



George Latimer, Westchester County Executive

**General Requirements and Proposals**  
**Information for Bidders**  
**General and Special Clauses**  
**Technical Specifications**

**ROOF REPLACEMENT PROGRAM**  
**YONKERS JOINT WATER RESOURCE RECOVERY FACILITY**  
**YONKERS, NEW YORK**

**Contract No. 21-507**  
**Bid Opening: November 17, 2021**

**By Bidder (Please Print)**

Firm/Business Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

**For Official Use Only**

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**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**

**Division of Engineering**



**SPECIAL NOTICE**

County of Westchester  
New York

**ADDENDA TO THE BID DOCUMENTS**

Addenda to the Bid Documents will be published on the Empire State Purchasing Group website at (<http://www.bidnetdirect.com/new-york>) **It is the responsibility of each potential bidder to check the website on a regular basis for further information relative to the bid documents including information relating to any and all addenda** prior to submitting its bid. All Bidders are deemed to have reviewed and considered all addendums in their Bid.

**SUBMISSION OF BIDS**

Bidders should not submit the entire bid document with its bid submission. Instead, each bidder is required to submit the full set of designated Proposal Pages. The Proposal Pages are denoted by a border and are titled on the bottom as “Proposal Page \_\_\_\_”. The Proposal Pages must be accompanied by the “Bid Bond and Consent of Surety” (as set forth in the Proposal Pages) attached to the outside of the sealed bid. A Bid Bond is NOT required for contracts of \$100,000 or less. Failure to submit in this manner may cause the bid to be rejected.

The successful bidder will be required to furnish a Performance and Payment Bond.



**SPECIAL NOTICE**

County of Westchester  
New York

**NOTICE: DUE TO THE COVID-19 PANDEMIC, TO PARTICIPATE IN THE  
MANDATORY PRE-BID SITE INSPECTION YOU ARE REQUIRED TO:**

- 1. Be familiar with the attached Department of Environmental Facilities notice to Contractors and Site Visitors regarding COVID-19 PPE Protocol and Zero Tolerance dated April 7, 2020.**
- 2. Maintain a minimum distance of 6-feet between yourself and other people while at the facility**
- 3. Bring and wear a protective mask covering both the nose and mouth at all times while at the location.**
- 4. Note that, for the purpose of this site visit, gloves and protective eye-wear are optional.**

**MANDATORY PRE-BID SITE INSPECTION**

- A. Superseding the first paragraph of Article “3. PRE-BID SITE INSPECTION” of the Information for Bidders, Bidders are required to attend a Mandatory Pre-Bid Site Inspection at **10:00 a.m. Wednesday, October 27, 2021 meeting at the Yonkers Joint Water Resource Recovery Facility – Administration Building, 1 Fernbrook Street, Yonkers, NY 10705,** at which time they will examine the work site under escort by the County’s representative.

**BIDS FROM CONTRACTORS NOT IN ATTENDANCE AT THIS MEETING, OR  
THOSE WHO FAIL TO SIGN THE ATTENDANCE SHEET-WILL BE *REJECTED***

- B. Bidders shall indicate their interest in the Mandatory Pre-Bid Site Inspection by contacting John Coelho, Department of Public Works and Transportation, Division of Engineering at (914) 995-5144.
- C. All other portions of Article “3. PRE-BID SITE INSPECTION” of the Information for Bidders shall remain in full force and effect.





Department Memorandum  
**Department of Environmental Facilities**

**Date: April 7, 2020**

**To: Westchester County DEF Contractors and Site Visitors**

**From: Nat J. Federici, P.E.  
Deputy Commissioner**

**Re: COVID-19 PPE Protocol and Zero Tolerance**

First and foremost, on behalf of the Department I would like to thank everyone for the work that you all do and the part that you play in helping the Department maintain continuous wastewater collection and treatment services to Westchester County and its nearly one million residents. Wastewater collection and treatment are deemed essential public health services. Equally as important during this time is to ensure the health and safety of our employees and on-site consultants, contractors, sub-contractors, and suppliers.

As a result, the following protocol are being established and enforced in order to address the current state of emergency due to the COVID-19 pandemic at all of our Wastewater Collection and Treatment Facilities.

- All non-County employees working at a DEF site, should be confined to their designated work area and use separate personnel, dining, and restroom facilities, wherever possible.
- All non-County employers and their personnel working on-site at a DEF facility should follow all recommended CDC practices and guidelines to prevent exposure and/or spread of the Corona-virus. These include using engineering and administrative controls, safe work practices, and personal protective equipment (PPE) normally required for work tasks at all DEF facilities. The required minimum PPE includes: protective masks covering both the nose and mouth; disposable, single use latex or similar material gloves; and protective eye-ware. **The required PPE will be strictly enforced with zero tolerance going forward.**
- All non-County employees working at a DEF site, should maintain safe work distancing and a minimum of six feet of separation at all other times when on-site.

**Anyone not adhering to the protocol listed above will be asked to leave the facility and not return; zero tolerance and no exceptions.**

In addition, for the duration of the COVID-19 Pandemic Emergency, we request that all contractors limit their permanent employees to working only on one site, to the extent possible, as



this will also minimize the potential for cross-contaminating personnel across different sites. Any employer that has an employee or sub-contractor that has tested positive for the COVID-19 virus must notify the DEF Facility Superintendent of the positive test, without specifically identifying the employee's name, but notifying the Superintendent of the positive tested employee's day(s) and location worked. Lastly, all Contractors working on-site should amend their Health and Safety Plan (HASP) to include the COVID-19 Pandemic Protocol.

While the change and disruption is reflected in every aspect of our lives, we remain confident and determined that we will come out through this together and stronger than we were before this unprecedented crisis. As stated before, **the health and safety of all employees working at all of our Facilities is paramount**, and maintaining the safest work environment by implementing the protocol included above is the most effective way to ensure that all workers remain safe, while working at any and each DEF Facility.

NJF/njf

cc: Vincent F. Kopicki  
Erin O'Shea  
Anthony Della Valle  
Jagdish Mistry  
Joseph Gibney  
Michael Facelle  
Jeffrey Bryant  
Warren Pierce  
John Lennon  
Dave Ciuffreda  
Ed Pellegrino  
Catherine D'Onofrio



**SPECIAL NOTICE**

County of Westchester  
New York

**MINORITY PARTICIPATION POLICY**

Contractors must comply with the County's Minority Participation Policy, including, but not limited to, the requirement that contractors make a demonstrated good faith effort to utilize Minority Owned Businesses ("MOB") and Women Owned Businesses ("WOB") (see IFB Article 36). To assist contractors in this effort the County has made available a list of MOB and WOB at <http://mwbe.westchestergov.com/> Contractors are also encouraged to utilize other sources to identify potential MOB and WOB as subcontractors and suppliers.

All bidders must submit as part of their bid package the Minority/Women Owned Business Enterprise Questionnaire located in the Proposal Page section of the bid documents.



**SPECIAL NOTICE**

County of Westchester  
New York

**COMPLETION OF GRANT FUNDING FORMS**

The bidders are hereby notified that if this project, or any portion thereof, is funded by a grant then the contractor will be responsible to complete all appropriate forms as required by the grant agency in order to complete the application.

**PROMPT EXECUTION AND RETURN OF CONTRACT**

- A. The successful bidder is required to return the completed contract to the County within ten (10) days of receipt of the execution copy of the contract. The contract must be signed, notarized and returned to the County with all insurance certificates, bonds and supporting documentation, including all required Subcontractor information.
- B. The County reserves all of its rights, including, but not limited to, proceeding against the bid bond, if the successful bidder fails to submit the complete executed package within the above time frame.



**SPECIAL NOTICE**

County of Westchester  
New York

**MANDATORY OSHA CERTIFICATION**

When a public works contract is in excess of \$250,000.00, all employees are required to have successfully completed the OSHA 10 hours training class. All contractors and subcontractors must attach copies of proof of completion of the OSHA 10 hour course by all employees to the first certified payroll submitted to the County and on each succeeding payroll where any new or additional employee is first listed. Employees may be requested by the County's representative to verify compliance with the OSHA 10 hour course by showing their OSHA card.

When a public works contract is in excess of \$1,000,000.00, all employees are required to have successfully completed the OSHA 30 hours training class. All contractors and subcontractors must attach copies of proof of completion of the OSHA 30 hour course by all employees to the first certified payroll submitted to the County and on each succeeding payroll where any new or additional employee is first listed. Employees may be requested by the County's representative to verify compliance with the OSHA 30 hour course by showing their OSHA card.

In addition, on any contract that includes excavation of underground facilities, the excavator is required to be certified and have completed the training and education program provided by the one-call notification system (Dig Safely New York, Inc. Certified Excavator Program in Safe Digging Best Practices) or any other provider authorized by the public service commission to administer such training and education program.



**SPECIAL NOTICE**

County of Westchester  
New York

**BUILDERS RISK INSURANCE**

In addition to the insurance requirements listed in Section 2 of the Information for Bidders, the Contractor, at their own cost and expense, shall provide and maintain a **Builder's Risk Form, All Risk Insurance Contract**. The coverage shall be written for **100% of the completed value**, with the County of Westchester named as loss payee as its interest may appear. In formulating its proposal, the Contractor shall include the costs for this coverage. In the event that claims, for which the County may be liable, in excess of the insured amounts provided herein are filed by reason of Contractor's negligent acts or omissions under the Agreement or by virtue of the provisions of the labor law or other statute or any other reason, the amount of excess of such claims or any portion thereof, may be withheld from payment due or to become due the Contractor until such time as the Contractor shall furnish such additional security covering such claims in form satisfactory to the County of Westchester.



**SPECIAL NOTICE**

County of Westchester  
New York

**PROOF OF PAYMENT BY CONTRACTOR TO SUBCONTRACTORS AND MATERIALMEN.**

In addition to and without limiting any of the provisions set forth in Section 23 of the Information for Bidders, after the Contractor completes 50% of the work under the contract, the Contractor shall supplement each requisition submitted to the County with documentation that establishes that the Contractor has timely and properly paid its subcontractors and materialmen as required by Section 23 of the Information For Bidders. Such documentation shall include copies of both sides of cancelled check(s) paid to the order of the subcontractors and materialmen and such other documentation as may be reasonably requested by the Commissioner. If the Contractor fails to submit such documentation, the Commissioner may, in his sole discretion, withhold payment of the requisition until such time as the documentation is properly submitted. Nothing herein is intended or shall be construed to confer upon or give any subcontractor or materialman, or its successors and assigns, any third party beneficiary rights, remedies or basis for reliance upon, under or by reason of the contract or this Special Notice provision.



**SPECIAL NOTICE**

County of Westchester  
New York

**PREVAILING WAGE**

All public works contracts are subject to the payment of the prevailing wage and supplements as set forth by the laws of the State of New York, including, but not limited to, Articles 8 and 9 of the New York Labor Law (the “Prevailing Wage Laws”). Westchester County has an active Prevailing Wage Enforcement Officer who enforces the Prevailing Wage Laws within the County for public works contracts, including reviewing certified payroll records, visiting job sites, interviewing the employer and employees (See IFB Article 12) and, if necessary, requesting copies of cancelled checks.

Any Contractor who fails to comply with the Prevailing Wage Laws, including, but not limited to, failing to pay the prevailing wage rates and supplements, failing to submit certified payroll records to the County or failing to post the prevailing wage rates and supplements at the work site, will be subject to enforcement as provided for in the Contract and laws of the State of New York through the Westchester County District Attorney’s office, the Commissioner of the New York State Department of Labor, the County and/or the employee who suffered the underpayment. This enforcement could include, but is not limited to, criminal penalties, civil penalties, debarment from future bid awards, the withholding of payment under the Contract to satisfy the unpaid wages and supplements, including interest and civil penalty. In addition, such a failure shall constitute grounds for cancellation of the Contract (IFB 8(C)). Moreover, a prime contractor is responsible for its subcontractor’s failure to comply with, or evasion of, the provisions of the Prevailing Wage Laws.



**SPECIAL NOTICE**

**Department of Environmental Facilities**  
**Environmental Management System Requirements**

**General**

The Contractor is responsible for complying and ensuring that all the Contractor's subcontractors comply with all federal, state, and local environmental and health and safety legal requirements.

The Contractor recognizes that the Department of Environmental Facilities (DEF) has an Environmental Management System (EnvMS) that includes DEF's Wastewater Treatment Plants (WWTPs), Solid Waste facilities, water treatment facilities, and related facilities and shall conform to and ensure the conformance of all of the Contractor's subcontractors (subcontractors) to the DEF Environmental Policy (Policy), all EnvMS associated procedures and protocols, and the requirements of this Special Notice. This includes the requirement to participate in the corrective action process, including attendance at meetings should activities in which the Contractor is involved result in a deviation from the Policy or the requirements of the EnvMS. Depending on the seriousness of the deviation, this may include participation in full root cause analysis.

**Training**

Prior to performing work the project superintendent, project manager and all responsible foremen for the Contractor and subcontractors shall attend a required 45-minute training session on EnvMS requirements provided by DEF Personnel. The Contractor shall ensure the attendance of these staff. The training may occur at the facility or at another location. The Contractor shall ensure that a minimum of one person who has participated in the EnvMS training is available on-site at all times that the Contractor's personnel or subcontractors are on-site.

The Contractor shall ensure that all employees and subcontractor employees working at any DEF facility are trained on the requirements of the EnvMS relevant to their work and shall keep records of training on site. The initial training for superintendents, project managers and foremen may be video taped by the Contractor for subsequent training of all Contractor's employees and subcontractor employees.

Records of training shall be kept by the contractor and made available to DEF, upon request.

**Competency**

The Contractor shall ensure employees and subcontractors are capable, based on training, education, licensing, and/or experience, to perform tasks that can impact the



environment. The Contractor shall maintain records of competency and make these records available to DEF upon request.

### **Project Coordination**

The Contractor shall designate a staff member who will be responsible for the oversight of EnvMS project requirements and to work as a liaison with the plant Superintendent or facility operator. This person, or their properly qualified designee, must be available anytime the Contractor's personnel or subcontractors are on-site performing work.

### **Working Environment**

In addition to the hazards typically found on construction and industrial sites, the following specific hazards are present at the WWTPs and water treatment facilities.

Hazards	Yonkers	Port Chester	Peekskill	Ossining	New Rochelle	Mamaroneck	Blind Brook	Shaft 22	Kensico Dam	Gate of Heaven
Digester Gas (consists mostly of methane – the primary component of natural gas)	X		X							
Natural Gas	X	X		X	X					
Propane		X	X		X					
Oxygen					X					
Class 1, Division 1 Explosion Proof Areas	X	X	X	X	X	X	X			
Confined Spaces	X	X	X	X	X	X	X			
Chemical Storage/Hazardous Materials	X	X	X	X	X	X	X	X	X	X
Hydrogen Sulfide	X	X	X	X	X	X	X			
High Pressure Lines	X	X	X	X	X	X	X			
Open Tanks / Drowning Hazards	X	X	X	X	X	X	X			
Ladders, Platforms & Slippery Surfaces	X	X	X	X	X	X	X	X	X	X
High Voltage Electrical Systems	X	X	X	X	X	X	X			
Potential Exposure to Blood Borne Pathogens	X	X	X	X	X	X	X			
Automatic Equipment	X	X	X	X	X	X	X			
Chlorine Gas								X		



Other DEF facilities (transfer stations, pump stations) may have these same or similar hazards.

The Contractor and subcontractors shall plan work appropriately for this environment and the specific location(s) where work is anticipated and implement the necessary health and safety precautions including, but not limited to, the use of proper equipment, including non-sparking tools, proper personal protective equipment (PPE) and monitoring equipment, and compliance with contractor Confined Space Entry and Lock-out / Tag-out programs.

### **Health and Safety Plan**

The contractor shall develop a health and safety plan (plan) specific to the facility and the work planned and shall ensure that all work is performed in conformance with the plan. The contractor shall ensure that the plan addresses all relevant hazards including, but not limited to, the aforementioned hazards. The plan must be kept on site at the facility when work is being performed and must be made available to DEF personnel upon request.

### **Health and Safety Compliance Monitoring**

An expert provided by the Contractor will monitor the Contractor and subcontractor compliance with all applicable health and safety regulations and the health and safety plan on an ongoing basis while the Contractor and subcontractors are performing work at any DEF facility. Monitoring shall be performed in accordance with the health and safety requirements in the project specifications. The Contractor shall ensure that all employees and subcontractors cooperate with the expert. The expert will document results of the monitoring and provide the results to the Contractor on an ongoing basis. The Contractor shall correct all health and safety non-compliances identified by the independent expert in a timely fashion. The monitoring results and any corrective actions taken shall be provided to DEF's representative on site.

### **Plant Equipment and Control of Hazardous Energy**

All DEF sites are working facilities that must function at all times so as to meet regulatory obligations. The Contractor shall receive prior authorization from the WWTP Superintendent, the Supervisor of Operations, Chief Operator (water districts) facility manager (solid waste) if any planned activities of the Contractor or Contractor's subcontractor could interfere with the operation of the DEF facility, involve the use of plant or facility equipment, or require taking plant or facility equipment on or off line. The contractor shall not proceed without expressed authorization by same. DEF reserves the right to rescind authorization for the Contractor to use, work on, or otherwise render inoperable, any piece of equipment if needed for the operation of the plant or facility.



The Contractor shall be responsible for ensuring control of hazardous energy (lock-out/tag-out) for all contractor and subcontractor activities. Contractor shall coordinate taking plant equipment off line and putting it back on line with the Plant Superintendent or the Supervisor of Operations, Chief Operator (water districts) or facility manager (solid waste). Only authorized DEF personnel shall take plant equipment off line or place it back on line. Plant equipment includes, but is not limited to, all gates, valves, pumps, electrical panels, solid waste facilities, water and wastewater treatment, and associated equipment.

### **Odor Notification**

The Contractor shall notify the WWTP Superintendent, Supervisor of Operations, Chief Operator (water districts) facility manager (solid waste) or ISO Coordinator 24 hrs prior to the initiation of activities that have the potential to cause odors in excess of those associated with normal operations.

### **Odor Control**

The Contractor and subcontractors shall comply with all EnvMS odor control requirements. WWTP doors must be kept closed at all times except for entry or exit of personnel and equipment. Open periods shall be minimized to the greatest extent possible. Doors shall not be propped open or held open without the expressed approval of the WWTP Superintendent or the Supervisor of Operations.

For activities with the potential to cause odors in excess of those associated with normal operations, the contractor shall plan and implement appropriate odor abatement controls.

### **Demolition**

Contractor shall implement a methodology to tag or mark all equipment and piping prior to demolition. All contractor and subcontractor employees responsible for demolition activities shall be trained on the methodology. Prior to demolition, marked or tagged equipment scheduled for demolition shall be reviewed with DEF's representative on site.

### **Stormwater Management, Soil Erosion and Sediment Control Activities**

The Contractor shall comply strictly with all Soil Erosion and Sediment Control project specifications; stormwater permit requirements, if a permit is required; and regulatory requirements including the ***New York Standards and Specifications for Erosion and Sediment Control and the County of Westchester Best Management Practices for Reducing Nitrogen and Other Stormwater Pollutants.***

Soil Erosion and Sediment Controls shall include, but are not limited to, the following:



- Proper installation and use of erosion and sediment capture devices, i.e. silt fences and hay bales
- Protection of storm drain inlets
- Proper and timely backfilling and stabilization of trench excavation
- Inspections of discharge points
- Proper maintenance of erosion and sediment capture devices
- Regular inspections of controls by qualified Contractor staff
- Use of phosphorus containing fertilizers only in conformance with County requirements.

The Contractor shall be subject to Erosion and Sediment Control Inspections by DEF personnel.

### **Spills Prevention, Control and Response Procedures**

Contractor and subcontractors shall have written spill response procedures that conform to DEF requirements. The Contractor's and subcontractors' supervisory personnel will be trained in the facility's Spill Prevention, Control and Response Procedures Requirements during the 45-minute EnvMS training session. Contractors and subcontractors shall ensure that these requirements are complied with and that their on-site employees are properly trained in spill prevention, control and response, and conformance with their spill response procedures. Contractor and subcontractors shall have a copy of these procedures available on site. The Contractor shall have appropriate spill clean-up equipment on site at all times.

**In the event of a spill, the Contractor and subcontractors shall immediately respond to the spill in conformance with their spill procedures and as soon as possible report the spill to the main office.**

The Contractor is responsible for proper clean-up and disposal of waste materials generated by any spill resulting from their activities.

### **Vehicle and Equipment Control**

The Contractor and subcontractors shall ensure all vehicles and equipment are properly maintained and free of leaks. Contractor and subcontractors shall not perform fueling or maintenance of vehicles and equipment onsite without the expressed approval of the WWTP Superintendent or Supervisor of Operations, Chief Operator (water districts), or facility manager (solid waste). Contractor and subcontractors shall ensure vehicles comply with Westchester County idling restrictions and do not idle unnecessarily. The Contractor and subcontractors shall ensure all fuel used is ultra low sulfur in content.



**Good Housekeeping/Chemicals, Petroleum and Hazardous Materials Management**

The Contractor and subcontractors shall demonstrate good housekeeping practices and perform daily site clean-ups at the work site. The work site shall be subject to inspections by DEF Personnel.

The Contractor and subcontractors shall properly store and use all petroleum, chemicals and hazardous materials. This shall include but is not limited to use of proper secondary containment and protection from precipitation. Storage locations shall be pre-approved by the WWTP Superintendent, Supervisor of Operations, Chief Operator (water districts) or facility manager (solid waste) or ISO Coordinator.

The Contractor shall provide all Material Safety Data Sheets (MSDS) for all petroleum, chemicals and hazardous materials used at the work site to DEF prior to bringing same on site and shall maintain all MSDS on site. DEF reserves the right to forbid any material from being brought on site.

At the completion of work, the Contractor shall remove any staged materials, petroleum, chemicals, and hazardous materials remaining from the project, whether a result of contractor or subcontractor activities. Staged materials, petroleum, chemicals, and hazardous materials may remain with the expressed written approval of the WWTP Superintendent or Supervisor of Operations, Chief operator (water districts) facility manager (solid waste).

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**Waste Management and Minimization**

The Contractor and subcontractors shall dispose of waste in a manner that meets all applicable laws and regulations including Westchester County Source Separation Law (Chapter 825). Contractors shall make every effort to minimize waste production during construction operations. Contractors and subcontractors shall not bring waste onsite and may not dispose of waste onsite or in DEF receptacles without the expressed approval of DEF

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**Mercury Containing Devices**

The Contractor shall ensure no mercury containing devices are installed. Any mercury devices removed by the Contractor or subcontractors shall be disposed of legally by the Contractor and records of disposal shall be provided to the facility.

**Energy Efficiency and Environmentally Preferable Products**

With the exception of exterior lighting and historic lighting at the South Yonkers CSO and the Mamaroneck WWTP, the Contractor shall ensure incandescent bulbs are not installed or used.



The contractor shall:

- select energy star equipment or equipment within the upper 25 percent of energy efficiency as designated by the United States Federal Energy Management Program
- select environmentally preferable products
- utilize environmentally preferable cleaning products

if the prices of the equipment and products are reasonably competitive and the quality is adequate for the purpose intended.

The contractor shall ensure Styrofoam products are not utilized and shall request non-Styrofoam packaging for equipment and products.

### **Landscaping**

When selecting plantings, the Contractor shall ensure plantings native to Westchester County are utilized. If no native species are appropriate, the Contractor shall ensure the planting of noninvasive species.

### **Pesticide Ban**

The Contractor shall ensure pesticides that are banned under Westchester County Law (Chapter 690) are not utilized at the work site.

### **Change to Environmental Project Design Specification**

The Contractor shall receive approval from an authorized County representative prior to making any modifications that affect environmental project specifications due to field conditions.

### **Third Party Audit**

The EnvMS is certified to ISO 14001. The certification requires that a yearly third party audit be performed. The Contractor shall ensure that all employees cooperate with the third party auditor, answer questions put to them by the auditor, and make records required as part of this special notice available to the auditor, as requested.





**WESTCHESTER COUNTY  
DEPARTMENT OF ENVIRONMENTAL FACILITIES**

**ENVIRONMENTAL POLICY**

It is the mission of the Westchester County Department of Environmental Facilities to protect, preserve and conserve the water supply and quality of watercourses within or on the borders of Westchester County; to provide proper solid waste stream reduction and recycling; and to protect the health, safety and welfare of the public. The Department is responsible for planning, operating and maintaining: water resource recovery facilities, sanitary collection systems, drinking water treatment and distribution facilities, and solid waste facilities in compliance with local, state and federal laws.

To achieve this mission and thereby contribute to a more sustainable society, DEF is committed to:

- meet, and where practical, exceed its environmental legal and regulatory requirements, and other commitments;
- prevent pollution, protect the environment; and,
- continually improve.

A handwritten signature in blue ink, appearing to read "V. F. Kopicki".

Vincent F. Kopicki, P.E.  
Acting Commissioner, DEF

Effective Date: 12-5-2017



## NOTICE TO CONTRACTORS

County of Westchester  
New York

Sealed proposals for the following construction work:

CONTRACT NO: 21-507

ADVERTISING: October 20, 2021

MANDATORY PRE-BID INSPECTION: October 27, 2021

### **ROOF REPLACEMENT PROGRAM YONKERS JOINT WATER RESOURCE RECOVERY FACILITY YONKERS, NEW YORK**

will be received by the Board of Acquisition and Contract in Room 528, Michaelian Office Building, 148 Martine Ave., White Plains, New York until 11:00 a.m., **Wednesday, November 17, 2021**, and immediately thereafter, the bids will be publicly opened and read aloud in Room 527 of the said building. The bid opening also will be made accessible to the public via the livestreaming service WebEx. The livestreaming of the bid opening via WebEx is in addition to and not in place of the publicly bid opening to be held in Room 527 of the Michaelian Office Building. For additional bidding information or questions call (914) 995-2274.

Instructions for livestreaming via WebEx. Attendees may join by computer browser at <https://westchestergov.webex.com/meet/bac-bidopening> or by phone 1-415-655-0001 US Toll or 1-844-621-3956 US Toll Free. The Access Code is 614 981 028.

The Bid Documents (General Requirements, Information for Bidders, Technical Specifications, etc. with Authorized Proposal Pages) **MUST BE OBTAINED** from the Empire State Purchasing Group website at the following web address: <http://www.bidnetdirect.com/new-york>.

There is no cost to the bidder for this service. Bid documents will be available after 1:00 p.m. on the advertising date.

**PLEASE TAKE NOTICE:** IN ORDER TO SUBMIT A BID, BIDDERS MUST REGISTER AND DOWNLOAD THE BID DOCUMENTS FROM THE EMPIRE STATE PURCHASING GROUP WEBSITE AND MUST REGISTER USING THE NAME OF THE PERSON OR BUSINESS ENTITY THAT WILL BE SUBMITTING THE BID. IN ORDER TO ENSURE THAT COUNTY BID DOCUMENTS HAVE NOT BEEN ALTERED IN ANY WAY, THE COUNTY WILL NOT ACCEPT BIDS FROM PERSONS OR BUSINESS ENTITIES THAT HAVE NOT FOLLOWED THIS REQUIREMENT.

The Bid Documents include Contract Drawings which **MAY BE OBTAINED at no cost on the Empire State Purchasing Group website at the following web address:** <http://www.bidnetdirect.com/new-york>, after 1:00 p.m. on the advertising date.

If the bidder is unable to utilize the electronic version of the Contract Drawings that are available on the Empire State Purchasing Group Website, the bidder may purchase copies of the Contract Drawings. Contract Drawings may be obtained from the Office of the Board of Acquisition and Contract at the above address after 1:00 p.m. on the advertising date and between the hours of 9:00 a.m. to 4:00 p.m. Monday thru Friday. Copies of the Contract Drawings shall be made available upon payment of a personal check, company check or money order made payable to the County of Westchester, in the amount of **\$100.00** per set. For bidders, the deposit for each set of drawings will be refunded in full if returned in good condition within thirty days after award or rejection of bids. For non-bidders, only fifty percent of the deposit will be refunded. No refunds will be made to the successful bidder.

Each bidder is required to submit the full set of authorized Proposal Pages and all bids over **\$100,000.00** must also be accompanied by the "Bid Bond and Consent of Surety" (as set forth in the Proposal Pages) attached to the outside of the sealed bid. Failure to submit in this manner may cause the bid to be rejected. **The successful bidder, no matter the amount of its bid, will be required to furnish a Performance and Payment Bond with its signed contract.**

The County of Westchester reserves the right to waive any informalities in the bids, or to reject any or all bids. No bidder may withdraw its bid within forty-five (45) days after the date of the bid opening.

Pursuant to Chapter 308 of the Laws of the County of Westchester, it is the goal of the County to use its best efforts to encourage, promote, and increase the participation of business enterprises owned and controlled by persons of color or women - Minority Business Enterprise (MBE) and Women Business Enterprise (WBE).

**REMINDER: All required licenses should be submitted with the Bid.**

COUNTY OF WESTCHESTER, NEW YORK  
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION

BY: Hugh J. Greechan, Jr., P.E., Commissioner



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# **1. GENERAL REQUIREMENTS AND PROPOSALS**

**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**

**Division of Engineering**



## GENERAL REQUIREMENTS

### 1. DESCRIPTION OF THE WORK

The work to be performed under this Contract and in accordance with the specifications consists of the furnishing of all equipment, superintendents, labor, skill, material and all other items necessary to replace the existing roofing systems for multiple buildings at the Yonkers Joint Water Resource Recovery Facility. In general the work includes, but is not limited to, asbestos abatement work, demolition, removal and disposal of the existing roofing systems and all associated construction, and the installation of a new Styrene, Butadiene Styrene (SBS) 3-ply cold applied, fully adhered white roofing system with rigid insulation. The new roofing system shall include to all roofing sheets (base, intermediate, cap), bonding agents, adhesives, flashings, terminations, metal copings, metal fascias, walkway pads and associated accessories as required for the specified manufacturer's roofing warranty.

The contractor shall perform all work required for such construction in accordance with the Contract Documents and subject to the terms and condition of the Contract, complete and ready use.

It is not intended that this description of work mention each particular item required, but that it give information concerning the general scope and areas of work for the convenience of the bidders.



## GENERAL REQUIREMENTS

### 2. SUBCONTRACTING & DIRECT EMPLOYMENT OF LABOR

The Contractor shall not subcontract more than forty-nine (49%) percent of its bid. The Contractor must directly employ at least fifty-one (51%) percent of the personnel working on this contract as measured in man-days worked

“Directly employ” shall be construed to include only workers employed and paid directly by the Contractor, usually for wages or salary.

The Contractor expressly acknowledges that any violation of this provision constitutes a default under this contract.

### 3. REQUIRED TIME FOR COMPLETION OF THE WORK

Notification to commence the work will require the mandatory submission of all the executed contracts and the Certificates of Insurance after receipt of authority to award.

The Contractor shall commence the work embraced in this contract within ten (10) days of the service of Notice by the County to do so and shall complete the said work within **450** consecutive calendar days computed from the date of such Notice to commence.



## GENERAL REQUIREMENTS

### 4. SECURITY REGULATIONS

#### **Security Regulations For all County Facilities except County Correctional Facilities:**

- A. Contractor's attention is called to the fact that this work is to be performed on property which is the responsibility of the County; therefore, all personnel associated with this contract are subject to special conditions affecting security and control of the facilities operations. Every person required to enter the work site will be issued an ID card and be required to fill out appropriate applications. **There is a \$30.00 processing fee for each lost ID card**; remitted by check made payable to the County of Westchester. All ID processing will be scheduled by the Construction Administrator.
- B. The Contractor/Subcontractor shall issue a copy of the security regulations (Paragraph C) to all personnel engaged on this project.
- C. All Contractor/Subcontractor personnel shall be bound by the following security regulations for the duration of this contract.
  - 1) All personnel must conspicuously display the ID card and identify themselves upon request.
  - 2) If an ID card is misplaced or lost, report this immediately to the Inspector.
  - 3) All Contractor/Subcontractor personnel are responsible for all tools and equipment and you must report any loss immediately to the Construction Administrator.
  - 4) All personnel must observe all orders of the Owner.
  - 5) All personnel are to report any unusual incidents or problems to the Construction Administrator immediately.
  - 6) All personnel shall not possess or consume any alcoholic beverage or illegal drug or medication while on the property, or report to work under the influence of alcohol or drugs.
  - 7) Any vehicle left on the property must be locked and the ignition keys must be removed. Vehicles will not be left overnight without prior approval.
  - 8) All personnel shall not enter any other areas of the premises (except the areas agreed to) without prior approval of the Construction Administrator.

#### **Security Regulations For County Correctional Facilities:**

- A. Contractor's attention is called to the fact that this work is to be performed on property adjacent and/or within the County's Correctional Facilities; therefore, all personnel associated with this project are subject to special conditions affecting security and control of the Correctional Facility Operations. Every person required to enter the work site will be fingerprinted, processed for a photo ID card and be required to fill out appropriate applications. **There is a \$100.00 processing fee for each person**, checks made payable to the Commissioner of Finance. All ID processing will be scheduled by the Construction Administrator.



## GENERAL REQUIREMENTS

- B. All Contractors and Subcontractors shall issue a copy of the security regulations (Paragraph C) to all personnel to be engaged on this project.
- C. All Contractor's and Subcontractor's personnel shall be bound by the following security regulations for the duration of this project.
  - 1) All personnel entering the Penitentiary, Jail or Women's Unit must stop and identify themselves to the Control or Desk Officer who will issue the appropriate pass after ascertaining that they have been cleared to enter the facility. Only workers with valid ID will be permitted entry. **NO HELPERS.**
  - 2) All personnel must sign in the Visitor's Book, to include the following information: **PERSON'S NAME, COMPANY NAME, REASON FOR ENTRY, WORK LOCATION IN BUILDING.**
  - 3) All personnel must conspicuously display the ID card and identify themselves upon request.
  - 4) If ID card is misplaced or lost, report this loss immediately to the Shift Captain or Associate Warden.
  - 5) All tradesmen will be required to perform a tool inventory inspection of all tools in their possession to demonstrate to the admitting Correction Officer that the typed inventory list matches the tools each time they enter and leave the building. The tradesmen are responsible for keeping all tools and equipment locked when not in immediate use and they must report any loss of tools or equipment immediately to the Shift Captain or Associate Warden.
  - 6) All tradesmen and helpers shall carry all tools in a locked and secured tool box or tool cart. A typed inventory sheet shall be carried with the tool box/cart listing all hand and power tools. A manufacturer's MSD Sheet shall be carried with the tool box/cart for any chemical compound that the tradesman has in his/her possession.
  - 7) All debris (i.e. packaging, demolition, etc) shall be removed from the worksite at the end of each workday.
  - 8) All personnel are subject to search at all times.
  - 9) All personnel must observe all orders of Correctional Staff.
  - 10) All personnel are to report any unusual incidents or problems to a Correction Officer, Shift Captain or the Associate Warden immediately.
  - 11) All personnel shall not possess or consume any alcoholic beverage or illegal drug or medication while on County property, or report to work under the influence of alcohol or drugs.
  - 12) Any vehicle left on County property must be locked and the ignition keys must be removed. Vehicles will not be left over-night on County property without prior approval.
  - 13) All personnel shall not enter any other areas of the prison (except the areas agreed to) without prior approval of the Shift Captain or the Associate Warden.



## GENERAL REQUIREMENTS

- 14) All personnel shall not bring anything in for any inmate/detainee or staff member or take out anything for any inmate/detainee or staff member.
- 15) All personnel shall not engage in any unnecessary conversations with any inmate/detainee.
- 16) Weapons, i.e., guns, knives, blackjacks, to include any tool activated by gunpowder or other explosive charge is prohibited in the building (i.e., stud gun). Violators of this rule are subject to arrest.
- 17) All personnel must sign out when leaving and must return the ID card to the Control/Desk Officer before leaving.
- 18) Failure of the contractor to follow these procedures will result in the contractor being denied access to the facility.

### 5. PAYMENT FOR BONDS AND INSURANCE

The amount bid for contract bonds and insurance shall not exceed 3% of the total contract price excluding the bid price for Miscellaneous Additional Work (Item W800) and Field Testing Equipment (W851), where applicable. Should the bidder exceed the foregoing three percent (3%), the Department will make the necessary adjustment to determine the total amount bid based on the arithmetically correct proposal.

The amount bid shall be payable with the first contract payment.



## GENERAL REQUIREMENTS

### CONTRACT DRAWINGS:

#### CONTRACT NUMBER 21-507

The Design Drawings, as listed on the Contract Drawing Index, herewith made a part of these Specifications, shows in general and/or in detail the work to be done under this Contract and/or the various Contracts forming the entire work for the Project, as described herein.

After sending the executed contract to the County and prior to the first job meeting, the Contractor is responsible for obtaining from Public Works, Division of Engineering, Michaelian Office Building, White Plains, a maximum of five gratis copies of the Contract Drawings and Specifications; for the Contractor's permanent possession. Additional sets, requested by the Contractor, beyond the permitted number and time limit, will be furnished by Public Works; but at the Contractor's expense.

<u>DRAWING NO.</u>	<u>TITLE</u>	<u>SHEET NO.</u>
200-02-T-276-0	Cover Sheet and General Notes	T1.0
200-02-G-277-0	General Notes, Legends and Location Plans	INF1.0
200-02-AB-278-0	Asbestos Abatement Drawings	ASB1.0
200-02-A-279-0	Blower and Administration Building Demolition Roof Plan (Building Area 'A', 'C' and 'D')	A1.0
200-02-A-280-0	Blower and Administration Building Demolition Roof Plan (Building Area 'B')	A1.1
200-02-A-281-0	Blower and Administration Building Roof Plan (Building Area 'A', 'C' and 'D')	A1.2
200-02-A-282-0	Blower and Administration Building Roof Plan (Building Area 'B')	A1.3
200-02-A-283-0	Dewatering/Truck Loading Platform and Primary Access Control Buildings Demolition Roof Plan	A1.4
200-02-A-284-0	Dewatering/Truck Loading Platform and Primary Access Control Buildings Roof Plan	A1.5
200-02-A-285-0	Roof Details	A2.0
200-02-A-286-0	Roof Details	A2.1
200-02-A-287-0	Roof Details	A2.2



Submit all proposal pages in this section, including all executed and unexecuted pages and fasten with a clip at the upper left hand corner.



George Latimer, Westchester County Executive

## **PROPOSAL PAGES**

### **ROOF REPLACEMENT PROGRAM YONKERS JOINT WATER RESOURCE RECOVERY FACILITY YONKERS, NEW YORK**

**Contract No. 21-507**

**Bid Opening: November 17, 2021**

**By Bidder (Please Print)**

Firm/Business Name: \_\_\_\_\_

Address: \_\_\_\_\_

**For Official Use Only**

\_\_\_\_\_

**DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION**

**Division of Engineering**



**PROPOSAL REQUIREMENTS**

**BIDDER'S IDENTIFICATION**

CONTRACT NO. \_\_\_\_\_

To the Commissioner of Public Works, Westchester County, New York, acting for the party of the first part.

Proposal made by \_\_\_\_\_  
as party of the second part.

Whose business address is \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Whose telephone number is \_\_\_\_\_

Whose E-mail address is \_\_\_\_\_

Whose Federal ID number is \_\_\_\_\_

Is bidder an individual,  
a partnership or a corporation? \_\_\_\_\_

If a partnership or corporation,  
give the names of all partners  
or officers with their titles \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If operating under a trade name or as partners, has the required Certificate been filed with a County Clerk in accordance with the General Business Law, Section 130?

Yes....[ ] No....[ ] N.A....[ ]

If the answer is NO, Certificate must be filed before the contract can be executed.

**NOTE:** the bid must be submitted using the Contractor's legal name, not just the "doing business as" (i.e. DBA) name.

**COMPLETE THIS FORM USING BLACK INK ONLY**



## **PROPOSAL REQUIREMENTS**

1. The undersigned, the bidder, does hereby declare that it has carefully read the contract specifications and has carefully studied the relevant plans, profiles and other drawings (as defined in Article "Contract Drawings" of the General Requirements) relating to the contract work, and has inspected the site(s) of the work..
2. The undersigned does hereby declare that it is the only one interested in its indicated bid; that the bid is in all respects without fraud or reservations; and that no official of the County or of the participating municipalities (if any), or any person in the employ of the County of participating municipalities (if any) is directly interested in the contract bid or in the supplies, equipment or works to which it relates, or in any part of the profits resulting there-from.
3. The undersigned does hereby offer and agree to furnish all materials, to fully and faithfully construct, perform and execute all work under the contract in accordance with the plans, profiles, other drawings and specifications relating thereto, and to furnish all labor, tools, implements, machinery, forms, transportation and materials necessary and proper for said purpose at the following indicated lump sum price for the total work and/or the following indicated unit prices for the various items of the work.
4. The undersigned does hereby declare that the indicated price(s) cover all expenses of every kind incidental to the completion of the contract work, including all claims affecting the work, labor and materials, which may arise through any cause whatsoever, excepting as provided for in Article "Disputed Work-Notice Of Claims For Damages: of the General Clauses.
5. The undersigned hereby agrees that in the event that the quantities of contract work actually performed by the undersigned are less than the approximate quantities indicated in the specifications it will make no claim(s) for loss of anticipated profits.
6. The undersigned does hereby agree that it will execute a contract containing all the terms, conditions, provisions and covenants necessary to complete the work according to the appropriate plans and specifications, within ten working days after receipt by the undersigned of the contract from the County, and that if it fails to execute said contract within said period of time the County may rescind the contract award and may retain as liquidated damages and not as a penalty, any amounts submitted as the bid security accompanying the undersigned's proposal, and/or demand from the Bidder's Surety Company that executed the required Bid Bond and Consent of Surety to pay to the County the difference between the amount bid and the amount for which such contract is thereafter awarded, together with the cost to the County of reletting said contract up to the maximum aggregate amount of 25% of the amount bid.
7. The undersigned does hereby agree to commence the work encompassed under the contract within ten days after notification in writing from the Commissioner of Public Works or his authorized designee, unless a definite earlier or later start has been specified, and will complete the work fully and in every respect on or before the specified completion date; and further agrees that the County has the right to employ such combination of labor, equipment



## **PROPOSAL REQUIREMENTS**

and materials as may be required for the proper completion of the contract work and to deduct all costs from such monies as may be due the undersigned, in the event the contract work is not completed by the specified completion date.

8. The undersigned does hereby agree to comply with all relevant provisions of the Labor Laws of the State of New York, and agrees to adhere to the provisions relating to the eight-hour day and five-day week, the payments of minimum rates for labor, and the latest laws relative to payments for wages for labor on public contracts.
9. The undersigned does hereby agree to insure all persons connected with the contract work against accident, at its own expense, as prescribed by the Workmen's Compensation Law of the State of New York; and that it will be responsible for payments by itself, its subcontractors and vendors of all taxes applicable to the work, and all other payments as may be required by various laws and rules and regulations of the Federal Government, the State of New York and its political subdivisions and agencies, such payments including but not limited to the following:
  - A. Federal Social Security Taxes on employees' wages.
  - B. Applicable Federal Excise Taxes.
  - C. New York State Unemployment Insurance and Disability Payments, based on employees' wages.
10. The undersigned does hereby agree to accept their indicated lump sum price for the total work and/or their indicated unit prices for the various items of the work as the sole basis in the determination of the value of addition to, or deletions from the specified scope of the contract work.

11. ADDENDUM RECEIPT - CONTRACT NO. \_\_\_\_\_

(The undersigned shall fill in contract number above, and the required information below.)

The undersigned does hereby acknowledge receipt of the below listed addenda to the contract specifications:

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ Dated \_\_\_\_\_

**COMPLETE THIS FORM USING BLACK ONLY**



## **PROPOSAL REQUIREMENTS**

12. Bidders should not submit the entire Bid document with its bid submission. Instead, Bidders must submit ALL of the Proposal Pages. Proposal Pages are denoted by a border and are titled on the bottom as "Proposal Page \_\_\_\_".

Be sure that, where required, the forms have been completed and signed by a notary public.

**Proposal Page 12** must be completed by a surety company and submitted with the bid if a Performance and Payment Bond is required in accordance with the "Notice to Contractors".

### **13. NON-COLLUSIVE BIDDING CERTIFICATION**

Made pursuant to Section 103-d of the General Municipal Law of the State of New York as amended by the Laws of 1966.

- A. By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his knowledge and belief:
- 1) The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
  - 2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and
  - 3) No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.
- B. A bid shall not be considered for award nor shall any award be made where a. (1), (2) and (3), above, have not been complied with; provided however, that if any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefore. Where a. (1), (2) and (3), above, have not been complied with, the bid shall not be considered for award nor shall any award be made unless the head of the purchasing unit of the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, determines that such disclosure was not added for the purpose of restricting competition."
14. The undersigned and each person signing in behalf of the undersigned hereby executes the foregoing Affirmative Action Questionnaire, Proposal, Addendum Receipt and Non-Collusive Bidding Certification.
15. The undersigned and each person signing on behalf of the undersigned hereby certifies that



## **PROPOSAL REQUIREMENTS**

the person, firm or corporation submitting this proposal as the bidder has not been found guilty of a willful violation of the New York State Labor Law for failure to pay prevailing wages and supplements, as those terms are defined by the New York State Labor Law, within the twelve (12) months immediately preceding the submission of this bid.

16. The undersigned, by submitting the Proposal Pages, acknowledges that it has read the complete bid package including any and all addenda thereto and its bid includes all of the terms and conditions set forth in the bid documents, including, but not limited to, the Notice to Contractors, General Requirements and Proposals, Contract plans/drawings (if any), Proposal Forms, Information for Bidders, General Clauses, Sample Forms and Attachments, Sample Contract and Bond, Schedule of Hourly Rates and Supplements, Technical Specifications, any Special Notices and all applicable laws, rules and regulations. The undersigned further acknowledges that by submitting this bid the above denoted items are incorporated by reference and constitute an integral part of its bid.
17. The undersigned agrees that, if it is not the Successful bidder, the Sealed List of Subcontractors submitted with its bid can be destroyed by the County. **Please check the following box if you want the Sealed List of Subcontractors returned to you.** ☐

Dated \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
Legal Name of Person, Firm or  
Corporation

(Seal of Corporation)

\_\_\_\_\_  
\_\_\_\_\_  
Business Address of Person, Firm or Corporation

By \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

**COMPLETE THIS FORM USING BLACK INK ONLY**



ITEMIZED PROPOSAL

ITEM NO.	DESCRIPTION	AMOUNT BID	
		DOLLARS	CENTS
A	For providing all labor, material, and equipment necessary to complete all work as shown on the contract drawings and in accordance with the specifications for the Roof Replacement Program at Yonkers Joint Water Resources Recovery Facility	\$	
<b>SUBTOTAL OF ALL ITEMS ABOVE:</b>		\$	
B	Contract Bonds and Insurance (Must not exceed 3.00% of Subtotal shown above)	\$	
W800	Necessary for Miscellaneous Additional Work per Article "Miscellaneous Additional Work (Item W-800)" of Information for Bidders, as directed	\$ 450,000	00
<b>TOTAL BID FOR 'BASE BID':</b>		\$	

CONTRACTOR: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

BY: \_\_\_\_\_

Signature/Title



**CONTRACTOR'S ACKNOWLEDGMENT**

(If Corporate)

STATE OF NEW YORK)

COUNTY OF WESTCHESTER) ss.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came \_\_\_\_\_  
\_\_\_\_\_ to me known and known to me to be the \_\_\_\_\_  
\_\_\_\_\_ of \_\_\_\_\_ the corporation described in and which  
executed the within instrument, who being by me duly sworn did depose and say that he the said \_\_\_\_\_  
\_\_\_\_\_ resides at \_\_\_\_\_  
\_\_\_\_\_ and that he is \_\_\_\_\_ of said corporation and knows the corporate  
seal of the said corporation; that the seal affixed to the within instrument is such corporate seal and  
that it was so affixed by order of the Board of Directors of said corporation, and that he signed his  
name thereto by like order.

\_\_\_\_\_  
Notary Public

**CONTRACTOR'S ACKNOWLEDGMENT**

(If Individual)

STATE OF NEW YORK)

COUNTY OF WESTCHESTER) ss.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came \_\_\_\_\_  
\_\_\_\_\_ to me known, and known to me to be the same person described in  
and who executed the within instrument and he duly acknowledged to me that he executed the same  
for the purpose herein mentioned and, if operating under the trade name, that the certificate required  
by the New York State General Business Law Section 130 has been filed with the County Clerk of  
Westchester County.

\_\_\_\_\_  
Notary Public

**CONTRACTOR'S ACKNOWLEDGMENT**

(If Co-Partnership)

STATE OF NEW YORK)

COUNTY OF WESTCHESTER) ss.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came \_\_\_\_\_  
\_\_\_\_\_ to me known, and known to me to be a member of the firm of \_\_\_\_\_  
\_\_\_\_\_ and the person described in, and who executed the  
within instrument in behalf of said firm, and he acknowledged to me that he executed the same in  
behalf of, and as the act of said firm for the purposes herein mentioned and that the certificate  
required by the New York State General Business Law Section 130 has been filed with the County  
Clerk of Westchester County.

\_\_\_\_\_  
Notary Public

**COMPLETE THIS FORM USING BLACK INK ONLY**



## CONTRACTOR'S ACKNOWLEDGMENT

(If Corporation/Sole Officer)

STATE OF NEW YORK                     )  
   ) ss.:  
COUNTY OF                                     )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, before me  
personally came \_\_\_\_\_ to me known and  
(Name)

known to me to be the \_\_\_\_\_  
(Title)

of \_\_\_\_\_, the corporation described in and which  
(Name of Corporation)

executed the within instrument, who being by me duly sworn did depose and say that he/she,  
resides at \_\_\_\_\_

and that he/she signed the within instrument, on behalf of said corporation, in his/her capacity  
as the \_\_\_\_\_ and sole officer and director of said corporation  
(Title)

and that he/she owns all the issued and outstanding capital stock of said corporation.

Notary Public

**COMPLETE THIS FORM USING BLACK INK ONLY**



## LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

STATE OF NEW YORK                    )  
  ) ss.:  
COUNTY OF                            )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, before me

personally came \_\_\_\_\_ to me known to be the individual  
(Name of individual who signed agreement)

who executed the foregoing instrument, and who, being duly sworn by me, did depose and say that

(s)he is (the)(a) \_\_\_\_\_ of \_\_\_\_\_,  
                     (member)(manager)                         (name of limited liability company)

a \_\_\_\_\_ limited liability company, and that (s)he has authority  
(name of state)

to sign the same, and acknowledged that (s)he executed the same as the act and deed of said limited liability company.

Sworn to before me this \_\_\_\_ day  
of \_\_\_\_\_, 20\_\_

Notary Public

My Commission Expires on: \_\_\_\_\_

**COMPLETE THIS FORM USING BLACK INK ONLY**



**CERTIFICATE OF AUTHORITY**

I, \_\_\_\_\_  
(Officer other than officer executing proposed documents)

certify that I am \_\_\_\_\_ of the  
(Title)

\_\_\_\_\_  
(Name of Contractor)

(the "Contractor"), a corporation duly organized and in good standing under the

\_\_\_\_\_  
(Law under which organized, e.g., the New York Business Corporation Law)

named in the foregoing agreement; that \_\_\_\_\_  
(Person executing proposal documents)

who signed said agreement on behalf of the Contractor was, at the time of execution the

\_\_\_\_\_ of the Contractor; that said agreement was  
(Title of such person)

duly signed for and in behalf of said Contractor by authority of its Board of Directors, thereunto

duly organized, and that such authority is in full force and effect at the date hereof.

\_\_\_\_\_  
(Signature)

(SEAL)

STATE OF NEW YORK       )  
  ) ss.:  
COUNTY OF                )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came  
\_\_\_\_\_ to me known, and known to me to be  
the \_\_\_\_\_ of \_\_\_\_\_, the  
Corporation described in and which executed the above certificate, who being by me duly sworn did  
depose and say that he, the said \_\_\_\_\_ resides at  
\_\_\_\_\_ and that he is \_\_\_\_\_  
\_\_\_\_\_ of said Corporation and knows the Corporate Seal of the said  
Corporation; that the seal affixed to the above certificate is such Corporate Seal and that it was so  
affixed by order of the Board of Directors of said Corporation, and that he signed his name thereto  
by like order.

\_\_\_\_\_  
Notary Public

**COMPLETE THIS FORM IN BLACK INK ONLY**



# CERTIFICATE OF AUTHORITY-LIMITED LIABILITY COMPANY

I, \_\_\_\_\_,  
(member or manager other than person executing the agreement)

certify that I am a \_\_\_\_\_ of \_\_\_\_\_  
(member/manager) (Name of Limited Liability Company)

(the “LLC”) duly organized under the Laws of the State of \_\_\_\_\_; that  
(Name of State)

\_\_\_\_\_ who signed said agreement on behalf of the LLC.  
(Person Executing Agreement)

was, at the time of execution, a manager of the LLC; that said Contract was duly signed for and on behalf of said LLC and as the act of said LLC for the purposes herein mentioned.

(Signature)

STATE OF NEW YORK )  
COUNTY OF \_\_\_\_\_) SS.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came \_\_\_\_\_, to me known, and known to me to be the \_\_\_\_\_  
*(name of member/manager)* *(member/manager)*  
described in and who executed the above certificate, who being be me duly sworn did depose and say that he resides at \_\_\_\_\_, and he is a  
(member/manager) of said LLC; that he is duly authorized to execute said certificate on behalf of said LLC, and that he signed his name thereto pursuant to such authority.

*Notary Public*

County

My Commission Expires on: \_\_\_\_\_

**COMPLETE THIS FORM USING BLACK INK ONLY**



***Required for all Bids over \$100,000 where a Performance & Payment Bond  
is Required in accordance with the "Notice to Contractors"***

CONTRACT NO. \_\_\_\_\_

**BID BOND AND CONSENT OF SURETY**

KNOW ALL PERSONS BY THESE PRESENTS, That \_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address)  
(hereinafter called the "Principal") and the \_\_\_\_\_ a  
corporation created and existing under the laws of the State of \_\_\_\_\_, having its principal office  
at \_\_\_\_\_ (hereinafter called the "Surety"),  
(PRINT FULL ADDRESS OF SURETY)

are held and firmly bound unto the County of Westchester (hereinafter called the "Obligee"), in the full just  
sum of *Twenty-Five (25%) Percent of the Attached Bid*, good and lawful money of the United States of  
America, for the payment of which said sum of money, well and truly to be made and done, the said  
Principal binds themselves (himself/herself, itself), their (his/her, its) heirs, executors and administrators,  
successors and assigns, and the said Surety binds itself, its successors and assigns jointly and severally,  
firmly by these presents:

WHEREAS, the said Principal has submitted to the County of Westchester, New York, a  
proposal/bid for Contract Number: \_\_\_\_\_  
Project Title: \_\_\_\_\_ and  
\_\_\_\_\_

WHEREAS, under the terms of the Laws of the State of New York as above indicated, the said  
Principal has filed or intends to file this bond to guarantee that the Principal will execute all required contract  
documents, furnish all required insurance and furnish such Performance and Payment Bonds or other bonds  
as may be required in accordance with the terms of the Principal's said proposal/bid.

NOW, THEREFORE, the Surety agrees:

(i) if the Contract for which the preceding estimate and proposal is made, is awarded to the Bidder by  
the County, the Surety shall become bound as Surety and guarantor for the faithful performance of the  
Contract and shall execute and deliver a Performance & Payment Bond, in a form acceptable to the County,  
in the amount of 100% of the total Contract price, or such other amount as may be specified in the Bid  
documents, and shall execute the Contract as party of the third part when required to do so by the Board of  
Acquisition and Contract of the County; and

(ii) if the Bidder shall, upon award of the Contract to the Bidder, fail or refuse to execute the Contract  
and furnish the necessary bonds and insurance certificates, the Surety shall, on demand by the County, pay to  
the County the difference between the amount bid and the amount for which such contract is thereafter  
awarded, together with the cost to the County of reletting said Contract, up to the maximum aggregate  
amount of this bond.

(iii) the condition of the foregoing obligation is such, that if the said Principal shall promptly execute  
and submit, and the County shall accept, all required contract documents including insurance and such  
Performance and Payment Bond or other bonds, all as may be required in accordance with the terms of the  
Principal's said bid/proposal, then this obligation shall be null and void, otherwise to remain in full force and  
virtue.



The Surety, for value received, the receipt of which is hereby acknowledged by the Surety, hereby stipulates and agrees that the obligation of the Surety and of its bond shall remain absolute and shall be in no way impaired, affected or discharged by an extension of time, mutually agreed to by the County and the Bidder, within which the County may award said Contract, and the Surety hereby waives notice of any such extension.

IN TESTIMONY WHEREOF, the said Principal has hereunto set his/her (their, its) hand and the said Surety has caused this instrument to be signed by its duly authorized officer this \_\_\_\_\_ day of \_\_\_\_\_ 200\_\_.

Signed and delivered this \_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_ in the presence of:

\_\_\_\_\_  
(Print Name of Contractor)

\_\_\_\_\_  
(Signature) Principal

\_\_\_\_\_  
(Title of Authorized Officer)

\_\_\_\_\_  
(Print Name of Surety)

By \_\_\_\_\_ Surety  
(Signature)

\_\_\_\_\_  
(Title of Authorized Officer)

(The Surety Company shall append a single copy of a statement of its financial condition, a copy of the resolution authorizing the execution of Bonds by officers of the Surety Company, Power of Attorney, Surety Acknowledgment.)



## **AFFIRMATIVE ACTION PROGRAM REQUIREMENT**

### **Affirmative Action Program**

An approved Affirmative Action Plan shall be required in all contracts for public work where the awarded contract amount exceeds \$50,000 or more than fourteen (14) persons are employed by the Contractor and/or his subcontractors.

Does the Contractor participate in an approved Affirmative Action Program? Yes [ ☐ ]    No [ ☐ ]

If Yes, give name of Program: \_\_\_\_\_

\_\_\_\_\_

If No, how many employees (total) does the Contractor employ. Please also include in your count the number of employees the Contractor and its Subcontractors expect to use on this project: \_\_\_\_\_

An approved Affirmative Action Program shall mean a plan approved or adopted by Westchester County including but not limited to, the Home-Town Plan, the Recruitment Training Program or any other program approved or meeting the requirements of the State or Federal government.

The "Monthly Employment Utilization Report" of the Sample Forms, shall be filled out by the Contractor and/or Subcontractor(s) who are required to have an Affirmative Action Program, prior to the start of the work.

Before any subcontractor is approved for use on this contract it will have to complete and submit the "Affirmative Action Program Requirement- Subcontractors" form of the Sample Forms.

**COMPLETE THIS FORM USING BLACK INK ONLY**



**APPRENTICESHIP TRAINING PROGRAM REQUIREMENT**

Apprenticeship Training Program

An approved Apprenticeship Training Program shall be required in all contracts for public work where the awarded contract amount exceeds \$50,000. and more than fourteen (14) persons are employed by the Contractor or Subcontractor(s).

Will the Contractor utilize apprentices for this  
Contract? Yes [ ] No [ ]

If Contractor Yes, do the apprentices participate in an approved Apprenticeship  
Training Program? Yes [ ] No [ ]

If Contractor Yes, give the name of the Program: \_\_\_\_\_  
\_\_\_\_\_

Will the Subcontractor(s) utilize apprentices for this  
Contract? Yes [ ] No [ ]

If Subcontractor(s) Yes, do the apprentices participate in an approved Apprenticeship  
Training Program? Yes [ ] No [ ]

If Subcontractor(s) Yes, give the name of the Program: \_\_\_\_\_  
\_\_\_\_\_

AN APPROVED APPRENTICESHIP TRAINING PROGRAM SHALL MEAN A NEW YORK  
STATE REGISTERED APPRENTICESHIP TRAINING PROGRAM AS DEFINED UNDER  
THE NEW YORK STATE LABOR LAW.

**COMPLETE THIS FORM USING BLACK INK ONLY**



## **CERTIFICATE OF LICENSE**

(TO BE COMPLETED BY AN ELECTRICAL BIDDER ONLY)

\_\_\_\_\_, being duly sworn  
(Name)

deposes and says that the following statements are true:

(1) I am the \_\_\_\_\_ of the  
(Title)

\_\_\_\_\_, the bidder named on the  
(Name of Contractor)

bid proposal, and I have read and am familiar with: a) the electrical license requirements contained in the Information for Bidders of the bid, b) Chapter 277 Article XVII of the Laws of Westchester County entitled Electrical Licensing Board and the Licensing of Master Electricians, and c) the Westchester County Electrical Licensing Board Rules and Regulations.

(2) I am familiar with, and this bid is being submitted in compliance with, the Westchester County Electrical Licensing Board Rules and Regulations, in particular No. 11, which states as follows:

No individual holding a Master Electrician's License shall lend such License to any person or allow any other person to carry on, engage in, or labor at the business as defined herein of installing, removing, altering, testing, replacing, or repairing electrical systems. A violation of this section by any person holding a License shall be sufficient cause for revocation of such License.

However, nothing herein shall be construed to prohibit the use of a License by the holder thereof for or on behalf of a partnership, corporation or other business association, provided that fifty-one (51) percent or more of the control of the voting capital stock of such partnership, corporation, or other business association is owned by one (1) or more holders of a Westchester County Master Electrical License and that all work performed by such partnership, corporation or other business association is performed by or under the direct supervision of such License holder or holders.

(3) That, as of this date, the bidder submitting the bid possesses the applicable valid Master/"Special" Electrician's license issued by the Westchester County Electrical Licensing Board; that this License is being used in compliance with the Laws of Westchester County and Westchester County Electrical Licensing Board Rules and Regulations; and **I have provided a copy of such license with the sealed bid proposal.**

**COMPLETE THIS FORM USING BLACK INK ONLY**



**CERTIFICATE OF LICENSE (Continued)**

(TO BE COMPLETED BY AN ELECTRICAL BIDDER ONLY)

(4) That all electrical work shall be performed in accordance with the requirements of Chapter 277 Article XVII of the Laws of Westchester County entitled Electrical Licensing Board and the Licensing of Master Electricians and the Westchester County Electrical Licensing Board Rules and Regulations.

(5) That I make this statement in connection with the submission of the bid as proof of the required electrical license, knowing that this statement will be relied upon by the County in the evaluation of that bid.

\_\_\_\_\_

Signature

Sworn to before me  
this \_\_\_\_\_ day of \_\_\_\_\_

\_\_\_\_\_

License No.

\_\_\_\_\_  
Notary Public - State of New York

**COMPLETE THIS FORM USING BLACK INK ONLY**



**CERTIFICATE OF LICENSE**

(TO BE COMPLETED BY A PLUMBING BIDDER ONLY)

\_\_\_\_\_, being duly sworn  
(Name)

deposes and says that the following statements are true:

(1) I am the \_\_\_\_\_ of the  
(Title)

\_\_\_\_\_, the bidder named on the  
(Name of Contractor)

bid proposal, and I have read and am familiar with: a) the plumbing license requirements contained in the Information for Bidders of the bid, b) Chapter 277 Article XV of the Laws of Westchester County entitled Westchester County Board of Plumbing Examiners and County-wide Plumbing License, and c) the Westchester County Board of Plumbing Examiners Rules and Regulations.

(2) I am familiar with, and this bid is being submitted in compliance with, Section 277.509A of Article XV of Chapter 277 of the Laws of Westchester County, which states as follows:

A. No holder of a license or certification issued under this article shall authorize, consent to or permit the use of his or her license or certification by or on behalf of any other person. No person who has not qualified or obtained a license or certification under this article shall represent himself or herself to the public as holder of a license or certification issued under this article, either directly, by means of signs, sign cards metal plates or stationery, or indirectly in any other manner whatsoever. However, nothing herein shall be construed to prohibit the use of a license by the holder thereof for or on behalf of a partnership, corporation or other business association, provided that 51 percent or more of the control of the voting capital stock of such partnership, corporation or other business association is owned by one or more holders of a Westchester County master plumbing license and that all work performed by such partnership, corporation or other business association is performed by or under the direct supervision of such license holder or holders.

(3) That, as of this date, the bidder submitting the bid possesses a valid Master Plumber's license issued by the Westchester County Board of Plumbing Examiners; that this License is being used in compliance with the Laws of Westchester County and the Westchester County Board of Plumbing Examiners Rules and Regulations; and **I have provided a copy of such license with the sealed bid proposal.**

**COMPLETE THIS FORM USING BLACK INK ONLY**



**CERTIFICATE OF LICENSE (Continued)**

(TO BE COMPLETED BY A PLUMBING BIDDER ONLY)

(4) That all plumbing work shall be performed in accordance with the requirements of Chapter 277, Article XV of the Laws of Westchester County entitled Westchester County Board of Plumbing Examiners and County-wide Plumbing License, and the Westchester County Board of Plumbing Examiners Rules and Regulations.

(5) That I make this statement in connection with the submission of the bid as proof of the required plumbing license, knowing that this statement will be relied upon by the County in the evaluation of that bid.

\_\_\_\_\_

Signature

Sworn to before me  
this \_\_\_\_\_ day of \_\_\_\_\_

\_\_\_\_\_

License No.

\_\_\_\_\_  
Notary Public - State of New York

**COMPLETE THIS FORM USING BLACK INK ONLY**



**CERTIFICATE OF LICENSE**

(TO BE COMPLETED BY A HAULING BIDDER OR SUBCONTRACTOR ONLY)

\_\_\_\_\_, being duly sworn  
(Name)

deposes and says that the following statements are true:

(1) I am the \_\_\_\_\_ of the  
(Title)

\_\_\_\_\_, the bidder/subcontractor (circle one)  
(Name of Contractor)

named on the foregoing bid proposal, and I have read and am familiar with the hauling license requirements contained in the Information for Bidders of the foregoing bid.

(2) That, as of this date, the bidder submitting the foregoing bid/subcontractor of the bidder submitting the foregoing bid (circle one) possesses a valid \_\_\_\_\_ license  
(License type, i.e. Class "A")  
issued by the Westchester County Solid Waste Commission.

(3) That all hauling work shall be performed in accordance with the requirements of Chapter 826-a of the Laws of Westchester County.

(4) That I make this statement in connection with the submission of the foregoing bid as proof of the required hauling license, knowing that this statement will be relied upon by the County in the evaluation of that bid.

\_\_\_\_\_  
Signature

Sworn to before me  
this \_\_\_\_\_ day of \_\_\_\_\_

\_\_\_\_\_  
License No.

\_\_\_\_\_  
Notary Public - State of New York

**COMPLETE THIS FORM USING BLACK INK ONLY**



## **STORMWATER POLLUTION PREVENTION CERTIFICATION**

I certify under penalty of law that I understand and agree to comply with the terms and conditions of the Stormwater Pollution Prevention Plan ("SPPP") for the construction site identified in such SPPP as a condition of authorization to discharge stormwater. I also understand the operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and it is unlawful for any person to contribute to a violation of water quality standards.

\_\_\_\_\_  
Signature

Sworn to before me

This \_\_\_\_\_ day of \_\_\_\_\_, 200\_\_.

\_\_\_\_\_  
Notary Public – State of New York, County of \_\_\_\_\_

My Commission Expires on \_\_\_\_\_.

***This Certification will also have to be signed by your subcontractors. Additional copies of this form can be acquired from the Department of Public Works.***

**COMPLETE THIS FORM USING BLACK INK ONLY**



**PREVAILING WAGE RATES AND SUPPLEMENTS**

Compliance with the New York State Construction (Article 1, Section 17) and the New York State Labor Law (Section 220)

Is your firm in full compliance with the New York State Labor Law?  
(Please check one)

Yes \_\_\_\_\_

No \_\_\_\_\_

Are the wage supplements paid into a Federally approved program?  
(Please check one)

Yes \_\_\_\_\_

No \_\_\_\_\_

If Yes, please indicate which program:

---

---

---

If No, please indicate how the supplements are being paid:

---

---

---

Yes, I have read and understand the terms of this Contract and the laws of this Agreement:

\_\_\_\_\_  
Signature

Date: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

Date: \_\_\_\_\_

**COMPLETE THIS FORM USING BLACK INK ONLY**



**MINORITY/WOMEN BUSINESS ENTERPRISE PROGRAM QUESTIONNAIRE**  
**QUESTIONNAIRE REGARDING BUSINESS ENTERPRISES**  
**OWNED AND CONTROLLED BY WOMEN OR PERSONS OF COLOR**

As part of the County's program to encourage the meaningful and significant participation of business enterprises owned and controlled by persons of color or women in County contracts, and in furtherance of Section 308.01 of the Laws of Westchester County, completion of this form is required.

A "business enterprise owned and controlled by women or persons of color" means a business enterprise, including a sole proprietorship, limited liability partnership, partnership, limited liability corporation, or corporation, that either:

- 1.) meets the following requirements:
  - a. is at least 51% owned by one or more persons of color or women;
  - b. is an enterprise in which such ownership by persons of color or women is real, substantial and continuing;
  - c. is an enterprise in which such ownership interest by persons of color or women has and exercises the authority to control and operate, independently, the day-to-day business decisions of the enterprise; and
  - d. is an enterprise authorized to do business in this state which is independently owned and operated.
- 2.) is a business enterprise certified as a minority business enterprise ("MBE") or women business enterprise ("WBE") pursuant to Article 15-a of the New York State Executive Law and the implementing regulations, 9 New York Code of Rules and Regulations subtitle N Part 540 et seq., **OR**
- 3.) is a business enterprise certified as a small disadvantaged business concern pursuant to the Small Business Act, 15 U.S.C. 631 et seq., and the relevant provisions of the Code of Federal Regulations as amended.

Please note that the term "persons of color," as used in this form, means a United States citizen or permanent resident alien who is and can demonstrate membership of one of the following groups:

- (a) Black persons having origins in any of the Black African racial groups;
- (b) Hispanic persons of Mexican, Puerto Rican, Dominican, Cuban, Central or South American descent of either Indian or Hispanic origin regardless of race;
- (c) Native American or Alaskan native persons having origins in any of the original peoples of North America; or
- (d) Asian or Pacific Islander persons having origins in any of the Far East countries, South East Asia, the Indian subcontinent or the Pacific Islands.



1. Are you a business enterprise owned and controlled by women or persons of color in accordance with the standards listed above?

\_\_\_\_\_ No

\_\_\_\_\_ Yes

**Please note: If you answered “yes” based upon certification by New York State and/or the Federal government, official documentation of the certification must be attached.**

2. If you answered “Yes” above, please check off below whether your business enterprise is owned and controlled by women, persons of color, or both.

\_\_\_\_\_ Women

\_\_\_\_\_ Persons of Color (*please check off below all that apply*)

\_\_\_\_\_ Black persons having origins in any of the Black African racial groups

\_\_\_\_\_ Hispanic persons of Mexican, Puerto Rican, Dominican, Cuban, Central or South American descent of either Indian or Hispanic origin regardless of race

\_\_\_\_\_ Native American or Alaskan native persons having origins in any of the original peoples of North America

\_\_\_\_\_ Asian or Pacific Islander persons having origins in any of the Far East countries, South East Asia, the Indian sub-continent or the Pacific Islands

Name of Business Enterprise: \_\_\_\_\_

Address: \_\_\_\_\_

Name and Title of person completing questionnaire: \_\_\_\_\_

Signature: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Date



## CONTRACTOR'S DISCLOSURE STATEMENT

### Instructions:

The County of Westchester, in order to insure that it employs responsible contractors for its major construction projects, requires all bidders for construction contracts (which includes reconstruction and repair) with an estimated value of One Hundred Thousand (\$100,000.00) or more Dollars to answer completely and swear to the questions below. If a Contractor Disclosure Statement has been included with this bid specification, then the County has determined that it is applicable to this bid. All subcontractors whose contract has a value of One Hundred Thousand (\$100,000.00) or more Dollars must also submit a Contractor Disclosure Statement.

Please read the questions carefully and answer them completely. Before you answer these questions, please read the definitions of terms used in these questions. While you may contact the Department of Public Works if you have questions about this form, the County cannot provide you with any legal advice for which you must contact your own lawyer. **FAILURE TO COMPLETE THIS CONTRACTOR DISCLOSURE STATEMENT IN GOOD FAITH MAY RESULT IN THE REJECTION OF YOUR BID.**

If you have previously filled out a Contractor Disclosure Statement for another County bid and only some but not all of your responses have changed, attach a copy of the prior Contractor Disclosure Statement and check #2 below indicating changes only and only answer those questions which have changed since you last filled out the Contractor Disclosure Statement.

If you have previously completed a Contractor Disclosure Statement for another County bid and nothing has changed in your responses to the questions, then check #3 and fill out the attached No Change Affidavit. Attach a copy of the prior Contractor Disclosure Statement to the No Change Affidavit.

NOTE IF THE SPACES PROVIDED FOR ANSWERS ARE NOT SUFFICIENT FOR YOU TO COMPLETE YOUR ANSWER TO A PARTICULAR QUESTION, THEN ATTACH ADDITIONAL PAGES TO THIS CONTRACTOR DISCLOSURE STATEMENT WHICH INDICATE THE NUMBER OF THE QUESTION THAT YOU ARE COMPLETING THE ANSWER FOR.

ALSO DO NOT LEAVE ANY ANSWERS BLANK. IF A QUESTION IS NOT APPLICABLE, ANSWER - N/A – AND OFFER A BRIEF EXPLANATION AS TO WHY THE QUESTION DOES NOT APPLY.

### Definitions:

**Affiliate** – is another Business Entity in which the Contractor or one or more of the Principals of the Contractor has an ownership interest of more than fifty (50%) percent. An Affiliate is also another Business Entity in which the Parent of the Contractor owns more than fifty (50%) percent of that other Business Entity.

**Agency or Government Agency** – is any Federal, State, City or other local agency including, but not limited to, departments, offices, quasi-public agencies, public authorities and



## CONTRACTOR'S DISCLOSURE STATEMENT

corporations, boards of education and higher education, public development corporations and local development corporations.

**Assignee** – is a person or Business Entity to whom an assignment (e.g., a transfer to another of any property, real or personal, including a transfer of any rights in such property) is made.

**Business Address** – is the location of principal executive offices and is also the primary place of business in Westchester County, if different.

**Business Entity** – is any profit-seeking business including, but not limited to, corporations, limited and general partnerships, joint ventures and individual (sole) proprietorships.

**Contract** – is any binding agreement with any Government Agency or other Business Entity for the provision of goods, or services including, but not limited to, construction.

**Contractor** – is the Business Entity submitting this Contractor Disclosure Statement.

**Contractor Disclosure Statement** – is this document.

**Control** – A Business Entity controls another Business Entity when:

- The controlling Business Entity owns more than fifty (50%) percent of the controlled Business Entity, or
- The controlling Business Entity directs or has the right to direct daily operations of the controlled Business Entity, or
- The same person is a Principal in both businesses and directs the daily operations of the controlled Business Entity.

**Investigations** – is any official inquiry by any Government Agency, with the exception of background investigations for employment.

**Officer** – is any individual who serves in the function of chief executive officer, chief financial officer or chief operating officer of the Business Entity by whatever titles known.

**Parent** – is a Business Entity which owns more than fifty (50%) percent of another Business Entity.

**Principal** – is an individual, partnership, joint venture or corporation which holds ten (10%) percent or more ownership interest in the Business Entity.

**Partner** – shall mean a person or Business Entity that has a joint ownership in a particular business, but the ownership interest is not as a shareholder of a corporation.

**Successor** – is a person or Business Entity that takes the place that another has left. With reference to a corporation, a successor shall mean another corporation which, through amalgamation, consolidation, or other legal succession, becomes invested with the rights and assumes the burdens of the first corporation.



## CONTRACTOR'S DISCLOSURE STATEMENT

CONTRACT NO.: \_\_\_\_\_

☐ Check if Subcontractor

### Type Of Submission

*(Put a X or √ next to the applicable type of submission)*

1. **Fully Completed Contractor Disclosure Statement** \_\_\_\_\_  
*(Sign Oath on last page of Disclosure Statement)*

2. **Changes Only Contractor Disclosure Statement** \_\_\_\_\_  
*(Attach copy of previously filed Contractor Disclosure Statement that you are amending. Denote any changes on the following Contractor Disclosure Statement. Sign Oath on last page of this Disclosure Statement)*

3. **No Change** \_\_\_\_\_  
*(Fill out "No Change Affidavit" [below] and attach copy of previously filed Contractor Disclosure Statement)*

## **NO CHANGE AFFIDAVIT**

I swear that the attached Contractor Disclosure Statement was submitted to the County of Westchester on \_\_\_\_\_ and was true as signed, and that  
*(Date)*  
since the above date nothing has occurred which changes in any way the responses made to the questions contained in the attached Contractor Disclosure Statement.

Submitted by: \_\_\_\_\_  
*(Signature)*

Name (Print): \_\_\_\_\_

Title (Print): \_\_\_\_\_

Sworn to before me this \_\_\_\_ day of \_\_\_\_\_, 200\_\_

\_\_\_\_\_  
**NOTARY PUBLIC**

**COMPLETE THIS FORM USING BLACK INK ONLY**



**CONTRACTOR'S DISCLOSURE STATEMENT**

**Questions:**

1. The Business Address and taxpayer identification number of Contractor and primary telephone number for such location.

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2. List the Business Addresses and primary telephone numbers for such locations, if different from answer to #1 above, where Contractor has been located over the last five (5) years.

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3. List all other names and taxpayer identification numbers under which the Contractor, or the Principals and Officers of Contractor, have conducted business within the prior five (5) years.

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4. For any response to #3 above, list any and all Westchester County contracts that were awarded to such "other name" Business Entity.

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5. List the type of Business Entity that the Contractor is presently organized as (for example - sole proprietorship, partnership, joint venture or corporation).

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**COMPLETE THIS FORM USING BLACK INK ONLY**



CONTRACTOR'S DISCLOSURE STATEMENT

6. If Contractor is a corporation, list the date that the Contractor was incorporated. Also list the name of the Government Agency and location of said Agency in which a certificate of incorporation, certificate of doing business or equivalent, has been filed and the date of any amendments thereto. If, however, the Contractor is a partnership, list the date that the partnership was formed and the name of the Government Agency and location of said Agency in which a business certificate for partnership or equivalent has been filed.

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7. List all the names, current Business Addresses and business telephone numbers of the Principals and Officers of the Contractor. If the Contractor is a partnership, list all partners and their business telephone numbers.

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8. List the names, current Business Addresses, telephone numbers and taxpayer identification numbers of all Affiliates of the Contractor.

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9. List all the names, Business Addresses and telephone numbers of the Principals and Officers of the Affiliates listed in response to #7 above. If the Affiliate is a partnership, list the Business Addresses and business telephone numbers of all partners.

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**COMPLETE THIS FORM USING BLACK INK ONLY**



CONTRACTOR'S DISCLOSURE STATEMENT

10. Is the Contractor Controlled by another Business Entity? \_\_\_\_ Yes \_\_\_\_ No. If you answered yes, please identify the name, Business Address and telephone number of that Controlling Business Entity and list any contracts that the Controlling Business Entity has had with Westchester County in the past five (5) years?

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11. If the Contractor has Control of any other Business Entity that has had a Contract with the County of Westchester in the past five (5) years, please identify the name, Business Address and telephone number of that Controlled Business Entity.

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12. List any and all contract sanctions imposed on the Contractor or on a Business Entity listed in response to #3 above that was imposed by a Government Agency during the prior five (5) years, including, but not limited to, all cautions, suspensions, debarments, cancellations of a contract based on business conduct, declarations of default, determinations of ineligibility to bid or whether any proceedings to determine eligibility to bid are pending.

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13. List the contract sanction history for the past five (5) years, as defined in #12 above, for any Affiliate of the Contractor.

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**COMPLETE THIS FORM USING BLACK INK ONLY**



**CONTRACTOR'S DISCLOSURE STATEMENT**

14. If you answered yes to #10 above, list the contract sanction history as defined in #12 above for the Controlling Business Entity during the past five (5) years.

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15. List any and all prevailing wage or supplement payment violations; state labor law violations deemed willful and any other federal or state citations, notices, violation orders, pending administrative hearings or proceedings or determinations of a violation of any labor law or regulation regarding the Contractor.

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16. List all Investigations of the Contractor, its Principals and Officers or, if a partnership, of the Contractor's Partners. Also list all investigations of Affiliates, their Principals and Officers or, if a partnership, of their Partners.

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**COMPLETE THIS FORM USING BLACK INK ONLY**



CONTRACTOR'S DISCLOSURE STATEMENT

17. Have all Federal and State income tax returns, if required, been filed by Contractor during the last five (5) years? \_\_\_\_Yes \_\_\_\_No If you answered no, please explain why such returns were not filed.

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18. Are there any criminal proceedings pending against the Contractor or any Principal or Officer of the Contractor or partner, if Contractor is a partnership? \_\_\_\_Yes \_\_\_\_No If you answered yes, please provide details of the pending criminal proceedings.

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19. List the record of all criminal convictions of the Contractor, any Principal or Officer or partner, if Contractor is a partnership, and of any former Principal or Officer, of the Contractor or former partner, if Contractor is a partnership, for any crime related to truthfulness or business conduct and for any felony committed within the prior ten (10) years.

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20. List all bankruptcy proceedings that the Contractor or its Affiliates have been the subject of within the past seven (7) years, whether pending or completed.

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**COMPLETE THIS FORM USING BLACK INK ONLY**



CONTRACTOR'S DISCLOSURE STATEMENT

21. Is the Contractor a successor, assignee or Affiliate of a Business Entity that has ever been denied a Contract or deemed ineligible to bid on a Government Agency contract?

\_\_\_\_ Yes   No \_\_\_\_      If you answered yes, explain below.

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**OATH**

I swear that all of the above answers are true based on my knowledge of the facts, or are believed by me to be true, based upon a review of records containing the facts or based upon information I obtained from someone who has knowledge of the facts; and that I have authority to sign this document; and that the answers given above have not been made in a manner intended to deceive or to defeat the purpose of the Contractor Disclosure Statement, which is to assist the County of Westchester in determining if the Contractor is a responsible bidder.

Submitted by: \_\_\_\_\_  
(Signature)

Name (Print): \_\_\_\_\_

Title (Print): \_\_\_\_\_

Sworn to before me this \_\_\_\_ day of  
\_\_\_\_\_, 20\_\_

\_\_\_\_\_  
**NOTARY PUBLIC**

**COMPLETE THIS FORM USING BLACK INK ONLY**



## **REQUIRED DISCLOSURE OF RELATIONSHIPS TO COUNTY**

**(Prior to execution of a contract by the County, a potential County contractor must complete, sign and return this form to the County)**

**Contract Name and/or ID No.:**

*(To be filled in by County)*

**Name of Contractor:**

*(To be filled in by Contractor)*

*A potential County contractor must complete this form as part of the proposed County contract.*

- 1.) Are any of the employees that the Contractor will use to carry out this contract also a County officer or employee, or the spouse, child, or dependent of a County officer or employee?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, please provide details (attach extra pages, if necessary): \_\_\_\_\_

- 2.) Are any of the owners of the Contractor or their spouses a County officer or employee?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, please provide details (attach extra pages, if necessary): \_\_\_\_\_

- 3.) Do any County officers or employees have an **interest**<sup>1</sup> in the Contractor or in any approved subcontractor that will be used for this contract?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, please provide details (attach extra pages, if necessary): \_\_\_\_\_

By signing below, I hereby certify that I am authorized to complete this form for the Contractor.

\_\_\_\_\_  
Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

<sup>1</sup> "Interest" means a direct or indirect pecuniary or material benefit accruing to a County officer or employee, his/her spouse, child or dependent, whether as the result of a contract with the County or otherwise. For the purpose of this form, a County officer or employee shall be deemed to have an "interest" in the contract of:

- 1.) His/her spouse, children and dependents, except a contract of employment with the County;
- 2.) A firm, partnership or association of which such officer or employee is a member or employee;
- 3.) A corporation of which such officer or employee is an officer, director or employee; and
- 4.) A corporation of which more than five (5) percent of the outstanding capital stock is owned by any of the aforesaid parties.



**QUESTIONNAIRE REGARDING BUSINESS ENTERPRISES**  
**OWNED AND CONTROLLED BY**  
**SERVICE-DISABLED VETERANS**

The County believes it is a laudable goal to provide business opportunities to veterans who were disabled while serving our country, and wants to encourage the participation in County contracts of certified business enterprises owned and controlled by service-disabled veterans. As part of the County's program to encourage the participation of such business enterprises in County contracts, and in furtherance of Article 17-B of the New York State Executive Law, we request that you answer the questions listed below.

The term "Certified Service-Disabled Veteran-Owned Business" shall mean a business that is a certified service-disabled veteran-owned business enterprise under the New York State Service-Disabled Veteran-Owned Business Act (Article 17-B of the Executive Law).

1. Are you a business enterprise that is owned and controlled by a service-disabled veteran in accordance with the standards listed above?

\_\_\_\_\_ No  
\_\_\_\_\_ Yes

2. Are you certified with the State of New York as a Certified Service-Disabled Veteran-Owned Business?

\_\_\_\_\_ No  
\_\_\_\_\_ Yes

3. If you are certified with the State of New York as a Certified Service-Disabled Veteran-Owned Business, please attach a copy of the certification.

Name of Firm/Business Enterprise: \_\_\_\_\_

Address: \_\_\_\_\_

Name/Title of Person completing Questionnaire: \_\_\_\_\_

Signature: \_\_\_\_\_

STATE OF NEW YORK        )  
                                      ) ss.:  
COUNTY OF                 )

\_\_\_\_\_

Notary Public

Date:



**SCHEDULE "F"**  
**CRIMINAL BACKGROUND DISCLOSURE**  
**INSTRUCTIONS**

Pursuant to Executive Order 1-2008, the County is required to maintain a record of criminal background disclosure from all persons providing work or services in connection with any County contract, including leases of County-owned real property and licenses:

- a.) If any of the persons providing work or services to the County in relation to a County contract are not subject to constant monitoring by County staff while performing tasks and/or while such persons are present on County property pursuant to the County contract; and
- b.) If any of the persons providing work or services to the County in relation to a County contract may, in the course of providing those services, have access to sensitive data (for example SSNs and other personal/secure data); facilities (secure facilities and/or communication equipment); and/or vulnerable populations (for example, children, seniors, and the infirm).

In those situations, the persons who must provide a criminal background disclosure ("Persons Subject to Disclosure") include the following:

- a.) Consultants, Contractors, Licensees, Lessees of County-owned real property, their principals, agents, employees, volunteers or any other person acting on behalf of said Contractor, Consultant, Licensee, or Lessee who is at least sixteen (16) years old, including but not limited to Subconsultants, subcontractors, Sublessess, or Sublicensees who are providing services to the County, and
- b.) Any family member or other person, who is at least sixteen (16) years old, residing in the household of a County employee who lives in housing provided by the County located on County property.

Under Executive Order 1-2008, it is the duty of every County Consultant, Contractor, Licensee, or Lessee to inquire of each and every Person Subject to Disclosure and disclose whether they have been convicted of a crime or whether they are subject to pending criminal charges, and to submit this form with that information.<sup>1</sup> Accordingly, you are required to complete the attached Criminal Background Disclosure Form and Certification.

Please note that under no circumstances shall the existence of a language barrier serve as a basis for the waiver of or an exception from the disclosure requirements of Executive Order 1-2008. If translation services are required by the Consultant, Contractor, Licensee, or Lessee to fulfill this obligation, it shall be at the sole cost and expense of the Consultant, Contractor, Licensee, or Lessee.

Please also note that the conviction of a crime(s) and/or being subject to a pending criminal charge(s) will not automatically result in a denial of a person's right to work on a County contract, right to be on County property, or license, but may, if the County determines that the prior conviction(s) or pending criminal charge(s) create an unacceptable risk. However, if a person fails to list or falsifies any part of his/her conviction history or any pending criminal charge(s) for any reason, he/she may be prohibited from working or being on County property without any risk assessment. If it is later determined that a Person Subject to Disclosure failed to disclose a criminal conviction or pending criminal charge for any reason, his/her right to work on a County contract, be on County property, or license may be terminated at any time.

Please further note that, pursuant to Executive Order 1-2008, and subject to the applicable provisions of New York Correction Law §§ 752 and 753, the County has the right to bar a Person Subject to Disclosure from providing work or services to the County or from being on County property if any such person has:

- a.) A conviction of a crime(s);
- b.) A pending criminal proceeding for a crime(s); or
- c.) Refused to answer questions concerning his/her criminal background

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<sup>1</sup> For these disclosures, a "crime" or "pending criminal charge" includes all felonies and misdemeanors as defined under the New York State Penal Law or the equivalent under Federal law or the laws of any other State.



Please finally note that any failure by a County Consultant, Contractor, Licensee, or Lessee to comply with the disclosure requirements of Executive Order 1–2008 may be considered by the County to be a material breach and shall be grounds for immediate termination by the County of the related County contract.

### **Exemptions**

Executive Order 1-2008 exempts from the aforementioned disclosure requirements Persons Subject to Disclosure:

- a.) for whom the County has already conducted a background check and issued a security clearance that is in full force and effect; and
- b.) for whom another state or federal agency having appropriate jurisdiction has conducted a security and/or background clearance or has implemented other protocols or criteria for this purpose that apply to the subject matter of a County contract that is in full force and effect.

If you are claiming an exemption for one or more Persons Subject to Disclosure, you must notify the Procuring Officer<sup>2</sup>. The Procuring Officer will then determine whether the Person(s) Subject to Disclosure are actually exempt, and provide written notification of his/her determination. If the Procuring Officer determines that a Person Subject to Disclosure is not exempt, the Procuring Officer will notify you of that determination, and you will have to include disclosures for that person on your Criminal Background Disclosure Form and Certification.

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<sup>2</sup> Procuring Officer” shall mean the head of the department or the individual or individuals authorized by the head(s) of the department(s) undertaking the procurement and with respect to those matters delegated to the Bureau of Purchase and Supply pursuant to Section 161.11(a) of the Laws of Westchester County, the Purchasing Agent.



**Subconsultants, Subcontractors, Sublessees, or Sublicensees**

Under Executive Order 1-2008, it is your duty to ensure that any and all approved subconsultants, subcontractors, sublessees, or sublicensees complete and submit the attached Criminal Background Disclosure Form and Certification for all of their respective Persons Subject to Disclosure. This must be done before such a subconsultant, subcontractor, sublessees, or sublicensees can be approved to perform work on a contract.

**New Persons Subject to Disclosure**

Under Executive Order 1-2008, you have a **CONTINUING OBLIGATION** to maintain the accuracy of the Criminal Background Disclosure Form and Certification (and any accompanying documentation) for the duration of this contract, including any amendments or extensions thereto. Accordingly, it is your duty to complete and submit an updated Criminal Background Disclosure Form and Certification whenever there is a new Person Subject to Disclosure for this contract. **NO NEW PERSON SUBJECT TO DISCLOSURE SHALL PERFORM WORK OR SERVICES OR ENTER ONTO COUNTY PREMISES UNTIL THE UPDATED CRIMINAL BACKGROUND DISCLOSURE FORM AND CERTIFICATION IS FILED WITH THE PROCURING OFFICER.** You shall also provide the County with any other updates that may be necessary to comply with the disclosures required by Executive Order 1-2008.

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*PLEASE CONTINUE TO THE*

*Criminal Background Disclosure Form and Certification*

*BEGINNING ON THE NEXT PAGE*



**CONTRACT #:** \_\_\_\_\_

Name of Consultant, Contractor, Lessee, or Licensee: \_\_\_\_\_

**CRIMINAL BACKGROUND DISCLOSURE  
FORM AND CERTIFICATION**

If this form is being completed by a subconsultant, subcontractor, sublessee, or sublicensee, please consider all references in this form to "consultant, contractor, lessee, or licensee" to mean "subconsultant, subcontractor, sublessee, or sublicensee" and check here: \_\_\_\_\_

I, \_\_\_\_\_, certify that I am a principal or a  
(Name of Person Signing Below)

representative of the Consultant, Contractor, Lessee, or Licensee and I am authorized to complete and execute this Criminal Background Disclosure Form and Certification. I certify that I have asked each Person Subject to Disclosure the following questions:

- **Have you or your company ever been convicted of a crime (all felonies and misdemeanors as defined under the New York State Penal Law or the equivalent under Federal law or the laws of any other State) including, but not limited to, conviction for commission of fraud, embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property?**
- **Are you or your company subject to any pending criminal charges (all felonies and misdemeanors as defined under the New York State Penal Law or the equivalent under Federal law or the laws of any other State)?**

I certify that the names and titles of Persons Subject to Disclosure who refused to answer **either** of the questions above are:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

(If more space is needed, please attach separate pages labeled "REFUSED to Answer - Continued.")



I certify that the names and titles of Persons Subject to Disclosure who answered “Yes” to **either of the** questions above are:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

(If more space is needed, please attach separate pages labeled “YES Answers - Continued.”)

Each Person Subject to Disclosure listed above who has either **been convicted of a crime(s)** and/or **is subject to a pending criminal charge(s)** must answer additional questions. Those questions are below.

A Person Subject to Disclosure who has **been convicted of a crime(s)** must respond to the following (please attach separate pages with responses for each person, with their name and title):

- 1.) Describe the reason for being on County property if applicable, identify the specific duties and responsibilities on this project which you intend to perform for the County, including but not limited to, access to sensitive data and facilities and access to vulnerable populations.
- 2.) Please list all criminal convictions along with a brief description of the crime(s) (including all felonies and misdemeanors as defined under the New York State Penal Law or the equivalent under Federal law or the laws of any other State).
- 3.) Please provide the date and place of each conviction.
- 4.) Please provide your age at the time of each crime for which you were convicted.
- 5.) Please provide the legal disposition of each case.
- 6.) Please provide any information either produced by yourself or someone on your behalf in regards to your rehabilitation and good conduct.

A Person Subject to Disclosure who **is subject to a pending criminal charge(s)** must respond to the following (please attach separate pages with responses for each person, with their name and title):

- 1.) Describe the reason for being on County property and if applicable, identify the specific duties and responsibilities on this project which you intend to perform for the County, including but not limited to, access to sensitive data and facilities and access to vulnerable populations.
- 2.) Please identify all pending criminal charges (all felonies and misdemeanors as defined under the New York State Penal Law or the equivalent under Federal law or the laws of any other State).
- 3.) Please briefly describe the nature of the pending charges and the date upon which it is alleged that a crime was committed.

I hereby certify that all of the information provided herein (and in any and all attachments) is true and accurate and that all disclosures required by Executive Order 1-2008 and this Criminal Background Disclosure Form and Certification have been completed. By my signature below, I hereby affirm that all of the facts, statements and answers contained herein (and in any and all attachments) are true and correct. I understand that providing false or incomplete information or withholding by omission or intention pertinent information will be cause for refusing further consideration of my being utilized under this contract.

**It is understood and agreed that no Person Subject to Disclosure shall perform work or services or enter onto County property until this required Criminal Background Disclosure Form and Certification is filed with the Procuring Officer.**



**It is understood and agreed that to the extent that new Persons Subject to Disclosure are proposed to perform work or provide services under this contract after filing of this Criminal Background Disclosure Form and Certification with the Procuring Officer, such new Persons Subject to Disclosure shall not perform work or provide services or enter into County property until an updated Criminal Background Disclosure Form and Certification has been filed with the Procuring Officer.**

**It is further understood and agreed that the consultant, contractor, lessee, or licensee has a continuing obligation to maintain the accuracy of the Criminal Background Disclosure Form and Certification for the duration of this contract, including any amendments or extensions thereto, and shall provide any updates to the information to the County as necessary to comply with the requirements of Executive Order 1-2008.**

\_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

\_\_\_\_\_  
Date



**INFORMATION FOR BIDDERS**



**2. INFORMATION FOR BIDDERS**

**DEPARTMENT OF PUBLIC WORKS**

**Division of Engineering**



## INFORMATION FOR BIDDERS

### 1. ADDENDA AND INTERPRETATION

No interpretation of the meaning of the plans, specifications or other contract documents will be made to any bidder orally. Every request for such interpretation should be in writing addressed to the Westchester County Department of Public Works, Division of Engineering, Room 512, Michaelian Office Building, White Plains, New York, and to be given consideration must be received at least five (5) days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be posted on the internet not later than three (3) days prior to the date fixed for the opening of bids. Revisions to plans or drawings requiring the issuance of additional or revised drawings will be noted on the internet with instructions how to acquire copies of such revised plans or drawings. Failure of any bidder to receive any such addendum or interpretation or any other form, instrument or document shall not relieve any bidder from any obligation under its bid as submitted. All addenda so issued shall become part of the contract documents.

A bidder's failure to request a clarification, interpretation, etc. of any portion of the plans, specifications, or contract or to point out any inconsistency therein will preclude such bidder from thereafter claiming any ambiguity, inconsistency, or error which should have been discovered by a reasonably prudent bidder and from asserting any claim for damages arising directly or indirectly therefrom.

### 2. VOIDED CLAUSES

Wherever in this booklet any page is stamped "VOID", only the section(s) or paragraph(s) so stamped are void. All other sections(s) and paragraph(s) remain in full force and effect.

### 3. PRE-BID SITE INSPECTION

Unless otherwise stated, on building construction work, bidders are free and encouraged to examine the work site during normal work hours preceding the date on which bids are to be opened. For those bidders requesting further clarification of the conditions, an appointment with the County's representative, on the eighth day (Tuesday) prior to the bid opening date, can be requested, by contacting the, Department of Public Works, Division of Engineering at (914) 995-2553.

Each bidder must inform itself fully of the conditions relating to the work to be performed. Failure to do so will not relieve a successful bidder of the obligation to furnish all material and labor necessary to carry out the provisions of the contract documents and to complete the contemplated work for the consideration set forth in its Bid.

At the time of the opening of bids each bidder will be presumed to have inspected the sites and to have read and to be thoroughly familiar with the Plans and Contract Documents (including all addenda).

### 4. BID SECURITY

**Bid Security shall be provided in accordance with the "Notice to Contractors."** Where



## INFORMATION FOR BIDDERS

a Performance and Payment bond is required in the Notice to Contractors, the executed “Bid Bond and Consent of Surety” of the Proposal Pages must be submitted with the Bid when the bid is more than \$100,000. The successful bidder, no matter the size of its bid, will be required to furnish a Performance and Payment Bond.

Where a Performance and Payment Bond is not specified in the Notice to Contractors, then the required Security may be furnished in the form of a Certified Check; drawn to the order of “County of Westchester, clipped to the top of the front cover and submitted with the Bid.

Certified checks submitted will be returned to all bidders submitting certified checks within three (3) days after the opening of bids unless the bidder or bidders submitting certified checks are among the two lowest bidders. At any time after the opening of bids, the second lowest bidder, if the second lowest bidder has submitted a certified check, may substitute a bid bond for the certified check by presenting the bond to the Secretary of the Board of Acquisition and Contract. This bond shall be in the form and coverage required by the County and shall be in an amount not less than the amount of the bidder's certified check. After receipt, approval and acceptance of the bond by the County, the County will forward to the bidder a County check in an amount equal to the bidder's certified check.

All certified checks submitted will be returned to the two lowest bidders within 48 hours after the successful bidder executes the required contract and furnishes the County with all necessary bonds and insurance certificates.

In the event that the successful bidder has not executed the required contract and furnished the required bonds and insurance certificates within forty-five (45) days after the opening of bids, the County, upon demand from a bidder (except for the successful bidder), will send a County check to the bidder in the amount of the bidder's certified check.

Failure of the successful bidder to execute the contract and furnish the necessary bonds and insurance certificates shall result in forfeiture of the bid security, such sum to be retained by the County as liquidated damages.

### 5. PERFORMANCE AND PAYMENT BOND

#### **If required pursuant to "Notice to Contractors."**

If a Performance and Payment bond is required in accordance with the “Notice to Contractors”, the “Bid Bond and Consent of Surety” of the Proposal Pages must be executed by the Contractor’s Surety Company and submitted with the Bid for all bids over \$100,000.

Simultaneously with its delivery of the executed contract, the successful bidder shall deliver to the County an executed bond in the amount of one hundred percent of the accepted bid as security for the faithful performance of its contract and in the amount of one hundred percent for the payment of all persons performing labor or furnishing materials in connection therewith, prepared in satisfactory form and having as surety thereon such bond underwriter or surety that appears on the U.S. Treasury’s listing of approved sureties (Department Circular 570), and is licensed to transact business in New York State. In the event such Surety ceases to appear on the U.S. Treasury’s listing of approved sureties (Department Circular 570) or ceases to be licensed to transact business in New York State or becomes insolvent or enters liquidation proceedings, the Contractor, at its sole cost, shall furnish a replacement bond from a surety satisfactory to the County.



## INFORMATION FOR BIDDERS

The form of contract and Performance and Payment Bond to be used in connection with this Contract and to become a part of the contract documents is attached in the section entitled "Sample Contract and Bond for Construction".

### 6. INDEMNIFICATION AGREEMENT

The Contractor agrees:

- A. that except for the amount, if any, of damage contributed to, caused by or resulting from the negligence of the County, the Contractor agrees to indemnify and hold harmless the County of Westchester, its officers, employees, elected officials, and agents from and against any and all liability, damage, claims, demands, costs, judgments, fees, attorneys' fees or loss arising directly or indirectly out of the performance or failure to perform hereunder by the Contractor or third parties under the direction or control of the Contractor; and
- B. to provide defense for and defend, at its sole expense, any and all claims, demands or causes of action directly or indirectly arising out of the Agreement and to bear all other costs and expenses related thereto.

### 7. INSURANCE REQUIREMENTS

The Contractor, upon award of the contract and throughout the term of the Agreement, shall obtain at its own cost and expense the required insurance as delineated below from insurance companies licensed in the State of New York, carrying a Best's financial rating of A or better. Contractor shall provide evidence of such insurance to the County of Westchester ("County"), either by providing a copy of policies and/or certificates as may be required and approved by the Director of Risk Management of the County ("Director"). The policies or certificates thereof shall provide that ten (10) days prior to cancellation or material change in the policy, notices of same shall be given to the Board of Acquisition and Contract of the County of Westchester by registered mail, return receipt requested, for all of the following stated insurance policies, with a copy also sent to the Director of Risk Management of the County. All notices shall name the Contractor and identify the Contract Number.

If at any time any of the policies required herein shall be or become unsatisfactory to the Director, as to form or substance, or if a company issuing any such policy shall be or become unsatisfactory to the Director, the Contractor shall upon notice to that effect from the County, promptly obtain a new policy, and submit the policy or the certificate as requested by the Director to the Office of Risk Management of the County for approval by the Director. Upon failure of the Contractor to furnish, deliver and maintain such insurance, the Agreement, at the election of the County, may be declared suspended, discontinued or terminated.

Failure of the Contractor to take out, maintain, or the taking out or maintenance of any required insurance, shall not relieve the Contractor from any liability under the Agreement, nor shall the insurance requirements be construed to conflict with or otherwise limit the contractual obligations of the Contractor concerning indemnification.

All property losses shall be made payable to the "County of Westchester" and adjusted with the appropriate County personnel.

In the event that claims, for which the County may be liable, in excess of the insured amounts provided herein are filed by reason of Contractor's negligent acts or omissions under the



## INFORMATION FOR BIDDERS

agreement or by virtue of the provisions of the labor law or other statute or any other reason, the amount of excess of such claims or any portion thereof, may be withheld from payment due or to become due the Contractor until such time as the Contractor shall furnish such additional security covering such claims in form satisfactory to the Director.

In the event of any loss, if the Contractor maintains broader coverage and/or higher limits than the minimums identified herein, the County shall be entitled to the broader coverage and/or higher limits maintained by the Contractor. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the County.

The Contractor shall provide proof of the following coverage. (Other coverage may be required by the County of Westchester based on specific needs. If such other coverages are required for a specific contract, those coverages will be described in the "Special Clauses" of the contract specifications):

- a) Workers' Compensation and Employer's Liability. Certificate form C-105.2 or State Fund Insurance Company form U-26.3 is required for proof of compliance with the New York State Workers' Compensation Law. State Workers' Compensation Board form DB-120.1 is required for proof of compliance with the New York State Disability Benefits Law. Location of operation shall be "All locations in Westchester County, New York."

Where an applicant claims to not be required to carry either a Workers' Compensation Policy or Disability Benefits Policy, or both, the employer must complete NYS form CE-200, available to download at: <http://www.wcb.ny.gov>.

If the employer is self-insured for Workers' Compensation, he/she should present a certificate from the New York State Worker's Compensation Board evidencing that fact (Either SI-12, Certificate of Workers' Compensation Self-Insurance, or GSI-105.2, Certificate of Participation in Workers' Compensation Group Self-Insurance).

- b) Commercial General Liability Insurance with a combined single limit of \$1,000,000 (c.s.1) per occurrence and a \$2,000,000 aggregate limit naming the "County of Westchester" as an additional insured on a primary and non-contributory basis. This insurance shall include the following coverages:
  - i. Premises - Operations.
  - ii. Broad Form Contractual.
  - iii. Independent Contractor and Sub-Contractor.
  - iv. Products and Completed Operations.

NOTE: Additional insured status shall be provided by standard or other endorsement that extends coverage to the County of Westchester for both on-going and completed operations.

All Contracts involving the use of explosives, demolition and/or underground work shall provide proof that XCU is covered.

- c) Commercial Umbrella/Excess Insurance: \$2,000,000 each Occurrence and Aggregate naming the "County of Westchester" as additional insured, written on a "follow the form" basis.
- d) Owners Protective Liability Policy naming the County as insured, with a minimum limit of liability per occurrence of \$3,000,000 (where applicable, or as determined by the Director, Risk Management)
- e) Automobile Liability Insurance with a minimum limit of liability per occurrence of \$1,000,000 for bodily injury and a minimum limit of \$100,000 per occurrence for property damage or a



### INFORMATION FOR BIDDERS

combined single limit of \$1,000,000 unless otherwise indicated in the contract specifications. This insurance shall include for bodily injury and property damage the following coverages and name the "County of Westchester" as additional insured:

- i. Owned automobiles.
  - ii. Hired automobiles.
  - iii. Non-owned automobiles.
- f) Construction Insurance: For the construction, renovation or repair of bridges, viaducts or similar structures, the Contractor at its own cost and expense shall provide and maintain a "Bridge Builder's Risk Form, All Risk Insurance Contract," with flat premium endorsement, until the construction contract is accepted by the Board of Acquisition and Contract of the County of Westchester. The coverage shall be written for 100% of the completed value, covering the Contractor and County of Westchester as the insureds. The Contractor shall provide the original and duplicate policy to the County (unless the County shall accept, in lieu thereof, all contained endorsements including all applicable provisions and coverages).

For the construction of (a) new buildings and (b) for additions or repairs of existing buildings or structures, the Contractor at its own cost and expense shall provide and maintain a "Builder's Risk Form, All Risk Insurance Contract," with flat premium endorsement, until the construction contract is accepted by the Board of Acquisition and Contract of the County of Westchester. The coverage shall be written for 100% of the completed value, covering the Contractor and County of Westchester as the insureds. The Contractor shall provide the original and duplicate policy to the County (unless the County shall accept, in lieu thereof, all contained endorsements including all applicable provisions and coverages).

All policies of the Contractor shall be endorsed to contain the following clauses:

(a) Insurers shall have no right to recovery or subrogation against the County (including its employees and other agents and agencies), it being the intention of the parties that the insurance policies so effected shall protect both parties and be primary coverage for any and all losses covered by the above-described insurance.

(b) The clause "other insurance provisions" in a policy in which the County is named as an insured, shall not apply to the County.

(c) The insurance companies issuing the policy or policies shall have no recourse against the County (including its agents and agencies as aforesaid) for payment of any premiums or for assessments under any form of policy.

(d) Any and all deductibles in the above described insurance policies shall be assumed by and be for the account of, and at the sole risk of, the Contractor.



## INFORMATION FOR BIDDERS

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### 8. PREVAILING WAGE RATES AND SUPPLEMENTS

#### A. Wages to be Paid and Supplements to be Provided

Each laborer, workman or mechanic employed by the Contractor(s), Sub-contractor(s) or other person(s) doing or contracting to do the whole or part of the work contemplated by this Contract, shall be paid the prevailing wages and provide the supplements (including but not limited to health, welfare and pension benefits) as required by Article 8 (Section 220-223) and Article 9 (230-239) of the New York State Labor Law.



## INFORMATION FOR BIDDERS

### B. Schedule of Hourly Rates/Supplements

The "Schedule of Hourly Rates and Supplements" shows the prevailing hourly rates of wages to be paid and supplements to be provided. It is the County's preference that such supplements shall be paid to a Federally qualified Pension, Health and Welfare program and New York State Registered Apprentice Training Program.

Classifications not appearing on the rate sheet can be used only with the consent of the Commissioner of Public Works and then the rate to be paid will be given by the Commissioner of Public Works after advising with the State Department of Labor.

### C. Grounds for Cancellation of Contract

In the event of a failure, to pay the prevailing wages and provide the supplements in accordance with the New York State Labor Law, and as described in this Contract, it shall be considered a material breach. For the breach or violation of this provision, without limiting any other rights or remedies to which the County or any individual may be entitled or any civil or criminal penalty for which any violator may be liable, the County shall have the right, in its discretion, to terminate this agreement immediately upon notice. In such event, the Contractor(s), Sub-Contractor(s), et al shall be liable to the County for any additional costs incurred by the County in the completion of the project.

In addition to any other remedies available to the County and irrespective of any applicable penalties pursuant to law, the County may deduct from the amount payable to the Contractor under this contract five hundred (\$500.00) dollars as reimbursement for the costs it incurs in investigating any violation of Section 220 of the Labor Law.

### D. Records to be kept on Site

The Contractor(s), Sub-contractor(s), et al. shall certify their payrolls and keep them on site and available, in addition to the following informative records:

- 1) Record of hours worked by each workman, laborer and mechanic on each day;
- 2) Record of days worked each week by each workman, laborer and mechanic;
- 3) Schedule of occupation or occupations at which each workman, laborer and mechanic on the project is employed during each work day and week;
- 4) Schedule of hourly wage rates paid to each workman, laborer and mechanic for each occupation.
- 5) A statement or declaration signed by each workman, laborer and mechanic attesting that they have been provided with a written notice, informing them of the prevailing wage rates and supplements requirement for this contract.

### E. Responsibility of the Contractor, Sub-Contractor, et al.

The Contractor(s), Sub-Contractor(s), et al. will display the posters in a conspicuous location at the site and distribute the wallet cards to the employees. These posters and wallet cards will inform the employees that they are entitled to receive the prevailing wages and supplements as determined by the Department of Labor and will list the



## INFORMATION FOR BIDDERS

Department of Labor's Public Work field offices, with phone numbers for individuals to call if they believe their rights are being violated.

### F. Pay for a Legal Day's Work & Use of Apprentices

The wages to be paid for a legal day's work, as hereinbefore defined, to laborers, workmen or mechanics upon such public works, shall be not less than the prevailing rate of wages as hereinafter defined. Serving laborers, helpers, assistants and apprentices shall not be classified as common labor and shall be paid not less than the prevailing rate of wages as hereinafter defined. No employee shall be deemed to be an apprentice unless he is individually registered in an apprenticeship program which is duly registered with the Industrial Commissioner in conformity with the provision of Article 23 of the Labor Law. The wages to be paid for a legal day's work, as hereinbefore defined, to laborers, workmen or mechanics upon any material to be used upon or in connection therewith shall be not less than the prevailing rate for a day's work in the same trade or occupation in the locality within the state where such public work on, about or in connection with which such labor is performed in its final or completed form is to be situated, erected or used and shall be paid in cash; provided, however, that an employer may pay his employees by check upon a Certificate of the Industrial Commissioner to be issued only after a hearing upon the application to pay by check, which hearing shall be with notice of at least five days to be served personally or by mail on all interested persons, or if not served as aforesaid, then to be published in a manner directed by the Industrial Commissioner, which shall afford interested persons the opportunity to appear and to be heard at such hearing, and after proof has been furnished satisfactorily to the Industrial Commissioner of the employer's financial responsibility and the employer gives assurance that such checks may be cashed by employees without difficulty and for the full amount for which they are drawn. Such Contracts shall contain a provision that each laborer, workman or mechanic, employed by such Contractor, Subcontractor or other person about or upon such public works, shall be paid the wages herein provided.

### G. Fiscal Officer's Duty to Determine Schedule of Wages

It shall be the duty of the fiscal officer (the "New York State Commissioner of Labor"), to ascertain and determine the schedule of wages to be paid workmen, laborers and mechanics on each such public work, prior to the time of the advertisement for bids, and such schedule of wages shall be annexed to and form a part of the specifications for the work. Such fiscal officer shall file with the department having jurisdiction such schedule of wages to the time of the commencement of the advertisement for bids on all public works proposed to be constructed. The term "Contract" as used in this subdivision also shall include reconstruction and repair of any such public work.

Where Contracts are not awarded within ninety days of the date of the establishment of the prevailing rate of wages by the fiscal officer, the department of jurisdiction shall request of the fiscal officer a redetermination of a schedule of wages.

### H. Penalty for Payment of Less than Prevailing Wages

Any person or corporation that willfully pays after entering into such Contract, less than such stipulated wage scale as established by the fiscal officer shall be guilty of a



## INFORMATION FOR BIDDERS

misdemeanor and upon conviction shall be punished for such first offense by a fine of five hundred dollars or by imprisonment for not more than thirty days, or both fine and imprisonment; for a second offense by a fine of one thousand dollars, and in addition thereto the Contract on which the violation has occurred shall be forfeited and no such person or corporation shall be entitled to receive any sum nor shall any officer, agent, or employee of the state, municipal corporation or commission or board appointed pursuant to law pay the same or authorize its payment from the funds under his charge or control to any person or corporation for work done upon any Contract, on which the Contractor has been convicted for a second offense in violation of the provisions of this section.

### 9. LABOR AND COMPLIANCE WITH LABOR LAW

#### A. Preference for Westchester Residents

The Contractor agrees that in the performance of the work under this Contract he will give preference, and so far as legally possible, to employ citizens and residents of Westchester County.

#### B. Certifications To Be Filed

It is agreed that, in accordance with Section 220-d of the Labor Law as amended before final payment by or on behalf of the County for any sum due on account of a Contract for a public improvement, the Contractor and each and every Subcontractor of the Contractor or a Subcontractor is required to file a statement in writing in form satisfactory to the Commissioner of Finance certifying to the amounts then due and owing from such Contractor or Subcontractor filing such statement to or on behalf of any and all laborers for daily or weekly wages or supplements on account of labor performed upon the work under the Contract, setting forth therein the names of the persons whose wages or supplements are unpaid and the amount due to each or on behalf of each respectively, which statement so to be filed shall be verified by the oath of the Contractor or Subcontractor as the case may be that he has read such statement subscribed by him and knows the contents thereof, and that the same is true to his own knowledge.

#### C. Retention of Funds

It is further agreed that in accordance with Section 220b of the Labor Law, as amended:

- 1) In case any interested person shall have previously filed a protest in writing objecting to the payment to any Contractor or Subcontractor to the extent of the amount or amounts due or become due to him/her for daily or weekly wages or supplements for labor performed on the public improvement for which such Contract was entered into, or if for any other reason it may be deemed advisable, the Commissioner of Finance may deduct from the whole amount of any payment on account thereof the sum or sums admitted by any Contractor or Subcontractor in such statement or statements so filed to be due and owing by him on account of labor performed on such public improvement before making payment of the amount certified for payment in any estimate or voucher, and may withhold the amount so deducted for the benefit of the laborers, workmen or mechanics whose



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wages or supplements are unpaid or not provided, as the case may be, as shown by the verified statements filed by any Contractor or Subcontractor, and may pay directly to any person the amount or amounts shown to be due to him or his duly authorized collective bargaining labor organization, as the case may be, for such wages or supplements by the statements filed as hereinbefore required, thereby discharging the obligation of the Contractor or Subcontractor to the person or his duly authorized collective bargaining labor organization receiving such payment to the extent of the amount thereof, or

- 2) When any interested person shall file a written complaint with the fiscal officer as defined in section 220-b of the Labor Law, alleging unpaid wages or supplements due for labor performed on a public improvement for which a Contract has been entered into, and said labor is alleged to have been performed within the two year period immediately preceding the date of the filing of said complaint, or if, on the fiscal officer's own initiative, unpaid wages or supplements appear to be due, the fiscal officer shall immediately so notify the financial officer of the civil division interested, or, if there are insufficient moneys still due to the Contractor or Subcontractor to satisfy said wages and supplements, including interest and penalty, the financial officer of another civil division which has entered or subsequently enters into a public improvement contract with the Contractor or Subcontractor, who shall withhold from any payment due or earned by the Contractor or Subcontractor executing said public improvement, sufficient moneys to satisfy said wages and supplements, including interest at the rate provided herein, and any civil penalty that may be assessed as provided herein, pending a final determination. The Commissioner of Finance shall immediately confirm in writing to the fiscal officer the amount of money withheld.
- 3) Moneys withheld pursuant to this section shall be held by the Commissioner of Finance for the sole and exclusive benefit of the workers employed on said public improvement and for payment of any civil penalty that may be assessed as provided herein and shall not be used for any other purpose except upon court order. Any person, partnership, association, corporation or governmental body who files a lien or commences a judicial proceeding with respect to any moneys withheld pursuant to this section shall notify the fiscal officer in writing of the lien or claim on or before the date of filing of the lien or commencement of the judicial proceeding. In any proceeding to obtain moneys withheld pursuant to this section by any person, partnership, association, corporation or governmental body, the Commissioner of Labor shall have the right to appear and be heard.
- 4) The fiscal officer shall then cause an investigation to be made to determine whether any amounts are due to the laborers, workmen or mechanics, or on their respective behalves, on such public improvement, for labor performed after the commencement of the three-year period immediately preceding the filing of the complaint or the commencement of the investigation on his own initiative, as the case may be, and shall order a hearing therein at a time and place to be specified and shall give notice thereof, together with a copy of such complaint, or a statement of the facts disclosed upon such investigation, which notice shall be served personally or by mail on all interested persons, including the person complained



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against and upon the financial officer of the civil division; such person complained against shall have an opportunity to be heard in respect to the matters complained of, at the time and place specified in such notice, which time shall be not less than five days from the service of said notice. The fiscal officer in such an investigation shall be deemed to be acting in a judicial capacity and shall have the rights to issue subpoenas, administer oaths and examine witnesses. The enforcement of a subpoena issued under this section shall be regulated by the Civil Practice Law and Rules. Such investigation and hearing shall be expeditiously conducted, and upon such hearing and investigation, the fiscal officer shall determine the issues raised thereon and shall make and file an order in his office stating such determination and forthwith serve a copy of such order, either personally or by mail, together with notice of filing, upon the parties to such proceedings, and if the fiscal officer be the Comptroller, upon the Commissioner of the Department of Labor. Such order shall direct payment of wages or supplements found to be due, including interest at the rate of interest then in effect as prescribed by the Superintendent of Banks pursuant to Section fourteen (a) of the Banking law per annum from the date of the underpayment to the date of payment.

- 5) In addition to directing payment of wages or supplements, including interest found to be due, the order of the fiscal officer may direct payment of a further sum as a civil penalty in an amount not exceeding twenty-five percent of the total amount found to be due. In assessing the amount of the penalty, due consideration shall be given to the size of the employer's business, the good faith of the employer, the gravity of the violation, the history of previous violations of the employer or any successor or substantially-owned affiliated entity or any of the partners if the Contractor or Subcontractor is a partnership or any of the five largest shareholders of the Contractor or Subcontractor, as determined by the fiscal officer, and any officer of the Contractor or Subcontractor who knowingly participated in the violation of this article, and the failure to comply with record keeping or other non-wage requirements. Upon the fiscal officer's determination of the penalty, where the fiscal officer is the Commissioner of the Department of Labor, the penalty shall be paid to said Commissioner for deposit in the State Treasury.
- 6) Upon the entry and service of such order, the Commissioner of Finance shall pay to the claimant, from the moneys due to the Contractor or Subcontractor, the amount of the claim as determined by the fiscal officer and the amount of the civil penalty, if any, shall be paid as provided herein, provided that no proceeding pursuant to Article Seventy-Eight of the Civil Practice Law and Rules for review of said order is commenced by any party aggrieved thereby within thirty days from the date of said order was filed in the office of the fiscal officer. Said proceeding shall be directly in the appellate division of the Supreme Court. Where the fiscal officer is the Commissioner of the Department of Labor, the civil penalty shall be paid to said Commissioner for deposit in the State Treasury. In the event that such a proceeding for review is instituted, moneys sufficient to satisfy the claim and civil penalty shall be set aside by the Commissioner of Finance, subject to the order of the Court.



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- 7) When final determination has been made and such determination is in favor of the complainant, said complainant may in addition to any other remedy provided by this article, institute an action in any Court of appropriate jurisdiction against the person or corporation found violating this article, any substantially-owned affiliated entity or any successor of the Contractor or Subcontractor, any officer of the Contractor or Subcontractor who knowingly participated in the violation of this article, and any of the partners if the Contractor or Subcontractor is a partnership or any of the five largest shareholders of the Contractor or Subcontractor, as determined by the fiscal officer, for the recovery of the difference between the sum, if any, actually paid to him by the Commissioner of Finance pursuant to said order and the amount found to be due him as determined by said order. Such action must be commenced, within three years from the date of the filing of said order, or if the said order is reviewed in a proceeding pursuant to Article Seventy-eight of the Civil Practice Law and Rules, within three years after the termination of such review proceeding.
- 8) When two final determinations have been rendered against a Contractor, Subcontractor, successor, or any substantially owned affiliated entity of the Contractor or Subcontractor, any of the partners if the Contractor or Subcontractor is a partnership, any officer of the Contractor or Subcontractor who knowingly participated in the violation of this article, any of the five largest shareholders of the Contractor or Subcontractor or any successor within any consecutive six-year period determining that such Contractor, Subcontractor, successor, or any substantially-owned affiliated entity of the Contractor or Subcontractor, any of the partners or any of the five largest shareholders of the Contractor or Subcontractor, any officer of the Contractor or Subcontractor who knowingly participated in the violation of this article has willfully failed to pay the prevailing rate of wages or to provide supplements in accordance with this article, whether such failures were concurrent or consecutive and whether or not such final determinations concerning separate public work projects are rendered simultaneously, such Contractor, Subcontractor, successor, or any substantially-owned affiliated entity of the Contractor or Subcontractor, any of the partners if the Contractor or Subcontractor is a partnership or any of the five largest shareholders of the Contractor or Subcontractor, any officer of the Contractor or Subcontractor who knowingly participated in the violation of this article shall be ineligible to submit a bid on or be awarded any public work contract or subcontract with the State, any municipal corporation or public body for a period of five years from the second final determination, provided, however, that where any such final determination involves the falsification of payroll records or the kickback of wages or supplements, the Contractor, Subcontractor, successor, or any substantially-owned affiliated entity of the Contractor or Subcontractor, any partner if the Contractor or Subcontractor is a partnership or any of the five largest shareholders of the Contractor or Subcontractor, any officer of the Contractor or Subcontractor who knowingly participated in the violation of this article shall be ineligible to submit a bid on or be awarded any public work contract with the State, any municipal corporation or public body for a period of five years from the first final determination.



## INFORMATION FOR BIDDERS

- 9) Nothing in this subdivision shall be construed as affecting any provision of any other law or regulation relating to the awarding of public contracts.

Pursuant to Section 220-C of the Labor law, any Contractor or Subcontractor who shall upon his oath verify any statement required to be filed herein, which is known by him to be false, shall be guilty of perjury and punishable as provided by the Penal Law.

### 10. CONTRACTOR'S REPORT OF EMPLOYMENT AND WEEKLY AFFIDAVIT

Each week the Contractor shall furnish to the Commissioner of Public Works the "Contractor's Report Of Employment And Weekly Affidavit" of the Sample Forms.

### 11. LAWS/REGULATIONS AND APPROPRIATIONS

- A. The Contractor shall, at its own cost and expense, comply with all provisions of the Labor Law (i.e. prevailing rate of wages and supplements), Lien Law, Workmen's Compensation Law and all other laws and ordinances affecting this contract or order, either Federal, State or local.
- B. It is recognized and understood by the Parties that when this Agreement is subject to future appropriation by the Westchester County Board of Legislators for funds not presently appropriated to pay for this Agreement; the County shall have no liability under this agreement beyond the funds, if any, that are appropriated and available for payment of the amounts due under this Agreement. The Parties understand and intend that the obligation of the County to pay the amounts due hereunder shall constitute a current expense of the County and shall not in any way be construed to be a debt of the County in contravention of any applicable constitutional or statutory limitations or requirements concerning the creation of indebtedness by the County, nor shall anything contained in this Agreement constitute a pledge of the general tax revenues, funds or monies of the County. The County shall pay amounts due under this Agreement exclusively from legally available funds appropriated for this purpose. Notwithstanding the foregoing, the County will do all things lawfully within its power to obtain, maintain, and properly request and pursue funds from which payments under this Agreement may be made, including: (i) the County Executive making provisions for such payments to the extent necessary in the annual budget submitted to the Board of Legislators for the purpose of obtaining funding; and (ii) using its reasonable efforts to have such portion of the budget approved.

### 12. REFUSAL TO ANSWER QUESTIONS

It is understood and agreed by the Contractor that he/she bears an affirmative obligation to answer questions specifically or directly relating to this agreement before any official, board or agency authorized or empowered to inquire into such matters. This section shall not be construed as barring the Contractor, its directors, officers or employees from exercising their constitutional privilege against self-incrimination.

The foregoing, however, shall not be construed as limiting the rights and remedies of the County in the event of such refusal, and when such body or agency is wholly civil in nature,



## INFORMATION FOR BIDDERS

failure or refusal to fully cooperate with and diligently answer the inquiries of such official, board or agency may constitute grounds for the termination of this agreement and/or the exercise of any and all other rights or remedies which the County may have by reason of such failure or refusal.

Any and all contracts made with the State, the County of Westchester, or any public department, agency or official thereof, since July 1, 1959 by such person and by any firm, partnership or corporation of which he is a member, partner, director or officer, may be canceled or terminated by the County of Westchester, without incurring any penalty or damages on account of such cancellation or termination, but any monies owing pursuant to said transaction or contract prior to the cancellation and termination, shall be paid.

The successful bidder will be required to make all books and records concerning this contract available during business hours, upon reasonable notice, to duly authorized County personnel for the purpose of ascertaining compliance and/or performance of all provisions of this contract. This provision shall survive the termination of this agreement and for a period of six (6) years thereafter.

### 13. BID REQUIREMENTS

The Bid must be made on the "Proposal Pages" included in this specification or as provided with an addendum. All blank spaces on said Proposal Pages must be filled in and no change shall be made in the phraseology or in the items as contained therein.

Any bid which fails to name a price per unit of measurement for each of the items for which quantities are given, may be held to be informal and rejected. Bids submitted on Proposal Pages that contain any omissions, alterations, additions or items not called for in the bid documents, or that are illegible, unbalanced, conditional, incomplete or contain irregularities of any kind, may be rejected as informal. If the various parts of the work have been divided into classes and/or items to enable the bidder to bid for different portions of the work in accordance with its estimate of their costs, in the event of any increase or decrease in the quantity will be paid for at the price bid for that particular item. The sum of the amounts for each class or item, obtained by multiplying the approximate quantity by the unit price, shall constitute the total sum bid.

In the event of a discrepancy between the written bid amount and the numerical bid amount, the written amount will take precedence and be controlling as to the amount of the Bid. Any such discrepancy shall be corrected as set forth in Article "Correction Of Errors" of the Information for Bidders.

### 14. MISCELLANEOUS ADDITIONAL WORK (ITEM W-800)

A. Description - Under this item each Contractor shall furnish all labor, material and equipment required to accomplish miscellaneous additional work:

- 1) Necessitated by encountering during the course of the work field conditions of a nature not determinable during design; or
- 2) For which no unit prices are applicable.



## INFORMATION FOR BIDDERS

- B. Method of Measurement - Only that miscellaneous additional work shall be performed by the Contractor and will be paid for by the County, which has been authorized by the Commissioner or the Construction Administrator in writing, prior to its commencement.
- C. Article “Increase or Decrease of Quantities: Elimination of Items” of the Information for Bidders, will still apply relative to the percentage of the total awarded contract price that the work under the contract may be increased or decreased.
- D. Payment - The total amount paid to the Contractor will be determined in strict accordance with the provisions of Article “Extra Work: Increased Compensation/ Decreased Work: Credit to the Owner” of the General Clauses, and such payment will include only that overhead and profit that is applicable to the work performed under this item.
- E. Each Contractor shall include in its total bid the lump sum printed in the Proposal and any bid other than the specified amount will be considered informal.

### 15. CORRECTION OF ERRORS

Relative to dollar bid items and the required computations as submitted and performed by bidders on the proposal sheets, if there are any inconsistencies derived in multiplying unit bid prices by the stated quantities, the Commissioner reserves the right to reconcile the unit bid prices or the products of the unit bid prices and the stated quantities, when in the Commissioner's professional opinion such reconciliation(s) would concur with the apparent intent of a bidder and the Commissioner's estimated values of the respective bid items of the proposed contract work. In addition to the foregoing, the Commissioner reserves the right to correct all mathematical errors in additions or subtractions.

### 16. SHOWN QUANTITIES

All bids shall be submitted upon the following express conditions, which shall apply to and become a part of every bid received. The Bidders accept the quantities shown on the Proposal Pages opposite items of the work for which unit prices are to be bid as being approximate estimated quantities. Bidders shall satisfy themselves by personal examination of the location of the proposed work and surroundings thereof, and by such other means as they may prefer, as to the scope of the work and the accuracy of the approximate estimated quantities; and shall not at any time after submission of their bids dispute such approximate estimated quantities nor assert that there was any misrepresentation by the County or any misunderstanding by the Contractor in regard to the quantity or kind of materials to be furnished, or work to be done.

### 17. QUALIFICATION OF BIDDERS

The County may make such investigation as it deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish all information and data for this purpose as may be requested. The County reserves the right to reject any bid if the evidence submitted by, or the investigation of such bidder fails to satisfy the County, in the County's sole discretion, that it is properly qualified to carry out the obligations of the contract and to complete the contemplated work.



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### 18. REQUIRED EXPERIENCE

The County requires that each contractor possess not less than five (5) year's experience in performing work substantially similar in scope and size to the work for which it is bidding. The contractor agrees that upon request of the County the contractor will furnish a detailed statement of each project that it has performed during the most recent five (5) years (including but not limited to the name and address of the project, the name of the awarding entity/owner, the name of the awarding entity's/owner's representative, a current telephone number where that representative can be reached, the description of the project, general scope of the contractor's work, contract price, dates of performance, whether the contract was terminated for cause or convenience, whether the contract was completed and whether liquidated damages were assessed against the contractor [and if so, provide a written explanation]). The County reserves the right to require additional information as it deems appropriate concerning the history of the contractor's performance of each such contract. The final determination of whether the contractor possesses the requisite experience rests in the sole discretion of the County.

### 19. INCREASE OR DECREASE OF QUANTITIES: ELIMINATION OF ITEMS

In entering into this contract, the Contractor agrees that quantities shown on the Proposal Pages opposite items of the work for which unit prices have been requested are approximate estimated quantities, and that during the progress of the work the County may find it advisable and shall have the right to omit portions of the work, and to increase or decrease the shown approximate estimated quantities, or the scope of the whole work; and that the County reserves the right to add to or take from the total amount of the work up to a limit of thirty percent of the total amount of the contract based upon the executed contract price for all the specified work.

The Contractor shall make no claim for anticipated profits or loss of profits, because of any difference between the quantities of the various classes of work actually done, or of the materials actually furnished, and the original specified scope of work and the shown approximate estimated quantities.

The aforesaid thirty- percent pertains to the total amount of the contract and not to any individual item. Individual items may be increased or decreased any amount or may be eliminated entirely if so ordered by the Commissioner, excepting that the total amount of the contract as adjusted shall not result in a net increase or decrease of more than thirty percent except by mutual agreement between both parties thereto.

The Contractor waives all claims of any nature due to a misunderstanding of the location, character, or other conditions surrounding the work or of the shown approximate estimated quantities of items of the work.

### 20. BREAKDOWN COST OF LUMP SUM ITEMS AND CONTRACTS

After award of the contract and prior to actual start of the work, the successful bidder shall submit an itemized schedule of its estimated costs of lump sum items and or lump sum total contract work, for approval by the County. The schedule shall be submitted as an outline series with minor subdivisions, in accordance with the directives of the County. As part of



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this Schedule, the Contractor will be required to include a sum sufficient, as determined in the County's sole discretion, for the preparation and submission of approved final "As-builts", record drawings, guarantees, warranties, and operations and maintenance manuals.

### 21. ENGINEERING CHARGES

In addition to any and all other remedies available to the County when the work embraced in the contract is not completed on or before the date specified herein, engineering and inspection expenses incurred by the County of Westchester upon the work from the completion date originally fixed in the contract to the final date of completion of the work may be charged to the Contractor and be deducted from monies due the Contractor. Consideration of any extra work or supplemental contract work added to the original contract, as well as extenuating circumstances beyond the control of the Contractor, will be given due consideration by the County before assessing engineering and inspection charges against the Contractor. Such charges will be assessed, however, in cases where in the opinion of the Commissioner, the Contractor has delayed the work.

### 22. ESTIMATES AND PAYMENTS

As the work progresses but not more often than once a month and then on such days as the Construction Administrator may fix, the Contractor will submit a requisition in writing of the amount and value of the work performed and the materials and equipment provided to the date of the requisition, less any amount previously paid to the Contractor. The Contractor must complete at least ten (10%) percent of the work before submitting any claims for mobilization. From each requisition, the County will retain five percent (5%) plus one hundred fifty percent (150%) of the amount necessary to satisfy any claims, liens or judgments against the Contractor that have not been suitably discharged. The Commissioner will thereupon cause the balance of the requisition therein to be paid to the Contractor. In lieu of all or part of the cash retainage the County shall only accept bonds or notes of United States of America, New York State or political subdivisions thereof. As a condition to the making of any progress payment as set forth in this paragraph, the County, in its sole discretion may require the Contractor to submit such document as may be reasonably required to establish that the Contractor (and its subcontractor(s)) have timely and properly paid their respective subcontractor(s) and materialmen of whatever tier.

**VENDOR DIRECT PAYMENT:** All payments made by the County to the Contractor will be made by electronic funds transfer ("EFT") pursuant to the County's Vendor Direct program. The Contractor is required to complete the Vendor Direct Payment Authorization Form, which is located in the Forms Section on page 11 and 12. Payments will be automatically credited to the Contractor's designated bank account at the Contractor's financial institution. Payments are anticipated to be deposited two business days after the voucher/invoice is processed for payment. Saturdays, Sundays, and legal holidays are not considered business days. Under the Vendor Direct program you will receive an e-mail notification two days prior to the day the payment will be credited to your designated account. The e-mail notification will come in the form of a remittance advice with the same information that currently appears on County check stubs and will contain the date that the funds will be credited to your account. If there is a discrepancy in the amount received please contact



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your Westchester County representative as you would have in the past if there were a discrepancy in a check.

In the unlikely event that you do not receive the money in your designated bank account on the date indicated in the e-mail, please contact the Westchester County Accounts Payable Department at 914-995-3748. Whenever you change your bank or change or close your account a new Vendor Direct Payment Authorization Form must be submitted. Please contact the Westchester County Accounts Payable Department at 914-995-3748 and a new form will be e-mailed to you. When completing the payment authorization form you must either supply a voided check or have it signed by a bank official to ensure the authenticity of the account being set up to receive your payments. Failure to return the completed authorization form prior to award of the contract may result in the bid being considered non-responsive and the bid may be rejected.

When the work or major portion thereof, as contemplated by the terms of the contract (see Substantial Completion Payment and Final Payment later in this article), are substantially completed in the judgment of the Commissioner, the Contractor shall submit a requisition for the remainder of the contract balance. An amount equal to two (2) times the value of the remaining items to be completed plus one hundred fifty percent (150%) of the amount that the Commissioner deems necessary to satisfy any claims, liens or judgments against the Contractor which have not been suitably discharged shall be deducted from the requisition. As the remaining items of work are satisfactorily completed or corrected, the County will, upon receipt of a requisition, pay for these items less one hundred fifty percent (150%) of the amount necessary to satisfy any claims, liens or judgments.

Contractor agrees, in the event of any withdrawal by the contractor of amounts retained from payments to the contractor pursuant to the terms hereof, that notwithstanding any contrary interpretation of Section 106 of the New York General Municipal Law, the contractor will be obliged to maintain the market value of securities deposited in an amount equal to the amount withdrawn pursuant to said Section 106. The Contractor will, within five (5) days of demand therefore by the fiscal officer of the County, deposit with such fiscal officer cash, or securities of the kind provided in Section 106, of a market value sufficient to maintain the market value of all securities on deposit at a level equal (as of the date such notice of the fiscal officer is given to the contractor) to the amount which the County shall be entitled to retain from payments to the contractor pursuant to the terms of the contract.

All estimates will be made for actual quantities for work performed and materials and equipment incorporated in the work as determined by the measurements of the Engineer, and this determination shall be accepted as final, conclusive and binding upon the Contractor. All estimates will be subject to correction in any succeeding estimate.

Payment will be made for materials pertinent to the project which have been delivered to the site or off-site by the Contractor and/or Subcontractor and suitably stored and secured in first-class condition as required by the Construction Administrator. Payment may be limited to materials in short and/or critical supply and materials specially fabricated for the project, as defined by the contract. Payment will be made only upon the written request of the contractor. The Contractor must submit certified copies of the manufacturer's or vendor's invoices or statements establishing the true purchase value of the material or equipment; freight bills, release of liens and certificate of insurance covering all equipment and materials. Then the County will include in the following monthly payment an amount not to



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exceed the lesser of the bid breakdown or the total purchase price of the stored equipment and materials less retainage provided that such equipment and materials are suitable for their intended use.

The Contractor shall be responsible for safeguarding stored equipment and materials against loss or damage of any nature whatsoever, shall retain title until incorporated into the work and acceptance by the County and in case of loss or damage, the Contractor shall replace such lost or damaged equipment and materials at no cost to the County.

After receipt of payment, the Contractor shall not remove from the site equipment and materials for which such payment was made without written authorization from the Commissioner.

No major equipment item shall be brought to the site until the following conditions are met:

- 1) The County must have received the manufacture's recommendations for on-site storage in writing.
- 2) The structure in which the equipment is to be installed is roofed (roofing must be watertight) and has such protection of doorways, windows, and other openings that will provide reasonable protection from the weather.
- 3) Prior to the County making a Partial Payment on a major equipment item the following conditions must be met:
  - a. The Contractor must certify to the County, in writing, that the equipment has been properly stored.
  - b. The Shop Drawings must be approved and the draft Operation and Maintenance Manuals must have been submitted.

The Contractor shall furnish to the Construction Administrator, prior to the making up of any Partial or Final Estimate, a copy of its and its Subcontractors' weekly payrolls for each and every preceding payroll period. The payroll submitted shall be a certified true copy and shall contain full information including but not limited to the number of hours worked, rate, classification and total sum paid each employee charged to or working on the job. With all except the first estimate, the Contractor shall furnish to the Construction Administrator a sworn statement listing all unpaid bills and liabilities incurred under the Contract.

### A. Substantial Completion Payment

- 1) Within thirty (30) days after receiving written notice from the Contractor of substantial completion of the work under this Agreement, the Commissioner will cause an inspection to be made of the work done under this contract. If, upon such inspection, the Engineer determines that the work is substantially complete, a Substantial Completion Payment to the Contractor for the work done under this Contract, less any and all deductions authorized to be made by the Commissioner under this contract or by law, will be issued.
- 2) Such a Payment shall be considered a Partial and not a Final Payment.
- 3) As a condition precedent to receiving payment therefore, the Contractor must have received County approval of all Shop Drawing submittals, the Operation and Maintenance Manuals, and As-Built Drawing(s). Together with its application for substantial completion payment the Contractor shall also deliver to the



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Construction Administrator a verified statement certifying that all claims or liabilities arising from the completed work, including all charges for Extra Work, Change Orders, additional time, damages or credits (collectively referred to as "claims") have been presented to the County. All such claims shall be described in sufficient detail so as to be easily identified. The Contractor's failure to submit the verified statement shall constitute a full and final waiver of all claims against the County from the beginning of the project through the date of substantial completion as established by the County. The presentation of the verified statement to the County shall not constitute an acknowledgement by the County that any such claim is valid. The County expressly reserves its right to assert that any such claim(s) is waived or precluded by reason of other provisions of the contract documents. Only claims particularly identified on the Contractor's verified statement shall be preserved; all other claims whatever nature shall be deemed waived and released. It shall also submit proof of title of the materials and equipment covered by the contract. The Contractor shall also, prior to the issuance of said Substantial Completion Payment, supply to the County affidavits and certificates for labor, material and equipment (where applicable).

### B. Final Payment

- 1) Within ten (10) days after receiving written notice from the Contractor of completion of all the work, the Engineer will make a final inspection. If upon inspection the Engineer determines that no further work is needed, the Commissioner will request that the Board of Acquisition and Contract approve the completion of the project and authorize payment of the Final Estimate. Also required prior to the Board of Acquisition and Contract approval is a Condition Report by the Contractor that any damage of public or privately owned properties resulting from the Contractor's work has been satisfactorily repaired.
- 2) As a condition precedent to receiving Final Payment therefore the Contractor shall submit a supplementary verified statement similar to that required under, "A. Substantial Completion Payment", hereof. This verified statement must include only those charges for Extra Work, Change Orders, additional time, damages or credits (collectively referred to as "claims") that accrued between substantial completion and final completion. The Contractor's failure to submit the verified statement shall constitute a full and final waiver of all claims against the County from the beginning of the project through the date of substantial completion as established by the County. The presentation of the verified statement to the County shall not constitute an acknowledgement by the County that any such claim is valid. The County expressly reserves its right to assert that any such claim is waived or precluded by reason of other provisions of the contract documents. Only claims particularly identified on the Contractor's supplementary verified statement shall be preserved; all other claims of whatever nature shall be deemed waived and released.
- 3) The Contractor shall also, prior to the issuance of Final Payment, supply to the County affidavits and certificates for labor, material and equipment (where applicable).



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- 4) The County will, not less than thirty (30) days after the Final Acceptance of the work under this contract, by the Board of Acquisition and Contract, pay the Contractor upon the receipt of all required documentation the balance of funds due thereunder after deduction of all previous payments, liens and all percentages and amounts to be kept and retained under provision of this contract.

All prior Partial Payments, being merely estimates made to enable the Contractor to prosecute the work more advantageously, shall be subject to correction in the Final Estimate and Payment

- 5) The acceptance by the Contractor or by anyone claiming by or through him of the Final Payment shall operate as and shall be a release to the County and every officer and agent thereof, from any and all claims of the Contractor for anything done or furnished in connection with this work or project and for any act or omission of the County or of any others relating to or affecting the work. No payment, however, final or otherwise, shall operate to release the Contractor or its Sureties from any obligation under this contract or the Performance and Payment Bond. Should the Contractor refuse to accept the final payment as tendered by the County, it shall constitute a waiver of any rights to interest thereon. Nor shall refusal to accept final payment extend any applicable statute of limitation.

### 23. PAYMENTS TO SUBCONTRACTORS AND MATERIALMEN BY CONTRACTOR

Within fifteen calendar days of the receipt of any payment from the County, the contractor shall pay each of its sub-contractors 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 judgment against the subcontractor or materialman which have not been suitably discharged and less any retained amount as hereafter described. The contractor shall retain not more than five per centum of each payment to the subcontractor and/or materialman except that the contractor may retain in excess of five per centum but not more than ten per centum of each payment to the subcontractor provided that prior to entering into a subcontract with the contractor, the sub-contractor is unable or unwilling to provide a performance bond and a labor and material bond both in the full amount of the sub-contract at the request of the contractor. However, the contractor shall retain nothing from those payments representing proceeds owed the subcontractor and/or materialman from the County's payments to the contractor for the remaining amounts of the contract balance as provided in Article "Estimates and Payments" of the Information For Bidders. Within fifteen calendar days of the receipts of payment from the contractor, the subcontractor and/or materialman shall pay each of its 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 County to pay or to see the payment of any moneys to any subcontractor or materialman 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 County. Notwithstanding anything to the foregoing, the County may tender payments to the Contractor in the form of joint or dual payee checks.



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**NOTICE:** No direct payment will be made for work done or materials furnished under the General Clauses, Information for Bidders, General Clauses and Special Clauses, except where expressly stated elsewhere, but compensation shall be deemed to be included in the contract lump sum price for the total work and/or the contract unit prices for the various items of the work.

### 24. TIME OF STARTING

Time being of the essence, all bidders shall take notice that the timely completion of the work called for under this contract is of the greatest importance. The contractor shall commence its work within ten (10) days after "notice to proceed" has been given it by the Commissioner (unless a definite starting date is stated). Prior to commencing its work, the Contractor shall notify the Director of Project Management, Division of Engineering and Department of Public Works, at least forty-eight (48) hours prior to the planned date of its "start", so that a Construction Administrator can be assigned to the work.

### 25. SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION AND DEMOLITION WORK

At all times the Contractor shall use all required and necessary precautions for the safety and protection of the public, County personnel, construction employees, and private and public property on or adjacent to the work.

The Contractor shall comply fully with all the applicable provisions of the following listed governmental regulations and standards, noting that in case of conflict, the Contractor shall comply with the most stringent rule or regulation:

- 1) State of New York, Department of Labor, Bureau of Standards and Appeals, Industrial Code Rule 23 "Protection of Persons Employed in Construction and Demolition Work."
- 2) United States Department of Labor, Bureau of Labor Standards, "Safety and Health Regulations for Construction," as promulgated in accordance with the Occupational Safety and Health Act of 1970, Public Law 91-596; 84 Stat. 1590, Laws of 91st Congress - 2nd Session.

It shall be the sole responsibility of the Contractor to ascertain which of the regulations and standards contained in the foregoing listed publications effect its construction activities, and it shall be solely responsible for the penalties resulting from its failure to comply with such applicable rules and regulations. Copies of the listed publications are available for reference purposes only, in the Westchester County Department of Public Works, Division of Engineering, Design Section, Room 500, Michaelian Office Building, White Plains, New York.

The West Nile Mosquito control program:

- 1) Routinely, the work site should be inspected for potential habitats (i.e. stagnant/standing water) for mosquitoes.
- 2) Conditions that would require remediation include: improper site grading, ruts/other depressions, water in debris (i.e. containers, tires, etc.), stored or



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discarded materials, and excavations, and those cited by the Construction Administrator.

- 3) Under the direction of the Construction Administrator, the Contractor shall take all necessary preventive and/or corrective action to eliminate the potential breeding grounds.

### 26. ACCIDENT PREVENTION AND FIRST AID FACILITIES

In addition to conforming to the applicable governmental regulations and standards referred to in Article "Fire Prevention And Control" of the Information For Bidders, the Contractor shall conduct its work in accordance with the recommendations contained in the latest edition of the "Manual of Accident Prevention in Construction," as published by the Associated General Contractors of America, Inc. and the most recent safety codes approved by the American Standards Association. In case of the conflict with the referenced governmental regulations and standards, the most stringent regulation, standard or recommendation shall govern.

Further, and without in any way limiting the Contractor's obligations hereunder, and in accordance with the instructions of the Construction Administrator, the Contractor shall provide barricades, warning lights, danger and caution signs and other safeguards at all places where the work in any way is a hazard to the public.

The Contractor shall also provide and maintain upon the site at each location where major work is in progress, a completely equipped first aid kit that shall be readily accessible when construction activities are in progress. Posted on each first aid kit shall be the name, location and telephone number of the nearest hospital or doctor with whom the Contractor has previously made arrangements for emergency treatment in case of accident.

### 27. FIRE PREVENTION AND CONTROL

The Contractor shall abide by such rules and instructions as to fire prevention and control as the municipality having jurisdiction may prescribe. It shall take all necessary steps to prevent its employees from setting fires not required in the construction of the facility and shall be responsible for preventing the escape of fires set in connection with the construction.

It shall at all times provide the proper housekeeping to minimize potential fire hazards, and shall provide approved spark arresters on all steam engines, internal combustion engines and fuels.

Free access to fire hydrants and standpipe connections shall be maintained at all times during construction operations, and portable fire extinguishers shall be provided by the Contractor and made conveniently available throughout the construction site. The Contractor shall also notify its employees of the location of the nearest fire alarm box at all locations where work is in progress.



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### 28. STATE AND LOCAL SALES TAX EXEMPTION

The Contractor's attention is directed to Section 1115 of the Tax Law of New York State, Chapters 513 and 514 of the Laws of 1974. In connection with capital improvement contracts entered into on or after September 1, 1974, all tangible personal property which will become an integral component of a structure, building or real property of New York State, or any of its political sub-divisions, including the County of Westchester, is exempt from State and local retail sales tax and compensating use tax.

Bidders' proposals shall exclude dollar amounts for the payment of State and Local retail sales tax and compensating use tax, for tangible personal property defined above.

The successful bidder shall be obliged to file the required Contractor Exempt Purchase Certificates, which may be obtained from the New York State Department of Taxation and Finance (1-800-462-8100), in order to utilize such exemption.

### 29. APPRENTICES

The attention of all bidders is directed to Section 220(3-e) of the New York State Labor Law, which is hereby incorporated herein by reference, which requires, among other things, that "Apprentices who are registered under a Bona Fide New York State Registered Apprentice Training Program shall be permitted to work."

### 30. AFFIRMATIVE ACTION PROVISION

During the performance of this Contract, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, age or handicap. Contractor shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, national origin, age or handicap. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoffs or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor agrees to include, or require the inclusion of the above provision in any subcontract made pursuant to its contract with the County.

### 31. AFFIRMATIVE ACTION PROGRAM REQUIREMENT

Relative to the award of this Contract, it is required that all bidders completely answer all questions contained in the questionnaire entitled "Affirmative Action Program Requirement" of the Proposal Pages, and properly attest to same.

It is also required that all subcontractors completely answer all questions contained in the questionnaire entitled "Affirmative Action Program Requirement-Subcontractors" of the Sample Forms, and properly attest to same. This form is to be submitted with the request to utilize subcontractor(s).



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### 32. AUTHORITY TO DO BUSINESS IN NEW YORK

Any corporation not incorporated under the Laws of New York State, must furnish a copy of its certificate of authority, from the New York State Secretary of State, to do business in the State of New York, in accordance with Article 13 of the New York State Business Corporation Law.

### 33. LICENSE REQUIREMENTS (ELECTRICAL)

- A. In accordance with the requirements of Local Law No. 20-1997 of Westchester County, no person shall perform work under any contract with the County of Westchester except (i) a licensed Master Electrician; (ii) a licensed "Special Electrician"; or (iii) a Journeyman Electrician working under the direct supervision and control of a Master Electrician.

In no event shall the County incur any liability to pay for any electrical work performed in violation of the licensing requirements of Local Law No. 20-1997 of Westchester County.

- B. Contract with separate bids:

If the project is one where separate bid specifications are required pursuant to the provisions of the New York General Municipal Law, then any person, partnership, corporation, business organization or other business entity submitting a bid for the electrical portion of the project must possess, at the time of submission of the Bid, a valid Master/"Special" Electrician's license issued by the Westchester County Electrical Licensing Board in accordance with Chapter 277 Article XVII of the Laws of Westchester County and the Westchester County Electrical Licensing Board Rules & Regulations, in particular No. 11, which states as follows:

No individual holding a Master Electrician's License shall lend such License to any person or allow any other person to carry on, engage in, or labor at the business as defined herein of installing, removing, altering, testing, replacing, or repairing electrical systems. A violation of this section by any person holding a License shall be sufficient cause for revocation of such License.

However, nothing herein shall be construed to prohibit the use of a License by the holder thereof for or on behalf of a partnership, corporation or other business association, provided that fifty-one (51) percent or more of the control of the voting capital stock of such partnership, corporation, or other business association is owned by one (1) or more holders of a Westchester County Master Electrical License and that all work performed by such partnership, corporation or other business association is performed by or under the direct supervision of such License holder or holders.

- C. Contract with single bid:

Where the project does not involve separate bids pursuant to the New York General Municipal Law but where some electrical work is contemplated along with other work, the person, firm, partnership or corporation engaged to perform said electrical work



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must possess a valid Master/"Special" Electrician's license issued by the Westchester County Electrical Licensing Board.

- D. An electrical bidder must complete the "Certificate of License (Electrical)" of the Proposal Pages and will be required to furnish a copy of such license with the sealed Bid. Other bidders will be required to furnish a copy of such license for the applicable person engaged to perform the electrical work when request by the County, prior to awarding the contract.
- E. The license must be maintained at all times during the performance of the work contemplated under the contract. The suspension, revocation or the failure to maintain or renew such license shall, in addition to any other right or remedy available to the County, be grounds for immediate termination of the contract, effective immediately upon notice from the Commissioner.

### 34. LICENSE REQUIREMENTS (PLUMBING)

- A. In accordance with the requirements of Chapter 277, Article XV of the Laws of Westchester County, no person shall perform plumbing work under any contract with the County of Westchester except (i) a licensed Master Plumber; (ii) a certified Journey Level Plumber employed by and under the direction of a licensed Master Plumber; or (iii) an Apprentice Plumber working under the direct supervision and control of a Master Plumber or under the direct supervision and control of a certified Journey Level Plumber in the employ of a licensed Master Plumber.

In no event shall the County incur any liability to pay for any plumbing work performed in violation of the licensing requirements of Chapter 277, Article XV of the Laws of Westchester County.

- B. Contract with separate bids:

If the project is one where separate bid specifications are required pursuant to the provisions of the New York General Municipal Law, then any person, partnership, corporation, business organization or other business entity submitting a bid for the plumbing portion of the project must possess, at the time of submission of the Bid, a valid Master Plumber's license issued by the Westchester County Board of Plumbing Examiners in accordance with the Westchester County Board of Plumbing Examiners Rules and Regulations and Chapter 277 Article XV of the Laws of Westchester County, in particular Section 277.509A, which states as follows:

- A. No holder of a license or certification issued under this article shall authorize, consent to or permit the use of his or her license or certification by or on behalf of any other person. No person who has not qualified or obtained a license or certification under this article shall represent himself or herself to the public as holder of a license or certification issued under this article, either directly, by means of signs, sign cards metal plates or stationery, or indirectly in any other manner whatsoever. However, nothing herein shall be construed to prohibit the use of a license by the holder thereof for or on behalf of a partnership, corporation or other business association, provided that 51 percent or more of the control of the voting capital stock of such partnership, corporation or other business



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association is owned by one or more holders of a Westchester County master plumbing license and that all work performed by such partnership, corporation or other business association is performed by or under the direct supervision of such license holder or holders.

C. Contract with single bid:

Where the project does not involve separate bids pursuant to the New York General Municipal Law but where some plumbing work is contemplated along with other work, the person, firm, partnership or corporation engaged to perform said plumbing work must possess a valid Master Plumber's license issued by the Westchester County Board of Plumbing Examiners.

- D. A plumbing bidder must complete the "Certificate of License (Plumbing)" of the Proposal Pages and will be required to furnish a copy of such license and the County issued identity badge with the sealed Bid. Other bidders will be required to furnish a copy of such license and the County issued identity badge for the applicable person engaged to perform the plumbing work when request by the County, prior to awarding the contract.
- E. A restricted Master Plumber's license issued by the Westchester County Board of Plumbing Examiners shall satisfy the requirements of this section provided such restricted license authorizes the Master Plumber to engage in the business of plumbing within the local municipality in which the work under the contract is to be performed.
- F. The license must be maintained at all times during the performance of the work contemplated under the contract. The suspension, revocation or the failure to maintain or renew such license shall, in addition to any other right or remedy available to the County, be grounds for immediate termination of the contract, effective immediately upon notice from the Commissioner.

### 35. LICENSE REQUIREMENTS (HAULERS)

#### **(Haulers Of Solid Waste; Recyclables; Construction And Demolition Debris; Garden And Yard Waste And/Or Scrap Metal)**

A. DEFINITIONS:

- 1) "Class A" refers to all haulers except those whose hauling business is limited solely to Class C, Class D or Class E activities or whose recycling business is limited to Class B activities. Class A Licensees may also conduct Class B, Class C, Class D and Class E activities.
- 2) "Class B" refers to Recyclable brokers. Class B Licensees may also conduct Class C, Class D and Class E activities.
- 3) "Class C" refers to haulers who exclusively handle construction and demolition debris. Class C Licensees may also conduct Class D and Class E activities. With respect to Class C haulers, the following shall apply: a. Class "C-1" shall refer to a business or subsidiary which generates construction and demolition debris, as defined herein, and which, incidental to such business, transports, stores, processes, transfers or disposes of the construction and demolition debris generated by the



## INFORMATION FOR BIDDERS

operations of such business or subsidiary. Class "C-1" Licensees may also conduct Class E activities; b. Class "C-2" shall refer to all other businesses which otherwise transport, collect, store, transfer, process, or dispose of construction and demolition debris. Class "C-2" haulers may also conduct Class "C-1", Class D and Class E activities.

- 4) "Class D" refers to (i) haulers who collect, store, transport, transfer, process or dispose of garden and yard waste generated, originated or brought within the County where such garden and yard waste was previously generated by a person or entity other than the Licensees and/or (ii) haulers who collect, store, transport, transfer, process or dispose of garden and yard waste and which own, lease, or control one or more vehicles having three (3) or more axles which vehicles will be used in the collection, storage, transfer, transportation, processing or disposal of garden and yard waste generated, originated or brought within the County.
- 5) "Class E" refers to haulers who exclusively conduct a scrap peddler business.
- 6) "Construction and Demolition Debris" means uncontaminated Solid Waste resulting from the construction, remodeling, repair and demolition of structures and roads, and uncontaminated Solid Waste consisting of vegetation resulting from land clearing and grubbing, utility line maintenance and seasonal and storm-related cleanup. Such waste includes, but is not limited to, bricks, concrete and other masonry materials, soil, rock, wood, wall coverings, plaster, drywall, plumbing fixtures, non-asbestos insulation, roofing shingles, asphaltic pavement, glass, plastics that are not sealed in a manner that conceals other waste, electrical wiring and components containing no hazardous liquids, metals, and trees or tree limbs that are incidental to any of the above.
- 7) "Hauler" means any person excluding municipalities, the County and any County district including, but not limited to, Refuse Disposal District No. 1 and all County sewer and water districts, who, for a fee or other consideration, collects, stores, processes, transfers, transports or disposes of Solid Waste, Recyclables or construction and demolition debris that is generated or originated within the County or brought within the boundaries of the County for disposal, storage, transfer or processing.
- 8) "Recyclables" means those materials defined as "Recyclables" under Section 825.30 (8) of the Westchester County Source Separation Law.
- 9) "Scrap Peddler" shall mean any person who collects scrap materials for sale to a Recyclable broker using no more than one vehicle for collection and transportation of such materials.
- 10) "Solid Waste" means all putrescible and non-putrescible materials or substances, except as described in Paragraph 4 of 6 NYCRR Part 360-1.2(a), and/or regulated under 6 NYCRR Part 364, that are discarded or rejected as being spent, useless, worthless or in excess to the owners at the time of such discard or rejection including, but not limited to, garbage, refuse, commercial waste, rubbish, ashes, incinerator residue and construction and demolition debris. "Solid Waste" shall not be understood to include Recyclables as defined above.



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- B. **PLEASE TAKE NOTICE** - In accordance with the requirements of Chapter 826-a, Article III of the Laws of Westchester County, it is unlawful for any person to collect, store, transfer, transport or dispose of solid waste; recyclables; construction and demolition debris; garden and yard waste and/or scrap metal, as defined herein, that is generated or originated within the County or brought within the boundaries of the County for disposal, storage, transfer or processing, or to conduct any activities defined as Class A, Class B, Class C, Class D or Class E activities under Chapter 826-a of the Laws of Westchester County, in Westchester County (hereinafter collectively referred to as "hauling") without having first obtained a license therefore from the Westchester County Solid Waste Commission.

In no event shall the County incur any liability with respect to any hauling activities conducted by the bidder or any subcontractor of the bidder in violation of Chapter 826-a of the Laws of Westchester County.

- C. Where the project necessitates that hauling be performed, either the bidder or the person, partnership, corporation, business organization or other business entity engaged to perform such hauling work on behalf of the bidder (hereinafter the "subcontractor") must possess a valid license issued by the Westchester County Solid Waste Commission at the time of submission of the bid and throughout the duration of any contract issued pursuant thereto.
- D. A hauler bidder must complete the "Certificate of License (Hauler)" of the Proposal Pages and will be required to furnish a copy of such license with the sealed bid. Other bidders will be required to furnish a copy of such license for the applicable person engaged to perform the hauling work when requested by the County, prior to awarding the contract.
- E. The suspension, revocation, or the failure to maintain or renew such license may, in addition to any other right or remedy available to the County, be grounds for termination of the contract, effective immediately upon notice from the Commissioner. The bidder which is awarded the contract hereunder shall have a continuing obligation to notify the Commissioner, within (2) business days, of any suspension, revocation or other action taken with respect to any license issued by the Westchester County Solid Waste Commission which may limit or impair the bidder's ability, or the ability of any authorized subcontractor, to perform such hauling work in the County of Westchester.

It shall be the bidder's responsibility to ensure that any subcontractor who will perform the hauling services required under any contract issued pursuant to this bid specification has a valid license for the duration of the term of any contract awarded hereunder.

- F. In the event that a license held by the bidder or its subcontractor is revoked, suspended or otherwise discontinued by the Westchester County Solid Waste Commission, or in the event that the bidder is otherwise required to obtain the services of a new or alternate subcontractor for the hauling work, the bidder shall immediately notify the Commissioner and seek the Commissioner's approval for the use of such subcontractor to provide the hauling services which are required under the contract, and shall provide the Commissioner with a copy of the license issued by the Westchester County Solid Waste Commission to such subcontractor. No bidder or subcontractor shall provide



## INFORMATION FOR BIDDERS

hauling services under the contract until a copy of its license has been provided to the Commissioner and the Commissioner has approved of such bidder or subcontractor.

### 36. MINORITY PARTICIPATION POLICY

- A. Pursuant to Chapter 308 of the Laws of the County of Westchester, the County encourages the meaningful and significant participation of business enterprises owned by persons of color and women - Minority Business Enterprise (MBE) and Women Business Enterprise(WBE); on County of Westchester contracts.
- B. It is the goal of the County of Westchester to use its best efforts to encourage, promote and increase participation of business enterprises owned and controlled by persons of color or women (MBE/WBE) in contracts and projects funded by all departments of the County and to develop a policy to efficiently and effectively monitor such participation.
- C. In recognition of the need to promote the development of business enterprises owned and controlled by persons of color and women to achieve a goal of equal opportunity, and overcome the existing under representation of these groups in the business community, the County of Westchester acting through its Office of Economic Development shall as a lawful public and County purpose provide technical and informational assistance to such business enterprises with a particular emphasis on education programs to encourage participation in the contract procurement process.
- D. For the purposes of this Local Law, a business enterprise owned and controlled by women or persons of color shall be construed to mean a business enterprise including a sole proprietorship, partnership or corporation that is: (a) at least 51% owned by one or more persons of color or women; (b) an enterprise in which such ownership by persons of color or women is real, substantial and continuing; (c) an enterprise in which such ownership interest by persons of color or women has and exercises the authority to control and operate, independently, the day-to-day business decisions of the enterprise; and (d) an enterprise authorized to do business in this state which is independently owned and operated. In addition, a business enterprise owned and controlled by persons of color or women shall be deemed to include any business enterprise certified as an MBE or WBE pursuant to Article 15-a of the New York State Executive Law and implementing regulations, 9 NYCRR Subtitle N Part 540 et seq., or as a small disadvantaged business concern pursuant to the Small Business Act, 15 U.S.C. 631 et seq., and the relevant provisions of the Code of Federal Regulations as amended.
- E. The Contractor hereby acknowledges and agrees:
  - 1) That in the hiring of employees for the performance of work under this contract or any subcontract hereunder, no contractor, subcontractor, nor any person acting on behalf of such contractor or subcontractor, shall be reason of race, creed, color, religion, gender, age, ethnicity, disability, sex, alienage or citizenship status, national origin, marital status, sexual orientation, familial status, genetic predisposition or carrier status discriminate against any citizen of the State of New York who is qualified and available to perform the work to which the employment relates;



## INFORMATION FOR BIDDERS

- 2) That no contractor, subcontractor, nor any person on its behalf shall, in any manner, discriminate against or intimidate any employee hired for the performance of work under this contract on account of race, creed, color, religion, gender, age, ethnicity, disability, sex, alienage or citizenship status, national origin, marital status, sexual orientation, familial status, genetic predisposition or carrier status;
  - 3) That there may be deducted from the amount payable to the contractor by the County under this contract a penalty of fifty (50) dollars for each person for each calendar day during which such person was discriminated against or intimidated in violation of the provisions of the contract;
  - 4) That this contract may be canceled or terminated by the County, and all moneys due or to become due hereunder may be forfeited, for a second or any subsequent violation of the terms or conditions of this section of the contract; and
  - 5) The aforesaid provisions of this section covering every contract for or on behalf of the County for the manufacture, sale or distribution of materials, equipment or supplies shall be limited to operations performed within the territorial limits of the State of New York.
  - 6) Contractor agrees to include, or require the inclusion of the above provision in any subcontract made pursuant to its contract with the County.
- F. In furtherance of the Contractor's obligation to make documented good faith efforts to utilize Minority Business Enterprises (MBE) and Women's Business Enterprises (WBE) for the Work required by this Contract, the Contractor shall provide the Minority/Women Business Enterprise Questionnaire signed by an officer of the Contractor, and any additional information requested by the County, including but not limited to the following, which shall be delivered to the Construction Administrator and \_\_\_\_\_, Program Manager of Minority- and Women-Owned Business Program, County of Westchester, Room 911, 148 Martine Avenue, White Plains, New York 10601 coincident with the Contractor's delivery to the County of its bid and shall be provided by the Contractor with any request for approval of subcontractors:
- 1 (a) The name, address, telephone number and contact person of each MBE and WBE solicited verbally by Contractor during the applicable period for the performance of any portion of the Contractor's Work and the date(s) that each such solicitation was made;
  - 1 (b) A description of the portion of the Contractor's Work for which each such solicitation is made.
  - 1 (c) A listing of the project documents, if any, furnished to each such MBE and WBE.
  2. A copy of each written solicitation sent by the Contractor to each MBE and WBE and the name and address of each MBE and WBE to whom the solicitation was made.
  - 3) The name and address of each MBE and WBE that performs any portion of the Contractor's Work, a description of such portion of the Work and the dollar



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amount therefore.

- 4) A statement that the Contractor reviewed a list of MBE and WBE contractors in their outreach efforts. A list can be found at [www.westchestergov.com/mwob](http://www.westchestergov.com/mwob).
- 5) Indicate those MBE and WBE contractors found on the list that provided the type of subcontractor services required for this project. If none were found, please indicate.
- 6) Describe other outreach efforts, including other MBE and/or WBE lists, organizations or individuals that were contacted.

The failure of the low bidder to comply with the provisions of this subparagraph F may result in the County NOT awarding this contract to your firm. Failure of the Contractor to comply with the provisions of this subparagraph F may constitute a material breach of this Contract. Failure to comply with the Minority Participation Policy may be considered by the County when awarding contracts.

### 37. SEXUAL HARASSMENT POLICY

- A. As with discrimination involving race, color, religion, age, sexual orientation, disability, and national origin, Westchester County also prohibits sex discrimination, including sexual harassment of its employees in any form. The County will take all steps necessary to prevent and stop the occurrence of sexual harassment in the workplace.
  - 1) **This policy applies to all County employees and all personnel in a contractual relationship with the County.** Depending on the extent of the County's exercise of control, this policy may be applied to the conduct of non-County employees with respect to sexual harassment of County employees in the workplace.
  - 2) This sexual harassment policy includes, but is not limited to, inappropriate forms of behavior described by the Equal Employment Opportunity Commission.
- B. Sexual advances that are not welcome, requests for sexual favors, and other verbal or physical conduct of a sexual nature constitutes sexual harassment when:
  - 1) Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment; -OR-
  - 2) Submission to or rejection of such conduct by an individual is used as the basis for employment decisions, such as promotion, transfer, or termination, affecting such individuals; -OR-
  - 3) Such conduct has the purpose or effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile or offensive working environment.
- C. Sexual harassment refers to behavior that is not welcome, that is personally offensive, that fails to respect the rights of others, that lowers morale and that, therefore, interferes



## INFORMATION FOR BIDDERS

with an employee's work performance and effectiveness or creates an intimidating, hostile or offensive working environment.

### 38. SMOKE-FREE WORKPLACE POLICY

- A. By way of Executive Order No. 5 of 1998 and Local Law 3 of 2003, it is now the policy of the County of Westchester to institute a smoke-free “workplace”.
- B. Every indoor County “workplace”, shall become a smoke-free area. The smoking or carrying of lighted cigarettes, cigars, pipes, or any other tobacco-based products, or products that result in smoke, is hereby banned.
- C. Every indoor County “workplace” shall be covered under this Executive Order, including the County Jail in Valhalla and the Westchester County Center in White Plains. This Executive Order shall not, however, apply to County-owned facilities that are not County “workplaces”, such as employees housing or privately run restaurants on County property (e.g. at the County golf courses).
- D. The Richard J. Daronco County Courthouse shall not, for purposes of this Executive Order, be considered a County “workplace”, and therefore shall not be required to be smoke-free.
- E. This Executive Order is intended to be consistent with, and not modify, any provisions of the New York State Public Health Law.
- F. This Executive Order shall take effect immediately and remain in full force and effect until otherwise superseded or revoked.

### 39. COUNTY ENERGY EFFICIENT PURCHASING POLICY

- A. By way of Executive Order No. 9 of 2002, it is now the policy of the County of Westchester to institute an Energy Efficient Purchasing Policy.
- B. This policy shall apply to all purchases made by and for the County in accordance with applicable laws, rules and regulations.
- C. Wherever the price is reasonably competitive and the quality adequate for the purpose intended, purchase and utilization of products that meet Energy Star requirements for energy efficiency as determined by the United States Environmental Protection Agency and the United States Department of Energy is hereby recommended.
- D. If the Energy Star label is not available with respect to a particular product, than it is recommended that products in the upper twenty-five percent of energy efficiency as designated by the United States Federal Energy Management Program shall be purchased and utilized if the prices of those products are reasonably competitive and the quality adequate for the purpose intended.

### 40. RESTRICTION ON USE OF TROPICAL HARDWOODS

- A. The bidder/proposer shall not use or propose to use any tropical hardwoods or tropical hardwood products in any form, except in accordance with State Finance Law § 165 (Use of Tropical Hardwoods), as may be amended from time to time. Pursuant to the



## INFORMATION FOR BIDDERS

State Finance Law § 165, any bid/proposal which proposes or calls for the use of any tropical hardwood or wood product in the performance of the contract shall be deemed non-responsive.

### 41. DISCLOSURE OF RELATIONSHIPS TO COUNTY

- A. The successful bidder is required to complete the form entitled “Required Disclosure of Relationships to County” on Proposal Pages 32-33 before award of the contract.
- B. In the event that any information provided on the completed Proposal Pages entitled “Required Disclosure of Relationships to County” changes during the term of this agreement, the Contractor shall notify the Commissioner in writing within ten (10) days of such event by submitting a revised “Required Disclosure of Relationships to County” form.

### 42. CONTRACTOR DISCLOSURE STATEMENT

The Contractor and each Major Subcontractor represents that all information provided by the Contractor and Major Subcontractor in the form entitled “Contractor Disclosure Statement” on Proposal Pages 23-31 is in all respects true and correct. In the event the information provided on that document changes during the term of this agreement or for a period of three (3) years after the date that the Contractor and/or the Major Subcontractor receives final payment under this agreement, the Contractor and/or Major Subcontractor shall notify the Commissioner in writing within ten (10) days of such event by submitting a revised “Contractor/Major Subcontractor Disclosure Statement”. Bidders must complete the Required Disclosure of Relationships to County form. The Required Disclosure of Relationships to County form is located on Proposal Pages 32-33.

### 43. CRIMINAL BACKGROUND INFORMATION

Pursuant to Executive Order 1-2008 and subject to the applicable provisions of New York Correction Law §§ 752 and 753, the County shall have the right to bar the following “Persons Subject to Disclosure” (Persons shall mean individuals or legal entities) from providing work or services to the County or from being on County property:

(a) Consultants, Contractors, Licensees, Lessees of County owned real property, their principals, agents, employees, volunteers or any other person acting on behalf of said Contractor, Consultant, Licensee, or Lessee who is at least sixteen (16) years old, including but not limited to Subconsultants, Subcontractors, Sublessees or Sublicensees who are providing services to the County; and

(b) Any family member or other person, who is at least sixteen (16) years old, residing in the household of a County employee who lives in housing provided by the County located on County property.

If any of the above mentioned Persons Subject to Disclosure has either one of the following:

(a) A conviction of a crime (all felonies and misdemeanors as defined under the New York State Penal Law or the equivalent under Federal law or the laws of any other State);

(b) A pending criminal proceeding for a crime(s) as defined above; or



## INFORMATION FOR BIDDERS

(c) A refusal to answer such questions.

Where the following criteria apply:

(a) If any of the Persons Subject to Disclosure providing work or services to the County in relation to a County Contract are not subject to constant monitoring by County staff while performing tasks and/or while such persons are present on County property pursuant to the County Contract; and

(b) If any of the Persons Subject to Disclosure providing work or services to the County, in relation to a County Contract may, in the course of providing those services, have access to sensitive data (for example, Social Security Numbers and other personal/secure data); facilities (secure facilities and/or communication equipment); and/or vulnerable populations (for example, children, seniors and the infirm).

Accordingly, the Contractor is required to review the Instructions found in the instructions and complete “Contractor and all persons subject to Disclosure Certification Forms” located at Forms Pages 11-13 as well as any other applicable criminal disclosure forms (i.e., Forms Pages 14 through 19,” together with Forms Pages 11-13 collectively referred to as “Disclosure Forms”).

However, the following Persons Subject to Disclosure are **exempt** from Executive Order 1-2008: (i) those persons for whom the County has already conducted a background check and issued a security clearance that is in full force and effect; or (ii) those persons for whom another state or federal agency having appropriate jurisdiction has conducted a security and/or background clearance or has implemented other protocols or criteria for this purpose that apply to the subject matter of this Contract that is in full force and effect.

If a Person Subject to Disclosure is exempt from the disclosure described in Executive Order 1-2008 because of either “i” or “ii” above, then the Contractor shall notify the Procuring Officer<sup>1</sup> in the respective Department of its claim of exemption and it shall be the responsibility of the Procuring Officer to verify each exemption. If the Procuring Officer determines that the Contractor is exempt under sections “i” or “ii” above, the Procuring Officer shall confirm same with the Contractor and maintain a written record including all supporting details of the verification of and acknowledgement of said exemption.

If the Procuring Officer determines that the Contractor is not exempt under sections “i” or “ii” above, the Procuring Officer shall notify the Contractor in writing, and the appropriate Disclosure Forms shall be required.

It shall be the Contractor’s duty to disclose and to inquire of each and every Person Subject to Disclosure, whether they have been convicted of a crime or whether they are currently subject to pending criminal charges. It shall be the duty of the Contractor to submit a completed Certification Form “Forms Pages 11-13”annexed hereto as ,” which certifies that the Contractor and every Person Subject to Disclosure has been asked whether they have been convicted of a crime or are currently subject to pending criminal charges.

Should the Contractor or any Person Subject to Disclosure (also referred to as “Person”)

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<sup>1</sup> “Procuring Officer” shall mean the head of the department or the individual(s) authorized by the head(s) of the department(s) undertaking the procurement and with respect to those matters delegated to the Bureau of Purchase and Supply pursuant to Section 161.11(a) of the Laws of Westchester County, the Purchasing Agent.



## INFORMATION FOR BIDDERS

affirmatively advise that they have been convicted of a crime said Person shall be identified in Forms Page 14 entitled “Names And Titles Of Persons Subject To Disclosure That Answered Yes” to any questions on Forms Pages 11-13 and shall complete Forms Pages 15-16 entitled, “Criminal Background Disclosure Form For Persons Who Have Been Convicted of A Crime.”

Should the Contractor or any Person Subject to Disclosure advise that they are subject to pending criminal charges, said Person shall be identified in Forms Page 14 and shall complete the form annexed hereto as Forms Pages 17-18 entitled, “Criminal Background Disclosure Form For Persons Who Are Subject to Pending Criminal Charges.”

Should the Contractor or any Person Subject to Disclosure refuse to answer whether they have been convicted of a crime or are currently subject to pending criminal charges, the name and title of said Person(s) shall be listed on Forms Page 19 entitled “Persons That refused To Answer”.

It shall be the duty of the Contractor to submit to the Procuring Officer all of the attached applicable Disclosure Forms prior to the commencement of this Contract. It is the responsibility of each Contractor to assure that all of their proposed Subcontractors complete the criminal background and disclosure certification forms and submit the forms to the Procuring Officer before they will be approved to perform work on the contract.

Under no circumstances shall the existence of a language barrier serve as a basis for the waiver of or an exception to this obligation. If the Contractor needs to obtain translation services to fulfill this obligation, it shall be at the sole cost and expense of the Contractor.

The Contractor shall be required to make the same inquiry and forward updated Disclosure Forms to the Procuring Officer regarding additional Persons Subject to Disclosure in connection with this Contract during the term of this Contract. **NO NEW PERSON SUBJECT TO DISCLOSURE SHALL PERFORM WORK OR SERVICES OR ENTER ONTO COUNTY PREMISES UNTIL THE UPDATED DISCLOSURE FORMS ARE FILED WITH THE PROCURING OFFICER.**

**THE CONTRACTOR HAS A CONTINUING OBLIGATION TO MAINTAIN THE ACCURACY OF THE DISCLOSURE FORMS FOR THE DURATION OF THIS CONTRACT, INCLUDING ANY AMENDMENTS OR EXTENSIONS THERETO AND SHALL PROVIDE ANY UPDATES TO THE PROCURING OFFICER AS NECESSARY TO COMPLY WITH THE DISCLOSURE REQUIREMENTS BY EXECUTIVE ORDER 1-2008.**

Any failure by the Contractor to comply with the disclosure requirements of Executive Order 1-2008, absent proof of exemption deemed satisfactory by the County Procuring Officer, may be considered by the County, a material breach by the Contractor and may be grounds for immediate termination of this Agreement by the County.

#### 44. MANDATORY OSHA CONSTRUCTION SAFETY AND HEALTH TRAINING

Pursuant to NYS Labor Law §220-h – On all public work projects of at least \$250,000 all laborers, workers and mechanics employed, in the performance of the contract on the public work site, either by the contractor, sub-contractor or other person doing or contracting to do the



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whole or a part of the work contemplated by the contract, are required to be certified as having successfully completed an OSHA construction safety and health course of at least 10 hours prior to performing any work on the project.





### **3. GENERAL CLAUSES**

**DEPARTMENT OF PUBLIC WORKS**

**Division of Engineering**



## GENERAL CLAUSES

### 1. MATERIAL AND WORKMANSHIP

It is the intent of these specifications to require first-class work and new and best quality materials. For any unexpected features arising during the progress of the work and not fully covered herein the specifications shall be interpreted to require first-class work and materials, and such interpretations shall be binding upon the Contractor.

- 1) Upon award of the Contract, the Contractor shall furnish in writing to the Construction Administrator the sources of supply for concrete, and other materials that it proposes to use in the work, and material shall not be furnished from other sources of supply except after written approval by the Construction Administrator. The Contractor shall, before ordering equipment verify that Suppliers of equipment will provide the required warranties, guarantees, and maintenance services.

### 2. DEFINITIONS

COMMISSIONER - The head of the Department of Public Works of the County of Westchester.

CONSTRUCTION ADMINISTRATOR- The representative of the Commissioner of Public Works at the project site who, unless specifically designated otherwise in the Contract, shall in the first instance, make such determinations as are necessary for the expeditious completion of the Work, except for those determinations that are reserved to the Commissioner.

CONTRACT - Shall mean each of the various parts of these documents both as a whole or severally and except for titles, subtitles, headings and table of contents, shall include the Notice to Bidders, Information for Bidders, the Proposal, the Specifications, the Performance Bond, the Plans, the Contract Form, and all addenda and provisions required by law.

CONTRACTOR - Party of the second part to the Contract acting directly or through its agents, subcontractors, or employees, and who is responsible for all debts pertaining to and for the acceptable performance of the work for which it had contracted.

COUNTY - Party of the first part to the Contract as represented by the Board of Acquisition and Contract and the Commissioner of Public Works for the County of Westchester.

ENGINEER - An Engineer or Architect that designed the project and is serving as the duly authorized representative of the Commissioner of Public Works who, in addition to the duties set forth in the Contract, shall, in the first instance, make such determinations as are necessary to ensure the Contractor's compliance with its obligations for the preparation and submission of shop drawings and all other submittals required for the Work. If there is no Engineer the duties of the Engineer shall be performed by the Construction Administrator and all references in this



## GENERAL CLAUSES

Agreement to the Engineer shall be deemed to mean the Construction Administrator.

**MAJOR SUBCONTRACTOR-** Subcontractors performing all or a portion of the work for Electrical; Heating, Ventilating and Air Conditioning; Fire Prevention; General Construction; and/or any Subcontractor whose subcontract price is equal to or greater than ten percent (10%) of the Contract Price.

**OWNER -** The County of Westchester.

**PLANS -** All official drawings or reproductions of drawings pertaining to the work or to any structure connected therewith.

**SPECIFICATIONS -** The body of directions, requirements, etc. contained in this present volume, together with all documents of any descriptions and agreements made (or to be made), pertaining to the methods(or manner) of performing the work or to the quantities and quality. Specifications shall also include the Notice to Contractors, Instructions to Bidders, Bond, Proposal and Contract Agreement.

**SURETY -** The corporate body, which is bound with and for the Contractor and which engages to be responsible for the faithful performance of the contract, and to indemnify the County against all claims for damages.

**A.A.S.H.O. -** American Association of State Highway Officials

**A.R.E.A. -** American Railway Engineering Association

**A.S.T.M. -** American Society for Testing Materials

**A.W.W.A. -** American Water Works Association

**N.E.C. -** National Electrical Code

**N.E.M.A. -** National Electric Manufacturers Association

### 3. BOUNDARIES OF WORK

The County will provide land or rights-of-way for the work specified in this Contract. Other contractors, employees or concessionaires of the county, may for all necessary purposes enter upon the work and premises used by the Contractor, and the Contractor shall give to other contractors and employees of the County all reasonable facilities and assistance for the completion of adjoining work.

### 4. OVERLAPPING WORK

The Contractor shall take notice that because of work on other contracts within and adjacent to the contract limits it may not have exclusive occupancy of the territory within or adjacent



## GENERAL CLAUSES

to the contract limits, and that during the life of this contract the owners and operators of Public Utilities may make changes in their facilities.

The said changes may be made by utility employees or by contract within or adjacent to the contract limits and may be both temporary and permanent.

The Contractor shall cooperate with other Contractors and owners of various utilities and shall coordinate and arrange the sequence of its work to conform with the progressive operations of work already or to be put under contract. Cooperation with Contractors already or to be engaged upon the site is essential to properly coordinate the construction efforts of all Contractors, Utility Owners and Subcontractors engaged in work within and adjacent to the contract limits.

The Contractor shall coordinate the work of its various Subcontractors. Their respective operations shall be arranged and conducted so that delays are avoided. Where the work of the Contractor or Subcontractor overlaps or dovetails with that of other Contractors, materials shall be delivered and operations conducted so as to carry on the work continuously in an efficient and workmanlike manner. The Contractor shall coordinate its work to be done hereunder with the work of the other Contractor(s) and the Contractor shall fully cooperate with such other Contractor(s) and carefully fit its own work to that provided under other contracts as may be directed by the Construction Administrator. If the Construction Administrator shall determine that the Contractor is failing to coordinate its work with the work of the other Contractor(s) as the Construction Administrator has directed, then the Commissioner shall have the right, at its sole option, to withhold any payments otherwise due hereunder until the Construction Administrator's directions are complied with by the Contractor and/or deduct the costs incurred by the County due to the Contractor's failure or refusal to so cooperate. Delays or oversights on the part of the Contractor or Subcontractors or Utility Owners in performing their work in the proper manner thereby causing cutting, removing and replacing work already in place, shall not be the basis for a claim for extra compensation.

In the event of interference between operations of Utility Owners and other Contractors, or among the Contractors themselves, the Construction Administrator shall be the sole judge of the rights of each Contractor insofar as the sequence of work necessary to expedite the completion of the entire project, and in all cases its decision shall be final. The Contractor agrees that it has included in its unit prices bid for the various items of the contract the possible additional cost of performing the work under this contract because it may not have a clear site for its work and because of possible interference of roadway use, other Contractors and necessary utility work, and the necessity or desirability of opening certain sections of pavement to traffic before the entire work is completed. The County shall not be liable for any damages suffered by any Contractor by reason of another Contractor's failure to comply with the directions of the Construction Administrator, or by reason of another Contractor's default in performance or by any act or failure to act of any Utility Owner or anyone working on its behalf, it being understood that the County does not guarantee the responsibility or continued efficiency of any Contractor or Utility Owner and under no circumstances shall the County be liable to any Contractor or Utility Owner for any delays, interferences or any other impediment or hindrance to the Contractor's or Utility Owner's work .



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Should the Contractor sustain any damage through any act or omission of any other contractor having a Contract with the County for the performance of work upon the site or of work which may be necessary to be performed for the proper prosecution of the work to be performed hereunder, or through any act or omission of a supplier or subcontractor of whatever tier of such contractor, the Contractor shall have no claim against the County for such damage, but shall have a right to recover such damage from the other contractor under the provision similar to the following provision that has been or will be inserted in the Contracts with such other contractors.

Should any other Contractor having or who shall hereafter have a Contract with the County for the performance of work upon the site sustain any damage through any act or omission of the Contractor hereunder or through the act or omission of any subcontractor of whatever tier of the Contractor, the Contractor agrees to reimburse such other Contractor for all such damages and to defend at his own expense any suit based upon such claim and if any judgment or claims against the County shall be allowed the Contractor shall pay or satisfy such judgment or claim and pay all costs and expenses, including attorney's fees, incurred by the County in connection therewith and to indemnify and hold the County harmless from all such claims.

The County's right to indemnification hereunder shall not be diminished or waived by its assessment against the Contractor of liquidated damages as may be provided elsewhere herein.

Delays in availability of any part of the site or any delays due to interference between the several Contractors and the Utility Owners shall be compensated for by the Construction Administrator solely through granting an extension of time in which to complete the work of the contract without assessment of Engineering charges. The Contractor in submitting its bid hereby agrees that it shall make no other claim against the County for any damages due to such delays or interference.

### **5. PROPER METHOD OF WORK AND PROPER MATERIALS**

The Construction Administrator shall have the power in general to direct the order and sequence of the work, which will be such as to permit the entire work under this contract to be begun and to proceed as rapidly as possible, and such as to bring the several parts of the work to a successful completion at about the same time.

If at any time before the commencement or during the progress of the work the materials and appliances used or to be used appear to the Construction Administrator as insufficient or improper for securing the quality of work required, or the required rate of progress, he may order the Contractor to increase their efficiency or to improve their character, and the Contractor shall promptly conform to such order; but the failure of the Construction Administrator to demand any increase of such efficiency or improvement shall not release the Contractor from its obligation to secure the quality of work or the rate of progress specified.



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### 6. CONTROL OF AREA

Unloading of materials and parking of equipment shall be subject to the orders of the Construction Administrator so far as he may find necessary for the protection and safety of the traveling public and the preservation of property.

### 7. PERMITS, FEES, ETC.

The County will obtain at its sole cost the necessary New York State Pollutant Discharge Elimination System ("SPDES") Permit and will sign the associated Notice of Intent ("NOI"). The Contractor and its subcontractors will sign the required Certification Statement (a copy of which is contained as Proposal Page ) when it signs the contract.

All necessary permits from County, State or other concerned Public Authorities shall be secured at the cost and expense of the Contractor. It shall also give all notices required by law, ordinance, or the rules and regulations of the concerned Public Bureaus or Departments, and also as a part of the Contract, comply without extra charge or compensation with all State Laws and all other Ordinances or Regulations that may be applicable to this work. Contractor, however, shall first notify the Commissioner before proceeding with securing of all necessary permits and the giving of required notices.

### 8. TRAFFIC

The General Contractor shall be responsible for the Maintenance and Protection of traffic at all times until the date of completion and acceptance of its work.

During the whole course of the work the Contractor shall so conduct its work and operations so as to interfere with traffic passing the work as little as possible and effect by every reasonable means the safety and comfort of pedestrians, vehicles and vehicle passengers passing the work.

### 9. INSPECTION

The Contractor shall at all times provide convenient access and safe and proper facilities for the inspection of all parts of the work. No work, except such shop work as may be so permitted, shall be done except in the presence of the Construction Administrator or his/her assistants. No material of any kind shall be used upon the work until it has been inspected and accepted by the Construction Administrator. All materials rejected shall be immediately removed from the work and not again offered for inspection. Any materials or workmanship found at any time to be defective shall be remedied at once, regardless of previous inspection. The inspection and supervision of the work by the Construction Administrator is intended to aid the Contractor in supplying labor and materials in accordance with the specifications, but such inspection shall not operate to release the Contractor from any of its contract obligations.

### 10. STOPPING WORK

The Commissioner, Construction Administrator or Engineer may stop by written order any work or any part of the work under this contract if, in his/her opinion, the methods employed



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or conditions are such that unsatisfactory work might result. When work is so stopped it shall not be resumed until the methods or conditions are revised to the satisfaction of the Commissioner, which must be signified in writing. The Contractor agrees to make no claim for increased costs arising from the issuance of any stop work order.

### 11. DIMENSIONS

Figured dimensions on the plans shall be given preference over scaled dimensions, but shall be checked by the Contractor before starting construction. Any errors, omissions or discrepancies shall be brought to the attention of the Engineer and his/her decision thereon shall be final.

### 12. PAYMENTS TO COUNTY

Wherever in the Contract Documents the Contractor is required to make a payment to the County, the Contractor agrees that the County has the option to withhold such sum(s) from payments otherwise due to the Contractor and that all such sums withheld shall be deemed not to be earned by the Contractor.

### 13. PROTECTION OF UTILITIES AND STRUCTURES

The Contractor shall be responsible for the preservation of all public and private underground and surface utilities/structures at or adjacent to the construction work; insofar as they may be endangered by the work. This shall hold true whether or not they are shown on the contract drawings. If they are shown on the drawings, the County does not guarantee their locations even though the information will be from the best available sources.

The Contractor shall give ample and reasonable notice to all private, corporate or municipal owners before work is done near their utility or structure; shall properly protect all utilities/structures encountered; shall at their expense repair/replace any items that are damaged; and shall proceed with caution to prevent undue interruptions to utility services.

Investigation and/or on-site mark-out, by the County, must be done prior to excavation work at the Valhalla Campus. This investigation/mark-out is to serve as a guide for the Contractor and does not absolve the Contractor from the responsibility to repair/replace identified or non-identified utilities/structures, at no cost to the County.

All excavation work performed at the Valhalla Campus requires the submission of a completed "Ground Penetration" form/sketch(es) will be distributed to the appropriate utility owners. Therefore, the Contractor should assume that no excavation work can be performed until approximately twenty (20) working days after submission of the form/sketch(es), but not prior to approval by the DPW-BO Superintendent of Buildings.

### 14. PROTECTION OF WATER RESOURCES & THE ENVIRONMENT

The Contractor is responsible to review the specifications and drawings as they relate to this Agreement to ascertain what procedures must be followed in order to comply with all applicable stormwater management, water quality control, erosion, and sediment control



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laws, rules, regulations and permits. If the Contractor is of the opinion that any work required, necessitated, or contained in the specifications or otherwise ordered conflicts with the applicable stormwater management, water quality control, erosion, and sediment control laws, rules, regulations, procedures, and permits, including, without limitation, all applicable provisions of the New York State Stormwater Management Design Manual, and the New York Standards and Specifications for Erosion and Sediment Control as they may be amended from time to time, it must promptly notify the First Deputy Commissioner of the Department of Public Works in writing.

In addition to all other requirements contained in this Agreement, the Contractor recognizes and understands that it is an essential element of this Agreement that the Contractor complies with the County's policies to protect water resources and the environment. The Contractor must comply with all applicable stormwater management, water quality control, erosion, and sediment control laws, rules, regulations, permits, procedures and specifications, including, without limitation, all applicable provisions of the New York State Stormwater Management Design Manual,<sup>1</sup> the New York Standards and Specifications for Erosion and Sediment Control as they may be amended from time to time. All of these documents should be obtained from the New York State Department of Environmental Conservation to ensure that the Contractor has the latest version. It should be noted that the standards set forth in the New York State Stormwater Management Design Manual, and the New York Standards and Specifications for Erosion and Sediment Control apply to ALL work done for the County, regardless of the size of the project. In case of a conflict among the governmental regulations and standards, the most stringent regulation, standard or recommendation shall apply to the work done under this Agreement.

The Contractor and its subcontractors shall execute the required Stormwater Pollution Prevention Certification, which is located at Proposal Page 20. In addition, the Contractor acknowledges that if the work required under this Agreement requires that a State Pollutant Discharge Elimination System ("SPDES") permit be obtained from the New York State Department of Environmental Conservation, then the Contractor must comply with the terms and conditions of the SPDES permit for stormwater discharges from construction activities and the Contractor will not take any action or fail to take any necessary action that will result in the County being held to be in violation of said permit or any other permit. The Contractor shall cooperate with the County in obtaining the permit and comply with the SPDES permit and all other applicable laws, rules, regulations and permits.

The Contractor shall provide, as the Commissioner or his designee may request, proof of compliance with the County's policies to protect water resources and the environment, and all applicable stormwater management, water quality control, erosion and sediment control laws, rules, regulations, permits, procedures and specifications.

The Contractor is responsible to ascertain which of the laws, rules, regulations, permits and standards referenced above affect its construction activities, and the Contractor shall be solely responsible for all costs and expenses, including any penalties or fines, incurred by the County, due to the Contractor's failure to comply with such applicable laws, rules,

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<sup>1</sup> available at <http://www.dec.state.ny.us/website/dow/swmanual/swmanual.html> - The location of this reference is provided to assist the Contractor; it does not relieve the Contractor from the obligation of obtaining and complying with the latest version of the document.



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permits, regulations, standards and County policies. The Contractor shall be responsible to defend and indemnify the County from any and all claims resulting from the Contractor's failure to comply with the applicable laws, rules, regulations, permits, standards and County policies.

Failure of the Contractor to comply with the County's policies to protect water resources and the environment, and all applicable stormwater management, water quality control, erosion and sediment control laws, rules, regulations, permits, procedures and specifications may result in the withholding of progress payments to the Contractor by the County. Such withholding of progress payments shall not relieve the Contractor of any requirements of the Agreement including the completion of the work within the specified time, and any construction sequence requirement of the Agreement.

The Contractor acknowledges that its failure to comply with the County's policies to protect water resources and the environment, and all applicable stormwater management, water quality control, erosion and sediment control laws, rules, regulations, permits, procedures and specifications shall constitute a material breach under this contract. For the breach or violation of this provision, without limiting any other rights or remedies to which the County may be entitled, the County shall have the right, in its sole discretion to suspend, discontinue or terminate this Agreement immediately upon notice to the Contractor. In such event, the Contractor shall be liable to the County for any additional costs incurred by the County in the completion of the project.

The failure of the Contractor to comply with these requirements could lead to a determination that the Contractor is not a responsible bidder when the Contractor is bidding on other projects.

### 15. SANITARY REGULATIONS

The Contractor shall obey and enforce such sanitary regulations and orders and shall take such precautions against infectious diseases as may be deemed necessary. The building of shanties or other structures for housing the men, tools, machinery or supplies will be permitted only at approved places, and the sanitary condition of the grounds in and at such shanties or other structures must be at all times maintained in a satisfactory manner.

### 16. CLEANING UP

Upon completion of the work, the Contractor shall remove all equipment, rubbish, debris and surplus materials from the buildings, and grounds, and provide a suitable dumping place for such materials. The premises shall be left in a neat, clean and acceptable condition.

No litter, debris of any kind shall be allowed to accumulate for more than one day in any portion of the buildings or grounds, and must be removed from the area at the end of each workday.

### 17. PREVENTION OF DUST HAZARD

In accordance with the New York State Labor Law, Section 22a, in the event a silica or other harmful dust hazard is created due to construction operations under the contract, the Contractor shall install, maintain and keep in effective operation the appliances and methods



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for the elimination of such silica dust or other harmful dust as have been recommended and approved by State and local authorities.

### 18. REPRESENTATIVE ALWAYS PRESENT

The Contractor in case of its absence from the work shall have a competent representative **fluent in English** or foreman present, who shall obey without delay, all instructions of the Construction Administrator in the prosecution and completion of the work in conformity with this contract, and shall have full authority to supply labor and material immediately.

### 19. WORK IN BAD WEATHER

During freezing, stormy or inclement weather, no work shall be done except such as can be done satisfactorily and in a manner to secure first-class construction throughout.

### 20. PROTECTION OF WORK UNTIL COMPLETION

The Contractor shall be responsible for the protection and maintenance of its work until the same has been accepted by the Owner and shall make good any damage to the work caused by floods, storms, settlements, accidents, or acts of negligence by its employees or others so that the complete work when turned over to the Owner will be in first-class condition and in accordance with the plans and specifications.

### 21. REMOVAL OF TEMPORARY STRUCTURES AND CLEANING UP

On or before the completion of the work the Contractor shall, without charge therefore, tear down and remove all buildings and other structures built by him for facilitating the carrying out of the work, shall remove all rubbish of all kinds from the grounds which he has occupied, shall do any small amount of additional trimming and grading and shall leave the entire work and premises clean, neat and in good condition. The Contractor shall provide at its own expense suitable dumping places for such material. When the necessity for protecting traffic ends, the Contractor shall remove all signs, lighting devices, barricades and temporary railings from the site of the work.

### 22. GROSS LOADS HAULED ON HIGHWAY

The Contractor shall at no time during the construction of this contract, haul gross loads exceeding the legal limit prescribed by the Highway Law over the highways of access to, or the highway included in this contract.

### 23. CONCRETE BATCH PROPORTIONS - YIELD

No Construction Administrator or Engineer is authorized to instruct or inform the Contractor, or any of its agents or employees, or its concrete supplier as to the weights of the ingredients to be used to produce a cubic yard of concrete or as to the yield to be used to produce a cubic yard of concrete or as to the yield to be expected from any batch. The Contractor shall make its own determination and give its own instructions to its agents, employees and concrete supplier as to the total quantity of ingredients to be purchased as a



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cubic yard of concrete. The right is reserved to the Construction Administrator and Engineer, however, to verify yields after batch weights have been established by the Contractor and to order a reduction in total weight per load in the event his/her calculations show that the rated capacity of truck mixers, if approved for use, will be exceeded.

### 24. DAMAGE DUE TO CONTRACTOR'S OPERATIONS

In the event that damage is caused to structures, surfacing, pavement, shrubbery, trees or to grassed areas through trucking operations, delivery of materials, the actual performance of the work, or other causes, the Contractor shall fully restore the same to their original condition at its own expense. In the event that more than one contractor causes damages to any one area, the Director of Project Management will apportion the amount of repair work to be done by each contractor. The decision of the Director of Project Management shall be final and binding upon the Contractor(s) and may not be challenged except pursuant to a proceeding brought pursuant to Article 78 of the Civil Practice Law and Rules.

### 25. PROPERTY DAMAGE

The Contractor shall not enter upon nor make use of any private property along the line of work except when written permission is secured from the owner of that property. In case of any damage or injury done along the line of work in consequence of any act or omission on the part of the Contractor, or any one in its employ, in carrying out the contract, the Contractor shall at its own expense restore the same or make repairs as are necessary in consequence thereof in a manner satisfactory to the owner of the affected property; provided, however, that the obligation thus assumed by the Contractor shall not inure directly or indirectly to the benefit of any insurer of physical damage to property or loss of use, rents or profits of property regardless of whether the insurer has actually paid the claim or made only a loan to its insured, nor to the latter if it shall waive or abandon any claim against its insurer or insurers.

In case of failure on the part of the Contractor to restore or repair such property in a manner satisfactory to the owner of the affected property, the party of the first part may upon forty-eight hours notice to the Contractor proceed with such restoration or repair. The expense of such restoration or repair shall be deducted from any monies, which are due or may become due the Contractor under its contract. The Construction Administrator shall be the sole judge as to what constitutes failure to restore or repair as above stated and service of notice by mail addressed to the Contractor at the address stated in the proposal shall be sufficient.

### 26. CLAIMS FOR DAMAGES

The Contractor agrees that it will make no claim against the County or any of its representatives for damages for delay, interference or disruption of any kind in the performance of its Contract and further agrees that any such claim arising from acts or failure to act of the County or any of its representatives shall be fully and exclusively compensated for by an extension of time to complete the performance of the work as provided herein.



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### 27. EXTENSIONS OF TIME

An extension or extensions of time may be granted only by the Commissioner and only upon a verified application therefore by the Contractor. Each application for an extension of time must set forth in detail the nature of each cause of delay in the completion of the work, the date upon which each such cause of delay began and ended, and the number of days attributable to each of such causes. If the schedule for this project is based upon the Critical Path Method, the Contractor must also demonstrate that the delay for which an extension of time is sought occurred on the critical path. A formal written notice of the Contractor's intent to apply for an extension of time must be submitted to the Commissioner within seven (7) calendar days of the start of the alleged delay. The formal application for the extension of time must be submitted to the Commissioner no later than ten (10) calendar days after the end of the delay, but in no event later than the Contractor's submittal of its application for its substantial completion payment. The failure of the Contractor to timely submit either its formal written notice of its intent to apply for an extension of time or the application thereof shall be deemed a waiver of any entitlement to any extension of time.

The Contractor shall be entitled to an extension of time for delay in completion of the work caused solely (1) by the acts or omissions of the County, its officers, agents or employees; or (2) by the acts or omissions of other Contractors on this project; or (3) by supervening conditions entirely beyond the control of either party hereto (such as, but not limited to, Acts of God, excessive inclement weather, war, or any other national emergency making performance temporarily impossible or illegal, or strikes or labor disputes not brought about by any act or omission of the Contractor).

The Contractor shall not be entitled to receive a separate extension of time for each of several causes of delay operating concurrently, but, if at all, only for the actual period of delay in completion of the work as determined by the Engineer or Commissioner. If one of multiple causes of delay operating concurrently results from any act or omission of the Contractor or of its subcontractors of whatever tier, and would of itself (irrespective of concurrent causes) have delayed the work, no extension of time will be allowed for the period of delay resulting from such act or omission and the Contractor shall re-arrange his Progress Schedule and operations so as to complete the Work within the time set forth in the Contract and minimize the impact of the Work on the other Prime Contractors.

The determination made by the Commissioner or Engineer on an application for an extension of time shall be binding and conclusive on the Contractor and may not be challenged except in a proceeding commenced pursuant to Article 78 of the Civil Practice Law and Rules.

Permitting the Contractor to continue with the work after the time fixed for its completion has expired, or after the time to which such completion may have been extended has expired, or the making of any payment to the Contractor after such time, shall not operate as waiver on the part of the County of any of its rights or remedies under this contract nor shall it relieve the Contractor from his obligation under the Contract, including without limitations its liability to the County for liquidated damages, engineering costs, delays, damages, and/or costs incurred by the County.

If the Commissioner deems it advisable and expedient to have the Contractor complete and furnish the Work after the expiration of the time of Completion of Work (see "Required



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Time For Completion Of The Work” of the General Requirements) and in order that the County’s fiscal officers may be permitted to make payment to the Contractor for Work performed beyond that date, the Commissioner may extend the Contract solely for the purpose of enabling the Contractor to be paid for Work performed. This extension shall in no way relieve the Contractor from his obligation under the Contract, including without limitations its liability to the County for liquidated damages, engineering costs, delays, damages, attorney’s fees and/or costs incurred by the County, nor shall such extension of time be asserted by the Contractor in any action or proceeding as evidence that it completed its work in a timely manner.

The time necessary for review by the Engineer of all submittals including vendors, shop drawings, substitutions, etc., and delays incurred by normal seasonal and weather conditions should be anticipated and is neither compensatory nor eligible for Extensions of Time.

When the Work embraced in the Contract is not completed on or before the date specified herein, engineering and inspection expenses incurred by the County of Westchester upon the Work from the completion date originally fixed in the Contract to the final date of completion of the Work may be charged to the Contract and be deducted from the final monies due the Contractor.

### 28. REQUEST FOR APPROVAL OF EQUAL

#### A. GENERAL REQUIREMENTS

Wherever in the Contract Documents an article, material, apparatus, product or process is called for by trade name or catalog reference, or by the name of the patentee, manufacturer or dealer, it is understood that it constitutes the standard requirement to meet the contract specifications. Where two or more articles, materials, apparatus, products or processes are listed as acceptable by reference to trade name or otherwise, the choice of these will be optional to the bidder.

Bidders may base their bid on one of the specified items, or they may base their bid on an “equal”. However, the bidder should be aware that the County makes the final determination as to what constitutes an equal.

If the Engineer shall reject the proposed equal as not being the equal of that specifically named in the contract, the successful bidder (Contractor) shall immediately proceed to furnish the designated article, material, apparatus, product or process as specified or an approved equal without additional cost or time delay to the County.

#### B. REVIEW PROCESS

- 1) Within fifteen (15) days from the Notice to Proceed, requests for approval of equals must be proposed to the Commissioner on the “Request For Approval Of Equal” form of the Sample Forms. This Period for submitting requests will be strictly enforced. Such requests shall conform to the requirements of this Article.
- 2) Requests for approval of equals will be received and considered from Prime Contractors only and not from manufacturers, suppliers, Subcontractors, or other third parties.
- 3) If the materials and equipment submitted are offered as equals to the Contract



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Documents the Contractor shall advise the County and the Engineer of the requested equal and comply with the requirements hereinafter specified in this Article.

- 4) Where the acceptability of an equal is conditioned upon a record of satisfactory operation and the proposed equal does not fulfill this requirement, the Engineer, at his/her sole discretion, may accept the equal if the Contractor provides a bond or cash deposit which guarantees replacement at no cost to the County for any failure occurring within the specified time. The equal item must meet all other technical requirements contained in the Specification.
- 5) The successful bidder shall furnish such information as required by the Engineer to demonstrate that the equal article, material, apparatus, product or process is the equal of that specified in quality, finish, design, efficiency and durability and has been elsewhere demonstrated to be equally serviceable for the purpose for which it is intended. The Contractor shall set forth the reasons for desiring to utilize the proposed equal.
- 6) Contractor shall submit:
  - a. For each proposed request for approved equal sufficient details, complete descriptive literature and performance data together with samples of the materials, where feasible, to enable the Engineer to determine if the proposed request for approved equal is equal, including manufacturer's brand or trade names, model numbers, description of specification of item, performance data, test reports, samples, history of service, and other data as applicable.
  - b. Certified tests, where applicable, by an independent laboratory attesting that the proposed equal is equal.
  - c. A list of installations where the proposed equal equipment or materials is performing under similar conditions as specified.
- 7) Requests for approval of equal after the period set forth in B. REVIEW PROCESS, Paragraph 1, above will not be accepted for evaluation except in case of strikes, discontinuance of manufacturer or other reason deemed valid by the Engineer whereby the specified products or those approved are unattainable. In such case the Contractor shall provide substantial proof that the acceptable products are unavailable.
- 8) Where the approval of an equal requires revision or redesign of any part of Work, including that of other Contracts, all such revision and redesign, and all new drawings and details required therefore, shall be provided by the Contractor at its own cost and expense, and shall be subject to the approval of the Commissioner.
- 9) In the event that the Engineer is required to provide additional engineering services, then the engineer's charges for such additional services shall be promptly paid by the Contractor to the County.
- 10) Any modifications in the Work required under other Contracts to accommodate the changed design will be incorporated in the appropriate Contracts and any resulting increases in Contract prices will be paid by the Contractor who initiated the



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changed design to the County.

- 11) In all cases the Engineer shall be the judge as to whether a proposed equal is to be approved. The Contractor shall abide by his/her decision when proposed equal items are judged to be unacceptable and shall in such instances furnish the item specified or indicated. No equal items shall be used in the Work without written approval of the Engineer.
- 12) In making request for approval of equal, Contractor represents that:
  - a. Contractor has investigated proposed equal, and determined that it is equal to or superior in all respects to the product, manufacturer or method specified.
  - b. Contractor will provide the same or better warranties or bonds for proposed equal as for product, manufacturer or method specified.
  - c. Contractor waives all claims for additional costs or extension of time related to proposed equal that subsequently may become apparent.
  - d. Contractor shall have and make no claim for an extension of time or for damages by reason of the time taken by the Engineer in considering an equal proposed by the Contractor or by reason of refusal of the Engineer to approve an equal proposed by the Contractor. Any delays arising out of consideration, approval, or utilization of an equal shall be the sole responsibility of the Contractor requesting the equal and it shall arrange its operations to make up the time lost.
- 13) Proposed Equal Will Not Be Accepted If:
  - a. Acceptance will require substantial revision of Contract Documents.
  - b. They will change design concepts or Technical Specifications.
  - c. They will delay completion of the Work, or the Work of other Contractors.
  - d. They are indicated or implied on a Shop Drawing and are not accompanied by a formal request for approval of equal from Contractor.
- 14) Only those products originally specified and/or added by approved requests for equals submitted in accordance with the preceding paragraphs may be used in the Work. Whenever requests for equals are approved, it shall be understood that such approval is conditional upon strict conformance with all requirements of the Contract and further subject to the following:
  - a. Any material or article submitted for approval in accordance with the above procedure must be equal, in the sole opinion of the Engineer, to the material or article specified. It must be readily available in sufficient quantity to prevent delay of any Work; it must be available in an equivalent color, texture, dimension, gauge, type and finish as to the item or article specified; it must be equal to the specified item in strength, durability, efficiency, serviceability, compatibility with existing systems, ease and cost of maintenance; it must be compatible with the design and not necessitate substantial design modifications; it must be equal in warranties and guarantees; its use must not impose substantial additional Work, or require substantial changes in the Work of any



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other Contractor. Availability of spare parts shall be assured for the useful life of the Project.

- b. The Engineer reserves the right to disapprove, for aesthetic reasons, any material or equipment on the basis of design or color considerations alone, without prejudice to the quality of the material or equipment, if the manufacturer cannot meet the required colors or design.
  - c. All requests for approval of equals of materials or other changes from the contract requirements shall be accompanied by an itemized list of all other items affected. The Engineer shall have the right, if such is not done, to rescind any approvals for equals or changes and to order such Work removed and replaced with Work conforming to the specified requirements of the contract, all at the Contractor's expense, or to assess all additional costs resulting from the equal to the Contractor.
- 15) Approval of an equal will not relieve Contractor from the requirement to submit Shop Drawings or any of the provisions of the Contract Documents.
- 16) In the event that the Engineer is required to provide additional engineering services as a result of a request for approval of an equal of materials or equipment which are not "or equal" by the Contractor, or changes by the Contractor in dimension, weight, power requirements, etc., of the equipment and accessories furnished, or as a result of Contractor's errors, omissions or failure to conform to the requirements of the Contract Documents or if the Engineer is required to examine and evaluate any changes proposed by the Contractor solely for the convenience of the Contractor, or for evaluation of deviations from Contract Documents, then the Engineer's charges in connection with such additional services shall be paid by the Contractor to the County.
- 17) The Contractor shall respond to required submittals with complete information and with a degree of accuracy to achieve approvals within three (3) submissions. All costs to the Engineer involved with subsequent submissions requiring approval, will be paid by the Contractor to the County.

### 29. SUBSTITUTION

- A. Should the Contractor desire to substitute other articles, materials, apparatus, products or processes than those specified or approved as equal, the Contractor shall apply to the Engineer in writing for approval of such substitution. It should be noted that the bid shall not be based on a substituted article, material, apparatus, product or process. With the application shall be furnished such information as required by the Engineer to demonstrate that the article, material, apparatus, product or process he wishes to use is the equivalent of that specified in quality, finish, design, efficiency and durability and has been elsewhere demonstrated to be equally serviceable for the purpose for which it is intended. The Contractor shall set forth the reasons for desiring to make the substitution and shall further state what difference, if any, will be made in the construction schedule and the contract price for such substitution should it be accepted; it being the intent hereunder that any savings shall accrue to the benefit of the County.



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- B. If the Engineer shall reject any such desired substitution as not being the equivalent of that specifically named in the contract, or if it shall determine that the adjustment in price in favor of the County is insufficient, the Contractor shall immediately proceed to furnish the designated article, material, apparatus, product or process.
- C. Request for substitutes must be proposed to the Commissioner on the "Request For Approval Of Substitution" form of the Sample Forms. Such requests shall conform to the requirements of this Article.
- D. Requests for substitutions shall include full information concerning differences in cost, and any savings in cost resulting from such substitutions shall be passed on to the County.
- E. Requests for utilization of substitutes will be reviewed during the course of the project. The impact on the project and the timeliness of submission will be of key consideration.
- F. The approval of utilization of a substitute is subject to the sole and final discretion of the Engineer.
- G. REVIEW PROCESS
  - 1) Requests for approval of substitutions will be received and considered from Prime Contractors only and not from manufacturers, suppliers, Subcontractors, or other third parties.
  - 2) If the materials and equipment submitted are offered as substitutions to the Contract Documents or approved equal the Contractor shall advise the County and the Engineer of the requested substitutions and comply with the requirements hereinafter specified in this Article.
  - 3) Where the acceptability of substitution is conditioned upon a record of satisfactory operation and the proposed substitution does not fulfill this requirement, the Engineer, at his/her sole discretion, may accept the substitution if the Contractor provides a bond or cash deposit which guarantees replacement at no cost to the County for any failure occurring within the specified time. The substitution item must meet all other technical requirements contained in the Specification.
  - 4) The Contractor shall furnish such information as required by the Engineer to demonstrate that the equal article, material, apparatus, product or process is the equivalent of that specified in quality, finish, design, efficiency and durability and has been elsewhere demonstrated to be equally serviceable for the purpose for which it is intended and/or that it offers substantial benefits to the County in saving of time and/or cost. The Contractor shall set forth the reasons for desiring to make this substitution.
  - 5) Contractor shall submit:
    - a. For each proposed request for approved substitute sufficient details, complete descriptive literature and performance data together with samples of the materials, where feasible, to enable the Engineer to determine if the proposed request for approval should be granted, including manufacturer's brand or trade names, model numbers, description of specification of item, performance data, test reports, samples, history of service, and other data as applicable.



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- b. Certified tests, where applicable, by an independent laboratory attesting to the performance of the substitute.
  - c. A list of installations where the proposed substitute equipment or materials is performing under similar conditions as specified.
- 6) Where the approval of a substitute requires revision or redesign of any part of Work, including that of other Contracts, all such revision and redesign, and all new drawings and details required therefore, shall be provided by the Contractor at its own cost and expense, and shall be subject to the approval of the Engineer.
- 7) In the event that the Engineer is required to provide additional engineering services, then the engineer's charges for such additional services shall be paid by the Contractor to the County.
- 8) Any modifications in the Work required under other contracts to accommodate the changed design will be incorporated in the appropriate contracts and any resulting increases in contract prices will be charged to the Contractor by the County who initiated the changed design.
- 9) In all cases the Engineer shall be the judge as to whether a proposed substitute is to be approved. The Contractor shall be bound by his/her decision. No substitute items shall be used in the Work without written approval of the Engineer.
- 10) In making request for approval of substitute, Contractor represents that:
- a. Contractor has investigated proposed substitute, and determined that it is equal to or superior in all respects to the product, manufacturer or method specified or offers other specified advantages to the County.
  - b. Contractor will provide the same or better warranties or bonds for proposed substitute as for product, manufacturer or method specified.
  - c. Contractor waives all claims for additional costs or extension of time related to proposed substitute that subsequently may become apparent.
  - d. Contractor shall have and make no claim for an extension of time or for damages by reason of the time taken by the Engineer in considering a substitute proposed by the Contractor or by reason of failure of the Engineer to approve a substitute proposed by the Contractor. Any delays arising out of consideration, approval, or utilization of a substitute shall be the sole responsibility of the Contractor requesting the substitute and it shall arrange its operations to make up the time lost.
- 11) Proposed substitute will not be accepted if:
- a. Acceptance will require substantial revision of Contract Documents.
  - b. They will substantially change design concepts or Technical Specifications.
  - c. They will delay completion of the Work, or the Work of other Contractors.
  - d. They are indicated or implied on a Shop Drawing and are not accompanied by a formal request for approval of substitute from Contractor.
- 12) The Engineer reserves the right to disapprove, for aesthetic reasons, any material or



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equipment on the basis of design or color considerations alone, without prejudice to the quality of the material or equipment, if the manufacturer cannot meet the required colors or design.

- 13) All requests for approval of substitutes of materials or other changes from the contract requirements, shall be accompanied by an itemized list of all other items affected by such substitution or change. The Engineer shall have the right, if such is not done, to rescind any approvals for substitutions and to order such Work removed and replaced with Work conforming to the specified requirements of the contract, all at the Contractor's expense, or to assess all additional costs resulting from the substitution to the Contractor.
- 14) Approval of a substitute will not relieve Contractor from the requirement to submit Shop Drawings or any of the provisions of the Contract Documents.
- 15) In the event that the Engineer is required to provide additional engineering services as a result of a request for approval of a substitute results in changes by the Contractor in dimension, weight, power requirements, etc., of the equipment and accessories furnished, or as a result of Contractor's errors, omissions or failure to conform to the requirements of the Contract Documents or if the Engineer is required to examine and evaluate any changes proposed by the Contractor solely for the convenience of the Contractor, or for evaluation of deviations from Contract Documents, then the Engineer's charges in connection with such additional services shall be paid by the Contractor.
- 16) Structural design shown on the Drawing is based upon the configuration of and maximum loading for major items of equipment as indicated on the Drawings and as specified. If the substituted equipment furnished differs from said features, the Contractor shall pay to the County all costs of redesign and for any construction changes required to accommodate the equipment furnished, including the Engineer's charges in connection therewith.
- 17) The Contractor shall respond to required submittals with complete information and with a degree of accuracy to achieve approvals within two (2) submissions. All costs to the Engineer involved with subsequent submissions of Shop Drawings, Samples or other items requiring approval, will be paid by the Contractor to the County, by deducting such costs from payments due for Work completed. In the event an approved item is requested by the Contractor to be changed or substituted for, all costs involved in the reviewing and approval process will likewise be backcharged to the Contractor unless determined by the Engineer that the need for such substitution and/or deviation from Contract Documents is beyond the control of the Contractor.

### 30. EXTRA WORK: INCREASED COMPENSATION/DECREASED WORK: CREDIT TO THE OWNER

The Director of Project Management may, at any time, by a written order, and without notice to the sureties, require the performance of Extra Work or require or approve changes in the work, or Decreased Work ("work" to include but not be limited to specified methods of performing work) as he may deem necessary or desirable. The amount of compensation



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to be paid to the Contractor for any Extra Work, as so ordered, or credit to the Owner for such decreased work, as so ordered or approved, shall be determined as follows:

- 1) **First:** By such applicable unit prices, if any, as set forth in the Contract; or
- 2) **Second:** If no such prices are so set forth, then by unit prices or by a lump sum, or sums, mutually agreed upon by the Director of Project Management and the Contractor; or
- 3) **Third:** If, in the opinion of the Director of Project Management, the aforesaid unit prices, under "First" above, are not applicable, or if the two parties hereto cannot reach agreement as to new unit prices or a lump sum, or sums, under "Second" above, then by the actual net cost in money to the Contractor of the materials and of the wages of applied labor (including cost of supplements provided and premiums for Workmen's Compensation Insurance, FICA, and Federal and State Unemployment Insurance) required for such Extra Work, plus twenty (20%) percent as compensation for all items of profit and costs or expenses including administration, overhead, superintendence, insurance (other than those specifically noted above) materials used in temporary structures, allowances made by the Contractor to subcontractors, including those made for overhead and profit, additional premiums upon the performance bond of the Contractor and the use of small tools and any and all other costs and expenses not enumerated above, plus such rental for plant and equipment (other than small tools) required and approved for such extra work. Where extra work is performed by a Subcontractor, the twenty percent stipulated above shall be divided between the Contractor and the Subcontractor as per their contractual agreement, or if not defined therein, then as the Contractor sees fit.

Rental rates for any power operated machinery, trucks or equipment, which it may be found necessary to use as in "Third" above, shall be reasonable and shall be based on those prevailing in the area of the County where such work is to be done, and they shall be agreed upon in writing before the work is begun.

In no case shall the rental rates submitted exceed the rates set up in the current edition of "Equipment Watch" plus the cost of fuel and lubricants.

These rates shall include all repairs, fuel, lubricants, applicable taxes, insurance, depreciation, storage and all attachments complete, ready to operate, but excluding operators. Operators shall be paid as stated here in above for labor.

For equipment, which is already on the project, the rental period shall start when ordered to work by the Construction Administrator, and shall continue until ordered to discontinue by him. The minimum payment for any one rental period shall be four hours, unless otherwise agreed upon between the Construction Administrator and the Contractor.

For equipment which has to be brought to the project, specifically for use as in "Third" above, the County will pay all loading and unloading costs, also all transportation costs will not be paid, if the equipment is used for work other than in "Third" above while on the project. The rental period shall begin at the time the equipment has been unloaded on the



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project, and shall end on and include the day the order to discontinue the use of the equipment as in "Third" above is given to the Contractor by the Construction Administrator.

The daily rate shall apply for rental periods of four calendar days or less, the weekly rate shall apply for rental periods of more than four and not exceeding twenty-one calendar days, and the monthly rate shall apply for rental periods in excess of twenty-one calendar days. For fractional periods above the full unit rental period (day, week, month) reimbursement shall be proportioned on the basis of the applicable rental period. (Day-8 hrs.; Week-7 calendar days; Month-30 calendar days).

No percentage shall be added to the amounts of equipment rental prices agreed upon, but the price agreed upon shall be the total compensation allowed for the use of such equipment.

The provisions hereof shall not affect the power of the Contractor to act in case of emergency.

### 31. DISPUTED WORK - NOTICE OF CLAIMS FOR DAMAGES

If the Contractor is of the opinion that any work required, necessitated, or ordered violates or conflicts with or is not required by the terms and provisions of this Contract, it must promptly, within five (5) calendar days after being directed to perform such work, notify the Construction Administrator, in writing, of its contentions with respect thereto and request a final determination thereon. If the Construction Administrator determines that the work in question is contract and not extra work, or that the order complained of is proper, he will direct the Contractor in writing to proceed and the Contractor shall promptly comply. In order, however, to preserve its right to claim compensation for such work or damages resulting from such compliance, the Contractor must, within seven (7) calendar days after receiving notice of the Construction Administrator's determination and direction, notify the Construction Administrator, in writing that the work is being performed or that the determination and direction is being complied with, under protest. Failure of the Contractor to so notify shall be deemed as a waiver of claim for extra compensation or damages therefore.

While the Contractor is performing disputed work or complying with a determination or order under protest in accordance with this Article, in each such case the Contractor shall furnish the Construction Administrator daily with three copies of written statements signed by the Contractor's representatives at the site showing:

- 1) the name of each worker employed on such work or engaged in complying with such determination or order, the number of hours employed thereon, and the character of the work each is doing; and
- 2) the nature and quantity of any materials, plant and equipment furnished or used in connection with the performance of such work or compliance with such order, and from whom purchased or rented.

It is expressly agreed that no dispute over the scope of the Contractor's work or any portion thereof shall cause any delay or interruption to the Contractor's work.

In addition to the foregoing statements, the Contractor shall, upon notice from the Board of Acquisition and Contract, produce for examination by the duly appointed representative of



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the Board of Acquisition and Contract, all its books of accounts, bills, invoices, payrolls, subcontracts, time books, daily reports, bank deposit books, bank statements, check books and canceled checks, showing all of its acts and transactions in connection with or relating to or arising by reason of this contract, and submit itself, its agents, servants and employees for examination under oath by any duly appointed representative designated by the Board of Acquisition and Contract to investigate claims made against the County. Unless the aforesaid statements shall be made and filed within the time aforesaid and the aforesaid records submitted for examination and the Contractor, its agents, servants, and employees submit themselves for examination as aforesaid, the County shall be released from all claims arising under, relating to or by reason of this contract, except for the sums certified by the Construction Administrator to be due and agreed that no person has power to waive any of the foregoing provisions, and that in any action against the County to recover any sum in excess of the sums certified by the Construction Administrator to be due under or by reason of this contract, the Contractor must allege in its complaint and prove, at the trial, strict compliance with the provisions of this article.

Before final acceptance of the work by the County, all matters of dispute must be adjusted to the mutual satisfaction of the parties thereto. Determinations and decisions in case any question shall arise, shall constitute a condition precedent to the right of the Contractor to receive the money therefore, until the matter in question has been adjusted.

### 32. CONTRACTOR'S SUBCONTRACTS AND MATERIAL LISTS

Within fifteen (15) days after execution of the Contract, the successful bidder shall submit to the County for approval a list of the subcontractors, materialmen and materials that he/she plans to use in the performance of the work and statements of the work they are to perform. The format and content of the list shall be in accordance with directives from the Construction Administrator. He/sit shall also submit additional information regarding their qualifications as may be later requested by the County. No part of the work may be sublet until after the Contractor has received the County's approval.

The Contractor shall be fully responsible for all acts and omissions of its subcontractors and persons directly or indirectly employed by them, and the County's approval to sublet parts of the work will in no way relieve the Contractor of any of its obligations under the Contract. All dealings of the Construction Administrator with the subcontractors shall be through the Contractor, subcontractors being recognized by the County only as employees of the Contractor.

By executing the Agreement, the Contractor represents that the Contractor shall insert appropriate clauses in all subcontracts to bind the subcontractors to the Contractor by all applicable provisions of the Contract Documents executed between the Contractor and the County, but this shall not be construed as creating any contractual relationships between subcontractors and the County. Prior to approval of the subcontractors, the County has the right to review and recommend changes in the subcontracts. The County reserves the right to reject any subcontractor proposed by the Contractor if in the reasonable opinion of the County such subcontractor lacks the experience, capability or integrity to perform its subcontract work or is otherwise non-responsible.



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By executing the Agreement, the Contractor represents that the Contractor shall insert appropriate clauses in each subcontract that require that if the Contractor is terminated by the County either for default or convenience that at the sole option of the County the subcontract shall automatically attach to the County and the subcontractor shall continue without delay or interruption to fully perform all of the obligations required by its subcontract.

Where the specifications permit the Contractor a choice of different materials or manufactured products, it shall state the choice he has made in making up its bid, with the understanding that all choices must subsequently be approved by the Commissioner, after award of the contract to the successful bidder. If the bidder wishes to propose utilization of materials or manufactured products other than those specified, it shall so state and submit the required information in accordance with Article "Request For Approval Of Equal" of the General Clauses."

### 33. ASSIGNMENT OF CONTRACT

The Contractor shall not assign, transfer, convey or otherwise dispose of the contract or any part of it or any monies due and payable under the contract, without prior written approval of the County. If such approvals are granted by the County, they shall in no way relieve the Contractor or from any obligations under the terms of this Contract.

All documents assigning the contract or any part of it or any monies due and payable under the contract shall contain a clause stating that all monies to be paid the assignee in accordance with the terms of the Contractor's contract with the County, are subject to a prior lien for services rendered or materials and equipment supplied, in favor of all persons, firms or corporations rendering such services or supplying such materials and equipment.

### 34. PAYMENT FOR GENERAL PROVISIONS

No direct payment will be made for work done or materials furnished in compliance with the General Provisions of the specifications, unless otherwise noted. All compensation to the Contractor for its performance of the requirements of any general provision shall be considered to have been included in the prices he has bid for the individual items if a unit price contract and/or for a lump sum price if a lump sum contract.

In the event the Contractor fails or refuses to proceed with its work and/or correct or repair deficient or defective work then without prejudice to any and all of the County's other rights and remedies, and upon three (3) days notice to Contractor, the County may perform and/or employ any other person or persons to correct and/or repair any or all such work. All costs incurred by the County pertaining thereto shall be paid forthwith by the Contractor to the County.

### 35. COSTS INCURRED BY COUNTY

Wherever in these Contract Documents the County is entitled to recover costs from the Contractor or charge the Contractor for the costs incurred for the correction, supervision or for any other reason related to the Contractor's work or arising from the Contractor's failure or refusal to proceed with its work in a timely manner, such costs and/or charges shall be



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deemed to include, but not be limited to, the County's costs and fees for inspection(s), engineering, consultant(s) and attorneys.

### 36. GUARANTEE OF WORK

- A. Except as otherwise specified, all work performed under the Contract shall be guaranteed by the Contractor against defects resulting from the use of inferior materials, equipment or workmanship for one year from the guarantee starting date (which shall be defined as the date of the County's approval of the final Certificate for Payment or the date of actual full occupancy of the building, whichever is earlier). The building, section thereof, or item of equipment, shall be occupied or put into actual use by the Owner only after judged completed by the Construction Administrator and Owner and approved by him as ready for occupancy.
- B. If, within any guarantee period, repairs or changes are required in connection with guaranteed work, which in the opinion of the Construction Administrator or Owner is rendered necessary as a result of the materials, equipment or workmanship which are inferior, defective, or not in accordance with terms of the Contract, the Contractor shall promptly upon receipt of notice from the Construction Administrator or Owner and without expense to the Construction Administrator or Owner:
  - 1) Place in satisfactory condition, in every particular, all of such guaranteed work, correct all defects thereof, and
  - 2) Make good all damages to the building or site, or equipment or contents thereof, and
  - 3) Make good any work or material, or equipment and contents of said building or site disturbed in fulfilling any such guarantee.
- C. In any case where in fulfilling requirements of the Contract or of any guarantee embraced in or required thereby the Contractor disturbs any work, it shall restore such disturbed work to a condition satisfactory to the Construction Administrator.
- D. If the Contractor, after notice, fails to proceed promptly to comply with terms of its guarantee, the Owner may have the defects corrected and the Contractor shall be liable for all expenses incurred.
- E. All special guarantees applicable to definite parts of the work that may be stipulated in the Specifications or other papers forming a part of the Contract shall be subject to the requirements and term of this article.

### 37. SEPARATE CONTRACTS

- A. Contractor's attention is specifically directed to the fact that, because of the work of other contracts within and adjacent to the limits of this Contract they may not have exclusive occupancy of the territory within or adjacent to the limits of this Contract.
- B. Contractor's attention is further directed to the fact that, during the life of this Contract the owners and operators of Public Utilities may make changes in their facilities. These changes may be made by the Utility employees or by contract within the limit or adjacent to these contracts and may be both temporary and permanent.



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- C. Contractor shall be required to cooperate with other contractors and the owners of the various utilities, and to coordinate and arrange the sequence of their work to conform to the progressive operations of the work already under contract and to be put under contract.
- D. Contractor shall be responsible for the coordination of the work of their various subcontractors. Their respective operations shall be arranged and conducted so that delays will be avoided. Where the work of a subcontractor overlaps or dovetails with that of other subcontractors, materials shall be delivered and operations conducted so as to carry on the work continuously in an efficient and workmanlike manner. Delays or oversights on the part of Contractor or its subcontractors or utility owners in getting any or all of their work done in the proper way thereby causing cutting, removing and replacing work already in place, shall not be the basis for claim for extra compensation.
- E. In case of interference between the operations of the utility owners and different Contractors, the Construction Administrator will be the sole judge of the rights of each Contractor and the sequence of work necessary to expedite the completion of the entire project, and in all cases the Construction Administrator's decision shall be accepted as final and may not be challenged except in a proceeding brought pursuant to Article 78 of the Civil Practice Law and Rules.

### 38. COOPERATION WITH OWNER

Each Contractor shall cooperate with the Owner as to parking of vehicles, availability of storage and working areas and confining of activities and personnel to same. **NO PARKING FOR CONTRACTOR'S EMPLOYEES.**

### 39. JOB MEETINGS & PROJECT SUPERINTENDANT

- A. An officer of the Contractor, or its project manager or superintendent, who is fluent in English and authorized to make binding decision on behalf of the Contractor shall attend job meetings with the Commissioner and/or the Construction Administrator, and any subcontractors whom the Inspector may designate; for the purpose of discussing expedition, execution and coordination of the work.
- B. Job meetings will be scheduled periodically (the first to be prior to commencement of construction) at a time and place designated by the Construction Administrator.
- C. The Contractor shall not commence any work prior to the first (pre-construction) meeting between the Contractor, Commissioner and/or Construction Administrator, client, and other concerned governmental and utility company representatives.
- D. At the pre-construction meeting, the scheduling of the work on an arrow-flow diagram (showing chronologically and in detail the sequence and methods that will be followed) will be provided, and details for the proper execution and special requirements of the work will be explained and discussed.
- E. The Contractor shall be responsible for providing a detailed construction schedule that provides for a Critical Path Method ("CPM") and which is compatible with any of the state of the art CPM Method scheduling software.



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- F. Updated coordinated arrow-flow diagrams or CPM schedules, as the case may be, will be provided by the Contractor, as above, on a monthly basis to the County.

The Contractor shall indicate on the construction schedules noted above, time for shop drawing preparation, approvals, fabrication and delivery of materials and equipment for major items. The County may request that additional important items be included on the schedule.

- G. The Contractors shall ensure that its Project Superintendent shall be on site full time at all times when the Contractor's Work is being performed.

### 40. PATENT WARRANTY

- A. Contractor expressly represents, warrants and agrees that he has the legal right to furnish and install and to authorize the County to purchase and use the equipment hereby offered and each and every one of its several parts and every feature thereof, under one or the other, or partly under one and partly under the other of the following representations.
- 1) That the Contractor possesses a valid patent(s) covering the equipment to be furnished hereunder or part or features thereof or has or will obtain permit(s) and license(s) authorizing the Contractor to furnish and install same and to authorize the purchase and use thereof by the County.
  - 2) The Contractor is responsible before ordering material, equipment, parts, systems, etc, to verify that the suppliers of all such material, equipment, parts, systems, etc, will supply the required warranty, guarantee, O & P manual, and maintenance service schedule.
  - 3) That the equipment offered or certain parts or features thereof are not covered by any valid patent(s) within the knowledge of the Contractor.
- B. Contractor further warrants and agrees that if any patent(s) is hereafter issued to any person whatsoever with respect to the equipment or any part or features thereof, to be furnished and installed hereunder, the Contractor will obtain such permit(s) or license(s) from the Patentee as may be necessary to authorize the use of the equipment by the County.
- C. Contractor further represents, warrants and agrees that he and its sureties shall hold themselves responsible for and defend any claims made against the County for any infringement of patents due to the purchase and use by the County of said equipment or any part or feature thereof; that they will indemnify and save harmless the County from all costs, expenses and damages which it shall be obliged to pay by reason of any such infringement of patent(s); that in case the use of any such equipment is enjoined, they will bear the expenses of removing same and replacing same with equipment which will satisfactorily perform the function without constituting an infringement of any patent(s); and in case the use of any equipment shall be enjoined, that they shall pay to the County the sum of \$1,000.00 per day, as liquidated damages, for each and every day during which the County shall be enjoined from using the same up to the day on which such



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equipment is replaced by other equipment which will satisfactorily perform the same function but which will not constitute an infringement of any other patent(s).

- D. The Contractor further agrees in the event the use of any of the equipment is enjoined and the Contractor is unable within a reasonable time to devise other equipment which will satisfactorily perform the same functions without infringement on any patent(s), that he will remove the equipment and refund to the County the entire cost of its purchase and installation, plus the sum of \$ 1,000.00 per day as liquidated damages for each and every day until the substitute equipment has been purchased and installed by the County, excepting however that such period shall not exceed three months.
- E. The Contractor further agrees in the event that any claim or notice of claim for infringement of patent(s) are made or filed prior to the making of payment by the County for the equipment and/or material proposed to be furnished and installed hereunder, that the County may withhold any sum due to the Contractor for such equipment and/or material until such claims shall have been settled or adjudicated or until additional surety bonds or other guarantees of indemnification shall have been posted, if deemed necessary by the County for its protection.

### 41. MATERIALS

#### A. Quality

- 1) It is the intent of these Specifications to describe definitely and fully the character of materials and workmanship required with regard to all ordinary conditions of the work and to require first-class work and new and best quality materials in all particulars. For unexpected conditions arising during the progress of the work and not fully covered herein, the Specifications shall be interpreted by the Construction Administrator to require first-class work and materials and such interpretations shall be accepted by the Contractor.
- 2) The Contractor is responsible before ordering material, equipment, parts, systems, etc, to verify that the suppliers of all such material, equipment, parts, systems, etc, will supply the required warranty, guarantee, O & P manual, and maintenance service schedule.
- 3) Where materials or devices are specified in these documents by reference to government, manufacturer's association, or professional society standards, the pertinent sections of the latest edition of such standards shall have the same force and effect as if set forth in full in these Specifications. The following abbreviations shall be used as indicated for the principal societies:

AASHO	American Association of State Highway Officials
ACI	American Concrete Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute



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ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
AWI	American Woodworking Institute
AWS	American Welding Society
BHMA	Builders Hardware Manufacturers Association
CS	Commercial Standards
FS	Federal Specifications
IEEE	Institute of Electrical and Electronic Engineers
NEC	National Electric Code
NEMA	National Electrical Manufacturer's Association
NFPA	National Fire Protection Association
SDI	Steel Deck Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association, Incorporated
TCA	Tile Council of America, Incorporated
TMCA	Tile and Marble Contractors of America
UL	Underwriter's Laboratories, Incorporated

### B. Delivery, Storage and Handling:

- 1) Materials shall be delivered in manufacturer's original sealed containers with complete identification of contents and manufacturer, and kept sealed in original containers until used. Labels shall not be removed until materials have been installed and inspected.
- 2) Materials shall be delivered, stored, and handled with proper equipment and in a manner to protect them from damage.
- 3) The Contractor shall make arrangements for the receipt of materials delivered to the construction site. No representative of the County will accept any materials ordered by the Contractor.
- 4) Finish materials shall be protected from dirt and damage, and perishable materials shall be stored within appropriate weatherproof enclosures.
- 5) Delivery of materials shall be coordinated with the Operations Schedule.
- 6) The Contractor shall confine the apparatus, the storage of materials and the operations of the workmen to the limits indicated by law, ordinances, permits, or directions of the Construction Administrator, and shall not encumber the premises beyond the contract limits.



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- 7) The Contractor shall not load or permit any part of the structure to be loaded with a weight that will endanger its safety.
- 8) Whenever the Contract Documents require delivery by the Contractor of any materials, equipment, or other items, the term delivery shall be deemed to include unloading and storing with proper protection where directed.

### C. Federal Regulations

- 1) Should the Federal Government, because of Declaration of an Emergency, or other cause, establish controls over the use of certain construction materials, then the Contractor, immediately after signing the Contract or immediately after Declaration of an Emergency, shall furnish the Commissioner with an itemized list of all critical materials required for use on the project. For each item, the quantity required and the approximate date on which delivery will be required shall be indicated.

### D. Name Plates

- 1) Each piece of operable equipment to be furnished and installed by a Contractor under its Contract such as motors, pumps, heaters, fans, transformers, switch and fuse racks and other similar equipment shall be provided with a substantial name plate of non-corrodible metal securely fastened in place and clearly and permanently inscribed with the manufacturer's name, the model or type designation, the serial number, the principal rated capacities, the electrical or other power characteristics and other similar and appropriate information.
- 2) Manufacturer's identification shall be inconspicuous, but where nameplates contain information relative to characteristics or maintenance, they shall be clearly visible and located for easy access.
- 3) The nameplate of a subcontractor or a distributor will not be permitted.

### E. Manufacturer's Certification

- 1) Prior to the delivery of any water or sewer pipe to the construction site, the Contractor shall furnish properly attested documents certifying as to the type, class, name of manufacturer and source of supply of the pipe. One copy of each document shall be forwarded to the Construction Administrator at the construction site and to the Director of Project Management care of the Engineering Division, Michaelian Office Building, White Plains, New York.

### F. Samples

- 1) The Contractor shall furnish, for approval of the Engineer, any samples required by the specifications or that may be requested by the Owner, of all materials he proposes to use, and shall pay all shipping charges for the samples. The Contractor shall send all samples to the office of the Engineer, except when directed otherwise. The sample of approved material will remain on file in the Engineer's office. A disapproved sample will be returned to the Contractor.
- 2) No samples are to be submitted with bids.
- 3) No materials or equipment of which samples are required to be submitted for



## GENERAL CLAUSES

approval shall be used on the work until such approval has been given by the Engineer or Construction Administrator, save only at the Contractor's risk and expense.

- 4) Each sample shall have a label indicating the material represented, its place of origin and the names of the producer, the Contractor and the Contract for which the material is intended.
- 5) Approval of any sample shall be only for characteristics or for uses named in such approval, and no other. No approval of a sample shall be taken in itself to change or modify any Contract requirement. When a material has been approved, no additional sample of that material will be considered and no change in brand or make will be permitted. Approved samples held by the Engineer will be returned to the Contractor upon completion of the work, if requested.
- 6) Transactions with manufacturers or subcontractors shall be through the Contractor.

### G. Dissimilar Materials

- 1) Where metals are placed in contact with or fastened to dissimilar metals, concrete, masonry, wood or other absorptive materials subject to repeated wetting or wood treated with a preservative non-compatible with the metal or if drainage from dissimilar materials passes over the work; treat the contact surfaces with a heavy coat of approved alkali-resident bituminous paint.
- 2) Where one of the metals is aluminum, a coat of zinc-chromate primer shall be applied prior to the bituminous paint.

## 42. STANDARD OF QUALITY

Wherever in the contract documents an article, material, apparatus, device, product or process is called for by trade name or catalog reference, or by the name of the patentee, manufacturer or dealer, it shall be construed as establishing a standard of quality and not construed as limiting competition. In such instances, the Contractor may use any article, material, etc. which, in the judgment of the Engineer, expressed in writing, is equal to and acceptable for the intent specified.

## 43. PROPRIETARY ITEM

Whenever less than three names are used in proprietary item specifications, it has been determined that:

- A. The use of trade names is necessary for effective and workable specifications for the item.
- B. All manufacturers known by the individuals familiar with the trade involved have been listed.
- C. Equal items may be approved in accordance with Article "Request For Approval Of Equal" of the General Clauses.



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### 44. SHOP DRAWINGS

#### A. Shop Drawing Schedule

- 1) Within fifteen (15) days after the Notice to Proceed, the Contractor shall prepare and submit two (2) copies of its schedule of Shop Drawing submissions to the Engineer for review and approval. The schedule is to be submitted on the “Shop Drawing Schedule” form of the Sample Forms.
- 2) In order to maintain the construction schedule for this project the Contractor shall submit all Shop Drawings per approved schedule. The Contractor is expressly cautioned that its failure or refusal to timely submit a shop drawing schedule acceptable to the Engineer and/or any deviation from the approved shop drawing schedule shall be deemed a default under this Contract.
- 3) Shop Drawings shall be submitted without fail in time to permit correction, resubmission and final approval, as hereinafter specified, without causing any delay in the construction of any Work.
- 4) Samples and Shop Drawings, which are related to the same unit of Work or Specification Section, shall be submitted at the same time. If related Shop Drawings and Samples are submitted at different times, they cannot be reviewed until both are furnished to the Engineer.
- 5) The schedule shall be updated every four-(4) weeks or more frequently as required by the Engineer.
- 6) Two (2)-updated copies of the schedule shall be submitted to the Engineer with each application for Partial Payment.
- 7) Form of Schedule

Schedule shall be in tabular form with appropriate spaces to insert the following information for principal items of equipment and materials:

- a. Date on which Shop Drawings are requested and received from the manufacturer.
- b. Dates on which Shop Drawings are transmitted to the Engineer by the Contractor.
- c. Dates on which Shop Drawings are returned by the Engineer for revisions.
- d. Dates on which Shop Drawings are revised by manufacturer and resubmitted to the Engineer.
- e. Date on which Shop Drawings are returned by Engineer annotated either “Approved” or “Approved as Noted”.
- f. Date on which accepted Shop Drawings are transmitted to manufacturer and Contractor’s Invoice Number.
- g. Date of manufacturer’s scheduled delivery.
- h. Date on which delivery is actually made.



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- i. Sample of schedule follows on next page.

### B. Shop Drawing Requirements

- 1) Shop Drawings for the Work shall include working and setting drawings, schedules, shop details, wiring diagrams, manufacturer's catalog cuts and brochures and all other drawings, schedules and diagrams necessary for the proper correlation of the Work.

Insofar as it is practicable, all drawings shall be uniform in size. They shall be dated, numbered consecutively and shall be identified with the Contract Number and Title, a description of the material or equipment and the area of the work and where it is to be installed. Shop drawings shall accurately and clearly show sizes, work, erection dimensions, arrangement and sectional views, necessary details including information for making connection with the work of other items as may be required, materials and finishes, detailed parts lists, and performance characteristics and capacities as may be required.

- 2) All detailing for structural components shall be done in accordance with the provisions for design and workmanship in the latest additions of the publications listed below except as may be modified in the Contract Documents:

- a. "Manual of Steel Construction" of the American Institute of Steel Construction.
- b. "Building Code Requirements for Reinforced Concrete" and "Manual of Standard Practice for Detailing Reinforced Concrete Structures" of American Concrete Institute.

- 3) Detailing practices for other components shall be done to conform to the best trade practices.

#### 4) Contractor Responsibilities

- a. Before submitting Shop Drawings to the Engineer all submittals from its Subcontractors, manufacturers or suppliers shall be sent directly to the Contractor for preliminary review, coordination and checking.

Contractor shall be responsible for their submission at the proper time so as to prevent delays in delivery of material or equipment. Contractor shall thoroughly check all drawings for accuracy and conformance to the intent of the Contract Documents. Drawings found to be inaccurate or otherwise in error shall be returned to the Subcontractors, manufacturers, or suppliers by the Contractor for correction.

- b. All submittals, including Shop Drawings prepared by or under the direction of the various Contractors, shall be thoroughly checked by the Contractor for accuracy and checked by the Contractor for accuracy and conformance to the intent of the Contract Documents before being submitted to the Engineer and shall bear the Contractor's signature certifying that they have been so checked. Before submitting them to the Engineer, all submittals shall be properly labeled and consecutively numbered. In a clear space above the title block, the Contractor shall provide the "Shop Drawing ID" form of the Sample Forms, and enter the required information:



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- c. Shop Drawings shall be submitted as a single package including all associated drawings for any operating system and shall include all items of equipment and any mechanical units involved or necessary for the functioning of such system. Where applicable, the submittal shall include elementary wiring diagrams showing circuit functioning and necessary interconnecting wiring diagrams for construction.
- d. If the submittals contain any departures from the Contract Documents, specific mention thereof shall be made in the Contractor's letter of transmittal. Otherwise, the review of such submittals shall not constitute approval of the departure. The Contractor shall also call the Engineer's attention to any changes by the use of larger letters of at least 1" in height on the Shop Drawings along with a letter by the Contractor advising the Engineer to the recommended change and the reason therefore. If this is not done, even if the Work is incorporated in the construction, it will not be accepted by the Engineer even if Shop Drawings are "Approved".
- e. No materials or equipment shall be ordered, fabricated or shipped or any Work performed until the Engineer returns to the Contractor the submittals herein required, annotated "Approved".
- f. Where errors, deviations, and/or omissions are discovered at a later date in any of the submittals, the Engineer's prior review of the submittals does not relieve the Contractor of the responsibility for correcting all errors, deviations and/or omissions.
- g. Two (2) copies of Preliminary Operations and Maintenance Manuals shall be submitted with the final Shop Drawings for each item of equipment.
- h. Submittals shall be transmitted in strict compliance with Special Clause 10. A.2 and in sufficient time to allow the Engineer adequate time for review and processing so as not to delay the Project per the approved Shop Drawing Schedule.
- i. Contractor shall transmit five (5) prints of each submittal to the Engineer for review. Any submissions, which in the opinion of the Engineer, are not legible will not be reviewed and will be returned to the Contractor annotated "Disapproved".
- j. Contract drawings are for engineering and general arrangement purposes only and are not to be used as Shop Drawings.
- k. Shop Drawings shall accurately and clearly present the following:
  - All working and installation dimensions.
  - Arrangement and sectional views.
  - Units of equipment in the proposed positions for installation, details of required attachments and connections, and dimensioned locations between units and in relation to the structures.
  - Necessary details and information for making connections between the



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various trades including, but not limited to, power supplies and interconnecting wiring between units, accessories, appurtenances, etc.

- l. Structural and all other layout drawings prepared specifically for the Project shall have a plan scale of not less than 1/4-inch equal to 1 foot and they shall be not larger than the size of the Contract Drawings.
  - m. Where manufacturer's publications in the form of catalogs, brochures, illustrations, compliance certificates, or other data sheets are submitted in lieu of prepared Shop Drawings, such submissions shall specifically indicate the item for which approval is requested. Identification of items shall be made in ink, and submissions showing only general information are not acceptable.
  - n. The Contractor shall provide all required copies for the use of the various trades and at the Site, and one (1) copy of approved Shop Drawings shall be provided by the Contractor to each of the other Prime Contractors unless otherwise noted in writing by the Engineer.
  - o. The Contractor shall respond to required submittals with complete information and accuracy to achieve required approvals within three (3) submissions. All costs to the Owner involved with subsequent submissions of Shop Drawings, Samples or other items requiring approval, will be backcharged to the Contractor, at the rate of 3.0 times direct technical labor cost, by deducting such costs from payments due for Work completed. In the event an approved item is requested by the Contractor to be changed or substituted, all involved costs in the review process will likewise be paid by the Contractor to the County unless determined by the Director of Project Management or Commissioner that the need for such deviation is beyond the control of the Contractor. Contractor shall be responsible for coordinating its Work and submittals with its Subcontractors.. Should Contractor cause the need for additional submissions or reviews of previous submissions all involved costs will similarly be paid to the County.
- 5) Procedure for Review
- a. Shop Drawings will be checked for design conformance with the Contract Documents and general arrangement only.
  - b. Submittals will be annotated by the Engineer in one of the following ways:
    - "Approved" - no exceptions are taken.
    - "Approved as Noted" - minor corrections are noted and shall be made and a resubmittal is required.
    - "Disapproved because" - with specific deficiencies noted.
    - "Disapproved" - based on the information submitted, the submission is not in conformance with the Contract Documents. The deviations from the Contract Documents are too numerous to list and a completely revised submission of the proposed equipment or a submission of other equipment is required.



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c. One copy of the reviewed submittals will be returned to the Contractor. It is the Contractor's responsibility to provide copies to:

- Its Subcontractors.
- Its Materialmen and Suppliers.

unless notified otherwise in writing by the Engineer.

- 6) Disapproved drawings will be returned to the Contractor for correction and resubmission. After the Contractor has had the required corrections made on the original drawing, it shall again submit five copies for review by the Engineer.
- 7) The acceptance of Shop Drawings by the Engineer shall be only general in nature and shall not relieve the Contractor of any responsibility for the accuracy of the drawings, the proper fitting and construction of the Work or for the furnishing of materials or other Work required by the Contract Documents, but not shown on the Shop Drawings. Acceptance of Shop Drawings by the Engineer shall not be construed as approving departures from the Contract requirements unless specifically noted by the Engineer. Acceptance of Shop Drawings for one item shall not be construed as approval for other changes even if noted by the Contractor on the drawing.
- 8) Shop Drawings submitted other than in accordance with the outlined procedures will be returned to the Contractor for resubmission and the Contractor shall bear all expense and risk of all delays as if no Shop Drawings had been submitted.
- 9) No Work shall be performed until the Shop Drawings have been accepted by the Owner, and the Contractor shall be responsible for all costs and damages, which may result from proceeding prior to the approval of the Shop Drawings.

### 45. SEQUENCE OF CONSTRUCTION OPERATIONS

- A. It is mandatory that the premises continue to be occupied and facilities therein shall continue to function during the performance of the construction work.
- B. Detailed sequence of construction and availability of spaces in areas through which services must pass shall be coordinated between the Owner and the Contractor, before actual commencement of the Work.
  - 1) To enable the Work to be laid out and prosecuted in an orderly and expeditious manner, Contractor shall provide a proposed Progress Schedule, within fifteen (15) days after the issuance of the Notice to Proceed of this Contract unless otherwise directed in writing by the Construction Administrator. The proposed Progress Schedule shall show the anticipated time of commencement and completion of each of the various operations to be performed under this Contract; together with all necessary and appropriate information regarding the sequence and correlation of Work; and the Schedule of Shop Drawings and delivery of all materials and equipment required for the Work. The Contractor shall prepare a Master Progress Schedule (Schedule) for the Work. Contractor as directed by the Construction Administrator shall revise the proposed Schedule until each activity is properly sequenced to provide that the Work will be completed in the proper order and



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within the allotted Contract duration, without any conflicts. When the Construction Administrator has accepted the Schedule the Contractor will sign it. The Contractor shall then provide one (1) copy of such approved Schedule to each Subcontractor and two (2) copies to the Construction Administrator. Contractor shall afford its Subcontractors a reasonable opportunity for the introduction and storage of their materials and the execution of their Work and shall properly connect and coordinate its Work with others.

Contractor shall strictly adhere to the Schedule unless changed as provided for in the following paragraph.

- 2) Within five (5) days after receiving notice of any change in the Contract, or of any Extra Work to be performed, or of any suspension of the whole or any portion of the Work, or of any other conditions which are likely to cause or are actually causing delays, Contractor must notify the Construction Administrator in writing of the effect, if any, of such change or Extra Work or suspension or other condition upon the previously approved schedule, and must state in what respects, if any, the Schedule should be revised, with the reasons therefor. These proposed changes in the Schedule shall be reviewed and, if appropriate, approved, in writing, by the Construction Administrator. Contractor must strictly adhere to the revised Schedule. Distribution of the revised Schedule shall be as described in paragraph B-1 above. Contractor's compliance with the requirements of this paragraph is in addition to, and not in lieu of, compliance with other notice requirements pertaining to delays and extensions of time contained elsewhere in the contract.
  - 3) The Schedule shall be reviewed by Contractor every two (2) weeks or as directed by the Construction Administrator.
  - 4) If Contractor shall fail to adhere to the approved Schedule, or to the Schedule as revised, they must promptly adopt additional means and methods of construction with no additional cost to the County that will make up for the lost time and will assure completion in accordance with such Schedule. The proposed means and methods shall be described in writing to the County within two (2) days after the Contractor discovered or should have reasonably discovered that the Schedule would not be met as originally proposed. Failure to comply with this requirement may result in the County enforcing its rights under the Contract including, without limitation, default of the Contract.
- C. From time to time as the Work progresses and in the sequence indicated by the approved Schedule, the Contractor must submit to the Construction Administrator a specific request in writing for each item of information or approval required. These requests shall be submitted sufficiently in advance of the date upon which the information or approval is actually required by the Contractor to allow for the time the Construction Administrator may reasonably take to act upon such submissions or resubmissions. The Contractor shall not have any right to an Extension of Time on account of delays due to its failure to timely submit requests for the information or approvals.
- D. Certain construction work shall be required, which will be disruptive to the Owner's staff insofar as noise, dirt and dust is concerned. The Contractor, therefore, shall



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perform such work during other than normal working hours. Subject to the requirements of law, the Owner imposes no limitation on the Contractor's working hours and whatever overtime work may be necessary or required shall be considered by the Contractor and reflected in its Bid Proposal without the benefit of extra compensation.

### 46. PROTECTION

- A. The Contractor shall at all times exercise all necessary precautions for the safety of the public, employees performing the work and County personnel. The Contractor shall provide and maintain barricades, danger signals and other safeguards about the work and shall be held responsible for all accidents or damages to persons or property caused by failure to do so throughout the progress of the work, and shall comply with all applicable provisions of Federal, State and County Safety Laws.
- B. The Contractor shall during the performance of its work, protect at all times all adjacent portions of the existing surfaces and existing equipment from damage due to the performance of the construction work.
- C. The Contractor shall furnish temporary facilities and/or temporary dust-proof partitions separating all work areas and access routes from those areas not involved in active alterations, so that this work will not interfere with the Owner's access or normal use of areas not allocated to the Contractor, or any essential service to such areas, when ordered by the Construction Administrator.

### 47. CLEANUP AND REMOVAL OF DEBRIS

- A. At the end of each working day, the Contractor shall sweep up and collect all the rubbish and place it in appropriate containers, furnished by the Contractor. Containers shall be kept at a location on, or adjacent to the work site, as designated by the Construction Administrator. Wood or cardboard crates and other debris of a similar nature shall be broken up, securely bundled and neatly stacked alongside the containers. Once each week and at the completion of the work, the Contractor shall remove all accumulated debris and rubbish.
- B. At the completion of the work, the Contractor shall clean all equipment, fixtures, surfaces and accessories, removing all dust and other foreign matter, ready for use by the Owner.

### 48. TEMPORARY SERVICE

- A. Sanitary facilities will be provided by the Owner for the Contractor and its personnel.
- B. The Owner will supply and pay for the cost of all-temporary water and temporary electric power (120 volt, 60 hertz). The Contractor shall furnish and install all temporary electrical and water connections required for work under this Contract, at and to locations as designated by the Construction Administrator.



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### 49. OPERATING TESTS

- A. Where operating tests are specified the Contractor shall test the work as it progresses and shall make satisfactory preliminary tests in all cases before applying to the Engineer for official tests.
- B. Official tests will be made in the manner specified for the different branches of the work, in the presence of the Construction Administrator or Engineer. Should defects appear they shall be corrected by the Contractor and the test repeated until the installation is acceptable to the Construction Administrator or Engineer and to any authorities having jurisdiction.
- C. No work of any kind shall be covered or enclosed before it has been tested and approved.
- D. The Contractor shall furnish all materials and apparatus, make connections and conduct tests, without extra compensation unless noted otherwise.

### 50. OPERATING INSTRUCTIONS AND PARTS LISTS

- A. Where the Specifications require any Contractor to supply equipment operating and maintenance instructions and spare parts lists prior to the completion of the work it shall provide three copies of the publications for each piece of equipment he has furnished and installed under the Contract, upon receipt of the approved shop drawings.
- B. Publications shall be prepared for the specific equipment furnished and installed, containing the following information, and shall not refer to other sizes, types or models of similar equipment:
  - 1) Clear and concise instructions for the operation, adjustment, lubrication and other maintenance of the equipment, including a complete lubrication chart.
  - 2) A complete listing of all parts for the equipment, with catalog numbers and other data necessary for ordering replacement parts.
- C. Advertising literature will not be acceptable.

### 51. CUTTING AND PATCHING

#### **Contract with Single Bid:**

- A. Where the project does not involve separate bids pursuant to the New York General Municipal Law the following will apply:
  - 1) Where walls, floors, ceilings, roofs or other items require cutting for the installation of new work, all such cutting shall be done by the Contractor with the approval of the Construction Administrator; and the Contractor shall patch the opening to make the cut portions match the adjacent finished surfaces, unless otherwise indicated.
  - 2) The Contractor shall not endanger any existing condition by its operations.
  - 3) The cost of all cutting and patching caused by the Contractor's negligence shall be



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borne by the Contractor.

### **Contract with Separate Bids:**

- B. If the project is one where separate bid specifications are required pursuant to the New York General Municipal Law the following will apply:
- 1) A sufficient time in advance of the construction of new floors, walls, ceilings, roofs, or other items, each Contractor shall be responsible for properly locating and providing in place all sleeves, inserts and forms required for their work, and shall furnish the Contractor for General Construction with complete information relative to exact locations and dimensions of all required openings in the General Contractor's work. Other Contractors shall periodically consult the Job Progress Chart of the General Contractor so that they will not be delayed by their work requirements, but the General Contractor shall be obliged to give all other Contractors at least seventy-two hours notice before commencing the previously mentioned new construction work.
  - 2) The cost shall be borne by the responsible Contractor for all cutting, patching, re-waterproofing and re-caulking of new work necessary for reception of the work of a Contractor, caused by the Contractor's failure to timely or properly locate and provide in place all sleeves, inserts and forms required for its own work, or by a Contractor's failure to inform the General Contractor of required openings. The General Contractor shall do all cutting, patching, re-waterproofing and re-caulking of all new work no matter how or by whom such work was caused and shall be reimbursed for such extra work by the responsible Contractor, in accordance with the terms of the Contract. All cutting and patching shall have prior approval of the Construction Administrator.
  - 3) Where sleeves, inserts, forms or openings are required in existing walls, floors, ceilings roofs, or other existing items, all necessary cutting, patching, re-waterproofing and re-caulking required shall be done by the individual responsible Contractor, except for finished surfaces. The responsible Contractor shall do all rough patching to bring the cut areas to the proper surface ready to receive the finished surface. All finishing work required to make the cut portions match the adjacent finished surfaces shall be performed by the General Contractor.
  - 4) Each Contractor shall be responsible for coordinating their work with the work of all other Contractors engaged on the project. If directed, Contractors shall submit coordinated shop drawings showing how the fitting of the various parts of the work will be accomplished, for the Construction Administrator's acceptance.
  - 5) All cutting and patching shall be governed by the applicable divisions of the Specifications with regard to workmanship, materials and methods.
  - 6) No Contractor shall endanger any work by unauthorized cutting, excavating, or other alteration of the work, unless previously authorized by the Construction Administrator.



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### 52. CONFLICTS AMONG CONTRACT DOCUMENTS

In the event of any conflict among the Contract Documents, the Contractor shall notify the Commissioner and comply with the Commissioner's interpretation, according to the following priorities:

<u>Priority Order</u>	<u>Document</u>
1.....	Modification issued after execution of Agreement
2.....	Agreement between Owner and Contractor
3.....	Addenda issued prior to the execution of the Agreement (Later date to take precedence)
4.....	Special Notices
5.....	Technical Specifications
6.....	Construction Drawings:
6A.....	Schedule on Construction Drawings
6B.....	Notes on Construction Drawings
6C.....	Large Scale Details on Construction Drawings
6D.....	Small Scale Details on Construction Drawings
7.....	General Requirements
8.....	Special Clauses
9.....	Information for Bidders and General Clauses

### 53. RECORD DRAWINGS

- A. The Owner shall furnish, at the first job meeting, one set of "paper" copies of the contract drawing(s) - this is in addition to the five sets of contract drawings as described in the Article "Contract Drawings" of the General Requirements; for the Contractor's use to indicate change(s) as they occur for the duration of the construction work. Upon request from the Contractor, the County will supply the Contractor a copy of the original Contract Drawings in AutoCAD format.
- B. The Contractor shall record neatly and legibly, using reasonable drafting care, all approved change(s) (including minor revisions or corrections of pipes, ducts, electric outlets, circuit panels and other features, as well as invert elevations and locations of underground lines).
- C. When all approved changes are recorded and clearly identified, the Contractor shall prepare a set of "as-built" (record) drawings, in the latest version of AutoCAD, using the approved County format and associated CAD layering guidelines, with 24" x 36" drawing sizes, showing the project as built including all changes in the work made during construction based on marked-up prints, drawings, and other data. These drawings shall be filed on a CD and submitted to the Construction Administrator.
- D. All additional "paper" or reproducible drawings are to be obtained by the Contractor at their own expense.



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### 54. TIME

- A. All time limits (see Article “Required Time For Completion Of The Work” of the General Requirements, and, Article “Time Of Starting” of the Information For Bidders) stated in the specifications are of the essence of the Contract.
- B. The Contractor may perform all necessary labor during other than normal working hours. The Owner imposes no limitation of the Contractor's working hours and whatever overtime work may be necessary or required shall be considered by the Contractor and reflected in its Bid Proposal without the benefit or extra compensation. The Contractor must give a minimum of four (4) hours notice to the Construction Administrator when overtime Work is necessary. The Contractor shall promptly pay to the County the additional cost of the Engineer and Construction Administrator for inspection services during the overtime Work.

### 55. ACCELERATION OF THE WORK

The Owner may, at its sole discretion and for any reason, require the Contractor to accelerate the schedule of performance by providing overtime, extended day, extra crews, Saturday, Sunday and/or holiday work and/or by having all or any subcontractors designated by the Owner provide overtime, extended day, extra crews, Saturday, Sunday or holiday work by the Contractor's or his subcontractor's own forces, and such requirements is independent of and not related in any way to any apparent inability of the Contractor to comply with the schedule(s), Milestone(s) and/or completion date requirements, the Owner, pursuant to a written change order as signed by the Commissioner shall reimburse the Contractor for the direct cost to the Contractor of the premium time for the labor utilized by the Contractor in such overtime, extended day, extra crews, Saturday, Sunday or holiday work (but not for the straight time costs of such labor) together with any social security and state or federal unemployment insurance taxes in connection with such premium time. However, no overhead, supervision costs, commissions, profit or other costs and expenses of any nature whatsoever, including impact costs or costs associated with lost efficiency or productivity, shall be payable in connection therewith. Anything to the foregoing notwithstanding, in the event that the Contractor has fallen behind schedule or in the Owner's judgment appears likely to fall behind schedule, Owner shall have the absolute right to direct the Contractor to accelerate the performance of its work, including that of its subcontractors, and the full costs for such acceleration shall be borne solely by the Contractor.

### 56. ULTRA LOW SULFUR DIESEL FUEL

- A. Contractors and Subcontractors operating onroad and nonroad vehicles to perform County work must power those vehicles with ultra low sulfur diesel fuel. Ultra low sulfur diesel fuel is any diesel fuel that has a sulfur content of no more than fifteen parts per million.
- B. In addition, all onroad and nonroad diesel vehicles used to perform County work and equipped with a model year 2003 or older engine shall utilize the best available



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technology<sup>2</sup> in accordance with the following schedule:

- a) effective September 1, 2007 - 35% of all such motor vehicles used on this project;
- b) effective September 1, 2008 - 65% of all such motor vehicles used on this project;
- c) effective September 1, 2009 - 100% of all such motor vehicles used on this project.

- C. All onroad and nonroad diesel vehicles to perform County work having a gross vehicle weight rating of more than 14,000 pounds shall utilize the best available technology or be equipped with an engine certified to the applicable 2007 United States Environmental Protection Agency ("EPA") standard for particulate matter as set forth in Section 86.007-11 of Title 40 of the Code of Federal Regulations or to any subsequent EPA standard for such pollutant that is at least as stringent, in accordance with the following schedule:
  - a) by September 1, 2007 - 35% of all such motor vehicles;
  - b) by September 1, 2008 - 65% of all such motor vehicles;
  - c) by September 1, 2009 - 100% of all such motor vehicles
- D. Any contractor who violates any provision of Section 873.1329 shall be liable for a civil penalty not to exceed ten thousand dollars plus twice the amount of money saved by such contractor for failure to comply with this section.
- E. Any contractor who makes a false claim may be liable for a civil penalty not to exceed twenty thousand dollars, in addition to twice the amount of money saved by such contractor as a result of having made such false claim.
- F. Nothing in this section shall be construed to limit the County's authority to cancel or terminate a contract, deny or withdraw approval to perform a subcontract or provide supplies, issue a non-responsibility finding, issue a non-responsiveness finding, deny a person or entity pre-qualification as a vendor, or otherwise deny a person or entity public entity business.
- G. If sufficient quantities of ultra low sulfur diesel fuel are not available to meet the needs of a contractor to fulfill the requirements of this contract, the Contractor may submit a written request to the Commissioner to use diesel fuel with a sulfur content of no more than thirty parts per million as long as the contractor shall use whatever quantity of ultra low sulfur diesel fuel that is available. Such determination shall be made in writing on a case by case basis upon written application to the Commissioner. If the Commissioner grants such authority it shall expire sixty days thereafter and may be renewed upon written request for additional periods of sixty days.

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<sup>2</sup> Best Available Technology means a system for reducing the emission of pollutants which is based on technology verified by the U.S. Environmental protection Agency or the California Air Resources Board or which has been identified pursuant to NYC's Department of Environmental Protection that (1) reduces diesel particulate matter emissions by at least 85 percent, as compared to a similar engine operating on traditional diesel fuel without emission control technology, or reduces engine emissions to 0.01 grams diesel particulate matter per brake horsepower per hour or less; and 2) achieves the greatest reduction in emissions of nitrogen oxides at a reasonable cost and in no case produces a net increase in nitrogen oxides in excess of 10%.



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H. The Contractor, in order to comply with Subsections B & C above, must retrofit its vehicles to include both of the following in order to comply with the Best Available Technology Requirements:

- Diesel Oxidation Catalysts (DOC)
- Crankcase Vent Filters (CVF)

If the Contractor wants to propose an alternative technology it must submit a written request to the Commissioner with sufficient detail to enable the Commissioner to make a determination as to whether to accept the alternative technology. Any approval of alternative technology must be in writing.

### 57. QUALIFIED TRANSPORTATION FRINGE PROGRAM

#### **EXECUTIVE ORDER NO. 7-2005**

Requires that contractors, concessionaires and vendors doing business with the County enroll in a Qualified Transportation Fringe Program as defined in §132(f)(1) of the IRS Tax Code for all contracts for goods or services of \$100,000 or more in any twelve month period during the contract term if such contractor, concessionaire or vendor employs more than 25 individuals who utilize public transportation and/or pay for commuter parking at least 1 day per week regardless of whether those employees are engaged in work pursuant to the contract.

Bidders shall submit the signed statement on Proposal Page 34. Notwithstanding the above, a Bidder may submit a Waiver Application on Proposal Page 35 to the Commissioner.

### 58. USE OF FLUORESCENT LIGHT BULBS & ENERGY EFFICIENT BULBS

The use of incandescent light bulbs is prohibited in County-owned buildings and facilities. Only fluorescent light bulbs may be installed in County buildings and facilities. Exterior lights must utilize energy-efficient bulbs. For further details see Article 58 of the General Clauses.

### 59. COUNTY OF WESTCHESTER PHOSPHORUS-FREE LAWN FERTILIZER POLICY

Executive Order 8-2007 limits the use of lawn fertilizers containing phosphorous and other compounds containing phosphorous, such as phosphate on County owned property.

#### **EXECUTIVE ORDER NO.8 OF 2007**

**WHEREAS**, the New York City water supply watershed is a critical drinking water source for approximately eight million New York City consumers and approximately one million upstate consumers. Over eighty-five percent (85%) of Westchester County's residents consume water from the New York City water supply system; and

**WHEREAS**, eutrophication is a natural aging process of lakes or streams brought on by



## GENERAL CLAUSES

nutrient enrichment. Eutrophication can be greatly accelerated by human activities that increase the rate at which nutrients and organic substances enter aquatic ecosystems from their surrounding watersheds; and

**WHEREAS**, as a result of accelerated eutrophication, enhanced plant growth reduces dissolved oxygen in the water creating severely impaired water bodies with unpleasant water taste and odor, discoloration, release of toxins and increased turbidity that interferes with the health and diversity of indigenous fish, plant, and animal populations and with the recreational use of rivers, lakes and wetlands. Consequently, eutrophication restricts water use for fisheries, recreation, industry, and drinking due to the increased growth of undesirable algae and aquatic weeds and the oxygen shortages caused by their death and decomposition; and

**WHEREAS**, nutrient pollution due to human activities is one of the leading causes of eutrophication in the NYC Watershed, and is specifically accelerated by the introduction of excessive phosphorus into the environment. In fact, most reservoirs in the East of Hudson portion of the New York City Watershed (5 of the 7 located in Westchester County) are designated as phosphorous-restricted basins in accordance with the New York City Watershed Rules & Regulations due to excessive phosphorous volumes which have not been reduced despite phosphorous reductions mandated by the New York State Department of Environmental Conservation (NYSDEC); and

**WHEREAS**, one unnecessary source of phosphorus pollution in the watershed is the many pounds of lawn fertilizer applied by residents and businesses in the County of Westchester each year; and

**WHEREAS**, when phosphorus fertilizer is applied to phosphorus-rich lawns, much of the excess simply runs off of the lawn into the storm drainage systems where it can be carried into rivers, lakes, streams, and wetlands, causing eutrophication; and

**WHEREAS**, soil tests conducted pursuant to a six-year study by the Cornell Cooperative Extension, an extension of the State's designated Land-Grant University, have shown that approximately 90% of the lawns in Westchester County have medium-to-high levels of phosphorus; and

**WHEREAS**, the New York City Watershed Pesticide and Fertilizer Technical Working Group, established by the New York City Watershed Memorandum of Agreement, issued a report in 2000, noting the high percentage of phosphorus in regional soils and recommending that phosphorus-based lawn fertilizers be added only when a soil analysis identifies phosphorus deficiencies.

**WHEREAS**, the proposed Stormwater Phase II regulations recently issued by the New York State Department of Environmental Conservation, and which are expected to go into effect in January of 2008, will allow the use of phosphorus-based lawn fertilizers on municipally-owned land only where soil testing indicates that phosphorus concentrations are inadequate, in order to ensure that municipalities in the New York City Watershed are



## GENERAL CLAUSES

taking satisfactory steps to achieve the above-referenced mandatory phosphorous reductions.

**WHEREAS**, the United States Environmental Protection Agency has also determined that a Nonpoint Source Implementation Plan was necessary in the Croton Watershed because the phosphorus reductions necessary to meet the targeted applicable water quality standards could not be achieved by wastewater treatment plant upgrades alone; and

**WHEREAS**, Section 110.11 of the Laws of Westchester County places the responsibility to supervise, direct and control, subject to law, the administrative services and departments of the county, upon the County Executive; and

**WHEREAS**, I have determined that restricting the application and use of lawn fertilizer containing phosphorus on all County-owned property will address one source of unnecessary and preventable phosphorus pollution and will improve water quality in the County; and

**WHEREAS**, the Department of Planning, after review of the applicable regulations under the State Environmental Quality Review Act, has advised that this Executive Order has been classified as a Type II action, pursuant to 6 N.Y.C.R.R. § 617.5(c)(20), “routine or continuing agency administration and management, not including new programs or major reordering of priorities that may affect the environment,” and 6 N.Y.C.R.R. § 617.5(c)(27), “adoption of regulations, policies, procedures and local legislative decisions in connection with any action on this list.” As such, no further environmental review is required.



## GENERAL CLAUSES

**NOW THEREFORE, I,** \_\_\_\_\_, County Executive of the County of Westchester, in light of the aforementioned, do hereby order and direct each and every department, board, agency, and commission of the County of Westchester under my jurisdiction to ensure that the policies and procedures set forth in the following Phosphorus-Free Lawn Fertilizer Policy are complied with.

### COUNTY OF WESTCHESTER PHOSPHORUS- FREE LAWN FERTILIZER POLICY

#### **I. Definitions:**

- (1) "Certified laboratory" means any laboratory certified by the New York State Department of Health pursuant to section five hundred two of the New York State Public Health Law to conduct soil analysis.
- (2) "Commercial fertilizer" means any substances containing one or more recognized plant nutrients which is used for its plant nutrient content, and which is designed for use or claimed to have value in promoting plant growth, except unmanipulated animal or vegetable manures, agricultural liming material, wood ashes, gypsum and other products exempted by regulation of the New York State Commissioner of Agriculture and Markets.
- (3) "Lawn fertilizer" means a commercial fertilizer distributed primarily for non-farm use, such as lawns, shrubbery, flowers, golf courses, municipal parks, cemeteries, greenhouses and nurseries, and such other use as the commissioner may define by regulation. Lawn fertilizer does not include fertilizer products intended primarily for garden and indoor plant application.

#### **II. Use and Application of Lawn Fertilizer:**

- (1) Any lawn fertilizer that is labeled as containing more than 0% phosphorus or other compound containing phosphorus, such as phosphate, shall not be applied upon any County-owned property, except as provided in section III. Of this Executive Order.
- (2) No lawn fertilizer shall be applied upon County-owned property when the ground is frozen.
- (3) Lawn fertilizer shall not be applied to any impervious surface upon County-owned property, including parking lots, roadways, and sidewalks. If such application occurs, the fertilizer must be immediately contained and either applied to turf in a manner consistent with this Executive Order or placed in an appropriate container.

#### **III. Exemptions:**

The prohibition against the use of lawn fertilizer under section II of this Executive Order shall not apply to:



## GENERAL CLAUSES

(1) Newly established turf or lawn areas during their first growing season.

(2) Turf or lawn areas that soil tests, performed within the past three years by a certified laboratory or by the Cornell University Cooperative Extension of Westchester County, confirm the need for additional phosphorus application in accordance with the phosphorus levels established by the Cornell University Cooperative Extension of Westchester County. The lawn fertilizer application shall not contain an amount of phosphorus exceeding the amount and rate of application recommended in the soil test evaluation.

(3) Agricultural uses, vegetable and flower gardens, or application to trees or shrubs.

IV. The transition to phosphorus-free lawn fertilizer shall occur as soon as possible in a manner that avoids wasting of existing inventories; accommodates establishment of supply chains for new products; enables the training of County employees and licensees in appropriate work methods; and allows the phase-out of products and practices inconsistent with this Executive Order. However, in no event shall lawn fertilizer containing phosphorus (i.e., labeled as containing more than 0% phosphorus or other compound containing phosphorus, such as phosphate) be applied upon County-owned property after January 1, 2009, unless an exemption set forth in Section III of this Executive Order applies.

V. This Executive Order shall take effect on the date hereof, and shall remain in effect until otherwise superseded, repealed, modified or revoked.





## **SAMPLE FORMS**

**DEPARTMENT OF PUBLIC WORKS**

**Division of Engineering**



SAMPLE FORMS

**AFFIRMATIVE ACTION PROGRAM REQUIREMENT- SUBCONTRACTOR(S)**

**County of Westchester, Department of Public Works**

(To Be Completed By Subcontractor and Submitted with Request to Utilize Subcontractor)

Affirmative Action Program

An approved Affirmative Action Plan shall be required for all Subcontractors for public work where the subcontracted work exceeds \$50,000 or more than fourteen (14) persons are employed by the Subcontractor.

Does the Subcontractor participate in an approved Affirmative Action Program? Yes [ ☐ ] No [ ☐ ]

If Yes, give name of Program: \_\_\_\_\_

\_\_\_\_\_

If No, how many employees will the Subcontractor employ on this project? \_\_\_\_\_

An approved Affirmative Action Program shall mean a plan approved or adopted by Westchester County including but not limited to, the Home-Town Plan, the Recruitment Training Program or any other program approved or meeting the requirements of the State or Federal government.

The "Monthly Employment Utilization Report" of the Sample Forms, shall be filled out by the Contractor and/or Subcontractor(s) who are required to have an Affirmative Action Program, prior to the start of the work.



SAMPLE FORMS

**CONTRACTOR'S REPORT OF EMPLOYMENT AND WEEKLY AFFIDAVIT**

**County of Westchester, Department of Public Works**

Contract No. \_\_\_\_\_

Report No. \_\_\_\_\_

Week(s) ending \_\_\_\_\_

Title of Contract and Location \_\_\_\_\_

Contractor or Subcontractor \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ ) SS.:

I, \_\_\_\_\_, being duly sworn, depose and say:

1. I pay or supervise the payment of the persons employed by \_\_\_\_\_  
(Contractor or Subcontractor)  
in connection with the above referenced contract;

2. During the payment period commencing on the \_\_\_\_ day of \_\_\_\_\_,  
20\_\_\_\_ and ending on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, all persons employed by  
\_\_\_\_\_ in connection with such contract have been paid in full  
(Contractor or Subcontractor)  
weekly wages and supplements earned by such persons except the following: (strikeout, if not  
applicable)

3. Such persons have been paid the prevailing rate of wages and the supplements as  
determined and required by Section 220 of the New York State Labor Law.



SAMPLE FORMS

4. No rebates or deductions have been deducted from such wages and supplements except as authorized or required by applicable statutes or regulations of the Federal, State and County Governments.

5. The following is a true and accurate summary of wages and supplements paid:

\_\_\_\_\_ During the week \_\_\_\_\_ Total to date

Number of names on payroll \_\_\_\_\_

Hours worked \_\_\_\_\_

Total wages earned \_\_\_\_\_

6. I have read the foregoing statement of wages and supplement, know the contents thereof, and the same is true to my own knowledge.

\_\_\_\_\_  
(Signature)

STATE OF NEW YORK)  
COUNTY OF WESTCHESTER) ss.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came \_\_\_\_\_ to me known, and known to me to be the person who executed the above instrument, and who being duly sworn did say that he executed the same.

Sworn to before me  
this \_\_\_\_\_ day of \_\_\_\_\_

\_\_\_\_\_  
License No.

\_\_\_\_\_  
Notary Public - State of New York



SAMPLE FORMS

**MONTHLY EMPLOYMENT UTILIZATION REPORT**  
**County of Westchester, Department of Public Works**

<b><u>MONTHLY EMPLOYMENT UTILIZATION REPORT</u></b>										JOB TITLE:		CONTRACT NO.:											
WESTCHESTER COUNTY DEPARTMENT OF PUBLIC WORKS DIVISION OF ENGINEERING										NAME AND LOCATION OF CONTRACTOR:		REPORTING PERIOD: FROM: _____ TO: _____											
CONSTRUCTION TRADE	CLASSIFICATION	TOTAL ALL EMPLOYEES BY TRADE						BLACK (NOT HISPANIC ORIGINAL)		HISPANIC		ASIAN OR PACIFIC ISLANDERS		AMERICAN INDIAN OR ALASKAN NATIVE		MINORITY PERCENTAGE %	FEMALE PERCENTAGE %	TOTAL NUMBER OF EMPLOYEES		TOTAL NUMBER OF MINORITY EMPLOYEES			
		M	HRS	F	HRS	M	F	M	F	M	F	M	F	M	F			M	F				
	JOURNEY WORKER																						
	APPRENTICE																						
	TRAINEE																						
	SUB-TOTAL																						
	JOURNEY WORKER																						
	APPRENTICE																						
	TRAINEE																						
	SUB-TOTAL																						
	JOURNEY WORKER																						
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	SUB-TOTAL																						
	JOURNEY WORKER																						
	APPRENTICE																						
	TRAINEE																						
	SUB-TOTAL																						
	TOTAL JOURNEY WORKER																						
TOTAL APPRENTICES																							
TOTAL TRAINEES																							
GRAND TOTAL (#HRS & #EMPL)																							
COMPANY OFFICIAL'S SIGNATURE AND TITLE:										TELEPHONE NUMBER (Include Area Code):										DATE SIGNED:		PAGE: _____ OF _____	

This report must be filled out by all contractors (both prime and sub) who are required to have an Affirmative Action Program, and must be filed with the Engineer by the 5<sup>th</sup> day of each month during the term of the Contract, and shall include the total work hours of each employee classification in each trade in the covered area for the Monthly Reporting Period. The Prime Contractor shall submit a report for its Aggregate Work Force and collect and submit reports for each subcontractor's Aggregate Work Force to the Engineer.



**SHOP DRAWING SCHEDULE**  
**County of Westchester, Department of Public Works**

Forms Page 5



SAMPLE FORMS

**SHOP DRAWING ID**

**County of Westchester, Department of Public Works**

WESTCHESTER COUNTY DRAWING \_\_\_\_\_ OF \_\_\_\_\_

NAME OF PROJECT

\_\_\_\_\_

Date \_\_\_\_\_

Contract No. \_\_\_\_\_

Item/Model No. \_\_\_\_\_

Manufacturer \_\_\_\_\_

Contract Drawing No. \_\_\_\_\_

Specification Section \_\_\_\_\_

This document has been reviewed, coordinated and checked for accuracy of content and for compliance with the Contract Documents. The information contained herein has been coordinated with all other Contract Work.

Contractor \_\_\_\_\_

Signed \_\_\_\_\_



**REQUEST FOR APPROVAL OF EQUAL**  
**County of Westchester, Department of Public Works**

NO.

## EQUAL

(WC DPW E Version 11/3/08)



## REQUEST FOR APPROVAL OF SUBSTITUTIONS

<u>ITEM</u> <u>NO.</u>	<u>ITEM</u>	<u>SUBSTITUTION</u>	<u>COST OF</u> <u>SPECIFIED</u> <u>ITEM</u>	<u>COST OF</u> <u>SUBSTITUTED</u> <u>ITEM</u>	<u>SAVINGS</u> <u>TO</u> <u>COUNTY</u>
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This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

Forms Page 8



SAMPLE FORMS

**CONTRACTOR'S ULTRA LOW SULFUR DIESEL FUEL AFFIDAVIT**

County of Westchester, Department of Public Works

Contract No. \_\_\_\_\_ Period Included in this Report: \_\_\_\_\_, 20\_\_ to \_\_\_\_\_, 20\_\_

Title of Contract and Location \_\_\_\_\_  
\_\_\_\_\_

Contractor \_\_\_\_\_

Address \_\_\_\_\_

Subcontractor \_\_\_\_\_

Address \_\_\_\_\_

STATE OF \_\_\_\_\_ ) ss.:  
COUNTY OF \_\_\_\_\_ )

I, \_\_\_\_\_ being duly sworn, depose and say:  
(print name) (print title)

1. I certify under penalty of perjury that I agree to comply with the requirements of Chapter 878, Article XIII, Section 873.13.29 of the Laws of Westchester County.
2. During the period \_\_\_\_\_ through \_\_\_\_\_, all diesel-powered vehicles, used in the performance of Contract No. \_\_\_\_\_, were powered by ultra low sulfur diesel fuel (15 ppm Sulfur Maximum).
3. No fuel other than Ultra Low Sulfur Diesel Fuel (15 ppm Sulfur Maximum) was utilized on this project for the above described vehicles.
4. The annexed Ultra Low Sulfur Diesel Fuel Log is a true and accurate summary of the low sulfur diesel fuel (15 ppm Sulfur Maximum) purchased and utilized in the performance of this project.
5. I have read the foregoing statement, have full knowledge of the contents thereof, and it is my intent that the County of Westchester will rely on the statements contained herein.

\_\_\_\_\_  
(Signature)

STATE OF \_\_\_\_\_ ) ss.:  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, before me personally came \_\_\_\_\_ to me known, and known to me to be the person who executed the above instrument, and who being duly sworn did say that he/she executed the same.

Sworn to before me this

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public

**The Ultra Low Sulfur Diesel Fuel-Log must be attached.**

This Certification also has to be submitted by your subcontractor(s). *Additional copies of this form can be acquired from the Department of Public Work.*



SAMPLE FORMS

**ULTRA LOW SULFUR DIESEL FUEL (15 ppm Sulfur Maximum) – LOG**

Period of Log: \_\_\_\_\_ through \_\_\_\_\_

Contract No. \_\_\_\_\_

Title of Contract and Location \_\_\_\_\_

\_\_\_\_\_

Contractor or Subcontractor \_\_\_\_\_

Address \_\_\_\_\_

<b>Date of Purchase</b>	<b>Name and Address of Vendor (Print)</b>	<b>Gallons Purchased</b>

***A Separate Copy of this Certification will also have to be signed by each of your subcontractors that utilize diesel powered vehicles, fifty horsepower or greater, on the above project. Additional copies of this form can be acquired from the Department of Public Works.***



- ☐ New  
☐ Change  
☐ No Change

**Electronic Funds Transfer (EFT)  
Vendor Direct Payment Authorization Form**

**INSTRUCTIONS:** Please complete both sections of this Authorization form and attach a voided check. See the reverse for more information and instructions (Forms Page 21). If you previously submitted this form and there is no change to the information previously submitted, ONLY complete lines 1 through 6 of section 1.

**Section I - Vendor Information**

1. Vendor Name:

2. Taxpayer ID Number or Social Security Number:

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3. Vendor Primary Address

4. Contact Person Name:

Contact Person Telephone Number:

5. Vendor E-Mail Addresses for Remittance Notification:

6. Vendor Certification: *I have read and understand the Vendor Direct Payment Program and hereby authorize payments to be received by electronic funds transfer into the bank that I designate in Section II. I further understand that in the event that an erroneous electronic payment is sent, Westchester County reserves the right to reverse the electronic payment. In the event that a reversal cannot be implemented, Westchester County will utilize any other lawful means to retrieve payments to which the payee was not entitled.*

\_\_\_\_\_  
Authorized Signature\_\_\_\_\_  
Print Name/Title\_\_\_\_\_  
Date**Section II- Financial Institution Information**

7. Bank Name:

8. Bank Address:

9. Routing Transit Number:

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10. Account Type:  
(check one)☐ Checking☐ Savings

11. Bank Account Number:

12. Bank Account Title:

13. Bank Contact Person Name:

Telephone Number:

14. FINANCIAL INSTITUTION CERTIFICATION (required **ONLY** if directing funds into a Savings Account **OR** if a voided check is not attached to this form): *I certify that the account number and type of account is maintained in the name of the vendor named above. As a representative of the named financial Institution, I certify that this financial Institution is ACH capable and agrees to receive and deposit payments to the account shown.*

\_\_\_\_\_  
Authorized Signature\_\_\_\_\_  
Print Name / Title\_\_\_\_\_  
Date

**(Leave Blank - to be completed by  
Westchester County) - Vendor number assigned**

(WC DPW E Version 11/3/08)

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Forms Page 11



## Electronic Funds Transfer (EFT) Vendor Direct Payment Authorization Form

### GENERAL INSTRUCTIONS

Please complete both sections of the Vendor Direct Payment Authorization Form and forward the completed form (along with a voided check for the account to which you want your payments credited) to: Westchester County Board of Acquisition and Contract, 148 Martine Ave, Room 104, White Plains, NY 10601, Attention: Vendor Direct. Please see item 14 below regarding attachment of a voided check.

### Section I - VENDOR INFORMATION

1. Provide the name of the vendor as it appears on the W-9 form.
2. Enter the vendor's Taxpayer ID number or Social Security Number as it appears on the W-9 form.
3. Enter the vendor's complete primary address (not a P.O. Box).
4. Provide the name and telephone number of the vendor's contact person.
5. Enter the business e-mail address for the remittance notification. THIS IS VERY IMPORTANT. This is the e-mail address that we will use to send you notification and remittance information two days prior to the payment being credited to your bank account. We suggest that you provide a group mailbox (if applicable) for your e-mail address. You may also designate multiple e-mail addresses.
6. Please have an authorized Payee/Company official sign and date the form and include his/her title.

### Section II - FINANCIAL INSTITUTION INFORMATION

7. Provide bank's name.
8. Provide the complete address of your bank.
9. Enter your bank's 9 digit routing transit number.
10. Indicate the type of account (check one box only).
11. Enter the vendor's bank account number.
12. Enter the title of the vendor's account.
13. Provide the name and telephone number of your bank contact person.
14. If you are directing your payments to a Savings Account OR you can not attach a voided check for your checking account, this line needs to be completed and signed by an authorized bank official. IF YOU DO ATTACH A VOIDED CHECK FOR A CHECKING ACCOUNT, YOU MAY LEAVE THIS LINE BLANK.





**SAMPLE CONTRACT AND BOND**  
**FOR CONSTRUCTION**

**DEPARTMENT OF PUBLIC WORKS**

**Division of Engineering**



**WESTCHESTERGOV . COM**

**DEPARTMENT OF PUBLIC WORKS  
OFFICE OF THE COMMISSIONER**

**CONTRACT AND BOND**

**FOR CONTRACT**

**NOTE: ONLY PROVIDED AS A SAMPLE IN THESE SPECIFICATIONS FOR INFORMATIONAL PURPOSES AND NOT TO BE EXECUTED WHEN SUBMITTING THE BID PROPOSAL. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO EXECUTE THESE DOCUMENTS, AS MORE FULLY DESCRIBED IN THE PROPOSAL REQUIREMENTS.**



CONTRACT NO.

Amount of Contract \$

**THIS AGREEMENT** made this \_\_\_\_ day of \_\_\_\_\_, 200\_\_, by and between the COUNTY OF WESTCHESTER, a municipal corporation of the State of New York, hereinafter, "County", and

hereinafter called the "Contractor", WITNESSETH as follows:

**WHEREAS**, the Commissioner of Public Works, hereinafter called "Commissioner", by virtue of the power and authority in him vested did advertise for proposals and bids for:

Westchester County, New York, to furnish all labor, tools, implements and materials that may be requisite and necessary to the execution and completion of the work according to the plans, specifications, profiles and other drawings relating to such work, as approved by the County of Westchester and now on file in the Office of the Commissioner, and

**WHEREAS**, the Contractor did bid for said work in the manner and form as required by said plans and specifications and, being the lowest responsible bidder therefore, was duly awarded the Contract for such work at prices named in the itemized proposal by a resolution of the Board of Acquisition and Contract of the said County of Westchester.

**NOW THEREFORE**, the Contractor, in consideration of the prices so named for the various items of work to be paid for as hereinafter provided, does for itself, its representatives, agents, executors, administrators, successors or assigns, covenant and agree with the County that it, the said Contractor, shall and will at its own proper costs and charges and in conformity with said plans and specifications which are made a part of this Contract without setting forth same herein, provide all manner and kind of materials, molds, models, cartage, appliances and appurtenances required and of every description necessary for the due and proper performance of this Contract and the completion of said work to be done under the supervision and direction of the Commissioner, in a good workmanlike manner and in conformity with said plans and specifications without any alteration, deviation, additions, or omissions therefrom except upon due request and under the written direction of said Commissioner.

The Contractor acknowledges receipt of the "Information for Bidders, General and Special Clauses, Specification, Proposal and Plans" relating to this Contract, as well as all issued Addenda thereto, all of which are expressly incorporated in this Contract as if fully set forth herein.



**IT IS FURTHER UNDERSTOOD AND AGREED** by and between the parties to this Contract that if in the opinion of the said Commissioner of the County of Westchester it shall become necessary to make any change in the work called by the plans and specifications which are a part of this Contract, whereby, consistent with the Information for Bidders, the work contemplated by said plans and specifications is modified and reduced and the costs and expenses of such work lessened, that then and in that event the Contractor will do the work as changed and modified and the said Commissioner shall estimate the difference between the original estimate of quantities therefor and the amount that should be paid by reason of the modification and change and the difference shall be deducted from the original estimate of quantities therefore of said Contract and said Contractor shall be paid accordingly. The estimate of said Commissioner shall be final and conclusive upon the parties hereto and may not be challenged except in a proceeding commenced pursuant to Article 78 of the Civil Practice Law and Rules. Any changes, modifications or deductions shall in no way invalidate this Contract and said Contractor agrees that in the event of any such change or modification reducing the original, estimated quantities therefore, it will not make any claim for any profit, or loss of profit by reason thereof. Notwithstanding any dispute or disagreement arising hereunder, Contractor agrees that the Work shall not be delayed nor disrupted by reason thereof.

The County hereby covenants and agrees with the said Contractor, in consideration of the covenants and agreements herein being strictly and in all respects complied with by the said Contractor as specified, that it will well and truly pay unto the said Contractor the unit prices set forth in the Proposal for the various items included in the Contract.

All partial payments will be made in accordance with the provisions set forth in the "Information for Bidders" and especially that part thereof which relates to "Estimates and Payments".

Furthermore, all partial payments will be made on the claim voucher and verified certificate of the Commissioner, both of which shall be filed in the Office of the Commissioner of Finance of the County of Westchester. The said claim voucher shall show the value of the work completed and the verified certificate shall show the said work was done in accordance with the plans and specifications.

With the final estimate the Contractor shall furnish to the Construction Administrator a sworn statement listing all unpaid bills and liabilities incurred under this Contract up to and including the date of the estimate. Where there are any bills or liabilities in excess of moneys due under any estimate under this Contract, the Construction Administrator may withhold payment of the estimate pending a satisfactory proof of settlement or adjustment of any excess claims. No final estimate will be approved or passed for payment unless and until the Contractor furnishes satisfactory proof that all bills and liabilities incurred under the Contract are paid in full and complies with the requirements of Section 220-a of the Labor Law.

Acceptance shall be effected as follows: whenever, in the opinion of the Commissioner, the Contractor shall have completely performed the Contract on his part to be performed, the Commissioner shall so certify in writing to the Board of Acquisition and Contract of the County and file such certificate with the said Board, stating therein, in substance that the work has been duly examined by him and that the same has been fully performed and completed in accordance



with the terms of the Contract therefor, and recommending the acceptance thereof. When the Board of Acquisition and Contract by resolution duly adopts, approves and ratifies, the said acceptance shall be complete. No final payment shall be made under this Contract until such certificate of completion and recommendation of acceptance have been approved and ratified by a resolution of said Board of Acquisition and Contract.

Unless otherwise provided for in the contract documents, the Commissioner may take over, use, occupy or operate any part of the Work at any time prior to Final Acceptance upon written notification to the Contractor. The Engineer shall inspect the part of the Work to be taken over, used, occupied or operated, and will furnish the Contractor with a written statement of the Work, if any, that remains to be performed on such part. The Contractor shall not object to, nor interfere with, the Commissioner's decision to exercise the rights granted herein. In the event the Commissioner takes over, uses, occupies or operates any part of the work: (i) the Commissioner shall issue a written determination of Substantial Completion with respect to such part of the Work; and (ii) the Contractor shall be relieved of its absolute obligation to protect such part of the unfinished work in accordance with Article 20 of the General Clauses.

The Commissioner will approve a final estimate for final payment consistent with the authorization of final acceptance from the Board of Acquisition and Contract less previous payments and any and all deductions authorized to be made by the Commissioner under the Contract or law. Payment pursuant to such final estimate less any additional deductions authorized to be made by the Commissioner of Finance under the Contract or law shall constitute the final payment and shall be made by the Commissioner of Finance. If the contract is terminated prior to final acceptance the Commissioner is authorized to prepare a final payment as otherwise authorized by the Board of Acquisition and Contract subject to the above noted adjustments.

Upon the completion and acceptance of this Contract by the Board of Acquisition and Contract, as aforesaid, the Commissioner shall proceed with all reasonable diligence to ascertain from actual measurements the whole amount of work done by the Contractor, and also the value of such work under and according to the terms of this Contract, and thereupon make out in writing a final estimate therefor.

After the completion and acceptance as herein above-mentioned, the Commissioner of Public Works shall file with the Commissioner of Finance of the County of Westchester the original verified certificate, claim voucher and the certification required by Section 220-a of the Labor Law, together with a certified copy of the resolution of approval and ratification of the Board of Acquisition and Contract of the said verified certificate and claim voucher and the resolution of acceptance of completion.

**IT IS FURTHER UNDERSTOOD AND AGREED** by and between the parties to this Contract that the Contractor will accept the unit prices named in the proposal for all additions to or deductions from the original quantities as given in the specifications. It is agreed that the Commissioner will make estimates of the value for the work completed as provided in the specifications and the final estimate will be made accordingly.



The Contractor further agrees that if at any time before or within thirty days after the whole of the work herein agreed to be performed has been completed and accepted any person or persons claiming to have performed any labor or furnished any material towards the performance and completion of this contract shall file with the proper officials any such notice as is described in the Lien Law, or any other act of the Legislature of the State of New York, the Contractor shall cause such Lien to be discharged of record. Otherwise and in every case and until the Lien is discharge of record the County shall retain, anything herein to the contrary notwithstanding, from the moneys under its control and due or to grow due under this Contract the sum of one hundred fifty (150%) percent of the amount of such Lien, unless otherwise authorized to withhold a larger amount. The Contractor further agrees to pay the County upon demand the costs, including but not limited to attorney's fees, incurred by the County in any action(s) brought to foreclose or otherwise enforce said Lien.

The Contractor covenants and agrees to commence the work embraced in this Contract within Ten [10] calendar days after service upon him, by the Commissioner, of written notice instructing him to begin the work and shall complete the same in all respects within \_\_\_\_\_ consecutive calendar days computed from the date of such Notice to Commence.

It is further understood and agreed by the parties hereto that the time of completion is of the essence of this Contract.

It is further understood and agreed by the Contractor that before entering upon the performance of this Contract it shall have approved by the County Attorney the Bond required to be furnished by it in the sum of-----  
[\$ \_\_\_\_\_ ] conditioned for the faithful performance of the work.

The Contractor hereby covenants and agrees to observe the plans, specifications and directions of the Commissioner in the doing of the work provided for under this Contract and to furnish the necessary materials and implements required therefore and to remove condemned material and rubbish as provided by plans and specifications and to employ a competent and sufficient force of workmen to complete the work of this improvement within the time specified. Should the Contractor at any time become insolvent, make an assignment for the benefit of creditors, abandon the Work, reduce its working force to a number which, if maintained, would be insufficient, in the sole opinion of the Commissioner, to complete the Work in accordance with the approved progress schedule; sublet, assign or otherwise dispose of this Contract other than as permitted elsewhere herein, refuse or neglect to supply a sufficiency of properly skilled workmen, or of material of the proper quantity or fail in any respect to prosecute the work with promptness and diligence, or fail in any other way in the performance of any of the agreements herein contained; all the foregoing being deemed acts of default, and such default being certified by the Commissioner, the County of Westchester, acting by the Board of Acquisition and Contract, shall be at liberty after five days written notice to the Contractor to provide any such labor or materials, use any and all sums due or to become due to the Contractor under this Contract, to pay for such labor and material, and if the Commissioner shall certify that such default is sufficient ground for such action, the County of Westchester acting by the Board of Acquisition and Contract, shall also be at liberty to terminate the employment of the Contractor for the said work and to enter upon the premises and take possession for the purpose of completing the work included under this Contract of all materials, tools and appliances thereon



and to employ any other person or persons to finish the work and provide the materials therefore. Upon the Contractor's receipt of a notice from the County the Contractor shall immediately discontinue all further operations under this Contract. In case of such termination, the Contractor shall not be entitled to receive any further payment under this Contract until the said work shall be wholly finished, at which time if the unpaid balance of the amount to be paid under this Contract shall exceed the reasonable value of the work performed and the material furnished or the total costs therefor, whichever is greater, in finishing the work, such excess shall be paid by the County of Westchester to the Contractor, but if such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the County.

The expense incurred by the County and the total costs as herein provided either for furnishing materials or for finishing the work and any damage incurred through such default shall be certified by the Commissioner whose certificate thereof shall be final and conclusive upon the parties and may not be challenged except in a proceeding commenced pursuant to Article 78 of the Civil Practice Law and Rules.

In case the County shall declare the Contractor in default as to a part of the work only, the Contractor shall immediately discontinue such part, shall continue performing the remainder of the Work in strict conformity with the terms of the Contract.

In completing the whole or any part of the Work under the provisions of this Contract, the Commissioner shall have the power to depart from or change or vary the terms and provisions of this Contract. Such departure, change or variation, even to the extent of accepting a lesser or different performance, shall not affect the conclusiveness of the Commissioner's certification of the cost of completion referred to above, nor shall it constitute a defense to an action to recover the amount by which such certificate exceeds the amount which would have been payable to the Contractor hereunder but for his default or partial default.

In addition to termination as provided for above, the County may terminate this Contract for the convenience of the County by written notice to the Contractor from the Commissioner. In such event and upon receipt of such notice the Contractor shall stop work on the date specified in the notice; take such actions as may be necessary to protect and preserve the County's materials and property; cancel all cancelable orders for material and equipment; assign to the County and deliver to the jobsite or any other location designated by the Commissioner any non-cancelable orders for material and equipment that is not capable of use except in the performance of this Contract and which has been specifically fabricated for the sole purpose of this Contract and not incorporated in the Work; and take no action that will increase the amounts payable by the County under this Contract.

In the event the contract is cancelled for the convenience of the County the following provisions shall apply:

- (a) For Work completed prior to the notice of termination, the Contractor shall be paid the fair and reasonable value of its work determined by the pro rata portion of the lump sum bid amount based upon the percent completion of the Work as of the date of termination as determined by the Commissioner, plus work completed pursuant to approved change orders, less amounts



previously paid. For purposes of determining the pro rata portion of the lump sum bid amount to which the Contractor is entitled, the Contractor's approved bid breakdown pursuant to Article 21 of the Information for Bidders shall be considered but shall not be dispositive as to the fair and reasonable value.

- (b) For non-cancelable material and equipment that is not capable of use except in the performance of this Contract and which has been specifically fabricated for the sole purpose of this Contract, but not yet incorporated in the Work, the Contractor shall be paid the fair and reasonable value thereof as determined by the Commissioner, but not more than the Contractor's cost for such material and equipment, plus an additional sum of two (2%) percent of such fair and reasonable value.
- (c) In the event the County terminates a lump sum Contract for convenience within thirty (30) days after the Contractor has received the Notice of Award from the County, the Contractor shall be paid one (1%) percent of the difference between the total lump sum bid amount and the total of all payments made prior to the notice of termination plus all payments allowed pursuant to (a) and (b).
- (d) On all unit price Contracts, or on unit price items in a Contract, the County will pay the Contractor the sum of (e) and (f) below, less all payments previously made pursuant to this Contract:
- (e) For all completed units, the unit price stated in the Contract, and
- (f) For units that have been ordered but are only partially completed, the Contractor will be paid (i) a pro rata portion of the unit price as stated in the Contract based upon the percent completion of the unit as determined by the Commissioner and (ii) for non-cancelable material and equipment, payment will be made pursuant to (b), above.
- (g) The Commissioner's determination(s) hereunder shall be final, binding and conclusive and subject to review only pursuant to Article 78 of the New York Civil Practice Law and Rules.
- (h) The County shall not be liable to the Contractor for any payment or claim if the termination for convenience results in a reduction of thirty (30%) percent or less of the original contract price as bid.

On all Contracts or items in a Contract where time and material records are specified as the basis for payment of the Work, the Contractor shall be paid in accordance with Article 29 of the General Clauses, less all payments previously made pursuant to this Contract.

In no event shall any payments made pursuant to a termination for convenience exceed the Contract price for such items, either individually or collectively.



All payments made pursuant to a termination for convenience shall be in the nature of liquidated damages and shall be accepted by the Contractor in full satisfaction of all claims against the County.

The County may deduct or set off against any sums due and payable arising from a termination for convenience, any claims it may have against the Contractor.

In the event the County terminates the Contractor for default and it is subsequently determined that the Contractor was not in default, said termination shall automatically be converted for all purposes into a termination for convenience.

It is further understood and agreed between the parties hereto that no certificate given or payment made under this Contract, except the final certificate or final payment shall be conclusive evidence of the performance of this Contract either wholly or in part and that no payment shall be construed to be an acceptance of defective work or improper materials. If the Contractor shall fail to replace any defective work or materials, the County may cause such defective materials to be removed and defective work to be replaced and the expense thereof shall be deducted from the amount to be paid the Contractor.

Anything to the contrary in the preceding paragraph notwithstanding, the Contractor is responsible for the repair of defects in materials and workmanship for a period of one year from the date of final acceptance of the work by the Board of Acquisition and Contract, unless a longer term is specified in the specifications.

The Contractor further agrees not to assign, transfer, convey, sublet or otherwise dispose of this Contract, or its right, title or interest in or to the same, or any part hereof without the previous consent in writing of the Board of Acquisition and Contract of the County. Before a Subcontractor shall proceed with any work, the Commissioner must first recommend and the Board of Acquisition and Contract must approve the use of the Subcontractor on this Contract. If a Subcontractor is not approved it may not work on this Contract. The Contractor specifically waives any claim due to the failure or refusal of the Commissioner or the Board of Acquisition and Contract to approve said Subcontractor.

The Contractor agrees to hold himself responsible for any claims made against the County for any infringement of patents by the use of patented articles in the construction and completion of the work or any process connected with the work agreed to be performed under this Contract or of any material used upon the said work, and shall indemnify and save harmless the County for the costs, expenses and damages which the County may be obligated to pay by reason of any infringement of patents used in the construction and completion of the work.

The parties hereto agree that no laborer, workman or mechanic in the employ of the Contractor, Subcontractor or other person doing or contracting to do the whole or part of the work contemplated by the Contract shall be permitted or required to work more than eight hours in any one calendar day or more than five days in any one week except in cases of extraordinary emergency including fire, flood or danger to life or property. No such person shall be so employed more than eight hours in any day or more than five days in any one week except in such emergency. Time lost in any week because of inclement weather by employees engaged in



the construction, reconstruction and maintenance of highways outside of the limits of cities and villages may be made up during that week and/or the succeeding three weeks.

The Contractor further agrees to erect and maintain during construction all necessary guards, rails and signals to prevent accidents to persons, vehicles or to the adjoining property and also agrees to use all necessary precautions in blasting and that he will indemnify and save the County of Westchester harmless from all suits and actions of any kind and nature whatsoever from or on account of the construction of said work.

It is further understood and agreed by the parties hereto that should any dispute arise respecting the true construction, interpretation or meaning of the Contract plans, specifications or conditions herein, or the measurements for the payment thereunder, same shall be referred to and decided by the said Commissioner and his decision thereon shall be final and conclusive upon the parties thereto and may not be challenged except in a proceeding commenced pursuant to Article 78 of the Civil Practice Law and Rules. This provision shall also apply to the true value of and duly authorized extra work or any work permitted by agreement in case any work shall be ordered performed, or any work called for shall be so omitted under and upon the direction of said Commissioner.

The Contractor by the submitting of bids and execution of this Contract hereby covenants and agrees that he has examined the plans, specifications and the site work, as to local conditions, difficulties and accuracy of approximate estimate of quantities and does hereby further covenant and agree that he will not make any claim for damages by reason of any such local conditions, difficulties or variation of approximate estimate of quantities.

The Contractor represents and warrants to the County with the knowledge and expectation that this warranty will be relied upon by the County that it is not now participating and has not at any time participated, either directly or through any substantially owned or affiliated person, firm, partnership or corporation, in an international boycott in violation of the provisions of United States Export Administration Act of 1969, 50 USC 2401 et seq. or the regulations promulgated thereunder.

The Contractor further warrants and represents that it is financially solvent, and sufficiently experienced and competent to perform the work and that the facts provided by it to the County in its bid and supporting documents, and contract documents are true and correct in all respects.

This Contract shall become void and any rights of the Contractor hereunder shall be forfeited if, subsequent to the execution hereof, the Contractor is convicted of a violation of the provision of the United States Export Administration Act of 1969, 50 USC 2401 et seq. as amended or has been found upon the final determination of the United States Commerce Department or any other appropriate agency of the United States or the State of New York to have violated such act or regulations.

If the Contractor, any officer, director, or any party holding a controlling interest (defined as five (5%) percent or more, or in the case of a corporation, any stockholder owning five (5%) percent or more of the outstanding shares) is convicted of a crime (excluding Class B and



Unclassified Misdemeanors as defined under the New York State Penal Law and their equivalent in any city, state or under Federal law related to the type of services or activities which are the subject matter of this Contract) or if a related or affiliated company, partnership or corporation is convicted of a crime (excluding Class B and Unclassified Misdemeanors as defined above) after this Contract is fully executed, the County shall have the right to terminate this Agreement immediately and without penalty. An "affiliated company" as used herein means any affiliate which is a partnership, corporation, proprietorship, association or other entity (i) in which a 50% or greater ownership interest (as defined below) is directly or indirectly held by the Contractor or any of its management personnel (as defined below) or directors, (ii) which directly or indirectly holds 50% or more of the ownership interest in the Contractor, (iii) in which an aggregate 20% or greater ownership interest is directly or indirectly held by one or more shareholders (or partners or proprietors, in the case of a partnership or proprietorship) which or who in the aggregate hold a 20% or greater ownership interest in the Contractor, or (iv) which, whether by Contract or otherwise, directly or indirectly controls, is controlled by or is under common control with the Contractor. An "ownership interest" means the ownership, whether legally or beneficially, of the stock of or assets employed by a corporation, of a partnership interest in or assets employed by a partnership or of a similar interest in or assets employed by any other entity. "Management personnel" means executive officers and all other persons, whether or not officers or employees, who perform policy-making functions similar to those of executive officers.

The Contractor represents that at the time of execution of this Contract, no individual or entity, as described above, has been convicted of a crime during the five (5) year period preceding the execution of this Contract.

The parties hereto recognize that it is the goal of Westchester County to use its best efforts to encourage, promote and increase participation of business enterprises owned and controlled by persons of color or women (MBE/WBE) in contracts or projects funded by all Departments of the County and to effectively and efficiently monitor such participation. Therefore, the Contractor agrees to complete the MBE/WBE Questionnaire, which is attached hereto as Schedule "A," in furtherance of this goal and in accordance with Local Law No. 27-1997.

It is recognized and understood by the parties that this Contract is subject to appropriation by the Westchester County Board of Legislators. The County shall have no liability under this Contract beyond the funds, if any, that are appropriated and available for payment of the amounts due under this Contract. Notwithstanding the foregoing, the County will do all things lawfully within its power to obtain, maintain and properly request and pursue funds from which payments under this Contract may be made.

The parties hereto for themselves, their legal representatives, successors and assigns, expressly agree that any legal action or proceeding that may arise out of or relating to this Contract shall be brought and maintained only in the courts of the State of New York ("New York State Court") located in the County of Westchester. With respect to any action between the County and Contractor in New York State Court, the Contractor hereby expressly waives and relinquishes any rights it may otherwise have (i) to move to dismiss on grounds of *forum non*



*conveniens*; (ii) to remove to Federal Court; and (iii) to move for a change of venue to a New York State Court outside of Westchester County.

This Contract and its terms, covenants, obligations, conditions and provisions shall be binding upon all the parties hereto, their legal representatives, successors and assigns.

SAMPLE



This Contract shall not be enforceable until it is signed by all parties and approved by the Office of the County Attorney.

**IN WITNESS WHEREOF**, the parties hereto have executed this agreement, THE COUNTY OF WESTCHESTER pursuant to law by:

\_\_\_\_\_ its **Commissioner** \_\_\_\_\_

and the CONTRACTOR:

By: \_\_\_\_\_ its \_\_\_\_\_  
(Type or Print Name) (Title)

**THE COUNTY OF WESTCHESTER:**

By: \_\_\_\_\_  
Commissioner

**CONTRACTOR:**

By: \_\_\_\_\_  
(Signature)

**ATTEST:**

(SEAL)

By: \_\_\_\_\_  
(Signature)

Recommended:

\_\_\_\_\_  
Deputy Commissioner of Public Works

Approved as to form and manner of execution  
this \_\_\_\_ day of \_\_\_\_\_, 200\_\_

\_\_\_\_\_  
County Attorney



**CONTRACTOR'S ACKNOWLEDGMENT**  
**(If Corporation)**

STATE OF NEW YORK       )  
  ) ss.:  
COUNTY OF                       )

On this \_\_\_\_ day of \_\_\_\_\_, 200\_\_, before me personally came \_\_\_\_\_ to me known, and known to me to be the \_\_\_\_\_ of \_\_\_\_\_, the Corporation described in and which executed the within instrument, who being by me duly sworn did depose and say that the said \_\_\_\_\_ resides at \_\_\_\_\_ and that he/she is the \_\_\_\_\_ of said Corporation and that he/she signed his/her name thereto by order of the Board of Directors of said Corporation and, if operating under any trade name, that the certificate required by the New York State General Business Law Section 130 has been filed with the Secretary of State of the State of New York.

\_\_\_\_\_  
Notary Public

**CONTRACTOR'S ACKNOWLEDGMENT**  
**(If Individual)**

STATE OF NEW YORK       )  
  ) ss.:  
COUNTY OF                       )

On this \_\_\_\_ day of \_\_\_\_\_, 200\_\_, before me personally came \_\_\_\_\_ to me known, and known to me to be the same person described in and who executed the within instrument and duly acknowledged to me that he/she executed the same for the purpose herein mentioned and, if operating under any trade name, that the certificate required by the New York State General Business Law Section 130 has been filed with the County Clerk of Westchester County.

\_\_\_\_\_  
Notary Public

**CONTRACTOR'S ACKNOWLEDGMENT**  
**(If Co-Partnership)**

STATE OF NEW YORK       )  
  ) ss.:  
COUNTY OF                       )

On this \_\_\_\_ day of \_\_\_\_\_, 200\_\_, before me personally came \_\_\_\_\_ to me known, and known to me to be a member of the firm of \_\_\_\_\_ and the person described in, and who executed the within instrument in behalf of said firm, and he/she acknowledged to me that he/she executed the same in behalf of, and as the act of said firm for the purposes herein mentioned and, if operating under any trade name, that the certificate required by the New York State General Business Law Section 130 has been filed with the County Clerk of Westchester County.

\_\_\_\_\_  
Notary Public



**CERTIFICATE OF AUTHORITY**

I, \_\_\_\_\_  
(Officer other than officer signing contract)

certify that I am \_\_\_\_\_ of  
(Title)

the \_\_\_\_\_  
(Name of Corporation)

organized and in good standing under the \_\_\_\_\_  
(Law under which organized)

named in the foregoing agreement; that \_\_\_\_\_  
(Person executing agreement)

who signed said agreement on behalf of the Contractor was, at the time of execution the  
\_\_\_\_\_ of the Corporation; that said agreement was duly  
(Title of such person)

signed for and on behalf of said Corporation by authority of its Board of Directors, thereunto  
duly authorized and is in full force and effect at the date hereof.

\_\_\_\_\_  
(Signature)

(SEAL)

STATE OF NEW YORK     )  
  ) ss.:  
COUNTY OF                    )

On this \_\_\_\_ day of \_\_\_\_\_, 200\_\_, before me personally came  
\_\_\_\_\_ to me known, and known to me to be the  
\_\_\_\_\_ of \_\_\_\_\_,  
the Corporation described in and which executed the above certificate, who being by me duly  
sworn did depose and say that the said \_\_\_\_\_ resides at  
\_\_\_\_\_ and that he/she is  
\_\_\_\_\_ of said Corporation and knows the Corporate Seal of the said  
Corporation; that the seal affixed to the above certificate is such Corporate Seal and was so  
affixed by order of the Board of Directors of said Corporation, and that he/she signed his/her  
name thereto by like order.

\_\_\_\_\_  
Notary Public



STATE OF NEW YORK                     )  
   ) ss.:  
COUNTY OF                                     )

\_\_\_\_\_  
Notary Public



## PERFORMANCE AND PAYMENT BOND

**KNOW ALL MEN BY THESE PRESENTS**, that we

(hereinafter called the "Principal"), and the \_\_\_\_\_

\_\_\_\_\_ a Corporation created and existing under the laws of the State of \_\_\_\_\_

and having its principal office at \_\_\_\_\_  
in the City of \_\_\_\_\_ (hereinafter called the "Surety"), are held and  
firmly bound unto The County of Westchester (hereinafter called the "Obligee") in the penal sum  
of-----**DOLLARS**-----**AND**-----/100-----  
--[ \$                      ]

lawful money of the United States of America, for the payment of which, well and truly  
to be made, the said Principal binds itself, (himself, themselves) and its (his, their) successors  
and assigns, and the said Surety binds itself and its successors and assigns, all jointly and  
severally, firmly by these presents. Said penal sum shall apply separately and independently, in  
its total amount, to the payment provision and the performance provision of this Bond shall not  
reduce or limit the right of the Obligee to recover under the other said provision.

Signed, sealed and dated this \_\_\_\_\_ day of \_\_\_\_\_, 200\_\_.

**WHEREAS**, said Principal has entered into a certain written contract with said Obligee, dated  
this \_\_\_\_\_ day of \_\_\_\_\_, 200\_\_, (hereinafter called the "Contract")

For ----**CONTRACT #** \_\_\_\_\_ a copy of which Contract is hereto annexed and  
hereby made a part of this bond as if herein set forth in full.



**NOW THEREFORE,** THE CONDITIONS OF THE ABOVE OBLIGATIONS ARE SUCH THAT, if the said Principal, and its (his, their) successors or assigns, or any or either of them shall,

(1) well and truly and in good, sufficient and workmanlike manner, perform or cause to be performed such Contract, and any amendment or extension of or addition thereto, and each and every of the covenants, promises, agreements and provisions therein stipulated and contained to be performed by said Principal, and complete the same within the period therein mentioned, and in each and every respect, comply with the conditions therein mentioned to be complied with by said Principal, and fully indemnify and save harmless the Obligee from all costs and damages which it may suffer by reason of failure so to do and fully reimburse and repay the Obligee all outlay and expense which it may incur in making good any such default, and

(2) also pay or cause to be paid the wages and compensation for labor performed and services rendered of all persons engaged in the prosecution of the work provided for therein, whether such persons by agents, servants or employees of the Principal, and of its (his, their) successors or assigns, or any Subcontractor or of any assignee thereof, including all persons so engaged who perform the work of laborers or of mechanics regardless of any contractual relationship between the Principal, or its (his, their) successors or assigns, or any Subcontractor or any designee thereof, and such laborers or mechanics, but not including office employees not regularly stationed at the site of the work, and further, shall pay or cause to be paid all lawful claims of Subcontractors and of materialmen and other third persons out of or in connection with said Contract and the work, labor, services, supplies and material furnished in and about the performance and completion thereof, then these obligations shall be null and void, otherwise they shall remain in full force and effect.

**PROVIDED,** however, that this bond is subject to the following additional conditions and limitations:

- (a) All persons who have performed labor or rendered services, as aforesaid, all Subcontractors, and all persons, firms, corporations, including materialmen and third persons, as aforesaid, furnishing work, labor, services, supplies and material under or in connection with said Contract or in or about the performance and completion thereof, shall have a direct right of action (subject to the prior right of the Obligee under any claim which it may assert against the Principal or its (his, their) successors and assigns, and/or the Surety and its successors and assigns) against the Principal and its (his, their) successors and assigns on this bond, which right of action shall be asserted in proceedings instituted in the State in which such work, labor, services, supplies or material was performed, rendered or furnished or where work, labor, services, supplies or material has been performed, rendered or furnished, as aforesaid, in more than one State, than in any such State. Insofar as permitted by the laws of such State, said right of action shall be asserted in a proceeding instituted in the name of Obligee to the use and benefit of the person, firm or corporation instituting such action and of all other persons, firms and corporations having claims hereunder, and any other person, firm or corporation having a claim hereunder shall have the



right to be made a party to such proceedings (but not later than twelve months after the performance of said Contract and final settlement thereof) and to have such claim adjudicated in such action and judgment rendered thereon. Prior to the institution of such a proceeding by a person, firm or corporation in the name of the Obligee, as aforesaid, such person, firm or corporation shall furnish the Obligee with a Bond of Indemnity for costs, which Bond shall be in an amount satisfactory to the Obligee.

- (b) The Surety or its successors or assigns shall not be liable hereunder for any damages or compensation recoverable under any worker's compensation or employer's liability statute.
- (c) In no event shall the Surety or its successors or assigns be liable under either the foregoing clause (1) or the foregoing clause (2) for a greater sum than the penalty of this Bond provided; however, that said penalty is separately applicable, in its total amount to each of the foregoing clauses (1) and (2), or subject to any suit, action or proceeding hereon that is instituted by any person, firm or corporation under the provisions of the above section (a) later than twelve months after the complete performance of said Contract and final settlement thereof.

The Principal, for itself (himself, themselves) and its (his, their) successors and assigns, and the Surety, for itself and its successors and assigns, do hereby expressly waive any objections that might be interposed as to the right of the Obligee to require a Bond containing the foregoing provisions, and they do hereby further expressly waive any defense which they or either of them might interpose to an action brought hereon by any person, firm or corporation, including Subcontractors, materialmen, and third persons, for work, labor, services, supplies or material performed, rendered or furnished as aforesaid, upon the ground that there is no law authorizing the said Obligee to require the foregoing provision to be placed in this Bond.

And Surety, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligations of said Surety and of its successors and assigns and this Bond shall in no way be impaired or affected by an extension of time, modification, omission, addition or change in or to the said Contract or the work to be performed thereunder, or by any payment thereunder, before the time required therein, or by any waiver of any provision thereof, or by an assignment, subletting or other transfer thereof, or of any part thereof, or of any work to be performed, or of any moneys due or to become due thereunder; and the said Surety, for itself and its successors and assigns, does hereby waive notice of any and all of such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby stipulates and agrees that any and all things done and omitted to be done by and in relation to (executors, administrators), successors, assigns, Subcontractors, and other transferees, shall have the same effect as to said Surety and its successors and assigns, as though done or omitted to be done by and in relation to said Principal.

And Surety, for value received, hereby stipulates and agrees, if requested to do so by Obligee, to fully perform and complete the work to be performed under the Contract, pursuant to the terms, conditions and covenants thereof, if for any cause, the Principal fails or neglects to so



fully perform and complete such Work. The Surety further agrees to commence such Work of Completion within twenty-five (25) calendar days after written notice thereof from the Oblige, and to complete such Work within twenty-five (25) calendar days from the expiration of the time allowed the Principal in the Contract for the completion of such Work.

**WITNESSETH** our hands and seals this \_\_\_\_ day of \_\_\_\_\_, 200\_\_.

**PRINCIPAL:**

By: \_\_\_\_\_

*(Signature)*

*(SEAL)*

**ATTEST:**

\_\_\_\_\_

\_\_\_\_\_

*(Surety)*

By: \_\_\_\_\_

*(Signature)*

*(SEAL)*

**ATTEST:**

\_\_\_\_\_



If the Contractor (Principal) is a partnership, the Bond should be signed by each of the individuals who are partners.

If the Contractor (Principal) is a Corporation, the Bond should be signed in its correct corporate name by a duly authorized officer, agent, or attorney-in-fact.

There should be executed an appropriate number of counterparts of the Bond corresponding to the number of counterparts of the Contract.

Each executed Bond should be accompanied by:

- (a) appropriate acknowledgments of the respective parties;
- (b) appropriate duly certified copy of Power of Attorney or other Certificate of Authority where Bond is executed by agent, officer or other representative of Principal or Surety;
- (c) a duly certified extract from By-laws or resolutions of Surety under which Power of Attorney or other Certificate of Authority of its agent, officer or representative was issued, and
- (d) duly certified copy of latest published financial statement of assets and liabilities of Surety.



**BOND**

**BOND**

**CONTRACTOR'S ACKNOWLEDGMENT**  
**(If Corporation)**

STATE OF NEW YORK       )  
  ) ss.:  
COUNTY OF                    )

On this \_\_\_\_ day of \_\_\_\_\_, 200\_\_, before me personally came \_\_\_\_\_ to me known, and known to me to be the \_\_\_\_\_ of \_\_\_\_\_, the Corporation described in and which executed the within instrument, who being by me duly sworn did depose and say that the said \_\_\_\_\_ resides at \_\_\_\_\_ and that he/she is the \_\_\_\_\_ of said Corporation and knows the Corporate Seal of the said Corporation; that the seal affixed to the within instrument is such Corporate Seal and that it was so affixed by order of the Board of Directors of said Corporation and that he/she signed his/her name thereto by like order.

\_\_\_\_\_  
Notary Public

**CONTRACTOR'S ACKNOWLEDGMENT**  
**(If Individual)**

STATE OF NEW YORK       )  
  ) ss.:  
COUNTY OF                    )

On this \_\_\_\_ day of \_\_\_\_\_, 200\_\_, before me personally came \_\_\_\_\_ to me known, and known to me to be the same person described in and who executed the within instrument and he/she duly acknowledged to me that he/she executed the same for the purpose herein mentioned.

\_\_\_\_\_  
Notary Public

**CONTRACTOR'S ACKNOWLEDGMENT**  
**(If Co-Partnership)**

STATE OF NEW YORK       )  
  ) ss.:  
COUNTY OF                    )

On this \_\_\_\_ day of \_\_\_\_\_, 200\_\_, before me personally came \_\_\_\_\_ to me known, and known to me to be a member of the firm of \_\_\_\_\_ and the person described in, and who executed the within instrument in behalf of said firm, and acknowledged to me that he/she executed the same in behalf of, and as the act of said firm for the purposes herein mentioned.

\_\_\_\_\_  
Notary Public



**BOND**

**BOND**

**ACKNOWLEDGMENT BY SURETY COMPANY**  
**(Signed by One Authorized Person)**

STATE OF NEW YORK       )  
  ) ss.:  
COUNTY OF                    )

On this \_\_\_\_ day of \_\_\_\_\_, 200\_\_, before me personally came  
\_\_\_\_\_  
(Name)  
\_\_\_\_\_ of \_\_\_\_\_,  
(Title) (Name of Corporation)  
the Corporation described in and which executed the within instrument, who being by me duly  
sworn did depose and say that he/she resides at \_\_\_\_\_  
\_\_\_\_\_ and that he/she is the \_\_\_\_\_ of said Corporation  
(Title)  
and knows the Corporate Seal of the said Corporation; that the seal affixed to the within  
instrument is such Corporate Seal and so affixed by order of the Board of Directors of said  
Corporation and that he/she signed his/her name thereto by like order; and that the said  
Corporation has received from the Superintendent of Insurance of the State of New York a  
Certificate of Solvency, and of its sufficiency as Surety or Guarantor, pursuant to Section 327 of  
the Insurance Law of the State of New York as amended, and that such Certificate has not been  
revoked.

\_\_\_\_\_  
Notary Public





**SCHEDULE OF HOURLY RATES**  
**AND SUPPLEMENTS**

**DEPARTMENT OF PUBLIC WORKS**

**Division of Engineering**





Kathy Hochul, Governor

Roberta Reardon, Commissioner

Westchester County DPWT

Yolanda Spraggins, Secretary II  
Michaelian Office Building  
148 Martine Avenue - Room 518  
White Plains NY 10601

Schedule Year 2021 through 2022  
Date Requested 10/06/2021  
PRC# 2021010502

Location Yonkers Joint WRRF  
Project ID# 21-507  
Project Type Provide all necessary labor, material and equipment required for the full roofing system replacement and select structural modifications to select buildings.

### PREVAILING WAGE SCHEDULE FOR ARTICLE 8 PUBLIC WORK PROJECT

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

The schedule is effective from July 2021 through June 2022. All updates, corrections, posted on the 1st business day of each month, and future copies of the annual determination are available on the Department's website [www.labor.ny.gov](http://www.labor.ny.gov). Updated PDF copies of your schedule can be accessed by entering your assigned PRC# at the proper location on the website.

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

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

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

#### NOTICE OF COMPLETION / CANCELLATION OF PROJECT

Date Completed: \_\_\_\_\_ Date Cancelled: \_\_\_\_\_

Name & Title of Representative: \_\_\_\_\_

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



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

## **Introduction**

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

## **Responsibilities of the Department of Jurisdiction**

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

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

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

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

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

## **Hours**

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

There are very few exceptions to this rule. Complete information regarding these exceptions is available on the ["Request for a dispensation to work overtime" form \(PW30\)](#) and ["4 Day / 10 Hour Work Schedule" form \(PW 30.1\)](#).

## **Wages and Supplements**

The wages and supplements to be paid and/or provided to laborers, workers, and mechanics employed on a public work project shall be not less than those listed in the current Prevailing Rate Schedule for the locality where the work is performed. If a prime contractor on a public work project has not been provided with a Prevailing Rate Schedule, the contractor must notify the Department of Jurisdiction (Contracting Agency) who in turn must request an original Prevailing Rate Schedule form the Bureau of Public Work. Requests may be submitted by: mail to NYSDOL, Bureau of Public Work, State Office Bldg. Campus, Bldg. 12, Rm. 130, Albany, NY 12240; Fax to Bureau of Public Work (518) 485-1870; or electronically at the NYSDOL website [www.labor.ny.gov](http://www.labor.ny.gov).

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

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

## **Payrolls and Payroll Records**

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



or provided, and Daily and weekly number of hours worked in each classification.

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

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

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

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

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

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

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

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

### **Withholding of Payments**

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

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

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

### **Summary of Notice Posting Requirements**

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



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

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

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

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

## **Apprentices**

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

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

Persons wishing to verify the apprentice registration of any person must do so in writing by mail, to the NYSDOL Office of Employability Development / Apprenticeship Training, State Office Bldg. Campus, Bldg. 12, Albany, NY 12240 or by Fax to NYSDOL Apprenticeship Training (518) 457-7154. All requests for verification must include the name and social security number of the person for whom the information is requested.

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

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

## **Interest and Penalties**

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

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

## **Debarment**

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

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

## **Criminal Sanctions**

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

## **Discrimination**

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

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



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

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

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

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

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

### **Workers' Compensation**

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

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

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

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

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

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

### **Unemployment Insurance**

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





Kathy Hochul, Governor

Roberta Reardon, Commissioner

Westchester County DPWT

Yolanda Spraggins, Secretary II  
Michaelian Office Building  
148 Martine Avenue - Room 518  
White Plains NY 10601

Schedule Year 2021 through 2022  
Date Requested 10/06/2021  
PRC# 2021010502

Location Yonkers Joint WRRF  
Project ID# 21-507  
Project Type Provide all necessary labor, material and equipment required for the full roofing system replacement and select structural modifications to select buildings.

### Notice of Contract Award

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

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

### Contractor Information

All information must be supplied

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

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



## **Social Security Numbers on Certified Payrolls:**

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

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

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

Construction industry employers must post the "Construction Industry Fair Play Act" notice in a prominent and accessible place on the job site. Failure to post the notice can result in penalties of up to \$1,500 for a first offense and up to \$5,000 for a second offense. The posting is included as part of this wage schedule. Additional copies may be obtained from the NYS DOL website, [www.labor.ny.gov](http://www.labor.ny.gov). <https://labor.ny.gov/formsdocs/ui/1A999.pdf>

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

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

### **Effective June 23, 2020**

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



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

## **Budget Policy & Reporting Manual**

# **B-610**

### **Public Work Enforcement Fund**

*effective date December 7, 2005*

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#### **1. Purpose and Scope:**

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

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

#### **2. Background and Statutory References:**

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

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

#### **3. Procedures and Agency Responsibilities:**

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

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



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

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

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

Reports should contain the following information:

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

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

Department of Labor  
Administrative Finance Bureau-PWEF Unit  
Building 12, Room 464  
State Office Campus  
Albany, NY 12240

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





Required Notice under Article 25-B of the Labor Law

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

**The law says that you are an employee unless:**

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

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

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

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

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

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

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

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

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

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

**Employer Name:**

IA 999 (09/16)



# Attention Employees

## THIS IS A: **PUBLIC WORK PROJECT**

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

Chapter 629 of  
the Labor Laws  
of 2007:

**These wages are set by law and must be posted  
at the work site. They can also be found at:**  
[www.labor.ny.gov](http://www.labor.ny.gov)

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

Albany	(518) 457-2744	Patchogue	(631) 687-4882
Binghamton	(607) 721-8005	Rochester	(585) 258-4505
Buffalo	(716) 847-7159	Syracuse	(315) 428-4056
Garden City	(516) 228-3915	Utica	(315) 793-2314
New York City	(212) 932-2419	White Plains	(914) 997-9507
Newburgh	(845) 568-5156		

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

Contractor Name: \_\_\_\_\_

Project Location: \_\_\_\_\_



## Requirements for OSHA 10 Compliance

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

### The Bureau will enforce the statute as follows:

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

Proof of completion may include but is not limited to:

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

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

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

## WICKS

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

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

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

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

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

Contractors must pay subcontractors within a 7 days period.

(07.19)



## Introduction to the Prevailing Rate Schedule

### Information About Prevailing Rate Schedule

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

#### Classification

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

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

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

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

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

#### Payrolls and Payroll Records

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

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

#### Paid Holidays

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

#### Overtime

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

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

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

#### Supplemental Benefits

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

#### Effective Dates

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

#### Apprentice Training Ratios

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

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

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



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

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

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

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



## Westchester County General Construction

### Boilermaker

10/01/2021

**JOB DESCRIPTION** Boilermaker

**DISTRICT** 4

#### ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

#### WAGES

Per Hour: 07/01/2021

Boilermaker	\$ 63.38
Repairs & Renovations	63.38

#### SUPPLEMENTAL BENEFITS

Per Hour: 07/01/2021

Boilermaker	32% of hourly
Repair & Renovations	Wage Paid
	+ \$ 25.38

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

Repairs & Renovation Includes replacement of parts and repairs & renovation of existing unit.

#### OVERTIME PAY

See (D, O) on OVERTIME PAGE

Repairs & Renovation see (B,E,Q)

#### HOLIDAY

Paid: See (8, 16, 23, 24) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 12, 15, 16, 22, 23, 24, 25) on HOLIDAY PAGE

NOTE: \*Employee must work in pay week to receive Holiday Pay.

\*\*Employee gets 4 times the hourly wage rate for working Labor Day.

#### REGISTERED APPRENTICES

Wage per hour:

(1/2) Year Terms at the following percentage of Boilermaker's Wage

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

Supplemental Benefits Per Hour:

	07/01/2021
Apprentice(s)	32% of Hourly
	Wage Paid Plus
	Amount Below

1st Term	\$ 19.41
2nd Term	20.26
3rd Term	21.11
4th Term	21.96
5th Term	22.82
6th Term	23.68
7th Term	24.52

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

4-5

### Carpenter

10/01/2021

**JOB DESCRIPTION** Carpenter

**DISTRICT** 8

#### ENTIRE COUNTIES

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

#### WAGES

Per hour: 07/01/2021

Piledriver	\$ 56.93
Dockbuilder	\$ 56.93



## SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker \$ 53.33

## OVERTIME PAY

See (B, E2, O) on OVERTIME PAGE

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

## REGISTERED APPRENTICES

Wages per hour

(1)year terms:

1st	2nd	3rd	4th
\$23.37	\$28.97	\$37.35	\$45.74

Supplemental benefits per hour:

All Terms: \$ 35.33

8-1556 Db

## Carpenter

10/01/2021

**JOB DESCRIPTION** Carpenter

**DISTRICT** 8

## ENTIRE COUNTIES

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

## WAGES

Per hour: 07/01/2021

Carpet/Resilient

Floor Coverer \$ 54.75

INCLUDES HANDLING & INSTALLATION OF ARTIFICIAL TURF AND SIMILAR TURF INDOORS/OUTDOORS.

## SUPPLEMENTAL BENEFITS

Per hour:

\$ 46.97

## OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE

## HOLIDAY

Paid: See (18, 19) on HOLIDAY PAGE.

Paid for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

## REGISTERED APPRENTICES

Wage per hour - (1) year terms:

1st	2nd	3rd	4th
\$ 24.55	\$ 27.55	\$ 31.80	\$ 39.68

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 16.19	\$ 17.69	\$ 21.29	\$ 23.29

8-2287

## Carpenter

10/01/2021

**JOB DESCRIPTION** Carpenter

**DISTRICT** 8



**ENTIRE COUNTIES**

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

**WAGES**

Per Hour: 07/01/2021

Marine Construction:

Marine Diver \$ 71.80  
Marine Tender 51.34

**SUPPLEMENTAL BENEFITS**

Per Hour:

Journeyworker \$ 53.33

**OVERTIME PAY**

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

**HOLIDAY**

Paid: See (18, 19) on HOLIDAY PAGE

Overtime: See (5, 6, 10, 11, 13, 16, 18, 19) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wages per hour:

One (1) year terms.

1st year \$ 23.37  
2nd year 28.97  
3rd year 37.35  
4th year 45.74

Supplemental Benefits

Per Hour:

All terms \$ 35.33

8-1456MC

**Carpenter**

**10/01/2021**

**JOB DESCRIPTION** Carpenter

**DISTRICT 8**

**ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

**WAGES**

Per hour: 07/01/2021

Building  
Millwright \$ 57.00

**SUPPLEMENTAL BENEFITS**

Per hour:

Millwright \$ 54.60

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (18,19) on HOLIDAY PAGE.

Overtime See (5,6,8,11,13,18,19,25) on HOLIDAY PAGE.

**REGISTERED APPRENTICES**

Wages per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$30.74	\$36.19	\$41.64	\$52.54

Supplemental benefits per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
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\$35.03      \$38.73      \$43.08      \$49.84

8-740.1

**Carpenter**

**10/01/2021**

**JOB DESCRIPTION** Carpenter

**DISTRICT 8**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour:

07/01/2021

Timberman

\$ 52.05

**SUPPLEMENTAL BENEFITS**

Per Hour:

07/01/2021

\$ 52.78

**OVERTIME PAY**

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

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

**REGISTERED APPRENTICES**

Wages per hour:

One ( 1 ) year terms:

1st	2nd	3rd	4th
\$21.42	\$26.53	\$34.18	\$41.84

Supplemental benefits per hour:

All terms \$ 35.06

8-1556 Tm

**Carpenter**

**10/01/2021**

**JOB DESCRIPTION** Carpenter

**DISTRICT 8**

**ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Westchester

**PARTIAL COUNTIES**

Orange: South of but including the following, Waterloo Mills, Slate Hill, New Hampton, Goshen, Blooming Grove, Mountainville, east to the Hudson River.

Putnam: South of but including the following, Cold Spring, TompkinsCorner, Mahopac, Croton Falls, east to Connecticut border.

Suffolk: West of Port Jefferson and Patchogue Road to Route 112 to the Atlantic Ocean.

**WAGES**

Per hour: 07/01/2021 10/18/2021

Core Drilling:

Driller \$ 41.74 \$ 42.27

Driller Helper 32.92 33.47

Note: Hazardous Waste Pay Differential:

For Level C, an additional 10% above wage rate per hour

For Level B, an additional 10% above wage rate per hour

For Level A, an additional 10% above wage rate per hour

Note: When required to work on water: an additional \$ 0.50 per hour.

**SUPPLEMENTAL BENEFITS**

Per hour:

Driller and Helper \$ 29.40 \$ 30.60



## OVERTIME PAY

OVERTIME: See (B,E,K\*,P,R\*\*) on OVERTIME PAGE.

## HOLIDAY

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

Overtime: \* See (5,6) on HOLIDAY PAGE.

\*\* See (8,10,11,13) on HOLIDAY PAGE.

8-1536-CoreDriller

## Carpenter - Building / Heavy&Highway

10/01/2021

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

**DISTRICT** 11

## ENTIRE COUNTIES

Putnam, Rockland, Westchester

## WAGES

WAGES:(per hour)

07/01/2021

BUILDING/HEAVY & HIGHWAY/TUNNEL:

Carpenter

Base Wage

\$ 37.69

+ \$7.63\*

\*For all hours paid straight or premium.

SHIFT DIFFERENTIAL: When it is mandated by a Government Agency irregular or off shift can be worked. The Carpenter shall receive an additional fifteen percent (15%) of wage plus applicable benefits.

NOTE: Carpenters employed in the removal or abatement of asbestos or any toxic or hazardous material or required to work near asbestos or any toxic or hazardous material and required to wear protective equipment shall receive two (2) hours extra pay per day, plus applicable supplemental benefits.

## SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker

\$ 31.91

## OVERTIME PAY

BUILDING:

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

HEAVY&HIGHWAY/TUNNEL:

See ( B, E, P, \*R, \*\*T, X ) on OVERTIME PAGE.

\*R applies to Heavy&Highway/Tunnel Overtime Holiday Code 25 with benefits at straight time rate.

\*\*T applies to Heavy&Highway/Tunnel Overtime Holiday Codes 5 & 6 with benefits at straight time rate.

## HOLIDAY

BUILDING:

Paid: See ( 1 ) on HOLIDAY PAGE.

Overtime: See ( 5, 6, 16, 25 ) on HOLIDAY PAGE.

Holidays that fall on Sunday will be observed Monday.

HEAVY&HIGHWAY/TUNNEL:

Paid: See ( 5, 6, 25 ) on HOLIDAY PAGE including benefits.

Overtime: See ( 5, 6, 25 ) on HOLIDAY PAGE.

## REGISTERED APPRENTICES

1 year terms at the following wage rates:

Indentured before July 1 2016

1st	2nd	3rd	4th
\$ 18.85	\$ 22.61	\$ 26.38	\$ 30.15
+3.57*	+3.57*	+3.57*	+3.57*

Indentured after July 1 2016

1st	2nd	3rd	4th	5th
\$ 18.85	\$ 22.61	\$ 24.50	\$ 26.38	\$ 30.15
+3.57*	+3.57*	+3.57*	+3.57*	+3.57*

\*For all hours paid straight or premium

SUPPLEMENTAL BENEFITS per hour:



All terms \$ 16.28

11-279.1B/HH

**Electrician**

**10/01/2021**

**JOB DESCRIPTION** Electrician

**DISTRICT 9**

**ENTIRE COUNTIES**

Bronx, Kings, New York, Queens, Richmond, Westchester

**WAGES**

Per hour: 07/01/2021

Service Technician \$ 34.40

Service and Maintenance on Alarm and Security Systems.

Maintenance, repair and /or replacement of defective (or damaged) equipment on, but not limited to, Burglar - Fire - Security - CCTV - Card Access - Life Safety Systems and associated devices. (Whether by service contract of T&M by customer request.)

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyworker: \$ 19.32

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 17, 25, 26) on HOLIDAY PAGE

9-3H

**Electrician**

**10/01/2021**

**JOB DESCRIPTION** Electrician

**DISTRICT 8**

**ENTIRE COUNTIES**

Westchester

**WAGES**

Per hour: 07/01/2021 04/21/2022

\*Electrician/A-Technician \$ 53.75 \$ 53.75

Teledata 53.75 53.75

\*All new installations of wiring, conduit, junction boxes and light fixtures for projects with a base bid of more than \$325,000. For projects with a base bid of \$325,000 or less, see Maintenance and Repair rates.

Note: On a job where employees are required to work on bridges over navigable waters, transmission towers, light poles, bosun chairs, swinging scaffolds, etc. 40 feet or more above the water or ground or under compressed air, or tunnel projects under construction or where assisted breathing apparatus is required, they will be paid at the rate of time and one-half for such work except on normal pole line or building construction work.

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyworker \$ 52.73 \$ 54.39

**OVERTIME PAY**

See (A, G, \*J, P) on OVERTIME PAGE

\*NOTE: Emergency work on Sunday and Holidays is at the time and one-half overtime rate.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

(1) year terms at the following wage rates:

	07/01/2021	01/01/2022	04/21/2022
1st term	\$ 14.00	\$ 15.00	\$ 15.00
2nd term	16.00	16.00	16.00
3rd term	18.00	18.00	18.00
4th term	20.00	20.00	20.00
MIJ 1-12 months	24.00	24.00	25.00
MIJ 13-18 months	27.50	27.50	28.50



Supplemental Benefits per hour:

	07/01/2021	04/21/2022
1st term	\$ 10.15	\$ 10.82
2nd term	13.05	13.05
3rd term	14.39	14.39
4th term	15.72	15.72
MIJ 1-12 months	13.39	13.49
MIJ 13-18 months	13.76	13.87

8-3/W

**Electrician**

**10/01/2021**

**JOB DESCRIPTION** Electrician

**DISTRICT 8**

**ENTIRE COUNTIES**

Westchester

**WAGES**

	07/01/2021	04/21/2022
Electrician -M	\$ 27.50	\$28.50
H - Telephone	\$ 27.50	\$28.50

All work with a base bid amount of \$325,000 or less. Including repairs and /or replacement of defective electrical and teledata equipment, all work necessary to retrofit, service, maintain and repair all kinds of lighting fixtures and local lighting controls, and washing and cleaning of foregoing fixtures.

\*If the project exceeds \$375,000 due to changes in the scope of work, an Electrician/A Technician must be part of the labor ratio.

**SUPPLEMENTAL BENEFITS**

	07/01/2021	04/21/2022
Electrician &		
H - Telephone	\$ 13.76	\$13.87

**OVERTIME PAY**

See (B, G, \*J, P) on OVERTIME PAGE

\*Note: Emergency work on Sunday and Holidays is at the time and one-half overtime rate.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

8-3m

**Elevator Constructor**

**10/01/2021**

**JOB DESCRIPTION** Elevator Constructor

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**PARTIAL COUNTIES**

Rockland: Entire County except for the Township of Stony Point

Westchester: Entire County except for the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

**WAGES**

Per hour:		
	07/01/2021	03/17/2022
Elevator Constructor	\$ 72.29	\$ 75.14
Modernization & Service/Repair	56.77	59.09

Four(4), ten(10) hour days may be worked at straight time during a week, Monday thru Friday.

NOTE- In order to use the '4 Day/10 Hour Work Schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 IS NOT SUBMITTED you will be liable for overtime payments for work over the allotted hours per day listed.

**SUPPLEMENTAL BENEFITS**

Per Hour:



Elevator Constructor	\$ 41.92	\$ 43.914
Modernization & Service/Repairs	41.082	42.787

#### OVERTIME PAY

Constructor See ( D, M, T ) on OVERTIME PAGE.

Modern/Service See ( B, F, S ) on OVERTIME PAGE.

#### HOLIDAY

Paid: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE  
Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

#### REGISTERED APPRENTICES

WAGES PER HOUR:

\*Note: 1st Term is based on Average wage of Constructor & Modernization.  
Terms 2 thru 4 Based on Journeymans wage of classification Working in.

1 YEAR TERMS:

1st Term*	2nd Term	3rd Term	4th Term
50%	55%	65%	75%

#### SUPPLEMENTAL BENEFITS

Elevator Constructor		
1st Term	\$ 34.05	\$ 34.772
2nd Term	34.91	35.606
3rd Term	36.30	37.052
4th Term	37.70	38.497

Modernization & Service/Repair

1st Term	\$ 34.00	\$ 34.672
2nd Term	34.50	35.195
3rd Term	35.83	36.571
4th Term	37.15	37.938

4-1

#### Elevator Constructor

10/01/2021

**JOB DESCRIPTION** Elevator Constructor

**DISTRICT** 1

#### ENTIRE COUNTIES

Columbia, Dutchess, Greene, Orange, Putnam, Sullivan, Ulster

#### PARTIAL COUNTIES

Delaware: Towns of Andes, Bovina, Colchester, Davenport, Delhi, Harpersfield, Hemdon, Kortright, Meredith, Middletown, Roxbury, Hancock & Stamford

Rockland: Only the Township of Stony Point.

Westchester: Only the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

#### WAGES

Per Hour	07/01/2021	01/01/2022
Mechanic	\$ 62.51	\$ 64.63
Helper	70% of Mechanic Wage Rate	70% of Mechanic Wage Rate

Four (4), ten (10) hour days may be worked for New Construction and Modernization Work at straight time during a week, Monday thru Thursday or Tuesday thru Friday.

\*\*\*Four (4), ten (10) hour days are not permitted for Contract Work/Repair Work

NOTE - In order to use the '4 Day/10 Hour Work Schedule' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule', form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

#### SUPPLEMENTAL BENEFITS

Per hour	07/01/2021	01/01/2022
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Journeyman/Helper  
\$ 35.825\* \$ 36.885\*

(\*)Plus 6% of regular hourly if less than 5 years of service. Plus 8% of regular hourly rate if more than 5 years of service.

#### 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

Note: When a paid holiday falls on Saturday, it shall be observed on Friday. When a paid holiday falls on Sunday, it shall be observed on Monday.

#### REGISTERED APPRENTICES

Wages per hour:

0-6 mo*	6-12 mo	2nd yr	3rd yr	4th yr
50 %	55 %	65 %	70 %	80 %

(\*)Plus 6% of the hourly rate, no additional supplemental benefits.

Supplemental Benefits per hour worked:

Same as Journeyman/Helper

1-138

#### Glazier

10/01/2021

#### JOB DESCRIPTION Glazier

#### DISTRICT 8

#### ENTIRE COUNTIES

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

#### WAGES

Per hour:	7/01/2021	11/01/2021
Glazier	\$ 58.60	+ \$1.25
*Scaffolding	59.55	
Glass Tinting & Window Film	29.60	
**Repair & Maintenance	29.60	

\*Scaffolding includes swing scaffold, mechanical equipment, scissor jacks, man lifts, booms & buckets 24' or more, but not pipe scaffolding.

\*\*Repair & Maintenance- All repair & maintenance work on a particular building, whenever performed, where the total cumulative contract value is under \$148,837. All Glass tinting, window film, regardless of material or intended use, and all affixing of decals to windows or glass.

#### SUPPLEMENTAL BENEFITS

Per hour:	7/01/2021
Journeyworker	\$ 36.04
Glass tinting & Window Film	21.19
Repair & Maintenance	21.19

#### OVERTIME PAY

See (B,H,V) on OVERTIME PAGE.

For 'Repair & Maintenance' and 'Glass Tinting & Window Film' see (B, B2, I, S) on overtime page.

#### HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (4, 6, 16, 25) on HOLIDAY PAGE

For 'Repair & Maintenance' and 'Glass Tinting & Window Film' Only

Paid: See(5, 6, 16, 25)

Overtime: See(5, 6, 16, 25)

#### REGISTERED APPRENTICES

Wage per hour:

(1) year terms at the following wage rates:

	7/01/2021
1st term	\$ 20.72



2nd term	28.66
3rd term	34.67
4th term	46.62

Supplemental Benefits:

(Per hour)

1st term	\$ 16.58
2nd term	23.57
3rd term	26.09
4th term	30.91

8-1087 (DC9 NYC)

**Insulator - Heat & Frost**

**10/01/2021**

**JOB DESCRIPTION** Insulator - Heat & Frost

**DISTRICT 8**

**ENTIRE COUNTIES**

Dutchess, Orange, Putnam, Rockland, Westchester

**WAGES**

Per hour:	07/01/2021	05/31/2022
Insulator	\$ 56.25	+ \$ 2.00
Discomfort & Additional Training**	59.22	+ \$ 2.00
Fire Stop Work*	30.07	+ \$ 2.00

\* Applies on all exclusive Fire Stop Work (When contract is for Fire Stop work only). No apprentices on these contracts only.

\*\*Applies to work requiring: garb or equipment worn against the body not customarily worn by insulators; psychological evaluation; special training, including but not limited to "Yellow Badge" radiation training

Note: Additional \$0.50 per hour for work 30 feet or more above floor or ground level.

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyworker	\$ 35.10
Discomfort & Additional Training	37.06
Fire Stop Work:	
Journeyworker	17.90

**OVERTIME PAY**

See (B, E, E2, Q, \*T) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Note: Last working day preceding Christmas and New Years day, workers shall work no later than 12:00 noon and shall receive 8 hrs pay.

Overtime: See ( 2\*, 4, 6, 16, 25 ) on HOLIDAY PAGE.

\*Note: Labor Day triple time if worked.

**REGISTERED APPRENTICES**

(1) year terms:

Insulator Apprentices:

1st	2nd	3rd	4th
\$ 30.07	\$ 35.30	\$ 40.54	\$ 45.78

Discomfort & Additional Training Apprentices:

1st	2nd	3rd	4th
\$ 31.55	\$ 37.08	\$ 42.61	\$ 48.16

Supplemental Benefits paid per hour:

Insulator Apprentices:

1st term	\$ 17.90
----------	----------



2nd term	21.35
3rd term	24.79
4th term	28.23

Discomfort & Additional Training Apprentices:

1st term	\$ 18.89
2nd term	22.52
3rd term	26.16
4th term	29.80

8-91

**Ironworker**

**10/01/2021**

**JOB DESCRIPTION** Ironworker

**DISTRICT 9**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour: 07/01/2021

Ironworker Rigger \$ 67.99

Ironworker Stone  
Derrickman \$ 67.99

**SUPPLEMENTAL BENEFITS**

Per hour: \$ 41.44

**OVERTIME PAY**

See (B, D1, \*E, Q, \*\*V) on OVERTIME PAGE

\*Time and one-half shall be paid for all work on Saturday up to eight (8) hours and double time shall be paid for all work thereafter.

\*\* Benefits same premium as wages on Holidays only

**HOLIDAY**

Paid: See (18) on HOLIDAY PAGE  
Overtime: See (5, 6, 8, 25) on HOLIDAY PAGE

\*Work stops at schedule lunch break with full day's pay.

**REGISTERED APPRENTICES**

Wage per hour:

1/2 year terms at the following hourly wage rate:

	1st	2nd	3rd	4th
07/01/2021	\$33.55	\$47.94	\$53.34	\$58.74

Supplemental benefits:

Per hour:				
07/01/2021	\$21.18	\$31.45	\$31.45	\$31.45

9-197D/R

**Ironworker**

**10/01/2021**

**JOB DESCRIPTION** Ironworker

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour:	07/01/2021	01/01/2022
		Additional
		\$ 1.25

Ornamental	\$ 46.15
Chain Link Fence	46.15
Guide Rail	46.15

**SUPPLEMENTAL BENEFITS**

Per hour:  
Journeyworker: \$ 60.05

**OVERTIME PAY**

See (B, B1, Q, V) on OVERTIME PAGE



# **HOLIDAY**

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

# **REGISTERED APPRENTICES**

Apprentices hired before 8/31/2018:  
(1/2) year terms at the following percentage of Journeyman's wage.

5th Term 80%

Supplemental Benefits per hour:

5th Term 54.03

Apprentices Hired after 9/1/18:

1 year terms

1st Term \$ 20.63

2nd Term 24.22

3rd Term 27.80

4th Term 31.38

Supplemental Benefits per hour:

1st Term \$ 17.89

2nd Term 19.14

3rd Term 20.40

4th Term 21.66

4-580-Or

# **Ironworker**

10/01/2021

**JOB DESCRIPTION** Ironworker

**DISTRICT** 4

# **ENTIRE COUNTIES**

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

# **WAGES**

PER HOUR:

07/01/2021

01/01/2022

Ironworker:

Structural \$ 54.20

Additional \$ 1.75/Hr.

Bridges

Machinery

# **SUPPLEMENTAL BENEFITS**

PER HOUR PAID:

Journeyman \$ 82.35

# **OVERTIME PAY**

See (B, B1, Q, \*V) on OVERTIME PAGE

\*NOTE: Benefits are calculated for every hour paid

# **HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 18, 19) on HOLIDAY PAGE

# **REGISTERED APPRENTICES**

WAGES PER HOUR:

6 month terms at the following rate:

1st \$28.21

2nd \$28.81

3rd - 6th \$29.42

Supplemental Benefits

PER HOUR PAID:

All Terms \$56.90

4-40/361-Str

# **Ironworker**

10/01/2021

**JOB DESCRIPTION** Ironworker

**DISTRICT** 4



## ENTIRE COUNTIES

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

## PARTIAL COUNTIES

Rockland: Southern section - south of Convent Road and east of Blue Hills Road.

## WAGES

Per hour: 07/01/2021

Reinforcing &  
Metal Lathing \$ 56.25

"Base" Wage \$ 54.70  
plus \$ 1.55

"Base" Wage is used to calculate overtime hours only.

## SUPPLEMENTAL BENEFITS

Per hour:  
Reinforcing & Metal Lathing \$ 38.30

## OVERTIME PAY

See (B, E, Q, \*X) on OVERTIME PAGE

\*Only \$22.00 per Hour for non worked hours

Supplemental Benefit Premiums for Overtime Hours worked:

Time & One Half \$ 45.08  
Double Time \$ 51.33

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6, 11, 13, 18, 19, 25) on HOLIDAY PAGE

## REGISTERED APPRENTICES

(1) year terms at the following wage rates:

1st term	2nd term	3rd term	4th Term
Wage Per Hour: \$ 22.55	\$ 28.38	\$ 34.68	\$ 37.18
"Base" Wage \$ 21.00 plus \$1.55	\$ 26.80 plus \$1.58	\$ 33.10 plus \$1.58	\$ 35.60 plus \$1.58

"Base" Wage is used to calculate overtime hours ONLY.

## SUPPLEMENTAL BENEFITS

Per Hour:

1st term	2nd term	3rd term	4th Term
\$ 18.17	\$ 21.34	\$ 22.00	\$ 20.50

4-46Reinf

## Laborer - Building

10/01/2021

**JOB DESCRIPTION** Laborer - Building

**DISTRICT** 8

## ENTIRE COUNTIES

Putnam, Westchester

## WAGES

07/01/2021

Laborer \$ 36.40  
plus \$5.05\*\*

Laborer - Asbestos & Hazardous  
Materials Removal \$ 43.10\*

\* Abatement/Removal of:



- Lead based or lead containing paint on materials to be repainted is classified as Painter.
- Asbestos containing roofs and roofing material is classified as Roofer.

\*\* This portion is not subject to overtime premium.

NOTE: Upgrade/Material condition work plan for work performed during non-outage under a wage formula of 90% wage/100% fringe benefits at nuclear power plants.

### SUPPLEMENTAL BENEFITS

Per hour: 07/01/2021

Journeyworker \$ 27.50

### OVERTIME PAY

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

\*Note: For Sundays and Holidays worked benefits are at the same premium as wages.

### HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

### REGISTERED APPRENTICES

LABORER ONLY

Hourly terms at the following wage:

Level A	Level B	Level C	Level D
0-1000	1001-2000	2001-3000	3001-4000
\$ 21.04	\$ 24.86	\$ 28.69	\$ 32.51

Supplemental Benefits per hour:

Apprentices  
All terms \$ 21.15

8-235/B

### Laborer - Heavy&Highway

10/01/2021

**JOB DESCRIPTION** Laborer - Heavy&Highway

**DISTRICT** 8

### ENTIRE COUNTIES

Putnam, Westchester

### WAGES

\*\*PUTNAM: APPLIES TO ALL HEAVY & HIGHWAY WORK EXCLUDING HIGHWAYS, STREETS, AND BRIDGES\*\*

GROUP I: Blaster, Quarry Master, Curbs/Asphalt Screedman, Pipe Jacking and Boring Operations Operator, Qualified Dead Condition Pipe Fuser (B Mechanic)

GROUP II: Burner, Drillers(jumbo, joy, wagon, air track, hydraulic), Drill Operator, Self Contained Rotary Drill, Curbs, Raker, Bar Person, Concrete Finisher.

GROUP III: Pavement Breakers, Jeep Operator, Jack Hammer, Pneumatic Tools (all), Gas Driller, Guniting, Railroad Spike Puller, Pipelayer, Chain Saw, Deck winches on scows, Power Buggy Operator, Power Wheelbarrow Operator, Bar Person Helper, Compressed Air lance, Water Jet Lance.

GROUP IV: Concrete Laborers, Asph. Worker, Rock Scaler, Vibrator Oper., Bit Grinder, Air Tamper, Pumps, Epoxy (adhesives, fillers and troweled on), Barco Rammer, Concrete Grinder, Crack Router Operator, Guide Rail-digging holes and placing concrete and demolition when not to be replaced, distribution of materials and tightening of bolts.

GROUP V: Drillers Helpers, Common Laborer, Mason Tenders, Signal Person, Pit Person, Truck Spotter, Powder Person, Landscape/Nursery Person, Dump Person, Temp. Heat.

GROUP VIA: Asbestos/Toxic Waste Laborer-All removal (Roads, Tunnels, Landfills, etc.) Confined space laborer, Bio-remediation, Phyto-remediation, Lead or Hazardous material, Abatement Laborer.

Wages:(per hour) 07/01/2021

GROUP I	\$45.65*
GROUP II	44.30*
GROUP III	43.90*
GROUP IV	43.55*



GROUP V	43.20*
GROUP VIA	45.20*
Operator Qualified	
Gas Mechanic(A Mech)	55.65*
Flagperson	36.85*

\*NOTE: To calculate overtime premiums, deduct \$0.10 from above wages

SHIFT WORK: A shift premium will be paid on Public Work contracts for off-shift or irregular shift work when mandated by the NYS D.O.T. or other Governmental Agency contracts. Employees shall receive an additional 15% per hour above current rate for all regular and irregular shift work. Premium pay shall be calculated using the 15% per hour differential as base rate.

#### SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker:

First 40 Hours

Per Hour \$26.10

Over 40 Hours

Per Hour 19.85

#### OVERTIME PAY

See (B, E, P, R, S) on OVERTIME PAGE

#### HOLIDAY

Paid: See (5, 6, 8, 15, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 25, 26) on HOLIDAY PAGE

NOTE: For Holiday Overtime: 5, 6 - Code 'S' applies

For Holiday Overtime: 8, 15, 25, 26 - Code 'R' applies

#### REGISTERED APPRENTICES

	1st term	2nd term	3rd term	4th term
	1-1000hrs	1001-2000hrs	2001-3000hrs	3001-4000hrs
07/01/2021	\$ 24.56	\$ 28.98	\$ 33.40	\$ 37.72

Supplemental Benefits per hour:

1st term	\$ 4.70 - After 40 hours: \$ 4.45
2nd term	\$ 4.80 - After 40 hours: \$ 4.45
3rd term	\$ 5.30 - After 40 hours: \$ 4.85
4th term	\$ 5.85 - After 40 hours: \$ 5.35

8-60H/H

#### Laborer - Tunnel

10/01/2021

**JOB DESCRIPTION** Laborer - Tunnel

**DISTRICT** 11

#### ENTIRE COUNTIES

Columbia, Dutchess, Greene, Orange, Otsego, Putnam, Rockland, Sullivan, Ulster, Westchester

#### PARTIAL COUNTIES

Chenango: Townships of Columbus, Sherburne and New Berlin.

Delaware: Townships of Andes, Bovina, Middletown, Roxbury, Franklin, Hamden, Stamford, Delhi, Kortright, Harpersfield, Merideth and Davenport.

#### WAGES

Class 1: All support laborers/sandhogs working above the shaft or tunnel.

Class 2: All laborers/sandhogs working in the shaft or tunnel.

Class 4: Safety Miners

Class 5: Site work related to Shaft/Tunnel

WAGES: (per hour)

	07/01/2021	07/01/2022
Class 1	\$ 51.95	\$ 53.45
Class 2	54.10	55.60
Class 4	60.50	62.00
Class 5	43.50	44.80

Toxic and hazardous waste, lead abatement and asbestos abatement work will be paid an additional \$ 3.00 an hour.

SHIFT DIFFERENTIAL...On all Government mandated irregular shift work:



- Employee shall be paid at time and one half the regular rate Monday through Friday.
- Saturday shall be paid at 1.65 times the regular rate.
- Sunday shall be paid at 2.15 times the regular rate.

### SUPPLEMENTAL BENEFITS

Per hour:

Benefit 1	\$ 33.25	\$ 34.45
Benefit 2	49.81	51.60
Benefit 3	66.35	68.75

Benefit 1 applies to straight time hours, paid holidays not worked.

Benefit 2 applies to over 8 hours in a day (M-F), irregular shift work hours worked, and Saturday hours worked.

Benefit 3 applies to Sunday and Holiday hours worked.

### OVERTIME PAY

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

### HOLIDAY

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

Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

When a recognized Holidays falls on Saturday or Sunday, holidays falling on Saturday shall be recognized or observed on Friday and holidays falling on Sunday shall be recognized or observed on Monday. Employees ordered to work on the Saturday or Sunday of the holiday or on the recognized or the observed Friday or Monday for those holidays falling on Saturday or Sunday shall receive double time the established rate and benefits for the holiday.

### REGISTERED APPRENTICES

FOR APPRENTICE RATES, refer to the appropriate Laborer Heavy & Highway wage rate contained in the wage schedule for the County and location where the work is to be performed.

11-17/60/235/754Tun

### Lineman Electrician

10/01/2021

### JOB DESCRIPTION Lineman Electrician

### DISTRICT 6

### ENTIRE COUNTIES

Westchester

### WAGES

Below rates apply to electrical overhead and underground distribution and maintenance work and overhead and underground transmission line work, electrical substations, switching structures, continuous pipe-type underground fluid or gas filled transmission conduit and cable installations, maintenance jobs or projects, railroad catenary installations and maintenance, third rail installations, the bonding of rails and the installation of fiber optic cable. (Ref #14.04.01)

Includes Teledata Work performed within ten (10) feet of high voltage (600 volts or over) transmission lines.

Per hour:	07/01/2021	05/02/2022	05/01/2023	05/06/2024
Lineman, Tech, Welder	\$ 57.71	\$ 59.01	\$ 60.41	\$ 61.91
Crane, Crawler Backhoe	57.71	59.01	60.41	61.91
Cable Splicer-Pipe Type	63.48	64.91	66.45	68.10
Digging Mach Operator	51.94	53.11	54.37	55.72
Cert. Welder-Pipe Type	60.60	61.96	63.43	65.01
Tractor Trailer Driver	49.05	50.16	51.35	52.62
Groundman, Truck Driver	46.17	47.21	48.33	49.53
Equipment Mechanic	46.17	47.21	48.33	49.53
Flagman	34.63	35.41	36.25	37.15

Additional \$1.00 per hour for entire crew when a helicopter is used.

NOTE: 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%

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. Tuesday thru Friday may be worked with no make-up day.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.



## SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

	\$25.40 *plus 7% of hourly Wage	\$ 25.90 *plus 7% of hourly wage	\$ 26.40 *plus 7% of hourly wage	\$ 26.90 *plus 7% of hourly wage
Journeyman Lineman or Equipment Operators with Crane License	\$ 26.40 *plus 7% of hourly wage	\$ 27.90 *plus 7% of hourly wage	\$ 29.40 *plus 7% of hourly wage	\$ 30.90 *plus 7% of hourly wage

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

## OVERTIME PAY

See ( B, E, Q, ) on OVERTIME PAGE. \*Note\* Double time for emergency work designated by the Dept of Jurisdiction.

NOTE: 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, 13, 25 ) on HOLIDAY PAGE plus Governor of NYS Election Day.  
Overtime See ( 5, 6, 8, 13, 25 ) on HOLIDAY PAGE plus Governor of NYS Election Day.

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 Journeyman Lineman wage.

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

SUPPLEMENTAL BENEFITS per hour:

07/01/2021	05/02/2022	05/01/2023	05/06/2024
\$25.40 *plus 7% of hourly Wage	\$ 25.90 *plus 7% of hourly wage	\$ 26.40 *plus 7% of hourly wage	\$ 26.90 *plus 7% of hourly wage

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

6-1249aWest

## Lineman Electrician - Teledata

10/01/2021

**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

Per hour:

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

07/01/2021

Cable Splicer	\$ 34.78
Installer, Repairman	\$ 33.01
Teledata Lineman	\$ 33.01
Tech., Equip. Operator	\$ 33.01
Groundman	\$ 17.50

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

NOTE: THE FOLLOWING RATES WILL APPLY ON ALL CONTRACTING AGENCY MANDATED MULTIPLE SHIFTS OF AT LEAST FIVE (5) DAYS DURATION WORKED:

1ST SHIFT

REGULAR RATE



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

### SUPPLEMENTAL BENEFITS

Per hour:

Journeyman

\$ 5.14  
\*plus 3% of  
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

NOTE: 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

10/01/2021

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

**DISTRICT** 6

### ENTIRE COUNTIES

Westchester

### 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.

A Groundman/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.  
(Ref #14.01.03)

Per hour:	07/01/2021	05/02/2022	05/01/2023	05/06/2024
Lineman, Technician	\$ 52.56	\$ 53.60	\$ 54.73	\$ 55.95
Crane, Crawler Backhoe	52.56	53.60	54.73	55.95
Certified Welder	55.19	56.28	57.47	58.75
Digging Machine	47.30	48.24	49.26	50.36
Tractor Trailer Driver	44.68	45.56	46.52	47.56
Groundman, Truck Driver	42.05	42.88	43.78	44.76
Equipment Mechanic	42.05	42.88	43.78	44.76
Flagman	31.54	32.16	32.84	33.57

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.

NOTE: 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%

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day. Tuesday thru Friday may be worked with no make-up day.



NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

### SUPPLEMENTAL BENEFITS

Per hour worked (but also required on non-worked holidays):

	\$25.40 *plus 7% of hourly Wage	\$ 25.90 *plus 7% of hourly wage	\$ 26.40 *plus 7% of hourly wage	\$ 26.90 *plus 7% of hourly wage
Journeyman Lineman or Equipment Operators with Crane License	\$ 26.40 *plus 7% of hourly wage	\$ 27.90 *plus 7% of hourly wage	\$ 29.40 *plus 7% of hourly wage	\$ 30.90 *plus 7% of hourly wage

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

### OVERTIME PAY

See (B, E, Q) on OVERTIME PAGE. \*Note\* Double time for emergency work designated by the Dept. of Jurisdiction.

NOTE: 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, 13, 25 ) on HOLIDAY PAGE and Governor of NYS Election Day.

Overtime: See ( 5, 6, 8, 13, 25 ) on HOLIDAY PAGE and Governor of NYS Election Day.

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 Journeyman Lineman wage.

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

SUPPLEMENTAL BENEFITS per hour:

07/01/2021	05/02/2022	05/01/2023	05/06/2024
\$25.40 *plus 7% of hourly Wage	\$ 25.90 *plus 7% of hourly wage	\$ 26.40 *plus 7% of hourly wage	\$ 26.90 *plus 7% of hourly wage

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

6-1249aWestLT

### Mason - Building

10/01/2021

**JOB DESCRIPTION** Mason - Building

**DISTRICT** 9

### ENTIRE COUNTIES

Nassau, Rockland, Suffolk, Westchester

### WAGES

Per hour:	07/01/2021	12/06/2021 Additional	06/06/2022 Additional
Tile Setters	\$ 61.07	\$ 0.48	\$ 0.72

### SUPPLEMENTAL BENEFITS

Per Hour:	\$ 24.91* + \$10.01
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\* This portion of benefits subject to same premium rate as shown for overtime wages.

### OVERTIME PAY

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

Work beyond 10 hours on Saturday shall be paid at double the hourly wage rate.

### HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

### REGISTERED APPRENTICES

Wage per hour:



Tile Setters:  
(750 hour) term at the following wage rate:

Term:	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
	1-750	751-1500	1501-2250	2251-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6750	6501-7000
07/01/2021	\$20.84	\$25.66	\$32.68	\$37.50	\$40.99	\$44.30	\$47.82	\$52.63	\$55.35	\$59.34

Supplemental Benefits per hour:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$12.55* +\$0.66	\$12.55* +\$0.71	\$15.16* +\$0.81	\$15.16* +\$0.85	\$16.16* +\$1.23	\$17.66* +\$1.28	\$18.66* +\$1.63	\$18.66* +\$1.68	\$16.66* +\$5.83	\$21.91* +\$6.32

\* This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/52A

<b>Mason - Building</b>	<b>10/01/2021</b>
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**JOB DESCRIPTION** Mason - Building

**DISTRICT** 11

**ENTIRE COUNTIES**

Putnam, Rockland, Westchester

**PARTIAL COUNTIES**

Orange: Only the Township of Tuxedo.

**WAGES**

Per hour:

	07/01/2021	06/01/2022 Additional	06/01/2023 Additional
Bricklayer	\$ 43.35	\$ 2.39	\$ 2.05
Cement Mason	43.35	2.39	2.05
Plasterer/Stone Mason	43.35	2.39	2.05
Pointer/Caulker	43.35	2.39	2.05

Additional \$1.00 per hour for power saw work

Additional \$0.50 per hour for swing scaffold or staging work

**SHIFT WORK:** When shift work or an irregular work day is mandated or required by state, federal, county, local or other governmental agency contracts, the following premiums apply:

Irregular work day requires 15% premium

Second shift an additional 15% of wage plus benefits to be paid

Third shift an additional 25% of wage plus benefits to be paid

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyman \$ 36.05.

**OVERTIME PAY**

**OVERTIME:**

Cement Mason See ( B, E, Q, W ) on OVERTIME PAGE.

All Others See ( B, E, Q ) on OVERTIME PAGE.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

Whenever any of the above holidays fall on Sunday, they will be observed on Monday. Whenever any of the above holidays fall on Saturday, they will be observed on Friday.

**REGISTERED APPRENTICES**

Wages per hour:

750 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
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50% 55% 60% 65% 70% 75% 80% 85%

Supplemental Benefits per hour

750 hour terms at the following percentage of journeyman supplements

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	60%	65%	70%	75%	80%	85%

Apprentices indentured before June 1st, 2011 receive full journeyman benefits

11-5wp-b

## Mason - Building

10/01/2021

**JOB DESCRIPTION** Mason - Building

**DISTRICT** 9

### ENTIRE COUNTIES

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

### WAGES

Building

07/01/2021

01/01/2022

Wages per hour:

Mosaic & Terrazzo Mechanic

\$ 58.46

Additional  
\$ 0.85

Mosaic & Terrazzo Finisher

\$ 56.86

### SUPPLEMENTAL BENEFITS

Per hour:

Mosaic & Terrazzo Mechanic

\$ 26.11\*  
+ \$11.73

Mosaic & Terrazzo Finisher

\$ 26.11\*  
+ \$11.71

\*This portion of benefits subject to same premium rate as shown for overtime wages.

### OVERTIME PAY

See (A, E, Q) on OVERTIME PAGE

Deduct \$6.80 from hourly wages before calculating overtime.

### HOLIDAY

Paid:

See (1) on HOLIDAY PAGE

Overtime:

See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

Easter Sunday is an observed holiday. Holidays falling on a Saturday will be observed on that Saturday. Holidays falling on a Sunday will be celebrated on the Monday.

### REGISTERED APPRENTICES

Wages per hour:

(750 Hour) terms at the following wage rate.

	1st	2nd	3rd	4th	5th	6th	7th	8th
07/01/2021	\$ 25.82	\$ 28.40	\$ 31.00	\$ 33.58	\$ 36.16	\$ 38.74	\$ 43.91	\$ 49.08

Supplemental benefits per hour:

	1st	2nd	3rd	4th	5th	6th	7th	8th
07/01/2021	\$13.06* +\$9.27	\$14.37* +\$10.19	\$15.67* +\$11.12	\$16.98* +\$12.04	\$18.28* +\$12.97	\$19.59* +\$13.90	\$22.20* +\$15.75	\$24.81* +\$17.60

Apprentices hired after 07/01/2017:

Wages Per hour:

1st	2nd	3rd	4th	5th	6th
0- 1500	1501- 3000	3001- 3750	3751- 4500	4501- 5250	5251- 6000



07/01/2021	\$ 22.63	\$ 29.10	\$ 31.00	\$ 36.16	\$ 41.32	\$ 46.48
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Supplemental Benefits per hour:

	1st	2nd	3rd	4th	5th	6th
07/01/2021	\$4.59*	\$5.90*	\$15.67*	\$18.28*	\$20.89*	\$23.50*
	+\$6.49	+\$8.34	+\$11.12	+\$12.97	+\$14.83	+\$16.67

\*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/3

<b>Mason - Building</b>	<b>10/01/2021</b>
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**JOB DESCRIPTION** Mason - Building

**DISTRICT** 9

**ENTIRE COUNTIES**

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

**WAGES**

Per hour: 07/01/2021 01/01/2022

Building-Marble Restoration: Additional

Marble, Stone & Terrazzo Polisher, etc \$ 46.16 \$ 1.10

**SUPPLEMENTAL BENEFITS**

Per Hour:

Journeyworker:

Building-Marble Restoration:

Marble, Stone & Polisher \$ 29.11

**OVERTIME PAY**

See (B, \*E, Q, V) on OVERTIME PAGE

\*ON SATURDAYS, 8TH HOUR AND SUCCESSIVE HOURS PAID AT DOUBLE HOURLY RATE.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

1ST TERM APPRENTICE GETS PAID FOR ALL OBSERVED HOLIDAYS.

**REGISTERED APPRENTICES**

WAGES per hour:

900 hour term at the following wage:

	1st 1- 900	2nd 901- 1800	3rd 1801- 2700	4th 2701
07/01/2021	\$32.28	\$36.91	\$41.51	\$46.16

Supplemental Benefits Per Hour:

07/01/2021	\$26.47	\$27.34	\$28.29	\$29.11
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9-7/24-MP

<b>Mason - Building</b>	<b>10/01/2021</b>
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**JOB DESCRIPTION** Mason - Building

**DISTRICT** 9

**ENTIRE COUNTIES**

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

**WAGES**

Wages: 07/01/2021 01/03/2022

Marble Cutters & Setters \$ 61.73 \$ 0.95



## SUPPLEMENTAL BENEFITS

Per Hour:

Journeyworker \$ 37.76

## OVERTIME PAY

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

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

## REGISTERED APPRENTICES

Wage Per Hour:

750 hour terms at the following wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1-750	751-1500	1501-2250	2251-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6751	6751-7500
\$ 24.70	\$ 27.77	\$ 30.87	\$ 33.94	\$ 37.03	\$ 40.11	\$ 43.20	\$ 46.29	\$ 52.46	\$ 58.64

Supplemental Benefits per hour:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 20.01	\$ 21.43	\$ 22.83	\$ 24.25	\$ 25.65	\$ 27.07	\$ 28.47	\$ 29.88	\$ 32.70	\$ 35.51

9-7/4

## Mason - Building

10/01/2021

**JOB DESCRIPTION** Mason - Building

**DISTRICT** 9

## ENTIRE COUNTIES

Nassau, Rockland, Suffolk, Westchester

## WAGES

Per hour:	07/01/2021	12/06/2021	06/06/2022
Tile Finisher	\$ 46.89	Additional \$ 0.39	Additional \$ 0.58

## SUPPLEMENTAL BENEFITS

Per Hour:

\$ 21.91\*  
+ \$9.84

\*This portion of benefits subject to same premium rate as shown for overtime wages

## OVERTIME PAY

See (B, E, Q, \*V) on OVERTIME PAGE

Work beyond 10 hours on a Saturday shall be paid at double the hourly wage rate.

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

9-7/88A-tf

## Mason - Building

10/01/2021

**JOB DESCRIPTION** Mason - Building

**DISTRICT** 9

## ENTIRE COUNTIES

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

## WAGES

Per hour:	07/01/2021	01/01/2022
Marble, Stone, etc. Maintenance Finishers:	\$ 26.73	Additional \$ 0.68

Note 1: An additional \$2.00 per hour  
for time spent grinding floor using  
"60 grit" and below.



Note 2: Flaming equipment operator  
shall be paid an additional \$25.00 per day.

### SUPPLEMENTAL BENEFITS

Per Hour:

Marble, Stone, etc  
Maintenance Finishers: \$ 14.00

### OVERTIME PAY

See (B, \*E, Q, V) on OVERTIME PAGE

\*Double hourly rate after 8 hours on Saturday

### HOLIDAY

Paid: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

1st term apprentice gets paid for all observed holidays.

### REGISTERED APPRENTICES

WAGES per hour:

07/01/2021

0-750	\$21.37
751-1500	\$22.09
1501-2250	\$22.81
2251-3000	\$23.52
3001-3750	\$24.61
3751-4500	\$26.04
4501+	\$26.73

Supplemental Benefits:

Per hour:

0-750	\$ 11.24
751-1500	\$ 11.60
1501-2250	\$ 11.97
2251-3000	\$ 12.35
3001-3750	\$ 12.84
3751-4500	\$ 13.63
4501+	\$ 14.00

9-7/24M-MF

### Mason - Building / Heavy&Highway

10/01/2021

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

**DISTRICT** 9

### ENTIRE COUNTIES

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

### WAGES

Per hour: 07/01/2021 01/03/2022

Marble-Finisher	\$ 48.87	Additional \$ 0.61
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### SUPPLEMENTAL BENEFITS

Journeyworker:  
per hour

Marble- Finisher \$ 35.25

### OVERTIME PAY

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

### HOLIDAY

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

\* Work beyond 8 hours on a Saturday shall be paid at double the rate.

\*\* When an observed holiday falls on a Sunday, it will be observed the next day.

9-7/20-MF

### Mason - Heavy&Highway

10/01/2021

**JOB DESCRIPTION** Mason - Heavy&Highway

**DISTRICT** 11

### ENTIRE COUNTIES



Putnam, Rockland, Westchester

### PARTIAL COUNTIES

Orange: Only the Township of Tuxedo.

### WAGES

Per hour:

	07/01/2021	06/01/2022 Additional	06/01/2023 Additional
Bricklayer	\$ 43.85	\$ 2.39	\$ 2.05
Cement Mason	43.85	2.39	2.05
Marble/Stone Mason	43.85	2.39	2.05
Plasterer	43.85	2.39	2.05
Pointer/Caulker	43.85	2.39	2.05

Additional \$1.00 per hour for power saw work

Additional \$0.50 per hour for swing scaffold or staging work

SHIFT WORK: When shift work or an irregular work day is mandated or required by state, federal, county, local or other governmental contracts, the following rates apply:

Irregular work day requires 15% premium

Second shift an additional 15% of wage plus benefits to be paid

Third shift an additional 25% of wage plus benefits to be paid

### SUPPLEMENTAL BENEFITS

Per hour:

Journeyman \$ 36.05

### OVERTIME PAY

Cement Mason See ( B, E, Q, W, X )

All Others See ( B, E, Q, X )

### HOLIDAY

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

Whenever any of the above holidays fall on Sunday, they will be observed on Monday. Whenever any of the above holidays fall on Saturday, they will be observed on Friday.

### REGISTERED APPRENTICES

Wages per hour:

750 hour terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	60%	65%	70%	75%	80%	85%

Supplemental Benefits per hour

750 hour terms at the following percentage of journeyman supplements

1st	2nd	3rd	4th	5th	6th	7th	8th
50%	55%	60%	65%	70%	75%	80%	85%

Apprentices indentured before June 1st, 2011 receive full journeyman benefits

11-5WP-H/H

### Operating Engineer - Building

10/01/2021

**JOB DESCRIPTION** Operating Engineer - Building

**DISTRICT** 9

### ENTIRE COUNTIES

Bronx, Kings, New York, Putnam, Queens, Richmond, Westchester

### PARTIAL COUNTIES

Dutchess: that part of Dutchess County lying south of the North City Line of the City of Poughkeepsie.

### WAGES

NOTE:Construction surveying

Party Chief--One who directs a survey party

Instrument Man--One who runs the instrument and assists Party Chief.

Rodman--One who holds the rod and assists the Survey Crew

Wages:(Per Hour)

07/01/2021



**Building Construction:**

Party Chief	\$ 76.09
Instrument Man	\$ 60.41
Rodman	\$ 41.11

**Steel Erection:**

Party Chief	\$ 79.02
Instrument Man	\$ 62.89
Rodman	\$ 44.03

**Heavy Construction-NYC counties only:  
(Foundation, Excavation.)**

Party Chief	\$ 84.60
Instrument man	\$ 63.79
Rodman	\$ 54.52

**SUPPLEMENTAL BENEFITS**

Per Hour:	07/01/2021
Building Construction	\$ 24.40* +\$ 7.15
Steel Erection	\$ 25.00* +\$ 7.15
Heavy Construction	\$ 25.25* +\$ 7.15

\* This portion subject to same premium as wages

Non-Worked Holiday Supplemental Benefit:	\$ 16.45
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**OVERTIME PAY**

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

Code "A" applies to Building Construction and has double the rate after 7 hours on Saturdays.

Code "B" applies to Heavy Construction and Steel Erection and had double the rate after 8 hours on Saturdays.

**HOLIDAY**

Paid:	See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE
Overtime:	See (5, 6, 9, 11, 15, 16, 25) on HOLIDAY PAGE

9-15Db

**Operating Engineer - Building**

**10/01/2021**

**JOB DESCRIPTION** Operating Engineer - Building

**DISTRICT 8**

**ENTIRE COUNTIES**

Putnam, Westchester

**PARTIAL COUNTIES**

Dutchess: All the counties of Westchester and Putnam and the southern part of Dutchess County defined by the northern boundary line of the City of Poughkeepsie, then due east to Route 115, then north along Route 115 to Bedell Road, then east along Bedell Road to Van Wagner Road, then north along Van Wagner Road to Bower Road, then east along Bower Road to Route 44 and along Route 44 east to Route 343, then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to the border line of the State of Connecticut and bordered on the west by the middle of the Hudson River.

**WAGES**

**GROUP I:**

Cranes (All Types up to 49 tons), Boom Trucks, Cherry Pickers (All Types), Clamshell Crane, Derrick (Stone and Steel), Dragline, Franki Pile Rig or similar, High Lift (Lull or similar) with crane attachment and winch used for hoisting or lifting, Hydraulic Cranes, Pile Drivers, Potain and similar.

Cranes (All types 50-99 tons), Drill Rig Casa Grande (CAT or similar), Franki Pile Rig or similar, Hydraulic Cranes (All types including Crawler Cranes- No specific boom length).

Cranes (All types 100 tons and over), All Tower Cranes, All Climbing Cranes irrespective of manufacturer and regardless of how the same is rigged, Franki Pile Rig or similar, Conventional Cranes (All types including Crawler Cranes-No specific boom length), Hydraulic Cranes.



GROUP I-A: Barber Green Loader-Euclid Loader, Bulldozer, Carrier-Trailer Horse, Concrete Cleaning Decontamination Machine Operator, Concrete-Portable Hoist, Conway or Similar Mucking Machines, Elevator & Cage, Excavators all types, Front End Loaders, Gradall, Shovel, Backhoe, etc. (Crawler or Truck), Heavy Equipment Robotics Operator/Mechanic, Hoist Engineer-Material, Hoist Portable Mobile Unit, Hoist (Single, Double or Triple Drum), Horizontal Directional Drill Locator, Horizontal Directional Drill Operator and Jersey Spreader, Letourneau or Tournapull (Scrapers over 20 yards Struck), Lift Slab Console, etc., Lull HiLift or Similar, Master Environmental Maintenance Mechanics, Mucking Machines Operator/Mechanic or Similar Type, Overhead Crane, Pavement Breaker (Air Ram), Paver (Concrete), Post Hole Digger, Power House Plant, Road Boring Machine, Road Mix Machine, Ross Carrier and Similar Machines, Rubber tire double end backhoes and similar machines, Scoopmobile Tractor-Shovel Over 1.5 yards, Shovel (Tunnels), Spreader (Asphalt) Telephie (Cableway), Tractor Type Demolition Equipment, Trenching Machines-Vermeer Concrete Saw Trencher and Similar, Ultra High Pressure Waterjet Cutting Tool System, Vacuum Blasting Machine operator/mechanic, Winch Truck A Frame.

GROUP I-B: Compressor (Steel Erection), Mechanic (Outside All Types), Negative Air Machine (Asbestos Removal), Push Button (Buzz Box) Elevator.

GROUP II: Compactor Self-Propelled, Concrete Pump, Crane Operator in Training (Over 100 Tons), Grader, Machines Pulling Sheep's Foot Roller, Roller (4 ton and over), Scrapers (20 yards Struck and Under), Vibratory Rollers, Welder.

GROUP III-A: Asphalt Plant, Concrete Mixing Plants, Forklift (All power sources), Joy Drill or similar, Tractor Drilling Machine, Loader (1 1/2 yards and under), Portable Asphalt Plant, Portable Batch Plant, Portable Crusher, Skid Steer (Bobcat or similar), Stone Crusher, Well Drilling Machine, Well Point System.

GROUP III-B: Compressor Over 125 cu. Feet, Conveyor Belt Machine regardless of size, Compressor Plant, Ladder Hoist, Stud Machine.

GROUP IV-A: Batch Plant, Concrete Breaker, Concrete Spreader, Curb Cutter Machine, Finishing Machine-Concrete, Fine Grading Machine, Hepa Vac Clean Air Machine, Material Hopper (sand, stone, cement), Mulching Grass Spreader, Pump Gypsum etc, Pump-Plaster-Grout-Fireproofing. Roller (Under 4 Ton), Spreading and Fine Grading Machine, Steel Cutting Machine, Siphon Pump, Tar Joint Machine, Television Cameras for Water, Sewer, Gas etc. Turbo Jet Burner or Similar Equipment, Vibrator (1 to 5).

GROUP IV-B: Compressor (all types), Heater (All Types), Fire Watchman, Lighting Unit (Portable & Generator) Pump, Pump Station (Water, Sewer, Portable, Temporary), Welding Machine (Steel Erection & Excavation).

GROUP V: Mechanics Helper, Motorized Roller (walk behind), Stock Attendant, Welder's Helper, Maintenance Engineer Crane (75 ton and over).

Group VI-A: Welder Certified

GROUP VI-B: Utility Man, Warehouse Man.

WAGES: (per hour)

	07/01/2021	3/7/2022	3/6/2023
GROUP I			
Cranes- up to 49 tons	\$ 63.86	\$ 65.03	\$ 66.23
Cranes- 50 tons to 99 tons	66.07	67.28	68.53
Cranes- 100 tons and over	75.37	76.77	78.21
GROUP I-A	55.96	56.97	58.01
GROUP I-B	51.60	52.52	53.48
GROUP II	54.00	54.98	55.70
GROUP III-A	52.04	52.97	53.94
GROUP III-B	49.56	50.44	51.35
GROUP IV-A	51.52	52.44	53.40
GROUP IV-B	43.62	44.38	45.17
GROUP V	47.00	47.83	48.69
Group VI-A	54.94	55.93	56.96
GROUP VI-B			
Utility Man	44.61	45.39	46.21
Warehouse Man	46.74	47.57	48.42

An additional 20% to wage when required to wear protective equipment on hazardous/toxic waste projects.

Engineers operating cranes with booms 100 feet but less than 149 feet in length will be paid an additional \$2.00 per hour.

Engineers operating cranes with booms 149 feet or over in length will be paid an additional \$3.00 per hour.

Loader operators over 5 cubic yard capacity additional .50 per hour.

Shovel operators over 4 cubic yard capacity additional \$1.00 per hour.

#### SUPPLEMENTAL BENEFITS

Per hour:

	07/01/2021	03/07/2022	03/06/2023
Journeyworker	\$ 29.17	\$ 29.87	\$ 30.57

#### OVERTIME PAY



See (B, E, Q, \*V) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6, 8, 15, 25, 26) on HOLIDAY PAGE  
Overtime: See (5, 6, 8, 15, 25, 26) on HOLIDAY PAGE

8-137B

**Operating Engineer - Heavy&Highway**

**10/01/2021**

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

**DISTRICT 8**

**ENTIRE COUNTIES**

Putnam, Westchester

**PARTIAL COUNTIES**

Dutchess: All the counties of Westchester and Putnam and the southern part of Dutchess County defined by the northern boundary line of the City of Poughkeepsie, then due east to Route 115, then north along Route 115 to Bedell Road, then east along Bedell Road to Van Wagner Road, then north along Van Wagner Road to Bower Road, then east along Bower Road to Route 44 and along Route 44 east to Route 343, then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to the border line of the State of Connecticut and bordered on the west by the middle of the Hudson River.

**WAGES**

GROUP I: Boom Truck, Cherry Picker, Clamshell, Crane, (Crawler, Truck),  
Dragline, Drill Rig (Casa Grande, Cat, or Similar), Floating Crane (Crane on Barges) under 100 tons, Gin Pole, Hoist Engineer-Concrete (Crane-Derrick-Mine Hoist), Knuckle Boom Crane, Rough Terrain Crane.

GROUP I-A: Auger (Truck or Truck Mounted), Boat Captain, Bulldozer-All Sizes, Central Mix Plant Operator, Chipper (all types), Close Circuit T.V., Combination Loader/Backhoe, Compactor with Blade, Concrete Finishing Machine, Gradall, Grader (Motor Grader), Elevator & Cage (Materials or Passenger), Excavator (and all attachments), Front End Loaders (1 1/2 yards and over), High Lift Lull and similar, Hoist (Single, Double, Triple Drum), Hoist Portable Mobile Unit, Hoist Engineer (Material), Jack and Bore Machine, Log Skidders, Mill Machines, Mucking Machines, Overhead Crane, Paver (concrete), Post Pounder (of any type), Push Cats, Road Reclaimer, Robot Hammer (Brokk or similar), Robotic Equipment (Scope of Engineer Schedule), Ross Carrier and similar, Scrapers (20 yard struck and over), Side Boom, Slip Form Machine, Spreader (Asphalt), Trenching Machines (Telephies-Vermeer Concrete Saw), Tractor Type Demolition Equipment, Vacuum Truck. Vibratory Roller(Riding) or Roller used in mainline paving operations.

GROUP I-B: Asphalt Mobile Conveyor/Transfer Machine, Road Paver (Asphalt).

GROUP II-A: Ballast Regulators, Compactor Self Propelled, Fusion Machine, Rail Anchor Machines, Roller (4 ton and over), Scrapers (20 yard struck and under).

GROUP II-B: Mechanic (Outside) All Types, Shop Mechanic.

GROUP III: Air Tractor Drill, Asphalt Plant, Batch Plant, Boiler (High Pressure), Concrete Breaker (Track or Rubber Tire), Concrete Pump, Concrete Spreader, Excavator Drill, Farm Tractor, Forklift (all types), Gas Tapping (Live), Hydroseeder, Loader (1 1/2 yards and under), Locomotive (all sizes), Machine Pulling Sheeps Foot Roller, Portable Asphalt Plant, Portable Batch Plant, Portable Crusher (Apprentice), Powerhouse Plant, Roller (under 4 ton), Sheer Excavator, Skid Steer/Bobcat, Stone Crusher, Sweeper (with seat), Well Drilling Machine.

GROUP IV: Service Person (Grease Truck), Deckhand.

GROUP IV-B: Conveyor Belt Machine (Truck Mounted), Heater (all types), Lighting Unit (Portable), Maintenance Engineer (For Crane Only), Mechanics Helper, Pump (Fireproofing), Pumps-Pump Station/Water/Sewer/Gypsum/Plaster, etc., Pump Truck (Sewer Jet or Similar), Welders Helper, Welding Machine (Steel Erection), Well Point System.

GROUP V: All Tower Cranes-All Climbing Cranes and all cranes of 100-ton capacity or greater (3900 Manitowac or similar) irrespective of manufacturer and regardless of how the same is rigged, Hoist Engineer (Steel), Engineer-Pile Driver, Jersey Spreader, Pavement Breaker/Post Hole Digger.

WAGES: Per hour:	07/01/2021	03/07/2022	03/06/2023
Group I	\$ 64.63	\$ 65.97	\$ 67.27
Group I-A	57.02	58.16	59.26
Group I-B	60.06	61.28	62.46
Group II-A	54.61	55.70	56.74
Group II-B	56.31	57.44	58.52
Group III	53.66	54.72	55.74
Group IV	48.80	49.74	50.63
Group IV-B	41.94	42.71	43.43
Group V			
Engineer All Tower, Climbing and			
Cranes of 100 Tons	73.18	74.73	76.24
Hoist Engineer(Steel)	66.29	67.67	69.01



Engineer(Pile Driver)	70.67	72.16	73.61
Jersey Spreader,Pavement Breaker (Air Ram)Post Hole Digger	55.87	56.99	58.06

**SHIFT DIFFERENTIAL:**

A 15% premium on all hours paid, including overtime hours for 2nd, 3rd shifts on all government mandated off-shift work

Engineers operating cranes with booms 100 feet but less than 149 feet in length will be paid an additional \$2.00 per hour over the rate listed in the Wage Schedule. Engineers operating cranes with booms 149 feet or over in length will be paid an additional \$3.00 per hour over the rate listed in the Wage Schedule. Loader and Excavator Operators: over 5 cubic yards capacity \$0.50 per hour over the rate listed in the Wage Schedule. Shovel Operators: over 4 cubic yards capacity \$1.00 per hour over the rate listed in the Wage Schedule.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday; Friday may be used as a make-up day.

NOTE - In order to use the 4 Day/10 Hour Work schedule Registration for Use of 4 Day/10 Hour Work Schedule,form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyworker:	07/01/2021	03/07/2022	03/06/2023
	\$ 31.60 up to 40 Hours	\$ 32.60 up to 40 hours	\$ 33.75 up to 40 hours
	After 40 hours \$ 22.40* PLUS \$ 1.20 on all hours worked	After 40 hours \$ 23.40* PLUS \$ 1.20 on all hours worked	After 40 hours \$ 24.50* PLUS \$ 1.25 on all hours worked

\*This amount is subject to premium

**OVERTIME PAY**

See (B, E, E2, P, \*R, \*\*U) on OVERTIME PAGE

**HOLIDAY**

Paid:..... See ( 5, 6, 8, 15, 25, 26 ) on HOLIDAY PAGE

Overtime..... See ( 5, 6, 8, 15, 25, 26 ) on OVERTIME PAGE

\* For Holiday codes 8,15,25,26 code R applies

\*\* For Holiday Codes 5 & 6 code U applies

Note: If employees are required to work on Easter Sunday they shall be paid at the rate of triple time.

**REGISTERED APPRENTICES**

(1)year terms at the following rate.

	07/01/2021	03/07/2022	03/06/2023
1st term	\$ 28.51	\$ 29.08	\$ 29.63
2nd term	34.21	34.90	35.56
3rd term	39.91	40.71	41.48
4th term	45.61	46.53	47.41
Supplemental Benefits per hour:			
	23.60	24.55	25.70

8-137HH

**Operating Engineer - Heavy&Highway**

**10/01/2021**

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

**DISTRICT** 9

**ENTIRE COUNTIES**

Putnam, Westchester

**PARTIAL COUNTIES**

Dutchess: South of the North city line of Poughkeepsie

**WAGES**

Party Chief - One who directs a survey party

Instrument Man - One who runs the instrument and assists Party Chief

Rodman - One who holds the rod and in general, assists the Survey Crew



Catogories cover GPS & Underground Surveying

Per Hour: 07/01/2021

Party Chief \$ 81.72

Instrument Man 61.43  
Rodman 52.40

#### **SUPPLEMENTAL BENEFITS**

Per Hour: 07/01/2021

All Catogories  
Straight Time: \$ 25.25\* plus \$7.15

Premium:  
Time & 1/2 \$ 37.88\* plus \$7.15

Double Time \$ 50.50\* plus \$7.15

Non-Worked Holiday Supplemental Benefits:  
\$ 16.45

#### **OVERTIME PAY**

See (B, \*E, Q) on OVERTIME PAGE

\* Doubletime paid on all hours in excess of 8 hours on Saturday

#### **HOLIDAY**

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

9-15Dh

### **Operating Engineer - Heavy&Highway - Tunnel**

**10/01/2021**

**JOB DESCRIPTION** Operating Engineer - Heavy&Highway - Tunnel

**DISTRICT** 8

#### **ENTIRE COUNTIES**

Putnam, Westchester

#### **PARTIAL COUNTIES**

Dutchess: All the counties of Westchester and Putnam and the southern part of Dutchess County defined by the northern boundary line of the City of Poughkeepsie, then due east to Route 115, then north along Route 115 to Bedell Road, then east along Bedell Road to Van Wagner Road, then north along Van Wagner Road to Bower Road, then east along Bower Road to Route 44 and along Route 44 east to Route 343, then along Route 343 east to the northern boundary of Town of Dover Plains and east along the northern boundary of Town of Dover Plains to the border line of the State of Connecticut and bordered on the west by the middle of the Hudson River.

#### **WAGES**

GROUP I: Boom Truck, Cherry Picker, Clamshell, Crane(Crawler,Truck), Dragline, Drill Rig Casa Grande(Cat or Similar), Floating Crane(Crane on Barge-Under 100 Tons), Hoist Engineer(Concrete/Crane-Derrick-Mine Hoist), Knuckle Boom Crane, Rough Terrain Crane.

GROUP I-A: Auger(Truck or Truck Mounted), Boat Captain, Bull Dozer-all sizes, Central Mix Plant Operator, Chipper-all types, Close Circuit T.V., Combination Loader/Backhoe, Compactor with Blade, Concrete Finishing Machine, Gradall, Grader(Motor Grader), Elevator & Cage(Materials or Passengers), Excavator(and all attachments), Front End Loaders(1 1/2 yards and over), High Lift Lull, Hoist(Single, Double, Triple Drum), Hoist Portable Mobile Unit, Hoist Engineer(Material), Jack and Bore Machine, Log Skidder, Milling Machine, Moveable Concrete Barrier Transfer & Transport Vehicle, Mucking Machines. Overhead Crane, Paver(Concrete), Post Pounder of any type, Push Cats, Road Reclaimer, Robot Hammer(Brokk or similar), Robotic Equipment(Scope of Engineer Schedule), Ross Carrier and similar machines, Scrapers(20 yards struck and over), Side Boom, Slip Form Machine, Spreader(Asphalt), Trenching Machines, Telephies-Vermeer Concrete Saw, Tractor type demolition equipment, Vacuum Truck, Vibratory Roller (Riding) used in mainline paving operations.

GROUP I-B: Asphalt Mobile Conveyor/Transfer Machine, Road Paver(Asphalt).

GROUP II-A: Ballast Regulators, Compactor(Self-propelled), Fusion Machine, Rail Anchor Machines, Roller(4 ton and over), Scrapers(20 yard struck and under).

GROUP II-B: Mechanic(outside)all types, Shop Mechanic.

GROUP III: Air Tractor Drill, Asphalt Plant, Batch Plant, Boiler(High Pressure), Concrete Breaker(Track or Rubber Tire), Concrete Pump, Concrete Spreader, Excavator Drill, Farm Tractor, Forklift(all types of power), Gas Tapping(Live), Hydroseeder, Loader(1 1/2 yards and under), Locomotive(all sizes), Machine Pulling Sheeps Foot Roller, Portable Asphalt Plant, Portable Batch Plant, Portable Crusher(Apprentice), Powerhouse Plant, Roller(under 4 ton), Sheer Excavator, Skidsteer/Bobcat, Stone Crusher, Sweeper(with seat), Well Drilling Machine.

GROUP IV-A: Service Person(Grease Truck), Deckhand.



GROUP IV-B: Conveyor Belt Machine(Truck Mounted), Heater(all types), Lighting Unit(Portable), Maintenance Engineer(for Crane only), Mechanics Helper, Pump(Fireproofing), Pumps-Pump Station/Water/Sewer/Gypsum/Plaster, etc., Pump Truck(Sewer Jet or similar), Welding Machine(Steel Erection), Welders Helper.

GROUP V-A: Engineer(all Tower Cranes, all Climbing Cranes & all Cranes of 100 ton capacity or greater),Hoist Engineer(Steel-Sub Structure), Engineer-Pile Driver, Jersey-Spreader, Pavement breaker, Post Hole Digger

WAGES: (per hour)

	07/01/2021	03/07/2022	03/06/2023
GROUP I	\$ 64.63	\$ 65.97	\$ 67.27
GROUP I-A	57.02	58.16	59.21
GROUP I-B	60.06	61.28	62.46
GROUP II-A	54.61	55.70	56.74
GROUP II-B	56.31	57.44	58.52
GROUP III	53.66	54.72	55.74
GROUP IV-A	48.80	49.74	50.63
GROUP IV-B	41.94	42.71	43.43
GROUP V-A			
Engineer-Cranes	73.18	74.73	76.24
Engineer-Pile Driver	70.67	72.16	73.61
Hoist Engineer	66.29	67.67	69.01
Jersey Spreader/Post Hole Digger	55.87	56.99	58.06

#### SHIFT DIFFERENTIAL:

A 15% premium on all hours paid, including overtime hours for 2nd, 3rd shifts  
on all government mandated off-shift work

An additional 20% to wage when required to wear protective equipment on hazardous/toxic waste projects. Operators required to use two buckets pouring concrete on other than road pavement shall receive \$0.50 per hour over scale. Engineers operating cranes with booms 100 feet but less than 149 feet in length will be paid an additional \$2.00 per hour. Engineers operating cranes with booms 149 feet or over in length will be paid an additional \$3.00 per hour. Operators of shovels with a capacity over (4) cubic yards shall be paid an additional \$1.00 per hour. Operators of loaders with a capacity over (5) cubic yards shall be paid an additional \$0.50 per hour.

#### SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker:

	07/01/2021	03/07/2022	03/06/2023
	\$ 23.60	\$ 24.55	\$ 25.70
	+ \$8.00	+ \$8.00	+ \$8.00
(Limited to first 40 hours)		(Limited to first 40 hours)	(Limited to first 40 hours)

#### OVERTIME PAY

See (D, O, \*U, V) on OVERTIME PAGE

#### HOLIDAY

Paid: See (5, 6, 8, 15, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 25, 26) on HOLIDAY PAGE

\* Note: For Holiday codes 5 & 6, code U applies. For Holiday codes 8, 15, 25, 26, code R applies.

Note: If employees are required to work on Easter Sunday, they shall be paid at the rate of triple time.

#### REGISTERED APPRENTICES

(1)year terms at the following rates:

	07/01/2021	03/07/2022	03/06/2023
1st term	\$ 28.51	\$ 29.08	\$ 29.63
2nd term	34.21	34.90	35.56
3rd term	39.91	40.71	41.48
4th term	45.61	46.53	47.41

Supplemental Benefits per hour:

All terms	\$ 23.60	\$ 24.55	\$ 25.70
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**Operating Engineer - Marine Dredging**

**10/01/2021**

**JOB DESCRIPTION** Operating Engineer - Marine Dredging

**DISTRICT 4**

**ENTIRE COUNTIES**

Albany, Bronx, Cayuga, Clinton, Columbia, Dutchess, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Orange, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

**WAGES**

These wages do not apply to Operating Engineers on land based construction projects. For those projects, please see the Operating Engineer Heavy/Highway Rates. The wage rates below for all equipment and operators are only for marine dredging work in navigable waters found in the counties listed above.

Per Hour:	07/01/2021	10/01/2021
CLASS A1 Deck Captain, Leverman Mechanical Dredge Operator Licensed Tug Operator 1000HP or more.	\$ 41.42	\$ 41.42
CLASS A2 Crane Operator (360 swing)	36.91	36.91
CLASS B Dozer, Front Loader Operator on Land	To conform to Operating Engineer Prevailing Wage in locality where work is being performed including benefits.	
CLASS B1 Derrick Operator (180 swing) Spider/Spill Barge Operator Operator II, Fill Placer, Engineer, Chief Mate, Electrician, Chief Welder, Maintenance Engineer Licensed Boat, Crew Boat Operator	35.82	35.82
CLASS B2 Certified Welder	33.72	33.72
CLASS C1 Drag Barge Operator, Steward, Mate, Assistant Fill Placer	32.80	32.80
CLASS C2 Boat Operator	30.89	31.74
CLASS D Shoreman, Deckhand, Oiler, Rodman, Scowman, Cook, Messman, Porter/Janitor	25.66	26.37

**SUPPLEMENTAL BENEFITS**

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B	07/01/2021 \$11.98 plus 8% of straight time wage, Overtime hours add \$ 0.63	10/01/2021 \$11.98 plus 8% of straight time wage, Overtime hours add \$ 0.63
All Class C	\$11.68 plus 8% of straight time wage, Overtime hours add \$ 0.48	11.68 plus 8% of straight time wage, Overtime hours add \$ 0.48
All Class D	\$11.38 plus 8%	11.38 plus 8%



of straight time  
wage, Overtime hours  
add \$ 0.33

of straight time  
wage, Overtime hours  
add \$ 0.33

# **OVERTIME PAY**

See (B2, F, R) on OVERTIME PAGE

# **HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

4-25a-MarDredge

## **Operating Engineer - Survey Crew - Consulting Engineer**

**10/01/2021**

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

**DISTRICT 9**

# **ENTIRE COUNTIES**

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

# **PARTIAL COUNTIES**

Dutchess: That part in Dutchess County lying South of the North City line of Poughkeepsie.

# **WAGES**

Feasibility and preliminary design surveying, any line and grade surveying for inspection or supervision of construction.

Per hour: 07/01/2021  
Survey Classifications

Party Chief \$ 45.83  
Instrument Man 38.17  
Rodman 33.34

# **SUPPLEMENTAL BENEFITS**

Per Hour:

All Crew Members: \$ 20.60

# **OVERTIME PAY**

OVERTIME:.... See ( B, E\*, Q, V ) ON OVERTIME PAGE.

\*Doubletime paid on the 9th hour on Saturday.

# **HOLIDAY**

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE  
Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

9-15dconsult

## **Painter**

**10/01/2021**

**JOB DESCRIPTION** Painter

**DISTRICT 8**

# **ENTIRE COUNTIES**

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

# **WAGES**

Per hour: 07/01/2021

Brush \$ 50.30\*

Abatement/Removal of lead based  
or lead containing paint on  
materials to be repainted. 50.30\*

Spray & Scaffold \$ 53.30\*  
Fire Escape 53.30\*  
Decorator 53.30\*  
Paperhanger/Wall Coverer 52.93\*

\*Subtract \$ 0.10 to calculate premium rate.

# **SUPPLEMENTAL BENEFITS**

Per hour: 07/01/2021

Paperhanger \$ 31.83  
All others 29.81  
Premium 33.40\*\*



\*\*Applies only to "All others" category, not paperhanger journeyworker.

**OVERTIME PAY**

See (A, H) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

One ( 1 ) year terms at the following wage rate.

Per hour:	07/01/2021
Appr 1st term...	\$ 19.56*
Appr 2nd term...	25.12*
Appr 3rd term...	30.42*
Appr 4th term...	40.65*

\*Subtract \$ 0.10 to calculate premium rate.

**Supplemental benefits:**

Per Hour:	07/01/2021
Appr 1st term...	\$ 14.72
Appr 2nd term...	18.23
Appr 3rd term...	21.06
Appr 4th term...	26.67

8-NYDC9-B/S

**Painter**

**10/01/2021**

**JOB DESCRIPTION** Painter

**DISTRICT 8**

**ENTIRE COUNTIES**

Putnam, Suffolk, Westchester

**PARTIAL COUNTIES**

Nassau: All of Nassau except the areas described below: Atlantic Beach, Ceadhurst, East Rockaway, Gibson, Hewlett, Hewlett Bay, Hewlett Neck, Hewlett Park, Inwood, Lawrence, Lido Beach, Long Beach, parts of Lynbrook, parts of Oceanside, parts of Valley Stream, and Woodmere. Starting on the South side of Sunrise Hwy in Valley Stream running east to Windsor and Rockaway Ave., Rockville Centre is the boundary line up to Lawson Blvd. turn right going west all the above territory. Starting at Union Turnpike and Lakeville Rd. going north to Northern Blvd. the west side of Lakeville road to Northern blvd. At Northern blvd. going east the district north of Northern blvd. to Port Washington Blvd. West of Port Washington blvd. to St. Francis Hospital then north of first traffic light to Port Washington and Sands Point, Manor HAVen, Harbour Acres.

**WAGES**

Per hour:	07/01/2021
Drywall Taper	\$ 50.30*

\*Subtract \$ 0.10 to calculate premium rate.

**SUPPLEMENTAL BENEFITS**

Per hour:	07/01/2021
Journeyman	\$ 29.81

**OVERTIME PAY**

See (A, H) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wages - Per Hour:	07/01/2021
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1500 hour terms at the following wage rate:

1st term	\$ 19.56*
2nd term	25.12*
3rd term	30.42*
4th term	40.65*

\*Subtract \$ 0.10 to calculate premium rate.

Supplemental Benefits - Per hour:

One year term (1500 hours) at the following dollar amount.



1st year	\$ 14.72
2nd year	18.23
3rd year	21.06
4th year	26.67

8-NYDCT9-DWT

**Painter - Bridge & Structural Steel**

**10/01/2021**

**JOB DESCRIPTION** Painter - Bridge & Structural Steel

**DISTRICT 8**

**ENTIRE COUNTIES**

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

**WAGES**

Per Hour:

STEEL:

Bridge Painting:	07/01/2021	10/01/2021
	\$ 51.50	\$ 53.00
	+ 8.63*	+ 9.63*

ADDITIONAL \$6.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

NOTE: All premium wages are to be calculated on base rate per hour only.

\* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (no cap).

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

**SHIFT WORK:**

When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11pm or 11pm-7am.

**SUPPLEMENTAL BENEFITS**

Per Hour:

Journeyworker:	07/01/2021	10/01/2021
	\$ 10.90	\$ 10.90
	+ 30.00*	+ 30.60*

\* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (no cap).

**OVERTIME PAY**

See (B, F, R) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (4, 6) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wage - Per hour:

Apprentices: (1) year terms	07/01/2021	10/01/2021
1st year	\$ 20.60	\$ 21.20
	+ 3.45*	+ 3.86*
2nd year	\$ 30.90	\$ 31.80
	+ 5.18*	+ 5.78*



3rd year	\$ 41.20 + 6.90*	\$ 42.40 + 7.70*
Supplemental Benefits - Per hour:		
1st year	\$ .25 + 12.00*	\$ .25 + 12.24*
2nd year	\$ 10.90 + 18.00*	\$ 10.90 + 18.36*
3rd year	\$ 10.20 + 24.00*	\$ 10.90 + 24.48*

NOTE: All premium wages are to be calculated on base rate per hour only.

8-DC-9/806/155-BrSS

<b>Painter - Line Striping</b>	<b>10/01/2021</b>
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**JOB DESCRIPTION** Painter - Line Striping

**DISTRICT** 8

**ENTIRE COUNTIES**

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

**WAGES**

Per hour:

Painter (Striping-Highway):	07/01/2021	07/01/2022
Striping-Machine Operator*	\$ 30.32	\$ 31.53
Linerman Thermoplastic	36.93	38.34

Note: \* Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

**SUPPLEMENTAL BENEFITS**

Per hour paid:	07/01/2021	07/01/2022
Journeyworker:		
Striping Machine Operator:	\$ 10.03	\$ 10.03
Linerman Thermoplastic:	10.03	10.03

**OVERTIME PAY**

See (B, B2, E2, F, S) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 20) on HOLIDAY PAGE  
Overtime: See (5, 20) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

One (1) year terms at the following wage rates:

	07/01/2021	12/31/2021	07/01/2022
1st Term*:	\$ 15.00	\$ 15.00	\$ 15.00
1st Term**:	14.00	15.00	15.00
1st Term***:	12.50	13.20	13.20
2nd Term:	18.19	18.19	18.92
3rd Term:	24.26	24.26	25.22

\*Bronx, Kings, New York, Queens, Richmond, and Suffolk counties

\*\*Nassau and Westchester counties

\*\*\*All other counties



Supplemental Benefits per hour:

1st term:	\$ 9.16	\$ 9.16	\$ 9.16
2nd Term:	9.16	9.16	10.03
3rd Term:	9.16	9.16	10.03

8-1456-LS

**Painter - Metal Polisher**

**10/01/2021**

**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**

	07/01/2021
Metal Polisher	\$ 37.13
Metal Polisher*	38.23
Metal Polisher**	41.13

\*Note: Applies on New Construction & complete renovation

\*\* Note: Applies when working on scaffolds over 34 feet.

**SUPPLEMENTAL BENEFITS**

Per Hour:	07/01/2021
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Journeyworker:

All classification	\$ 10.64
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**OVERTIME PAY**

See (B, E, P, T) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 9, 11, 15, 16, 25, 26) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2021
1st year	\$ 16.00
2nd year	17.00
3rd year	18.00
1st year*	\$ 16.39
2nd year*	17.44
3rd year*	18.54
1st year**	\$ 18.50
2nd year**	19.50
3rd year**	20.50

\*Note: Applies on New Construction & complete renovation

\*\* Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:

Per hour:

1st year	\$ 7.39
2nd year	7.39
3rd year	7.39

8-8A/28A-MP

**Plumber**

**10/01/2021**

**JOB DESCRIPTION** Plumber

**DISTRICT 8**



## ENTIRE COUNTIES

Putnam, Westchester

## WAGES

Per hour:

07/01/2021

Plumber and  
Steamfitter

\$ 59.01

## SHIFT WORK:

When directly specified in public agency or authority contract documents, shift work outside the regular hours of work shall be comprised of eight (8) hours per shift not including Saturday, Sundays and holidays. One half (1/2) hour shall be allowed for lunch after the first four (4) hours of each shift. Wage and Fringes for shift work shall be straight time plus a shift premium of twenty-five (25%) percent. A minimum of five days Monday through Friday must be worked to establish shift work.

## SUPPLEMENTAL BENEFITS

Per hour:

Journeyworker

\$ 39.26

## OVERTIME PAY

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

OVERTIME:.... See on OVERTIME PAGE.

## HOLIDAY

Paid:

See (1) on HOLIDAY PAGE

Overtime:

See (5, 6, 8, 16, 25) on HOLIDAY PAGE

## REGISTERED APPRENTICES

(1)year terms at the following wages:

1st Term

\$ 21.89

2nd Term

25.13

3rd Term

29.01

4th Term

41.43

5th Term

44.45

Supplemental Benefits per hour:

1st term

\$ 16.25

2nd term

18.13

3rd term

21.57

4th term

28.41

5th term

30.11

8-21.1-ST

## Plumber - HVAC / Service

10/01/2021

**JOB DESCRIPTION** Plumber - HVAC / Service

**DISTRICT** 8

## ENTIRE COUNTIES

Dutchess, Putnam, Westchester

## PARTIAL COUNTIES

Delaware: Only the townships of Middletown and Roxbury

Ulster: Entire County(including Wallkill and Shawangunk Prisons) except for remainder of Town of Shawangunk and Towns of Plattekill, Marlboro, and Wawarsing.

## WAGES

Per hour:

07/01/2021

HVAC Service

\$ 40.68

+ \$ 4.32\*

\*Note: This portion of wage is not subject to overtime premium.

## SUPPLEMENTAL BENEFITS

Per hour:

07/01/2021

Journeyworker HVAC Service

\$ 26.54

## OVERTIME PAY

See (B, F, R) on OVERTIME PAGE



## HOLIDAY

Paid: See (5, 6, 16, 25) on HOLIDAY PAGE  
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

## REGISTERED APPRENTICES

### HVAC SERVICE

(1) year terms at the following wages:

1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.
\$ 18.50	\$ 21.88	\$ 27.31	\$ 33.56	\$ 36.36
+\$2.37*	+\$2.67*	+\$3.22*	+\$3.84*	+\$4.07*

\*Note: This portion of wage is not subject to overtime premium.

Supplemental Benefits per hour:

Apprentices 07/01/2021

1st term	\$ 19.66
2nd term	20.86
3rd term	22.21
4th term	24.02
5th term	25.33

8-21.1&2-SF/Re/AC

## Plumber - Jobbing & Alterations

10/01/2021

**JOB DESCRIPTION** Plumber - Jobbing & Alterations

**DISTRICT** 8

### ENTIRE COUNTIES

Dutchess, Putnam, Westchester

### PARTIAL COUNTIES

Ulster: Entire county (including Wallkill and Shawangunk Prisons in Town of Shawangunk) EXCEPT for remainder of Town of Shawangunk, and Towns of Plattekill, Marlboro, and Wawarsing.

### WAGES

Per hour: 07/01/2021  
Journeyworker: \$ 45.83

Repairs, replacements and alteration work is any repair or replacement of a present plumbing system that does not change existing roughing or water supply lines.

### SHIFT WORK:

When directly specified in public agency or authority contract documents, shift work outside the regular hours of work shall be comprised of eight (8) hours per shift not including Saturday, Sundays and holidays. One half (1/2) hour shall be allowed for lunch after the first four (4) hours of each shift. Wage and Fringes for shift work shall be straight time plus a shift premium of twenty-five (25%) percent. A minimum of five days Monday through Friday must be worked to establish shift work.

### SUPPLEMENTAL BENEFITS

Per hour:  
Journeyworker  
\$ 32.96

### OVERTIME PAY

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

\*When used as a make-up day, hours after 8 on Saturday shall be paid at time and one half.

## HOLIDAY

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6, 8, 16, 25) on HOLIDAY PAGE

## REGISTERED APPRENTICES

(1) year terms at the following wages:

1st year	\$ 19.88
2nd year	22.06
3rd year	23.90
4th year	33.57
5th year	35.46



Supplemental Benefits per hour:

1st year	\$ 10.74
2nd year	12.65
3rd year	16.58
4th year	22.39
5th year	24.32

8-21.3-J&A

**Roofer**

**10/01/2021**

**JOB DESCRIPTION** Roofer

**DISTRICT** 9

**ENTIRE COUNTIES**

Bronx, Dutchess, Kings, New York, Orange, Putnam, Queens, Richmond, Rockland, Sullivan, Ulster, Westchester

**WAGES**

Per Hour: 07/01/2021

Roofer/Waterproofer \$ 45.25  
+ \$7.00\*

\* This portion is not subjected to overtime premiums.

Note: Abatement/Removal of Asbestos containing roofs and roofing material is classified as Roofer.

**SUPPLEMENTAL BENEFITS**

Per Hour: \$ 28.62

**OVERTIME PAY**

See (B, H) on OVERTIME PAGE

Note: An observed holiday that falls on a Sunday will be observed the following Monday.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

( 1 ) year term

1st	2nd	3rd	4th
\$ 15.84	\$ 22.63	\$ 27.15	\$ 33.94
	+ 3.50*	+ 4.20*	+ 5.26*

Supplements:

1st	2nd	3rd	4th
\$ 3.72	\$ 14.47	\$ 17.30	\$ 21.55

9-8R

**Sheetmetal Worker**

**10/01/2021**

**JOB DESCRIPTION** Sheetmetal Worker

**DISTRICT** 8

**ENTIRE COUNTIES**

Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester

**WAGES**

07/01/2021  
SheetMetal Worker \$ 44.15  
+ 3.37\*

\*This portion is not subject to overtime premiums.

**SHIFT WORK**

For all NYS D.O.T. and other Governmental mandated off-shift work:

10% increase for additional shifts for a minimum of five (5) days

**SUPPLEMENTAL BENEFITS**

Journeyworker \$ 44.20

**OVERTIME PAY**

OVERTIME: See ( B, E, Q, ) on OVERTIME PAGE.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 15, 16, 23) on HOLIDAY PAGE



## REGISTERED APPRENTICES

1st	2nd	3rd	4th	5th	6th	7th	8th
\$ 16.36	\$ 18.41	\$ 20.46	\$ 22.51	\$ 24.54	\$ 26.60	\$ 29.12	\$ 31.65
+ 1.35*	+ 1.52*	+ 1.69*	+ 1.85*	+ 2.02*	+ 2.19*	+ 2.36*	+ 2.53*

\*This portion is not subject to overtime premiums.

Supplemental Benefits per hour:

### Apprentices

1st term	\$ 18.96
2nd term	21.34
3rd term	23.71
4th term	26.11
5th term	28.46
6th term	30.82
7th term	32.72
8th term	34.64

8-38

## Sheetmetal Worker

10/01/2021

**JOB DESCRIPTION** Sheetmetal Worker

**DISTRICT** 4

### ENTIRE COUNTIES

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

### WAGES

Per Hour:	07/01/2021	8/01/2021
Sign Erector	\$ 52.29	\$ 53.97

NOTE: Structurally Supported Overhead Highway Signs(See STRUCTURAL IRON WORKER CLASS)

### SUPPLEMENTAL BENEFITS

Per Hour:	07/01/2021	8/01/2021
Sign Erector	\$ 51.26	\$ 53.15

### OVERTIME PAY

See (A, F, S) on OVERTIME PAGE

### HOLIDAY

Paid: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE  
Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

## REGISTERED APPRENTICES

Per Hour:

6 month Terms at the following percentage of Sign Erectors wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
35%	40%	45%	50%	55%	60%	65%	70%	75%	80%

### SUPPLEMENTAL BENEFITS

Per Hour:

07/01/2021

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 14.34	\$ 16.26	\$ 18.17	\$ 20.10	\$ 28.02	\$ 30.47	\$ 33.72	\$ 36.27	\$ 38.77	\$ 41.29

8/01/2021

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ TBD	\$ TBD	\$ TBD	\$ TBD	\$ TBD	\$ TBD	\$ TBD	\$ TBD	\$ TBD	\$ TBD

4-137-SE

## Sprinkler Fitter

10/01/2021

**JOB DESCRIPTION** Sprinkler Fitter

**DISTRICT** 1

### ENTIRE COUNTIES

Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester

### WAGES



Per hour 07/01/2021

Sprinkler \$ 47.19  
Fitter

### SUPPLEMENTAL BENEFITS

Per hour

Journey person \$ 28.09

### 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
\$ 22.67	\$ 25.19	\$ 27.46	\$ 29.98	\$ 32.50	\$ 35.02	\$ 37.54	\$ 40.05	\$ 42.57	\$ 45.09

Supplemental Benefits per hour

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 8.27	\$ 8.27	\$ 19.22	\$ 19.22	\$ 19.47	\$ 19.47	\$ 19.47	\$ 19.47	\$ 19.47	\$ 19.47
									1-669.2

### Teamster - Building / Heavy&Highway

10/01/2021

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

**DISTRICT** 8

### ENTIRE COUNTIES

Putnam, Westchester

### WAGES

GROUP A: Straight Trucks (6-wheeler and 10-wheeler), A-frame, Winch, Dynamite Seeding, Mulching, Agitator, Water, Attenuator, Light Towers, Cement (all types), Suburban, Station Wagons, Cars, Pick Ups, any vehicle carrying materials of any kind.

GROUP AA: Tack Coat

GROUP B: Tractor & Trailers (all types).

GROUP BB: Tri-Axle, 14 Wheeler

GROUP C: Low Boy (carrying equipment).

GROUP D: Fuel Trucks, Tire Trucks.

GROUP E: Off-road Equipment (over 40 tons): Athey Wagons, Belly Dumps, Articulated Dumps, Trailer Wagons.

GROUP F: Off-road Equipment (over 40 tons) Euclid, DJB.

GROUP G: Off-road Equipment (under 40 tons) Athey Wagons, Belly Articulated Dumps, Trailer Wagons.

GROUP H: Off-road Equipment (under 40 tons), Euclid.

GROUP HH: Off-road Equipment (under 40 tons) D.J.B.

GROUP I: Off-road Equipment (under 40 tons) Darts.

GROUP II: Off-road Equipment (under 40 tons) RXS.

WAGES:(per hour)

07/01/2021

GROUP A	\$ 42.47*
GROUP AA	45.27*
GROUP B	43.09*
GROUP BB	42.59*
GROUP C	45.22*
GROUP D	42.92*
GROUP E	43.47*
GROUP F	44.47*
GROUP G	43.22*
GROUP H	43.84*
GROUP HH	44.22*
GROUP I	43.97*



GROUP II 44.34\*

\* To calculate premium wage, subtract \$ .20 from the hourly wage.

Note: Fuel truck operators on construction sites addit. \$5.00 per day.  
For work on hazardous/toxic waste site addit. 20% of hourly rate.

Shift Differential: NYS DOT or other Governmental Agency contracts shall receive a shift differential of Fifteen(15%)percent above the wage rate

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

#### SUPPLEMENTAL BENEFITS

Per hour:  
Journeyworker

First 40 hours	\$ 33.64
41st-45th hours	15.18
Over 45 hours	0.26

#### OVERTIME PAY

See (B, E, P, R) on OVERTIME PAGE

#### HOLIDAY

Paid: See (5, 6, 8, 9, 15, 25) on HOLIDAY PAGE  
Overtime: See (5, 6, 8, 9, 15, 25) on HOLIDAY PAGE

8-456

#### Welder

10/01/2021

#### 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 07/01/2021

Welder: To be paid the same rate of the mechanic performing the work.\*

\*EXCEPTION: If a specific welder certification is required, then the 'Certified Welder' rate in that trade tag will be paid.

#### OVERTIME PAY

#### HOLIDAY

1-As Per Trade



## Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

- ( AA ) Time and one half of the hourly rate after 7 and one half hours per day
- ( A ) Time and one half of the hourly rate after 7 hours per day
- ( B ) Time and one half of the hourly rate after 8 hours per day
- ( B1 ) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday.  
Double the hourly rate for all additional hours
- ( B2 ) Time and one half of the hourly rate after 40 hours per week
- ( C ) Double the hourly rate after 7 hours per day
- ( C1 ) Double the hourly rate after 7 and one half hours per day
- ( D ) Double the hourly rate after 8 hours per day
- ( D1 ) Double the hourly rate after 9 hours per day
- ( E ) Time and one half of the hourly rate on Saturday
- ( E1 ) Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
- ( E2 ) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- ( E3 ) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
- ( E4 ) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- ( E5 ) Double time after 8 hours on Saturdays
- ( F ) Time and one half of the hourly rate on Saturday and Sunday
- ( G ) Time and one half of the hourly rate on Saturday and Holidays
- ( H ) Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- ( I ) Time and one half of the hourly rate on Sunday
- ( J ) Time and one half of the hourly rate on Sunday and Holidays
- ( K ) Time and one half of the hourly rate on Holidays
- ( L ) Double the hourly rate on Saturday
- ( M ) Double the hourly rate on Saturday and Sunday
- ( N ) Double the hourly rate on Saturday and Holidays
- ( O ) Double the hourly rate on Saturday, Sunday, and Holidays
- ( P ) Double the hourly rate on Sunday
- ( Q ) Double the hourly rate on Sunday and Holidays
- ( R ) Double the hourly rate on Holidays
- ( S ) Two and one half times the hourly rate for Holidays



- ( S1 ) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
- ( T ) Triple the hourly rate for Holidays
- ( U ) Four times the hourly rate for Holidays
- ( V ) Including benefits at SAME PREMIUM as shown for overtime
- ( W ) Time and one half for benefits on all overtime hours.
- ( X ) Benefits payable on Paid Holiday at straight time. If worked, additional benefit amount will be required for worked hours. (Refer to other codes listed.)



## Holiday Codes

### PAID Holidays:

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

### OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

- ( 1 ) None
- ( 2 ) Labor Day
- ( 3 ) Memorial Day and Labor Day
- ( 4 ) Memorial Day and July 4th
- ( 5 ) Memorial Day, July 4th, and Labor Day
- ( 6 ) New Year's, Thanksgiving, and Christmas
- ( 7 ) Lincoln's Birthday, Washington's Birthday, and Veterans Day
- ( 8 ) Good Friday
- ( 9 ) Lincoln's Birthday
- ( 10 ) Washington's Birthday
- ( 11 ) Columbus Day
- ( 12 ) Election Day
- ( 13 ) Presidential Election Day
- ( 14 ) 1/2 Day on Presidential Election Day
- ( 15 ) Veterans Day
- ( 16 ) Day after Thanksgiving
- ( 17 ) July 4th
- ( 18 ) 1/2 Day before Christmas
- ( 19 ) 1/2 Day before New Years
- ( 20 ) Thanksgiving
- ( 21 ) New Year's Day
- ( 22 ) Christmas
- ( 23 ) Day before Christmas
- ( 24 ) Day before New Year's
- ( 25 ) Presidents' Day
- ( 26 ) Martin Luther King, Jr. Day
- ( 27 ) Memorial Day
- ( 28 ) Easter Sunday



( 29 )      Juneteenth





New York State Department of Labor - Bureau of Public Work  
State Office Building Campus  
Building 12 - Room 130  
Albany, New York 12240

**REQUEST FOR WAGE AND SUPPLEMENT INFORMATION**

As Required by Articles 8 and 9 of the NYS Labor Law

Fax (518) 485-1870 or mail this form for new schedules or for determination for additional occupations.

**This Form Must Be Typed**

Submitted By:

(Check Only One)

☐

Contracting Agency

☐

Architect or Engineering Firm

☐

Public Work District Office

Date:

**A. Public Work Contract to be let by:** (Enter Data Pertaining to Contracting/Public Agency)

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

Telephone: ( )

Fax: ( )

E-Mail:

2. NY State Units (see Item 5)

☐ 01 DOT

☐ 02 OGS

☐ 03 Dormitory Authority

☐ 04 State University  
Construction Fund

☐ 05 Mental Hygiene  
Facilities Corp.

☐ 06 OTHER N.Y. STATE UNIT

☐ 07 City

☐ 08 Local School District

☐ 09 Special Local District, i.e.,  
Fire, Sewer, Water District

☐ 10 Village

☐ 11 Town

☐ 12 County

☐ 13 Other Non-N.Y. State  
(Describe)

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

Telephone:( )

Fax: ( )

E-Mail:

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

☐ New Schedule of Wages and Supplements.

APPROXIMATE BID DATE :

☐ Additional Occupation and/or Redetermination

PRC NUMBER ISSUED PREVIOUSLY FOR  
THIS PROJECT :

OFFICE USE ONLY

**B. PROJECT PARTICULARS**

5. Project Title \_\_\_\_\_

Description of Work \_\_\_\_\_

Contract Identification Number \_\_\_\_\_

Note: For NYS units, the OSC Contract No. \_\_\_\_\_

6. Location of Project:  
Location on Site \_\_\_\_\_

Route No/Street Address \_\_\_\_\_

Village or City \_\_\_\_\_

Town \_\_\_\_\_

County \_\_\_\_\_

7. Nature of Project - Check One:

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

8. OCCUPATION FOR PROJECT :

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

9. Has this project been reviewed for compliance with the Wicks Law involving separate bidding?

YES ☐ NO ☐

10. Name and Title of Requester

Signature





NEW YORK STATE DEPARTMENT OF LABOR  
Bureau of Public Work - Debarment List

**LIST OF EMPLOYERS INELIGIBLE TO BID ON OR BE  
AWARDED ANY PUBLIC WORK CONTRACT**

Under Article 8 and Article 9 of the NYS Labor Law, a contractor, sub-contractor and/or its successor shall be debarred and ineligible to submit a bid on or be awarded any public work or public building service contract/sub-contract with the state, any municipal corporation or public body for a period of five (5) years from the date of debarment when:

- Two (2) final determinations have been rendered within any consecutive six-year (6) period determining that such contractor, sub-contractor and/or its successor has WILLFULLY failed to pay the prevailing wage and/or supplements;
- One (1) final determination involves falsification of payroll records or the kickback of wages and/or supplements.

The agency issuing the determination and providing the information, is denoted under the heading 'Fiscal Officer'. DOL = New York State Department of Labor; NYC = New York City Comptroller's Office; AG = New York State Attorney General's Office; DA = County District Attorney's Office.

**Debarment Database:** To search for contractors, sub-contractors and/or their successors debarred from bidding or being awarded any public work contract or subcontract under NYS Labor Law Articles 8 and 9, or under NYS Workers' Compensation Law Section 141-b, access the database at this link: <https://applications.labor.ny.gov/EDList/searchPage.do>

**For inquiries where WCB is listed as the "Agency", please call 1-866-546-9322**



**NYSDOL Bureau of Public Work Debarment List    09/24/2021**

**Article 8**

AGENCY	Fiscal Officer	FEIN	EMPLOYER NAME	EMPLOYER DBA NAME	ADDRESS	DEBARMENT START DATE	DEBARMENT END DATE
DOL	NYC	*****9839	A.J.S. PROJECT MANAGEMENT, INC.		149 FIFTH AVENUE NEW YORK NY 10010	12/29/2016	12/29/2021
DOL	DOL	*****4018	ADIRONDACK BUILDING RESTORATION INC.		4156 WILSON ROAD EAST TABERG NY 13471	03/26/2019	03/26/2024
DOL	AG	*****1812	ADVANCED BUILDERS & LAND DEVELOPMENT, INC.		400 OSER AVE #2300HAUPPAUGE NY 11788	09/11/2019	09/11/2024
DOL	DOL	*****1687	ADVANCED SAFETY SPRINKLER INC		261 MILL ROAD P.O BOX 296EAST AURORA NY 14052	05/29/2019	05/29/2024
DOL	NYC	*****6775	ADVENTURE MASONRY CORP.		1535 RICHMOND AVENUE STATEN ISLAND NY 10314	12/13/2017	12/13/2022
DOL	NYC		AGOSTINHO TOME		405 BARRETTO ST BRONX NY 10474	05/31/2018	05/31/2023
DOL	NYC		AMJAD NAZIR		2366 61ST ST BROOKLYN NY 11204	12/15/2016	12/15/2021
DOL	NYC		AMJED PARVEZ		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL		ANGELO F COKER		2610 SOUTH SALINA STREET SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		ANGELO F COKER		2610 SOUTH SALINA STREET SUITE 14SYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	DOL		ANITA SALERNO		158 SOLAR ST SYRACUSE NY 13204	01/07/2019	01/07/2024
DOL	NYC		ANTHONY J SCLAFANI		149 FIFTH AVE NEW YORK NY 10010	12/29/2016	12/29/2021
DOL	DOL		ANTHONY PERGOLA		3 WEST MAIN ST/SUITE 208 ELMSFORD NY 10323	01/23/2017	01/23/2022
DOL	DOL		ANTONIO ESTIVEZ		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		ARNOLD A. PAOLINI		1250 BROADWAY ST BUFFALO NY 14212	02/03/2020	02/03/2025
DOL	NYC		ARSHAD MEHMOOD		168-42 88TH AVENUE JAMAICA NY 11432	11/20/2019	11/20/2024
DOL	DOL		ARVINDER ATWAL		65 KENNETH PLACE NEW HYDE PARK NY 11040	07/19/2017	07/19/2022
DOL	NYC	*****6683	ATLAS RESTORATION CORP.		35-12 19TH AVENUE ASTORIA NY 11105	08/02/2017	08/02/2022
DOL	NYC	*****5532	ATWAL MECHANICALS, INC		65 KENNETH PLACE NEW HYDE PARK NY 11040	07/19/2017	07/19/2022
DOL	NYC	*****2591	AVI 212 INC.		260 CROPSEY AVENUE APT 11GBROOKLYN NY 11214	10/30/2018	10/30/2023
DOL	NYC		AZIDABEGUM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	NYC		BALWINDER SINGH		421 HUDSON ST SUITE C5NEW YORK NY 10014	02/20/2019	02/20/2024
DOL	NYC	*****8416	BEAM CONSTRUCTION, INC.		50 MAIN ST WHITE PLAINS NY 10606	01/04/2019	01/04/2024
DOL	NYC	*****2113	BHW CONTRACTING, INC.		401 HANOVER AVENUE STATEN ISLAND NY 10304	01/11/2021	01/11/2026
DOL	DOL		BIAGIO CANTISANI			06/12/2018	06/12/2023
DOL	DOL	*****4512	BOB BRUNO EXCAVATING, INC		5 MORNINGSIDE DR AUBURN NY 13021	05/28/2019	05/28/2024
DOL	DOL		BOGDAN MARKOVSKI		370 W. PLEASANTVIEW AVE SUITE 2.329HACKENSACK NJ 07601	02/11/2019	02/11/2024
DOL	DOL		BRADLEY J SCHUKA		4 BROTHERS ROAD WAPPINGERS FALLS NY 12590	10/20/2020	10/20/2025
DOL	DOL		BRUCE P. NASH JR.		5841 BUTTERNUT ROAD EAST SYRACUSE NY 13057	09/12/2018	09/12/2023
DOL	DOL	*****0225	C&D LAFACE CONSTRUCTION, INC.		8531 OSWEGO RD BALDWINVILLE NY 13027	02/03/2020	01/09/2023
DOL	DOL	*****8809	C.B.E. CONTRACTING CORPORATION		310 MCGUINESS BLVD GREENPOINT NY 11222	03/07/2017	03/07/2022
DOL	DOL	*****9383	C.C. PAVING AND EXCAVATING, INC.		2610 SOUTH SALINA ST SUITE 12SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL	*****9383	C.C. PAVING AND EXCAVATING, INC.		2610 SOUTH SALINA ST SUITE 12SYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	DOL	*****5161	CALADRI DEVELOPMENT CORP.		1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	DOL	*****3391	CALI ENTERPRISES, INC.		1223 PARK STREET PEEKSKILL NY 10566	05/17/2021	05/17/2026



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DOL	NYC		CALVIN WALTERS		465 EAST THIRD ST MT. VERNON NY 10550	09/09/2019	09/09/2024
DOL	DOL		CANTISANI & ASSOCIATES LTD		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CANTISANI HOLDING LLC			06/12/2018	06/12/2023
DOL	DOL		CARMEN RACHETTA		8531 OSWEGO RD BALDWINVILLE NY 13027	02/03/2020	02/03/2025
DOL	DOL		CARMENA RACHETTA		8531 OSWEGO ROAD BALDWINVILLE NY 13027	02/03/2020	01/09/2023
DOL	DOL	*****3812	CARMODY "2" INC			06/12/2018	06/12/2023
DOL	DOL	*****1143	CARMODY BUILDING CORP	CARMODY CONTRACTING AND CARMODY CONTRACTING CORP.	442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CARMODY CONCRETE CORPORATION			06/12/2018	06/12/2023
DOL	DOL		CARMODY ENTERPRISES, LTD.		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CARMODY INC		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL	*****3812	CARMODY INDUSTRIES INC			06/12/2018	06/12/2023
DOL	DOL		CARMODY MAINTENANCE CORPORATION		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		CARMODY MASONRY CORP		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL	*****8809	CBE CONTRACTING CORP		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	AG		CESAR J. AGUDELO		81-06 34TH AVENUE APT. 6EJACKSON HEIGHTS NY 11372	02/07/2018	02/07/2023
DOL	DOL	*****0026	CHANTICLEER CONSTRUCTION LLC		4 BROTHERS ROAD WAPPINGERS FALLS NY 12590	10/20/2020	10/20/2025
DOL	DOL		CHRISTOPHER GRECO		26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026
DOL	DOL		CHRISTOPHER J MAINI		19 CAITLIN AVE JAMESTOWN NY 14701	09/17/2018	09/17/2023
DOL	DOL		CHRISTOPHER PAPASTEFANOU A/K/A CHRIS PAPASTEFANOU		1445 COMMERCE AVE BRONX NY 10461	05/30/2019	05/30/2024
DOL	DOL	*****1927	CONSTRUCTION PARTS WAREHOUSE, INC.	CPW	5841 BUTTERNUT ROAD EAST SYRACUSE NY 13057	09/12/2018	09/12/2023
DOL	DOL	*****3228	CROSS-COUNTY LANDSCAPING AND TREE SERVICE, INC.	ROCKLAND TREE SERVICE	26 NORTH MYRTLE AVENUE SPRING VALLEY NY 10956	02/18/2021	02/18/2026
DOL	DOL	*****2524	CSI ELECTRICAL & MECHANICAL INC		42-32 235TH ST DOUGLASTON NY 11363	01/14/2019	01/14/2024
DOL	NYC		DALJIT KAUR BOPARAI		185-06 56TH AVE FRESH MEADOW NY 11365	10/17/2017	10/17/2022
DOL	DOL		DANICA IVANOSKI		61 WILLET ST. PASSAIC NJ 07503	10/26/2016	10/26/2021
DOL	DOL		DARIAN L COKER		2610 SOUTH SALINA ST SUITE 2CSYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL		DARIAN L COKER		2610 SOUTH SALINA ST SUITE 2CSYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	NYC		DAVID WEINER		14 NEW DROP LANE 2ND FLOORSTATEN ISLAND NY 10306	11/14/2019	11/14/2024
DOL	DOL		DEBBIE STURDEVANT		29 MAPLEWOOD DRIVE BINGHAMTON NY 13901	02/21/2017	02/21/2022
DOL	AG		DEBRA MARTINEZ		31 BAY ST BROOKLYN NY 11231	03/28/2018	03/28/2023
DOL	DOL		DELPHI PAINTING & DECORATING CO INC		1445 COMMERCE AVE BRONX NY 10461	05/30/2019	05/30/2024
DOL	DOL		DF CONTRACTORS OF ROCHESTER, INC.		1835 DAANSEN RD. PALMYRA NY 14522	05/16/2017	05/16/2022
DOL	DOL		DF CONTRACTORS, INC.		1835 DAANSEN RD. PALMYRA NY 14522	05/16/2017	05/16/2022
DOL	NYC		DIMITRIOS TSOUMAS		35-12 19TH AVENUE ASTORIA NY 11105	08/02/2017	08/02/2022
DOL	DOL		DOMENICO LAFACE		8531 OSWEGO RD	02/03/2020	01/09/2023



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DOL	DOL	*****3242	DONALD R. FORSAY	DF LAWN SERVICE	1835 DAANSEN RD. PALMYRA NY 14522	05/16/2017	05/16/2022
DOL	DOL		DONALD R. FORSAY		1835 DAANSEN RD. PALMYRA NY 14522	05/16/2017	05/16/2022
DOL	NYC		DUARTE LOPES		66-05 WOODHAVEN BLVD. STE 2REGO PARK NY 11374	04/20/2017	04/20/2022
DOL	DOL	*****5175	EAGLE MECHANICAL AND GENERAL CONSTRUCTION LLC		11371 RIDGE RD WOLCOTT NY 14590	02/03/2020	02/03/2025
DOL	DOL		EAST COAST PAVING		2238 BAKER RD GILLET PA 16923	03/12/2018	03/12/2023
DOL	NYC	*****4269	EAST PORT EXCAVATION & UTILITIES		601 PORTION RD RONKONKOMA NY 11779	11/18/2016	11/18/2021
DOL	DOL	*****0780	EMES HEATING & PLUMBING CONTR		5 EMES LANE MONSEY NY 10952	01/20/2002	01/20/3002
DOL	NYC	*****5917	EPOCH ELECTRICAL, INC		97-18 50TH AVE CORONA NY 11368	04/19/2018	04/19/2024
DOL	DOL	*****7403	F & B PAINTING CONTRACTING INC		2 PARKVIEW AVENUE HARRISON NY 10604	09/26/2016	09/26/2021
DOL	DOL		FAIGY LOWINGER		11 MOUNTAIN RD 28 VAN BUREN DRMONROE NY 10950	03/20/2019	03/20/2024
DOL	DOL		FRANK BENEDETTO		19 CATLIN AVE JAMESTOWN NY 14701	09/17/2018	09/17/2023
DOL	DOL		FRANK BENEDETTO		C/O F & B PAINTING CONTRA 2 PARKVIEW AVENUEHARRISON NY 10604	09/26/2016	09/26/2021
DOL	DOL	*****4722	FRANK BENEDETTO AND CHRISTOPHER J MAINI	B & M CONCRETE	19 CAITLIN AVE JAMESTOWN NY 14701	09/17/2018	09/17/2023
DOL	NYC		FRANK MAINI		1766 FRONT ST YORKTOWN HEIGHTS NY 10598	01/17/2018	01/17/2023
DOL	NYC	*****6616	G & G MECHANICAL ENTERPRISES, LLC.		1936 HEMPSTEAD TURNPIKE EAST MEDOW NY 11554	11/29/2019	11/29/2024
DOL	DOL		GABRIEL FRASSETTI			04/10/2019	04/10/2024
DOL	DOL		GEOFF CORLETT		415 FLAGGER AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	DA		GEORGE LUCEY		150 KINGS STREET BROOKLYN NY 11231	01/19/1998	01/19/2998
DOL	DOL		GIGI SCHNECKENBURGER		261 MILL RD EAST AURORA NY 14052	05/29/2019	05/29/2024
DOL	DOL		GIOVANNI LAFACE		8531 OSWEGO RD BALDWINVILLE NY 13027	02/03/2020	01/09/2023
DOL	NYC	*****3164	GLOBE GATES INC	GLOBAL OVERHEAD DOORS	405 BARRETTO ST BRONX NY 10474	05/31/2018	05/31/2023
DOL	NYC		GREAT ESTATE CONSTRUCTION, INC.		327 STAGG ST BROOKLYN NY 11206	10/10/2017	10/10/2022
DOL	DOL		GREGORY S. OLSON		P.O BOX 100 200 LATTA BROOK PARKHORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL		HANS RATH		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	NYC	*****3228	HEIGHTS ELEVATOR CORP.		1766 FRONT ST YORKTOWN HEIGHTS NY 10598	01/17/2018	01/17/2023
DOL	DOL	*****5131	INTEGRITY MASONRY, INC.	M&R CONCRETE	722 8TH AVE WATERVLIET NY 12189	06/05/2018	06/05/2023
DOL	DOL		IRENE KASSELIS		32 PENNINGTON AVE WALDWICK NJ 07463	05/30/2019	05/30/2024
DOL	DOL	*****9211	J. WASE CONSTRUCTION CORP.		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
DOL	DOL		J.A. HIRES CADWALLADER		P.O BOX 100 200 LATTA BROOK PARKHORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL		JAMES C. DELGIACCO		722 8TH AVE WATERVLIET NY 12189	06/05/2018	06/05/2023
DOL	DOL		JAMES J. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL		JAMES LIACONE		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL		JAMES RACHEL		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL	*****7993	JBS DIRT. INC.		7901 GEE ROAD	08/17/2021	08/17/2026



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DOL	DOL	*****5368	JCH MASONRY & LANDSCAPING INC.		35 CLINTON AVE OSSINING NY 10562	09/12/2018	09/12/2023
DOL	NYC		JENNIFER GUERRERO		1936 HEMPSTEAD TURNPIKE EAST MEADOW NY 11554	11/29/2019	11/29/2024
DOL	DOL		JIM PLAUGHER		17613 SANTE FE LINE ROAD WAYNEFIELD OH 45896	07/16/2021	07/16/2026
DOL	AG		JOHN ANTHONY MASSINO		36-49 204TH STREET BAYSIDE NY 11372	02/07/2018	02/07/2023
DOL	DOL		JOHN F. CADWALLADER		200 LATTA BROOK PARK HORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL	*****4612	JOHN F. CADWALLADER, INC.	THE GLASS COMPANY	P.O BOX 100 200 LATTA BROOK PARKHORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL		JOHN GOCEK		14B COMMERCIAL AVE ALBANY NY 12065	11/14/2019	11/14/2024
DOL	DOL		JOHN LUCIANO			05/14/2018	05/14/2023
DOL	DOL		JOHN WASE		8545 RT 9W ATHENS NY 12015	03/09/2021	03/09/2026
DOL	AG	*****0600	JOHNCO CONTRACTING, INC.		36-49 204TH STREET BAYSIDE NY 11372	02/07/2018	02/07/2023
DOL	DOL		JON E DEYOUNG		261 MILL RD P.O BOX 296EAST AURORA NY 14052	05/29/2019	05/29/2024
DOL	DOL		JORGE RAMOS		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	DOL		JORI PEDERSEN		415 FLAGER AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	DOL		JOSE CHUCHUCA		35 CLINTON AVE OSSINING NY 10562	09/12/2018	09/12/2023
DOL	NYC		JOSEPH FOLEY		66-05 WOODHAVEN BLVD. STE 2REGO PARK NY 11374	04/20/2017	04/20/2022
DOL	NYC		JOSEPH MARTINO		1535 RICHMOND AVENUE STATEN ISLAND NY 10314	12/13/2017	12/13/2022
DOL	DOL		JOY MARTIN		2404 DELAWARE AVE NIGARA FALLS NY 14305	09/12/2018	09/12/2023
DOL	DOL		JULIUS AND GITA BEHREND		5 EMES LANE MONSEY NY 10952	11/20/2002	11/20/3002
DOL	DOL	*****5062	K R F SITE DEVELOPMENT INC		375 LAKE SHORE DRIVE PUTNAM VALLEY NY 10579	01/23/2017	01/23/2022
DOL	NYC		K.S. CONTRACTING CORP.		29 PHILLIP DRIVE PARSIPPANY NJ 07054	02/13/2017	02/13/2022
DOL	DOL		KARIN MANGIN		796 PHELPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	DOL		KATE E. CONNOR		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KATIE BURDICK		2238 BAKER RD GILLETT PA 16923	03/12/2018	03/12/2023
DOL	DOL	*****2959	KELC DEVELOPMENT, INC		7088 INTERSTATE ISLAND RD SYRACUSE NY 13209	03/31/2021	03/31/2026
DOL	DOL		KENNETH FIORENTINO		375 LAKE SHORE DRIVE PUTNAM VALLEY NY 10579	01/23/2017	01/23/2022
DOL	DOL		KIMBERLY F. BAKER		7901 GEE ROAD CANASTOTA NY 13032	08/17/2021	08/17/2026
DOL	DOL	*****3490	L & M CONSTRUCTION/DRYWALL INC.		1079 YONKERS AVE YONKERS NY 10704	08/07/2018	08/07/2023
DOL	DA	*****8816	LAKE CONSTRUCTION AND DEVELOPMENT CORPORATION		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL	*****4505	LARAPINTA ASSOCIATES INC		29 MAPLEWOOD DRIVE BINGHAMTON NY 13901	02/21/2017	02/21/2022
DOL	DOL		LAVERN GLAVE		161 ROBYN RD MONROE NY 10950	01/30/2018	01/30/2023
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	06/24/2016	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	06/24/2016	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	01/17/2017	09/19/2022



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DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL	*****4388	LEN.J CONSTRUCTION, LLC		PO BOX 10007 ALBANY NY 12201	08/14/2017	09/19/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	09/19/2017	09/19/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	08/14/2017	08/14/2022
DOL	DOL		LEROY NELSON JR		PO BOX 10007 ALBANY NY 12201	01/17/2017	09/19/2022
DOL	DA	*****4460	LONG ISLAND GLASS & STOREFRONTS, LLC		4 MANHASSET TRL RIDGE NY 11961	09/06/2018	09/06/2023
DOL	AG	*****4216	LOTUS-C CORP.		81-06 34TH AVENUE APT. 6EJACKSON HEIGHTS NY 11372	02/07/2018	02/07/2023
DOL	DOL		LOUIS A. CALICCHIA		1223 PARK ST. PEEKSKILL NY 10566	05/17/2021	05/17/2026
DOL	NYC		LUBOMIR PETER SVOBODA		27 HOUSMAN AVE STATEN ISLAND NY 10303	12/26/2019	12/26/2024
DOL	NYC		M & L STEEL & ORNAMENTAL IRON CORP.		27 HOUSMAN AVE STATEN ISLAND NY 10303	12/26/2019	12/26/2024
DOL	DOL		M ANVER BEIG		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	DOL		M. ANVER BEIG		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	DOL	*****1784	MADISON AVE CONSTRUCTION CORP		39 PENNY STREET WEST ISLIP NY 11795	11/02/2016	11/02/2021
DOL	DOL	*****2196	MAINSTREAM SPECIALTIES, INC.		11 OLD TOWN RD SELKIRK NY 12158	02/02/2021	02/02/2026
DOL	DA		MANUEL P TOBIO		150 KINGS STREET BROOKLYN NY 14444	08/19/1998	08/19/2998
DOL	DA		MANUEL TOBIO		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	NYC		MAREK FABIJANOWSKI		50 MAIN ST WHITE PLAINS NY 10606	01/04/2019	01/04/2024
DOL	NYC		MARTINE ALTER		1010 NORTHERN BLVD. GREAT NECK NY 11021	03/09/2017	03/09/2022
DOL	DOL		MARVIN A STURDEVANT		29 MAPLEWOOD DRIVE BINGHAMTON NY 13901	02/21/2017	02/21/2022
DOL	DOL		MASONRY CONSTRUCTION, INC.		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL	*****3333	MASONRY INDUSTRIES, INC.		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	NYC		MATINA KARAGIANNIS		97-18 50TH AVE CORONA NY 11368	04/19/2018	04/19/2023
DOL	DOL		MATTHEW P. KILGORE		4156 WILSON ROAD EAST TABERG NY 13471	03/26/2019	03/26/2024
DOL	DOL		MAURICE GAWENO		442 ARMONK RD MOUNT KISCO NY 10549	06/12/2018	06/12/2023
DOL	DOL		MCLEAN "MIKKI BEANE"		1229 JAMES STREET SYRACUSE NY 13203	05/02/2017	05/02/2022
DOL	DOL		MCLEAN "MIKKI" DRAKE		1229 JAMES STREET SYRACUSE NY 13203	05/02/2017	05/02/2022
DOL	DOL		MCLEAN M DRAKE-BEANE		1229 JAMES STREET SYRACUSE NY 13203	05/02/2017	05/02/2022
DOL	DOL	*****9445	MCLEAN M WALSH	ELITE PROFESSION AL PAINTING OF CNY	1229 JAMES STREET SYRACUSE NY 13203	05/02/2017	05/02/2022
DOL	DOL	*****9445	MCLEAN M WALSH	ELITE PROFESSION AL PAINTING OF CNY	1229 JAMES STREET SYRACUSE NY 13203	05/02/2017	05/02/2022
DOL	DOL		MICHAEL LENIHAN		1079 YONKERS AVE UNIT 4YONKERS NY 10704	08/07/2018	08/07/2023
DOL	AG		MICHAEL RIGLIETTI		31 BAY ST BRONX NY 10461	03/28/2018	03/28/2023



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DOL	DOL	*****4829	MILESTONE ENVIRONMENTAL CORPORATION		704 GINESI DRIVE SUITE 29MORGANVILLE NJ 07751	04/10/2019	04/10/2024
DOL	NYC	*****9926	MILLENNIUM FIRE PROTECTION, LLC		325 W. 38TH STREET SUITE 204NEW YORK NY 10018	11/14/2019	11/14/2024
DOL	NYC	*****0627	MILLENNIUM FIRE SERVICES, LLC		14 NEW DROP LNE 2ND FLOORSTATEN ISLAND NY 10306	11/14/2019	11/14/2024
DOL	NYC	*****3826	MOVING MAVEN OF NY, INC.		1010 NORTHERN BLVD. GREAT NECK NY 11021	03/09/2017	03/09/2022
DOL	NYC	*****3550	MOVING MAVEN, INC		1010 NORTHERN BLVD. GREAT NECK NY 11021	03/09/2017	03/09/2022
DOL	AG		MSR ELECTRICAL CONSTRUCTION CORP.		31 BAY ST BROOKLYN NY 11231	03/28/2018	03/28/2023
DOL	DOL		MUHAMMAD BEIG		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	DOL		MUHAMMAD BEIG		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	NYC		MUHAMMED A. HASHEM		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DA	*****9786	NATIONAL INSULATION & GC CORP		180 MILLER PLACE HICKSVILLE NY 11801	12/12/2018	12/12/2023
DOL	DOL	*****3684	NATIONAL LAWN SPRINKLERS, INC.		645 N BROADWAY WHITE PLAINS NY 10603	05/14/2018	05/14/2023
DOL	NYC		NICHOLAS FILIPAKIS		7113 FORT HAMILTON PARKWA BROOKLYN NY 11228	12/09/2016	12/09/2021
DOL	DOL	*****7429	NICOLAE I. BARBIR	BESTUCCO CONSTRUCTI ON, INC.	444 SCHANTZ ROAD ALLETOWN PA 18104	09/17/2020	09/17/2025
DOL	DOL	*****6966	NORTH COUNTRY DRYWALL AND PAINT		23167 COUNTY ROUTE 59 DEXTER NY 13634	10/24/2016	10/24/2021
DOL	DOL	*****0065	NORTHEAST LANDSCAPE AND MASONRY ASSOC		3 WEST MAIN ST/SUITE 208 ELMSFORD NY 10523	01/23/2017	01/23/2022
DOL	DOL	*****1845	OC ERECTERS, LLC A/K/A OC ERECTERS OF NY INC.		1207 SW 48TH TERRACE DEERFIELD BEACH FL 33442	01/16/2018	01/16/2023
DOL	NYC	*****0818	ONE TEN RESTORATION, INC.		2366 61ST ST BROOKLYN NY 11204	12/15/2016	12/15/2021
DOL	NYC		PARESH SHAH		29 PHILLIP DRIVE PARSIPPANY NJ 07054	02/13/2017	02/13/2022
DOL	DOL		PAULINE CHAHALES		935 S LAKE BLVD MAHOPAC NY 10541	03/02/2021	03/02/2026
DOL	NYC	*****9422	PELIUM CONSTRUCTION, INC.		22-33 35TH ST. ASTORIA NY 11105	12/30/2016	12/30/2021
DOL	DOL		PETER M PERGOLA		3 WEST MAIN ST/SUITE 208 ELMSFORD NY 10523	01/23/2017	01/23/2022
DOL	DOL		PETER STEVENS		11 OLD TOWN ROAD SELKIRK NY 12158	02/02/2021	02/02/2026
DOL	DOL		PIERRE LAPORT		224 COUNTY HIGHWAY 138 BROADALBIN NY 12025	03/07/2017	03/07/2022
DOL	DOL	*****1543	PJ LAPORT FLOORING INC		224 COUNTY HIGHWAY 138 BROADALBIN NY 12025	03/07/2017	03/07/2022
DOL	NYC	*****5771	PMJ ELECTRICAL CORP		7113 FORT HAMILTON PARKWA BROOKLYN NY 11228	12/09/2016	12/09/2021
DOL	DOL	*****0466	PRECISION BUILT FENCES, INC.		1617 MAIN ST PEEKSKILL NY 10566	03/03/2020	03/03/2025
DOL	NYC	*****4532	PROFESSIONAL PAVERS CORP.		66-05 WOODHAVEN BLVD. REGO PARK NY 11374	04/20/2017	04/20/2022
DOL	NYC		RASHEL CONSTRUCTION CORP		524 MCDONALD AVENUE BROOKLYN NY 11218	09/17/2020	09/17/2025
DOL	DOL	*****1068	RATH MECHANICAL CONTRACTORS, INC.		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	DOL	*****2633	RAW POWER ELECTRIC CORP		3 PARK CIRCLE MIDDLETOWN NY 10940	01/30/2018	01/30/2023
DOL	AG	*****7015	RCM PAINTING INC.		69-06 GRAND AVENUE 2ND FLOORMASPETH NY 11378	02/07/2018	02/07/2023
DOL	DOL		REGINALD WARREN		161 ROBYN RD MONROE NY 10950	01/30/2018	01/30/2023
DOL	DOL	*****9148	RICH T CONSTRUCTION		107 WILLOW WOOD LANE CAMILLUS NY 13031	11/13/2018	11/13/2023
DOL	DOL		RICHARD MACONE		8617 THIRD AVE BROOKLYN NY 11209	09/17/2018	09/17/2023



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DOL	DOL		RICHARD REGGIO		1617 MAIN ST PEEKSKILL NY 10566	03/03/2020	03/03/2025
DOL	DOL	*****9148	RICHARD TIMIAN	RICH T CONSTRUCTI ON	108 LAMONT AVE SYRACUSE NY 13209	10/16/2018	10/16/2023
DOL	DOL		RICHARD TIMIAN JR.		108 LAMONT AVE SYRACUSE NY 13209	10/16/2018	10/16/2023
DOL	DOL		RICHARD TIMIAN JR.		108 LAMONT AVE SYRACUSE NY 13209	11/13/2018	11/13/2023
DOL	DOL		ROBBYE BISSEsar		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	01/11/2003	01/11/3003
DOL	DOL		ROBERT A. VALERINO		3841 LANYARD COURT NEW PORT RICHEY FL 34652	07/09/2019	07/09/2024
DOL	DOL		ROBERT BRUNO		3 GAYLORD ST AUBURN NY 13021	11/15/2016	11/15/2021
DOL	DOL		ROBERT BRUNO		5 MORNINGSIDE DRIVE AUBURN NY 13021	05/28/2019	05/28/2024
DOL	NYC		ROBERT HOHMAN		149 FIFTH AVE NEW YORK NY 10010	12/29/2016	12/29/2021
DOL	DOL		RODERICK PUGH		404 OAK ST SUITE 101SYRACUSE NY 13203	07/23/2018	07/23/2023
DOL	DOL	*****4880	RODERICK PUGH CONSTRUCTION INC.		404 OAK ST SUITE 101SYRACUSE NY 13203	07/23/2018	07/23/2023
DOL	DOL		ROMEO WARREN		161 ROBYN RD MONROE NY 10950	01/30/2018	01/30/2023
DOL	DOL		RONALD MESSEN		14B COMMERCIAL AVE ALBANY NY 12065	11/14/2019	11/14/2024
DOL	DOL		ROSEANNE CANTISANI			06/12/2018	06/12/2023
DOL	DOL		RYAN ALBIE		21 S HOWELLS POINT ROAD BELLPORT NY 11713	02/21/2017	02/21/2022
DOL	DOL	*****3347	RYAN ALBIE CONTRACTING INC		21 S HOWELLS POINT ROAD BELLPORT NY 11713	02/21/2017	02/21/2022
DOL	DOL	*****1365	S & L PAINTING, INC.		11 MOUNTAIN ROAD P.O BOX 408MONROE NY 10950	03/20/2019	03/20/2024
DOL	DOL	*****7730	S C MARTIN GROUP INC.		2404 DELAWARE AVE NIAGARA FALLS NY 14305	09/12/2018	09/12/2023
DOL	NYC	*****0349	SAM WATERPROOFING INC		168-42 88TH AVENUE APT.1 AJAMAICA NY 11432	11/20/2019	11/20/2024
DOL	NYC		SANDEEP BOPARAI		185-06 56TH AVE FRESH MEADOW NY 11365	10/17/2017	10/17/2022
DOL	DOL	*****9751	SCW CONSTRUCTION		544 OLD ROUTE 23 ACRE NY 12405	02/14/2017	02/14/2022
DOL	NYC	*****6597	SHAIRA CONSTRUCTION CORP.		421 HUDSON STREET SUITE C5NEW YORK NY 10014	02/20/2019	02/20/2024
DOL	DOL	*****1961	SHANE BURDICK	CENTRAL TRAFFIC CONTROL, LLC.	2238 BAKER ROAD GILLET PA 16923	03/12/2018	03/12/2023
DOL	DOL		SHANE BURDICK		2238 BAKER ROAD GILLET PA 16923	03/12/2018	03/12/2023
DOL	DOL		SHANE NOLAN		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL		SHULEM LOWINGER		11 MOUNTAIN ROAD 28 VAN BUREN DRMONROE NY 10950	03/20/2019	03/20/2024
DOL	DOL	*****0816	SOLAR ARRAY SOLUTIONS, LLC		9365 WASHINGTON ST LOCKPORT IL 60441	07/23/2018	07/23/2023
DOL	DOL	*****0440	SOLAR GUYS INC.		8970 MIKE GARCIA DR MANASSAS VA 20109	07/16/2021	07/16/2026
DOL	DOL	*****2221	SOUTH BUFFALO ELECTRIC, INC.		1250 BROADWAY ST BUFFALO NY 14212	02/03/2020	02/03/2025
DOL	DOL	*****3496	STAR INTERNATIONAL INC		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	08/11/2003	08/11/3003
DOL	DOL	*****6844	STEAM PLANT AND CHX SYSTEMS INC.		14B COMMERCIAL AVENUE ALBANY NY 12065	11/14/2019	11/14/2024
DOL	DOL	*****9933	STEED GENERAL CONTRACTORS, INC.		1445 COMMERCE AVE BRONX NY 10461	05/30/2019	05/30/2024
DOL	DOL	*****9528	STEEL-IT, LLC.		17613 SANTE FE LINE ROAD WAYNESFIELD OH 45896	07/16/2021	07/16/2026
DOL	DOL		STEFANOS PAPASTEFANOU, JR. A/K/A STEVE		256 WEST SADDLE RIVER RD UPPER SADDLE RIVER NJ	05/30/2019	05/30/2024



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DOL	DOL	*****9751	STEPHEN C WAGAR		544 OLD ROUTE 23 ACRE NY 12405	02/14/2017	02/14/2022
DOL	DOL		STEVE TATE		415 FLAGER AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	NYC		STEVEN GOVERNALE		601 PORTION RD RONKONKOMA NY 11779	11/18/2016	11/18/2021
DOL	DOL		STEVEN MARTIN		2404 DELWARE AVE NIAGARA FALLS NY 14305	09/12/2018	09/12/2023
DOL	DOL		STEVEN TESTA		50 SALEM STREET - BLDG B LYNNFIELD MA 01940	01/23/2017	01/23/2022
DOL	NYC	*****5863	SUKHMANY CONSTRUCTION, INC.		185-06 56TH AVE FRESH MEADOW NY 11365	10/17/2017	10/17/2022
DOL	DOL	*****1060	SUNN ENTERPRISES GROUP, LLC		370 W. PLEASANTVIEW AVE SUITE 2.329HACKENSACK NJ 07601	02/11/2019	02/11/2024
DOL	DOL	*****8209	SYRACUSE SCALES, INC.		158 SOLAR ST SYRACUSE NY 13204	01/07/2019	01/07/2024
DOL	DOL		TALAILA OCAMPA		1207 SW 48TH TERRACE DEERFIELD BEACH FL 33442	01/16/2018	01/16/2023
DOL	DOL		TERRY THOMPSON		11371 RIDGE RD WOLCOTT NY 14590	02/03/2020	02/03/2025
DOL	DOL		TEST		P.O BOX 123 ALBANY NY 12204	05/20/2020	05/20/2025
DOL	DOL	*****6789	TEST1000		P.O BOX 123 ALBANY NY 12044	03/01/2021	03/01/2026
DOL	DOL	*****5570	TESTA CORP		50 SALEM STREET - BLDG B LYNNFIELD MA 01940	01/23/2017	01/23/2022
DOL	DOL	*****5766	THE COKER CORPORATION	COKER CORPORATIO N	2610 SOUTH SALINA ST SUITE 14SYRACUSE NY 13205	12/04/2018	12/04/2023
DOL	DOL	*****5766	THE COKER CORPORATION	COKER CORPORATIO N	2610 SOUTH SALINA ST SUITE 14SYRACUSE NY 13205	09/17/2020	09/17/2025
DOL	DOL	*****8311	TRIPLE B FABRICATING, INC.		61 WILLETT ST. PASSAIC NJ 07503	10/26/2016	10/26/2021
DOL	DOL	*****6392	V.M.K CORP.		8617 THIRD AVE BROOKLYN NY 11209	09/17/2018	09/17/2023
DOL	DOL	*****6418	VALHALLA CONSTRUCTION, LLC.		796 PHLEPS ROAD FRANKLIN LAKES NJ 07417	12/01/2020	12/01/2025
DOL	NYC	*****7361	VIALE HOLDINGS, INC.	MOVING MAVEN	1010 NORTHERN BLVD. GREAT NECK NY 11021	03/09/2017	03/09/2022
DOL	DOL		VICTOR ALICANTI		42-32 235TH ST DOUGLASTON NY 11363	01/14/2019	01/14/2024
DOL	NYC		VIKTAR PATONICH		2630 CROPEY AVE BROOKLYN NY 11214	10/30/2018	10/30/2023
DOL	DOL		VIKTORIA RATH		24 ELDOR AVENUE NEW CITY NY 10956	02/03/2020	02/03/2025
DOL	NYC		VITO GARGANO		1535 RICHMOND AVE STATEN ISLAND NY 10314	12/13/2017	12/13/2022
DOL	NYC	*****3673	WALTERS AND WALTERS, INC.		465 EAST AND THIRD ST MT. VERNON NY 10550	09/09/2019	09/09/2024
DOL	DOL		WAYNE LIVINGSTON JR	NORTH COUNTRY DRYWALL AND PAINT	23167 COUNTY ROUTE 59 DEXTER NY 13634	10/24/2016	10/24/2021
DOL	DOL	*****3296	WESTERN NEW YORK CONTRACTORS, INC.		3841 LAYNARD COURT NEW PORT RICHEY FL 34652	07/09/2019	07/09/2024
DOL	DOL		WHITE PLAINS CARPENTRY CORP		442 ARMONK RD	06/12/2018	06/12/2023
DOL	DOL		WILLIAM C WATKINS		1229 JAMES STREET SYRACUSE NY 13203	05/02/2017	05/02/2022
DOL	DOL		WILLIAM DEAK		C/O MADISON AVE CONSTR CO 39 PENNY STREETWEST ISLIP NY 11795	11/02/2016	11/02/2021
DOL	DOL	*****4043	WINDSHIELD INSTALLATION NETWORK, INC.		200 LATTA BROOK PARK HORSEHEADS NY 14845	03/08/2018	03/08/2023
DOL	DOL	*****4730	XGD SYSTEMS, LLC	TDI GOLF	415 GLAGE AVE #302STUART FL 34994	10/31/2018	10/31/2023
DOL	NYC		ZAKIR NASEEM		30 MEADOW ST BROOKLYN NY 11206	10/10/2017	10/10/2022
DOL	NYC	*****8277	ZHN CONTRACTING CORP		30 MEADOW ST BROOKLYN NY 11206	10/10/2017	10/10/2022





architects + engineers

## **TECHNICAL SPECIFICATIONS**

**WESTCHESTER COUNTY  
DEPARTMENT OF PUBLIC WORKS AND  
TRANSPORTATION  
DIVISION OF ENGINEERING  
WESTCHESTER COUNTY, NEW YORK**

### **ROOF REPLACEMENT PROGRAM YONKERS JOINT WATER RESOURCE RECOVERY FACILITY YONKERS, NEW YORK**

Contract No. 21-507



**AUGUST 2021**

**Prepared by:**

**H2M architects + engineers**  
2700 Westchester Avenue, Ste 415  
Purchase, NY 10577  
tel 914.358.5623 fax 914.358.5624



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### APPENDICES

APPENDIX A: Environmental Report: Yonkers Water Resource Recovery Facility  
Blower and Administration Building

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APPENDIX C: Roof Assessment Report: Yonkers Water Resource Recovery Facility  
Blower and Administration Building



**SECTION 011100**  
**SUMMARY OF WORK**

**PART 1 - GENERAL**

**1.01 BRIEF PURPOSE OF PROJECT / GENERAL**

- A. The purpose of the project is to remove and dispose of all existing roofing materials and provide a complete installation of a new Styrene, Butadiene Styrene white 3 ply roofing system with rigid insulation.
- B. All work shown and specified in the Contract Documents shall be the work of this Construction Contract. The Owner does not anticipate awarding other prime contracts for the project as shown.
- C. This Section provides an abbreviated summary of the work for the Construction Contract associated with the Owner's program to construct the project.
- D. In the event that any of the provisions in the technical specifications conflicts with the general conditions, the provision more favorable to the owner, as determined by the owner in its sole discretion, shall govern.

**1.02 NOMENCLATURE**

- A. Where the terms "Engineer/Architect", "Architect/Engineer", "Engineer", or "Architect" are used throughout these Contract Documents, they shall mean the firm of H2M architects + engineers as may be abbreviated by H2M.
- B. The terms "Contractor" and/or "Prime Contractor" where used shall refer to the individual or company who has entered into an agreement with the Owner to perform the work contained within these Contract Documents. The lack of word capitalization shall be incidental.
- C. The Contractor may be referred to as the "General Contractor", "Prime General Contractor", "Contract G Contractor" or similar wording. The lack of word capitalization shall be incidental. This Construction Contract shall be known as Contract G.

**1.03 ABBREVIATED SUMMARY OF CONTRACT WORK**

- A. Furnish all labor, equipment, materials, tools, means, methods, and incidentals necessary to complete the Work as required by the Contract Documents for this Construction Contract. The contractor shall coordinate, through the Owner/Architect/Engineer, the work of their contract with the work by others.
- B. This following abbreviated summary is provided in order to briefly describe the work covered by the Contract Documents for this Construction Contract. It is not all inclusive of the work under the Contract.
- C. The work includes, but is not limited to, the following:
  - 1. Demolition and removals as shown,
  - 2. Installation of a new Styrene, Butadiene Styrene white 3 ply roofing system with rigid insulation including rigid insulation, walway pads, flashing and coping as shown on the construction documents.
  - 3. Pipe support systems for exposed piping



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4. Miscellaneous metals including guardrails, ladders, and supports.
5. Roof access ladders & hatches as shown.
6. Miscellaneous masonry work as shown.
7. Project closeout submittals.

D. All other work shown and specified within the Contract Documents.

#### 1.04 PARTIAL LISTING OF OVERALL CONTRACT REQUIREMENTS

- A. The Contract Documents detail the work included in the Contract. Related requirements and conditions covered by the Contract Documents include, but is not limited to, the following:
1. Debris removal and daily and final cleaning up.
  2. Coordination with the Owner and other contractors who have been awarded work by the Owner.
  3. Coordination with utility companies necessary to schedule connection of services, and management of the installation.
  4. Site utilization and management so as not to disrupt the Owner's ability to operate the existing facilities in a safe and efficient manner.
  5. Maintain the Owner's ability to operate the facility at all times during the construction period.
  6. Facilities to be used during the contract period that are to be used by the Owner or his representatives and others involved with constructing the project.
  7. Product and equipment storage and handling requirements.
  8. Starting and adjusting of the equipment and systems required under the project.
  9. Site safety in accordance with all applicable federal, state, and local regulations.
  10. Project submittals, meetings, professional photographs, testing services, work plans, schedules, shop drawings, closeout procedures and documents, manuals, as-built drawings, and final commissioning of the work shall be provided as required by the Contract.
  11. Provide and maintain, at all times, temporary roadways for site access to all parties involved with the project.
  12. To not hinder the Owner's ability to maintain permit levels of sewage treatment at all times.

#### 1.05 OWNER SUPPLIED PRODUCTS AND UTILITIES

- A. The Owner will not be supplying equipment, labor, or tools for the project.
- B. The Owner will pay for electricity usage. The restrictions on electrical usage shall be as follows:
1. Power tool usage during specified working hours will only be permitted.
  2. Dewatering and trash pumps and portable heaters will not be permitted.
  3. Sump pumps, if less than 1/3 horsepower will be allowed. Only two (2) sump pumps will be permitted to operate at the same time.
  4. Power to help cure concrete or painting systems will not be permitted.
  5. Power to the Contractor's trailer will be permitted.
- C. The Owner reserves the right to stop paying for electrical usage at any time if, in the opinion of the Owner/Architect/Engineer, the Contractor causes excessive electrical charges or does not conserve electricity to the maximum extent possible in the opinion of the Architect/Engineer. All Contractors shall conserve electricity during the course of construction.



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PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

**END OF SECTION**



**SECTION 011400**  
**WORK RESTRICTIONS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Site access and control of areas outside of site.
- B. Contractor use of the premises.
- C. Contractor storage, parking and deliveries.
- D. Work hours, employee conduct and miscellaneous employee requirements.

**1.02 SITE ACCESS AND CONTROL**

- A. The Contractor shall use the designated entrance to the site as shown on the drawings. If no site entrance is designated, the Contractor shall use an entrance designated by the Owner's Construction Representative.
  - 1. The Owner may permit, solely at the Owner's discretion, the temporary use of another entrance for site access.
  - 2. The Owner will only review requests made by the Contractor for an exception to the designated site entrance if made in writing at least 72 hours in advance of each of the times desired for use.
- B. The Contractor is to maintain the entrance area clear of materials, vehicles and any other obstacle or debris. Failure to do so will result in a minimum back charge of \$750 per occurrence.
- C. The area around the site is a residential neighborhood. The Owner intends to be a good neighbor. The Contractor shall not close any road for any period in time. The Contractor shall take whatever measures are necessary to not cause any inconvenience to the area's residents.
- D. The Contractor is responsible to employ methods to prevent construction materials and/or debris from leaving the site. The Contractor is responsible to routinely monitor the areas surrounding the site during the day as well as at the end of the work-day and to immediately clean up any area to its previous condition.
- E. The Contractor shall employ methods to prevent the transmission of dirt from vehicles driving on exposed areas of the site from reaching the surrounding roadways. The Contractor will be responsible to immediately clean the roadway, should the measures being taken by the Contractor not satisfactorily control the transmission of any dirt to the roadway.
- F. Any damages to areas outside the site, spills of soil, liquid, or any other material shall immediately be repaired, cleaned and restored to its previous condition.
- G. The Contractor shall comply with all state and local requirements for allowable weight limits of vehicles on all roads.
- H. The Owner reserves the right to back charge the Contractor for all costs associated with maintaining the grounds as well as maintaining areas outside the site, which may be disturbed



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by the Contractor should the Contractor fail to maintain or repair the aforementioned in a condition acceptable to the Owner.

- I. The Contractor shall not close any road for any period in time unless approved ahead of time by appropriate road agency. The Contractor shall take whatever measures are necessary to not cause any inconvenience to the area's residents.
- J. The Contractor shall be responsible for protecting private property. All existing buildings, structures, shrubs, trees, lawn fixtures, sculptures and misc. equipment shall be protected at all times. Any removals or relocation of said objects, if allowed shall be as directed by the Architect/Engineer or the Owner. The Contractor shall protect all of the physical structures, property and improvements from damage by their Work and shall immediately repair or replace damage caused by construction operations, employees or equipment employed by the Contractor. All labor, materials and equipment and outside contractors that are employed by the Owner to repair damage caused by the Contractor shall be billed to the Contractor directly or withheld from money due the Contractor for work already completed.
- K. Keep all existing driveways, roads, and parking areas free and clear of materials and equipment. Do not unreasonably encumber the work area with materials and equipment.
- L. The Contractor is responsible for cleaning up the work area. Failure to maintain a clean work site daily, will result in others performing the work and the Contractor being back charged for the cleaning cost plus construction administration fees.
- M. Do not discard or dispose of any waste on-site.
- N. The Contractor shall be responsible for managing dust.

#### 1.03 CONTRACTOR USE OF THE PREMISES

- A. Premises, for the purpose of this Contract, shall mean the site, buildings and other structures located within the property line or in any temporary or permanent construction easements identified on the plans.
- B. The Contractor shall use and manage the premises and the associated construction activities as follows:
  - 1. To not hinder the Owner's ability to operate their facilities.
  - 2. To allow for stockpiling of construction material and debris without any significant hardship, as defined by the Owner's Construction Representative, on the Owner or other contractors.
  - 3. To allow for the delivery of equipment and materials by independent trucking companies by leaving enough space for backing in and out of areas.
  - 4. To allow for the safe, unimpeded travel way of the Owners vehicles, Owner's Construction Representative's vehicles, Architect/Engineer's vehicles, construction vehicles and heavy construction equipment about the entire site.
- C. The Contractor shall maintain the premises in a safe condition throughout the construction period. Compliance with OSHA regulations and site safety shall be the responsibility of the Contractor as it relates to work of the Contract. The posting of all applicable OSHA safety signs shall be the responsibility of the Contractor.



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- D. The Contractor shall provide temporary handrails, as required, for their work or for work put in place by their Contract that will require temporary handrails. Construction of temporary handrails shall be as specified in Section 015000.
- E. The Contractor shall be responsible for protecting Owner's property. All existing buildings, structures, shrubs, trees, lawn fixtures, sculptures and misc. equipment shall be protected at all times. Any removals or relocation of said objects, if allowed shall be as directed by Owner's Construction Representative.
- F. The Contractor shall protect all of the physical structures, property and improvements upon the site from damage by their Work and shall immediately repair or replace damage caused by construction operations, employees or equipment employed by the Contractor. All labor, materials and equipment and outside contractors that are employed by the Owner to repair damage caused by the Contractor shall be billed to the Contractor directly or withheld from money due the Contractor for work already completed.
- G. The construction site space is limited and it shall be the Contractor's responsibility to manage the site during the entire construction period with input from all concerned parties as to meeting their needs. Equal consideration of the needs of others with that of the Contractor's shall be provided as judged by the Owner.
- H. Due to the limited site area available for construction, staging areas shall be relocated several times during the various stages of construction. Additional compensation for relocating staging areas, equipment and material storage, and trailers are not to be considered an extra cost to the Contractor as this is an anticipated expense that shall be considered at the time of the bid.
- I. The Contractor is responsible for cleaning up their own materials and debris. Failure to maintain a clean work site daily, will result in other performing the work and The Contractor being back charged for the cleaning cost plus construction administration fees.
- J. Use of the existing building facilities during construction is prohibited including but not limited to: toilet rooms, telephone and water fountains. The Contractor shall be fined \$250 per occurrence if their employee (or subcontractor's employee) is observed disregarding these rules.
- K. Should it become necessary to access the existing building during construction hours for measurements or other non-disruptive work, the contractor shall be escorted by an Owner's Construction Representative.
- L. Refer to Section 015000 - Temporary Facilities and Controls for minimum rubbish removal requirements.
- M. Do not discard or dispose of any waste on-site.
- N. Open fires will not be permitted on the site.

#### **1.04 CONTRACTOR STORAGE, PARKING AND DELIVERIES**

- A. The Contractor must provide exterior storage containers when required. Final location of storage container shall be determined by the Owner.



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- B. Do not unreasonably encumber the premises with materials and equipment. Do not store material in existing buildings. Store all equipment and materials to allow the Owner's employees to operate and conduct their business safely.
- C. Confine premise storage areas to locations designated by the Owner. Immediately repair or replace damaged facilities to the satisfaction of the Owner and to a condition that existed before the damage occurred as determined by preconstruction photographs, or if photographs are unavailable, to that deemed by the Owner.
- D. No materials storage will be permitted within the buildings at any time during construction.
- E. Storage of chemicals and paint materials shall be outside the existing or new structures and shall follow manufacturer's storage/handling guidelines.
- F. Compressed gas containers shall be properly stored and secured per OSHA, to the satisfaction of the Owner. Failure to do so will result in a \$250 back charge, per occurrence.
- G. The Contractor shall provide minimum of 48 hours advance written notice to the Owner's Construction Representative for deliveries of materials, site visits by inspectors, manufacturer's representatives or any other occasion that impacts the use of the site. The Contractor shall be responsible for any costs that are incurred by the owner, for failure to meet previously agreed upon appointments or work schedules.
- H. Deliveries sent to the Owner will not be signed for or unloaded by the Owner. They will be directed to the construction site and if no employee is on site, the delivery will be rejected, at the contractor's expense.
- I. Night deliveries of equipment (past the designated quitting time) will not be permitted. Do not schedule trucking companies to deliver equipment or wait for the job site to open. Delivery trucks shall not obstruct the site entrance, shall not sit within the neighborhood causing an obstruction or perceived nuisance, nor be left idling on or off the site for any period of time.
- J. Parking shall be in the designated areas of the site only. All automotive type vehicles are to be locked when parked or unattended to prevent unauthorized use. Do not leave vehicles or equipment unattended with the motor running or the ignition key in place. Any vehicles or trucks in non-designated areas may be towed at contractor's expense.

#### **1.05 WORK HOURS, EMPLOYEE CONDUCT AND MISCELLANEOUS EMPLOYEE REQUIREMENTS**

- A. The Contractor will be permitted to schedule working days and hours as specified in the General Terms and Conditions, if no times are specified therein then the work hours shall be Monday - Friday 8:00 am - 4:00 pm.
- B. Employees are to act in a professional manner. Any employee using inappropriate language or who is disruptive to the work environment will be banned from the site.
- C. Proper work attire is required. Shirts are to be worn at all times and no short pants are permitted.
- D. Employees shall not converse with local residents or Owner's employees.
- E. Any employee found under the influence of any drug or alcohol will be banned from the site.



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- F. The Contractor shall schedule working days and hours as specified. The contractor shall pay all excess costs for working beyond the times specified. This includes the cost of the owner's employees to keep the building/site open and/or the cost of the additional services for the construction manager.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

**END OF SECTION**



**SECTION 012500**  
**PRODUCT SUBSTITUTION PROCEDURES**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. This Section includes the requirements for substitution of specified products during construction.
- B. *The Architect/Engineer will consider requests for substitutions only within **thirty (30)** days from the date of the Notice to Proceed.*
- C. Only products not specifically named in the bid are eligible for substitution in accordance with the requirements contained herein these specifications.
- D. Products named by the Bidder, at the time of bid, shall be furnished and installed and substitutions will not be considered by the Owner/Architect/Engineer for those products named in the bid.

**1.02 CONTRACTOR'S OPTIONS**

- A. For products specified only by reference standard, select any product meeting that standard.
- B. For products specified by naming several products or manufacturers, select any one of the products or manufacturers named which complies with the Specifications.
- C. Where products are not named, then submit products that meet the specifications.

**PART 2 - PRODUCTS**

**2.01 SUBSTITUTIONS**

- A. Name - The Drawings and Specifications list acceptable manufacturers, commercial names, trademarks, brands and other product, material and equipment designations. Such names are provided to establish the required type, quality and other salient requirements of procurement.
- B. Equals - An item equal to that named or described on the Drawings or in the Specifications may be provided by Contractor if accepted by the Architect/Engineer.
- C. A request for product substitution constitutes a representation that the Contractor:
  - 1. Has investigated proposed Product and determined that it meets or exceeds the quality level of the specified Product.
  - 2. Shall provide the same warranty for the Substitution as for the specified Product.
  - 3. Shall coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner, including extra charges by material suppliers and vendors.
  - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
  - 5. Shall reimburse the Owner and the Architect/Engineer for review or redesign services associated with re-approval by authorities.
  - 6. Shall reimburse the Owner for all additional engineering services claimed by the Architect/Engineer for extra services associated with the review of the Contractor's



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substituted item since it could not have been originally included in the Architect/Engineer's professional engineering services agreement. Reimbursement shall be based on the man-hours expended, at current billing rates.

- D. 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 the Contract Documents.
- E. Substitution Submittal Procedure:
  - 1. The Contractor shall submit the REQUEST FOR SUBSTITUTION FORM for consideration including all required information.
  - 2. The Contractor shall use the form included within this Section.
  - 3. All forms shall be type written.
  - 4. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence.
- F. The burden to prove product equivalence rests on the Contractor.
- G. The Architect/Engineer will notify Contractor in writing of decision to accept or reject request and at that time the Contractor can make a formal submittal in accordance with the requirements contained in Section 013300.
- H. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.

## PART 3 - EXECUTION

NOT USED

**This space left intentionally blank.**



**REQUEST FOR SUBSTITUTION FORM**

Project: Roof Replacement Program - Substitution Request Number: \_\_\_\_\_  
YONKERS

Contractor: \_\_\_\_\_

Address: \_\_\_\_\_

To: \_\_\_\_\_ Date: \_\_\_\_\_

H2M Project Number: WCPW1802 Owner: Westchester County DPW

Contract Name: \_\_\_\_\_ Contract No.: \_\_\_\_\_

Specification Title: \_\_\_\_\_

Section: \_\_\_\_\_ Page: \_\_\_\_\_ Article/Paragraph: \_\_\_\_\_

Drawing No(s): \_\_\_\_\_

Proposed Substitution: \_\_\_\_\_

Manufacturer: \_\_\_\_\_ Address: \_\_\_\_\_

Trade Name: \_\_\_\_\_ Phone #: (\_\_\_\_) \_\_\_\_\_

Installer: \_\_\_\_\_ Address: \_\_\_\_\_

Phone #: (\_\_\_\_) \_\_\_\_\_

History: \_\_\_ New product \_\_\_ 2-5 years old \_\_\_ 5-10 years old \_\_\_ More than 10 years old

Differences between proposed substitution and specified product:

\_\_\_ Point-by-point comparative data attached

Reason for not providing specified item (Attach separate sheet if necessary):



**Typical Similar Installation:**

Project: \_\_\_\_\_

Engineer / Architect: \_\_\_\_\_

Address: \_\_\_\_\_

Owner: \_\_\_\_\_

Date Installed: \_\_\_\_\_

Submit complete installation list on separate sheets.

Proposed substitution affects other parts of Work: ☐ No ☐ Yes

Explain: \_\_\_\_\_

Gross Savings to Owner for accepting substitution: \$ \_\_\_\_\_

Proposed substitution changes Contract Time: ☐ No ☐ Yes

Add / deduct (circle): \_\_\_\_\_ days

Supporting data attached for evaluation of the proposed substitution:

☐ Product Data ☐ Photos ☐ Drawings ☐ Tests ☐ Reports ☐ Samples

☐ Other (explain): \_\_\_\_\_

Attached data includes description, specifications, drawings, photographs, performance and test data adequate for evaluation of request; applicable portions of data are clearly identified.

Attached data also includes a description of changes to Contract Documents that proposed substitution will require for its proper installation.



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**The undersigned certifies that the following paragraphs, unless modified by attachments, are correct:**

1. Proposed Substitution has been fully checked and coordinated with Contract Documents.
2. Proposed Substitution does not affect dimensions shown on Drawings.
3. Proposed Substitution does not require revisions to any other Prime Contractor's work.
4. The undersigned will pay for changes to building design, including Architectural and Engineering design, detailing, and construction costs caused by requested Substitution.
5. Proposed Substitution will have no adverse affect on other trades, construction schedule, or specified warranty requirements.
6. Maintenance and service parts will be locally available for proposed substitution.
7. The undersigned further states that the function, appearance, and quality of proposed Substitution are equivalent or superior to specified item.

**This request for product substitution also constitutes a representation that I, as the Contractor:**

1. Has investigated proposed Product and determined that it meets or exceeds the quality of the specified Product.
2. Shall provide the same warranty for the Substitution as for the specified Product.
3. Shall coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner, including extra charges by other Prime Contractors, material suppliers, and vendors.
4. Waives claims for additional costs or time extension that may subsequently become apparent.
5. Shall reimburse the Owner and the Architect/Engineer for review or redesign services associated with re-approval by authorities.
6. Shall reimburse the Owner for all additional engineering services claimed by the Architect/Engineer for extra services associated with the review of the Contractor's substituted item since it could not have been originally included in the Architect/Engineer's professional engineering services agreement. Reimbursement shall be based on the man-hours expended, at current billing rates.

Contractor's Authorized Representative (Typewritten): \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**END OF SECTION**



**SECTION 012700**  
**MOBILIZATION**

**PART 1- GENERAL**

**1.01 SUMMARY**

- A. The work under this Section of the Specification shall consist of the establishment of the Contractor's general plant, including shops, storage area, equipment, office and such sanitary and other facilities as are required by local or state law and all other work performed or costs incurred before beginning Work.

**1.02 MATERIALS AND INSTALLATION**

- A. Such materials as are required for mobilization and that are not to be a part of the complete Contract shall be as determined by the Contractor, except that they shall conform to any pertinent local or state law, regulation or code.
- B. The work required to provide the above facilities and services for mobilization shall be done in a safe and workmanlike manner and shall conform with any pertinent local or state law, regulation or code. Good housekeeping consistent with safety shall be maintained.

**1.03 MEASUREMENT AND PAYMENT**

- A. The amount to be paid for mobilization in the monthly pay estimate is limited to the following maximum amounts:
1. Original Contract Amount (Including Mobilization)

<b>FROM MORE THAN (\$)</b>	<b>UP TO AND INCLUDING (\$)</b>	<b>MAXIMUM AMOUNT FOR MOBILIZATION (\$)</b>
0	100,000	3,000
100,000	500,000	15,000
500,000	1,000,000	30,000
1,000,000	2,000,000	60,000
2,000,000	3,000,000	90,000
3,000,000	4,000,000	120,000
4,000,000	5,000,000	125,000
5,000,000	6,000,000	150,000
6,000,000	7,000,000	175,000
7,000,000	10,000,000	200,000
10,000,000	-	2.5% OF AMOUNT BID

- B. The amount for mobilization shall be payable to the Contractor whenever he completes ten (10%) percent of the work of the Contract. For the purposes of this Item, 10% of the work shall be considered completed when the total of payments earned and paid, as reflected by estimates of work done, not including the amount bid for this Item or for materials and equipment suitably stored, shall exceed 10% of the total amount bid for this Contract.



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PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

**END OF SECTION**



**SECTION 012900**  
**PAYMENT PROCEDURES**

**PART 1 - GENERAL**

**1.01 DESCRIPTION**

- A. Work under this Section specifies the procedures used to process partial payments and the Final Payment Request.

**1.02 TIME FOR COMPLETION**

- A. Inasmuch as the provisions of the Contract relating to the time for performance and completion of the Work are for the purposes of enabling the Owner to proceed with the construction of a public improvement in accordance with a predetermined program, and inasmuch as failure to complete the Work within the period herein specified may result in damage or loss to the Owner, time is of the essence of the Contract.
- B. Time for completion of the Work shall be in accordance with that stipulated in the Contract Documents.
- C. The date for completion will be calculated from the date shown on the Notice to Proceed. The Contractor shall execute the Work with diligence from day to day, and complete it within the time fixed.
- D. For the purpose of defining the date of substantial completion, the Project will be considered complete when all Work covered by the Contract has been performed and all installations and equipment have been tested and are ready for permanent use. Removal of the Contractor's equipment and other minor adjustments which do not prevent use of the Project will not be a factor in establishing the date of substantial completion.
- E. Notwithstanding the foregoing, the Architect/Engineer will establish the date of substantial completion when the project is accepted and ready for operation, and no large or major items of work are as yet outstanding. At such time, the Architect/Engineer will issue a punch list, itemizing the items of work remaining. The punch list will include "minor" items only, as defined solely by the Architect/Engineer. Any prior punch lists, which include "major" or significant items, as defined by the Architect/Engineer, shall not be a criterion in establishing the date of substantial completion.

**1.03 PARTIAL COMPENSATION**

- A. At the Owner's discretion, the Contractor may receive compensation for materials and products delivered to the site yet not installed providing:
  - 1. A canceled check or paid bill from the supplier is submitted to the Architect/Engineer indicating that the Contractor has paid the supplier for the material or equipment.
  - 2. The material or piece of equipment is properly stored and protected from the elements and/or vandalism in accordance with the manufacturer's written requirements for long term storage.
  - 3. A certificate of insurance is provided for the material or piece of equipment in the event of a fire, vandalism, theft, etc.
  - 4. A bill of material is delivered to the Architect/Engineer at the time of delivery itemizing the subject material or equipment. Payment will be made for on-site material and/or



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equipment in the amount of 80% of the gross amount of the paid invoice. This payment will be subject to the normal retainage of the partial estimate.

5. The Architect/Engineer has agreed to the pre-purchasing of the materials.
- B. The Contractor may not receive compensation for materials and products stored in the Contractor's yard or shop unless permitted by the Owner.

#### 1.04 APPLICATIONS FOR PAYMENT

- A. The Contractor shall review the percentage of work completed during the payment period with the Architect/Engineer, based on the bid items in the proposal. The Architect/Engineer shall make the final decision on the percentage of work completed.
- B. The form of application for payment shall be AIA Document G702, application and certificate for payment supported by AIA Document G703, Continuation Sheet.
- C. Submit one (1) copy of each payment application, completed, signed and notarized.
- D. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.
- E. The payment application shall include a Contractor Invoice and an Owner Claim Voucher.
- F. Provide completed Labor Affidavit Form for each pay period included in the certified payroll reports for each payment application for both the contractor and any subcontractor(s).
- G. Submit payment application to Architect/Engineer no later than the first day of each month. Payments received after the first day of each month shall be reviewed and processed after the first day of the following month. Only one application for payment will be reviewed and processed each month.
- H. Submit certified payroll receipts for all workers and subcontractors. Payroll receipts shall be submitted with every application for payment. All payroll receipts shall be certified correct and notarized by a Notary in the State of New York. Application for Payment will not be processed unless all payroll receipts are received.
- I. Contractor shall pay all workers and have all subcontractors pay all workers the prevailing New York State Wage Rates.
- J. Owner may conduct on-site interviews with all workers to verify payments of prevailing wage rates are enforced.
- K. The Architect/Engineer shall submit the documentation along with an Architect/Engineer's Payment Report to the Owner for payment.
- L. Retainage in the amount of 5% will be held from each partial payment. Retainage will only be released upon full completion of the project and will be included in the final payment.

#### 1.05 ACCEPTANCE OF FINAL PAYMENT REQUEST

- A. The Contractor shall be conclusively deemed to have accepted the Final Payment Request as a correct statement of the total liability of the Owner and of the compensation paid and to be paid to the Contractor by the Owner unless within seven (7) days after delivery of his copy of the Final Payment Request to him, the Contractor shall return such copy to the Owner together with



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a statement of his objections to such request and of any claim for damages or compensation in excess of the amounts shown on the Request. The acceptance by the Contractor of the Final Payment Request approved by the Owner shall constitute a release and shall discharge the Owner from all further claims by the Contractor arising out of or relating to the Contract, including but not limited to, a release from all impact costs.

#### **1.06 SCOPE OF PAYMENTS**

- A. The Contractor shall receive and accept the compensation as herein provided, in full payment for furnishing all materials, labor, tools, and equipment and for performing all work contemplated and embraced under the Contract, also for all loss or damage arising out of the nature of the Work or from the action of the elements, or from any unforeseen difficulties or obstructions which may arise or be encountered during the prosecution of the Work, and for all risks of every description connected with the prosecution of the Work, until its final acceptance by the Owner, also for all expenses incurred by, or in consequence of, the suspension or discontinuance of the said prosecution of the Work as herein specified, and for all actual or alleged infringements of patent, trademark, or copyright, and for completing the Work and the whole hereof, in an acceptable manner, according to the Plans, Specifications, and other Contract Documents. The payment of any partial or final estimate shall in no way or in no degree prejudice or affect the obligation of the Contractor, at his own cost and expense, to renew or replace all defects and imperfections, or damages. The Architect/Engineer shall be the judge, and the said Contractor shall be liable to the Owner for failure so to do.

#### **PART 2 - PRODUCTS**

NOT USED.

#### **PART 3 - EXECUTION**

NOT USED.

**END OF SECTION**



**SECTION 012973**  
**SCHEDULE OF VALUES**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Schedule of Values

**1.02 SCHEDULE OF VALUES**

- A. Submit for approval prior to the start of the work a Schedule of Values that indicates a breakdown of the labor, materials and equipment and other costs used in the preparation of the bid. This schedule shall be in sufficient detail to indicate separate figures for such items as excavation, concrete, equipment and all other items making up the lump sum price. The cost breakdown shall be separately itemized for each lump sum bid item in the project.
- B. Where the cost breakdown includes items for bond payment, insurance payment, job set-up, or job mobilization, these items will be paid based on paid invoices and copies of cancelled checks.
- C. Submit a Schedule of Values to the Architect/Engineer for review and approval within fifteen (15) calendar days from the date shown on the Notice to Proceed.

**1.03 FORM OF SUBMITTAL**

- A. Submit typewritten Contract Cost Breakdown on AIA Form G703 - Application and Certificate for Payment Continuation Sheet or EJCDC 1910-8-E. The Architect/Engineer reserves the right to revise the form or provide a form prepared by the Architect/Engineer.
- B. Use the Table of Contents of the Contract Specifications as a basis for format for listing costs of work for Sections under Divisions 01-48 as sections apply to work. Not all Sections need be assigned a breakout price as determined by the Architect/Engineer.
- C. Identify each line item with number and title as listed in Table of Contents.
- D. Provide dollar values for each line item for labor, overhead, profit, material, and equipment components for each category of work if requested by the Architect/Engineer.
- E. List quantities of materials specified under unit price allowances.
- F. The Schedule of Values, after approval by the Architect/Engineer, shall be the basis for the Contractor's Application for Payment.
- G. The first Application for Payment will not be reviewed prior to an approved breakdown.

**1.04 PREPARATION OF SCHEDULE OF VALUES**

- A. In addition to the above, provide a separate line item cost for each of the following items which shall be supported by proof where requested by Architect/Engineer:
  - 1. Performance and payment bonds - 1% of contract amount.
  - 2. Insurance - 1% of contract amount.



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3. Mobilization and Demobilization - 2% of contract amount (Amounts shall be equal in value).
4. Temporary facilities and measures as specified in Section 015000 - 5% of contract amount.
5. Project Coordination Meetings as specified in Section 013100 - 5% of contract amount.
6. Preparation of the Project Construction Schedule, and updates, as specified in Section 013300.
7. Preparation of Weekly Schedules as specified in Section 013100
8. Rubbish removal and daily cleaning up. (Provide a total dollar amount and a daily rate for each calendar day during the contract period.)
9. All Cash Allowance items as contained in Section 012100.
10. On-site, full time superintendent starting on the date of the Notice To Proceed and ending on the date that all punch list items are completed, which for the purposes of the Schedule of Values, shall be the contract completion date.
11. A total dollar amount for furnishing all the Operations and Maintenance Manuals specified throughout the specifications - 1% of contract amount.
12. Record Drawing retainage amount specified in Section 017839 - 1% of contract amount.
13. Final cleaning - 2% of contract amount.

B. Show total costs including overhead and profit.

C. Provide additional details and data to substantiate the cost breakdown as requested by the Architect/Engineer.

## **PART 2 - PRODUCTS**

NOT USED

## **PART 3 - EXECUTION**

NOT USED

## **END OF SECTION**



**SECTION 013100**  
**PROJECT MANAGEMENT AND COORDINATION**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Work of this Section includes:
  - 1. Requests for Interpretation or for information
  - 2. Administration of subcontracts
  - 3. Coordination of work with other Contractors, utility companies, and the Owner/Architect/Engineer
  - 4. Communication and coordination requirements
  - 5. Qualifications of Contractor's job site superintendent
- B. Site staffing requirements for the Contractor's superintendent are also specified herein, the costs for which shall be included in the Contract price.

**1.02 REQUEST FOR INTERPRETATION OR INFORMATION**

- A. The Contractor shall use the Request for Interpretation/Information Form included within this Section when the Contractor feels that additional information is needed to perform the work of the Contract.
- B. The Architect/Engineer will respond to requests utilizing the form provided herein.
- C. The Architect/Engineer's verbal response(s) to the Contractor's formal requests, if provided, shall not constitute an official response and if acted upon by the Contractor are done so at the Contractor's own risk and liability and shall not be subject to claims for additional compensation.
- D. The Architect/Engineer will respond in writing to the request as soon as possible.

**1.03 SUBCONTRACTOR ADMINISTRATION AND COORDINATION**

- A. Terms and conditions of the Contract shall be binding upon each subcontractor.
- B. Furnish each subcontractor and major equipment vendor at least one (1) copy of the Plans and Technical Specifications.
- C. Provide at least one (1) copy of each approved shop drawing to each subcontractor whose work may depend upon the contents of the shop drawing submittal. The Owner reserves the right to stop all work, without claims for delay, until such time as appropriate subcontractors are furnished with appropriate shop drawings.
- D. The Contractor shall sequence and schedule the work of subcontractors. Coordinate construction and administration activities of subcontractors. The Architect/Engineer and Owner will not accept telephone calls, facsimiles or office visits from any subcontractors on the project. Subcontractor and vendor questions and clarifications shall be directed to the Architect/Engineer by the Contractor.
- E. The Contractor's on-site project superintendent shall inspect all the work of all of his/her subcontractors, as it is being constructed. The Contractor's subcontractor shall not be



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permitted to do any work on the site without the Contractor's job site superintendent also being there to inspect the work as it is being performed.

#### 1.04 SPECIFIC COORDINATION REQUIREMENTS

- A. Project Coordination Meetings: Participate in and attend the Project Coordination Meetings as specified below:
  - 1. The meetings will be held when so called for by the Owner/Architect/Engineer.
- B. The Contractor shall also coordinate the work by complying with the following:
  - 1. Construction Schedule: The Contractor shall provide a construction schedule as specified in Section 013216 - Construction Schedules.
  - 2. Email Account: The Contractor shall maintain an email account that shall be used to improve communication. An email shall not constitute a formal advisement regarding the terms and conditions of the contract. Email shall only be considered an informal way of notifying relevant parties of project related activities.
  - 3. Email List: The Contractor, within five (5) calendar days from the Notice To Proceed, shall provide a list of email addresses for each major equipment supplier and local representative, if such exists. A contact person shall be provided for each email address.
  - 4. Work Plan: All Contractors shall within five (5) calendar days from the date of the Notice to Proceed, submit to the Engineer a type written work plan in bullet format of the sequence of construction activities from start to finish of construction. A facsimile will not be accepted. All work plans shall include a description of the different major phases of construction as pertaining to the individual construction contract. As a minimum each work plan shall include the tasks and subtasks specified in Section 013216 for the project schedule.
    - a. Each Prime Contractor's work plan shall be complete and shall address every phase of the scope of the Contract.
    - b. The Engineer/Architect will forward all work plans to all other Prime Contractors.
    - c. Each Prime Contractor shall then prepare a construction schedule as specified below using the work plans prepared by others and his/her own.

#### 1.05 CONTRACTOR'S JOB SITE SUPERINTENDENT

- A. The Contractor shall employ an on-site superintendent as specified herein below. He/She shall be a full-time employee of the Contractor.
- B. The Contractor shall name the job site superintendent within five (5) days of the Notice To Proceed. A letter to the Architect/Engineer shall be provided.
- C. He/She shall have the authority to sequence and schedule the work, and to staff the project, so as not to interfere with the work by others and to complete the work daily within the time so required.
- D. The Superintendent shall have a minimum of five (5) years of experience as a job site superintendent for projects of equal size and complexity.
- E. The superintendent shall speak English. If required by the Architect/Engineer, provide a resume for the proposed superintendent that shall be typed and shall list the qualifications of the superintendent. Prior to the Contractor assigning a superintendent to the project, he may wish to arrange an interview with the Architect/Engineer to determine the proposed superintendent's ability to properly coordinate the work through the Owner/Architect/Engineer. The Contractor shall employ a superintendent acceptable to the Owner.



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**Roof Replacement Program**  
**Yonkers WRRF**  
Contact No.: 21-507  
H2M Project No.: WCPW1802

REQUEST FOR INTERPRETATION/INFORMATION (RFI)

OWNER'S NAME: Westchester County DPW

PROJECT NAME & CONTRACT DESIGNATION: Roof Replacement Program - YONKERS

CONSTRUCTION CONTRACT NO.: WCPW1802

Product, Item, or System:		
Request Date:		RFI No.:
Specification Section:		Paragraph Ref:
Contract Drawing Reference(s):		
Describe Request:		
Signed:		See Contractor's Attachments for Additional Description for Information
Owner/Architect/Engineer Response:		
Architect/Engineer (Printed):		See Architect/Engineer's Attachments for Additional Information
Architect/Engineer's Signature & Date		<i>Response Accepted By Contractor Contractor's Signature &amp; Date</i>
The Work shall be carried out in accordance with these supplemental instructions without change in Contract amount or Contract time for completion. Prior to proceeding with these instructions, indicate your acceptance of these instructions by signing where indicated and returning this form to the Architect/Engineer.		



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PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

**END OF SECTION**



**SECTION 013119**  
**PROGRESS MEETINGS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Work of this Section includes the requirements for progress meetings.

**1.02 PRE-CONSTRUCTION CONFERENCE**

- A. The Contractor is required to attend the pre-construction conference at a location, date, and time selected by the Owner.
- B. The owner, a partner, or a corporate officer representing the Contractor shall attend the conference. The job site superintendent and office project manager for the Contractor shall also attend.
- C. The Architect/Engineer will prepare an agenda for the conference.

**1.03 PROGRESS MEETINGS**

- A. Progress meetings will be held approximately once every two (2) weeks during the project. The Owner may elect to hold meetings more or less frequently.
- B. At least seven (7) calendar days advance notice will be given by the Architect/Engineer or the date for the upcoming meeting will be set during the progress meeting.
- C. Attendance at progress meetings shall be mandatory. An amount of \$1,000 shall be deducted from the Contract Amount for each announced meeting not attended by the Contractor.
- D. The owner, a partner, or a corporate officer representing the Contractor shall attend each announced progress meeting. The job site superintendent and office project manager for each Contractor shall also attend.
- E. Subcontractors shall attend when requested by the Owner or Architect/Engineer at no cost to the Owner.
- F. Meetings will be conducted by Architect/Engineer at a location selected by the Owner, normally at or adjacent to the project site.
- G. The minimum agenda will cover:
  - 1. Review minutes of previous meetings.
  - 2. Identify present problems and resolve them.
  - 3. Plan work progress during next work period.
  - 4. Review the status of off-site fabrication and delivery schedule.
  - 5. Review shop drawings and submittal schedules.
  - 6. Review change order status.
  - 7. Review status of construction progress schedule.
  - 8. Coordinate access requirements.
  - 9. Other business related to the work.



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#### **1.04 OTHER MEETINGS**

- A. Attend special meetings which may be required or called for by Federal, State or Local authorities, utility companies, Owner, Architect/Engineer or any other firm, person or organization related to the project.

#### **1.05 CONDUCTING MEETINGS**

- A. General - This paragraph covers Owner and/or Architect/Engineer meetings with the Contractor and/or his subcontractors. Neither Owner nor Architect/Engineer wishes to meet solely with a subcontractor and requests for such meetings will be discouraged. If a meeting is deemed necessary, every effort will be made to have Contractor attend. If, for some reason, circumstances do not allow such, the meeting may be held, minutes of the meeting will be sent to contractor and decisions on any major questions will be reserved until contractor has been consulted. Subcontractors may accompany contractor to meetings provided contractor notifies Architect/Engineer in advance.
- B. Chairman - When Architect/Engineer/Owner attend meetings, Architect/Engineer, or his duly authorized representative, will act as chairman. Should Owner-Contractor meetings be necessary, Owner will chair such meetings.
- C. Notices - Architect/Engineer or Owner will issue notices of meetings to all parties concerned and will note, thereof, who must attend and who may attend if they so desire. When a Contractor desires a formal meeting, make a request through Architect/Engineer. Except when Architect/Engineer determines that a prompt meeting is essential, all notices will be issued at least one week in advance of the meeting date.
- D. Agenda - All parties shall inform Architect/Engineer of items desired to be discussed and Architect/Engineer will notify all parties of all items to be considered. This is to allow each party to fully prepare for the meeting. This shall not be construed to mean that other items cannot be brought up at the meetings.
- E. Time Limits - It is the intent to hold productive and efficient meetings and to keep them as short as is reasonably possible. The Chairman will be the sole judge as to whether or not further discussion on any matter is warranted and all discussions shall cease when he so orders.
- F. Minutes - Minutes of meetings will be kept, written and distributed by the Chairman or his duly authorized representative. Minutes of all meetings will be available upon request to the Chairman.
- G. Conduct - It is the intent to conduct all meetings in an orderly manner, to reasonably discuss all items and to hear and observe the rights and opinions of all parties. The Chairman will allow each party to speak, however, he reserves the right to order any individual to leave the meeting at any time for any reason.



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PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

**END OF SECTION**



**SECTION 013216**  
**CONSTRUCTION SCHEDULE**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. This Section specifies the requirements for preparing construction schedules and for keeping them up to date.
- B. Prepare a Gantt Chart type schedule and keep it up to date as specified hereinafter.
- C. All schedules shall be submitted in accordance with the requirements contained herein in Section 013300.
- D. Refer to Section 013100 regarding the requirements for attendance at Project Coordination Meetings and additional requirements concerning the submission of other project coordination and sequencing information.

**1.02 CONSTRUCTION SCHEDULE - GENERAL**

- A. Coordinate the work and maintain the construction schedule. In the event actual progress begins to lag the schedule, promptly employ additional means and methods of construction to make up the lost time.
- B. Keep the construction schedule current and revise and resubmit as often as necessary to accurately reflect the conditions of the work, past progress and anticipated future progress.
- C. The construction schedule shall be completed, submitted, and deemed received by the Architect/Engineer prior to the first payment application.
- D. The schedule, when approved by the Architect/Engineer and the Owner, shall establish the dates for starting and completing work for the various portions of the Contract. It shall be the duty of the Contractor to conform to his/her own schedule and to perform the work within the time limits indicated. Failure to adhere to the approved schedule shall expose the Contractor to disputes, claims and additional costs incurred by others.
- E. Coordinate letting of subcontracts, material purchases, shop drawing submissions, delivery of materials, and sequence of operations, to conform to the schedule.
- F. Coordinate the construction schedule with the proposed schedules of the equipment suppliers and subcontractors.
- G. The schedule shall show the critical sequence items where new units must come online before existing facilities go offline, if applicable to the project. The schedule shall also show, in detail, the proposed sequence of the work and the estimated date of starting and completing each stage of the work in order to complete the project within the contract time.
- H. The schedule shall be plotted out in color and shall be 11-inch by 17-inch. It shall contain as many sheets as are necessary to show all rolled down tasks. Partially printed schedules will not be accepted. Each Contractor shall arrange to have it plotted on a color plotter suitable for the intended application.



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- I. Prepare the schedule in a manner so that the actual progress of the work can be recorded and compared with the expected progress.
- J. The schedule shall use the following convention:
  - 1. Tasks for the General Contractor in blue ink.
  - 2. Task links/task dependency in blue ink.
  - 3. Work by others in green ink.
  - 4. Milestone dates (zero duration) by a red diamond.
  - 5. The end date for each task and subtask at the end of a bar.
  - 6. The description of all major tasks within the bar. The bar shall be red.
  - 7. Critical path.

#### 1.03 CONSTRUCTION SCHEDULE - GANTT CHART TYPE

- A. The schedule shall show, in detail, the proposed sequence of the work and the estimated date of starting and completing each stage of the work in order to complete the project within the contract time.
- B. Prepare the schedule in a manner so that the actual progress of the work can be recorded and compared with the expected progress.
- C. Coordinate the construction schedule with the proposed schedules of the equipment suppliers and subcontractors.
- D. The schedule shall show the following:
  - 1. Task links/task dependency in blue ink.
  - 2. Work under the Contract in green ink.
  - 3. Work by others in blue ink.
  - 4. Milestone dates (zero duration) by a red diamond.
  - 5. The end date for each task and subtask at the end of a bar.
  - 6. The description of all major tasks within the bar. The bar shall be red.
  - 7. Critical path.

#### 1.04 REVISION OF PROJECT PROGRESS SCHEDULE

- A. The Contractor shall evaluate and provide updated construction schedules monthly in accordance with job requirements. Each update shall be submitted to the Architect/Engineer for information purposes and be provided by the last Friday of every month.
- B. The Contractor shall modify his construction schedule to accommodate coordination of the construction contracts by the Owner/Architect/Engineer without claims for additional compensation or delay.
- C. The Architect/Engineer will provide an electronic version of the Final Combined Construction Schedule for use in keeping the schedule up to date.
- D. From time to time, and at stages deemed appropriate by the Architect/Engineer, the Architect/Engineer may issue updated schedules to reflect the project's status. The percent complete for each task may be shown, as determined by the Architect/Engineer.



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PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

**END OF SECTION**



**SECTION 013300**  
**SUBMITTALS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. This Section specifies the requirements for making submissions for the project. Electronic submissions will be required unless expressly noted otherwise.
- B. Refer to Section 013216 - Construction Schedule for the requirements concerning the submission of construction schedules and for making updates thereto.

**1.02 IDENTIFICATION OF SUBMITTALS**

- A. Each and every submission shall be provided by the Contractor and shall be accompanied by a SUBMISSION TRANSMITTAL FORM. The Contractor shall use the specimen form made a part of this Section. *Submittals not containing the form will be returned to the Contractor un-reviewed.* The Architect/Engineer will not review project submissions until such time as the form is completed in its entirety. Identify each submittal and resubmittal using the form.
- B. Each individual submittal shall be identified with a 'submission log number' as specified here in this example: 033000.01-1
  - 1. The Section number for which the submittal applies, followed by a period, shall be indicated, "033000."
  - 2. The submittal within the Section shall be indicated by the next grouping "01". For instance and in this example, the concrete design mix may be submission "01", the waterstop catalog cut may be "02", and so on. Submittals shall be sequentially numbered within the Specification Section, i.e. 01, 02, etc.
  - 3. The number of times the submission was made shall be preceded by a dash and a numerical suffix as follows: "-1". In this example, the concrete design mix is being submitted for the first time. Use the number "1" for the first time it is being submitted.
  - 4. Subsequent submissions of the concrete design mix shall utilize the original number and a sequential numeric suffix, i.e. "2" for a resubmission, "3" for the second resubmission, and so on. Substitute the new number for the original "1".
- C. Where a layout drawing, containing different elements of the project, is being submitted and there is a question as to what the log number might be, then the Contractor shall contact the Architect/Engineer so that an agreed upon log number can be assigned.
- D. It is incumbent on the Contractor to initially assign the submission log number designation to each submission. Submissions not containing a log number, as specified above, will be returned to the Contractor un-reviewed by the Architect/Engineer.
- E. Every submittal shall also be accompanied by a Transmittal Letter (or "Speed Form") addressed to the Architect/Engineer's Project Manager as hereinafter defined.

**1.03 COORDINATION OF SUBMITTALS**

- A. Prior to submitting to the Architect/Engineer, fully coordinate all interrelated work. As a minimum, do the following:
  - 1. Determine and verify all field dimensions and conditions by field measuring existing conditions and the installed work of this Contract and work by others.



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2. Coordinate with all trades, subcontractors, vendors, system and equipment suppliers and manufacturers, public agencies, and utility companies and secure all necessary approvals, in writing.
- B. Make submittals in groups containing all associated items that in some way depend upon each other.
  1. This also applies to color charts, as one color may not be able to be selected without the selection of other colors so as to form a color-coordinated group.
  2. The Architect/Engineer may elect not to review partial or incomplete submissions, whereupon he will notify the Contractor of the additional submissions that are required before a review can be made.

#### 1.04 TIMING OF SUBMITTALS

- A. Make submittals far enough in advance of scheduled dates of installation to provide time for reviews, for securing necessary approvals, for possible revisions and re-submittals, and for placing orders and securing delivery. The Architect/Engineer will review submittals in a manner as expedient as possible, and will generally send a written response to the Contractor within seven (7) calendar days of receipt of submittals.
- B. Submissions may be returned reviewed, unreviewed, rejected, returned conditioned upon submission of related items, or for other reasons set forth in the Contract Documents.
- C. Make submissions well in advance as the returning, rejecting or disapproval of submissions or other similar circumstances are possible and are deemed "avoidable delays". Costs for these delays or those attributed to Contractor's tardiness in making submittals shall be borne by the Contractor.
- D. **All** submittals requiring Architect/Engineer's review (except operations manuals) as required under the technical specifications of these documents shall be submitted within **FORTY FIVE (45)** consecutive calendar days after the date of the Notice to Proceed. An amount of **\$250** per calendar day shall be deducted from payment due the Contractor for **each** day that an outstanding submittal exists, said amount being the cost associated with the Architect/Engineer's review.
- E. Operation and maintenance manuals shall be submitted at least **FORTY FIVE (45)** consecutive calendar days prior to scheduled startup of the unit or system.
- F. If material or equipment is installed before it has been deemed to be in general compliance with the Contract Documents, as determined by the Architect/Engineer, the Contractor shall be liable for its removal and replacement at no extra charge and without an increase in contract time.

#### 1.05 DESTINATION OF SUBMITTALS

- A. Each submission of documents shall be accompanied by a transmittal form containing the name of the project, the contract name, the Architect/Engineer's project manager, a submittal ID number, and a description of content for the submitted items.
- B. A copy of the TRANSMITTAL FORM shall also be provided to the Architect/Engineer's inspector at the job site.
- C. Electronic submittals shall be transmitted through the Newforma® Project Center website or by email, pending instruction by the Architect/Engineer. H2M architects + engineers is using a



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project information application called Newforma® Project Center. One of its components is Newforma Info Exchange, a web application that facilitates sending and sharing transmittals, and file sharing.

- D. As an external team member on this project the Contractor will be required to access the H2M architects + engineers/Newforma Info Exchange website for information related to the project, including file transfers, RFI, Submittals, Action Items, and project Calendar information. The Contractor will have access to this website using any internet-capable computer running Internet Explorer or Firefox. All data transmitted through the H2M architects + engineers/Newforma Info Exchange website is encrypted and logged. Further instructions will be provided to the Contractor after the contract is awarded.
- E. Other submissions, such as material samples or other items as instructed by the Architect/Engineer, shall be sent to the Architect/Engineer's office as follows:
  - H2M architects + engineers**
  - 538 Broad Hollow Road - 4th Floor East**
  - Melville, New York 11747**
  - Attention: H2M Project Manager (Named at Pre-Construction Conference or in the Notice to Proceed)**

#### 1.06 CLARITY OF SUBMITTALS

- A. All printed materials shall be neat, clean, professionally drafted by hand or by computer, clear, legible, and of such quality that they can be easily reproduced by normal photocopying.
- B. All electronic submittals shall be produced with a minimum resolution of 300 dpi.
- C. Binders of information shall be separated into groups, subsystems, or similar equipment/function. Copies not conforming to this paragraph will be returned to the Contractor without the Architect/Engineer's review.

#### 1.07 CONTRACTOR'S REPRESENTATION

- A. By making a submission, the Contractor represents that he has determined and verified all field measurements and dimensions, field construction criteria, site and building constraints in terms of limitations in moving equipment into an enclosed space, materials, catalog and model numbers and similar data and that he has checked and coordinated each submission with other work at or adjacent to the project site in accordance with the requirements contained in Section 013100 - Project Management and Coordination and the Contract Documents.
- B. Every SUBMISSION TRANSMITTAL FORM shall contain the Contractor's approval stamp and date showing that the submittal has been approved by the Contractor. The Architect/Engineer will not review submittals that have not yet been reviewed and approved by the Contractor.

#### 1.08 ENGINEER/ARCHITECT'S REVIEW

- A. Architect/Engineer will review and comment on each submission conforming to the requirements of this Section.
  - 1. Architect/Engineer's review will be for conformance with the design concept of the project and will be confined to general arrangement and compliance with the Contract Documents only, and will not be for the purpose of checking dimensions, weights, clearances, fittings, laying lengths, tolerances, interference's, for coordinating the work by others or subcontractors.



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2. The Architect/Engineer's review of a separate item, or portion of a system, does not represent a review of an assembly or system in which the item functions.
- B. The Architect/Engineer will mark submittals as follows:
  1. NO EXCEPTION TAKEN (A) - No corrections, no marks. The content of this submittal has been reviewed by the Architect/Engineer and been found to be in general compliance with the Contract Documents. No further submission of this submittal is required and the information contained in the submittal may be built into the work in accordance with the Contract Documents.
  2. MAKE CORRECTIONS NOTED (B) - Minor amount of corrections. The content of this submittal has been reviewed by the Architect/Engineer and has been found in general to be in compliance with the Contract Documents. The notations made on the submittal by the Architect/Engineer shall be incorporated into the work in accordance with the terms and conditions of the Contract Documents. No further submission of this submittal is required.
  3. AMEND AND RESUBMIT (C) - The content of this submittal has been reviewed by the Architect/Engineer and this review has determined that additional data and/or modification to the submitted data or other changes are required to bring the work represented in this submittal into compliance with the Contract Documents. This submittal shall be reviewed and revised in accordance with the Architect/Engineer's comments and resubmitted to the Architect/Engineer for review. The information contained on the resubmittal shall not be incorporated into the work until the submittal is returned to the Contractor marked "NO EXCEPTION TAKEN" or "MAKE CORRECTIONS NOTED".
  4. REJECTED (D) - The content of this submittal has been reviewed by the Architect/Engineer and has been determined not to be in accordance with the requirements contained in the Contract Document and requires too many corrections or other justifiable reason. The submittal shall be corrected and resubmitted or a submittal of an alternate shall be provided. No items are to be fabricated under this mark.
  5. SUBMIT SPECIFIED ITEM (E) - The content of this submittal has been reviewed by the Architect/Engineer and this review has indicated that the work displayed in the submittal is not in compliance with the Contract Documents. The Contractor shall submit another submittal for this portion of the work, which complies with the Contract Documents.
  6. RECEIVED (R) - This submittal is accepted on the project and filed for record purposes only, in accordance with the terms and conditions of the Contract Documents. Documents marked "RECEIVED" will not be returned.
- C. No payment will be made on any item for which a submission is required if such submission:
  1. has not been made,
  2. has been made but was not stamped "No Exceptions Taken" by Architect/Engineer,
  3. has been made and stamped "Make Corrections Noted", but contractor has not complied with Architect/Engineer's notes marked on the submittal,
  4. has been made and stamped "No Exceptions Taken", but item provided does not conform to the shop drawing nor to the Contract Documents.
- D. Submittals not required by these specifications will not be recognized or processed.
- E. Suffolk County Department of Public Works standard review stamp will be used containing similar notations.
- F. Provide an 8-inch by 10-inch space for the Architect/Engineer's review stamp.



#### 1.09 RESUBMISSIONS

- A. Prepare new and additional submissions, make required corrections, and resubmit corrected copies until found in compliance with the Contract Documents.
- B. On, or with, re-submittals, clearly describe revisions and changes made, other than the corrections requested by Architect/Engineer, which did not appear on the previous submissions.

#### 1.10 CONTRACTOR'S RESPONSIBILITIES

- A. Architect/Engineer's review of submittals shall not relieve the Contractor of his/her responsibility for any deviation from the requirements of the Contract Documents nor relieve the Contractor from responsibility for errors or omissions in the submittals.
- B. No portion of the work requiring a submission shall be commenced until the Architect/Engineer has found the submission in general compliance with the Contract Documents.
- C. The Contractor shall provide written notification of any specification or drawing deviation.

#### 1.11 EXCESS COSTS FOR ENGINEERING/ARCHITECTURAL SERVICES

- A. The Owner will charge to the Contractor, and will deduct from the partial and final payments due the Contractor, all excess engineering and architectural expenses incurred by the Owner for extra services (work) conducted or undertaken by the Architect/Engineer as stipulated below:
  - 1. Services and other similar charges because of the Contractor's errors, omissions, or failures to conform to the requirements of the Contract Documents as related to administrative charges associated with non-compliance with the requirements for making project submissions.
  - 2. Services and other similar charges required to examine and evaluate any changes or alternates proposed by the Contractor and which may vary from the Contract Documents.
  - 3. Services and other similar charges as a result of the Contractor's proposed substitution of materials, equipment or products which require a redesign of any portion of the project, as contained in the Contract Documents at the time of bid.
  - 4. Services and other similar charges as a result of the Contractor's proposed substitution of products which require an engineering and/or architectural evaluation, beyond the time stipulated in Section 012500, to determine if the substituted product is equal to that specified.
  - 5. Services and other similar charges as a result of changes by the Contractor to dimensions, weights, sizes, voltages, phase, horsepower, materials of construction, and similar physical or operating characteristics of the product furnished which require redesign of the project in any way.
  - 6. Services and other similar charges for the review of resubmissions of shop drawings that have been marked as "No Exceptions Taken" or "Make Corrections Noted".
  - 7. Services and other similar charges for the review of shop drawings submitted more than two (2) times for the same product or portion of the work.

#### 1.12 MISCELLANEOUS SUBMITTALS

- A. Provide a Submittal Schedule within seven (7) calendar days from the date of the Notice to Proceed. The Submittal Schedule shall list all submittals for the project referenced by draft log number. Provide the estimated date that the submittal will be transmitted to the Architect/Engineer for review.



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- B. Within seven (7) calendar days from the date of the Pre-Construction Meeting, submit a Proposed Products List. This list shall be a complete listing of all products proposed for use, with name of manufacturer, service headquarters, trade name and model number of each product. Partial listings will not be accepted.
- C. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

#### **1.13 SUBCONTRACTOR LIST**

- A. The Contractor shall submit, on AIA Form G705, within THIRTY (30) calendar days after the date of the Notice to Proceed, a list of all subcontractors, including the names of the major subcontractors that were submitted at the time of the bid.
- B. Indicate M/WBE subcontractors in accordance with the requirements contained in other portions of the Project Manual.

#### **1.14 MATERIAL SAFETY DATA SHEETS (MSDS)**

- A. Comply with "Right to Know" requirements of Chapter 551 of Laws of New York, 1980, concerning notification of the use of toxic substances.
- B. Any product or substance used by the Contractor or its subcontractors which is listed in Subpart Z of OSHA Part 1910 Title 29 of the Code of Federal Regulations entitled "Toxic and Hazardous Substances" shall be identified to the Owner/Architect/Engineer by the Contractor's submission of a standard Material Safety Data Sheet (MSDS) in accordance with "Right To Know" requirements.
- C. Products will not be permitted to be kept on site without a MSDS.

#### **1.15 SHOP DRAWINGS**

- A. Submit shop drawings for all fabricated work, for all manufactured items and for items specifically required by the specifications.
- B. Subcontractors shall submit shop drawings directly to the Contractor for checking. Thoroughly check subcontractors' shop drawings for measurements, sizes of members, details, materials, and conformance with the Contract Documents.
  - 1. Return submittals which are found to be inaccurate or in error.
  - 2. Do not submit to the Architect/Engineer until all corrections have been made.
- C. Clearly show the relationship of the various parts of the project and where the information provided on the submission depends upon field measurements and existing conditions.
- D. The Contractor shall make all measurements, confirm existing conditions, and include them on the shop drawings before making a submission to the Architect/Engineer.
- E. Submissions for a single item, or group of related items shall be complete.
- F. When submitting manufacturers' catalogs, pamphlets or other data sheets, in lieu of prepared shop drawings, clearly mark the items being submitted for review.



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- G. If the shop drawings contain any departures from the contract requirements, specifically describe them in the letter of transmittal.
  - 1. Where such departures require revisions to layouts, structural, architectural, electrical, HVAC or any other changes to the work as shown, Contractor shall, at his own expense, prepare and submit revised drawings accordingly.
  - 2. Make drawings the same size as the Contract Drawings and to the same scale.

#### **1.16 SAMPLES**

- A. Where required, or where requested by the Architect/Engineer, submit sample or test specimens of materials to be used or offered for use.
  - 1. Samples shall be representative, in all respects, of the material offered or intended, shall be supplied in such quantities and sizes as may be required for proper examination and tests, and shall be delivered to Architect/Engineer, prepaid, along with identification as to their sources and types of grades.
  - 2. Submit samples well in advance of anticipated use to permit the making of tests or examinations.
- B. Samples will be checked for conformance with the design and for compliance with the Contract Documents.
- C. Work shall be in accordance with the approved sample. The use of materials or equipment for which samples are requested or required to be submitted is not permitted until such time that the Architect/Engineer has completed his review.

#### **1.17 MANUFACTURER'S INSTRUCTIONS**

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Architect/Engineer.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation. Provide manufacturer's instructions with shop drawings.

#### **1.18 CERTIFICATIONS**

- A. Submit certifications of compliance indicated in the Contract Documents.
- B. Certifications shall be complete and exact, they shall be properly authenticated by the written signature, in ink, of an owner, officer or duly authorized representative of the person, firm or organization issuing such certification and they shall guarantee that the materials or equipment are in complete conformance with the requirements of these specifications.

#### **1.19 COLORS AND PATTERNS**

- A. Unless the precise color and pattern are specified, whenever a choice of color or pattern is available in a specified product, submit accurate color and pattern charts for Architect/Engineer's and Owner's review and selection.



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#### 1.20 MANUFACTURER'S SERVICE CENTER

- A. The product of a manufacturer who does not maintain an adequate nearby service center and a sufficient stock of spare parts are subject to rejection by Architect/Engineer solely on that basis.
- B. With each submission, submit information on manufacturer's facilities and give complete details of his service policies and capabilities, and a general idea of the stock of spare parts available. Submit this information in the form of a certification. Also include names, addresses and telephone numbers of at least three of the service center's present customers who are in the area of the project.

#### 1.21 TEST RESULTS AND INSTALLATION

- A. Whenever field startup services are specified, the Contractor shall obtain from the manufacturer and submit to the Architect/Engineer Manufacturer Startup Reports (MSR's). The report shall detail the results of the field visit and all special conditions resulting from the startup.
- B. Whenever field or factory tests are required on materials, equipment and systems, such tests shall be performed and the test results submitted to Architect/Engineer in the form of a MSR.
- C. Do not deliver to the project or incorporate into the work any materials or equipment for which Architect/Engineer has not completed his review and found same to be in general conformance with the Contract Documents.
- D. Submit MSR's within thirty (30) calendar days after the date of the startup or factory test.

#### 1.22 SPARE PARTS LIST

- A. Prepare a list of all spare parts specified to be provided in other Sections. Compile the total list for the purposes of reviewing actual spare parts delivered versus spare parts specified to be provided. The list shall reference the Section, model number, and quantity to be provided.

#### 1.23 WAIVER OF CERTAIN SUBMITTAL REQUIREMENTS

- A. Unless otherwise specified, the requirement to submit data and samples for products specified for approval will be waived for products specified by brand name if the specifically named products are furnished for the work. In such cases, the Contractor shall submit two (2) copies of required Product Data directly to the Architect/Engineer's field representative for information and verification during its incorporation into the work. The SUBMISSION TRANSMITTAL FORM shall always be used.

## PART 2 - PRODUCTS

NOT USED

## PART 3 - EXECUTION

NOT USED

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CONTRACTOR'S COMPANY NAME  
 ADDRESS

**SUBMISSION TRANSMITTAL FORM**

**CLIENT NAME:** Westchester County DPW

**PROJECT TITLE:** Roof Replacement Program - YONKERS

**H2M PROJECT NO.:** WCPW1802

Product, Item, or System Submitted:			
Submission Date:		Submission Log No.:	
Specification Section:		Paragraph Reference:	
Contract Drawing Reference(s):			
Manufacturer's Name:			
Manufacturer's Mailing Address:			
Manufacturer's Contact Information:	<i>Name</i>	( ) <i>Tel. no.</i>	<i>Email</i>
Supplier's Name:			
Supplier's Mailing Address:			
Supplier's Contact Information:	<i>Name</i>	( ) <i>Tel. no.</i>	<i>Email</i>
This item is a substitution for the specified item:	____ No		____ Yes
Contractor's Approval Stamp with Signature & Date	<u>Contractor's Brief Comments or Remarks</u> (attach separate letter as needed):		
	By making this submission, we represent that we have determined and verified all field measurements and dimensions, field construction criteria, site and building constraints in terms of limitations in moving the item into the enclosed space, materials, catalog and model numbers and similar data and that we have checked and coordinated this submission with other work at or adjacent to the installed location in accordance with the requirements contained in the Contract Documents.		



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**END OF SECTION**



**SECTION 014100**  
**REGULATORY REQUIREMENTS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Codes
- B. Governing agencies

**1.02 CODES**

- A. Comply with the requirements of the various codes referred to in these Specifications. Such codes shall be the date of the latest revision in effect at the time of receiving bids.
- B. If there is a conflict between local, state, and/or Federal regulatory requirements, seek a consultation with the State Department of Labor. Resolve conflicts to the satisfaction of the State Department of Labor prior to commencing work.
- C. Electrical Work: Conform to the requirements of the National Electrical Code (NEC) unless otherwise shown or specified. The Owner will be the sole judge of the interpretation of these rules and requirements.

**1.03 GOVERNING AGENCIES**

- A. All work shall conform to and be performed in strict accordance with all governing agencies such as, but not limited to:
  - 1. Occupational Safety and Health Act - OSHA
  - 2. State Department of Environmental Conservation
  - 3. State Building Code
  - 4. State Fire Code
  - 5. National Fire Protection Association - NFPA
  - 6. National Electrical Code
  - 7. State Plumbing Code
  - 8. New York State Energy Conservation Construction Code
  - 9. County Department of Health
  - 10. Town Codes, Rules, Laws and Ordinances
  - 11. Electric Utility
  - 12. Gas Utility
  - 13. Westchester County Department of Public Works.

**1.04 INSPECTIONS**

- A. Representatives of the Owner shall have access to the work for inspection purposes. The Contractor shall provide facilities suitable to the Owner to facilitate inspections of the installed work.

**1.05 NOISE CONTROL**

- A. Control noise in accordance with Town and OSHA requirements.



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- B. Operations which may generate objectionable noise shall be limited to between the hours of 8:00 a.m. to 4:30 p.m. on weekdays.

#### **1.06 PERFORMANCE BONDS**

- A. The Contractor shall obtain, pay for and submit all bonds required in connection with the work.

#### **1.07 LISTINGS**

- A. Equipment and materials for which Underwriters' Laboratories, Inc. (UL) provides product listing service, shall be listed and bear the listing mark.

#### **1.08 FIRE RESISTANT CONSTRUCTION MATERIALS AND ASSEMBLIES**

- A. Conform to the fire rating classifications based upon the test methods and acceptance criteria in the Standard, Fire Tests of Building Construction and Materials for which Underwriters' Laboratories, Inc. (UL) provides listings.
- B. Materials and assemblies shall comply with the acceptance criteria, detailed description of the assembly, its performance in the fire test and other pertinent details such as specification of materials, Classification coverage, and alternate assembly details.
- C. Alternatively, fire resistance rating classifications by other issuing organizations listed in the Fire and Building Codes are acceptable.

#### **PART 2 - PRODUCTS**

NOT USED

#### **PART 3 - EXECUTION**

NOT USED

**END OF SECTION**



**SECTION 014320**  
**PRE-INSTALLATION MEETINGS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Work of this Section includes the requirements for pre-installation meetings.

**1.02 PRE-INSTALLATION MEETINGS**

- A. As required in individual specification sections, the Contractor shall convene a pre-installation meeting at the site prior to commencing work of the section.
- B. Pre-installation meetings are to be convened at least one week prior to commencing work on the section. The contractor shall arrange and require attendance of Owner/Architect/Engineer and parties directly affecting, or affected by, work of the specific section.
  - 1. At least seven (7) calendar days advance notice is to be given.
  - 2. The contractor shall prepare agenda and preside at meeting. At a minimum the following items are to be discussed:
  - 3. Review conditions of installation, preparation and installation procedures.
  - 4. Review coordination with related work.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

**END OF SECTION**



**SECTION 014500**  
**QUALITY CONTROL**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Requirements for monitoring the quality of the constructed project.

**1.02 QUALITY ASSURANCE - 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 specified standards as a minimum quality for the work except when more stringent tolerances, codes, or specified requirements indicate higher standards or workmanship that is more precise.
- C. Perform work by persons qualified to produce workmanship of specified quality.
- D. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.
- E. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

**1.03 MOCK-UP**

- A. Assemble and erect specified items with specified attachment and anchorage devices, flashing, seals, and finishes.
- B. Accepted mock-ups shall be a comparison standard for the remaining work.
- C. Where a mock-up has been accepted by the Architect/Engineer and is specified to be removed, then the Contractor shall remove the mock-up and the clear area when directed to do so by the Architect/Engineer.

**1.04 REFERENCE STANDARDS**

- A. Conform to reference standards by date that the project was last bid.
- B. Obtain copies of standards when required by Contract Documents.
- C. Should specified reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

**1.05 FIELD OBSERVATION OF CONTRACTOR'S WORK**

- A. The Architect/Engineer will provide periodic observation of the Contractor's work.



## **Roof Replacement Program**

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## **PART 2 - PRODUCTS**

NOT USED

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions. Verify that the existing substrate is capable of structural support or attachment of new Work being applied or attached. Examine and verify specific conditions described in individual specification sections. Verify that utility services are available, of the correct characteristics, and in the correct locations.

### **3.02 PREPARATION**

- A. Clean substrate surfaces prior to applying next material or substance. Seal cracks or openings of substrate prior to applying next material or substance.
- B. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

**END OF SECTION**



**SECTION 014536**  
**ENVIRONMENTAL QUALITY CONTROL**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Asbestos and lead-based paint certification.
- B. Moisture control.

**1.02 ASBESTOS AND LEAD-BASED PAINT CERTIFICATION**

- A. Contractor shall submit the enclosed "Asbestos and Lead-Based Paint Certification" upon completion of all work.

**1.03 MOISTURE CONTROL**

- A. The Contractor shall maintain a strict policy and protocol for the control of water infiltration and moisture build-up during the course of the project. The plans and specifications are not intended to depict each and every condition or detail of construction. As the knowledgeable party in the field, the Contractor is in the best position to verify that all construction is completed in a manner which will provide a watertight structure. The Contractor has the sole responsibility for ensuring the watertight integrity of the structure. The Contractor's contractual obligations include, but are not limited, to the following:
- B. Water Infiltration: If the Contractor observes water infiltration (unintended) into a completed building or an ongoing construction site, he must immediately report the condition to the Owner and Architect/Engineer, and shall immediately take steps to investigate the source of the water infiltration, identify the responsible party (person who performed work that resulted in water infiltration) and devise a procedure to promptly eliminate water infiltration into the building.
- C. Handling of Water-Damaged Building Materials and Construction:
  - 1. Contractor shall inspect all building materials delivered to the site for pre-existing water damage, as well as existing mold growth.
  - 2. If in-place construction becomes wet, notify the Owner and Architect/Engineer immediately. The Owner and Architect/Engineer will determine whether or not the work shall be removed and replaced, or if the type of material can be permitted to dry.
  - 3. Under no circumstances may new or additional construction be placed over, or otherwise enclose, wet building materials.
- D. Visible Mold/Mildew:
  - 1. If the Contractor observes any substance that appears to be mold or other fungal growth and/or an unidentified substance within a completed building or the ongoing construction site, he shall immediately suspend construction operations in the area, and report the condition to the Owner and Architect/Engineer.
  - 2. No person shall be allowed back into the affected area without permission of the Owner.

**1.04 SUBMITTALS**

- A. Contractor shall submit completed and notarized "Certification of Asbestos and Lead-Based Paint" form.



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PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

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**Certificate of Asbestos and Lead-Based Paint  
(New Work)**

Client's Name: \_\_\_\_\_

Project Location: \_\_\_\_\_

Project Address: \_\_\_\_\_

Project Name: \_\_\_\_\_

Project Number: \_\_\_\_\_

**CERTIFICATION:**

This Contractor hereby certifies that no asbestos-containing material and lead-based paint, as defined by applicable federal and state regulations, has been furnished or installed at the referenced project:

Contractor Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_ Date Executed: \_\_\_\_\_

**This Form Shall Be Notarized**

**END OF SECTION**



**SECTION 015000**  
**TEMPORARY FACILITIES AND CONTROLS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. This Section supplements the General Conditions.
- B. The Work of this Section includes temporary facilities, utilities, and controls to be furnished by the Contractor for this project as it is specified herein.

**1.02 CARE AND PLACEMENT**

- A. All temporary and permanent facilities and controls and all other elements on the project site shall meet all standards of the Occupational Safety and Health Act of 1970 and subsequent revisions. The Contractor shall comply with all requirements of the Act.
- B. The Contractor shall take every precaution and shall provide such equipment and facilities as are necessary or required for the safety of its employees and persons at the site.
- C. In the event of damage to existing and/or temporary facilities then immediately make all repairs and replacements to an equal condition prior to the event.

**1.03 QUALITY PERFORMANCE**

- A. Comply with and perform all work in accordance with the requirements of local authorities and utility companies having jurisdiction, and all applicable codes, regulations and ordinances.
- B. Secure approvals from the appropriate jurisdictions and utility companies on all repairs, relocations, connections, disconnections and the Work.
- C. All barricades, warning signs, lights, temporary signals and other protective devices shall conform with "Manual on Uniform Traffic Control Devices for Streets and Highways", US Government Printing Office.

**1.04 SUBMITTALS**

- A. The Contractor shall provide a list of contact numbers as follows:
  - 1. Contractor's superintendent and office project manager (home, beeper, cellular, office, fax, trailer, and email address).
  - 2. All subcontractors.
  - 3. Emergency services such as fire department, police, and ambulance.
  - 4. Contractor shall also submit the following:
    - a. Name and qualifications of person or persons who shall be available to render first aid.
    - b. Names, addresses and telephone numbers of personnel who can be telephoned and act on behalf of Contractor in the event of emergencies or other problems requiring prompt attention during winter shutdown, holidays, nights and other periods when the Contractor's superintendent may be absent from the project site.



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#### **1.05 CONTRACTOR'S RESPONSIBILITY**

- A. The Contractor shall be responsible for the installation, performance, maintenance, and repair of all temporary facilities and controls specified herein this Section as originally provided.
- B. The Owner reserves the right to immediately correct a Contractor caused action, if in the opinion of the Owner, the situation may result in the immediate loss of life, property, and degradation of the environment. The costs for actions taken by the Owner shall be deducted from money due or to become due the Contractor. Amounts in excess shall be paid by the Contractor.
- C. If the Contractor caused situation is not deemed immediate, then the Contractor shall, within 24 hours of receipt of written and/or verbal notice, correct the defect or unsatisfactory condition.
- D. The Owner may repair, correct, replace, or install temporary facilities to correct the situation if the Contractor fails to perform within the allowed time. The costs to make the corrections shall be deducted from money due or to become due the Contractor. Amounts in excess shall be paid by the Contractor.

#### **PART 2 - PRODUCTS**

##### **2.01 GENERAL**

- A. The Owner may use temporary power lines, pipes, roadways or other facilities that the Contractor furnishes, installs, and maintains (then removes at the completion of the work), during the period of construction.
- B. The location of all temporary power lines, roadways, and other necessary temporary facilities shall be subject to the approval of the Architect/Engineer, and these shall be located and operated so as not to interfere with the operation of the facilities.

##### **2.02 WATER FOR CONSTRUCTION PURPOSES**

- A. The Contractor shall obtain water from the nearest potable water source as designated by the Owner.
- B. The Owner will pay for water usage for general construction activities such as dust control and for sanitary purposes, like hand washing.
- C. The Contractor shall exercise measures to conserve water.
- D. Provide insulation and heat tracing to prevent freezing of temporary piping. Drain hoses at the end of each use.
- E. All Contractors, subcontractors, and personnel involved in the project shall be permitted to use water for construction purposes as provided under this paragraph.

##### **2.03 SANITARY FACILITIES**

- A. General Contractor shall provide and maintain temporary toilet facilities for use by all contractors.



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- B. These facilities shall be maintained in a strictly sanitary manner and be screened from the general public.
- C. All facilities shall be in accordance with the Occupational Safety and Health Act (OSHA) standards and all other applicable local codes.
- D. The locations of such facilities shall be determined by the Architect/Engineer or the Owner and be shown on the General Contractor's Site Utilization Plan.
- E. All applicable codes and regulations regarding the maintenance and method of waste disposal for these facilities will be strictly enforced. These facilities shall be of the portable type.

#### **2.04 BARRIERS AND PROTECTION**

- A. The Contractor shall provide railings, barricades, signs, fences, overhead protection, walkway covers and other protective devices to prevent unauthorized entry to construction areas, to allow for the Owner's / Public safe use of the site and to protect existing facilities and adjacent structures from damage from the work.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing buildings.
- C. Provide protection for plant life designated to remain.
- D. Protect vehicular traffic, stored materials, public utilities, site and structures from damage.
- E. Provide warning signs, detour signs and other traffic control devices to insure the safety of plant operators and to adequately direct traffic around the work. Illuminate barricades, obstructions, and warning signs from sunset to sunrise.

#### **2.05 TEMPORARY FENCING**

- A. The Contractor is responsible for performance compliance with OSHA standards.

#### **2.06 TEMPORARY HANDRAILS AND SCAFFOLDS**

- A. All temporary handrailing and scaffolds shall be designed and erected in compliance with OSHA standards. The Contractor is responsible for performance compliance with OSHA standards.
- B. Handrails shall be securely installed and maintained in accordance with OSHA regulations until the permanent railing or grating has been permanently installed and approved by the Architect/Engineer.
- C. All scaffolding and platforms shall be erected in a safe and substantial manner complying with OSHA requirements.
- D. All temporary handrails and scaffolds shall be designed by a professional engineer licensed in the state where the project is being constructed.
  - 1. The design drawings and details shall be stamped by the licensed engineer and submitted for record purposes.
  - 2. The Contractor's design engineer shall visit the site to certify that the handrailing and/or scaffolds have been erected pursuant to the stamped design.



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- E. The General Contractor shall protect all openings in building/structures of any type such as shafts, deck openings, and other building related chases.

#### **2.07 DUST CONTROL**

- A. The Contractor shall provide measures to control dust resulting from the work.
- B. Control dust at locations and in such quantities and frequencies as required to prevent dust from becoming a nuisance to the surrounding area.
- C. In the event the Contractor does not adequately provide for dust control, or should insufficient quantities of dust control agents be placed and Contractor fails to place additional quantities within 4 hours after Architect/Engineer's direction, Owner will perform the required work by whatever means deemed expedient and all expenses incurred by Owner will be charged to and paid by Contractor.
- D. Take care in selecting and applying dust control agents so as not to make roadways or walkways slippery, muddy or hazardous. Dust control agents shall be acceptable to the Architect/Engineer.
- E. The General Contractor shall provide all roadways with dust control.

#### **2.08 RUBBISH REMOVAL**

- A. The General Contractor shall be responsible for overall rubbish removal.
- B. Burning of rubbish and trash will not be permitted.
- C. The General Contractor shall clean up trash as specified in Section 011400 - Work Restrictions or more often if the trash interferes with the work of others, presents a hazard or if directed by the Architect/Engineer.
- D. Dispose of rubbish and waste materials in accordance with state regulations and local ordinances.
- E. The General Contractor shall be responsible for maintaining the site free of trash.

#### **2.09 ENCLOSURES**

- A. The Contractor shall provide and maintain temporary enclosures, sheds, or fenced-in areas to accommodate protection for products, material and equipment.
- B. Store equipment that cannot be exposed to outdoors in accordance with Section 016500 - Product Delivery, Storage and Handling.

#### **2.10 SECURITY**

- A. The Contractor shall provide security and facilities to protect work from unauthorized entry, vandalism and theft.
- B. Coordinate with Owner's security program, if applicable.



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- C. The Contractor has full responsibility for the working area until final acceptance and payment.
- D. All on-site employees shall bear, at all times, an identification badge, conspicuously worn, which shall include, at a minimum, a passport or similar size photograph, the name of the employee and the name of the company.
- E. Any employee working on site without a photo identification badge will be instructed to leave the site.
- F. All company vehicles shall be conspicuously identified, through sufficiently sized lettering on both the passenger and driver sides, with the company name, address and telephone number.
  - 1. All employee owned vehicles shall have an 8-1/2 inch by 11 inch sign with the company name, address and telephone number placed on the dashboard on the driver side.
- G. Submit to the Owner a complete listing of all employees that will or might be performing work at the project site.
  - 1. Furthermore, provide sufficient information as may be required for the Owner to conduct background checks, in accordance with the Fair Credit Reporting Act.

#### **2.11 PARKING**

- A. Provide and maintain access to fire hydrants, building entrances, process tanks, doors and the work in general.
- B. The Contractor shall have his or her employees and subcontractors park in areas designated by the Owner/Architect/Engineer.
- C. If designated on the Contract Drawings, then only use those areas for parking.
- D. Since the site is limited in space, the Contractor shall provide special transportation to have their employees bused to the site from off-site parking as needed.

#### **2.12 DAMAGES**

- A. The Contractor, with the prior approval of the Owner/Architect/Engineer, shall promptly repair any damage, directly or indirectly caused by the Contractor's operations.
- B. All repairs shall be to the complete satisfaction of the Owner and equal in quality to that which pre-existed.

#### **2.13 FIRST AID FACILITIES & EMERGENCY TELEPHONE NUMBERS**

- A. The Contractor shall provide and maintain adequately equipped first aid facilities in a location or at locations that are readily accessible to workmen, Architect/Engineer and visitors to the site.
- B. Provide a list of emergency telephone numbers as specified above.
- C. Post the list of emergency telephone numbers as directed by the Architect/Engineer.



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#### **2.14 POLLUTION CONTROL**

- A. Do not permit pollutants, such as chemicals, fuels, lubricants, calcium chloride, sewage, water containing sediments and other deleterious, poisonous, toxic or oxygen demanding substances to enter or leach into streams, lakes, wetlands, other surface waters, into groundwater, or into the air.
- B. In waters used for public water supply or used for trout, salmon or other game or forage fish spawning or nursery, control measures must be adequate to assure that turbidity in the receiving water will be increased not more than 10 standard turbidity units (s.t.u.) in the absence of other more restrictive locally established limitations, unless otherwise permitted by the State.
- C. In no case shall the classification for the surface water be violated, unless otherwise permitted by the State.
- D. In water used for other purposes, the turbidity shall not exceed State limits.

#### **2.15 REMOVALS**

- A. Remove all items provided under this Section except as otherwise specified.

### **PART 3 - EXECUTION**

#### **3.01 PROTECTION OF EXISTING UTILITIES AND PUBLIC WORKS**

- A. Maintain and protect existing utilities and public works including, but not limited to, conduits, sewers, water mains, electric and telephone conductors or conduits, and gas mains encountered during the construction.
- B. In the event that damage shall result to any service pipe for water or gas, or any private or public sewer or conduit, the Contractor shall immediately, and at its own expense, repair same to the satisfaction of the Architect/Engineer.
- C. Any contents from the pipes, sewers or conduits shall be immediately removed and disposed in accordance with applicable laws.

#### **3.02 REMOVAL OF UTILITIES, FACILITIES AND CONTROLS**

- A. Remove temporary above grade or buried utilities, equipment, facilities and materials, immediately following substantial completion and prior to release of retainage.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.
- D. Final payment will not be processed until all removals have been completed to the satisfaction of the Owner/Architect/Engineer.

#### **3.03 PROTECTION OF EXISTING PROPERTY**

- A. Protect existing structures and finishes during performance of the work.



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- B. Protect existing trees and plants during performance of the work.
- C. Do not deposit excavated materials or store materials around trees or plants or attach guy wires to trees.

**END OF SECTION**



**SECTION 015719**  
**TEMPORARY ENVIRONMENTAL CONTROLS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Control of environmental pollution and damage that the Contractor must consider for air, water, and land resources in preparing a bid and while constructing the project. This Section includes management of site aesthetics, noise, solid and liquid waste and wastewater, and other pollutants that may be generated by the Contractor.
- B. Include all costs associated with environmental protection as specified herein and as specified in other Sections of these specifications in the total price bid.

**1.02 DEFINITIONS**

- A. Environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents which:
  - 1. Adversely effect human health or welfare,
  - 2. Unfavorably alter ecological balances of importance to human life,
  - 3. Impact wetlands,
  - 4. Effect other species of importance to man, or;
  - 5. Degrade the utility of the environment for aesthetic, cultural, and historical purposes.
- B. Definitions of Pollutants:
  - 1. Sediment: Soil and other debris that has been eroded and transported by runoff water.
  - 2. Solid Waste: Rubbish, debris, garbage, and other discarded solid materials resulting from industrial, commercial, and agricultural operations and from community activities.
  - 3. Rubbish: Combustible and noncombustible wastes such as paper, boxes, glass and crockery, metal and lumber scrap, tin cans, and bones.
  - 4. Debris: Combustible and noncombustible wastes, such as leaves, tree trimmings, ashes, and waste materials resulting from construction or maintenance and repair work.
  - 5. Chemical Waste: Petroleum products, bituminous materials, salts, acids, alkalies, herbicides, pesticides, organic chemicals, and inorganic wastes.
- C. Sanitary Wastes:
  - 1. Sewage: Domestic sanitary sewage and human and animal waste.
  - 2. Garbage: Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

**3.01 PROTECTION OF ENVIRONMENTAL RESOURCES**

- A. Protect environmental resources within the project boundaries and those affected outside the limits of permanent work during the entire period of this Contract. Confine activities to areas defined by the Contract Documents.



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- B. Protection of Landscape: Protect trees, shrubs, vines, grasses, land forms, and other landscape features shown on the drawings to be preserved by marking, fencing, or using any other approved techniques.
  - 1. Box and protect from damage existing trees and shrubs to remain on the construction site.
  - 2. Immediately repair all damage to existing trees and shrubs by trimming, cleaning, and painting with antiseptic tree paint.
  - 3. Do not store building materials or perform construction activities closer to existing trees or shrubs than the farthest extension of their limbs.
- C. Handle and dispose of solid wastes in such a manner that will prevent contamination of the environment.
  - 1. Place solid wastes (excluding clearing debris) in containers that are emptied on a regular schedule.
  - 2. Transport all solid waste off Owners' property and dispose of waste in compliance with Federal, State, and local requirements.
  - 3. Store chemical waste away from the work areas in corrosion resistant containers and dispose of waste in accordance with Federal, State, and local regulations.
  - 4. Handle discarded materials other than those included in the solid waste category as directed by the Architect/Engineer.
- D. Protection of Water Resources: Keep construction activities under surveillance, management, and control to avoid pollution of surface and ground waters and sewer systems. Implement management techniques to control water pollution by the listed construction activities that are included in this Contract.
- E. Washing and Curing Water: Do not allow wastewater directly derived from construction activities to enter water areas. Collect and place wastewater in retention ponds allowing the suspended material to settle, the pollutants to separate, or the water to evaporate.
- F. Control movement of materials and equipment during construction to prevent violation of water pollution control standards of the Federal, State, or local government.
- G. Protection of Fish and Wildlife Resources:
  - 1. Keep construction activities under surveillance, management, and control to minimize interference with, disturbance of, or damage to fish and wildlife.
- H. Protection of Air Resources: Keep construction activities under surveillance, management, and control to minimize pollution of air resources.
  - 1. Burning is not permitted on the job site. Keep activities, equipment, processes, and work operated or performed, in strict accordance with the State and Federal emission and performance laws and standards.
  - 2. Maintain ambient air quality standards set by the Environmental Protection Agency and State, for those construction operations and activities specified.
- I. Particulates: Control dust particles, aerosols, and gaseous by-products from all construction activities, processing, and preparation of materials (such as from asphaltic batch plants) at all times, including weekends, holidays, and hours when work is not in progress.
- J. Hydrocarbons and Carbon Monoxide: Control monoxide emissions from equipment to Federal and State allowable limits.
- K. Odors: Control odors of construction activities and prevent obnoxious odors from occurring.



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- L. Reduction of Noise: Minimize noise using every action possible. Perform noise-producing work in less sensitive hours of the day or week as directed by the Architect/Engineer. Maintain noise-produced work at or below the decibel levels and within the time periods specified in accordance with OSHA and local ordinances, whichever is more restrictive.
1. Perform construction activities involving repetitive, high-level impact noise only between 8:00 a.m. and 5:00 p.m. unless otherwise permitted by local ordinance or by the Architect/Engineer.
  2. Repetitive impact noise on the property shall not exceed the following dB limitations:
  3. Provide sound-deadening devices on equipment and take noise abatement measures that are necessary to comply with the requirements of this Contract, consisting of, but not limited to, the following:
    - a. Use shields or other physical barriers to restrict noise transmission.
    - b. Provide soundproof housings or enclosures for noise-producing machinery.
    - c. Use efficient silencers on equipment air intakes.
    - d. Use and maintain efficient intake and exhaust mufflers on internal combustion engines.
    - e. Line hoppers and storage bins with sound deadening material.
    - f. Conduct truck loading, unloading, and hauling operations so that noise is kept to a minimum.

**END OF SECTION**



**SECTION 016100**  
**BASIC PRODUCT REQUIREMENTS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. This Section includes the general requirements for products that are to be furnished, installed, or otherwise incorporated into the project.

**1.02 QUALITY ASSURANCE APPLIES TO ALL PRODUCTS**

- A. In addition to the Contractor's warranties and guarantees on materials and equipment required under the General Conditions of the Contract and the Technical Specifications contained hereinafter, the Contractor shall also be responsible for all materials, equipment, and products that have or is planned to be incorporated into the work.
  - 1. The Contractor shall be responsible for the finished work and that it accurately and completely complies with these Contract Documents.
  - 2. The Contractor shall be responsible for work performed by subcontractors, equipment suppliers, and material vendors.
  - 3. The Contractor shall be satisfied as to the product's performance before it is ordered for installation. At the Contractor's option, he/she shall have tested each product to determine compliance with these specifications.
- B. The Architect/Engineer may check all or any portion of the work and the Contractor shall afford all necessary assistance to the Architect/Engineer in carrying out such checks.
  - 1. Such checking by the Architect/Engineer shall not relieve the Contractor of any responsibilities for the accuracy or completeness of the work.
  - 2. Such checking is a courtesy service being provided by the Owner and does not relieve the Contractor of his/her responsibilities under this Construction Contract.
- C. If witnessed shop tests or inspections are required at the point of manufacture, the Contractor shall keep the Architect/Engineer advised as to the progress of the work to allow inspection at the proper time and place. Provide at least two (2) weeks advance notice before scheduled shop tests.
- D. Should a dispute arise as to the quality of workmanship, equipment or material performance, then the final decision regarding acceptability with these Contract Documents shall be that of the Owner.
- E. At the request of the Architect/Engineer, the Contractor shall promptly provide the services of a competent representative of the manufacturer at the project site, fully equipped and prepared to answer questions, perform tests, make adjustments and to prove compliance with the Contract Documents free of all additional charges. Proof of compliance shall be the responsibility of the Contractor, and such special visits to the project site by the manufacturer shall not be eligible under any cash allowances or stipulated man-hours necessary to startup the system and/or train the Owner as may be specified in the Technical Specifications.

**1.03 QUALITY ASSURANCE - EQUIPMENT**

- A. Erect and install products under the supervision of a competent and experienced superintendent. The method of installation, including anchorage, clearances, and tolerances for



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rotating assemblies, methods of support for equipment and adjacent piping, shall be as recommended by the equipment manufacturer unless detailed on the Drawings or specified.

- B. All material furnished shall be new, and guaranteed free from defects in workmanship, installation, and design.
- C. Design and fabricate equipment in conformance with ANSI, ASTM, ASME, ASHRAE, IEEE, NEC and NEMA Standards.
  - 1. Equipment shall withstand the stresses that may occur during fabrication, testing, transportation, installation and conditions of operation.
  - 2. Pumps shall conform to the requirements of the Hydraulic Institute.
  - 3. Equipment shall comply with the latest OSHA regulations and the ANSI Safety Standards.
- D. Equipment shall be products of manufacturers who produce evidence of their ability to promptly furnish any and all interchangeable replacement parts as may be needed at any time within the expected life of the equipment.
- E. Manufacturers shall also have readily available access to suitable and accurate testing facilities for performing the required shop tests.

## PART 2 - PRODUCTS

### 2.01 MATERIALS AND EQUIPMENT

- A. Equipment shall have been in successful regular operation under comparable conditions for a period of at least five (5) years.
  - 1. This time requirement does not apply when the manufacturer posts an Owner/Architect/Engineer acceptable Performance Bond or Letter of Credit for the duration of the time period that will guarantee replacement of the equipment in the event of failure.
  - 2. The bond shall be in a form that is acceptable to the Owner's legal council.
- B. The Owner reserves the right to reject any material or equipment manufacturer who, although he appears to be qualified and meets the technical requirements, does not provide satisfactory evidence indicating adequate and prompt post-installation repair and maintenance service, as required to suit the operational requirements of the Owner.
- C. Whenever it is required that the Contractor furnish materials or manufactured articles or shall do work for which no detailed specifications are set forth, the materials or manufactured articles shall be of the best grade in quality and workmanship obtainable on the market from firms of established good reputation, or, if not ordinarily carried in stock, shall conform to the usual standards for first-class materials or articles of the kind required.
- D. Perform work in full conformity and harmony with the intent to secure the best standard of construction and equipment of the work as a whole or in part.
- E. Items of any one type of material or equipment shall be the product of a single manufacturer.
  - 1. For ease of the Owner in maintaining and obtaining service for equipment and for obtaining spare parts from as few places as possible, to the maximum extent possible, use equipment of a single manufacturer.
  - 2. The Architect/Engineer reserves the right to reject any equipment from various manufacturers if suitable equipment can be secured from fewer manufacturers and to require that source of materials be unified to the maximum extent possible.



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- F. Substitute equipment shall not be fabricated nor installed until after written decision to accept request is received from the Architect/Engineer.

## **2.02 FABRICATIONS**

- A. Insofar as possible, shop prefabricate all items complete and ready for installation.
- B. Accurately fabricate all items to the details shown on the Drawings and on the shop drawings found in compliance with the Contract Documents.

## **PART 3 - EXECUTION**

### **3.01 PREPARATION**

- A. Prior to work under any Section, carefully inspect the existing work and verify that it is complete to the point where the work under that Section may properly commence.
- B. Avoid the need to remove and replace work and to avoid unnecessary cutting and patching.
- C. Inspect all surfaces to be sure that they have been properly prepared before applying new work to such surfaces.
- D. Verify that all work can be installed in strict accordance with the drawings and the approved shop drawings. Immediately report discrepancies to Architect/Engineer.
- E. Do not proceed with the work under any Section until these conditions are obtained.

### **3.02 INSTALLATION**

- A. Furnish and install materials and equipment in accordance with the instructions of the applicable manufacturer, fabricator or processors, except as otherwise provided in the Contract Documents.
- B. All work shall be done in a workmanlike manner and set to proper lines and grades. The work shall be square, plumb and/or level as the case may be.
- C. Where performance criteria are specified, do all work necessary to attain the required end results.

### **3.03 FIELD QUALITY CONTROL**

- A. Neither observations by Architect/Engineer nor inspections, tests or approvals by other persons shall relieve the Contractor from his obligations to perform the work in accordance with the requirements of the Contract Documents.
- B. If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to specifically be inspected, tested or approved by some public body, the Contractor shall assume full responsibility therefore, pay all costs in connection therewith, and furnish the Architect/Engineer with the required certificates of inspection, testing or approval.



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- C. The Owner reserves the right to independently perform laboratory tests on random samples of material or performance tests on equipment delivered to the site.
  - 1. These tests, if made, will be conducted in accordance with the appropriate referenced standards or specification requirements.
  - 2. The entire shipment represented by a given sample, samples or piece of equipment may be rejected on the basis of the failure of samples or pieces of equipment to meet specified test requirements.
  - 3. All rejected materials or equipment shall be removed from the site, whether stored or installed in the work, and the required replacements shall be made, all at no additional cost to Owner.

#### 3.04 ADJUST AND CLEAN

- A. Upon the completion of installations, and as a condition of its acceptance, visually inspect all work, adjust all components for proper alignment and touch-up abrasions and scratches to make them completely invisible.
- B. Thoroughly examine all materials and equipment with protective or decorative finishes for defects and damage prior to being covered.
  - 1. In the case of buried items of work, restore protective surface covers so as to conform to the Contract Documents prior to being backfilled, buried or embedded, as the case may be.
  - 2. In the case of exposed items of work, for which a decorative finish is required, all scratches, discoloration's, unmatched colors, disfigurations and damages shall be repaired and touched-up so as to provide a neat, clean finish, and be uniform in color.

#### 3.05 UNCOVERING WORK

- A. Unless otherwise specified or directed by Architect/Engineer, no work shall be covered until it has been observed, tested, photographed, measured, and authorized to be covered by Architect/Engineer.
- B. If any work has been covered with Architect/Engineer's consent and Architect/Engineer considers it necessary or advisable that covered work be observed or tested, the Contractor, at Architect/Engineer's request, shall uncover, expose or otherwise make available for observation, or testing as Architect/Engineer may require, that portion of the work in question, furnishing all necessary labor, material and equipment.
  - 1. If it is found that such work is defective, the Contractor shall bear all the expenses of such uncovering, exposure, observation, and testing of satisfactory reconstruction, including compensation for additional engineering services and an appropriate deductive change order shall be issued.
  - 2. If, however, such work is not found to be defective, the Contractor shall be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to such uncovering, exposure, observation, testing and reconstruction if he makes a claim therefore as provided in the General Conditions.

#### 3.06 DEFECTIVE WORK

- A. The repair, removal, replacement and correction of defective work is a part of this Contract and shall be promptly performed in accordance with the requirements set forth in the General Conditions or other portions of the Contract Documents. All costs in connection with the correction of defective work shall be borne by the Contractor.



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- B. Products that fail to maintain the performance or other salient requirements of the Contract Documents, shows undue wear, or other deleterious effects during the maintenance period, shall be considered defective.

**END OF SECTION**



**SECTION 016500**  
**PRODUCT DELIVERY, STORAGE AND HANDLING**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. The Section includes the transportation, handling, storage and protection of products that are to be incorporated into the work.

**1.02 GENERAL**

- A. Items shall be delivered as complete assemblies direct from the manufacturer with all internal wiring, piping, valving, and control devices intact except where partial disassembly is required by transportation regulations, protection of components, or where physical constraints may exist or be created for the setting of the item.
- B. Coordinate the disassembly and reassembly requirements with the manufacturer. Determine the need and extent of reassembly prior to bid.
  - 1. All labor, material and equipment costs associated with the disassembly and reassembly of the product shall be included in the Contract Price.
  - 2. Where reassembly of equipment is necessary, then the manufacturer shall provide reassembly instruction at the project site.
  - 3. A technician shall be present during the entire reassembly procedure and the manufacturer shall certify, in writing, that the unit was reassembled properly in accordance with instructions provided by the manufacturer and that all as-specified warranties remain in effect.
  - 4. The manufacturer's reassembly inspection time shall be in addition to the field service time specified and shall be included in the Contract Price. This time shall not be eligible for payment under any cash allowance item.
- C. In the case where equipment is to be installed by others, then the supplying contractor shall be responsible for its reassembly. If reassembly is necessary and the unit(s) are to be set inside an enclosure or building, reassemble the equipment inside said enclosure. The equipment once reassembled shall be turned over to the installing contractor as specified below.

**1.03 PACKING**

- A. Transport products in containers, crates, boxes or similar means such that the products are protected against damage that may occur during transportation.
- B. All parts shall be packaged separately or in container where parts of similar systems are grouped.
- C. Part numbers shall be indicated on the individual part. Use indelible ink to mark part numbers.
- D. All equipment shipments shall be included with a parts list showing a description (name) of the part and the manufacturer's part number.
  - 1. The parts list shall be shipped in a plastic zippered envelope with the words "Parts List" lettered on it in indelible ink.
  - 2. The parts list shall be placed inside the shipping container so that it is on the top of the contents.



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- E. Equipment shall be shipped with storage, handling and installation instructions.
  - 1. The Engineer reserves the right to withhold payment for equipment delivered to the site until such time as the storage, handling and installation instructions are supplied by the manufacturer.
  - 2. In the case where operation and maintenance manuals have been provided by the manufacturer, which includes the installation instructions, then the installation instructions shall also be included with the equipment shipment.
- F. Delicate instruments and devices, reagents, chemicals, and glassware shall be shipped in packaging normally provided by the manufacturer.
- G. The Contractor shall require the manufacturer to be responsible for the proper packing of all products.

#### 1.04 SHIPPING AND DELIVERY

- A. Product deliveries shall be accompanied with a bill of lading indicating the place of origination and the Contractor's purchase order number.
- B. Inspect shipments immediately upon delivery, to assure compliance with requirements of the Contract Documents and those products are undamaged.
- C. Promptly remove damaged material and unsuitable items from the job site.
- D. Provide equipment and personnel to handle products by methods to prevent soiling; disfigurement or damage.

#### 1.05 STORAGE

- A. Store sensitive products and all spare parts in weather tight, climate controlled enclosures in an environment favorable to product.
- B. Store and protect products in accordance with the manufacturer's instructions.
- C. All other products that are to be installed underground or products such as pipe, valves, and fittings shall be stored outdoors but shall be blocked off the ground and covered with impervious sheet coverings.
- D. Store fabricated products above the ground on blocking or skids.
- E. Store loose granular materials in well-drained areas on solid surfaces to prevent mixing with foreign matter.
- F. Provide adequate ventilation to avoid condensation.
- G. In accordance with manufacturer's instructions protect bearings, couplings, shafts, rotating components, and assemblies. Protection of said equipment shall be continuous until the time the equipment is placed into permanent service.
- H. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.



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- I. Do not store volatile liquids in any building on site.
- J. Storage of products shall be the responsibility of the supplying contractor. The installing contractor shall take all necessary precautions to protect the equipment being furnished by others.
- K. Store with seals and labels intact and legible.

#### **1.06 PROTECTION OF WORK**

- A. The Contractor shall protect the installed work. All costs for protection shall be borne by the Contractor. Provide coverings as necessary to protect installed products from damage, from traffic and subsequent construction operations. Remove when no longer needed.
- B. Cover and protect equipment from dust, moisture or physical damage. Protect finished floor surfaces prior to allowing equipment or materials to be moved over such surfaces. Maintain finished surfaces clean, unmarred and suitably protected until accepted by the Owner.
- C. Additional time required to secure replacements and to make repairs will not be considered by the Architect/Engineer to justify any extension in the Contract Time of Completion. In the event of the damage, promptly make replacement and repairs to the approval of the Engineer at no additional costs.

#### **PART 2 - PRODUCTS**

NOT USED

#### **PART 3 - EXECUTION**

NOT USED

**END OF SECTION**



**SECTION 017423**  
**CLEANING**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Cleaning during the progress of the work
- B. Cleaning prior to final payment

**PART 2 - PRODUCTS**

**2.01 MATERIALS**

- A. Cleaning materials shall be appropriate to the surface and materials being cleaned.
- B. Provide pads to protect finished surfaces from cleaning materials.

**PART 3 - EXECUTION**

**3.01 PREPARATION**

- A. Post signs to advise building occupants if wet and/or slippery floor conditions exist during cleaning operations.

**3.02 PROGRESS CLEANING**

- A. Keep all buildings, enclosures, and confined areas where work is being performed under the Contract free from unattended combustible materials.
- B. Remove rust spots as they develop.

**3.03 FINAL CLEANING**

- A. Remove dust, dirt, grease, stains, paint drips and runs, plastic, labels, tape, glue, rope, and other foreign materials from visible interior and exterior surfaces.
- B. Do not move dust from spot to spot. Remove directly from the surface on which it lies by the most effective mean such as appropriately treated dusting cloths or vacuum tools. When doing high cleaning, do not allow dust to fall from high areas onto furniture and equipment below.
- C. Dismantle and remove all temporary structures, scaffolding, fencing, and equipment. Remove waste materials, rubbish, lumber, block, tools, machinery, and surplus materials.
- D. Perform the following prior to final payment:
  - 1. Broom clean all exterior concrete surfaces and vacuum clean all interior concrete surfaces.
  - 2. Dust and spot clean painted and vinyl covered walls.
  - 3. Clean and polish all unpainted metal on doors such as trim, hardware, kickplates and doorknobs.
  - 4. Vacuum clean carpets and mats.
  - 5. Vacuum clean acoustic ceilings.



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6. Repair, patch, and touch-up marred surfaces to specified finish and to match adjacent surfaces.
7. Remove foreign material from exterior masonry.
8. Replace all broken and scratched glass and mirrors.
9. Replace all damaged insect screens.
10. Wash and clean interior and exterior window surfaces. All glass shall be clean and free of dirt, grime, streaks and excessive moisture. Wipe drippings and other marks from windowsills, sashes and woodwork. Do not use windowsills in lieu of ladders.
11. Polish bright metal by damp wiping and drying with a suitable cloth. If a polished appearance is not thereby produced, apply appropriate metal polish.
12. Clean and polish all stainless steel surfaces, including control panels supplied under this Contract.
13. Clean furniture and equipment in accordance with manufacturers instructions.
14. Clean all paved roads, lots and drives which were paved as work under this Contract and all existing paved surfaces using a mechanical street cleaner.
15. Repair or repaint damaged pavement markings.
16. Vacuum and clean with a damp cloth light fixtures, including glass and plastic lenses, ceiling and wall mounted lights, cover panels, side panels, louvers, fixture frames and lamps.
17. Clean supply vents and exhaust grilles. Clean gutters and downspouts.
18. Remove all rust spots and stains from new and pre-existing concrete, painted surfaces, and all other surfaces.
19. Clean and disinfect all pre-existing toilet facilities that were entered upon and used by the Contractor during the project.
20. Replace damaged existing toilet fixtures, such as sinks, toilet bowls, urinals, and mirrors, with in-kind units if so directed by the Architect/Engineer.
21. Wash all existing floors that were in any way impacted by the construction operations.
22. Rake clean landscaped surfaces. Final mow all areas grassed and sodded during the work.
23. Inspect interior and exterior surfaces, and all work areas, to verify that the entire work is clean and ready for use by the Owner. The project will not be considered substantially complete until all final cleaning has been performed.
24. Polish all new handrail installed as work of this contract with a commercially available aluminum cleaner recommended by the railing manufacturer.
25. Clean dirt that has accumulated between grating and grating angles/supports.
26. Fill in all holes in concrete that remain after temporary handrail is removed. Non-shrink grout shall be used.

**END OF SECTION**



**SECTION 017800**  
**CLOSEOUT SUBMITTALS**

**PART 1 - GENERAL**

**1.01 SUBMITTALS**

- A. Submit the following documents to the Architect/Engineer before Substantial Completion:
  - 1. Project Record Documents as specified in Section 017839.
  - 2. Operations and Maintenance Manuals prepared in accordance with Section 017823 and be updated as a result of start-up activities.
  - 3. One binder containing original counterparts of all warranties, guarantees, bonds, or affidavits as specified in the Technical Specification Sections. These documents shall contain the original signatures and be placed in a plastic sheet protector, one document per protector.
  - 4. Spare parts checklist itemizing all spare parts furnished under the Contract summarized by Section.
  - 5. Electrical Underwriter's Certificate where the prime construction contract includes electrical construction or where this Contract is for a Prime Electrical Construction Contract.
- B. Submit the following items to the Architect/Engineer with the final application for payment:
  - 1. Final Application for Payment prepared by the Architect/Engineer for Contractor's execution showing final amount of Contract including change orders.
  - 2. Maintenance Bond prepared in accordance with the Contract or General Conditions.
  - 3. Utility company signoffs and inspection approvals, if applicable.
  - 4. Federal, state, county, town and local signoffs and inspection approvals, where applicable.
  - 5. Final Application for Payment and continuation (G702 and G703)
  - 6. Contractor's Certified Payrolls
  - 7. OSHA cards for all workers
  - 8. Contractor's Affidavit of Payment of Debts and Claims (G706)
  - 9. Contractor's Affidavit of Release of Liens (G706A)
  - 10. Final list of Subcontractors (G705)
  - 11. Subcontractor's Affidavit of Payment of Debts and Claims (G706) - (for each subcontractor used)
  - 12. Subcontractor's Affidavit of Release of Liens (G706A) - (for each subcontractor used)
  - 13. Consent of Surety to Final Payment (G707)
  - 14. 2 year Maintenance Bond - 100% of contract including change orders
  - 15. Contractors letter guaranteeing workmanship 2 years
  - 16. Product data, Maintenance manuals and Warranty Information
  - 17. As Built Documentation
  - 18. Attic Stock / Spare Parts (provide proof of delivery transmittal signed by owner)
  - 19. Training and Demonstrations (provide sign-in from training session)
  - 20. Asbestos Affidavit and waste manifests
- C. All documents shall be complete, signed, dated, and notarized (where applicable) and be subject to the Architect/Engineer's acknowledgment of receipt or approval.



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PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

**END OF SECTION**



**SECTION 017823**  
**OPERATING AND MAINTENANCE DATA**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Where the technical specifications call for the submission of manuals, said manuals shall be prepared in accordance with the requirements contained herein. It being understood that manuals shall be submitted for all equipment even if it is not specifically called out in the specifications.

**1.02 MANUAL CONTENTS AND FORMAT**

- A. All Operations and Maintenance Manuals shall be as specified hereinafter.
- B. The binder shall be 8 1/2" x 11", metal hinge, vinyl, large capacity by National or Equal. It shall show the name of the manufacturer or supplier and project name on the spine of the binder.
- C. A cover shall be provided showing the names of the Owner, Architect/Engineer, Contractor, and Manufacturer.
  - 1. It shall show the Contractor's order number and manufacturer's project number.
  - 2. The address of the manufacturer, service station telephone number, project title, contract number, and year shall also be shown.
- D. Provide tabbed color dividers for each separate product and system.
  - 1. The name of the product shall be typed on the tab.
  - 2. A separate tab shall also be provided for information such as troubleshooting instructions, spare parts list, etc.
- E. An index shall be provided in the back of the binder, with a separate tab, providing a quick way for the operator to find key and important topics contained in the manual.
- F. A separate listing for all charts, graphs, tables, figures and shop drawings shall be provided directly following the table of contents.
- G. Each manual shall contain one (1) copy of all shop drawings deemed in compliance with the Contract Documents by the Architect/Engineer submitted for the equipment or system for which the manual is prepared.
  - 1. Only these shop drawings shall be included in the manual.
  - 2. All shop drawings larger than 8 1/2" x 11" shall be folded and placed in a heavy duty, top loading plastic sheet protector with the title of the drawing showing; one (1) drawing per protector page.
- H. Each manual shall contain the following as a minimum:
  - 1. Table of contents
  - 2. Final version of the warranty statement approved by the Architect/Engineer
  - 3. Nameplate data of each component, year of installation, contract number and specification number
  - 4. Name, address and telephone number of the manufacturer and the manufacturer's local representative(s)



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5. Maintenance requirements include routine procedures and guide for preventative maintenance and troubleshooting; disassembly, repair and reassembly instructions; and alignment, adjusting, balancing, and checking instructions
- I. All electronic Operations and Maintenance Manuals shall be as specified hereinafter.
  1. All files shall be in Adobe PDF format and submitted on compact discs.
  2. Files shall be organized by specification section and then by product.
  3. An electronic index and list of all charts, graphs, tables, figures, and shop drawings shall be included.
  4. All information provided in the paper Operations and Maintenance Manual shall be included in the electronic version.
- J. Submit two (2) copies of a preliminary draft manual at least fourteen (14) calendar days prior to the date set for start-up.
  1. The Architect/Engineer will review the manual for content and compliance with these specifications.
  2. Written comments will be provided, but the manual will not be returned.
  3. This copy of the manual will be retained on the site until such time as the final, updated manual is provided.

#### **1.03 RETAINAGE**

- A. The Architect/Engineer will retain from payment due the Contractor, for failure to submit manuals as specified, an amount equal to 2% of the scheduled value for the equipment or system for which the manual applies. This Contract requirement only applies when a manual is specified to be provided in the Technical Specifications for a particular system or piece of equipment.

#### **PART 2 - PRODUCTS**

NOT USED

#### **PART 3 - EXECUTION**

NOT USED

**END OF SECTION**



**SECTION 017839**  
**PROJECT RECORD DOCUMENTS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. This Section includes:
  - 1. Maintenance of documents
  - 2. Recording of record information
  - 3. Submission of record documents

**1.02 PLANS AND SPECIFICATIONS FURNISHED TO THE CONTRACTOR**

- A. One (1) complete set of Contract Documents (plans, specifications and addenda) will be furnished to the Contractor.
- B. Additional sets will be furnished to the Contractor at \$250 per set.
- C. One (1) complete set of Contract Documents shall be kept in the field office.

**1.03 MAINTENANCE OF DOCUMENTS**

- A. The Contractor shall maintain at the site one (1) set of the following: drawings, specifications, addenda, change orders, approved shop drawings, test reports, operations and maintenance manuals, and shop drawing log.
- B. The Contractor shall make these documents available for use by the Owner, Architect/Engineer, regulatory agencies and other parties designated by the Owner.
- C. Maintain these documents in a clean, dry, legible condition throughout the entire contract period.

**1.04 RECORDING OF RECORD INFORMATION**

- A. Affix a stamp to each Contract Drawing and Shop Drawing reading as follows: "RECORD DOCUMENT" - "NAME OF PROJECT" - "CONTRACTOR NAME" in 2-inch high printed letters. The stamp shall be specifically prepared for this project.
- B. Keep the record documents current as the work progresses. Record information concurrent with construction progress.
- C. Do not permanently conceal any work until required information has been recorded.
- D. Legibly mark the Contract Plans to record actual construction, including, but not limited to the following:
  - 1. All as-built work.
  - 2. All approved field changes and conditions.
  - 3. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
  - 4. Location of underground conduits, boxes, devices. Wire sizes (AWG) and types installed. Number of active and spare wires in each conduit and conduit size (applicable where work involves electrical construction).



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- E. Shop Drawings: Maintain as record documents. Legibly mark-up to show changes made due to field conditions encountered during construction.
- F. As work progresses, the contractor shall maintain an on the field set of hard copy drawings, a complete and accurate set of field notes clearly delineating all work as it is actually installed. This set of drawings shall be available at all times for the engineer to review and shall be examined at all jobsite meetings.

#### 1.05 SUBMITTAL OF RECORD DOCUMENTS

- A. At Substantial Completion, the Contractor shall deliver one (1) preliminary record set of as-built documents to the Architect/Engineer with all changes conspicuously ballooned or otherwise emphasized.
- B. The work will not be considered substantially complete until such time as the preliminary record documents are delivered and acceptable to the Architect/Engineer. Mark this set "Preliminary Record Drawings".
- C. Prior to Final Completion, the Contractor shall conform the preliminary record drawings to the comments made by the Architect/Engineer. The Contractor shall provide one (1) set of full-scale paper as-built drawings and one (1) electronic copy in portable document format (PDF).
- D. As-built drawings shall be the same size as the Contract Drawings, with 1/2-inch margins space on three sides and a 2-inch margin on the left side for binding.
- E. Each drawing shall bear in the title box the words "FINAL RECORD DRAWINGS" and the name of the Contractor in heavy black lettering 1/2 inch high and be certified as complete and accurate.
- F. As a convenience, Architect/Engineer will make available to the Contractor electronic media of the Contract Drawings for the sole purpose of the Contractor preparing as-built drawings.
- G. Electronic media made available is without guarantee of compatibility with the Contractor's software or hardware.
  - 1. If the Contractor wishes to take advantage of this offer, the Contractor will be required to execute an indemnification and hold harmless agreement with the Architect/Engineer.
  - 2. Electronic media will be provided free of charge on disc in a zipped format.

#### 1.06 RELATED DOCUMENTS

- A. Provide certificate of release of liens if requested by the Architect/Engineer.

## PART 2 - PRODUCTS

NOT USED

## PART 3 - EXECUTION

NOT USED

## END OF SECTION



**SECTION 020100**  
**MAINTENANCE OF EXISTING CONDITIONS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Protection of existing equipment and building.

**1.02 SCHEDULING**

- A. Schedule Work to coincide with other trades and availability of site access.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

**3.01 PROTECTION OF EXISTING WORK**

- A. All existing structures, piping, utilities or materials stored to be maintained shall be protected against damage as may be required by the Owner/Architect. The Contractor shall be responsible for any damage to the existing or installed works and appurtenances during construction operations and such damage shall be corrected by replacing the items damaged to their original condition and position at the Contractor's cost and expense and to the satisfaction of the Owner/Architect.

**3.02 PREPARATION PRIOR TO START OF WORK**

- A. Existing equipment which can not be removed from the building shall be protected from damage by the Contractor's operation. Protect all items to remain as necessary to prevent damage for the duration of the contract.
- B. All existing equipment shall be protected from damage by the Contractor's operation.
- C. The Contractor shall be required to restore equipment to a condition equal to what it was prior to the Contractor starting work. Any equipment that is damaged shall be replaced at the Contractor's cost.

**3.03 CLEANING UP**

- A. The Contractor shall keep the project site free from waste materials and rubbish during the progress of the work and shall make a thorough cleaning of the building and site when the work is completed. Cleaning shall be done to the satisfaction of the Owner/Architect.
- B. After completion of the contract, the Contractor will be required to clean up the site of all spoil, clays, gravel, etc. and level off all trenches and pits and dispose of all material as directed by the Engineer and leave the site in as good condition as at the beginning of the contract.
- C. All material used for protection shall be removed. All items shall be restored to its prior condition and shall be left broom cleaned.



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- D. Buildings, grounds, paving, sidewalk, etc. shall be restored and left in a condition at least equal to that existing prior to the beginning of the work.

**END OF SECTION**



**SECTION 024119**  
**SELECTIVE DEMOLITION**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section Includes:
  - 1. Demolition and removal of selected portions of building or structure.
  - 2. Salvage of existing items to be reused or recycled.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for restrictions on the use of the premises, Owner-occupancy requirements, and phasing requirements.

**1.03 DEFINITIONS**

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

**1.04 MATERIALS OWNERSHIP**

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition shall remain the property of Owner.
  - 1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

**1.05 PREINSTALLATION MEETINGS**

- A. Predemolition Conference: Conduct conference at Project site.
  - 1. Inspect and discuss condition of construction to be selectively demolished.
  - 2. Review structural load limitations of existing structure.
  - 3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.



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4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
5. Review areas where existing construction is to remain and requires protection.
6. Review procedures for turning over salvaged materials to the Owner and protected off-site storage of materials to be reused in the work of the project.

#### 1.06 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For refrigerant recovery technician.
- B. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting the public, pedestrian access and circulation areas and property, for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- C. Schedule of Selective Demolition Activities: Indicate the following:
  1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
  2. Interruption of utility services. Indicate how long utility services will be interrupted.
  3. Coordination for shutoff, capping, and continuation of utility services.
  4. Use of elevator and stairs.
  5. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.
- D. Inventory: Submit a list of items to be removed, salvaged and delivered to Owner prior to start of demolition.
- E. Photographs or Video: Submit before Work begins.
- F. Warranties: Documentation indicated that existing warranties are still in effect after completion of selective demolition.

#### 1.07 CLOSEOUT SUBMITTALS

- A. Inventory: Submit a list of items that have been removed and salvaged.
- B. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

#### 1.08 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: Hazardous materials are present in buildings and structures to be selectively demolished. A report on the presence of hazardous materials is on file for review and use and is included in this Division of the specifications. Examine report and / or the



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appropriate specification section to become aware of locations where hazardous materials are present.

1. Hazardous material remediation is specified elsewhere in the Contract Documents.
2. Do not disturb hazardous materials or items suspected of containing hazardous materials except under procedures specified elsewhere in the Contract Documents.
3. Owner will provide material safety data sheets for suspected hazardous materials that are known to be present in buildings and structures to be selectively demolished because of building operations or processes performed there.

E. Storage or sale of removed items or materials on-site is not permitted.

F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

1. Maintain fire-protection facilities in service during selective demolition operations.
2. Provide a Fire Watch or other method acceptable to the authority having jurisdiction should the existing fire protection facilities have to be shut down during the work.
3. Do not disable or disrupt building fire or life safety systems without five (5) days prior written notice to Architect.

## 1.09 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties. Notify warrantor before proceeding.
- B. Notify warrantor on completion of selective demolition, and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

## PART 2 - PRODUCTS

### 2.01 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.
- C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.



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- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Engage a professional engineer to perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.
  - 1. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.
- F. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.
  - 1. Inventory and record the condition of items to be removed and salvaged. Provide photographs of conditions that might be misconstrued as damage caused by salvage operations.
  - 2. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

### 3.02 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
  - 1. Comply with requirements for existing services/systems interruptions specified in Section 011000 "Summary."
- B. Existing Services/Systems to be removed, relocated, or abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
  - 1. Arrange to shut off indicated utilities with utility companies. Provide 5 days notice to the Architect prior to any utility shut-downs.
  - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
  - 3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated to be removed.
    - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap, plug or reconnect remaining piping with same or compatible piping material.
    - b. Equipment to Be Removed: Disconnect and cap services and remove equipment.
    - c. Ducts to Be Removed: Remove portion of ducts indicated to be removed and plug or reconnect remaining ducts with same or compatible ductwork material.

### 3.03 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
  - 1. Comply with requirements for access and protection specified in Section 015000 "Temporary Facilities and Controls."



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- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building. Maintain existing required widths of egress pathways throughout.
  - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
  - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."
- C. Temporary Shoring: Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.
  - 1. Strengthen or add new supports when required during progress of selective demolition.

#### 3.04 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
  - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  - 4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
  - 5. Maintain adequate ventilation when using cutting torches.
  - 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
  - 7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  - 8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
  - 9. Dispose of demolished items and materials promptly.
- B. Removed and Salvaged Items:
  - 1. Clean salvaged items.
  - 2. Pack or crate items after cleaning. Identify contents of containers.



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3. Store items in a secure area until delivery to Owner.
  4. Transport items to Owner's storage area designated by Owner or as indicated on Drawings.
  5. Protect items from damage during transport and storage.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

#### **3.05 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS**

- A. Concrete: Demolish in small sections. Using power-driven saw, cut concrete to a depth of at least 1 inch (19 mm) at junctures with construction to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete. Neatly trim openings to dimensions indicated.
- B. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, then remove masonry between saw cuts.

#### **3.06 DISPOSAL OF DEMOLISHED MATERIALS**

- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
1. Do not allow demolished materials to accumulate on-site.
  2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

#### **3.07 CLEANING**

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

#### **3.08 SELECTIVE DEMOLITION SCHEDULE**

- A. Remove, store, relocate, salvage and protect the following materials and equipment:
1. Existing Items to Be Removed: Items indicated on contract drawings and items listed in technical specifications sections.
  2. Existing Items to Be Removed, relocated and/or Salvaged: Items required to be removed, relocated salvaged and/or stored to complete the work as indicated or called for in these construction documents.
- B. Existing Items to Remain: to complete and conform to the work of the project shall be as indicated on the contract drawings and items listed in the technical specification sections..

### **END OF SECTION**



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**SECTION 028200**  
**ASBESTOS REMEDIATION**

**PART 1 - GENERAL**

**1.01 SCOPE OF WORK**

- A. Broad Scope: Asbestos containing materials (ACM) have been identified at the project site. Samples of various suspect materials have been collected and analyzed; additional samples may be required as existing materials are removed or revealed during the course of work. The scope of work and procedures outlined herein shall be followed by a New York State Department of Labor (NYS DOL) certified asbestos abatement contractor.
- B. Related Sections:
  - 1. Appendix A: Environmental Report: Yonkers WRRF
    - a. Blower and Administration Building
  - 2. Appendix B: Environmental Report: Yonkers WRRF
    - a. Dewatering/Truck Loading Platform Building
    - b. Primary Access Control Building (PACB) 1, 2 and 3
- C. SCOPE OF WORK
  - 1. Removal of the following items described in the asbestos survey as positive for asbestos, in accordance with NYSDOL Industrial Code Rule (ICR) 56:
    - a. Blower and Administration Building
      - 1) Administration Building: Bottom Layer of Roof Membrane
      - 2) Blower Building: Flashing Top Mastic and Flashing
      - 3) Refer to Appendix A: Environmental Report: Yonkers WRRF
    - b. Dewatering/truck Loading Platform Building
      - 1) No Asbestos Containing Materials
      - 2) Refer to Appendix B: Environmental Report: Yonkers WRRF
    - c. Primary Access Control Building (PACB) 1, 2 and 3
      - 1) PACB 1: Tar over copper cap flashing, drain flashin tar and caulk/tar over coping stones.
      - 2) PACB 2: flashing at parapet walls, flashing tar at bricks and copper cap flashing, and patch repair and drain flashing tar.
      - 3) PACB 3: Drain flashing tar and caulk/tar over coping stone joints.
      - 4) Refer to Appendix B: Environmental Report: Yonkers WRRF
  - 2. Asbestos Containing materials must be removed only by a New York State Department of Labor (NYS DOL) licensed asbestos abatement contractor (herein referred to as the "Contractor").
  - 3. The Contractor shall be aware of all conditions of the Project and is responsible for field verifying quantities and locations of all ACM to be removed from the building prior to submission of any bid. Failure to do so shall not relieve the Contractor of its obligation to furnish all labor and materials necessary to perform the Work. The quantities presented in this Specification are approximate and should not be used solely as the basis for any bid. In the event that suspect materials not included in this Specification are encountered while the work is in progress, such material shall be tested for asbestos content or assumed positive for asbestos content, and removed in accordance with the procedures herein. Any discovery of new ACM shall not delay the progress of the Work. Payment for any additional work shall be considered on a case-by-case basis by the Engineer and Owner.



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4. All Work shall be performed in strict accordance with the Contract Documents and all applicable codes, rules, and regulations. Where conflicts occur between the Contract Documents and applicable codes, rules, and regulations, the more stringent shall apply.
5. The Contractor's industrial hygiene practices during asbestos abatement will be monitored by the Owner's representative. The Contractor shall be responsible for monitoring his own construction safety work practices for compliance with the OSHA regulations.

#### 1.02 SPECIAL JOB CONDITIONS

- A. Any special job conditions, including variances to be obtained by the Contractor, are described herein.
  1. A Site Specific Variance is anticipated for the asbestos abatement work as described in Section 1.01A to alleviate the requirement of full containment.
  2. The contractor shall be responsible for obtaining any site specific variances.
  3. No chemicals shall be utilized during the removal of mastic.

#### 1.03 CODES, PERMITS AND COMPLIANCE

- A. The Contractor shall assume full responsibility and liability for compliance with all applicable Federal, State, and local laws, rules, and regulations pertaining to Work practices, protection of workers, authorized visitors to the site, persons, and property adjacent to the Work.
- B. Perform asbestos related Work in accordance with New York State Industrial Code Rule 56, 40 CFR 61, and 29 CFR 1926, as specified herein. Where more stringent requirements are specified, adhere to the more stringent requirements.
- C. State Licenses: The Contractor must maintain current licenses pursuant to New York State Department of Labor and Department of Environmental Conservation for all Work related to this Project, including the removal, handling, transport, and disposal of asbestos containing materials.
  1. The Contractor must have and submit proof upon request that any persons employed by the Contractor to engage in, or supervise Work on any asbestos Project have a valid NYS asbestos handling certificate pursuant to Industrial Code Rule 56.
  2. The Contractor shall comply fully with the variances secured from regulatory agencies in the performance of the Work. The Contractor shall also be responsible for paying and complying with any additional variances. Should the Contractor choose to apply for any variance, approval from the Engineer is first required. In the event that the Contractor chooses to use more than one NYS Applicable Variance in the same Work Area simultaneously, the Contractor is responsible for complying with all conditions of each variance and any NYS DOL interpretations concerning the use of these variances together.
- D. Agency Notifications: The Contractor shall prepare written notification to EPA Region 2, and to the NYSDOL at least 10 days prior to commencement of Work, when applicable. The Contractor shall be responsible for use and payment of any notifications required for performance of the Work.
- E. It is the sole responsibility of the Contractor to determine what, if any patents are applicable to the Project. The Contractor shall pay all royalties and/or license fees. He shall defend all suits or claims for infringement of any patent rights and save the Owner, Architect, Engineer, and Construction Manager harmless from loss, including attorney's fees, on account thereof.



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- F. Before commencement of Work, the Contractor shall review and adhere to the Contract Documents. Failure to adhere to the Contract Documents shall constitute a breach of the Contract and the Owner shall have the right to and may terminate the Contract provided, however, the failure of the Owner to so terminate shall not relieve the Contractor from future compliance.

#### 1.04 APPLICABLE STANDARDS AND REGULATIONS

- A. The Contractor shall comply with the following codes and standards, except where more stringent requirements are shown or specified:
- B. Federal Regulations:
  - 1. 29 CFR 1910.1001, "Asbestos" (OSHA)
  - 2. 29 CFR 1910.1200, "Hazard Communication" (OSHA)
  - 3. 29 CFR 1910.134, "Respiratory Protection" (OSHA)
  - 4. 29 CFR 1910.145, "Specification for Accident Prevention Signs and Tags" (OSHA)
  - 5. 29 CFR 1926, "Construction Industry" (OSHA)
  - 6. 29 CFR 1926.1101, "Asbestos, Tremolite, Anthophyllite, and Actinolite" (OSHA)
  - 7. 29 CFR 1926.2, "Variances from safety and health standards" (OSHA)
  - 8. 29 CFR 1926.500 "Guardrails, Handrails and Covers" (OSHA)
  - 9. 40 CFR 61, Subpart A, "General Provisions" (EPA)
  - 10. 40 CFR 61, Subpart M, "National Emission Standard for Asbestos" (EPA)
  - 11. 49 CFR 171-172, Transportation Standards (DOT)
  - 12. 40 CFR Part 763, "Asbestos Hazard Emergency Response Act" (AHERA)
- C. New York State Regulations:
  - 1. 12 NYCRR, Part 56, "Asbestos", Industrial Code Rule 56 (DOL)
  - 2. 6 NYCRR, Parts 360, 364, Disposal and Transportation (DEC)
  - 3. 10 NYCRR, Part 73, "Asbestos Safety Program Requirements" (DOH)
  - 4. New York State Department of Health (NYSDOH) Training Requirements
- D. Standards and Guidance Documents:
  - 1. American National Standard Institute (ANSI) Z88.2-80, Practices for Respiratory Protection
  - 2. ANSI Z9.2-79, Fundamentals Governing the Design and Operation of Local Exhaust Systems
  - 3. EPA 560/585-024, Guidance for Controlling Asbestos Containing Materials in Buildings (Purple Book)
  - 4. EPA 530-SW-85-007, Asbestos Waste Management Guidance

#### 1.05 AUTHORITY TO STOP WORK

- A. The Owner shall have the authority to stop the abatement work at any time a determination is made that conditions are not within Specification and applicable regulations. The stoppage of work shall continue until conditions have been corrected to the satisfaction of the Owner. Standby time to resolve the problems shall be at the contractor's expense.

#### 1.06 SUBMITTALS

- A. Pre-contract Submittals. After bids are opened, the apparent low bidder shall submit the following documentation, in accordance with the project deadlines outlined in the Contract



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Documents. Failure to submit all required documentation truthfully or in a timely manner may be cause for rejection of the bid.

1. Contractor license issued by New York State Department of Labor.
  2. A list of Projects performed within the past two (2) years and include the dollar value of all Projects. Provide Project references to include Owner, consultant, and air monitoring firm's name, contact persons, address, and phone number.
  3. A standard operating procedures manual describing Work practices and procedures, equipment, type of decontamination facilities, respiratory program, special removal techniques, etc.
  4. Citations/Violations/Legal Proceedings: Submit a notarized statement describing:
    - a. Any citations, violations, criminal charges, or legal proceedings undertaken or issued by any law enforcement, regulatory agency, or consultant concerning performance on previous abatement contracts. Briefly describe the circumstances citing the Project and involved persons and agencies as well as the outcome of any actions.
    - b. Any litigation or arbitration proceedings arising out of performance on past Projects.
    - c. Any liquidated damages assessed within the last 2 years.
  5. Preliminary Schedule: Provide an estimate of manpower to be utilized and the time required for completion of each major Work Area. Include estimated size and number of crews and work shifts.
- B. Pre-Work Submittals. The Contractor shall submit 3 copies of the documents listed below, in accordance with the project deadlines outlined in the Contract Documents:
1. Progress Schedule:
    - a. Show the complete sequence of abatement activities and the sequencing of Work within each building or building section.
    - b. Show the dates for the beginning and completion of each major element of Work including substantial completion dates for each Work Area, building, or phase.
  2. Notifications: As required by Federal, State and local regulatory agencies together with proof of transmittal (i.e. certified mail return receipt).
  3. Permits: As required by State and local regulations, including arrangements for storage, transportation, and disposal of contaminated material.
  4. Abatement Work Plan: Provide plans which clearly indicate the following:
    - a. All Work Areas/containments numbered sequentially.
    - b. Locations and types of all decontamination enclosures.
    - c. Entrances and exits to the Work Areas/containments.
    - d. Type of abatement activity/technique for each Work Area/containment.
    - e. Number and location of negative air units and exhaust.
    - f. Proposed location and construction of storage facilities and field office.
    - g. Location of water and electrical connections to building services.
  5. Subcontractor List: List of all subcontractors to be used on the Project (i.e. Waste Hauler).
  6. Material Safety Data Sheets (MSDS): Copies of MSDS for each chemical or material used for the Project (encapsulant, surfactant, mastic remover, etc.).
  7. Laboratory: Submit the NYS Department of Health ELAP certification for the laboratory that will be analyzing the OSHA personnel air samples.
- C. Project Close-out Submittal. Submit the following at the closeout of the Project:
1. Copies of all waste disposal manifests, seals, and disposal logs.
  2. OSHA compliance air monitoring records conducted during the Work.
  3. Daily progress log.
  4. Entry and exit log.
  5. A list of each Worker used in the performance of the Project, including name, social security number, and NYS DOL certification number.



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#### 1.07 HEALTH & SAFETY

- A. Worker Protection: The Contractor shall comply with OSHA and provide and maintain all safety measures necessary to properly protect all individuals that enter the work area.
- B. Emergency Actions: In an emergency affecting the safety of life, the work, or adjoining property, the Contractor shall immediately act in such a manner to prevent such threatened loss or injury.
- C. Fire Protection, And Emergency Egress: The Contractor shall be responsible to the security and safeguarding of all areas turned over by the Owner to the Contractor. The Contractor shall designate to his workers and other building occupants the means of egress in case of emergency.
- D. The Contractor shall establish emergency and fire exits from the work area. First aid kit, two (2) full sets of protective clothing and respirators shall be provided for use by qualified emergency personnel in the clean room of the decontamination facility.
- E. Contractor shall provide fire watch and logbook throughout the entire term of the project, to protect against fire and unauthorized entry into and around the work area. Any intrusion or incident shall be documented in the logbook. Fire watch personnel shall be present during off-hours shift such as night shift, weekends and holidays when abatement work is not in progress. Fire watch shall be a certified asbestos handler by NYSDOL.

#### 1.08 PRE-CONSTRUCTION CONFERENCE

- A. Prior to start of preparatory Work under this Contract, and in accordance with the deadlines outlined in the Contract Documents, the Contractor shall attend a pre-construction conference attended by Owner, Facility Personnel, and Engineer, if requested.
- B. Agenda for this conference shall include but not necessarily be limited to:
  - 1. Contractor's scope of Work, Work plan, and schedule to include number of Workers and shifts.
  - 2. Contractor's safety and health precautions including protective clothing and equipment and decontamination procedures.
  - 3. Owner & Engineer's duties, functions, and authority.
  - 4. Contractor's Work procedures including:
    - a. Methods of job site preparation and removal methods.
    - b. Respiratory protection.
    - c. Disposal procedures.
    - d. Cleanup procedures.
    - e. Fire exits and emergency procedures.
  - 5. Contractor's plan for twenty-four (24) hour project security both for prevention of theft and for barring entry of unauthorized personnel into Work Areas.
  - 6. Temporary utilities.
  - 7. Handling of furniture and other moveable objects.
  - 8. Storage of removed asbestos containing materials.
  - 9. Waste disposal requirements and procedures.
- C. In conjunction with the conference, if requested, the Contractor shall accompany the Owner and/or Engineer on a pre-construction walk-through documenting existing condition of finishes and furnishings, reviewing overall Work plan, location of fire exits, fire protection equipment, water supply and temporary electric tie-in.



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#### 1.09 PROJECT MONITORING, AIR SAMPLING, AND INSPECTIONS

- A. The Owner shall engage the services of an Environmental Consultant (the Consultant) or Engineer who shall serve as the Owner's Representative in regard to the performance of the asbestos abatement Project and provide direction as required throughout the entire abatement period.
- B. The Contractor is required to ensure cooperation of its personnel with the Consultant/Engineer for the air sampling and project monitoring functions described below. The Contractor shall comply with all direction given by the Consultant/Engineer during the course of the Project.
- C. The Consultant/Engineer shall provide the following administrative services:
  - 1. Review and approve or disapprove all submittals, shop drawings, schedules, and samples.
  - 2. Assure that all notifications to governmental agencies by the Contractor are submitted in a timely manner and are correct in content.
  - 3. Review and approve the Contractor's OSHA compliance testing laboratory.
- D. The Consultant/Engineer shall staff the Project with a NYSDOL-trained and certified Project Monitor to act on the Owner's behalf at the job site. This individual shall be designated as the Abatement Project Monitor (APM).
  - 1. The APM shall be on-site at all times the Contractor is on-site. The Contractor shall not be permitted to conduct any Work unless the APM is on-site.
  - 2. The APM has the authority to direct the actions of the Contractor verbally and in writing if the Contractor is not performing in compliance with the Project Documents and all regulations. Such authority does not in any way diminish the Contractor's sole responsibility to perform all Work in accordance with the Contract Documents and regulations. However, only the Owner shall have the authority to Stop Work when gross work practice deficiencies or unsafe practices are reported by the APM or when ambient fiber concentrations outside the removal area exceed 0.01 f/cc or background level, whichever is greater.
    - a. Such Stop Work order shall be effective immediately and remain in effect until corrective measures have been taken and the situation has been corrected.
    - b. Standby time required to resolve the situation shall be at the Contractor's expense.
  - 3. The APM shall provide the following services:
    - a. Inspection of the Contractor's Work, practices, and procedures, including temporary protection requirements, for compliance with all regulations and Project specifications.
    - b. Provide abatement Project air sampling as required by applicable regulations (NYS, AHERA). Sampling will include pre-abatement (backgrounds), work area preparation, during abatement and clearance sampling.
    - c. Verify daily that all Workers used in the performance of the Project are certified by the appropriate regulatory agency.
    - d. Monitor the progress of the Contractor's Work, and report any deviations from the schedule to the Owner.
    - e. Monitor, verify, and document all waste load-out operations.
    - f. Verify that the Contractor is performing personal air monitoring daily, and that results are being returned and posted at the site as required.
  - 4. Inspections shall be conducted at various milestones as Work progresses by the APM. Additional inspections shall be conducted as required by Project conditions. Progression from one phase of work to the next by the Contractor shall be permitted only after visual inspection and verbal approval by the APM.



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- E. The Consultant/Engineer shall provide abatement project air sampling and analysis as required by applicable regulations (New York State and/or AHERA). Sampling will include background, pre-abatement, during-abatement and clearance sampling.
  - 1. Unless otherwise required by applicable regulations, the Consultant shall have samples analyzed by Phase Contrast Microscopy (PCM) using NIOSH Method 7400. Results shall be available within 24 hours of completion of sampling.
  - 2. If the air sampling during abatement reveals airborne fiber levels at or above 0.01 fibers/cc or the background level (whichever is greater) outside the Work Area, then the Owner shall issue an immediate Stop Work order. The Contractor shall then inspect the barriers for leakage and HEPA vacuum and/or wet clean the surface outside the Work Area. The Contractor shall bear the burden of any and all costs incurred by this delay.
  - 3. Final air clearance sampling will be conducted by Transmission Electron Microscopy (TEM) in accordance with 40 CFR Part 763 (AHERA), as applicable.

#### 1.10 CONTRACTOR AIR SAMPLING

- A. In addition to the requirements of OSHA 1926.1101, the Contractor shall be required to perform personal air monitoring every Work shift in each Work Area during which abatement activities occur in order to determine that appropriate respiratory protection is being utilized (OSHA Monitoring).
- B. The Contractor shall conduct air sampling that is representative of both the 8-hour time weighted average and 30-minute short-term exposures to indicate compliance with the permissible exposure and excursion limits.
- C. The Contractor's laboratory analysis of air samples shall be conducted by an NYS DOH ELAP approved laboratory.

#### 1.11 WORK SUPERVISION

- A. The Contractor shall designate a full-time Project Supervisor who shall meet the following qualifications:
  - 1. The Project Supervisor shall hold New York State certification as an Asbestos Supervisor.
  - 2. The Project Supervisor shall meet the requirements of a "Competent Person" as defined by OSHA 1926.1101 and shall have a minimum of one year experience as a supervisor.
  - 3. The Project Supervisor must be able to read and write English fluently, as well as communicate in the primary language of the Workers.
- B. If the Project Supervisor is not on-site, all Work shall be stopped. The Project Supervisor shall remain on-site whenever asbestos removal is being performed. The Project Supervisor cannot be removed from the Project without the written consent of the Owner and the Engineer.
- C. The Project Supervisor shall maintain the Project Log Book required by New York State Department of Labor and section 2.03 of the specifications and the Waste Disposal Log required by section 4.04 of the specifications.
- D. The Project Supervisor shall be responsible for the performance of the Work and shall represent the Contractor in all respects at the Project site. The Supervisor shall be the primary point of contact for the Asbestos Project Monitor.



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#### 1.12 DELIVERY AND STORAGE

- A. Deliver non-contaminated materials to the job site in original packages with containers bearing manufacturer's name and label.
- B. Store all materials at the job site in a suitable and designated area.
  - 1. Store materials subject to deterioration or damage away from wet or damp surfaces and under cover.
  - 2. Protect materials from unintended contamination.
- C. Remove damaged or deteriorated materials from the job site. Materials contaminated with asbestos shall be disposed of as asbestos debris as herein specified.

#### 1.13 TEMPORARY UTILITIES

- A. Shut down and lock out all electrical power to the asbestos Work Areas.
- B. Provide temporary 120-208 volt, single phase, three wire, 100 amp electric service with Ground Fault Circuit Interrupters (GFCI) for all electric requirements within the asbestos Work Area.
  - 1. Where available, obtain from Owner's existing electrical system. Otherwise provide power from other sources (i.e. generator).
  - 2. Provide temporary wiring and "weatherproof" receptacles in sufficient quantity and location to serve all HEPA equipment and tools.
  - 3. Provide adequate "weatherproof" receptacles, to incorporate use by the APM for air sampling equipment.
  - 4. All power to the Work Area shall be brought in from outside the area through GFCI's at the source.
- C. Provide temporary lighting with "weatherproof" fixtures for all Work Areas including decontamination chambers.
  - 1. The entire Work Area shall be kept illuminated at all times work is in progress.
  - 2. Provide lighting adequate for the purposes of performing required inspections.
- D. All temporary devices and wiring used in the Work Area shall be capable of decontamination procedures including HEPA vacuuming and wet-wiping.
- E. Utilize domestic water service, if available, from Owner's existing system. Provide hot water heaters with sufficient capacity to meet Project demands.

## PART 2 - PRODUCTS

#### 2.01 PROTECTIVE CLOTHING

- A. Provide personnel utilized during the Project with disposable protective whole body clothing, head coverings, gloves and foot coverings. Provide disposable plastic or rubber gloves to protect hands. Cloth gloves may be worn inside the plastic or rubber for comfort, but shall not be used alone. Make sleeves secure at the wrists and make foot coverings secure at the ankles by the use of tape, or provide disposable coverings with elastic wrists or tops.
- B. Provide sufficient quantities of protective clothing to assure a minimum of four (4) complete disposable outfits per day for each individual performing abatement Work.



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#### **2.02 DISPOSAL BAGS, DRUMS, AND CONTAINERS**

- A. Provide 6 mil polyethylene disposal bags printed with asbestos caution labels. Bags shall be imprinted with U.S. Department of Transportation required markings.
- B. If the asbestos waste has the potential to damage or puncture the disposal bags, burlap sacks shall be utilized as a liner inside the polyethylene disposal bags to prevent puncture or damage to the disposal bags. In addition, 30 or 55 gallon capacity fiber or metal drums capable of being sealed air and water tight may also be used. Affix asbestos caution labels on lids and at one-third points around drum circumference to assure ready identification.
- C. Containers and bags must be labeled with the names of the waste generator and the location at which the waste was generated in accordance with 40 CFR Part 61 NESHAPS.
- D. Labeled ACM waste containers or bags shall not be used for non-ACM waste or trash. Any material placed in labeled containers or bags, whether turned inside out or not shall be handled and disposed of as ACM waste.

#### **2.03 HEPA VACUUM EQUIPMENT**

- A. All dry vacuuming performed under this contract shall be performed with High Efficiency Particulate Absolute (HEPA) filter equipped industrial vacuums conforming to ANSI Z9.2.
- B. Provide tools and specialized equipment including scraping nozzles with integral vacuum hoods connected to a HEPA vacuum with flexible hose.

#### **2.04 POWER TOOLS**

- A. Any power tools used to drill, cut into, or otherwise disturb asbestos material shall be equipped with HEPA filtered local exhaust ventilation.

### **PART 3 - EXECUTION**

#### **3.01 GENERAL REQUIREMENTS**

- A. Should the area beyond the Work Area(s) become contaminated with asbestos containing materials or elevated fiber levels, immediately stop Work and institute emergency procedures. Contaminated non-Work Areas shall be isolated and decontaminated in accordance with procedures established for asbestos removal. All costs incurred in decontaminating such non-Work Areas and the contents thereof shall be borne by the Contractor, at no additional cost to the Owner.
- B. NYS DOL certificates shall be on site prior to admittance of any Contractor's employees to the asbestos Work Area.
- C. Perform all asbestos removal Work using wet removal procedures. Dry removal procedures are not permitted.
- D. The following documents shall be posted at the site at an easily accessible location:
  - 1. Company Asbestos Abatement license.
  - 2. Worker's asbestos handling certificates (copies are acceptable provided Workers have original certificates in their possession).



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3. Project specifications.
4. Project drawings.
5. Notifications and variances.
6. Applicable regulations.
7. Material Safety Data Sheets.
8. Abatement Work plan.
9. List of emergency telephone numbers.
10. Waste Disposal Log.

- E. The Work Area must be vacated by building occupants prior to decontamination enclosure construction and Work Area preparation.

### **3.02 PERSONNEL DECONTAMINATION ENCLOSURE**

- A. Full (five room) Decontamination Facility: The Contractor shall provide a full decontamination enclosure system for large asbestos projects in accordance with OSHA Standard 29 CFR 1926.1101 and 12NYCRR Part 56 (ICR 56).
- B. Remote Decontamination Facility: The Contractor shall provide a remote personnel decontamination enclosure system for small asbestos projects, asbestos projects that utilize multiple tents, and exterior asbestos roof projects in accordance with OSHA Standard 29 CFR 1926.1101 and 12NYCRR Part 56 (ICR 56).
- C. Decontamination Enclosure System Utilities: Lighting, heat, and electricity shall be provided as necessary by the Contractor.

### **3.03 WASTE DECONTAMINATION ENCLOSURE**

- A. Waste/Equipment Decontamination Enclosure System: This system is located adjacent to the work area and personnel decontamination system. If the decontamination chamber is accessible to the public it shall be fully framed and sheathed to prevent unauthorized entry. A remote decontamination unit may be used that complies with subpart 56-9 of NYS Industrial Code Rule 56 of Title 12, section 30 of the Labor Law. This remote enclosure system must be on the property and stationary, within 50 feet of the building.
- B. Where only one egress from the Work Area exists, the holding area of the waste decontamination enclosure system may branch off from the personnel decontamination enclosure equipment room, which then serves as the waste wash room.
- C. The waste wash room water shall be drained, collected, and filtered as specified in ICR 56.
- D. In small asbestos projects where only one egress from the Work Area exists, the shower room may be used as a waste washroom. In this instance, the clean room shall not be used for waste storage, but shall be used for waste transfer to carts, which shall immediately be removed from this enclosure.

### **3.04 WORK AREA ENTRY AND EXIT PROCEDURES**

- A. Personnel Entrance and Decontamination Procedures for Gross Removal Operations utilizing full decontamination facility, the following entry/exit procedures shall be used for gross removal using full containment:
1. All workers and authorized visitors shall enter the work area through the worker decontamination enclosure system.



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2. All individuals who enter the work area shall sign the entry log, located in the clean room, upon each entry and exit. The log shall be permanently bound and shall identify fully the facility, agents, contractor(s), the project, each work area and worker respiratory protection employed. The site supervisor shall be responsible for the maintenance of the log during the abatement activity.
  3. Each worker or authorized visitor shall, upon entering the job site, remove street clothes in the clean room and put on a clean respirator (with new filters, if appropriate) and clean protective clothing before entering the work area through the shower room and equipment room.
  4. Each worker or authorized visitor shall, each time he leaves the work area: remove gross contamination from clothing before leaving the work area; proceed to the equipment room and remove all clothing except the respirator; still wearing the respirator, proceed to the shower room; clean the outside of the respirator with soap and water while showering; remove filters, wet them, and dispose of them in the container provided for that purpose; wash and rinse the inside of the respirator; and thoroughly shampoo and wash himself/herself.
  5. Following showering and drying off, each worker or authorized visitor shall proceed directly to the clean room, dress in street clothes, and exit the decontamination enclosure system immediately. Disposable clothing of the type worn inside the work area is not permitted outside the work area.
- B. Personnel Entrance and Decontamination Procedures for Removal Operations utilizing remote decontamination facility: The following entry/exit procedures shall be used for removal work areas.
1. All individuals who enter the Work Area shall sign the entry log, located in the clean room, upon each entry and exit. The log shall be permanently bound and shall identify fully the facility, agents, contractor(s), the project, each Work Area, and worker respiratory protection employed. The job supervisor shall be responsible for the maintenance of the log during the abatement activity.
  2. Each worker shall remove street clothes in the clean room; wear two disposable suits, including gloves, hoods and non-skid footwear; and put on a clean respirator (with new filters) before entering the work area.
  3. Each worker shall, before leaving the work area or tent, shall clean the outside of the respirators and outer protective clothing by wet cleaning and/or HEPA vacuuming. The outer disposable suit shall be removed in the work area and the worker shall then proceed to the shower room. The inner disposable suit and respirator shall be wet wiped and HEPA vacuumed thoroughly before removing and prior to aggressive shower.
  4. Following showering and drying off, each worker or authorized visitor shall proceed directly to the clean room, dress in street clothes, and exit the decontamination enclosure system immediately.

### 3.05 WORK AREA PREPARATION

- A. Work Area preparation shall be performed in accordance with ICR 56, the Contract Documents and the approved Asbestos Work Plan.
- B. Temporary lighting within the work area and decontamination system shall be provided as required to achieve minimum illumination levels.
- C. Unless otherwise specified for removal, the Contractor shall either protect all fiberglass insulation on piping, ductwork, tanks, etc. in the Work Area using two layers of six mil polyethylene or remove the insulation as asbestos containing waste. If the Contractor elects to



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remove the fiberglass insulation, he shall be responsible for reinsulation, if reinsulation of removed ACM is part of the Contract or Project.

- D. Emergency exits. Emergency exits and routes shall be established and clearly marked with florescent paint or other effective designations to permit easy location from anywhere within the work area. Emergency exits shall be secured to prevent access from uncontaminated areas and yet permit emergency exiting. Exits shall be checked daily against exterior blockage or impediments to exiting.
- E. Remove all items attached to or in contact with ACM only after the Work Area enclosure is in place. HEPA vacuum and wet wipe with amended water all removed items prior to their removal from the Work Area and before the start of asbestos removal operations.
- F. If, required, suspended ceiling tiles shall only be removed after Work Area preparation is complete. Non-contaminated ceiling tiles shall be HEPA vacuumed and removed from the Work Area before asbestos removals begin. Contaminated ceiling tiles shall be disposed of as asbestos waste.
- G. For tent enclosures: the Contractor shall use negative pressure ventilation equipment to continuously exhaust the enclosed area. A minimum of two (2) volume changes per hour is required. All required air monitoring must be successfully completed before the tent/barrier is collapsed.

### 3.06 NEGATIVE AIR PRESSURE FILTRATION SYSTEM

- A. Provide a portable asbestos filtration system that develops a minimum pressure differential of negative 0.02 in. of water column within all full enclosure areas relative to adjacent unsealed areas and that provides a minimum of 4 air changes per hour in the Work Area during abatement.
- B. The system shall include a series of pre-filters and filters to provide High Efficiency Particulate Air (HEPA) filtration of particles down to 0.3 microns at 100% efficiency and below 0.3 microns at 99.9% efficiency. Provide sufficient replacement filters to replace pre-filters every 2 hours, secondary pre-filters every 24 hours, and primary HEPA filters every 600 hours of operation.
- C. At no time will the unit exhaust indoors, within 50 feet of a receptor, including but not limited to windows and doors, or adversely affect the air intake of the building.
- D. The Contractor shall provide either a manometer or a photohelic style negative air pressure gauge with chart recorder to measure and record negative pressure differential across the Work Area barriers without interruption 24 hours per day as directed by the Environmental Consultant.
- E. There shall be at least a 12-hour settling period after the Work Area is fully prepared and the negative filtration units have been started to ensure integrity of the barriers. Unless otherwise specified in the variance(s) utilized by the contractor.

### 3.07 REMOVAL OF ASBESTOS CONTAINING MATERIALS

- A. Asbestos-containing materials shall be removed in accordance with ICR 56, the Contract Documents and the approved Asbestos Work Plan.



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- B. Sufficiently wet asbestos materials with a low pressure, airless fine spray of surfactant to ensure full penetration prior to material removal. Re-wet material that does not display evidence of saturation.
- C. One Worker shall continuously apply amended water while ACM is being removed.
- D. Perform cutting, drilling, abrading, or any penetration or disturbance of asbestos containing material in a manner to minimize the dispersal of asbestos fibers into the air. Use equipment and methods specifically designed to limit generation of airborne asbestos particles. All power operated tools used shall be provided with HEPA equipped filtered local exhaust ventilation.
- E. Power or pressure washers will not be allowed to be used for asbestos removal or clean-up procedures.

#### **3.08 ACM WASTE CONTAINERIZING, DECONTAMINATION AND LOAD OUT PROCEDURES**

- A. Packaging of ACM shall conform to OSHA Standard 29 CFR 1926.1101, DOT 49 CFR 171, 172, and 173, and EPA Standard 40 CFR Part 61 and the requirements as herein specified. Materials to be transported through a non-Work area building space shall be placed in hard wall shipping containers for handling.
- B. The cleaned containers of asbestos material and equipment shall be placed in water tight carts with doors or tops that shall be closed and secured. These carts shall be held in the holding area pending removal. The carts shall be wet cleaned and/or HEPA vacuumed at least once each day.
- C. The exit from the decontamination enclosure system shall be secured to prevent unauthorized entry.
- D. Where the waste removal enclosure is part of the personnel decontamination enclosure, waste removal shall not occur during shift changes or when otherwise occupied. Precautions shall be taken to prevent short circuiting and cycling of air outward through the shower and clean room.

#### **3.09 WORK AREA CLEANING PROCEDURES**

- A. Following completion of gross abatement and after all accumulations of asbestos waste materials have been containerized, decontamination procedures shall be followed as specified in ICR 56, unless otherwise stated in the variance(s) utilized by the Contractor.
- B. Following each decontamination procedure (i.e., first, second, and third cleanings) the APM shall inspect the Work Area for effectiveness of the cleanings. If necessary, additional cleaning shall be performed by the Contractor as directed by the APM.
- C. As a result of any air sampling results that indicate high fiber levels, the Contractor will clean or reclean the affected areas at no additional expense to the Owner.

#### **3.10 TENT ENCLOSURES**

- A. Tent enclosures may only be used in areas specifically permitted by NYS Department of Labor Code Rule 56 or a Project specific variance issued by the NYS Department of Labor.



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- B. The Contractor shall restrict access to the immediate area where tent removal procedures are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.
- C. Remote personnel and waste decontamination enclosures shall be constructed. Configuration shall be as required by Project size.
- D. During removal activity, a HEPA vacuum or small capacity negative pressure filtration unit shall be used to provide a negative air pressure inside the tent. A minimum of six air changes per hour is required.
- E. Workers shall wear two disposable suits for all phases of Work. Workers exiting the tent shall HEPA vacuum the outer suit, enter the airlock, remove the outer suit and then place it back into the Work Area. A clean second suit shall be donned before exiting the airlock and proceeding to the decontamination enclosure or another tent.
- F. ACM removal shall follow procedures defined in Section 3.07.
- G. Waste material shall be placed in properly labeled 6 mil plastic bags or other appropriate containers. The outside of the bags or containers shall be wet wiped and/or HEPA vacuumed before being passed into the airlock for double- bagging. The bags or containers shall then be transported to the decontamination enclosure and then bagged for a third time and transported to the waste storage container. All transportation of waste bags and containers outside the Work Area shall be in watertight carts.
- H. The APM shall conduct a visual inspection of the Work Area for cleanliness and completion of abatement.

#### 3.11 GLOVEBAG REMOVAL

- A. Glovebag removals may only be used as specifically permitted by NYS Department of Labor Code Rule 56, Applicable Variance 108 (AV 108) Glovebag Operations, or a Project specific variance issued by the NYS Department of Labor. Glovebags may only be used on piping.
- B. As specified in applicable regulations and variances, glovebag removals are only permitted to be conducted within tent enclosures complying with these specifications. Removal and disposals must also be conducted in conformance with all Project variance conditions.
- C. The Contractor shall restrict access to the immediate area where tent/glovebag removal procedures are taking place using barrier tape and/or construction barriers. Caution signs shall be posted.
- D. Remote personnel and waste decontamination enclosures shall be constructed. Configuration shall be as required by Project size.
- E. The glovebags shall be smoke tested by the APM before removal operations commence. Glovebags that do not pass the smoke test shall be resealed and then retested.
- F. After glovebag removals are complete, tent decontamination procedures shall be followed.



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#### 3.12 RESTORATION OF UTILITIES, FIRESTOPPING, AND FINISHES

- A. After final clearance, remove locks and restore electrical and HVAC systems. All temporary power shall be disconnected, power lockouts removed and power restored. All temporary plumbing shall be removed.
- B. Finishes damaged by asbestos abatement activities including, but not limited to, plaster/paint damage due to duct tape and spray adhesives, and floor tile lifted due to wet or humid conditions, shall be restored prior to final payment, unless the damaged surfaces are to be replaced during renovation activities.
  - 1. Finishes unable to be restored shall be replaced under this Contract.
  - 2. All foam and expandable foam products and materials used to seal Work Area openings shall be completely removed upon completion of abatement activities.
- C. All penetrations (including, but not limited to, pipes, ducts, etc.) through fire rated construction shall be firestopped using materials and systems tested in accordance with ASTM E814 on Projects where re-insulation is part of the required work.

#### 3.13 ASBESTOS WASTE

- A. Applicable Regulations: All asbestos waste shall be stored, transported and disposed of in accordance with the following regulations as a minimum:
  - 1. NYS DEC 6 NYCRRNYRCC part 360 and 364.
  - 2. US EPA NESHAPS 40 CFR 61.
  - 3. US EPA Asbestos Waste Management Guidance EPA/530-SW85.
- B. Waste Storage Containers.
  - 1. As work progresses, remove sealed and labeled bags of ACM from the Work area and place in a lockable trailer, dumpster, or other container approved for storage or transport of asbestos waste. Open containers will not be permitted on-site (i.e. open dumpster with canvas cover, etc.).
  - 2. The container interior shall be plasticized and sealed with a minimum of two (2) layers of 6 mil polyethylene.
  - 3. While on-site, the container shall be labeled with EPA Danger signage:

**DANGER  
CONTAINS ASBESTOS FIBERS  
AVOID CREATING DUST  
CANCER AND LUNG DISEASE HAZARD**

- 4. The danger sign legend, text size, style and arrangement shall conform to the requirements of EPA Standard 40 CFR Part 61.149 (d) (1).
- 5. The New York State Department of Environmental Conservation Asbestos Hauler's Permit number shall be stenciled on both sides and back of the container.
- 6. Once the container is loaded at the site, the door(s) will be locked at all times.
- 7. Before the container is removed from the Project Site for transportation to the Disposal Site, the door(s) shall be locked. The locks shall be removed at the Disposal Site by the operator of the Disposal Facility.
- 8. The Owner may initiate random checks at the Disposal Site to insure that the procedures outlined herein are complied with.



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#### **3.14 DISPOSAL AND TRANSPORTATION OF ASBESTOS-CONTAMINATED WASTES**

- A. Sealed and labeled disposal bags or waste wrapped in two layers of plastic sheeting sealed airtight shall be used to transport asbestos-contaminated waste to the landfill. Procedures for hauling and disposal shall comply with 40 CFR, Part 61, 49 CFR, Part 171 and 172, and other applicable state, regional, and local government regulations.
  - 1. An asbestos waste shipment record or waste manifest shall accompany asbestos waste, which is transported to a disposal site.
  - 2. The waste manifest shall be completed by the Contractor.
  - 3. The waste manifest shall have the appropriate signatures of the APM, the Contractor, and the Hauler representatives prior to any waste being removed from the site.
  - 4. Copies of the completed waste manifest shall be retained by APM and the Contractor and shall remain on site for inspection. The Contractor shall forward originals of the waste manifest, which include final sign-off by the disposal facility, to Consultant/Engineer within 14 days of the waste container being removed from the site. Failure to do so may result in payment being withheld from the Contractor.

#### **3.15 DISPOSAL SITE**

- A. The Contractor's Hauler and Disposal Site shall be approved by the Owner.
- B. The Contractor shall have the Hauler provide the estimated date and time of arrival at the Disposal Site.
- C. Unless specifically approved by the Owner, the Contractor shall not permit any off-site transfers of the waste or allow the waste to be transported or combined with any other off-site asbestos material. The Hauler must travel directly to the disposal site without unauthorized stops.

#### **END OF SECTION**



**SECTION 028304**  
**HANDLING OF LEAD CONTAINING MATERIALS**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. This Section specifies the requirements for the detection and prevention of lead dust contamination of lead dust control work areas and areas adjacent to them, protection of workers, post-work cleaning, pre-disposal testing and appropriate disposal of removed material.

**1.02 RELATED SECTIONS**

- A. Section 011100 - SUMMARY OF WORK.
- B. Section 028200 - ASBESTOS REMEDIATION.
- C. Section 015000 - TEMPORARY FACILITIES AND CONTROLS.
- D. Section 040120 - MAINTENANCE OF UNIT MASONRY.

**1.03 REFERENCES**

- A. New York State Department of Environmental Conservation (DEC) 6NYCRR:
- B. Part 360 Solid Waste Management Facilities.
- C. Part 364 Waste Transporter Permits.
- D. Part 370 Hazardous Waste Management System-General.
- E. Part 371 Identification and Listing of Hazardous Wastes.
- F. Part 372 Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities.
- G. Part 373 Hazardous Waste Management Facilities.
- H. New York State Department of Transportation (DOT): Follow all regulations of 49CFR Part 100 through 199.
- I. Occupational Safety and Health Administration (OSHA): Lead Exposure in Construction: Interim Final Rule 29 CFR 1926.62.
- J. U.S. Department of Housing and Urban Development (HUD): Guidelines for evaluation and control of Lead based paint hazards: Title Ten of Housing and Community Act of 1992.
- K. U.S. Environmental Protection Agency (EPA): Resource Conservation and Recovery Act (RCRA) Section 3004 Hazardous and Solid Waste Amendments.
- L. U.S. Environmental Protection Agency (EPA): Toxicity Characteristics Leaching Procedure EPA Method 1311.



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#### 1.04 DEFINITIONS

- A. Authorized Personnel: Facility or the Director's Representative, and all other personnel who are authorized officials of any regulating agency, be it State, Local, Federal or Private entity who possess legal authority for enforcement or inspection of the work.
- B. Containment: The enclosure within the building which establishes a contaminated area and surrounds the location where lead remediation is taking place and establishes a Lead Control Work Area.
- C. Clearance Criteria: Shall be determined and established by an independent testing lab hired by the Director's Representative, conforming to all standards set forth by all authorities having jurisdiction, mentioned in the references, and issue the certification of cleaning. At a minimum no single sample shall have reading levels greater than the levels established by pre-work sampling and testing. Levels shall be recorded in mg/ft<sup>2</sup>.
- D. Fixed Object: Mechanical equipment, electrical equipment, fire detection systems, alarms, and all other fixed equipment, furniture, fixtures or other items which cannot be removed from the work area.
- E. HEPA: High Efficiency Particulate Absolute filtration efficiency of 99.97 percent down to 0.3 microns. Filtration provided on specialized vacuums and air filtration devices to trap particles.
- F. Lead Based Paint (LBP): Paints or other surface coatings that contain lead equal to or greater than 1.0 milligrams per square centimeter or 0.5 percent of lead by weight.
- G. Lead Dust Control Work Area: A cordoned off area with drop clothes or an enclosed area or structure with containment to prevent the spread of lead dust, paint chips, or debris from lead-containing paint disturbance operations.
- H. PPE: Personal Protective Equipment.

#### 1.05 ABBREVIATIONS

- A. ASTM: American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103
- B. CFR: Code of Federal Regulations, Government Printing Office, Washington, DC 20402
- C. DOT: Department of Transportation, Main Office, 50 Wolf Road, Albany, NY 12232
- D. NIOSH: National Institute for Occupational Safety and Health, Building J, N.E. Room 3007, Atlanta, Georgia 30333
- E. OSHA: Occupational Safety and Health Administration, 200 Constitution Avenue, Washington, DC 20210
- F. USEPA: United States Environmental Protection Agency, 401 M Street SW, Washington, DC 20460.

#### 1.06 SUBMITTALS

- A. Quality Control Submittals:

H2M architects + engineers

Date: AUGUST 2021

HANDLING OF LEAD  
CONTAINING MATERIALS  
028304- 2



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1. Worker' Qualifications: The persons removing lead containing/coated material and their Supervisors shall be personally experienced in this type of work and shall have been employed by a company with a minimum of one year experience in this type of work. Submit a copy of documentation of completion of current valid lead awareness certifications.
  2. Work Plan: Submit one copy of the work plan required under Quality Assurance Article.
  3. Waste Transporter Permit: One copy of transporter's current waste transporter permit.
- B. Operation and Maintenance Data: Submit air filtration unit operation and maintenance data and manufacturer's catalog sheets for the HEPA filter.
1. Provide an affidavit stating that the HEPA filters to be used for this project are new and unused.
- C. Contract Closeout Submittals:
1. Assessment Report compiled by a testing lab certifying that the work area has lead concentrations below the levels specified under the cleaning criteria.
  2. Disposal Site Receipts: Copy of waste shipment record and disposal site receipt showing that the lead-containing materials have been properly disposed.

#### 1.07 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with the referenced standards.
- B. Pre-Work Conference: Before the Work of this Section is scheduled to commence, a conference will be held by the Owner's Representative at the Site with the contractor and the lead handling subcontractor (if any) for the purpose of reviewing the Contract Documents, discussing requirements for the Work, and reviewing the Work procedures.
- C. Lead-Containing Material Removal Work Plan: Before the physical Work begins, prepare a detailed lead-containing material removal work plan.
1. The work plan shall include, but not be limited to, the location, size, and details of lead dust control work areas, sequencing of lead containing material handling, work procedures, types of equipment, crew size, and emergency procedures for fire and medical emergencies.

#### 1.08 PROJECT CONDITIONS

- A. Shut-down of Air Handling System: Complete the Work of this Section within the time limitation allowed for shutdown of the air handling system serving the work area.
1. The air handling system will not be restarted until approval of the post-work dust-wipe testing following the last cleaning.
- B. Cover and seal all fin-tube radiator covers, diffusers, duplex outlets, speakers, smoke and heat detectors, etc.
1. Prevent lead containing dust from entering hard to clean areas within the duct containment area.
  2. Items judged to be too difficult to protect may be disconnected, removed and replaced at contractor's option.
- C. Remove or encase all movable equipment in the work area with two layers of six mil fire retardant polyethylene sheeting.



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#### **1.09 HEALTH AND SAFETY**

- A. Where in the performance of the work, workers, supervisory personnel or sub-contractors may encounter, disturb, or otherwise function in the immediate vicinity of contaminated items and materials, all personnel shall take appropriate continuous measures as necessary to protect all ancillary building occupants from the potential lead exposure.
  - 1. Such measures shall include the procedures and methods described herein and shall be in compliance with all applicable regulations of Federal, State and Local agencies.

#### **1.10 FIRE PROTECTION, EMERGENCY EGRESS AND SECURITY**

- A. Establish emergency and fire exits from the lead dust control work area containment. Provide first aid kits and two full sets of protective clothing and respirators for use by qualified emergency personnel outside of the work area.
- B. Provide a logbook throughout the entire term of the project. All persons who enter the regulated lead dust control work area or containment shall sign the logbook. Document any intrusion or incident in the log book.

#### **1.11 PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT**

- A. Workers must wear protective suits, protective gloves, eye protection and a minimum of half-face respirator with HEPA filter cartridge for all projects. Respiratory protection shall be in accordance with OSHA regulation 29 CFR 1910.134 and ANSI Z88.2.
- B. Workers must be trained, have medical clearance and must have recently received pulmonary function test (PFT) and respirator fit tested by a trained professional.
  - 1. A personal air sampling program shall be in place as required by OSHA.
  - 2. The use of respirators must also follow a complete respiratory protection program as specified by OSHA.

### **PART 2 - PRODUCTS**

#### **2.01 RESPIRATORS**

- A. Type: Approved by the Mine Safety and Health Administration (MSHA), Department of Labor, or the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services.

#### **2.02 VACUUM CLEANERS**

- A. Type: Vacuums equipped with HEPA filters.

#### **2.03 PLASTIC SHEETS**

- A. Type: Minimum 6 mil., clear, fire retardant polyethylene sheets.
- B. Floor Protective Layer: Minimum 10 mil., reinforced polyethylene sheets.

#### **2.04 DISPOSAL BAGS**

- A. Type: Minimum 6 mil thick, clear polyethylene bags with preprinted Caution Label.



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#### **2.05 EQUIPMENT**

- A. Temporary lighting, heating, hot water heating units, ground fault interrupters, and all other equipment on site shall be UL listed and shall be safe, proper, and sufficient for the purpose intended.
- B. All electrical equipment shall be in compliance with the National Electric Code, Article 305 - Temporary Wiring.

#### **PART 3 - EXECUTION**

##### **3.01 PRE-WORK TESTING**

- A. Testing: The Owner's Representative will employ the services of an independent testing laboratory to perform the pre-work testing within the lead dust control work area and the areas adjacent to the lead dust control work area.
  - 1. The testing lab will be New York State Department of Health, Environmental Laboratory Accreditation Program (NYS ELAP).

##### **3.02 EMPLOYEE PROTECTION**

- A. Comply with all applicable Occupational Safety and Health Administration (OSHA) Requirements.

##### **3.03 LEAD-CONTAINING/COATED MATERIAL HANDLING AND DISPOSAL**

- A. Handle and dispose of lead-containing materials in accordance with OSHA 1926.62 and the approved lead-containing material work plan. Use procedures and equipment required to limit occupational and environmental exposure to lead when material containing or coated with lead containing paint is handled and disposed of in accordance with referenced standards.

##### **3.04 POST-WORK TESTING**

- A. Testing: The Owner will employ the services of an independent testing laboratory to perform the post-work testing within the lead dust control work area and the areas adjacent to the lead dust control work area.
  - 1. The testing lab will be New York State Department of Health, Environmental Laboratory Accreditation Program (NYS ELAP).

##### **3.05 MULTIPLE WORK LOCATIONS**

- A. The first two locations encountered shall be utilized to develop a method for an acceptable baseline approach for the lead dust control area, pre work wipe samples, employee protection, work method, post work wipe samples, cleaning criteria and disposal.
  - 1. Once an acceptable method is developed and verified by the independent testing lab employed by the Owner, subsequent testing shall not be required.
  - 2. Do not change the methodology of the verified work plan during the course of the entire project.



### 3.06 CLEANING CRITERIA

- A. Cleaning criteria is separated into two categories; areas within the lead dust control work area, and areas adjacent to the lead dust control work area:
  - 1. Surfaces within the Lead Dust Control Work Area: In each area where the lead containing/coated materials have been disturbed, compare the sample results with the criteria listed below. Any other surfaces inside the lead dust control work area that is not listed below shall be cleaned to the pre-work levels. If any of the results exceed the following values, clean again and schedule retesting until the lead dust levels are equal to or lower than the following values:
    - a. Floors: 40 micrograms of lead per square foot.
    - b. Window Sills: 250 micrograms of lead per square foot.
    - c. Window Troughs: 400 micrograms of lead per square foot.
    - d. Soil: 400 ppm in play areas and 1,200 ppm in bare soil in the remainder of the yard.
  - 2. Areas Adjacent to the Lead Dust Control Work Area: If the post-work test results indicate an increase in the lead level as compared to the pre-work samples, the area has been contaminated by the work and cleaning is mandatory.
    - a. Clean all affected surfaces and schedule retesting. If results still exceed pre-abatement levels, clean again and schedule retesting until the following criteria is met or until the lead dust levels are equal to or lower than the pre-work wipe sample results. Any affected surfaces that are not listed below shall be cleaned to pre-work levels.
      - 1) Floors: 40 micrograms of lead per square foot.
      - 2) Window Sills: 250 micrograms of lead per square foot.
      - 3) Window Troughs: 400 micrograms of lead per square foot.
      - 4) Soil: 400 ppm in play areas and 1,200 ppm in bare soil in the remainder of the yard.

### 3.07 CERTIFICATION OF CLEANING

- A. Schedule dust wipe testing with the Owner's Representative at the site, when work area is ready for clearance testing.
- B. Owner's Representative will employ the services of an independent testing lab to perform clearance testing.
  - 1. Prior to removal of any isolation barrier, the Owner's Representative will obtain a written affidavit and a final assessment report from the lab stating that the tests conform to all standards set forth by all authorities having jurisdiction, mentioned in the references.
  - 2. Schedule a walk-through inspection with the Owner's Representative and obtain his written approval.
- C. The Owner's Representative shall have final determination of an acceptable clearance level.

### 3.08 PRE-DISPOSAL TESTING

- A. Prior to disposal, test the removed materials for toxicity in accordance with EPA Method 1311, Toxicity Characteristic Leaching Procedure (TCLP).
  - 1. Test results indicating a value greater than 5 ppm lead classifies the removed material as Hazardous Waste.



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#### **3.09 DISPOSAL OF LEAD-CONTAINING/COATED MATERIAL AND RELATED DEBRIS**

- A. Transport and dispose of lead-containing material classified as Hazardous Waste in accordance with the standards referenced in Part 1 of this Section.
- B. Transport and dispose of lead-containing material classified as Non- Hazardous Waste in accordance with the standards referenced in Part 1 of this Section.

#### **3.10 RESTORATION**

- A. Remove temporary decontamination facilities and restore area designated for these facilities to its original condition or better.
- B. Where existing construction is damaged or contaminated during the course of performing this project, restore area to its condition or better.

#### **END OF SECTION**



**SECTION 033053**  
**MISCELLANEOUS CAST-IN-PLACE CONCRETE**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section includes cast-in-place concrete, concrete base units and equipment pads including reinforcement, concrete materials, mixture design, placement procedures, and finishes.

**1.03 ACTION SUBMITTALS**

- A. Product Data: For each type of product.
- B. Design mixtures: For each concrete mixture.

**1.04 QUALITY ASSURANCE**

- A. Ready-Mix-Concrete 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

**PART 2 - PRODUCTS**

**2.01 CONCRETE, GENERAL**

- A. Comply with the following sections of ACI 301 unless modified by requirements in the Contract Documents:
  - 1. "General Requirements."
  - 2. "Formwork and Formwork Accessories."
  - 3. "Reinforcement and Reinforcement Supports."
  - 4. "Concrete Mixtures."
  - 5. "Handling, Placing, and Constructing."
  - 6. "Lightweight Concrete."
- B. Comply with ACI 117 (ACI 117M).

**2.02 STEEL REINFORCEMENT**

- A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 (Grade 420), deformed.
- B. Deformed-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, flat sheet.

**2.03 CONCRETE MATERIALS**

- A. Regional Materials: Concrete shall be manufactured within 500 miles (800 km) of Project site from aggregates[ and cementitious materials] that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site.



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- B. 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.
- C. Cementitious Materials:
  - 1. Portland Cement: ASTM C 150/C 150M, Type I.
  - 2. Fly Ash: ASTM C 618, Class C or F.
- D. Normal-Weight Aggregate: ASTM C 33/C 33M, 1-1/2 inch (38 mm) nominal maximum aggregate size.
- E. Air-Entraining Admixture: ASTM C 260/C 260M.
- F. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
  - 1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
- G. Water: ASTM C 94/C 94M.

#### 2.04 RELATED MATERIALS

- A. Vapor Retarder: Polyethylene sheet, ASTM D 4397, not less than 10 mils (0.25 mm) thick; or plastic sheet, ASTM E 1745, Class C.
- B. Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber, or ASTM D 1752, cork or self-expanding cork.

#### 2.05 CURING MATERIALS

- A. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- B. Water: Potable.

#### 2.06 CONCRETE MIXTURES

- A. Comply with ACI 301 (ACI 301M).
- B. Normal-Weight Concrete:
  - 1. Minimum Compressive Strength: 4500 psi (31 MPa) at 28 days.
  - 2. Maximum W/C Ratio: 0.50.
  - 3. Slump Limit: 4 inches (100 mm) for concrete with verified slump of 2 to 4 inches (50 to 100 mm) before adding high-range water-reducing admixture or plasticizing admixture, plus or minus 1 inch (25 mm).
  - 4. Air Content: Maintain within range permitted by ACI 301 (ACI 301M). Do not allow air content of trowel-finished floor slabs to exceed 3 percent.

#### 2.07 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116, and furnish batch ticket information.



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1. When air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

## **PART 3 - EXECUTION**

### **3.01 FORMWORK INSTALLATION**

- A. Design, construct, erect, brace, and maintain formwork according to ACI 301 (ACI 301M).

### **3.02 EMBEDDED ITEM INSTALLATION**

- 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.

### **3.03 STEEL REINFORCEMENT INSTALLATION**

- A. Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
  1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

### **3.04 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 Architect.

### **3.05 CONCRETE PLACEMENT**

- A. Comply with ACI 301 (ACI 301M) for placing concrete.
- B. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301 (ACI 301M).
- C. Do not add water to concrete during delivery, at Project site, or during placement.
- D. Consolidate concrete with mechanical vibrating equipment according to ACI 301 (ACI 301M).

### **3.06 FINISHING FORMED SURFACES**

- A. 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 defective areas. Remove fins and other projections exceeding 1/8 inch (3 mm).
  1. Apply to concrete surfaces exposed to public view, to receive a rubbed finish, or to be covered with a coating or covering material applied directly to concrete.
- B. Rubbed Finish: Apply the following rubbed finish, defined in ACI 301 (ACI 301M), to smooth-formed-finished as-cast concrete where indicated:
  1. Smooth-rubbed finish.
  2. Grout-cleaned finish.
  3. Cork-floated finish.



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- 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.

### 3.07 FINISHING UNFORMED SURFACES

- A. General: Comply with ACI 302.1R for screeding, restraighening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Screed surfaces with a straightedge and strike off. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane before excess moisture or bleedwater appears on surface.
  - 1. Do not further disturb surfaces before starting finishing operations.
- C. Float Finish: Apply float finish to surfaces indicated, to surfaces to receive trowel finish, and to floor and slab surfaces to be covered with fluid-applied or sheet waterproofing, fluid-applied or direct-to-deck-applied membrane roofing, or sand-bed terrazzo.
- D. Trowel and Fine-Broom Finish: Apply a partial trowel finish, stopping after second troweling, to surfaces indicated and to surfaces where ceramic or quarry tile is to be installed by either thickset or thinset methods. Immediately after second troweling, and when concrete is still plastic, slightly scarify surface with a fine broom.
- E. Slip-Resistive Broom Finish: Apply a slip-resistive finish to surfaces indicated and to exterior concrete platforms, steps, and ramps. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route.

### 3.08 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 with ACI 301 (ACI 301M) for hot-weather protection during curing.
- B. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- C. Curing Methods: Cure formed and unformed concrete for at least seven days 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. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) 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 (300 mm), 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.
  - 3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall



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within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

### **3.09 FIELD QUALITY CONTROL**

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Tests: Perform according to ACI 301 (ACI 301M).
  1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m) or fraction thereof.
  2. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. (76 cu. m) or fraction thereof of each concrete mixture placed each day.

**END OF SECTION**



**SECTION 040120**  
**MAINTENANCE OF UNIT MASONRY**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section includes maintenance of unit masonry consisting of brick clay masonry restoration and cleaning as follows:
  - 1. Unused anchor removal.
  - 2. Repairing unit masonry, including replacing units.
  - 3. Painting steel uncovered during the work.
  - 4. Re-anchoring veneers.
  - 5. Repointing joints.
  - 6. Preliminary cleaning, including removing plant growth.
  - 7. Cleaning exposed unit masonry surfaces.

**1.03 DEFINITIONS**

- A. Very Low-Pressure Spray: Under 100 psi (690 kPa).
- B. Low-Pressure Spray: 100 to 400 psi (690 to 2750 kPa); 4 to 6 gpm (0.25 to 0.4 L/s).
- C. Medium-Pressure Spray: 400 to 800 psi (2750 to 5510 kPa); 4 to 6 gpm (0.25 to 0.4 L/s).
- D. High-Pressure Spray: 800 to 1200 psi (5510 to 8250 kPa); 4 to 6 gpm (0.25 to 0.4 L/s).
- E. Saturation Coefficient: Ratio of the weight of water absorbed during immersion in cold water to weight absorbed during immersion in boiling water; used as an indication of resistance of masonry units to freezing and thawing.

**1.04 PRECONSTRUCTION TESTING**

- A. Preconstruction Testing Service: Engage a qualified testing agency to perform preconstruction testing on masonry units as follows.
  - 1. Existing Brick: Test each type of existing masonry unit indicated for replacement, according to testing methods in ASTM C 67 for compressive strength, 24-hour cold-water absorption, 5-hour boil absorption, saturation coefficient, and initial rate of absorption (suction). Carefully remove existing units from locations designated by Architect. Take testing samples from these units.
  - 2. Replacement Brick: Test each proposed type of replacement masonry unit, according to sampling and testing methods in ASTM C 67 for compressive strength, 24-hour cold-water absorption, 5-hour boil absorption, saturation coefficient, and initial rate of absorption (suction).
- B. Mortar Analysis Test: The Contractor shall take two (2) (1/2 cup min.) samples of existing mortar from building joint areas. Mortar shall be sent in closed protective containers to one of the laboratories listed herein and analyzed. Analysis shall consist of, but not be limited to, the



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following tests: Wet Chemical/Gravimetric Analysis & Examination, Chemical Dissolution, Aggregate Separation, and Sieve Mesh Analysis. All tests shall be completed in conformance with the latest applicable ASTM Standard(s). Test results shall include a detailed list of materials to make an exact replica of the existing mortar including strength, material composition, sources, color, and texture. Results shall include aggregate identification/source(s) and characteristics; binder to aggregate ratio and probable original mix based on lab analysis and historical investigations. Based upon the findings of the mortar analysis, the Contractor shall prepare two samples of the mortar for selection by the Architect and the Owner prior to the production of Mortar utilized for the project. Contractor shall have testing shall be preformed at one of the following testing labs:

1. Jablonski Berkowitz Conservation Inc. (certified WBE)  
40 W. 27th St., Suite 1201  
NY, NY 10001  
(212) 532-7775
2. ICR (Integrated Conservation Resources)  
32 Old Slip  
NY, NY 10005  
(212) 947-4499
3. BCA (Building Conservation Associates)  
44 E 32nd St.  
NY, NY 10016  
(212) 777-1300
4. Wiss, Janney, Elstner  
330 Pfingsten Road  
Northbrook, IL 60062-2095  
(847) 272-7740

#### 1.05 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include recommendations for application and use. Include test data substantiating that products comply with requirements.
- B. Samples for Verification: For the following:
  1. Each type of masonry unit to be used for replacing existing units. Include sets of Samples as necessary to show the full range of shape, color, and texture to be expected.
    - a. For each brick type, provide straps or panels containing at least four bricks. Include multiple straps for brick with a wide range.
  2. Each type, color, and texture of pointing mortar in the form of sample mortar strips, 6 inches (150 mm) long by 1/4 inch (6 mm) (13 mm) wide, set in aluminum or plastic channels.
    - a. Include with each Sample a list of ingredients with proportions of each. Identify sources, both supplier and quarry, of each type of sand and brand names of cementitious materials and pigments if any.

#### 1.06 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For including field supervisors and restoration workers and testing service.
- B. Restoration Program.
- C. Cleaning Program.



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#### 1.07 QUALITY ASSURANCE

- A. Restoration Specialist Qualifications: Engage an experienced, preapproved masonry restoration and cleaning firm to perform work of this Section. Firm shall have completed work similar in material, design, and extent to that indicated for this Project with a record of successful in-service performance. Experience installing standard unit masonry is not sufficient experience for masonry restoration work.
  - 1. At Contractor's option, work may be divided between two specialist firms: one for cleaning work and one for repair work.
  - 2. Field Supervision: Restoration specialist firms shall maintain experienced full-time supervisors on Project site during times that clay masonry restoration and cleaning work is in progress. Supervisors shall not be changed during Project except for causes beyond the control of restoration specialist firm.
  - 3. Restoration Worker Qualifications: Persons who are experienced and specialize in restoration work of types they will be performing.
- B. Chemical-Cleaner Manufacturer Qualifications: A firm regularly engaged in producing masonry cleaners that have been used for similar applications with successful results, and with factory-trained representatives who are available for consultation and Project-site inspection and assistance at no additional cost.
- C. Source Limitations: Obtain each type of material for masonry restoration (face brick, cement, sand, etc.) from one source with resources to provide materials of consistent quality in appearance and physical properties.
- D. Quality-Control Program: Prepare a written quality-control program for this Project to systematically demonstrate the ability of personnel to properly follow methods and use materials and tools without damaging masonry. Include provisions for supervising performance and preventing damage due to worker fatigue.
- E. Restoration Program: Prepare a written, detailed description of materials, methods, equipment, and sequence of operations to be used for each phase of restoration work including protection of surrounding materials and Project site.
  - 1. Include methods for keeping pointing mortar damp during curing period.
  - 2. If materials and methods other than those indicated are proposed for any phase of restoration work, add to the Quality-Control Program a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project and worker's ability to use such materials and methods properly.
- F. Cleaning Program: Prepare a written cleaning program that describes cleaning process in detail, including materials, methods, and equipment to be used, protection of surrounding materials, and control of runoff during operations.
  - 1. If materials and methods other than those indicated are proposed for any phase of restoration work, add to the Quality-Control Program a written description of such materials and methods, including evidence of successful use on comparable projects, and demonstrations to show their effectiveness for this Project and worker's ability to use such materials and methods properly.
- G. Cleaning and Repair Appearance Standard: Cleaned and repaired surfaces are to have a uniform appearance as viewed from 20 feet (6 m) away by Architect. Perform additional paint



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and stain removal, general cleaning, and spot cleaning of small areas that are noticeably different, so that surface blends smoothly into surrounding areas.

- H. Mockups: Prepare mockups of restoration and cleaning to demonstrate aesthetic effects and set quality standards for materials and execution and for fabrication and installation.
  - 1. Repointing: Rake out joints in 2 separate areas, each approximately 36 inches (900 mm) high by 48 inches (1200 mm) wide for each type of repointing required and repoint one of the areas.
  - 2. Cleaning: Clean an area approximately 25 sq. ft. (2.3 sq. m) for each type of masonry and surface condition.
    - a. Test cleaners and methods on samples of adjacent materials for possible adverse reactions. Do not use cleaners and methods known to have deleterious effect.
    - b. Allow a waiting period of not less than seven days after completion of sample cleaning to permit a study of sample panels for negative reactions.
  - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
- I. Preinstallation Conference: Conduct conference at Project site.
  - 1. Review methods and procedures related to masonry restoration and cleaning including, but not limited to, the following:
    - a. Construction schedule. Verify availability of materials, Restoration Specialist's personnel, equipment, and facilities needed to make progress and avoid delays.
    - b. Materials, material application, sequencing, tolerances, and required clearances.

#### 1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver masonry units to Project site strapped together in suitable packs or pallets or in heavy-duty cartons.
- B. Deliver other materials to Project site in manufacturer's original and unopened containers, labeled with manufacturer's name and type of products.
- C. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- D. Store hydrated lime in manufacturer's original and unopened containers. Discard lime if containers have been damaged or have been opened for more than two days.
- E. Store lime putty covered with water in sealed containers.
- F. Store sand where grading and other required characteristics can be maintained and contamination avoided.

#### 1.09 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit masonry restoration and cleaning work to be performed according to manufacturers' written instructions and specified requirements.
- B. Repair masonry units and repoint mortar joints only when air temperature is between 40 and 90 deg F (4 and 32 deg C) and is predicted to remain so for at least 7 days after completion of the Work unless otherwise indicated.



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- C. Cold-Weather Requirements: Comply with the following procedures for masonry repair and mortar-joint pointing unless otherwise indicated:
  - 1. When air temperature is below 40 deg F (4 deg C), heat mortar ingredients, masonry repair materials, and existing masonry walls to produce temperatures between 40 and 120 deg F (4 and 49 deg C).
  - 2. When mean daily air temperature is below 40 deg F (4 deg C), provide enclosure and heat to maintain temperatures above 32 deg F (0 deg C) within the enclosure for 7 days after repair and pointing.
- D. Hot-Weather Requirements: Protect masonry repair and mortar-joint pointing when temperature and humidity conditions produce excessive evaporation of water from mortar and repair materials. Provide artificial shade and wind breaks and use cooled materials as required to minimize evaporation. Do not apply mortar to substrates with temperatures of 90 deg F (32 deg C) and above unless otherwise indicated.
- E. For manufactured repair materials, perform work within the environmental limits set by each manufacturer.
- F. Clean masonry surfaces only when air temperature is 40 deg F (4 deg C) and above and is predicted to remain so for at least 7 days after completion of cleaning.

#### 1.10 COORDINATION

- A. Coordinate masonry restoration and cleaning with public circulation patterns at Project site. . Public circulation patterns cannot be closed off entirely, and in places can be only temporarily redirected around small areas of work. Plan and execute the Work accordingly.

#### 1.11 SEQUENCING AND SCHEDULING

- A. Order replacement materials at earliest possible date to avoid delaying completion of the Work.
- B. Order sand and gray Portland cement for pointing mortar immediately after approval of mockups. Take delivery of and store at Project site a sufficient quantity to complete Project.
- C. Perform masonry restoration work in the following sequence:
  - 1. Remove plant growth.
  - 2. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.
  - 3. Remove paint.
  - 4. Clean masonry surfaces.
  - 5. Rake out mortar from joints surrounding masonry to be replaced and from joints adjacent to masonry repairs along joints.
  - 6. Repair masonry, including replacing existing masonry with new masonry materials.
  - 7. Rake out mortar from joints to be repointed.
  - 8. Point mortar and sealant joints.
  - 9. After repairs and repointing have been completed and cured, perform a final cleaning to remove residues from this work.
  - 10. Inspect for open mortar joints and repair before cleaning to prevent the intrusion of water and other cleaning materials into the wall.



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- D. As scaffolding is removed, patch anchor holes used to attach scaffolding. Patch holes in masonry units to comply with "Masonry Unit Patching" Article. Patch holes in mortar joints to comply with "Repointing Masonry" Article.

## PART 2 - PRODUCTS

### 2.01 MASONRY MATERIALS

- A. Face Brick: Provide face brick, including specially molded, ground, cut, or sawed shapes where required to complete masonry restoration work matching existing masonry.
  - 1. Provide units with colors, color variation within units, surface texture, size, and shape to match existing brickwork.
    - a. For existing brickwork that exhibits a range of colors or color variation within units, provide brick that proportionally matches that range and variation rather than brick that matches an individual color within that range.
  - 2. Tolerances as Fabricated: Comply with tolerance requirements in ASTM C 216, Type FBS or to match existing brick masonry tolerances.
- B. Salvaged Brick: When available, obtain salvaged brick from Owner from location shown on Drawings. Clean off residual mortar prior to re-use.

### 2.02 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150, Type I or Type II, white or gray or both where required for color matching of exposed mortar.
  - 1. Provide cement containing not more than 0.60 percent total alkali when tested according to ASTM C 114.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Mortar Sand: ASTM C 144 unless otherwise indicated.
  - 1. Color: Provide natural sand or ground marble, granite, or other sound stone of color necessary to produce required mortar color.
  - 2. For pointing mortar, provide sand with rounded edges.
  - 3. Match size, texture, and gradation of existing mortar sand as closely as possible. Blend several sands if necessary to achieve suitable match.
- D. Mortar Pigments: Natural and synthetic iron oxides, compounded for mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortars.
- E. Mortar Staining: Nawkaw Corporation - NECT-90 Nawkaw emulsion color treatment or approved equal.
- F. Water: Potable.

### 2.03 MANUFACTURED REPAIR MATERIALS

- A. Masonry Patching Compound: Factory-mixed cementitious product that is custom manufactured for patching masonry.
  - 1. Products: Subject to compliance with requirements, provide the following:
    - a. Cathedral Stone Products, Inc.; Jahn M100 Terra Cotta and Brick Repair Mortar.
    - b. Or approved equal.



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2. Use formulation that is vapor- and water permeable (equal to or more than the masonry unit), exhibits low shrinkage, has lower modulus of elasticity than the masonry units being repaired, and develops high bond strength to all types of masonry.
3. Use formulation having working qualities and retardation control to permit forming and sculpturing where necessary.
4. Formulate patching compound used for patching brick in colors and textures to match each masonry unit being patched. Provide sufficient number of colors to enable matching the color, texture, and variation of each unit.

#### 2.04 PAINT REMOVERS

- A. Alkaline Paste Paint Remover: Manufacturer's standard alkaline paste formulation for removing paint coatings from masonry.
  1. Products: Subject to compliance with requirements, provide the following:
    - a. PROSOCO; Enviro Klean Safety Peel 2.
    - b. Or approved equal.

#### 2.05 CLEANING MATERIALS

- A. Water: Potable.
- B. Job-Mixed Detergent Solution: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium polyphosphate, 1/2 cup (125 mL) of laundry detergent, and 20 quarts (20 L) of hot water for every 5 gal. (20 L) of solution required.
- C. Job-Mixed Mold, Mildew, and Algae Remover: Solution prepared by mixing 2 cups (0.5 L) of tetrasodium polyphosphate, 5 quarts (5 L) of 5 percent sodium hypochlorite (bleach), and 15 quarts (15 L) of hot water for every 5 gal. (20 L) of solution required.
- D. Nonacidic Gel Cleaner: Manufacturer's standard gel formulation, with pH between 6 and 9 that contains detergents with chelating agents and is specifically formulated for cleaning masonry surfaces.
- E. Nonacidic Liquid Cleaner: Manufacturer's standard mildly alkaline liquid cleaner formulated for removing mold, mildew, and other organic soiling from ordinary building materials, including polished stone, brick, aluminum, plastics, and wood.
  1. Products: Subject to compliance with requirements, provide the following:
    - a. PROSOCO; Enviro Klean 2010 All Surface Cleaner.
    - b. Or Approved Equal.

#### 2.06 ACCESSORY MATERIALS

- A. Liquid Strippable Masking Agent: Manufacturer's standard liquid, film-forming, strippable masking material for protecting glass, metal, and polished stone surfaces from damaging effects of acidic and alkaline masonry cleaners.
  1. Products: Subject to compliance with requirements, provide the following:
    - a. PROSOCO; Sure Klean Strippable Masking.
    - b. Or Approved Equal.
- B. Masonry Repair Anchors, Spiral Type: Type 304 stainless-steel spiral rods designed to anchor to backing and veneer. Anchors are flexible in plane of veneer but rigid perpendicular to it.
  1. Provide driven-in anchors designed to be installed in drilled holes and relying on screw effect rather than adhesive to secure them to backup and veneer.



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2. Products: Subject to compliance with requirements, provide the following:
  - a. Heckmann Building Products Inc.; #391 Remedial Tie.
  - b. Hohmann & Barnard, Inc.; Helix Spiro-Ties.
  - c. Or approved equal.
- C. Sealant Materials:
  1. Provide manufacturer's standard chemically curing, elastomeric sealant(s) of base polymer and characteristics indicated below that comply with applicable requirements in Section 079200 - JOINT SEALANTS.
    - a. Single-component, non-sag urethane sealant.
  2. Colors: Provide colors of exposed sealants to match colors of masonry adjoining installed sealant unless otherwise indicated.
- D. Joint-Sealant Backing:
  1. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
  2. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where acceptable.
- E. Setting Buttons: Resilient plastic buttons, nonstaining to masonry, sized to suit joint thicknesses and bed depths of masonry units without intruding into required depths of pointing materials.
- F. Masking Tape: Nonstaining, nonabsorbent material, compatible with pointing mortar, joint primers, sealants, and surfaces adjacent to joints; that will easily come off entirely, including adhesive.
- G. Antirust Coating: Fast-curing, lead- and chromate-free, self-curing, universal modified-alkyd primer complying with SSPC-Paint 20 or SSPC-Paint 29 zinc-rich coating.
  1. Use coating requiring no better than SSPC-SP 3, "Power Tool Cleaning" surface preparation according to manufacturer's literature or certified statement.
  2. Use coating with a VOC content of 420 g/L (3.5 lb/gal.) or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- H. Miscellaneous Products: Select materials and methods of use based on the following, subject to approval of a mockup:
  1. Previous effectiveness in performing the work involved.
  2. Little possibility of damaging exposed surfaces.
  3. Consistency of each application.
  4. Uniformity of the resulting overall appearance.
  5. Do not use products or tools that could do the following:
    - a. Remove, alter, or in any way harm the present condition or future preservation of existing surfaces, including surrounding surfaces not in contract.
    - b. Leave a residue on surfaces.

## 2.07 MORTAR MIXES

- A. Preparing Lime Putty: Slake quicklime and prepare lime putty according to appendix to ASTM C 5 and manufacturer's written instructions.



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- B. Measurement and Mixing: Measure cementitious materials and sand in a dry condition by volume or equivalent weight. Do not measure by shovel; use known measure. Mix materials in a clean, mechanical batch mixer.
  - 1. Mixing Pointing Mortar: Thoroughly mix cementitious materials and sand together before adding any water. Then mix again adding only enough water to produce a damp, unworkable mix that will retain its form when pressed into a ball. Maintain mortar in this dampened condition for 15 to 30 minutes. Add remaining water in small portions until mortar reaches desired consistency. Use mortar within one hour of final mixing; do not re-temper or use partially hardened material.
- C. Colored Mortar: Produce mortar of color required by using specified ingredients. Do not alter specified proportions without Architect's approval.
  - 1. Mortar Pigments: Where mortar pigments are indicated, do not exceed a pigment-to-cement ratio of 1:10 by weight.
- D. Do not use admixtures in mortar unless otherwise indicated.
- E. Mortar Proportions: Mix mortar materials in the following proportions:
  - 1. Pointing Mortar for Brick: 1 part Portland cement, 2 parts lime, and 6 parts sand.
    - a. Add mortar pigments to produce mortar colors required.
  - 2. Rebuilding (Setting) Mortar: Comply with ASTM C 270, Proportion Specification, Type N unless otherwise indicated; with cementitious material limited to Portland cement and lime.

## 2.08 CHEMICAL CLEANING SOLUTIONS

- A. Dilute chemical cleaners with water to produce solutions not exceeding concentration recommended by chemical-cleaner manufacturer.
- B. Acidic Cleaner Solution for Brick: Dilute with water to produce hydrofluoric acid content of 3 percent or less, but not greater than that recommended by chemical-cleaner manufacturer.

## PART 3 - EXECUTION

### 3.01 PROTECTION

- A. Protect persons, motor vehicles, surrounding surfaces of building being restored, building site, plants, and surrounding buildings from harm resulting from masonry restoration work.
  - 1. Erect temporary protective covers over walkways and at points of pedestrian and vehicular entrance and exit that must remain in service during course of restoration and cleaning work.
- B. Comply with chemical-cleaner manufacturer's written instructions for protecting building and other surfaces against damage from exposure to its products. Prevent chemical-cleaning solutions from coming into contact with people, motor vehicles, landscaping, buildings, and other surfaces that could be harmed by such contact.
  - 1. Cover adjacent surfaces with materials that are proven to resist chemical cleaners used unless chemical cleaners being used will not damage adjacent surfaces. Use materials that contain only waterproof, UV-resistant adhesives. Apply masking agents to comply with manufacturer's written instructions. Do not apply liquid masking agent to painted or porous surfaces. When no longer needed, promptly remove masking to prevent adhesive staining.
  - 2. Keep wall wet below area being cleaned to prevent streaking from runoff.



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3. Do not clean masonry during winds of sufficient force to spread cleaning solutions to unprotected surfaces.
  4. Neutralize and collect alkaline and acid wastes for disposal off Owner's property.
  5. Dispose of runoff from cleaning operations by legal means and in a manner that prevents soil erosion, undermining of paving and foundations, damage to landscaping, and water penetration into building interiors.
- C. Prevent mortar from staining face of surrounding masonry and other surfaces.
1. Cover sills, ledges, and projections to protect from mortar droppings.
  2. Keep wall area wet below rebuilding and pointing work to discourage mortar from adhering.
  3. Immediately remove mortar in contact with exposed masonry and other surfaces.
  4. Clean mortar splatters from scaffolding at end of each day.

### 3.02 UNUSED ANCHOR REMOVAL

- A. Remove masonry anchors, brackets, wood nailers, and other extraneous items no longer in use unless identified as historically significant or indicated to remain.
1. Remove items carefully to avoid spalling or cracking masonry.
  2. Where directed, if an item cannot be removed without damaging surrounding masonry, do the following:
    - a. Cut or grind off item approximately 3/4 inch (20 mm) beneath surface and core drill a recess of same depth in surrounding masonry as close around item as practical.
    - b. Immediately paint exposed end of item with two coats of anti-rust coating, following coating manufacturer's written instructions and without exceeding manufacturer's recommended dry film thickness per coat. Keep paint off sides of recess.
  3. Patch the hole where each item was removed unless directed to remove and replace the masonry unit.

### 3.03 BRICK REMOVAL AND REPLACEMENT

- A. At locations indicated, remove bricks that are damaged, spalled, or deteriorated or are to be reused. Carefully demolish or remove entire units from joint to joint, without damaging surrounding masonry, in a manner that permits replacement with full-size units.
1. When removing single bricks, remove material from center of brick and work toward outside edges.
- B. Support and protect remaining masonry that surrounds removal area. Maintain flashing, reinforcement, lintels, and adjoining construction in an undamaged condition.
- C. Notify Architect of unforeseen detrimental conditions including voids, cracks, bulges, and loose units in existing masonry backup, rotted wood, rusted metal, and other deteriorated items.
- D. Remove in an undamaged condition as many whole bricks as possible.
1. Remove mortar, loose particles, and soil from brick by cleaning with hand chisels, brushes, and water.
  2. Remove sealants by cutting close to brick with utility knife and cleaning with solvents.
  3. Store brick for reuse. Store off ground, on skids, and protected from weather.
  4. Deliver cleaned brick not required for reuse to Owner unless otherwise indicated.
- E. Clean bricks surrounding removal areas by removing mortar, dust, and loose particles in preparation for replacement.



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- F. Replace removed damaged brick with other removed brick in good quality, where possible, or with new brick matching existing brick, including size. Do not use broken units unless they can be cut to usable size.
- G. Install replacement brick into bonding and coursing pattern of existing brick. If cutting is required, use a motor-driven saw designed to cut masonry with clean, sharp, unchipped edges.
  - 1. Maintain joint width for replacement units to match existing joints.
  - 2. Use setting buttons or shims to set units accurately spaced with uniform joints.
- H. Lay replacement brick with completely filled bed, head, and collar joints. Butter ends with sufficient mortar to fill head joints and shove into place. Wet both replacement and surrounding bricks that have ASTM C 67 initial rates of absorption (suction) of more than 30 gr/30 sq. in. per min. (30 g/194 sq. cm per min.). Use wetting methods that ensure that units are nearly saturated but surface is dry when laid.
  - 1. Tool exposed mortar joints in repaired areas to match joints of surrounding existing brickwork.
  - 2. Rake out mortar used for laying brick before mortar sets and point new mortar joints in repaired area to comply with requirements for repointing existing masonry, and at same time as repointing of surrounding area.
  - 3. When mortar is sufficiently hard to support units, remove shims and other devices interfering with pointing of joints.

#### 3.04 REANCHORING VENEERS

- A. Install masonry repair anchors in horizontal mortar joints and according to manufacturer's written instructions. Install at not more than 16 inches (400 mm) o.c. vertically and 32 inches (800 mm) o.c. horizontally unless otherwise indicated. Install at locations to avoid penetrating flashing.
- B. Recess anchors at least 5/8 inch (16 mm) from surface of mortar joint and fill recess with pointing mortar.

#### 3.05 PAINTING STEEL UNCOVERED DURING THE WORK

- A. Inspect steel exposed during masonry removal. Where Architect determines that it is structural, or for other reasons cannot be totally removed, prepare and paint it as follows:
  - 1. Remove paint, rust, and other contaminants according to SSPC-SP 3, "Power Tool Cleaning", as applicable to meet paint manufacturer's recommended preparation.
  - 2. Immediately paint exposed steel with two coats of anti-rust coating, following coating manufacturer's written instructions and without exceeding manufacturer's recommended rate of application (dry film thickness per coat).
- B. If on inspection and rust removal, the cross section of a steel member is found to be reduced from rust by more than 1/16 inch (1.6 mm), notify Architect before proceeding.

#### 3.06 MASONRY UNIT PATCHING

- A. Patch the following masonry units unless another type of replacement or repair is indicated:
- B. Remove and replace existing patches unless otherwise indicated or approved by Architect.
- C. Patching Bricks:



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1. Remove loose material from masonry surface. Carefully remove additional material so patch will not have feathered edges but will have square or slightly undercut edges on area to be patched and will be at least 1/4 inch (6 mm) thick, but not less than recommended by patching compound manufacturer.
2. Mask adjacent mortar joint or rake out for repointing if patch will extend to edge of masonry unit.
3. Mix patching compound in individual batches to match each unit being patched. Combine one or more colors of patching compound, as needed, to produce exact match.
4. Rinse surface to be patched and leave damp, but without standing water.
5. Brush-coat surfaces with slurry coat of patching compound according to manufacturer's written instructions.
6. Place patching compound in layers as recommended by patching compound manufacturer, but not less than 1/4 inch (6 mm) or more than 2 inches (50 mm) thick. Roughen surface of each layer to provide a key for next layer.
7. Trowel, scrape, or carve surface of patch to match texture and surrounding surface plane or contour of the masonry unit. Shape and finish surface before or after curing, as determined by testing, to best match existing masonry unit.
8. Keep each layer damp for 72 hours or until patching compound has set.

### 3.07 CLEANING MASONRY, GENERAL

- A. Proceed with cleaning in an orderly manner; work from bottom to top of each scaffold width and from one end of each elevation to the other. Ensure that dirty residues and rinse water will not wash over cleaned, dry surfaces.
- B. Use only those cleaning methods indicated for each masonry material and location.
  1. Do not use wire brushes or brushes that are not resistant to chemical cleaner being utilized. Do not use plastic-bristle brushes if natural-fiber brushes will resist chemical cleaner being used.
  2. Use spray equipment that provides controlled application at volume and pressure indicated, measured at spray tip. Adjust pressure and volume to ensure that cleaning methods do not damage masonry.
    - a. Equip units with pressure gages.
  3. For chemical-cleaner spray application, use low-pressure tank or chemical pump suitable for chemical cleaner indicated, equipped with cone-shaped spray tip.
  4. For water-spray application, use fan-shaped spray tip that disperses water at an angle of 25 to 50 degrees.
  5. For heated water-spray application, use equipment capable of maintaining temperature between 140 and 160 deg F (60 and 71 deg C) at flow rates indicated.
- C. Perform each cleaning method indicated in a manner that results in uniform coverage of all surfaces, including corners, moldings, and interstices, and that produces an even effect without streaking or damaging masonry surfaces.
- D. Water Application Methods:
  1. Water-Soak Application: Soak masonry surfaces by applying water continuously and uniformly to limited area for time indicated. Apply water at low pressures and low volumes in multiple fine sprays using perforated hoses or multiple spray nozzles. Erect a protective enclosure constructed of polyethylene sheeting to cover area being sprayed.
  2. Water-Spray Applications: Unless otherwise indicated, hold spray nozzle at least 6 inches (150 mm) from surface of masonry and apply water in horizontal back and forth sweeping motion, overlapping previous strokes to produce uniform coverage.



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- E. Chemical-Cleaner Application Methods: Apply chemical cleaners to masonry surfaces to comply with chemical-cleaner manufacturer's written instructions; use brush or spray application. Do not spray apply at pressures exceeding 50 psi (345 kPa). Do not allow chemicals to remain on surface for periods longer than those indicated or recommended by manufacturer.
- F. Rinse off chemical residue and soil by working upward from bottom to top of each treated area at each stage or scaffold setting. Periodically during each rinse, test pH of rinse water running off of cleaned area to determine that chemical cleaner is completely removed.
  - 1. Apply neutralizing agent and repeat rinse if necessary to produce tested pH of between 6.7 and 7.5.
- G. After cleaning is complete, remove protection no longer required. Remove tape and adhesive marks.

### 3.08 PRELIMINARY CLEANING

- A. Removing Plant Growth: Completely remove visible plant, moss, and shrub growth from masonry surfaces. Carefully remove plants, creepers, and vegetation by cutting at roots and allowing to dry as long as possible before removal. Remove loose soil and debris from open masonry joints to whatever depth they occur.
- B. Preliminary Cleaning: Before beginning general cleaning, remove extraneous substances that are resistant to cleaning methods being used. Extraneous substances include paint, caulking, asphalt, and tar.
  - 1. Carefully remove heavy accumulations of material from surface of masonry with a sharp chisel. Do not scratch or chip masonry surface.
  - 2. Remove paint and caulking with alkaline paint remover.
    - a. Comply with requirements in "Paint Removal" Article.
    - b. Repeat application up to two times if needed.

### 3.09 PAINT REMOVAL

- A. Paint Removal with Alkaline Paste Paint Remover:
  - 1. Remove loose and peeling paint using low -pressure spray, scrapers, stiff brushes, or a combination of these. Let surface dry thoroughly.
  - 2. Allow paint remover to remain on surface for period recommended by manufacturer.
  - 3. Rinse with hot water applied by low -pressure spray to remove chemicals and paint residue.
  - 4. Repeat process if necessary to remove all paint.
  - 5. Apply acidic cleaner or manufacturer's recommended afterwash to masonry, while surface is still wet, using low-pressure spray equipment or soft-fiber brush. Let cleaner or afterwash remain on surface as a neutralizing agent for period recommended by chemical cleaner or afterwash manufacturer.

### 3.10 CLEANING BRICKWORK

- A. Cold-Water Soak:
  - 1. Apply cold water by intermittent spraying to keep surface moist.
  - 2. Use perforated hoses or other means that will apply a fine water mist to entire surface being cleaned.
  - 3. Apply water in cycles with at least 30 minutes between cycles.



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4. Continue spraying until surface encrustation has softened sufficiently to permit its removal by water wash, as indicated by cleaning tests.
  5. Continue spraying for 72 hours.
  6. Remove soil and softened surface encrustation from masonry with cold water applied by low-pressure spray.
- B. Cold-Water Wash: Use cold water applied by low-pressure spray.
- C. Detergent Cleaning:
1. Wet masonry with cold water applied by low-pressure spray.
  2. Scrub masonry with detergent solution using medium-soft brushes until soil is thoroughly dislodged and can be removed by rinsing. Use small brushes to remove soil from mortar joints and crevices. Dip brush in solution often to ensure that adequate fresh detergent is used and that masonry surface remains wet.
  3. Rinse with cold water applied by low -pressure spray to remove detergent solution and soil.
  4. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.
- D. Mold, Mildew, and Algae Removal:
1. Wet masonry with hot water applied by low-pressure spray.
  2. Apply mold, mildew, and algae remover by brush or low-pressure spray.
  3. Scrub masonry with medium-soft brushes until mold, mildew, and algae are thoroughly dislodged and can be removed by rinsing. Use small brushes for mortar joints and crevices. Dip brush in mold, mildew, and algae remover often to ensure that adequate fresh cleaner is used and that masonry surface remains wet.
  4. Rinse with cold water applied by medium -pressure spray to remove mold, mildew, and algae remover and soil.
  5. Repeat cleaning procedure above where required to produce cleaning effect established by mockup.
- E. Nonacidic Gel Chemical Cleaning:
1. Apply non-acidic gel cleaner in 1/8-inch (3-mm) thickness by brush, working into joints and crevices. Apply quickly and do not brush out excessively so area will be uniformly covered with fresh cleaner and dwell time will be uniform throughout area being cleaned.

### 3.11 CLEANING BROWNSTONE TERRA COTTA

- A. Mild Acidic Chemical Cleaning:
1. Repeat cleaning procedure above where required to produce cleaning effect established by mockup. Do not repeat more than once. If additional cleaning is required, use a steam cleaning.

### 3.12 REPOINTING MASONRY

- A. Rake out and repoint joints to the following extent:
1. All joints in areas indicated.
  2. Joints where mortar is missing or where they contain holes.
  3. Cracked joints where cracks can be penetrated at least 1/4 inch (6 mm) by a knife blade 0.027 inch (0.7 mm) thick.
  4. Cracked joints where cracks are 1/16 inch (1.6 mm) or more in width and of any depth.
  5. Joints where they sound hollow when tapped by metal object.
  6. Joints where they are worn back 1/4 inch (6 mm) or more from surface.



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7. Joints where they are deteriorated to point that mortar can be easily removed by hand, without tools.
  8. Joints where they have been filled with substances other than mortar.
  9. Joints indicated as sealant-filled joints.
- B. Do not rake out and repoint joints where not required.
- C. Rake out joints as follows, according to procedures demonstrated in approved mockup:
1. Remove mortar from joints to depth of 2 times joint width, but not less than 1/2 inch (13 mm) or not less than that required to expose sound, un-weathered mortar.
  2. Remove mortar from masonry surfaces within raked-out joints to provide reveals with square backs and to expose masonry for contact with pointing mortar. Brush, vacuum, or flush joints to remove dirt and loose debris.
  3. Do not spall edges of masonry units or widen joints. Replace or patch damaged masonry units as directed by Architect.
    - a. Cut out mortar by hand with chisel and resilient mallet. Do not use power-operated grinders without Architect's written approval based on approved quality-control program.
    - b. Cut out center of mortar bed joints using angle grinders with diamond-impregnated metal blades. Remove remaining mortar by hand with chisel and resilient mallet. Strictly adhere to approved quality-control program.
- D. Notify Architect of unforeseen detrimental conditions including voids in mortar joints, cracks, loose masonry units, rotted wood, rusted metal, and other deteriorated items.
- E. Pointing with Mortar:
1. Rinse joint surfaces with water to remove dust and mortar particles. Time rinsing application so, at time of pointing, joint surfaces are damp but free of standing water. If rinse water dries, dampen joint surfaces before pointing.
  2. Apply pointing mortar first to areas where existing mortar was removed to depths greater than surrounding areas. Apply in layers not greater than 3/8 inch (9 mm) until a uniform depth is formed. Fully compact each layer thoroughly and allow it to become thumbprint hard before applying next layer.
  3. After low areas have been filled to same depth as remaining joints, point all joints by placing mortar in layers not greater than 3/8 inch (9 mm). Fully compact each layer and allow to become thumbprint hard before applying next layer. Where existing masonry units have worn or rounded edges, slightly recess finished mortar surface below face of masonry to avoid widened joint faces. Take care not to spread mortar beyond joint edges onto exposed masonry surfaces or to feather edge the mortar.
  4. When mortar is thumbprint hard, tool joints to match original appearance of joints as demonstrated in approved mockup. Remove excess mortar from edge of joint by brushing.
  5. Cure mortar by maintaining in thoroughly damp condition for at least 72 consecutive hours including weekends and holidays.
    - a. Acceptable curing methods include covering with wet burlap and plastic sheeting, periodic hand misting, and periodic mist spraying using system of pipes, mist heads, and timers.
    - b. Adjust curing methods to ensure that pointing mortar is damp throughout its depth without eroding surface mortar.
  6. Hairline cracking within the mortar or mortar separation at edge of a joint is unacceptable. Completely remove such mortar and repoint.
- F. Pointing with Sealant:



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1. After raking out, keep joints dry and free of mortar and debris.
  2. Clean and prepare joint surfaces according to Section 079200 "Joint Sealants." Prime joint surfaces unless sealant manufacturer recommends against priming. Do not allow primer to spill or migrate onto adjoining surfaces.
  3. Fill sealant joints with specified joint sealant according to Section 079200 "Joint Sealants" and the following:
    - a. Install cylindrical sealant backing beneath the sealant, except where space is insufficient. There, install bond-breaker tape.
    - b. Install sealant using only proven installation techniques that will ensure that sealant will be deposited in a uniform, continuous ribbon, without gaps or air pockets, and with complete wetting of the joint bond surfaces equally on both sides. Fill joint flush with surrounding masonry and matching the contour of adjoining mortar joints.
    - c. Install sealant as recommended by sealant manufacturer but within the following general limitations, measured at the center (thin) section of the bead:
    - d. Fill joints to a depth equal to joint width, but not more than 1/2 inch (13 mm) deep or less than 1/4 inch (6 mm) deep.
    - e. Immediately after first tooling, apply ground-mortar aggregate to sealant, gently pushing aggregate into the surface of sealant. Retool sealant to form smooth, uniform beads, slightly concave. Remove excess sealant and aggregate from surfaces adjacent to joint.
    - f. Do not allow sealant to overflow or spill onto adjoining surfaces, or to migrate into the voids of adjoining surfaces, particularly rough textures. Remove excess and spillage of sealant promptly as the work progresses. Clean adjoining surfaces by the means necessary to eliminate evidence of spillage, without damage to adjoining surfaces or finishes, as demonstrated in an approved mockup.
  4. Cure sealant according to Section 079200 "Joint Sealants."
- G. Where repointing work precedes cleaning of existing masonry, allow mortar to harden at least 30 days before beginning cleaning work.

### 3.13 FINAL CLEANING

- A. After mortar has fully hardened, thoroughly clean exposed masonry surfaces of excess mortar and foreign matter; use wood scrapers, stiff-nylon or -fiber brushes, and clean water, spray applied at low pressure.
  1. Do not use metal scrapers or brushes.
  2. Do not use acidic or alkaline cleaners.
- B. Clean mortar and debris from roof; remove debris from gutters and downspouts. Rinse off roof and flush gutters and downspouts.
- C. Sweep and rake adjacent pavement and grounds to remove mortar and debris. Where necessary, pressure wash pavement surfaces to remove mortar, dust, dirt, and stains.

### END OF SECTION



**SECTION 042113**  
**BRICK MASONRY**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section Includes
  - 1. Face brick.
  - 2. Mortar and grout.
  - 3. Ties and anchors.
  - 4. Miscellaneous masonry accessories.

**1.03 ACTION SUBMITTALS**

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For the following:
  - 1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.
- C. Samples for Initial Selection:
  - 1. Face brick, in the form of straps of five or more bricks.
  - 2. Colored mortar.
- D. Samples for Verification: For each type and color of the following:
  - 1. Face brick, in the form of straps of five or more bricks.
  - 2. Pigmented and colored-aggregate mortar. Make Samples using same sand and mortar ingredients to be used on Project.

**1.04 INFORMATIONAL SUBMITTALS**

- A. Material Certificates: For each type and size of the following:
  - 1. Masonry units.
  - 2. Pre-blended, dry mortar mixes. Include description of type and proportions of ingredients.
  - 3. Anchors, ties, and metal accessories.
- B. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

**1.05 QUALITY ASSURANCE**

- A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.



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- C. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.
- D. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
  - 1. Build mockup of typical wall area as shown on Drawings.
  - 2. Clean one-half of exposed faces of mockups with masonry cleaner as indicated.
  - 3. Protect accepted mockups from the elements with weather-resistant membrane.
  - 4. Approval of mockups is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; and aesthetic qualities of workmanship.
    - a. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless such deviations are specifically approved by Architect in writing.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver pre-blended, dry mortar mix in moisture-resistant containers designed for use with dispensing silos. Store pre-blended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in covered weatherproof dispensing silos.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

#### 1.07 PROJECT CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
  - 1. Extend cover a minimum of 24 inches down both sides of walls and hold cover securely in place.
- B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
  - 1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
  - 2. Protect sills, ledges, and projections from mortar droppings.
  - 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
  - 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.



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- C. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ERTA/ASCE 6/TMS 602.
- D. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ERTA/ASCE 6/TMS 602.

## PART 2 - PRODUCTS

### 2.01 MASONRY UNITS, GENERAL

- A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed Work.

### 2.02 BRICK

- A. General: Provide shapes indicated and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units.
  - 1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
  - 2. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.
  - 3. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.
- B. Face Brick: Facing brick complying with ASTM C 216.
  - 1. Products: Subject to compliance with requirements, provide the following:
    - a. Standard Modular size brick unless indicated otherwise. Texture, color and finish shall be selected by Architect from a manufacturer's standard brick selection. For assistance, contact: Rocco Maggio of Consolidated Brick: 127 W. 24th Street, 3rd Floor, New York, NY 10011. Tel.: 516-410-9030.
    - b. Brick to match existing conditions.
    - c. Or approved equal.
  - 2. Grade: SW.
  - 3. Type: Match existing conditions
  - 4. Initial Rate of Absorption: Less than 30g/30 sq. in. (30g/194 sq. cm) per minute when tested per ASTM C 67.
  - 5. Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not effloresced."

### 2.03 MORTAR MATERIALS

- A. Portland Cement: ASTM C 150, Type I. Provide natural color or white cement as required to produce mortar color that matches existing conditions.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Portland Cement-Lime Mix: Packaged blend of Portland cement and hydrated lime containing no other ingredients.



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- D. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes and complying with ASTM C 979. Use only pigments with a record of satisfactory performance in masonry mortar.
- E. Colored Cement Product: Packaged blend made from Portland cement and hydrated lime and mortar pigments, all complying with specified requirements, and containing no other ingredients.
  - 1. Products: Subject to compliance with requirements, provide the following:
    - a. Colored Portland Cement-Lime Mix
      - 1) Capital Materials Corporation; Riverton Portland Cement Lime Custom Color.
      - 2) Holcim (US) Inc.; Rainbow Mortamix Custom Color Cement/Lime.
      - 3) Lafarge North America Inc.; Eaglebond Portland & Lime.
      - 4) Or Approved Equal.
  - 2. Formulate blend as required to produce color indicated or, if not indicated, as selected from manufacturer's standard colors.
  - 3. Pigments shall not exceed 10 percent of Portland cement by weight.
  - 4. Pigments shall not exceed 5 percent of masonry cement by weight.
- F. Aggregate for Mortar: ASTM C 144.
  - 1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
  - 2. For joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 (1.18-mm) sieve.

## 2.04 REINFORCEMENT

- A. Masonry Joint Reinforcement, General: ASTM A 951/A 951M.
- B. Masonry Joint Reinforcement for Veneers Anchored with Seismic Masonry-Veneer Anchors: Single 0.187 inch (4.75 mm) diameter, hot-dip galvanized, carbon-steel continuous wire.

## 2.05 TIES AND ANCHORS

- A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:
  - 1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2 coating.
  - 2. Stainless-Steel Wire: ASTM A 580/A 580M, Type 304.
  - 3. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.
  - 4. Stainless-Steel Sheet: ASTM A 666, Type 304.
- B. Wire Ties, General: Unless otherwise indicated, size wire ties to extend at least halfway through veneer but with at least 5/8-inch cover on outside face. Outer ends of wires are bent 90 degrees and extend 2 inches parallel to face of veneer.
- C. Adjustable Anchors for Connecting to Structural Steel Framing: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.
  - 1. Tie Section: Triangular-shaped wire tie, sized to extend within 1 inch (25.4 mm) of masonry face, made from 0.187-inch diameter, hot-dip galvanized steel wire. Mill-galvanized wire may be used at interior walls unless otherwise indicated.



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#### D. Adjustable Masonry-Veneer Anchors:

1. General: Provide anchors that allow vertical adjustment but resist tension and compression forces perpendicular to plane of wall, for attachment over sheathing to metal studs, and as follows:
  - a. Structural Performance Characteristics: Capable of withstanding a 100-lbf (445-N) load in both tension and compression without deforming or developing play in excess of 0.05 inch (1.3 mm).
2. Screw-Attached, Masonry-Veneer Anchors: Units consisting of a wire tie and a metal anchor section.
  - a. Products: Subject to compliance with requirements, provide one of the following:
    - 1) Heckmann Building Products Inc.; 315-D.
    - 2) Hohmann & Barnard, Inc.; DW-10HS.
3. Thermal Wing Nut Anchor for Metal Stud Construction: 2-Seal reinforced flame-resistant plastic Wing Nut Anchor with 1 1/2 inch diameter Type 304 Stainless Steel / bonded EPDM washer to seal against insulation and secure insulation to backup. Additional washer on Anchor barrel seals against the Air Barrier. Length of each Anchor shall be as required by the detailed sheathing and insulation depths. Each anchor shall be provided with a Hot-Dip Galvanized, 3/16 inch diameter Compressed Leg 2X-Hook with offsets as required to provide a minimum of 2 inch engagement of the masonry veneer. Space 16 inches on center in each direction maximum or less if indicated on the drawings.
  - a. Manufacturer:
    - 1) Hohmann & Barnard, Inc.
    - 2) Or approved equal.
  - b. For Seismic requirements, provide 3/16 inch diameter continuous Hot-Dip Galvanized wire in conjunction with the 2X-HOOK Seismic Pintle.
4. Polymer-Coated, Steel Drill Screws for Steel Studs: ASTM C 954 except manufactured with hex washer head and neoprene or EPDM washer, No. 10 (4.83-mm) diameter by length required to penetrate steel stud flange with not less than three exposed threads, and with organic polymer coating with salt-spray resistance to red rust of more than 800 hours per ASTM B 117.

## 2.06 EMBEDDED FLASHING MATERIALS

- A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual" and as follows:
  1. Fabricate through-wall metal flashing embedded in masonry from stainless steel, with ribs at 3-inch (76-mm) intervals along length of flashing to provide an integral mortar bond.
- B. Flexible Flashing: Use the following unless otherwise indicated:
  1. Elastomeric Thermoplastic Flashing: Composite flashing product consisting of a polyester-reinforced ethylene interpolymer alloy.
    - a. Products: Subject to compliance with requirements, provide the following:
      - 1) Mortar Net USA, Ltd.; Total Flash.
      - 2) Or approved equal.
    - b. Monolithic Sheet: TPO Elastomeric thermoplastic flashing, 0.040 inch (1.0 mm) thick with integral stainless steel drip edge, drainage matrix, stainless steel termination bar with #14 x 2" fasteners at 6" o.c., integral weeps.
    - c. Accessories: Provide preformed corners, end dams, other special shapes, and seaming materials produced by flashing manufacturer.
- C. Application: Unless otherwise indicated, use the following:



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1. Where flashing is indicated to receive counterflashing, use metal flashing.
2. Where flashing is indicated to be turned down at or beyond the wall face, use metal flashing.
3. Where flashing is partly exposed and is indicated to terminate at the wall face, use metal flashing with a drip edge.
4. Where flashing is fully concealed, use flexible flashing.

## 2.07 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Pre-molded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene.
- B. Weep/Vent Products: Use one of the following unless otherwise indicated:
  1. Cellular Plastic Weep/Vent: One-piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth 1/8 inch (3 mm) less than depth of outer wythe, in color selected from manufacturer's standard.
    - a. Products: Subject to compliance with requirements, provide one of the following:
      - 1) Heckmann Building Products Inc.; No. 85 Cell Vent.
      - 2) Hohmann & Barnard, Inc.; Quadro-Vent.
      - 3) Wire-Bond; Cell Vent.
  2. Mesh Weep/Vent: Free-draining mesh; made from polyethylene strands, full height and width of head joint and depth 1/8 inch (3 mm) less than depth of outer wythe; in color selected from manufacturer's standard.
    - a. Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
      - 1) Mortar Net USA, Ltd.; Mortar Net Weep Vents.
      - 2) Or approved equal.
- C. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.
  1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Dayton Superior Corporation, Dur-O-Wal Division; Polytite MortarStop.
    - b. Mortar Net USA, Ltd.; Mortar Net.
  2. Provide one of the following:
    - a. Cavity Wall Drainage System: Total Flash System as manufactured by Mortar Net USA, Ltd. System is an all-inclusive flashing/drainage system with adhered cavity drainage/mortar collection material, drip edge, termination bar, weep tabs with included fasteners and adhesives. This system replaces the separate requirements for flashing, weeps, mortar collection products, drip edge and termination bar.
    - b. Or an approved equal system.

## 2.08 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.
  1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. EaCo Chem, Inc.
    - b. ProSoCo, Inc.



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## **2.09 MORTAR MIXES**

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
  - 1. Do not use calcium chloride in mortar.
  - 2. Use Portland cement-lime mortar unless otherwise indicated.
  - 3. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Pre-blended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a pre-blended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- C. Pigmented Mortar: Use colored cement product or select and proportion pigments with other ingredients to produce color required. Do not add pigments to colored cement products.
  - 1. Pigments shall not exceed 10 percent of Portland cement by weight.
  - 2. Pigments shall not exceed 5 percent of masonry cement by weight.
  - 3. Mix to match Architect's sample.
  - 4. Application: Use pigmented mortar for exposed mortar joints with the following units:
    - a. Face brick.
- D. Colored-Aggregate Mortar: Produce required mortar color by using colored aggregates and natural color or white cement as necessary to produce required mortar color.
  - 1. Application: Use colored aggregate mortar for exposed mortar joints with the following units:
    - a. Face brick.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### **3.02 INSTALLATION, GENERAL**

- A. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match the construction immediately adjacent to opening.
- B. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- C. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
  - 1. Mix units from several pallets or cubes as they are placed.



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- D. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30g/30 sq. in. (30 g/194 sq. cm) per minute when tested per ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.

### 3.03 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation do not vary by more than plus 1/2 inch or minus 1/4 inch.
2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch.
3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls do not vary from level by more than 1/4 inch in 10 feet, or 1/2 inch maximum.
2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet, or 1/2 inch maximum.
3. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet (9 mm in 6 m), or 1/2 inch (12 mm) maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet (3 mm in 3 m), 1/4 inch in 20 feet (6 mm in 6 m), or 1/2 inch (12 mm) maximum.
5. For lines and surfaces do not vary from straight by more than 1/4 inch in 10 feet, 3/8 inch in 20 feet, or 1/2 inch (12 mm) maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m) or 1/2 inch (12 mm) maximum.
7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch; do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch (3 mm).
2. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm). Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch (3 mm).
3. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch from one masonry unit to the next.

### 3.04 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in bond pattern indicated on Drawings; do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.



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- C. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.
- D. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- E. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.

### 3.05 MORTAR BEDDING AND JOINTING

- A. Lay hollow brick as follows:
  - 1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
  - 2. With entire units, including areas under cells, fully bedded in mortar at starting course on footings or foundation walls.
- B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- C. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

### 3.06 ANCHORING MASONRY TO STRUCTURAL STEEL AND CONCRETE

- A. Anchor masonry to structural steel and concrete where masonry abuts or faces structural steel or concrete to comply with the following:
  - 1. Provide an open space not less than 1/2 inch (13 mm) wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
  - 2. Anchor masonry with anchors embedded in masonry joints and attached to structure.
  - 3. Space anchors as indicated, but not more than 16 inches o.c. vertically and 24 inches o.c. horizontally.

### 3.07 ANCHORING MASONRY VENEERS

- A. Anchor masonry veneers to wall framing with masonry-veneer anchors to comply with the following requirements:
  - 1. Fasten anchors with metal fasteners of type indicate as specified by manufacturers. Use two fasteners unless anchor design only uses one fastener.
  - 2. Embed tie sections in masonry joints. Provide not less than 2 inches (50 mm) of air space between back of masonry veneer and face of sheathing.
  - 3. Locate anchor sections to allow maximum vertical differential movement of ties up and down.
  - 4. Maximum vertical offset of bed joints from one wythe to the other shall be 1 1/4 inch when utilizing adjustable wall ties such as pintle ties.
  - 5. Pintle ties shall have two legs of W2.8 wire size minimum.
  - 6. Space anchors as indicated, but not more than 16 inches o.c. vertically and 16 inches (407 mm) o.c. horizontally, with not less than 1 anchor for each 1.77 sq. ft. of wall area. Install additional anchors within 12 inches (305 mm) of openings and at intervals, not exceeding 8 inches (203 mm), around perimeter.



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#### 3.08 EXPANSION JOINTS

- A. General: Install expansion joint materials in unit masonry as masonry progresses. Do not allow materials to span expansion joints without provision to allow for in-plane wall or partition movement.
- B. Form expansion joints in brick as follows:
  - 1. Build flanges of metal expansion strips into masonry. Lap each joint 4 inches in direction of water flow. Seal joints below grade and at junctures with horizontal expansion joints if any.
  - 2. Build flanges of factory-fabricated, expansion-joint units into masonry.
  - 3. Build in compressible joint fillers where indicated.
  - 4. Form open joint full depth of brick wythe and of width indicated, but not less than 3/8 inch for installation of sealant and backer rod specified in Section 079200 "Joint Sealants."
- C. Provide horizontal, pressure-relieving joints by either leaving an air space or inserting a compressible filler of width required for installing sealant and backer rod specified in Section 079200 "Joint Sealants," but not less than 3/8 inch (10 mm).
  - 1. Locate horizontal, pressure-relieving joints beneath shelf angles supporting masonry.

#### 3.09 LINTELS

- A. Install galvanized steel lintels where indicated on drawings.
- B. Provide minimum bearing of 8 inches at each jamb unless otherwise indicated.

#### 3.10 FLASHING, WEEP HOLES, CAVITY DRAINAGE, AND VENTS

- A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated. Install vents at shelf angles, ledges, and other obstructions to upward flow of air in cavities, and where indicated.
- B. Install flashing as follows unless otherwise indicated:
  - 1. For Total Flash System at base of wall: Install as directed by manufacturer.
  - 2. At lintels, extend flashing a minimum of 8 inches (204 mm) into masonry at each end. At heads and sills, extend flashing 8 inches at ends and turn up not less than 2 inches to form end dams.
- C. Install reglets and nailers for flashing and other related construction where they are shown to be built into masonry.
- D. Install vents in head joints in exterior wythes at spacing indicated. Use specified weep/vent products to form vents.

#### 3.11 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas, as needed to perform tests and inspections. Retesting of materials that fail to meet specified requirements shall be done at Contractor's expense.
- B. Inspections: Level 1 special inspections according to the "International Building Code."



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1. Begin masonry construction only after inspectors have verified proportions of site-prepared mortar.

#### **3.12 REPAIRING, POINTING, AND CLEANING**

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
  1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
  2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
  3. Protect adjacent stone and non-masonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
  4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
  5. Clean brick by bucket-and-brush hand-cleaning method described in "BIA Technical Notes 20."
  6. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.

#### **3.13 MASONRY WASTE DISPOSAL**

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property.
- B. Waste Disposal as Fill Material: Dispose of clean masonry waste; including excess or soil-contaminated sand, waste mortar, and broken masonry units and masonry cut-offs by crushing and mixing with fill material as fill is placed.
  1. Crush masonry waste to less than 4 inches (100 mm) in each dimension.
  2. Do not dispose of masonry waste as fill within 18 inches (450 mm) of finished grade.
- C. Legally dispose of off-site, any excess masonry waste.

#### **END OF SECTION**



**SECTION 055000**  
**METAL FABRICATIONS**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section Includes:
  - 1. Miscellaneous framing and supports.
  - 2. Shelf angles.

**1.03 COORDINATION**

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of metal fabrications that are anchored to or that receive other work. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

**1.04 ACTION SUBMITTALS**

- A. Shop Drawings: Show fabrication and installation details. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items. Provide Shop Drawings for the following:
  - 1. Miscellaneous framing and supports.
  - 2. Shelf angles.

**1.05 INFORMATIONAL SUBMITTALS**

- A. Qualification Data: For professional engineer.
- B. Welding certificates.

**1.06 QUALITY ASSURANCE**

- A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1, "Structural Welding Code - Steel."
- B. Welding Qualifications: Qualify procedures and personnel according to the following:
  - 1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."



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#### **1.07 FIELD CONDITIONS**

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication and indicate measurements on the shop drawings.
  - 1. Established dimensions: Where field measurements cannot be made without delaying the work, establish dimensions and proceed with fabricating metal fabrications without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond with established dimensions.

#### **PART 2 - PRODUCTS**

##### **2.01 METALS**

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.
- B. Steel Plates, Shapes, and Bars: ASTM A36/A36M.

##### **2.02 FASTENERS**

- A. Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A307, Grade A; with hex nuts, ASTM A653/A653M; and, where indicated, flat washers.
- B. Anchor Bolts: ASTM F1554, Grade 36, of dimensions indicated; with nuts, ASTM A563; and, where indicated, flat washers.
  - 1. Hot-dip galvanize or provide mechanically deposited, zinc coating where item being fastened is indicated to be galvanized.
- C. Plain Washers: Round, ASME B18.22.1.
- D. Anchors, General: Anchors capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E488/E488M, conducted by a qualified independent testing agency.

##### **2.03 MISCELLANEOUS MATERIALS**

- A. Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.
- B. Shop Primer for Galvanized Steel: Primer formulated for exterior use over zinc-coated metal and compatible with finish paint systems indicated.
- C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.
- D. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.
- E. Non-shrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, non-gaseous grout complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.



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#### **2.04 FABRICATION, GENERAL**

- A. Shop Assembly: Pre-assemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
- B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- C. Form exposed work with accurate angles and surfaces and straight edges.
- D. Weld corners and seams continuously to comply with the following:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- E. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) fasteners unless otherwise indicated. Locate joints where least conspicuous.
- F. Fabricate seams and other connections that are exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- G. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.
- H. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.

#### **2.05 MISCELLANEOUS FRAMING AND SUPPORTS**

- A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.
- B. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.
  - 1. Fabricate units from slotted channel framing where indicated.
- C. Galvanize miscellaneous framing and supports where indicated.

#### **2.06 SHELF ANGLES**

- A. Fabricate shelf angles from steel angles of sizes indicated and for attachment to concrete framing. Provide horizontally slotted holes to receive 1/2-inch bolts, spaced not more than 6 inches from ends and 16 inches o.c., unless otherwise indicated.
  - 1. Provide mitered and welded units at corners.



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2. Provide open joints in shelf angles at expansion and control joints. Make open joint approximately 2 inches larger than expansion or control joint.

B. Hot Dip Galvanize: (2.0 oz. / sq. ft.) shelf angles located in exterior walls.

C. Furnish wedge-type concrete inserts, complete with corrosion resistant fasteners, to attach shelf angles to cast-in-place concrete.

#### **2.07 FINISHES, GENERAL**

A. Finish metal fabrications after assembly.

B. Finish exposed surfaces to remove tool and die marks and stretch lines, and to blend into surrounding surface.

#### **2.08 STEEL AND IRON FINISHES**

A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A153/A153M for steel and iron hardware and with ASTM A123/A123M and ASTM A653/A653M for other steel and iron products.

1. Do not quench or apply post galvanizing treatments that might interfere with paint adhesion.

B. Shop prime iron and steel items not indicated to be galvanized unless they are to be embedded in concrete, sprayed-on fireproofing, or masonry, or unless otherwise indicated.

1. Shop prime with universal shop primer primers specified in Section 099113 - EXTERIOR PAINTING unless indicated otherwise.

### **PART 3 - EXECUTION**

#### **3.01 EXAMINATION**

A. Examine materials upon arrival at site. Notify the carrier and manufacturer of any damage.

#### **3.02 INSTALLATION, GENERAL**

A. Install all factory-fabricated items in accordance with the manufacturer's specifications and recommendations.

B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

C. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

D. Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.



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3. Remove welding flux immediately.
  4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.
- E. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag screws, and other connectors.
- F. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.
- G. Corrosion Protection: Coat concealed surfaces of aluminum that come into contact with grout, concrete, masonry, wood, or dissimilar metals with the following:
1. Cast Aluminum: Heavy coat of bituminous paint.

### **3.03 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS**

- A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.
- B. Anchor supports for securely to, and rigidly brace from, building structure.
- C. Install pipe columns on concrete footings with grouted baseplates. Position and grout column baseplates as specified in "Installing Bearing and Leveling Plates" Article.

### **3.04 PROTECTION**

- A. Protect installed products until completion of project.

### **3.05 ADJUSTING AND CLEANING**

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.
- B. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Section 099113 "Exterior Painting."
- C. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A780/A780M.

## **END OF SECTION**



**SECTION 055133.13**  
**FIXED METAL LADDERS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Interior aluminum ladder.
- B. Exterior aluminum ladder.
- C. Safety cage of structural sections for aluminum ladder.
- D. Attachment hardware.
- E. Security Gate for exterior aluminum ladder.

**1.02 REFERENCES**

- A. ANSI A14.3 - Ladders-Fixed-Safety Requirements
- B. ASTM A36 - Structural Steel.
- C. ASTM A108 - Steel Bars, Carbon, Cold Finished, Standard Quality.
- D. AWS A2.0 - Standard Welding Symbols.
- E. AWS D1.0 - Code for Welding in Building Construction.
- F. AWS D1.1 - Structural Welding Code.
- G. OSHA 1910.27 - Fixed Ladders.

**1.03 DESIGN REQUIREMENTS**

- A. Fabricate ladder assembly to support concentrated live load of 250 lb (1100 N) acting anywhere on the ladder with a maximum deflection of 1/240 of span and without damage or permanent set.
- B. Fabricate ladder assembly to support a concentrated live load of 80 lb (350 N) acting on each rung simultaneously with a maximum deflection of 1/240 of span and without damage or permanent set.

**1.04 SUBMITTALS**

- A. Submit under provisions of Section 013300.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, fastener size and type, and accessories. Indicate welded connections using standard AWS A2.0 welding symbols. Indicate net weld lengths.
- C. Manufacturer's Instructions: Indicate special procedures and methods required for proper installation of the safety climbing system and vandal deterrent.



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#### **1.05 QUALITY ASSURANCE**

- A. Fabricate ladder in accordance with ANSI A14.3, OSHA 1910.27, AWS D1.0, and AWS D1.1.
- B. Maintain one (1) copy of each document on site.

#### **1.06 QUALIFICATIONS**

- A. Prepare shop drawings under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the project is located. The shop drawings shall be signed and sealed by the Professional Structural engineer.
- B. Installer: Company specializing in performing the work of this section with a minimum of three (3) years documented experience.

#### **1.07 DELIVERY, STORAGE AND HANDLING**

- A. Deliver, store, protect, and handle products to the site under provisions of Section 016500.
- B. Fabricate and deliver products to the site in largest sections practical.
- C. Do not handle products in a manner that will damage or distort ladder.
- D. Do not store materials directly on the ground.

#### **1.08 FIELD MEASUREMENTS**

- A. Verify that field measurements are as indicated on approved shop drawings.

#### **1.09 COORDINATION**

- A. Coordinate work under provisions of Section 013100.
- B. Coordinate installation of ladder with the installation or fabrication of substrate and all other adjacent work.

### **PART 2 - PRODUCTS**

#### **2.01 MATERIALS**

- A. Basis of Design: Fixed Ladder with Cage and Walk-Thru as manufactured by Precision Ladders, LLC. Aluminum Mill Factory Finish.
- B. Basis of Design: Retractable Wall Mounted Ladder Model 660 as manufactured by ALACO Ladder Co.

#### **2.02 FABRICATION - GENERAL**

- A. Fit and assemble in largest practical sections for delivery to site.
- B. Fabricate components with joints tightly fitted and secured.



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- C. Continuously seal jointed pieces with continuous welds in accordance with AWS D1.0 and D1.1.
- D. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- E. Exposed Mechanical Fastenings: Flush, countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- F. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.
- G. Accurately form components required for anchorage of ladder and accessories to each other and to structure.

#### 2.03 INTERIOR ALUMINUM LADDER

- A. Basis of Design: Retractable Wall Mounted Ladder Model 660 as manufactured by ALACO Ladder Co.
- B. Fabricated from 6061-T aluminum alloy, 1 1/8" thick round serrated rungs, secured with cast aluminum connectors and 4 solid rivets. Provide retractable mounting brackets for flat storage against wall.
- C. Non-marking solid rubber feet extend 3/4" (19.1mm) from the rail ends. Rubber plugs extend 3/4" (19.1mm) from the side rail tops to provide closed end protection.
- D. Width: 18 1/4"
- E. Finish: Mill finish

#### 2.04 EXTERIOR ALUMINUM LADDER

- A. Basis of Design: Fixed Ladder with Cage and Walk-Thru as manufactured by Precision Ladders, LLC. Aluminum Mill Factory Finish.
- B. Fabricate ladder with rungs spaced at 12 inches (300 mm) on center. Minimum rung length to be 18 inches (410 mm) (Clearance between siderails).
- C. Install attachment hardware such that the centerline of the rungs is a minimum of 7 inches (180 mm) from any structure, measured perpendicular to the ladder.
- D. Extend side rails a minimum of 42 inches (1,070 mm) above any platforms and landings.

#### 2.05 LADDER SAFETY CAGE

- A. Fabricate horizontal bands spaced at 4 feet on center.
- B. Fabricate vertical bars at angles shown on the plans.
- C. All horizontal/vertical band intersections shall be fully seal welded.
- D. Extend cage a minimum of 42 inches (1,070 mm) above any platforms and landings.



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E. Safety Caps: 1/8" Molded Polyurethane Safety Caps

F. 1 1/2" Aluminum square tubing safety bars

#### **2.06 ACCESSORIES - SECURITY GATE FOR CAGE**

A. Hinge Mount Welded Connection

B. 1/4" x 2" Aluminum flatbar (typical)

C. 7/8" Ø hole drilled through security gate stay for hasp

D. 3/4" Ø hole grating

#### **2.07 ACCESSORIES - SUPPORT BRACKET**

A. Support Brackets by fixed ladder manufacturer.

B. Bolts and fasteners as per manufacturer's recommendation and construction drawings.

### **PART 3 - EXECUTION**

#### **3.01 EXAMINATION**

A. Verify existing conditions.

B. Verify that field conditions are acceptable and are ready to receive work.

C. Beginning of installation means erector accepts existing conditions.

#### **3.02 PREPARATION**

A. Clean and strip primed steel items to bare metal where site welding is required. Refer to Section 099870.

B. Supply items required to be bolted or welded to steel with setting templates, to appropriate sections.

#### **3.03 INSTALLATION**

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Provide anchors, plates, angles, hangers, and struts required for connecting ladder to structure.

C. Allow for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

D. Field weld components indicated on approved shop drawings. Perform field welding in accordance with AWS D1.1. Provide a fire watch during all welding operations.

E. Field bolt and weld to match shop bolting and welding. Conceal bolts and screws whenever possible. Where not concealed, use flush countersunk fastenings.



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- F. Mechanically fasten joints butted tight, flush, and hairline. Grind welds smooth and flush.
- G. Obtain Engineer approval prior to site cutting or making adjustments not scheduled.
- H. Install safety climbing system in accordance with manufacturer's instructions.
- I. Install vandal deterrent in accordance with manufacturer's instructions.

#### **3.04 TOLERANCES**

- A. Maximum Variation From Plumb: 1/4 inch (6 mm) in 10 feet (3 m), non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch (6 mm).

#### **3.05 DEMONSTRATION**

- A. Demonstrate operation and use of safety climbing system to Owner's representatives once system is installed.

#### **3.06 PROTECTION**

- A. Protect finished work from damage until project is accepted by the Owner.

#### **END OF SECTION**



**SECTION 055213**  
**PIPE AND TUBE RAILINGS**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section Includes:
  - 1. Pipe and Tube Guardrail

**1.03 PERFORMANCE REQUIREMENTS**

- A. Delegated Design: Design railings, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. General: In engineering railings to withstand structural loads indicated, determine allowable design working stresses of railing materials in accordance with ANSI/NAAMM AMP 521 - latest edition and based on the following:
  - 1. Steel: 72 percent of minimum yield strength.
  - 2. Aluminum: The lesser of minimum yield strength divided by 1.65 or minimum ultimate tensile strength divided by 1.95.
- C. Structural Performance: Railings shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
  - 1. Handrails and Top Rails of Guards:
    - a. Uniform load of 50 lbf/ ft. (0.73 kN/m) applied in any direction.
    - b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
    - c. Uniform and concentrated loads need not be assumed to act concurrently.
  - 2. Infill of Guards:
    - a. Concentrated load of 50 lbf (0.22 kN) applied horizontally on an area of 1 sq. ft. (0.093 sq. m).
    - b. Infill load and other loads need not be assumed to act concurrently.
- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.
  - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
- E. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

**1.04 ACTION SUBMITTALS**

- A. Product Data: For the following:
  - 1. Manufacturer's product lines of mechanically connected railings.
  - 2. Railing brackets.



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- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
- C. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

#### 1.05 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified professional engineer.

#### 1.06 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of railing from single source from single manufacturer.
- B. Welding Qualifications: Qualify procedures and personnel according to the following:
  - 1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
  - 2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."

#### 1.07 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of structural anchorage members and other construction contiguous with metal fabrications by field measurements before fabrication.

#### 1.08 COORDINATION AND SCHEDULING

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.
- C. Schedule installation so wall attachments are made only to completed walls. Do not support railings temporarily by any means that do not satisfy structural performance requirements.

### PART 2 - PRODUCTS

#### 2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. Pipe and Tube Guardrail:
    - a. Leading Edge Safety: Deck Mounted Guardrail
    - b. Or approved equal.

#### 2.02 GUARDRAIL

- A. Guardrail: Permanent perimeter fall protection for low-sloped roofs as shown on the contract drawings.
  - 1. Manufacturers: Leading Edge Safety or approved equal



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2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on drawings or comparable product to the following:

- a. PRS Deck Mounted Guardrail

B. Materials:

1. Uprights: 1.625" x .25" steel tube (ASTM A-513-5-08A DOM Grade 1026) welded to 6" diameter x 3/8" steel plate (ASTM A-572) with pre-punched holes for permanent structural attachment
2. Horizontal Rails: 1.625" x .065" and 1.375" x .065" (ASTM A-513 DOM Grade 1020) steel tube adjustable slide rails.
3. Hardware: 3/8"-16 x 1" zinc plated steel

## 2.03 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated. Stainless Steel anchors.

## 2.04 STEEL AND IRON

- A. Tubing: ASTM A 500 (cold formed) or ASTM A 513.
- B. Pipe: ASTM A 53/A 53M, Type F or Type S, Grade A, Standard Weight (Schedule 40), unless another grade and weight are required by structural loads.
  1. Provide galvanized finish for exterior installations and where indicated.
- C. Plates, Shapes, and Bars: ASTM A 36/A 36M.

## 2.05 FASTENERS

- A. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.
- B. Fasteners for Interconnecting Railing Components:
  1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless otherwise indicated.
  2. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless exposed fasteners are unavoidable or are the standard fastening method for railings indicated.
  3. Provide tamper-resistant flat-head machine screws for exposed fasteners unless otherwise indicated.
- C. Material for Exterior Locations and Where Stainless Steel is Indicated: Alloy Group 2 (A4) stainless-steel bolts, ASTM F 593 (ASTM F 738M), and nuts, ASTM F 594 (ASTM F 836M).

## 2.06 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.



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1. For aluminum railings, provide type and alloy as recommended by producer of metal to be welded and as required for color match, strength, and compatibility in fabricated items.
- B. Etching Cleaner for Galvanized Metal: Complying with MPI#25.
- C. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.
- D. Shop Primers: Provide primers that comply with Section 099113 "Exterior Painting"
- E. Intermediate Coats and Topcoats: Provide products that comply with Section 099113 "Exterior Painting,"
- F. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.
- G. Non-shrink, Non-metallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- H. Anchoring Cement: Factory-packaged, non-shrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.
  1. Water-Resistant Product: At exterior locations and where indicated, provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended by manufacturer for exterior use.

## 2.07 FABRICATION

- A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.
- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- G. Connections: Fabricate railings with welded connections unless otherwise indicated.
- H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.



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1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  2. Obtain fusion without undercut or overlap.
  3. Remove flux immediately.
  4. At exposed connections, finish exposed surfaces smooth and blended so no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
- I. Form changes in direction as follows:
1. As detailed.
- J. Bend members in jigs to produce uniform curvature for each configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.
- K. Close exposed ends of railing members with prefabricated end fittings.
- L. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch (6 mm) or less.
- M. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.
1. At brackets and fittings fastened to plaster or gypsum board partitions, provide crush-resistant fillers, or other means to transfer loads through wall finishes to structural supports and prevent bracket or fitting rotation and crushing of substrate.
- N. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.

## 2.08 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

## 2.09 FINISHES

- A. Powder Coat Finish:
1. Powder coated finish, minimum three coat, shop applied, baked on 70% fluoropolymer coating system based on Kynar 500 XL or Hylar 5000 resin (polyvinylidene fluoride, PVDF) formulated by a licensed manufacturer and applied by manufacturer's approved applicator to meet AAAMA 2605.



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2. Coating system shall provide minimum 1.3 to 1.5 mils DFT.
  3. Color: as selected by the Architect from the manufacturer's full range of available colors.
- B. Powder Coat Paint Meeting AAMA 2605 "superior performing organic coatings."
1. U.V. resistance and scratch & mar resistance formula shall consist of super durable TGIC polyester resin system with flocked and color stable full pigmentation.
  2. Chemical pretreatment: a. Alkaline cleaner applied at 160 degrees F. for duration of 3 to 5 minutes.
    - a. D.I. (Deionized) water rinse.
    - b. Conversion phosphate coating applied at 140 degrees F. for 3 to 5 minutes.
    - c. D.I. water rinse.
    - d. Application on non-chromate, chrome sealer amorphous chromium phosphate that meets or exceeds ASTM D1730, Type B, Method 5.
    - e. D.I. water rinse, and dry in place.
  3. Coating Application:
    - a. Electrostatic application of super TGIC system powder with a minimum dry film thickness of 3.5 to 5.5 mils cured coating.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine construction to ensure that aluminum support angles are in place to receive anchors, to verify that locations of concealed reinforcements have been clearly marked for Installer. Locate reinforcements and mark locations if not already done.

### 3.02 INSTALLATION, GENERAL

- A. Fit exposed connections together to form tight, hairline joints.
- B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.
1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
  2. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).
- C. Corrosion Protection: Coat concealed surfaces of aluminum that will be in contact with wood, or dissimilar metals, with a heavy coat of bituminous paint.
- D. Adjust railings before anchoring to ensure matching alignment at abutting joints.
- E. Fastening: Use anchorage devices and fasteners for securing railings and for properly transferring loads to adjoining support structure.

### 3.03 RAILING CONNECTIONS

- A. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article whether welding is performed in the shop or in the field.
- B. Expansion / Slip Movement Joints: Install expansion joints at locations indicated but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve



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extending 2 inches (50 mm) beyond joint on either side, fasten internal sleeve securely to one side, and locate joint within 6 inches (150 mm) of post.

#### **3.04 ADJUSTING AND CLEANING**

- A. Clean aluminum by washing thoroughly with clean water and soap and rinsing with clean water.
- B. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Section 099113 - EXTERIOR PAINTING and 099123.01 - INTERIOR PAINTING.

#### **3.05 PROTECTION**

- A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

#### **END OF SECTION**



**SECTION 061000**  
**ROUGH CARPENTRY**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section Includes:
  - 1. Treated Wood Members.
  - 2. Fasteners.
  - 3. Structural Hold Downs, Connectors and Framing Accessories.
  - 4. Wood blocking, cants, and nailers.

**1.03 REFERENCES:**

- A. AWWA - (American Wood Preservers Association) C1 - All Timber Products Preservative Treatment by Pressure Process.
- B. APA - American Plywood Association.
- C. AITC - American Institute of Timber Construction.
- D. US Department of Commerce (DOC):
  - 1. DOC PS 1 - Performance Standard for Structural Plywood.
  - 2. DOC PS 2 - Performance Standard for Wood-Based Structural Panels.
- E. International Code Council (ICC):
  - 1. ICC IBC - International Building Code

**1.04 DEFINITIONS**

- A. Exposed Framing: Framing not concealed by other construction.
- B. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
- C. Timber: Lumber of 5 inches nominal or greater in least dimension.
- D. 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. SPIB: The Southern Pine Inspection Bureau.
  - 4. WCLIB: West Coast Lumber Inspection Bureau.
  - 5. WWPA: Western Wood Products Association.



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#### **1.05 ACTION SUBMITTALS**

- A. **Product Data:** For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
  - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
  - 3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
  - 4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
  - 5. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

#### **1.06 INFORMATIONAL SUBMITTALS**

- A. **Material Certificates:** For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
- B. **Evaluation Reports:** For the following, from ICC-ES:
  - 1. Wood-preservative-treated wood.
  - 2. Power-driven fasteners.
  - 3. Powder-actuated fasteners.
  - 4. Expansion anchors.
  - 5. Metal framing anchors.

#### **1.07 DELIVERY, STORAGE, AND HANDLING**

- A. **Handle, Transport and Store Plywood Panels** in accordance with the APA Storage and Handling recommendations.
- B. **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.
- C. **Stack panels flat** with a minimum of three, full panel width, 4 inch by 4 inch spacers per eight foot panel length 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.



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## PART 2 - PRODUCTS

### 2.01 WOOD PRODUCTS, GENERAL

- A. Certified Wood: Materials shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship" for the following:
  - 1. Miscellaneous lumber.
- B. 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. For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece or omit grade stamp and provide certificates of grade compliance issued by grading agency.
  - 3. 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.
  - 4. Provide dressed lumber, S4S, unless otherwise indicated.
- C. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal thickness or less, 19 percent for more than 2-inch nominal thickness 15 percent for 2-inch nominal thickness or less, no limit for more than 2-inch nominal thickness unless otherwise indicated.

### 2.02 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWP A U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC4A for exterior construction not in contact with the ground, and Use Category UC4B for items in contact with the ground.
  - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.
  - 2. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not require incising, contain colorants, bleed through, or otherwise adversely affect finishes.
- 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.
  - 1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece or omit marking and provide certificates of treatment compliance issued by inspection agency.
- D. Application: Treat items indicated on Drawings, and the following:
  - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
  - 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.



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3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
4. Wood framing members that are less than 18 inches (460 mm) above the ground in crawlspaces or unexcavated areas.
5. Wood floor plates that are installed over concrete slabs-on-grade.

## 2.03 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. Grounds.
- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber and any of the following species:
  1. Hem-fir (north); NLGA.
  2. Mixed southern pine; SPIB.
  3. Hem-fir; WCLIB or WWPA.
  4. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.
- C. For concealed boards, provide lumber with 15 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.
  2. Eastern softwoods; No. 2 Common grade; NeLMA.
- 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.
- F. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

## 2.04 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 A153/A153M or Type 304 stainless steel.
- B. Power-Driven Fasteners: NES NER-272.
- C. Wood Screws: ASME B16.1.
- D. Lag Bolts: ASME B18.2.1.
- E. Bolts: Steel bolts complying with ASTM A307, Grade A; with ASTM A563 hex nuts and, where indicated, flat washers.



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- F. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry assemblies and equal to four times the load imposed when installed in concrete as determined by testing per ASTM E488/E488M conducted by a qualified independent testing and inspecting agency.
  - 1. Material: Stainless steel with bolts and nuts complying with ASTM F593 and ASTM F594, Alloy Group 1 or 2.

#### 2.05 MISCELLANEOUS MATERIALS

- A. Adhesives for Gluing Furring to Concrete or Masonry: Formulation complying with ASTM D 3498 that is approved for use indicated by adhesive manufacturer.

### PART 3 - EXECUTION

#### 3.01 PREPARATION OF SURFACES

- A. Surfaces to receive new wood members shall be free of all dirt, debris, and loose materials. Exposed surfaces shall be mechanically scraped if necessary, to remove projections.
- B. Surfaces shall have no free water present in any form (rain, dew, frost, snow or ice).
- C. Contractor is responsible to inspect all exposed surfaces to see that conditions are satisfactory for installation of new work.

#### 3.02 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb and in true alignment until completion of erection and installation of permanent bracing.
- C. Place horizontal members flat, crown side up.
- D. Coordinate installation of adjacent construction.
- E. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
- F. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.
- 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 2304.10.1, "Fastening Schedule," in ICC's International Building Code.



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- H. Warped wood members shall not be used unless they can be fastened adequately to permanently hold them in their required alignment.
- I. For exposed work, arrange fasteners in straight rows parallel with edges of members, with fasteners evenly spaced, and with adjacent rows staggered.
  - 1. Comply with approved fastener patterns where applicable. Before fastening, mark fastener locations, using a template made of sheet metal, plastic, or cardboard.
  - 2. Use finishing nails unless otherwise indicated. Countersink nail heads and fill holes with wood filler.
  - 3. Use common nails unless otherwise indicated. Drive nails snug but do not countersink nail heads.

### **3.03 WOOD GROUND, BLOCKING, AND NAILER INSTALLATION**

- A. Install where indicated and where required for screeding or attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.
- C. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- D. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

### **3.04 PROTECTION**

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

## **END OF SECTION**



**SECTION 070150.19**  
**PREPARATION FOR RE-ROOFING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Removal of existing roofing system in preparation for a new roof system.

**1.02 REFERENCE STANDARDS**

- A. ASTM C208 - Standard Specification for Cellulosic Fiber Insulating Board; 2012.

**1.03 ADMINISTRATIVE REQUIREMENTS**

- A. Coordinate with affected mechanical and electrical work associated with roof penetrations.
- B. Preinstallation Meeting: Convene one week before starting work of this section.
- C. Schedule work to coincide with commencement of installation of new roofing system.

**1.04 FIELD CONDITIONS**

- A. Do not remove existing roofing membrane when weather conditions threaten the integrity of the building contents or intended continued occupancy.
- B. Maintain continuous temporary protection prior to and during installation of new roofing system.
- C. Contractor shall perform their own pre-construction field conditions visit and photograph and/or video existing landscape and physical building features and conditions prior to commencement of work. Contractors shall advise the Architect and Owner as to existing damages and conditions which exist that may impede the work of this contract or be construed as damage caused by the work of this contract accordingly.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. Temporary Protection: Sheet polyethylene; provide weights to retain sheeting in position.
- B. Protection Board: ASTM C208 cellulose fiber board, one face finished with mineral fiber, asphalt and kraft paper.
  - 1. Provide protection board with the following characteristics:
    - a. High Density, Type II, Grade 2.
    - b. Board Size: 48 by 48 or 96 inch (1219 x 1219 or 2438 mm).
    - c. Board Thickness: 1 inch (25.4 mm).
    - d. Thermal Conductivity: K factor of 0.36 (KSI factor of 0.62).
    - e. Board Edges: Square.



## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that existing roof surface is clear and ready for work of this section.

### 3.02 PREPARATION

- A. Sweep roof surface clean of loose matter.
- B. Remove loose refuse and dispose off site.

### 3.03 MATERIAL REMOVAL

- A. Remove only existing roofing materials that can be replaced with new materials the same day.
- B. Remove metal counter flashings. Store and protect for re-use and re-installation if not being replaced with new.
- C. Scrape roofing gravel from membrane surface.
- D. Remove roofing membrane, perimeter base flashings, flashings around roof protrusions, pitch pans and pockets and insulation vents.
- E. Remove insulation and fasteners, cant strips, blocking.
- F. Remove vapor retarder, sheathing paper, and underlay.
- G. Repair existing concrete deck surface to provide smooth working surface for new roof system.

### 3.04 FIELD QUALITY CONTROL

- A. The drawings identify the approximate limits to material removal.

### 3.05 PROTECTION

- A. Provide temporary protective sheeting over uncovered deck surfaces.
- B. Turn sheeting up and over parapets, roof edges, and roof curbs. Retain sheeting in position with weights.
- C. Provide for surface drainage from sheeting to existing drainage facilities.
- D. Do not permit traffic over unprotected or repaired deck surface.
- E. Install recovery board over all surfaces used for roof access, equipment, tool, material storage. Contractor shall make permanent repair to any and all roof surfaces damaged..
- F. If roof top storage is permitted, contractor shall evenly distribute material across the roof in order to avoid damage to the structural roof deck. Contractor assumes full responsibility for loading the structural roof deck during contract operations. The Architect reserves the right to reject and such loadings deemed unacceptable.



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**END OF SECTION**



**SECTION 075216**  
**STYRENE-BUTADIENE-STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section Includes:
  - 1. Styrene-butadiene-styrene (SBS)-modified bituminous membrane roofing system and accessories.
  - 2. Temporary Roof Ply Sheet.
  - 3. Roof Insulation.
  - 4. Fastening Systems.
  - 5. Liquid Flashing System

**1.03 DEFINITIONS**

- A. Roofing Terminology: Definitions in ASTM D1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" apply to work of this Section.
- B. LTTR: Long Term Thermal Resistance as per ASTM C1303 and CAN-ULC S770.

**1.04 PREINSTALLATION MEETINGS**

- A. Preinstallation Roofing Conference: Conduct conference at Project site.
  - 1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
  - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
  - 3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 4. Review the use and staging of hoisting equipment required for the project including safety, OSHA regulations pertaining to operation and use of this equipment.
  - 5. Review Contractor's (and their Subcontractor's) responsibility to comply with OSHA regulations, requirements for provision and implementation of safety equipment and regulations. Additionally, Contractor shall keep on-site at all times a minimum of three complete additional safety units (i.e.: harnesses, rigging gear, hardhats, safety vests, etc.) for use by site visitors requiring access to the work.
  - 6. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
  - 7. Review structural loading limitations of roof deck during and after roofing.
  - 8. Review the location of any fresh-air intakes for the building with the building owner which may have to be covered or re-directed to maintain intakes during roofing operations.

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9. Review base flashings, special roofing details, roof drainage, roof penetrations; raising and/or replacement of equipment curbs, disconnection and re-connection of mechanical roof mounted equipment; and condition of other construction that affects roofing system.
10. Review governing regulations and requirements for insurance and certificates if applicable.
11. Review temporary protection requirements including but not limited to safety lines, roof barriers, walkway protections as required by OSHA during and after roofing installations.
12. Review roof installation observations during construction; notifications and repair procedures after roofing installation with the manufacturer's field representative.

#### 1.05 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  1. Provide membrane manufacturer's printed data sufficient to show that all components of the roofing system, including insulation, fasteners, edge conditions, comply with the specified requirements and with the roofing manufacturer's requirements and recommendations for the system type specified; include data for each product used in conjunction with the roofing membranes.
- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work, including:
  1. Base flashings and membrane terminations.
  2. Tapered insulation, including slopes.
  3. Crickets, saddles, and tapered edge strips, including slopes.
- C. Samples for Verification: For the following products:
  1. Cap sheet, of color required.
  2. Flashing sheet, of color required.
  3. Aggregate surfacing material in gradation and color required.
  4. Walkway pads or rolls, of color required.
- D. Specimen (Sample) Warranty: Submit for approval accompanying Product Data submissions.
- E. Installer Qualifications Letter: Provide a letter from the roofing manufacturer attesting that the roofing contractor meets the manufacturer's qualifications for the roofing system specified.
- F. Submit evidence that the manufacturer's Pre-Installation Notice requirements, if any, have been accepted and approved by the manufacturer.

#### 1.06 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer manufacturer and testing agency.
- B. Product Test Reports: For components of membrane roofing system, for tests performed by manufacturer and witnessed by a qualified testing agency.
- C. Research/Evaluation Reports: For components of membrane roofing system, from ICC-ES.

#### 1.07 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing system to include in maintenance manuals.

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- B. Executed Manufacturer's Warranty for this specific project scope, signed by a current representative of the approved Roofing Manufacturer.

#### 1.08 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that produces a product that is UL listed FM Global approved Class A for membrane roofing system identical to that specified (including mopping asphalt or cold adhesive) for this Project.
- B. Primary roofing products, including each type of sheet, all manufactured in the United States, shall be supplied by a single manufacturer which has been successfully producing the specified types of products for not less than 10 years. Secondary or accessory products shall be acceptable to the manufacturer of the primary roofing products.
- C. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
- D. Contract shall have a minimum of (5) Five years experience in successfully installing the same or similar roofing materials and be certified in writing by the roofing materials manufacturer to install the roofing system specified.
- E. Local Regulations: Conform to regulations of public agencies, including any specific requirements of the AHJ.
- F. Manufacturer's Representative: Ensure that the primary roofing materials manufacturer provides direct trained company personnel to attend necessary project meetings, perform periodic weekly inspections or more frequently as required by the operations and conduct a final inspection and report upon completion of the the project.

#### 1.09 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store roll materials on ends. Store materials left overnight pallets.
- C. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight. Cover materials with a breathable cover such as canvas. Sort materials so as not to overload the deck materials or building structure.
  - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
  - 2. Remove any damaged materials from the site. Contractor shall replace damaged materials with new materials at Contractor's expense.
- D. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

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- E. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck.

#### 1.10 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.
- B. Provide a minimum of 5 days notice to the Owner and manufacturer prior to commencing any work and apprise said parties of expected work schedule on a daily basis.
- C. Safety: Ensure that every member of the roofing crew are in compliance and have been trained in accordance with fire and safety regulations of OSHA, NRCA and other industry and local jurisdictional groups.

#### 1.11 PROTECTION REQUIREMENTS

- A. Membrane Protection: Provide protection against staining and mechanical damage for newly applied roofing and adjacent surfaces throughout the project.
- B. Limited Access: Prevent access by the public to materials, tools and equipment throughout the course of the project.
- C. Debris Removal: Remove all construction and demolition debris on a daily basis and dispose of legally in an off-site disposal location. Clean the surrounding site of all debris generated by roofing activities on a daily basis, to the Owner's satisfaction.

#### 1.12 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.
  - 1. Special warranty includes membrane roofing, base flashings, roof insulation, fasteners, cover boards, substrate board, roofing accessories, roof edge and coping metal systems and other components of the total roofing system.
  - 2. Warranty Period: 30 years from date of Substantial Completion.
  - 3. The warranty shall be a term type, without deductibles or limitations on the coverage amount (No Dollar Limit).
  - 4. Scope of Warranty shall include but not be limited to:
    - a. Ordinary wear and tear of the elements.
    - b. Manufacturing defects in any part of the total roofing system.
    - c. Defective Workmanship in the installation of the roofing materials.
    - d. Damage caused by winds up to and including 120 mph.
  - 5. Metal Roof Edge, Flashing and Coping materials: Provide 20-year warranty for painted finish covering color fade, chalking and film integrity.



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## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
  - 1. Johns Manville
  - 2. Or Approved Equal
- B. Source Limitations: Obtain components including roof insulation fasteners metal edge, flashing and coping materials, recovery board, vapor barrier (temporary roof) for the total roofing system from same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer.

### 2.02 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roofing and base flashings shall remain watertight.
  - 1. Accelerated Weathering: Roofing system shall withstand 2000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G155.
  - 2. Impact Resistance: Roofing system shall resist impact damage when tested according to ASTM D 3746 or ASTM D 4272.
- B. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.
- C. Roofing System Design: Tested by a qualified testing agency to resist the following uplift pressures:
  - 1. Uniform Wind Uplift Load Capacity
    - a. Installed roof system shall withstand negative (uplift) design wind loading pressures complying with the following criteria:
      - 1) Design Code: ASCE 7, Method 2 for Components and Cladding.
      - 2) Category: IV
      - 3) Building with an Importance Factor of: 1.00
      - 4) Wind Speed: 125 mph.
      - 5) Exposure Category: D.
      - 6) Design Roof Height: varies Refer to construction documents.
      - 7) Minimum Building Width: varies. Refer to construction documents.
      - 8) Roof Pitch: 0.125 inch per foot (min.)
      - 9) Topographic Factor(Kzt): 1.00
      - 10) Roof Area Design Uplift Pressures:
        - (a) Corner Uplift Pressure: 137.9 lbf/sq. ft. .
        - (b) Perimeter Uplift Pressure: 101.15 lbf/sq. ft..
        - (c) Field-of-Roof Uplift Pressure: 76.7 lbf/sq. ft..

- D. FM Global Listing: Roofing, base flashings, and component materials shall comply with requirements in FM Global 4450 or FM 4470 as part of a roofing system, and shall be listed in

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FM Global's "RoofNav" for Class 1 or noncombustible construction, as applicable. Identify materials with FM Global markings.

1. Provide assembly complying with Factory Mutual Corporation (FM) Roof Assembly Classification, FM DS 1-28 and FM DS 1-29 and meeting the following:
  - a. Fire/Windstorm Classification: Class 1A-120.
- E. Energy Star Listing: Roofing system shall be listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for low-slope roof products.
- F. Exterior Fire-Test Exposure: ASTM E108 or UL 790, Class A; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- G. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.
- H. Drainage: Provide a roof system with positive drainage where all standing water dissipates within 48 hours after precipitation ends.
- I. Roofing System membranes containing recycled or bio-based materials shall be third party certified through UL Environment.

#### 2.03 SBS MODIFIED BITUMEN MATERIALS

- A. Cap Sheet: Ceramic-Coated Roofing Granules with factory applied cool roof coating, reinforced with fiber glass/polyester composite reinforcement, complying with ASTM D6162, Type I, Grade G, with the following additional characteristics:
  1. Formulated for hot asphalt and cold adhesive application.
  2. Nominal Thickness: 150mil (3.8mm)
  3. Roll Weight: 39 3/8"
  4. Acceptable Product: Dynakap FR T1 CR by Johns Manville
- B. Interply Base Sheet: SBS polymer-modified bitumen sheet, complying with ASTM D6163/D6163M, Type I, Grade S, with glass fiber reinforcing fabric, formulated for hot asphalt and cold adhesive application to substrate and cap sheet, with the following additional characteristics:
  1. Nominal Thickness: 91mil (2.3mm)
  2. Sheet Width: 39 3/8"
  3. Acceptable Product: Dynabase by Johns Manville
- C. Base Sheet: Same as interply base sheet.
- D. Roof Walkway Pads: Mineral-granule-surfaced, reinforced modified asphalt composition, slip-resisting pads, manufactured as a traffic pad for foot traffic provided by roofing system manufacturer, with a pad size of 32 inch x 32 inch.
  1. Acceptable Product: Dynatred plus roof walkway or approved equal
- E. Cold Adhesive: Multi-Purpose MBR Cold Adhesive by Johns Manville or as recommended by manufacturer.

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#### 2.04 VAPOR RETARDER MATERIALS

- A. Asphalt Felt: Asphalt impregnated, polyethylene reinforced self adhering roofing sheet, complying with ASTM D2178/D2178M, Type IV or VI.
  - 1. Acceptable Product: JM Vapor Barrier SA by Johns Manville or approved equal.
- B. Adhesive: As recommended by roofing membrane manufacturer.

#### 2.05 ROOF INSULATION AND COVER BOARDS

- A. Polyisocyanurate Board Insulation: Closed cell polyisocyanurate foam with black glass reinforced mat laminated to faces, complying with ASTM C1289 Type II Class 1, with the following additional characteristics:
  - 1. Acceptable Product: Flat and Tapered ENRGY 3 by Johns Manville or approved equal
  - 2. Thickness: As indicated on Contract Drawings.
  - 3. Size: 48 inches (1220 mm) by 96 inches (2440 mm), nominal.
    - a. Exception: Insulation to be attached using adhesive or asphalt may be no larger than 48 inches (1220 mm) by 48 inches (1220 mm), nominal.
  - 4. Compressive Strength: 20 psi (138 kPa) when tested in accordance with ASTM C1289.
  - 5. Minimum LTTR-value shall be 30 for the entire roof surface area.
  - 6. Ozone Depletion Potential: Zero; made without CFC or HCFC blowing agents.
  - 7. Recycled Content: 19 percent post-consumer and 5 percent pre-consumer (post-industrial), average.
  - 8. Crickets: 1/4 inch per foot
- B. High-Density Perlite-Based Cover Board: high density expanded perlite with reinforcing cellulosic fibers complying with ASTM C 778, Type 2 with a polymerized asphalt emulsion coating, with the following characteristics:
  - 1. Approved product: Duraboard by Johns Manville or approved equal.
  - 2. Size: 48 inches (1220mm) by 48 inches (1220mm), nominal.
  - 3. Thickness: 1/2 inch (12mm)
  - 4. Thermal Value: 1.3
  - 5. Compressive Strength: 35 psi, when tested in accordance with ASTM C 165
  - 6. Flame Spread: 35, when tested in accordance with ASTM E 84
  - 7. Smoke Developed: 10, when tested in accordance with ASTM E 84
- C. Adhesive for Insulation Attachment: Type as required by roof membrane manufacturer for roofing system and warranty to be provided; use only adhesives furnished by roof membrane manufacturer.
- D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes providing drainage to roof drain locations in conjunction with the minimum required roof pitch of 1/4 inch per foot.
- E. Install boards no thicker than 1.5 inches. Provide multiple layers to achieve required R-Value and tapered configurations to achieve drainage slopes. Minimum board thickness shall be 1 inch as needed at drain locations.



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#### 2.06 FLUID APPLIED FLASHING MEMBRANE ASSEMBLY

- A. Resin for all Flashing Applications: A multi-component, flexible, polymethylmethacrylate (PMMA) based resin combined with a thixotropic agent for use in combination with fleece fabric to form a monolithic, reinforced flashing membrane.
  - 1. Reinforced Fluid Applied PMMA Flashing System:
    - a. Resin for Flashing Applications: a multi-component, flexible, polymethylmethacrylate (PMMA) based resin combined with a thixotropic agent for use in combination with fleece fabric to form a monolithic, reinforced flashing membrane.
      - 1) JM PermaFlash System
      - 2) Or approved equal.

#### 2.07 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with roofing membrane.
- B. Asphalt Primer: ASTM D 41. Product: JM Asphalt Primer or approved equal.
- C. Cold-Applied Adhesive: Roofing system manufacturer's asphalt-based, two-component, asbestos-free, cold-applied adhesive specially formulated for compatibility and use with membrane applications.
  - 1. JM MBR Bonding Adhesive or approved equal.
- D. Cold-Applied Flashing Adhesive: Roofing system manufacturer's asphalt-based, two-component, asbestos-free, trowel-grade, cold-applied adhesive specially formulated for compatibility and use with flashing applications.
  - 1. JM MBR Flashing Cement or approved equal
- E. Mastic Sealant: Polyisobutylene, plain or modified bitumen; non hardening, nonmigrating, nonskinning, and nondrying. As required by manufacturer.
- F. Expansion Joints If Applicable: Provide factory fabricated weatherproof, exterior covers for expansion joint openings consisting of flexible rubber membrane, supported by a closed cell foam to form flexible bellows, with two metal flanges, adhesively and mechanically combined to the bellows by a patented bifurcation process. Provide product manufactured and marketed by single-source membrane supplier that is included in the No Dollar Limit guarantee.
  - 1. Expand-O-Flash or approved equal.
- G. PMMA Primers:
  - 1. PMMA Primer for Concrete/Masonry/Wood/ Plywood substrates:
    - a. JM PMMA Primer
    - b. Or approved equal.
  - 2. Primer for Asphaltic Substrates: A two component, fast curing, PMMA based primer for use over Asphaltic materials.
    - a. JM PMMA Primer
    - b. Or approved equal.
- H. Metal Flashing Sheet: Metal flashing sheet is specified in Division 07 Section "Sheet Metal Flashing and Trim."

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- I. Roofing Granules: Ceramic-coated roofing granules matching specified cap sheet, provided by roofing system manufacturer.
- J. Sheet Flashing: Manufacturer's sheet flashing of same material, type, reinforcement, thickness, and color as sheet membrane. Basis of Design: JM .060 TPO
- K. Sheet Flashing: Manufacturer's unreinforced sheet flashing of same material as sheet membrane. Basis of Design: JM TPO Detail Membrane
- L. Slip Sheet: Manufacturer's recommended slip sheet, of type required for application.
- M. Metal Termination Bars: Manufacturer's standard predrilled stainless-steel or aluminum bars, with anchors. Basis of Design: JM Termination Systems
- N. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM 4470, designed for fastening roofing components to substrate; tested by manufacturer for required pullout strength, and acceptable to roofing system manufacturer.
- O. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, termination reglets, cover strips, and other accessories. Basis of Design: [JM TPO Pourable Sealer A & B, JM TPO Pipe Boots, JM TPO Universal Corners, JM TPO Edge Sealant, JM TPO T-Joint Patch, JM TPO Membrane Cleaner, JM TPO Membrane Primer, JM TPO Sealing Mastic, JM TPO Cover Tape, JM TPO Detail Membrane, JM TPO Peel & Stick 10" RPS, JM TPO Peel & Stick 6" RTS, JM TPO-Coated Metal] and JM Single Ply Caulk.
- P. Miscellaneous Accessories: Provide those recommended by roofing system manufacturer.

#### 2.08 WALL AND CURB SUBSTRATE BOARD

- A. Closed cell Polyisocyanurate foam board. ASTM C 1289, Type II, Class 4, Grades 1, 2, and 3. , 1/4 inch thick. Product:
  - 1. Invinsa FR or approved equal

#### 2.09 INSULATION ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- B. Provide factory preformed tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated. Product:
  - 1. Tapered Fesco Edge Strip or approved equal
- C. Urethane Adhesive: Manufacturer's two component urethane adhesive formulated to adhere insulation to substrate. Product:
  - 1. JM Two-Part Urethane Insulation Adhesive or approved equal
- D. Insulation Cant Strips: ASTM C 728, perlite insulation board. Product:
  - 1. FesCant Plus or approved equal

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- E. Wood Nailer Strips: Comply with requirements in Division 06 Section "Rough Carpentry"

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work:
1. Verify that all existing roof demolition work is complete including but not limited to: Roof membrane, insulation, base flashings, metal flashings, skylights, walkways, miscellaneous blocking, drain assemblies, damaged Tectum roof substrates to be replaced.
  2. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.
  3. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  4. Verify that deck is securely fastened with no projecting fasteners and with no adjacent units in excess of 1/16 inch out of plane relative to adjoining deck.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Install new roof deck replacement materials to replace damaged roof deck encountered during demolition.
- D. Install Base Sheet over entire area being re-roofed, lapping sides and ends four (4) inches. Using approved fasteners, nail each sheet nine (9) inches on center through laps and stagger nail the remainder of the sheet in two (2) rows on twelve (12) inch centers.
- E. Insulation: Install insulation panels with end joints offset; edges of the panels shall be in moderate contact without forcing applied in strict accordance with the insulation manufacturer's requirements and the following instructions. Insulation shall be installed in two layers with staggered joints.
1. Multi-Layer Insulation: Install insulation panels in an application of the specified insulation adhesive in strict accordance with the requirements of the insulation manufacturer. Insulation panels installed in adhesive shall have a maximum panel size of 4 feet by 4 feet.

### 3.03 INSTALLATION, GENERAL

- A. Comply with roofing system manufacturer's written instructions.

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- B. Substrate-Joint Penetrations: Prevent roofing asphalt and adhesives from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.

#### 3.04 VAPOR BARRIER INSTALLATION

- A. Before installing insulation install vapor retarder directly over the deck.
- B. Install modified bitumen base sheet using the appropriate deck fasteners and insulation plates. Apply a second layer of modified bitumen base sheet in solid mopping of asphalt. Apply a glaze coat of asphalt over the base sheet.
- C. Install polyethylene sheet with all joints, edges, and penetrations taped.
- D. Ensure that all penetrations and edge conditions are sealed to prevent moisture and air drive into the roofing system.

#### 3.05 INSULATION INSTALLATION

- A. Install one lapped base-sheet course and cold apply to substrate according to roofing system manufacturer's written instructions.
- B. Install tapered insulation under area of roofing to conform to slopes indicated.
- C. Install insulation with long joints of insulation in a continuous straight line, with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.
  - 1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- D. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- E. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.
- F. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches in each direction. Loosely butt cover boards together and fasten to roof deck. Tape joints if required by roofing system manufacturer.
  - 1. Fasten cover boards according to requirements in FM Globals "RoofNav" for specified Windstorm Resistance Classification.
  - 2. Fasten cover boards to resist uplift pressure at corners, perimeter, and field of roof.
  - 3. Apply hot roofing asphalt to underside, and immediately bond cover board to substrate.

#### 3.06 ROOFING INSTALLATION, GENERAL

- A. Install roofing system according to roofing system manufacturer's written instructions and applicable recommendations in ARMA/NRCA's "Quality Control Guidelines for the Application of Polymer Modified Bitumen Roofing" and as follows:
  - 1. Deck Type: C (concrete or non-nailable).
  - 2. Adhering Method: L (cold-applied adhesive).

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STYRENE-BUTADIENE-STYRENE  
(SBS) MODIFIED  
BITUMINOUS MEMBRANE  
ROOFING  
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3. Base Sheet: Two
  4. Number of SBS-Modified Asphalt Sheets: One
  5. Surfacing Type: M (mineral-granule-surfaced cap sheet).
- B. Start installation of roofing in presence of manufacturer's technical personnel.
- C. Where roof slope exceeds 1/2 inch per 12 inches, install roofing membrane sheets parallel with slope.
- D. Coordinate installation of roofing system so insulation and other components of the roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
1. Provide tie-offs at end of each day's work to cover exposed roofing sheets and insulation with a course of coated felt set in roofing cement or hot roofing asphalt, with joints and edges sealed.
  2. Complete terminations and base flashings, and provide temporary seals to prevent water from entering completed sections of roofing system.
  3. Remove and discard temporary seals before beginning work on adjoining roofing.

#### 3.07 BASE-SHEET INSTALLATION

- A. Loosely lay one course of sheathing paper, lapping edges and ends a minimum of 3 inches and 6 inches, respectively.

#### 3.08 SBS-MODIFIED BITUMINOUS MEMBRANE INSTALLATION

- A. Install modified bituminous roofing sheet and cap sheet according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond eaves, installing as follows:
1. Align and unroll roofing sheets and allow them to relax for minimum time period required by manufacturer.
  2. Torch apply to substrate for a complete heat weld as recommended by the manufacturer.
- B. Laps: Accurately align roofing sheets, without stretching, and maintain uniform 3 inch side and 6 inch end laps unless recommended otherwise by the manufacturer. Stagger end laps a minimum of 3 feet. Completely bond and seal laps, leaving no voids.
- C. Repair tears and voids in laps and lapped seams not completely sealed. Granule Surfaced Sheets: In areas that form the substrate for heat fusing, such as laps, flashings and patches, embed the granules prior to fusing subsequent sheets. Apply additional granules to all exposed surfaces that have none or cover with additional piece of granule surfaced material.
- D. Install roofing sheets so side and end laps shed water.
- E. At the end of day's work, or when precipitation is imminent, construct a water cut-off at all open edges. Cut -offs must be completely removed prior to the resumption of roofing activities.



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#### 3.09 FLASHING AND STRIPPING INSTALLATION

- A. Install base flashing over cant strips and other sloped and vertical surfaces, at roof edges, and at penetrations through roof, and secure to substrates according to roofing system manufacturer's written instructions and as follows:
  - 1. Prime substrates with asphalt primer if required by roofing system manufacturer.
  - 2. Backer-Sheet Application: Adhere backer sheet to substrate in cold-applied adhesive.
- B. Extend base flashing up walls or parapets a minimum of 8 inches above roofing membrane and 4 inches onto field of roofing membrane.
- C. Mechanically fasten top of base flashing securely at terminations and perimeter of roofing.
  - 1. Seal top termination of base flashing.
- D. Install roofing cap-sheet stripping where metal flanges and edgings are set on roofing according to roofing system manufacturer's written instructions.
- E. Roof Drains: Set 30-by-30-inch metal flashing pan in bed of adhesive on completed roofing membrane. Install specified pre-manufactured tapered insulation with facer to provide slopes to drain locations in accordance with the manufacturer's installation instructions. Cover metal flashing with roofing cap-sheet stripping, and extend a minimum of 6 inches beyond edge of metal flashing onto field of roofing membrane. Install sealant to drain bowl where clamping ring seats below the membrane. Clamp roofing membrane, metal flashing, and stripping into roof-drain clamping ring, tighten bolts to achieve constant compression..
  - 1. Install stripping according to roofing system manufacturer's written instructions.
- F. Caulk all exposed finish ply edges at gravel stops, waste stacks, pitch pans, vent stacks, etc. with a smooth continuous bead of approved sealant.

#### 3.10 WALKWAY INSTALLATION

- A. Walkway Pads: Install walkway pads using units of size indicated or, if not indicated, of manufacturer's standard size, according to walkway pad manufacturer's written instructions.
  - 1. Set walkway pads in cold-applied adhesive.
  - 2. Allow Walkway pads to relax until flat. Adhere the pads using the specified plastic cement. Apply the specified cement in thickness, spacing and pattern in accordance with walkway manufacturer. Walk-in each sheet after application to ensure proper adhesion. Provide a minimum of two inches between sheets to allow for proper drainage.

#### 3.11 FIELD QUALITY CONTROL

- A. Test Cuts: Remove test specimens to evaluate problems observed during quality-assurance inspections of roofing membrane as follows:
  - 1. Determine approximate quantities of components within roofing membrane according to ASTM D 3617.
  - 2. Examine test specimens for interply voids according to ASTM D 3617 and to comply with criteria established in Appendix 3 of ARMA/NRCA's "Quality Control Guidelines for the Application of Polymer Modified Bitumen Roofing."
  - 3. Repair areas where test cuts were made according to roofing system manufacturer's written instructions.

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- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.
  - 1. Notify Architect and Owner 48 hours in advance of date and time of inspection.
  - 2. Hold a meeting at the completion of the project attended by all parties in attendance at the pre-construction job conference. A punch list of items required for completion shall be compiled by the Contractor and the manufacturer's authorized field representative. Complete, sign and forward the punch list form to the Manufacturer's headquarters with a copy to the Architect.
  - 3. Drain verification: At final inspection of all roofing work, verify that all drains are functioning properly and that roof drain strainers are secure and in place.
- C. Roofing system will be considered defective if it does not pass tests and inspections.
  - 1. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.
- D. Issuance of the Warranty: Complete all post installation procedures and meet the manufacturer's final endorsement for issuance of the specified warranty.

### 3.12 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.
- D. Repair or replace building components and finished surfaces damaged or defaced due to the work of this section; comply with the recommendations of the manufacturers of the component materials and surfaces.
- E. Clean site of any and all construction debris pertaining to the execution of the work

### END OF SECTION



**SECTION 076200**  
**SHEET METAL FLASHING AND TRIM**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section Includes:
  - 1. Formed roof-drainage sheet metal fabrications.
  - 2. Gravel stops.
  - 3. Fascia systems.
  - 4. Drip edges.
  - 5. Through-wall flashing.
  - 6. Expansion Joints

**1.03 COORDINATION**

- A. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.
- B. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

**1.04 REFERENCES:**

- A. ASTM B209 - Specification for Aluminum Sheet
- B. ASTM B32 - Standard Specification for Solder Metal
- C. ASTM B370 - Standard Specification for Copper Sheet and Strip for Building Construction.
- D. SMACNA (ASMM) - Architectural Sheet Metal Manual

**1.05 ACTION SUBMITTALS**

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each manufactured product and accessory.
- B. Shop Drawings: For sheet metal flashing and trim.
  - 1. Detail fabrication and installation layouts, details. Distinguish between shop- and field-assembled work.
  - 2. Include identification of material, thickness, weight, and finish for each item and location in Project.
  - 3. Include details for forming, including profiles, shapes, seams, and dimensions.
  - 4. Include details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
  - 5. Include details of termination points and assemblies.



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6. Include details of expansion joints and expansion-joint covers, including showing direction of expansion and contraction from fixed points.
7. Include details of roof-penetration flashing.
8. Include details of edge conditions, including eaves, ridges, valleys, rakes, crickets, and counterflashings as applicable.
9. Include details of special conditions.
10. Include details of through wall scuppers including section details, dimensions of scupper openings and height above finished roof surface, edge sealing details, interface and sealing with roof membrane system, counterflashing and exposed exterior fascia conditions.
11. Include details of connections to adjoining work.

C. Samples for Verification: For each type of exposed finish.

#### 1.06 QUALITY ASSURANCE

- A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.
  1. For copings and roof edge flashings that are SPRI ES-1 tested and FM Approvals approved, shop shall be listed as able to fabricate required details as tested and approved.
- B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation.
- C. Perform work in accordance with SMACNA (ASMM), CDA A4050, and approved manufacturers requirements and standard details, except as otherwise indicated.

#### 1.07 DELIVERY, STORAGE, AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
- B. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

#### 1.08 WARRANTY

- A. Special Warranty on Finishes: Manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
  1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  2. Finish Warranty Period: 20 years from date of Substantial Completion.
- B. Metal Copings, Gravel Stops, scuppers, roof edges, counterflashing, and other components incorporated or in contact with the Roofing System shall be pre-approved by and made integral to the 30-year Total Roofing System warranty specified in Division 07. Shop drawings and components shall be reviewed and approved by the Roofing manufacturer prior to submittal to



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the architect for approval. Submit a letter signed by a current representative of the manufacturer on Roofing manufacturer letterhead, attesting to this approval and warranty acceptability. Submit this certification letter as part of the Shop Drawing submittals for this section.

## PART 2 - PRODUCTS

### 2.01 PERFORMANCE REQUIREMENTS

- A. General: Sheet metal flashing and trim assemblies shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
- B. Sheet Metal Standard for Flashing and Trim: Comply with NRCA's "The NRCA Roofing Manual" SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated or required by the approved roofing manufacturer responsible for providing the Total System Warranty for the roof system.
- C. Sheet Metal Standard for Copper: Comply with CDA's "Copper in Architecture Handbook." Conform to dimensions and profiles shown unless more stringent requirements are indicated.
- D. FM Approvals Listing: Manufacture and install copings, roof edge flashings that are listed in FM Approvals' "RoofNav" and approved for windstorm classification, Class 1-180 Identify materials with name of fabricator and design approved by FM Approvals.
- E. SPRI Wind Design Standard: Manufacture and install Metal Copings, Gravel Stops, Scuppers, Roof edges, Counterflashing, and other components of roof metal work tested according to SPRI ES-1 and capable of resisting the required design pressure.
- F. Recycled Content of Copper-Sheet Flashing and Trim: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 40 percent.
- G. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material

### 2.02 FASCIA SYSTEM

- A. Fascia System: Manufacturer's factory fabricated fascia consisting of a base piece and a snap-on cover. Provide product manufactured and marketed by single-source membrane supplier that is included in the No Dollar Limit guarantee.
  - 1. OMG Roofing Drip Edge; Decorative metal fascia with continuous extruded aluminum bar to terminate roofing at perimeter. Provide watertight system with no exposed fasteners
    - a. Product
      - 1) OMG Roofing Drip Edge Fascia
    - b. Typical Performance Characteristics
      - 1) FM 1-120 approved.
      - 2) Provide meeting or exceeding requirements of ES-1 and IBC.
      - 3) Provide extruded bar locks membrane.
      - 4) Provide injection molded EPDM anchor bar thermal expansion splices.
      - 5) Provide a fascia that freely thermally cycles on extruded bar.



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- c. Typical Physical Properties
  - 1) Provide fascia metal gauge: .040" thick formed aluminum.
  - 2) Provide fascia: standard 12'-0" (3.65 m) lengths x max. 12" face height. If over 12" high is required provide Fascia Extender (non-standard height fascia) overlap 1 1/2" minimum as per manufacturer, verify in field.
  - 3) Provide extruded bar: Continuous 6063-T6 alloy aluminum in 12'-0" (3.65 m) standard lengths with re-punched slotted holes and all bar miters welded.
  - 4) Provide fasteners: #9 x 2" stainless steel with drivers.
  - 5) Provide exterior fascia finishes: (as indicated on drawing detail) natural mill finish, Kynar 500 from manufacturer's standard colors, custom color Kynar 500, or clear or color anodized.
- d. Accessories
  - 1) Provide miters (inside and outside corners)
  - 2) Employ welded base assembly to maintain watertight integrity.
  - 3) Provide matching brick wall cap, extenders, or other special fabrications as detailed.

## 2.03 SHEET METALS

- A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.
- B. Copper Sheet: ASTM B 370, cold-rolled copper sheet, H00 or H01 temper, natural finish, 16 oz. / s.f. (24 gage) minimum or as indicated on the drawings.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
    - a. Hussey Copper Ltd
    - b. Revere Copper Products, Inc
    - c. Or approved equal.
  - 2. Non-patinated Exposed Finish: Mill.
- C. Aluminum Sheet: ASTM B209, alloy as standard with manufacturer for finish required, with temper as required to suit forming operations and performance required; with smooth, flat surface.
  - 1. Thickness: 0.040 inch minimum or as indicated on the drawings.
  - 2. Exposed Coil-Coated Finish:
    - a. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    - b. Modified Silicone Polyester Coating: Pigmented Organic Coating System, AAMA 2603; baked enamel finish system.
    - c. Color: as selected by the Architect from the manufacturer's full range of color offerings.
  - 3. Anodized Finishes:
    - a. Clear Anodized Finish: AAMA 611 AA-M12C22A41 Class I clear anodic coating not less than 0.7 mils (0.018 mm) thick.
    - b. Color Anodized Finish: AAMA 611 AA-M12C22A42/44 Class I integrally or electrolytically colored anodic coating not less than 0.7 mils (0.018 mm) thick.
  - 4. Color: as selected by the Architect from the manufacturer's full range of color offerings.



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5. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with minimum total dry film thickness of 0.5 mil.
- D. Pre-Finished Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gage, (0.0239) inch thick base metal, shop pre-coated with PVDF coating.
  1. Modified Silicone Polyester Coating: Pigmented Organic Coating System, AAMA 2603; baked enamel finish system.
  2. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.
  3. Color: as selected by the Architect from the manufacturer's full range of color offerings.
- E. Stainless Steel: ASTM A666, Type 304, soft temper, 28 gage thick; smooth No. 4 finish.

## 2.04 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal or manufactured item unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal or manufactured item.
  1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
    - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
    - b. Blind Fasteners: High-strength aluminum or stainless-steel rivets suitable for metal being fastened.
  2. Fasteners for Copper Sheet: Copper, hardware bronze or passivated Series 300 stainless steel.
  3. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
- C. Solder:
  1. For Copper: ASTM B32, with maximum lead content of 0.2 percent.
- D. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.
- E. Elastomeric Sealant: ASTM C920, elastomeric polyurethane silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- F. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for hooked-type expansion joints with limited movement.

## 2.05 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to design, dimensions, geometry,



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metal thickness, and other characteristics of item required. Fabricate sheet metal flashing and trim in shop to greatest extent possible.

1. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
  2. Obtain field measurements for accurate fit before shop fabrication.
  3. Form sheet metal flashing and trim to fit substrates without excessive oil canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
  4. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.
- B. Fabrication Tolerances: Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.
- C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
- D. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal to provide for proper installation of elastomeric sealant according to cited sheet metal standard.
- E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, non-corrosive metal.
- F. Fabricate cleats and attachment devices of sizes as recommended by cited sheet metal standard and by FM Global Property Loss Prevention Data Sheet 1-49 for application, but not less than thickness of metal being secured.
- G. Seams: Fabricate non-moving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.

## 2.06 WALL SHEET METAL FABRICATIONS

- A. Opening Flashings: Fabricate head, sill, jamb, and similar flashings to extend 6 inches beyond wall openings. Form head and sill flashing with 2-inch (50-mm-) high, end dams. Fabricate from the following materials:
1. Copper: 16 oz./sq. ft.
  2. Aluminum: 0.032 inch thick. Finish color as selected by the Architect.

## 2.07 MISCELLANEOUS FLASHINGS - COORDINATED SHEET METAL FABRICATIONS

- A. Equipment Support Flashing: Fabricate from the following materials:
1. Stainless Steel: 0.018 (26 gauge) thick.
  2. Aluminum Sheet: 0.040 inch thick. Finish color as selected by the Architect.

## 2.08 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.



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- C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.
  - 1. Verify compliance with requirements for installation tolerances of substrates.
  - 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
  - 3. Verify that air- or water-resistant barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Sheet Underlayment: Install self-adhering sheet underlayment, wrinkle free. Prime substrate if recommended by underlayment manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation; use primer for installing underlayment at low temperatures. Apply in shingle fashion to shed water, with end laps of not less than 6 inches staggered 24 inches between courses. Overlap side edges not less than 3-1/2 inches. Roll laps and edges with roller. Cover underlayment within 14 days.
- B. Apply slip sheet, wrinkle free, over underlayment before installing sheet metal flashing and trim.

### 3.03 INSTALLATION, GENERAL

- A. General: Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement. Use fasteners, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
  - 1. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds, and sealant.
  - 2. Install sheet metal flashing and trim to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.
  - 3. Space cleats not more than 12 inches apart. Attach each cleat with at least two fasteners. Bend tabs over fasteners.
  - 4. Install exposed sheet metal flashing and trim with limited oil canning, and free of buckling and tool marks.
  - 5. Torch cutting of sheet metal flashing and trim is not permitted.
  - 6. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.



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1. Coat concealed side of sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
  2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at maximum of 10 feet with no joints within 24 inches of corner or intersection.
- D. Fasteners: Use fastener sizes that penetrate wood blocking or sheathing not less than 1-1/4 inches (32 mm) for nails and not less than 3/4 inch (19 mm) for wood screws.
- E. Seal joints as required for watertight construction.
1. Use sealant-filled joints unless otherwise indicated. Embed hooked flanges of joint members not less than 1 inch into sealant. Form joints to completely conceal sealant. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant-type joints at temperatures below 40 deg F.
  2. Prepare joints and apply sealants to comply with requirements in Section 079200 - JOINT SEALANTS.
- F. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pre-tin edges of sheets with solder to width of 1-1/2 inches; however, reduce pre-tinning where pre-tinned surface would show in completed Work.
1. Do not solder aluminum sheet.
  2. Do not use torches for soldering.
  3. Heat surfaces to receive solder, and flow solder into joint. Fill joint completely. Completely remove flux and spatter from exposed surfaces.
  4. Stainless-Steel Soldering: Tin edges of uncoated sheets, using solder for stainless steel and acid flux. Promptly remove acid flux residue from metal after tinning and soldering. Comply with solder manufacturer's recommended methods for cleaning and neutralization.

### 3.04 ROOF FLASHING INSTALLATION

- A. General: Install sheet metal flashing and trim to comply with performance requirements, sheet metal manufacturer's written installation instructions, and cited sheet metal standard. Provide concealed fasteners where possible, and set units true to line, levels, and slopes. Install work with laps, joints, and seams that are permanently watertight and weather resistant.
- B. Roof Edge Flashing: Anchor to resist uplift and outward forces according to recommendations in FM Global Property Loss Prevention Data Sheet 1-49 for FM Approvals' listing for required windstorm classification.
- C. Pipe or Post Counterflashing: Install counterflashing umbrella with close-fitting collar with top edge flared for elastomeric sealant, extending minimum of 4 inches over base flashing. Install stainless-steel draw band and tighten.
- D. Counterflashing: Coordinate installation of counterflashing with installation of base flashing. Insert counterflashing in reglets or receivers and fit tightly to base flashing. Extend counterflashing 4 inches over base flashing. Lap counterflashing joints minimum of 4 inches. Secure in waterproof manner by means of snap-in installation and sealant or lead wedges and sealant unless otherwise indicated.



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- E. Roof-Penetration Flashing: Coordinate installation of roof-penetration flashing with installation of roofing and other items penetrating roof. Seal with elastomeric sealant and clamp flashing to pipes that penetrate roof.

#### **3.05 WALL FLASHING INSTALLATION**

- A. General: Install sheet metal wall flashing to intercept and exclude penetrating moisture according to cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with installation of wall-opening components such as windows, doors, and louvers.
- B. Through-Wall Flashing: Installation of through-wall flashing is specified in Division 4.
- C. Opening Flashings in Frame Construction: Install continuous head, sill, jamb, and similar flashings to extend 6 inches beyond wall openings.

#### **3.06 MISCELLANEOUS FLASHING INSTALLATION**

- A. Equipment Support Flashing: Coordinate installation of equipment support flashing with installation of roofing and equipment. Weld or seal flashing with elastomeric sealant to equipment support member.

#### **3.07 ERECTION TOLERANCES**

- A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet on slope and location lines indicated on Drawings and within 1/8-inch offset of adjoining faces and of alignment of matching profiles.

#### **3.08 CLEANING AND PROTECTION**

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.
- D. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended by sheet metal flashing and trim manufacturer. Maintain sheet metal flashing and trim in clean condition during construction.
- E. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

## **END OF SECTION**



**SECTION 077200**  
**ROOF ACCESSORIES**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section Includes:
  - 1. Roof curbs.
  - 2. Equipment supports.
  - 3. Roof hatches.
  - 4. Preformed flashing sleeves.
  - 5. Fall Protection Tie-Offs

**1.03 PERFORMANCE REQUIREMENTS**

- A. General Performance: Roof accessories shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.

**1.04 ACTION SUBMITTALS**

- A. Product Data: For each type of roof accessory indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For roof accessories. Include plans, elevations, keyed details, and attachments to other work. Indicate dimensions, loadings, and special conditions. Distinguish between plant- and field-assembled work.

**1.05 INFORMATIONAL SUBMITTALS**

- A. Coordination Drawings: Roof plans, drawn to scale, and coordinating penetrations and roof-mounted items. Show the following:
  - 1. Size and location of roof accessories specified in this Section.
  - 2. Method of attaching roof accessories to roof or building structure.
  - 3. Other roof-mounted items including mechanical and electrical equipment, ductwork, piping, and conduit.
  - 4. Required clearances.
- B. Warranty: Sample of special warranty.

**1.06 CLOSEOUT SUBMITTALS**

- A. Operation and Maintenance Data: For roof accessories to include in operation and maintenance manuals.



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#### **1.07 COORDINATION**

- A. Coordinate layout and installation of roof accessories with roofing membrane and base flashing and interfacing and adjoining construction to provide a leakproof, weathertight, secure, and noncorrosive installation.
- B. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.

#### **1.08 WARRANTY**

- A. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finishes or replace roof accessories that show evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Finish Warranty Period: 20 years from date of Substantial Completion.

## **PART 2 - PRODUCTS**

### **2.01 METAL MATERIALS**

- A. Aluminum Sheet: ASTM B209, 0.040 inch thickness or as indicated, manufacturer's standard alloy for finish required, with temper to suit forming operations and performance required.
  - 1. Mill Finish: As manufactured.
  - 2. Factory Prime Coating: Where field painting is indicated, apply pretreatment and white or light-colored, factory-applied, baked-on epoxy primer coat, with a minimum dry film thickness of 0.2 mil.
  - 3. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
  - 4. Concealed Finish: Pretreat with manufacturer's standard white or light-colored acrylic or polyester-backer finish consisting of prime coat and wash coat, with a minimum total dry film thickness of 0.5 mil.
- B. Stainless-Steel Sheet and Shapes: ASTM A240/A240M or ASTM A666, Type 304.
- C. Galvanized-Steel Tube: ASTM A500/A500M, round tube, hot-dip galvanized according to ASTM A123/A123M.

### **2.02 MISCELLANEOUS MATERIALS**

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.
- B. Fasteners: Roof accessory manufacturer's recommended fasteners suitable for application and metals being fastened. Match finish of exposed fasteners with finish of material being fastened. Provide nonremovable fastener heads to exterior exposed fasteners. Furnish the following unless otherwise indicated:



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1. Fasteners for Zinc-Coated or Aluminum-Zinc Alloy-Coated Steel: Series 300 stainless steel or hot-dip zinc-coated steel according to ASTM A153/A153M or ASTM F 2329.
  2. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
  3. Fasteners for Copper Sheet: Copper, hardware bronze, or passivated Series 300 stainless steel.
  4. Fasteners for Stainless-Steel Sheet: Series 300 stainless steel.
- C. Gaskets: Manufacturer's standard tubular or fingered design of neoprene, EPDM, PVC, or silicone or a flat design of foam rubber, sponge neoprene, or cork.
- D. Elastomeric Sealant: ASTM C920, elastomeric polyurethane polymer sealant as recommended by roof accessory manufacturer for installation indicated; low modulus; of type, grade, class, and use classifications required to seal joints and remain watertight.
- E. Butyl Sealant: ASTM C1311, single-component, solvent-release butyl rubber sealant; polyisobutylene plasticized; heavy bodied for expansion joints with limited movement.
- F. Asphalt Roofing Cement: ASTM D4586/D4586M, asbestos free, of consistency required for application.

## 2.03 ROOF CURBS

- A. Roof Curbs: Internally reinforced roof-curb units capable of supporting superimposed live and dead loads, including equipment loads and other construction indicated on Drawings; with welded or mechanically fastened and sealed corner joints, stepped integral metal cant raised the thickness of roof insulation, and integrally formed deck-mounting flange at perimeter bottom.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
    - a. Thybar Corporation
    - b. Greenheck Fan Corporation
    - c. Pate Company (The)
- B. Size: Coordinate dimensions with roughing-in information or Shop Drawings of equipment to be supported.
- C. Material: Aluminum sheet, 0.090 inch thick.
1. Finish: Mill.
- D. Construction:
1. Liner: Same material as curb, of manufacturer's standard thickness and finish.
  2. Fabricate curbs to minimum height of 18 inches unless otherwise indicated.
  3. Top Surface: Level around perimeter with roof slope accommodated by sloping the deck-mounting flange.

## 2.04 EQUIPMENT SUPPORTS

- A. Equipment Supports: Internally reinforced metal equipment supports capable of supporting superimposed live and dead loads, including equipment loads and other construction indicated on Drawings; with welded or mechanically fastened and sealed corner joints, integral metal cant, and integrally formed deck-mounting flange at perimeter bottom.



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1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
  - a. Thybar Corporation
  - b. Greenheck Fan Corporation
  - c. Milcor Inc.; Commercial Products Group of Hart & Cooley, Inc
  - d. Pate Company (The)
- B. Size: Coordinate dimensions with roughing-in information or Shop Drawings of equipment to be supported.
- C. Loads: Coordinate and verify load requirements with approved manufacturer's Product Data for each piece of equipment requiring support.
- D. Material: Aluminum sheet, 0.090 inch thick.
  1. Finish: Factory prime coating Baked enamel or powder coat .
  2. Color: As selected by Architect from manufacturer's full range.
- E. Construction:
  1. Liner: Same material as equipment support, of manufacturer's standard thickness and finish.
  2. Fabricate equipment supports to minimum height of 18 inches unless otherwise indicated.
  3. Sloping Roofs: Where roof slope exceeds 1:48, fabricate each support with height to accommodate roof slope so that tops of supports are level with each other. Equip supports with water diverters or crickets on sides that obstruct water flow.
  4. Security Grille: Provide where indicated.

## 2.05 ROOF HATCH

- A. Roof Hatches: Thermally broken metal roof-hatch units with lids and insulated double-walled curbs, welded and sealed corner joints, continuous lid-to-curb counterflashing and weathertight perimeter gasketing, stepped integral metal cant raised the thickness of roof insulation, and integrally formed deck-mounting flange at perimeter bottom.
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
    - a. Acudor Products, Inc.
    - b. Babcock-Davis
    - c. Bilco Company (The) - E-50TB
- B. Type and Size: Single-leaf lid, Thermally Broken, 30 inch x 36 inch.
- C. Loads: Minimum 40-lbf/sq. ft. external live load and 25-lbf/sq. ft. internal uplift load.
- D. Hatch Material: Aluminum sheet, 0.090 inch (2.28 mm) thick.
  1. Finish: Aluminum
  2. Color: As selected by Architect from manufacturer's full range.
- E. Construction:



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1. Curb and Cover Insulation: Polyisocyanurate board, 3" thick with an R-value of 18 ( $U=0.315$ ) with an 18 gauge aluminum liner.
  2. Cover: Thermally broken, insulated, and double walled, with 11 gauge aluminum liner of same finish as outer metal lid. Cover shall have a heavy extruded EPDM rubber gasket bonded to the cover interior providing a continuous seal with the top of the curb.
  3. Curb Liner: Manufacturer's standard, of same material and finish as metal curb. The curb shall be formed with a 5 1/2" flange with 7/16" holes provided for securing to the roof deck. The curb shall be equipped with an integral 11 gauge aluminum cap flashing with fully welded corners and stamped tab clip flashing system spaced 6 inches on center for securing roof membrane.
  4. On ribbed or fluted metal roofs, form flange at perimeter bottom to conform to roof profile.
  5. Fabricate 11 gauge aluminum curbs with thermally broken interior and exterior surfaces to a minimum height of 12 inches unless otherwise indicated.
  6. Sloping Roofs: Where slope or roof deck exceeds 1:48, fabricate curb with perimeter curb height that is tapered to accommodate roof slope so that top surfaces of perimeter curb are level. Equip hatch with water diverter or cricket on side that obstructs water flow.
  7. Lifting Mechanism: Compression spring operators enclosed in telescopic tubes controlling the operation of the Cover throughout the entire movement of the cover. Tubes shall be located to prevent accumulation of moisture, dirt and debris. The lower tube shall interlock with a flanged support shoe welded to the curb assembly.
- F. Hardware: Heavy stainless-steel spring latch with interior and exterior turn handles, pintle-type hinge system, and interior and exterior padlock hasps.
1. The latch strike(s) shall be a stamped component bolted to the curb assembly.
  2. Provide two-point latch on lids larger than 84 inches.
  3. The cover shall automatically lock in the open position with a rigid hold open arm equipped with a 1 inch diameter red vinyl grip handle to permit the easy release for closing.
  4. Compression spring tubes shall be an anti-corrosive composite material and all other hardware shall be Type 316 stainless steel.
  5. Cover hardware shall be bolted into the heavy gauge channel reinforcing welded to the underside of the cover and concealed within the insulation space.
- G. Safety Railing System: Roof-hatch manufacturer's standard system including rails, clamps, fasteners, safety barrier at railing opening, and accessories required for a complete installation; attached to roof hatch and complying with 29 CFR 1910.23 requirements and authorities having jurisdiction.
1. Height: 42 inches above finished roof deck.
  2. Posts and Rails: Galvanized-steel pipe, 1-1/4 inches in diameter or galvanized-steel tube, 1-5/8 inches in diameter.
  3. Flat Bar: Galvanized steel, 2 inches high by 3/8 inch thick.
  4. Maximum Opening Size: System constructed to prevent passage of a sphere 21 inches in diameter.
  5. Self-Latching Gate: Fabricated of same materials and rail spacing as safety railing system. Provide manufacturer's standard hinges and self-latching mechanism.
  6. Post and Rail tops and ends: Weather resistant, closed or plugged with prefabricated end fittings.
  7. Provide weep holes or another means to drain entrapped water in hollow sections of handrail and railing members.
  8. Fabricate joints exposed to weather to be watertight.
  9. Fasteners: Manufacturer's standard, finished to match railing system.
  10. Finish: Manufacturer's standard.



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- H. Ladder-Assist Post: Roof-hatch manufacturer's standard device for attachment to roof-access ladder.
  - 1. Operation: Post locks in place on full extension; release mechanism returns post to closed position.
  - 2. Height: 42 inches above finished roof deck.
  - 3. Material: Steel tube .
  - 4. Post: 1-5/8-inch diameter pipe.
  - 5. Finish: Manufacturer's standard baked enamel or powder coat.
    - a. Color: As selected by Architect from manufacturer's full range.

## 2.06 PREFORMED FLASHING SLEEVES

- A. Exhaust Vent Flashing: Double-walled metal flashing sleeve or boot, insulation filled, with integral deck flange, 12 inches (300 mm) high, with removable metal hood and slotted metal collar.
  - 1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
    - a. Custom Solution Roof and Metal Products
    - b. Milcor Inc.; Commercial Products Group of Hart & Cooley, Inc
  - 2. Metal: Aluminum sheet, 0.063 inch (1.60 mm) thick.
  - 3. Diameter: As indicated.
  - 4. Finish: Manufacturer's standard.
- B. Vent Stack Flashing: Metal flashing sleeve, uninsulated, with integral deck flange.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 2. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
    - a. Custom Solution Roof and Metal Products
    - b. Milcor Inc.; Commercial Products Group of Hart & Cooley, Inc
  - 3. Metal: Aluminum sheet, 0.063 inch (1.60 mm) thick.
  - 4. Height: 13 inches (330 mm).
  - 5. Diameter: As indicated.
  - 6. Finish: As selected by the Architect from the manufacturer's full line of finishes.

## 2.07 FALL PROTECTION TIE OFFS

- A. Fall Protection Tie-Off: Galvanized steel, compatible with horizontal lifelines anchor point with standard loop tie-off.
  - 1. Basis-of-Design Product: Guardian Fall CB-18 Anchor Point or approved equal.
  - 2. Material: galvanized steel
  - 3. Worker capacity range: 130-420 lbs.
  - 4. Minimum breaking strength: 5,000 lbs.
  - 5. Concrete backer plate #10683 for installation on existing concrete deck, install as per manufacturer's recommendations and as per contract drawings.

## 2.08 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.



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- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of the Work.
- B. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
- C. Verify dimensions of roof openings for roof accessories.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 INSTALLATION

- A. General: Install roof accessories according to manufacturer's written instructions.
  - 1. Install roof accessories level, plumb, true to line and elevation, and without warping, jogs in alignment, excessive oil canning, buckling, or tool marks.
  - 2. Anchor roof accessories securely in place so they are capable of resisting indicated loads.
  - 3. Use fasteners, separators, sealants, and other miscellaneous items as required to complete installation of roof accessories and fit them to substrates.
  - 4. Install roof accessories to resist exposure to weather without failing, rattling, leaking, or loosening of fasteners and seals.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
  - 1. Coat concealed side of stainless-steel roof accessories with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
  - 2. Underlayment: Where installing roof accessories directly on cementitious or wood substrates, install a course of felt underlayment and cover with a slip sheet, or install a course of polyethylene sheet.
  - 3. Bed flanges in thick coat of roofing cement where required by manufacturers of roof accessories for waterproof performance.
- C. Roof Curb Installation: Install each roof curb so top surface is level.
- D. Equipment Support Installation: Install equipment supports so top surfaces are level with each other.
- E. Preformed Flashing-Sleeve Installation: Secure flashing sleeve to roof membrane according to flashing-sleeve manufacturer's written instructions.
- F. Seal joints with butyl sealant as required by roof accessory manufacturer.

### 3.03 REPAIR AND CLEANING

- A. Clean exposed surfaces according to manufacturer's written instructions.



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- B. Clean off excess sealants.
- C. Replace roof accessories that have been damaged or that cannot be successfully repaired by finish touchup or similar minor repair procedures.

**END OF SECTION**



**SECTION 077201**  
**NON-PENETRATING ROOFTOP SUPPORT SYSTEMS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. The work covered by this specification consists of furnishing all labor, equipment, materials and accessories, and performing all operations required for the correct installation of non-penetrating, recycled rubber rooftop supports for piping and ductwork systems.

**1.02 REFERENCES**

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2015.
- B. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; 2015.
- C. ASTM C531 – Test Method for Linear Shrinkage and Coefficient of Thermal Expansion of Chemical Resistant Mortars, Grouts, Monolithic Surfaces, and Polymer Concretes
- D. ASTM C642 - Standard Test Method for Density, Absorption, and Voids in Hardened Concrete; 2013.
- E. ASTM C672 – Test Methods for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals.
- F. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness; 2015.
- G. ASTM D395 - Standard Test Methods for Rubber Property--Compression Set; 2018.
- H. ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers--Tension; 2016.
- I. ASTM D573 - Standard Test Method for Rubber — Deterioration in an Air Oven; 2004 (Reapproved 2019).
- J. ASTM D746 - Standard Test Method for Brittleness Temperature of Plastics and Elastomers by Impact; 2014.
- K. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

**1.03 QUALITY ASSURANCE**

- A. Rubber / steel pipe supports shall be manufactured under a strict quality control program assuring quality product delivered to the jobsite. Pipe supports that are damaged shall not be installed.
- B. Workmanship: All rooftop supports to be installed by a qualified contractor and installed in accordance with manufacturer's recommendations.



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1. All work shall comply with all applicable federal, state, and local codes and laws having jurisdiction.
2. All work shall conform to accepted industry and trade standards for pipe, and ductwork installations.

## PART 2 - PRODUCTS

### 2.01 ACCEPTABLE MANUFACTURERS

- A. Manufacturer: Subject to compliance with these specifications, rooftop support systems shall be Dura-Blok™ design as supplied by Eaton or approved equal.

### 2.02 MATERIALS

- A. Curb base shall be made of 100% recycled rubber and polyurethane prepolymer with a uniform load capacity of 500 pounds per linear foot of support\*. In addition, each base to have a reflective red stripe. (\*See 3.01(C))
- B. Steel frame: Steel, strut galvanized per ASTM A653 or strut galvanized per ASTM A653 for bridge series.
- C. Attaching hardware: Zinc-plated threaded rod, nuts and attaching hardware per ASTM B633.
- D. Rooftop support system products shall meet or exceed the physical and performance characteristics as specified below:
  1. Density: 0.52 oz/cu in. ASTM D575
  2. Durometer Hardness: 67.2A ± 1. ASTM D575
  3. Tensile Strength: 231 psi minimum. ASTM D575
  4. Compression Deformation: 5% at 70psi and 72°F. ASTM D395.
  5. Brittleness at Low Temp: -50°F. ASTM D746.
  6. Weathering: 70 HOURS AT 120°F. ASTM D573.
    - a. Hardness Retained: 100% (±5%)
    - b. Compressive strength: 100% (±5%)
    - c. Tensile strength: 100% (±5%)
    - d. Elongation retained: 100% (±5%)

### 2.03 TYPE OF ROOFTOP SUPPORTS

- A. Continuous block channel pipe supports – Dura-Blok™ DB6-Series; Support shall consist of a 6 inch wide by 5 inch high rubber base with length of 9.6 inch length. 12 ga. galvanized channel. Standard strut accessories shall be used for attachment. Length of support shall extend a minimum of 2-inches from each side of the pipe(s) supported. Exact length to be coordinated in field. Assembly shall have 1" gaps between blocks for free flow of water.
- B. Extendable height pipe support – Dura-Blok™ model DBE 10-12, height to suit application: 12 inch (200 pound maximum load). Support shall consist of a 4-inch high rubber base with two (2) ½"-13 electro zinc all threaded rod risers and a 1" high galvanized slotted channel. Length of support to extend a minimum of 2-inches from each side of the pipe supported. Consult manufacturer as heavier loads may require CLDP load distribution plate.
- C. Fixed height roller pipe supports– Dura-Blok™ DBR Series; Support shall consist of a 4-inch high rubber base with 1" high galvanized channel and a pipe roller assembly. Coordinate selection of support with manufacturer to accommodate size of pipe to be installed. Roller



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supports shall be available in the following pipe sizes: 2" to 3 1/2", 4" to 6", 8" to 10", 12" to 14", 16" to 20". Support shall raise the pipe a minimum of 6" above the roof measured to bottom of supported pipe.

- D. Adjustable height roller pipe supports— Dura-Blok™ DBR10 Series; Support shall consist of a 4-inch high rubber base with two (2) 1/2"-13 electro zinc all threaded rod risers and a B3114-3-1/2" pipe roll with sockets. Support shall be suitable for pipe up to 3-1/2 inches, with vertical adjustment up to 12 inches.
- E. Elevated single pipe supports— Dura-Blok™ DBM Series; Support shall consist of a 4-inch high rubber base with one (1) 3/8"-16 electro zinc all threaded rod and a hinged pipe clamp. Supports shall be available in pipe sizes ranging from 1/2" to 2" and be suitable for supporting steel pipe or copper tubing. Coordinate clamp type with pipe material to be installed. Support shall raise the pipe approximately 11" above the roof measured to bottom of supported pipe.
- F. Adjustable pipe supports for installations over 12" in height – Dura-Blok™ DB\_DS Series; Support shall consist of two (2) 4-inch high rubber bases with 1" high galvanized channels and SH style riser channels. Riser channels shall be 1-5/8" x 1-5/8" x 12 ga. Support shall be capable of vertical adjustments between 12" and 50" measured to top of horizontal support channel.

## PART 3 - EXECUTION

### 3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions and recommendations. Coordinate overall dimensions of supports and pipe/duct to be supported in field with manufacturer prior to ordering.
- B. Piping shall be elevated not less than 12 inches above the roof surface.
- C. Consult roofing manufacturer for roof membrane compression capacities. Provide a compatible sheet of roofing material (rubber pad) installed under rooftop support to disperse concentrated loads and add enhance membrane protection.
- D. If gravel top roof, gravel must be removed around and under support.
- E. Support gas piping at intervals not exceeding the spacing specified in the Table below in accordance with the New York State Fuel Gas Code.

<b>Steel Pipe, Nominal Size of Pipe (Inches)</b>	<b>Maximum Horizontal Spacing of Supports (Feet)</b>
1/2	6
3/4 or 1	8
1-1/4 or Larger	10

- F. Support hydronic piping systems at intervals not exceeding the spacing specified in the Table below in accordance with the New York State Mechanical Code, or in accordance with ANSI/MSS SP-58. Hydronic piping systems shall include steam, hot water, chilled water, steam condensate, and ground source heat pump loop systems.



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<b>Piping Materials</b>	<b>Maximum Horizontal Spacing of Supports (Feet)</b>
ABS Pipe	4
Aluminum Pipe and Tubing	10
Cast-Iron Pipe	5
Copper or Copper-Alloy Pipe	12
Copper or Copper-Alloy Tubing	8
CPVC Pipe or Tubing, 1-Inch and Smaller	3
CPVC Pipe or Tubing, 1-1/4 Inches and Larger	4
Lead Pipe	Continuous
PB Pipe or Tubing	2-2/3 (32 Inches)
PE-RT, 1-Inch and Smaller	2-2/3 (32 Inches)
PE-RT, 1-1/4 Inches and Larger	4
PEX Tubing, 1-Inch and Smaller	2-2/3 (32 Inches)
PEX Tubing, 1-1/4 Inches and Larger	4
Polypropylene (PP) Pipe or Tubing, 1-Inch and Smaller	2-2/3 (32 Inches)
Polypropylene (PP) Pipe or Tubing, 1-1/4 Inches and Larger	4
PVC Pipe	4
Steel Tubing	8
Steel Pipe	12

G. Use properly sized clamps to suit pipe and conduit sizes.

**END OF SECTION**



**SECTION 079200**  
**JOINT SEALANTS**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section Includes:
  - 1. Silicone joint sealants.
  - 2. Urethane joint sealants.

**1.03 PRECONSTRUCTION TESTING**

- A. Preconstruction Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
  - 1. Use ASTM C1087 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
  - 2. Samples for Verification: For each type of sealant submit a color sample board and one sample joint, 1/2" wide by 6" long including joint substrates, shims, joint-sealant backings, secondary seals, and miscellaneous materials.
  - 3. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
  - 4. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures including use of specially formulated primers.
  - 5. Testing will not be required if joint-sealant manufacturers submit joint preparation data that are based on previous testing, not older than 24 months, of sealant products for adhesion to, and compatibility with, joint substrates and other materials matching those submitted.

**1.04 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.
- C. Joint-Sealant Schedule: Include the following information:
  - 1. Joint-sealant application, joint location, and designation.
  - 2. Joint-sealant manufacturer and product name.
  - 3. Joint-sealant formulation.
  - 4. Joint-sealant color.

**1.05 INFORMATIONAL SUBMITTALS**

- A. Qualification Data: For qualified Installer and testing agency.
- B. Product Certificates: For each kind of joint sealant and accessory, from manufacturer.



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- C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that sealants comply with requirements.
- D. Preconstruction Compatibility and Adhesion Test Reports: From sealant manufacturer, indicating the following:
  - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
  - 2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.
- E. Warranties: Sample of special warranties.

#### 1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project with a minimum of three-years experience in the installation of the work of this section.
- B. Source Limitations: Obtain each kind of joint sealant from single source from single manufacturer.
- C. Product Testing: Test joint sealants using a qualified testing agency.
  - 1. Testing Agency Qualifications: An independent testing agency qualified according to ASTM C1021 to conduct the testing indicated.
  - 2. Test according to SWRI's Sealant Validation Program for compliance with requirements specified by reference to ASTM C920 for adhesion and cohesion under cyclic movement, adhesion-in-peel, and indentation hardness.
- D. Mockups: Install sealant in mockups of assemblies specified in other Sections that are indicated to receive joint sealants specified in this Section. Use materials and installation methods specified in this Section.

#### 1.07 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 degrees 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.

#### 1.08 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: Two years from date of Substantial Completion.



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- B. Special Manufacturer's Warranty: Manufacturer's standard form in which joint-sealant manufacturer agrees to furnish joint sealants to repair or replace those that do not comply with performance and other requirements specified in this Section within specified warranty period.
  - 1. Warranty Period: Two years from date of Substantial Completion.
- C. 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

### 2.01 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 C920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C920 classifications for type, grade, class, and uses related to exposure and joint substrates.
  - 1. Suitability for Immersion in Liquids. Where sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247. Liquid used for testing sealants is deionized water, unless otherwise indicated.
- 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 C1248 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 Architect from manufacturer's full color range.

### 2.02 SILICONE JOINT SEALANTS

- A. Single-Component, Non-sag, Neutral-Curing Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 100/50, for Use NT.



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1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
  - a. Dow Corning Corporation; 790.
  - b. Pecora Corporation; 301 NS
  - c. Sika Corporation, Construction Products Division; SikaSil-C990.
  - d. Tremco Incorporated; Spectrem 1.
- B. Single-Component, Non-sag, Traffic-Grade, Neutral-Curing Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 100/50, for Use T.
  1. Products: Subject to compliance with requirements, provide the following:
    - a. Pecora Corporation; 311 NS.
    - b. Tremco Incorporated; Spectrem 800.
- C. Single-Component, Pourable, Traffic-Grade, Neutral-Curing Silicone Joint Sealant: ASTM C920, Type S, Grade P, Class 100/50, for Use T.
  1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Dow Corning Corporation; 890-SL.
    - b. Pecora Corporation; 310 SL.
    - c. Tremco Incorporated; Spectrem 900 SL.
- D. Mildew-Resistant, Single-Component, Nonsag, Neutral-Curing Silicone Joint Sealant: ASTM C920, Type S, Grade NS, Class 25, for Use NT.
  1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Tremco Incorporated; Tremsil 200.
    - b. Pecora Corporation; 898.
    - c. Or Approved Equal.

## 2.03 URETHANE JOINT SEALANTS

- A. Single-Component, Non-sag, Urethane Joint Sealant: ASTM C920, Type S, Grade NS, Class 100/50, for Use NT.
  1. Products: Subject to compliance with requirements, provide one of the following:
    - a. Sika Corporation, Construction Products Division; Sikaflex - 15LM.
    - b. Tremco Incorporated; Dymonic 100.
    - c. Or approved Equal.
- B. Single-Component, Nonsag, Traffic-Grade, Urethane Joint Sealant: ASTM C920. Type S, Grade NS, Class 25, for Use T.
  1. Products: Subject to compliance with requirements, provide one of the following:
    - a. BASF Building Systems; Sonolastic NP1 .
    - b. Sika Corporation, Construction Products Division; Sikaflex - 1a.
    - c. Tremco Incorporated; Vulkem 116, Dymonic FC.
- C. Single-Component, Pourable, Traffic-Grade, Urethane Joint Sealant: ASTM C920, Type S, Grade P, Class 25, for Use T.
  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; Sonolastic SL 1.
    - b. Pecora Corporation; Urexpan NR-201.
    - c. Sherwin-Williams Company, Loxon SL1 Self-Leveling.
    - d. Sika Corporation. Construction Products Division; Sikaflex - 1CSL.
    - e. Tremco Incorporated; Vulkem 45.



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- D. Immersible Multicomponent, Nonsag, Traffic-Grade, Urethane Joint Sealant: ASTM C920, Type M, Grade NS, Class 25, for Uses T and I.
  - 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; Sonolastic NP 2.
    - b. Pecora Corporation; Dynatred.
    - c. Tremco Incorporated; THC 901.

#### 2.04 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 C1330, Type C (closed-cell material with a surface skin) Type B (bicellular 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.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

#### 2.05 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Non-staining, non-absorbent material compatible with joint sealants and surfaces adjacent to joints.

### PART 3 - EXECUTION

#### 3.01 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.

#### 3.02 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:



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1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
    - a. Concrete.
    - b. Masonry.
    - c. Unglazed surfaces of ceramic tile.
  3. Remove laitance and form-release agents from concrete.
  4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
    - a. Metal.
    - b. Glass.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.03 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of 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.



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3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
  1. Remove excess sealant from surfaces adjacent to joints.
  2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
  3. Provide concave joint profile per Figure 8A in ASTM C1193, unless otherwise indicated.
  4. Provide flush joint profile where indicated per Figure 8B in ASTM C1193.
  5. Provide recessed joint configuration of recess depth and at locations indicated per Figure 8C in ASTM C1193.
    - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

### 3.04 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
  1. Extent of Testing: Test completed and cured sealant joints as follows:
    - a. Perform 1 test for each 500 feet of joint length thereafter or 1 test per each floor per elevation.
  2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C1193 or Method A, Tail Procedure, in ASTM C1521.
    - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
  3. Inspect tested joints and report on the following:
    - a. Whether sealants filled joint cavities and are free of voids.
    - b. Whether sealant dimensions and configurations comply with specified requirements.
    - c. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field-adhesion hand-pull test criteria.
  4. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
  5. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.
- B. Evaluation of Field-Adhesion Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

### 3.05 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.



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#### **3.06 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.

#### **3.07 JOINT-SEALANT SCHEDULE**

- A. Joint-Sealant Application: Exterior joints in horizontal traffic surfaces subject to water immersion.
  - 1. Joint Locations:
    - a. Joints in pedestrian plazas.
  - 2. Urethane Joint Sealant: Immersible, multicomponent, non-sag, traffic grade.
  - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.
- B. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal non-traffic surfaces.
  - 1. Joint Locations:
    - a. Construction joints in cast-in-place concrete.
    - b. Control and expansion joints in unit masonry.
    - c. Joints in dimension stone cladding.
    - d. Joints between metal panels.
    - e. Joints between different materials listed above.
    - f. Perimeter joints between materials listed above and frames of doors windows and louvers.
    - g. Control and expansion joints in ceilings and other overhead surfaces.
  - 2. Silicone Joint Sealant: Single component, non-sag, neutral curing, Class 100/50.
  - 3. Urethane Joint Sealant: Single component, non-sag, Class 100/50.
  - 4. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

#### **3.08 SEALANT INSTALLATION LOG**

- A. A tabular log of all sealant installations on the project shall be kept and submitted with the O & M manuals at the completion of the project.
- B. Tabular log shall have columns for:
  - 1. Sealant type
  - 2. Sealant installation location
  - 3. Temperature during installation
  - 4. Date of Installation
  - 5. Manufacturer
  - 6. Sealant color installed.

**END OF SECTION**



**SECTION 099113**  
**EXTERIOR PAINTING**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 SUMMARY**

- A. Section includes surface preparation and the application of paint systems on the following exterior substrates:
  - 1. Concrete.
  - 2. Galvanized metal.
  - 3. Steel.

**1.03 DEFINITIONS**

- A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.
- B. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- C. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.
- D. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D523.
- E. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D523.
- F. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D523.

**1.04 ACTION SUBMITTALS**

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
- B. Samples for Initial Selection: For each type of topcoat product.
- C. Product List: For each product indicated, include the following:
  - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
  - 2. Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
  - 3. VOC content.

**1.05 CLOSEOUT SUBMITTALS**

- A. Coating Maintenance Manual: Upon conclusion of the project, the Contractor or paint manufacturer/supplier shall furnish a coating maintenance manual, such as Sherwin-Williams



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"Custodian Project Color and Product Information report or equal. Manual shall include an Area Summary with finish schedule, Area Detail designating where each product/color/finish was used, product data pages, Material Safety Data Sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

#### 1.06 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
  - 1. Paint: 5 percent, but not less than 1 gal. of each material and color applied.

#### 1.07 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
  - 1. Maintain containers in clean condition, free of foreign materials and residue.
  - 2. Remove rags and waste from storage areas daily.
- B. Delivery and Handling: Deliver products to Project site in an undamaged condition in manufacturer's original sealed containers, complete with labels and instructions for handling, storing, unpacking, protecting, and installing. Packaging shall bear the manufacture's label with the following information:
  - 1. Product name and type (description).
  - 2. Batch date.
  - 3. Color number.
  - 4. VOC content.
  - 5. Environmental handling requirements.
  - 6. Surface preparation requirements.
  - 7. Application instructions.

#### 1.08 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.
- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

### PART 2 - PRODUCTS

#### 2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Sherwin Williams
  - 2. Benjamin Moore & Co.
  - 3. PPG Architectural Finishes, Inc.
- B. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to products listed in other Part 2 articles for the paint category indicated.



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#### **2.02 PAINT, GENERAL**

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. Material Compatibility:
  - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
  - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- C. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.
- D. Colors: As selected by Architect from manufacturer's full range.

#### **2.03 SOURCE QUALITY CONTROL**

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:
  - 1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
  - 2. Testing agency will perform tests for compliance with product requirements.
  - 3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

#### **2.04 PRIMERS/SEALERS**

- A. Primer, Alkali Resistant, Water Based: MPI #3.
- B. Primer, Bonding, Water Based: MPI #17.

#### **2.05 METAL PRIMERS**

- A. Primer, Alkyd, Anti-Corrosive for Metal: MPI #79.
- B. Primer, Alkyd, Quick Dry, for Metal: MPI #76.
- C. Primer, Galvanized: As recommended in writing by topcoat manufacturer.

#### **2.06 WATER-BASED PAINTS**

- A. Latex, Exterior Low Sheen (Gloss Level 3-4): MPI #15.
- B. Latex, Exterior Semi-Gloss (Gloss Level 5): MPI #11.



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## 2.07 SOLVENT-BASED PAINTS

- A. Alkyd, Exterior Flat (Gloss Level 1): MPI #8.
- B. Alkyd, Exterior, Semi-Gloss (Gloss Level 5): MPI #94.
- C. Alkyd, Exterior Gloss (Gloss Level 6): MPI #9.
- D. Alkyd, Quick Dry, Semi-Gloss (Gloss Level 5): MPI #81.
- E. Alkyd, Quick Dry, Gloss (Gloss Level 7): MPI #96.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers. Where acceptability of substrate conditions is in question, apply samples and perform in-situ testing to verify compatibility, adhesion, and film integrity of new paint application.
  - 1. Report, in writing, conditions that may affect application, appearance, or performance of paint.
- B. Substrate Conditions:
  - 1. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
    - a. Concrete: 12 percent.
    - b. Masonry (Clay and CMU): 12 percent.
  - 2. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
  - 3. Proceed with coating application only after unsatisfactory conditions have been corrected.
    - a. Application of coating indicates acceptance of surfaces and conditions.

### 3.02 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
  - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.



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- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceeds that permitted in manufacturer's written instructions.
- F. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer but not less than the following:
  - 1. SSPC-SP 3, "Power Tool Cleaning."
  - 2. SSPC-SP 7/NACE No. 4, "Brush-off Blast Cleaning."
  - 3. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."
- G. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- H. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- I. Aluminum Substrates: Remove loose surface oxidation.

### 3.03 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."
  - 1. Use applicators and techniques suited for paint and substrate indicated.
  - 2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
  - 3. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
  - 4. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
- B. Tint undercoats same color as topcoat, but tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
  - 1. Paint the following work where exposed to view:
    - a. Equipment, including panelboards and switch gear.
    - b. Uninsulated metal piping.



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- c. Uninsulated plastic piping.
- d. Pipe hangers and supports.
- e. Metal conduit.
- f. Plastic conduit.
- g. Tanks that do not have factory-applied final finishes.

#### 3.04 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
  - 1. Contractor shall touch up and restore painted surfaces damaged by testing.
  - 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

#### 3.05 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

#### 3.06 EXTERIOR PAINTING SCHEDULE

- A. Concrete Substrates, Non-traffic Surfaces:
  - 1. Latex System:
    - a. Prime Coat: Primer sealer, latex, exterior, MPI #3: S-W Loxon Concrete & Masonry Primer Sealer, A24W8300, at 8.0 mils wet, 3.2 mils dry.
    - b. Prime Coat: Latex, exterior, matching topcoat.
    - c. Intermediate Coat: Latex, exterior, matching topcoat.
    - d. Topcoat as selected by the Architect from the following:
      - 1) Topcoat: Latex, exterior, satin, (Gloss Level 3-4), MPI #15: S-W A-100 Exterior Latex Satin, A82 Series, at 4.0 mils wet, 1.5 mils dry, per coat.
- B. Concrete Substrates, Traffic Surfaces: (MPI EXT 3.2C)
  - 1. Pigmented Polyurethane over Epoxy Slip-Resistant Deck Coating System:
    - a. Prime Coat: Epoxy gloss, Gloss Level 6, MPI #212: Sherwin-Williams Armorseal 1000 HS. B67W2001 Series, at 2.5 to 4.0 mils dry, per coat.
    - b. Intermediate: Polyurethane, gloss matching Topcoat.
    - c. Topcoat: Polyurethane, two-component, pigmented, gloss, Gloss Level 6, MPI #212: Sherwin - Williams Armorseal HS Polyurethane, B65W220 Series, at 2.0 to 3.0 mils dry per coat, with manufacturer's slip resistant aggregate to produce a non-slip finish.
- C. CMU Substrates:



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1. Latex System: (MPI EXT 4.2L)
  - a. Block Filler: Block filler, latex, interior/exterior: S-W PrepRite Block Filler, B25W25, at 75 to 125 sq. ft. per gal (1.8 to 3.1 sq. m per l).
  - b. Intermediate Coat: Latex, exterior, matching topcoat.
  - c. Topcoat as selected by the Architect from the following:
    - 1) Topcoat: Latex, exterior, low-sheen, (Gloss Level 3-4), MPI #15: S-W A-100 Exterior Latex Low Sheen, A12 Series, at 4.0 mils wet, 1.5 mils dry, per coat.
- D. Steel Substrates:
  1. Pigmented Polyurethane System: (MPI EXT 5.1H)
    - a. Prime Coat: Alkyd anti-corrosive, quick dry for metal, MPI #79: Sherwin-Williams Kern Kromik Universal Primer, B62WZ111 Series, at 3.0 to 4.0 mils dry, per coat..
    - b. Intermediate Coat: Polyurethane, two component, pigmented, semi-gloss, Gloss Level 5, MPI #72: Sherwin-Williams Acrolon 218 HS Acrylic Polyurethane, B65-650 Series, at 3.0 to 6.0 mils dry , per coat.
    - c. Topcoat: Polyurethane, two-component, pigmented, gloss (Gloss Level 6), MPI #72: Sherwin Williams Acrolon 218 HS Acrylic Polyurethane, B65-600 Series, at 3.0 to 6.0 mils dry, per coat.
- E. Galvanized-Metal Substrates:
  1. Alkyd System:
    - a. Prime Coat: Primer, galvanized metal, as recommended in writing by topcoat manufacturer for exterior use on galvanized-metal substrates with topcoat indicated.
    - b. Intermediate Coat: Exterior alkyd enamel matching topcoat.
    - c. Topcoat: Sherwin-Williams, Protective & Marine, Steel Spec Fast Dry Alkyd, B55 Series, gloss (Gloss Level 5), MPI #96.

**END OF SECTION**



**SECTION 220529.12**  
**HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Pipe hangers for various installed pipe systems.

**1.02 SUBMITTALS**

- A. Submit under provisions of Section 013300.

**PART 2 - PRODUCTS**

**2.01 MANUFACTURERS**

- A. NATIONAL PIPE HANGER CORPORATION (NPHC), Grinnell, Fee and Mason, or Elcen.

**2.02 MATERIALS**

- A. All pipe hangers and supports for piping systems shall be of stainless steel construction. Provide dielectric/isolation wrapping in systems of dissimilar metals.
- B. Unistrut Trapeze Hangers: Stainless steel construction, where three or more lines of pipe run parallel, support them with trapeze hangers.
- C. C-Clamps: NPHC Model 615 - stainless steel. Use these for attaching hangers to steel beams. Welding hanger rods to steel members is not permitted. Provide retaining clip for C-Clamps.
- D. Malleable Beam Clamps: NPHC Model 675 - galvanized steel. Use these for attaching hangers to bar joists. Provide retaining clip for all beam clamps.
- E. Floor supports: Galvanized coated cast iron adjustable pipe saddle, locknut, nipple, floor flange and concrete pier or steel support.

**PART 3 - EXECUTION**

**3.01 PIPE HANGERS**

- A. Support pipes on specified hangers so that equipment, pumps, and fittings do not bear weight of pipe.
- B. Do not use perforated metal, strap iron, or band iron.
- C. Do not make offsets in hangers.
- D. Maximum allowable spacing of pipe hangers for horizontal piping is listed below. Space hangers and brackets at close intervals where necessary to maintain levels, slopes, and drainage, or to prevent sagging.
- E. Place hangers within 12 inches of each horizontal elbow.



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- F. Use hangers with 1-½ inch minimum vertical adjustment.
- G. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.

### **3.02 PIPE SUPPORTS**

- A. Maximum allowable spacing of pipe supports for vertical piping shall be supported according to manufacturer's recommendations.

### **3.03 SCHEDULES - HANGER SPACING**

- A. PVC Pipe:
  - 1. ½ to 1-inch - 4'-0" o.c.
  - 2. 1¼ to 2-inches - 5'-0" o.c.

### **END OF SECTION**



**SECTION 220553.11**  
**PLUMBING IDENTIFICATION**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Nameplates.
- B. Tags.
- C. Stencils.
- D. Pipe Markers.

**1.02 REFERENCES**

- A. Section 014500 - Quality Control: Requirements for references and standards.
- B. ASME A13.1 - Scheme for the Identification of Piping Systems.

**1.03 SUBMITTALS FOR REVIEW**

- A. Section 013300 - Submittal Procedures.
- B. Submit list of wording, symbols, letter size, and color coding for mechanical identification.

**1.04 SUBMITTALS FOR INFORMATION**

- A. Section 013300 - Submittal Procedures.
- B. Manufacturer's Instructions: Indicate installation instructions, special procedures, and installation.

**1.05 REGULATORY REQUIREMENTS**

- A. Colors shall conform to ASME A13.1.

**PART 2 - PRODUCTS**

**2.01 NAMEPLATES**

- A. Manufacturer: SETON NAMEPLATE COMPANY.
- B. Other acceptable manufacturers offering equivalent products.
  - 1. BUNTING.
  - 2. BRADY
- C. Description: Laminated three-layer plastic with engraved white letters on dark contrasting background color.



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## 2.02 TAGS

- A. Plastic Tags:
  - 1. Manufacturers:
    - a. SETON NAMEPLATE COMPANY.
    - b. BUNTING.
    - c. BRADY.
    - d. Laminated three-layer plastic with engraved white letters on dark contrasting background color. Tag size minimum 1-1/2 inches diameter, brass S hook.
- B. Metal Tags:
  - 1. Manufacturers:
    - a. SETON NAMEPLATE COMPANY Model M4506.
    - b. BUNTING.
    - c. BRADY.
  - 2. Brass with stamped letters and service designation tag size minimum 1-1/2 inches diameter with smooth edges, brass S hooks.
- C. Tag Chart: Typewritten letter size list in anodized aluminum frame with plastic window.

## 2.03 STENCILS

- A. Manufacturer: SETON NAMEPLATE COMPANY Model SPS.
- B. Other acceptable manufacturers offering equivalent products.
  - 1. BUNTING.
  - 2. BRADY.
- C. Stencils: With clean cut symbols and letters of following size:
  - 1. Up to 2 inch Outside Diameter of Insulation or Pipe: 1/2 inch high letters.
  - 2. 2-1/2 to 6 inches Outside Diameter of Insulation or Pipe: 1 inch high letters.
  - 3. Over 6 inches Outside Diameter of Insulation or Pipe: 1-3/4 inches high letters.
- D. Stencil Paint: Semi-gloss enamel, colors and lettering size conforming to ASME A13.1.

## 2.04 PIPE MARKERS

- A. Color and Lettering: Conform to ASME A13.1.
- B. Plastic Pipe Markers:
  - 1. Manufacturers:
    - a. SETON NAMEPLATE COMPANY Model SETMARK.
    - b. BUNTING
    - c. BRADY
    - d. Factory fabricated, flexible, semi-rigid plastic, preformed to fit around pipe or pipe covering. Larger sizes may have maximum sheet size with spring fastener.
- C. Plastic Tape Pipe Markers:
  - 1. Manufacturers:
    - a. SETON NAMEPLATE COMPANY.
    - b. BUNTING.



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- c. BRADY.
- d. Substitutions: Refer to Section 012500 - Substitution Procedures.
- 2. Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings.

## PART 3 - EXECUTION

### 3.01 PREPARATION

- A. Degrease and clean surfaces to receive adhesive for identification materials.
- B. Prepare surfaces for stencil painting.

### 3.02 INSTALLATION

- A. Section 014500 - Quality Control: Manufacturer's instructions.
- B. Install identifying devices after completion of coverings and painting.
- C. Install plastic nameplates with corrosive-resistant mechanical fasteners, or adhesive.
- D. Install labels with sufficient adhesive to ensure permanent adhesion and seal with clear lacquer. For unfinished canvas covering, apply paint primer before applying labels.
- E. Install tags using corrosion resistant chain. Number tags consecutively by location.
- F. Identify piping, concealed or exposed, with plastic pipe markers. Use tags on piping 3/4 inch (20 mm) diameter and smaller. Identify service, flow direction, and pressure. Install in clear view and align with axis of piping. Locate identification not to exceed 20 feet (6 m) on straight runs including risers and drops, adjacent to each valve and tee, at each side of penetration of structure or enclosure, and at each obstruction.

### 3.03 SCHEDULES

Outside Diameter of Insulation or Pipe Inches	Letter Height Inches	Color Field Inches
3/4 to 1-1/4	1/2	8
1-1/2 to 2	3/4	8
2-1/2 to 6	1	12
8 to 10	2	24
Over 10	2	24
Equipment	2	24

## END OF SECTION



**SECTION 221000**  
**PLUMBING PIPING**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Pipe, pipe fittings, valves, and connections for piping systems.
  - 1. Storm water.

**1.02 RELATED SECTIONS**

- A. Section 220553 - Plumbing Identification

**1.03 REFERENCES**

- A. Section 014500 - Quality Control: Requirements for references and standards.
- B. ANSI/UL 263 - Standard for Safety for Fire Tests of Building Construction and Materials
- C. ASME B16.51 - Pipe Flanges and Flanged Fittings: NPS ½ through NPS 24
- D. ASTM C564 - Rubber Gaskets for Cast Iron Soil Pipe and Fittings.
- E. ASTM D1784 - Rigid Vinyl Compounds.
- F. ASTM D1785 - PVC Plastic Pipe, Schedule 40
- G. ASTM D2466 - PVC Plastic Fittings, Schedule 40
- H. ASTM D2665 - PVC Drain, Waste, and Vent Pipe and Fittings
- I. ASTM D2564 - Solvent Cements for PVC Pipe and Fittings
- J. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials
- K. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials
- L. ASTM F1866 - Fabricated PVC DWV Fittings
- M. CISPI 310 - Couplings for use in connection with Hubless Cast Iron Soil Pipe and fittings for Sanitary, Storm Drainage, and Vent Systems.
- N. NSF/ANSI Standard 14 - Plastic Piping Components and Related Materials.
- O. PPI Technical Report TR-4/06
- P. Plumbing Code of New York State

**1.04 SUBMITTALS FOR REVIEW**

- A. Section 013300 - Submittals: Procedures for submittals.



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- B. Product Data: Provide data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalog information. Indicate valve data and ratings.
- C. Shop Drawings: Provide installation drawings indicating pipe/tubing layout and location of plumbing fixtures.

#### **1.05 QUALITY ASSURANCE**

- A. Perform Work in accordance with State of New York and Town code.

#### **1.06 REGULATORY REQUIREMENTS**

- A. Perform Work in accordance with the State of New York and the Town code.
- B. Conform to applicable code for installation of backflow prevention devices.

#### **1.07 DELIVERY, STORAGE, AND PROTECTION**

- A. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

### **PART 2 - PRODUCTS**

#### **2.01 SANITARY SEWER, VENT & STORM PIPING, ABOVE GRADE**

- A. PVC Schedule 40 Solid Wall Pipe and PVC DWV Fittings: Manufactured from virgin rigid PVC (polyvinyl chloride) vinyl with a Cell Class of 12454 as identified in ASTM D 1784. This system is intended for use in a non-pressure applications where operating temperatures will not exceed 140° F. PVC piping shall not be used in return air plenums.
  - 1. Fittings: PVC DWV fittings. Injection molded PVC DWV fittings shall conform to ASTM D2665. Fabricated PVC DWV fittings shall conform to ASTM F1866. Pipe and fittings shall conform to NSF International Standard 14.
  - 2. Joints: solvent-cement joints. All primers shall conform to ASTM F656. All Solvent cements for use with PVC, shall conform to ASTM D2654. Solvent cements for use with PVC shall conform to SCAQMD 1168/16A containing low VOC levels at maximum 510 grams per liter.

### **PART 3 - EXECUTION**

#### **3.01 EXAMINATION**

- A. Section 013100 - Project Management and Coordination: Verification of existing conditions before starting work.

#### **3.02 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.
- C. Prepare piping connections to equipment with flanges or unions.



## **Roof Replacement Program**

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#### **3.03 INSTALLATION (GENERAL)**

- A. Install in accordance with manufacturer's instructions.
- B. Provide non-conducting dielectric connections wherever jointing dissimilar metals.
- C. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls. Effect changes in size with reducing fittings.
- D. Install piping to maintain headroom, conserve space, and not interfere with use of space.
- E. Group piping whenever practical at common elevations.
- F. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment. Provide loops, pipe offsets or expansion loops.
- G. PVC pipe and fittings shall be manufactured as a system and be the product of one manufacturer.
- H. PVC pipe systems are not permitted for use in applications with operating temperatures exceeding 140°F.
- I. PVC pipe systems shall be protected from chemical agents, fire stopping materials, thread sealant, plasticized vinyl products, or other aggressive chemical agents not compatible with PVC compounds.
- J. Identify piping under provisions of Section 220553.11

#### **3.04 ERECTION TOLERANCES**

- A. Section 014500 - Quality Control: Tolerances.
- B. Establish invert elevations, slopes for drainage to ¼ inch per foot minimum. Maintain gradients.
- C. Slope water piping minimum 0.25 percent and arrange to drain at low points.

#### **END OF SECTION**



**SECTION 224400**  
**PLUMBING SPECIALTIES**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Roof Drains.

**1.02 REFERENCES**

- A. ASME A112.21.2 - Roof Drains.

**1.03 SUBMITTALS FOR REVIEW**

- A. Section 013300 - Submittal Procedures: Procedures for submittals.
- B. Product Data: Provide component sizes, rough-in requirements, service sizes, and finishes.
- C. Shop Drawings: Indicate dimensions, weights, and placement of openings and holes.

**1.04 SUBMITTALS FOR INFORMATION**

- A. Section 013300 - Submittal Procedures: Procedures for submittals.
- B. Manufacturer's Instructions: Indicate Manufacturer's Installation Instructions: Indicate assembly and support requirements.

**1.05 SUBMITTALS AT PROJECT CLOSEOUT**

- A. Section 017800 - Closeout Submittals: Procedures for submittals.
- B. Project Record Documents: Record actual locations of equipment, cleanouts, water hammer arrestors and specialties.
- C. Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.

**1.06 DELIVERY, STORAGE, AND PROTECTION**

- A. Accept specialties on site in original factory packaging. Inspect for damage.

**PART 2 - PRODUCTS**

**2.01 ROOF DRAINS & AREAWAY DRAIN**

- A. Round Roof Drain
  - 1. Manufacturer: Zurn Model Z100-DR with Top-Set Drain Riser and sump pan as per manufacturer.
    - a. Fifteen (15) inch diameter roof drain, with adjustable extension, Dura-Coated cast iron body with combination flashing clamp/gravel guard and low silhouette cast iron dome.



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**PART 3 - EXECUTION**

**3.01 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.

**END OF SECTION**



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# **APPENDIX A**

**Watts Architecture and Engineering Environmental Report:**  
**Yonkers Water Resource Recovery Facility:**

**Blower and Administration Building**



PRE-RENOVATION SURVEY  
FOR  
ASBESTOS-CONTAINING MATERIALS,  
LEAD-BASED PAINT  
AND  
POLYCHLORINATED BIPHENYLS IN CAULKS/SEALANTS  
FOR THE  
ROOF REPLACEMENT PROJECT  
FOR THE  
ADMINISTRATION, BLOWER AND THICKENING BUILDINGS  
AT THE  
YONKERS WATER RESOURCE RECOVERY FACILITY  
1 FERNBROOK STREET  
YONKERS, NEW YORK

SEPTEMBER 2018

PREPARED FOR:

H2M Architects and Engineers  
538 Broad Hollow Road  
Melville, New York

PREPARED BY:

315 5<sup>th</sup> Avenue, 11<sup>th</sup> Floor  
New York, NY 10016  
p: 646.998.3677

**WATTS**  
ARCHITECTURE &  
ENGINEERING





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## 1.0 – EXECUTIVE SUMMARY

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## 1.0 EXECUTIVE SUMMARY

Watts Architecture & Engineering (Watts) was retained by H2M Architects and Engineers to perform a survey for asbestos-containing materials (ACM), polychlorinated biphenyls (PCBs), and lead-based paint (LBP) that may be present at the Yonkers Water Resource Recovery Facility, pertaining to the roofs on the Administration, Blower and Thickening buildings located at 1 Fernbrook Street in Yonkers, New York.

Watts investigated the entirety of the roofs of the buildings, including the roofing equipment that was present at the time of the site visit. Watts collected representative bulk samples from each identified suspect material. The purpose of the survey was to determine the presence, location and quantity of ACM, PCBs, and LBP associated with the roofs to serve as a guide for future renovations.

The field survey for this report was conducted by Watts' personnel on August 30, 2018 and included the following:

- A visual site inspection to identify suspect ACM, LBP and PCBs on the roofs.
- Collection and laboratory analysis of samples for asbestos and polychlorinated biphenyls, as appropriate, from each identified suspect material.
- Documentation of suspect ACM and PCB sample locations on drawings and chain-of-custody forms.
- Performed X-Ray Fluorescence (XRF) readings to detect the presence of lead-based paint on suspect surfaces.
- Photographs.

### ASBESTOS-CONTAINING MATERIALS

The inspection included the collection of thirty (30) asbestos bulk samples representing thirteen (13) suspect materials identified. ACM is defined as any material containing more than one percent (1%) of asbestos.

Based on the laboratory analysis of samples collected by Watts and visual observations, **the following ACM has been identified:**

#### Administration Building

- **Bottom Layer of Roof Membrane - (3,025 SF)** located on the lower roof. The membrane is non-friable and in good condition.

#### Blower Building

- **Flashing Top Mastic - (1,200 SF)** – on top of the perimeter flashing. The flashing top mastic is non-friable and fair condition.
- **Flashing - (1,200 SF)** - around the perimeter of the various roofs and the roof



penetrations/mechanical equipment curbs. The flashing is non-friable and fair condition.

If asbestos-containing materials are accidentally disturbed, unidentified suspect asbestos-containing materials are discovered, or unknown hazardous materials, are found, cease work within the affected area, cordon off the affected area at the limits of disturbance or the unknown materials, and contact the DASNY construction manager.

### **NON-ASBESTOS-CONTAINING MATERIALS**

The following materials that may be disturbed by Roof Replacement Project at the Yonkers Water Resource Recovery Facility – Administration, Blower and Thickening Buildings were sampled by Watts as part of this inspection. The following materials have been determined to be non-asbestos-containing materials (Non-ACM) by laboratory analysis (no asbestos detected).

#### **Administrative Building - Lower Roof**

- Top roof sealant
- Top layer of roofing material
- Built-up roofing material at
- Grey caulking on the coping joints

#### **Blower Building**

- Dark grey caulk above the flashing around the perimeter
- Grey caulking on the coping joints

#### **Blower and Thickening Buildings**

- Built-up roofing material
- Light weight concrete (second layer)
- Vapor barrier (bottom layer)
- Brick mortar above the metal counter flashing

### **XRF TESTING FINDINGS**

Representative XRF readings were taken on select building components on the roofs of the Administration, Blower and Thickening buildings. The list below represents the building components that were tested as part of this investigation. For additional information, refer to the XRF analyzer data table in Section 3.1.

- Roof ladders
- Ladder/stairs over the large pipe
- Silver roof coating
- Roof vents
- Coping



No building components were identified to be coated with lead-based paint.

### POLYCHLORINATED BIPHENYLS (PCBs)

Watts investigated caulks and sealants within the roof replacement scope of work located at the Yonkers Water Resource Recovery Facility to determine if polychlorinated biphenyls (PCBs) were present and will be impacted by the roof replacement project. Three (3) samples were collected from representative locations identified by Watts based on visual observations made at the time of the visit.

The following materials were identified and sampled:

- Grey caulk above the metal flashing on the lower roof (Administration Building)
- Dark grey caulk above the metal flashing on the upper roofs (Administration and Blower Buildings)
- Grey caulk on the coping joints (Administration and Blower Buildings)

The Environmental Protection Agency (EPA) regulates PCBs and considers any debris generated from construction materials manufactured with PCBs derived from building renovation projects with a concentration of greater than 50 parts per million (ppm) as “PCB bulk product waste”. The Toxic Substances Control Act (TSCA) regulations (40 CFR Part 761) prescribe requirements for the proper management of PCB materials, including their handling and disposal. PCB bulk product waste at concentrations >50 ppm must follow specific storage, transport and disposal requirements.

The laboratory results indicate that all of the caulk/sealant samples were found to be below (none detected) the current regulatory threshold of 50 parts per million (50 ppm). 50 ppm is equivalent to 50,000  $\mu\text{g}/\text{kg}$ . Therefore, no special handling and disposal, related to PCBs, will be required.

### OBSERVATIONS

The Yonkers Water Resource Recovery Facility has different roof levels associated with the various buildings that are part of the project. The lower portion of the Administration Building roof has a membrane system with a silver coating on it. The remainder of the roofs consist of built-up roofing. All roof materials are to be removed completely to the roof deck.

Included in this report are: drawings indicating approximate bulk sample locations, chain-of-custody forms, laboratory results, laboratory accreditations, and consultant's license and certifications.

It is the belief of Watts that this investigation has identified all suspect ACM and PCB caulk/sealants that could be disturbed during future renovation and maintenance activities. However, if additional suspect materials are identified during the construction period that have not been previously sampled or sampled as part of this assessment, samples of each material



should be collected and analyzed for asbestos and/or PCB content.



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## 2.0 – ASBESTOS-CONTAINING MATERIALS

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## 2.0 ASBESTOS-CONTAINING MATERIALS

### ASBESTOS BULK SAMPLING AND LABORATORY METHODOLOGY

A NYSDOL-certified asbestos inspector from Watts collected bulk samples of all suspect ACM that was identified within the roof replacement project limits for the buildings. Bulk samples were collected using simple hand tools from each matrix identified as a potential ACM.

Samples were delivered with the proper chain-of-custody forms to a New York State accredited laboratory that is a participant in the Environmental Laboratory Approval Program (ELAP) and National Voluntary Laboratory Approval Program (NVLAP). All materials, except non-friable organically bound (NOB) materials and ceiling tiles, were analyzed using Polarized Light Microscopy (PLM) using ELAP Method 198.1. Ceiling tiles and NOBs, which include but are not limited to, mastics, window caulks, floor tiles, underwent gravimetric reduction prior to being analyzed by Transmission Electron Microscopy (TEM) under ELAP Method 198.4. The New York State Department of Health (NYSDOH) protocol requires analysis by TEM if the PLM analysis does not confirm the presence of asbestos.

This section includes information on all suspect ACM sampled. This section contains the following: a Homogeneous Materials List containing the homogeneous materials identified, their corresponding sample numbers and whether or not they are ACM, as well as a drawing identifying the approximate locations of asbestos bulk samples.

Where possible, Watts visually inspected the identified ACM to assess its condition. The condition of the ACM was classified as good, fair or poor. The requirement for each designation is as follows:

Good: Material with no visible damage or deterioration or showing very limited damage or deterioration.

Fair: The surface of the material is crumbling, blistering, water-stained, gouged, punctured or otherwise damaged with the damage covering less than one tenth of the surface if the damage is evenly distributed or up to 25% of the material if the damage is localized.

Poor: The surface of the material is crumbling, blistering, water-stained, gouged, punctured or otherwise damaged with the damage covering more than one tenth of the surface if the damage is evenly distributed or more than 25% of the material if the damage is localized. Material with large areas hanging from the substrate, delaminated, heavily gouged, crushed, etc.



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## 2.1 – HOMOGENEOUS MATERIALS LIST

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TABLE 2.1  
HOMOGENEOUS MATERIALS LIST  
YONKERS WATER RECOVERY RESOURCE FACILITY  
ADMINISTRATION, BLOWER AND THICKENING BUILDINGS  
1 FERNBROOK STREET  
YONKERS, NY

HM ID No.	Material Description	Sample Location	Type	Sample Number	Results (% Asbestos)			ACM (Y/N)
					PLM Friable	PLM NOB	TEM NOB	
1	Top Roof Sealant (Silver Coating)	Administrative Building	M	18051-1 18051-2	NA NA	NAD NAD	NAD NAD	N
2	Top Roofing Material	Administrative Building	M	18051-3 18051-4	NA NA	NAD NAD	NAD NAD	N
3	Built up Roofing Material	Administrative Building	M	18051-5 18051-6	NA NA	NAD NAD	NAD NAD	N
4	Bottom Layer Membrane	Administrative Building	M	18051-7 18051-8	NA NA	NAD 13.3% Chrysotile	NA NA	Y
5	Grey Caulk on Top of Flashing	Administrative Building	M	18051-9 18051-10	NA NA	NAD NAD	NAD NAD	N
6	Dark Grey Caulk on Top of Flashing	Blower Building	M	18051-11 18051-12	NA NA	NAD NAD	NAD NAD	N
7	Grey Caulk on Coping Seams	Blower Building	M	18051-13 18051-14	NA NA	NAD NAD	NAD NAD	N
8	Mastic/Sealant on Flashing	Blower Building	M	18051-15 18051-16	NA NA	5.9% Chrysotile NA/PS	NA NA	Y
9	Roof Flashing	Blower Building	M	18051-17 18051-18 18051-19	NA NA NA	11.8% Chrysotile NA/PS NA/PS	NA NA NA	Y
10	Built up Roofing	Thickening Building Blower Building	M	18051-20 18051-21 18051-22	NA NA NA	NAD NAD NAD	NAD NAD NAD	N



TABLE 2.1  
HOMOGENEOUS MATERIALS LIST  
YONKERS WATER RECOVERY RESOURCE FACILITY  
ADMINISTRATION, BLOWER AND THICKENING BUILDINGS  
1 FERNBROOK STREET  
YONKERS, NY

HM ID No.	Material Description	Sample Location	Type	Sample Number	Results (% Asbestos)			ACM (Y/N)
					PLM Friable	PLM NOB	TEM NOB	
11	Lightweight Concrete	Thickening Building Blower Building	M	18051-23 18051-24 18051-25	NA NA NA	ND ND ND	NA NA NA	N
12	Vapor Barrier under Built-up Roofing and Insulation	Thickening Building Blower Building	M	18051-26 18051-27 18051-28	NA NA NA	ND ND ND	NAD NAD NAD	N
13	Brick Mortar above Metal Flashing	Blower Building	M	18051-29 18051-30	NAD NAD	NA NA	NA NA	N

Abbreviations:  
NA = Not analyzed  
ND = None detected  
NA/PS = Not analyzed/positive stop  
HM = Homogeneous Material Identification Number

ACM  
Y = Yes  
N = No

Type  
T = Thermal  
S = Surfacing  
M = Miscellaneous

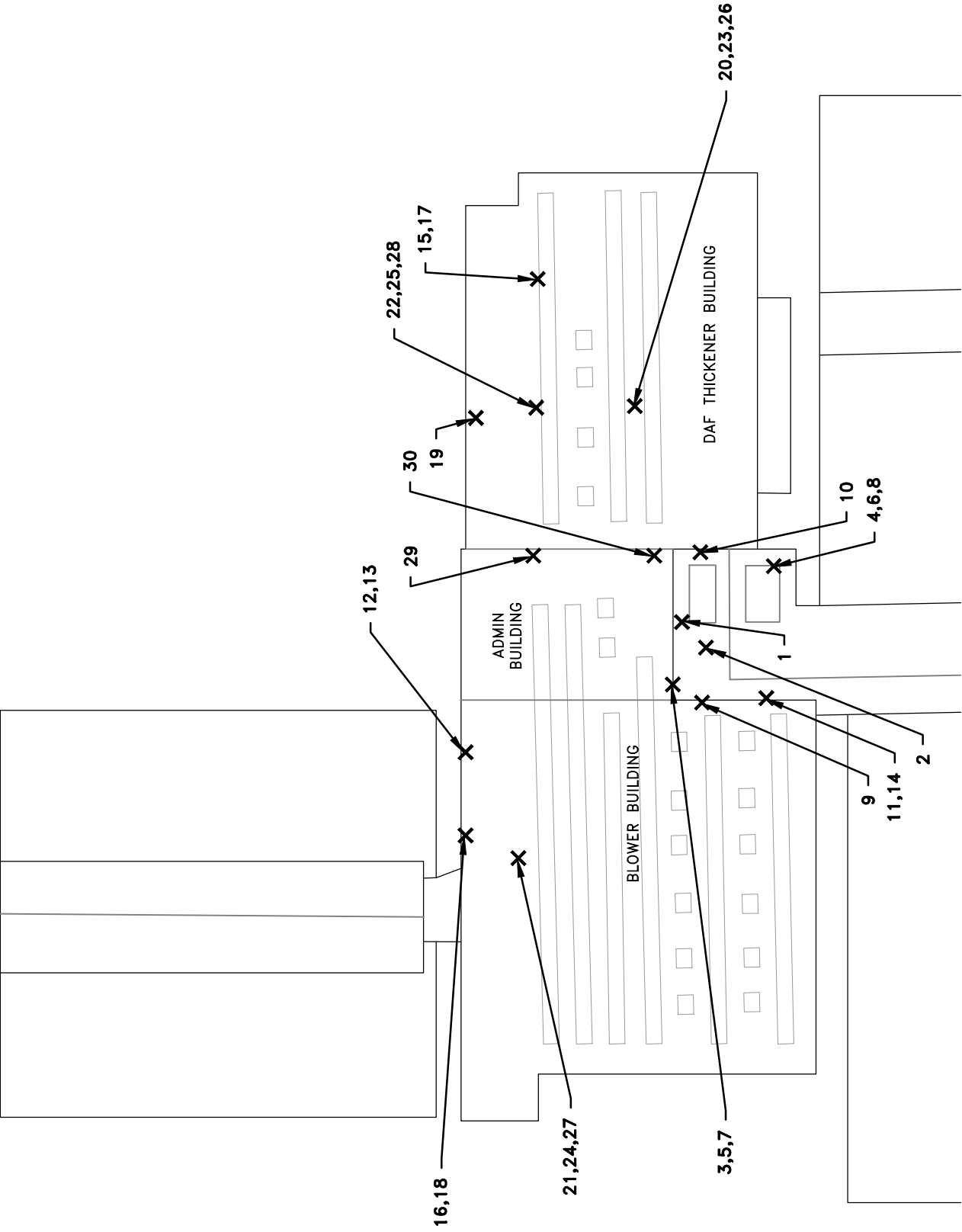


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## 2.2 – BULK SAMPLE LOCATION DRAWING

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PARTIAL ROOF PLAN



ASBESTOS BULK SAMPLE LOCATIONS		
ROOF		
YONKERS JOINT WASTEWATER TREATMENT PLANT ADMINISTRATION, BLOWER & DAF THICKENER BUILDING		
1 FERNBROOK STREET, YONKERS, NY		
NOT TO SCALE		SEPTEMBER 2018



WATTS  
ARCHITECTURE  
& ENGINEERING  
315 5th Avenue, 11th Floor  
New York, NY 10016  
(646) 998-3677

ALL SAMPLES ARE PREFIXED BY 18051-  
SAMPLES WERE COLLECTED ON AUGUST 30, 2018.  
X INDICATES APPROXIMATE SAMPLE LOCATION



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## 2.3– LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS

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**AmeriSci New York**

117 EAST 30TH ST.  
NEW YORK, NY 10016  
TEL: (212) 679-8600 • FAX: (212) 679-3114

## PLM Bulk Asbestos Report

Watts Architecture & Engineers  
Attn: Greg Andrews  
90 Perry Street  
  
Buffalo, NY 14203

**Date Received** 08/31/18    **AmeriSci Job #** 218085714  
**Date Examined** 09/05/18    **P.O. #**  
**ELAP #** 11480    **Page** 1 of 6  
**RE:** 18051; H2M Architects & Engineers; Roof Replacement  
Program - Yonkers Joint Wastewater Treatment Plant

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
18051-1 1	218085714-01 <b>Location:</b> Admin. Bld, Lower Roof South - Top Roof Sealant	<b>No</b>	NAD <sup>1</sup> (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Silver/Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 0.8 %			
18051-2 1	218085714-02 <b>Location:</b> Admin. Bld, Lower Roof North - Top Roof Sealant	<b>No</b>	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Silver/Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 0.9 %			
18051-3 2	218085714-03 <b>Location:</b> Admin. Bld, Lower Roof South - Top Roofing Material	<b>No</b>	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Silver/Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 1 %			
18051-4 2	218085714-04 <b>Location:</b> Admin. Bld, Lower Roof North - Top Roofing Material	<b>No</b>	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Silver/Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 0.7 %			
18051-5 3	218085714-05 <b>Location:</b> Admin. Bld, Lower Roof South - Built Up Roofing Material	<b>No</b>	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Silver/Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 0.4 %			



Client Name: Watts Architecture &amp; Engineers

**PLM Bulk Asbestos Report**18051; H2M Architects & Engineers; Roof Replacement  
Program - Yonkers Joint Wastewater Treatment Plant

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
18051-6 3	218085714-06	No	NAD
Location: Admin. Bld, Lower Roof North - Built Up Roofing Material			(by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
Analyst Description: Silver/Black, Homogeneous, Non-Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Non-fibrous 0.5 %			
18051-7 4	218085714-07	No	NAD
Location: Admin. Bld, Lower Roof South - Bottom Layer Membrane			(by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Fibrous glass 2 %, Non-fibrous 43.9 %			
18051-8 4	218085714-08	Yes	13.3 %
Location: Admin. Bld, Lower Roof North - Bottom Layer Membrane			(by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
Analyst Description: Black, Homogeneous, Non-Fibrous, Bulk Material			
Asbestos Types: Chrysotile 13.3 %			
Other Material: Non-fibrous 26.6 %			
18051-9 5	218085714-09	No	NAD
Location: Admin. Bld, Lower Roof South - Gray Caulking			(by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Non-fibrous 12.4 %			
18051-10 5	218085714-10	No	NAD
Location: Admin. Bld, Lower Roof North - Gray Caulking			(by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
Analyst Description: Grey, Homogeneous, Non-Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Non-fibrous 7.5 %			
18051-11 6	218085714-11	No	NAD
Location: Blower Bld - North - Dark Gray Caulking (Above Flashing)			(by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
Analyst Description: Dark Grey, Homogeneous, Non-Fibrous, Bulk Material			
Asbestos Types:			
Other Material: Non-fibrous 30.2 %			



Client Name: Watts Architecture &amp; Engineers

**PLM Bulk Asbestos Report**18051; H2M Architects & Engineers; Roof Replacement  
Program - Yonkers Joint Wastewater Treatment Plant

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
18051-12 6	218085714-12 Location: Blower Bld - South - Dark Gray Caulking (Above Flashing)	No	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Dark Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 31.4 %			
18051-13 7	218085714-13 Location: Blower Bld - West - Gray Caulking	No	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 74.5 %			
18051-14 7	218085714-14 Location: Blower Bld - East - Gray Caulking	No	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Grey, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 9.2 %			
18051-15 8	218085714-15 Location: Blower Bld - West - Flashing Top Mastic	Yes	5.9 % (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 5.9 % <b>Other Material:</b> Non-fibrous 26.7 %			
18051-16 8	218085714-16 Location: Blower Bld - East - Flashing Top Mastic		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
18051-17 9	218085714-17 Location: Blower Bld - West - Flashing	Yes	11.8 % (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> Chrysotile 11.8 % <b>Other Material:</b> Non-fibrous 23.7 %			



Client Name: Watts Architecture &amp; Engineers

**PLM Bulk Asbestos Report**

18051; H2M Architects & Engineers; Roof Replacement  
Program - Yonkers Joint Wastewater Treatment Plant

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
18051-18 9	218085714-18 Location: Blower Bld - East - Flashing		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
18051-19 9	218085714-19 Location: Blower Bld - West - Top Level Roof - North		NA/PS
<b>Analyst Description:</b> Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b>			
18051-20 10	218085714-20 Location: DAF Thickener Bld - Southeast - Built Up Roofing	No	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 5 %			
18051-21 10	218085714-21 Location: Blower Bld - South - Built Up Roofing	No	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 12.9 %			
18051-22 10	218085714-22 Location: Blower Bld - Top Roof - North - Built Up Roofing	No	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 4.6 %			
18051-23 11	218085714-23 Location: DAF Thickener Bld - Southeast - Soft Concrete (Second Layer)	No	NAD (EPA 400 PC) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Tan, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			



Client Name: Watts Architecture &amp; Engineers

**PLM Bulk Asbestos Report**

18051; H2M Architects & Engineers; Roof Replacement  
Program - Yonkers Joint Wastewater Treatment Plant

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
18051-24 11	218085714-24 <b>Location:</b> Blower Bld - South - Soft Concrete (Second Layer)	<b>No</b>	NAD (by NYS ELAP 198.1) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Tan, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
18051-25 11	218085714-25 <b>Location:</b> Blower Bld - North - Top Roof - Soft Concrete (Second Layer)	<b>No</b>	NAD (by NYS ELAP 198.1) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Tan, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			
18051-26 12	218085714-26 <b>Location:</b> DAF Thickener Bld - Southeast - Vapor Barrier (Bottom Layer)	<b>No</b>	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 1.1 %			
18051-27 12	218085714-27 <b>Location:</b> Blower Bld - South - Vapor Barrier (Bottom Layer)	<b>No</b>	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 2.6 %			
18051-28 12	218085714-28 <b>Location:</b> Blower Bld - North - Top Roof - Vapor Barrier (Bottom Layer)	<b>No</b>	NAD (by NYS ELAP 198.6) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> Black, Homogeneous, Non-Fibrous, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 3.7 %			
18051-29 13	218085714-29 <b>Location:</b> Blower Bld - South - Brick Mortar	<b>No</b>	NAD (by NYS ELAP 198.1) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> OffWhite, Homogeneous, Non-Fibrous, Cementitious, Bulk Material <b>Asbestos Types:</b> <b>Other Material:</b> Non-fibrous 100 %			



Client Name: Watts Architecture &amp; Engineers

## PLM Bulk Asbestos Report

18051; H2M Architects & Engineers; Roof Replacement  
Program - Yonkers Joint Wastewater Treatment Plant

Client No. / HGA	Lab No.	Asbestos Present	Total % Asbestos
18051-30 13	218085714-30 <b>Location:</b> Blower Bld - South - Brick Mortar	<b>No</b>	NAD (by NYS ELAP 198.1) by Ella Babayeva on 09/05/18
<b>Analyst Description:</b> OffWhite, Homogeneous, Non-Fibrous, Cementitious, Bulk Material			
<b>Asbestos Types:</b>			
<b>Other Material:</b> Non-fibrous 100 %			

### Reporting Notes:

(1) This job was - Analyzed using Olympus BH-2 Pol Scope S/N 229003

Analyzed by: Ella Babayeva

\*NAD/NSD =no asbestos detected; NA =not analyzed; NA/PS=not analyzed/positive stop, (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; PLM Bulk Asbestos Analysis by Appd E to Subpt E, 40 CFR 763 (NVLAP 200546-0), ELAP PLM Method 198.1 for NY friable samples, which includes the identification and quantitation of vermiculite or 198.6 for NOB samples or EPA 400 pt ct by Appd E to Subpt E, 40 CFR 763 (NY ELAP Lab 11480); Note:PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. NAD or Trace results by PLM are inconclusive, TEM is currently the only method that can be used to determine if this material can be considered or treated as non asbestos-containing in NY State (also see EPA Advisory for floor tile, FR 59,146,38970,8/1/94) National Institute of Standards and Technology Accreditation requirements mandate that this report must not be reproduced except in full without the approval of the lab.This PLM report relates ONLY to the items tested. AIHA-LAP, LLC Lab ID 102843, RI Cert AAL-094, CT Cert PH-0186, Mass Cert AA000054.

Reviewed By: \_\_\_\_\_ END OF REPORT \_\_\_\_\_



Client Name: Watts Architecture &amp; Engineers

**Table I**  
**Summary of Bulk Asbestos Analysis Results**

18051; H2M Architects &amp; Engineers; Roof Replacement Program - Yonkers Joint Wastewater Treatment Plant

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
01	18051-1	1	0.129	82.2	17.1	0.8	NAD	NAD
Location:	Admin. Bld, Lower Roof South - Top Roof Sealant							
02	18051-2	1	0.110	80.9	18.2	0.9	NAD	NAD
Location:	Admin. Bld, Lower Roof North - Top Roof Sealant							
03	18051-3	2	0.100	84.0	15.0	1.0	NAD	NAD
Location:	Admin. Bld, Lower Roof South - Top Roofing Material							
04	18051-4	2	0.141	85.8	13.5	0.7	NAD	NAD
Location:	Admin. Bld, Lower Roof North - Top Roofing Material							
05	18051-5	3	0.255	85.9	13.7	0.4	NAD	NAD
Location:	Admin. Bld, Lower Roof South - Built Up Roofing Material							
06	18051-6	3	0.192	83.9	15.6	0.5	NAD	NAD
Location:	Admin. Bld, Lower Roof North - Built Up Roofing Material							
07	18051-7	4	0.370	23.0	31.1	45.9	NAD	NA
Location:	Admin. Bld, Lower Roof South - Bottom Layer Membrane							
08	18051-8	4	0.291	43.3	16.8	26.6	Chrysotile 13.3	NA
Location:	Admin. Bld, Lower Roof North - Bottom Layer Membrane							
09	18051-9	5	0.170	31.2	56.5	12.4	NAD	NAD
Location:	Admin. Bld, Lower Roof South - Gray Caulking							
10	18051-10	5	0.160	71.9	20.6	7.5	NAD	NAD
Location:	Admin. Bld, Lower Roof North - Gray Caulking							
11	18051-11	6	0.162	53.1	16.7	30.2	NAD	NAD
Location:	Blower Bld - North - Dark Gray Caulking (Above Flashing)							
12	18051-12	6	0.118	50.8	17.8	31.4	NAD	NAD
Location:	Blower Bld - South - Dark Gray Caulking (Above Flashing)							
13	18051-13	7	0.239	3.8	21.8	74.5	NAD	NAD
Location:	Blower Bld - West - Gray Caulking							
14	18051-14	7	0.142	31.7	59.2	9.2	NAD	NAD
Location:	Blower Bld - East - Gray Caulking							
15	18051-15	8	0.132	66.7	0.8	26.7	Chrysotile 5.9	NA
Location:	Blower Bld - West - Flashing Top Mastic							
16	18051-16	8	0.172	65.1	8.7	26.2	NA/PS	NA
Location:	Blower Bld - East - Flashing Top Mastic							

See Reporting notes on last page



**Table I**  
**Summary of Bulk Asbestos Analysis Results**

18051; H2M Architects & Engineers; Roof Replacement Program - Yonkers Joint Wastewater Treatment Plant

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
17	18051-17	9	0.214	56.1	8.4	23.7	Chrysotile 11.8	NA
Location:	Blower Bld - West - Flashing							
18	18051-18	9	0.239	52.3	9.2	38.5	NA/PS	NA
Location:	Blower Bld - East - Flashing							
19	18051-19	9	0.300	89.3	4.3	6.3	NA/PS	NA
Location:	Blower Bld - West - Top Level Roof - North							
20	18051-20	10	0.323	91.6	3.4	5.0	NAD	NAD
Location:	DAF Thickener Bld - Southeast - Built Up Roofing							
21	18051-21	10	0.248	75.4	11.7	12.9	NAD	NAD
Location:	Blower Bld - South - Built Up Roofing							
22	18051-22	10	0.262	14.9	80.5	4.6	NAD	NAD
Location:	Blower Bld - Top Roof - North - Built Up Roofing							
23	18051-23	11	----	----	----	----	NAD	NA
Location:	DAF Thickener Bld - Southeast - Soft Concrete (Second Layer)							
24	18051-24	11	----	----	----	----	NAD	NA
Location:	Blower Bld - South - Soft Concrete (Second Layer)							
25	18051-25	11	----	----	----	----	NAD	NA
Location:	Blower Bld - North - Top Roof - Soft Concrete (Second Layer)							
26	18051-26	12	0.190	92.6	6.3	1.1	NAD	NAD
Location:	DAF Thickener Bld - Southeast - Vapor Barrier (Bottom Layer)							
27	18051-27	12	0.233	93.1	4.3	2.6	NAD	NAD
Location:	Blower Bld - South - Vapor Barrier (Bottom Layer)							
28	18051-28	12	0.243	93.0	3.3	3.7	NAD	NAD
Location:	Blower Bld - North - Top Roof - Vapor Barrier (Bottom Layer)							
29	18051-29	13	----	----	----	----	NAD	NA
Location:	Blower Bld - South - Brick Mortar							
30	18051-30	13	----	----	----	----	NAD	NA
Location:	Blower Bld - South - Brick Mortar							



Table I  
Summary of Bulk Asbestos Analysis Results

18051; H2M Architects & Engineers; Roof Replacement Program - Yonkers Joint Wastewater Treatment Plant

AmeriSci Sample #	Client Sample#	HG Area	Sample Weight (gram)	Heat Sensitive Organic %	Acid Soluble Inorganic %	Insoluble Non-Asbestos Inorganic %	** Asbestos % by PLM/DS	** Asbestos % by TEM
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Analyzed by: Karol H. Lu  : Date Analyzed 9/6/2018

\*\*Quantitative Analysis (Semi/Full): Bulk Asbestos Analysis - PLM by Appd E to Subpt E, 40 CFR 763 or ELAP 198.1 for New York friable samples or ELAP 198.6 for New York NOB samples; TEM (Semi/Full) by EPA 600/R-93/116 (or ELAP 198.4; for New York samples; NAD = no asbestos detected during a quantitative analysis; NA = not analyzed; Trace = <1%; (SOF-V) = Sprayed On Fireproofing containing Vermiculite; (SM-V) = Surfacing Material containing Vermiculite; Quantitation for beginning weights of <0.1 grams should be considered as qualitative only; Qualitative Analysis: Asbestos analysis results of "Present" or "NVA = No Visible Asbestos" represents results for Qualitative PLM or TEM Analysis only (no accreditation coverage available from any regulatory agency for qualitative analyses); NVLAP (PLM) 200546-0, NYSDOH ELAP Lab 11480, AIHA-LAP, LLC (PLM) Lab ID 102843.

Warning Note: PLM limitation, only TEM will resolve fibers <0.25 micrometers in diameter. TEM bulk analysis is representative of the fine grained matrix material and may not be representative of non-uniformly dispersed debris for which PLM evaluation is recommended (i.e. soils and other heterogeneous materials).

Reviewed By: \_\_\_\_\_



## BULK SAMPLE CHAIN-OF-CUSTODY FORM

The purpose of the chain-of-custody form is to reduce the possibility of misidentifying individual samples, to help trace any samples that may be lost, and to provide a record certifying that the samples were delivered to and received by the analytical laboratory.

An important feature of this form is the signature section at the bottom, identifying all persons who handled the samples.



# Watts Architecture & Engineering

# 218085714

Page

1 of 2

Client:

Project:

Building/Location:

Samples Collected by:

Email Results to:

Mail Report & Invoice to:

HA Architects & Engineers

Roof Replacement Program

Yonkers Joint Wastewater Treatment Plant

Albany, NY 12208

Cell: (646) 954-4458

Watts Architecture & Engineering

95 Perry Street, Suite 300, Buffalo, NY 14203

Date:

Watts Project No.:

Turnaround Requested:

Analysis Requested:

PLM X TEM X

3 Hr.

6 Hr.

12 Hr.

24 Hr.

48 Hr.

4 Day

5 Day

6-10 Day

HA #	Sample Number	Material Description	Sample Location	Laboratory Results
18051-1	1	Top Roof Sealant	Admin Bld, Lower Roof South	
1	2	↓	North	
2	3	Top Roofing Material	Admin Bld, Lower Roof South	
2	4	↓	North	
3	5	Built up Roofing Material	Admin Bld, Lower Roof South	
3	6	↓	North	
4	7	Bottom layer membrane	Admin Bld, Lower Roof South	
4	8	↓	North	
5	9	Grey caulking	Admin Bld, Lower Roof South	
5	10	↓	North	
6	11	Dark Grey caulking (above flashing)	Blower Bld North	
6	12	↓	South	
7	13	Grey caulking	West	
7	14	↓	East	
8	15	Flashing Top Mastic	West	
8	16	↓	East	

Relinquished By:

Signature

Date/Time:

8/30/18

Received By:

Signature

Date/Time:

8/30/18

Relinquished By:

Signature

Date/Time:

8/30/18

Received By:

Signature

Date/Time:

8/31/18

Comments:

Please stop at the first positive in each Homogenous Area



# Watts Architecture & Engineering

## ASBESTOS BULK SAMPLE CHAIN-OF-CUSTODY

# 218085714

Page

2 of 2

Client:

Project:

Building/Location:

Samples Collected by:

Email Results to:

Mail Report & Invoice to:

H2M Architects & Engineers

West Repacement Program

Venters Joint Water Treatment Plant

Alexander Miller

one.hsin@h2m.com and gandrums@watts-ae.com

Watts Architecture & Engineering

95 Perry Street, Suite 300, Buffalo, NY 14203

Turnaround Requested:

48 Hr.

6 Hr.

12 Hr.

24 Hr.

Analysis Requested:

PLM X TEM X

Date:

8/30/18

Watts Project No.:

18051

HA #	Sample Number	Material Description	Sample Location	Laboratory Results
18051-9	17	Flashing	Blower Bld west	
	18		East	
	19		Top level Roof - North	
10	20	Built up Roofing	DAF Thickener Bld - South east	
	21		Blower Bld - South	
	22		DAF Thickener Bld - South East	
11	23	Soft Concrete (second layer)	Blower Bld - South	
	24		DAF Thickener Bld - South	
	25		Blower Bld - North (Top Roof)	
12	26	Vapor Barrier (bottom layer)	DAF Thickener Bld - South East	
	27		Blower Bld - South	
	28		Blower Bld - North (Top Roof)	
13	29	Brick Mortar	Blower Bld - South	
	30		North	

Relinquished By:

Date/Time:

8/30/18

Received By:

Print Name

M. Villatoro

Date/Time:

8/30/18

Relinquished By:

Date/Time:

8/30/18

Received By:

Signature

M. Villatoro

Date/Time:

8/30/18

Comments:

Please stop at the first positive in each Homogenous Area



---

## 3.0 – LEAD-BASED PAINT

---



### 3.0 LEAD-BASED PAINT (LBP)

#### Methodology

Painted building components were grouped by testing combinations. A testing combination is characterized by location, component type, substrate, and visible color. Refer to Section 3.1 for a complete listing of all XRF readings that were taken for this project.

Each XRF reading is identified by the component analyzed, the substrate and the paint color of the visible paint film, and where applicable, the side of the room/area it was collected from (North, East, South, West).

The LBP survey was performed using the Department of Housing and Urban Development (HUD) protocol. Certain aspects of the HUD guidelines are typically applied to public and commercial buildings, most commonly the levels used to establish LBP. HUD defines LBP, when analyzed by a portable XRF, as paint that contains lead at 1.0 milligram per square centimeter ( $\text{mg}/\text{cm}^2$ ) or greater. When paint chips are analyzed by Atomic Absorption Spectroscopy (AAS), HUD defines LBP as paint containing 0.5 percent or greater ( $>0.5\%$ ) lead by weight.

The Occupational Safety and Health Administration (OSHA) lead in construction standard applies to all construction work where an employee may be exposed to lead. Therefore, for the purposes of this report, any point that contains lead greater than 1.0 milligrams per square centimeter ( $\text{mg}/\text{cm}^2$ ) is considered to be LBP.

For the purposes of this project, the Occupational Safety & Health Administration's (OSHA) Lead in Construction Standard (29 CFR 1926.62) applies. This standard applies to all construction work where an employee may be occupationally exposed to lead. Construction work is defined as work for construction, alteration and/or repair, including painting and decorating. It includes but is not limited to the following:

- Demolition or salvage of structures where lead or materials containing lead are present.
- Removal or encapsulation of materials containing lead.
- New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, which contain lead, or materials containing lead.
- Installation of products containing lead.
- Lead contamination/emergency cleanup.
- Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed; and
- Maintenance operations associated with the construction activities.

#### XRF Calibration

In order to field verify the calibration and accuracy of the XRF equipment, "calibration checks" are made both by the equipment itself and by the operator. Before the XRF will allow any testing



for lead-based paint, it requires a "standardization" reading. This is accomplished by placing the standardization clip over the end of the XRF when prompted by the XRF. Upon the completion of the standardization reading, the XRF will display a Pass or Fail result. If the standardization is successful, the operator checks the calibration of the XRF against National Institute of Standards and Technology (NIST) lead samples that were provided by the manufacturer. The operator's calibration checks are taken at the beginning and the end of the testing period, and approximately every four hours, if necessary. The calibration checks are acceptable if the average of the three readings is between 1.0 and 1.1 mg/cm<sup>2</sup>.

Watts utilized the existing room names identified for the purposes of the testing. The location of each XRF reading was recorded based on the room name. Refer to Section 3.2 for the XRF testing reference drawing.

### Disclaimer

This report is based primarily on the results of visual site observations and a general survey of the conditions within the pre-defined project areas for the roof replacement project at the Yonkers Administration, Blower and Thickening buildings. Representative XRF readings were taken from each distinct building component within the project areas in order to be able to determine if those components contained lead or were covered with lead-based paint.

The lead-based paint survey was performed by Watts on August 30, 2018.

Gregory A. Andrews  
Lead Risk Assessor

*Gregory A. Andrews*  
Signature

NY-R-4906-4  
Certification Number

Address: Yonkers WRRF  
1 Fernbrook Street  
Yonkers, NY



---

### 3.1 – X-RAY FLUORESCENCE ANALYZER (XRF) LEAD DATA TABLE

---



**XRF DATA TABLE**  
**YONKERS WATER RESOURCE RECOVERY FACILITY**  
**ROOF REPLACEMENT**  
**BLOWER AND ADMINISTRATION BUILDINGS**  
**YONKERS, NEW YORK**

**Testing Date: August 30, 2018**

**Innov-X Serial No. 571370**

Reading	Room	Side	Component	Substrate	Color	Condition	Floor	Results (mg/cm <sup>2</sup> )
1	Standardization							PASS
2	Calibration							1.06
3	Calibration							1.12
4	Calibration							1.1
5	Low Roof	South	Roof Ladder	Metal	Brown	Intact	Roof	0
6	Low Roof	South	Roof Ladder	Metal	Brown	Intact	Roof	0
7	Low Roof	West	Ladder Over Pipe	Metal	Light Brown	Intact	Roof	0.01
8	Low Roof	West	Ladder Over Pipe	Metal	Light Brown	Intact	Roof	0.01
9	Low Roof	South	Roof Coating	Roof Membrane	Silver	Intact	Roof	0.17
10	Low Roof	Center	Roof Coating	Roof Membrane	Silver	Intact	Roof	0
11	Middle Roof	West	Roof Ladder	Metal	Brown	Intact	Roof	0
12	Middle Roof	West	Roof Ladder	Metal	Brown	Intact	Roof	0
13	Middle Roof	West	Roof Vents	Metal	Silver	Intact	Roof	0
14	Middle Roof	West	Roof Vents	Metal	Silver	Intact	Roof	0
15	Middle Roof	South	Coping Caps	Metal	Silver	Intact	Roof	0
16	Middle Roof	South	Coping Caps	Metal	Silver	Intact	Roof	0
17	Calibration							1.02
18	Calibration							1.01
19	Calibration							1.04

**Readings greater than 1.0 mg/cm<sup>2</sup> indicate the presence of lead-based paint.**



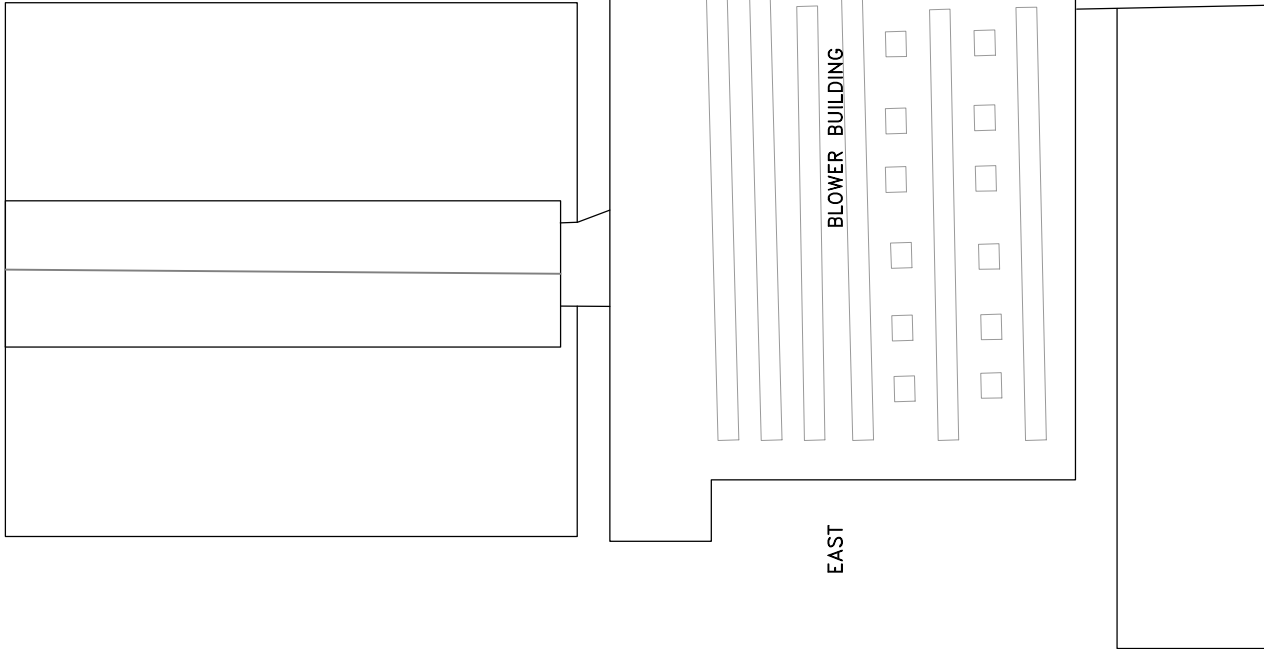
---

## 3.2 – XRF TEST REFERENCE DRAWING

---



SOUTH



NORTH

PARTIAL ROOF PLAN




LEAD REFERENCE DRAWING  
ROOF

YONKERS JOINT WASTEWATER TREATMENT PLANT  
ADMINISTRATION, BLOWER & DAF THICKENER  
BUILDING

1 FERNBROOK STREET, YONKERS, NY

NOT TO SCALE

SEPTEMBER 2018

  
WATTS  
ARCHITECTURE  
& ENGINEERING  
315 5th Avenue, 11th Floor  
New York, NY 10016  
(646) 998-3677

XRF TESTING WAS CONDUCTED ON AUGUST 30, 2018.



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## 4.0 – POLYCHLORINATED BIPHENYLS (PCBs) IN CAULKS/SEALANTS

---



## 4.0 PCBS IN CAULK/SEALANTS

### Sampling and Laboratory Methodology

The Environmental Protection Agency (EPA) regulates PCBs and considers any debris generated from construction materials manufactured with PCBs derived from building renovation projects with a concentration of greater than 50 parts per million (ppm) as PCB bulk product waste. The Toxic Substances Control Act (TSCA) regulations (40 CFR Part 761) prescribes requirements for the proper management of PCB materials, including their handling and disposal. PCB bulk product waste at concentrations >50 ppm must follow specific storage, transport and disposal requirements.

Watts collected a total of three (3) samples of suspect PCB-containing caulks/sealants that were observed at the time of our site visit. The samples were collected using simple hand tools from each matrix identified as a potential PCB-containing material. The samples were analyzed by Schneider Laboratories Global of Richmond, VA, a NYSDOH approved laboratory (ELAP No. 11413) utilizing USEPA SW-846 Method 8082, PCBs. The following table identifies the suspect materials identified, their corresponding sample numbers, and individual PCB aroclor analytical results.

TABLE 4-1  
YONKERS WATER RESOURCE RECOVERY PLANT  
ADMINISTRATION, BLOWER AND THICKENING BUILDINGS  
1 FERNBROOK STREET  
YONKERS, NY

PCB Concentration (mg/kg or ppm)										
Sample Number	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Sample Description
001	ND	ND	ND	ND	ND	ND	ND	ND	ND	Grey Caulk - Lower Roof Administrative Building
002	ND	ND	ND	ND	ND	ND	ND	ND	ND	Dark Grey Caulk - Above Flashing at the Administrative and Blower Buildings
003	ND	ND	ND	ND	ND	ND	ND	ND	ND	Grey Caulk on the Coping Joint at the Administrative and Blower Buildings

#### Abbreviations:

ND = Non Detected, below Reporting Limit

mg/kg = milligram per kilogram

ppm = parts per million

**Bold rows indicate PCB concentration >50ppm.**

\*Indicates that the material contains asbestos.



None of the sampled materials contained PCBs in excess of the current regulatory action of 50 ppm. Therefore, no special handling or disposal considerations for these materials with respect to PCBs are required.

A drawing depicting the approximate PCB sample locations and the full laboratory analytical results for PCBs are included in Section 4.3

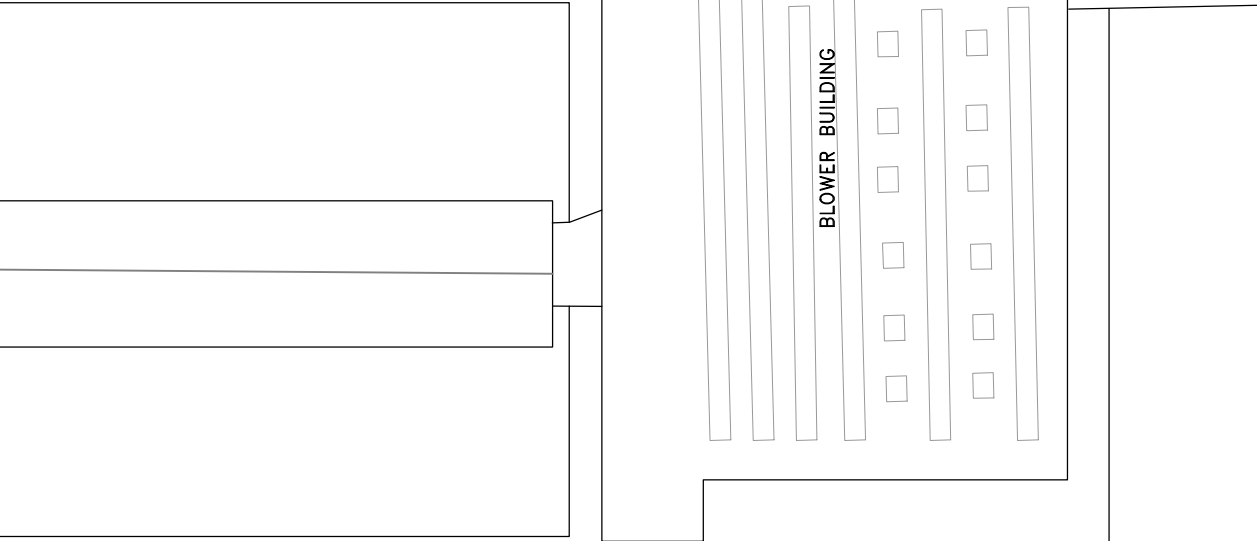


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## 4.1 – PCB SAMPLE LOCATION DRAWING

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PARTIAL ROOF PLAN

PCB BULK SAMPLE LOCATIONS  
ROOF

YONKERS JOINT WASTEWATER TREATMENT PLANT  
ADMINISTRATION, BLOWER & DAF THICKENER  
BUILDING  
1 FERNBROOK STREET, YONKERS, NY  
NOT TO SCALE



WATTS  
ARCHITECTURE  
& ENGINEERING  
315 5th Avenue, 11th Floor  
New York, NY 10016  
(646) 998-3677

ALL SAMPLES ARE PREFIXED BY 18051-  
SAMPLES WERE COLLECTED ON AUGUST 30, 2018.  
X INDICATES APPROXIMATE SAMPLE LOCATION



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## 4.2 – LABORATORY REPORT AND CHAIN-OF-CUSTODY FORMS

---





## Analysis Report

# Schneider Laboratories Global, Inc

2512 W. Cary Street • Richmond, Virginia • 23220-5117  
804-353-6778 • 800-785-LABS (5227) • Fax 804-359-1475

**Customer:** Watts Architecture & Engineering (4637)  
**Address:** 95 Perry Street Suite 300  
Buffalo, NY 14203

**Order #:** 277576

**Matrix** Bulk  
**Received** 09/04/18  
**Reported** 09/06/18

**Attn:**

**Project:** Roof Replacement Program  
**Location:** Yonkers Joint Waste Water Trmt  
**Number:** 18051

**PO Number:** 7628

Sample ID	Cust. Sample ID	Location	Result	RL*	Units	Analysis Date	Analyst
Parameter		Method					
<b>277576-001</b>	18051 001	Grey Caulk Lower Roof					
<b>Semi-volatile Organic Compounds</b>							
Aroclor - 1016		SW846 8082A	<334	334	µg/Kg	09/06/18	AE
Aroclor - 1221		SW846 8082A	<334	334	µg/Kg	09/06/18	AE
Aroclor - 1232		SW846 8082A	<334	334	µg/Kg	09/06/18	AE
Aroclor - 1242		SW846 8082A	<334	334	µg/Kg	09/06/18	AE
Aroclor - 1248		SW846 8082A	<334	334	µg/Kg	09/06/18	AE
Aroclor - 1254		SW846 8082A	<334	334	µg/Kg	09/06/18	AE
Aroclor - 1260		SW846 8082A	<334	334	µg/Kg	09/06/18	AE
Aroclor - 1262		SW846 8082A	<334	334	µg/Kg	09/06/18	AE
Aroclor - 1268		SW846 8082A	<334	334	µg/Kg	09/06/18	AE
PCB - Surrogate Recoveries							
DCB		MI					
TCMX		MI					
<b>277576-002</b>	18051 002	D Grey Caulk Admin Bld.					
<b>Semi-volatile Organic Compounds</b>							
Aroclor - 1016		SW846 8082A	<312	311	µg/Kg	09/06/18	AE
Aroclor - 1221		SW846 8082A	<312	311	µg/Kg	09/06/18	AE
Aroclor - 1232		SW846 8082A	<312	311	µg/Kg	09/06/18	AE
Aroclor - 1242		SW846 8082A	<312	311	µg/Kg	09/06/18	AE
Aroclor - 1248		SW846 8082A	<312	311	µg/Kg	09/06/18	AE
Aroclor - 1254		SW846 8082A	<312	311	µg/Kg	09/06/18	AE
Aroclor - 1260		SW846 8082A	<312	311	µg/Kg	09/06/18	AE
Aroclor - 1262		SW846 8082A	<312	311	µg/Kg	09/06/18	AE
Aroclor - 1268		SW846 8082A	<312	311	µg/Kg	09/06/18	AE
PCB - Surrogate Recoveries							
DCB		MI					
TCMX		MI					

All internal QC parameters were met. Unusual sample conditions, if any, are described. Surrogate Spike results designated with "D" indicate that the analyte was diluted out. "MI" indicates matrix interference. Concentration and \*Reporting Limit (RL) based on areas provided by client. Values are reported to three significant figures. Solid PPM = mg/kg | PPB = µg/kg and Water PPM = mg/L | PPB = µg/L. The test results reported relate only to the samples submitted.





## Analysis Report

# Schneider Laboratories Global, Inc

2512 W. Cary Street • Richmond, Virginia • 23220-5117  
804-353-6778 • 800-785-LABS (5227) • Fax 804-359-1475

**Customer:** Watts Architecture & Engineering (4637)  
**Address:** 95 Perry Street Suite 300  
Buffalo, NY 14203

**Order #:** 277576

**Matrix** Bulk  
**Received** 09/04/18  
**Reported** 09/06/18

**Attn:**

**Project:** Roof Replacement Program  
**Location:** Yonkers Joint Waste Water Trmt  
**Number:** 18051

**PO Number:** 7628

Sample ID	Cust. Sample ID	Location	Result	RL*	Units	Analysis Date	Analyst
Parameter		Method					
277576-003	18051 003	Grey Caulk Admin Bld.					
<b>Semi-volatile Organic Compounds</b>							
Aroclor - 1016		SW846 8082A	<404	404	µg/Kg	09/06/18	AE
Aroclor - 1221		SW846 8082A	<404	404	µg/Kg	09/06/18	AE
Aroclor - 1232		SW846 8082A	<404	404	µg/Kg	09/06/18	AE
Aroclor - 1242		SW846 8082A	<404	404	µg/Kg	09/06/18	AE
Aroclor - 1248		SW846 8082A	<404	404	µg/Kg	09/06/18	AE
Aroclor - 1254		SW846 8082A	<404	404	µg/Kg	09/06/18	AE
Aroclor - 1260		SW846 8082A	<404	404	µg/Kg	09/06/18	AE
Aroclor - 1262		SW846 8082A	<404	404	µg/Kg	09/06/18	AE
Aroclor - 1268		SW846 8082A	<404	404	µg/Kg	09/06/18	AE
PCB - Surrogate Recoveries							
DCB		MI					
TCMX		MI					

277576-09/06/18 04:33 PM

Reviewed By: **Ben Wood**  
Analyst

All internal QC parameters were met. Unusual sample conditions, if any, are described. Surrogate Spike results designated with "D" indicate that the analyte was diluted out. "MI" indicates matrix interference. Concentration and \*Reporting Limit (RL) based on areas provided by client. Values are reported to three significant figures. Solid PPM = mg/kg | PPB = µg/kg and Water PPM = mg/L | PPB = µg/L. The test results reported relate only to the samples submitted.





## Analysis Report

# Schneider Laboratories Global, Inc

2512 W. Cary Street • Richmond, Virginia • 23220-5117  
804-353-6778 • 800-785-LABS (5227) • Fax 804-359-1475

**Customer:** Watts Architecture & Engineering (4637)  
**Address:** 95 Perry Street Suite 300  
Buffalo, NY 14203

**Order #:** 277576

**Matrix** Bulk  
**Received** 09/04/18  
**Reported** 09/06/18

**Attn:**

**Project:** Roof Replacement Program  
**Location:** Yonkers Joint Waste Water Trmt  
**Number:** 18051

**PO Number:** 7628

Sample ID	Cust. Sample ID	Location	Result	RL*	Units	Analysis Date	Analyst
Parameter		Method					

## State Certifications

Method	Parameter	New York	Virginia
SW846 8082A	Aroclor - 1016	ELAP Certified	VELAP Certified
SW846 8082A	Aroclor - 1221	ELAP Certified	VELAP Certified
SW846 8082A	Aroclor - 1232	ELAP Certified	VELAP Certified
SW846 8082A	Aroclor - 1242	ELAP Certified	VELAP Certified
SW846 8082A	Aroclor - 1248	ELAP Certified	VELAP Certified
SW846 8082A	Aroclor - 1254	ELAP Certified	VELAP Certified
SW846 8082A	Aroclor - 1260	ELAP Certified	VELAP Certified
SW846 8082A	Aroclor - 1262	ELAP Certified	VELAP Certified
SW846 8082A	Aroclor - 1268	ELAP Certified	VELAP Certified

State	Certificate Number
New York	ELAP 57776
Virginia	VELAP 9908

All internal QC parameters were met. Unusual sample conditions, if any, are described. Surrogate Spike results designated with "D" indicate that the analyte was diluted out. "MI" indicates matrix interference. Concentration and \*Reporting Limit (RL) based on areas provided by client. Values are reported to three significant figures. Solid PPM = mg/kg | PPB = µg/kg and Water PPM = mg/L | PPB = µg/L. The test results reported relate only to the samples submitted.



# Watts Architecture & Engineering

Page ( of

of

**POLYCHLORINATED BIPHENYLS (PCBs) BULK SAMPLE CHAIN-OF-CUSTODY**

**Client:**

### Project:

**Building/Location:**

**Samples Collected by:**

Email Results to: [marketing@st-aq.com](mailto:marketing@st-aq.com)

**Mail Report & Invoice to:**

## Watts Architecture & Engineering

**95 Perry Street, Suite 300, Buffalo, NY 14203**

**Analysis Requested:**

**EPA SW-846 3540C/8082A**

Turnaround Requested: x 5 Day

## Other

**Date:**

**Watts Project No.:**

**Turnaround Requested:**

## 5 Day

Architects, Friends

Prof. Claesment + Vickram

Voklos tint. Washwater Treatment Plant

**at (716) 206-5100**

06-15-2016

## Watts Architecture & Engineering

**95 Perry Street, Suite 300, Buffalo, NY 14203**

[illegible]

Sampled By:

Date:

Received By:

Date:

Relinquished By:

Date:

Received By:

Date:

Comments:



---

## 5.0 – SITE PHOTOGRAPHS

---





Photo #1: Administration Building - View of the asbestos-containing bottom layer membrane (3025 SF) located on the lower roof. The membrane is non-friable and in good condition.



Photo #2: Blower Building - View of the asbestos-containing flashing top mastic (1200 SF) on top of the perimeter flashing. The flashing top mastic is non-friable and fair condition. The perimeter flashing is also asbestos-containing and is non-friable and in fair condition.



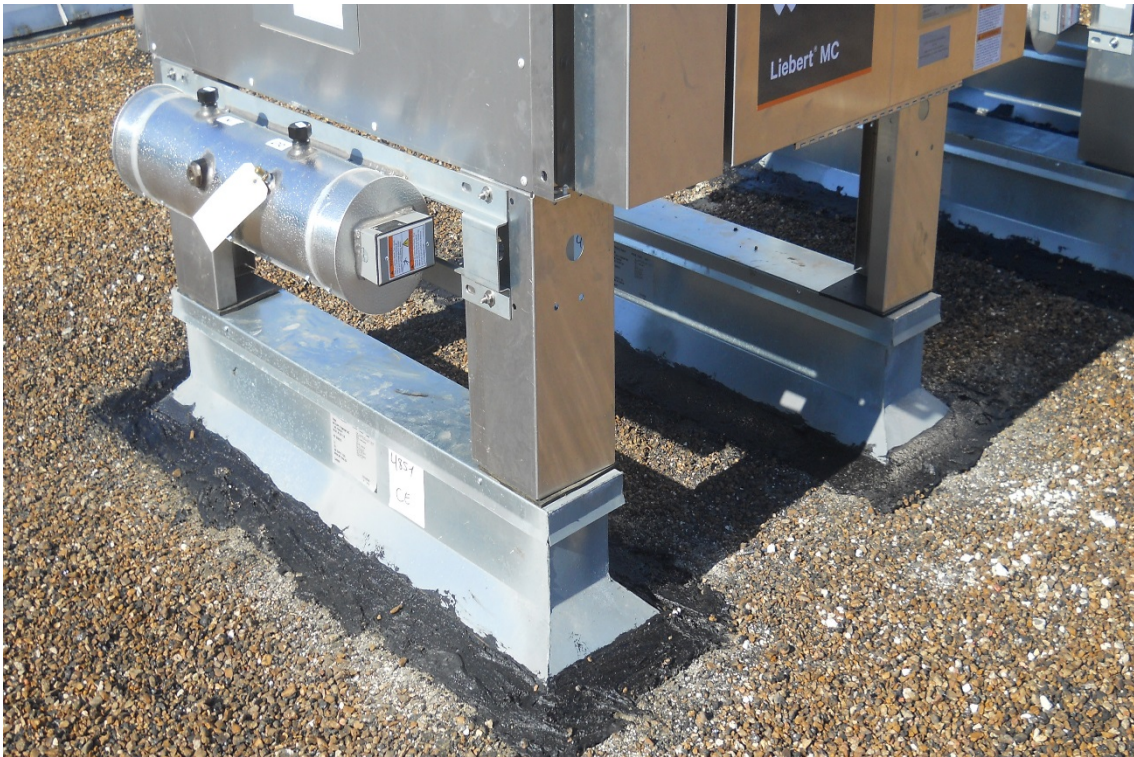


Photo #3: Blower Building - View of the asbestos-containing flashing around the perimeter of the mechanical equipment curbs. The flashing is non-friable and in good condition.



Photo #4: Blower Building - View of the white caulk along the coping on the parapet around the perimeter of the roof. This caulk does not contain asbestos or PCBs.





Photo #5: Administration Building - View of the dark grey caulk along the top of the metal counterflashing. This caulk does not contain asbestos or PCBs.



Photo #6: Thickening Building – Typical view of the built-up roofing. The field roofing materials were found to be non-ACM, however, the flashing material around the perimeter of the roof is ACM.



---

## 6.0 – LABORATORY ACCREDITATIONS

---



**SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005**

**AmeriSci New York**  
DBA: AmeriSci New York  
117 E. 30th Street  
New York, NY 10016  
Mr. Paul Mucha  
Phone: 212-679-8600 Fax: 212-679-2711  
Email: [pmucha@amerisci.com](mailto:pmucha@amerisci.com)  
<http://www.amerisci.com>

**ASBESTOS FIBER ANALYSIS**

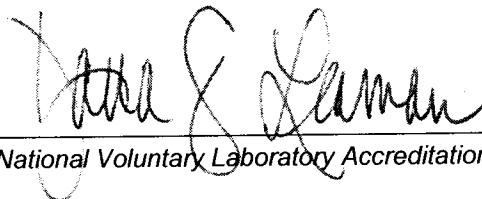
**NVLAP LAB CODE 200546-0**

**Bulk Asbestos Analysis**

<u><b>Code</b></u>	<u><b>Description</b></u>
18/A01	EPA -- Appendix E to Subpart E of Part 763 -- Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

**Airborne Asbestos Analysis**

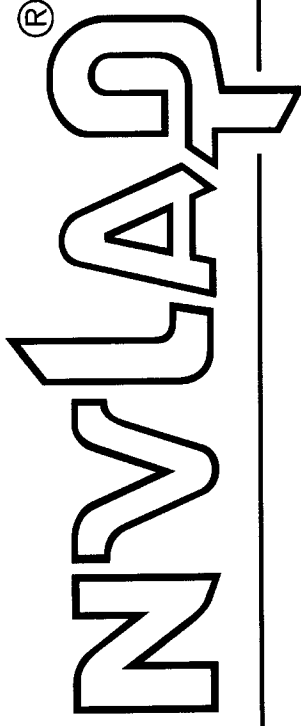
<u><b>Code</b></u>	<u><b>Description</b></u>
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.



*For the National Voluntary Laboratory Accreditation Program*



United States Department of Commerce  
National Institute of Standards and Technology



---

**Certificate of Accreditation to ISO/IEC 17025:2005**

---

NVLAP LAB CODE: 200546-0

**AmeriSci New York**  
New York, NY

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,  
listed on the Scope of Accreditation, for:

**Asbestos Fiber Analysis**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.  
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2017-07-01 through 2018-06-30

Effective Dates

A handwritten signature in dark ink, appearing to read "Peter S. Luman".

---

For the National Voluntary Laboratory Accreditation Program



NEW YORK STATE DEPARTMENT OF HEALTH  
WADSWORTH CENTER



Expires 12:01 AM April 01, 2019  
Issued April 01, 2018

**CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE**

*Issued in accordance with and pursuant to section 502 Public Health Law of New York State*

MR. FAYEZ ABOUZAKI  
SCHNEIDER LABORATORIES GLOBAL, INC  
2512 WEST CARY STREET  
RICHMOND, VA 23220-5117

NY Lab Id No: 11413

*is hereby APPROVED as an Environmental Laboratory in conformance with the  
National Environmental Laboratory Accreditation Conference Standards (2003) for the category  
ENVIRONMENTAL ANALYSES SOLID AND HAZARDOUS WASTE  
All approved analytes are listed below:*

**Metals III**

Molybdenum, Total	EPA 6010D
Thallium, Total	EPA 6010C
	EPA 6010D
Tin, Total	EPA 6010C
	EPA 6010D
Titanium, Total	EPA 6010C
	EPA 6010D

**Sample Preparation Methods**

EPA 3010A  
EPA 3050B  
EPA 3550C

**Miscellaneous**

Asbestos in Friable Material	EPA 600/M4/82/020
Asbestos in Non-Friable Material-PLM	Item 198.6 of Manual (NOB by PLM)
Boron, Total	EPA 6010D
Lead in Dust Wipes	EPA 7000B
Lead in Paint	EPA 7000B

**Polychlorinated Biphenyls**

PCB-1016	EPA 8082A
PCB-1221	EPA 8082A
PCB-1232	EPA 8082A
PCB-1242	EPA 8082A
PCB-1248	EPA 8082A
PCB-1254	EPA 8082A
PCB-1260	EPA 8082A
PCB-1262	EPA 8082A
PCB-1268	EPA 8082A

**Serial No.: 57776**

Property of the New York State Department of Health. Certificates are valid only at the address shown, must be conspicuously posted, and are printed on secure paper. Continued accreditation depends on successful ongoing participation in the Program. Consumers are urged to call (518) 485-5570 to verify the laboratory's accreditation status.





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## 7.0 – CONSULTANT’S LICENSES AND CERTIFICATION

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120 E. Washington St., Suite 414  
Syracuse, NY 13202

95 Perry Street, Suite 300  
Buffalo, NY 14203

315 5th Ave, 11th Floor  
New York, NY 10016

**New York State – Department of Labor**

Division of Safety and Health  
License and Certificate Unit  
State Campus, Building 12  
Albany, NY 12240

**ASBESTOS HANDLING LICENSE**

Watts Architecture & Engineering, D.P.C.  
Suite 300  
95 Perry Street  
Buffalo, NY 14203

FILE NUMBER: 12-68007  
LICENSE NUMBER: 68007  
LICENSE CLASS: RESTRICTED  
DATE OF ISSUE: 08/24/2017  
EXPIRATION DATE: 09/30/2018

Duly Authorized Representative – Edward Watts:

This license has been issued in accordance with applicable provisions of Article 30 of the Labor Law of New York State and of the New York State Codes, Rules and Regulations (12 NYCRR Part 56). It is subject to suspension or revocation for a (1) serious violation of state, federal or local laws with regard to the conduct of an asbestos project, or (2) demonstrated lack of responsibility in the conduct of any job involving asbestos or asbestos material.

This license is valid only for the contractor named above and this license or a photocopy must be prominently displayed at the asbestos project worksite. This license verifies that all persons employed by the licensee on an asbestos project in New York State have been issued an Asbestos Certificate, appropriate for the type of work they perform, by the New York State Department of Labor.



Eileen M. Franko, Director  
For the Commissioner of Labor

SH 432 (8/12)



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**WATTS** Architecture & Engineering

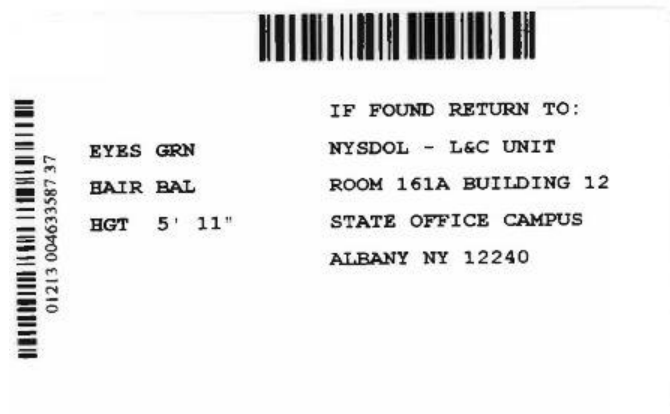
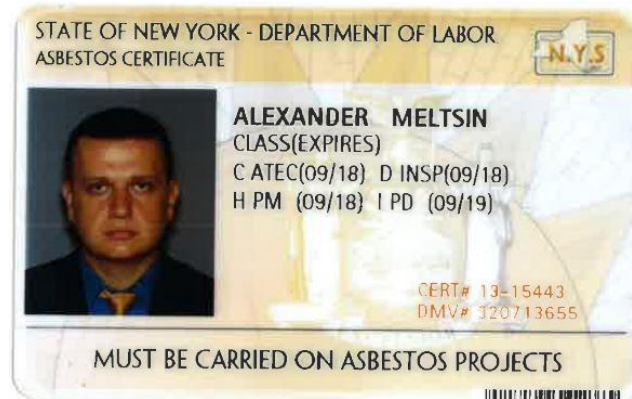




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Buffalo, NY 14203

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New York, NY 10016



### Alexander Meltsin

C – Air Sampling Technician  
D – Inspector  
H – Project Monitor  
PD – Project Designer



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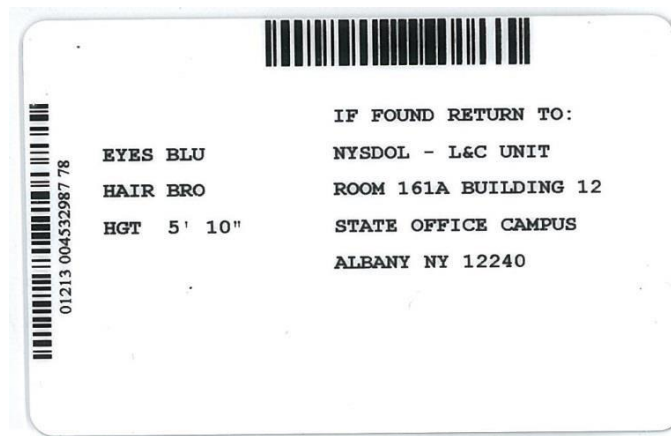
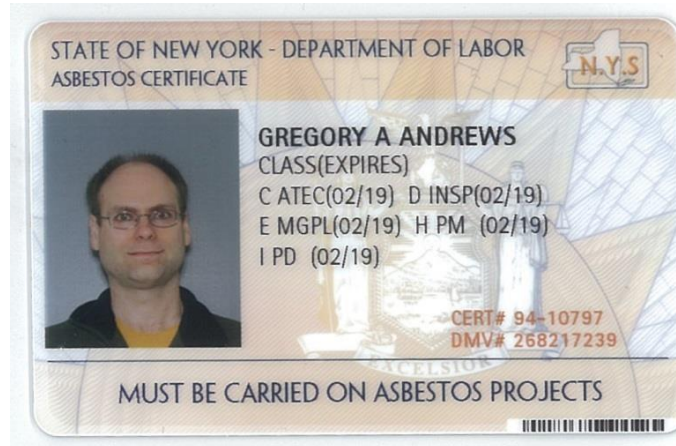




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New York, NY 10016



## Gregory A. Andrews, CHMM

C – Air Sampling Technician  
D – Inspector  
E – Management Planner  
H – Project Monitor  
I – Project Designer



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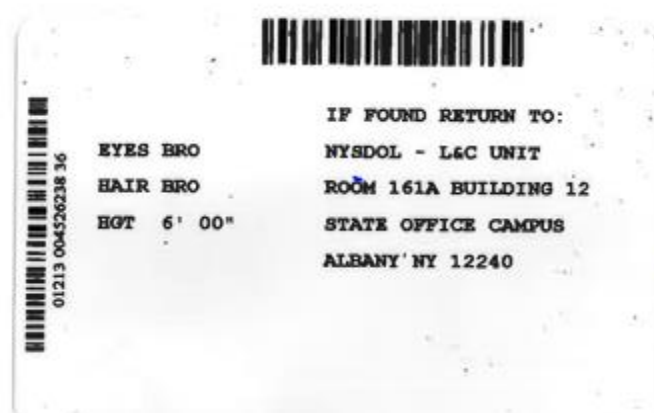
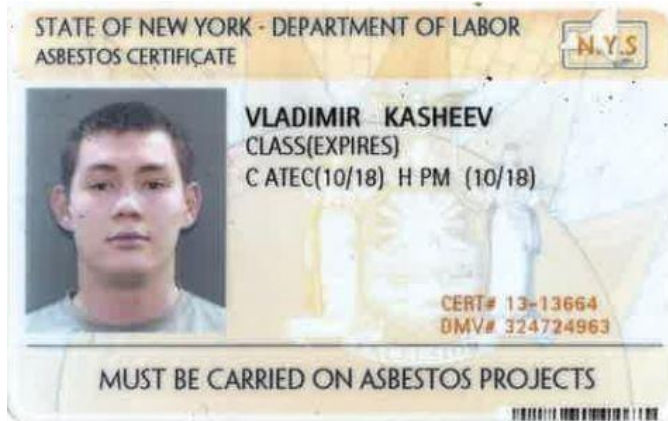




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Buffalo, NY 14203

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New York, NY 10016



Vladimir Kasheev

C – Air Sampling Technician  
H – Project Monitor



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New York, NY 10016

# United States Environmental Protection Agency

This is to certify that

Watts Architecture & Engineering

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires May 21, 2021

LBP-1952-1

Certification #

January 24, 2018

Issued On



Michelle Price, Chief

Lead, Heavy Metals, and Inorganics Branch



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WATTS Architecture & Engineering





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Syracuse, NY 13202

95 Perry Street, Suite 300  
Buffalo, NY 14203

315 5th Ave, 11th Floor  
New York, NY 10016

# United States Environmental Protection Agency

This is to certify that



Gregory A. Andrews

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires May 24, 2019

LBP-R-4906-1

Certification #

April 08, 2016

Issued On



John Gorman, Chief

Pesticides & Toxic Substances Branch



*Excellence in all we do.*

**WATTS** Architecture & Engineering



**Roof Replacement Program**  
**Yonkers WRRF**  
Contact No.: 21-507  
H2M Project No.: WCPW1802

## **APPENDIX B**

**Watts Architecture and Engineering Environmental Report:  
Yonkers Water Resource Recovery Facility:**

**Dewatering/Truck Loading Platform and Primary Access  
Control Building No. 1, 2 and 3**



Yonkers Waste Water Treatment Plant  
Administration Building  
1 Fernbrook St  
Yonkers, N.Y. 10705



Roof Assessment Report

Prepared For  
Adriana Concepcion  
H2M Group





On Thursday August 30, 2018 a survey inspection was performed on the above roof areas. The inspection was initiated to determine the existing system and to provide long term solutions. The inspection included a close visual inspection and probe analysis. Access was provided by Plant Mgr. Jeff Bryant.

**Perimeter Details of Roofs** are terminated by way of a metal edge fascia, masonry stone coping and high bulkhead brick walls.

**Drainage** is accomplished by way of internal drains.

**Flashing material** is Built up and modified bitumen membranes.

## INSPECTION REPORT

**Deck Substrate:** The foundation or base which the roofing system is dependant is the structural deck. The architectural requirements are that the deck be designed to support the weight of the loads such as wind, snow, rain, equipment and the dead loads of the deck itself and the roof system are not enough to produce a base adequate for the application of a roof system. To provide an adequate foundation for the construction of a roof system, the structural deck must be smooth, free of humps, depressions offsets at joints and be stiff enough to support the equipment and materials needed to apply the roof system. Unless provision is made by use of non-structural fills, the structural deck must provide for the drainage of water from the roof. Enough slope should be built in so that water does not collect in the low areas between the roof framing members and so that the roof is completely dry 48 hours after it stops raining. At the time of the inspection there was no evidence of ponding or standing water that would indicate a lack of slope. (Dark Surface staining, moss, algae, etc. on upper roof.) The lower mechanical did have a ponding condition due to the weeps of the drain bowl being clogged and the drain could be a bit lower for better run off). The deck is constructed of tapered lightweight concrete on the upper roof areas and tapered concrete on the lower mechanical roof area. It appears that there is slope being provided in the deck substrates. Probes were performed and proved 2" thickness at low point drain areas and 4" at the perimeter and high point between drains.



**Insulation: Failed.** The primary function of roof insulation is to retard heat flow by acting as a barrier or retarder between the inside and outside temperature conditions. The insulation either reduces heat flow from the hot or warm side, or reduces heat entering the cold side. There is no existing insulation other than the R 0.11 per 1" of Lightweight. The lightweight 4" at the high point 2" at the drains averages less than R 1. Building code currently requires R 30. Accomplishing the new code required R 30 on the lower mechanical roof area will more than likely not be achieved due to height restrictions from the existing in wall louvers and the low concrete curbs and clearance of the large piping throughout the surface. (See photos)

**Perimeter Edge: Poor:** Perimeter of roof is terminated with a metal edge / gravel stop fascia. The existing metal edge attachment or design more than likely no longer meets building code uplift requirement. The new design would either require new additional perimeter blocking fastened to the concrete for Johns Manville new perimeter edge or to apply Johns Manville liquid applied Perma Flash system either would be acceptable for Johns Manville complete Edge to Edge No Dollar limit warranty.

According to Factory Mutual data, almost 60 percent of roof failures begin at the edge. This statistic emphasizes the critical nature of secure, safe roof edges in protecting the building envelope—and the potential pitfalls of edging that fails. To aid architects, specifiers, building owners and other roofing professionals in ensuring that a quality roof edge is specified and installed, the Single Ply Roofing Institute (SPRI), a roofing industry trade association, created an edge standard for low-slope roofs called "ES-1." ES-1 was accepted by the American National Standard Institute (ANSI) as a standard and has been adopted by the International Code Council and included in the 2003 International Building Code (IBC) as paragraph 1405 – "Edge Securement for Low-Slope Roofs." Numerous states and U.S. government departments have adopted the 2003 IBC; more details can be found at [www.iccsafe.org/government/adoption](http://www.iccsafe.org/government/adoption). Formally called "ES-1 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems," the ES-1 standard has existed for a number of years. With its inclusion in the 2003 IBC, ES-1 has now asked for calculating the wind load on edges for low-slope roofs and prescribes methodology for testing and evaluating the ability of edge systems to withstand those loads, thus ensuring wind resistance and long-term performance. ES-1 takes into account all the important factors that go into a properly designed roof edge. These include wind speed, building height, roof edge regions, building exposure, importance factors, metal thickness, galvanic compatibility and resistance, rooftop appliances, nailer securement, membrane attachment, and fastener spacing. There are three tests prescribed in ES-1, and these are based on the American Society of Civil Engineers' document ASCE7/02, *Minimum Design Loads for Buildings and Other Structures*. Test method RE-1 measures how well the edge secures the perimeter on ballasted or mechanically-attached membranes. Method RE-2 is a pull-off test for metal edge flashing. It tests for wind load on the face dimension of the flashing system. RE-3 tests the strength of the metal coping cap to assure it meets or exceeds calculated design wind pressure. RE-3 tests wind load on both the face and top dimension and the top and back leg dimension. Many pre-manufactured roof edge systems have been tested according to ANSI/SPRI ES-1 requirements. The National Roofing Contractors Association (NRCA) also has an approval listing based on these requirements. To ensure that you're up to code, be sure to write specifications requiring roof edge systems to meet ANSI/SPRI ES-1 standards for all low-slope construction and monitor the process to ensure that the specifications are followed. To review the ANSI/SPRI ES-1 standard, now required as part of the 2003 International Building Code. **Johns Manville Presto-Tite metal edge systems are tested and approved according to ANSI/SPRI ES-1 requirements.**



**Field: Failed:** The upper administration building roof system consists of a 4 Ply built up roof with a final surfacing consisting of a floodcoat of asphalt and gravel aggregate. A built up membrane is a continuous semi flexible assembly consisting of plies of saturated or coated felts, base sheets between alternate layers of bitumen. (Hot asphalt or cold adhesives) A considerable amount of the existing surface aggregate is basically loose and unadhered, this stone can become airborne missiles when exposed to high winds resulting in injury and shattered windows exposing neighboring interior. This type of surfacing is no longer a preference for consultants and architects or permitted by building code in hurricane prone regions which Yonkers is considered. The surface is exhibiting a condition known as alligatoring that runs throughout the field of the roof surface. This occurs when the volatile bitumen oils are extracted from the surface floodcoat and membrane, the system then loses its flexibility and begins to crack and resemble alligator skin. This is the result of the sun's UV light, heat and oxidation. As the alligatoring condition advances, the dry and brittle asphalt erodes, and is then separated from the top ply of felt or in this case the cap sheet and is driven away by wind and rain erosion. This process causes a surface loss of waterproofing leaving the felts or cap bare, open and exposed. Since the main enemies of the roofs in the northeast are freeze to thaw cycles and thermal shocks, one of the most important qualities your new roof should have is low temperature flexibility to resist these conditions. Thermal shock is a stress producing phenomenon resulting from sudden and usually extreme temperature changes that adversely affect the roof membrane, such as the temperature transition from a sunny 90 degree day (Roof Surface Temp 130) that experiences an afternoon thunder shower. The existing roof surface temperature will drop from 130 degrees to 80 degrees in a few hours' time. This condition has a tremendous effect on the roof system which results in surface splits to the built up membrane. Blisters can indicate varying levels of moisture entrapment within the roof system and underlying insulation. Entrapped moisture has the capability of expanding 120 X its volume when heated by the rays of the sun. This expansion exerts tremendous pressure on the roof system causing a blister to form. As the roof system cools during evening hours or during a rain shower, this vaporized moisture will return to a liquid state. However, the formed blister has stretched and deformed an already dry, embrittled roof membrane. This inflation and deflation cycling will occur repeatedly until the roof system develops a split in the roof membrane which results in water infiltration to the roofing system and building. The upper Adm. Roof surface is exhibiting what is known as blueberries. These are the result of dried out surface asphalt. They appear on the roof as small blue or black balls or berries. When the top pour of asphalt erodes to this stage, the roof system has lost at least 40% of its waterproofing ability.

The lower mechanical roof system consists of a 2 ply modified built up roof membrane system that was installed over concrete deck. There are obvious wet blisters consisting of water that has infiltrated the system. (See photo)

**Penetrations: Failed.** The system and its projections experience constant expansion and contraction, and degradation from the sun's heat and UV light. A void is created and will allow for water infiltration and funnel its way into the system and building by way of gravity. The base flashings of the stair tower of lower roof and concrete curbs of large plumbing are open and exposed allowing for water infiltration. (See Photos)

**Drainage: Good:** Drainage occurs by way of internal drains. There appears to be adequate slope being provided by the deck substrate by no evidence of excessive standing water stains and vegetation on the roof surface. The lower mechanical did have a ponding condition due to the weeps of the drain bowl being clogged and the drain could be a bit lower for better run off). The deck is constructed of tapered lightweight concrete on the upper roof areas and tapered concrete on the lower mechanical roof area. It appears that there is slope being provided in the deck



substrates. Probes were performed and proved 2” thickness at low point drain areas and 4” at the perimeter and high point between drains.

**Overall Rating: Failed:** The present condition of the existing roof systems state that they are in need of attention. They have reached the end of their useful life and in some case have begun to run on borrowed time. Failure in taking a proactive approach with this system will continue to result in interior damage, ongoing leaks and inconveniences along with possible deterioration of the roof deck which as mentioned will result in costly replacement, downtime and safety concerns along with the concern of growth of toxic mold that will develop below which is a concern for individuals with allergies and respiratory ailments.



Probe revealed 4 Ply BUR gravel surface over 4”lightweight concrete at high point and 2”of Lightweight concrete at drain low point of roof. System contains no insulation.



Photo exhibits repair to probe with compatible material according to NRCA recommendations.





Probe of lower mechanical roof reveal a smooth 2 ply modified bitumen roof system containing no insulation and tapered concrete.



Photo exhibits failed solar panel system and ballast that is no longer secured and at risk of a blow off resulting in injury below.

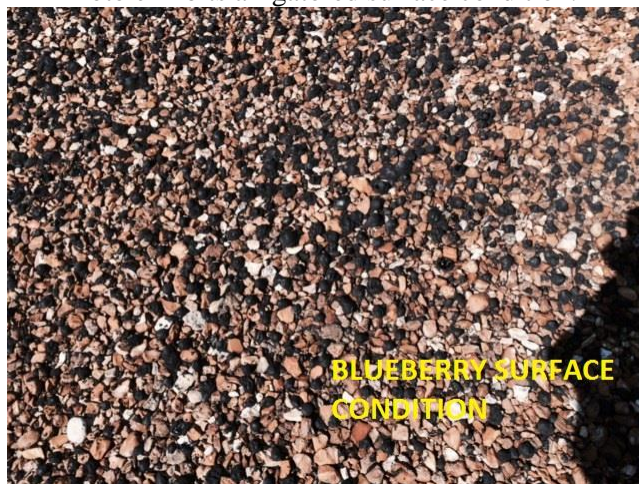


Photo exhibits wall louvers of lower mechanical roof are restricting flashing height for building code insulation requirement.





Photo exhibits alligatoring surface condition.



Above blueberry surface condition is the result of dried out surface asphalt. They appear on the roof as small blue or black balls or berries. When the top pour of asphalt erodes to this stage, the roof system has lost at least 40% of its waterproofing ability.



Photo exhibits surface blister condition.





Photo exhibits low concrete curbs and clearance for new required insulation. The open existing flashing membrane has separated from the curb due to not installing or securing it with a termination bar and fasteners and has allowed for water infiltration. Johns Manville liquid applied system will prevent this condition as well as water proofing the metal flange nuts & bolts.



The open existing flashing membrane of lower mechanical roof stair tower has separated from the curb due to not installing or securing it with a termination bar and fasteners and has allowed for water infiltration. Johns Manville liquid applied system will prevent this condition.



## **Recommended Solution: Replacement**

### **Scope of Work:**

Remove and legally dispose of the existing systems down to the deck structure according to state and county requirements. Adhere according to code new Flat or Tapered Johns Manville R 30 ENRGY polyisocyanurate insulation, ½” Dura Board Board in Johns Manville 2 Part UIA insulation adhesive.

We have scheduled for an adhesive pull test of Johns Manville 2 Part UIA insulation adhesive to the lightweight concrete deck. Results will determine whether the new flat insulation can be installed to the lightweight or that the lightweight will have to be removed down to the existing concrete deck and new tapered insulation will be adhered to the concrete deck.

Install Westchester County DPW standard Johns Manville 30 Year NDL 3 ply Modified Bitumen roof system to upper administration building. Johns Manville modified system has superior weatherability through a wide range of temperatures and conditions and demonstrates superior ozone resistance. The FR CR cap sheet is a fire-resistant, modified bitumen, Energy Star Rated cool roof cap sheet incorporating the features of a strong fiber glass mat with a blend of SBS (Styrene-Butadiene-Styrene) rubber, high quality asphalt and fire-retardant additives. The elastomeric asphalt blend has full recovery properties after 100% elongation and lends elasticity and flexibility to the sheet. The inorganic fiber glass reinforcement provides tensile strength, stability and toughness to the product and resists moisture absorption. These properties also afford the product better resistance to other factors which affect roof performance. The covering layer of a white, acrylic coating combined with ceramic coated roofing granules provides durability along with superior resistance to damage from weather and foot traffic, as well as the Benefits of a reflective, emissive surface. This system is a **Class A Fire Rated FM rated system. This system is backed by JM's single source complete system 30 Yr No Dollar Limit Warranty.** (All components from deck up including insulation, cover board, roof membranes and new drains, perimeter metal edge, perimeter coping.)

Install Johns Manville Presto-Tite .040 alum perimeter metal edge. **System has FM 1-245 and ANSI-SPRI ES-1 Design Pressure of 290 PSF approval Rating.**

Install new **JM Hercules Retro Drains** that will be included in overall complete roof system warranty.

Install Johns Manville PMMA liquid applied system to lower mechanical roof area.

Once the specification is prepared by H2M and Johns Manville and the proposals are received and reviewed by the DPW from the contractors and the job is awarded JM will provide job site progress inspections.

Johns Manville / Moseley assoc. and I wish to thank you for this opportunity and look forward to working with you in the near future in providing you and Westchester DPW



with a long term successful roofing solution. If you should have any questions, or if I can be of any further assistance please don't hesitate to contact me at 914-356-1233.

Respectfully yours

John Moore



### **Recommended Solution: Replacement**

#### **Scope of Work:**

Remove and legally dispose of the existing systems down to the deck structure according to state and county requirements. Adhere according to code new **Tapered Johns Manville R 30 ENRGY polyisocyanurate insulation, ½" Dura Board Board and Westchester County DPW standard 30 Year NDL 3 ply Modified Bitumen roof system.**

#### **Replace existing drains.**

Install according to building code new Johns Manville Presto-Tite .040 alum perimeter metal edge. **System has FM 1-645 and ANSI-SPRI ES-1 Design Pressure of 290PSF approval Rating.**



**Roof Replacement Program**  
**Yonkers WRRF**  
Contact No.: 21-507  
H2M Project No.: WCPW1802

## **APPENDIX C**

**Moseley and Associates Roof Assessment Report:**  
**Yonkers Water Resource Recovery Facility:**

**Blower and Administration Building**



Yonkers Waste Water Treatment Plant  
Administration Building  
1 Fernbrook St  
Yonkers, N.Y. 10705



Roof Assessment Report

Prepared For  
Adriana Concepcion  
H2M Group





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**Perimeter Edge: Poor:** Perimeter of roof is terminated with a metal edge / gravel stop fascia. The existing metal edge attachment or design more than likely no longer meets building code uplift requirement. The new design would either require new additional perimeter blocking fastened to the concrete for Johns Manville new perimeter edge or to apply Johns Manville liquid applied Perma Flash system either would be acceptable for Johns Manville complete Edge to Edge No Dollar limit warranty.

According to Factory Mutual data, almost 60 percent of roof failures begin at the edge. This statistic emphasizes the critical nature of secure, safe roof edges in protecting the building envelope—and the potential pitfalls of edging that fails. To aid architects, specifiers, building owners and other roofing professionals in ensuring that a quality roof edge is specified and installed, the Single Ply Roofing Institute (SPRI), a roofing industry trade association, created an edge standard for low-slope roofs called "ES-1." ES-1 was accepted by the American National Standard Institute (ANSI) as a standard and has been adopted by the International Code Council and included in the 2003 International Building Code (IBC) as paragraph 1405 – "Edge Securement for Low-Slope Roofs." Numerous states and U.S. government departments have adopted the 2003 IBC; more details can be found at [www.iccsafe.org/government/adoption](http://www.iccsafe.org/government/adoption). Formally called "ES-1 Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems," the ES-1 standard has existed for a number of years. With its inclusion in the 2003 IBC, ES-1 has now asked for calculating the wind load on edges for low-slope roofs and prescribes methodology for testing and evaluating the ability of edge systems to withstand those loads, thus ensuring wind resistance and long-term performance. ES-1 takes into account all the important factors that go into a properly designed roof edge. These include wind speed, building height, roof edge regions, building exposure, importance factors, metal thickness, galvanic compatibility and resistance, rooftop appliances, nailer securement, membrane attachment, and fastener spacing. There are three tests prescribed in ES-1, and these are based on the American Society of Civil Engineers' document ASCE7/02, *Minimum Design Loads for Buildings and Other Structures*. Test method RE-1 measures how well the edge secures the perimeter on ballasted or mechanically-attached membranes. Method RE-2 is a pull-off test for metal edge flashing. It tests for wind load on the face dimension of the flashing system. RE-3 tests the strength of the metal coping cap to assure it meets or exceeds calculated design wind pressure. RE-3 tests wind load on both the face and top dimension and the top and back leg dimension. Many pre-manufactured roof edge systems have been tested according to ANSI/SPRI ES-1 requirements. The National Roofing Contractors Association (NRCA) also has an approval listing based on these requirements. To ensure that you're up to code, be sure to write specifications requiring roof edge systems to meet ANSI/SPRI ES-1 standards for all low-slope construction and monitor the process to ensure that the specifications are followed. To review the ANSI/SPRI ES-1 standard, now required as part of the 2003 International Building Code. **Johns Manville Presto-Tite metal edge systems are tested and approved according to ANSI/SPRI ES-1 requirements.**



**Field: Failed:** The upper administration building roof system consists of a 4 Ply built up roof with a final surfacing consisting of a floodcoat of asphalt and gravel aggregate. A built up membrane is a continuous semi flexible assembly consisting of plies of saturated or coated felts, base sheets between alternate layers of bitumen. (Hot asphalt or cold adhesives) A considerable amount of the existing surface aggregate is basically loose and unadhered, this stone can become airborne missiles when exposed to high winds resulting in injury and shattered windows exposing neighboring interior. This type of surfacing is no longer a preference for consultants and architects or permitted by building code in hurricane prone regions which Yonkers is considered. The surface is exhibiting a condition known as alligatoring that runs throughout the field of the roof surface. This occurs when the volatile bitumen oils are extracted from the surface floodcoat and membrane, the system then loses its flexibility and begins to crack and resemble alligator skin. This is the result of the sun's UV light, heat and oxidation. As the alligatoring condition advances, the dry and brittle asphalt erodes, and is then separated from the top ply of felt or in this case the cap sheet and is driven away by wind and rain erosion. This process causes a surface loss of waterproofing leaving the felts or cap bare, open and exposed. Since the main enemies of the roofs in the northeast are freeze to thaw cycles and thermal shocks, one of the most important qualities your new roof should have is low temperature flexibility to resist these conditions. Thermal shock is a stress producing phenomenon resulting from sudden and usually extreme temperature changes that adversely affect the roof membrane, such as the temperature transition from a sunny 90 degree day (Roof Surface Temp 130) that experiences an afternoon thunder shower. The existing roof surface temperature will drop from 130 degrees to 80 degrees in a few hours' time. This condition has a tremendous effect on the roof system which results in surface splits to the built up membrane. Blisters can indicate varying levels of moisture entrapment within the roof system and underlying insulation. Entrapped moisture has the capability of expanding 120 X its volume when heated by the rays of the sun. This expansion exerts tremendous pressure on the roof system causing a blister to form. As the roof system cools during evening hours or during a rain shower, this vaporized moisture will return to a liquid state. However, the formed blister has stretched and deformed an already dry, embrittled roof membrane. This inflation and deflation cycling will occur repeatedly until the roof system develops a split in the roof membrane which results in water infiltration to the roofing system and building. The upper Adm. Roof surface is exhibiting what is known as blueberries. These are the result of dried out surface asphalt. They appear on the roof as small blue or black balls or berries. When the top pour of asphalt erodes to this stage, the roof system has lost at least 40% of its waterproofing ability.

The lower mechanical roof system consists of a 2 ply modified built up roof membrane system that was installed over concrete deck. There are obvious wet blisters consisting of water that has infiltrated the system. (See photo)

**Penetrations: Failed.** The system and its projections experience constant expansion and contraction, and degradation from the sun's heat and UV light. A void is created and will allow for water infiltration and funnel its way into the system and building by way of gravity. The base flashings of the stair tower of lower roof and concrete curbs of large plumbing are open and exposed allowing for water infiltration. (See Photos)

**Drainage: Good:** Drainage occurs by way of internal drains. There appears to be adequate slope being provided by the deck substrate by no evidence of excessive standing water stains and vegetation on the roof surface. The lower mechanical did have a ponding condition due to the weeps of the drain bowl being clogged and the drain could be a bit lower for better run off). The deck is constructed of tapered lightweight concrete on the upper roof areas and tapered concrete on the lower mechanical roof area. It appears that there is slope being provided in the deck



substrates. Probes were performed and proved 2” thickness at low point drain areas and 4” at the perimeter and high point between drains.

**Overall Rating: Failed:** The present condition of the existing roof systems state that they are in need of attention. They have reached the end of their useful life and in some case have begun to run on borrowed time. Failure in taking a proactive approach with this system will continue to result in interior damage, ongoing leaks and inconveniences along with possible deterioration of the roof deck which as mentioned will result in costly replacement, downtime and safety concerns along with the concern of growth of toxic mold that will develop below which is a concern for individuals with allergies and respiratory ailments.



Probe revealed 4 Ply BUR gravel surface over 4”lightweight concrete at high point and 2”of Lightweight concrete at drain low point of roof. System contains no insulation.



Photo exhibits repair to probe with compatible material according to NRCA recommendations.





Probe of lower mechanical roof reveal a smooth 2 ply modified bitumen roof system containing no insulation and tapered concrete.



Photo exhibits failed solar panel system and ballast that is no longer secured and at risk of a blow off resulting in injury below.

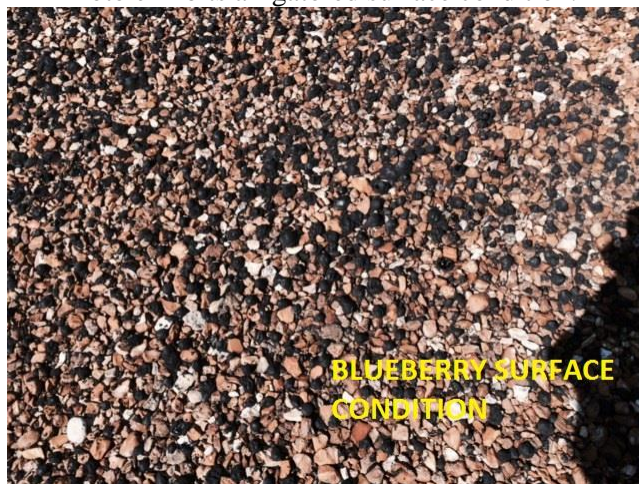


Photo exhibits wall louvers of lower mechanical roof are restricting flashing height for building code insulation requirement.





Photo exhibits alligatoring surface condition.



Above blueberry surface condition is the result of dried out surface asphalt. They appear on the roof as small blue or black balls or berries. When the top pour of asphalt erodes to this stage, the roof system has lost at least 40% of its waterproofing ability.



Photo exhibits surface blister condition.





Photo exhibits low concrete curbs and clearance for new required insulation. The open existing flashing membrane has separated from the curb due to not installing or securing it with a termination bar and fasteners and has allowed for water infiltration. Johns Manville liquid applied system will prevent this condition as well as water proofing the metal flange nuts & bolts.



The open existing flashing membrane of lower mechanical roof stair tower has separated from the curb due to not installing or securing it with a termination bar and fasteners and has allowed for water infiltration. Johns Manville liquid applied system will prevent this condition.



## **Recommended Solution: Replacement**

### **Scope of Work:**

Remove and legally dispose of the existing systems down to the deck structure according to state and county requirements. Adhere according to code new Flat or Tapered Johns Manville R 30 ENRGY polyisocyanurate insulation, ½” Dura Board Board in Johns Manville 2 Part UIA insulation adhesive.

We have scheduled for an adhesive pull test of Johns Manville 2 Part UIA insulation adhesive to the lightweight concrete deck. Results will determine whether the new flat insulation can be installed to the lightweight or that the lightweight will have to be removed down to the existing concrete deck and new tapered insulation will be adhered to the concrete deck.

Install Westchester County DPW standard Johns Manville 30 Year NDL 3 ply Modified Bitumen roof system to upper administration building. Johns Manville modified system has superior weatherability through a wide range of temperatures and conditions and demonstrates superior ozone resistance. The FR CR cap sheet is a fire-resistant, modified bitumen, Energy Star Rated cool roof cap sheet incorporating the features of a strong fiber glass mat with a blend of SBS (Styrene-Butadiene-Styrene) rubber, high quality asphalt and fire-retardant additives. The elastomeric asphalt blend has full recovery properties after 100% elongation and lends elasticity and flexibility to the sheet. The inorganic fiber glass reinforcement provides tensile strength, stability and toughness to the product and resists moisture absorption. These properties also afford the product better resistance to other factors which affect roof performance. The covering layer of a white, acrylic coating combined with ceramic coated roofing granules provides durability along with superior resistance to damage from weather and foot traffic, as well as the Benefits of a reflective, emissive surface. This system is a **Class A Fire Rated FM rated system. This system is backed by JM's single source complete system 30 Yr No Dollar Limit Warranty.** (All components from deck up including insulation, cover board, roof membranes and new drains, perimeter metal edge, perimeter coping.)

Install Johns Manville Presto-Tite .040 alum perimeter metal edge. **System has FM 1-245 and ANSI-SPRI ES-1 Design Pressure of 290 PSF approval Rating.**

Install new **JM Hercules Retro Drains** that will be included in overall complete roof system warranty.

Install Johns Manville PMMA liquid applied system to lower mechanical roof area.

Once the specification is prepared by H2M and Johns Manville and the proposals are received and reviewed by the DPW from the contractors and the job is awarded JM will provide job site progress inspections.

Johns Manville / Moseley assoc. and I wish to thank you for this opportunity and look forward to working with you in the near future in providing you and Westchester DPW



with a long term successful roofing solution. If you should have any questions, or if I can be of any further assistance please don't hesitate to contact me at 914-356-1233.

Respectfully yours

John Moore



### **Recommended Solution: Replacement**

#### **Scope of Work:**

Remove and legally dispose of the existing systems down to the deck structure according to state and county requirements. Adhere according to code new **Tapered Johns Manville R 30 ENRGY polyisocyanurate insulation, ½" Dura Board Board and Westchester County DPW standard 30 Year NDL 3 ply Modified Bitumen roof system.**

#### **Replace existing drains.**

Install according to building code new Johns Manville Presto-Tite .040 alum perimeter metal edge. **System has FM 1-645 and ANSI-SPRI ES-1 Design Pressure of 290PSF approval Rating.**