

*Invitation to Bid  
Bid Specifications  
Technical Specifications*

**Boquet River Non-Point Source Pollution  
Prevention Improvement Project  
Phase II**

July, 2017

*Owner:*

**Town of Willsboro  
5 Farrell Road, P.O. Box 370  
Willsboro, NY 12996**

*Engineer:*



civil and environmental engineering

13 Latour Avenue, Suite 204 • P.O. Box 2787 • Plattsburgh, NY 12901  
518-563-9445 • Fax 518-563-5189  
Email: [info@espc-consulting.com](mailto:info@espc-consulting.com)



**LEGAL NOTICE TOWN OF WILLSBORO, NY  
ADVERTISEMENT FOR BIDS  
BOQUET RIVER NON-POINT SOURCE POLLUTION  
PREVENTION IMPROVEMENT PROJECT – PHASE II**

July 10, 2017

The Town of Willsboro, New York, will receive sealed Bids for the Boquet River Non-Point Source Pollution Prevention Project – Phase II, until 3:00 PM, local time Friday, August 4, 2017 at the Willsboro Town Office, 5 Farrell Road, Willsboro, New York 12996, at which time all bids will be publicly opened and read aloud. A pre-bid meeting for prospective bidders will be held at the project location; meet at the dead end of Mill Lane in Willsboro, at 10:00 AM on Wednesday, July 19, 2017. **All prospective bidders are highly encouraged to attend the pre-bid meeting.**

For all matters of these bids the primary contact is Erik Sandblom at ESPC Civil and Environmental Engineering (Town's Engineering Firm) at 802-383-0486. All questions must be submitted in writing by means of email to [eriks@espc-consulting.com](mailto:eriks@espc-consulting.com) or by fax to 802-383-0490. All questions must be submitted no later than 12:00 PM on August 1, 2017.

The work involves the stabilization of 35 linear feet of eroded bank section by excavating and re-grading the steep slope on either side of the failed slope, cutting an existing protruding culvert back and stabilizing the outfall, providing erosion and sediment control, and disposing of the ash, lime, Wallastonite tailings and buried building materials at a landfill. The project will also involve the proper removal and disposal of asbestos waste present at the site. Site changes include re-grading the bank to construct a concrete walkway and ramp that complies with Americans with Disabilities Act (ADA) accessibility requirements, constructing a rockery toe, and the construction of a concrete fishing platform on top of the existing structures that are remnants of the former mill. Landscaping to include placing topsoil, mulch, planting trees, and seeding will be used surrounding the new construction and above placed fill.

The Contractor will be required to achieve Substantial Completion of all work by October 1, 2017. Contractor will be required to work continuously thereafter to complete all work.

The Contract Documents for the Work may be obtained from the Essex County Office of Purchasing Agent, 7551 Court Street, Elizabethtown, New York or the county's website at [www.co.essex.ny.us](http://www.co.essex.ny.us) for download. The Contract Documents may be viewed at ESPC offices located at 13 Latour Avenue, Suite 204, Plattsburgh, NY 12901 or at the Town of Willsboro at 5 Farrell Road, Willsboro, New York 12996.

Each Bid shall be accompanied by a bid guarantee in the amount of five percent (5%) of the value of the bid in the form described in the Instructions to Bidders. A performance bond and a payment bond, each in the amount of 100 percent of the contract price, along with certain insurance certificates will be required in the form described in the Instructions to Bidders.

Bidder's attention is called to the requirements regarding conditions of employment to be observed and wages to be paid, as this project is a public works project and New York State Prevailing Wages apply.

No Bidder may withdraw his or her Bid within 90 days after the actual date of the Bid opening. Complete instructions for filing Bids are included in the Instructions to Bidders.

Any contract awarded under this Advertisement for Bids is expected to be funded by several funding sources. Section 3 businesses are encouraged to apply. Neither the State of New York or Essex County, New York, nor any of its departments, agencies, or employees is or will be a party to this Contract. Each Bidder shall act in accordance with Federal and State Minority and Women-owned Business Enterprises-Equal Employment Opportunity (MWBE-EEO) and Davis Bacon laws and regulations governing this project. Failure to complete the requirements of this program may result in finding that the Bidder is non-responsible and therefore, not entitled to award of this Contract.

The Town (Owner) may waive any informalities or minor defects, or reject any or all Bids if it is in the best interest of the County to do so.

**Shaun Gilliland  
Town Supervisor  
Town of Willsboro  
New York**

**SPECIFICATION INDEX**

**BID SPECIFICATIONS**

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**TECHNICAL SPECIFICATIONS**

200.0 GENERAL
201.0 SITE PREPARATION
202.0 MOBILIZATION / DEMOBILIZATION (NRCS CONSTRUCTION SPECIFICATION 8)
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206.0 EARTH FILL (NRCS CONSTRUCTION SPECIFICATION 23)
207.0 EXCAVATION (NRCS CONSTRUCTION SPECIFICATION 21)
208.0 GEOTEXTILE (NRCS CONSTRUCTION SPECIFICATION 95)
209.0 CHANNEL CLEARING AND SHAPING (NRCS CONSTRUCTION SPECIFICATION 4)
210.0 ROCK RIPRAP (NRCS CONSTRUCTION SPECIFICATION 61)
211.0 CONTAMINATED SOIL (NYS DOT STANDARD SPECIFICATIONS SECTION 205)
212.0 PORTLAND CEMENT CONCRETE (NYS DOT STANDARD SPECIFICATIONS SECTION 500)
213.0 BIO-ENGINEERING (NRCS CONSTRUCTION SPECIFICATION 00)
214.0 SEEDING, SPRIGGING, AND MULCHING (NRCS CONSTRUCTION SPECIFICATION 6)
215.0 TREES AND SHRUBS
216.0 LIVE STAKE JOINT PLANTING (VTDEC SPECIFICATION 653)
217.0 CONSTRUCTION LAYOUT STAKING
218.0 STONE FILLING (NYS DOT STANDARD SPECIFICATIONS SECTION 733-21 B)
219.0 EXISTING UTILITIES
220.0 GUIDE RAILING (NYS DOT STANDARD SPECIFICATIONS SECTION 606)
501.0 GEOTEXTILE (NRCS MATERIAL SPECIFICATION 592)
502.0 ROCK FOR RIPRAP (NRCS MATERIAL SPECIFICATION 523)
601.0 SPECIAL CONDITIONS FOR ASBESTOS ABATEMENT

**PERMITS / AUTHORIZATIONS**

NYSDEC GENERAL PERMIT GP-5-09-002 – SOIL AND WATER CONSERVATION  
DISTRICTS – PERMIT PENDING – **2014 PERMIT PROVIDED FOR REFERENCE**  
US ARMY CORPS OF ENGINEERS PERMIT – PERMIT PENDING – **2014 PERMIT  
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**DESIGN PLANS**

- SP.1: Civil Site Plan – 7/10/17
- D.1: Details and Notes – 7/10/17
- D.2: Cross Sections – 7/10/17
- S1.0: Structural Design – 4/8/2016

## INSTRUCTIONS TO BIDDERS

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## INSTRUCTIONS TO BIDDERS

Proposals to be entitled for consideration must be made in accordance with the following instructions:

### Article 1 – Description of Work

The work the stabilization of 35 linear feet of eroded bank section by excavating and re-grading the steep slope on either side of the failed slope, cutting an existing protruding culvert back and stabilizing the outfall, providing erosion and sediment control, and disposing of the ash, lime, Wallastonite tailings and buried building materials at a landfill. Site changes include re-grading the bank to construct a concrete walkway and ramp that complies with Americans with Disabilities Act (ADA) accessibility requirements, constructing a rockery toe, and the construction of a concrete fishing platform on top of the existing structures that are remnants of the former mill. Landscaping to include placing topsoil, mulch, planting trees, and seeding will be used surrounding the new construction and above placed fill.

### Article 2 – Bid Schedule

Bid Advertisement begins on Monday, July 10, 2017. A pre-bid meeting will be held at Site located at the end of Mill Lane in Willsboro, New York on Wednesday, July 19, 2017 at 10:00 AM. Proposals are due to the Bid Submission address per Article 8 at 3:00 PM on August 4, 2017. No proposals will be considered unless received and on hand at the specified time, date, and address to which proposals are to be opened. Proposals en-route by mail or other means but not so received and on hand will not be considered.

### Article 3 – Construction Schedule

The project must be substantially completed by October 1, 2017.

### Article 4 – Special Conditions

1. Due to potential habitat of Indiana Bats, no trees may be removed.
2. The contractor will be required to comply with all permits relating to this project. Following is a summary of secured permits:
  - A NYSDEC General Permit GP-5-09-002 – Soil and Water Conservation Districts – an application has been submitted to the Essex County Soil and Water Conservation District and is pending. A copy of the 2014 permit is provided for reference and is included in the Contract Documents.
  - A U.S. Army Corps of Engineers permit has been submitted and is under review. A copy of the 2014 permit is provided for reference and is included in the Contract Documents.
3. An easement has been obtained from the landowner, Mr. John Lease, III and is included in the Contract Documents.
4. The project will require the excavation of unsuitable fill that shall be removed from the site. Material characterized as ash, Wallastonite tailings, glass fragments, and wood is considered historic fill and must be disposed of at a landfill. Remaining concrete sections and other material may be disposed of as exempt waste or construction and demolition debris. The on-site engineer will make the determination regarding the classification of surplus excavated material.





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5. Loose pieces of transite siding is present on the ground surface at the site. Prior to disturbance, these materials shall be removed in accordance with New York State Department of Labor asbestos removal requirements.

#### **Article 5 – Proposal Form**

Proposals shall be made according to the form provided therefore, and all blank spaces in the form, that apply shall be fully filled; numbers shall be stated, both in writing and figures; the signature shall be in longhand; and the completed form shall be without interlineations, alteration or erasures.

#### **Article 6 – No Recapitulation or Modification**

Proposals shall not contain any recapitulation of the work to be done. No oral, telegraphic, facsimile machine, or telephone proposals or modifications will be considered.

#### **Article 7 – Standard Forms**

For the purpose of preparing these Contract Documents, the Insurance Requirements, Standard Clauses, and General Specifications for Procurement Contracts for Essex County have been utilized. All references to “Essex County” in these documents shall be changed to “Town of Willsboro”.

#### **Article 8 – Bid Submission Address**

Proposals shall be addressed to Mr. Shaun Gilliland, Town Supervisor, Willsboro Town Office, 5 Farrell Road, Willsboro, NY 12996.

#### **Article 9 – Pre-Bid Specification & Site Inspection**

Before submitting a proposal, bidders shall carefully examine the plans and specifications, visit the site of the work, fully inform themselves as to all the conditions and limitations and shall include in the proposal a sum to cover the cost of all items included in the Contract. **All bidders are highly encouraged to attend the pre-bid meeting which will include a tour of the site of the work.**

#### **Article 10 – Competency of Bidder**

The competency and responsibility of the bidders and of their proposed sub-contractors will be considered in making the award.

#### **Article 11 – Bid Security**

Each proposal shall be accompanied by a Certified Check or Bid Bond in the amount of five percent (5%) of the bid. This shall be made payable to the Town of Willsboro, NY. The check shall insure the Town of Willsboro of the adherence of the bidder to his proposal, the execution of the Contract, and the furnishing of a faithful performance, labor and materials payment bond by the bidder as specified in the Contract documents, if his proposal is accepted. Bonding company and bond must be approved by the Essex County Attorney.

#### **Article 12 – Notification of Award**

Acceptance of a proposal will be a notice in writing, signed by the Town Supervisor.

#### **Article 13 – Time of Execution**

Any Bidder whose proposal is accepted will be required to execute the Contract within ten (10) days after Notice of Contract has been awarded to the Company.

**Article 14 – Time of Starting**

Work shall not be started prior to the Award of the Contract, and the Contractor must diligently continue work without unnecessary delays and with sufficient manpower and equipment to complete the work schedule detailed in Article 3.

**Article 15 – Bonds**

The Contractor shall upon execution of the Agreement furnish and deliver to the Town of Willsboro a faithful Performance Bond and a labor and materials Payment Bond. He/She shall furnish and maintain said bonds at his/her own expense and without expense to the Town until final acceptance of the work covered by the Agreement. Each bond coverage shall be one hundred percent (100%) of the amount of the total Contract price. The furnishing of the bonds shall be a condition precedent to the effectuation of an Agreement between the Town and the contractor. The bonds shall be in a form satisfactory to the Town and shall be issued by a Surety Company licensed to do business in the State of New York.

**Article 16 – Insurance Requirements**

It is a requirement of the Town of Willsboro that for work performed under Contract that the Contractor procure and maintain at his/her own expense and without expense to the Town, until final acceptance of the work by the Town, the insurance listed below.

Before Commencement of any work, a Certificate or Certificates of Insurance must be furnished to the Town on forms satisfactory to the Essex County Attorney.

All Certificates of Insurance must provide that the policy or policies shall not be changed or canceled until after at least thirty days (30) prior written notice has been given to the Town.

When required by the Town the "XCU" exclusion of the policy or policies shall be eliminated or show proof the "XCU" is covered.

THE KINDS OF INSURANCE, LIMITS, AND/OR CONDITIONS ARE AS FOLLOWS:

- A. Worker's Compensation -- statutory - covering all operations and locations involved in the Contract.
- B. Comprehensive General Liability - covering all operations and locations involved in the Contract including the following coverages:
  - 1. Premises Operations
  - 2. Independent Contractors and Sub-Contractors
  - 3. Products and Completed Operations.
  - 4. Broad Form Contractual
- C. Comprehensive General Liability - covering all operations and locations involved in the Contract, including the following coverages:
  - 1. Owned Automobiles
  - 2. Hired Automobiles
  - 3. Non-owned Automobiles.

Unless specifically required, each policy shall provide limits of not less than:  
Bodily Injury Liability-per occurrence - single limit of \$1,000,000.00



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Property Damage Liability-per occurrence - single limit of \$1,000,000.00

D. New York State Disability Benefits – Statutory

STANDARD INSURANCE REQUIREMENTS AND INDEMNIFICATION REQUIREMENT

All policies and Certificates of Insurance of the Contractor shall contain the following clauses:

1. Town of Willsboro is named as an additional assured. Insurers shall have no right of recovery or subrogation against the Town of Willsboro (including its 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.
2. The clause "other insurance provisions" in a policy in which the Town of Willsboro is named as an insured, shall not apply to the Town of Willsboro.
3. The Insurance Companies issuing the policy or policies shall have no recourse against the Town of Willsboro (including its agents or agencies) for payment of any premiums or for assessments under any form of policy.
4. Any and all deductibles in the above-described insurance policies shall be assumed by and at the risk of the Contractor.

The following indemnification agreement shall be, and is hereby, a provision of the Contract and shall be endorsed on the reverse side of all Certificates of Insurance:

The Contractor, person or firm agrees to protect, defend, indemnify and hold the Town of Willsboro and its officers, employees and agents free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees or other expense or liabilities of every kind and character arising out of or relating to any and all claims, liens, demands obligations, actions, proceedings or causes of action of every kind and character in connection with or arising directly or indirectly out of this Agreement and/or the performance hereof. Without limiting the generality of the foregoing, and all such claims, etc., relating to personal injury, death, damage to property, defects in material or workmanship, actual or alleged infringement of any patent, trademark, copyright (or application for any thereof) or of any other tangible or intangible personal or property right, or any actual or alleged violation of any applicable statute, ordinance, administrative order, rule or regulation, or decree of any court shall be included in the indemnity hereunder. The contractor further agrees to investigate, handle, respond to, provide defense for and defend any such claims, etc. at his sole expense and agrees to bear all costs and expense related thereto, even if it (claims, etc.) is groundless, false or fraudulent.

**Article 17 - Blasting**

Blasting - the Contractor shall comply with the requirements of the Penal Law, Section 1918, as amended, regarding blasting.

**Article 18 – Wages**

Wages - the Contractor shall pay a minimum wage which shall be equal to the hourly wage as scheduled by the New York State Department of Labor for the various classes of labor, such

schedules being the prevailing rate in Essex County at the time of the receipt of bids. (See Prevailing Wage Rate in the Bid Specifications). In addition, the following requirements of the Labor Law of the State of New York shall be complied with:

A. Latest amendments of Sections 220, 220-d and 220-e, 222 and 222-e.

### **Article 19 – Estimates and Payments**

Estimates and Payments - As the work progresses but not more than once a month and then on such days as he or she may fix, the Engineer will make an estimate in writing of the amount and value of the work performed and the materials and equipment incorporated in the work, such as in his opinion is just and fair. The first such estimate will be of the amount and value of work performed and material and equipment incorporated in the work since the Contractor began the work under the Contract. Every subsequent estimate except the final estimate will be of the amount incorporated in the work since the last preceding estimate was made. Except for the final estimate the amount of each such estimate less ten percent (10%) retainage will be paid the Contractor within a reasonable time after the date of completion of such estimate by the Engineer. The retained percentage will be held until payment of the final estimate.

All estimates will be made for actual quantities of 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.

The Contractor shall furnish to the Engineer, prior to his making up any partial or final estimate, a copy of his and his sub-Contractor's 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 Engineer a sworn statement listing all unpaid bills and liabilities incurred under the Contract. Where there are any bills or liabilities in excess of money due under any estimate, the Engineer may withhold payment of the estimate pending a satisfactory proof of settlement or adjustment of any excess claims.

Subject to the prior approval of the Town, allowances for the value of certain materials or equipment stored on the construction site but not incorporated in the work may be used by the Engineer in making up estimates for partial payment, upon written request by the Contractor, subject to the following conditions.

- A. The material or equipment is stored and maintained on the construction site in first class condition in the manner directed by the Engineer.
- B. The material will not be used or the equipment will not be installed within forty-five (45) days from the date of the submission of the Contractor's request for partial payment.
- C. The Contractor has submitted certified copies of the manufacturer's or vendor's invoices or statements establishing the true purchase value of the material or equipment and evidence that the accounts for the claimed material or equipment have been paid in full.



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Allowances for such materials or equipment shall not exceed ninety percent (90%) of the stored material or equipment, but the actual allowances incorporated in the estimates will be at the discretion of the Engineer.

Upon the completion of the required work as shown and specified in the Contract documents, should the final estimate of quantities show either an increase or decrease from the approximate estimates of quantities, then such variations will be computed at the unit price bid and the final estimate will be that arrived at by adding or deducting the respective amount from the gross sum bid.

The final estimate will be prepared after the work has been completed; tested and approved by the Engineer and after acceptance of the work has been given by the Superintendent of Public Works. No final estimate will be approved for payment unless and until the Contractor furnishes satisfactory proof that all bills and liabilities incurred under the Contract have been paid in full. Payments on the final estimate will not be made prior to the expiration of thirty-one (31) days from the date of acceptance of the work.

#### **Article 20 – Contract Drawings**

Contract Drawings - The Design Drawings detailed in the **SPECIFICATIONS** show in general and/or in detail the work to be done under this Contract.

Upon request and after award and execution of the Contract, the successful Bidder will be issued for permanent possession a maximum of three (3) complete sets of the Contract Drawings and Specifications at no cost to him or her. Electronic copies will also be provided.

Additional sets beyond that number, requested by the Contractor, will be furnished to him or her by the Engineer, but at his or her expense.

#### **Article 21 – Conditions of Work**

Conditions of Work. Each Bidder must inform himself or herself 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 his bid.

At the time of the opening of bids, each Bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and Contract documents (including all addenda).

#### **Article 22 – Addenda and Interpretation**

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 Engineer, and to be given consideration must be received at least three (3) days prior to the date fixed for opening the bids.

Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the Specifications or plans which if issued will be delivered via the Essex County Purchasing Department's website to all prospective Bidders (at the respective email addresses furnished for such purpose). 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



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obligation under his or her bid as submitted. All addenda so issued shall become part of the Contract.

### **Article 23 – Shown Quantities and Site Inspection**

All bids shall be submitted upon the following express conditions which shall apply to and become a part of every bid received. The quantities shown on the Proposal Sheets opposite items of the work for which unit prices are to be bid are accepted by Bidders 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 misunderstanding in regard to the quantity or kind of materials to be furnished, or work to be done.

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.

### **Article 24 – Increase or Decrease of Quantities / Elimination of Items**

In entering into this Contract, the Contractor agrees that quantities shown on the proposal sheets 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 Town may find it advisable and shall have the right to omit portions of the work, and to increase or decrease the whole work; and that the Town reserves the right to add to or take from the total amount of the work up to a limit of thirty percent (30%) of the total amount of the Contract based upon the executed Contract price for all the specified work.

The Contractor shall and will at no time make any claim for anticipated profit 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 (30%) 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 Engineer, excepting that the total amount of the Contract shall not be increased or decreased more than thirty percent (30%) except by mutual agreement between both parties thereto.

### **Article 25 - State and Local Sales Tax Exemption**

The Contractor's attention is directed to the changes made in Section 1115 of the Tax Law of New York State by 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 subdivisions, including the Town of Willsboro, is exempt from State and Local retail sales tax and compensating use tax.

In formulating their proposals, all Bidders shall exclude any dollar amounts for the payment of State and Local retail sales tax and compensating use tax. The successful Bidder shall be



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obligated to file the required Contractor Exempt Purchase Certificates, a sample of which is reproduced on the following pages of this Information for Bidders.

**Article 26 – Engineering Charges**

When the work embraced in the Contract is not completed on or before the date specified herein, engineering and inspection expenses incurred by the Town of Willsboro upon the work from the completion date originally fixed in the Contract to the final date of completion of work may be charged to the Contractor and be deducted from the final monies due the Contractor. Consideration of any extra work or supplemental Contract work added to the original will be given due consideration by the Town before assessing engineering and inspection charges against the Contractor. Such charges will be assessed, however in cases where in the opinion of the Engineer, the work has been unduly delayed by the Contractor.

**Article 27 – 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 will be permitted to work as such only when they are registered, individually, under a bona fide program registered with the New York State Department of Labor".

**Article 28 – Affirmative Action Provision**

During the performance of this Contract, the Contractor agrees that he/she will not discriminate against any employee or applicant for employment because of 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 Town.

**Article 29 – Certificate of Authority from the State of 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.

**Article 30 – Licensing Requirements**

On building alterations and new building construction Contracts, it shall be a requirement that all electrical and plumbing work be done under the direct supervision of a licensed electrician or plumber. For the purpose of this Contract, licensing shall mean licensure in a municipality in the geographic limits of Essex, Warren, Clinton, or Franklin Counties

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PROPOSAL**

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**CERTIFICATE OF AUTHORITY**

I, \_\_\_\_\_  
(Officer other than officer executing proposal documents)  
certify that I am the \_\_\_\_\_ of the \_\_\_\_\_  
(Title) (Name of 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,  
\_\_\_\_\_ of the Contractor; that said agreement was duly signed for  
(Title of such person)  
and in behalf of said Contractor by authority of its Board of Directors, thereunto duly authorized, and that  
such authority is in full force and effect at the date hereof.

\_\_\_\_\_  
Signature Corporate Seal  
STATE OF NEW YORK ) SS.:  
COUNTY OF ESSEX )  
On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came \_\_\_\_\_  
\_\_\_\_\_ to me known, and known to me to be the \_\_\_\_\_  
(Title) of \_\_\_\_\_ the corporation described in  
and which executed the above certificate, who being by me duly sworn did depose and say that he/she, 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 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 County

**CERTIFICATION OF EXPERIENCE**

BIDDER: \_\_\_\_\_

I, \_\_\_\_\_ HEREBY CERTIFY THAT (COMPANY \_\_\_\_\_  
\_\_\_\_\_ HAS PERFORMED THE FOLLOWING WORK WITHIN THE LAST  
THREE YEARS **UNLESS SPECIFIED DIFFERENTLY IN THE SPECIFICATION:**

NAMES OF BUSINESS: \_\_\_\_\_ CONTACT NAME: \_\_\_\_\_

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

AMOUNT OF CONTRACT: \_\_\_\_\_ TELEPHONE NO.: \_\_\_\_\_

TYPE OF WORK: \_\_\_\_\_ FAX NO.: \_\_\_\_\_

---

NAMES OF BUSINESS: \_\_\_\_\_ CONTACT NAME: \_\_\_\_\_

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

AMOUNT OF CONTRACT: \_\_\_\_\_ TELEPHONE NO.: \_\_\_\_\_

TYPE OF WORK: \_\_\_\_\_ FAX NO.: \_\_\_\_\_

---

NAMES OF BUSINESS: \_\_\_\_\_ CONTACT NAME: \_\_\_\_\_

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

AMOUNT OF CONTRACT: \_\_\_\_\_ TELEPHONE NO.: \_\_\_\_\_

TYPE OF WORK: \_\_\_\_\_ FAX NO.: \_\_\_\_\_

---

NAMES OF BUSINESS: \_\_\_\_\_ CONTACT NAME: \_\_\_\_\_

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

AMOUNT OF CONTRACT: \_\_\_\_\_ TELEPHONE NO.: \_\_\_\_\_

TYPE OF WORK: \_\_\_\_\_ FAX NO.: \_\_\_\_\_

---

NAMES OF BUSINESS: \_\_\_\_\_ CONTACT NAME: \_\_\_\_\_

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

AMOUNT OF CONTRACT: \_\_\_\_\_ TELEPHONE NO.: \_\_\_\_\_

TYPE OF WORK: \_\_\_\_\_ FAX NO.: \_\_\_\_\_

---

NAMES OF BUSINESS: \_\_\_\_\_ CONTACT NAME: \_\_\_\_\_

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

AMOUNT OF CONTRACT: \_\_\_\_\_ TELEPHONE NO.: \_\_\_\_\_

TYPE OF WORK: \_\_\_\_\_ FAX NO.: \_\_\_\_\_

---

NOTE: THIS FORM MUST BE EXECUTED BY YOUR SURETY AND SUBMITTED WITH YOUR BID.

TOWN OF WILLSBORO  
BID SECURITY FORM #1

**CONSENT OF SURETY**

Issued to: \_\_\_\_\_  
(Name of Bidder)

CONTRACT NUMBER \_\_\_\_\_

In consideration of the premises and of one dollar to it in hand paid by the Town of Willsboro the receipt whereof is hereby acknowledged, the undersigned contents and agrees that if the contract, for which the preceding estimate and proposal is made, be awarded to the corporation, person or persons making the same, it will become bound as surety and guarantor for its faithful performance, and will execute it as party of the third part thereto when required to do so by the said Town of Willsboro and if the said corporation, person or persons shall omit or refuse to execute such contract if so awarded, it will pay, on demand, to the said Town of Willsboro , any difference between the sum bid by the corporation, person or persons and the sum which the said County may be obliged to pay the corporation, person or person to whom the contract may be afterwards awarded, the amount in each case to be determined by the bids for said contract.

In witness whereof, said Surety has set its seal and caused these presents to be signed by its duly authorized officers, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

(SEAL)

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

TITLE: \_\_\_\_\_

NOTE: Attach necessary Power of Attorney, Notarial Acknowledgement of Signature and Surety's Financial Statement.

**STATEMENT OF SURETY'S INTENT**

To: \_\_\_\_\_

We have reviewed the Bid of \_\_\_\_\_  
(Contractor)

Of \_\_\_\_\_  
(Address)

For \_\_\_\_\_  
\_\_\_\_\_  
(Project)

Bids for which will be received on \_\_\_\_\_  
(Bid Opening Date)

and wish to advise that should this Bid of the Contractor be accepted and the Contract awarded to him/her, it is our present intention to become surety on the Performance Bond and Labor and Materials Payment Bond required by this Contract.

Any arrangement for the bonds required by the Contract is a matter between the Contractor and ourselves, and we assume no liability to you or third parties if for any reason we do not execute the requisite bonds.

We are duly authorized to transact business in the State of New York, and we appear on the U.S. Treasury Department's most current list (Circular 570 as amended).

Attest:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
Surety's Authorized Signature(s)

Attach Power of Attorney

(Corporate seal if any. If no seal, write  
"No Seal" across this place and sign.)

**BID SECURITY**

(ATTACHED HERE – CERTIFIED CHECK, CASH OR BID BOND)

BIDDER'S CHECKLIST

Each of the following forms must be executed and notarized if applicable:

CERTIFICATE OF AUTHORITY \_\_\_\_\_

CERTIFICATION OF EXPERIENCE \_\_\_\_\_

BID SECURITY FORM # 1 \_\_\_\_\_

STATEMENT OF SURETY'S INTENT \_\_\_\_\_

PROPOSAL \_\_\_\_\_

CERTIFICATION OF COMPLIANCE  
WITH IRAN DIVESTMENT ACT \_\_\_\_\_

NON-COLLUSIVE BIDDING CERTIFICATION \_\_\_\_\_

# PROPOSAL

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

Proposal of \_\_\_\_\_

---

to furnish and deliver all labor, supervision, materials, and equipment and perform all work in accordance with the Specifications for *Boquet River Non-Point Source Pollution Prevention Improvement Project – Phase II* in the Town of Willsboro, New York for the following lump sum cost.

The owner, Town of Willsboro, is tax-exempt. Do not include sales tax in Bid amounts.

The undersigned bidder has carefully examined the contract documents, site of the work, is familiar with existing conditions, and will provide all necessary insurance, bonds, machinery, tools, apparatus, false work and other means of construction, and do all the work and furnish all the materials called for by said contract according to the following bid, including all labor, supplies and equipment, permits, fees, overhead and profit for the following Lump Sum price and unit price for the specific items identified. The Total Bid price is the sum of the Lump Sum Base Bid and Unit Price Base Bid(s) and is to be shown in both words and figures. In the event of discrepancies, the amount shown in words shall govern. All items are to be furnished and installed in place complete.

**LUMP SUM BASE BID:** Lump Sum Price that includes all work in the contract documents except for landfill transport and disposal of waste.

1) Lump Sum Price \$ \_\_\_\_\_

**UNIT PRICE BID:**

2) <u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>UNIT PRICE</u>	<u>TOTAL PRICE</u>
Unit Price Bid for Landfill Transport and Disposal of Waste	TONS	900	\$ _____	\$ _____

**TOTAL BID (sum of items (1) and (2))**

---

(Amount in Words)

---

(Amount in Figures)

The undersigned further understands that the contract will be awarded to the competent, qualified bidder submitting the lowest bid for the Total Bid.

**ADDENDA ACKNOWLEDGEMENT**

<u>Addendum No.</u>	<u>Date Received</u>
_____	_____
_____	_____
_____	_____
_____	_____

**UNIT PRICES:**

The undersigned proposes unit prices as follows for use in determining cost of work added to or deducted from the Contract. Said unit prices shall include all charges for installation, supervision, taxes, insurance and profit. See Contract Documents for Unit Price descriptions.

TECHNICAL SPECIFICATION/DESCRIPTION	UNIT PRICE
207.0 - Cost per cu.yd. Rock / Ledge Excavation	\$ _____
207.0 - Cost per cu.yd. Common Excavation	\$ _____
501.0 - Cost per sq. yd. Geotextile	\$ _____
218.0 - Cost per cu.yd. Fill Material (Stone)	\$ _____



The undersigned agrees as follows:

1. The total contract price bid shall be accepted as full compensation for the complete work subject to additions or deductions in quantity of work performed or changes agreed upon.
2. Within twenty (20) days from the date of "Notice of Acceptance" of the Proposal, to execute the contract and to furnish a satisfactory labor, material and performance bond in the amount of
3. 100% of the contract price.
4. To execute the work as specified herein as soon as possible after notice of award.
5. To comply with requirements as to the conditions of employment, wage rates and hours set forth in the bidding documents.
6. Progress Payments will be made on a percentage of completion basis monthly.
7. 5% Retainage will be withheld until final approval of project(s).

Bidder: \_\_\_\_\_

By: \_\_\_\_\_

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

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

Dated: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

Social Security/Federal ID No: \_\_\_\_\_

Email: \_\_\_\_\_

**CERTIFICATION OF COMPLIANCE WITH THE IRAN DIVESTMENT ACT**

As a result of the Iran Divestment Act of 2012 (the "Act"), Chapter 1 of the 2012 Laws of New York, a new provision has been added to State Finance Law (SFL) § 165-a and New York General Municipal Law § 103-g, both effective April 12, 2012. Under the Act, the Commissioner of the Office of General Services (OGS) will be developing a list of "persons" who are engaged in "investment activities in Iran" (both are defined terms in the law) (the "Prohibited Entities List"). Pursuant to SFL § 165-a(3)(b), the initial list is expected to be issued no later than 120 days after the Act's effective date at which time it will be posted on the OGS website.

By submitting a bid in response to this solicitation or by assuming the responsibility of a Contract awarded hereunder, each Bidder/Contractor, any person signing on behalf of any Bidder/Contractor and any assignee or subcontractor and, in the case of a joint bid, each party thereto, certifies, under penalty of perjury, that once the Prohibited Entities List is posted on the OGS website, that to the best of its knowledge and belief, that each Bidder/Contractor and any subcontractor or assignee is not identified on the Prohibited Entities List created pursuant to SFL § 165-a(3)(b).

Additionally, Bidder/Contractor is advised that once the Prohibited Entities List is posted on the OGS Website, any Bidder/Contractor seeking to renew or extend a Contract or assume the responsibility of a Contract awarded in response to this solicitation must certify at the time the Contract is renewed, extended or assigned that it is not included on the Prohibited Entities List.

During the term of the Contract, should the Town receive information that a Bidder/Contractor is in violation of the above-referenced certification, the Town will offer the person or entity an opportunity to respond. If the person or entity fails to demonstrate that he/she/it has ceased engagement in the investment which is in violation of the Act within 90 days after the determination of such violation, then the Town shall take such action as may be appropriate including, but not limited to, imposing sanctions, seeking compliance, recovering damages or declaring the Bidder/Contractor in default.

The Town reserves the right to reject any bid or request for assignment for a Bidder/Contractor that appears on the Prohibited Entities List prior to the award of a contract and to pursue a responsibility review with respect to any Bidder/Contractor that is awarded a contract and subsequently appears on the Prohibited Entities List.

I, \_\_\_\_\_, being duly sworn, deposes and says that he/she is the \_\_\_\_\_ of the \_\_\_\_\_ Corporation and

that neither the Bidder/Contractor nor any proposed subcontractor is identified on the Prohibited Entities List.

\_\_\_\_\_  
SIGNED

SWORN to before me this \_\_\_\_\_

day of \_\_\_\_\_, 20\_\_

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

**NON-COLLUSIVE BIDDING CERTIFICATION**

1. By submission of this bid, the undersigned bidder and each person signing on behalf of such 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 the undersigned’s knowledge and belief:
  - (a) 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;
  - (b) 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
  - (c) 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.
  
2. The undersigned acknowledges and agrees that a bid shall not be considered for award nor shall any award be made where any of the above have not been complied with; provided however, that if in 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 therefor. Where one or more of the above has/have not been complied with, the bid shall not be considered for award nor shall any award be made unless the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.
  
3. The undersigned also acknowledges and agrees that the fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of paragraph 1 above.
  
4. The undersigned further acknowledges and agrees that any bid hereafter made to any political subdivision of the state or any public department, agency or official thereof by a bidder which is a corporation or a limited liability company for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in paragraph 1 of this certificate, shall be deemed to have been authorized by the board of directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation or limited liability company.

Name of Bidder: \_\_\_\_\_  
(print full legal name)

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

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

Name of Person Signing Certificate: \_\_\_\_\_  
(print full legal name of signer)

Bidder is (check one):  an individual,  a limited liability partnership,  a limited liability company,  
 other entity (specify): \_\_\_\_\_

CONTRACTOR'S ACKNOWLEDGEMENT

(If Corporation)

STATE OF NEW YORK) SS:  
COUNTY OF ESSEX)

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 duly sworn did depose  
and say that he/she, the said \_\_\_\_\_ reside at \_\_\_\_\_ and  
that he/she 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 ACKNOWLEDGEMENT

(If Individual)

STATE OF NEW YORK) SS:  
COUNTY OF ESSEX)

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 and trade name, that the  
certificate required by the New York State Penal Law, Sections 440 and 440-b has been filed with the  
County Clerk of Essex County.

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

CONTRACTOR'S ACKNOWLEDGEMENT

(If Co-Partnership)

STATE OF NEW YORK) SS:  
COUNTY OF ESSEX)

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 for the purposes  
herein mentioned and that the certificate required by the New York State Penal Law, Sections 440 and 440-b  
has been filed with the County Clerk of Essex County.

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

## **EXHIBIT C**

### **INSURANCE REQUIREMENTS – PUBLIC WORKS CONTRACTORS**

I. The Contractor and each of its subcontractors shall procure and maintain during the entire term of the contract the following required insurance:

- **Commercial General Liability Insurance**  
\$1,000,000 per occurrence / \$2,000,000 aggregate, including coverage for liability assumed by contract, completed operations, explosion, collapse, underground hazard and products liability.
- **Automobile Liability**  
\$1,000,000 combined single limit for owned, hired and borrowed and non-owned motor vehicles.
- **Workers' Compensation**  
Statutory Workers' Compensation and Employers' Liability Insurance for all employees.
- **Owners & Contractors Protective Liability Insurance**  
\$2,000,000 per occurrence / \$2,000,000 aggregate.
- **Excess/Umbrella Liability Insurance**  
\$1,000,000 per occurrence / \$2,000,000 aggregate.

II. Notwithstanding any terms, conditions or provisions, in any other writing between the parties, the Contractor hereby agrees to name the County as:

- (a) an additional insured on the Contractor's Commercial General Liability, Automobile Liability and Excess/Umbrella Liability insurance policies, and
- (b) a named insured on the Owners & Contractors Protective Liability Insurance Policy.

III. The policy/policies of insurance furnished by the Contractor shall:

- be from an A.M. Best rated "A" New York State licensed insurer; and
- contain a 30-day notice of cancellation

IV. The Contractor agrees to indemnify the County for any applicable deductibles.

V. Contractor acknowledges that failure to obtain such insurance on behalf of the County constitutes a material breach of contract and subjects it to liability for damages, indemnification and all other legal remedies available to the County. Prior to commencement of work or use of facilities, the Contractor shall provide to the County proof that such requirements have been met by furnishing certificate(s) of such insurance, and the declarations pages from the policies of such insurance. The failure of the County to object to the contents of the certificate(s) and/or declarations pages, or the absence of same, shall not be deemed a waiver of any and all rights held by the County.

VI. All certificates of insurance will provide 30 days notice to the county of cancellation or non-renewal.

VII. Contractor and subcontractor waives all rights of subrogation against the owner and will have the General Liability, Umbrella Liability Workers' Compensation policies endorsed setting forth this Waiver of Subrogation.

VII. All policies will also contain no exclusions with respect to Section 240 and 241 of the NYS Labor Law.

IX. The County shall be listed as an additional insured on a primary and non-contributory basis.

## **APPENDIX D - STANDARD CLAUSES FOR ESSEX COUNTY CONTRACTS**

### **1. Independent Contractor Status**

The parties each acknowledge, covenant and agree that the relationship of the Contractor to the County shall be that of an independent contractor. The Contractor, in accordance with its status as an independent contractor, further covenants and agrees that it:

- (a) will conduct itself in accordance with its status as an independent contractor;
- (b) will neither hold itself out as nor claim to be an officer or employee of the County; and
- (c) will not make any claim, demand or application for any right or privilege applicable to an officer or employee of the County, including but not limited to workers' compensation benefits, unemployment insurance benefits, social security coverage or retirement membership or credits.

### **2. Contractor To Comply With Laws/Regulations**

The Contractor shall at all times comply with all applicable state and federal laws, rules and regulations governing the performance and rendition of the services to be furnished under this agreement.

### **3. Licenses, Permits, Etc.**

The Contractor shall, during the term of this agreement, obtain and keep in full force and effect any and all licenses, permits and certificates required by any governmental authority having jurisdiction over the rendition and performance of the services to be furnished by the Contractor under this agreement.

### **4. Termination**

This agreement may be terminated without cause by either party upon 30 days prior written notice, and upon such termination neither party shall have any claim or cause of action against the other except for services actually performed and mileage expenses actually incurred prior to such termination. Notwithstanding the foregoing, this agreement may be immediately terminated by the County:

- (a) for the Contractor's breach of this agreement, by serving written notice of such termination stating the nature of the breach upon the Contractor by personal delivery or by certified mail, return receipt requested, and upon such termination either party shall have such rights and remedies against the other as provided by law; or
- (b) upon the reduction or discontinuance of funding by the State or Federal governments to be used in furnishing some or all of the work, labor and/or services provided for under this agreement, and upon such termination neither party shall have any claim or cause of action against the other except for services actually performed and expenses (if the same are to be paid under this agreement) actually incurred prior to such termination.

### **5. Defense & Indemnification**

The Contractor shall defend, indemnify and hold harmless the County to the fullest extent allowed by law, and notwithstanding any insurance requirements, from and against any and all liability, losses, claims, actions, demands, damages, expenses, suits, judgments, orders, causes of action and claims, including but not limited to attorney's fees and all other costs of defense, by reason of any liability whatsoever imposed by law or otherwise upon the County for damages to person, property or of any other kind in nature, including but not limited to those for bodily injury, property damage, death arising out of or in connection with its officers, employees, agents, contractors, sub-contractors, guests or invitees negligence or

its/their performance or failure to perform this agreement.

6. **Discrimination Prohibited**

The services to be furnished and rendered under this agreement by the Contractor shall be available to any and all residents of Essex County without regard to race, color, creed, sex, religion, national or ethnic origin, handicap, or source of payment; and under no circumstances shall a resident's financial ability to pay for the services provided be considered unless such consideration is allowed by State and/or Federal law, rule or regulation.

7. **Non-Discrimination In Employment**

The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, age, disability or marital status. In the event that this is a contract to be performed in whole or in part within the State of New York for (a) the construction, alteration or repair of any public building or public work, (b) for the manufacture, sale or distribution of materials, equipment or supplies, (c) for building service, the Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex or national origin:

- (1) discriminate in hiring against any citizen who is qualified and available to perform the work; or
- (2) discriminate against or intimidate any employee hired for the performance of work under this contract.

The Contractor agrees to be subject to fines of \$50.00 per person per day for any violation of this paragraph, as well as to possible termination of this contract or forfeiture of all moneys due hereunder for a second or subsequent violation.

8. **Damage/Injury To Persons & Property**

The Contractor shall promptly advise the County of all damages to property of the County or of others, or of injuries incurred by persons other than employees of the Contractor, in any manner relating, either directly or indirectly, to the performance of this agreement.

9. **Records**

The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter collectively "the Records") in accordance with the following requirements:

- (a) the Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter;
- (b) the County Auditor, State Comptroller, the Attorney General or any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York, or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying.

The County shall take reasonable steps to protect from public disclosure any of the records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate County official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified and designation of said records as exempt under the statute is reasonable. Nothing

contained herein shall diminish, or in any way adversely affect, the County's right to discovery in any pending or future litigation.

10. **Claims For Payment**

All invoices or claims for which payment is sought from the County must be submitted in accordance with the following:

- (a) each claim for payment must include
  - (1) an invoice detailing the claim,
  - (2) copies of all documentation supporting the claim,
  - (3) a properly completed County standard voucher, which includes
    - (i) the County contract number under which payment is being claimed, **AND**
    - (ii) the payee's Federal employer identification number or Federal social security number, or both such numbers when the payee has both such numbers. *[Failure to include this number or numbers will prevent and preclude payment by the County; except that where the payee does not have such number or numbers, the payee, on the invoice or County voucher, must give the reason or reasons why the payee does not have such number or numbers and such reasons constitute a valid excuse under law.]*
- (b) Unless otherwise provided in this agreement, each claim for payment must be submitted to the County no later than 30 days after the work, labor, materials, and/or services for which payment is claimed were rendered or furnished.
- (c) Notwithstanding any other provision of this agreement, no claim for payment shall be valid, and the County shall not be liable for payment thereof, unless it is submitted to the County within 30 days of the close of the calendar year in which the work, labor, materials, and/or services for which payment is claimed were rendered or furnished.
- (d) Unless otherwise provided in this agreement, the requirements of this paragraph 10, and/or of any other provisions of this agreement which supersede the same, shall constitute conditions precedent to the County's payment obligation, and failure to comply with any or all of said requirements shall entitle the County to deny payment.
- (e) As a further condition of payment, each claim of payment shall be accompanied by a Contractor and Sub-Contractor Progress Payment Waiver, Release and Discharge, and each Final Payment shall be accompanied by a Contractor and Sub-Contractor Final Payment, Waiver and Release form. As well as a Contractor Affidavit relative to Final Payment. Copies of these forms are attached and made a part hereof.

11. **Consent**

In the event that State or Federal law requires the recipient of services to be furnished and rendered under this agreement to give his/her prior consent thereto, the contractor shall obtain such person's consent and furnish proof thereof to the County.

12. **Executory Clause**

The County shall have no liability under this contract to the Contractor or to anyone else beyond the funds appropriated and available for this contract.

13. **Public Work & Building Service Contract Requirements**

If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof:

- (a) neither the Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said



- statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department; and
- (b) the Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law.

14. **Public Work Contracts – Hazardous Substances**

If this is a contract for public work, the Contractor agrees as follows:

- (a) the Contractor acknowledges that the County uses and/or produces various substances which may be classified as hazardous under OSHA's Hazard Communication Standard;
- (b) the Contractor recognizes the use of said substances by the County and acknowledges that the County has provided, or upon request will provide, the Contractor with a description of such substances which may be present in the area of the County's facility/facilities to which the Contractor may have accessed during the performance of this contract;
- (c) the Contractor acknowledges that the County has provided, or upon request will provide, suggestions for appropriate protective measures which should be observed when the Contractor is in the area of any such hazardous substances;
- (d) the Contractor agrees to be solely responsible for providing training and information to its employees regarding any such hazardous substances, as well as of any protective measures suggested by the County;
- (e) the Contractor agrees to be solely responsible to ensure that the Contractor's employees observe protective measures during the performance of their duties in the performance of the contract, and that all such protective measures will be at least as stringent as those suggested or which would have been suggested by the County;
- (f) in the event that the Contractor's performance of the work under this contract requires the use of any hazardous substances, the Contractor shall notify the County in advance of bringing in and/or using such substances in or upon County property and suggest to the County appropriate measures to be observed by the County, its officers and employees, and/or the public; and
- (g) in the event the Contractor fails in whole or in part to comply with the terms of this paragraph, the County shall have the right to interrupt the Contractor's work and/or terminate this contract, and the Contractor shall be prohibited from renewing such work until all applicable safety and health procedures and practices are implemented by the Contractor.

15. **Disputes**

Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration, but must, instead, be heard in a court of competent jurisdiction within the State of New York.

16. **Non-Assignment**

This agreement may not be assigned, subcontracted, transferred, conveyed, sublet or otherwise disposed of in whole or in part, by the Contractor, without the prior written consent of the County, and any attempts to assign the contract without the County's written consent are null and void.

17. **No Collusion**

If this contract was awarded based upon the submission of bids, the Contractor

warrants, under penalty of perjury, that:

- (a) its bid was arrived at independently and without collusion aimed at restricting competition; and
- (b) at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the County a non-collusive bidding certification on Contractor's behalf.

18. **International Boycott**

In accordance with Section 220-f of the Labor Law, if this contract exceeds \$5,000.00, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation, has participated, is participating, or shall participate in an International boycott in violation of the federal Export Administration Act of 1979, or regulations thereunder. If such contractor, or any of the aforesaid affiliates of Contractor, is convicted, or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the County Manager within five (5) business days of such conviction, determination or disposition of appeal.

19. **County's Rights of Set-Off**

The County shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the County's option to withhold for the purposes of set-off any moneys due to the Contractor under this agreement up to any amounts due and owing to the County with regard to this contract, any other contract with any County department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the County for any other reason, including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The County shall exercise its set-off rights in accordance with normal County practices, including, in cases of set-off pursuant to an audit, the acceptance of such audit by the County Board of Supervisors or its designated representative.

20. **Contractor Defined**

Whenever the term "Contractor" is used in this agreement, such term shall include and apply to all employees, all officers, directors and agents, if any, of the Contractor.

21. **Amendment**

This agreement may not be amended, modified or renewed except by written agreement signed by the Contractor and the County.

22. **Ownership Of Work Products**

All final and written or tangible work products completed by the Contractor shall belong to the County. In the event of premature discontinuance of performance, the Contractor agrees to deliver all existing products and data files to the County.

23. **Executive Order Debarment/Suspension**

In the event that this contract involves the Contractor furnishing goods and services in excess of \$100,000.00, or constitutes a subaward to subrecipients, under any Federal program, grant or other funding source, then by executing this agreement the Contractor certifies that neither it nor any of its principals are suspended or debarred within the scope or

meaning of Executive Orders 12549 and 12689, any Federal or State regulation implementing or codifying the same, or any other Federal or State law, rule or regulation.

24. **Health Insurance Portability and Accountability Act of 1996 (HIPAA)**

In the event that this contract involves the use or disclosure of protected health information within the meaning or application of the Health Insurance Portability and Accountability Act of 1996 (HIPAA), and the regulations thereunder, the following provisions of this paragraph shall apply.

- (a) **Definitions.** The terms used, but not otherwise defined, in this Agreement shall have the same meaning as given such terms in 45 CFR §160.103 and §164.501, as the same may be amended from time to time, including but not limited to the following.
- (1) "Business Associate" shall mean the Contractor, its officers, employees, agents and subcontractors.
  - (2) "Covered Entity" shall mean Essex County (the "County"), its departments, agencies, officers and employees.
  - (3) "Individual" shall have the same meaning as given such term in 45 CFR §164.501 and shall also include a person who qualifies as a personal representative in accordance with 45 CFR §164.502(g).
  - (4) "Privacy Rule" shall mean the Standards for Privacy of Individually Identifiable Health Information at 45 CFR Part 160 and Part 164, subparts A and E.
  - (5) "Protected Health Information" shall have the same meaning as given such term in 45 CFR §164.501, limited to the information created or received by Contractor from or on behalf of the County.
  - (6) "Required by law" shall have the same meaning as given such term in 45 CFR §164.501.
  - (7) "Secretary" shall mean the Secretary of the Department of Health and Human Services or his/her designee.
- (b) **Obligations and Activities of Contractor.** Contractor agrees to:
- (1) not use or disclose Protected Health Information other than as permitted or required by this Agreement or as required by law;
  - (2) use appropriate safeguards to prevent use or disclosure of the Protected Health Information other than as provided for by this Agreement;
  - (3) mitigate, to the extent practicable, any harmful effect that is known, should have been known, and/or discovered to/by Contractor of a use or disclosure of Protected Health Information by Contractor in violation of the requirements of this Agreement;
  - (4) report to the County any use or disclosure of the Protected Health Information not provided for by this Agreement of which it becomes aware;
  - (5) ensure that any agent, including a subcontractor, to whom it provides Protected Health Information received from, or created or received by Contractor on behalf of the County agrees to the same restrictions and conditions that apply through this Agreement to Contractor with respect to such information;
  - (6) provide access, at the request of the County, and in the time and manner designated by the County or the Secretary, to Protected Health Information in a Designated Record Set, to the County or, as directed by the County, to an Individual in order to meet the requirements under 45 CFR §164.524;
  - (7) make any amendment(s) to Protected Health Information in a Designated Record

Set that the County directs or agrees to pursuant to 45 CFR §164.526 at the request of the County or an Individual, and in the time and manner designated by the County or the Secretary;

(8) make internal practices, books, and records, including policies and procedures and Protected Health Information, relating to the use and disclosure of Protected Health Information received from, or created or received by Contractor on behalf of, the County available to the County, and/or to the Secretary, in a time and manner designated by the County or by the Secretary, for purposes of the Secretary determining the County's compliance with the Privacy Rule;

(9) document such disclosures of Protected Health Information and information related to such disclosures as would be required for the County to respond to a request by an Individual for an accounting of disclosures of Protected Health Information in accordance with 45 CFR §164.528;

(10) provide to the County or an Individual, in time and manner designated by the County or the Secretary, information collected in accordance with the above subparagraph (b)(9) of this Agreement, to permit the County to respond to a request by an Individual for an accounting of disclosures of Protected Health Information in accordance with 45 CFR §164.528.

(c) Permitted Uses and Disclosures by Contractor.

Except as otherwise limited in this Agreement, Contractor may use or disclose Protected Health Information on behalf of, or to provide services to, the persons entitled to services under this Agreement:

(1) solely for the purposes of performing Contractor's obligations under this Agreement, if such use or disclosure of Protected Health Information would not violate the Privacy Rule if done by the County or the minimum necessary policies and procedures of the County; or

(2) provided that such use or disclosures are required by law; or

(3) Contractor

(A) obtains written authorization(s) from the individual to which the information pertains permitting the specific uses or disclosures of such information to third persons,

(B) represents and agrees in writing with such individual that the information to be used and/or disclosed will remain confidential and used or further disclosed only as required by law or for the purposes specified in the written authorization(s), and

(C) such third persons agree in writing to notify the County as soon as practicable and in writing of any instances of which such third person(s) is/are aware in which the confidentiality of the information has been breached; or

(4) provide Data Aggregation services to the County as permitted by 42 CFR §164.504(e)(2)(i)(B); or

(5) report violations of law to appropriate Federal and State authorities, consistent with §164.502(j)(1).

(d) County To Inform Contractor of Privacy Practices and Restrictions.

The County agrees to notify the Contractor of any

(1) limitation(s) in its notice of privacy practices of the County in accordance with 45 CFR §164.520, to the extent that such limitation may affect the Contractor's use or disclosure of Protected Health Information;

- (2) changes in, or revocation of, permission by Individual to use or disclose Protected Health Information, to the extent that such changes may affect the Contractor's use or disclosure of Protected Health Information; and/or
- (3) restriction to the use or disclosure of Protected Health Information that the County has agreed to in accordance with 45 CFR §164.522, to the extent that such restriction may affect Contractor's use or disclosure of Protected Health Information.

(e) Permissible Requests by County.

The County shall not request Contractor to use or disclose Protected Health Information in any manner that would not be permissible under the Privacy Rule if done by the County; except that in the event that the services to be furnished by the Contractor under this Agreement requires data aggregation by the Contractor, the Contractor may use or disclose protected health information for such data aggregation or management and administrative activities of Contractor.

(f) Survival of Provisions.

The obligations of the Contractor under this paragraph 24 shall survive the expiration of the term of this Agreement and/or the termination of this Agreement, and said obligations shall remain effective and shall not terminate until all of the Protected Health Information provided by the County to Contractor, or created or received by Contractor on behalf of the County, is destroyed or returned to the County, or, if it is infeasible to return or destroy Protected Health Information, protections are extended to such information, in accordance with the termination provisions in subparagraph (g) below.

(g) Return or Destruction of Protected Health Information.

Except as otherwise provided below, upon termination of this Agreement for any reason, Contractor shall return or destroy all Protected Health Information received from the County, or created or received by Contractor on behalf of the County. This provision shall apply to Protected Health Information that is in the possession of subcontractors or agents of Contractor. Contractor shall retain no copies of the Protected Health Information.

In the event that Contractor determines that returning or destroying the Protected Health Information is infeasible, Contractor shall provide to the County notification of the conditions that make return or destruction infeasible. Upon determination by the County that return or destruction of Protected Health Information is infeasible, Contractor shall extend the protections of this Agreement to such Protected Health Information and limit further uses and disclosures of such Protected Health Information to those purposes that make the return or destruction infeasible, for so long as Contractor maintains such Protected Health Information.

(h) Termination for Cause.

Upon the County's knowledge of a material breach of this paragraph by Contractor, the County shall:

- (1) either:
  - (A) provide an opportunity for Contractor to cure the breach or end the violation and terminate this Agreement within the time specified by the County, or
  - (B) immediately terminate this Agreement if cure is not possible; and
- (2) report the violation to the Secretary.

(i) Miscellaneous.

- (1) Regulatory References. A reference in this Agreement to a section in the Privacy

Rule means the section as in effect or as amended.

(2) Amendment. The Parties agree to take such action as is necessary to amend this Agreement from time to time as is necessary for the County to comply with the requirements of the Privacy Rule and the Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191.

(3) Survival. The respective rights and obligations of Contractor under this paragraph 24 of this Agreement shall survive the termination of this Agreement.

(4) Interpretation. Any ambiguity in this Agreement shall be resolved to permit the County to comply with the Privacy Rule.

25. **Severability**

If any term or provision of this agreement or the application thereof to any person or circumstance shall to any extent be held invalid or unenforceable, the remainder of this agreement or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby and every other term and provision of this agreement shall be valid and be enforced to the fullest extent permitted by law.

26. **Entire Agreement**

This agreement is the entire agreement between the parties, and the same shall be construed in accordance with the laws of the State of New York.

27. **For Medicaid/Federal Health Care Related Work**

**Excluded/Debarred Party Clause**

The Vendor/Contractor represents and warrants that it, nor its employees or contractors, are not excluded from participation, and is not otherwise ineligible to participate, in a "federal health care program" as defined in 42 U.S.C. § 1320a-7b(f) or in any other government payment program.

In the event Vendor/Contractor, or one of its employees or contractors, is excluded from participation, or becomes otherwise ineligible to participate in any such program during the Term, Vendor/Contractor will notify Essex County in writing within three (3) days after such event. Upon the occurrence of such event, whether or not such notice is given to the Vendor/Contractor, Essex County reserves the right to immediately cease contracting with the Vendor/Contractor.

If Vendor/Contractor is an Employment Agency, the Vendor/Contractor represents and warrants that its employees and contractors are not excluded from participation in a "federal health care program" as defined in 42 U.S.C. § 1320a-7b(f) or debarred from participation in any federal or other program.

The Vendor/Contractor further represents and warrants it will, at a minimum, check monthly all of its employees and subcontractors against:

- The General Services Administration's Federal Excluded Party List System (or any successor system),
- The United States Department of Health and Human Services's Office of the Inspector General's Lists of Excluded Individuals and Entities or any successor list,
- The New York State Department of Health's Office of the Medicaid Inspector General's list of Restricted, Terminated or Excluded Individuals or Entities.

In the event an excluded party is discovered the Vendor/Contractor will notify Essex County in

writing within three (3) days after such event. Upon the occurrence of such event, whether or not such notice is given to the Vendor/Contractor, Essex County reserves the right to immediately cease contracting with the Vendor/Contractor.

28. **Cooperative Purchasing (Piggybacking)**

Pursuant to General Municipal Law §103 and County Law §408-a, any political subdivision or fire company (as both are defined in Section 100 of the GML) or district authorized to make purchases of apparatus, materials, equipment or supplies, or to contract for services related to the installation, maintenance or repair of apparatus, materials, equipment and supplies may make said purchases under this existing contract (Piggybacking) provided, and on condition that this present contract was **LET TO THE LOWEST RESPONSIBLE BIDDER**. Therefore all terms and condition under this contract are extended to other political subdivisions and governmental entities.

Purchases under this contract by any other political sub-division other than Essex County shall be pursuant to the terms and conditions of Resolution No. 207 of 2013 dated July 1, 2013.

CONTRACTOR PROGRESS PAYMENT WAIVER, RELEASE AND DISCHARGE

PROJECT: \_\_\_\_\_

OWNER:           ESSEX COUNTY          

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

W I T N E S S E T H :

The above-named Contractor, hereinafter referred to as the "Releasor", does, for and on behalf of itself, its' successors, assigns and all parties claiming any interest or right through the Releasor, hereby warrant, covenant and agree as follows:

1. Releasor is/was a Contractor relative to the above-referenced Project pursuant to a contract or other relationship for the performing and/or furnishing of work, labor, services, materials and/or equipment at the Project site or to be incorporated in said Project.

2 Whenever the term "Releasor" is used in this instrument such term shall mean: (a) the above-named Contractor, its, successors and assigns; (b) any and all sureties and all other guarantors of the Releasor on any payment, performance, labor and/or material bond or other undertaking; (c) all parties claiming any interest or right through the Releasor, including but not limited to subcontractors and suppliers; and (d) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a), (b) and (c).

3. Whenever the term "Releasees" is used in this instrument such term shall mean: (a) the above-named Owner, its' successors and assigns; (b) the Project Architect/Engineer; and (c) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a) and (b).

4. For and in consideration of the sum of \$ \_\_\_\_\_, and other good and valuable consideration, which sum is acknowledged as being the full and total amount due or allegedly due or owing from the Releasees to the Releasor as of the date hereof, and the receipt of such payment being hereby acknowledged, the Releasor does waive, release and discharge the Releasees from any and all causes of action, suits, debts, claims, liens, accounts, bonds, contracts, damages, encumbrances, judgments and demands whatsoever and of every kind and nature, in law or in equity, which against the Releasees, jointly and/or severally, the Releasor ever had, now has, or might hereafter have, relating directly or indirectly to the work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or incorporated or to be incorporated in said Project, as of the date hereof, including but not in any manner limited to the right of the Releasor to assert, file or claim any lien or other security interest in or upon the real and/or personal property of the Releasees.

5. The Releasor hereby agree to defend, indemnify, and hold harmless the Releasees from any and all damages, costs, expenses, demands, suits, liens and legal fees, directly or indirectly relating to any claim for compensation by any other party for work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or which should have been so furnished or performed, or incorporated or to be incorporated in said Project, as of the date hereof, by the Releasor or by any other party claiming any interest or right through the



Releasor.

6. The Releasor hereby certifies and warrants that it has fully paid for all work, labor, services, materials and/or equipment provided to it in connection with the Project and/or any contract relating thereto.

7. The Releasor hereby grants to the Releasees the right to review and audit any and books and records of the Releasor at any time for verification.

**IN WITNESS WHEREOF** this instrument has been executed this \_\_\_\_ day of \_\_\_\_  
\_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Releasor

By: \_\_\_\_\_

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

\_\_\_\_\_  
(Title)

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

I, \_\_\_\_\_, being duly sworn, depose and say that: I reside at \_\_\_\_\_  
\_\_\_\_\_, and I hereby sign this instrument under penalty of perjury; I am  
the of the Releasor identified herein; I am fully authorized to execute this instrument on behalf of  
the Releasor; and I hereby affirm that the statements contained in this instrument are true and  
correct.

\_\_\_\_\_  
Vendor/Releasor Agent Sign Here

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

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

CONTRACTOR FINAL PAYMENT WAIVER, RELEASE AND DISCHARGE

PROJECT: \_\_\_\_\_

OWNER:           ESSEX COUNTY          

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

W I T N E S S E T H :

The above-named Contractor, hereinafter referred to as the "Releasor", does, for and on behalf of itself, its' successors, assigns and all parties claiming any interest or right through the Releasor, hereby warrants, covenants and agrees as follows:

1. Releasor is/was a Contractor relative to the above-referenced Project pursuant to a contract or other relationship for the performing and/or furnishing of work, labor, services, materials and/or equipment at the Project site or to be incorporated in said Project.
  
2. Whenever the term "Releasor" is used in this instrument such term shall mean: (a) the above-named Contractor, its, successors and assigns; (b) any and all sureties and all other guarantors of the Releasor on any payment, performance, labor and/or material bond or other undertaking; (c) all parties claiming any interest or right through the Releasor, including but not limited to subcontractors and suppliers; and (d) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a), (b) and (c).
  
3. Whenever the term "Releasees" is used in this instrument such term shall mean: (a) the above-named Owner, its' successors and assigns; (b) Essex County, its agencies and departments (including but not limited to its Office for the Aging); and (c) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a) and (b).
  
4. For and in consideration of the sum of \$\_\_\_\_\_, and other good and valuable consideration, which sum is acknowledged as being the full, final and total amount due or allegedly due or owing from the Releasees to the Releasor as of the date hereof, and the receipt of such payment being hereby acknowledged, the Releasor does waive, release and discharge the Releasees from any and all causes of action, suits, debts, claims, liens, accounts, bonds, contracts, damages, encumbrances, judgments and demands whatsoever and of every kind and nature, in law or in equity, which against the Releasees, jointly and/or severally, the Releasor ever had, now has, or might hereafter have, relating directly or indirectly to the work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or incorporated or to be incorporated in said Project, as of the date hereof, including but not in any manner limited to the right of the Releasor to assert, file or claim any lien or other security interest in or upon the real and/or personal property of the Releasees.
  
5. The Releasor hereby agree to defend, indemnify, and hold harmless the Releasees from any and all damages, costs, expenses, demands, suits, liens and legal fees, directly or indirectly relating to any claim for compensation by any other party for work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or which should have been so furnished or performed, or incorporated or to be incorporated in said Project, as of the date hereof, by the

Releasor or by any other party claiming any interest or right through the Releasor.

6. The Releasor hereby certifies and warrants that it has fully paid for all work, labor, services, materials and/or equipment provided to it in connection with the Project and/or any contract relating thereto.

7. The Releasor hereby grants to the Releasees the right to review and audit any and books and records of the Releasor at any time for verification.

**IN WITNESS WHEREOF** this instrument has been executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Contractor

By: \_\_\_\_\_

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

\_\_\_\_\_  
(Title)

STATE OF NEW YORK )  
                                  ) SS:  
COUNTY OF ESSEX )

I, \_\_\_\_\_, being duly sworn, depose and say that: I reside at \_\_\_\_\_, and I hereby sign this instrument under penalty of perjury; I am the of the Releasor identified herein; I am fully authorized to execute this instrument on behalf of the Releasor; and I hereby affirm that the statements contained in this instrument are true and correct.

\_\_\_\_\_  
Vendor/Releasor Agent Sign Here

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

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

**CONTRACTORS AFFIDAVIT RELATIVE TO FINAL PAYMENT**

PROJECT: \_\_\_\_\_

OWNER: \_\_\_\_\_ ESSEX COUNTY \_\_\_\_\_

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

W I T N E S S E T H :

The herein below designated representative of the Contractor being duly sworn deposes and states:

1. He is duly authorized to sign this Affidavit on behalf of the Contractor.
2. That all payrolls, bills for materials and equipment, and other indebtedness connection with the work for which the County or the County's property might be responsible or encumbered have been paid or otherwise satisfied and there remain no further indebtedness or bills outstanding.
3. Attached hereto and made a part hereof is a valid certificate of insurance evidencing that insurance required by the contract documents will remain in full force after final payment is currently in effect and will not be cancelled or allowed to expire until at least 30 days prior written notice has been given to the owner.
4. Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the contract documents.
5. Attached hereto and made a part hereof at Schedule B is a detailed list of all sub-contractors and material suppliers.
6. Contractor warrants and represents that all sub-contractors, material suppliers and fringe benefit trust funds for employees of contractor and sub-contractors on the portion of the project encompassed by the work, as well as all workers and persons employed in connection therewith have been paid in full for all labor and work and materials furnished.
7. Contractor releases and waives any and all public improvement lien rights which contractor has against the County.

**IN WITNESS WHEREOF**, deponent has executed this document on \_\_\_\_ day of \_\_\_\_\_

\_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Contractor

By: \_\_\_\_\_

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

\_\_\_\_\_  
(Title)

STATE OF NEW YORK    )  
                                  ) SS:  
COUNTY OF ESSEX     )

I, \_\_\_\_\_, being duly sworn, depose and say that: I reside at \_\_\_\_\_, and I hereby sign this instrument under penalty of perjury; I am the of the Releasor identified herein; I am fully authorized to execute this instrument on behalf of the Releasor; and I hereby affirm that the statements contained in this instrument are true and correct.

\_\_\_\_\_  
Vendor/Releasor Agent Sign Here

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

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



SUBCONTRACTOR/SUPPLIER PROGRESS PAYMENT  
WAIVER, RELEASE AND DISCHARGE

PROJECT: \_\_\_\_\_

OWNER:           ESSEX COUNTY          

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

SUBCONTRACTOR/SUPPLIER: \_\_\_\_\_

W I T N E S S E T H :

The above-named Subcontractor/Supplier, hereinafter referred to as the "Releasor", does, for and on behalf of itself, its, successors, assigns and all parties claiming any interest or right through the Releasor, hereby warrants, covenants and agrees as follows:

1. Releasor is/was a subcontractor/supplier to the Contractor above-named relative to the above-referenced Project pursuant to a contract or other relationship for the performing and/or furnishing of work, labor, services, materials and/or equipment at the Project site or to be incorporated in said Project.
2. Whenever the term "Releasor" is used in this instrument such term shall mean: (a) the above-named Subcontractor/Supplier, its' successors and assigns; (b) any and all sureties and all other guarantors of the Releasor on any payment, performance, labor and/or material bond or other undertaking; (c) all parties claiming any interest or right through the Releasor; and (d) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a), (b) and (c).
3. Whenever the term "Releasees" is used in this instrument such term shall mean: (a) the above-named Contractor and all of its, sureties and other guarantors on any payment, performance, labor and/or material bond or other undertaking; (b) the abovenamed Owner, its, successors and assigns; (c) the Project Architect/Engineer; and (d) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a), (b) and (c).
4. For and in consideration of the sum of \$ \_\_\_\_\_, and other good and valuable consideration, which sum is acknowledged as being the full and total amount due or allegedly due or owing from the Releasees to the Releasor as of the date hereof, and the receipt of such payment being hereby acknowledged, the Releasor does waive, release and discharge the Releasees from any and all causes of action, suits, debts, claims, liens, accounts, bonds, contracts, damages, encumbrances, judgments and demands whatsoever and of every kind and nature, in law or in equity, which against the Releasees, jointly and/or severally, the Releasor ever had, now has, or might hereafter have, relating directly or indirectly to the work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or incorporated or to be incorporated in said Project, as of the date hereof, including but not in any manner limited to the right of the Releasor to assert, file or claim any lien or other security interest in or upon the real and/or personal property of the Releasees.
5. The Releasor hereby agree to defend, indemnify, and hold harmless the Releasees from any and all damages, costs, expenses, demands, suits, liens and legal fees, directly or indirectly relating to any claim for compensation by any other party for work, labor, services, materials and/or

equipment furnished and/or performed at the Project site, or which should have been so furnished or performed, or incorporated or to be incorporated in said Project, as of the date hereof, by the Releasor or by any other party claiming any interest or right through the Releasor.

6. The Releasor hereby certifies and warrants that it has fully paid for all work, labor, services, materials and/or equipment provided to it in connection with the Project and/or any contract relating thereto.

7. The Releasor hereby grants to the Releasees the right to review and audit any and books and records of the Releasor at any time for verification.

**IN WITNESS WHEREOF** this instrument has been executed this \_\_\_ day of \_\_\_\_\_  
\_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_ Releasor

By: \_\_\_\_\_

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

\_\_\_\_\_ (Title)

STATE OF NEW YORK )  
                                      ) SS:  
COUNTY OF ESSEX )

I, \_\_\_\_\_, being duly sworn, depose and say that: I reside at \_\_\_\_\_, and I hereby sign this instrument under penalty of perjury; I am the of the Releasor identified herein; I am fully authorized to execute this instrument on behalf of the Releasor; and I hereby affirm that the statements contained in this instrument are true and correct.

\_\_\_\_\_  
Vendor/Releasor Agent Sign Here

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

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



SUBCONTRACTOR/SUPPLIER FINAL WAIVER, RELEASE AND DISCHARGE

PROJECT: \_\_\_\_\_

OWNER: \_\_\_\_\_ ESSEX COUNTY \_\_\_\_\_

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

SUBCONTRACTOR/SUPPLIER: \_\_\_\_\_

W I T N E S S E T H :

The above-named Subcontractor/Supplier, hereinafter referred to as the "Releasor", does, for and on behalf of itself, its, successors, assigns and all parties claiming any interest or right through the Releasor, hereby warrants, covenants and agrees as follows:

1. Releasor is/was a subcontractor/supplier to the Contractor above-named relative to the above-referenced Project pursuant to a contract or other relationship for the performing and/or furnishing of work, labor, services, materials and/or equipment at the Project site or to be incorporated in said Project.

2. Whenever the term "Releasor" is used in this instrument such term shall mean: (a) the above-named Subcontractor/Supplier, its' successors and assigns; (b) any and all sureties and all other guarantors of the Releasor on any payment, performance, labor and/or material bond or other undertaking; (c) all parties claiming any interest or right through the Releasor; and (d) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a), (b) and (c).

3. Whenever the term "Releasees" is used in this instrument such term shall mean: (a) the above-named Contractor and all of its, sureties and other guarantors on any payment, performance, labor and/or material bond or other undertaking; (b) the abovenamed Owner, its, successors and assigns; (c) the Project Architect/Engineer; and (d) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a), (b) and (c).

4. For and in consideration of the sum of \$\_\_\_\_\_, and other good and valuable consideration, which sum is acknowledged as being the full, final and total amount due or allegedly due or owing from the Releasees to the Releasor as of the date hereof, and the receipt of such payment being hereby acknowledged, the Releasor does waive, release and discharge the Releasees from any and all causes of action, suits, debts, claims, liens, accounts, bonds, contracts, damages, encumbrances, judgments and demands whatsoever and of every kind and nature, in law or in equity, which against the Releasees, jointly and/or severally, the Releasor ever had, now has, or might hereafter have, relating directly or indirectly to the work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or incorporated or to be incorporated in said Project, as of the date hereof, including but not in any manner limited to the right of the Releasor to assert, file or claim any lien or other security interest in or upon the real and/or personal property of the Releasees.

5. The Releasor hereby agree to defend, indemnify, and hold harmless the Releasees from any and all damages, costs, expenses, demands, suits, liens and legal fees, directly or indirectly relating to any claim for compensation by any other party for work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or which should have been so furnished or performed, or incorporated or to be incorporated in said Project, as of the date hereof, by the Releasor or by any other party claiming any interest or right through the Releasor.

6. The Releasor hereby certifies and warrants that it has fully paid for all work, labor, services, materials and/or equipment provided to it in connection with the Project and/or any contract relating thereto.

7. The Releasor hereby grants to the Releasees the right to review and audit any and books and records of the Releasor at any time for verification.

**IN WITNESS WHEREOF** this instrument has been executed this \_\_\_\_ day of \_\_\_\_  
\_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Releasor

By: \_\_\_\_\_

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

\_\_\_\_\_  
(Title)

STATE OF NEW YORK    )  
                                      ) SS:  
COUNTY OF ESSEX     )

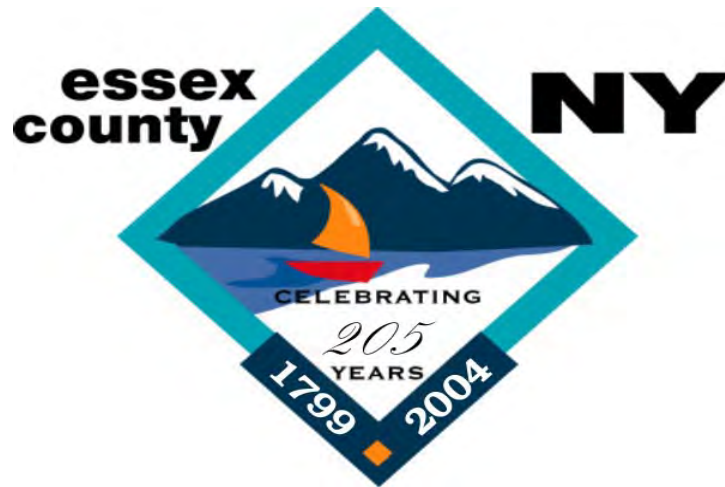
I, \_\_\_\_\_, being duly sworn, depose and say that: I reside at \_\_\_\_\_, and I hereby sign this instrument under penalty of perjury; I am the of the Releasor identified herein; I am fully authorized to execute this instrument on behalf of the Releasor; and I hereby affirm that the statements contained in this instrument are true and correct.

\_\_\_\_\_  
Vendor/Releasor Agent Sign Here

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

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

## APPENDIX E



### **ESSEX COUNTY**

#### ***Office of the Purchasing Agent***

7551 Court Street, P.O. Box 217

Elizabethtown, NY 12932

518-873-3330/Fax 518-873-3339

## GENERAL SPECIFICATIONS FOR PROCUREMENT CONTRACTS

Adopted May 20, 1999.

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**PART I**  
**General Provisions**

**1. APPLICABILITY** The terms and conditions set forth herein are expressly incorporated in and applicable to all procurements and resulting procurement contracts let by the Office of the Essex County Purchasing Agent where incorporated by reference in its Bid Documents. The provisions herein shall govern such procurement or contract unless expressly modified or amended by the terms of a Bid Specifications, or a negotiated Contract/Clarification document, if any. Captions are intended as descriptive and are not intended to limit or otherwise restrict the terms and conditions set forth herein.

**2. GOVERNING LAW** The laws of the State of New York shall govern and apply to the procurement, any resulting contract and for determinations in a court of competent jurisdiction in New York of any and all disputes, litigation or interpretations arising from or connected with the procurement or contract, except where expressly superseded in a specific contract letting or where the Federal supremacy clause requires otherwise. These specifications are modeled after and upon the specifications developed and used by the New York State Office of General Services for procurements by New York State.

**3. APPENDIX A / INSURANCE** The mandatory terms for all Essex County contracts are expressly incorporated herein and in all bid documents and/or resulting contracts, such terms being set forth in Appendix A (*Standard Clauses for Essex County Contracts*). Insurance requirements are also attached and incorporated herein.

**4. ETHICS COMPLIANCE** All Bidders/Contractors and their employees must comply with the requirements of the *General Municipal Law*, the *Public Officers Law*, and other State codes, rules and regulations establishing ethical standards for the conduct of business with New York State and/or municipalities. In signing the bid, Bidder certifies full compliance with those provisions for any present or future dealings, transactions, sales, contracts, services, offers, relationships, etc., involving Essex County and/or its employees. Failure to comply with those provisions may result in disqualification from the bidding process, termination of contract, and/or other civil or criminal proceedings as required by law.

**5. CONFLICT OF CLAUSES** Conflicts between procurement or contract documents shall be resolved in the following order of precedence:

(a) **Appendix A** (*Standard Clauses for Essex County Contracts*)

(b) **Contract/Clarification Documents** Writing(s) setting forth the final agreements, clarifications, terms, statement of work and/or modifications between the Bid Documents and Contractors Bid or Mini-bid.

(c) **Bid Documents** - Bid Specifications prepared by Essex County

(d) **Contractors Bid or Proposal**

**6. DEFINITIONS**

Terms used in this document shall have the following meanings:

**AGENCY OR AGENCIES** Essex County, New York, acting by or through one or more departments, boards, commissions, offices or institutions of Essex County.

**ANCILLARY PRODUCT:** Product which is purchased or licensed on a restricted use basis in conjunction with the principal manufacturers Product being acquired (e.g. may be used only in combination, or by educational institutions for research use).

**AUTHORIZED USER(S)** Agencies, or any other entity authorized by Essex County to participate in Essex County procurement contracts (including but not limited to political subdivisions, public authorities, school districts and public benefit corporations), provided that each such Agency or other entity shall be held solely responsible for liabilities or payments due as a result of its participation. The term "Authorized User" shall include "Licensees."

**BID OR BID PROPOSAL** An offer or proposal submitted by a Bidder to furnish a described product or a solution or means of achieving a practical end, at a stated price for the stated contract term.

**BIDDER** Any individual or other legal entity, (including but not limited to partnership, firm or corporation) which submits a bid in response to a Bid Solicitation. The term Bidder shall also include "offeror" and/or "contractor".

**BID DOCUMENTS** Writings setting forth the scope, terms, conditions and technical specifications for a procurement of Product. Such writings typically include, but are not limited to: Invitation for Bids (IFB), Request for Quotation (RFQ), Request for Proposals (RFP), addenda or amendments thereto, and terms and conditions which are incorporated by reference, e.g. Appendix A (*Standard Clauses for NYS Contracts*), Appendix B, (*General Specifications*). Where these General Specifications are incorporated in negotiated contracts which have not been competitively bid, the term "Bid Documents" shall be deemed to refer to the terms and conditions set forth in the negotiated contract.

**BID SOLICITATION** The notice or advertisement of an intent to purchase a specified Product by or on behalf of Authorized User(s).

**BID SPECIFICATION** A written description drafted by Essex County or an authorized user setting forth the specific terms of the intended procurement, which may include: physical or functional characteristics, the nature of a commodity or construction item, any description of the work to be performed, Products to be provided, the necessary qualifications of the Bidder, the capacity and capability of the Bidder to successfully carry out the proposed contract, or the process for achieving specific results and/or anticipated outcomes or any other requirement necessary to perform work. Where these *General Specifications* are incorporated in negotiated contracts which have not been competitively bid, the term "Bid Specifications" shall be deemed to refer to the terms and conditions set forth in the negotiated contract.

**CONTRACT** The writing(s) which contain the agreement of the Commissioner and the Bidder/Contractor setting forth the total legal obligation between the parties as determined by applicable rules of law.

**CONTRACT AWARD NOTIFICATION** An announcement to Authorized Users that a contract has been established.

**CONTRACTOR** Any successful Bidder(s) to whom a contract has been awarded by the Purchasing Agent. The term "Contractor" includes Licensors.

**COUNTY** Essex County, New York.

**EMERGENCY** An urgent and unexpected requirement where health and public safety or the conservation of public resources is at risk.

**ERROR CORRECTIONS** Machine executable software code furnished by Contractor which corrects the Product so as to conform to the applicable warranties, performance standards and/or obligations of the Contractor.

**GROUP** A classification of Product (commodities, services or technology).



**INVITATION FOR BIDS (IFB)** A type of Bid Document which is most typically used where requirements can be stated and award will be made to the lowest responsive bid submitted by the most responsible Bidder(s).

**LATE BID** For purposes of bid openings held and conducted by the Essex County Purchasing Agent, a bid not received in such place as may be designated on the Bid Specifications or in the Office of the Essex County Purchasing Agent, at or before the date and time established in the Bid Specifications for the bid opening.

**LETTER OF ACCEPTANCE** A letter to the successful Bidder(s) indicating acceptance of its bid in response to a solicitation. Unless otherwise specified, the issuance of a Letter of Acceptance forms a contract but is not an order for Product, and Contractor should not take any action with respect to actual contract deliveries except on the basis of Purchase Orders sent from Authorized User(s).

**LICENSED SOFTWARE** Software transferred upon the terms and conditions set forth in the Contract. "Licensed Software" includes ancillary products, error corrections, upgrades, enhancements or new releases, and any deliverables due under a maintenance or service contract (e.g. patches, fixes, PTFs, programs, code or data conversion, or custom programming).

**LICENSEE** The County, or one or more Agencies or Authorized Users who acquire Product from Contractor by execution of a license in accordance with the terms and conditions of the Contract; provided that, for purposes of compliance with an individual license, the term "Licensee" shall be deemed to refer separately to the individual Authorized User(s) on whose behalf the license was executed who took receipt of the Product, and who shall be solely responsible for performance and liabilities incurred.

**LICENSOR** A Contractor who transfers rights in proprietary Product to Authorized Users in accordance with the rights and obligations specified in the Contract.

**MULTIPLE AWARD** A determination and award of a contract in the discretion of the Purchasing Agent to more than one responsive and responsible Bidder who meets the requirements of a specification, where the multiple award is made on the grounds set forth in the Bid Document in order to satisfy multiple factors and needs of Authorized Users (e.g., complexity of items, various manufacturers, differences in performance required to accomplish or produce required end results, production and distribution facilities, price, compliance with delivery requirements, geographic location or other pertinent factors).

**NEW PRODUCT RELEASES (Product Revisions)** Any commercially released revisions to the version of a Product as may be generally offered and available to Authorized Users. New releases involve a substantial revision of functionality from a previously released version of the Product.

**PROCUREMENT RECORD** Documentation by the Essex County Purchasing Agent of the decisions made and approach taken during the procurement process.

**PRODUCT** A deliverable under any Bid or Contract which may include commodities (including printing), services and/or technology. The term "Product" includes Licensed Software.

**PURCHASE ORDER** The County's fiscal form or format which is used when making a purchase.

**REQUEST FOR PROPOSALS (RFP)** A type of Bid Document which is used for procurements where factors in addition to cost are considered and weighted in awarding the contract and where the method of award is "best value", as defined by the County's Procurement Policy and New York Law.

**REQUEST FOR QUOTATION (RFQ)** A type of Bid Document which can be used when a formal bid opening is not required (e.g. discretionary, sole source, single source or emergency purchases).

**RESPONSIBLE BIDDER** A Bidder that is determined to have skill, judgment and integrity, and that is found to be competent, reliable, experienced and qualified financially, as determined by the Purchasing Agent.

**RESPONSIVE BIDDER** A Bidder meeting the specifications or requirements prescribed in the Bid Document or solicitation, as determined by the Purchasing Agent.

**SINGLE SOURCE** A procurement where two or more offerors can supply the required Product, and the Purchasing Agent may award the contract to one Bidder over the other.

**SOLE SOURCE** A procurement where only one offeror is capable of supplying the required Product.

### ***Bid Submission***

**7. BID LANGUAGE & CURRENCY** All offers (tenders), and all information and Product documentation required by the solicitation or provided as explanation thereof, shall be submitted in English. All prices shall be expressed, and all payments shall be made, in United States Dollars (\$ US). Any offers (tenders) submitted which do not meet the above criteria will be rejected.

**8. BID OPENING** Bids may, as applicable, be opened publicly. The Purchasing Agent reserves the right at anytime to postpone or cancel a scheduled bid opening.

**9. BID SUBMISSION** The submission of a bid will be construed to mean that the bidder is fully informed as to the extent and character of the supplies, material, or equipment required and a representation that the bidder can furnish the supplies, materials, or equipment satisfactorily in complete compliance with the specifications.

All bids shall comply with the following:

**(a)** Bids are to be packaged, sealed and submitted to the location stated in the Bid Specifications. Bidders are solely responsible for timely delivery of their bids to the location set forth in the Bid Specifications prior to the stated bid opening date/time.

**(b)** A bid return envelope, if provided with the Bid Specifications, should be used with the bid sealed inside. If the bid response does not fit into the envelope, the bid envelope should be taped onto the outside of the sealed box or package with the bid inside. If using a commercial delivery company which requires use of their shipping package or envelope, Bidders sealed bid, labeled as detailed below, should be placed within the shippers sealed envelope to ensure that the bid is not prematurely opened. All bids must have a label on the outside of the package or shipping container outlining the following information:

**“BID ENCLOSED”** (bold print, all capitals)  
IFB or RFP Number  
Bid Submission date and time

In the event that a Bidder fails to provide such information on the return bid envelope or shipping material, the County reserves the right to open the shipping package or envelope to determine the proper bid number or Product group, and the date and time of bid opening. Bidder shall have no claim against the receiving entity arising from such opening and such opening shall not affect the validity of the bid or the procurement. Notwithstanding the County’s right to open a bid to ascertain the foregoing information, Bidder assumes all risk of late delivery associated with the bid not being identified, packaged or labeled in accordance with the foregoing requirements.

**10. FACSIMILE SUBMISSIONS** Unless specifically authorized by the terms of the Bid Specifications,

facsimile bids ARE PROHIBITED AND SHALL NOT BE ACCEPTED. Where the bid specifications are silent as to the submission of bids by facsimile, no fax bids shall be permitted or accepted. Where specifically authorized, the following rules and conditions apply:

- (a) FAX number(s) indicated in the Bid Specifications must be used.
- (b) Access to the facsimile machine(s) is on a "first come, first serve" basis, and the Purchasing Agent bears no liability or responsibility and makes no guarantee whatsoever with respect to the Bidders access to such equipment at any specific time.
- (c) Bidders are solely responsible for submission and receipt of the entire facsimile bid by the Essex County Purchasing Agent prior to bid opening and must include on the first page of the transmission the total number of pages transmitted in the bid, including the cover page. Incomplete, ambiguous or unreadable transmissions in whole or in part may be rejected at the sole discretion of the Purchasing Agent.
- (d) Facsimile bids are fully governed by all conditions outlined in the Bid Documents and must be submitted on forms or in the format required in the Bid Specifications, including the executed signature page and acknowledgment.

**11. AUTHENTICATION OF FACSIMILE BIDS** The act of submitting a bid by facsimile transmission, when, as and if specifically authorized, including an executed signature page, shall be deemed a confirming act by Bidder which authenticates the signing of the bid.

**12. LATE BIDS** Any bid received at the specified location after the time specified will be considered a late bid. A late bid shall not be considered for award unless acceptance of the late bid is in the best interests of Essex County and either (a) no timely bids meeting the requirements of the Bid Documents are received, or (b) in the case of a multiple award, an insufficient number of timely bids were received to satisfy the multiple award. Delays in United States mail deliveries or any other means of transmittal, including couriers or agents of Essex County, shall not excuse late bid submissions. Otherwise, all late bids will not be considered and will be returned unopened to the bidder. The bidder assumes the risk of any delay in the mail or in the handling of the mail by employees of the County. Whether sent by mail or by means of personal delivery, the bidder assumes responsibility for having his bid deposited on time at the place specified.

**13. BID CONTENTS** Bids must be complete and legible. All bids must be signed. All information required by the Bid Specifications must be supplied by the Bidder on the forms or in the format specified in the Bid Specifications. No alteration, erasure or addition is to be made to the Bid Documents. Changes may be ignored by the Purchasing Agent or may be grounds for rejection of the bid. Changes, corrections and/or use of white-out in the bid or Bidders response portion of the Bid Document must be initialed by an authorized representative of the Bidder. Bidders are cautioned to verify their bids before submission, as amendments to bids or requests for withdrawal of bids received by the Purchasing Agent after the time specified for the bid opening, may not be considered. All lines must have an indication of bidders response whether it be "o", "N/A" or a dollar figure. All lines must be filled in to indicate bidder acknowledgment of the request. Bids that do not have all applicable lines filled in on bid sheet may be disqualified as a non-responsive bid. The Purchasing Agent shall not assume there is "no charge" when lines are left empty.

Bidders must submit with bid detailed specifications, circulars, warranties and all necessary data on items he proposes to furnish. This information must show clearly that the item offered meets all detailed specifications herein. The Purchasing Agent reserves the right to reject any bid if its compliance with the specifications is not clearly evident. If item offered differs from the provisions contained in these specifications such differences must be explained in detail, and bid will receive careful consideration if such deviations do not depart from the intent of these specifications and are to the best interests of Essex County as interpreted by the Purchasing Agent of Essex County.

It is the responsibility of the bidder to offer a product that meets the specifications of the manufacturer model as listed.

All stock electrical items must be listed and approved by Underwriters' Laboratories, Inc.

**14. EXTRANEOUS TERMS** Bids must conform to the terms set forth in the Bid Documents, as extraneous terms or material deviations (including additional, inconsistent, conflicting or alternative terms) may render the bid non-responsive and may result in rejection of the bid.

**Extraneous term(s) submitted on standard, pre-printed forms (including but not limited to: product literature, order forms, license agreements, contracts or other documents) which are attached or referenced with the submission shall not be considered part of the bid, but shall be deemed included for informational or promotional purposes only.**

Only those extraneous terms which meet all the following requirements will be considered as having been submitted as part of the Bid:

- (a) Each proposed extraneous term (addition, counter-offer, deviation, or modification) must be specifically enumerated in a writing which is not part of a pre-printed form; and
- (b) The writing must identify the particular specification requirement (if any) which Bidder rejects or proposes to modify by inclusion of the extraneous term; and
- (c) The Bidder shall enumerate the proposed addition, counteroffer, modification or deviation from the Bid Document, and the reasons therefore.

No extraneous term(s), whether or not deemed "material," shall be incorporated into a contract unless the Purchasing Agent expressly accepts each such term(s) in writing. Acceptance and/or processing of the Bid shall not constitute such written acceptance of Extraneous Term(s).

**15. CONFIDENTIAL / TRADE SECRET MATERIALS** Confidential, trade secret or proprietary materials as defined by the laws of the State of New York must be clearly marked and identified as such upon submission. Bidders/Contractors intending to seek an exemption from disclosure of these materials under the *Freedom of Information Law* must request the exemption in writing, setting forth the reasons for the claimed exemption, at the time of submission. Acceptance of the claimed materials does not constitute a determination on the exemption request, which determination will be made in accordance with statutory procedures.

**16. PREVAILING WAGE RATES - Public Works and Building Services Contracts** If any portion of work being bid is subject to the prevailing wage rate provisions of Labor Law, the following shall apply:

**(a) "Public Works" and "Building Services" – Definitions**

**i. Public Works** *Labor Law* Article 8 applies to contracts for public improvement in which laborers, workers or mechanics are employed on a "public works" project (distinguished from public "procurement" or "service" contracts). The State, a public benefit corporation, a municipal corporation (including a school district), or a commission appointed by law must be a party to the contract. The wage and hours provision applies to any work performed by contractor or subcontractors.

**ii. Building Services** *Labor Law* Article 9 applies to contracts for building service work over \$1,500 with a public agency, which 1) involve the care or maintenance of an existing building, or 2) involve the transportation of office furniture or equipment to or from such building, or 3) involve the transportation and delivery of fossil fuel to such building, and 4) the principal purpose of which is to furnish services through use of building service employees.

**(b) Prevailing Wage Rate Applicable to Bid Submissions** A copy of the applicable prevailing wage rates to be paid or provided are attached to this solicitation. Bidders must submit bids which are based upon the prevailing hourly wages, and supplements in cash or equivalent benefits (i.e., fringe benefits and any cash or non-cash compensation which are not wages, as defined by law) that equal or exceed the applicable prevailing wage rate(s) for the location where the work is to be performed. Where the Bid Documents require the Bidder to enumerate hourly wage rates in the bid, Bidders may not submit bids based upon hourly wage rates and supplements below the applicable prevailing wage rates as established by the New York State Department of Labor. **Bids which fail to comply with this requirement will be disqualified.**

**(c) Wage Rate Payments / Changes During Contract Term** The wages to be paid under any resulting contract shall not be less than the prevailing rate of wages and supplements as set forth by law. It is required that the Contractor keep informed of all changes in the Prevailing Wage Rates during the contract term that apply to the classes of individuals supplied by the contractor on any projects which result from this contract which are subject to the provisions of the *Labor Law*. Contractor is solely liable for and must pay such required prevailing wage adjustments during the contract term as required by law.

**(d) Public Posting & Certified Payroll Records** In compliance with Article 8, Section 220 of the *Labor Law*, as amended by Chapter 565 of the Laws of 1997:

**i. Posting** The Contractor must publicly post on the work site, in a prominent and accessible place, a legible schedule of the prevailing wage rates and supplements.

**ii. Payroll Records** Contractors and sub-contractors must keep original payrolls or transcripts subscribed and affirmed as true under the penalties of perjury as required by law. For public works contracts over \$25,000 where the contractor maintains no regular place of business in New York State, such records must be kept at the work site. For building services contracts, such records must be kept at the work site while work is being performed.

**iii. Submission of Certified Payroll Transcripts for Public Works Contracts Only** Contractors and sub-contractors on public works projects must submit monthly payroll transcripts to Essex County which has prepared or directs the preparation of the plans and specifications for a public works project, as set forth in the Bid Specifications. For mini-bid solicitations, the payroll records must be submitted to the entity preparing the agency mini-bid project specification. For "agency specific" bids, the payroll records should be submitted to the entity issuing the purchase order. For all other Essex County procurement contracts, such records should be submitted to the individual agency issuing the purchase order(s) for the work. Upon mutual agreement of the Contractor and Essex County, the form of submission may be submitted in a specified disk format acceptable to the Department of Labor so long as: 1) the contractor/subcontractor retains the original records; and, (2) an original signed letter by a duly authorized individual of the contractor or subcontractor attesting to the truth and accuracy of the records accompanies the disk. **This provision does not apply to building services contracts.**

**iv. Records Retention** Contractors and subcontractors must preserve such certified transcripts for a period of three years from the date of completion of work on the awarded contract.

**(e) Days Labor - Defined for Article 8, Public Works (For Purposes of Article 8 of the Labor Law)** No laborer, worker or mechanic in the employ of the contractor, subcontractor or other person doing or contracting to do all 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. "Extraordinary emergency" shall be deemed to include situations in which sufficient laborers, workers and mechanics cannot be employed to carry on public work expeditiously as a result of such

restrictions upon the number of hours and days of labor and the immediate commencement or prosecution or completion without undue delay of the public work is necessary in the judgment of the Essex County Purchasing Agent for the preservation of the contract site or for the protection of the life and limb of the persons using the contract site.

## 17. TAXES

(a) Unless otherwise specified in the Bid Specifications or set forth in this clause, the quoted bid price includes all taxes applicable to the transaction.

(b) Purchases made by Essex County and certain non-County Authorized Users are exempt from New York State and local sales taxes and, with certain exceptions, federal excise taxes. To satisfy the requirements of the New York State Sales tax exemption, either the Purchase Order issued by a County Agency or the invoice forwarded to authorize payment for such items will be sufficient evidence that the sale by the Contractor was made to the County, an exempt organization under Section 1116 (a) (1) of the *Tax Law*. Non-County Authorized Users must offer their own proof of exemption where required. No person, firm or corporation is, however, exempt from paying the State Truck Mileage and Unemployment Insurance or Federal Social Security taxes, which remain the sole responsibility of the Bidder/Contractor. For tax free transactions under the Internal Revenue Code, the Essex County Registration Number is 14 6002889.

(c) Purchases by Authorized Users other than Essex County may be subject to such taxes, and in those instances the tax should be computed based on the bid price and added to the invoice submitted to such entity for payment.

**18. EXPENSES PRIOR TO AWARD** Essex County is not liable for any costs incurred by a Bidder in the preparation and production of a bid or for any work performed prior to contract award and/or issuance of an approved Purchase Order.

**19. ADVERTISING BID RESULTS** A Bidder in submitting a bid agrees not to use the results therefrom as a part of any commercial advertising without the prior written approval of the Purchasing Agent. In addition to any other sanctions or remedies available to it in law or equity, the Purchasing Agent may suspend from bidding on its requirements or terminate a contract of any Bidder/Contractor who violates the terms of this clause.

## 20. PRODUCT REFERENCES

(a) **“Or Equal”** On all Bid Specifications the words “or equal” are understood to apply where a copyright brand name, trade name, catalog reference, or patented Product is referenced. References to such specific Product are intended as descriptive, not restrictive, unless otherwise stated. Comparable Product will be considered if proof of compatibility is provided, including appropriate catalog excerpts, descriptive literature, specifications and test data, etc. The Purchasing Agents decision as to acceptance of the Product as equal shall be final.

(b) **Discrepancies in References** In the event of a discrepancy between the model number referenced in the Bid Specifications and the written description of the Products therein which cannot be reconciled, with respect to such discrepancy, then the written description shall prevail.

**21. RECYCLED OR RECOVERED MATERIALS** Upon the conditions specified in the Bid Specifications and in accordance with the laws of the State of New York, Contractors are encouraged to use recycled or recovered materials in the manufacture of Products and packaging to the maximum extent practicable without jeopardizing the performance or intended end use of the Product or packaging unless such use is precluded due to health, welfare, safety requirements or in the Bid

Specifications. Where such use is not practical, suitable, or permitted by the Bid Specifications, Contractor shall deliver new materials in accordance with the "Warranties & Guaranties" set forth below.

Refurbished or remanufactured components or items may only be accepted at the discretion of the Purchasing Agent, or upon the conditions set forth in the Bid Specifications.

Items with recycled, recovered, refurbished or remanufactured content must be identified in the bid or will be deemed new Product.

**22. PRODUCTS MANUFACTURED IN PUBLIC INSTITUTIONS** Bids offering Products which are manufactured or produced in public institutions will be rejected.

### **23. PRICING**

**(a) Unit Pricing** If required by the Bid Specifications, the Bidder should insert the price per unit specified and the price extensions in decimals, not to exceed four places for each item, in the bid. In the event of a discrepancy between the unit price and the extension, the unit price shall govern unless, in the sole judgment of the Purchasing Agent, such unit pricing is obviously erroneous.

**(b) Net Pricing** Prices must be net, including transportation, customs, tariff, delivery and other charges fully prepaid by the Contractor to the destination(s) indicated in the Bid Specifications, subject only to the cash discount. If the award is to be made on another basis, transportation and other charges must be prepaid by the Contractor and added to the invoice as a separate item, unless otherwise required in the Bid Specifications.

**(c) "No Charge" Bid** When bids are requested on a number of Products as a group or Lot, a Bidder desiring to bid "no charge" on a Product in the grouping or Lot must clearly indicate such. Otherwise, such bid may be considered incomplete and be rejected, in whole or in part, at the discretion of the Purchasing Agent.

If a price is written in numbers and alpha, the alpha will govern.

Prices shall be net FOB any point in Essex County, New York. Price quoted shall include all delivery costs. Prices shall be net, including transportation and delivery charges fully prepaid by the successful bidder to destination indicated in the proposal. If award is made on any other basis, transportation charges must be prepaid by the successful bidder and added to the invoice as a separate item. In any case, title shall not pass until items have been delivered and accepted by the County.

### **24. DRAWINGS**

**(a) Drawings Submitted With Bid** When the Bid Specifications require the Bidder to furnish drawings and/or plans, such drawings and/or plans shall conform to the mandates of the Bid Documents and shall, when approved by the Purchasing Agent, be considered a part of the bid and of any resulting contract. All symbols and other representations appearing on the drawings shall be considered a part of the drawing.

**(b) Drawings Submitted During the Contract Term** Where required by the Bid Specifications to develop, maintain and deliver diagrams or other technical schematics regarding the scope of work, Contractor shall be required to develop, maintain, deliver and update such drawings on an ongoing basis at no additional charge. Contractor shall be responsible for updating drawings and plans during the contract term to reflect additions, alterations, and deletions. Such drawings and diagrams shall be delivered to the Authorized

Users representative as required by the Bid Specifications. Where required, Contractor shall furnish to Authorized User in a timely manner the required drawings representing the then current, "as modified" condition of all product included in the scope of work.

**(c) Accuracy of Drawings Submitted** All drawings shall be neat and professional in manner and shall be clearly labeled as to locations and type of product, connections and components. Drawings and diagrams are to be in compliance with accepted drafting standards. Acceptance or approval of such plans shall not relieve the Contractor from responsibility for design or other errors of any sort in the drawings or plans, or from its responsibility for performing as required, furnishing product, services or installation, or carrying out any other requirements of the intended scope of work.

**25. SITE INSPECTION** Where Bidder is required by the Bid Specifications to deliver or install Product, or to service installed product(s) or equipment, Bidder shall be given an opportunity and shall be required to inspect the site prior to submission of the Bid, including environmental or other conditions or pre-existing deficiencies in the installed product, equipment or environment, which may affect Bidders ability to deliver, install or otherwise provide the required product. All inquiries regarding such conditions may only be made in writing. Bidder shall be deemed to have knowledge of any deficiencies or conditions which such inspection or inquiry might have disclosed, and to have included the costs of repair in its bid. Bidder must provide a detailed explanation of work intended to be performed under this clause. Bidder shall be required to remedy any pre-existing deficiencies or conditions at the commencement of the contract term. Reimbursement for the cost of repairing the conditions or deficiencies shall be separately enumerated in the bid.

## **26. SAMPLES**

**(a) Standard Samples** Bid Specifications may indicate that the Product to be purchased must be equal to a standard sample on display in a place designated by the Purchasing Agent and such sample will be made available to the Bidder for examination prior to the opening date. Failure by the Bidder to examine such sample shall not entitle the Bidder to any relief from the conditions imposed by the Bid Documents.

**(b) Bidder Supplied Samples** The Purchasing Agent reserves the right to request from the Bidder/Contractor a representative sample(s) of the Product offered at any time prior to or after award of a contract. Unless otherwise instructed, samples shall be furnished within the time specified in the request. Untimely submission of a sample may constitute grounds for rejection of bid or cancellation of the Contract. Samples must be submitted free of charge and be accompanied by the Bidders name and address, any descriptive literature relating to the Product and a statement indicating how and where the sample is to be returned. Where applicable, samples must be properly labeled with the appropriate bid or Essex County contract reference.

A sample may be held by the Purchasing Agent during the entire term of the contract and for a reasonable period thereafter for comparison with deliveries. At the conclusion of the holding period the sample, where feasible, will be returned as instructed by the Bidder, at the Bidders expense and risk. Where the Bidder has failed to fully instruct the Purchasing Agent as to the return of the sample (i.e. mode and place of return, etc.) or refuses to bear the cost of its return, the sample shall become the sole property of the receiving entity at the conclusion of the holding period.

**(c) Enhanced Samples** When an approved sample exceeds the minimum specifications, all Product delivered must be of the same enhanced quality and identity as the sample. Thereafter, in the event of a Contractors default, the Purchasing Agent may procure a commodity substantially equal to the enhanced sample from other sources, charging the Contractor for any additional costs incurred.



**(d) Conformance with Sample(s)** Submission of a sample (whether or not such sample is tested by, or for, the Purchasing Agent) and approval thereof shall not relieve the Contractor from full compliance with all conditions and terms, performance related and otherwise, specified in the Bid Documents. If in the judgment of the Purchasing Agent the sample or product submitted is not in accordance with the specifications or testing requirements prescribed in the Bid Documents, the Purchasing Agent may reject the bid. If an award has been made, the Purchasing Agent may cancel the contract at the expense of the Contractor.

**(e) Testing** All samples are subject to tests in the manner and place designated by the Purchasing Agent, either prior to or after contract award. Unless otherwise stated in the Bid Specifications, Bidder Samples consumed or rendered useless by testing will not be returned to the Bidder.

**27. ADDENDA / INTERPRETATION** No verbal interpretation of the intent of any of the specifications or other Contract Documents will be made before receipt of bids. Requests for interpretations prior to receipt of bids must be presented, in writing, to the Purchasing Agent, 100 Court Street, P.O. Box 217, Elizabethtown, NY 12932, and to be given consideration must be received by the Purchasing Agent at least seven (7) days prior to the date set for the opening of bids.

Any interpretation, and any additional information or instruction will, if issued, be in the form of a written Addendum or Addenda sent to all holders of Contract Documents at the addresses furnished therefor, at least five (5) days prior to the date of the opening of bids.

Failure of any bidder to receive any Addenda shall not relieve such bidder from any obligation under this bid as submitted. All Addenda so issued shall become a part of the Contract Documents.

### ***Bid Evaluation***

**28. BID EVALUATION** The Purchasing Agent reserves the right to accept or reject any and all bids, or separable portions of offers, and waive technicalities, irregularities, and omissions if the Purchasing Agent determines the best interests of the County will be served. The Purchasing Agent, in his/her sole discretion, may accept or reject illegible, incomplete or vague bids and his/her decision shall be final. A conditional or revocable bid which clearly communicates the terms or limitations of acceptance may be considered and contract award may be made in compliance with the Bidders conditional or revocable terms in the offer.

Where a bidder is requested to submit a bid on individual items and/or on a total sum or sums, the right is reserved to award bids on individual items or on total sums. The County reserves the right to award in whole or in part based on the lowest responsible bid.

The following three items will automatically render a bid unacceptable to Essex County:

- a. Failure to sign bid proposal page.
- b. Failure to include necessary bid deposit (as required).
- c. Failure to sign and submit non-collusive bidding certificate.

It shall be fully understood that any deviations from the inclusion of the above items will be grounds to see the bid as non-compliant and will not be considered for award.

The Purchasing Agent reserves the right to reject such bids, as in his opinion, are incomplete, conditional, obscure, or which contain irregularities of any kind including unbalanced bids. One in which the amount bid for one or more separate items is substantially out of line with the current market prices for the materials and/or work covered thereby.

**29. CONDITIONAL BID** Unless the Bid Specifications provides otherwise, a bid is not rendered non-responsive if the Bidder specifies that the award will be accepted only on all or a specified group of items or Product included in the specification. It is understood that nothing herein shall be deemed to change or alter the method of award contained in the Bid Documents.

**30. CLARIFICATIONS / REVISIONS** Prior to award, the Purchasing Agent reserves the right to seek clarifications, request bid revisions, or to request any information deemed necessary for proper evaluation of bids from all Bidders deemed to be eligible for contract award. Failure to provide requested information may result in rejection of the bid.

**31. PROMPT PAYMENT DISCOUNTS** While prompt payment discounts will not be considered in determining the low bid, the Purchasing Agent may consider any prompt payment discount in resolving bids which are otherwise tied. However, any notation indicating that the price is net, (e.g. net 30 days), shall be understood to mean only that no prompt payment discount is offered by the Bidder. The imposition of service, interest, or other charges, except pursuant to the provisions of Article 11\_A of the *State Finance Law*, which are applicable in any case, may render the bid non-responsive and may be cause for its rejection.

**32. EQUIVALENT OR IDENTICAL BIDS** In the event two offers are found to be substantially equivalent, price shall be the basis for determining the award recipient. If two or more Bidders submit substantially equivalent bids as to pricing or other factors, the decision of the Purchasing Agent to award a contract to one or more of such Bidders shall be final.

**33. PERFORMANCE QUALIFICATIONS** The Purchasing Agent reserves the right to investigate or inspect at any time whether or not the Product, qualifications or facilities offered by the Bidder/Contractor meet the requirements set forth in the Bid Documents. Contractor shall at all times during the contract term remain responsible and responsive. A Bidder/Contractor must be prepared, if requested by the Purchasing Agent, to present evidence of experience, ability and financial standing, as well as a statement as to plant, machinery and capacity of the manufacturer for the production, distribution and servicing of the Product bid. If the Purchasing Agent determines that the conditions and terms of the Bid Documents or Contract are not complied with, or that items or Product proposed to be furnished do not meet the specified requirements, or that the qualifications, financial standing or facilities are not satisfactory, or that performance is untimely, the Purchasing Agent may reject such bid or terminate the contract. Nothing in the foregoing shall mean or imply that it is obligatory upon the Purchasing Agent to make an investigation either before or after award of a contract, but should such investigation be made, it in no way relieves the Bidder/Contractor from fulfilling all requirements and conditions of the contract.

**34. DISQUALIFICATION FOR PAST PERFORMANCE** Bidder may be disqualified from receiving awards if Bidder, or anyone in Bidders employment, has previously failed to perform satisfactorily in connection with public bidding or contracts.

**35. QUANTITY CHANGES PRIOR TO AWARD** The Purchasing Agent reserves the right, at any time prior to the award of a specific quantity contract, to alter in good faith the quantities listed in the Bid Specifications to conform with requirements. In the event such right is exercised, the lowest responsible Bidder meeting specifications will be advised of the revised requirements and afforded an opportunity to extend or reduce its bid price in relation to the changed quantities. Refusal by the low Bidder to so extend or reduce its bid price may result in the rejection of its bid and the award of such contract to the lowest responsible Bidder who accepts the revised requirements.

**36. RELEASE OF BID EVALUATION MATERIALS** Requests concerning the evaluation of bids may be submitted under the *Freedom of Information Law*. Information, other than the Bid Tabulation, shall be released as required by law after contract award. Written requests should be directed to the Purchasing Agent.

**37. TIME FRAME FOR OFFERS** The Purchasing Agent reserves the right to make awards within sixty (60) days after the date of the bid opening, during which period, bids must remain firm and cannot be withdrawn. If, however, an award is not made within the sixty (60) day period, bids shall remain firm until such later time as either a contract is awarded or the Bidder delivers to the Purchasing Agent written notice of the withdrawal of its bid. Any bid which expressly states therein that acceptance must be made within a shorter specified time, may at the sole discretion of the Purchasing Agent, be accepted or rejected.

## **TERMS & CONDITIONS**

**38. CONTRACT CREATION / EXECUTION** Except as may be otherwise provided by law or by the Purchasing Agent, upon receipt of all required approvals a Contract shall be deemed executed and created with the successful Bidder(s) upon the Purchasing Agent's mailing or electronic communication to the address on the bid of (a) a Letter of Acceptance and (b) a fully executed contract, or (c) a Purchase Order authorized by the Purchasing Agent.

**39. COMPLIANCE WITH LAWS, ETC.** The Bidder shall comply with all the provisions of the laws of the State of New York and of the United States of America which affect municipalities and municipal contracts, and any and all State and Federal rules and regulation, and of amendments and additions thereto, insofar as the same shall be applicable to any contract awarded hereunder with the same force and effect as if set forth at length herein. The Bidder's special attention is called to the following laws: *General Municipal Law* Section 1 03-d, *State Finance Law* Section 167-b prohibiting the purchase of tropical hardwood products, and the New York State Public Employee Safety & Health Act of 1980.

**40. MODIFICATION OF TERMS** The terms and conditions set forth in the Contract shall govern all transactions by Authorized User(s) under this Contract. The Contract may only be modified or amended upon mutual written agreement of the Purchasing Agent and Contractor.

The Contractor may, however, offer Authorized User(s) more advantageous pricing, payment, or other terms and conditions than those set forth in the Contract. In such event, a copy of such terms shall be furnished to the Authorized User(s) and Purchasing Agent by the Contractor.

Other than where such terms are more advantageous for the Authorized User(s) than those set forth in the Contract, no alteration or modification of the terms of the Contract, including substitution of Product, shall be valid or binding against Authorized User(s) unless authorized by the Purchasing Agent or specified in the Contract Award Notification. No such alteration or modification shall be made by unilaterally affixing such terms to Product upon delivery (including, but not limited to, attachment or inclusion of standard pre-printed order forms, product literature, "shrink wrap" terms accompanying software upon delivery, or other documents) or by incorporating such terms onto order forms, purchase orders or other documents forwarded by the Contractor for payment, notwithstanding Authorized Users subsequent acceptance of Product, or that Authorized User has subsequently processed such document for approval or payment.

**41. SCOPE CHANGES** The Purchasing Agent reserves the right, unilaterally, to require, by written order, changes by altering, adding to or deducting from the contract specifications, such changes to be within the general scope of the contract. The Purchasing Agent may make an equitable adjustment in the contract price or delivery date if the change affects the cost or time of performance.

With respect to any specific quantity stated in the contract, the Purchasing Agent reserves the right after award to order up to 20% more or less (rounded to the next highest whole number) than the specific quantities called for in the contract. Notwithstanding the foregoing, the Purchasing Agent may purchase greater or lesser percentages of contract quantities should the Purchasing Agent and Contractor so agree.

**42. ESTIMATED QUANTITY CONTRACTS** Estimated quantity contracts are expressly agreed and

understood to be made for only the quantities, if any, actually ordered during the contract term. No guarantee of any estimated quantity(s) is implied or given. Unless otherwise set forth in the Bid Specifications, contracts for services and technology are completely voluntary as to use, and therefore no quantities are guaranteed.

**43. BEST PRICING OFFER** During the contract term, if substantially the same or a smaller quantity of a Product is sold by the Contractor outside of this contract vehicle upon the same or similar terms and conditions as that of this contract at a lower price, the price under this contract shall be immediately reduced to the lower price.

**44. PURCHASE ORDERS** Unless otherwise authorized in writing by the Purchasing Agent, no Products are to be delivered or furnished by Contractor until transmittal of an official Purchase Order from the Authorized User requiring the Product. Unless terminated or canceled pursuant to the authority vested in the Purchasing Agent, Purchase Orders shall be effective and binding upon the Contractor when placed in the mail or electronically transmitted prior to the termination of the contract period, addressed to the Contractor at the address set forth in the Contract for receipt of orders, or in the Contract Award Notification.

All Purchase Orders issued pursuant to contracts let by the Purchasing Agent must bear the appropriate contract number and, if necessary, required State approvals. Unless otherwise specified, all Purchase Orders against centralized contracts will be placed by Authorized Users directly with the Contractor and any discrepancy between the terms stated on the vendors order form, confirmation or acknowledgment, and the contract terms shall be resolved in favor of the terms most favorable to the Authorized User.

If, with respect to an agency specific contract, a Purchase Order is not received within two weeks after the issuance of a Contract Award Notification, it is the responsibility of the Contractor to request in writing that the appropriate Authorized User forward a Purchase Order. If, thereafter, a Purchase Order is not received within a reasonable period of time, the Contractor shall promptly notify the appropriate purchasing officer in Essex County. Failure to timely notify such officer may, in the discretion of the Purchasing Agent and without cost to the State, result in the canceling of such requirement by the Purchasing Agent with, at the Purchasing Agents discretion, a corresponding reduction in the contract quantity and price.

**45. PRODUCT DELIVERY** It shall be understood that with respect to contract deliveries, time is of the essence. Delivery must be made as ordered and in accordance with the terms of the contract. Unless otherwise specified in the Bid Specifications, delivery shall be made within thirty calendar days after receipt of a purchase order by the Contractor. The decision of the Purchasing Agent as to compliance with delivery terms shall be final. The burden of proof for delay in receipt of Purchase Order shall rest with the Contractor. In all instances of a potential or actual delay in delivery, the Contractor shall immediately notify the Purchasing Agent and the Authorized User, and confirm in writing the explanation of the delay, and take appropriate action to avoid any subsequent late deliveries. Any extension of the time for delivery must be requested in writing by the Contractor and approved in writing by the Purchasing Agent. Failure to meet such time schedule may be grounds for cancellation of the order or, in the Purchasing Agents discretion, the Contract.

The County must be notified twenty-four (24) hours in advance of delivery. The County reserves the right to deny acceptance of delivery if this notice is not given, at no cost to the County.

The successful bidder shall be responsible for delivery of items in good condition at point of destination, and shall file with the carrier all claims for breakage, imperfections, and other losses, which will be deducted from invoices. The Purchasing Agent will note for the benefit of successful bidder when packages are not received in good condition. Carton shall be labeled with purchase order or contract number, successful bidders name and general statement of contents. Failure to comply with this condition shall be considered sufficient reason for refusal to accept the goods.

Unless otherwise stated in the specifications, all items must be delivered into and placed at a point within the building as directed by the shipping instructions or the Purchasing Agent. The successful bidder will be required to furnish proof of delivery in every instance.

Unloading and placing of equipment and furniture is the responsibility of the successful bidder, and the County accepts no responsibility for unloading and placing of equipment. Any costs incurred due to the failure of the successful bidder to comply with this requirement will be charged to him. No help for unloading will be provided by the County, and suppliers should notify their truckers accordingly.

All deliveries shall be accompanied by delivery tickets or packing slips. Ticket shall contain the following information for each item delivered:

- Contract Number and/or Purchase Order Number
- Name of Article
- Item Number (if applicable)
- Quantity
- Name of the Successful Bidder

**46. SATURDAY & HOLIDAY DELIVERIES** Unless otherwise specified in the Bid Specifications or by an Authorized User, deliveries will not be scheduled for Saturdays, Sundays or legal holidays observed by the State of New York except of Product for daily consumption or where an emergency exists or the delivery is a replacement or is late, in which event the convenience of the Authorized User shall govern.

**47. SHIPPING / RECEIPT OF PRODUCT**

(a) **Packaging** Tangible Product shall be securely and properly packed for shipment, storage and stocking in appropriate, clearly labeled shipping containers and according to accepted commercial practice, without extra charge for packing materials, cases or other types of containers. The container shall become and remain the property of the receiving entity unless otherwise specified in the contract documents.

(b) **Shipping Charges** Contractor shall be responsible for insuring that the Bill of Lading states "charges prepaid" for all shipments. Unless otherwise stated in the Bid Specifications, all deliveries shall be deemed to be FOB Destination tailgate delivery at the dock of the Authorized User. Unless otherwise agreed, items purchased at a price F.O.B. Shipping point plus transportation charges are understood to not relieve the contractor from responsibility for safe and proper delivery notwithstanding the Authorized Users payment of transportation charges.

(c) **Receipt of Product** The Contractor shall be solely responsible for assuring that deliveries are made to personnel authorized to accept delivery on behalf of the Authorized User. Any losses resulting from the Contractors failure to deliver Product to authorized personnel shall be borne exclusively by the Contractor.

**48. TITLE AND RISK OF LOSS** Notwithstanding the form of shipment, title and risk of loss shall not pass from the Contractor to the Authorized User until the Products have been received, inspected and accepted by the receiving entity. Acceptance shall occur within a reasonable time or in accordance with such other defined acceptance period as may be specified in the Bid Specifications. Mere acknowledgment by Authorized User personnel of the delivery or receipt of goods (e.g. signed bill of lading) shall not be deemed or construed as acceptance of the Products received. Any delivery of Product which is substandard or does not comply with the Contract terms, may be rejected or accepted on an adjusted price basis, as determined by the Purchasing Agent.

**49. RE-WEIGHING PRODUCT** Deliveries are subject to re-weighing at the point of destination by the receiving entity. If shrinkage occurs which exceeds that normally allowable in the trade, the receiving

entity shall have the option to require delivery of the difference in quantity, or to reduce the payment accordingly.

**50. PRODUCT SUBSTITUTION** In the event a specified manufacturers Product listed in the Contractors Bid becomes unavailable or cannot be supplied by the Contractor for any reason (except as provided for in the Force Majeure Clause below) a Product deemed by the Purchasing Agent to be the equal or better of the specified commodity or service must be substituted by the Contractor at no additional cost or expense to the Authorized User. Unless otherwise specified, any substitution of Product prior to the Purchasing Agents approval may be cause for cancellation of contract.

**51. REJECTED PRODUCT** When Products are rejected, they must be removed by the Contractor from the premises of the receiving entity within ten days of notification of rejection by Authorized User. Upon rejection notification, risk of loss of rejected or non-conforming Product shall remain on Contractor. Rejected items not removed by the Contractor within ten days of notification shall be regarded as abandoned by the Contractor, and the Authorized User shall have the right to dispose of the items as its own property. The Contractor shall promptly reimburse the Authorized User for any and all costs and expenses incurred in storage or effecting removal or disposition.

**52. INSTALLATION** Where installation is required, Bidder shall be responsible for placing and installing the equipment in the required locations. All materials used in the installation shall be of good quality and shall be free from any and all defects which would mar the appearance of the equipment or render it structurally unsound. Installation includes the furnishing of any equipment, rigging and materials required to install or replace the Product in the proper location. The Contractor shall protect the site from damage for all its work and shall repair damages or injury of any kind caused by the Contractor, its employees, officers or agents. If any alteration, dismantling or excavation, etc. is required to effect installation, the Contractor shall thereafter promptly restore the structure or site to its original condition. Work shall be performed so as to cause the least inconvenience to the Authorized User(s) and with proper consideration for the rights of other contractors or workers. The Contractor shall promptly perform its work and shall coordinate its activities with those of other contractors. The Contractor shall clean up and remove all debris and rubbish from its work as required or directed. Upon completion of the work, the building and surrounding area of work shall be left clean and in a neat, unobstructed condition, and everything in satisfactory repair and order.

**53. REPAIRED OR REPLACED PRODUCT / COMPONENTS** Where the Contractor is required to repair, replace or substitute Product or components under the Contract, the repaired, replaced or substituted Product shall be subject to all terms and conditions for new Product set forth in the contract, including product warranties.

**54. ON-SITE STORAGE** Materials, equipment or supplies may be stored at the County/s or Authorized User's site at the Contractors sole risk and only with the approval of, as the case may be, the County or the Authorized User.

**55. EMPLOYEES / SUBCONTRACTORS / AGENTS** All employees, subcontractors or agents performing work under the contract must be trained technicians who meet or exceed the technical and training qualifications set forth in the Bid Specifications or the Bid, whichever is greater, and must comply with all rules and requirements of the Contract. The Purchasing Agent reserves the right to conduct a security background check or otherwise approve any employee or agent furnished by Contractor and to refuse access to or require replacement of any personnel for cause, including but not limited to, technical or training qualifications, quality of work or change in security status or non-compliance with Authorized Users security or other requirements. Such approval shall not relieve the Contractor of the obligation to perform all work in compliance with the contract terms. The Purchasing Agent reserves the right to reject and/or bar from the facility for cause any employee, subcontractor, or agents of the Contractor.

**56. ASSIGNMENT / SUBCONTRACTORS** The Contractor shall not assign, transfer, convey, sublet, or otherwise dispose of the contract or its right, title or interest therein, or its power to execute such contract to any other person, company, firm or corporation in performance of the contract, other than the assignment of the right to receive moneys due, without the prior written consent of Essex County. Prior to an assignment of the right to receive moneys becoming effective, Contractor shall file a written notice of such assignment simultaneously with Essex County and participating Authorized User(s).

The Purchasing Agent reserves the right to reject any proposed subcontractor, assignee or supplier for bona fide business reasons, which may include, but are not limited to: that the proposed transferee is on the Department of Labors list of companies with which New York State cannot do business; the Purchasing Agent determines that the company is not qualified; unsatisfactory contract performance or service has been previously provided; or attempts were not made to solicit minority and womens business enterprises (M/WBE) bidders for the subcontract.

**57. PERFORMANCE / BID BOND** Essex County reserves the right to require the Bidder/Contractor to furnish without additional cost, a performance, payment or bid bond or negotiable irrevocable letter of credit or other form of security for the faithful performance of the contract, whenever the Purchasing Agent in his/her sole discretion deems such bond or security to be in Essex County's best interest. Where required, such bond or other security shall be in the form prescribed by the Purchasing Agent.

**58. STOP / SUSPENSION OF WORK**

**(a) Stop Work Order** The Purchasing Agent reserves the right to stop the work covered by this contract at any time that the successful Contractor becomes unable or incapable of performing the work or meeting any requirements or qualifications set forth in the contract. In the event of such stopping, the Purchasing Agent shall have the right to arrange for the completion of the work in such manner as it may deem advisable and if the cost thereof exceeds the amount of the bid, the successful Contractor shall be liable for any such cost on account thereof.

**(b) Suspension of Work Order** The Purchasing Agent, in his/her sole discretion, reserves the right to suspend any or all activities under this contract, at anytime, in the best interests of the State or Issuing Entity. In the event of such suspension, the contractor will be given a formal written notice outlining the particulars of such suspension. Examples of the reason for such suspension include, but are not limited to, a budget freeze on County spending, declaration of emergency, or other such circumstances. Upon issuance of such suspension of work, the Contractor is not to accept any purchase orders, as specified in the Suspension Order. Activity may resume at such time as the Purchasing Agent issues a formal written notice authorizing a resumption of work.

**59. CANCELLATION** A contract may be canceled by the Purchasing Agent, and/or an Authorized User may cancel its participation, license or service order under the contract, at the Contractors expense upon non-performance, or upon a determination that Contractor is non-responsive, or non-responsible.

**60. FORCE MAJEURE** The Contractor shall not be responsible for delay resulting from its failure to perform if neither the fault nor negligence of the Contractor, its officers, employees or agents contributed to such delay and the delay is due directly to acts of God, wars, acts of public enemies, strikes, fires or floods, or other similar cause beyond the control of the Contractor, or for any of the foregoing which affect subcontractors or suppliers and no alternate source of supply is available to the Contractor. In such event, Contractor shall notify the Purchasing Agent, by certified or registered mail, of the delay or potential delay and the cause(s) thereof either (a) within ten (10) calendar days after the cause which creates or will create the delay first arose if the Contractor could reasonably foresee that a delay could occur by reason thereof, or (b), if delay is not reasonably foreseeable, within five (5) calendar days after the date the Contractor first had reason to believe a delay could result. The foregoing shall constitute the Contractors sole remedy or excuse with respect to such delay. In the

event performance is suspended or delayed, in whole or in part, by reason of any of the aforesaid causes or occurrences and proper notification is given the Purchasing Agent, any performance so suspended or delayed shall be performed by the Contractor at no increased cost, promptly after such disabilities have ceased to exist unless it is determined in the sole discretion of the Purchasing Agent that the delay will significantly impair the value of the contract to the County or to Authorized Users, whereupon the Purchasing Agent may:

- (a) Accept allocated performance or deliveries from the Contractor. The Contractor, however, hereby agrees to grant preferential treatment to County Agencies with respect to Product subjected to allocation; and/or
- (b) Purchase from other sources (without recourse to and by the Contractor for the costs and expenses thereof) to replace all or part of the Products which are the subject of the delay, which purchases may be deducted from the contract quantity; or
- (c) Terminate the contract or the portion thereof which is subject to delivery delays, and thereby discharge any unexecuted portion of the contract or the relative part thereof.

**61. CONTRACT BILLINGS** Contractor shall provide complete and accurate billing invoices to each Authorized User in order to receive payment. Billings for Agencies must contain all information required by the County Treasurer and/or Auditor. The County Treasurer shall render payment for Agency purchases, and such payment shall be made in accordance with ordinary County procedures and practices. Payment of contract purchases made by Authorized Users other than Agencies shall be billed directly by Contractor on invoices/vouchers, together with complete and accurate supporting documentation as required by the Authorized User.

Submission of an invoice and payment thereof shall not preclude the Purchasing Agent from reimbursement or demanding a price adjustment in any case where the Product delivered is found to deviate from the terms and conditions of the bid and award documents.

**62. DEFAULT - AUTHORIZED USER** An Authorized Users breach shall not be deemed a breach of the centralized contract. In the event a participating Authorized User fails to make payment to the Contractor for Products delivered, accepted and properly invoiced, within 60 days of such delivery and acceptance, the Contractor may, upon 10 days advance written notice to both the Purchasing Agent and the Authorized Users purchasing official, suspend additional shipments of Product or provision of services to such entity until such time as reasonable arrangements have been made and assurances given by such entity for current and future contract payments.

Notwithstanding the foregoing, the Contractor shall, at least 10 days prior to declaring a breach of contract by any Authorized User, by certified or registered mail, notify both the Purchasing Agent and the purchasing official of the breaching Authorized User of the specific facts, circumstances and grounds upon which a breach will be declared. It is understood, however, that if the Contractors basis for declaring a breach is insufficient, the Contractors declaration of breach and failure to service an Authorized User shall constitute a breach of its contract and the County or Authorized User may thereafter utilize any remedy available at law or equity.

**63. INTEREST ON LATE PAYMENTS**

- (a) **County Agencies** The payment of interest on certain payments due and owed by a County agency may be made in accordance with Section 3-a of the *General Municipal Law* at the rate of three percent (3%) per annum.
- (b) **By Non-County Agencies** The terms of Article 11-A apply only to procurements by and the consequent payment obligations of the County. Neither expressly nor by any implication is the County responsible for payments on any purchases made by a Non-County Agency



Authorized User.

**(c) By Contractor** Should the Contractor be liable for any payments to the County hereunder, interest, late payment charges and collection fee charges will be determined and assessed pursuant to Section 18 of the *State Finance Law* to the same extent as though the contract was with the State of New York rather than the County.

**64. REMEDIES FOR BREACH** It is understood and agreed that all rights and remedies afforded below shall be in addition to all remedies or actions otherwise authorized or permitted by law:

**(a) Cover / Substitute Performance** Upon the failure of the Contractor to properly perform within the time specified, failure to provide acceptable service, to make immediate replacement of rejected Product when so requested, or upon the revocation of the Contract by the Purchasing Agent for cause, or upon repudiation of the contract by the Contractor, the Purchasing Agent may, with or without formally bidding same:

i. Purchase from other sources to replace the Product rejected, revoked, not timely delivered or repudiated; or

ii. If after making reasonable attempts, under the circumstances then existing, to timely provide acceptable service or acquire replacement product of equal or comparable quality, the Purchasing Agent is unsuccessful, the Purchasing Agent may acquire acceptable service or replacement product of lesser or greater quality.

Such purchases may, in the discretion of the Purchasing Agent, be deducted from the contract quantity.

**(b) Withhold Payment** In any case where a question of non-performance by Contractor arises, payment may be withheld in whole or in part at the discretion of the Purchasing Agent. Should the amount withheld be finally paid, a cash discount originally offered may be taken as if no delay in payment had occurred.

**(c) Reimbursement of Costs Incurred** The Contractor agrees to reimburse the County and/or Authorized User promptly for any and all additional costs and expenses incurred for acquiring acceptable services, and/or replacement Product. Should the cost of cover be less than the contract price, the Contractor shall have no claim to the difference. The Contractor covenants and agrees that in the event suit is successfully prosecuted for any default on the part of the Contractor, all costs and expenses expended or incurred by the County or Authorized User in connection therewith, including reasonable attorneys fees, shall be paid by the Contractor.

Where the Contractor fails to timely deliver pursuant to the guaranteed delivery terms of the contract, the Purchasing Agent may authorize an ordering Authorized User to rent substitute equipment temporarily. Any sums expended for such rental shall, upon demand, be reimbursed to the Authorized User promptly by the Contractor or deducted by the Authorized User from payments due or to become due the Contractor on the same or another transaction.

**(d) Deduction / Credit** Sums due as a result of these remedies may be deducted or offset by the County or Authorized User from payments due, or to become due, the Contractor on the same or another transaction. If no deduction or only a partial deduction is made in such fashion the Contractor shall pay to the County or Authorized User the amount of such claim or portion of the claim still outstanding, on demand. The Purchasing Agent reserves the right to determine the disposition of any rebates, settlements, restitution, liquidated damages, etc. which arise from the administration of the contract.

**65. ASSIGNMENT OF CLAIM** Contractor hereby assigns to the County any and all its claims for overcharges associated with this contract which may arise under the antitrust laws of the United States, 15 U.S.C. Section 1, *et seq.* and the antitrust laws of the State of New York, *General Business Law* Section 340, *et seq.*

**66. TOXIC SUBSTANCES** Each Contractor furnishing a toxic substance as defined by Section 875 of the *Labor Law*, shall provide such Authorized User with not less than two copies of a material safety data sheet, which sheet shall include for each such substance the information outlined in Section 876 of the *Labor Law*.

Before any chemical product is used or applied on or in any building, a copy of the product label and Material Safety Data Sheet must be provided to and approved by the user agency representative.

**67. INDEPENDENT CONTRACTOR** It is understood and agreed that the legal status of the Contractor, its agents, officers and employees under this Contract is that of an independent contractor, and in no manner shall they be deemed employees of the County or Authorized User, and therefore are not entitled to any of the benefits associated with such employment. The Contractor agrees, during the term of this contract, to maintain at Contractors expense those benefits to which its employees would otherwise be entitled by law, including health benefits, and all necessary insurance for its employees, including workers compensation, disability and unemployment insurance, and to provide the Authorized User with certification of such insurance upon request. The Contractor remains responsible for all applicable federal, state and local taxes, and all FICA contributions.

**68. SECURITY / CONFIDENTIALITY** Contractor warrants, covenants and represents that it will comply fully with all security procedures of the County and any Authorized User(s) in performance of the Contract.

Contractor further warrants, covenants and represents that any confidential information obtained by Contractor, its agents, subcontractors, officers, or employees in the course of performing its obligations, including without limitation, security procedures, business operations information, or commercial proprietary information in the possession of the County or any Authorized User hereunder or received from another third party, will not be divulged to any third parties. Contractor shall not be required to keep confidential any such confidential material which is publicly available through no fault of Contractor, independently developed by Contractor without reliance on confidential information of the County or Authorized User, or otherwise obtained under the Freedom of Information Act or other applicable New York State Laws and Regulations. This warranty shall survive termination of this Contract for a period of five (5) years. Contractor further agrees to take appropriate steps to instruct its personnel, agents, officers and any subcontractors regarding the obligations arising under this clause to insure such confidentiality.

**69. COOPERATION WITH THIRD PARTIES** The Contractor shall be responsible for fully cooperating with any third party agents, including but not limited to subcontractors of the Authorized User, relating to delivery of product or coordination of services.

**70. CONTRACT TERM - EXTENSION** In addition to any stated renewal periods in the Contract, any contract or unit portion thereof let by the Purchasing Agent may be extended by the Purchasing Agent for an additional period(s) of up to one year (cumulatively) with the written concurrence of the Contractor.

**71. WARRANTIES & GUARANTEES** Contractor hereby warrants and guarantees:

- (a) To fully defend, indemnify and save harmless the County, Authorized Users and their respective officers, agents and employees from suits, actions, damages and costs of every name and description arising out of the acts or omissions of Contractor, its officers, employees,

subcontractors, partners, or agents, in any performance under this contract including: i) personal injury, damage to real or personal tangible or intangible property, without limitation; ii) negligence, either active or passive, without limitation, or iii) infringement of any law or of a United States Letter Patent with respect to the Products furnished, or of any copyright, trademark, trade secret or other third party intellectual proprietary rights, without limitation, provided that the County or Authorized User shall give Contractor: (a) prompt written notice of any action, claim or threat of infringement suit, or other suit, promptness of which shall be established by Authorized User upon the furnishing of written notice and verified receipt, (b) the opportunity to take over, settle or defend such action, claim or suit at Bidders sole expense, and (c) assistance in the defense of any such action at the expense of Contractor. Where a dispute or claim arises relative to a real or anticipated infringement, the County or Authorized User may require Bidder/Contractor, at its sole expense, to submit such information and documentation, including formal patent attorney opinions, as the Purchasing Agent shall require.

**(b)** Contractor warrants full ownership, clear title free of all liens, or perpetual license rights to any Products transferred to Authorized User under this Contract, and Contractor shall be solely liable for any costs of acquisition associated therewith without limitation. Contractor warrants that Authorized User will have undisturbed, peaceful use of the Products, including, without limitation, software, object or source codes, custom programming or third party intellectual property rights incorporated or embedded therein, and training modules or Documentation. Contractor fully indemnifies the County and Authorized User for any loss, damages or actions arising from a breach of said warranty without limitation.

**(c)** To pay, at its sole expense, all applicable permits, licenses, tariffs, tolls and fees and give all notices and comply with all laws, ordinances, rules and regulations of any governmental entity in conjunction with the performance of obligations under the contract.

**(d)** Unless recycled or recovered materials are available in accordance with the "Recycled & Recovered Materials" clause, Product offered shall be standard new equipment, current model of regular stock product with all parts regularly used with the type of equipment offered; and no attachment or part has been substituted or applied contrary to the manufacturers recommendations and standard practice. Every Product, including any substituted or replacement unit delivered, must be guaranteed against faulty material and workmanship for a period of one year from and after the date the unit is accepted unless otherwise specified by the County or Authorized User. Notwithstanding the foregoing, when the manufacturers standard guarantee for Product or any component thereof exceeds one year, the longer guarantee period shall apply to such unit or component thereof delivered under this contract. Furthermore, the Contractor agrees to extend its warranty period with regard to any Product delivered by the cumulative periods of time, after notification, during which the Product requires servicing or replacement (down time) or is in the possession of the Contractor, its agents, officers or employees. If during the regular or extended warranty periods faults develop, the Contractor shall promptly repair or, upon demand, replace the defective unit or component part affected. All costs for labor and material and transportation incurred to repair or replace defective goods during the warranty periods shall be borne solely by the Contractor, and the County or Authorized User shall in no event be liable or responsible therefore. This warranty shall survive any termination of the contract in accordance with the warranty term.

**(e)** Where the provision of services requires the replacement or repair of Product, any replaced or repaired component, part or Product shall be new and shall, if available, be replaced by the original manufacturers component, part or Product. All proposed substitutes for the original manufacturers installed Product must be approved by the Authorized User before installation. The Product or part shall be equal to or of better quality than the original Product being replaced. Any Product replaced by the Contractor under the contract shall be guaranteed for one (1) year from the date of replacement and replaced at no cost to the Authorized User if found defective during that time.

(f) Prior to award and during the Contract term and any renewals thereof, Contractor must establish to the satisfaction of the Purchasing Agent that it meets or exceeds all requirements of the bid and any applicable laws, including but not limited to, permits, insurance coverage, licensing, proof of coverage for workman's compensation, and shall provide such proof as required by the Purchasing Agent. Failure to do so may constitute grounds for the County to cancel or suspend this contract, in whole or in part, or to take any other action deemed necessary by the Purchasing Agent.

The Contractor further warrants and guarantees:

i. His/Her/Its products against defective material or workmanship and to repair or replace any damages or marring occasioned in transit.

ii. To furnish adequate protection from damage for all work and repair damages of any kind for which he or his workmen are responsible, to the building or equipment, to his own work, or to the work of other successful bidders.

iii. To carry adequate insurance to protect the County from loss in case of accident, fire, theft, etc.

iv. That all deliveries will be equal to the accepted bid sample.

v. That the equipment delivered is standard, new, latest model of regular stock product or as required by the specifications; also that no attachment or part has been substituted or applied contrary to manufacturer's recommendations and standard practice. Every unit delivered must be guaranteed against faulty material and workmanship for a period of at least one year from date of delivery. If during this period such faults develop, the successful bidder agrees to replace the unit or the part affected without cost to the County. Any merchandise provided under the contract which is or becomes defective during the guarantee period shall be replaced by the successful bidder free of charge with the specific understanding that all replacements shall carry the same guarantee as the original equipment. The successful bidder shall make any such replacement immediately upon receiving notice from the County.

vi. That all manufacturers product warranties and guarantees shall be furnished to the County, and that the County's rights thereunder shall not be in any way impaired or limited.

## GENERAL

**72. APPLICABILITY** In addition to the terms contained in **Part I (General - All Procurements)**, the terms contained in **Part II (Software & Technology Procurements)** apply to software and technology procurements.

## 73. DEFINITIONS - Part II

**DOCUMENTATION** The complete set of manuals (e.g. user, installation, instruction or diagnostic manuals) in either hard or electronic copy, necessary to enable an Authorized User to properly test, install, operate and enjoy full use of the Product in accordance with the license rights.

**ENTERPRISE** The business operations in the United States of a Licensee or Enterprise Participant, without regard to geographic location where such operations are performed or the entity actually performing such operations on behalf of Licensee or Enterprise Participant. For the County of New York, "business operations" shall be defined as the business operations of all Agencies, as defined in Part I.

**ENTERPRISE LICENSE** A contract which grants Enterprise Participants unlimited license rights to access, use and/or execute Product within the Enterprise.

**ENTERPRISE PARTICIPANTS** One or more Licensees, as defined in Part I, participating in an Enterprise License.

**LICENSE EFFECTIVE DATE** The date Product is delivered to an Authorized User. Where a License involves Licensees right to copy a previously licensed and delivered Master Copy of a Program, the license effective date for additional copies shall be deemed to be the date on which the Purchase Order is executed.

**LOGICAL PARTITION** A subset of the processing power within a CEC which has been divided through hardware and/or software means (i.e. *Processor Resources/System Manager [PR/SM]*) so as to limit the total processing power which is accessible by an operating system image by individual users or individual software products.

**OBJECT CODE** The machine executable code that can be directly executed by a computers central processing unit(s).

**PHYSICAL PARTITION** A subset of the processing power within a CEC which has been derived through hardware means so as to limit the total processing power accessible by an operating system image by individual users or individual Products.

**SITE** The location (street address) where Product will be executed.

**SOURCE CODE** The programming statements or instructions written and expressed in any language understandable by a human being skilled in the art which are translated by a language compiler to produce executable machine Object Code.

**TERMS OF LICENSE** The terms and conditions set forth in the Contract which are in effect and applicable to a Product order at the time of order placement, and only such additional terms as are consistent therewith or more advantageous to the Authorized User as are set forth on the individual Product order form executed and approved by both Authorized User and Contractor.

**VIRUS** Any computer code, whether or not written or conceived by Contractor, which disrupts, disables, harms, or otherwise impedes in any manner the operation of the Product, or any other associated software, firmware, hardware, or computer system (such as local area or wide-area networks), including aesthetic disruptions or distortions, but does not include security keys or other such devices installed by Product manufacturer.

## **TERMS AND CONDITIONS**

**74. SOFTWARE LICENSE GRANT** *Unless otherwise set forth in the Bid Specifications or Contract, where Product is acquired on a licensed based the following shall constitute the license grant:*

(a) **License Scope** Licensee is granted a non-exclusive, perpetual license to use, execute, reproduce, display, perform, or merge the Product with other product within its business enterprise in the United States. Licensee shall have the right to use and distribute modifications or customizations of the Product to and for use by any Authorized Users otherwise licensed to use the product, provided that any modifications, however extensive, shall not diminish manufacturers proprietary title or interest. No license, right or interest in any trademark, trade name, or service mark is granted hereunder.

(b) **License Term** The license term shall commence upon the License Effective Date. Where the terms of license permit licensing on a non-perpetual basis, the license term stated in

the Contract shall be extended by the time periods allowed for testing and acceptance.

**(c) Licensed Documentation** Contractor hereby grants to Licensee a perpetual license right to make, reproduce (including downloading electronic copies of the Product) and distribute, either electronically or otherwise, copies of Product Documentation as necessary to enjoy full use of the Product. If commercially available, Licensee shall have the option to require the Contractor to deliver, at Contractors expense: a) One (1) hard copy and One (1) Master Electronic Copy of the Documentation in diskette or CD-ROM format; or b) hard copies of the Product Documentation by type of license in the following amounts, unless otherwise mutually agreed:

- Individual/Named User License – 1 copy per License
- Concurrent Users – 8 copies per site
- Processing Capacity – 8 copies per site

**(d) Product Use** Product may be accessed, used, executed, reproduced, displayed, performed by Licensee to service all Authorized Users of the machine on which Product is installed, up to the capacity measured by the applicable licensing unit stated in the terms of license (i.e. payroll size, number of employees, CPU, MIPS, MSU, concurrent user, workstation).

**(e) Permitted License Transfers** As Licensee's business operations may be altered, expanded or diminished, licenses granted hereunder may be transferred or combined for use at an alternative or consolidated Authorized User site not originally specified in the license, including transfers between Agencies ("permitted license transfers"). Licensee(s) do not have to obtain the approval of Contractor for permitted license transfers, but must give thirty (30) days prior written notice to Contractor of such move(s) and certify in writing that the Product is not in use at the prior site. There shall be no additional license or other transfer fees due Contractor, provided that: i) the maximum capacity of the consolidated machine is equal to the combined individual license capacity of all licenses running at the consolidated or transferred site. (e.g., named users, seats, or MIPS); and ii) that, if the maximum capacity of the consolidated machine is greater than the individual license capacity being transferred, a logical or physical partition or other means of restricting access will be maintained within the computer system so as to restrict use and access to the Product to that unit of licensed capacity solely dedicated to beneficial use for Licensee.

**(f) Restricted Use By Outsourcers / Facilities Management, Service Bureaus / or Other Third Parties** Outsourcers, facilities management or service bureaus retained by Licensee shall have the right to use the Product to maintain Licensee's business operations, including data processing, for the time period that they are engaged in such activities, provided that: 1) Licensee gives notice to Contractor of such party, site of intended use of the Product, and means of access; and 2) such party has executed, or agrees to execute, the Product manufacturers standard nondisclosure or restricted use agreement which executed agreement shall be accepted by the Contractor ("NonDisclosure Agreement"); and 3) if such party is engaged in the business of facility management, outsourcing, service bureau or other services, such third party will maintain a logical or physical partition within its computer system so as to restrict use and access to the program to that portion solely dedicated to beneficial use for Licensee. In no event shall Licensee assume any liability for third partys compliance with the terms of the Non-Disclosure Agreement, nor shall the Non-Disclosure Agreement create or impose any liabilities on the County or Licensee.

Any third party with whom a Licensee has a relationship for a state function or business operation, shall have the temporary right to use Product (using, for example, but not limited to, JAVA Applets), provided that such use shall be limited to the time period during which the third party is using the Product for the stated function or business activity.

**(g) Archival Back-Up and Disaster Recovery** Licensee may use and copy the Product and related Documentation in connection with: 1) reproducing a reasonable number of copies of the Product for archival backup and disaster recovery procedures in the event of destruction or corruption of the Product or disasters or emergencies which require Licensee to restore backup(s) or to initiate disaster recovery procedures for its platform or operating systems; 2) reproducing a reasonable number of copies of the Product and related documentation for cold site storage. "Cold Site" storage shall be defined as a restorable back-up copy of the Product not to be installed until and after the declaration by the Licensee of a disaster; 3) reproducing a back-up copy of the Product to run for a reasonable period of time in conjunction with a documented consolidation or transfer otherwise allowed under paragraph (F) above. "Disaster Recovery" shall be defined as the installation and storage of Product in ready-to-execute, back-up computer systems prior to disaster or breakdown which is not used for active production or development.

**(h) Confidentiality Restrictions** The Product is a trade secret and proprietary product. Licensee and its employees will keep the Product strictly confidential, and Licensee will not disclose or otherwise distribute or reproduce any Product to anyone other than as authorized under the terms of license. Licensee will not remove or destroy any proprietary markings of Contractor.

**(i) Restricted Use by Licensee** Except as expressly authorized by the terms of license, Licensee shall not:

- a. Copy the Product;
- b. Cause or permit reverse compilation or reverse assembly of all or any portion of the Product;
- c. Distribute, disclose, market, rent, lease or transfer to any third party any portion of the Product or the Documentation, or use the Product or Documentation in any service bureau arrangement;
- d. Disclose the results of Product performance benchmarks to any third party who is not an Authorized User without prior notice to Contractor;
- e. Export the Licensed Software in violation of any U.S. Department of Commerce export administration regulations.

**75. ENTERPRISE LICENSE OPTION FOR SOFTWARE** Multiple Authorized Users may license any Product offered under the Contract on behalf of their collective business operations. An Enterprise License shall incorporate the terms set forth in this Part II and the pricing set forth in the Contract, and additionally the following terms:

**(a) Enterprise – Defined** Any Authorized User may be an Enterprise Participant. Enterprise Participants will be enumerated in the Enterprise License, including: i) contact name, ship to and main billing address of each Enterprise Participant, ii) street address of the included End User sites of each Enterprise Participant. The originally defined Enterprise may be modified at any time thereafter, including deletion or addition of Enterprise Participants, sites ownership to" locations, provided that Contractor is given written notice and that any additional capacity required by such addition is licensed in accordance with the Enterprise License terms.

**(b) Product Use** Product licensed under this Enterprise Option shall be licensed with the rights set forth in this Part II, without reference to a specific designated system or Licensee, up to the maximum licensed capacity. Product may be used and freely transferable anywhere

within the defined Enterprise, including higher or lower performance machines, and Enterprise Participants will not incur an increase in license, support or other charges provided that the aggregate utilization of the Product does not exceed the aggregate Enterprise Licensed capacity.

**(c) Submission of Orders, Billing and Usage Reporting** An Enterprise may be established for order placement and billing as either a “single” or “multiple” point of contact, at Licensees option. Where designated as a “single”, one Enterprise Participant shall be designated as the lead agency and central point for submission of Purchase Orders, usage reporting and billing. Where designated as “multiple” point of contact, each designated Enterprise Participant shall be responsible for submission of Purchase Orders, reporting and billing with regard to its use of Enterprise Licensed Product. For either single or multiple point of contact Enterprises, a) Contractor agrees to hold each Enterprise Participant solely responsible for payment and performance; and b) Contractor shall be responsible for furnishing an annual report to each designated point of contact summarizing overall Enterprise License activity for the preceding twelve months.

**(d) Shipping / Delivery** Contractor shall be responsible for delivery of Master Copies of Enterprise Licensed Product and documentation to Enterprise Participants. Within either “Single” or “Multiple” Enterprise Licenses, shipping and delivery of Master Copies of Product and Documentation shall be the responsibility of Contractor to each “ship to” location specified on the Purchase Order(s). Distribution and installation of Enterprise Licensed Product to End Users at a site shall be the responsibility of the Licensee.

**(e) Enterprise Operating Systems** Unless otherwise specified by the parties, up to ten (10) hardware/operating system combinations for Product shall be included at no additional charge. The initial ten hardware/operating systems may be specified at any time within five (5) years of the Enterprise License effective date. Additional hardware/operating systems beyond the initial ten (10) may be specified at anytime by the Enterprise, however if additional copies of Product are required for hardware/operating systems beyond the initial ten, the cost for such systems will be as mutually agreed between the parties.

**(f) Product Acceptance** Each Enterprise Participant shall have a right of acceptance, as set forth above in this Part II, only for the first copy of Product for its site(s).

**(g) Enterprise Fees** Enterprise License Fees shall be set forth in the Contract. Notwithstanding the foregoing, the Product license fees for additional copies or units of capacity for Enterprise licensed Product shall not increase by more than six percent (6%) annually each year during the Enterprise License term. Contractor may offer additional discounts/incentives for Enterprise Participants as may be mutually agreed between the parties. Enterprise Participants shall be entitled to aggregate the volume of all Enterprise Participants for purposes of establishing any applicable discounts under the Contract, and Enterprise Licensed Volume shall be aggregated with volume of non-Enterprise Licensed Product otherwise purchased under the centralized Contract. Upon termination of the Enterprise, Enterprise Participants have the right to acquire additional capacity or users at the Enterprise License price for twelve months after the termination of the Enterprise License.

**(h) Technical Support** Unless otherwise mutually agreed, technical support is optional and may be elected individually by Product by each Enterprise Participant. Where an Enterprise Participant is under a current maintenance or technical support contract, such Enterprise Participant shall be entitled to credit any support paid covering any portion of the Enterprise License Term to the fees due under the Enterprise license.

Enterprise Participants shall have the right to partially or wholly de-support a subset of unused Enterprise licensed capacity upon written notice to Contractor at the end of any then -



current technical support term without penalty or charge. The capacity for a Program license which has been de-supported must remain inactive and may not be used within the Enterprise unless technical support for such capacity has been reinstated. In the event of de-support, Contractor reserves the right to reasonably determine compatibility of future releases or new programs prior to shipment.

**(i) Merger of Two or More Enterprises** Two or more Enterprises may be merged to form a larger Enterprise for the purpose of sharing and exchanging data at no additional license fee provided that participants give Contractor notice of such merger and that the combined capacity does not exceed the maximum capacity of the individual licenses.

**(j) "Nested" Enterprises** Individual Enterprise License participant(s) may license additional capacity or products for the specific use of a subset of the larger enterprise. Said participant(s) must certify in writing to Contractor that such use is only by the enumerated subset of participants.

**(k) Default** A default by any Enterprise Participant shall entitle the Contractor to the remedies against such participant under the Contract, but shall not be deemed a default by the remaining non-defaulting Enterprise Participants.

**76. PRODUCT ACCEPTANCE** Unless otherwise provided in the Bid Specifications, the County and/or Authorized User(s) shall have sixty (60) days from delivery to accept Product. Failure to provide notice of acceptance or rejection by the end of the period provided for under this clause would constitute acceptance by the County or Authorized User(s) as of the expiration of that period.

Unless otherwise provided in the Bid Specifications, The County or Authorized User shall have the option to run acceptance testing on the Product prior to acceptance, such tests and data sets to be specified by User. Where using its own data or tests, The County or Authorized User must have the tests or representative set of data available upon delivery. This demonstration will take the form of a documented installation test, capable of observation by the County or Authorized User, and shall be made part of the Contractors standard documentation. The test data shall remain accessible to the County or Authorized User after completion of the test.

In the event that the documented installation test cannot be completed successfully within sixty (60) days from delivery, and the Contractor or Product is responsible for the delay, The County or Authorized User shall have the option to cancel the order in whole or in part, or to extend the testing period for another sixty (60) day increment. The County or Authorized User shall notify Contractor of acceptance upon successful completion of the documented installation test. Such cancellation shall not give rise to any cause of action against the County or Authorized User for damages, loss of profits, expenses, or other remuneration of any kind.

Costs and liabilities associated with a failure of the Product to perform in accordance with the functionality tests or product specifications during the acceptance period shall be borne fully by Contractor to the extent that said costs or liabilities shall not have been caused by negligent or willful acts or omissions of the The County or Authorized Users agents or employees. Said costs shall be limited to fees paid to Contractor, if any, or any liability for costs incurred at the direction or recommendation of Contractor.

**77. AUDIT OF LICENSED PRODUCT USAGE** Contractor shall have the right to periodically audit, at its expense, use of licensed Product at any site where a copy of the Product resides provided that: i) Contractor gives Licensee or Enterprise Participants at least thirty (30) days advance notice, ii) such audit is conducted during such party's normal business hours iii) each Licensee or Enterprise Participant is entitled to designate a representative who shall be entitled to participant and simultaneously review all information obtained by the audit, and shall be entitled to copies of all reports, data or information obtained by the Contractor; and iv) if the audit shows that such party is not in

compliance such party shall be liable for the unlicensed capacity and shall be required to purchase the additional units or rights necessary to bring it into compliance.

**78. OWNERSHIP / TITLE TO CUSTOM PRODUCTS OR PROGRAMMING** Where contract deliverables include custom products or programming, title, rights and interests to such Product(s) shall be determined as follows:

**(a) Definitions**

**Product** For purposes of this section, the term “Product” shall have the meaning set forth in Part I of these *General Specifications*, which includes, but is not limited to: software applications or programming, programming tools, documentation (including user or training manuals), modules, interfaces, templates, and other elements such as utilities, subroutines, algorithms, formulas, source code, object code, reports, drawings, or data.

**“Existing Product”** is defined as any proprietary material(s) existing or developed independently and not at the expense of Licensee.

**“Custom Product”** is defined as any material(s), exclusive of Existing Product, created, prepared, written, compiled or developed by Contractor, or anyone acting on his behalf for The County or Authorized User pursuant to the Contract.

**(b) Contractor or Third Party Manufacturers Title to Existing Product** Title to Existing Product(s) does not transfer. With respect to such Existing Product(s), whether embedded in or operating in conjunction with Custom Product, Contractor warrants: a) all right, title and interest in Contractor Existing Product(s); or b) all license rights, title and interest in third party Existing Product(s), which include the right to grant to The County or Authorized User an irrevocable, non-exclusive, worldwide, paid-up license to use, execute, reproduce, display, perform, and distribute Existing Product(s). Contractor hereby grants a irrevocable, non-exclusive, worldwide, paid-up license to use, execute, reproduce, display, perform, and distribute Existing Product(s) embedded in or transferred for use in conjunction with Custom Product(s). The Licensee agrees to reproduce the copyright notice and any other legend of ownership on any copies made under the license granted under this paragraph prior to distribution or use.

**(c) Title to Custom Product** Title to Custom Product(s), excluding Existing Product, shall be deemed the sole and exclusive property of the County or Authorized User, who shall have all right, title and interest (including ownership and copyrights). For the purposes of the federal copyright law, execution of this contract shall constitute an assignment of all right, title and interest in the Custom Product(s) by Contractor to the County or Authorized User. The County or Authorized User, in its sole discretion, reserves the right to sell Custom Product or to license them on an exclusive or non-exclusive basis to Contractor or other Third Parties. Contractor hereby agrees to take all necessary and appropriate steps to ensure that Custom Product is protected against unauthorized use, execution, reproduction, display, performance, or distribution by or through Contractor, its partners or agents. Notwithstanding this reservation of title, Contractor shall not be precluded from using the related or underlying general knowledge, skills and experience developed in the course of providing the Custom Product in the course of Contractor’s business.

**(d) Acquisitions Funded By Tax Exempt Financing** In addition to the foregoing rights under a, b and c, the sale or licensing of Custom Product or rights therein shall not occur until such Product or rights are or become useable, and shall be at fair market value which shall be determined at the time of sale or licensing. Any such transfer shall be pursuant to a separate written agreement. If the Contract deliverables are to be funded through tax exempt financing, the County or Authorized User may assign to a Trustee or other entity for security purposes County or Authorized Users ownership and license rights in Custom and Existing Products. Contractor will cooperate with the County or Authorized User to execute such other documents as may be appropriate to achieve the objectives of

this paragraph.

**(e) Other Acquisitions (Not Funded by Tax Exempt Financing)** In addition to the rights set forth above (paragraphs “a”, “b” and “c”), the County or Authorized User reserves the right to transfer any or all rights to Custom Materials on an exclusive or non-exclusive basis. Where such transfer (sale or licensing) is provided in the Bid Specifications, Contractor shall include a purchase price for such rights in its bid. Such price shall be offered as a deduction from Contractor’s overall Bid or Project Bid price, and shall be weighted as set forth in the bid evaluation criteria, if any. Such rights shall transfer to the successful Bidder/Contractor upon successful completion and acceptance by the County or Authorized User of all contract deliverables. Contractor will cooperate with the County or Authorized User to execute such other documents as may be appropriate to achieve the objectives of this paragraph.

**79. PROOF OF LICENSE** The Contractor must provide to each Licensee who places a Product order either: a) the Product manufacturer’s certified License Confirmation Certificates in the name of each such Licensee; or b) a written confirmation from the Product manufacturer accepting Contractors Product invoice as proof of license. Bidder or Contractor shall submit a sample manufacturers certificate, or alternatively such written confirmation from the manufacturer, with the Bid or Contract. Such certificates must be in a form acceptable to the Licensee.

**80. PRODUCT VERSION** Product orders shall be deemed to reference Manufacturers most recently released model or version of the Product at time of delivery, unless an earlier model or version is specifically requested in writing by the County or Authorized User and Contractor is willing to provide such version.

**81. MIGRATION TO CENTRALIZED CONTRACT** The County or Authorized User may obtain additional Product authorized under this contract, (e.g., licensed capacity upgrades, new releases, documentation, maintenance, consulting or training) whether or not Product was initially obtained independently of this contract. The County or Authorized Users election to obtain additional Product shall not operate to diminish, alter or extinguish rights previously granted.

**82. NOTICE OF PRODUCT DISCONTINUANCE** In the event that a Product manufacturer proposes to discontinue maintenance or support for Product, Contractor shall (1) notify the County and each Authorized User in writing of the intended discontinuance, and (2) continue to provide maintenance and support for the greater of: a) the best terms offered by Contractor to any other customer, or b) not less than eighteen (18) months from the date of notice, and (3) at The County or Authorized Users option, either a) provided that the County or Authorized User is under maintenance, provide the County or Authorized User with either a Product replacement with equivalent functionality at no additional charge, or b) provide County or Authorized User with the source code for Licensed Product at no additional charge to enable it to continue use and maintenance of the Product.

**83. REINSTATEMENT OF MAINTENANCE** The County or Authorized User shall not be required to purchase maintenance for use of Product, and may discontinue maintenance at the end of any current maintenance term upon written notice to Contractor. In the event that The County or Authorized User discontinues maintenance of licensed Product, it may, at any time thereafter, reinstate maintenance for Product without any additional penalties or other charges, by paying Contractor at rates which would have been due under the contract for the period of time that such maintenance had lapsed, or for twelve months, whichever is less.

**84. NO HARDSTOP / PASSIVE LICENSE MONITORING** Contractor hereby represents, warrants and covenants that the Product and all Upgrades do not and will not contain any computer code that would disable the Product or Upgrades or impair in any way its operation based on the elapsing of a period of time, exceeding an authorized number of copies, advancement to a particular date or other numeral, or other similar self-destruct mechanisms (sometimes referred to as “time bombs”, “time locks”, or “drop dead” devices) or that would permit Contractor to access the Product to cause such disablement or

impairment (sometimes referred to as a “trap door” device). Contractor agrees that in the event of a breach or alleged breach of this provision that The County or Authorized User shall not have an adequate remedy at law, including monetary damages, and that The County or Authorized User shall consequently be entitled to seek a temporary restraining order, injunction, or other form of equitable relief against the continuance of such breach, in addition to any and all remedies to which The County or Authorized User shall be entitled.

**85. ADDITIONAL WARRANTIES / GUARANTEES** Where Contractor or Product manufacturer offers additional or more advantageous warranties than set forth herein, Contractor shall offer or pass through any additional or more advantageous warranties to The County or Authorized Users. In addition to the ‘Warranties/Guarantees’ set forth in Part I, Contractor makes the following warranties.

**(a) Product Performance Warranty** Contractor represents and warrants that the Products delivered pursuant to this contract conform to the manufacturers specifications, performance standards, and documentation and that the documentation fully describes the proper procedure for using the Products in an efficient manner. Contractor does not warrant that software is error-free.

In the event that Contractor does not remedy a substantial breach of this warranty within the cure period, Licensee shall also have the right to terminate any payments due Contractor, with a refund of the any fees prospectively paid from the date of breach.

**(b) Year 2000 Warranty** For all procurements of Product, Contractor must furnish a warranty statement in accordance with the NYS Standard Year 2000 Warranty Compliance Statement set forth in Part I at the time of bid for agency specific contracts or product order for centralized contracts.

**(c) Virus Warranty** Contractor represents and warrants that Licensed Software contains no known viruses. Bidder is not responsible for viruses introduced at Licensees site. For purposes of this provision, “Virus” shall have the meaning set forth in Part II, “Definitions”.

A breach of any of the foregoing shall be deemed a material breach of the Contract or any License granted thereunder. The defaulting party shall be given written notice of a warranty breach under this section and shall have a thirty (30) day period to cure such breach.

**86. INDEMINIFICATION THE WARRANTIES SET FORTH IN THESE GENERAL SPECIFICATIONS (PARTS I and II) ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

Contractor shall defend, indemnify and save harmless the County and Authorized Users from suits, actions, claims, damages and costs arising under or connected to Contractors actions, and except where express loss liabilities set forth elsewhere in the Contract provide for a higher loss limitation liability than as set forth in this paragraph, or where such express provisions impose Contractor liability on “without limitation”, the total liability of Contractor for such claim(s), regardless of the nature and basis for the claim, shall not exceed two (2) times the fees paid for the applicable Product. For any suit, action, claim, damages or costs arising under or are connected to personal injury or property damage, or breach of the title, patent and copyright warranties, Contractor shall be fully liable without limitation.

The County or Authorized User may retain such moneys from the amount due Contractor as may be necessary to satisfy any claim for damages, costs and the like asserted by or against the County or Authorized User, provided however, that Contractor shall not indemnify each such entity to the extent that any claim, loss or damages arising hereunder is caused by the negligence act or failure to act of said entity.

**87. SOURCE CODE ESCROW FOR LICENSED PRODUCTS** If source code or source code escrow is offered by either Contractor or Product manufacturer/developer to any other commercial customers, Contractor either: i) will provide Licensee with the Source Code for the Product; or ii) place the Source Code in a third party escrow arrangement with a designated escrow agent who shall be named and identified to the County, and who shall be directed to release the deposited Source Code in accordance with a standard escrow agreement acceptable to the County, or iii) will certify to the County that the Product manufacturer/developer has named the County, and the Licensee, as a named beneficiary of an established escrow arrangement with its designated escrow agent who shall be named and identified to the County and Licensee, and who shall be directed to release the deposited Source Code in accordance with the terms of escrow. Source Code, as well as any corrections or enhancements to such source code, shall be updated for each new release of the Product in the same manner as provided above. Contractor shall identify the escrow agent upon commencement of the contract term and shall certify annually that the escrow remains in effect in compliance with the terms of this paragraph.

The County may release the Source Code to Licensees under this Contract who have licensed Product or obtained services, who may use such copy of the Source Code to maintain the Product.





Andrew M. Cuomo, Governor

Roberta Reardon, Commissioner

Town of Willsboro

Anthony Harvey, Engineer  
KAS Consulting  
13 Latour Avenue, Suite 204  
P.O. Box 2787  
Plattsburgh NY 12901

Schedule Year 2017  
Date Requested 07/05/2017  
PRC# 2017007125

Location Boquet River

Project ID#

Project Type The work involves the stabilization of 35 linear feet of eroded bank section by excavating and re-grading the steep slope on either side of the failed slope, cutting an existing protruding culvert

### 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





APPENDIX G – CHANGE ORDER

**TOWN OF WILLSBORO, NEW YORK**  
5 Farrell Road, P.O. Box 370  
Willsboro, NY 12996  
(518) 963-8668

Shaun Gilliland  
Town Supervisor

**CHANGE ORDER**

CONTRACT NO.		CHANGE ORDER NO.	
CONTRACTOR:			
PROJECT:			

DESCRIPTION OF CHANGES			
------------------------	--	--	--

AGREED INCREASE IN CONTRACT PRICE:		AGREED DECREASE IN CONTRACT PRICE:	
------------------------------------	--	------------------------------------	--

Pursuant to Section 9 of the above-referenced contract, I, the Town of Willsboro Town Supervisor, hereby authorize the changes or additions in work described above and agree to the increase or decrease, if any and as indicated above, in the Contract Price.

Dated: \_\_\_\_\_

\_\_\_\_\_  
Shaun Gilliland  
Keene Town Supervisor

I, the duly authorized representative of the Contractor, hereby agree that the Contractor will perform/provide the changes or additions in work described above and to accept the increase or decrease, if any and as indicated above, in the Contract Price.

Dated: \_\_\_\_\_

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

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

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



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## GENERAL CLAUSES

### 1. Material and Workmanship

It is the intent of these specifications to require first-class work constructed of new and best quality materials unless otherwise stated. For any unexpected features arising during the progress of the work and not fully covered herein, the specifications shall be interpreted by the Engineer to require first-class work and materials, and such interpretations shall be accepted by the Contractor. Upon award of the Contract the Contractor shall furnish in writing to the Engineer the sources of supply for concrete, and other materials, which he proposes to use in the work, and material shall not be furnished from other sources of supply except after approval by the Engineer.

### 2. Definitions

OWNER - ~~The County of Essex~~ The Town of Keene

COUNTY - Party of the First part to the Contract as represented by the Superintendent of Public Works for the County of Essex.

SUPERINTENDENT - The head of the Department of Public Works of the County of Essex.

ENGINEER - The Superintendent of Public Works or his duly authorized representative.

INSPECTOR - The representative of the Engineer specially designated to supervise the work for which these specifications are intended.

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 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.

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 his agents, sub-contractors, or employees, and who is responsible for all debts pertaining to and for the acceptable performance of the work for which he had contracted.

A.A.S.H.T.O. - American Association of State Highway and Transportation Officials

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

A.S.T.M. - American Society of Testing Materials

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

N.E.C. - National Electrical Code

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

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.

### 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. Proper Method of Work and Proper Materials

The Engineer 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 started 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 Engineer as insufficient or improper for securing the quality of work required, or the required rate of progress, he may order the Contractor to increase efficiency or to improve their character, and the Contractor shall conform to such order; but the failure of the Engineer to demand any increase of such efficiency or improvement shall not release the Contractor from his obligation to secure the quality of work or the rate of progress specified.

### 5. Control of Area

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

### 6. Permits, Fees, Etc.

All necessary permits from County, State or other concerned Public Authorities shall be secured at the cost and expense of the Contractor. He 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 Owner before proceeding with the securing of all necessary permits and the giving of required notices.

### 7. Traffic

The Contractor shall be responsible for the Maintenance and Protection of traffic at all times until the date of completion and acceptance of his work. During the whole course of the work the Contractor shall so conduct his 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.

### 8. 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 Engineer or his assistants. No material of any kind shall be used upon the work until it has been inspected and accepted by the Engineer. 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 Engineer 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 his contract obligations.

#### 9. Stopping Work

The Engineer may stop by written order any work or any part of the work under this contract if, in his opinion the methods employed 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 Engineer, which must be signified in writing.

#### 10. 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 decision hereon shall be final.

#### 11. Utilities and Service Lines

The Contractor is hereby warned that a reasonable opportunity is to be given the Municipalities and Public Service Corporations to alter and install pipes, conduits or other structures prior to placing of pavement. No guarantee is given that public utility structures and service lines herein shown are correctly located. Locations given are from the best available information

#### 12. Sanitary Regulations

Necessary housing convenience for the use of the workmen for changing clothes and for protection during inclement weather shall be provided. Toilet accommodations, properly secluded from observation, shall also be erected and maintained by the Contractor in such manner and at such points as shall be approved, and their use shall be strictly enforced. The Contractor shall obey and enforce such other 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.

#### 13. Representative Always Present

The Contractor in case of his absence from the work shall have a competent representative or foreman present, who shall follow without delay, all instructions of the Engineer or his assistants in the prosecution and completion of the work in conformity with this Contract, and shall have full authority to supply labor and materials immediately.

#### 14. 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.

#### 15. Protection of Work until Completion

The Contractor shall be responsible for the protection and maintenance of his 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 or the negligence of himself or his 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.

#### 16. 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, and 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 his own expense suitable dumping places for such materials. When the necessity for protecting traffic ends, the

Contractor shall remove all signs, lighting devices, barricades and temporary railing from the site of the work.

#### 17. Gross Loads Hauled on Highway

The Contractor shall at no time during the construction of the 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.

#### 18. Repairs Caused by 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 his own expense. In the event that damages to any one area are caused by more than one contractor, the Engineer will apportion the amount of repair work to be done by each contractor. The decision of the Engineer shall be final.

#### 19. 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. 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 his employ, in carrying out the contract, the Contractor shall at his own expense restore the same or make repairs as are necessary in consequence thereof in a manner satisfactory to the Owner; 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 he shall waive or abandon any claim against his insurer or insurers.

#### 20. Claims for Damages

No claims of any description for damages or delays caused by the work or negligence of other contractors will be allowed. Allowance will be made, however, for extension of the time of completion, provided, in the opinion of the Engineer, the delays of other contractors have actually delayed completion and further provided, that the Contractor has complied with those sections of the contract documents governing progress of the work, time of completion and extension of time.

#### 21. Equivalent Quality

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 shall be the basis of the bid and shall be furnished under the Contract unless otherwise permitted by the Engineer. Should the Contractor desire to substitute other articles, materials, apparatus, products or processes, he shall apply to the Engineer in writing for approval of such substitution. With this 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 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 make the substitution and shall further state what difference, if any, will be made in 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. If the Engineer shall reject any such desired substitution as not being the equal of that specifically named in the contract, or if he 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. 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 Contractor.

#### 22. Payment

No direct payment will be made for work done or materials furnished under the 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.

### 23. Extra Work: Increased Compensation

#### Decreased Work: Credit to the Owner

The Engineer 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 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:

First: By such applicable unit prices, if any, as set forth in the Contract; or Second: If no such unit prices are so set forth, then by unit prices or by a lump sum, or sums, mutually agreed upon by the Engineer and the Contractor; or Third: If, in the opinion of the Engineer, 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) required for such Extra Work, plus thirty percentum as compensation for all items of profit and costs or expenses including administration, overhead, superintendence, insurance (other than Workmen's Compensation Insurance) 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 thirty percentum stipulated above shall be divided between the Contractor and the Subcontractor as per their contractual agreement, or if not defined herein, 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 negotiated between the Engineer and the Contractor. These rates 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.

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 hereinabove for labor.

For equipment which is already on the project, the rental price shall start when ordered to work by the Engineer, and shall continue until ordered to discontinue by him.

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.

### 24. 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, he must promptly, within five calendar days after being directed to perform such work, notify the Engineer, in writing, of his contentions with respect thereto and request a final determination thereon. If the Engineer 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 his 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 Engineer's determination and direction, notify the Engineer, 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.

On or before the fifteenth day of the month succeeding that in which any such damage shall have been sustained, or alleged to have been sustained, the Contractor shall file with the Engineer an itemized statement setting forth in detail the hours, rates, amounts, etc., of the labor, materials, equipment and other costs of such damages incurred during the preceding month, and, unless such statement shall be made as thus required, his claim for compensation shall be forfeited and invalidated and he shall not be entitled to payment on account of any such damage.

In addition to the foregoing statements, the Contractor shall, upon notice from the Superintendent of Public Works, produce for examination by the duly appointed representative of the Superintendent of Public Works, all his books of accounts, bills, invoices, payrolls, subcontracts, time books, daily reports, bank deposit books, bank statements, checkbooks and cancelled checks, showing all of his acts and transactions in connection with or relating to or arising by reason of this contract, and submit himself, his agents, servants and employees for examination under oath by a duly appointed representative designated by the Superintendent of Public Works 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, his 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 Engineer to be due under the provisions of this contract. It is further stipulated 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 Engineer to be due under or by reason of this Contract, the Contractor must allege in his complaint and prove, at the trial, 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 questions 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.

#### 25. Disqualification from Public Contracts of Persons who refuse to Waive Immunity

When Called to Testify Before a Grand Jury. It is understood and agreed by the Contractor that upon the refusal of the Contractor, or if the Contractor is a partnership or corporation, upon the refusal of a member, partner, director or officer of such partnership or corporation, when called before a grand jury to testify concerning any transaction or contract had with the State, any political subdivision thereof, a public authority or with any public department, agency or official of the State or any political subdivision thereof, or of a public authority, to sign a waiver of immunity against any future criminal prosecution or to answer any relevant question concerning such transaction or contract,

- (a) such person, and any firm, partnership or corporation of which he is a member, partner, director or officer, shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any contract with the State, the County of Essex, or any public department or official thereof, for goods, work or services, for a period of five (5) years after such refusal to sign a waiver of immunity; and
- (b) any and all contracts made with the State, the County of Essex 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 cancelled or terminated by the State, or by the County of Essex, without incurring any penalty or owing pursuant to said transaction or contract prior to the cancellation and termination, shall be paid.

#### 26. Contractor's Report of Employment and Weekly Affidavit

Each week the Contractor shall furnish to the Superintendent of Public Works a report of employment and affidavit in the form as shown within.

#### 27. Subletting

As soon as practicable after execution of the contract, the successful bidder shall submit to the County for approval, a list with the names and addresses of the subcontractors to whom he is proposing to sublet parts of the work, and statements of the work they are to perform. He 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 his 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 his obligations under the Contract. All dealings of the Engineer with the subcontractors shall be through the Contractor, subcontractors being recognized by the County only as employees of the Contractor.

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 relationship 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 may designate the percentage and the specific parts of the total work that can be sublet by the Contractor, and if this designation has been made, it will be described in the Special Clauses.

#### 28. 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 from any of his 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 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 supplying such materials and equipment.

#### 29. Overlapping Work

The Contractor shall take notice that because of work on other contracts within and adjacent to the contract limits he may not have exclusive occupancy of the territory within or adjacent 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 his 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 Sub-contractors engaged in work within and adjacent to the contract limits.

The Contractor shall coordinate the work of his various Subcontractors. Their respective operations shall be

arranged and conducted so that delays are avoided. Where the work of the Contractor or Subcontractors 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. 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, the Engineer shall 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 his decision shall be final. The Contractor agrees that he has included in his unit prices bid for the various items of the Contract the possible additional cost of performing the work under this contract because he may not have a clear site for his 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.

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 Engineer 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 his bid hereby agrees that he shall make no other claim against the County for any damages due to such delays or interference.

CONTRACTOR'S REPORT OF EMPLOYMENT AND WEEKLY AFFIDAVIT

County of Essex

Department of Public Works

Contract No. \_\_\_\_\_ Report No. \_\_\_\_\_ Weeks Ending \_\_\_\_\_

Title of Contract and Location \_\_\_\_\_

Contractor or Subcontractor \_\_\_\_\_

Address \_\_\_\_\_

I, \_\_\_\_\_  
(Name of signatory person and title)

being duly sworn, to depose and say, that I pay or supervise the payment of the persons employed by

\_\_\_\_\_  
(Contractor or Subcontractor)

on the above referenced contract work; that during the payroll period commencing on the \_\_\_\_ day of \_\_\_\_\_  
\_\_\_\_ 20\_\_ and ending on the \_\_\_\_ day of \_\_\_\_\_, 20\_\_, all persons employed by me on the contract  
work have been paid the full weekly wages earned; that no rebates have been made or will be made either directly or  
indirectly to or on behalf of said \_\_\_\_\_, other than those deductions which are  
permissible or required by the various Federal, State or local statutes and ordinances; and that the following  
summary of wages paid is true and accurate:

	<u>During the Week</u>	<u>Total to Date</u>
Number of names on payroll		
Hours works		
Total wages earned		

By \_\_\_\_\_  
(Signature and Title)

State of \_\_\_\_\_) ss.  
County of \_\_\_\_\_)

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

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

The above summary of wages paid is true and accurate as to facts and extensions, to the best of my knowledge and belief.

\_\_\_\_\_  
(DATE)

\_\_\_\_\_  
(Signature & Title of Essex County Public Works Engineer)





Andrew M. Cuomo, Governor

Roberta Reardon, Commissioner

Town of Willsboro

Anthony Harvey, Engineer  
KAS Consulting  
13 Latour Avenue, Suite 204  
P.O. Box 2787  
Plattsburgh NY 12901

Schedule Year 2017  
Date Requested 07/05/2017  
PRC# 2017007125

Location Boquet River

Project ID#

Project Type The work involves the stabilization of 35 linear feet of eroded bank section by excavating and re-grading the steep slope on either side of the failed slope, cutting an existing protruding culvert

### 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 2017 through June 2018. 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.state.ny.us](http://www.labor.state.ny.us). 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 "[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 from the Bureau of Public Work. Requests may be submitted by: mail to NYSDOL, Bureau of Public Work, State Office Bldg. Campus, Bldg. 12, Rm. 130, Albany, NY 12240; Fax to Bureau of Public Work (518) 485-1870; or electronically at the NYSDOL website [www.labor.state.ny.us](http://www.labor.state.ny.us).

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.state.ny.us](http://www.labor.state.ny.us).

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.state.ny.us](http://www.labor.state.ny.us).

## Payrolls and Payroll Records

Every contractor and subcontractor MUST keep original payrolls or transcripts subscribed and affirmed as true under penalty of perjury. Payrolls must be maintained for at least Five (5) years from the project's date of completion. [See Spota Bill Notice](#). 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 NYS DOL 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.

# IMPORTANT NOTICE

FOR

## CONTRACTORS & CONTRACTING AGENCIES

### 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' concerns with regard to 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.*

**NOTE:** This change does not affect the Department's ability to request and receive the entire social security number from employers during the course of its public work / prevailing wage investigations.



**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.



# **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).

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.state.ny.us](mailto:dol.misclassified@labor.state.ny.us) .





New York State Department of Labor  
Required Notice under Article 25-B of the Labor Law

**ATTENTION ALL EMPLOYEES, CONTRACTORS AND SUBCONTRACTORS:  
YOU ARE COVERED BY THE  
CONSTRUCTION INDUSTRY FAIR PLAY ACT**

**The law says that you are an employee unless:**

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

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

**IT IS AGAINST THE LAW FOR AN EMPLOYER TO MISCLASSIFY EMPLOYEES AS  
INDEPENDENT CONTRACTORS OR PAY EMPLOYEES OFF-THE-BOOKS.**

**Employee rights.** If you are an employee:

- You are entitled to state and federal worker protections such as
  - unemployment benefits, if 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 required by New York State and Federal Law.

**Penalties** for paying 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, 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 1(866)435-1499 or send an email to [dol.misclassified@labor.state.ny.us](mailto:dol.misclassified@labor.state.ny.us). All complaints of fraud and violations are taken seriously and you can remain anonymous.**

**Employer Name:**



# WORKER NOTIFICATION

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

*Effective February 24, 2008*

This provision is an addition to the existing prevailing 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 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 particular job classification. The required notification will be provided with each wage schedule, may be downloaded from our website [www.labor.state.ny.us](http://www.labor.state.ny.us) or made available upon request by contacting the Bureau of Public Work at 518-457-5589.

\* In the event that the required information will not fit on the pay stub, an accompanying sheet or attachment of the information will suffice.





# 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: \_\_\_\_\_



# **OSHA 10-hour Construction Safety and Health Course – S1537-A**

*Effective July 18, 2008*

This provision is an addition to the existing prevailing wage rate law, Labor Law §220, section 220-h. It requires that on all public work projects of at least \$250,000.00, all laborers, workers and mechanics working on the site, be certified as having successfully completed the OSHA 10-hour construction safety and health course. It further requires that the advertised bids and contracts for every public work contract of at least \$250,000.00, contain a provision of this requirement.

***NOTE: The OSHA 10 Legislation only applies to workers on a public work project that are required, under Article 8, to receive the prevailing wage.***

## Where to find OSHA 10-hour Construction Course

1. NYS Department of Labor website for scheduled outreach training at:

[www.labor.state.ny.us/workerprotection/safetyhealth/DOSH\\_ONSITE\\_CONSULTATION.shtm](http://www.labor.state.ny.us/workerprotection/safetyhealth/DOSH_ONSITE_CONSULTATION.shtm)

2. OSHA Training Institute Education Centers:

### **Rochester Institute of Technology OSHA Education Center**

Rochester, NY

Donna Winter

Fax (585) 475-6292

e-mail: [dlwtpo@rit.edu](mailto:dlwtpo@rit.edu)

(866) 385-7470 Ext. 2919

[www.rit.edu/~outreach/course.php3?CourseID=54](http://www.rit.edu/~outreach/course.php3?CourseID=54)

### **Atlantic OSHA Training Center**

UMDNJ – School of Public Health

Piscataway, NJ

Janet Crooks

Fax (732) 235-9460

e-mail: [crooksje@umdnj.edu](mailto:crooksje@umdnj.edu)

(732) 235-9455

<https://ophp.umdnj.edu/wconnect/ShowSchedule.awp?~~GROUP~AOTCON~10~>

### **Atlantic OSHA Training Center**

University at Buffalo

Buffalo, New York

Joe Syracuse

Fax (716) 829-2806

e-mail: [mailto:japs@buffalo.edu](mailto:mailto:japs@buffalo.edu)

(716) 829-2125

[http://www.smbs.buffalo.edu/CENTERS/trc/schedule\\_OSHA.php](http://www.smbs.buffalo.edu/CENTERS/trc/schedule_OSHA.php)

### **Keene State College**

Manchester, NH

Leslie Singleton

e-mail: [lsingletin@keene.edu](mailto:lsingletin@keene.edu)

(800) 449-6742

[www.keene.edu/courses/print/courses\\_osh.cfm](http://www.keene.edu/courses/print/courses_osh.cfm)

3. List of trainers and training schedules for OSHA outreach training at:

[www.OutreachTrainers.org](http://www.OutreachTrainers.org)

# Requirements for OSHA 10 Compliance

Chapter 282 of the Laws of 2007, codified as Labor Law 220-h took effect on July 18, 2008. The statute provides as follows:

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

The Bureau will enforce the statute as follows:

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

Proof of completion may include but is not limited to:

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

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

Any questions regarding this statute may be directed to the New York State Department of Labor, Bureau of Public Work at 518-485-5696.



# WICKS Reform 2008

(For all contracts advertised or solicited for bid on or after 7/1/08)

- Raises the threshold for public work projects subject to the Wicks Law requiring separate specifications and bidding for the plumbing, heating and electrical work. The total project's threshold would increase from \$50,000 to: \$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 work 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 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.
- Reduces from 15 to 7 days the period in which contractors must pay subcontractors.





## **IMPORTANT INFORMATION**

**Regarding Use of Form PW30.1  
(Previously 30R)**

**“Employer Registration for Use of 4 Day / 10 Hour Work Schedule”**

### **To use the ‘4 Day / 10 Hour Work Schedule’:**

There **MUST** be a *Dispensation of Hours (PW30)* in place on the project

***AND***

You **MUST** register your intent to work 4 / 10 hour days, by completing the PW30.1 Form.

***REMEMBER...***

The ‘4 Day / 10 Hour Work Schedule’ applies **ONLY** to Job Classifications and Counties listed on the PW30.1 Form.

Do not write in any additional Classifications or Counties.

**(Please note :** For each Job Classification check the individual wage schedule for specific details regarding their 4/10 hour day posting.)

# Instructions for Completing Form PW30.1

(Previously 30R)

## “Employer Registration for Use of 4 Day / 10 Hour Work Schedule”

### ***Before completing Form PW30.1 check to be sure ...***

- There is a *Dispensation of Hours* in place on the project.
- The 4 Day / 10 Hour Work Schedule applies to the Job Classifications you will be using.
- The 4 Day / 10 Hour Work Schedule applies to the County / Counties where the work will take place.

### **Instructions (Type or Print legibly):**

#### Contractor Information:

- Enter the Legal Name of the business, FEIN, Street Address, City, State, Zip Code; the Company’s Phone and Fax numbers; and the Company’s email address (if applicable)
- Enter the Name of a Contact Person for the Company along with their Phone and Fax numbers, and the personal email address (if applicable)

#### Project Information:

- Enter the Prevailing Rate Case number (PRC#) assigned to this project
- Enter the Project Name / Type (i.e. Smithtown CSD – Replacement of HS Roof)
- Enter the Exact Location of Project (i.e. Smithtown HS, 143 County Route #2, Smithtown, NY; Bldgs. 1 & 2)
- If you are a Subcontractor, enter the name of the Prime Contractor for which you work
- On the Checklist of Job Classifications -
  - Go to pages 2 and 3 of the form
  - Place a checkmark in the box to the right of the Job Classification you are choosing
  - Mark all Job Classifications that apply

\*\*\**Do not write in any additional Classifications or Counties.*\*\*\*

#### Requestor Information:

- Enter the name of the person submitting the registration, their title with the company , and the date the registration is filled out

#### Return Completed Form:

- **Mail** the completed PW30.1 form to: NYSDOL Bureau of Public Work, SOBC – Bldg.12 – Rm.130, Albany, NY 12240 **-OR-**
- **Fax** the completed PW30.1 form to: NYSDOL Bureau of Public Work at (518)485-1870



Bureau of Public Work Harriman  
State Office Campus  
Building 12, Room 130  
Albany, New York 12240  
Phone: (518) 457-5589 | Fax: (518) 485-1870  
[www.labor.ny.gov](http://www.labor.ny.gov)

## Employer Registration for Use of 4 Day / 10 Hour Work Schedule

Before completing this form, make sure that:

- There is a **Dispensation of Hours** in place on the project.
- The 4 Day / 10 Hour Work Schedule applies to the Job Classifications you will be using.
- The 4 Day / 10 Hour Work Schedule applies to the County / Counties where the work will take place.

Please **type or print** the requested information and then **mail or fax** to the address above.

### Contractor Information

Company Name: \_\_\_\_\_ FEIN: \_\_\_\_\_

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

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone No: \_\_\_\_\_ Fax No: \_\_\_\_\_ Email: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone No: \_\_\_\_\_ Fax No: \_\_\_\_\_ Email: \_\_\_\_\_

### Project Information

Project PRC#: \_\_\_\_\_ Project Name/Type: \_\_\_\_\_

Exact Location  
of Project: \_\_\_\_\_ County: \_\_\_\_\_

(If you are Subcontractor)

Prime Contractor Name: \_\_\_\_\_

Job Classification(s) to Work 4/10 Schedule: *(Choose all that apply on Job Classification Checklist - Pages 3-8)*  
*\*\*\* Do not write in any additional Classifications or Counties\*\*\**

### Requestor Information

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

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



Please use the list below with the number assigned to each county as a reference to the corresponding numbers listed in the following pages under **Entire Counties & Partial Counties**.

- |     |                             |     |                                 |
|-----|-----------------------------|-----|---------------------------------|
| 1.  | Albany County               | 33. | Oneida County                   |
| 2.  | Allegany County             | 34. | Onondaga County                 |
| 3.  | Bronx County                | 35. | Ontario County                  |
| 4.  | Broome County               | 36. | Orange County                   |
| 5.  | Cattaraugus County          | 37. | Orleans County                  |
| 6.  | Cayuga County               | 38. | Oswego County                   |
| 7.  | Chautauqua County           | 39. | Otsego County                   |
| 8.  | Chemung County              | 40. | Putnam County                   |
| 9.  | Chenango County             | 41. | Queens County                   |
| 10. | Clinton County              | 42. | Rensselaer County               |
| 11. | Columbia County             | 43. | Richmond County (Staten Island) |
| 12. | Cortland County             | 44. | Rockland County                 |
| 13. | Delaware County             | 45. | Saint Lawrence County           |
| 14. | Dutchess County             | 46. | Saratoga County                 |
| 15. | Erie County                 | 47. | Schenectady County              |
| 16. | Essex County                | 48. | Schoharie County                |
| 17. | Franklin County             | 49. | Schuyler County                 |
| 18. | Fulton County               | 50. | Seneca County                   |
| 19. | Genesee County              | 51. | Steuben County                  |
| 20. | Greene County               | 52. | Suffolk County                  |
| 21. | Hamilton County             | 53. | Sullivan County                 |
| 22. | Herkimer County             | 54. | Tioga County                    |
| 23. | Jefferson County            | 55. | Tompkins County                 |
| 24. | Kings County (Brooklyn)     | 56. | Ulster County                   |
| 25. | Lewis County                | 57. | Warren County                   |
| 26. | Livingston County           | 58. | Washington County               |
| 27. | Madison County              | 59. | Wayne County                    |
| 28. | Monroe County               | 60. | Westchester County              |
| 29. | Montgomery County           | 61. | Wyoming County                  |
| 30. | Nassau County               | 62. | Yates County                    |
| 31. | New York County (Manhattan) |     |                                 |
| 32. | Niagara County              |     |                                 |

### Job Classification Checklist

**(Place a checkmark by all classifications that will be using the 4/10 schedule)**

*\*\*\* Do not write in any additional Classifications or Counties\*\*\**

<b>Job Classification</b>	<b>Tag #</b>	<b>Entire Counties</b>	<b>Partial Counties</b>	<b>Check Box</b>
Carpenter – Building	276B-All	7	2, 5	
Carpenter – Building	276B-Cat	15	5	
Carpenter – Building	276-B-LIV	26, 28, 35, 59	61	
Carpenter – Building	276B-Gen	19, 32, 37	61	
Carpenter – Heavy & Highway	276HH-All	2, 5, 7		
Carpenter – Heavy & Highway	276HH-Erie	15		
Carpenter – Heavy & Highway	276HH- Gen	19, 32, 37, 61		
Carpenter – Heavy & Highway	276HH-Liv	26, 28, 35, 59		
Carpenter – Residential	276R-All	7	2, 5	
Carpenter – Building	277B-Bro	4, 54		
Carpenter – Building	277B-CAY	6, 50, 62		
Carpenter – Building	277B-CS	8, 12, 49, 51, 55	2	
Carpenter – Building	277 JLS	23, 25, 45		
Carpenter – Building	277 omh	22, 27, 33		
Carpenter – Building	277 On	34		
Carpenter – Building	277 Os	38		
Carpenter – Building	277CDO Bldg	9, 13, 39		
Carpenter – Heavy & Highway	277CDO HH	9, 13, 39		
Carpenter – Heavy & Highway	277HH-BRO	4, 6, 8, 12, ,22, 23, 25, 27, 33, 34, 38, 45, 49, 50, 51, 54, 55, 62		
Carpenter – Building	291B-Alb	1, 18, 20, 29, 42, 47, 48		
Carpenter – Building	291B-Cli	10, 16, 17		
Carpenter – Building	291B-Ham	21, 57, 58		
Carpenter – Building	291B-Sar	46		
Carpenter – Heavy & Highway	291HH-Alb	1, 10, 16, 17,18, 20, 21, 29, 42, 46, 47, 48, 57, 58		
Electrician	25m	30, 52		
Electrician – Teledata Cable Splicer	43	12, 22, 27, 33, 38	6, 9, 34, 39, 55, 59	

### Job Classification Checklist

**(Place a checkmark by all classifications that will be using the 4/10 schedule)**

*\*\*\* Do not write in any additional Classifications or Counties\*\*\**

<b>Job Classification</b>	<b>Tag #</b>	<b>Entire Counties</b>	<b>Partial Counties</b>	<b>Check Box</b>
Electrician	86	26, 28	19, 35, 37, 59, 61	
Electrician	840 Teledata and 840 Z1	62	6, 34, 35, 50, 59	
Electrician	910	10, 16, 17, 23, 25, 45		
Electrical Lineman	1049Line/Gas	30, 41, 52		
Electrical Lineman	1249a	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 44, 46, 47, 48, 49, 50, 45, 51, 53, 54, 55, 56, 57, 58, 59, 61, 62		
Electrical Lineman	1249a West	60		
Electrical Lineman	1249a-LT	1, 2, 4, 5, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 32, 33, 34, 35, 37, 38, 39, 42, 46, 47, 48, 49, 50, 45, 51, 53, 54, 55, 57, 58, 59, 61, 62		
Electrical Lineman	1249aREG8LT	11, 14, 36, 40, 44, 56		
Electrical Lineman	1249aWestLT	60		
Elevator Constructor	138	11, 14, 20, 36, 40, 53, 56	13, 44, 60	
Elevator Constructor	14	2, 5, 7, 15, 19, 32, 37, 61		
Elevator Constructor	27	8, 26, 28, 35, 49, 50, 51, 59, 62		
Elevator Constructor	35	1, 10, 16, 18, 21, 22, 29, 39, 42, 46, 47, 48, 57, 58		
Elevator Constructor	62.1	4, 6, 9, 12, 23, 25, 27, 33, 34, 38, 45, 54, 55	13	
Glazier	201	1, 10, 11, 16, 17, 18, 20, 21, 29, 42, 46, 47, 48, 57, 58		
Glazier	660r	2, 5, 7, 15, 19, 32, 37, 61		
Glazier	660	2, 5, 7, 15, 19, 32, 37, 61		
Glazier	677.1	23, 25, 26, 28, 35, 45, 50, 59, 62		
Glazier	677Z-2	6, 12, 22, 27, 33, 34, 38		
Glazier	677z3	4, 8, 9, 13, 39, 49, 51, 54, 55		
Glazier	677r.2	6, 12, 22, 27, 33, 34, 38		
Insulator – Heat & Frost	30-Syracuse	4, 6, 8, 9, 12, 22, 23, 25, 27, 33, 34, 38, 39, 49, 50, 45, 54, 55		
Laborer – Building	621b	2, 7	5	
Laborer – Building	633 bON	34		

**Job Classification Checklist**

**(Place a checkmark by all classifications that will be using the 4/10 schedule)**

\*\*\* Do not write in any additional Classifications or Counties\*\*\*

<b>Job Classification</b>	<b>Tag #</b>	<b>Entire Counties</b>	<b>Partial Counties</b>	<b>Check Box</b>
Laborer – Building	633b Cay	6		
Laborer – Building	633bOS	38		
Laborer – Building	785(7)	4	9, 13, 54	
Laborer – Building	785B-CS	8, 51	49	
Laborer – Building	7-785b	12, 55	49, 54	
Laborers – Heavy & Highway	157h/h	47	18, 29, 46	
Laborers – Heavy & Highway	190 h/h	1, 42, 58	11, 20, 46	
Laborers – Heavy & Highway	35/2h	21, 22, 27, 33	18, 29	
Laborer – Residential	621r	2, 7	5	
Laborers – Tunnel	157	47	18, 29, 46	
Laborers – Tunnel	35T	21, 22, 27, 33	18, 29	
Laborers – Tunnel	190	1, 42, 58	11, 20, 46	
Mason – Building	2TS.1	1, 10,11, 16, 17, 18, 20, 21, 29, 42, 46, 47, 48, 57, 58		
Mason – Building	2TS.2	22, 23, 25, 33, 45	27	
Mason – Building	2TS.3	6, 34, 38	27	
Mason – Building	2b-on	34		
Mason – Building	2b.1	1, 11, 18, 20, 21, 29, 42, 46, 47, 48, 58	57	
Mason – Building	2b.2	22, 33	25	
Mason – Building	2b.3	6, 34	27	
Mason – Building	2b.4	38		
Mason – Building	2b.5	23	25	
Mason – Building	2b.6	45		
Mason – Building	2b.8	10, 16, 17	57	
Mason – Building	3b-Co-Z2	8, 49, 51	2	
Mason – Building	3B-Z1	19, 26, 28, 35, 50, 59, 61, 62		
Mason – Building – Residential	3B-Z1R	19, 26, 28, 35, 50, 59, 61, 62		
Mason – Building	3B-Bing-Z2	4, 9, 13, 39, 54		
Mason – Building	3B-lth-Z2	12, 55		



### Job Classification Checklist

**(Place a checkmark by all classifications that will be using the 4/10 schedule)**

*\*\*\* Do not write in any additional Classifications or Counties\*\*\**

<b>Job Classification</b>	<b>Tag #</b>	<b>Entire Counties</b>	<b>Partial Counties</b>	<b>Check Box</b>
Mason – Building	3B-Jam-Z2	7	2, 5	
Mason – Building – Residential	3B-Jam-Z2R	2, 4, 8, 7, 9, 12, 39, 13, 49, 51, 54, 55	5	
Mason – Building	3B-Z3	15, 32	5	
Mason – Building	3B-Z3.Orleans	37		
Mason – Residential	3B-Z3R	15, 32	5	
Mason – Residential	3B-z3R.Orleans	37		
Mason - Heavy & Highway	3h	2, 4, 8, 7, 9, 12, 13, 19, 26, 28, 35, 37, 39, 49, 50, 51, 54, 55, 59, 61, 62	5, 15, 32	
Mason – Tile Finisher	3TF-Z1	19, 26, 28, 35, 50, 59, 61, 62		
Mason – Tile Finisher	3TF-Z2	2, 4, 8, 7, 9, 12, 13, 39, 49, 51, 54, 55	5	
Mason – Tile Finisher	3TF-Z3	15, 32, 37	5	
Mason – Tile Finisher	3TF-Z1R	19, 26, 28, 35, 50, 59, 61, 62		
Mason – Tile Finisher	3TF-Z2R	2, 4, 7, 9, 12, 13, 39, 49, 51, 54, 55	5	
Mason – Tile Finisher	3TF-Z3R	15, 32, 37	5	
Mason – Tile Setter	3TS-Z1	19, 26, 28, 35, 50, 59, 61, 62		
Mason – Tile Setter Residential	3TS-Z1R	19, 26, 28, 35, 50, 59, 61, 62		
Mason – Tile Setter	3TS-Z2	2, 4, 7, 8, 9, 12, 13, 39, 49, 51, 54, 55	5	
Mason – Tile Setter Residential	3TS-Z2R	2, 4, 7, 8, 9, 12, 13, 39, 49, 51, 54, 55	5	
Mason – Tile Setter	3TS-Z3	15, 32, 37	5	
Mason – Tile Setter Residential	3TS-Z3R	15, 32, 37	5	
Mason – Building/Heavy & Highway	780	3, 24, 30, 31, 41, 43, 52		
Operating Engineer - Heavy & Highway	137H/H	40, 60	14	
Operating Engineer – Heavy & Highway	158-832H	2, 8, 26, 28, 35, 49, 51, 59, 62	19	
Operating Engineer – Heavy & Highway	158-H/H	1, 4, 9, 10, 11, 14, 16, 17, 18, 20, 21, 22, 29, 39, 42, 46, 47, 48, 54, 57, 58		
Operating Engineer – Heavy & Highway	158-545h	6, 12, 23, 25, 27, 33, 38, 45, 50, 55		
Painter	1456-LS	1, 3, 10, 11, 14, 16, 17, 18, 20, 21, 24, 29, 30, 31, 36, 40, 41, 42, 43, 44, 46, 47, 48, 52, 53, 56, 57, 58, 60		
Painter	150	28, 59, 62	26, 35	

### Job Classification Checklist

**(Place a checkmark by all classifications that will be using the 4/10 schedule)**

*\*\*\* Do not write in any additional Classifications or Counties\*\*\**

<b>Job Classification</b>	<b>Tag #</b>	<b>Entire Counties</b>	<b>Partial Counties</b>	<b>Check Box</b>
Painter	178 B	4, 9, 54		
Painter	178 E	8, 49	51	
Painter	178 I	12, 55		
Painter	178 O	13, 39		
Painter	31	6, 22, 27, 33, 34, 50	25, 35, 38	
Painter	38.O		38	
Painter	38.W	23, 45	25	
Painter	4- Buf,Nia,Olean	2, 15, 19, 32, 37, 61	5, 7, 26, 51	
Painter	4-Jamestown		5, 7	
Sheetmetal Worker	46	26, 28, 35, 50, 59, 62		
Sheetmetal Worker	46r	26, 28, 35, 50, 59, 62		
Teamsters – Heavy & Highway	294h/h	1, 11, 18, 20, 29, 42, 46, 47, 48, 58	57	
Teamsters – Heavy & Highway	317bhh	6, 12, 50, 51, 55, 62	2	
Teamsters - Building/Heavy & Highway	456	40, 60		

## 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.

#### 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. In most cases the payment or provision of supplements is for each hour worked (noted in the schedule as 'Per hour worked'). Some classifications require the payment or provision of supplements for each hour paid (noted in the schedule as 'Per hour paid'), which require supplements to be paid or provided at a premium rate for premium hours worked. Some classifications may also require the payment or provision of supplements for paid holidays on which no work is performed.

#### 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.state.ny.us](http://www.labor.state.ny.us)) 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

**Essex County General Construction**

**Boilermaker** **07/01/2017**

**JOB DESCRIPTION** Boilermaker **DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Broome, Chenango, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Tioga, Warren, Washington

**WAGES**

Per hour  
 07/01/2017

Boilermaker \$ 34.54

**SUPPLEMENTAL BENEFITS**

Per hour worked

Journeyman \$ 24.03\*  
 + 1.24

\* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime.

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

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

Note: When a holiday falls on Sunday, the day observed by the State or Nation shall be observed, and when Christmas Day and New Year's fall on Saturday, Friday will be observed as the holiday.

**REGISTERED APPRENTICES**

Wages per hour  
 ( 1/2 ) year terms at the following percentage of Journeyman's wage.

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

Supplemental Benefits per hour worked

1st	2nd	3rd	4th	5th	6th	7th	8th
18.11*	18.11*	18.97*	19.81*	20.65*	21.49*	22.34*	23.19*
+1.24	+1.24	+1.24	+1.24	+1.24	+1.24	+1.24	+1.24

\* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime.

1-197

**Carpenter - Building** **07/01/2017**

**JOB DESCRIPTION** Carpenter - Building **DISTRICT 2**

**ENTIRE COUNTIES**

Clinton, Essex, Franklin

**WAGES**

Per hour:	07/01/2017	01/01/2018	07/01/2018	07/01/2019
		Additional	Additional	Additional
Carpenter	\$ 26.32	\$ 0.40	\$ 1.00	\$ 1.00
Floor Coverer	26.32	0.40	1.00	1.00
Carpet Layer	26.32	0.40	1.00	1.00
Dry-Wall	26.32	0.40	1.00	1.00
Lather	26.32	0.40	1.00	1.00
Diver-Wet Day	61.25	0.00	0.00	0.00
Diver -Dry Day	27.32	0.40	1.00	1.00
Diver Tender	27.32	0.40	1.00	1.00

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (not subject to overtime premiums):

- Pile Drivers shall receive \$0.25 per hour over the journeyman's rate of pay when performing piledriving work.
- Certified welders shall receive \$1.00 per hour over the journeyman's rate of pay when the employee is required to be certified and performs DOT or ABS specified welding work

- When an employee performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require employees to be furnished and use or wear required forms of personal protection, then the employee shall receive his regular hourly rate plus \$1.50 per hour.
- Depth pay for Divers based upon deepest depth on the day of the dive:
  - 0' to 80' no additional fee
  - 81' to 100' additional \$.50 per foot
  - 101' to 150' additional \$0.75 per foot
  - 151' and deeper additional \$1.25 per foot
- Penetration pay for Divers based upon deepest penetration on the day of the dive:
  - 0' to 50' no additional fee
  - 51' to 100' additional \$.75 per foot
  - 101' and deeper additional \$1.00 per foot

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 worked:

Journeyman \$ 19.34

### OVERTIME PAY

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

\* Note - Saturday is payable at straight time if the employee misses work, except where a doctor's or hospital verification of illness is produced Monday through Friday when work was available to the employee.

### HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday. If Christmas falls on a Saturday, it shall be observed on the prior Friday.

### REGISTERED APPRENTICES

Wages per hour

#### FOR APPRENTICES INDENTURED PRIOR TO JANUARY 1, 2016

One year terms at the following percentage of Journeyman's base wage

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

Supplemental Benefits per hour worked plus paid holidays:

1st year term	\$ 10.91
2nd year term	10.91
3rd year term	13.51
4th year term	13.51

#### FOR APPRENTICES INDENTURED AFTER JANUARY 1, 2016

1,300 hour terms at the following percentage of Journeyman's base wage

1st	2nd	3rd	4th	5th
50%	60%	65%	70%	80%

Supplemental Benefits per hour worked plus paid holidays:

1st term	\$ 10.91
2nd term	10.91
3rd term	13.51
4th term	13.51
5th term	13.51

ADDITIONAL AMOUNTS PAID TO APPRENTICES FOR SPECIFIC TYPES OF WORK PERFORMED (not subject to overtime premiums):

- Pile Driving apprentices shall receive \$0.25 per hour when performing piling work.
- Certified welders shall receive \$1.00 per hour over the apprentices rate of pay when the apprentice is required to be certified and performs DOT or ABS specified welding work
- When an apprentice performs work within a contaminated area on a State and/or Federally designated hazardous waste site, and where relevant State and/or Federal regulations require the apprentice to be furnished and use or wear required forms of personal protection, then the apprentice shall receive his regular hourly rate plus \$1.50 per hour.

2-291B-Cli

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

**DISTRICT 2**

**ENTIRE COUNTIES**

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

**PARTIAL COUNTIES**

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

**WAGES**

Wages per hour:

	07/01/2017	07/01/2018
Carpenter - ONLY for		Additional
Artificial Turf/Synthetic		
Sport Surface	\$ 29.88	\$ 1.50

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

**SUPPLEMENTAL BENEFITS**

Per hour worked plus paid holidays:

Journeyman	\$ 21.45
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**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (2, 17) on HOLIDAY PAGE  
 Overtime: See (5, 6, 16) on HOLIDAY PAGE

Notes:

When a holiday falls upon a Saturday, it shall be observed on the preceding Friday. When a holiday falls upon a Sunday, it shall be observed on the following Monday.

An employee taking an unexcused day off the regularly scheduled day before or after a paid Holiday shall not receive Holiday pay.

**REGISTERED APPRENTICES**

Wages per hour:

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

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

Supplemental Benefits per hour worked plus paid holidays:

1st year term	\$ 11.00
2nd year term	11.00
3rd year term	13.60
4th year term	13.60

2-42AtSS

**Carpenter - Heavy&Highway**

**07/01/2017**

**JOB DESCRIPTION** Carpenter - Heavy&Highway

**DISTRICT 2**

**ENTIRE COUNTIES**

Albany, Clinton, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**WAGES**

Per hour

	07/01/2017	07/01/2018
Carpenter	\$ 30.78	\$ 1.50
Piledriver	30.78	1.50
Diver-Wet Day	55.78	1.50
Diver-Dry Day	31.78	1.50
Diver-Tender	31.78	1.50

NOTE ADDITIONAL AMOUNTS PAID FOR THE FOLLOWING WORK LISTED BELOW (not subject to overtime premiums):

- When Millwright work is performed, the employee will receive an additional \$1.50 per hour for all hours worked on the day the millwright work was performed.

- When project owner mandates a single irregular work shift, the employee will receive an additional \$2.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.
- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.00 per hour.
- Certified welders when required to perform welding work will receive an additional \$1.50 per hour.

**ADDITIONAL NOTES PERTAINING TO DIVERS/TENDERS:**

- Divers and Tenders shall receive one and one half (1 1/2) times their regular diver and tender rate of pay for Effluent and Slurry diving.
- Divers and tenders being paid at the specified rate for Effluent and Slurry diving shall have all overtime rates based on the specified rate plus the appropriate overtime rates (one and one half or two times the specified rate for Slurry and Effluent divers and tenders).
- The pilot of an ADS or submersible will receive one and one-half (1 1/2) times the Diver-Wet Day Rate for time submerged.
- Depth pay for Divers based upon deepest depth on the day of the dive:
  - 0' to 50' no additional fee
  - 51' to 100' additional \$.50 per foot
  - 101' to 150' additional \$0.75 per foot
  - 151' and deeper additional \$1.25 per foot
- Penetration pay for Divers based upon deepest penetration on the day of the dive:
  - 0' to 50' no additional fee
  - 51' to 100' additional \$.75 per foot
  - 101' and deeper additional \$1.00 per foot
- Diver rates applies to all hours worked on dive day.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Friday, provided the project duration is more than forty (40) hours.

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 plus paid holidays:

Journeyman \$ 20.55

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (2, 17) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

In the event a Holiday falls on a Saturday, the Friday before will be observed as a Holiday. If a Holiday falls on a Sunday, then Monday will be observed as a Holiday.

**REGISTERED APPRENTICES**

Wages per hour

**FOR APPRENTICES INDENTURED PRIOR TO JANUARY 1, 2016**

One year terms at the following percentage of Journeyman's base wage

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

Supplemental Benefits per hour worked plus paid holidays:

1st year term	\$ 10.87
2nd year term	10.87
3rd year term	13.47
4th year term	13.47

**FOR APPRENTICES INDENTURED AFTER JANUARY 1, 2016**

1,300 hour terms at the following percentage of Journeyman's base wage

1st	2nd	3rd	4th	5th
50%	60%	65%	70%	80%

Supplemental Benefits per hour worked plus paid holidays:

1st term	\$ 10.87
2nd term	10.87
3rd term	13.47
4th term	13.47
5th term	13.47

NOTE ADDITIONAL AMOUNTS PAID TO APPRENTICES FOR THE FOLLOWING WORK LISTED BELOW (not subject to overtime premiums):

- When Millwright work is performed, the employee will receive an additional \$1.50 per hour for all hours worked on the day the millwright work was performed.



- When project owner mandates a single irregular work shift, the employee will receive an additional \$2.00 per hour. A single irregular work shift can start any time from 5:00 p.m. to 1:00 a.m.
- State or Federal designated hazardous site, requiring protective gear shall be an additional \$2.00 per hour.
- Certified welders when required to perform welding work will receive an additional \$1.50 per hour.

2-291HH-Alb

**Electrician**

**07/01/2017**

**JOB DESCRIPTION** Electrician

**DISTRICT 6**

**ENTIRE COUNTIES**

Clinton, Essex, Franklin, Jefferson, Lewis, St. Lawrence

**WAGES**

Per hour:	07/01/2017
Electrician	\$ 33.50
Teledata	33.50
Cable Splicer	35.00
Welder	35.00

NOTE: Additional premiums for the following work listed:

- Additional \$1.50 per hour for work performed underground such as tunnels and mine shafts. Excludes manholes and walkway tunnels between buildings.
- Additional \$1.50 per hour for working 35 feet or more on scaffolds, ladders, towers, steeples, structural steel, or mechanical lifts over 65 feet.

Shift Work: The following rates will apply on all Contracting Agency mandated multiple shifts worked between the hours listed below. The employer may be permitted to adjust the starting hours of the shift by up to two (2) hours if required by the agency. If a shift begins outside of the stated shift hours, the rate paid would be determined by what shift the majority of the hours were worked.

When two (2) or three (3) shifts are worked:

1st shift:	8:00 AM to 4:30 PM	regular wage rate
2nd shift:	4:30 PM to 1:00 AM	regular wage rate plus 17.3%
3rd shift:	12:30 AM to 9:00 AM	regular wage rate plus 31.4%

**\*\* IMPORTANT NOTICE - EFFECTIVE 07/01/2012 \*\***

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:	\$ 19.98
	* plus 3% of gross wage

\* NOTE: THE 3% IS BASED ON THE HOURLY WAGE PAID, STRAIGHT TIME RATE OR PREMIUM TIME 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) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

WAGES: Hourly terms at the following percentage of Journeyman's wage.

	1-1000	to 2000	to 3500	to 5000	to 6500	to 8000
	40%	45%	50%	60%	70%	80%
Electrician	\$13.40	\$15.08	\$16.75	\$20.10	\$23.45	\$26.80
Cable Splicer, Tunnel	\$14.90	\$16.58	\$18.25	\$21.60	\$24.95	\$28.30

SUPPLEMENTAL BENEFITS per hour:

Appr 1st & 2nd term	\$ 10.17
	* plus 3% of gross wage

Appr All other terms \$ 19.98  
 \* plus 3% of  
 gross wage

\* NOTE: THE 3% IS BASED ON THE HOURLY WAGE PAID, STRAIGHT TIME RATE OR PREMIUM TIME RATE.

6-910

**Elevator Constructor** **07/01/2017**

**JOB DESCRIPTION** Elevator Constructor

**DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Clinton, Essex, Fulton, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**PARTIAL COUNTIES**

Madison: Madison Only the towns of: Brookfield, Hamilton, Lincoln, Madison, Smithfield, Stockbridge and the City of Oneida  
 Oneida: Entire county except the towns of: Camden, Florence, and Vienna.

**WAGES**

Per hour

	07/01/2017	01/01/2018	01/01/2019
Mechanic	\$ 43.24	\$ 45.40	\$ 47.56
Helper	70% of Mechanic Wage Rate	70% of Mechanic Wage Rate	70% of Mechanic Wage Rate

\*\*\*\* IMPORTANT NOTICE - EFFECTIVE 04/01/2009 \*\*\*\*

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday or Tuesday 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 may be liable for overtime payments for work over 8 hours per day.

**SUPPLEMENTAL BENEFITS**

Per hour worked

	07/01/2017	01/01/2018	01/01/2019
Journeyman/Helper	\$ 31.585*	\$ 32.705*	\$ 33.825*

(\*)Plus 6% of regular hourly rate.

**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\*

50%

\*No supplemental benefits

6-12 mo	2nd yr	3rd yr	4th yr
55 %	65 %	70 %	80 %

Supplemental Benefits per hour worked

Same as Journeyman/Helper

1-35

**Glazier** **07/01/2017**

**JOB DESCRIPTION** Glazier

**DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**WAGES**

Per hour	07/01/2017	05/01/2018 Additional
Glazier base wage	\$ 27.05	\$ 1.50
	+ additional \$2.00 per hour for all hours worked	
*High Work Base Wage	30.50	
	+ additional \$3.52 per hour for all hours worked	

(\*)When working on Swing Stage or Lift 100 feet or more in height, measured from the ground level up.

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 worked	
Journeyman	\$ 19.11
Journeyman High Work	23.94

**OVERTIME PAY**

See (B, E, E2, Q) on OVERTIME PAGE  
 Premium is applied to the respective base wage only.

**HOLIDAY**

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

Note: If any of the holidays are designated by federal law to be celebrated on a day other than that on which they regularly fall, then the holiday shall be celebrated on the day set by said federal law as if the day on which the holiday is celebrated was actually the holiday date.

**REGISTERED APPRENTICES**

Wages per hour

Apprentice Glazier One Half Year (750 hr) terms at the following percentage of Journeyman's base wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
35%	45%	55%	65%	75%	85%	90%	95%
+ additional \$2.00 per hour for all hours worked for all terms							

Apprentice Glazier Hi-Work One Half Year (750 hr) terms at the following percentage of Journeyman's Hi-Work base wage.

1st	2nd	3rd	4th	5th	6th	7th	8th
35%	45%	55%	65%	75%	85%	90%	95%
+ additional \$3.52 per hour for all hours worked for all terms							

Supplemental Benefits per hour worked

Apprentice	
1st-4th term	\$ 15.64
5th-8th term	19.11
Apprentice High Work	
1st-4th term	\$ 17.94
5th-8th term	23.94

**Insulator - Heat & Frost**

**07/01/2017**

**JOB DESCRIPTION** Insulator - Heat & Frost

**DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Columbia, Delaware, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Sullivan, Ulster, Warren, Washington

**WAGES**

Wages per hour	07/01/2017	05/01/2018 Additional
Asbestos Worker*	\$ 34.10	\$ 1.25
Insulator*	34.10	
Firestopping Worker*	28.99	

(\*)On Mechanical Systems only.

On government mandated shift work additional 12% of wage for all shifts starting after 3:30 P.M.

**SUPPLEMENTAL BENEFITS**

Per hour worked

Journeyman	\$ 21.49
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**OVERTIME PAY**

See (\*B1, \*\*Q) on OVERTIME PAGE

\*B1=Double time begins after 10 hours on Saturday

\*\*Q=Triple time on Labor Day if worked.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When a holiday falls on Sunday the following Monday shall be observed as the holiday.

**REGISTERED APPRENTICES**

Wages per hour

one year terms at the following percentage of Journeyman's wage.

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

Supplemental Benefits per hour worked:

Apprentices	\$ 21.49
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1-40

**Ironworker**

**07/01/2017**

**JOB DESCRIPTION** Ironworker

**DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Clinton, Columbia, Delaware, Essex, Greene, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**PARTIAL COUNTIES**

Fulton: Only the Townships of Broadalbin, Mayfield, Northampton, Bleecker and Johnstown.

Hamilton: Only the Townships of Hope, Benson and Wells.

Montgomery: Only the Townships of Florida, Amsterdam, Charleston, Glen, Mohawk and Root.

Otsego: Only the Towns of Unadilla, Butternuts, Morris, Otego, Oneonta, Laurens, Millford, Maryland and Worcester.

**WAGES**

Wages 07/01/2017  
 Per hour

Ornamental	\$ 30.50
Reinforcing	30.50
Rodman	30.50
Structural & Precast	30.50
Mover/Rigger	30.50
Fence Erector	30.50
Stone Derrickman	30.50
Sheeter	30.75
Curtain Wall Installer	30.50
Metal Window Installer	30.50

**SUPPLEMENTAL BENEFITS**

Per hour worked

JOURNEYMAN	\$ 27.36
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**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

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

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

**REGISTERED APPRENTICES**

Wages per hour

ONE YEAR TERMS AT THE FOLLOWING WAGE RATES:

	07/01/2017
1st year	\$ 16.50
2nd year	18.50
3rd year	20.50
4th year	22.50
Supplemental Benefits per hour worked	
1st year	\$ 10.75
2nd year	21.28
3rd year	22.79
4th year	24.30

1-12

**Laborer - Building**

**07/01/2017**

**JOB DESCRIPTION** Laborer - Building

**DISTRICT 7**

**ENTIRE COUNTIES**

Clinton, Essex, Warren

**WAGES**

GROUP #A: All Laborers (except as noted)

GROUP #B: Asbestos & Hazardous Waste Work.

WAGES per hour

	07/01/2017	07/01/2018 Additional	07/01/2019 Additional
Group # A	\$ 22.88	\$ 1.50	\$ 1.50
Group # B	24.38	1.50	1.50

**SUPPLEMENTAL BENEFITS**

Per hour worked

Journeyman \$ 20.90

**OVERTIME PAY**

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

\*Inclement weather makeup day may be provided November 15 to May 15.

**HOLIDAY**

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

**REGISTERED APPRENTICES**

Wages per hour

Terms are at the following percentage of Group Rate A.

0-1,000 Hrs	1,001-2,000 Hrs	2,001-3,000 Hrs	3,001-4,000 Hrs
60%	70%	80%	90%

SUPPLEMENTAL BENEFITS per hour worked:

All Terms: Same as Journeyman

7-1822ew

**Laborer - Heavy&Highway**

**07/01/2017**

**JOB DESCRIPTION** Laborer - Heavy&Highway

**DISTRICT 7**

**ENTIRE COUNTIES**

Clinton, Essex, Warren

**WAGES**

Per hour:

GROUP A: Drill Helper on drilling equipment listed below in Group C, Flagmen, Outboard and Hand Boats.

GROUP B: BASIC RATE: Bull Float (where used for strike off only), Chain Saw, Concrete Aggregate Bin, Concrete Bootman, Gin Buggy, Hand or Machine Vibrator, Jack Hammer, Mason Tender, Mortar Mixer, Pavement Breaker, Handlers of All Steel Mesh, Small Generators for Laborers' Tools, Installation of Bridge Drainage Pipe, Pipe Layers, Vibrator Type Rollers, Tamper, Drill Doctor, Water Pump Operator (1-1/2" and Single Diaphragm) Nozzle (Asphalt, Guniting, Seeding, and Sand Blasting), Laborers on Chain Link Fence Erection, Rock Splitter & Power Unit, Pusher Type Concrete Saw and All Other Gas, Electric, Oil, and Air Tool Operators, Wrecking Laborer.

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

GROUP D: Blasters, Form Setters, Stone or Granite Curb Setters.

GROUP E: Hazardous Waste Removal Work when designated by State/Federal as hazardous waste site and regulations require employees wear required personal protection.

WAGES per hour	07/01/2017	07/01/2018 Additional
Group # A	\$ 24.97	\$ 1.60
Group # B	25.17	1.60
Group # C	25.37	1.60
Group # D	25.57	1.60
Group # E	27.17	1.60

NOTE: A single irregular work shift starting any time between 5:00 PM and 1:00 AM on governmental mandated night work shall be paid an additional \$2.00 per hour.

IMPORTANT NOTE: Operation of equipment (i.e. forklift, skid steer) is the work of the Operating Engineers, please see appropriate rates.

**SUPPLEMENTAL BENEFITS**

Per hour worked

Journeyman \$ 22.75

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

NOTE: If a holiday falls on Sunday, it will be celebrated on Monday. In the event that men work on this Sunday holiday, they shall be paid double time. In the event that men work on Monday, they shall be compensated at double time plus the holiday pay. Accordingly, the Monday following the Sunday is treated as the holiday.

**REGISTERED APPRENTICES**

WAGES: 1000 hour terms at the following percentage of Journeyman's wage.

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

SUPPLEMENTAL BENEFITS per hour worked:

All Terms: Same as Journeyman

7-1822/2h

**Laborer - Tunnel**

**07/01/2017**

**JOB DESCRIPTION** Laborer - Tunnel

**DISTRICT 7**

**ENTIRE COUNTIES**

Clinton, Essex, Warren

**WAGES**

GROUP A: General Laborer

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

**GROUP C: Hazardous/Waste Work**

**WAGES (per hour)**

	07/01/2017	07/01/2018 Additional
Tunnel Laborer:		
Group A	\$ 28.15	\$ 1.60
Group B	27.95	1.60
Group C*	30.15	1.60

(\*)Work site required to be designated by State/Federal as hazardous waste site and relevant regulations require employees to use personal protection.

**SUPPLEMENTAL BENEFITS**

Per hour worked:

Journeyman \$ 22.75

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

If the holiday falls on Saturday, it will be celebrated on Friday. If the holiday falls on Sunday, it will be celebrated on Monday.

**REGISTERED APPRENTICES**

Wages per hour

Terms are at the following percentage of Group B rate.

0-1000 Hrs	1001-2000 Hrs	2001-3000 Hrs	3001-4000 Hrs
60%	70%	80%	90%

**SUPPLEMENTAL BENEFITS**

All Terms: Same as Journeyman

7-1822T

**Lineman Electrician**

**07/01/2017**

**JOB DESCRIPTION** Lineman Electrician

**DISTRICT 6**

**ENTIRE COUNTIES**

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

**WAGES**

Per hour:

NOTE: Includes Teledata Work within ten (10) feet of High Voltage Transmission Lines

Below rates applicable on all overhead and underground distribution and maintenance work, and all overhead and underground transmission line work and the installation of fiber optic cable where no other construction trades are or have been involved. (Ref #14.01.01)

	07/01/2017	05/07/2018	05/06/2019	05/04/2020
Lineman, Technician	\$ 49.20	\$ 50.60	\$ 52.05	\$ 53.50
Crane, Crawler Backhoe	49.20	50.60	52.05	53.50
Welder, Cable Splicer	49.20	50.60	52.05	53.50
Digging Mach. Operator	44.28	45.54	46.85	48.15
Tractor Trailer Driver	41.82	43.01	44.24	45.48
Groundman, Truck Driver	39.36	40.48	41.64	42.80
Equipment Mechanic	39.36	40.48	41.64	42.80
Flagman	29.52	30.36	31.23	32.10

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all electrical sub-stations, switching structures, fiber optic cable and all other work not defined as "Utility outside electrical work". (Ref #14.02.01-A)

Lineman, Technician	\$ 49.20	\$ 50.60	\$ 52.05	\$ 53.50
Crane, Crawler Backhoe	49.20	50.60	52.05	53.50
Cable Splicer	54.12	55.66	57.26	58.85
Certified Welder - Pipe Type Cable	51.66	53.13	54.65	56.18
Digging Mach. Operator	44.28	45.54	46.85	48.15
Tractor Trailer Driver	41.82	43.01	44.24	45.48
Groundman, Truck Driver	39.36	40.48	41.64	42.80
Equipment Mechanic	39.36	40.48	41.64	42.80
Flagman	29.52	30.36	31.23	32.10

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates apply on switching structures, maintenance projects, railroad catenary install/maintenance third rail installation, bonding of rails and pipe type cable and installation of fiber optic cable. (Ref #14.02.01-B)

Lineman, Tech, Welder	\$ 50.52	\$ 51.92	\$ 53.37	\$ 54.82
Crane, Crawler Backhoe	50.52	51.92	53.37	54.82
Cable Splicer	55.57	57.11	58.71	60.30
Certified Welder - Pipe Type Cable	53.05	54.52	56.04	57.56
Digging Mach. Operator	45.47	46.73	48.03	49.34
Tractor Trailer Driver	42.94	44.13	45.36	46.60
Groundman, Truck Driver	40.42	41.54	42.70	43.86
Equipment Mechanic	40.42	41.54	42.70	43.86
Flagman	30.31	31.15	32.02	32.89

Additional \$1.00 per hour for entire crew when a helicopter is used.

Below rates applicable on all overhead and underground transmission line work & fiber optic cable where other construction trades are or have been involved. This applies to transmission line work only, not other construction. (Ref #14.03.01)

Lineman, Tech, Welder	\$ 51.71	\$ 53.11	\$ 54.56	\$ 56.01
Crane, Crawler Backhoe	51.71	53.11	54.56	56.01
Cable Splicer	51.71	53.11	54.56	56.01
Digging Mach. Operator	46.54	47.80	49.10	50.41
Tractor Trailer Driver	43.95	45.14	46.38	47.61
Groundman, Truck Driver	41.37	42.49	43.65	44.81
Equipment Mechanic	41.37	42.49	43.65	44.81
Flagman	31.03	31.87	32.74	33.61

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 %

**\*\* IMPORTANT NOTICE \*\***

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.  
 \*Effective 05/06/2013, 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 (also required on non-worked holidays):

The following SUPPLEMENTAL BENEFITS apply to all classification categories of CONSTRUCTION, TRANSMISSION and DISTRIBUTION.

Journeyman	\$ 22.65	\$ 23.40	\$ 24.15	\$ 24.90
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\*plus 6.75% of  
 hourly wage

\*plus 6.75% of  
 hourly wage

\*plus 6.75% of  
 hourly wage

\*plus 6.75% of  
 hourly wage

\*The 6.75% is based on the hourly wage paid, straight time rate or premium rate.

**OVERTIME PAY**

See (B, E, Q,) on OVERTIME PAGE. \*Note\* Double time for all 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: 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: Same as Journeyman

6-1249a

**Lineman Electrician - Teledata** **07/01/2017**

**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.

07/01/2017

Cable Splicer	\$ 30.90
Installer, Repairman	29.33
Teledata Lineman	29.33
Technician, Equipment Operator	29.33
Groundman	15.56

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	\$ 4.43
	*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** **07/01/2017**

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

**ENTIRE COUNTIES**

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

**WAGES**

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

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/groundman truck driver may assist in installing conduit, pipe, cables and equipment.

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

(Ref #14.01.01)

Per hour:	07/01/2017	05/07/2018	05/06/2019	05/04/2020
Lineman, Technician	\$ 42.65	\$ 43.80	\$ 45.00	\$ 46.20
Crane, Crawler Backhoe	42.65	43.80	45.00	46.20
Certified Welder	44.78	45.99	47.25	48.51
Digging Machine	38.39	39.42	40.50	41.58
Tractor Trailer Driver	36.25	37.23	38.25	39.27
Groundman, Truck Driver	34.12	35.04	36.00	36.96
Equipment Mechanic	34.12	35.04	36.00	36.96
Flagman	25.59	26.28	27.00	27.72

Above rates applicable on all Lighting and Traffic Signal Systems with the installation, testing, operation, maintenance and repair of all traffic control and illumination projects, traffic monitoring systems, road weather information systems and the installation of Fiber Optic Cable.

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%

**\*\* IMPORTANT NOTICE \*\***

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. \*Effective 05/06/2013, 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):

Journeyman	\$ 22.65	\$ 23.40	\$ 24.15	\$ 24.90
	*plus 6.75% of hourly wage	*plus 6.75% of hourly wage	*plus 6.75% of hourly wage	*plus 6.75% of hourly wage

\*The 6.75% is based on the hourly wage paid, straight time rate or premium rate.  
 Supplements paid at STRAIGHT TIME rate for holidays.

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE. \*Note\* Double time for all 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.

	07/01/2017	05/07/2018	05/06/2019	05/04/2020
1st term	\$ 25.59	\$ 26.28	\$ 27.00	\$ 27.72
2nd term	27.72	28.47	29.25	30.03
3rd term	29.86	30.66	31.50	32.34
4th term	31.99	32.85	33.75	34.65
5th term	34.12	35.04	36.00	36.96
6th term	36.25	37.23	38.25	39.27
7th term	38.39	39.42	40.50	41.58

SUPPLEMENTAL BENEFITS: Same as Journeyman

6-1249a-LT

**Lineman Electrician - Tree Trimmer**

**07/01/2017**

**JOB DESCRIPTION** Lineman Electrician - Tree Trimmer

**DISTRICT 6**

**ENTIRE COUNTIES**

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

**WAGES**

Per hour:

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

07/01/2017

Tree Trimmer	\$ 23.95
Equipment Operator	21.13
Equipment Mechanic	21.13
Truck Driver	17.52
Groundman	14.36
Flag person	10.23

**SUPPLEMENTAL BENEFITS**

Per hour worked (but also required on non-worked holidays):

Journeyman	\$ 9.98
	*plus 3% of hourly wage

\* 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 (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE  
Overtime: See (5, 6, 8, 15, 16, 25) on HOLIDAY PAGE

NOTE: All paid holidays falling on a Saturday shall be observed on the preceding Friday.  
All paid holidays falling on a Sunday shall be observed on the following Monday.

6-1249TT

**Mason - Building**

**07/01/2017**

**JOB DESCRIPTION** Mason - Building

**DISTRICT** 12

**ENTIRE COUNTIES**

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**WAGES**

Per hour 07/01/2017

Tile/Marble/Terrazzo

Setter \$ 33.65  
Finisher 26.40

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 worked

Journeyman Setter \$ 19.29  
Journeyman Finisher 16.57

**OVERTIME PAY**

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

**HOLIDAY**

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

**REGISTERED APPRENTICES**

Wages per hour

Hour Terms at the following percentage of Journeyman's wage

Setter:

1st term 0-500 hrs 60%  
2nd term 501-1500 hrs 70%  
3rd term 1501-2500 hrs 80%  
4th term 2501-3500 hrs 85%  
5th term 3501-4500 hrs 90%  
6th term 4501-6000 hrs 95%

Finisher:

1st term 0-500 hrs 70%  
2nd term 501-1500 hrs 80%  
3rd term 1501-2500 hrs 90%  
4th term 2501-3700 hrs 95%

Supplemental Benefits per hour worked

07/01/2017

Setter:

1st term 0-500 hrs \$ 11.24  
2nd term 501-1500 hrs 11.24  
3rd term 1501-2500 hrs 15.26  
4th term 2501-3500 hrs 15.26  
5th term 3501-4500 hrs 17.28

6th term 4501-6000 hrs 19.29

**Finisher:**

1st term 0-500 hrs \$ 10.72  
 2nd term 501-1500 hrs 10.72  
 3rd term 1501-2500 hrs 13.64  
 4th term 2501-3700 hrs 13.64

12-2TS.1

**Mason - Building**

**07/01/2017**

**JOB DESCRIPTION** Mason - Building

**DISTRICT** 12

**ENTIRE COUNTIES**

Clinton, Essex, Franklin

**PARTIAL COUNTIES**

Warren: Only the Townships of Chester, Hague, Horicon and Johnsburg.

**WAGES**

Per hour 07/01/2017

Bricklayer \$ 30.95  
 Cement Finisher 30.95  
 Plasterer/Fireproofers\* 30.95  
 Pointer/Caulker/Cleaner 30.95  
 Stone Mason 30.95  
 Acid Brick 31.45

(\*)Fireproofers on Structural only.

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 worked

Journeyman \$ 18.95

**OVERTIME PAY**

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

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: Any holiday which occurs on Sunday shall be observed the following Monday.

**REGISTERED APPRENTICES**

Wages per hour

750 hr terms at the following percentage of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

0-500 Hours \$ 11.27  
 All others \$ 18.72

12-2b.8

**Mason - Heavy&Highway**

**07/01/2017**

**JOB DESCRIPTION** Mason - Heavy&Highway

**DISTRICT** 12

**ENTIRE COUNTIES**

Albany, Cayuga, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Jefferson, Lewis, Madison, Montgomery, Oneida, Oswego, Rensselaer, Saratoga, Schenectady, Schoharie, St. Lawrence, Warren, Washington

**PARTIAL COUNTIES**

Onondaga: For Heavy & Highway Cement Mason or Plaster Work in Onondaga County, refer to Mason-Heavy&Highway tag 1-2h/h on.

**WAGES**

Per hour  
07/01/2017  
Mason &  
Bricklayer \$36.06

Additional \$1.00 per hour for work on any swing scaffold or staging suspended by means of ropes or cables.

**SUPPLEMENTAL BENEFITS**

Per hour worked  
Journeyman \$ 19.23

**OVERTIME PAY**

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

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6) on HOLIDAY PAGE  
Note: If a holiday falls on Sunday, the Monday following shall constitute the day of the legal holiday.

**REGISTERED APPRENTICES**

Wages per hour  
750 HR TERMS at the following percent of Journeyman's wage

1st	2nd	3rd	4th	5th	6th	7th	8th
55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked  
\$ 19.23

12-2hh.1

**Millwright - Building**

**07/01/2017**

**JOB DESCRIPTION** Millwright - Building

**DISTRICT 2**

**ENTIRE COUNTIES**  
Clinton, Essex, Franklin, Hamilton

**WAGES**

Per hour: 07/01/2017  
Millwright\* \$ 27.15

- NOTE ADDITIONAL PREMIUMS PAID FOR THE FOLLOWING WORK LISTED BELOW (amount subject to any overtime premiums):
- Certified Welders shall receive \$1.25 per hour in addition to the current Millwright's rate provided he/she is directed to perform certified welding.
  - If a work site has been declared a hazardous site by the Owner and the use of protective gear (including, as a minimum, air purifying canister-type chemical respirators) are required, then that employee shall receive a \$1.25 premium per hour.
  - An employee performing the work of a machinist shall receive \$1.25 per hour in addition to the current Millwright's rate. For the purposes of this premium to apply, a "machinist" is a person who uses a lathe, Bridgeport, milling machine or similar type of tool to make or modify parts.

\*Regarding treatment plants water or sewer, the Millwright Building rate is applicable for millwrights only performing maintenance and upkeep of existing equipment. For new work at treatment plants water or sewer, refer to the Heavy Highway Millwright rates listed under Carpenter Heavy Highway.

**SUPPLEMENTAL BENEFITS**

Per hour worked:  
Journeyman \$ 21.64

**OVERTIME PAY**

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

\*Note - Saturday may be used as a make-up day and worked at the straight time rate of pay during a work week when conditions such as weather, power failure, fire, or natural disaster prevent the performance of work on a regular scheduled work day.

**HOLIDAY**

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

Note: Any holiday that falls on Sunday shall be observed the following Monday. Any holiday that falls on Saturday shall be observed the preceding Friday.

**REGISTERED APPRENTICES**

Wages per hour:

(1)year terms at the following percentage of journeyman's rate.

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

Supplemental Benefits per hours worked:

Apprentices:

1st term	\$ 10.05
2nd term	18.17
3rd term	19.32
4th term	20.49

2-1163.2

**Operating Engineer - Building**

**07/01/2017**

**JOB DESCRIPTION** Operating Engineer - Building

**DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**PARTIAL COUNTIES**

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 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 Connecticut.

**WAGES**

CLASS A1:

Crane, hydraulic cranes, tower crane, locomotive crane, piledriver, cableway, derricks,whirlies, dragline, boom trucks over 5 tons.

CLASS A:

Shovel, all Excavators (including rubber tire full swing), Gradalls, power road grader, all CMI equipment, front-end rubber tire loader, tractor-mounted drill (quarry master), mucking machine, concrete central mix plant, concrete pump, belcrete system, automated asphalt concrete plant, and tractor road paver, boom trucks 5 tons and under, maintenance engineer, self-contained crawler drill-hydraulic rock drill.

CLASS B:

Backhoes (rubber tired backhoe/loader combination), bulldozer, pushcat, tractor, traxcavator, scraper, LeTourneau grader, form fine grader, self-propelled soil compactor (fill roller), asphalt roller, blacktop spreader, power brooms, sweepers, trenching machine, Barber Green loader, side booms, hydro hammer, concrete spreader, concrete finishing machine, one drum hoist, power hoisting (single drum), hoist two drum or more, three drum engine, power hoisting (two drum and over), two drum and swinging engine, three drum swinging engine, hod hoist, A-L frame winches, core and well drillers (one drum), post hole digger, model CHB Vibro-Tamp or similar machine, batch bin and plant operator, dinky locomotive, skid steer loader, track excavator 5/8 cubic yard or smaller, front end rubber tired loader under four cubic yards, vacuum machine (mounted or towed).

CLASS C:

Fork lift, high lift, all terrain fork lift: or similar, oiler, fireman and heavy-duty greaser, boilers and steam generators, pump, vibrator, motor mixer, air compressor, dust collector, welding machine, well point, mechanical heater, generators, temporary light plants, electric submersible pumps 4" and over, murphy type diesel generator, conveyor, elevators, concrete mixer, beltcrete power pack (belcrete system), seeding, and mulching machines, pumps.

\* In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

WAGES per hour

	07/01/2017	07/01/2018
Class # A1	\$ 42.66	\$ 44.29
Class # A	42.18	43.80
Class # B	41.18	42.78
Class # C	38.37	39.88

Additional \$0.50 per hr for Tower Cranes.

Additional \$1.00 per hr for Cranes with Boom length & jib 150ft. and over.  
Additional \$2.00 per hr for Cranes with Boom length & jib 200ft. and over.  
Additional \$2.00 per hr over B rate for Nuclear Leader work.  
Additional \$0.40 per hr for tunnel or excavation of shaft 40' or more deep.  
Additional \$2.50 per hour if work requires Personal Protective Equipment for hazardous waste site activities with a level C or over rating.

**SUPPLEMENTAL BENEFITS**

Per hour worked

Journeyman                                 \$ 25.00                                 \$ 25.40

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid:   See (1) on HOLIDAY PAGE

Overtime:                                 See (5, 6) on HOLIDAY PAGE

Note: If a holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on Saturday, it will be celebrated on Friday.

Employees who work a Saturday holiday shall be paid double time plus the holiday pay.

**REGISTERED APPRENTICES**

Wages per hour

1000 hours terms at the following percentage of Journeyman's wage Class B

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

Supplemental Benefits per hour worked

07/01/2017                                 07/01/2018

All terms                                 \$ 20.30                                 \$ 20.70

1-158 Alb

**Operating Engineer - Heavy&Highway**

**07/01/2017**

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

**DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Broome, Chenango, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Herkimer, Montgomery, Otsego, Rensselaer, Saratoga, Schoenectady, Schoharie, Tioga, Warren, Washington

**PARTIAL COUNTIES**

Dutchess: Defined as north of the northern boundary line of City of Poughkeepsie then due east to Route 115 to Bedelt Road then east along Bedelt Road to VanWagner Road then north along VanWagner Road to Bower Road then east along Bower Road to Rte. 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 Connecticut.

**WAGES**

**CLASSIFICATION A:**

Asphalt Curb Machine (Self Propelled, Slipform), Asphalt Paver, Automated Concrete Spreader (CMI Type), Automatic Fine Grader, Backhoe (Except Tractor Mounted, Rubber Tired), Backhoe Excavator Full Swing (CAT 212 or similar type), Back Filling Machine, Belt Placer (CMI Type), Blacktop Plant (Automated), Boom truck, Cableway, Caisson Auger, Central Mix Concrete Plant (Automated), Concrete Curb Machine (Self Propelled, Slipform), Concrete Pump, Crane, Cherry Picker, Derricks (steel erection), Dragline, Overhead Crane (Gantry or Straddle type), Pile Driver, Truck Crane, Directional Drilling Machine, Dredge, Dual Drum Paver, Excavator (All PurposeHydraulically Operated) (Gradall or Similar), Front End Loader (4 cu. yd. and Over), Head Tower (Sauerman or Equal), Hoist (Two or Three Drum), Holland Loader, Maintenance Engineer, Mine Hoist, Mucking Machine or Mole, Pavement Breaker(SP) Wertgen; PB-4 and similar type, Power Grader, Profiler (over 105 H.P.), Quad 9, Quarry Master (or equivalent), Scraper, Shovel, Side Boom, Slip Form Paver (If a second man is needed, he shall be an Oiler), Tractor Drawn BeltType Loader, Truck or Trailer Mounted Log Chipper (Self Feeder), Tug Operator (Manned Rented Equipment Excluded), Tunnel Shovel

**CLASSIFICATION B:**

Backhoe (Tractor Mounted, Rubber Tired), Bituminous Recycler Machine, Bituminous Spreader and Mixer, Blacktop Plant (NonAutomated), Blast or Rotary Drill (Truck or Tractor Mounted), Boring Machine, Cage Hoist, Central Mix Plant [(NonAutomated) and All Concrete Batching Plants], Concrete Paver (Over 16S), Crawler Drill (Self-contained), Crusher, Diesel Power Unit, Drill Rigs, Tractor Mounted, Front End Loader (Under 4 cu. yd.), Greaseman/Lubrication Engineer, HiPressure Boiler (15 lbs. and over), Hoist (One Drum), Hydro-Axe, Kolman Plant Loader and Similar Type Loaders (If Employer requires another man to clean the screen or to maintain the equipment, he shall be an Oiler), L.C.M. Work Boat Operator, Locomotive, Material handling knuckle boom, Mixer (for stabilized base selfpropelled), Monorail Machine, Plant Engineer, Profiler (105 H.P. and under), Pug Mill, Pump Crete, Ready Mix Concrete Plant, Refrigeration Equipment (for soil stabilization), Road Widener, Roller (all above subgrade), Sea Mule, Self-contained Ride-on Rock Drill(Excluding Air-Track Type Drill), Skidder, Tractor with Dozer and/or Pusher, Trencher, Tugger Hoist, Vacuum machine (mounted or towed), Vermeer saw (ride on, any size or type), Welder



**CLASSIFICATION C:**

A Frame Winch Hoist on Truck, Articulated Heavy Hauler, Aggregate Plant, Asphalt or Concrete Grooving Machine (ride on), Ballast Regulator(Ride-on), Boiler (used in conjunction with production), Bituminous Heater (self-propelled), Boat (powered), Cement and Bin Operator, Concrete Pavement Spreader and Finisher Concrete Paver or Mixer (16' and under), Concrete Saw (self-propelled), Conveyor, Deck Hand, Directional Drill Machine Locator, Drill (Core and Well), Farm Tractor with accessories, Fine Grade Machine, Fireman, Fork Lift, Form Tamper, Grout Pump, Gunit Machine, Hammers (Hydraulic self-propelled), Hydra-Spiker (ride-on), Hydraulic Pump (jacking system), Hydro-Blaster (Water), Mulching Machine, Oiler, Parapet Concrete or Pavement Grinder, Post Hole Digger and Post Driver, Power Broom (towed), Power Heaterman, Power Sweeper, Revinus Widener, Roller (Grade and Fill), Scarifier (ride-on), Shell Winder, Skid steer loader (Bobcat or similar), Span-Saw (ride-on), Steam Cleaner, Tamper (ride-on), Tie Extractor (ride-on), Tie Handler (ride-on), Tie Inserter (ride-on), Tie Spacer (ride-on), Tire Repair, Track Liner (ride-on), Tractor, Tractor (with towed accessories), Vibratory Compactor, Vibro Tamp, Well Point, and the following hands-off equipment: Compressors, Dust Collectors, Generators, Pumps, Welding Machines, Light Plants and Heaters

- Note for all above classifications of Operating Engineer - In the event that equipment listed above is operated by robotic control, the classification covering the operation will be the same as if manually operated.

**WAGES per hour**

	07/01/2017	07/01/2018
Master Mechanic	\$ 43.79	\$ 45.58
Class A*	42.18	43.97
Class B	41.27	43.06
Class C	38.70	40.49

Additional \$2.00 per hour for All Employees who work a single irregular work shift starting from 5:00 PM to 1:00 AM that is mandated by the Contracting Agency.  
 Additional \$2.50 per hr. for hazardous waste removal work on State and/or Federally designated waste site which require employees to wear Level C or above forms of personal protection.

(\* Premiums for CRANES is based upon Class A rates with the following premiums:

- Additional \$4.00 per hr for Tower Cranes, including self erecting.
- Additional \$3.00 per hr for Lattice Boom Cranes and all other cranes with a manufacturers rating of fifty (50) tons and over.
- Additional \$2.00 per hr for all Hydraulic Cranes and Derricks with a manufacturer's rating of 49 ton and below, including boom trucks.

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 worked

Journeyman	\$ 25.20	\$ 25.60
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**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

Note: If the holiday falls on Sunday, it will be celebrated on Monday. If the holiday falls on a Saturday, it will be celebrated on Saturday.

**REGISTERED APPRENTICES**

Wages per hour

1000 hours terms at the following percentage of Journeyman's wage Class B

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

Supplemental Benefits per hour worked

	07/01/2017	07/01/2018
All Terms	\$ 20.60	\$ 21.00

1-158H/H Alb

**Operating Engineer - Marine Dredging**

**07/01/2017**

**JOB DESCRIPTION** Operating Engineer - Marine Dredging

**DISTRICT** 4

**ENTIRE COUNTIES**

Albany, Bronx, Cayuga, Chautauqua, Clinton, Columbia, Dutchess, Erie, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Niagara, Orange, Orleans, 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 barge mounted cranes and other equipment are only for marine dredging work in navigable waters found in the counties listed above.

Per Hour:

DREDGING OPERATIONS	07/01/2017	10/01/2017
CLASS A		
Operator, Leverman, Lead Dredgeman	\$ 37.25	\$ 38.18

CLASS A1 Dozer, Front Loader Operator	To conform to Operating Engineer Prevailing Wage in locality where work is being performed including benefits.	
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CLASS B Barge Operator Spider/Spill Tug Operator(over1000hp), OperatorII, Fill Placer, Derrick Operator, Engineer, Chief Mate, Electrician, Chief Welder, Maintenance Engineer	\$ 32.21	\$33.02
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Certified Welder, Boat Operator(licensed)	\$ 30.33	\$ 31.09
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CLASS C Drag Barge Operator, Steward, Mate, Assistant Fill Placer,	\$ 29.50	\$ 30.24
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Welder (please add)\$ 0.06

Boat Operator	\$ 28.54	\$ 29.26
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CLASS D Shoreman, Deckhand, Rodman, Scowman, Cook, Messman, Porter/Janitor	\$ 23.71	\$ 24.30
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Oiler(please add)\$ 0.09

**SUPPLEMENTAL BENEFITS**

Per Hour:

THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B	07/01/2017 \$10.75 plus 8% of straight time wage, Overtime hours add \$ 0.63	10-01-2017 \$11.23 plus 8% of straight time wage, Overtime hours add \$ 0.63
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All Class C	\$10.45 plus 8% of straight time wage, Overtime hours add \$ 0.48	\$10.93 plus 8% of straight time wage, Overtime hours add \$ 0.48
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All Class D	\$10.15 plus 8%	\$10.63 plus 8%
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of straight time  
wage, Overtime hours  
add \$ 0.33

of straight time  
wage, Overtime hours  
add \$ 0.33

**OVERTIME PAY**

See (B, 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**

**07/01/2017**

**JOB DESCRIPTION** Operating Engineer - Survey Crew

**DISTRICT** 12

**ENTIRE COUNTIES**

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

**PARTIAL COUNTIES**

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

**WAGES**

These rates apply to Building and Heavy Highway.

Per hour:

**SURVEY CLASSIFICATIONS:**

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

07/01/2017

Party Chief	\$ 39.46
Instrument Person	37.25
Rod Person	25.91

Additional \$3.00 per hr. for work in a Tunnel.  
Additional \$2.50 per hr. for EPA or DEC certified toxic or hazardous waste work.

**SUPPLEMENTAL BENEFITS**

Per hour worked:

Journeyman	\$ 24.70
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**OVERTIME PAY**

See (B, E, P, T) on OVERTIME PAGE

**HOLIDAY**

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

**REGISTERED APPRENTICES**

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

07/01/2017

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

SUPPLEMENTAL BENEFIT per hour worked:

0-1000	\$ 15.55
1001-2000	\$ 18.14
2001-3000	\$ 20.73

12-158-545 D.H.H.

**Operating Engineer - Survey Crew - Consulting Engineer**

**07/01/2017**

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

**DISTRICT** 12

**ENTIRE COUNTIES**

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

**PARTIAL COUNTIES**

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

**WAGES**

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

Per hour:

**SURVEY CLASSIFICATIONS:**

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

07/01/2017

Party Chief	\$ 39.46
Instrument Person	37.25
Rod Person	25.91

Additional \$3.00 per hr. for work in a Tunnel.  
Additional \$2.50 per hr. for EPA or DEC certified toxic or hazardous waste work.

**SUPPLEMENTAL BENEFITS**

Per hour worked:

Journeyman	\$ 24.70
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**OVERTIME PAY**

See (B, E, P, T) on OVERTIME PAGE

**HOLIDAY**

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

**REGISTERED APPRENTICES**

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

07/01/2017

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

SUPPLEMENTAL BENEFIT per hour worked:

0-1000	\$ 15.55
1001-2000	\$ 18.14
2001-3000	\$ 20.73

12-158-545 DCE

**Operating Engineer - Tunnel**

**07/01/2017**

**JOB DESCRIPTION** Operating Engineer - Tunnel

**DISTRICT** 7

**ENTIRE COUNTIES**

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

**PARTIAL COUNTIES**

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

**WAGES**

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

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

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

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

WAGES per hour:

	07/01/2017	07/01/2018
Master Mechanic	45.49	47.15
CLASS A	43.15	44.74
CLASS B	41.93	43.52
CLASS C	39.14	40.73
CLASS D	36.13	37.72

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

CRANES:

Crane 1: All cranes, including self-erecting to be paid \$4.00 per hour over the Class A rate.

Crane 2: All Lattice Boom Cranes and all cranes with a manufacturer's rating of fifty (50) ton and over to be paid \$3.00 per hour over Class A rate.

Crane 3: All hydraulic cranes and derricks with a manufacturer's rating of forty nine (49) ton and below, including boom trucks, to be paid \$2.00 per hour over Class A rate.

Crane 1	\$ 47.15	\$ 48.74
Crane 2	46.15	47.74
Crane 3	45.15	46.74

**SUPPLEMENTAL BENEFITS**

Per hour paid:

\$ 27.20	\$ 27.90
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**OVERTIME PAY**

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

**HOLIDAY**

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

**REGISTERED APPRENTICES**

WAGES:(1000) hours terms at the following percentage of Journeyman's wage.

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

SUPPLEMENTAL BENEFITS per hour paid: Same as Journeyman

7-158-832TL.

**Painter 07/01/2017**

**JOB DESCRIPTION** Painter **DISTRICT 1**

**ENTIRE COUNTIES**  
 Essex, Hamilton, Warren, Washington

**WAGES**

Per hour	07/01/2017	05/01/2018 Additional	05/01/2019 Additional
Painter\Wallcover	\$ 29.00	\$ 1.40	\$1.40
Drywall Finishers	29.00	1.40	1.40
Spray Rate	29.00	1.40	1.40
Structural Steel*	30.00	1.40	1.40
Lead Abatement	30.00	1.40	1.40
Lead Abatement on structural Steel	31.00	1.40	1.40

(\* )Employees working on objects with the use of swing stage, boatswain chair, pick and cables only will be paid at Structural Steel rate.

Bridge Painter  
 See Bridge Painter rates for the following work:  
 All Bridges and Tanks

**SUPPLEMENTAL BENEFITS**

Per hour worked  
 Journeyman \$ 14.08

**OVERTIME PAY**  
 See (B, E2, H) on OVERTIME PAGE

**HOLIDAY**

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

**REGISTERED APPRENTICES**

Wages per hour  
 1000 hour terms at the following percentage of Journeyman's wage.

1st	2nd	3rd	4th	5th	6th
45%	50%	60%	70%	80%	90%

Supplemental Benefits per hour worked

All terms \$ 14.08

1-466-Z2

**Painter - Bridge & Structural Steel 07/01/2017**

**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 Worked:

STEEL:

Bridge Painting:	07/01/2017	10/01/2017	10/01/2018
From May 1st to Nov. 15th -	\$ 49.50	\$ 50.00	\$ 51.00
	+ 6.38*	+ 6.63*	+ 6.63*
From Nov. 16th to April 30th -	\$ 49.50	\$ 50.00	\$ 51.00
	+ 6.38*	+ 6.63*	+ 6.63*

\*Not subject to overtime and limited to first 40 hours

NOTE: All premium wages are to be calculated on base rate per hour only.

EXCEPTION: During the period of May 1st to November 15th, for the first and last week of employment on the project, and for the weeks of Memorial Day, Independence Day and Labor Day, this rate shall be paid for the actual number of hours worked.

Power Tool/Spray is an additional \$6.00 per hour above hourly rate, whether straight time or overtime

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.

**SUPPLEMENTAL BENEFITS**

Per Hour Worked:

Journeyworker:	07/01/2017	10/01/2017	10/01/2018
From May 1st to Nov. 15th -			
Hourly Rate up to 40 hours	\$ 30.90	\$ 31.90	\$ 33.60
Hourly Rate after 40 hours	7.50	7.50	7.50
From Nov. 16th to April 30th -			
Hourly Rate up to 50 hours	\$ 29.70	\$ 31.90	\$ 33.60
Hourly Rate after 50 hours	7.50	7.50	7.50

EXCEPTION: During the period of May 1st to November 15th, for the first and last week of employment on the project, and for the weeks of Memorial Day, Independence Day and Labor Day, this rate shall be paid for the actual number of hours worked.

**OVERTIME PAY**

See (A, F, R) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (4, 6) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wage - Per hour worked:

Apprentices: (1) year terms	07/01/2017	10/01/2017	10/01/2018
1st year	\$ 22.35	\$ 22.65	\$ 23.13
2nd year	33.53	33.98	34.73
3rd year	44.70	45.30	46.30

Supplemental Benefits - Per hour worked:

1st year	\$ 12.36	\$ 12.76	\$ 13.44
2nd year	18.54	19.14	20.16
3rd year	24.72	25.52	26.88

8-DC-9/806/155-BrSS

**Painter - Line Striping**

**07/01/2017**

**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):	07/01/2017
Striping-Machine Operator*	\$ 27.11
Linerman Thermoplastic	\$ 32.37

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:	07/01/2017
Journeyworker:	
Striping-Machine operator	\$ 14.18
Linerman Thermoplastic	\$ 14.55

**OVERTIME PAY**

See (B, E, E2, F, S) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 20) on HOLIDAY PAGE  
 Overtime: See (5, 8, 11, 12, 15, 16, 17, 20, 21, 22) on HOLIDAY PAGE

8-1456-LS

**Painter - Metal Polisher**

**07/01/2017**

**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**

	07/01/2017	06/01/2018
Metal Polisher	\$ 29.73	\$ 30.58
Metal Polisher**	30.68	31.53
Metal Polisher***	33.23	34.08

\*\*Note: Applies on New Construction & complete renovation

\*\*\* Note: Applies when working on scaffolds over 34 feet.

**SUPPLEMENTAL BENEFITS**

Per Hour:	07/01/2017	06/01/2018
Journeyworker:		
All classification	\$ 7.55	\$ 7.65

**OVERTIME PAY**

See (B, E, E2, 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:

	07/01/2017	06/01/2018
1st year	\$ 12.14	\$ 14.25
2nd year	13.44	15.50
3rd year	16.29	18.25

Supplemental benefits:

Per hour paid:

	07/01/2017	06/01/2018
1st year	\$ 5.62	\$ 5.62
2nd year	5.62	5.62
3rd year	5.62	5.62

8-8A/28A-MP

**Plumber**

**07/01/2017**

**JOB DESCRIPTION** Plumber

**DISTRICT 1**

**ENTIRE COUNTIES**

Essex, Franklin

**PARTIAL COUNTIES**

Hamilton: The Townships of Long Lake and Indian Lake

**WAGES**

Per hour

	07/01/2017	05/01/2018	05/01/2019
Plumber & Steamfitter	\$ 37.35	+\$1.65	+\$1.65

**SUPPLEMENTAL BENEFITS**

Per hour worked

Journeyman	\$ 18.80 +10.03*
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\* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime.

\* This portion per hour paid.

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (22) on HOLIDAY PAGE  
 Overtime: See (5, 6, 16, 23) on HOLIDAY PAGE

Note: Whenever a Holiday falls on a Saturday, the preceding day, Friday, shall be observed as the Holiday. If a Holiday falls on a Sunday, the following day, Monday shall be observed as the Holiday.

**REGISTERED APPRENTICES**

Wages per hour

One year terms at the following percentage of Journeyman's wage

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

Supplemental Benefits per hour worked

1st yr	\$ 16.48 + 5.02*
2nd yr	16.94 + 6.02*
3rd yr	17.41 + 7.02*
4th yr	17.87 + 8.02*

5th yr 18.34 + 9.03\*

\* This portion of the benefit is subject to the SAME PREMIUM as shown for overtime.  
 \* This portion per hour paid.

1-773EF-SF

**Roofer** **07/01/2017**

**JOB DESCRIPTION** Roofer **DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Clinton, Columbia, Essex, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Warren, Washington

**WAGES**

Per hour 07/01/2017

Roofer/Waterproofer	\$ 29.05
Asphalt Cold Process	29.55
Pitch & Asbestos	31.05

**SUPPLEMENTAL BENEFITS**

Per hour worked

Journeyman \$ 18.77

**OVERTIME PAY**

See ( B, E\*, Q ) on OVERTIME PAGE.  
 \* Saturday may be used as a make up day at straight time if employee misses 8 hrs or more during that week due to inclement weather.

**HOLIDAY**

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

Note: When any Holiday falls on Saturday, the Friday before such Holiday shall be recognized as the legal Holiday. When a Holiday falls on Sunday, it shall be observed the following Monday.

**REGISTERED APPRENTICES**

Wages per hour

( 1/2 ) year terms at the following per cent of the Roofer/Waterproofer rate. For Pitch & Asbestos work, an additional \$2.00 must be paid in wages. For Asphalt Cold Process work, an additional \$0.50 must be paid in the wages.

1st yr 1st half	50%
1st yr 2nd half	58%
2nd yr 1st half	66%
2nd yr 2nd half	74%
3rd yr 1st half	82%
3rd yr 2nd half	90%

Supplemental Benefits per hour worked

1st yr 1st half	\$ 17.00
1st yr 2nd half	17.19
2nd yr 1st half	17.42
2nd yr 2nd half	17.62
3rd yr 1st half	17.90
3rd yr 2nd half	18.10

1-241

**Sheetmetal Worker** **07/01/2017**

**JOB DESCRIPTION** Sheetmetal Worker **DISTRICT 1**

**ENTIRE COUNTIES**

Albany, Clinton, Columbia, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saratoga, Schenectady, Schoharie, Warren, Washington

**WAGES**

Per hour 07/01/2017 06/01/2018  
Additional

Sheetmetal Worker \$31.80 \$1.60

All work requiring HAZWOPER Training additional \$1.00 per hour

**SUPPLEMENTAL BENEFITS**

Per hour worked

Journeyman \$31.15

**OVERTIME PAY**

See ( B,E\*,Q,) on OVERTIME PAGE

\* Time and one half 1st 8 hours on Saturday. Double the hourly rate all additional Saturday hours.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

When any holiday falls on Saturday, the Friday before such holiday shall be recognized as the legal holiday. Any holiday falling on Sunday, the following Monday shall be recognized as the legal holiday.

**REGISTERED APPRENTICES**

Wages per hour

6 Month Terms at the following rate:

1st term	\$17.61
2nd term	\$19.08
3rd term	\$19.82
4th term	\$20.56
5th term	\$19.52
6th term	\$20.49
7th term	\$22.10
8th term	\$23.72
9th term	\$25.34
10th term	\$26.95

Supplemental Benefits per hour worked

1st term	\$18.92
2nd term	19.50
3rd term	19.79
4th term	20.21
5th term	25.69
6th term	26.12
7th term	26.84
8th term	27.56
9th term	28.28
10th term	29.00

**Sprinkler Fitter**

**07/01/2017**

**JOB DESCRIPTION** Sprinkler Fitter

**DISTRICT 1**

**ENTIRE COUNTIES**

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

**WAGES**

Per hour	07/01/2017	01/01/2018	04/01/2018
Sprinkler	\$ 33.76	33.76	34.91
Fitter			

**SUPPLEMENTAL BENEFITS**

Per hour worked

Journeyman	\$ 22.14	22.84	23.14
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**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

For Apprentices HIRED ON OR AFTER 04/01/2010:

One Half Year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
45%	50%	55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 8.73	\$ 8.77	\$ 16.34	\$ 16.38	\$ 16.93	\$ 16.97	\$ 17.02	\$ 17.06	\$ 17.11	\$ 17.15

For Apprentices HIRED ON OR AFTER 04/01/2013:

One Half Year terms at the following percentage of journeyman's wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
45%	50%	55%	60%	65%	70%	75%	80%	85%	90%

Supplemental Benefits per hour worked

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 8.07	\$ 8.07	\$ 16.24	\$ 16.24	\$ 16.49	\$ 16.49	\$ 16.49	\$ 16.49	\$ 16.49	\$ 16.49

1-669

**Teamster - Building** **07/01/2017**

**JOB DESCRIPTION** Teamster - Building

**DISTRICT 7**

**ENTIRE COUNTIES**

Clinton, Essex, Franklin, Jefferson, St. Lawrence

**PARTIAL COUNTIES**

Lewis: Only the Townships of Croghan, Denmark, Diana, New Bremen, Harrisburg, Montague, Osceola and Pinckney.

Oswego: Only the Towns of Boylston, Redfield, and Sandy Creek.

Warren: Only the Townships of Hague, Horicon, Chester and Johnsburg.

**WAGES**

GROUP # 1: Fuel Trucks, Fork Lift (Warehouse & Storage Area Only), Bus, Warehouse, Yardman, Truck Helper, Pickups, Panel Truck, Flatbody Material Trucks (straight Jobs), Single axle Dump Trucks, Dumpsters, Material Checkers & Receivers, Greasers, Tiremen, Mechanic Helpers and Parts Chasers.

GROUP # 2: Tandems, Mechanics & Batch Trucks.

GROUP # 3: Semi Trailers, Low Boys, Asphalt Distributor Trucks, and Agitator Mixer Truck, Dump Crete Type Vehicles and 3 axle Dump trucks.

GROUP # 4: Asbestos Removal, Special earth moving Euclid type or similar off highway equip.(non self load.) Articulated and all-track dump trucks.

Wages per hour

07/01/2017

Building:

Group #1	\$ 23.58
Group #2	24.58
Group #3	24.68
Group #4	23.84

**SUPPLEMENTAL BENEFITS**

Per hour worked:

All groups \$ 21.51

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

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

7-687B

**Teamster - Heavy&Highway**

**07/01/2017**

**JOB DESCRIPTION** Teamster - Heavy&Highway

**DISTRICT 7**

**ENTIRE COUNTIES**

Clinton, Essex, Franklin, Jefferson, St. Lawrence

**PARTIAL COUNTIES**

Lewis: Only the Townships of Croghan, Denmark, Diana, New Bremen, Harrisburg, Montague, Osceola and Pinckney.

Oswego: Only the Towns of Boylston, Redfield, and Sandy Creek.

Warren: Only the Townships of Hague, Horicon, Chester and Johnsburg.

**WAGES**

GROUP 1: Warehousemen, Yardmen, Truck Helpers, Pickups, Panel Trucks, Flatboy Material Trucks(straight jobs), Single Axle Dump Trucks, Dumpsters, Material Checkers and Receivers, Greasers, Truck Tiremen, Mechanics Helpers and Parts Chasers. Fork Lift (storage & warehouse areas only) Tandems and Batch Trucks, Mechanics, Dispatcher. Semi-Trailers, Low-boy Trucks, Asphalt Distributor Trucks, and Agitator, Mixer Trucks and dumpcrete type vehicles, Truck Mechanic, Fuel Truck.

GROUP 2: Specialized Earth Moving Equipment, Euclid type, or similar off-highway where not self-loading, Straddle (Ross) Carrier, and self-contained concrete mobile truck. Off-highway Tandem Back-Dump, Twin Engine Equipment and Double-Hitched Equipment where not self-loading.

Per hour:

07/01/2017

Heavy/Highway:

Group #1 \$ 25.82  
Group #2 26.04

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

For work bid on or after April 1, 1982 there shall be a 12 month carryover of the negotiated rate in effect at the time of the bid.

**SUPPLEMENTAL BENEFITS**

Per hour worked:

All classes \$ 23.52

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

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

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

7-687

**Welder**

**07/01/2017**

**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 07/01/2017

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, if worked

- ( 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, if worked
- ( U ) Four times the hourly rate for Holidays, if worked
- ( V ) Including benefits at SAME PREMIUM as shown for overtime
- ( W ) Time and one half for benefits on all overtime hours.

## 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





**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

NOTE: The agency issuing the determination and providing the information, is denoted under the heading 'Fiscal Officer'. DOL = NYS Dept. of Labor; NYC = New York City Comptroller's Office; AG = NYS Attorney General's Office; DA = County District Attorney's Office.

A list of those barred from bidding, or being awarded, any public work contract or subcontract with the State, under section 141-b of the Workers' Compensation Law, may be obtained at the following link, on the NYS DOL Website:

<https://dbr.labor.state.ny.us/EDList/searchPage.do>



**NYSDOL Bureau of Public Work Debarment List 05/17/2017**

**Article 8**

AGENCY	Fiscal Officer	FEIN	EMPLOYER NAME	EMPLOYER DBA NAME	ADDRESS	DEBARMENT START DATE	DEBARMENT END DATE
DOL	DOL		4618 FOSTER AVE LLC		C/O KAHAN & KAHAN 225 BROADWAY-SUITE 715NEW YORK NY 10007	02/05/2013	02/05/2018
DOL	DOL	****0996	A-1 CONSTRUCTION & RENOVATION INC		1973 81ST ST - SUITE A-5 BROOKLYN NY 11214	01/08/2015	01/08/2020
DOL	NYC	****4486	ABBEY PAINTING CORP		21107 28TH AVENUE BAYSIDE NY 11360	07/02/2012	07/02/2017
DOL	DOL	****9095	ABDO TILE CO		6179 EAST MOLLOY ROAD EAST SYRACUSE NY 13057	06/25/2010	07/02/2017
DOL	DOL	****9095	ABDO TILE COMPANY		6179 EAST MOLLOY ROAD EAST SYRACUSE NY 13057	06/25/2010	07/02/2017
DOL	NYC		ABDUL KARIM		C/O NORTH AMERICAN IRON W 1560 DECATUR STREETRIDGWOOD NY 11385	05/15/2015	05/15/2020
DOL	DOL	****8488	ABELCRAFT OF NEW YORK CORP		640 ASHFORD AVENUE ARDSLEY NY 10502	08/27/2013	08/27/2018
DOL	DOL	****1219	ABSOLUTE GENERAL CONTRACTING INC		1229 AVENUE U BROOKLYN NY 11229	01/28/2013	01/28/2018
DOL	DOL	****4539	ACCOMPLISHED WALL SYSTEMS INC		112 OSCAWANA HEIGHTS ROAD PUTNAM VALLEY NY 10542	08/27/2013	08/27/2018
DOL	DOL	****8018	ACCURATE MECHANICAL LLC		9547 BUSTLETON AVENUE PHILADELPHIA PA 19115	02/05/2014	02/05/2019
DOL	DOL		ACCURATE MECHANICAL OF PHILADELPHIA LLC		9547 BUSTLETON AVENUE PHILADELPHIA PA 19115	02/05/2014	02/05/2019
DOL	DOL	****3344	ACT INC		6409 LAND O LAKES BLVD LAND O LAKES FL 34638	11/10/2015	11/10/2020
DOL	NYC		ADRIANA SELA	C/O COLONIAL ROOFING COMPANY INC	247 48TH STREET BROOKLYN NY 11220	02/05/2014	02/05/2019
DOL	DOL	****6367	ADVANCED METALS		387 RIVERSIDE DRIVE JOHNSON CITY NY 13790	10/01/2012	10/01/2017
DOL	DOL	****1687	ADVANCED SAFETY SPRINKLER INC		261 MILL ROAD P O BOX 296EAST AURORA NY 14052	07/29/2015	07/29/2020
DOL	DOL	****2538	AGG MASONRY INC		160 72ND ST - SUITE 721 BROOKLYN NY 11209	03/19/2013	03/19/2018
DOL	DOL		AJ TORCHIA		10153 ROBERTS RD SAUQUOIT NY 13456	08/09/2016	08/09/2021
DOL	DOL		ALISHER KARIMOV		C/O AGG MASONRY INC 7105 3RD AVENUEBROOKLYN NY 11209	03/19/2013	03/19/2018
DOL	DOL	****3344	ALL CATASTROPHE CONSTRUCTION TEAM INC	ACT INC	6409 LAND O LAKES BLVD LAND O LAKES FL 34638	11/10/2015	11/10/2020
DOL	DOL	****8740	ALLSTATE ENVIRONMENTAL CORP		C/O JOSE MONTAS 27 BUTLER PLACEYONKERS NY 10710	03/18/2011	03/19/2020
DOL	DOL		AMADEO J TORCHIA	TORCHIA'S HOME IMPROVEMEN T	10153 ROBERTS RD SAUQUOIT NY 13456	08/09/2016	08/09/2021
DOL	DOL	****4274	AMERICAN STEEL MECHANICAL INC		693 PAINTER STREET MEDIA PA 19063	02/20/2013	02/20/2018
DOL	DOL		ANDREW DIPAUL		C/O CONSOLIDATED INDUSTRI 2051 ROUTE 44/55MODENA NY 12548	12/11/2012	12/11/2017
DOL	NYC		ANDRZEJ WROBEL		24 CONGRESS LANE SOUTH RIVER NJ 08882	05/01/2013	05/01/2018
DOL	NYC		ANISUL ISLAM		C/O RELIANCE GENERAL CONS 644 OCEAN PARKWAYBROOKLYN NY 11230	09/02/2015	09/02/2020
DOL	DOL	****7004	ANNEX CONTRACTING LTD		3005 WYNSUM AVENUE MERRICK NY 11566	08/18/2014	08/18/2019
DOL	DOL	****7004	ANNEX GENERAL CONTRACTING INC		3005 WYNSUM AVENUE MERRICK NY 11566	08/18/2014	08/18/2019
DOL	DA		ANTHONY CARDINALE		58-48 59TH STREET MASPETH NY 11378	05/16/2012	05/08/2020
DOL	DOL		ANTHONY J MINGARELLI JR		C/O T & T CONCRETE INC 2560 HAMBURG TURNPIKELACKAWANNA NY 14218	07/08/2015	07/08/2020
DOL	DOL		ANTHONY PERGOLA		3 WEST MAIN ST/SUITE 208 ELMSFORD NY 10323	01/23/2017	01/23/2022

**NYS DOL Bureau of Public Work Debarment List 05/17/2017**

**Article 8**

DOL	DOL	****3020	APCO CONTRACTING CORP		24 SOUTH MARYLAND AVENUE PORT WASHINGTON NY 11050	09/24/2012	09/02/2020
DOL	DOL	****3219	APOLLO CONSTRUCTION SERVICES CORP	APOLLO PAINTING CO	157 TIBBETTS ROAD YONKERS NY 10705	03/12/2014	03/12/2019
DOL	DOL		APOLLO PAINTING CO		157 TIBBETTS ROAD YONKERS NY 10705	03/12/2014	03/12/2019
DOL	DOL	****3295	APOLLO PAINTING CORP		3 ALAN B SHEPART PLACE YONKERS NY 10705	03/12/2014	03/12/2019
DOL	AG	****0194	APPLIED CONSTRUCTION INC		46 RUGBY ROAD WESTBURY NY 11590	11/20/2013	11/20/2018
DOL	NYC	****8403	AQUA JET PAINTING CORP		10 VIKING DRIVE WEST ISLIP NY 11795	04/16/2014	04/16/2019
DOL	NYC	****9232	ARKAY CONSTRUCTION INC		102-104 GREYLOCK AVENUE BELLEVILLE NJ 07109	07/15/2015	07/15/2020
DOL	DOL	****3953	ASCAPE LANDSCAPE & CONSTRUCTION CORP		634 ROUTE 303 BLAUVELT NY 10913	07/26/2012	11/19/2018
DOL	NYC	****4779	ASTORIA GENERAL CONTRACTING CORP		35-34 31ST STREET LONG ISLAND CITY NY 11106	09/02/2015	09/02/2020
DOL	NYC	****7217	ASTRO COMMUNICATIONS OF NY CORP		79 ALEXANDER AVE- STE 36A BRONX NY 10454	10/30/2015	10/30/2020
DOL	NYC	****6046	ATLANTIC SUN CONSTRUCTION CORP		58-46 59TH AVENUE MASPETH NY 11378	05/08/2015	05/08/2020
DOL	NYC		AUDLEY O'BRIEN		1273 NORTH AVENUE/#1 CP NEW ROCHELLE NY 10804	04/07/2015	04/07/2020
DOL	DOL		AVIS R HILL		3510 HICKORY WALK LANE ELLENWOOD GA 32094	01/22/2015	01/22/2020
DOL	AG		AVTAR SINGH		116-24 127TH STREET SOUTH OZONE PARK NY 11420	12/22/2015	12/22/2020
DOL	AG		BALDEV SINGH		116-24 127TH STREET SOUTH OZONE PARK NY 11420	12/22/2015	12/22/2020
DOL	DOL		BARBARA CASSIDY		7 BLENIS PLACE VALHALLA NY 10595	04/02/2015	04/02/2020
DOL	DOL		BARRY KINNEY		6409 LAND O LAKES BLVD LAND O LAKES FL 34638	11/10/2015	11/10/2020
DOL	NYC	****3915	BEACON RESTORATION INC		SUITE B-8 782 PELHAM PARKWAY SOUTHBRONX NY 10462	04/21/2016	04/21/2021
DOL	DOL		BEVERLY F WILLIAMS		1238 PRESIDENT STREET BROOKLYN NY 11225	11/18/2013	11/18/2018
DOL	DOL	****8551	BRANDY'S MASONRY		216 WESTBROOK STREET P O BOX 304SAYRE PA 18840	08/09/2016	08/09/2021
DOL	NYC	****6555	BROOKLYN WELDING CORP		1273 NORTH AVENUE/ #1 CP NEW ROCHELLE NY 10804	04/07/2015	04/07/2020
DOL	DOL	****1449	BRRESTORATION NY INC		140 ARCADIA AVENUE OSWEGO NY 13126	09/12/2016	09/12/2021
DOL	DOL		BRUCE MORSEY		C/O KENT HOLLOW SIDING LL 29A BRIDGE STREETNEW MILFORD CT 06776	01/15/2016	01/15/2021
DOL	DOL	****6156	C & J LANDSCAPING & MAINTENANCE INC		520 PINE HILL ROAD CHESTER NY 10940	06/23/2014	06/23/2019
DOL	DOL		CARIBBEAN POOLS		C/O DOUGLAS L MALARKEY 64 VICTORIA DRIVEBINGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	NYC	****9172	CASSIDY EXCAVATING INC		14 RAILROAD AVENUE VALHALLA NY 10595	05/15/2014	04/02/2020
DOL	DOL	****6745	CATSKILL FENCE INSTALLATIONS INC		5445 ROUTE 32 CATSKILL NY 12414	08/22/2014	08/22/2019
DOL	DOL	****8530	CAZ CONTRACTING CORP		37-11 35TH AVENUE LONG ISLAND CITY NY 11101	08/26/2013	08/26/2018
DOL	DOL	****8809	CBE CONTRACTING CORP		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	DOL	****5556	CERTIFIED INSTALLERS INC		113 N MAPLE AVENUE GREENSBURG PA 15601	02/21/2013	02/21/2018
DOL	DOL	****7655	CHAMPION CONSTRUCTION SERVICES CORP		2131 SCHENECTADY AVENUE BROOKLYN NY 11234	11/18/2015	11/18/2020
DOL	NYC		CHARLES CASSIDY JR		14 RAILROAD AVENUE VALHALLA NY 10595	05/15/2014	04/02/2020
DOL	DOL		CHARLES ZIMMER JR		216 WESTBROOK STREET P O BOX 304SAYRE PA 18840	08/09/2016	08/09/2021
DOL	DOL		CHRISTINE J HEARNE		C/O CJ-HEARNE CONSTRUCTIO 131 PONCE DE LEON AVE NEATLANTA GA 30308	12/01/2015	12/01/2020

**NYSDOL Bureau of Public Work Debarment List 05/17/2017**

**Article 8**

DOL	DOL	****3360	CITY LIMITS GROUP INC		2279 HOLLERS AVENUE BRONX NY 10475	01/07/2014	06/23/2019
DOL	DOL	****0671	CJ-HEARNE CONSTRUCTION CO		SUITE 204 131 PONCE DE LEON AVENUE ATLANTA GA 30308	12/01/2015	12/01/2020
DOL	NYC	****2905	COLONIAL ROOFING COMPANY INC		247 48TH STREET BROOKLYN NY 11220	02/05/2014	02/05/2019
DOL	NYC	****3182	COLORTECH INC		5990 58TH AVENUE MASPETH NY 11378	11/18/2013	11/18/2018
DOL	DOL	****2703	CONKLIN'S TECH- MECHANICAL INC		5 PARKER AVENUE POUGHKEEPSIE NY 12601	03/25/2014	03/25/2019
DOL	DOL	****4175	CONSOLIDATED INDUSTRIAL SERVICES INC		2051 ROUTE 44/55 MODENA NY 12548	12/11/2012	01/28/2018
DOL	DOL		CONSTANTINOS ZERVAS		37-11 35TH AVENUE LONG ISLAND CITY NY 11101	08/26/2013	08/26/2018
DOL	NYC	****4468	CRAFT CONTRACTING GROUP INC		3256 BRUNER AVENUE BRONX NY 10469	07/29/2014	07/29/2019
DOL	NYC	****8507	CRAFT FENCE INC		3256 BRUNER AVENUE BRONX NY 10469	07/29/2014	07/29/2019
DOL	NYC	****2164	CREATIVE TRUCKING INC		58-83 54TH STREET MASPETH NY 11378	02/26/2016	02/26/2021
DOL	DOL	****7761	D L MALARKEY CONSTRUCTION		64 VICTORIA DRIVE BINGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	DOL	****7888	D L MALARKEY CONSTRUCTION INC		64 VICTORIA DRIVE BINGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	DOL	****5629	DAKA PLUMBING AND HEATING LLC		2561 ROUTE 55 POUGHQUAG NY 12570	02/19/2016	02/19/2021
DOL	DOL		DARYL T RIEKS		C/O RIEKS CONTRACTING LLC 4804 GAHWILER ROAD AUBURN NY 13021	05/01/2015	05/01/2020
DOL	NYC	****7707	DASSLE CONTRACTING INC		213-37 39TH AVE/SUITE 120 BAYSIDE NY 11360	05/08/2015	05/08/2020
DOL	DOL		DAVID MARTINEZ		C/O EMPIRE TILE INC 6 TREMONT COURTHUNTINGTON STATION NY 11746	03/08/2016	03/08/2021
DOL	NYC		DAWN AVILA AKA DAWN BECHTOLD		1ST FLOOR STORE FRONT 88-10 LITTLE NECK PARKWAY FLORAL PARK NY 11001	06/24/2014	06/24/2019
DOL	NYC		DAWN BECHTOLD AKA DAWN AVILA		1ST FLOOR STORE FRONT 88-10 LITTLE NECK PARKWAY FLORAL PARK NY 11001	06/24/2014	06/24/2019
DOL	DOL		DEAN ROBBINS III		212 OXFORD WAY SCHENECTADY NY 12309	12/11/2012	09/16/2018
DOL	DOL		DEBBIE STURDEVANT		29 MAPLEWOOD DRIVE BINGHAMTON NY 13901	02/21/2017	02/21/2022
DOL	NYC	****3865	DECOMA BUILDING CORPORATION		134 EVERGREEN PL/STE 101 EAST ORANGE NJ 07018	12/30/2013	12/30/2018
DOL	DOL		DEDA GAZIVODAN		C/O DAKA PLUMBING AND H 2561 ROUTE 55 POUGHQUAG NY 12570	02/19/2016	02/19/2021
DOL	DOL	****1446	DELTA CONTRACTING PAINTING AND DECORATING INC		437 SUNRISE HIGHWAY WEST BABYLON NY 11707	08/12/2013	08/12/2018
DOL	DOL	****3538	DELTA CONTRACTING PAINTING AND DESIGN INC		75 MCCULLOCH DRIVE DIX HILLS NY 11746	10/19/2010	08/12/2018
DOL	DOL		DEMETRIOS KOUTSOURAS		530 BEECH STREET NEW HYDE PARK NY 11040	07/02/2012	07/02/2017
DOL	DOL		DENNIS SCHWANDTNER		C/O YES SERVICE AND REPAIR 145 LODGE AVE HUNTINGTON STATION NY 11476	08/09/2016	08/09/2021
DOL	DOL	****9868	DESANTIS ENTERPRISES		161 OSWEGO RIVER ROAD PHOENIX NY 13135	09/24/2013	11/18/2018
DOL	NYC	****8234	DEWATERS PLUMBING AND HEATING LLC		30 COLUMBUS CIRCLE EASTCHESTER NY 10709	08/21/2012	08/21/2017
DOL	DOL	****9252	DI BERNARDO TILE AND MARBLE CO INC		15 WALKER WAY ALBANY NY 12205	03/21/2014	03/21/2019
DOL	DOL		DIANE DEAVER		731 WARWICK TURNPIKE HEWITT NJ 07421	06/25/2012	12/11/2017
DOL	NYC		DIMITRIOS KOUTSOUKOS		C/O ASTORIA GENERAL CONTR 35-34 31ST STREET LONG ISLAND CITY NY 11106	09/02/2015	09/02/2020
DOL	DA	****6789	DOL	DBA NAME QMC	BUILDING 12 ALBANY NY 12240	12/01/2017	12/01/2018

**NYS DOL Bureau of Public Work Debarment List 05/17/2017**

**Article 8**

DOL	DOL		DORIS SKODA		C/O APCO CONTRACTING CORP 24 SOUTH MARYLAND AVENUE PORT WASHINGTON NY 11050	09/24/2012	09/02/2020
DOL	NYC	****7404	DOSANJH CONSTRUCTION CORP		9439 212TH STREET QUEENS VILLAGE NY 11428	02/25/2016	02/25/2021
DOL	DOL		DOUGLAS L MALARKEY	MALARKEY CONSTRUCTION	64 VICTORIA DRIVE B INGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	DOL	****6982	DUFOUR GROUP INC	DUFOUR MASONRY	353 WEST 56TH STREET #7M NEW YORK NY 10019	06/10/2014	06/10/2019
DOL	DOL		DUFOUR MASONRY		353 WEST 56TH ST #7M NEW YORK NY 10019	06/10/2014	06/10/2019
DOL	DOL		DUFOUR MASONRY & RESTORATION INC		353 WEST 56TH STREET #7M NEW YORK NY 10019	06/10/2014	06/10/2019
DOL	DOL	****5840	DYNA CONTRACTING INC		363 88TH STREET BROOKLYN NY 11209	11/18/2013	11/18/2018
DOL	DOL		E C WEBB		6409 LAND O LAKES BLVD LAND O LAKES FL 34638	11/10/2015	11/10/2020
DOL	DOL		EARL GALBREATH		640 ASHFORD AVENUE ARDSLEY NY 10502	08/27/2013	08/27/2018
DOL	DOL		EARL L WILSON	WILSON BROTHER DRYWALL CONTRACTORS	36 ABERSOLD STREET ROCHESTER NY 14621	08/31/2015	08/31/2020
DOL	DOL	****1496	EAST COAST DRYWALL INC		1238 PRESIDENT STREET BROOKLYN NY 11225	11/18/2013	11/18/2018
DOL	DOL		EDWARD L GAUTHIER		C/O IMPERIAL MASONRY REST 141 ARGONNE DRIVE KENMORE NY 14217	10/03/2012	10/03/2017
DOL	NYC		EDWARD MENKEN		C/O AQUA JET PAINTING 10 VIKING DRIVE WEST ISLIP NY 11795	04/16/2014	04/16/2019
DOL	NYC	****0900	EF PRO CONTRACTING INC		147 BROOME AVENUE ATLANTIC BEACH NY 11509	03/03/2014	03/03/2019
DOL	NYC		EFSTRATIOS BERNARDIS		23-73 48TH STREET LONG ISLAND CITY NY 11103	04/24/2014	04/24/2019
DOL	DOL		ELIZABETH RAMADANI		C/O RAMADA CONSTRUCTION 80 SAVO LOOP STATEN ISLAND NY 10309	01/07/2014	01/07/2019
DOL	DOL		ELLEN DESANTIS	DESANTIS ENTERPRISES	161 OSWEGO RIVER ROAD PHOENIX NY 13135	09/24/2013	11/18/2018
DOL	DOL	****0780	EMES HEATING & PLUMBING CONTR		5 EMES LANE MONSEY NY 10952	01/20/2002	01/20/3002
DOL	AG		EMILIO FRANZA		90 JUNIUS STREET BROOKLYN NY 11212	01/23/2014	01/23/2019
DOL	DOL		EMPIRE CONCRETE SERVICES LLC		101 SULLYS TRAIL/SUITE 20 PITTSFORD NY 14534	11/18/2013	01/07/2019
DOL	DOL	****0511	EMPIRE CONCRETE SYSTEMS LLC		101 SULLYS TRAIL/ SUITE 2 PITTSFORD NY 14534	11/18/2013	01/07/2019
DOL	DOL	****2353	EMPIRE CONSTRUCTORS LLC		101 SULLYS TRAIL/SUITE 20 PITTSFORD NY 14534	11/18/2013	01/07/2019
DOL	DOL		EMPIRE PRECAST LLC		101 SULLYS TRAIL/SUITE 20 PITTSFORD NY 14534	11/18/2013	01/07/2019
DOL	DOL	****3270	EMPIRE TILE INC		6 TREMONT COURT HUNTINGTON STATION NY 11746	03/08/2016	03/08/2021
DOL	DOL		ERIKA BARNETT		253 BEACH BREEZE LANE UNIT BARVERNE NY 11692	02/05/2013	02/05/2018
DOL	DOL		ESTEVEES & FRAGA CONSTRUCTION CO INC		986 MADISON AVENUE PATERSON NJ 07501	01/03/2013	01/03/2018
DOL	DOL		ESTEVEES & FRAGA INC		986 MADISON AVENUE PATERSON NJ 07501	01/03/2013	01/03/2018
DOL	DOL		EVELIO ELLEDIAS		114 PEARL STREET PORT CHESTER NY 10573	08/15/2012	08/15/2017
DOL	NYC		EVERTON CARLESS		134 EVERGREEN PL/STE 101 EAST ORANGE NJ 07018	12/30/2013	12/30/2018
DOL	DOL	****7403	F & B PAINTING CONTRACTING INC		2 PARKVIEW AVENUE HARRISON NY 10604	09/26/2016	09/26/2021
DOL	DOL		F KALAFATIS		2279 HOLLERS AVENUE BRONX NY 10475	01/07/2014	06/23/2019
DOL	DOL		FANTASTIC PAINTING		493 LANSING ROAD FULTONVILLE NY 12072	11/18/2013	11/18/2018



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DOL	DOL		FAY MATTHEW		C/O CHAMPION CONSTRUCTION 2131 SCHENECTADY AVENUE BROOKLYN NY 11234	11/18/2015	11/18/2020
DOL	DOL		FAZIA GINA ALI-MOHAMMED	C/O CHAMPION CONSTRUCTION	2131 SCHENECTADY AVENUE BROOKLYN NY 11234	11/18/2015	11/18/2020
DOL	DOL	****1311	FLOZ-ON PAINTING & DECORATING INC		12 DUNDERBERG ROAD TOMKINS NY 10986	10/16/2013	10/16/2018
DOL	DOL	****8961	FLOZ-ON PAINTING INC		12 DUNDERBERG ROAD TOMKINS NY 10986	10/16/2013	10/16/2018
DOL	DOL		FMS		4 LEGHORN COURT NEW YORK NY 11746	11/28/2012	11/28/2017
DOL	DOL	****8067	FORTH SPORT FLOORS INC		P O BOX 74 EAST GREENBUSH NY 12061	02/28/2012	10/01/2017
DOL	DOL		FRAN MICELI		2279 HOLLERS AVENUE BRONX NY 10475	01/07/2014	06/23/2019
DOL	DOL		FRANCES KALAFATIS		2279 HOLLERS AVENUE BRONX NY 10475	01/07/2014	06/23/2019
DOL	DOL		FRANCES KALAFATIS-MICELI		2279 HOLLERS AVENUE BRONX NY 10475	01/07/2014	06/23/2019
DOL	DOL		FRANK BENEDETTO		C/O F & B PAINTING CONTRA 2 PARKVIEW AVENUE HARRISON NY 10604	09/26/2016	09/26/2021
DOL	DOL		FRANK DEMARTINO		101-61 99TH STREET OZONE PARK NY 11416	02/15/2017	02/15/2022
DOL	DOL		FRANK J MERCANDO		134 MURRAY AVENUE YONKERS NY 10704	12/11/2009	02/03/2019
DOL	DOL		FRANK MICELI JR	C/O FRANK MICELI JR CONTRACTING INC	19 CLIFF STREET NEW ROCHELLE NY 10801	10/16/2013	10/16/2018
DOL	DOL	****1321	FRANK MICELI JR CONTRACTING INC		19 CLIFF STREET NEW ROCHELLE NY 10801	10/16/2013	10/16/2018
DOL	DOL		FRED ABDO	ABDO TILE COMPANY AKA ABDO TILE CO	6179 EAST MOLLOY ROAD EAST SYRACUSE NY 13057	06/25/2010	07/02/2017
DOL	DOL	****2724	FRESH START PAINTING CORP		157 TIBBETS ROAD YONKERS NY 10705	03/12/2014	03/12/2019
DOL	DOL		G FUCCI CONSTRUCTION SERVICES		3 ALAN B SHEPARD PLACE YONKERS NY 10705	03/12/2014	03/12/2019
DOL	DOL	****6767	G FUCCI PAINTING INC		C/O SPIEGEL & UTRERA 1 MAIDEN LANE - 5TH FL NEW YORK NY 10038	03/12/2014	03/12/2019
DOL	DOL	****4546	GAF PAINTING LLC		157 TIBBETS ROAD YONKERS NY 10705	03/12/2014	03/12/2019
DOL	DOL		GALINDA ROTENBERG		C/O GMDV TRANS INC 67-48 182ND STREET FRESH MEADOWS NY 11365	06/24/2016	06/24/2021
DOL	DOL		GARDEN STATE PAINTING		157 TIBBETS ROAD YONKERS NY 10705	03/12/2014	03/12/2019
DOL	DOL		GARY MCDOWELL	GM CONSTRUCTION & LAWN CARE SERVICE	76 PLEASANT STREET WELLSVILLE NY 14895	06/11/2013	06/11/2018
DOL	DOL		GEORGE DI BERNARDO		C/O DI BERNARDO TILE 15 WALKER WAY ALBANY NY 12205	03/21/2014	03/21/2019
DOL	DA		GEORGE LUCEY		150 KINGS STREET BROOKLYN NY 11231	01/19/1998	01/19/2998
DOL	DOL	****1075	GLOBAL TANK CONSTRUCTION LLC		P O BOX 1238 SALINA OK 74365	11/28/2012	11/28/2017
DOL	DOL	****0878	GM CONSTRUCTION & LAWN CARE SERVICE		76 PLEASANT STREET WELLSVILLE NY 14895	06/11/2013	06/11/2018
DOL	DOL	****5674	GMDV TRANS INC		67-48 182ND STREET FRESH MEADOWS NY 11365	06/24/2016	06/24/2021
DOL	DOL	****0090	GOLDS FLOORING INSTALLATIONS INC		25 HAMILTON ROAD MONTICELLO NY 12701	10/16/2013	10/16/2018
DOL	DOL		GREGORY A FUCCI		C/O PAF PAINTING SERVICES 157 TIBBETS ROAD YONKERS NY 10705	03/12/2014	03/12/2019
DOL	DOL		GREGORY FUCCI JR		C/O APOLLO CONSTRUCTION 157 TIBBETS ROAD YONKERS NY 10705	03/12/2014	03/12/2019
DOL	DOL	****9456	GUILLO CONTRACTING CORP		P O BOX 229 CALVERTON NY 11933	07/08/2013	07/08/2018

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DOL	NYC	****0346	H N H CONTRACTORS CORP		4558 BROADWAY # 6 NEW YORK NY 10040	08/04/2014	08/04/2019
DOL	DOL		HALSSAM FOSTOK		5 HANSEN PLACE WAYNE NJ 07470	09/18/2013	09/18/2018
DOL	NYC		HAMEEDUL HASAN		240 HOME STREET TEANECK NJ 07666	08/04/2014	08/04/2019
DOL	AG	****9918	HARA ELECTRIC CORP		2461 47TH STREET ASTORIA NY 11103	09/26/2013	09/26/2018
DOL	NYC		HARMEL SINGH		15 CLINTON LANE HICKSVILLE NY 11801	02/25/2016	02/25/2021
DOL	NYC		HAROLD KUEMMELE		58-83 54TH STREET MASPETH NY 11378	02/26/2016	02/26/2021
DOL	AG		HARVINDER SINGH PAUL		90 JUNIUS STREET BROOKLYN NY 11212	01/23/2014	01/23/2019
DOL	DOL		HENRY VAN DALRYMPLE		2663 LANTERN LANE ATLANTA GA 30349	12/01/2015	12/01/2020
DOL	DOL		HI-TECH CONTRACTING CORP		114 PEARL STREET PORT CHESTER NY 10573	08/15/2012	08/15/2017
DOL	DOL	****6370	HILLIANO CONSTRUCTION & ELECTRICAL INC		354 MAGNOLIA STREET ROCHESTER NY 14611	01/22/2015	01/22/2020
DOL	DOL	****8282	IDEMA DEVELOPMENT INC		91 COLLEGE AVENUE POUGHKEEPSIE NY 12603	12/04/2015	12/04/2020
DOL	DOL	****8282	IDEMA GENERAL CONTRACTORS INC		91 COLLEGE AVENUE POUGHKEEPSIE NY 12603	12/04/2015	12/04/2020
DOL	DOL	****8426	IMPERIAL MASONRY RESTORATION INC		141 ARGONNE DRIVE KENMORE NY 14217	10/03/2012	10/03/2017
DOL	DOL	****7001	INTEGRATED CONSTRUCTION & POWER SYSTEMS INC		SUITE 100 2105 W GENESEE STREETS YRACUSE NY 13219	01/06/2016	01/06/2021
DOL	DOL		ISABEL FRAGA		C/O THREE FRIENDS CONSTR 986 MADISON AVENUE PATERSON NJ 07501	01/03/2013	01/03/2018
DOL	AG	****0000	J A M CONSTRUCTION CORP		SUITE 125 265 SUNRISE HIGHWAY ROCKVILLE CENTRE NY 10457	04/07/2016	04/07/2021
DOL	DOL	****7598	J M RICH LLC		P O BOX 268 STILLWATER NY 12170	09/16/2013	03/21/2019
DOL	DOL	****3478	J N P CONSTRUCTION CORP		50 LOUIS COURT P O BOX 1907 SOUTH HACKENSACK NY 07606	03/21/2014	03/21/2019
DOL	DOL		J N RICH LLC		P O BOX 268 STILLWATER NY 12170	09/16/2013	03/21/2019
DOL	DOL	****9368	J TECH CONSTRUCTION		PO BOX 64782 ROCHESTER NY 14624	09/24/2012	09/24/2017
DOL	DOL		J THE HANDYMAN			09/24/2012	09/24/2017
DOL	DOL	****4910	J V MAGIC TOUCH CORPORATION		94-25 57TH AVENUE, APT 5G ELMHURST NY 11373	01/12/2015	01/12/2020
DOL	DOL		JACQUELINE HOWE		C/O FLOZ-ON PAINTING INC 12 DUNDERBERG ROAD TOMKINS NY 10986	10/16/2013	10/16/2018
DOL	DOL	****8627	JAG I LLC		635 LUZERNE ROAD QUEENSBURY NY 12804	09/16/2013	09/16/2018
DOL	DOL	****2868	JAG INDUSTRIES INC		175 BROAD ST - SUITE 320 GLENS FALLS NY 12801	09/16/2013	09/16/2018
DOL	DOL		JAMES B RHYNDERS		91 COLLEGE AVENUE POUGHKEEPSIE NY 12603	12/04/2015	12/04/2020
DOL	DOL		JAMES BOYCE		C/O EMPIRE CONCRETE SYST 101 SULLYS TRAIL/SUITE 20 PITTSFORD NY 14534	11/18/2013	01/07/2019
DOL	DOL		JAMES E RHYNDERS		91 COLLEGE AVENUE POUGHKEEPSIE NY 12603	12/04/2015	12/04/2020
DOL	AG		JAMES FALCONE		SUITE 125 265 SUNRISE HIGHWAY ROCKVILLE CENTRE NY 10457	04/07/2016	04/07/2021
DOL	DOL		JAMES RHYNDERS SR		91 COLLEGE AVENUE POUGHKEEPSIE NY 12603	12/04/2015	12/04/2020
DOL	DOL		JAMES SICKAU		3090 SHIRLEY ROAD NORTH COLLINS NY 14111	04/19/2011	07/08/2020
DOL	DOL		JASON M RICH		P O BOX 268 STILLWATER NY 12170	09/16/2013	03/21/2019
DOL	DOL		JASON W MILLIMAN		C/O ROCHESTER ACOUSTICAL P O BOX 799 HILTON NY 14468	02/19/2016	02/19/2021

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DOL	DOL		JAY PRESUTTI		C/O CONSOLIDATED INDUSTRI 2051 ROUTE 44/55MODENA NY 12548	01/28/2013	01/28/2018
DOL	DOL		JEFF P BRADLEY		520 PINE HILL ROAD CHESTER NY 10940	06/23/2014	06/23/2019
DOL	NYC		JEFFREY CASSIDY		14 RAILROAD AVENUE VALHALLA NY 10595	05/15/2014	04/02/2020
DOL	DOL		JERALD HOWE		C/O FLOZ-ON PAINTING INC 12 DUNDERBERG ROADTOMKINS NY 10986	10/16/2013	10/16/2018
DOL	DOL		JEROME LACITIGNOLA		C/O CATSKILL FENCE INSTAL 5445 ROUTE 32 CATSKILL NY 12414	08/22/2014	08/22/2019
DOL	NYC		JERRY DEWATERS		30 COLUMBUS CIRCLE EASTCHESTER NY 10709	08/21/2012	08/21/2017
DOL	DOL		JESSICA WHITESIDE		C/O BRRESTORATION NY INC 140 ARCADIA AVENUEOSWEGO NY 13126	09/12/2016	09/12/2021
DOL	DOL		JOHN DESCUL		437 SUNRISE HIGHWAYA WEST BABYLON NY 11704	08/12/2013	08/12/2018
DOL	DOL		JOHN H LEE	JOHN LEE QUALITY PAVING	67 WILER ROAD HILTON NY 14468	01/28/2013	01/28/2018
DOL	DOL	*****1749	JOHN LEE QUALITY PAVING		67 WILER ROAD HILTON NY 14468	01/28/2013	01/28/2018
DOL	DOL		JON E DEYOUNG		261 MILL ROAD P O BOX 296EAST AURORA NY 14052	07/29/2015	07/29/2020
DOL	DOL	*****9368	JORGE I DELEON	J TECH CONSTRUCTI ON	PO BOX 64782 ROCHESTER NY 14624	09/24/2012	09/24/2017
DOL	DOL		JORGE VILLALOBOS		94-25 57TH AVENUE - APT 5 ELMHURST NY 11373	01/12/2015	01/12/2020
DOL	DOL		JOSE MONTAS		27 BUTLER PLACE YONKERS NY 10710	03/18/2011	03/19/2020
DOL	AG		JOSEPH FALCONE		SUITE 125 265 SUNRISE HIGHWAYROCKVILLE CENTRE NY 10457	04/07/2016	04/07/2021
DOL	DOL	*****9273	JOSEPH M LOVETRO		P O BOX 812 BUFFALO NY 14220	08/09/2016	08/09/2021
DOL	DOL		JOSEPH MARTONE		112 OSCAWANA HEIGHTS ROAD PUTNAM VALLEY NY 10542	08/27/2013	08/27/2018
DOL	DOL		JOSHUA DEBOWSKY		9547 BUSTLETON AVENUE PHILADELPHIA PA 19115	02/05/2014	02/05/2019
DOL	DOL		JOYA MUSCOLINO		10 ST CHARLES STREET THORNWOOD NY 10594	09/03/2013	09/03/2018
DOL	DOL		JUANA MARTINEZ		C/O LEAD CONSTRUCTION 27 BUTLER PLACEYONKERS NY 10710	03/19/2015	03/19/2020
DOL	DOL	*****4340	JUBCO SITE DEVELOPMENT LLC		462 LAKEVIEW AVENUE VALHALLA NY 10595	12/16/2013	12/16/2018
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	DOL		KAREN HARTMAN		C/O GUILLO CONTRACTING P O BOX 229CALVERTON NY 11933	07/08/2013	07/08/2018
DOL	NYC		KATHLEEN SELA	C/O COLONIAL ROOFING COMPANY INC	247 48TH STREET BROOKLYN NY 11220	02/05/2014	02/05/2019
DOL	DOL		KEITH SCHEPIS		C/O KJS HAULING AND HOME 95 MAPLE AVENUENEW CITY NY 10956	04/15/2013	04/15/2018
DOL	DOL		KEN DEAVER		731 WARWICK TURNPIKE HEWITT NJ 07421	06/25/2012	12/11/2017
DOL	DOL		KENNETH FIORENTINO		375 LAKE SHORE DRIVE PUTNAM VALLEY NY 10579	01/23/2017	01/23/2022
DOL	DOL	*****9732	KENT HOLLOW SIDING LLC		29A BRIDGE STREET NEW MILFORD CT 06776	01/15/2016	01/15/2021
DOL	DOL		KEVIN BABCOCK JR		P O BOX 46 THOMPSON RIDGE NY 10985	08/22/2014	08/22/2019
DOL	DOL		KEVIN M BABCOCK		P O BOX 46 THOMPSON RIDGE NY 10985	08/22/2014	08/22/2019
DOL	DOL		KIM SOROCENSKI		C/O SOLUTION MATTERS INC 198 NORWOOD ROADPORT JEFFERSON NY 11776	11/19/2015	11/19/2020

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DOL	DOL	****2463	KJS HAULING AND HOME IMPROVEMENT INC		95 MAPLE AVENUE NEW CITY NY 10956	04/15/2013	04/15/2018
DOL	AG		KOSTAS "GUS" ANDRIKOPOULOS		2461 47TH STREET ASTORIA NY 11103	09/26/2013	09/26/2018
DOL	DOL	****6033	KUSNIR CONSTRUCTION		2677 ANAWALK ROAD KATONAH NY 10536	08/03/2012	08/03/2017
DOL	DA	****8816	LAKE CONSTRUCTION AND DEVELOPMENT CORPORATION		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL	****6224	LAKESIDE FIRE SPRINKLERS LLC		125 CHAUTAUQUA AVENUE LAKEWOOD NY 14750	06/24/2015	06/24/2020
DOL	DOL	****4505	LARAPINTA ASSOCIATES INC		29 MAPLEWOOD DRIVE BINGHAMTON NY 13901	02/21/2017	02/21/2022
DOL	DOL		LARRY DOMINGUEZ		114 PEARL STREET PORT CHESTER NY 10573	08/15/2012	08/15/2017
DOL	DOL		LAURA A. GAUTHIER		C/O IMPERIAL MASONRY REST 141 ARGONNE DRIVEKENMORE NY 14217	10/03/2012	10/03/2017
DOL	DOL		LAURI MARTONE		112 OSCAWANA HEIGHTS ROAD PUTNAM VALLEY NY 10542	08/27/2013	08/27/2018
DOL	DOL		LAVERN GLAVE		C/O RAW POWER ELECTRIC 3 PARK CIRCLEMIDDLETOWN NY 10940	09/15/2014	09/15/2019
DOL	DOL		LAWRENCE J RUGGLES		P O BOX 371 ROUND LAKE NY 12151	05/12/2014	05/12/2019
DOL	DOL	****1364	LEAD CONSTRUCTION SERVICES INC		3 ALAN B SHEPARD PLACE YONKERS NY 10705	03/19/2015	03/19/2020
DOL	DOL	****0597	LEED INDUSTRIES CORP	HI-TECH CONTRACTIN G CORP	114 PEART STREET PORT CHESTER NY 10573	08/15/2012	08/15/2017
DOL	DOL	****4388	LEN J CONSTRUCTION LLC		P O BOX 10007 ALBANY NY 12201	06/24/2016	01/30/2022
DOL	AG		LEONID FRIDMAN		APT 5 200 BRIGHTON, 15TH STBROOKLYN NY 11235	01/23/2014	01/23/2019
DOL	DOL		LEROY NELSON JR		C/O LEN J CONSTRUCTION LL P O BOX 10007ALBANY NY 12201	06/24/2016	01/30/2022
DOL	DOL		LINDSEY R CRILL		143 FILLMORE AVENUE BUFFALO NY 14210	01/08/2015	01/08/2020
DOL	DOL	****8453	LINPHILL ELECTRICAL CONTRACTORS INC		523 SOUTH 10TH AVENUE MOUNT VERNON NY 10553	01/07/2011	04/15/2018
DOL	DOL		LINVAL BROWN		523 SOUTH 10TH AVENUE MOUNT VERNON NY 10553	01/07/2011	04/15/2018
DOL	NYC	****2850	M A 2 FLAGS CONTRACTING CORP		25-18 100TH STREET EAST ELMHURST NY 11369	08/21/2013	08/21/2018
DOL	DOL		M ANVER BEIG		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	AG	****6957	M B DIN CONSTRUCTION INC		8831 20TH AVENUE/SUITE 6E BROOKLYN NY 11214	11/17/2015	11/17/2020
DOL	NYC	****6317	M S QUALITY CONSTRUCTION LLC		27 MAPLEWOOD AVENUE COLONIA NJ 07067	02/04/2015	02/04/2020
DOL	NYC		MACIEJ SONTOWSKI		27 MAPLEWOOD AVENUE COLONIA NJ 07067	02/04/2015	02/04/2020
DOL	NYC	****9590	MACK GLASSNAUTH IRON WORKS INC		137 LIBERTY AVENUE BROOKLYN NY 11212	12/21/2015	12/21/2020
DOL	NYC	****3141	MACKIEY REED ELECTRIC INC		1ST FLOOR STORE FRONT 88-10 LITTLE NECK PARKWAYFLORAL PARK NY 11001	06/24/2014	06/24/2019
DOL	DOL	****1784	MADISON AVE CONSTRUCTION CORP		39 PENNY STREET WEST ISLIP NY 11795	11/02/2016	11/02/2021
DOL	DOL		MALARKEY'S BAR & GRILL LLC		64 VICTORIA DRIVE BINGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	DOL	****0705	MALARKEY'S PUB & GRUB LLC		64 VICTORIA DRIVE BINGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	DA		MANUEL P TOBIO		150 KINGS STREET BROOKLYN NY 14444	08/19/1998	08/19/2998
DOL	DA		MANUEL TOBIO		150 KINGS STREET BROOKLYN NY 11231	08/19/1998	08/19/2998
DOL	DOL		MAR CONTRACTING CORP		620 COMMERCE STREET THORNWOOD NY 10594	09/24/2012	09/24/2017
DOL	DOL		MARGARET FORTH		P O BOX 74 EAST GREENBUSH NY 12061	02/28/2012	10/01/2017

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DOL	DOL		MARIA ESTEVES AKA MARIA MARTINS		C/O THREE FRIENDS CONSTR 986 MADISON AVENUEPATERSON NJ 07501	01/03/2013	01/03/2018
DOL	DOL		MARIA MARTINS AKA MARIA ESTEVES		C/O THREE FRIENDS CONSTR 986 MADISON AVENUEPATERSON NJ 07501	01/03/2013	01/03/2018
DOL	DOL		MARIACHI'S PIZZERIA		C/O DOUGLAS L MALARKEY 64 VICTORIA DRIVEBINGHAMTON NY 13904	02/04/2016	02/04/2021
DOL	DOL		MARIO LUIS		31 DURANT AVENUE BETHEL CT 06801	07/02/2012	07/02/2017
DOL	DOL		MARK MIONIS		6409 LAND O LAKES BLVD LAND O LAKES FL 34638	11/10/2015	11/10/2020
DOL	DOL	*****5533	MARQUISE CONSTRUCTION & DEVELOPMENT CORP		10 ST CHARLES STREET THORNWOOD NY 10594	09/03/2013	09/03/2018
DOL	DOL	*****8810	MARQUISE CONSTRUCTION ASSOCIATES INC		20 BOSWELL ROAD PUTNAM VALLEY NY 10579	09/03/2013	09/03/2018
DOL	DOL	*****1134	MARQUISE CONSTRUCTION CORP		10 ST CHARLES STREET THORNWOOD NY 10594	09/03/2013	09/03/2018
DOL	DOL		MARVIN A STURDEVANT		29 MAPLEWOOD DRIVE BINGHAMTON NY 13901	02/21/2017	02/21/2022
DOL	DOL		MATTHEW IDEMA GENERAL CONTRACTORS INC		91 COLLEGE AVENUE POUGHKEEPSIE NY 12603	12/04/2015	12/04/2020
DOL	DOL	*****6416	MCCALL MASONRY		P O BOX 304 SAYRE PA 18840	08/09/2016	08/09/2021
DOL	DOL	*****9028	MCINTOSH INTERIORS LLC		8531 AVENUE B BROOKLYN NY 11236	02/05/2013	02/05/2018
DOL	DOL	*****4259	MERCANDO CONTRACTING CO INC		134 MURRAY AVENUE YONKERS NY 10704	12/11/2009	02/03/2019
DOL	DOL	*****0327	MERCANDO INDUSTRIES LLC		134 MURRAY AVENUE YONKERS NY 10704	12/11/2009	02/03/2019
DOL	NYC	*****5330	METRO DUCT SYSTEMS INC		1219 ASTORIA BOULEVARD LONG ISLAND CITY NY 11102	04/16/2014	11/19/2020
DOL	DOL	*****3368	MICEK CONSTRUCTION CO INC		20 CROSS STREET FALCONER NY 14733	12/02/2014	12/02/2019
DOL	DOL		MICHAEL A PASCARELLA		SUITE 100 2105 WEST GENESEE STREET SYRACUSE NY 13219	01/06/2016	01/06/2021
DOL	DOL	*****9198	MICHAEL CZECHOWICZ	OCTAGON CO	37-11 35TH AVENUE-2ND FL LONG ISLAND CITY NY 11101	01/08/2013	01/08/2018
DOL	DOL		MICHAEL F LEARY JR		3813 SNOWDEN HILL ROADNEW HARTFORD NY 13413	06/19/2013	06/19/2018
DOL	DOL		MICHAEL F LEARY JR METAL STUD & DRYWALL		3813 SNOWDEN HILL ROAD NEW HARTFORD NY 13413	06/19/2013	06/19/2018
DOL	NYC		MICHAEL HIRSCH		C/O MZM CORP 163 S MAIN STREETNEW CITY NY 10956	01/28/2016	01/28/2021
DOL	DOL		MICHAEL KTISTAKIS		363 88TH STREET BROOKLYN NY 11209	11/18/2013	11/18/2018
DOL	DOL	*****6033	MICHAEL KUSNIR	KUSNIR CONSTRUCTI ON	2677 ANAWALK ROAD KATONAH NY 10536	08/03/2012	08/03/2017
DOL	DOL		MICHAEL MARGOLIN		4 LEGHORN COURT NEW YORK NY 11746	11/28/2012	11/28/2017
DOL	DOL		MICHAEL WILSON	WILSON BROTHER DRYWALL CONTRACTOR S	36 ABERSOLD STREET ROCHESTER NY 14621	08/31/2015	08/31/2020
DOL	DOL		MICHELLE L BARBER		635 LUZERNE ROAD QUEENSBURY NY 12804	09/16/2013	09/16/2018
DOL	NYC		MIGUEL ACOSTA		25-18 100TH STREET EAST ELMHURST NY 11369	08/21/2013	08/21/2018
DOL	NYC		MILANCE HADZIC		22 CALIFORNIA AVE - STE 1 PATERSON NJ 07503	03/11/2015	03/11/2020
DOL	AG		MOHAMMAD RIAZ		46 RUGBY ROAD WESTBURY NY 11590	11/20/2013	11/20/2018
DOL	AG		MOHAMMED N CHATHA		8831 20TH AVENUE/SUITE 6E BROOKLYN NY 11214	11/17/2015	11/17/2020
DOL	DOL	*****2737	MOUNTAIN'S AIR INC		2471 OCEAN AVENUE- STE 7A BROOKLYN NY 11229	09/24/2012	09/18/2020
DOL	DOL		MUHAMMAD BEIG		142 EAST MARKET STREET LONG BEACH NY 11561	03/07/2017	03/07/2022
DOL	DOL		MUHAMMAD PERVAIZ		C/O CHAMPION CONSTRUCTION 2131 SCHENECTADY AVENUEBROOKLYN NY 11234	11/18/2015	11/18/2020

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DOL	DOL		MURRAY FORTH		P O BOX 74 EAST GREENBUSH NY 12061	02/28/2012	10/01/2017
DOL	DOL		MUZAFFAR HUSSAIN		C/O ABSOLUTE GENERAL CONT 1129 AVENUE UBROOKLYN NY 11229	01/28/2013	01/28/2018
DOL	NYC	****3613	MZM CORP		163 S MAIN STREET NEW CITY NY 10956	01/28/2016	01/28/2021
DOL	NYC	****1284	NEW AMERICAN RESTORATION INC		22 CALIFORNIA AVE - STE 1 PATERSON NJ 07503	03/11/2015	03/11/2020
DOL	DA	****6988	NEW YORK INSULATION INC		58-48 59TH STREET MASPETH NY 11378	05/16/2012	05/08/2020
DOL	NYC	****4839	NEW YORK RIGGING CORP		58-83 54TH STREET MASPETH NY 11378	02/26/2016	02/26/2021
DOL	DOL		NICHOLAS DEGREGORY JR	NJ DEGREGORY & COMPANY	1698 ROUTE 9 GLENS FALLS NY 12801	05/23/2013	05/23/2018
DOL	NYC		NICHOLAS PROVENZANO		147 BROOME AVENUE ATLANTIC BEACH NY 11509	03/03/2014	03/03/2019
DOL	NYC		NICHOLAS PROVENZANO		147 BROOME AVENUE ATLANTIC BEACH NY 11509	03/03/2014	03/03/2019
DOL	DOL	****5279	NJ DEGREGORY & COMPANY		1698 ROUTE 9 GLENS FALLS NY 12801	05/23/2013	05/23/2018
DOL	DOL		NJ DEGREGORY & SONS CONSTRUCTION		1698 ROUTE 9 GLENS FALLS NY 12801	05/23/2013	05/23/2018
DOL	NYC	****1968	NORTH AMERICAN IRON WORKS INC		1560 DECATUR STREET RIDGECREEK NY 11385	05/15/2015	05/15/2020
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	****9198	OCTAGON CO		37-11 35TH AVENUE-2ND FL LONG ISLAND CITY NY 11101	01/08/2013	01/08/2018
DOL	NYC	****8337	OPTIMUM CONSTRUCTION INC		23-73 48TH STREET LONG ISLAND CITY NY 11103	04/24/2014	04/24/2019
DOL	NYC		ORSON ARROYO		C/O METRO DUCT SYSTEMS 12-19 ASTORIA BOULEVARDLONG ISLAND CITY NY 11102	04/16/2014	11/19/2020
DOL	DOL	****4546	PAF PAINTING CORP		161 TIBBETTS ROAD YONKERS NY 10705	03/12/2014	03/12/2019
DOL	DOL	****5242	PAF PAINTING SERVICES INC	GARDEN STATE PAINTING	157 TIBBETTS ROAD YONKERS NY 10103	03/12/2014	03/12/2019
DOL	DOL		PAF PAINTING SERVICES OF WESTCHESTER INC		C/O SPIEGEL & UTRERA 1 MAIDEN LANE - 5TH FLNEW YORK NY 10038	03/12/2014	03/12/2019
DOL	DOL	****8802	PAT'S HEATING AND AIR CONDITIONING LTD		P O BOX 371 ROUND LAKE NY 12151	05/12/2014	05/12/2019
DOL	DOL		PATRICIA M RUGGLES		P O BOX 371 ROUND LAKE NY 12151	05/12/2014	05/12/2019
DOL	DOL		PAUL VERNA		C/O AMERICAN STEEL MECHA 693 PAINTER STREETMEDIA PA 19063	02/20/2013	02/20/2018
DOL	DOL	****9569	PERFORM CONCRETE INC		31 DURANT AVENUE BETHEL CT 06801	07/02/2012	07/02/2017
DOL	NYC		PETER LUSTIG		30 COLUMBUS CIRCLE EASTCHESTER NY 10709	08/21/2012	08/21/2017
DOL	DOL		PETER M PERGOLA		3 WEST MAIN ST/SUITE 208 ELMSFORD NY 10523	01/23/2017	01/23/2022
DOL	NYC		PETER TRITARIS		5990 58TH AVENUE MASPETH NY 11378	11/18/2013	11/18/2018
DOL	DOL	****2989	PROFESSIONAL ESTIMATING & BUSINESS CORP		157 TIBBETS ROAD YONKERS NY 10705	03/12/2014	03/12/2019
DOL	DOL	****6895	PROLINE CONCRETE OF WNY INC		3090 SHIRLEY ROAD NORTH COLLINS NY 14111	04/19/2011	07/08/2020
DOL	DA	****6817	QUADRANT METAL BUILDINGS LLC		2740 SW MARTIN DOWNS BLVD PALM CITY FL 34990	08/25/2016	08/25/2021
DOL	DOL	****0015	RAMADA CONSTRUCTION CORP		80 SAVO LOOP STATEN ISLAND NY 10309	01/07/2014	01/07/2019
DOL	NYC		RAMESHWAR ASU		137 LIBERTY AVENUE BROOKLYN NY 11212	12/21/2015	12/21/2020
DOL	DOL		RANA A KAHN		1973 81ST ST - SUITE A-5 BROOKLYN NY 11214	01/08/2015	01/08/2020
DOL	NYC		RANTI K PARIKH		13 LORIANN ROAD WARREN NJ 07059	07/15/2015	07/15/2020

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DOL	DOL	****2633	RAW POWER ELECTRIC CORP		3 PARK PLACE MIDDLETOWN NY 10940	09/16/2013	09/15/2019
DOL	NYC		RAYMOND PEARSON		P O BOX 957 PORT JEFFERSON STA NY 11776	03/12/2014	03/12/2019
DOL	DOL		REBECCA THORNE		113 N MAPLE AVENUE GREENSBURG PA 15601	02/21/2013	02/21/2018
DOL	DOL		REGINALD WARREN		C/O RAW POWER ELECTRIC 3 PARK CIRCLE MIDDLETOWN NY 10940	09/15/2014	09/15/2019
DOL	NYC	****3461	RELIANCE GENERAL CONSTRUCTION INC		644 OCEAN PARKWAY BROOKLYN NY 11230	09/02/2015	09/02/2020
DOL	DOL		REVOLUTIONARY FLOORS LLC		P O BOX 268 STILLWATER NY 12170	09/16/2013	03/21/2019
DOL	DOL		RHINO CONCRETE LLC		101 SULLYS TRAIL/SUITE 20 PITTSFORD NY 14534	11/18/2013	01/07/2019
DOL	DA		RIANN MULLER		2740 SW MARTIN DOWNS BLVD PALM CITY FL 34990	08/25/2016	08/25/2021
DOL	DOL		RICHARD WILSON		C/O DUFOUR GROUP INC 353 WEST 56TH STREET #7M NEW YORK NY 10019	06/10/2014	06/10/2019
DOL	DOL	****8618	RIEKS CONTRACTING LLC		4804 GAHWILER ROAD AUBURN NY 13021	05/01/2015	05/01/2020
DOL	DOL		ROBBYE BISSE SAR		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	01/11/2003	01/11/3003
DOL	DOL	****1855	ROBERT D BISHOP JR	ROBERT D BISHOP JR	P O BOX 112 MORRISONVILLE NY 12962	07/15/2014	07/15/2019
DOL	DOL		ROBERT D BISHOP JR		P O BOX 112 MORRISONVILLE NY 12962	07/15/2014	07/15/2019
DOL	NYC		ROBERT GUIDO		3256 BRUNER AVENUE BRONX NY 10469	07/29/2014	07/29/2019
DOL	DOL		ROBERT L EVANS		128A NORTH STAMFORD ROAD STAMFORD CT 06903	05/23/2013	05/23/2018
DOL	DOL		ROBERT TORDELLA		125 CHAUTAUQUA AVENUE LAKEWOOD NY 14750	06/24/2015	06/24/2020
DOL	DOL		ROCCO ESPOSITO		C/O ROCMAR CONTRACTING CO 620 COMMERCE STREET THORNWOOD NY 10594	09/24/2012	09/24/2017
DOL	DOL	****3859	ROCHESTER ACOUSTICAL CORP		P O BOX 799 HILTON NY 14468	02/19/2016	02/19/2021
DOL	DOL		ROCMAR CONSTRUCTION CORP		620 COMMERCE STREET THORNWOOD NY 10594	09/24/2012	09/24/2017
DOL	DOL	****7083	ROCMAR CONTRACTING CORP		620 COMMERCE STREET THORNWOOD NY 10594	09/24/2012	09/24/2017
DOL	NYC		RODNEY SCOTT		201 HEMPSTEAD AVENUE WEST HEMPSTEAD NY 11552	10/30/2015	10/30/2020
DOL	DOL		ROMEO WARREN		C/O RAW POWER ELECTRIC CORP 3 PARK PLACE MIDDLETOWN NY 10940	09/16/2013	09/15/2019
DOL	DOL		ROSS J MUSCOLINO		10 ST CHARLES STREET THORNWOOD NY 10594	09/03/2013	09/03/2018
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		S & S ELECTRIC		235 BROADWAY SCHENECTADY NY 12306	06/19/2013	06/19/2018
DOL	NYC		SABIR MUHAMMED		SUITE B-8 782 PELHAM PARKWAY SOUTH BRONX NY 10462	04/21/2016	04/21/2021
DOL	NYC		SAEED HASAN		4558 BROADWAY #6 NEW YORK NY 10040	08/04/2014	08/04/2019
DOL	DOL	****4923	SCHENLEY CONSTRUCTION INC		731 WARWICK TURNPIKE HEWITT NJ 07421	06/25/2012	12/11/2017
DOL	NYC	****2117	SCOTT ELECTRICAL LLC		201 HEMPSTEAD AVENUE WEST HEMPSTEAD NY 11552	10/30/2015	10/30/2020
DOL	DOL		SCOTT LEONARD	GLOBAL TANK CONSTRUCTION LLC	P O BOX 1238 SALINA OK 74365	11/28/2012	11/28/2017
DOL	DOL	****9751	SCW CONSTRUCTION		544 OLD ROUTE 23 ACRE NY 12405	02/14/2017	02/14/2022
DOL	DOL		SEAKCO CONSTRUCTION COMPANY LLC		128A NORTH STAMFORD ROAD STAMFORD CT 06903	05/23/2013	05/23/2018

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DOL	DOL	****9030	SEAKCO NEW YORK LLC	SEAKCO CONSTRUCTION COMPANY	128A NORTH STAMFORD ROAD STAMFORD CT 06903	05/23/2013	05/23/2018
DOL	DOL		SEAN BURBAGE	C/O SEAN BURBAGE CORP	445 ROOSA GAP ROAD BLOOMINGBURG NY 12721	04/14/2014	04/14/2019
DOL	DOL	****6586	SEAN BURBAGE CORP		445 ROOSA GAP ROAD BLOOMINGBURG NY 12721	04/14/2014	04/14/2019
DOL	NYC		SHAHZAD ALAM		21107 28TH AVE BAYSIDE NY 11360	07/02/2012	07/02/2017
DOL	DOL	****6904	SIGNING STAR LIMITED LIABILITY COMPANY		5 HANSEN PLACE WAYNE NJ 07470	09/18/2013	09/18/2018
DOL	DOL	****4025	SOLUTION MATTERS INC		198 NORWOOD ROAD PORT JEFFERSON NY 11776	11/19/2015	11/19/2020
DOL	NYC	****4934	SPHINX CONTRACTING CORP		240 HOME STREET TEANECK NJ 07666	08/04/2014	08/04/2019
DOL	DOL		SPORTSCRAFTERS INC		113 N MAPLE AVENUE GREENSBURG PA 15601	02/21/2013	02/21/2018
DOL	DOL	****3496	STAR INTERNATIONAL INC		89-51 SPRINGFIELD BLVD QUEENS VILLAGE NY 11427	08/11/2003	08/11/3003
DOL	DOL		STEPHEN BIANCHI		462 LAKEVIEW AVENUE VALHALLA NY 10595	12/16/2013	12/16/2018
DOL	DOL	****9751	STEPHEN C WAGAR		544 OLD ROUTE 23 ACRE NY 12405	02/14/2017	02/14/2022
DOL	DOL		STEPHEON SHELDON	FANTASTIC PAINTING	493 LANSING ROAD FULTONVILLE NY 12072	11/18/2013	11/18/2018
DOL	DOL		STEVEN P SUCATO		15-68 208TH STREET BAYSIDE NY 11360	06/23/2016	06/23/2021
DOL	DOL		STEVEN SAGGESE		3005 WYNSUM AVENUE MERRICK NY 11566	08/18/2014	08/18/2019
DOL	DOL		STEVEN TESTA		50 SALEM STREET - BLDG B LYNNFIELD MA 01940	01/23/2017	01/23/2022
DOL	DOL		STUART CHAITIN		634 ROUTE 303 BLAUVET NY 10913	07/26/2012	11/19/2018
DOL	NYC	****9432	SUBLINK LTD		346 THIRD AVENUE PELHAM NY 10803	11/19/2015	11/19/2020
DOL	DOL	****3210	SUPER SWEEP	FMS	4 LEGHORN COURT NEW YORK NY 11746	11/28/2012	11/28/2017
DOL	DOL		SUZANNE G GOLD	C/O GOLDS FLOORING INSTALLATIONS INC	25 HAMILTON ROAD MONTICELLO NY 12701	10/16/2013	10/16/2018
DOL	DOL	****7441	T & T CONCRETE INC		2560 HAMBURG TURNPIKE P O BOX 367LACKAWANNA NY 14218	07/08/2015	07/08/2020
DOL	DOL	****9676	T D CONTRACTORS CORP	T D CONTRACTORS INC	113 N MAPLE AVENUE GREENSBURG PA 15601	02/21/2013	02/21/2018
DOL	DOL		T D CONTRACTORS INC		113 N MAPLE AVENUE GREENSBURG PA 15601	02/21/2013	02/21/2018
DOL	DOL		TADCO CONSTRUCTION		101-61 99TH STREET OZONE PARK NY 11416	02/15/2017	02/15/2022
DOL	DOL	****7417	TADCO CONSTRUCTION CORP		101-61 99TH STREET OZONE PARK NY 11416	02/15/2017	02/15/2022
DOL	DOL		TAMMY LACITIGNOLA		C/O CATSKILL FENCE INSTAL 5445 ROUTE 32CATSKILL NY 12414	08/22/2014	08/22/2019
DOL	DOL	****9852	TAP STEEL INC		ROUTE 26 3101 P O BOX 457CONSTABLEVILLE NY 13325	01/28/2016	01/28/2021
DOL	DOL		TECH-MECHANICAL FAB DC INC		5 PARKER AVENUE POUGHKEEPSIE NY 12601	03/25/2014	03/25/2019
DOL	DOL	****5570	TESTA CORP		50 SALEM STREET - BLDG B LYNNFIELD MA 01940	01/23/2017	01/23/2022
DOL	DOL	****0887	THE BRINSON PAINTING CORPORATION		72 TAUNTON PLACE BUFFALO NY 14216	04/14/2015	04/14/2020
DOL	DOL	****8174	THE DALRYMPLE CORPORATION		UNIT 278 541 10TH STREET NWTALANTA GA 30318	12/01/2015	12/01/2020
DOL	DOL	****8174	THE DALRYMPLE GROUP LLC		289 JONESBORO RD/ STE 216 MCDONOUGH GA 30253	12/01/2015	12/01/2020
DOL	DOL		THE THORNE GROUP INC		113 N MAPLE AVENUE GREENSBURG PA 15601	02/21/2013	02/21/2018
DOL	DOL	****2070	THE UNIVERSAL GROUP OF NEW YORK INC		212 OXFORD WAY SCHENECTADY NY 12309	12/11/2012	09/16/2018
DOL	DOL	****9243	THE WELCOME MAT PROPERTY MANAGEMENT LLC		P O BOX 268 STILLWATER NY 12170	09/16/2013	03/21/2019



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DOL	DOL		THOMAS DESANTIS	DESANTIS ENTERPRISES	161 OSWEGO RIVER ROAD PHOENIX NY 13135	09/24/2013	11/18/2018
DOL	NYC		THOMAS SCARINCI		130-43 92ND AVENUE RICHMOND HILLS NY 11418	11/27/2013	11/27/2018
DOL	DOL	****2734	THREE FRIENDS CONSTRUCTION CORP		986 MADISON AVENUE PATERSON NJ 07501	01/03/2013	01/03/2018
DOL	NYC	****6253	THUNDER BROTHERS CORP		24 CONGRESS LANE SOUTH RIVER NJ 08882	05/01/2013	05/01/2018
DOL	DOL		TIMOTHY A PALUCK		C/O TAP STEEL INC RTE 26 3101/ P O BOX 457CONSTABLEVILLE NY 13325	01/28/2016	01/28/2021
DOL	DOL		TIMOTHY F BARBER		635 LUZERNE ROAD QUEENSBURY NY 12804	09/16/2013	09/16/2018
DOL	NYC	****1523	TM MECHANICAL CORP		130-43 92ND AVENUE RICHMOND HILLS NY 11418	11/27/2013	11/27/2018
DOL	DOL	****0600	TOMSON ALLOYS RECYCLING INC		143 FILLMORE AVENUE BUFFALO NY 14210	01/08/2015	01/08/2020
DOL	DOL	****3453	TORCHIA'S HOME IMPROVEMENT		10153 ROBERTS RD SAUQUOIT NY 13456	08/09/2016	08/09/2021
DOL	DOL	****6914	TRI-COUNTY RESTORATIONS & CONSTRUCTION INC		13 SUMMERSET DRIVE WALLKILL NY 12589	08/22/2014	08/22/2019
DOL	DOL		TRI-COUNTY RESTORATIONS INC		392 ROCK CUT ROAD WALDEN NY 12586	08/22/2014	08/22/2019
DOL	DOL		TROY D CLARKE	ADVANCED METALS	387 RIVERSIDE DRIVE JOHNSON CITY NY 13790	10/01/2012	10/01/2017
DOL	DOL	****9407	TURBO GROUP INC		15-68 208TH STREET BAYSIDE NY 11360	06/23/2016	06/23/2021
DOL	AG	****6490	UNIVERSAL STEEL FABRICATORS INC		90 JUNIUS STREET BROOKLYN NY 11212	01/23/2014	01/23/2019
DOL	NYC	****7174	V&R CONTRACTING		P O BOX 957 PORT JEFFERSON STA NY 11776	03/12/2014	03/12/2019
DOL	NYC		VALERIE VISCONTI		346 THIRD AVENUE PELHAM NY 10803	11/19/2015	11/19/2020
DOL	NYC		VEAP SELA	C/O COLONIAL ROOFING COMPANY INC	247 48TH STREET BROOKLYN NY 11220	02/05/2014	02/05/2019
DOL	DOL	****3270	VEZANDIO CONTRACTING CORP		530 BEECH STREET NEW HYDE PARK NY 11040	07/02/2012	07/02/2017
DOL	NYC		VICK CONSTRUCTION		21 DAREWOOD LANE VALLEY STREAM NY 11581	12/31/2013	12/31/2018
DOL	NYC		VICKRAM MANGRU	VICK CONSTRUCTI ON	21 DAREWOOD LANE VALLEY STREAM NY 11581	12/31/2013	12/31/2018
DOL	DOL		VICTOR ROTENBERG		C/O GMDV TRANS INC 67048 182ND STREETFRESH MEADOWS NY 11365	06/24/2016	06/24/2021
DOL	NYC		VINCENT PIZZITOLA		P O BOX 957 PORT JEFFERSON STA NY 11776	03/12/2014	03/12/2019
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		WESLEY J STAROBA		206 TALLY HO COURT SCHENECTADY NY 12303	06/19/2013	06/19/2018
DOL	DOL	****0078	WESLEY J STAROBA INC	S & S ELECTRIC	235 BROADWAY SCHENECTADY NY 12306	06/19/2013	06/19/2018
DOL	DOL		WILLIAM CONKLIN		5 PARKER AVENUE POUGHKEEPSIE NY 12601	03/25/2014	03/25/2019
DOL	DOL		WILLIAM DEAK		C/O MADISON AVE CONSTR CO 39 PENNY STREETWEST ISLIP NY 11795	11/02/2016	11/02/2021
DOL	DOL		WILLIAM MAZZELLA		134 MURRAY AVENUE YONKERS NY 10704	02/03/2014	02/03/2019
DOL	DOL		WILLIAM THORNE		113 N MAPLE AVENUE GREENSBURG PA 15601	02/21/2013	02/21/2018
DOL	DOL		WILLIE BRINSON		72 TAUNTON PLACE BUFFALO NY 14216	04/14/2015	04/14/2020
DOL	DOL	****6195	WILSON BROTHER DRYWALL CONTRACTORS		36 ABERSOLD STREET ROCHESTER NY 14621	08/31/2015	08/31/2020
DOL	DOL	****7345	YES SERVICE AND REPAIRS CORPORATION		145 LODGE AVE HUNTINGTON STATION NY 11476	08/09/2016	08/09/2021
DOL	DOL		YURIY IVANIN		C/O MOUNTAIN'S AIR INC 2471 OCEAN AVENUE-STE 7ABROOKLYN NY 11229	09/24/2012	09/18/2020



## **TECHNICAL SPECIFICATIONS**

- 200.0 GENERAL
- 201.0 SITE PREPARATION
- 202.0 MOBILIZATION / DEMOBILIZATION (NRCS CONSTRUCTION SPECIFICATION 8)
- 203.0 POLLUTION CONTROL (NRCS CONSTRUCTION SPECIFICATION 5)
- 204.0 REMOVAL OF WATER (NRCS CONSTRUCTION SPECIFICATION 11)
- 205.0 CONTRACTOR QUALITY CONTROL (NRCS CONSTRUCTION SPECIFICATION 94)
- 206.0 EARTH FILL (NRCS CONSTRUCTION SPECIFICATION 23)
- 207.0 EXCAVATION (NRCS CONSTRUCTION SPECIFICATION 21)
- 208.0 GEOTEXTILE (NRCS CONSTRUCTION SPECIFICATION 95)
- 209.0 CHANNEL CLEARING AND SHAPING (NRCS CONSTRUCTION SPECIFICATION 4)
- 210.0 ROCK RIPRAP (NRCS CONSTRUCTION SPECIFICATION 61)
- 211.0 CONTAMINATED SOIL (NYS DOT STANDARD SPECIFICATIONS SECTION 205)
- 212.0 PORTLAND CEMENT CONCRETE (NYS DOT STANDARD SPECIFICATIONS SECTION 500)
- 213.0 BIO-ENGINEERING (NRCS CONSTRUCTION SPECIFICATION 00)
- 214.0 SEEDING, SPRIGGING, AND MULCHING (NRCS CONSTRUCTION SPECIFICATION 6)
- 215.0 TREES AND SHRUBS
- 216.0 LIVE STAKE JOINT PLANTING (VTDEC SPECIFICATION 653)
- 217.0 CONSTRUCTION LAYOUT STAKING
- 218.0 STONE FILLING (NYS DOT STANDARD SPECIFICATIONS SECTION 733-21 B)
- 219.0 EXISTING UTILITIES
- 220.0 GUIDE RAILING (NYS DOT STANDARD SPECIFICATIONS SECTION 606)
- 501.0 GEOTEXTILE (NRCS MATERIAL SPECIFICATION 592)
- 502.0 ROCK FOR RIPRAP (NRCS MATERIAL SPECIFICATION 523)
- 601.0 SPECIAL CONDITIONS FOR ASBESTOS ABATEMENT



## **200.0 – GENERAL**

### **200.1-RELATED DOCUMENTS**

The provisions of the contract apply to the work specified in this section.

### **200.2-DESCRIPTION OF WORK**

This specification covers all items related to construction of in-stream structures, including excavation of the proposed channel.

### **200.3-REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

#### AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 136	(1996a) Sieve Analysis of Fine and Coarse Aggregates
ASTM D 422	(1963; R 1998) Particle-Size Analysis of Soils
ASTM D 2487	(1998) Classification of Soils for Engineering Purposes (Unified Soil Classification System)

#### NEW YORK STATE DEPARTMENT OF TRANSPORTATION (NYSDOT)

NYSDOT	Standard Specifications (2014) US Customary Units
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### **200.4-DEFINITIONS**

**200.4.1-Bankfull Elevation:** Bankfull elevation is the point of incipient flooding in an alluvial channel. This elevation is the reference for all elevations on or along the Hydraulic Structures described in this section and is clearly delineated in the project drawings.

**200.4.2-Bankfull Bench:** The bankfull bench is a constructed floodplain adjacent to the channel. The bankfull bench is constructed at the bankfull elevation.

**200.4.3-Footing Boulder (Footing Stone):** Footing boulders are boulders placed to provide a foundation for in-stream structures. Typically footing boulders are buried in the channel bottom and not seen when the structure is completed. The minimum footing depth at the invert of the stream shall be three times the protrusion height of the invert boulder. All surface boulders for all hydraulic structures require footing boulders unless bedrock is encountered at the proposed elevation of footing boulders. Footing boulders shall be durable sandstone with a minimum median axis diameter of 3.5 feet.

**200.4.4-Surface Boulder (Surface Stone):** Surface boulders are the top-most course of boulders used in each Hydraulic Structure. All surface boulders can be seen protruding from the water surface during extremely low flows. Surface boulders shall be durable sandstone with a minimum median axis diameter of 3.5 feet.

**200.4.5-Vane Length:** The vane length is the straight-line portion of a boulder vane measured from the stream bank at bankfull elevation to the channel bed.

**200.4.6-Vane Angle:** The vane angle is the smallest angle measured between a vane and a line tangent to bankfull elevation at the point where the vane intersects the bank.

**200.4.7-Floodplain Sill:** A floodplain sill is the buried extension of the in-stream structure perpendicular to the flow direction of the bankfull channel that extends beyond the bankfull channel.

**200.4.8-Thalweg:** The thalweg is the lowest portion of the bankfull channel.

## **200.5-MATERIALS**

Refer to each technical specification for materials necessary for each structure or item of work.

## **201.0-SITE PREPARATION**

### **201.1-GENERAL**

This work shall consist of clearing and grubbing, removing, and disposing of all vegetation and debris within the construction limits that is necessary to complete the work as indicated on the Contract Plans. This work shall also include preservation from injury or defacement of all vegetation and objects to remain. Native vegetation shall be preserved along the site where possible. Alignment stakes, grade stakes, guard stakes, boundary markers, bench marks and tie points shall be preserved until such time as their usefulness has ceased and permission for their destruction is given by the Engineer.

### **201.2-CLEARING AND GRUBBING**

All areas within the work limits indicated on the Plans shall be cleared and grubbed of the obstructions described. For areas outside of the construction limits, existing ground over shall be preserved insofar as possible, and the area shall be left neat and clear and in a condition which is reasonably consistent with the surroundings.

### **201.3-DISPOSAL**

All wood-type material shall be stockpiled and used for Woody Debris Toe Protection and Log Vanes. Material in excess shall be disposed of by the Contractor.

### **201.4-METHOD OF MEASUREMENT**

The quantity of work done will be on a lump sum basis.

### **201.5-BASIS OF PAYMENT**

Site preparation, determined as provided above, will be paid for at the contract price bid as a lump sum item, which price and payment shall be full compensation for the completion of items discussed with this task. The Contractor shall submit for payment a percentage of the bid item amount based on the work completed associated with this bid item. No deduction will be made, nor will any increase be made, in the lump sum site preparation item amount regardless of decreases or increases in the final total contract amount or for any other cause.





# Construction Specification 8—Mobilization and Demobilization

## **1. Scope**

The work consists of the mobilization and demobilization of the contractor's forces and equipment necessary for performing the work required under the contract. It does not include mobilization and demobilization for specific items of work for which payment is provided elsewhere in the contract. Mobilization will not be considered as work in fulfilling the contract requirements for commencement of work.

## **2. Equipment and material**

Mobilization shall include all activities and associated costs for transportation of contractor's personnel, equipment, and operating supplies to the site; establishment of offices, buildings, and other necessary general facilities for the contractor's operations at the site; premiums paid for performance and payment bonds including coinsurance and reinsurance agreements as applicable; and other items specified in section 4 of this specification.

Demobilization shall include all activities and costs for transportation of personnel, equipment, and supplies not required or included in the contract from the site; including the disassembly, removal, and site cleanup of offices, buildings, and other facilities assembled on the site specifically for this contract.

This work includes mobilization and demobilization required by the contract at the time of award. If additional mobilization and demobilization activities and costs are required during the performance of the contract as a result of changed, deleted, or added items of work for which the contractor is entitled to an adjustment in contract price, compensation for such costs will be included in the price adjustment for the item or items of work changed or added.

## **3. Payment**

Payment will be made as the work proceeds, after presentation of paid invoices or documentation of direct costs by the contractor showing specific mobilization and demobilization costs and supporting evidence of the charges of suppliers, subcontractors, and others. When the total of such payments is less than the lump sum contract price, the balance remaining will be included in the final contract payment. Payment of the lump sum contract price for mobilization and demobilization will constitute full compensation for completion of the work.

Payment will not be made under this item for the purchase costs of materials having a residual value, the purchase costs of materials to be incorporated in the project, or the purchase costs of operating supplies.

## **4. Items of work and construction details**



# Construction Specification 5—Pollution Control

## 1. Scope

The work consists of installing measures or performing work to control erosion and minimize the production of sediment and other pollutants to water and air from construction activities.

## 2. Material

All material furnished shall meet the requirements of the material specifications listed in section 8 of this specification.

## 3. Erosion and sediment control measures and works

The measures and works shall include, but are not limited to, the following:

**Staging of earthwork activities**—The excavation and moving of soil materials shall be scheduled to minimize the size of areas disturbed and unprotected from erosion for the shortest reasonable time.

**Seeding**—Seeding to protect disturbed areas shall occur as soon as reasonably possible following completion of that earthwork activity.

**Mulching**—Mulching to provide temporary protection of the soil surface from erosion.

**Diversions**—Diversions to divert water from work areas and to collect water from work areas for treatment and safe disposition. They are temporary and shall be removed and the area restored to its near original condition when the diversions are no longer required or when permanent measures are installed.

**Stream crossings**—Culverts or bridges where equipment must cross streams. They are temporary and shall be removed and the area restored to its near original condition when the crossings are no longer required or when permanent measures are installed.

**Sediment basins**—Sediment basins collect, settle, and eliminate sediment from eroding areas from impacting properties and streams below the construction site(s). These basins are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.

**Sediment filters**—Straw bale filters or geotextile sediment fences trap sediment from areas of limited runoff. Sediment filters shall be properly anchored to prevent erosion under or around them. These filters are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.

**Waterways**—Waterways for the safe disposal of runoff from fields, diversions, and other structures or measures. These works are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.

**Other**—Additional protection measures as specified in section 8 of this specification or required by Federal, State, or local government.

## 4. Chemical pollution

The contractor shall provide watertight tanks or barrels or construct a sump sealed with plastic sheets to collect and temporarily contain chemical pollutants, such as drained lubricating or transmission fluids, grease, soaps, concrete mixer washwater, or asphalt, produced as a by-product of the construction activities. Pollutants shall be disposed of in accordance with appropriate State and Federal regulations. At the completion of the construction work, tanks, barrels, and sumps shall be removed and the area restored to its original condition as specified in section 8 of this specification. Sump removal shall be conducted without causing pollution.

Sanitary facilities, such as chemical toilets, or septic tanks shall not be located next to live streams, wells, or springs. They shall be located at a distance sufficient to prevent contamination of any water source. At the completion of construction activities, facilities shall be disposed of without causing pollution as specified in section 8 of this specification.

## **5. Air pollution**

The burning of brush or slash and the disposal of other materials shall adhere to state and local regulations.

Fire prevention measures shall be taken to prevent the start or spreading of wildfires that may result from project activities. Firebreaks or guards shall be constructed and maintained at locations shown on the drawings.

All public access or haul roads used by the contractor during construction of the project shall be sprinkled or otherwise treated to fully suppress dust. All dust control methods shall ensure safe construction operations at all times. If chemical dust suppressants are applied, the material shall be a commercially available product specifically designed for dust suppression and the application shall follow manufacturer's requirements and recommendations. A copy of the product data sheet and manufacturer's recommended application procedures shall be provided to the engineer 5 working days before the first application.

## **6. Maintenance, removal, and restoration**

All pollution control measures and temporary works shall be adequately maintained in a functional condition for the duration of the construction period. All temporary measures shall be removed and the site restored to near original condition.

## **7. Measurement and payment**

**Method 1**—For items of work for which specific unit prices are established in the contract, each item is measured to the nearest unit applicable. Payment for each item is made at the contract unit price for that item. For water or chemical suppressant items used for dust control for which items of work are established in section 8 of this specification, measurement for payment will not include water or chemical suppressants that are used inappropriately or excessive to need. Such payment will constitute full compensation for the completion of the work.

**Method 2**—For items of work for which lump sum prices are established in the contract, payment is made as the work proceeds and supported by invoices presented by the contractor that reflect actual costs. If the total of all progress payments is less than the lump sum contract price for this item, the balance remaining for this item will be included in the final contract payment. Payment of the lump sum contract price will constitute full compensation for completion of the work.

**Method 3**—For items of work for which lump sum prices are established in the contract, payment will be prorated and provided in equal amounts on each monthly progress payment estimate. The number of months used for prorating shall be the number estimated to complete the work as outlined in the contractor's approved construction schedule. The final month's prorate amount will be provided with the final contract payment. Payment as described will constitute full compensation for completion of the work.

**All Methods**—The following provisions apply to all methods of measurement and payment. Compensation for any item of work described in the contract, but not listed in the bid schedule is included in the payment for the item of work to which it is made subsidiary. Such items, and the items to which they are made subsidiary, are identified in section 8 of this specification.

## **8. Items of work and construction details**

## SECTION 02245

### STREAM CHANNEL DEWATERING

#### PART 1 – GENERAL

- 1.1 The General Conditions and Supplementary General Conditions apply to this section of the Specifications.
- 1.2 SUMMARY
- A. Section includes control of water, flow diversions and construction dewatering.
  - B. Acquiring and paying for all permits and approvals related to running of pumps, discharging water, and other work incidental to the dewatering operations.
  - C. The Contractor shall furnish, install, operate and maintain dewatering equipment and systems as specified, shown on the Contract Drawings, or required during the construction of the project.
  - D. The Contractor shall provide standby equipment and power supply for maintaining uninterrupted construction dewatering.
  - E. The Contractor shall comply with all necessary permits from State and local agencies required for operation of the dewatering system, monitoring groundwater, and disposal of dewatering effluent.
- 1.3 PERFORMANCE REQUIREMENTS
- A. All water control provisions shall conform to Contract Drawings and approved water control plan. (See Section 3.8, Special Conditions), and to all requirements as specified in the approved SWPPP.
  - B. Proposed revisions to water control plan for any reason must be submitted in writing, and approved by the Engineer and NYSDEC.
  - C. Dewatering Performance: Design, furnish, install, test, operate, monitor and maintain dewatering system of sufficient scope, size, and capacity:
    - 1. To control, remove, and dispose of groundwater and permit excavation and construction to proceed on dry, stable subgrades.
    - 2. All dewatering facilities shall be designed, operated, and maintained to control existing flow of water in order to complete the channel excavation and all proposed work in a reasonably dry condition, and to prevent the transport of sediment and/or turbidity downstream throughout the duration of construction, in accordance with the SWPPP requirements.

3. Work includes removing dewatering system when no longer needed, or relocating dewatering during different phases of work to accommodate the proposed construction.
  4. Unless otherwise specified, diverted surface water shall be diverted to the same drainage-way that the water would have reached before being diverted.
  5. No separate payment will be made for dewatering measures that are damaged or overwhelmed by significant and sudden increases in the water flow. Contractors must plan for such events. In some instances, water flows may exceed those reasonably expected to be dewatered and the Contractor may be required to suspend work until such time that the water flows return to a manageable level. In the event the work is suspended due to high water, the Contractor will not be compensated for repairs to dewatering measures, but additional days will be added to the schedule, at no additional cost, to offset the days lost to high water.
  6. All dewatering facilities shall be designed, operated, and maintained such that discharge waters are kept clear of turbidity or sediment throughout the duration of construction.
- D. Pump Discharges: All pump discharges shall be routed to a designated discharge settling area to sufficiently settle out suspended sediments prior to water re-entering the watercourse, while also mitigating erosion or scour prior to encountering wetlands or watercourses.
- E. Water diversion provisions shall be designed to safely divert a minimum base flow of 50 cfs entirely around all active work areas, without the release turbidity downstream, 24 hours a day, 7 days a week.
- F. The Water Control Plan submitted by the Contractor must be consistent with the Flood Contingency Plan, which shall provide a description of the Contractor's plan to accommodate extreme flows through the project site without causing damage to the site. See Section 1.4C. The following table summarizes the predicted peak flows for Stony Clove:

Storm	Discharge (cfs)
Bankfull	840
2-Year	1,940
10-Year	2,390
50-Year	5,340
100-Year	7,250

- G. The Contractor shall monitor weather forecasts for the area. In the event that more than 1" of rain is forecast within a given 24-hour period, Contractor shall have a designated representative available to make preparations to the site (as described in the Water Control Plan) before the storm begins, and emergency repairs during the storm, if necessary.

## 1.4 SUBMITTALS

- A. Temporary Cofferdam plan for approval.
- B. Water control plan: Shall be submitted a minimum of two weeks prior to construction. Show arrangement, locations, and details of wells and well points; pumps, discharge lines, and means of discharge, control of sediment, and disposal of water, if applicable. If the submitted water control plan differs from the plan already provided by the Project Engineer, include Shop Drawings signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Emergency Operation (Flood Contingency) Plan: This emergency operation plan is designed to provide the Contractor with guidelines during a flood or a threatening flood period in order to protect the surrounding community.
  - 1. The Contractor shall monitor the weather forecasts and plan construction accordingly.
  - 2. If the weather forecasts should indicate the possibility of a major storm system within 24 to 48 hours, the Contractor shall plan for the possibility of high water levels at the site and the removal of temporary cofferdams and obstructions. Also, the Contractor shall notify the Engineer and Owner.
  - 3. If a significant rainfall in excess of two inches within a 24 hour period occurs or is predicted to occur by the National Weather Service, the Contractor shall maintain surveillance of the site and be prepared to provide emergency corrective stabilization measures, if necessary, until water levels recede and the construction site is stabilized.
  - 4. If the water level within the channel rises to a potentially unsafe level, the Contractor shall remove all equipment, construction materials (i.e., fuels, solvents, hydraulic fluids, etc.) and stockpiles from the floodplain, and alert the Owner of a potential emergency.
  - 5. The Contractor shall maintain sufficient equipment and manpower at the site in order to react to a flooding emergency.
  - 6. Compensation: No additional compensation shall be made to the Contractor for damages resulting from high water or from time lost due to inclement conditions or river flows such that Work within the project site is not feasible.
  - 7. The Contractor shall submit a detailed Emergency Operations and Flood Contingency Plan before any Work commences. Said plan shall include a detailed narrative describing the various types of emergencies and corresponding actions to be taken in response. Identified on the plans shall be the location where all construction equipment, oils, fuels, lubricants, and other supplies will be stored. The Contractor shall certify that personnel are familiar with all provisions of his plan and are able to execute same. The Contractor may use the above plan or prepare a plan of his own. In either case, the Contractor shall

submit to the Engineer an Emergency Operation Plan for approval within seven (7) days of the contract signing.

## 1.5 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning dewatering. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Pre-installation Conference: Conduct conference with Owner, Engineer, Contractor and Local Authorities at Project site.

## **PART 2 – PRODUCTS (Not Used)**

## **PART 3 – EXECUTION**

### 3.1 CONSTRUCTION METHODS

Description: The Contractor shall investigate and verify existing stream conditions, and evaluate the need for, and the type of protection and facilities required. Before commencing construction, the Contractor shall furnish the Engineer with details of the plan and methods he proposes to use for handling water and accomplishing the work. The Contractor may use sandbags, inflatable dams, cofferdams, or other types of protective facilities as approved by the Engineer. The furnishing of such plans and methods shall not relieve the Contractor of any of his responsibility for the safety of the work and for the successful completion of the project.

The height of any flow diversions and or barriers shall be elected by the Contractor to provide reasonable protection from flooding. At a minimum, any barriers shall be constructed to the locations shown on the plans. All such temporary structures or facilities shall be safely designed, extended to sufficient depth and be of such dimensions and water-tightness so as to assure construction of the permanent work to the limits shown on the plans. Movements or failures of the temporary protection facilities, or any portions thereof, which prevent proper completion of the permanent work, shall be corrected at the sole expense of the Contractor. Additionally, any cleanup associated with such movements or failures shall be completed at the sole expense of the Contractor.

Any pumping from within the areas of construction shall be done in such a manner as to prevent the possibility of movement of sediment from within these areas. Any pumped water must be discharged to a temporary sediment basin and/or in accordance with the requirements of the Standard Specifications.

Unless otherwise provided or directed, all such temporary protective work shall be removed and disposed of in an approved manner when no longer required.

The Contractor shall be responsible for the scheduling of work described herein so as not to interfere with any sequence of operations developed for this project. Delays as a result of work required under this specification shall not constitute a claim for an extension of contract time.



### 3.2 INSTALLATION

- A. Conform to Contract Drawings.
- B. Provide temporary grading to facilitate dewatering and control of surface water.
- C. Monitor dewatering systems continuously.
- D. Protect and maintain temporary erosion and sedimentation controls during dewatering operations.
- E. Before excavating below groundwater level, place system into operation to lower water to specified levels. Operate system continuously until channel excavation is complete or until dewatering is no longer required.
- F. Provide an adequate system to lower and control water to permit excavation, construction of structures, and placement of fill materials on dry subgrades.
  - 1. Do not permit open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability.

### 3.3 COFFERDAMS AND DIVERSIONS

- A. Cofferdams will be constructed of clean, inert materials that will have a minimal impact on the stream system. Cofferdams constructed of soil or material from the stream will not be used unless specifically directed by the Contracting Officer.
- B. Acceptable materials shall include water structures, concrete jersey barriers, plastic barriers, and other comparable items.
- C. The Contractor is responsible to install all cofferdams/diversion structures in a safe and correct manner. Cofferdams must be installed so as to withstand the pressures exerted by the stream flow or ponded water against the cofferdam.
- D. Commercial products used as cofferdams (i.e. water structures, temporary dams) shall be installed in accordance with the manufactures instructions.
- E. The Contractor is permitted to make minor disturbances to the streambed or banks as may be required to properly install the cofferdam. All disturbances will be limited to only that disturbance necessary to install the cofferdam. Cofferdam installation must be done in the presence of the Contracting Officer.
- F. If the Contract conditions call for the use of sand bags, or if the Contractor shall use sand bags to assist with de-watering, the Contractor shall fill the sand bags with clean, washed sand. Soils with fine particles are prohibited. When placed in the flowing water, the sand bags shall not produce visible turbidity.
- G. The stream channel shall be diverted around the active construction area in a temporary bypass or diversion pipe.

### 3.4 BYPASS CHANNEL

- A. The horizontal location of any bypass channel to be used shall be staked in the field prior to starting construction for approval by the owner and engineer. Its location may be adjusted in order to minimize disturbance to existing trees.
- B. The channel shall be maintained throughout the duration of construction and repaired as necessary due to various stream flow conditions.
- C. At the conclusion of construction, the bypass channel shall be filled in to desired proposed grade as indicated on the plans.

### 3.5 DE-WATERING OF CHANNEL EXCAVATIONS

- A. When in-stream construction requires deep excavation for the placement of footer rocks, the Contractor shall keep the excavation reasonably clear of water to allow observation of the footer rock placement. Excavation can be accomplished with a small diameter pump (2" or larger) with water pumped to the channel or to a filter area if excessive turbidity is produced in the channel.

### 3.6 MAINTENANCE, REMOVAL AND RESTORATION

- A. The Contractor shall maintain all de-watering measures in good operating form until such time that the measures are no longer needed.
- B. In the event that high flows damage or remove de-watering measures, the Contractor shall repair or replace the measures as soon as the water flows allow and prior to commencing work.
- C. Upon completion of the work, and approval of the Contracting Officer, the Contractor shall remove all de-watering measures. The Contractor shall remove pumps and hoses from the site, as well as cofferdams from the stream channel.
- D. Any fill placed in the active channel during the de-watering process, shall be removed from the channel upon completion of the work. In the event sandbags are used in the de-watering process, the sand bags will be removed and emptied outside of the active channel area.
- E. Upon removal of the de-watering measures, the Contractor shall regrade any disturbed surfaces, remove any contaminated soils, and restore all areas consistent with the stabilization of the project site as set forth in the Contract Documents.

### 3.7 SPECIAL CONDITIONS

- A. During all construction in the existing or proposed stream channel, the Contractor shall divert the entire stream flow around the work area. Diversions must be maintained 24 hours per day, 7 days a week during the construction period.

- B. Upon acceptance of the Contractor's bid, the Contractor shall have five (5) days to submit a written Water Control Plan for review and approval by the UCSWCD and the Engineer. Prior to development of the Water Control Plan, the UCSWCD and the Contractor shall thoroughly review the project site, sequencing of work and other conditions as may be required to be addressed in the Water Control Plan. In the event the Water Control Plan is deemed inadequate to meet the dewatering requirements, the Contractor shall, at his/her expense make sufficient modifications to the plan so as to provide the required de-watering. The Water Control Plan must meet all of the requirements as set forth in this specification.
  
- C. The Contractors Water Control Plan must address a contingency strategy for addressing increased flows due to storm events which occur during construction.

**PART 4 – MEASUREMENT AND PAYMENT**

4.1 See Section 01270 – Unit Prices.

**END OF SECTION 02245**



# Construction Specification 94—Contractor Quality Control

## 1. Scope

The work consists of developing, implementing, and maintaining a quality control system to ensure that the specified quality is achieved for all materials and work performed.

## 2. Equipment and materials

Equipment and material used for quality control shall be of the quality and condition required to meet the test specifications cited in the contract. Testing equipment shall be properly adjusted and calibrated at the start of operations and the calibration maintained at the frequency specified. Records of equipment calibration tests shall be available to the engineer at all times. Equipment shall be operated and maintained by qualified operators as prescribed in the manufacturer's operating instructions, the references specified, and as specified in section 10 of this specification. All equipment and materials used in performing quality control testing shall be as prescribed by the test standards referenced in the contract or in section 10.

All equipment and materials shall be handled and operated in a safe and proper manner and shall comply with all applicable regulations pertaining to their use, operation, handling, storage, and transportation.

## 3. Quality control system

**Method 1**—The contractor shall develop, implement, and maintain a system of quality control to provide the specified material testing and verification of material quality before use. The system activities shall include procedures to verify adequacy of completed work, initiate corrective action to be taken, and document the final results. The identification of the quality control personnel and their duties and authorities shall be submitted to the contracting officer in writing within 15 calendar days after notice of award.

**Method 2**—The contractor shall develop, implement, and maintain a system adequate to achieve the specified quality of all work performed, material incorporated, and equipment furnished before use. The system established shall be documented in a written plan developed by the contractor and approved by the contracting officer. The system activities shall include the material testing and inspection needed to verify the adequacy of completed work and procedures to be followed when corrective action is required. Daily records to substantiate the conduct of the system shall be maintained by the contractor. The quality control plan shall cover all aspects of quality control and shall address, as a minimum, all specified testing and inspection requirements. The plan provided shall be consistent with the planned performance in the contractor's approved construction schedule. The plan shall identify the contractor's onsite quality control manager and provide an organizational listing of all quality control personnel and their specific duties. The written plan shall be submitted to the contracting officer within 15 calendar days after notice of award. The contractor shall not proceed with any construction activity that requires inspection until the written plan is approved by the contracting officer.

**All methods**—The quality control system shall include, but not be limited to, a rigorous examination of construction material, processes, and operation, including testing of material and examination of manufacturer's certifications as required, to verify that work meets contract requirements and is performed in a competent manner.

#### **4. Quality control personnel**

*Method 1*—Quality control activities shall be accomplished by competent personnel. A competent person is: One who is experienced and capable of identifying, evaluating, and documenting that materials and processes being used will result in work that complies with the contract; and, who has authority to take prompt action to remove, replace, or correct such work or products not in compliance. Off-site testing laboratories shall be certified or inspected by a nationally recognized entity. The Contractor shall submit to the Contracting Officer, for approval, the names, qualifications, authorities, certifications, and availability of the competent personnel who will perform the quality control activities.

*Method 2*—Quality control activities shall be accomplished by competent personnel who are separate and apart from line supervision and who report directly to management. A competent person is one who is experienced and capable of identifying, evaluating, and documenting that material and processes being used will result in work that complies with the contract, and who has authorization to take prompt action to remove, replace, or correct such work or products not in compliance. Offsite testing laboratories shall be certified or inspected by a nationally recognized entity. The contractor shall submit to the contracting officer, for approval, the names, qualifications, authorities, certifications, and availability of the competent personnel who will perform the quality control activities.

#### **5. Post-award conference**

The contractor shall meet with the contracting officer before any work begins and discuss the contractor's quality control system. The contracting officer and the contractor shall develop a mutual understanding regarding the quality control system.

#### **6. Records**

The contractor's quality control records shall document both acceptable and deficient features of the work and corrective actions taken. All records shall be on forms approved by the contracting officer, be legible, and be dated and signed by the competent person creating the record.

Unless otherwise specified in section 10 of this specification, records shall include:

- a. Documentation of shop drawings including date submitted to and date approved by the contracting officer, results of examinations, any need for changes or modifications, manufacturer's recommendations and certifications, if any, and signature of the authorized examiner.
- b. Documentation of material delivered including quantity, storage location, and results of quality control examinations and tests.
- c. Type, number, date, time, and name of individual performing quality control activities.
- d. The material or item inspected and tested, the location and extent of such material or item, and a description of conditions observed and test results obtained during the quality control activity.
- e. The determination that the material or item met the contract provisions and documentation that the engineer was notified.
- f. For deficient work, the nature of the defects, specifications not met, corrective action taken, and results of quality control activities on the corrected material or item.

#### **7. Reporting results**

The results of contractor quality control inspections and tests shall be communicated to the engineer immediately upon completion of the inspection or test. Unless otherwise specified in section 10, the original plus one copy of all records, inspections, tests performed, and material testing reports shall be submitted to the engineer within one working day of completion. The original plus one copy of documentation of material delivered shall be submitted to the engineer before the material is used.

## **8. Access**

The contracting officer and the engineer shall be given free access to all testing equipment, facilities, sites, and related records for the duration of the contract.

## **9. Payment**

**Method 1**—For items of work for which lump sum prices are established in the contract, payment is made as the work proceeds, after presentation by the contractor of invoices showing related costs and evidence of charges by suppliers, subcontractors, and others for furnishing supplies and work performed. If the total of such payments is less than the lump sum contract price for this item, the remaining balance is included in the final contract payment. Payment of the lump sum contract price constitutes full compensation for completion of the work.

Payment is not made under this item for the purchase cost of material and equipment having a residual value.

**Method 2**—For items of work for which lump sum prices are established in the contract, payment is prorated and paid in equal amounts on each monthly estimate. The number of months used for prorating shall be the number estimated to complete the work. The final month's prorated amount is made with the final payment. Payment as described above constitutes full compensation for completion of the work.

Payment is not made under this item for the purchase cost of material and equipment having a residual value.

**All methods**—Compensation for any item of work described in the contract, but not listed in the bid schedule, is included in the payment for the item of work to which it is made subsidiary. Such items and the items to which they are made subsidiary are identified in section 10.

## **10. Items of work and construction details**





# Construction Specification 23—Earthfill

## 1. Scope

The work consists of the construction of earth embankments, other earthfills, and earth backfills required by the drawings and specifications.

Earthfill is composed of natural earth materials that can be placed and compacted by construction equipment operated in a conventional manner.

Earth backfill is composed of natural earth material placed and compacted in confined spaces or adjacent to structures (including pipes) by hand tamping, manually directed power tampers or vibrating plates, or their equivalent.

## 2. Material

All fill material shall be obtained from required excavations and designated borrow areas. The selection, blending, routing, and disposition of material in the various fills shall be subject to approval by the engineer.

Fill materials shall contain no frozen soil, sod, brush, roots, or other perishable material. Rock particles larger than the maximum size specified for each type of fill shall be removed prior to compaction of the fill.

The types of material used in the various fills shall be as listed and described in the specifications and drawings.

## 3. Foundation preparation

Foundations for earthfill shall be stripped to remove vegetation and other unsuitable material or shall be excavated as specified.

Except as otherwise specified, earth foundation surfaces shall be graded to remove surface irregularities and shall be scarified parallel to the axis of the fill or otherwise acceptably scored and loosened to a minimum depth of 2 inches. The moisture content of the loosened material shall be controlled as specified for the earthfill, and the surface material of the foundation shall be compacted and bonded with the first layer of earthfill as specified for subsequent layers of earthfill.

Earth abutment surfaces shall be free of loose, uncompacted earth in excess of 2 inches in depth normal to the slope and shall be at such a moisture content that the earthfill can be compacted against them to produce a good bond between the fill and the abutments.

Rock foundation and abutment surfaces shall be cleared of all loose material by hand or other effective means and shall be free of standing water when fill is placed upon them. Occasional rock outcrops in earth foundations for earthfill, except in dams and other structures designed to restrain the movement of water, shall not require special treatment if they do not interfere with compaction of the foundation and initial layers of the fill or the bond between the foundation and the fill.

Foundation and abutment surfaces shall be no steeper than one horizontal to one vertical unless otherwise specified. Test pits or other cavities shall be filled with compacted earthfill conforming to the specifications for the earthfill to be placed upon the foundation.

#### **4. Placement**

Earthfill shall not be placed until the required excavation and foundation preparation have been completed and the foundation has been inspected and approved by the engineer. Earthfill shall not be placed upon a frozen surface nor shall snow, ice, or frozen material be incorporated in the earthfill matrix.

Earthfill shall be placed in approximately horizontal layers. The thickness of each layer before compaction shall not exceed the maximum thickness specified in section 10 or shown on the drawings. Materials placed by dumping in piles or windrows shall be spread uniformly to not more than the specified thickness before being compacted.

Hand compacted earth backfill shall be placed in layers whose thickness before compaction does not exceed the maximum thickness specified for layers of earth backfill compacted by manually directed power tampers.

Earth backfill shall be placed in a manner that prevents damage to the structures and allows the structures to assume the loads from the earth backfill gradually and uniformly. The height of the earth backfill adjacent to a structure shall be increased at approximately the same rate on all sides of the structure.

Earthfill and earth backfill in dams, levees, and other structures designed to restrain the movement of water shall be placed to meet the following additional requirements:

- (a) The distribution of materials throughout each zone shall be essentially uniform, and the earthfill shall be free from lenses, pockets, streaks, or layers of material differing substantially in texture, moisture content, or gradation from the surrounding material. Zone earthfills shall be constructed concurrently unless otherwise specified.
- (b) The surface of each layer shall be scarified parallel to the axis of the fill to a depth of not less than 2 inches before the next layer is placed.
- (c) The top surface of embankments shall be maintained approximately level during construction with two exceptions: A crown or cross-slope of about 2 percent shall be maintained to ensure effective drainage, or as otherwise specified for drainfill or sectional zones.
- (d) Dam embankments shall be constructed in continuous layers from abutment to abutment except where openings to facilitate construction or to allow the passage of streamflow during construction are specifically authorized in the contract.
- (e) Embankments built at different levels as described under (c) or (d) above shall be constructed so that the slope of the bonding surfaces between embankment in place and embankment to be placed is not steeper than 3 feet horizontal to 1 foot vertical. The bonding surface of the embankment in place shall be stripped of all material not meeting the requirements of this specification and shall be scarified, moistened, and recompacted when the new earthfill is placed against it. This ensures a good bond with the new earthfill and obtains the specified moisture content and density at the contact of the in-place and new earthfills.

#### **5. Control of moisture content**

During placement and compaction of earthfill and earth backfill, the moisture content of the material being placed shall be maintained within the specified range.

The application of water to the earthfill material shall be accomplished at the borrow areas insofar as practicable. Water may be applied by sprinkling the material after placement on the earthfill, if necessary. Uniform moisture distribution shall be obtained by disking.

Material that is too wet when deposited on the earthfill shall either be removed or be dried to the specified moisture content prior to compaction.

If the top surface of the preceding layer of compacted earthfill or a foundation or abutment surface in the zone of contact with the earthfill becomes too dry to permit suitable bond, it shall either be removed or scarified and moistened by sprinkling to an acceptable moisture content before placement of the next layer of earthfill.

## 6. Compaction

**Earthfill**—Earthfill shall be compacted according to the following requirements for the class of compaction specified:

**Class A compaction**—Each layer of earthfill shall be compacted as necessary to provide the density of the earthfill matrix not less than the minimum density specified in Section 10 or identified on the drawings. The earthfill matrix is defined as the portion of the earthfill material finer than the maximum particle size allowed in the reference compaction test method specified (ASTM D698 or ASTM D1557).

**Class B compaction**—Each layer of earthfill shall be compacted to a mass density not less than the minimum density specified.

**Class C compaction**—Each layer of earthfill shall be compacted by the specified number of passes of the type and weight of roller or other equipment specified or by an approved equivalent method. Each pass shall consist of at least one passage of the roller wheel or drum over the entire surface of the layer.

**Earth backfill**—Earth backfill adjacent to structures shall be compacted to a density equivalent to that of the surrounding in-place earth material or adjacent required earthfill or earth backfill. Compaction shall be accomplished by hand tamping or manually directed power tampers, plate vibrators, walk-behind, miniature, or self-propelled rollers. Unless otherwise specified heavy equipment including backhoe mounted power tampers or vibrating compactors and manually directed vibrating rollers shall not be operated within 3 feet of any structure. Towed or self-propelled vibrating rollers shall not be operated within 5 feet of any structure. Compaction by means of drop weights operating from a crane or hoist is not permitted.

The passage of heavy equipment will not be allowed:

- Over cast-in-place conduits within 14-days after placement of the concrete
- Over cradled or bedded precast conduits within 7 days after placement of the concrete cradle or bedding
- Over any type of conduit until the backfill has been placed above the top surface of the structure to a height equal to one-half the clear span width of the structure or pipe or 3 feet, whichever is greater, except as may be specified in section 10.

Compacting of earth backfill adjacent to structures shall not be started until the concrete has attained the strength specified in section 10 for this purpose. The strength is determined by compression testing of test cylinders cast by the contractor's quality control personnel for this purpose and cured at the work site in the manner specified in ASTM C 31 for determining when a structure may be put into service.

When the required strength of the concrete is not specified as described above, compaction of earth backfill adjacent to structures shall not be started until the following time intervals have elapsed after placement of the concrete.

Structure	Time interval (days)
Vertical or near-vertical walls with earth loading on one side only	14
Walls backfilled on both sides simultaneously	7
Conduits and spillway risers, cast-in-place (with inside forms in place)	7
Conduits and spillway risers, cast-in-place (inside forms removed)	14
Conduits, pre-cast, cradled	2
Conduits, pre-cast, bedded	1
Cantilever outlet bents (backfilled both sides simultaneously)	3

### 7. Reworking or removal and replacement of defective earthfill

Earthfill placed at densities lower than the specified minimum density or at moisture contents outside the specified acceptable range of moisture content or otherwise not conforming to the requirements of the specifications shall be reworked to meet the requirements or removed and replaced by acceptable earthfill. The replacement earthfill and the foundation, abutment, and earthfill surfaces upon which it is placed shall conform to all requirements of this specification for foundation preparation, approval, placement, moisture control, and compaction.

### 8. Testing

During the course of the work, the contractor shall perform quality control tests, as applicable, to identify earthfill and earth backfill materials; determine the reference maximum density and optimum moisture content; and document that the moisture content of material at the time of compaction and the density of earthfill and earth backfill in place conform to the requirements of this specification.

*Determining Reference Maximum Density and Optimum Moisture Content*—For Class A compaction, the reference maximum density and optimum moisture content shall be determined in accordance with the compaction test and method specified on the drawings or in section 10.

*Documenting Specification Conformance*—In-place densities of earthfill and earth backfill requiring Class A compaction shall be measured in accordance with ASTM D1556, D2167, D2937, or D6938. Moisture contents of earthfill and earth backfill at the time of compaction shall be measured in accordance with ASTM D2216, D4643, or D6938. Values of moisture content determined by ASTM D2216 are considered the true value of the soil moisture. Values of moisture content determined by ASTM D4643 or D6938 shall be verified by comparison to values obtained by ASTM D2216. Values of in-place density and moisture content determined by these tests shall be compared to the minimum density and moisture content range specified on the drawings or in section 10.

*Correction for Oversize Particles*—If the materials to be used for earthfill or earth backfill contain more than 5 percent by dry weight of oversize rock particles (particles larger than those allowed in the specified compaction test and method), corrections for oversize particles shall be made using the appropriate procedures explained in ASTM D4718.

### 9. Measurement and payment

For items of work for which specific unit prices are established in the contract, the volume of each type and compaction class of earthfill and earth backfill within the specified zone boundaries and pay limits is measured and computed to the nearest cubic yard by the method of average cross-sectional end areas. Unless otherwise specified in section 10, no deduction in volume is made for embedded items, such as, but not limited to, conduits, inlet structures, outlet structures, embankment drains, sand diaphragm and outlet, and their appurtenances.

The pay limits shall be as defined below, with the further provision that earthfill required to fill voids resulting from overexcavation of the foundation, outside the specified lines and grades, will be included in the measurement for payment only under the following conditions:

- Where such overexcavation is directed by the engineer to remove unsuitable material, and
- Where the unsuitable condition is not a result of the contractor's improper construction operations as determined by the engineer.

Earthfill beyond the specified lines and grades to backfill excavation required for compliance with OSHA requirements will be considered subsidiary to the earthfill bid item(s).

**Method 1**—The pay limits shall be as designated on the drawings.

**Method 2**—The pay limits shall be the measured surface of the foundation when approved for placement of the earthfill and the specified neat lines of the earthfill surface.

**Method 3**—The pay limits shall be the measured surface of the foundation when approved for placement of the earthfill and the measured surface of the completed earthfill.

**Method 4**—The pay limits shall be the specified pay limits for excavation and the specified neat lines of the earthfill surface.

**Method 5**—The pay limits shall be the specified pay limits for excavation and the measured surface of the completed earthfill.

**Method 6**—Payment for each type and compaction class of earthfill and earth backfill is made at the contract unit price for that type and compaction class of earthfill. Such payment will constitute full compensation for all labor, material, equipment, and all other items necessary and incidental to the performance of the work.

**Method 7**—Payment for each type and compaction class of earthfill and earth backfill is made at the contract unit price for that type and compaction class of earthfill. Such payment will constitute full compensation for all labor, material, equipment, and all other items necessary and incidental to the performance of the work except furnishing, transporting, and applying water to the foundation and earthfill material. Water applied to the foundation and earthfill material is measured and payment made as specified in Construction Specification 10.

**All methods**—The following provisions apply to all methods of measurement and payment. Compensation for any item of work described in the contract, but not listed in the bid schedule is included in the payment for the item of work to which it is made subsidiary. Such items and the items to which they are made subsidiary are identified in section 10 of this specification.

## **10. Items of work and construction details**



# Construction Specification 21—Excavation

## 1. Scope

The work shall consist of the excavation required by the drawings and specifications and disposal of the excavated materials.

## 2. Classification

Excavation is classified as **common excavation**, **rock excavation**, or **unclassified excavation** in accordance with the following definitions.

**Common excavation** is defined as the excavation of all materials that can be excavated, transported, and unloaded using heavy ripping equipment and wheel tractor-scrapers with pusher tractors or that can be excavated and dumped into place or loaded onto hauling equipment by excavators having a rated capacity of one cubic yard or larger and equipped with attachments (shovel, bucket, backhoe, dragline, or clam shell) appropriate to the material type, character, and nature of the materials.

**Rock excavation** is defined as the excavation of all hard, compacted, or cemented materials that require blasting or the use of ripping and excavating equipment larger than defined for common excavation. The excavation and removal of isolated boulders or rock fragments larger than 1 cubic yard encountered in materials otherwise conforming to the definition of common excavation shall be classified as rock excavation. The presence of isolated boulders or rock fragments larger than 1 cubic yard is not in itself sufficient cause to change the classification of the surrounding material.

For the purpose of these classifications, the following definitions shall apply:

*Heavy ripping equipment* is a rear-mounted, heavy duty, single-tooth, ripping attachment mounted on a track type tractor having a power rating of at least 250 flywheel horsepower unless otherwise specified in section 10.

*Wheel tractor-scraper* is a self-loading (not elevating) and unloading scraper having a struck bowl capacity of at least 12 cubic yards.

*Pusher tractor* is a track type tractor having a power rating of at least 250 flywheel horsepower equipped with appropriate attachments.

**Unclassified excavation** is defined as the excavation of all materials encountered, including rock materials, regardless of their nature or the manner in which they are removed.

## 3. Blasting

The transportation, handling, storage, and use of dynamite and other explosives shall be directed and supervised by a person(s) of proven experience and ability who is authorized and qualified to conduct blasting operations.

Blasting shall be done in a manner as to prevent damage to the work or unnecessary fracturing of the underlying rock materials and shall conform to any special requirements in section 10 of this specification. When specified in section 10, the contractor shall furnish the engineer, in writing, a blasting plan before blasting operations begin.

#### **4. Use of excavated material**

**Method 1**—To the extent they are needed, all suitable material from the specified excavations shall be used in the construction of required permanent earthfill or rockfill. The suitability of material for specific purposes is determined by the engineer. The contractor shall not waste or otherwise dispose of suitable excavated material.

**Method 2**—Suitable material from the specified excavations may be used in the construction of required earthfill or rockfill. The suitability of material for specific purposes is determined by the engineer.

#### **5. Disposal of waste materials**

**Method 1**—All surplus or unsuitable excavated materials are designated as waste and shall be disposed of at the locations shown on the drawings.

**Method 2**—All surplus or unsuitable excavated materials are designated as waste and shall be disposed of by the contractor at sites of his own choosing away from the site of the work. The disposal shall be in an environmentally acceptable manner that does not violate local rules and regulations.

#### **6. Excavation limits**

Excavations shall comply with OSHA Construction Industry Standards (29CFR Part 1926) Subpart P, Excavations, Trenching, and Shoring. All excavations shall be completed and maintained in a safe and stable condition throughout the total construction phase. Structure and trench excavations shall be completed to the specified elevations and to the length and width required to safely install, adjust, and remove any forms, bracing, or supports necessary for the installation of the work. Excavations outside the lines and limits shown on the drawings or specified herein required to meet safety requirements shall be the responsibility of the contractor in constructing and maintaining a safe and stable excavation.

#### **7. Borrow excavation**

When the quantities of suitable material obtained from specified excavations are insufficient to construct the specified earthfills and earth backfills, additional material shall be obtained from the designated borrow areas. The extent and depth of borrow pits within the limits of the designated borrow areas shall be as specified in section 10 or as approved by the engineer.

Borrow pits shall be excavated and finally dressed to blend with the existing topography and sloped to prevent ponding and to provide drainage.

#### **8. Overexcavation**

Excavation in rock beyond the specified lines and grades shall be corrected by filling the resulting voids with portland cement concrete made of materials and mix proportions approved by the engineer. Concrete that will be exposed to the atmosphere when construction is completed shall meet the requirements of concrete selected for use under Construction Specification 31, Concrete for Major Structures, or 32, Structure Concrete, as appropriate.

Concrete that will be permanently covered shall contain not less than five bags of cement per cubic yard. The concrete shall be placed and cured as specified by the engineer.

Excavation in earth beyond the specified lines and grades shall be corrected by filling the resulting voids with approved, compacted earthfill. The exception to this is that if the earth is to become the subgrade for riprap, rockfill, sand or gravel bedding, or drainfill, the voids may be filled with material conforming to the specifications for the riprap, rockfill, bedding, or drainfill. Before correcting an overexcavation condition, the contractor shall review the planned corrective action with the engineer and obtain approval of the corrective measures.



## **9. Measurement and payment**

For items of work for which specific unit prices are established in the contract, the volume of each type and class of excavation within the specified pay limits is measured and computed to the nearest cubic yard by the method of average cross-sectional end areas or by methods outlined in section 10 of this specification. Regardless of quantities excavated, the measurement for payment is made to the specified pay limits except that excavation outside the specified lines and grades directed by the engineer to remove unsuitable material is included. Excavation required because unsuitable conditions result from the contractor's improper construction operations, as determined by the engineer, is not included for measurement and payment.

**Method 1**—The pay limits shall be as designated on the drawings.

**Method 2**—The pay limits shall be defined as follows:

- a. The upper limit shall be the original ground surface as it existed before the start of construction operations except that where excavation is performed within areas designated for previous excavation or earthfill, the upper limit shall be the modified ground surface resulting from the specified previous excavation or earthfill.
- b. The lower and lateral limits shall be the neat lines and grades shown on the drawings.

**Method 3**—The pay limits shall be defined as follows:

- a. The upper limit shall be the original ground surface as it existed before the start of construction operations except that where excavation is performed within areas designated for previous excavation or earthfill, the upper limit shall be the modified ground surface resulting from the specified previous excavation or earthfill.
- b. The lower and lateral limits shall be the true surface of the completed excavation as directed by the engineer.

**Method 4**—The pay limits shall be defined as follows:

- a. The upper limit shall be the original ground surface as it existed before the start of construction operations except that where excavation is performed within areas designated for previous excavation or earthfill, the upper limit shall be the modified ground surface resulting from the specified previous excavation or earthfill.
- b. The lower limit shall be at the bottom surface of the proposed structure.
- c. The lateral limits shall be 18 inches outside of the outside surface of the proposed structure or shall be vertical planes 18 inches outside of and parallel to the footings, whichever gives the larger pay quantity, except as provided in d below.
- d. For trapezoidal channel linings or similar structures that are to be supported upon the sides of the excavation without intervening forms, the lateral limits shall be at the underside of the proposed lining or structure.
- e. For the purposes of the definitions in b, c, and d, above, any specified bedding or drainfill directly beneath or beside the structure will be considered to be a part of the structure.

**All methods**—The following provisions apply to all methods of measurement and payment.

Payment for each type and class of excavation is made at the contract unit price for that type and class of excavation. Such payment will constitute full compensation for all labor, materials, equipment, and all other items necessary and incidental to the performance of the work except that extra payment for backfilling overexcavation will be made in accordance with the following provisions.

Payment for backfilling overexcavation, as specified in section 8 of this specification, is made only if the excavation outside specified lines and grades is directed by the engineer to remove unsuitable material and if the unsuitable condition is not a result of the contractor's improper construction operations as determined by the engineer.

Compensation for any item of work described in the contract, but not listed in the bid schedule is included in the payment for the item of work to which it is made subsidiary. Such items and the items to which they are made subsidiary are identified in section 10 of this specification.

## **10. Items of work and construction details**

# Construction Specification 95—Geotextile

## 1. Scope

This work consists of furnishing all material, equipment, and labor necessary for the installation of geotextiles.

## 2. Quality

Geotextiles shall conform to the requirements of Material Specification 592 and this specification.

## 3. Storage

Before use, the geotextile shall be stored in a clean, dry location out of direct sunlight, not subject to extremes of either hot or cold temperatures, and with the manufacturer's protective cover undisturbed. Receiving, storage, and handling at the job site shall be in accordance with the requirements listed in ASTM D 4873.

## 4. Surface preparation

The surface on which the geotextile is to be placed shall be graded to the neat lines and grades as shown on the drawings. It shall be reasonably smooth and free of loose rock and clods, holes, depressions, projections, muddy conditions, and standing or flowing water (unless otherwise specified in section 7 of this specification).

## 5. Placement

Before the geotextile is placed, the soil surface will be reviewed for quality assurance of the design and construction. The geotextile shall be placed on the approved prepared surface at the locations and in accordance with the details shown on the drawings and specified in section 7 of this specification. It shall be unrolled along the placement area and loosely laid, without stretching, in such a manner that it conforms to the surface irregularities when material or gabions are placed on or against it. The geotextile may be folded and overlapped to permit proper placement in designated area(s).

**Method 1**—The geotextile shall be joined by machine sewing using thread material meeting the chemical requirements for the geotextile fibers or yarn. The sewn overlap shall be 6 inches, and the sewing shall consist of two parallel stitched rows at a spacing of about 1 inch and shall not cross (except for any required re-stitching). The stitching shall be a lock-type stitch. Each row of stitching shall be located a minimum of 2 inches from the geotextile edge. The seam type and sewing machine to be used shall produce a seam strength, in the specified geotextile, that provides a minimum of 90 percent of the tensile strength in the weakest principal direction of the geotextile being used, when tested in accordance with ASTM D 4884. The seams may be factory or field sewn.

The geotextile shall be temporarily secured during placement of overlying material to prevent slippage, folding, wrinkling, or other displacement of the geotextile. Unless otherwise specified, methods of securing shall not cause punctures, tears, or other openings to be formed in the geotextile.

**Method 2**—The geotextile shall be joined by overlapping a minimum of 18 inches (unless otherwise specified) and secured against the underlying foundation material. Securing pins, approved and provided by the geotextile manufacturer, shall be placed along the edge of the panel or roll material to adequately hold it in place during installation. Pins shall be steel or fiberglass formed as a **U**, **L**, or **T** shape or contain "ears" to prevent total penetration through the geotextile. Steel washers shall be provided on all but the **U**-shaped pins. The upstream or upslope geotextile shall overlap the abutting downslope geotextile. At vertical laps, securing pins shall be inserted through the bottom layers along a line through approximately the mid-point of the overlap. At horizontal laps and across slope labs, securing shall be inserted

through the bottom layer only. Securing pins shall be placed along a line about 2 inches in from the edge of the placed geotextile at intervals not to exceed 12 feet unless otherwise specified. Additional pins shall be installed as necessary and where appropriate to prevent any undue slippage or movement of the geotextile. The use of securing pins will be held to the minimum necessary. Pins are to remain in place unless otherwise specified.

Should the geotextile be torn or punctured, or the overlaps or sewn joint disturbed, as evidenced by visible geotextile damage, subgrade pumping, intrusion, or grade distortion, the backfill around the damaged or displaced area shall be removed and restored to the original approved condition. The repair shall consist of a patch of the same type of geotextile being used and overlaying the existing geotextile. When the geotextile seams are required to be sewn, the overlay patch shall extend a minimum of 1 foot beyond the edge of any damaged area and joined by sewing as required for the original geotextile except that the sewing shall be a minimum of 6 inches from the edge of the damaged geotextile. Geotextile panels joined by overlap shall have the patch extend a minimum of 2 feet from the edge of any damaged area.

Geotextile shall be placed in accordance with the following applicable specification according to the use indicated in section 7:

*Slope protection*—The geotextile shall not be placed until it can be anchored and protected with the specified covering within 48 hours or protected from exposure to ultraviolet light. In no case shall material be dropped on uncovered geotextile from a height of more than 3 feet.

*Subsurface drains*—The geotextile shall not be placed until drainfill or other material can be used to provide cover within the same working day. Drainfill material shall be placed in a manner that prevents damage to the geotextile. In no case shall material be dropped on uncovered geotextile from a height of more than 5 feet.

*Road stabilization*—The geotextile shall be unrolled in a direction parallel to the roadway centerline in a loose manner permitting conformation to the surface irregularities when the roadway fill material is placed on its surface. In no case shall material be dropped on uncovered geotextile from a height of more than 5 feet. Unless otherwise specified, the minimum overlap of geotextile panels joined without sewing shall be 24 inches. The geotextile may be temporarily secured with pins recommended or provided by the manufacturer, but they shall be removed before the permanent covering material is placed.

## **6. Measurement and payment**

**Method 1**—For items of work for which specific unit prices are established in the contract, the quantity of geotextile for each type placed within the specified limits is determined to the nearest specified unit by measurements of the covered surfaces only, disregarding that required for anchorage, seams, and overlaps. Payment is made at the contract unit price. Such payment constitutes full compensation for the completion of the work.

**Method 2**—For items of work for which specific unit prices are established in the contract, the quantity of geotextile for each type placed with the specified limits is determined to the nearest specified unit by computing the area of the actual roll size or partial roll size installed. The computed area will include the amount required for overlap, seams, and anchorage as specified. Payment is made at the contract unit price. Such payment constitutes full compensation for the completion of the work.

**Method 3**—For items of work for which specific lump sum prices are established in the contract, the quantity of geotextile is not measured for payment. Payment for geotextiles is made at the contract lump sum price and constitutes full compensation for the completion of the work.

**All methods**—The following provisions apply to all methods of measurement and payment. Compensation for any item of work described in the contract, but not listed in the bid schedule, is included in the payment for the item of work to which it is made subsidiary. Such items and the items to which they are made subsidiary are identified in section 7 of this specification.

## **7. Items of work and construction details**

# **Construction Specification 4—Channel Clearing and Shaping**

## **1. Scope**

The work consists of clearing designated areas by the removal and disposal of trees, logs, stumps, shrubs, brush, and rubbish, and the shaping of the channel.

## **2. Protection of existing vegetation**

Trees and other vegetation designated to remain undisturbed shall be protected from damage throughout the duration of the construction period. Any damages resulting from the contractor's operations or neglect shall be repaired by the contractor.

Earthfill, stockpiling of materials, vehicle or equipment parking, and excessive foot or vehicle traffic shall not be allowed within the drip line of vegetation designated to remain in place. Vegetation damaged by any of these or similar actions shall be replaced with viable vegetation of the same species, similar condition, and like size unless otherwise approved by the contracting officer.

Any cuts, skins, scrapes, or bruises to the bark of the vegetation shall be carefully trimmed and local nursery accepted procedures used to seal damaged bark.

Any limbs or branches 0.5 inch or larger in diameter that are broken, severed, or otherwise seriously damaged during construction shall be cut off at the base of the damaged limb or branch flush with the adjacent limb or tree trunk.

All roots 1 inch or larger in diameter that are cut, broken, or otherwise severed during channel shaping shall have the end smoothly cut perpendicular to the root. Roots exposed during channel shaping operations shall be covered with moist soil as soon as possible to prevent roots from drying out.

## **3. Marking**

The limits of the area(s) to be cleared and shaped are marked by stakes, flags, paint, tree markings, or other suitable methods or as specified in section 8 of this specification, or they will be shown on the drawings. Trees to remain standing, undisturbed, and uninjured are designated by special markings.

## **4. Clearing**

Trees and other vegetation marked for clearing shall be cut off as near the ground surface as conventional tools and equipment normally permit. All trees not marked for preservation and all snags, logs, brush, shrubs, stumps, and rubbish shall be cleared from within the area limits identified.

## **5. Disposal**

All woody material, vegetation, and rubbish resulting from clearing from designated areas shall be disposed of at the locations and in a manner shown on the drawings, or as specified in section 8 of this specification.

## **6. Shaping**

The channel bottom and side slopes shall be shaped as shown on the drawings. The resulting shaped channel surface shall be reasonably smooth. Material excavated during the channel shaping operation shall be removed from the channel and disposed of as specified in section 8 of this specification.

## **7. Measurement and payment**

**Method 1**—For items of work for which specific unit prices are established by the contract, the designated cleared and shaped area is measured and the area determined to the nearest 0.1 acre. Payment for clearing and shaping is made at the contract unit price for the item and shall constitute full compensation for all labor, equipment, tools, applicable permits and associated fees for burning and disposal of refuse, and all other items necessary and incidental to the satisfactory completion of the work.

**Method 2**—For items of work for which specific unit prices are established by the contract, the length of the cleared and shaped channel designated is measured to the nearest 100 feet. Payment for clearing and shaping is made at the contract unit price for the item and shall constitute full compensation for all labor, equipment, tools, applicable permits and associated fees for burning and disposal of refuse, and all other items necessary and incidental to the satisfactory performance of the work.

**Method 3**—For items of work for which specific unit prices are established by the contract, the cleared and shaped area(s) is measured and the area determined to the nearest 0.1 acre. The designated cleared and shaped area(s) is determined from the measured width at representative sections and the distance between the sections. Payment for clearing and shaping is made at the contract unit price for the item and shall constitute full compensation for all labor, equipment, tools, applicable permits and associated fees for burning and disposal of refuse, and all other items necessary and incidental to the satisfactory completion of the work.

**Method 4**—For items of work for which specific lump sum prices are established by the contract, the extent of clearing and shaping is not measured or determined for payment. Payment for clearing and shaping is made at the contract lump sum price for the item and shall constitute full compensation for all labor, equipment, tools, applicable permits and associated fees for burning and disposal of refuse, and all other items necessary and incidental to the satisfactory completion of the work.

**All Methods**—The following provisions apply to all methods of measurement and payment. Compensation for any item of work described in the contract, but not listed in the bid schedule is included in the payment for the item of work to which it is made subsidiary. Such items and items to which they have been made subsidiary are identified in section 8 of this specification.

## **8. Items of work and construction details**





# Construction Specification 61—Rock Riprap

## 1. Scope

The work shall consist of the construction of rock riprap revetments and blankets, including filter or bedding where specified.

## 2. Material

Rock riprap shall conform to the requirements of Material Specification 523, Rock for Riprap, or if so specified, shall be obtained from designated sources. It shall be free from dirt, clay, sand, rock fines, and other material not meeting the required gradation limits.

At least 30 days before rock is delivered from other than designated sources, the contractor shall designate in writing the source from which rock material will be obtained and provide information satisfactory to the contracting officer that the material meets contract requirements. The contractor shall provide the contracting officer's technical representative (COTR) free access to the source for the purpose of obtaining samples for testing. The size and grading of the rock shall be as specified in section 8.

Rock from approved sources shall be excavated, selected, and processed to meet the specified quality and grading requirements at the time the rock is installed.

Based on a specific gravity of 2.65 (typical of limestone and dolomite) and assuming the individual rock is shaped midway between a sphere and a cube, typical size/weight relationships are:

Sieve size of rock	Approx. weight of rock	Weight of test pile
16 inches	300 pounds	6,000 pounds
11 inches	100 pounds	2,000 pounds
6 inches	15 pounds	300 pounds

When specified in Section 8 or when it is necessary to verify the gradation of the rock riprap, a particle size analysis shall be performed in accordance with ASTM D5519, Test Method A or B. The analysis shall be performed at the work site on a test pile of representative rock. The mass of the test pile shall be at least 20 times the mass of the largest rock in the pile.

The results of the test shall be compared to the gradation required for the project. Test pile results that do not meet the construction specifications shall be cause for the rock to be rejected. The test pile that meets contract requirements shall be left on the job site as a sample for visual comparison. The test pile shall be used as part of the last rock riprap to be placed.

**Filter or bedding aggregates** when required shall conform to Material Specification 521, Aggregates for Drainfill and Filters, unless otherwise specified. Geotextiles shall conform to Material Specification 592, Geotextile.

## 3. Subgrade preparation

The subgrade surface on which the rock riprap, filter, bedding, or geotextile is to be placed shall be cut or filled and graded to the lines and grades shown on the drawings. When fill to subgrade lines is required, it shall consist of approved material and shall conform to the requirements of the specified class of earthfill.

Rock riprap, filter, bedding, or geotextile shall not be placed until the foundation preparation is completed and the subgrade surface has been inspected and approved.

#### **4. Equipment-placed rock riprap**

The rock riprap shall be placed by equipment on the surface and to the depth specified. It shall be installed to the full course thickness in one operation and in such a manner as to avoid serious displacement of the underlying material. The rock for riprap shall be delivered and placed in a manner that ensures the riprap in place is reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks and spalls filling the voids between the larger rocks. Some hand placing may be required to provide a neat and uniform surface.

Rock riprap shall be placed in a manner to prevent damage to structures. Hand placing is required as necessary to prevent damage to any new and existing structures.

#### **5. Hand placed rock riprap**

The rock riprap shall be placed by hand on the surface and to the depth specified. It shall be securely bedded with the larger rocks firmly in contact one to another without bridging. Spaces between the larger rocks shall be filled with smaller rocks and spalls. Smaller rocks shall not be grouped as a substitute for larger rock. Flat slab rock shall be laid on its vertical edge except where it is laid like paving stone and the thickness of the rock equals the specified depth of the riprap course.

#### **6. Filter or bedding**

When the contract specifies filter, bedding, or geotextile beneath the rock riprap, the designated material shall be placed on the prepared subgrade surface as specified. Compaction of filter or bedding aggregate is not required, but the surface of such material shall be finished reasonably smooth and free of mounds, dips, or windrows.

#### **7. Measurement and payment**

**Method 1**—For items of work for which specific unit prices are established in the contract, the quantity of each type of rock riprap placed within the specified limits is computed to the nearest ton by actual weight. The volume of each type of filter or bedding aggregate is measured within the specified limits and computed to the nearest cubic yard by the method of average cross-sectional end areas. For each load of rock riprap placed as specified, the contractor shall furnish to the COTR a statement-of-delivery ticket showing the weight to the nearest 0.1 ton.

Payment is made at the contract unit price for each type of rock riprap, filter, or bedding. Such payment is considered full compensation for completion of the work.

**Method 2**—For items of work for which specific unit prices are established in the contract, the quantity of each type of rock riprap placed within the specified limits is computed to the nearest 0.1 ton by actual weight. The quantity of each type of filter or bedding aggregate delivered and placed within the specified limits is computed to the nearest 0.1 ton. For each load of rock riprap placed as specified, the contractor shall furnish to the engineer a statement-of-delivery ticket showing the weight to the nearest 0.1 ton. For each load of filter or bedding aggregate, the contractor shall furnish to the COTR a statement-of-delivery ticket showing the weight to the nearest 0.1 ton.

Payment is made at the contract unit price for each type of rock riprap, filter, or bedding. Such payment is considered full compensation for completion of the work.

**Method 3**—For items of work for which specific unit prices are established by the contract, the volume of each type of rock riprap and filter or bedding aggregate is measured within the specified limits and computed to the nearest cubic yard by the method of average cross-sectional end areas.

Payment is made at the contract unit price for each type of rock riprap, filter, or bedding. Such payment is considered full compensation for completion of the work.

**Method 4**—For items of work for which specific unit prices are established by the contract, the volume of each type of rock riprap, including filter and bedding aggregate, is measured within the specified limits and computed to the nearest cubic yard by the method of average cross-sectional end areas.

Payment is made at the contract unit price for each type of rock riprap, including filter and bedding. Such payment is considered full compensation for completion of the work.

**Method 5**—For items of work for which specific unit prices are established by the contract, the quantity of each type of rock riprap placed within the specified limits is computed to the nearest ton by actual weight. For each load of rock for riprap placed as specified, the contractor shall furnish to the COTR a statement-of-delivery ticket showing the weight to the nearest 0.1 ton.

Payment is made at the contract unit price for each type of rock riprap, including geotextile used for filter or bedding. Such payment is considered full compensation for completion of the work.

**Method 6**—For items of work for which specific unit prices are established by the contract, the volume of each type of rock riprap is measured within the specified limits and computed to the nearest cubic yard by the method of average cross-sectional end areas.

Payment is made at the contract unit price for each type of rock riprap, including geotextile used for filter or bedding. Such payment is considered full compensation for completion of the work.

**All methods**—The following provision applies to all methods of measurement and payment. Compensation for any item of work described in the contract, but not listed in the bid schedule, is included in the payment for the item of work to which it is made subsidiary. Such items and the items to which they are made subsidiary are identified in section 8.

No separate payment is made for testing the gradation of the test pile. Compensation for testing is included in the appropriate bid item for riprap.

## **8. Items of work and construction details**



## SECTION 205 - CONTAMINATED SOIL

### 205-1 DESCRIPTION.

**205-1.01 General.** Soil contamination may include:

- Petroleum products, which may include, but are not limited to: gasoline, heating oils, diesel fuel, kerosene, jet fuel, lubricating oils, motor oils, greases, and other fractions of crude oil;
- Contaminants associated with past Manufactured Coal Gas Plant (MGP) operations;
- Other contamination by organic constituents including volatile organic compounds;
- Metal(s) such as lead, chromium, and/or other heavy metals; and/or
- Any other constituents that require specialty disposal of the soil.

Additional information regarding contaminated soil may be available in a Special Note entitled *Soil Characterization Information* and/or in a *Contaminated Materials Assessment Report*, if such Special Note and/or Report were prepared by the Department during project design.

**205-1.02 Segregation and Storage.** This work shall consist of segregating contaminated soil from non-contaminated soil during excavation, and the temporary storage and management of contaminated soil (pending sampling, analysis and ultimate disposition) in accordance with an accepted Contaminated Material Handling Plan.

**205-1.03 Field Organic Vapor Monitoring.** This work shall consist of screening soil for contamination during excavation using field vapor monitoring equipment and observations. This work shall be performed by an independent firm hired by the Contractor and completed in accordance with an accepted Field Organic Vapor Monitoring Plan.

**205-1.04 Sampling and Analysis.** This work shall consist of collecting soil samples and arranging for samples to be analyzed at a laboratory in accordance with an accepted Sampling Plan. The laboratory shall be accredited for the specified parameters by the New York State Department of Health (NYSDOH) under the Environmental Laboratory Approval Program (ELAP). The results of the laboratory analysis will determine or confirm the final regulatory classification of the soil for appropriate handling, transportation, treatment and disposal methods and requirements.

**205-1.05 Transportation and Disposal.** This work shall consist of transporting and disposing of contaminated soil, and completing any other related activities, in accordance with an accepted Disposal Plan. For shipping and disposal purposes, the regulatory classification of the soil (as either contaminated non-hazardous industrial waste or RCRA regulated hazardous waste) will be based on investigations conducted prior to award or based on the results of laboratory analysis included in this section.

**205-1.06 Reuse of Contaminated Soil.** This work shall consist of the reuse of contaminated soil within the contract limits as embankment, fill or other appropriate on-site use. Contaminated soil areas and reuse locations, if provided, are indicated in the contract documents or shall be determined and approved by the Department. The reuse of contaminated soil may be deemed appropriate based upon the following a) an investigation conducted prior to the contract award and/or sampling and analysis conducted during project construction and the qualification of the soil placement as a generic beneficial use determination (BUD) or b) as a site specific BUD obtained from the NYSDEC. The material must be considered suitable material as per Section 203-1.08.

## **205-2 MATERIALS.**

**205-2.01 General.** As per the Contaminated Material Handling Plan, (Section 205-1.02).

**205-2.02 Segregation and Storage.** None Specified.

**205-2.03 Field Organic Vapor Monitoring.** Field organic vapor monitoring shall be conducted using a photoionization detector (PID) with a 10.2eV or higher ultraviolet lamp. The PID shall have a minimum detection range of 0.1 ppm to 2,000 ppm and shall be calibrated with isobutylene or other appropriate calibration gas.

A flame ionization detector (FID) may be used in lieu of a PID if a written request and justification is submitted by the Contractor and approved by the Department. The FID shall have a minimum detection range of 1.0 ppm to 50,000 ppm and shall be calibrated with appropriate calibration gas.

**205-2.04 Sampling and Analysis.** None Specified.

**205-2.05 Transportation and Disposal.** None Specified.

**205-2.06 Reuse of Contaminated Soil.** None Specified.

## **205-3 CONSTRUCTION DETAILS.**

**205-3.01 General.** Work activities shall be performed in accordance with the contract documents and with applicable Contaminated Material Handling Plan, Field Organic Vapor Monitoring Plan, Sampling Plan and/or Disposal Plan. The Contractor shall initiate any measures necessary to protect the safety and health of workers and the general public based on the potential hazards associated with the contaminated soil.

**A. Regulatory Compliance.** The Contractor shall conduct all tasks in accordance with all applicable Federal, State, County, and local regulations including, but not necessarily limited to:

- 29 CFR 1910.120 and 29 CFR 1926.65 - Hazardous Waste Operations and Emergency Response;
- 6 NYCRR 360 - Solid Waste Management Facilities;
- 6 NYCRR 364 - Waste Transporter Permits;
- 6 NYCRR 371 - Identification and Listing of Hazardous Wastes (Defines Resource Conservation and Recovery Act (RCRA) defined hazardous wastes);
- 6 NYCRR 372 - Hazardous Waste Manifest System and Related Standards for Generators, Transporters and Facilities (*applicable to soils regulated as hazardous wastes only*);
- 6 NYCRR Part 375 – Environmental Remediation Program;
- 49 CFR 100 to 180 - USDOT Hazardous Materials Transport and Manifest System Requirements (*applicable to soils regulated as hazardous wastes only*);
- TAGM 4046\* - NYSDEC (New York State Department of Environmental Conservation) Division of Hazardous Waste Remediation Technical and Administrative Guidance Memorandum (TAGM) 4046 “Determination of Soil Cleanup Levels”;
- NYSDEC STARS\* (Spill Technology and Remediation Series) Memo #1 for petroleum contamination constituents; and
- DER-22\* - Division of Environmental Remediation Determination of Soil Cleanup Objectives for Contaminants, not in Part 375.

\* Note: DER-22 will replace TAGM 4046 and components of STARS 1 when finalized.

**B. Preparation of Plans and Advance Notification Letters.** The Contractor shall be required to prepare one or more of the plans described below. Two (2) copies of each applicable plan shall be submitted to the Engineer for acceptance at least 30 calendar days prior to commencing work in areas identified as potentially contaminated.

Plans and notification letters shall be prepared based on the type(s) of contamination and locations identified in the contract documents. If a different type of contamination is encountered during work, and additional plans and notification letters must be written, the 30 calendar day lead time for submittals may be modified by the Engineer as appropriate.

**1. Contaminated Material Handling Plan (CMHP).** If the segregation and storage item is included in the contract, a CMHP shall be prepared. The CMHP shall describe the procedures to be used to segregate contaminated soil during excavation, soil storage/stockpile procedures, and safety and health issues. The following information shall be included in the CMHP:

- Name and address of the plan preparer;
- Contract name, contract number and description;
- Describe procedures to be used to segregate contaminated soil during excavation;
- Location of intended soil stockpile, trucks, roll-off container and other storage areas;
- Describe how contaminated soil will be moved to soil storage locations;
- Describe how soil storage/stockpile locations will be prepared and managed;
- Describe how potential air quality impacts such creation of dust particulates and vapors will be minimized to protect air quality within, adjacent to or downwind from the project.
- Describe air monitoring procedures to be used during work, define action levels, and explain the response if action levels are exceeded; The protocol and procedures shall consider action levels for both work personnel and also perimeter/community action levels based on the nature of the contamination and activities conducted
- Hazardous substance evaluation - types of chemicals associated with the waste to be generated,
- Hazard assessment - physical and toxic effects associated with the waste to be generated; Personal protective clothing (PPC) and personal protective equipment (PPE) to be used or available on-site;.

- Names of key personnel, emergency contacts and phone numbers;
- List the OSHA training each worker has received. At least one worker must have completed supervisor training per 29 CFR 1910.120(E)(4);
- General and site-specific safety rules, with emergency response procedures and directions to the nearest hospital (with map);
- Decontamination procedures for personnel and equipment; and
- Disposal of contaminated PPC and PPE;

**2. Field Organic Vapor Monitoring Plan (FOVMP).** If the field organic vapor monitoring item is included in the contract, a FOVMP shall be prepared. The following information shall be included in the FOVMP:

- Name and address of the plan preparer;
- Name, address, experience and qualifications of the independent firm performing the field organic vapor monitoring.
- Name, address, experience and qualifications of each individual who will conduct the field organic vapor monitoring. Each individual shall be thoroughly trained in sampling protocols, organic vapor monitoring procedures, and equipment calibration procedures.
- Type(s) of organic vapor monitoring equipment to be used – model, manufacturer and details of the PID or FID equipment that will be used to conduct field organic vapor monitoring; and
- Description of the field organic vapor monitoring and calibration procedures to be used.

**3. Sampling Plan.** If a sampling and analysis item is included in the contract, a Sampling Plan must be prepared. The following information shall be included in the Sampling Plan:

- Name and address of the plan preparer;
- Name, address, telephone number, and ELAP certification number of the proposed NYSDOH ELAP accredited laboratory;
- Name, address, experience and qualifications of each individual who will collect soil samples. Each individual shall be thoroughly trained in sampling protocols, handling and chain of custody procedures, and laboratory requirements.
- List of all laboratory tests required by the disposal/treatment facility
- Describe the sample collection and handling procedures to be used; and
- Sampling schedule or a description of the sampling frequency to be used to facilitate prompt disposal of stored soil.

If sampling and analysis items are not included in the contract, a separate Sampling Plan is not required, and the Contractor shall perform any soil sampling and analysis required under the disposal item.

**4. Disposal Plan.** If a disposal item(s) is included in the contract, a Disposal Plan shall be prepared. The following information shall be included in the Disposal Plan:

- Name and address of the plan preparer;
- Name of disposal/treatment facility, address, telephone number and contact person;
- Copy of applicable permits and/or licenses held by the disposal/treatment facility;
- EPA Identification Number and/or State Facility Identification Number issued to the disposal/treatment facility;
- Method(s) of disposal/treatment that will be used;
- Signed letter from the disposal/treatment facility stating it is authorized under law to accept the type of waste being generated, their intent to accept the contaminated waste generated by this contract, and a list of the laboratory tests required by the facility;
- Name of waste transporter, address, telephone number and contact person;



- EPA Identification Number and/or State Transporter Identification Number issued to waste transporter; and
- Copies of all waste transporter permits and/or license plate numbers for vehicles that will be used for transport of waste from the site to the intended disposal/treatment facility;

If a sampling and analysis item(s) is not included in the contract, the following information shall be included in the Disposal Plan for any sampling and analysis that will be conducted:

- Name, address, telephone number, and ELAP certification number of the proposed NYSDOH ELAP accredited laboratory.
- Name, address, experience and qualifications of each individual who will collect soil samples. Each individual shall be thoroughly trained in sampling protocols, handling and chain of custody procedures, and laboratory requirements.
- List of all laboratory tests required by the disposal/treatment facility;
- Describe the sample collection and handling procedures to be used; and
- Sampling schedule or a description of the sampling frequency to be used to facilitate prompt disposal of stored soil.

**5. Advance Notification Letters (Letters).** At least 10 calendar days prior to commencing work in contaminated areas, the Contractor shall prepare and submit Advance Notification Letters, (Letters) to the Engineer, the appropriate NYSDEC Regional Office (Environmental Remediation, Spill Prevention and Response), and the local fire department. The Letters shall include the dates that work will occur in contaminated areas, work locations, soil storage/stockpile locations, and the name, field office address and phone number of the Engineer. The Contractor shall provide the Engineer with a copy of the Letters sent to the NYSDEC and fire department.

**205-3.02 Segregation and Storage.** The Contractor shall have an accepted CMHP prior to commencing work within potentially contaminated soil areas. Contaminated soil areas are identified in the contract documents. Soil determined to be contaminated (by PID/FID screening or observation) shall be segregated from non-contaminated soil and stored pending sampling, analysis and disposal. If feasible, soil with significantly higher PID/FID head space readings and soil exhibiting unusual visual or odor characteristics shall be segregated from other contaminated soil. The Contractor shall notify the Engineer immediately if soil is discovered that appears to contain unknown contaminants or soil that varies significantly from the type of contamination identified in the contract documents. The Department will determine the preliminary regulatory classification of the suspect soil and will determine how the soil is to be managed.

The Contractor shall not store contaminated soil for more than 40 calendar days, with this time limit beginning on the first day soil is placed in a stockpile, truck-bed or roll-off container. If the Engineer approves additional storage time for soil determined to be contaminated non-hazardous industrial waste, the Contractor shall also request approval from NYSDEC for any storage greater than 60 calendar days. If the Engineer approves additional storage time for soil determined to be RCRA regulated hazardous waste, the Contractor shall also obtain approval from NYSDEC for any storage greater than 90 calendar days. Contaminated soil may be placed in stockpiles, trucks or roll-off containers as follows:

**A. Stockpiles.** The Contractor shall prepare and maintain stockpiles as follows:

**1. Preparation of Stockpile Areas.**

- The area shall be graded to provide positive drainage away from intended stockpile locations.
- All stones, roots, debris and other objects that may puncture polyethylene ground protection shall be removed.

- The ground surface where soil will be stockpiled shall be covered with a minimum of 10-mil or 2 layers of 6-mil polyethylene sheeting, or an equivalent material. All seams shall be overlapped and sealed to prevent the leaching of contaminants.
- Stockpile locations shall be within the right-of-way and accepted by the Engineer prior to use.

### **2. Stockpile Protection.**

- At the end of each work day, contaminated soil stockpiles shall be completely covered with a minimum of 10-mil or 2 layers of 6-mil polyethylene sheeting, or an equivalent material. All seams shall be overlapped and sealed to prevent the leaching of contaminants.
- Stockpile covers shall be weighted or secured by appropriate means to prevent tearing or removal by weather conditions.
- Stockpiles shall be labeled, signed, fenced or otherwise secured (as needed) at the end of each work day.

### **3. Maintenance.**

- Stockpile covers, site grading, signing and security measures shall be properly maintained for the duration of storage.
- Damaged covers and other protections shall be repaired or replaced by the Contractor within 24 hours after notification. If this work is not satisfactorily completed within 24 hours, no further stockpiling shall be allowed until such work is completed.

**B. Trucks or Roll-off Containers.** The Contractor shall prepare and maintain trucks and roll-off containers as follows:

- The interior of truck-beds and roll-off containers shall be lined with 10-mil or 2 layers of 6-mil polyethylene sheeting, or an equivalent material. All seams shall be overlapped and sealed to prevent the leaching of contaminants.
- At the end of each work day, trucks and roll-off containers storing soil shall be completely covered with waterproof tarpaulins. Tarpaulins shall be placed over the top of the truck bed or container (rather than over the soil inside) and shall extend over the sides to prevent water accumulation and the evaporation of contaminants.
- Tarpaulins shall be weighted or secured by appropriate means to prevent tearing or removal by climatic conditions.
- Trucks and roll-off containers shall be labeled, signed, fenced or otherwise secured (as needed) at the end of each work day.
- Trucks, roll-off containers and tarpaulins shall be properly maintained for the duration of soil storage.
- Damaged tarpaulins and protections shall be repaired or replaced by the Contractor within 24 hours after notification. If this work is not satisfactorily completed within 24 hours, no further soil storage shall be allowed until such work is completed.
- Trucks and roll-off containers storing contaminated soil shall be located as described in CMHP.

**205-3.03 Field Organic Vapor Monitoring.** The Contractor shall hire an independent firm to perform field organic vapor monitoring in accordance with the accepted FOVMP. The individual conducting the monitoring, hereafter referred to as the Field Monitor, shall be experienced and thoroughly trained in sampling protocols, organic vapor monitoring procedures, and equipment calibration procedures. The Field Monitor shall screen potentially contaminated soil during excavation using field vapor monitoring equipment (PID/FID) and visual observations. Based on the screening results, the Field Monitor shall direct the Contractor on the proper segregation of the material.

Field organic vapor monitoring shall be conducted when working in the contaminated soil areas identified in the contract documents, or whenever unusual or suspicious soil conditions based on visual or odor evidence are encountered during excavation. The Contractor or Field Monitor shall notify the Engineer immediately if soil is discovered that appears to contain unknown contaminants or soil that varies significantly from the type of contamination identified in the contract documents. (For health and safety reasons, personnel shall not evaluate odor by placing soil directly to the nose or by inhaling vapors from grab or bag samples).

The Field Monitor shall calibrate the PID/FID on a daily basis prior to starting field work and shall determine a background measurement. Excavated soil shall be tested with the PID/FID at intervals that will ensure the soil is being properly assessed for contamination. The PID/FID will be used to take head space readings from bag samples with the soil temperature at least 50°F. The Field Monitor shall maintain detailed and legible field notes indicating work locations, nature of work being performed, PID/FID head space readings, time of readings, pertinent measurements, visual and odor observations, quantities of both contaminated and non-contaminated soils excavated at each location, storage/stockpile locations, work hours, weather conditions, and any unusual conditions encountered. The Contractor shall provide the Engineer with a copy of all field notes within 5 work days from their recording.

The segregation threshold established below (25ppm) is based on gasoline being the predominant contaminant. If a different contaminant(s) is present or suspected, a different segregation threshold may need to be established. Alternative segregation thresholds may be designated in the contract documents.

PID/FIDs detect and measure gas concentrations (specifically volatile organic compounds); they do not quantify or identify the contaminants in the soil. Therefore, PID/FID readings can not determine specific contaminant concentrations within the soil.

Segregate soil as follows:

**A. Non-Contaminated Soil.** Soil with PID/FID head space readings less than 25 ppm and exhibiting no other evidence of contamination (visual or olfactory evidence) shall be considered non-contaminated. Unless further analysis is performed for confirmation of the non-contaminated soil, this soil will be considered uncontaminated.

**B. Contaminated Soil.** Soil with PID/FID head space readings equal to or greater than 25 ppm and/or soil exhibiting other evidence of contamination (visual or olfactory evidence) shall be considered contaminated. This soil shall be segregated from non-contaminated soil and placed in stockpiles or containers. If sampling and analysis provisions are included for the segregated soil, the results of laboratory analysis will be used to determine its regulatory classification. If feasible, soil with significantly higher PID/FID head space readings and soil exhibiting unusual visual or odor characteristics shall be segregated from other contaminated soil.

**205-3.04 Sampling and Analysis.** The Contractor shall have an accepted Sampling Plan prior to commencing work within potentially contaminated areas. Sampling shall be conducted by individuals thoroughly trained in sampling protocols, handling and chain of custody procedures, and laboratory requirements. Accepted sampling practices shall be used to obtain representative composite sample(s) and/or grab sample(s) as required for the specific analyses to be completed. Representative samples shall be collected from stored soil as soon as possible after excavation. Soil shall be taken from a depth greater than one foot within the stockpile. Each composite sample shall include a minimum of four sample points. Grab samples shall be collected in a manner so as to best characterize the extent of contamination of the soil in question and best characterize the extent of contamination of the pile. If any soil areas are present with field indications of contamination discretely different than the other areas (i.e., significantly elevated PID/FID readings, staining, etc.), the area may require a separate sample and the Engineer shall be alerted to approve additional sample and analysis. Analyses shall be completed at a NYSDOH ELAP accredited laboratory that is certified to perform the required tests. Analyses shall be completed within 10

work days of sample collection. The Contractor shall provide the Engineer with a copy of all reports within 2 work days of their receipt from the laboratory.

Soil shall not be added to any stockpile, truck or roll-off container after its contents have been sampled. If soil is added after sampling, or sampled soil is otherwise tampered with, the Contractor shall re-sample the soil at no additional cost to the State.

Conduct specified analyses as follows:

**A. Petroleum Contamination Parameter Analysis.** Samples shall be analyzed for petroleum contamination constituents (total constituent analysis) in accordance with NYSDEC Spill Technology and Remediation Series (STARS) Memo #1 using USEPA Method 8260 for volatile organics and methyl t-butyl ether (MTBE) and USEPA Method 8270 for base/neutrals.

**B. Hazardous Waste RCRA Toxicity Characteristic Analysis.** Samples shall be analyzed for Hazardous Waste RCRA Toxicity Characteristics Leaching Procedure (TCLP) constituents. Analysis shall be for full TCLP constituents on the sample extract as prepared by USEPA Method 1311.

**C. Ignitability of Solids Analysis.** Samples shall be analyzed for ignitability by USEPA Method 1030.

**D. pH of Soil and Waste.** Samples shall be analyzed for pH measurement by USEPA Method 9045.

**E. Polychlorinated Biphenyls (PCB) Analysis.** Samples shall be analyzed for PCBs by USEPA Method 8082.

**F. Total Petroleum Hydrocarbons (TPH) Analysis.** Samples shall be analyzed for petroleum hydrocarbons, USEPA Method 8015, gasoline range organics (GROs) and/or diesel range organics (DROs).

**205-3.05 Transportation and Disposal.** The Contractor shall have an accepted Disposal Plan prior to the transportation and disposal of contaminated soil. Contaminated soil shall not be transported until all sampling and analysis, as required by the Department or by the Disposal facility, have been performed and laboratory reports have been provided and accepted by the Department.

**A. Transportation Off Site.**

1. For the duration of transportation, roll-off containers and truck beds shall be completely covered with secured waterproof tarpaulins to prevent water infiltration, evaporation of contaminants and spillage of contaminated soil.
2. The Contractor shall take immediate action to remedy any situation involving a release of contaminated soil during loading or while in transit.
3. Contaminated soil shall not be combined with material from any other source.
4. Contaminated soil shall be transported in vehicles with valid Waste Transporter permits for New York State (and other required permits/licenses from any other states as applicable). The Contractor shall provide a copy to the Engineer of the waste transporter permit documenting that the transporter is authorized to transport waste to the intended disposal/treatment facility. The Contractor shall complete any required shipping papers, labeling, placarding, and weighing/load measurements and shall provide copies of required documentation to the Engineer.
5. Contaminated soil that is determined to be a regulated hazardous waste per the criteria of 6 NYCRR Part 371 shall be shipped with a hazardous waste manifest to a treatment/disposal facility permitted to accept the waste. The Contractor shall complete all required manifests,

labeling, placarding, land disposal restriction notifications, and other requirements for shipping and tracking hazardous wastes and shall provide copies of required documentation to the Engineer. The Engineer will provide the Contractor with the EPA Identification Number(s) issued to the Department as the hazardous waste generator and will sign the generator certification statements.

**B. Disposal/Treatment.** Contaminated soil shall be disposed of by the methods and procedures described in the accepted Disposal Plan. Soil characterization information, field identification and confirmation laboratory analyses, if included in the contract, will be used to determine appropriate classification and category of soil for disposal. Each category of surplus or waste soil shall be handled and disposed of based upon its characterization in accordance with the requirements outlined in §107-10 *Managing Surplus Material and Waste* for the following categories:

- Uncontaminated Soil;
- Contaminated Non-hazardous Industrial Waste; or
- Hazardous Waste regulated by 6 NYCRR Part 371

Soils characterized as contaminated as Hazardous Waste or as Non-hazardous Industrial Waste shall be disposed of and paid for per the items 205.0501 and 205.0502 respectively.

Contaminated soil shall be transported to a disposal/treatment facility within 40 calendar days from the start of storage. The Contractor shall complete under this item any soil sampling and analysis required by the disposal/treatment facility that is not specifically included in the contract.

**C. Documentation.** The Contractor shall provide the Engineer with copies of all receipts from the disposal/treatment facility which indicate the actual quantity of waste received within 2 work days of receipt from the facility. For soil determined to be RCRA regulated hazardous waste, the Contractor shall also provide the Engineer with the appropriate copies of each signed manifest within 2 work days of receipt. Any manifest discrepancies, including the need for exception reporting, shall be reported immediately to the Engineer and shall be resolved by the Contractor.

**205-3.06 Reuse of Contaminated Soil.** The Contractor shall place contaminated soil as embankment, fill or other appropriate on-site use as determined and approved by the Department, and in accordance with the contract documents. Only appropriate soils placed in appropriate locations as included in the contract documents shall be reused.

#### **205-4 METHOD OF MEASUREMENT.**

**205-4.01 General.** (Vacant)

**205-4.02 Segregation and Storage.** The work under segregation and storage will be measured for payment on a lump sum basis.

**205-4.03 Field Organic Vapor Monitoring.** The quantity for payment will be in hours of field organic vapor monitoring performed, measured to the nearest one-half hour.

**205-4.04 Sampling and Analysis.** The quantity to be measured for payment will be the number of soil samples analyzed as included in the contract documents.

**205-4.05 Transportation and Disposal.** The quantity to be measured for payment will be in tons of contaminated soil transported to a disposal/treatment facility, measured to the nearest 0.1 ton. If measurement of the contaminated soil by weight is not feasible, a conversion factor of 1.4 tons per cubic yard will be used to determine the quantity for payment.

**205-4.06 Reuse of Contaminated Soil.** The quantity to be measured for payment will be in cubic yards of contaminated soil stockpiled for reuse, computed to the nearest whole cubic yard.

**205-5 BASIS OF PAYMENT.** The price bid shall include the cost of all labor, materials and equipment necessary to complete the work. Excavation will be paid for separately.

*Payment will be made under:*

<b>Item No.</b>	<b>Item</b>	<b>Pay Unit</b>
205.02nn	Segregation and Storage of Contaminated Soil	Lump Sum
205.03	Field Organic Vapor Monitoring of Contaminated Soil	Hour
205.0401	Petroleum Contamination Parameter Analysis	Each
205.0402	Laboratory Analysis for Hazardous Waste RCRA Toxicity Characteristic	Each
205.0403	Laboratory Analysis for Ignitability	Each
205.0404	Laboratory Analysis for ph	Each
205.0405	Laboratory Analysis for Polychlorinated Biphenyls (PCB's)	Each
205.0406	Laboratory Analysis for Total Petroleum Hydrocarbons– Gasoline Range Organics	Each
205.0407	Laboratory Analysis for Total Petroleum Hydrocarbons– Diesel Range Organics	Each
205.0501nn	Disposal of Contaminated Hazardous Waste Soil	Ton
205.0502nn	Disposal of Contaminated Non-Hazardous Waste Soil	Ton
205.06nn	Reuse of Contaminated Soil	Cubic Yard

Note: nn denotes serialized pay item for each discrete contaminated area of property as indicated on the plans. The serialized items allow for different plans and different disposal procedures for discretely different areas and nature of the contamination.

**SECTION 206 - TRENCH, CULVERT AND STRUCTURE EXCAVATION**

**206-1 DESCRIPTION**

**206-1.01 General.** This work shall consist of the excavation of materials and backfill or disposal of excavated material required for trenches, culverts, structures, conduit and direct burial cable not otherwise provided for in other sections of these specifications. All such excavation shall be unclassified excavation as defined in §203-1.01. The work shall be conducted in accordance with 29 CFR 1926 Subpart P.

**206-1.02 Structure Excavation.** The work specified under this item shall include the excavation for all bridge foundations, walls and other major structures and backfill of suitable excavated material if another item is not specified.

**206-1.03 Trench and Culvert Excavation.** The work specified under this item shall include the excavation of all materials and backfill or disposal of excavated material required for trenches, culverts, pipes, manholes, drainage structures and other minor structures, conduit and direct burial cable.

**206-1.04 Conduit Excavation and Backfill including Surface Restoration.** The work specified under this item shall include the excavation, necessary backfill and surface restoration required for conduits and direct burial cables.

**206-1.05 Test Pits.** The work specified under this item shall include the excavation and backfill of test pits at locations shown in the contract documents, or as directed by the Engineer. Excavation and backfill methods, limits and equipment used shall be approved by the Engineer. This work will not relieve the contractor of the responsibility to locate underground facilities as required under 16 NYCRR 753.

# Section 500

## PORTLAND CEMENT CONCRETE

### SECTION 501 - PORTLAND CEMENT CONCRETE - GENERAL

**501-1 DESCRIPTION.** These general requirements apply to concrete furnished for pavement, structures and incidental construction. Additional requirements may be specified in the contract item. All testing will be done in accordance with Department procedures.

#### 501-2 MATERIALS

**501-2.01 Composition of Mixtures.** The Contractor shall inform the Regional Director, in writing, of the materials sources prior to mixing concrete. Proportion a homogenous Portland cement concrete mixture using the pre-approved materials listed under 501-2.02, Material Requirements.

Produce the class of concrete indicated in the contract documents. However, substitutions may be made according to Table 501-1, Concrete Class Options.

TABLE 501-1 CONCRETE CLASS OPTIONS	
Concrete Class	Allowable Class Options
A	C, E, F <sup>1</sup> , H or HP
C	HES <sup>2</sup>
D	DP
DP	None
E	H or HP
H	HP
F, G, GG, or HP	None
I	J
J	None

Notes:

1. Regional Director approval required for pavement applications, including approach slabs. D.C.E.S. approval required for structural or deck applications. May not be used in mass placements, or as a substitute for class A in Sign Structure, Signal Pole, and Luminary Foundations.
2. The requirements of §502-2.01 and §502-2.02 apply.

#### 501-2.02 Material Requirements

Portland Cement	701-01	Admixtures	711-08
Blended Portland Cement	701-03	Fly Ash	711-10
Concrete Sand	703-07	Microsilica	711-11
Coarse Aggregate	703-02	GGBFS *	711-12
CNPCI **	711-13	HRP ***	711-14
Water	712-01	* Ground Granulated Blast Furnace Slag	
		** Calcium Nitrite Based Corrosion Inhibitors	

**A. Cementitious Materials.** Use only cementitious materials meeting §701-01 whose brand name and type appears on the Department's Approved List. Cementitious materials stored over the winter at concrete producing facilities will be retested for specification compliance. All contaminated, or hardened cementitious material will be rejected and not used in Department work.

The Department will consider requests to evaluate alternate cements, pozzolan or microsilica. The use of alternatives is subject to approval by the Director, Materials Bureau.

**1. Portland Cement.** Use Type I, Type II or Type I/II cement, except as indicated below or in the contract documents.

Type I cement is restricted to fresh water and low sulfate soil areas. Use Type II or Type I/II cement in high sulfate, and salt water areas. Salt water areas are defined as; The Hudson River south of the Newburg-Beacon Bridge, and all other tidal / sea water spray areas of New York State. Type I/II cement is defined as a cement that meets the requirements of both Type I and Type II cements. High alkali cement is defined as any portland cement having an alkali content in excess of 0.70% as denoted on the Approved List. High alkali cement use is restricted, unless otherwise approved by the Regional Director, to mixtures that do not contain reactive aggregates ( as denoted in the Department's List of Approved Sources of Aggregates).

**2. Blended Portland Cement.** Blended cements meeting the requirements of 701-03, may be used as follows:

*a. Type IP or SM.* Blended Portland Cement (Type IP or Type SM), may be used in all classes of concrete listed in Table 501-03, Concrete Mixtures, except Class F. Type IP or SM blended cement replaces the portland cement/pozzolan portion of the designed mix in Class DP, G, GG, or HP concrete. When using Type IP or SM blended cement in Class DP and HP concrete, an addition of Microsilica §711-11 is required.

*b. Type SF.* Blended Portland Cement (Type SF), may be used in Class DP or HP concrete. Type SF blended cement replaces the portland cement/microsilica portion of the designed mix in Class DP or HP concrete. When using Type SF blended cement in Class DP or HP concrete, an addition of Fly Ash, §711-10, or Ground Granulated Blast Furnace Slag (GGBFS), §711-12, is required.

*c. Ternary Blend.* Blended Portland Cement (Ternary Blend), may be used in Class DP or HP concrete. Ternary blend cement in Class DP or HP concrete replaces the entire portland cement/pozzolan/microsilica portion of the designed mix. No subsequent addition of cementitious material is required or allowed.

**3. Pozzolan.** Pozzolan is defined as Fly Ash, §711-10, or Ground Granulated Blast-Furnace Slag (GGBFS), §711-12. All classes of concrete, except Class F, allow or require a pozzolan as a partial replacement for portland cement. Classes DP, G, GG, and HP concrete require the use of a pozzolan.

**4. Microsilica.** Class DP and HP concrete require Microsilica, §711-11, as a partial replacement for portland cement. Microsilica, a pozzolanic material, is not included in the definition of a pozzolan in these specifications.

**5. High Reactivity Pozzolan.** High Reactivity Pozzolans which meet the requirements of §711-14 may be considered as supplementary cementitious materials in concrete mixtures where



enhanced physical properties are desired. With prior approval from the Regional Materials Engineer, these materials may be allowed in lieu of microsilica in specialized and high performance concrete mixtures.

**B. Aggregates.** Use aggregate from a source on the Approved List of Sources of Fine and Coarse Aggregates that also meets the following requirements for gradation and friction.

**1. Gradation.** Samples will be taken from stockpiles, barges, conveyor belts, or bins and tested for gradation at the plant site in accordance with NYSDOT Materials Method 9.1. Rejected aggregates may be reprocessed or reworked to meet the gradation requirements.

*a. Concrete Sand.* Use only sand meeting the requirements of §703-07, Concrete Sand.

*b. Coarse Aggregate.* Use only crushed stone, crushed gravel, or crushed slag meeting the requirements of §703-02, Coarse Aggregates in either one or a combination of size designations specified in Table 703-4, Sizes of Stone, Gravel, and Slag and graded according to Table 501-2, Coarse Aggregate Gradations.

Aggregates that are uniform in size, but do not meet the requirements in Table 703-4, may be approved by the Regional Director. When these sizes are combined to meet the mixture gradation requirements of Table 501-2, the gradation requirements of §703-02 shall not apply. Blending of aggregates during the batching process may be approved by the Regional Director. When blending aggregates prior to batching, the blending method requires approval by the Regional Director.

TABLE 501-2 COARSE AGGREGATE GRADATIONS		
Sieve Sizes	Type CA 1 General Limits % Passing	Type CA 2 General Limits % Passing
1 1/2 inches	-	100
1 inch	100	93-100
1/2 inch	90-100	27-58
1/4 inch	0-15	0-8

**NOTES:**

ASTM C33 Size Number 7 is an acceptable equivalent to the Type CA 1 gradation.

ASTM C33 Size Number 57 is an acceptable equivalent to the Type CA 2 gradation.

Material passing the No. 200 sieve (wet) is limited to a maximum 1.0 % by weight for ASTM sizes 7 and 57.

**2. Friction.** Sample and test aggregate for friction characteristics according to the procedures of Materials Method 28 “Friction Aggregate Control and Test Procedures.” The Engineer will identify pavement areas, if any, represented by failing samples according to the procedures of Materials Method 28 “Friction Aggregate Control and Test Procedures.”

*a. Concrete Sand.* For use in concrete pavements, bridge decks, precast pavers, or any other item used in concrete highway wearing surfaces, sand (natural or manufactured) must contain at least 25.0% acid-insoluble residue in the plus No. 30 size fraction and in the minus No. 30 size fraction. Sands may be blended to meet this requirement.

*b. Type 1 Coarse Aggregate.* Use coarse aggregate meeting one of the of the following requirements:

- Limestone, dolomite, or a blend of the two, having an acid-insoluble residue content not less than 20.0%.

- Sandstone, granite, chert, traprock, ore tailings, slag, or other similar noncarbonate materials.
- For concrete mixtures containing CA1 coarse aggregate: gravel or a blend of rock types containing no less than 95.0% noncarbonate particles (by weight with adjustments to equivalent volumes for materials of different specific gravities) in the minus 1 inch, plus 1/4 inch primary size fraction.
- For concrete mixtures containing CA2 coarse aggregate: gravel or a blend of rock types containing no less than 95.0% noncarbonate particles (by weight with adjustments to equivalent volumes for materials of different specific gravities) in the minus 1 1/2 inch, plus 1/2 inch and the minus 1/2 inch, plus 1/4 inch primary size fractions.

*c. Type 2 Coarse Aggregate.* Use coarse aggregate meeting one of the following requirements:

- Limestone, dolomite, or a blend of the two, having an acid-insoluble residue content not less than 20.0%.
- Sandstone, granite, chert, traprock, ore tailings, slag, or other similar noncarbonate materials.
- For concrete mixtures containing CA1 coarse aggregate: gravel or a blend of rock types containing no less than 20.0% noncarbonate particles (by weight with adjustments to equivalent volumes for materials of different specific gravities) in the minus 1 inch, plus 1/4 inch primary size fraction.
- For concrete mixtures containing CA2 coarse aggregate: gravel or a blend of rock types containing no less than 20.0% noncarbonate particles (by weight with adjustments to equivalent volumes for materials of different specific gravities) in the minus 1 1/2 inch, plus 1/2 inch and the minus 1/2 inch, plus 1/4 inch primary size fractions.

*d. Type 3 Coarse Aggregate.* Use coarse aggregate meeting one of the following requirements:

- Limestone or a blend of limestone and dolomite having an acid-insoluble residue content not less than 20.0%.
- Dolomite.
- Sandstone, granite, chert, traprock, ore tailings, slag or other similar noncarbonate materials.
- For concrete mixtures containing CA1 coarse aggregate: gravel or a blend of rock types containing no less than 20.0% noncarbonate particles (by weight with adjustments to equivalent volumes for materials of different specific gravities) in the minus 1 inch, plus 1/4 inch primary size fraction.
- For concrete mixtures containing CA2 coarse aggregate: gravel or a blend of rock types containing no less than 20.0% noncarbonate particles (by weight with adjustments to equivalent volumes for materials of different specific gravities) in the minus 1 1/2 inch, plus 1/2 inch and the minus 1/2 inch, plus 1/4 inch primary size fractions.

*e. Type 9 Coarse Aggregate.* Use coarse aggregate meeting the requirements of §501-2.02 B.1.b. Coarse Aggregate.

**C. Admixtures.** Use only admixtures which meet the requirements of §711-08, or §711-13, and which appear on the Department's Approved List of Materials. Admixtures which do not conform to these requirements are subject to evaluation by the Materials Bureau.

**501-2.03 Concrete Batching Facility Requirements.** Batching facilities must be of sufficient design and capacity to produce the quantity of concrete specified. Batching facilities that differ from conventional designs will be considered for use by the Director, Materials Bureau.

**A. Acceptance.** Each facility requires initial and annual approval by the Director, Materials Bureau. The Regional Director may disapprove use of a previously approved facility at any time for non-conformance with the specifications. Once disapproved, production for Department work will not be allowed until corrective measures are implemented under the approval of the Regional Director.

**B. Bins.** Each facility requires:

- Sufficient size and number of storage bins to produce the quantity of concrete specified.
- Positive separations between fine aggregate and various sizes of coarse aggregates.
- Separate cement, pozzolan, High Reactivity Pozzolan, and microsilica bins, except Type I and Type II cement may be combined in common storage unless the cement is intended for use in high sulfate or salt water areas as described in §501-2.02 A. Cementitious Materials.
- Cement, pozzolan, High Reactivity Pozzolan and microsilica bins with protection from rain and moisture.
- A means of safely obtaining uncontaminated samples from all microsilica bins.
- A means of safely obtaining uncontaminated samples from any cement, pozzolan or High Reactivity Pozzolan bin that has been determined by the Regional Materials Engineer as either unsafe to sample, or difficult to verify the acceptability of its contents.

Sampling will be conducted, or witnessed by the Regional Materials Engineer's representative.

**C. Weigh Hoppers and Discharge Chutes.** Each facility requires:

- Separate weigh hoppers for aggregate and cementitious materials.
- Enclosed cement weigh hopper to protect against moisture and reduce escaping dust.
- Chutes arranged so that materials will not lodge or be lost on discharge.
- No chutes suspended from any part of the weighing system.
- Vibrators arranged so that no significant vibrations are transmitted to the scales or other plant control equipment during the weighing process.

**D. Scales.** Each facility requires:

- Load cell type scales which indicate the load at all stages of the weighing operation, from zero to full capacity, when installed for weighing materials after January 2, 2003.
- Scales that meet the requirements of the National Institute of Standards and Technology, Handbook 44, with no less than 500 nor more than 2000 scale divisions.
- Digital displays that match the primary scale within 1 division.
- Minimum resolution of digital displays equivalent to the minimum resolution on the primary scale.
- Digital displays located in direct sight of the operator's normal work station.
- Face of digital displays protected from manipulation.

Test all plant scales for accuracy, at no additional cost, by a qualified technician as follows:

- Annually, prior to use for Department work.
- At intervals of not more than 90 calendar days.
- Whenever a plant changes location.
- At any time ordered by the Regional Director.

Provide a cradle or test platform approved by the Regional Materials Engineer, for each scale. Provide at least 20 certified 50 lb. test weights for performing scale accuracy tests. The certification of compliance for the test weights must be made available upon request at the time of the scale accuracy test. The use of a set of test weights for multiple facilities may be permitted, providing that the test weights are available for use within one hour after request. When directed by the Regional Director, protect the scales, and displays from manipulation by locking or sealing. Any evidence of tampering will be cause for rejection.

**E. Proportioning Control Equipment.** Proportion the materials by automatic proportioning devices approved by the Director, Materials Bureau. The Regional Director may require the locking or sealing of proportioning equipment that is subject to manipulation. Install automatic proportioning equipment in a dust and weather protected area of at least 36 square feet, with no internal dimension less than 6 feet.

Include equipment to:

- Produce all batches in fully automatic mode using preprogrammed US Customary mix designs. The only manual operation allowed is a switch or button to start the batching sequence and/or discharge the completed batch.
- Accurately proportion the various components of the mixture by weight, or by volume for admixtures and water, in the proper order so that aggregates and cementitious materials are displayed cumulatively (when appropriate).
- Deliver each constituent within the tolerances indicated in Table 501-4, Batching Tolerances.
- Control the cycle sequence.
- Interrupt and stop the automatic batching operations via auxiliary interlock cutoff circuits, whenever an error exceeding the acceptable tolerance occurs in proportioning, for all materials except water.
- Time the mixing operations for central mix plants, and provide a clear indication on the recordation whenever the mix time has been interrupted.

Interlock the system so that during the batching of cementitious materials, aggregates and admixtures:

- No inlet gate can open while the weigh hopper discharge gate is open.
- No inlet gate can open while another material is being weighed in a shared weigh hopper.
- No weigh hopper discharge gate can open while the hopper is being filled nor until the full batch weight is within delivery tolerance.
- No new batch can be weighed until the hopper is entirely empty of the previous batch and the scale has returned to within the allowable zero tolerance.

**F. Admixture Dispensing Systems.** Equip plants with calibrated systems that meet the following:

- A sufficient number of dispensing systems to supply the concrete mixture specified.
- The ability to dispense each admixture through its own measuring system.
- Accurate measurement within the tolerance limits specified in Table 501-4, Batching Tolerances.
- A bypass valve to obtain a calibrated sample of admixture from each measuring device.
- Uniform distribution of admixture throughout the mix within the specified mixing period.
- When multiple admixtures are added, no direct contact with each other prior to mixing.
- An approved automatic admixture dispensing system in plants equipped with automated proportioning systems.
- Volumetric measuring devices interlocked with the automated proportioning equipment that insure the preset quantity has been actually measured and completely discharged.
- A readable indication at the operator's normal work station of the actual quantity batched.

Interlock the admixture system with the automated proportioning system so that aggregate and/or cement weigh hopper discharge gates cannot be opened until the preset quantity of admixture has been batched or discharged.

Recordation of the presence of admixture is dependent on completion of admixture discharge.

**G. Recordation Equipment.** Equip all plants with digital recording instruments approved by the Director, Materials Bureau, that meet the following requirements:

- Is readily accessible and readable at the operator's normal work station.
- Provides separate quantity recordation of each aggregate component, cement, pozzolan, High Reactivity Pozzolan, microsilica, admixture, fine aggregate moisture content, and water (at central mix plants) for each batch of concrete. Water at central mix plants may be recorded by weight or volume.
- Records the batch number, concrete class, date (day, month, year), and time of day to the nearest minute on each batch record.
- Provides cumulative recordation (when batching cumulatively) of weight and/or volume as indicated on the batching scale or meter within an accuracy of 1 scale or meter graduation.
- Has a minimum recorder resolution equivalent to or less than the minimum graduation on the scale or meter, unless otherwise approved by the Director, Materials Bureau.
- Provides a clear and legible copy of all batch records, containing permanent identification of the time and all quantities in each batch, to the Department.
- Automatically stamps the date and time of batch completion on each batch and /or delivery ticket.
- Provides clear identification on batch recordation when:
  - ◆ Initiating a batch without all conditions satisfied for full automated production.
  - ◆ An out of tolerance condition is accepted during batching.
  - ◆ A system is taken out of the full automated mode during the batching sequence.
  - ◆ A system produces a "demonstration" or "simulated" batch.
  - ◆ A system reprints a batch ticket.
  - ◆ The timing of a central mixer has been interrupted.

When the automation system can produce other than standard size batches (full, half or quarter cubic yard increments), recordation will be subject to approval of the Director, Materials Bureau.

**H. Inspection Facility.** Provide a weatherproof building or trailer, for use as an inspector's testing laboratory and office that meets the following criteria:

- Meets all applicable uniform fire prevention and building code requirements.
- Office area partitioned from the testing laboratory.
- Minimum gross area of 160 square feet, a minimum internal width of 7 feet and a ceiling height of not less than 7 1/2 feet.
- Protected from a noise level greater than an 8 hour, time weighted average of 85 dBa.
- Laboratory area with tables, work benches, shelving, and other equipment for testing portland cement concrete mixes.
- Increase the area proportionally to house and operate any additional testing equipment, and when there are multiple plants at one site, size the increase of the laboratory and office space to be adequate for performing inspection duties during all production circumstances.

Use the inspection facility only for its intended purpose, and when the inspection facility is used by more than one inspection authority, the Department will have priority. The facility and its location

are subject to approval by the Regional Materials Engineer. Maintain the inspection facility, office, and testing equipment in good operating and clean condition. The Producer will be responsible for routine cleaning.

Equip the inspection facility with the following:

**1. Office Equipment.** A Standard size (approx. surface dimensions: 30 x 60 inches) office desk with drawers and a chair, and a fireproof file cabinet with at least two locking drawers and two keys.

**2. First Aid Equipment.** An adequately stocked first aid kit at the plant site including:

- An emergency eye wash station in the laboratory area.
- Safety equipment including gloves, dust mask, etc..

**3. Sanitary Facilities.** A flush type toilet at the plant site, enclosed in a properly vented, separate room and complying with applicable sanitary codes. A portable toilet may be substituted when a facility is set up on a temporary basis for a specific project.

**4. Lighting.** Electric, non glare, providing a minimum illumination level of 1000 lux at desk and work bench level.

**5. Laboratory Sink / Potable Water.** A Sink and faucet with an adequate supply of clean water for testing, and if necessary, a water cooler for potable drinking water.

**6. Heating and Cooling.** Adequate heating and air conditioning equipment to maintain an ambient temperature of  $70\pm 5^{\circ}\text{F}$ .

**7. Ventilation.** Minimum 3.5 cfs exhaust hood, vented to the atmosphere, located over the sample drying area.

**8. Communication Equipment.** A telephone with a dedicated line in the laboratory office and a fax machine at the inspection facility or plant site for the inspector's use.

**9. Fire Extinguisher.** A 10 pound capacity multi-class ABC fire extinguisher, maintained and located in the laboratory area.

**10. Coarse Aggregate Sieve Shaker.** Power driven, with a minimum clear sieve area of 324 square inches.

- Anchored to a firm base.
- Imparts a vertical, or lateral and vertical motion.
- Equipped with an automatic timing shut-off device and dust cover.
- Fully enclosed and weatherproof when located outside the inspection facility.

**11. Fine Aggregate Sieve Shaker.**

- Power driven, independent of the coarse aggregate shaker.
- For 8 inch minimum diameter sieves.
- Imparts a vertical, or lateral and vertical motion.
- Equipped with an automatic timing shut-off device.
- Fully enclosed and weatherproof when located outside the inspection facility.

**12. Sample Splitter.** Able to split samples with a particle size of 1/2 – 2 inches.

**13. Large Scale.** Minimum capacity of 14 kg, with a maximum gradation of 0.005 kg meeting AASHTO M-231 Class G20. Scales provided as new or replacement after September 1, 2004, must be digital.”

**14. Small Scale.** Minimum capacity of 1500 g, with a maximum gradation of 0.1 g meeting AASHTO M-231 Class G2. Scales provided as new or replacement after September 1, 2004, must be digital.

**15. Sample Drying Appliance.** Stove or hot plates sized to rapidly dry aggregate samples with a minimum total of four burners.

**16. Miscellaneous Testing Equipment.** Miscellaneous equipment as per Department written directives or as requested by the Regional Director.

**17. pH Test Kit.** pH test kit meeting the requirements of Materials Procedure NY 90-1 for all plants supplying concrete containing microsilica (711-11).

**501-2.04 Concrete Mixer and Delivery Unit Requirements.** Each mixer requires a Manufacturer's plate, which contains the mixing capacity of the mixer, in a convenient visible location. Repair or replace blades inside the drum that have become heavily encrusted with mortar, or are loose, broken, bent, scalloped or worn 20% in any dimension or otherwise damaged.

**A. Central Mixers.** Central mixers meeting the following may be used unless otherwise specified:

- Equipped with an acceptable timing device that prohibits a batch of concrete from being discharged before the specified mixing time has elapsed (as per §501-3.03 C) without a clear indication on the recordation equipment.
- Able to discharge the entire batch in an unrestricted manner into a hopper or delivery unit.

**B. Delivery Units.** Delivery units are subject to inspection as per NYSDOT Materials Method 9.1 and approval by the Regional Director. If found unfit, it will be disapproved until properly repaired. Completely clean and empty the agitating and non-agitating units of concrete and wash water before loading again.

**1. Truck Mixer Requirements.** Use an inclined axis rotating drum type with a water tank system able to measure water (gallons) going into the drum within a 2% accuracy, and equipped with a hatch in the drum periphery to permit access to inspect the inside.

Each truck mixer unit will be inspected and approved annually by the Regional Materials Engineer for use in Department work, and additional inspections will be made during use to determine its operating condition. Truck mixers will not be permitted to mix batches greater than the maximum capacity indicated on the Manufacturer's rating plate.

*a. Transit Mixed Concrete.* Equip each truck mixer used for transit mixed concrete with an electrical revolution-counting device, appearing on the Approved List, mounted in a clearly visible position as follows:

- Separate counters showing; The number of drum revolutions at speeds within the mixing range and the total number of drum revolutions.
- Both counters legible to one revolution and designed to accept a non-standard electric plug for resetting each counter to read zero when loading at the batch plant.

- Tamper-proof such that if tampering occurs, the counters will become inoperative or the device will otherwise indicate tampering, including the interruption of electric power.
- Installed to count the number of revolutions of the drum only in the direction of mixing.
- Adjusted so that it counts the number of revolutions specified for the mixing and agitating drum speed within the tolerances indicated on the Manufacturer's rating plate, but not to exceed the following Department's requirements for truck mixers:
  - ◆ Mixing - 6 RPM minimum to 18 RPM maximum
  - ◆ Agitating - 2 RPM minimum to 6 RPM maximum
  - ◆ The mixing and agitating revolution limits may be adjusted for individual mixing units upon approval of the Director, Materials Bureau.

*b. Central Mixed or Truck Mixed Concrete.* Equip each truck mixer used for central or truck mixed concrete, either as described in §501-2.04 B.1.a., for Transit Mixed Concrete, or as follows:

- Mixing speed capability - 6 RPM minimum to 18 RPM maximum.
- Agitating speed capability - 2 RPM minimum to 6 RPM maximum.
- Approved counter- located in a position readily visible to the Engineer that accurately counts the number of revolutions in the direction of mixing.

**2. Non- Agitating/Open Haul Units for Central Mixed Concrete.** Each truck shall be:

- Sound and watertight enough to prevent loss of material during delivery.
- Free of contamination.
- Covered to protect the concrete from adverse drying or precipitation, when ordered by the Engineer.

**C. Mobile Concrete Mixing Units.** A mobile concrete mixing unit, with the Engineer's approval, may be used for miscellaneous work such as curb, gutter, headwalls, catch basins, manholes, drop inlets, field inlets, sign foundations, lighting structure foundations, anchor units, pullboxes, leveling footings and similar placements.

Equip the mobile mixing unit with proportioning devices that deliver the materials within the following tolerances by weight:

Cement	0 to +4%	Admixtures	±3%
Fine Aggregate	±2%	Water	±1%
Coarse Aggregate	±2%		

Use a self contained, continuous mixing type, that meets the following:

- Carries unmixed dry bulk cementitious materials, fine and coarse aggregate, water and admixtures sufficient for at least 6 cubic yards per batch, unless otherwise approved by the Regional Materials Engineer.
- Measures the amount of cement being introduced into the mix by a clearly visible meter which is kept clean at all times.
- Records the quantity of cement by a ticket printer that, as a minimum, records the number of revolution counts of the cement feeder.

**1. Water system**

- a. Provides positive control of the water flow into the mixing chamber.
- b. Water flow indicated by a readily adjustable flow-meter to provide for minor variations in aggregate moisture.



- c. Equipped with a bypass valve or hose suitable to determine batching accuracy.

## **2. Admixture System**

- a. Equipped with at least one admixture delivery system.
- b. Provides positive control of the admixture flow into the unit's mix water system.
- c. Flow-meters to control the amount of admixture added to the mix.
- d. Dispenses admixtures in a manner that provides uniform distribution throughout the concrete.
- e. Adds admixture in the amount necessary to achieve the required air content.
- f. Equipped with a bypass valve to obtain a calibrated sample to determine batching accuracy.

## **3. Mobile Mixing Unit:**

- a. Capable of combining aggregates, cement, water and admixture into a thoroughly mixed and uniform weight, and discharging the mixture without segregation.
- b. Set the mixing time to achieve proper and uniform mix, as determined by the Engineer.
- c. Stockpile all mix materials at the project site, unless otherwise approved by the Engineer
- d. Provide the necessary scales, containers and personnel, approved by the Engineer, to calibrate the unit.
- e. Calibrate the unit and provide a record of the calibration to the Engineer for the mix design to be used. The Regional Materials Engineer will furnish the mix design information and the calibration procedure. The Department reserves the right to witness calibration of the unit.
- f. Prior to actual use, demonstrate to the Engineer that the concrete meets the specification requirements for slump, air content and proportioning. Proportioning may be verified in accordance with NYSDOT Materials Method 9.4.

Correct any improper mixer conditions as approved by the Engineer. Improper conditions include, but are not limited to, blades that have become heavily encrusted with mortar, or are loose, broken, bent, scalloped, or worn 20% in any dimension or otherwise damaged. The Engineer will discontinue use of a unit that performs unsatisfactorily.

**D. Small Mixing Units.** The Engineer may allow a small construction mixer to mix small quantities of concrete. Mix for at least 90 seconds after all materials are in the mixer, and the Engineer will test the concrete for the specified slump and air content.

## **501-3 CONSTRUCTION DETAILS**

**501-3.01 Proportioning.** Proportion all ingredients, except for admixtures, according to Table 501-3, Concrete Mixtures and as determined by the Department unless otherwise indicated in the contract documents. Any concrete mix design not meeting the requirements of Table 501-3 will be subject to approval by the Director, Materials Bureau.

**A. Aggregates and Cementitious Materials.** Aggregate and cementitious material proportions are indicated in Table 501-3, Concrete Mixtures, for standard classes of concrete. Mixes containing aggregate other than those permitted by §501-2.02B, Aggregates, are subject to approval by the Director, Materials Bureau.

Certain aggregates appear in the Approved List of Sources of Fine & Coarse Aggregates that have use limitations if combined with a high-alkali portland cement. The Regional Materials Engineer may allow the use of these aggregates in combination with high-alkali cements provided that pozzolans are substituted for cement in the following way:

TABLE 501-3A POZZOLAN SUBSTITUTIONS		
Concrete Class Specified	Substitute Cement by Mass With	Class Substitution Allowed
A, C, E, H	15-20% Class F Fly Ash (711-10)	HP <sup>1</sup>
I, J	15-20% Class F Fly Ash (711-10)	-
D	15-20% Class F Fly Ash (711-10)	DP <sup>1</sup>
G <sup>2</sup> and GG <sup>2</sup>	20% Class F Fly Ash (711-10)	-
F	No Substitution Allowed	-

**NOTES:**

1. Class HP and DP concrete may be substituted to mitigate ASR as listed above. Classes HP and DP require the replacement of portland cement with 20% pozzolan and 6% microsilica. The pozzolan may be either Class C or F Fly Ash (§711-10) or Ground Granulated Blast Furnace Slag (§711-12).
2. Classes G and GG require the replacement of portland cement with 20% pozzolan. The mitigation of ASR in Classes G and GG must be accomplished using Class F Fly Ash (§711-10).

Notify the Regional Materials Engineer prior to using pozzolan substitutions to mitigate ASR when using reactive aggregates in combination with a high alkali cement.

Approval may be withdrawn when unsatisfactory results occur.

**B. Admixtures.** Admixtures are used to achieve the desired set retardation, water reduction, slump, air content, and to protect reinforcing steel from corrosion. Admixtures are not considered part of the solid volume in the concrete mixture. The admixture manufacturer's recommended maximum dosage rate should not be exceeded to obtain the desired results as specified in Table 501-3.

**1. Air Entrainment.** Air entraining agent is required for all mixes to produce concrete with an air content in the range specified in Table 501-3, Concrete Mixtures unless otherwise indicated in the contract documents. The Engineer will test the concrete for plastic air content, and reject concrete with air contents outside the specified limits.

**2. Retardation.** The setting time of concrete may be retarded when necessary for proper placement. A water-reducing and retarding admixture (§711-08, ASTM Type D), is required in Class DP for Structural Slab Overlays (Section 584), Class HP for Superstructure Slabs and Structural Approach Slabs (Section 557), Class G and Class GG concrete. It may be used with, or in place of, a water-reducing admixture (§711-08, ASTM Type A) in other applications that allow Class DP or Class HP. Limit the use of the water-reducing and retarding admixture to the minimum amount required to achieve retardation during placing conditions. Unless otherwise specified, the use of water-reducing and retarding admixtures are subject to approval of the Regional Director.

**3. Water Reduction.** Unless otherwise specified, a water-reducing admixture (§711-08, ASTM Type A), is required in Classes DP, HP, I and J concrete. For all other classes, except G and GG, a water-reducing admixture may be used, subject to advance notification and approval of the Regional Materials Engineer.

High Range Water-Reducing Admixtures (§711-08, ASTM Type F), may not be used unless allowed by specification, plans, or the Director, Materials Bureau.

**4. Corrosion Inhibitors.** Corrosion Inhibitors, meeting the requirements of §711-13, may be used in special applications where specified in the plans, contract documents, or as directed by the Director, Materials Bureau.

**C. Water.** Add water to obtain the slump desired by the Engineer, within the Design Mix Guidelines of Table 501-3, Concrete Mixtures. The Engineer will test the concrete for slump, and reject concrete with a slump greater than the guidelines for use in Department work.

Concrete with insufficient slump may be adjusted to within the guidelines of §501-3.03 by adding water and remixing, when permitted by the specifications or the Engineer.

**D. Pozzolan.** Up to 20% of the cement content for Classes A, C, D, E, H, I, and J may be substituted with a pozzolan (Fly Ash or GGBFS), except where prohibited by the Regional Director. No additional pozzolan is permitted in Classes DP, G, GG, or HP. No pozzolan is permitted in Class F.

**E. Microsilica.** Microsilica meeting the requirements of §711-11 may be added as part of a Blended Cement (§701-03, Type SF or Ternary Blend) or batched independently as a powder.

**F. High Reactivity Pozzolan (HRP).** When permitted by Regional Materials Engineer, HRP meeting the requirements of §711-14 may be batched independently as a partial replacement for Portland cement in specialized or high performance mixes.

<b>TABLE 501-3 CONCRETE MIXTURES</b>							
<b>Design Mix Guidelines (where sand fineness modulus = 2.80)<sup>1</sup></b>							
<b>Concrete Class</b>	<b>T.C.M.<sup>5</sup> Content (lb/cy)</b>	<b>Sand % Total Agg. (solid volume)</b>	<b>Water/cementitious mat'ls (by weight)</b>	<b>Air Content % desired (Range)</b>	<b>Slump Range (in)</b>	<b>Type of Coarse Aggregate Gradation</b>	<b>Primary Use</b>
A	606	36.2	0.46	6.5 (5.0 - 8.0)	2 1/2 - 3 1/2	CA 2	general purpose structural
C <sup>6</sup>	605	35.8	0.44	6.5 (5.0 - 8.0)	1 - 3	CA 2	Pavement: slipform paving, form paving
D	725	45.8	0.44	7.5 (6.0 - 9.0)	2 1/2 - 3 1/2	CA 1	thin structural applications
DP <sup>2</sup>	725	45.8	0.40	7.5 (6.0 - 9.0)	3 - 5	CA 1	thin structural applications, overlays
E	648	35.8	0.44	6.5 (5.0 - 8.0)	3 - 4	CA 2	structural slabs and structural approach slabs
F	716	34.6	0.38	6.5 (5.0 - 8.0)	2 - 3	CA 2	high early strength for pavement or structural applications
G <sup>3</sup>	727	45.0	0.45	6.0 (4.0 - 8.0)	6 - 7	CA 2	underwater
GG <sup>3</sup>	800	45.0	0.45	6.0 (4.0 - 8.0)	6 - 7	CA 1	underwater (special)
H	675	40.0	0.44	6.5 (5.0 - 8.0)	3 - 4	CA 2	pumping applications
HP <sup>2</sup>	675	40.0	0.40	6.5	3 - 5	CA 2	pumping, structural

				(5.0 - 8.0)			slabs, approach slabs, substructures exposed to chlorides
I <sup>4</sup>	640	41.0	0.44	6.0 (4.0 - 8.0)	1/2 - 1 1/2	CA 2	slip forming highway median barriers
J <sup>4</sup>	680	45.8	0.44	6.0 (4.0 - 8.0)	1/2 - 1 1/2	CA 1	slip forming structural median barriers, parapet walls and curbs

**NOTES :**

1. Mixture proportions will be computed by the Regional Materials Engineer using the fineness modulus and bulk specific gravities (saturated surface dry) of the aggregates proposed for use.
2. Class DP and HP require the replacement of portland cement with 20% pozzolan and 6% microsilica and the addition of a water reducing admixture and / or water- reducing and retarding admixture. Refer to §501-3.01 B, Admixtures.
3. Class G and GG require the replacement of portland cement with 20% pozzolan, and the addition of a water- reducing and retarding admixture. Refer to §501-3.01 B, Admixtures.
4. These mixes require the use of a water reducing admixture. Refer to §501-3.01 B, Admixtures.
5. T.C.M. = Total Cementitious Material.
6. Slump range for slipform paving is 1 – 2 1/2 inches and for fixed form paving is 1 1/2 – 3 inches.

**501-3.02 Handling, Measuring and Batching Materials.** Arrange the batching facility and equipment to assure a continuous supply of material to the work.

When written approval is granted by the Director, Materials Bureau, bagged material may be incorporated into the mix. Adjust the batch size to use whole bags of bagged material. The handling, measuring and batching of bagged material must be verified and documented by a Department representative.

**A. Stockpiles.** Build good draining bases for stockpiles, at the batching facility, on prepared aggregate, concrete, metal or wood surfaces, or barge floors, subject to approval by the Regional Director. Build the stockpiles by methods which do not cause particle segregation. Stockpile all aggregates separately, by source and size so that no cross contamination occurs. Label all Department approved stockpiles by source number.

Handle aggregates throughout the batching process such as to maintain uniform grading of the material. In case the aggregates contain a high or non-uniform moisture content, stockpile the aggregates for a sufficient length of time to stabilize the moisture content.

Equip each plant with a moisture sensing device that indicates, on a readily visible scale or chart, the fine aggregate moisture content as it is batched. Indicate the free moisture content on the batch recordation during batching. The free moisture content during batching is limited to a maximum of 8% of the fine aggregate's saturated-surface dry weight.

The Regional Materials Engineer will determine the acceptability and accuracy of the moisture sensing device. If the device is considered accurate, the free moisture content of the fine aggregate may be allowed to be adjusted between batches based on the most recent moisture reading. No adjustment for free moisture will be allowed for an individual batch after batching starts.

**B. Heating Materials for Cold Weather Concreting.** Use equipment that uniformly heats the materials. To obtain the specified temperature of the plastic concrete when the air temperature is below 32°F, heat the aggregates by steam or dry heat and heat the mix water. When the air temperature is 32°F or more, and the aggregates are free of ice, the specified temperature may be obtained by heating only the mix water. The equipment and operations for heating the materials must be approved by the Regional Director prior to use on Department projects.

<b>Specified Temperature Range</b>	<b>Minimum</b>	<b>Maximum</b>
Mix Water	70°F	180°F
Aggregate	40°F	100°F
Plastic Concrete in place	50°F	70°F

To avoid the possibility of flash set when water is heated over 100°F, combine the water and aggregate in the mixer so that the water temperature is reduced before cement is added.

### **C. Batching.**

**1. Aggregates.** When sizes are weighed cumulatively, allow a  $\pm 2\%$  tolerance for each draw weight, based on the combined aggregate batch weight. If sizes are weighed separately, apply the tolerance to each scale weight.

#### **2. Cement and Pozzolan.**

*a. Batching without microsilica or HRP added independently on a common scale.* Weigh the cement, blended cement, or pozzolan cumulatively with a  $\pm 1\%$  tolerance for each draw weight (based on the combined weight of all cementitious materials). Weigh the pozzolan last in the weighing sequence.”

*b. Batching with microsilica or HRP added independently on a common scale.* Weigh all cementitious materials cumulatively with a  $\pm 0.5\%$  tolerance for each draw weight (based on the combined weight of all cementitious materials). Double the minimum allowable batch weight. Weigh the microsilica or HRP last in the weighing sequence.

#### **3. Microsilica and High Reactivity Pozzolan (HRP).**

*a. Batching with cement, Type IP or SM blended cement, or pozzolan on a common scale.* Weigh the microsilica or HRP cumulatively with a  $\pm 0.5\%$  tolerance for each draw weight (based on the combined weight of all cementitious materials). Double the minimum allowable batch weight. Weigh the microsilica or HRP last in the weighing sequence.

*b. Batching microsilica or HRP on a separate scale.* Weigh the microsilica or HRP with a  $\pm 1\%$  tolerance (based on the total weight of microsilica or HRP).

**D. Delivery Tickets.** Each delivery ticket must contain the following:

- SiteManager Mix ID
- Delivery Ticket Number
- Plant Identification, with plant name and location and/ or facility number
- Contract Number
- Concrete Class or Item Number
- Quantity (Nominal Batch Size)
- Truck Number
- Batch Number
- An Automatically Applied Time- Date Stamp (immediately upon completion of batching) which may consist of one of the following :
  - ◆ Time - Date stamp by separate printing device on a regular ticket
  - ◆ Time - Date printed by a batch weight recorder on a printed ticket.
  - ◆ Time - Date printed by a batch weight recorder on a printed tape. Affix a copy of the tape to the regular delivery ticket.

**E. Failure of Automatic Batching, Admixture Dispensing and Recording Equipment.**

If automatic proportioning, admixture dispensing or recording instruments fail, the plant may be allowed, subject to approval of the Regional Director or his representative, to continue producing concrete for the Department for up to 48 hours from the time of breakdown. Written permission of the Regional Director will be required to operate without these instruments for periods longer than 48 hours.

During this period, batch all materials within the automatic proportioning system tolerances.

<b>TABLE 501-4 BATCHING TOLERANCES<sup>3</sup></b>	
Cement, Pozzolan, or Blended Cement	± 1% (by weight) of total cementitious materials, if no microsilica or HRP is weighed cumulatively on a common scale.
	± 0.5% (by weight) of total cementitious materials, if microsilica or HRP is weighed cumulatively on a common scale.
Microsilica or HRP	± 0.5% (by weight) of total cementitious materials, if weighed cumulatively with any other cementitious material.
	± 1% (by weight) if weighed on a separate scale.
Aggregates	± 2% (by weight)
Water <sup>1</sup>	± 1%
Admixtures (711-08, or 711-13)	± 3% by volume, or ± 1 meter pulse, whichever is greater.
Admixtures (others)	Contact Director, Materials Bureau
Zero - Aggregate <sup>2</sup>	± 2%
Zero - Cementitious Materials <sup>2</sup>	± 1%
Zero-Water (weighed) <sup>1,2</sup>	± 1%

- NOTES:**
- 1: Tolerance applies to water batched at central mix plants only.
  - 2: Zero tolerance applies to empty scales, based on the minimum allowable batch size.
  - 3. All tolerances are based on the pre-programmed target quantity.

**501-3.03 Concrete Mixing, Transporting and Discharging.**

**A. General.** Mix the concrete at a central mix plant, in truck mixers in transit or at the site. When mixed at a central mix plant, transport the concrete in vehicles acceptable to the Regional Director. Place the fresh concrete directly into the forms or into conveyance equipment approved by the Regional Director before evidence of initial set. No water addition will be permitted after the mix has reached the mid-point of the slump range, as indicated in Table 501-3, Concrete Mixtures, for the class used. Concrete with a discharge temperature exceeding 90°F will be subject to rejection.

Notify the Regional Materials Engineer’s office by 3:00 PM on the day before any production for the Department. Supply fresh concrete at a rate consistent with placement operations as determined by the Engineer. The Regional Director may disapprove the use of any type of concrete mixing or transporting units when unsatisfactory results occur.

Load the mixer, regardless of type, in a manner approved by the Regional Director and mix batches of concrete no larger than the rated capacity shown on the Manufacturer's plate.

A summary of time limitations for various types of concrete mixing equipment, from the beginning of batching to the completion of discharge, is given in Table 501-7, Summary of Concrete Batching, Mixing, Hauling and Discharging.

**B. Concrete Uniformity.** Use a mixer that combines aggregates, cementitious materials, water and admixtures into a uniform weight within the specified time. The mixer is required to discharge the mixture without segregation, and meet the uniformity requirements in Table 501-5, Concrete Uniformity. The Department will perform tests when required by the specifications or requested by the Regional Director.

It will only be necessary to verify that mixing equipment meets uniformity requirements if evidence of non-uniform concrete is found or a reduced mixing time for central mixers is requested. A reduction in the batch size below the rated mixer capacity or reduced mixing speed tolerance limits may be required to obtain uniformity.

<b>TABLE 501-5 CONCRETE UNIFORMITY</b>		
Test	Permissible Variation (Concrete samples taken at two locations in the batch)	
Weight per cubic foot calculated to an air-free basis	2.0 lb/cf	
Air Content, % by volume of concrete	1.0%	
Slump:	Average slump 4 in or less	1 in
	Average slump greater than 4 in	1 1/2 in
Coarse aggregate content, portion by weight of each sample retained on a No. 4 sieve	6.0%	
Unit weight of air-free mortars based on average for all comparative samples tested	1.6 %	

**NOTE:** The Department will take samples at the mixer discharge point and test in accordance with Materials Method 9.2.

**C. Central Mixed Concrete.** Central mixed concrete is concrete mixed in a stationary mixer and transported in approved agitating or non-agitating delivery units to the deposition point. Use a minimum 90 second mixing time after all materials are in the drum, unless tests show that the requirements of Table 501-5, Concrete Uniformity, can be consistently obtained at a lesser time as approved by the Director, Materials Bureau.

Use delivery units that transport thoroughly mixed concrete without loss of uniformity meeting the requirements of §501-2.04B.1.b. or §501-2.04B.2., pertaining to Central Mixed Concrete.

Travel on a haul road free from holes, washboarding or other features that cause segregation in plastic concrete.

Do not exceed the time limit between completion of mixing at a central mix plant and completion of discharge as noted in Table 501-6, Time Limits for Delivery of Central Mixed Concrete.

When transporting central mixed concrete in units approved for truck mixing, add a minimum of 90% of the design water to the mix with the batch plant water system.

Two additions of water will be allowed at the discharge point to obtain initial slump. After each addition, mix the concrete at least 30 mixing-speed revolutions before discharging. The initial loads may, with prior written approval by the Regional Materials Engineer, also be adjusted by using a water-reducing admixture (711-08, ASTM Type A). This adjustment will be limited to the first trucks arriving for a particular placement before any adjustments have been made at the batching facility. Observe the maximum number of mixing revolution or water addition requirements. Make all subsequent admixture additions or adjustments during production at the batching facility. No additions or adjustments are allowed when non-agitating / open haul units are used.

<b>TABLE 501-6 TIME LIMITS FOR DELIVERY AND DISCHARGE OF CENTRAL MIXED CONCRETE</b>	
Delivery Unit	Maximum Time (Minutes)

Non-Agitating / Open haul	30
Agitating - rotating drum	90 *

\* The Engineer will reject the concrete if there is evidence of initial set, and may reduce the time limit in hot weather or under unusual conditions if unsatisfactory results occur. For concrete that does not contain a water-reducing and retarding admixture, the time to initial strike-off or placement of subsequent lifts is included in the delivery and discharge time limit.

**D. Transit Mixed Concrete.** Transit mixed concrete is concrete batched at the production facility and mixed completely in a truck mixer at the following locations or combinations thereof: the plant, while in transit, or the discharge point. Transit mix may be used for all concrete items unless otherwise specified. Use a truck mixer meeting the requirements of §501-2.04B.1.a., pertaining to Transit Mixed Concrete.

- Load the mixer as follows:
1. Totally drain the drum of wash water before loading.
  2. Revolve the drum while loading the mix ingredients and add approximately 90% of the design water.
  3. Begin mixing within 5 minutes of cement to aggregate contact .

TABLE 501-7 SUMMARY OF CONCRETE BATCHING, MIXING, HAULING AND DISCHARGING			
Central Mixed Concrete	Transit Mixed Concrete		Truck Mixed Concrete
<b>Begin Batching</b>	<b>Begin Batching</b>		<b>Begin Batching</b> <b>REGULAR MIX</b>
Load mixer	Hatch load, or ribbon load materials through barrel hopper.		Load aggregates. Drum may be rocked or revolved
<b>End of Batching and Begin Mixing</b>	Add approx. 90% of design water		Load fine agg. , then SSD coarse agg. through hatch Drum may be rocked.
90 Second minimum after all materials are in the mixer.	▲	<b>Cement In Contact With Aggregates</b> 5 Minutes max.	<b>Load Cement</b> (See Note 3) <b>Cement In Contact With Aggregates</b> 30 Minutes max.
<b>End of Mixing</b>		<b>Begin Mixing</b> at plant or in transit	<b>Load Cement</b> (See Note 3) <b>Cement In Contact With Aggregates</b> 90 Minutes max.
<b>Open Haul Units</b>	<b>Rotating Drum</b>		<b>Begin Mixing</b> At project, after adding water
30 Minutes maximum	Agitate 2-6 rpm 90 Minutes maximum (See Note 2)	<b>Class HP or Class DP</b> 100 rev. minimum 200 rev. maximum	<b>Class HP or Class DP</b> 100 rev. minimum 200 rev. maximum
<b>Completion of Discharge</b>		Mix: 6-18 rpm	Mix: 6-18 rpm
(When concrete is transported in units approved for mixing, see Note 1)	90 Minutes max. (Note 2)	<b>All Other Classes</b> 100 rev. minimum 160 rev. maximum	<b>All Other Classes</b> 100 rev. minimum 160 rev. maximum
		Mix: 6-18 rpm	15 Minutes maximum
		<b>End of Mixing</b> Agitate 2-6 rpm	<b>End of Mixing</b> Agitate 2-6 rpm
		<b>Begin Discharge</b>	<b>Begin Discharge</b>
		50 Minutes maximum	30 Minutes maximum



	▼ <b>Completion of Discharge</b>	<b>Completion of Discharge</b>
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**NOTES:**

1. The remainder of the design water may be added at the work site to attain initial slump. When approved by the Regional Materials Engineer, only the first trucks may be adjusted to obtain initial slump using a water-reducing admixture (711-08, ASTM Type A). Exceeding the maximum mixing revolutions or water addition requirements will not be permitted.
2. For mixtures that do not contain a water-reducing and retarding admixture (711-08, ASTM Type D), the 90 minute maximum time includes the time to initial strike-off, or placement of subsequent lifts.
3. Add cement through hatch. Do not move drum while cement is being added.

Mix for a minimum of 100 mixing- speed revolutions and then check for consistency. If the truck is en route to the project, change the speed from mixing to agitating after 100 mixing revolutions. Unless restricted by local traffic laws, do not stop the rotation of the drum during transit.

Two additions of water will be allowed to obtain initial slump at the discharge location . After each addition, mix at least 30 mixing speed revolutions. For Class DP or HP concrete, mix a total of 100 to 200 mixing speed revolutions. For all other classes of concrete, mix a total of 100 to 160 mixing speed revolutions.

The initial loads may, with prior written approval by the Regional Materials Engineer, also be adjusted by using a water- reducing admixture (§711-08, ASTM Type A). This adjustment will be limited to the first trucks arriving for a particular placement before any adjustments have been made at the batching facility. Observe the maximum number of mixing revolution or water addition requirements. Make all subsequent admixture additions or adjustments during production at the batching facility.

After mixing, either discharge the load immediately or revolve the drum at agitating speed. Once begun, discharge the entire load within 50 minutes.

For mixes containing a water- reducing and retarding admixture, the total time interval from the moment the cement makes contact with the aggregates to the completion of discharge shall not exceed 90 minutes.

For mixes that do not contain a water- reducing and retarding admixture, the total time interval from the moment the cement makes contact with the aggregates to the completion of initial strike off or placement of subsequent lifts shall not exceed 90 minutes.

The Regional Director may reduce the total time limit in hot weather or under unusual conditions, if unsatisfactory results are obtained.

**E. Truck Mixed Concrete.** Truck mixed concrete is concrete completely mixed in a truck mixer meeting the requirements of §501-2.04B.1.b. Truck Mixers, after adding water at the discharge location. Apply §501-3.03D. Transit Mixed Concrete, except as follows:

**1. Loading of Mixer:**

*a. Regular Truck Mix (cement in contact with moist aggregates).* The drum may be rocked or revolved while loading coarse and/or fine aggregates with admixtures. Load the cement last, while keeping the drum stationary. Begin mixing within 30 minutes of cement to aggregate contact.

*b. Layered Truck Mix (cement in contact with Saturated Surface Dry(SSD) or drier coarse aggregate).* Batch the fine aggregate with admixtures, coarse aggregate and cement all separately. Load these materials through a hatch in the side of the drum in the following sequence: fine aggregate with admixtures, coarse aggregate, and cement last. The drum may be rocked after adding each aggregate size, but kept stationary while loading the cement. Begin mixing within 90 minutes of cement to coarse aggregate contact.

**2. Mixing:** Begin mixing at the discharge location. Add water to the drum either from the head section or by dual injection from both the head and discharge end. Mix for a minimum 100

revolutions or until uniform concrete of the specified consistency is produced, whichever is longer. Do not exceed a 15 minute mixing period.

**3. Discharge:** Discharge the entire load within 30 minutes after mixing.

**501-4 METHOD OF MEASUREMENT.** The Engineer will compute the volume of concrete as the number of cubic yards within the payment lines indicated on the plans or as specified by the Engineer. No deductions will be made for the volume of embedded reinforcement, structural shapes or joint materials. Also, no deductions will be made in concrete pavement for catch basins, manholes, etc. unless otherwise indicated in the contract documents.

**501-5 BASIS OF PAYMENT.** Include the cost of furnishing all materials, equipment and labor necessary to complete the work in the unit price bid for the appropriate items.

## **SECTION 502 - PORTLAND CEMENT CONCRETE PAVEMENT**

**502-1 DESCRIPTION.** Construct a portland cement concrete (PCC) pavement and shoulders, if required, as detailed in the contract documents.

### **502-2 MATERIALS AND EQUIPMENT**

Portland Cement Concrete	501
Anchoring Materials - Chemically Curing	701-07
Highway Joint Sealants (ASTM D6690, Type IV)	705-02
Silicone Joint Sealants	705-05
Premoulded Resilient Joint Filler	705-07
Preformed Elastic Longitudinal Joint Seal	705-10
Preformed Elastic Transverse Contraction and Expansion Joint Seal	705-12
Lubricant for Preformed Elastic Joint Sealer	705-13
Longitudinal Joint Ties	705-14
Transverse Joint Supports	705-15
Wire Fabric for Concrete Reinforcement	709-02
Epoxy Coated Bar Reinforcement, Grade 60	709-04
Quilted Covers (for curing)	711-02
Plastic Coated Fiber Blankets (for curing)	711-03
Polyethylene Curing Covers (white opaque)	711-04
Membrane Curing Compound	711-05
Form Insulating Materials for Cold Weather Concreting	711-07
Water	712-01
Backer Rods	ASTM D5249

In addition to meeting the requirements of ASTM D5249 (Type 1 or 3), backer rods must be closed cell polyethylene foam with a diameter at least 25% wider than the second-stage saw cut.

In addition to meeting the requirements of §701-07, Anchoring Materials - Chemically Curing, the material used to anchor longitudinal joint ties, dowels, or other miscellaneous items into hardened concrete must be a pourable, two-component, 100% solids structural epoxy dispensed:

- From side-by-side cartridges by manual or pneumatically powered injection guns.
- Through a static mixing nozzle that homogeneously mixes the material without any hand mixing.
- The Department may perform supplementary sampling and testing of the silicone and highway joint sealants. Deliver sealant in the manufacturer's original sealed container legibly marked with the:

- Manufacturer's name.
- Trade name of the sealant.
- Manufacturer's lot or batch number.
- Pouring temperature (Highway Joint Sealant only).
- Safe heating temperature (Highway Joint Sealant only).

**502-2.01 Concrete.** Use Class C concrete furnished in accordance with Section 501, Portland Cement Concrete – General, when specified. High-Early-Strength (HES) concrete, meeting the requirements of §502-2.02, may be substituted for closure or short placements, subject to the Engineer's approval.

**502-2.02 High-Early-Strength (HES) Concrete.** Use HES concrete where required in the contract documents or where the Contractor's request to use HES concrete is approved by the Department.

Whether required or requested, design the HES mix to satisfy the opening to traffic time requirements of the project and Table 502-1, High-Early-Strength Concrete Mix Requirements. Submit the HES concrete mix design to the Engineer. Include admixture brands and dosages as well as mixing, transporting, placing, paving, curing, and anticipated strength gain details.

Produce and place a 4.0 cy (minimum) trial batch at an off-contract location selected by the Contractor and agreed upon by the Engineer. Produce the trial batch using the same materials and processes as those to be used to produce concrete for the contract. Provide the Engineer a 7-day minimum advance notification of trial batch production. Produce and place the trial batch in the presence of the Engineer, the Regional Materials Engineer, and Materials Bureau personnel.

Provide an American Concrete Institute (ACI) Certified Concrete Field Testing Technician, Grade I, or higher, to:

- Measure slump, air content, and unit weight of the trial batch.
- Cast cylinders from the trial batch for compressive strength and freeze-thaw resistance testing.

Determine the compressive strength of the trial batch concrete at the desired time as discussed in §502-3.18C, Project Strength Determination.

The Materials Bureau will render a decision on mix acceptability, curing, and opening to traffic requirements within 45 calendar days of trial batch production. Changes other than minor fluctuations in admixture dosage rates require a new mix design and trial batch. The Engineer will reject the concrete if the specified slump or plastic air content are not achieved. The Engineer may halt paving and order additional trial batches whenever the specified compressive strength requirements are not achieved.

<b>TABLE 502-1 HIGH-EARLY-STRENGTH CONCRETE MIX REQUIREMENTS</b>			
<b>Property</b>	<b>Minimum</b>	<b>Desired</b>	<b>Maximum</b>
28 Day Compressive Strength	4000 psi	-	-
Opening Compressive Strength	2500 psi	-	-
Freeze-Thaw Loss (Test 502-3P, 3% NaCl)	-	0.0 %	3.0 %
Plastic Air Content	5.0 %	6.5 %	8.0 %
Hardened Air Content	5.0%	6.5 %	8.0 %
Water – Cement Ratio (w/c)	-	-	0.44
Slump <sup>2</sup>	1 in	-	6 in

**NOTES:**

1. See §502-3.18, Opening to Traffic.
2. Minimum slump provided the mix consolidates and finishes properly. Maximum slump provided the mix is nonsegregating.

**502-2.03 Portland Cement Treated Permeable Base (PCTPB).** Use (1) coarse aggregate meeting §501-2.02B2, Coarse Aggregate, with Type CA2 gradation, (2) portland cement, Type I, II, or I/II meeting §701-01, Portland Cement, and (3) water in the following proportions:

Cement	10 pcf (240 lb/cy)
Aggregate	100 pcf (2700 lb/cy)
W/C	0.37 max

Aggregate weight is based on a bulk density of 100 pcf (2700 lb/cy) and a saturated, surface-dry condition determined in accordance with AASHTO T 19M, Bulk Density (“Unit Weight”) and Voids in Aggregate. Adjust the aggregate weight accordingly if the contract aggregate has a different bulk density.

Use saturated, surface-dry coarse aggregate if PCTPB is brought to the site in open haul units. Coarse aggregate for PCTPB do not have to meet friction requirements.

**502-2.04 Equipment.** Provide the Engineer with an equipment list and specifications a minimum of 14 days prior to the planned start of PCC paving. Bring all equipment needed to place, consolidate, finish, texture, cure, saw cut, seal, and test the PCC pavement and permeable base to the job site a minimum of 1 full work day before its use to allow examination by the Engineer. Repair or replace any equipment found to be defective before or during its use. Discontinue any operation if unsatisfactory results are being obtained. Use of equipment other than described below is subject to the approval of the Director, Materials Bureau.

**A. Slipform Paving.** Use a self-propelled slipform paver equipped with:

- Rigid side forms that laterally support the concrete and minimize edge slumping.
- A full-width finishing pan.
- Attached internal vibrators capable of consolidating the entire concrete placement.

Slipform paving consists of a single paver, or a placer/spreader followed by a separate paver, capable of placing, spreading, consolidating, screeding, and finishing the concrete such that hand finishing is kept to a minimum. Use equipment guided by a reference system that ensures the pavement is placed to the specified line, grade, and cross section.

#### **B. Fixed Form Paving**

**1. Forms.** Use straight forms without horizontal joints meeting Table 502-2, Form Requirements, and equipped with:

- At least 3 stake pockets spaced 3 feet apart (maximum), each having a positive, nondetachable wedge.
- Positive, interlocking devices capable of holding abutting sections together to form neat, tight joints.

Flexible, curved, or wooden forms may be used in irregular areas or curved sections having horizontal radii of 100 feet or less.

**2. Paving Equipment.** Use a self-propelled paver equipped with a full-width finishing pan and attached internal vibrators capable of consolidating the entire concrete placement. Three (3) full-width transverse finishing screeds may be used in lieu of the full-width finishing pan. When 2 pavers are used to employ 3 transverse screeds, vibrate with the first paver only.

Finishing machines with double cylinders and augers capable of rotating in opposite directions, attached internal vibrators, and at least 1 pan float may also be used. However, if the pavement is specified as nonprofilographed, §502-3.16, Profilograph, and §502-3.17, Diamond Grinding, will apply. §502-3.15, Hardened Surface Test, will not apply.

Fixed form paving consists of 1 or 2 pavers, or a placer/spreader followed by the paver(s), capable of placing, spreading, consolidating, screeding, and finishing the concrete to the specified line, grade, and cross section such that hand finishing is kept to a minimum.

<b>TABLE 502-2 FORM REQUIREMENTS</b>	
<b>Characteristic</b>	<b>Requirement</b>
Material	Steel, 1/4 inch thick, minimum.
Length	10 feet, minimum.
Depth	Equal to the sum of the edge thicknesses of all pavement layers placed within the form.
Base Width	Equal to the depth, minimum.
Horizontal Top Face	2 inch wide, minimum, and lying in a plane with a maximum variation of 1/8 inch in 10 feet.
Vertical Face	Maximum variation of 1/4 inch in 10 feet and rounded on the upper corner with a 3/4 inch radius, maximum.
Flange Bracing	Extends outward on the base 2/3 of the form depth, minimum.

**3. Paving Irregular Areas.** Pave with the following equipment, in order of preference, if slipform or fixed form paving equipment cannot be used in an irregular area:

- a. Triple tube roller pavers.
- b. Concrete finishing machines equipped with internal vibrators and double cylinders and augers capable of rotating in opposite directions and at least 1 pan float.
- c. Roller pavers.
- d. Manual, vibrator equipped power screeds appearing on the Department's Approved List.
- e. By hand.

**C. Vibrators.** Use paver-mounted internal vibrators capable of consolidating the entire concrete placement that are:

- Capable of being shut off without shutting off the paver.
- Equipped with frequency controls readily accessible to the paver operator.
- Capable of simultaneously operating at the same frequency as the other paver-mounted vibrators.
- Capable of operating through a frequency range of 6,000 - 10,000 vibrations per minute.

Check vibrator operating frequencies daily when paving begins. Check frequencies under load with the Engineer present. If the paver is not equipped with direct-read frequency gauges for each vibrator, supply the Engineer with a calibrated, hand-held tachometer, including instructions, to monitor vibrator frequencies. The tachometer will remain the Contractor's property after paving is complete.

Use hand-held vibrators capable of operating through a frequency range of 6,000 - 10,000 vibrations per minute in irregular areas or at any location that is not consolidated by internal vibrators attached to the paving equipment.

**D. Permeable Base Paving Equipment.** Use pavers meeting §502-2.04A, Slipform Paving, with vibrators disengaged or §402-3.02, HMA Pavers, with an attached vibrating screed. Permeable

base may be placed by hand and compacted with plate or small drum vibrators in fixed form operations with permeable base placed within the forms or in areas not accessible to pavers.

**E. Saw Cutting Equipment.** Use diamond blade saws capable of making straight cuts to the dimensions depicted in the Standard Sheets that are equipped with cutting guides, blade guards, water cooling systems, dust controls, and cut depth control. Where beveled saw cuts are required, use a cutting or grinding device attached to the saw blade, or a separate device following the saw.

Maintain equipment and supplies to ensure uninterrupted saw cutting. Early entry saws require approval from the Director, Materials Bureau. Submit requests to use early entry saws at least 7 calendar days before paving.

**F. Curing Compound Applicators.** Use atomizing mechanical sprayers capable of exerting consistent pressure without hand pumping that are equipped with tank agitators to continuously mix the curing compound. Use nozzles with spray shields to prevent drift. Flush nozzles daily before use.

Maintain equipment and supplies, including extra nozzles, to ensure uninterrupted curing compound application. In a slipform paving operation, use self-propelled applicators guided by the same reference system as the slipform paver. In a fixed form operation, applicators need not be self-propelled.

**G. Profilograph.** For projects with profilograph smoothness requirements, use an automated California-type profilograph capable of producing and analyzing a profile trace in accordance with Materials Method 24, Portland Cement Concrete Pavements Profilograph Operations. Use automation capable of reporting profile indices in inches/mile using a 0.2 inch blanking band and in inches/mile using a zero blanking band.

**H. Diamond Grinding.** Use equipment having gang-mounted diamond saw blades on a multiblade arbor specifically designed for pavement bump cutting or production grinding. When production grinding, use equipment capable of producing a 4 foot (minimum) grinding pass width that is equipped with a vacuum system capable of removing slurry from the pavement surface. Use blade spacers having a minimum thickness of 0.105 inches. Inform the Engineer of the spacer thickness selected.

**I. Drills.** Use gang drills with a minimum of 2 independently powered and driven drills. Use tungsten carbide drill bits. Rest and reference the drill rig frame on and to the pavement surface such that the drilled holes are cylindrical, perpendicular to the surface being drilled, and repeatable in terms of position and alignment. Hand-held drills, or gang drills resting on the permeable base or subbase, are permitted for drilling holes in longitudinal joints if there is not enough room to use gang drills resting on the pavement surface. This typically occurs when traffic is being maintained on a previous placement.

**J. Joint Sealing - Silicone Joint Sealant.** Use equipment that pumps the silicone directly from plastic pails or drums by compressed air powered extrusion pumps designed for moisture curing silicone sealants. Use teflon seals and packing and teflon lined hoses to prevent moisture permeation. Use nozzles that apply the silicone within the joint confines for the full width of the joint, and to the level below the pavement surface depicted in the Standard Sheets.

**K. Joint Sealing - Highway Joint Sealant.** Heat the sealant in a melter constructed either:

- As a double boiler with the space between inner and outer shells filled with oil or other heat-transfer medium.

- With internal tubes or coils carrying the sealant through a heated oil bath and into a heated double-wall hopper.

Do not use direct heating. Use a melter capable of maintaining the sealant's pouring temperature and providing homogeneous sealant equipped with:

- Positive temperature control.
- Continuous full sweep mechanical agitation.
- Separate thermometers indicating the temperatures of the heat transfer medium and the sealant in the hopper. Do not place any sealant if the thermometers are defective or missing.

Provide 2 thermometers having stems 18 inches long and temperature ranges sufficient to meet the requirements of this specification. Use a discharge hose equipped with a controlled heating apparatus or sufficiently insulated to maintain the proper sealant pouring temperature. Use nozzles that apply the joint sealant within the joint confines for the full width of the joint, 1/4 to 3/8 inches below the pavement surface.

**L. Air Blasting Equipment.** Use equipment with traps or other installed devices that prevent moisture and oil from contaminating the concrete surface. Use a compressor that delivers air at a minimum of 120 cfm and develops a minimum nozzle pressure of 90 psi. Check the compressed air stream purity daily with a clean white cloth.

**502-3 CONSTRUCTION DETAILS.** Convene a prepaving meeting 7 to 14 days before the planned start of PCTPB paving with the Engineer and any PCC paving and saw cutting subcontractors to coordinate all aspects of paving and inspection, including equipment review, construction methods, and time and personnel requirements.

Construct a smooth, well consolidated, properly finished, textured, and cured pavement to the line and grade depicted in the contract documents, 1/4 inch vertically at any location.

### 502-3.01 Weather Limitations

**A. Rain.** Do not pave in the rain. Supply sufficient quilted covers, plastic coated fiber blankets, or polyethylene curing covers near the paving operation when rain may be expected. Securely cover any concrete exposed to rain that has not reached initial set or will be visibly affected by the rain.

**B. Cold Weather.** Place concrete when the air temperature is 40°F and rising, or warmer, and when the surface temperature of the area to be paved is 40°F, or warmer. Stop paving when the air temperature falls below 40°F. Measure temperatures in the shade to an accuracy of 1°F. Refer to §502-3.11C, Cold Weather Curing.

**502-3.02 Subbase Course.** Furnish in accordance with Section 304, Subbase Course, before placing any PCTPB or PCC. If the subsequent PCC placement is a profilographed traveled way and the area is available, widen the prepared subbase course at the same line, grade, and cross slope such that it is at least:

- 3 feet beyond the longitudinal edges of a slipform pavement.
- 1 foot beyond the outside longitudinal edges of the fixed forms.

Additional subbase course that is not included in the finished work will be paid for under Section 304 items included in the contract.

**502-3.03 Portland Cement Treated Permeable Base.** Apply §502-3.01, Weather Limitations.

Place and consolidate permeable base within 2 hours of water addition to the mix. Allow to air cure for a minimum period of time such that concrete placement results in no damage to the permeable base.

Place permeable base on a prepared subbase course to the dimensions depicted in the contract documents such that the final surface elevation does not vary more than 1/4 inch above or 1 inch below the design grade elevation at any location. In a slipform paving operation, test the surface both perpendicular to the pavement centerline and diagonally across the pavement using a stringline placed across the referencing system. Test the surface (1) at the beginning of each day's placement, (2) every 50 feet thereafter, (3) at the end of each day's placement, and (4) wherever required to ensure reasonably close conformance to the contract documents. In a fixed form paving operation, use a scratch board placed transversely across the forms to continuously test the surface elevation and verify the appropriate concrete thickness will be placed. Trim excess permeable base from high areas exceeding 1/4 inch in 10 feet before it hardens. Build up low areas deeper than 1 inch in 10 feet with CA 1 or CA 2 coarse aggregate.

In a slipform paving operation, place the permeable base slightly wider than the pavement width being placed. Remove and replace permeable base placed wider than the pavement if it is damaged or contaminated.

In a fixed form paving operation, place permeable base either within the forms or beneath the forms. When placing within forms, place a bead of commercial masonry caulk along the top surface of the permeable base at the form interface before placing concrete to prevent paste infiltration down the vertical face of the form. The masonry caulk bead is not required at placement edges outside of the underdrains.

Construction traffic may be maintained on permeable base in areas of limited access. Remove and replace damaged or contaminated permeable base before placing PCC.

**502-3.04 Slipform Paving.** Establish a reference system to achieve the specified smoothness level. If string lines are used, set them by survey and use dual lines for the initial placement if it is a profilographed traveled way and the area is available.

Maintain uniform concrete quality and head in front of the paver. Coordinate concrete delivery to maintain continuous forward movement of the paver and avoid excessive delivery truck queues. Keep paver tracks clear of concrete and debris before and during paving.

If concrete is placed directly on subbase, i.e., there is no permeable base, wet the entire subbase surface without forming puddles or mud immediately before placing concrete.

Whenever possible, unload concrete into a mechanical spreader that deposits it near the final position before paving. If a spreader is not used, uniformly distribute the concrete in front of the paver by maneuvering the delivery truck chute.

Consolidate the entire concrete placement using internal vibrators attached to the machine. Combine paver forward speed, vibrator frequency, and vibrator depth to consolidate the concrete without segregation, vibrator trails, or contacting the joint assemblies. Discontinue vibration and tamping if the paver stops.

Determine edge slump by extending a 2 foot (minimum) long straightedge over the longitudinal pavement edges. Immediately correct edge slumps greater than 1/4 inch that are between concrete placements and greater than 3/8 inch at free edges and HMA shoulders.

**502-3.05 Fixed Form Paving.**

**A. Setting Forms.** Compact the supporting layer at the form line such that the forms are supported for their full length. Set forms to string lines placed at the pavement elevation, line, and grade and to achieve the specified smoothness. If a form sits above the string line, remove the form and trim the form line to the proper grade. If a form sits below string line, remove the form and fill and compact the low area with granular material at least 6 inches on both sides of the form. Frequently check form grade and alignment while paving. Reset forms as necessary.



Set forms to accommodate a full days paving before placing concrete. Extend forms beyond construction bulkheads to provide a working platform at the end of a placement. Secure each form with a minimum of 3 pins each of sufficient length to hold the forms in place without movement during any operation. Lock the forms together such that the form ends are aligned and the joints are tight and smooth. Run the paving equipment atop the forms before placing any concrete and recheck form alignment. Reset forms as necessary.

Align keyway strips in a smooth, horizontal plane, parallel to the top of the form. Match keyway strips on abutting forms such that a nearly seamless keyway results.

**B. Paving.** Apply oil to forms before placing concrete. Immediately before placing concrete, wet the entire subbase or permeable base surface without forming puddles or mud. Whenever possible, unload concrete into a mechanical spreader that deposits it near the final position before paving. If a spreader is not used, uniformly distribute the concrete in front of the paver by maneuvering the delivery truck chute.

Maintain uniform concrete quality and head in front of the paving machine and without running over the screeds. Coordinate concrete delivery to maintain continuous forward movement of the paver and avoid excessive delivery truck queues. Keep form tops clean before and during paving. Consolidate the entire concrete placement using internal vibrators attached to the paver. Combine paver forward speed, vibrator frequency, and vibrator depth to consolidate the concrete without segregation, vibrator trails, or contacting the joint assemblies. Discontinue vibration and tamping if the paver stops.

Mark the midpoint (3/8 inch) of each transverse contraction joint with a shim placed into the plastic concrete immediately adjacent to each form. Use shims equal in width and depth to the contraction joint first-stage saw cuts depicted in the Standard Sheets. Set the shims perpendicular to the forms and the pavement surface. Make first-stage saw cuts from shim to shim as discussed in §502-3.06A1, Transverse Contraction Joints. Use shims of sufficient lengths to allow complete first-stage saw cutting to each shim without striking the form.

**C. Paving Irregular Areas.** Uniformly spread concrete. If concrete is spread by hand, use come-alongs or shovels. Do not use rakes or hand-held vibrators to spread concrete. Use hand-held vibrators ahead of the paving equipment to consolidate all concrete not vibrated by equipment-mounted internal vibrators. Keep hand-held vibrators perpendicular to the pavement surface. Vibrate between 2 and 4 seconds in each location, overlapping adjacent locations. Do not drag hand-held vibrators through the concrete. Do not walk through consolidated concrete.

**D. Form Removal.** Remove forms after the concrete has developed sufficient strength to allow removal without damaging the pavement. Repair pavement damaged during form removal. Remove forms before making second-stage saw cuts.

**502-3.06 Joint Construction.** Provide the Engineer approved Materials Details for longitudinal joint ties and transverse joint supports before placing any joint hardware. Construct joints in accordance with the Standard Sheets and approved Materials Details. Do not stand on joint hardware.

Base final joint layout on construction staging and the actual location of utilities, drainage structures, intersections, tapers, and other irregular areas. Submit a proposed joint layout to the Engineer at least 10 calendar days prior to PCC paving. Obtain the Engineer's joint layout approval before paving.

Make second-stage saw cuts and bevels, clean, and seal joints in accordance with §502-3.12, Sealing Joints.

**A. Transverse Joints.** Transverse joints include contraction, expansion, hinge, and construction joints. Secure joint supports to the permeable base or subbase as depicted in the Materials Details. Maintain joint supports in their proper position and alignment during paving.

Construct transverse joints perpendicular to both the pavement surface and longitudinal joints in the area being paved. Use a 16 foot typical transverse joint spacing for pavements having standard slab widths of 12 and 14 feet. For pavements having other slab widths, determine typical maximum and minimum transverse joint spacings in accordance with the following:

- $L_{\max}$  = maximum transverse joint spacing (slab length), feet =  $W_{\min} \times 1.33$   
 $L_{\min}$  = minimum transverse joint spacing (slab length), feet =  $W_{\max} \div 1.33$   
 $W_{\max}$  = maximum slab width across the pavement (load carrying slabs only), feet  $\leq 16$  feet  
 $W_{\min}$  = minimum slab width across the pavement (load carrying slabs only), feet

The range of slab lengths may be extended to 10 to 16.5 feet (from  $L_{\min}$  -  $L_{\max}$  above) in accordance with the contract documents to accommodate utilities, drainage structures, and irregular areas.

**1. Transverse Contraction Joints.** All transverse joints are contraction joints unless otherwise shown in the contract documents. Typically, contraction joints are constructed in a straight line across the full width of the PCC pavement and shoulders. Contraction joints may be slightly angled (rather than straight across a pavement) at tied longitudinal joints between lanes placed separately if the placements do not have the same centerline, e.g., where a ramp centerline diverges from parallel to the pavement centerline. Contraction joints may terminate at, or be misaligned at, untied longitudinal joints as discussed in §502-3.06B3, Untied Longitudinal Joints with Keyway.

Store transverse contraction joint support assemblies in inverted stacks at the project site. Handle joint supports such that no twisting or bending occurs during storage and positioning. Supports with bent, twisted, or deformed wires will be rejected.

Before placing concrete, position transverse joint supports such that the:

- Entire longitudinal axis of each dowel is located at the middepth of the pavement slab (1/4 inch).
- Longitudinal axes of the dowels are aligned parallel with the pavement centerline and pavement surface such that the maximum misalignment of one dowel end relative to the other is 1/8 inch.
- Midpoint of the longitudinal axis of each dowel is at the center of the joint.(1 inch).
- Longitudinal axes of the two end dowels are 4 to 8 inches from the longitudinal joints.
- Longitudinal axes of the dowels are spaced 4 to 12 inches apart.

Mark the location of each contraction joint before placing concrete. In a slipform paving operation, mark the joint support midpoint on the subbase or permeable base immediately adjacent to the pavement. In a fixed form paving operation, mark the joint support midpoint with shims as discussed in §502-3.05B, Paving. Immediately before concrete placement, cut the tie wires (parallel to the dowels) holding the 2 upper transverse support members in position.

Make first-stage saw cuts as soon as the concrete has hardened sufficiently to permit sawing without causing raveling wider than 1/8 inch. Replace blades if raveling persists. Center first-stage saw cuts within 1 inch of the longitudinal midpoints of the dowels.

Complete first-stage saw cuts before any uncontrolled cracking occurs. Be prepared to make first-stage saw cuts 24 hours a day to prevent uncontrolled cracking. Provide lighting required to make first-stage saw cuts at night at no additional cost to the State.

Sweep or wash first-stage saw cut debris from the pavement before profilographing, before it rains, or before opening the pavement to any traffic, such that debris does not enter the joint.

**2. Transverse Expansion Joints.** Construct transverse expansion joints as part of the utility and drainage structure isolation systems depicted in the Standard Sheets or where indicated in the contract documents. Handle and position expansion joint supports in accordance with §502-3.06A1, Transverse Contraction Joints.

Construct expansion joints using 3/8 to 5/8 inches thick premoulded resilient joint filler placed in 1 piece between longitudinal joints. Tightly place and support abutting sections of joint filler such that no concrete infiltrates the joint. Place expansion caps on the dowels as depicted in the Materials Details. Do not tap or hammer the caps onto the dowels.

No saw cuts are required in expansion joint construction. Remove the finishing cap, if supplied, after the concrete has developed sufficient strength to prevent damage.

**3. Transverse Construction Joints.** Construct transverse construction joints wherever there is an interruption of more than 30 minutes in concrete paving operations. Construct these joints as wide as the concrete placement, typically 1 or 2 lanes, but not necessarily the full pavement width. Align construction joints with transverse contraction or construction joints in adjacent lanes.

At unplanned stops, remove plastic concrete to the midpoint of the preceding transverse joint support. Place an Engineer-approved bulkhead over the exposed support assembly such that half of the dowel lengths are embedded within newly placed concrete. Immediately remove all plastic concrete in front of the bulkhead and from the exposed joint support.

At planned stops, use either the bulkhead system described above or transverse joint supports fabricated with hollow plastic cylinders, closed on one or both ends, instead of dowels. Use hollow cylinders with an inner diameter 0 to 1/32 inch greater than the required dowel diameter and an outer diameter 1/4 inch, maximum, larger than the required dowel diameter. Position cylinders as required in §502-3.06A1, Transverse Contraction Joints, with closed ends on the side of the support opposite to the paving direction.

Pave beyond the joint support containing the hollow cylinders. After the concrete has gained sufficient strength to prevent damage, saw cut the newly placed concrete full depth through the midpoint of the longitudinal axis of each cylinder (1 inch). Do not saw cut into previously placed PCC. Instead, stop saw cutting at the longitudinal joint between placements and chip out any uncut concrete such that a vertical joint face results.

Remove concrete and the joint assembly ahead of the saw cut. Repair damaged permeable base and/or subbase with coarse aggregate having a CA 1 or CA 2 gradation. Insert dowels into the exposed hollow cylinder to the required alignment in §502-3.06A1, Transverse Contraction Joints, and resume paving.

First-stage saw cuts are not required at construction joints.

**4. Transverse Hinge Joints.** Do not place hinge joints without the Engineer's approval. Construct transverse hinge joints when a slab length exceeds the geometric requirements of §502-3.06, Transverse Joints. (This situation typically occurs near structures that are skewed from perpendicular to the pavement centerline.)

Locate hinge joints such that they are equally spaced between other types of transverse joints. Construct hinge joints in accordance with 502-3.06A1, Transverse Contraction Joints, except the positioning requirements do not apply. Instead, position transverse hinge joint supports such that the:

- Entire longitudinal axis of each deformed bar is located at the middepth of the pavement slab (1/4 inch).
- Longitudinal axes of the bars are aligned parallel with the pavement centerline and pavement surface such that the maximum misalignment of one bar end relative to the other is 1 inch.
- Midpoint of the longitudinal axis of each bar is at the center of the joint (1 inch).

- Longitudinal axes of the two end bars are 4 to 10 inches from the longitudinal joints.
- Longitudinal axes of adjacent bars are spaced 4 to 18 inches apart.

**B. Longitudinal Joints.** Select tie type, size, spacing, and positioning in accordance with the contract documents. Provide a minimum clearance of 3 inches between the end ties in a slab and any part of the transverse joint support. Keep ties free of materials that inhibit bonding to concrete or anchoring material. Maintain ties in their proper position during paving.

Eliminating a longitudinal joint (and subsequent sawing and sealing) between a shoulder and adjacent lane is optional provided (1) the lane and shoulder are paved simultaneously and (2) the resulting slabs meet the geometric requirements detailed in §502-3.06A, Transverse Joints.

It is highly desirable to align longitudinal joints with the permanent pavement markings. Tied longitudinal joints located in the wheelpaths of the completed pavement will require additional ties.

**1. Longitudinal Joints Between Lanes Paved Simultaneously.** Use one-piece ties fabricated into assemblies capable of securely holding 2 or more ties. Secure the assemblies to the permeable base or subbase prior to paving in accordance with the Materials Details.

Make first-stage saw cuts parallel to the pavement centerline and perpendicular to the pavement surface within 24 hours of concrete placement and after first-stage transverse saw cuts are complete. Replace saw blades if raveling wider than 1/8 inch occurs. Center first-stage saw cuts within 1 inch of the longitudinal midpoint of the ties.

Sweep or wash first-stage saw cut debris from the pavement before profilographing, before it rains, or before opening the pavement to any traffic, such that debris does not enter the joint.

**2. Tied Longitudinal Joints Between Lanes Paved Separately.** In a slipform operation, construct a butt joint and drill and anchor one-piece ties into the hardened concrete. Do not drill holes until the concrete has developed sufficient strength to withstand drilling without damage. Damage from drilling will be treated in accordance with §502-3.14, Damaged or Defective Concrete.

Use # 6 ties, 28 inches long between travel lanes and 18 inches long between a travel lane and a PCC shoulder. Anchor ties between travel lanes 12 inches into the previously placed concrete, leaving 16 inches projecting from the joint face. Anchor ties between a travel lane and a PCC shoulder 8 inches into the previously placed concrete, leaving 10 inches projecting from the joint face.

Place end ties in a slab 12 to 14 inches from the transverse joint. Typically, space ties between the end ties 24 inches apart, maximum. Pavements having 4 or more tied lanes, or 3 lane pavements 12 inches (or more) thick, may require a decreased spacing in accordance with the contract documents.

Drill such that the hole diameters are in accordance with the anchoring material manufacturer's written recommendations. Give those recommendations to the Engineer before drilling any holes. Replace worn bits when necessary to ensure the proper hole diameter is drilled.

Follow the anchoring material manufacturer's written recommendations for cleaning the holes. Give those recommendations to the Engineer. As a minimum, air blast the drilled holes. Insert the air blasting equipment nozzle to the back of the hole to force out all dust and debris.

When using new cartridges of anchoring material, ensure the initial material exiting the nozzle appears uniformly mixed. If it is not uniformly mixed, waste the material until uniformly mixed material extrudes.

Place the anchoring material in the back of the hole using a nozzle or wand of sufficient length. Push the tie into the hole while twisting such that the air pocket within the hole is heard to burst and the anchoring material is evenly distributed around the bar. Use sufficient amounts of anchoring material such that it slightly extrudes out the hole as the bar is inserted.

In a fixed form operation, construct either a butt or a keyed joint. If a butt joint is constructed, drill and anchor longitudinal joint ties as described above. If a keyed joint is constructed, use multiple-piece ties. Apply a corrosion inhibiting coating to the threads of all components before assembly. Bolt the female portion of the tie to the form prior to paving as depicted in the Standard Sheets. Insert and tighten the male ends before paving the adjacent lane. Ensure all threaded connections are tight.

First-stage saw cuts are not required between lanes paved separately.

**3. Untied Longitudinal Joints with Keyway.** Construct untied longitudinal joints with keyways at utilities and/or drainage structures, at intersections, between adjacent lanes having non-parallel center lines (such as ramps), or where indicated in the contract documents. Form as depicted in the Standard Sheets. Transverse joint type, location, and alignment may be changed when a transverse joint intersects an untied longitudinal joint.

Patch honeycombing along the untied longitudinal joint face to achieve a smooth surface prior to applying the bond breaker and placing the adjacent concrete.

First-stage saw cuts are not required.

### **C. Utility and Drainage Structure Isolation Joint Systems and Telescoping Manholes.**

Isolate utilities and drainage structures from the pavement using the isolation joint systems or telescoping manhole castings depicted in the Standard Sheets. Remove temporary support bolts from the telescoping manhole casting as soon as the concrete hardens. If telescoping manhole castings are not used, form the required isolation joint system.

Construct transverse portions of the isolation joint systems in accordance with §502-3.06A2, Transverse Expansion Joints, or §502-3.06A3, Transverse Construction Joints, in accordance with the contract documents. Construct other isolation joints in accordance with the contract documents.

**502-3.07 Paving Adjacent To Existing Concrete.** Wherever paving equipment operates on existing PCC pavement that is to remain, install bolt-on track covers or rubber tired, flangeless wheels. Remove all debris on the existing PCC pavement in the equipment track. Immediately remove any concrete that spills onto the existing concrete.

When paving from (or to) a transverse construction joint or intersecting pavement, use hand-held vibrators to thoroughly consolidate any concrete inaccessible to the paving equipment vibrators. Hand finish these areas with the minimum effort required to produce an acceptable surface. Do not dump the grout box head into the pavement concrete when approaching a construction joint.

**502-3.08 Plastic Thickness Determination.** In a slipform paving operation, anchor flat, thin (1/16 - 1/8 inch), 6 x 6 inches rigid steel or plastic plates to the permeable base (or subbase) surface 24 inches from both placement edges at 150 foot intervals. Clearly mark the plate locations on the subbase, permeable base, or previously placed concrete immediately adjacent to the placement. Provide the Engineer with a round, rigid, nonaluminum probe, having a 1/8 inch  $\pm$  0 diameter. The Engineer will determine the plastic concrete thickness by inserting the probe to the plate and measuring the insertion depth. The plate thickness will be added to the insertion depth to determine concrete thickness.

In a slipform paving operation, the minimum measured plastic thickness must be within 3/8 inch of the thickness required in the contract documents. Areas not meeting minimum thickness will be treated in accordance with §502-3.14, Damaged or Defective Concrete. If 2 consecutive measurements do not meet minimum thickness, stop paving and reestablish the paving operation to achieve acceptable thickness.

**502-3.09 Finishing.** Mechanically finish the pavement after consolidation and strike off. Use machine mounted finishers such as full-width finishing pans, transverse oscillating screeds, longitudinal floats, pan floats or separate pieces of equipment such as tube floats or Lewis floats.

After mechanical finishing, hand finish the pavement to correct and seal minor imperfections. Provide an ACI certified concrete flatwork finisher to supervise all hand finishing. Provide proof of ACI flatwork certification to the Engineer. Keep hand finishing to a minimum. Do not use excess mortar or discarded concrete to fill low areas. Use work bridges to hand finish concrete inaccessible from the pavement edge. Do not add water to the concrete surface to close imperfections. Stop paving or reformulate the concrete mix if surface imperfections that require additional water to close routinely occur.

**502-3.10 Texturing.** Immediately after finishing and prior to applying the curing compound, texture the concrete surface using one of the following procedures in accordance with the contract documents. Apply longitudinal tining if no texturing method is designated in the contract documents. Additional requirements, such as Mean Texture Depth measured by a sand patch test or a profiler may be included in the contract documents. If the contract has a closed drainage system, provide a 8 - 12 inch blank in the texture along the pavement edges to enhance drainage to catch basins.

**A. Longitudinal Tining.** Texture the concrete parallel to the pavement centerline with a set of evenly spaced spring steel tines. Use rectangular tines 1/8 inch wide, 1/32 inch thick, and approximately 5 inches long at a center-to-center spacing of 3/4 inches.

Operate the tine head manually or mechanically. In either case, hold the tines as near an angle of 45° to the concrete surface as possible to minimize mortar dragging. Produce tine texture 1/16 - 1/8 inch deep with minimal dislodging of aggregate. Do not make multiple tine passes in the same area. Keep tines 2 - 4 inches from the placement edges. Keep the tines free of hardened concrete.

**B. Artificial Turf Drag.** Use a seamless strip of artificial turf drag appearing on the Department's Approved List entitled "Turf Drag" under "Equipment, Concrete Related." Produce a consistent texture, free of ridges or gouges, parallel to the pavement centerline either by hand or by attaching a weighted strip to the paver, texture/cure machine, or work bridge. Periodically replace or clean the drag to remove hardened concrete paste that compromises texture.

**C. Transverse Tining.** Texture the concrete perpendicular to the pavement centerline with a set of variably spaced spring steel tines. Use rectangular tines 1/8 inch wide, 1/32 inch thick, and approximately 5 inches long at the following center-to-center spacing in millimeters:

16/25/22/16/32/19/25/25/25/19/22/25/22/10/25/25/25/32/38/22/25/22/25.

Operate the tine head manually or mechanically. In either case, hold the tines as near an angle of 45° to the concrete surface as possible to minimize mortar dragging. Produce tine texture 1/16 - 1/8 inch deep with minimal dislodging of aggregate. Do not make multiple tine passes in the same area. Keep the tines free of hardened concrete. If the tine texture is placed manually, or if the mechanical equipment does not operate from the same referencing system as the paver, provide a 3 - 4 inch blank at each transverse joint saw cut location.

**502-3.11 Curing.** Keep the curing operation close to the texturing operation such that concrete is cured immediately after it is textured. The Engineer may stop paving if curing lags. Cure Class C concrete placed between June 1 and September 15 for 4 days, minimum. Cure Class C concrete placed between September 16 and May 31 for 6 days, minimum. Cure HES concrete in accordance with Materials Bureau requirements based on the Contractor-submitted mix design and the trial batch evaluation.

**A. White Pigmented Membrane Curing Compound.** Typically, cure concrete with white pigmented membrane curing compound. Mix the curing compound before each use and continuously agitate during use. Thoroughly and uniformly coat all exposed surfaces (including slipformed edges

and formed edges immediately after form removal) at a minimum rate of 150 sf/gal. Check the application rate after every paving day, including exposed vertical slab faces in the calculations. Apply the curing compound in 2 opposite direction passes with no longer than 15 minutes between passes.

Immediately reapply curing compound to any damaged coating areas during the curing period. During curing equipment breakdown, cure the pavement in accordance with §502-3.11B, Curing Covers. Do not apply curing compound in the rain. If rain damages the curing compound before it sets, reapply curing compound after the pavement surface dries.

**B. Curing Covers.** Use of curing covers is subject to the approval of the Engineer. Use quilted covers, plastic coated fiber blankets, or polyethylene curing covers. Do not use covers with tears or holes. Cover all exposed surfaces and extend the covers a minimum of 12 inches beyond the pavement edges or beyond the forms, when used. Overlap successive covers 12 inches, minimum. Secure the covers to keep them in contact with the entire surface and maintain the overlap. Wet the entire surface of quilted covers and maintain them in a wetted condition throughout the curing period.

**C. Cold Weather Curing.** Supply form insulating materials for winter concreting when the air temperature is expected to fall below 40°F at any time during the curing period. Use material capable of maintaining a surface temperature of 55°F and being easily removed and replaced to accommodate first-stage saw cuts. Apply the insulating material to prevent newly placed concrete from being exposed to air temperatures below 35°F for the curing period. Secure the insulation tight to the concrete surface to prevent air intrusion beneath the insulation. Extend the insulation 12 inches beyond the newly placed concrete. Insulate the pavement vertical edge and/or forms as well.

Place recording surface thermometers between the pavement surface and insulating material 12 inches from one of the placement edges wherever insulation is used. Use 4 equally spaced thermometers for each day's paving. Do not subject the concrete to a temperature drop in excess of 50°F during the first 24 hours after removing the insulation.

**502-3.12 Sealing Joints.** Seal joints as depicted in the Standard Sheets. Refer to Table 502-3, Joint Sealing Alternatives.

First-stage sawcuts may be temporarily left unfilled if a placement is only subjected to occasional construction traffic, such as pickup trucks or cars. In this case, sweep the pavement to ensure debris does not enter the joints.

Temporarily fill unsealed first-stage cuts with jute or backer rod if a placement is:

- Subjected to consistent construction traffic.
- Used as a haul road for subsequent concrete placements.
- Temporarily opened to general traffic while final sealing has been delayed for convenience, such as to maximize sealing production.

Before cleaning, remove any temporary fillers and repair damaged joints in accordance with §502-3.14, Defective or Damaged Concrete, including chipped joints resulting from debris accumulation in an unfilled or unsealed joint. Do not reuse backer rod used as temporary fillers in the final joint sealing.

**A. Sealing Transverse Contraction Joints - Highway Joint Sealant.** Widen joints to 1/4 - 3/8 inch for a depth of 1 inch if the first-stage saw cuts are less than 1/4 inch wide to allow full-depth sealing. Immediately wash the widening cut slurry from the pavement such that it does not reenter the joint. Do not seal transverse construction joints or longitudinal joints when highway joint sealants are specified for transverse contraction joints.

Joint cleaning and sealing may be delayed for convenience. Clean the joints by abrasive blasting immediately before sealing. Keep the nozzle within 2 inches of the joint surfaces. The Engineer may allow pressure washing in lieu of abrasive blast cleaning if it is not allowed in the contract. When pressure washing, use (1) a 900 psi minimum pressure and (2) a maximum pressure such that no damage occurs to the concrete. Manually dislodge debris remaining in the joint after cleaning, and reclean the joint. Immediately after pressure washing, air blast the joint to remove any debris from the cut and dry the exposed faces.

Do not allow any traffic on the pavement between cleaning and sealing. Reclean the joint if it rains between cleaning and sealing or if any traffic is on the placement between cleaning and sealing. Provide the Engineer a copy of the sealant Manufacturer's written recommendations for heating and application at least 1 work day before sealing. Follow those recommendations. Unless stated otherwise, the recommended pouring temperature is 40°F below the manufacturer's designated safe heating temperature, with an allowable variation of 40°F.

Prior to sealing, discharge sealant from the applicator wand into a vessel and measure the sealant temperature. The temperature must be equal to or above the Manufacturer's recommended minimum pouring temperature and equal to or below the Manufacturer's recommended safe heating temperature.

Do not use sealant heated above the safe heating temperature. Sealant may be reheated or heated in excess of 6 hours if allowed by the Manufacturer's heating and application recommendations. In these cases, recharge the melter with fresh sealant amounting to at least 20% of the sealant volume remaining in the melter.

Seal joints immediately after cleaning. Seal the joint from the bottom of the cut to within 1/4 - 3/8 inch of the pavement surface. Seal when the:

- Air and surface temperatures are 40°F or warmer.
- Air temperature is above the dew point.
- Pavement surface and all joint surfaces are dry.

Open to traffic after the sealant has cured to prevent tracking. Do not blot with fine aggregate.

**B. Sealing Joints - Silicone Sealant.** Make second-stage saw cuts and/or bevels in accordance with the Standard Sheets and (1) no sooner than 72 hours after concrete placement and (2) after the curing period has ended if curing covers are used. Wash the resulting slurry from the pavement and joint immediately after making second-stage saw cuts and/or bevels.

Second-stage saw cuts may be delayed for convenience, but do not leave second-stage saw cuts unsealed or unfilled while open to any traffic. Temporarily fill second-stage saw cuts with jute or backer rod if (1) they are exposed to any traffic before cleaning and sealing or (2) weather conditions are not favorable for timely (within 2 calendar days) cleaning and sealing, whether or not they are exposed to any traffic. Do not reuse backer rod used as temporary filler in the final joint sealing.

Install the sealant in accordance with the Manufacturer's written instructions. Give those instructions to the Engineer before any second-stage saw cutting begins. Consult the Manufacturer for primer requirements associated with the coarse aggregate used in the concrete.

Abrasive blast both vertical joint faces immediately before sealing. Tilt the nozzle to abrasive blast one vertical face at a time at each joint until uniformly abraded surfaces result. Air blast after abrasive blasting to remove all abrasives. Reclean the joint if it rains between cleaning and sealing. Do not allow any traffic on the pavement between cleaning and sealing. Immediately after blasting, install backer rod to the required depth without ripping, tearing, or puncturing the rod. Roll the insertion wheel over the backer rod twice, once in each direction.

Seal when the:

- Air and surface temperatures are 40°F or warmer.
- Air temperature is above the dew point.



- Pavement and all joint surfaces are dry.

Where possible, first widen and seal the longitudinal joints (if required), then widen and seal the transverse joints such that the entire transverse joint contains a continuous sealant bead. If this is not possible, install the silicone in full placement widths.

Traffic may traverse silicone sealed joints after the sealant has skinned over, provided traffic opening and sealer manufacturer requirements have been met.

**C. Sealing Joints - Preformed Joint Sealers.** Make second-stage saw cuts and/or bevels in accordance with the Standard Sheets and (1) no sooner than 72 hours after concrete placement and (2) after the curing period has ended if curing covers are used. Extend the second-stage saw cut vertically down the free concrete edges. Wash the resulting slurry from the pavement and joint immediately after making second-stage saw cuts and/or bevels.

Second-stage saw cuts may be delayed for convenience, but do not leave second-stage saw cuts unsealed or unfilled while open to any traffic. Temporarily fill second-stage saw cuts with jute or backer rod if (1) they are exposed to any traffic before cleaning and sealing or (2) weather conditions are not favorable for timely (within 2 calendar days) cleaning and sealing, whether or not they are exposed to any traffic.

Clean the joints by pressure washing before sealing. Use (1) a 900 psi minimum pressure and (2) a maximum pressure such that no damage occurs to the concrete. Manually dislodge debris remaining in the joint after cleaning, and reclean the joint. Within 24 hours of pressure washing, air blast the joint to remove any debris from the cut and dry the exposed faces. Reclean the joint if it rains between cleaning and sealing. Do not allow any traffic on the pavement between cleaning and sealing.

Install the sealant in accordance with the Manufacturer’s written instructions. Give those instructions to the Engineer before any second-stage saw cutting begins. Lubricate the concrete, the sealer, or both before installation such that the lubricant fully covers the sealer/concrete interface, but not the top of the sealer.

Install one piece of transverse joint sealer in a compressed condition across the full pavement width, including concrete shoulders, and down the vertical saw cut at the free edge. Cut the longitudinal sealer where it crosses a transverse joint. Do not splice the longitudinal sealer between transverse joints. Seal the intersection between longitudinal and transverse sealers with lubricant.

Install the sealer such that it is not stretched more than 5% , nor compressed more than 2%, of the minimum theoretical length. Check the installation for stretch and compression by installing sealers in 5 transverse joints and removing the sealer immediately after installation and checking the length. An alternate method for checking stretch and compression, where applicable, may be performed by premarking or precutting the sealer to length prior to installation. If the measurement of any of these 5 sealers exhibits stretching in excess of 5% or compression in excess of 2%, modify the installation method to meet the requirements or discontinue installation.

Once sealing operations begin, remove 1 joint per 100 in the presence of the Engineer to check stretch and compression. If the sealer is found to be stretched in excess of 5% or compressed in excess of 2%, remove the sealer material from successive joints in both directions until sealers are found that meet the stretch and compression requirements. Replace all joints sealers found with excess stretch or compression. Replace joint sealers removed and found to meet the stretch and compression requirements.

<b>TABLE 502-3 JOINT SEALING ALTERNATIVES</b>			
<b>Joint Type</b>	<b>Sealing Alternative</b>	<b>First-Stage Saw Cut Required</b>	<b>Second-Stage Saw Cut and Bevel Required</b>

Transverse Contraction	Silicone or Preformed	Yes	Both
	Highway Joint Sealant	Yes	Neither
Transverse Expansion and Isolation	Silicone or Preformed	No	Bevel Only
Transverse Construction	Silicone or Preformed	No	Both
	Do Nothing <sup>1</sup>	No	Neither
Longitudinal - Between Lanes Placed Simultaneously	Silicone or Preformed	Yes	Second-Stage Only
	Do Nothing <sup>1</sup>	Yes	Neither
Longitudinal - Between Lanes Placed Separately and Untied Joints With Keyway	Silicone or Preformed	No	Second-Stage Only
	Do Nothing <sup>1</sup>	No	Neither

**NOTE:**

1. Do nothing if highway joint sealants are specified for transverse contraction joints.

**502-3.13 Pavement Protection.** Protect the pavement and appurtenances from traffic and construction operations. Protect the work and provide for traffic as indicated in the contract documents.

**502-3.14 Damaged or Defective Concrete.** Repair or replace all damaged or defective concrete which occurs prior to final acceptance. Perform these repairs as described in the contract documents at no cost to the State. Damage and defects include, but are not limited to, cracking, spalling, honeycombing, or imperfections caused by inadequate pavement protection, traffic, and/or construction practices. Slipformed concrete with inadequate plastic thickness as described in §502-3.08, Plastic Thickness Determination, will be rejected in 150 foot segment lengths.

**502-3.15 Hardened Surface Test (Nonprofilographed Concrete).** After the concrete has hardened sufficiently, test the entire longitudinal center of each travel lane, including ramps, with a 10 foot, minimum, long straight edge laid longitudinally. The Engineer will mark high and low deviations in the pavement surface exceeding 1/8 inch in 10 feet. Diamond grind these deviations such that they do not exceed 1/8 inch in 10 feet when retested with the straight edge.

**502-3.16 Profilograph.** This section applies to profilographed concrete (and nonprofilographed concrete when a full-width finishing pan or triple transverse screed paving operation is not employed). The Engineer will divide each travel lane into reporting segments that are 0.1 mile long. The Engineer will group segments shorter than 0.1 mile with previous or subsequent segments. Provide survey stationing and develop a reference system that allows the Engineer to readily associate profilograph data to the corresponding reporting segment.

Develop a profile trace for each wheelpath in each reporting segment in accordance with Materials Method 24, PCC Pavement Profilograph Operations. Determine an initial profile index (PI) for each reporting segment by averaging the PIs of the wheelpaths. Provide the traces and initial PIs to the Engineer. The Engineer will identify bumps exceeding 3/8 inch in 25 feet on each profile trace. Locate and diamond grind these bumps, if any, to 3/8 inch or less in 25 feet. If no grinding is required for a given reporting segment, the initial PI may be used to determine the payable Quality Units of Smoothness Quality Adjustment per reporting segment.

Production diamond grinding equipment can be used to increase the amount of Quality Units payable as discussed in §502-3.17, Diamond Grinding. Whether diamond grinding was required through profile trace analysis, or performed as a Contractor option, reprofilograph each reporting segment that was

diamond ground and determine a final PI. Give the Engineer the final profile traces and final PI determined by using both the 0.2 inch and zero blanking bands.

**502-3.17 Diamond Grinding.** Diamond grind the pavement longitudinally, beginning and ending at lines normal to the pavement centerline, and in full travel lane width increments. Provide surface drainage by maintaining the proper cross slope on the finished surface and by blending adjacent passes. Continuously vacuum the slurry from the pavement when production grinding. If roadside slurry discharge is not allowed by the contract documents, transfer the slurry into equipment capable of transporting it from the contract site without spills. Dispose of slurry in conformance with all Federal, State, and local regulations.

In any case, do not allow slurry to enter:

- Occupied travel lanes.
- Drainage structures.
- Wetlands, streams, estuaries, or sensitive environmental resources.
- Areas where it will become a public nuisance.

Use of bump grinding equipment is restricted to grinding bumps that exceed 3/8 inch in 25 feet in profilographed concrete and bump grinding non-profilographed concrete. Production grinding equipment can be used to grind bumps or increase the amount of Quality Units payable subject to the following:

- For pavements textured with longitudinal tining or artificial turf drag, any amount of a reporting segment surface area may be diamond ground to increase the amount of Quality Units payable.
- For transverse tined pavements, Quality Units are payable if less than 20% or more than 95% of the reporting segment surface area is ground. If more than 20% of the reporting segment area is ground for any reason, diamond grind 95%, minimum, of the entire reporting segment.

### **502-3.18 Opening to Traffic**

**A. Construction Traffic.** Class C concrete may be opened to construction traffic and paving equipment 7 days after placement. With the Engineer's approval, this time frame may be shortened to 3 days if cylinders achieve a compressive strength of 2500 psi in accordance with §502-3.18C, Project Strength Determination. Any pavement damaged from opening to construction traffic in a reduced time frame will be treated in accordance with §502-3.14, Damaged or Defective Concrete.

**B. General Traffic.** Class C concrete placed between June 1 and September 15 may be opened to general traffic 10 days after placement. Class C concrete placed outside this interval may be opened to general traffic 15 days after placement. With the Engineer's approval, these time frames may be shortened to 4 days if cylinders achieve a compressive strength of 3000 psi in accordance with §502-3.18C, Project Strength Determination, and the joints are addressed in accordance with §502-3.12, Sealing Joints.

If Project Strength Determination testing for construction traffic opening indicates the concrete has achieved a compressive strength in excess of 3000 psi, the concrete may be opened to general traffic after 4 days. Any pavement damaged from opening to general traffic in a reduced time frame will be treated in accordance with §502-3.14, Damaged or Defective Concrete.

**C. Project Strength Determination.** Provide an ACI Certified Concrete Field Testing Technician, Grade I, or higher, to cast all cylinders. Unless otherwise noted in the contract documents, use an agency accredited by the AASHTO Accreditation Program (AAP) in the field of construction materials testing of portland cement concrete to perform compressive strength testing.

Cast and test in the presence of the Engineer, or the Engineer's representative. Provide

acceptable proof of ACI Certification and AASHTO Accreditation to the Engineer before placing any concrete.

The Engineer, or the Engineer's representative, will complete the Concrete Cylinder Report as cylinders are cast and tested.

Cast a minimum of 3 cylinder pairs (6 total) from each 1000 feet of paving length, or fraction thereof, in accordance with Materials Method 9.2, Field Inspection of Portland Cement Concrete. Cast each pair from different delivery trucks. Develop an Engineer-approved marking system that allows a cylinder to be readily associated with the corresponding placement location and placement time. Mark the cylinders and place them adjacent to the pavement under similar curing conditions. Determine the concrete compressive strength at the desired time in accordance with ASTM C39, Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens. The pavement may be opened to construction (or general) traffic if all the following apply:

- Average compressive strength of all cylinder pairs exceed 2500 psi (or 3000 psi).
- Average compressive strength of each cylinder pair exceeds 2000 psi (or 2500 psi).
- Appropriate time frame has elapsed for the entire area to be opened.

If these conditions are not met, test 3 additional cylinder pairs at a later time, provided the appropriate numbers of additional cylinders were cast. If the above conditions are not met after additional testing, or, if the required number of additional cylinders were not cast, open the pavement in accordance with the nonreduced time frames of §502-3.18A, Construction Traffic, and §502-3.18B, General Traffic.

**D. HES Concrete.** HES concrete may be opened to construction traffic when it has achieved a compressive strength of 2500 psi and to general traffic when it has achieved compressive strength of 3000 psi, in accordance with §502-3.18C, Project Strength Determination, and the joints are addressed in accordance with §502-3.12, Sealing Joints.

**502-4 METHOD OF MEASUREMENT.** The Engineer will measure the following quantities for items incorporated into the finished pavement:

**502-4.01 Portland Cement Treated Permeable Base.** The work will be measured for payment as the number of cubic yards of portland cement treated permeable base satisfactorily placed based on the payment lines shown in the contract documents. No deductions will be made for catch basins, manholes, or other similar pavement obstructions.

**502-4.02 PCC Pavement, Unreinforced.** The work will be measured for payment as the number of cubic yards of unreinforced PCC pavement satisfactorily placed based on the payment lines shown in the contract documents. Deductions in 150 foot segment lengths will be made for areas that do not meet minimum plastic thickness requirements. Deductions (and separate payment) will be made for catch basins, manholes, or other similar pavement obstructions requiring either mesh reinforced or heavily reinforced placements.

**502-4.03 PCC Pavement, Mesh or Heavily Reinforced.** The work will be measured for payment as the number of cubic yards of reinforced concrete satisfactorily placed. No deductions will be made for drainage and utility structures or other similar pavement obstructions being isolated from the surrounding pavement.

**502-4.04 Smoothness Quality Adjustment (Profilographed Items Only).** The work will be measured for payment as the number of Quality Units of Smoothness Quality Adjustment, if any, payable for each reporting segment determined by the following:

$$\text{Quality Units (Per Segment)} = (\text{SAF} - 1.00) \times \text{PCC Cubic Yards (Per Segment)}$$

The Smoothness Adjustment Factor (SAF) from Table 502-4, Smoothness Adjustment Factors, is based on the final PI obtained for each reporting segment using a 0.2 inch blanking band. No Quality Units are computed for pavements specified as nonprofilographed.

<b>TABLE 502-4 SMOOTHNESS ADJUSTMENT FACTORS</b>		
<b>Final Profile Index (in/mile.)</b>	<b>Level 1 SAF</b>	<b>Level 2 SAF</b>
0 - 1	1.05	1.05
1 - 2	1.04	1.04
2 - 3	1.03	1.03
3 - 4	1.02	1.02
4 - 5	1.01	1.01
5	1.00	1.00
5 +	Grind	1.00
12 +	Not Applicable	Grind

**502-4.05 Constructing Transverse Joints.** The work will be measured for payment as the number of feet of transverse joints satisfactorily constructed.

**502-4.06 Constructing Longitudinal Joints.** The work will be measured for payment as the number of feet of longitudinal joints satisfactorily constructed.

**502-4.07 Sealing Transverse Joints.** The work will be measured for payment as the number of feet of transverse joints satisfactorily sealed, excluding preformed sealers turned down at the pavement edges.

**502-4.08 Sealing Longitudinal Joints.** The work will be measured for payment as the number of feet of longitudinal joints satisfactorily sealed.

## **502-5 BASIS OF PAYMENT**

**502-5.01 Portland Cement Treated Permeable Base.** Include the cost of all labor, material, and equipment necessary to satisfactorily perform the work in the unit price bid for Portland Cement Treated Permeable Base.

**502-5.02 PCC Pavement, Unreinforced, Nonprofilographed.** Include the cost of all labor, material, and equipment necessary to satisfactorily perform the work in the unit price bid for PCC Pavement, Unreinforced, Nonprofilographed. No payment will be made for areas that do not meet minimum plastic thickness requirements. No additional payment will be made for Contractor-requested HES concrete mixes.

Also include the cost of all labor, material, and equipment necessary to profilograph and diamond grind the pavement to meet the Level 2 smoothness requirements of Table 502-4, Smoothness Adjustment Factors, if paving equipment other than a paver equipped with a full-width finishing pan or triple transverse screeds is used. In this case, no payment will be made for SAF Quality Units.

PCC Pavement, Unreinforced, Nonprofilographed will be eligible for progress payments in accordance with the following:

- 80% upon satisfactory completion of all work up to, and including, first-stage saw cutting.

- An additional 10% upon satisfactory completion of diamond grinding, if any.
- The remaining 10% upon satisfactory completion of the work.

**502-5.03 PCC Pavement, Unreinforced, Profilographed.** Include the cost of all labor, material, and equipment necessary to satisfactorily perform the work in the unit price bid for PCC Pavement, Unreinforced, Profilographed. No payment will be made for areas that do not meet minimum plastic thickness requirements. No additional payment will be made for Contractor-requested HES concrete mixes.

PCC Pavement, Unreinforced, Profilographed will be eligible for progress payments in accordance with the following:

- 80% upon satisfactory completion of all work up to, and including, first-stage saw cutting.
- An additional 10% upon satisfactory completion of diamond grinding, if any.
- The remaining 10% upon satisfactory completion of the work.

**502-5.04 Smoothness Quality Adjustment.** Quality Units of Smoothness Quality Adjustment are a fixed price in the bid documents and cannot be changed by the Contractor.

**502-5.05 PCC Pavement, Mesh or Heavily Reinforced.** Include the cost of all labor, material, and equipment necessary to satisfactorily perform the work in the unit price bid for PCC Pavement, Mesh or Heavily Reinforced. No additional payment will be made for Contractor-requested HES concrete mixes.

**502-5.06 Constructing Transverse Joints.** Include the cost of all labor, material, and equipment necessary to satisfactorily perform the work in the unit price bid for Constructing Transverse Joints.

**502-5.07 Constructing Longitudinal Joints.** Include the cost of all labor, material, and equipment necessary to satisfactorily perform the work in the unit price bid for Constructing Longitudinal Joints. Placing the inside shoulder and inside lane simultaneously, at the Contractor’s option, will not generate a Significant Change in the Character of Work. No additional payment will be provided for the additional number of longitudinal joint ties associated with:

- Constructing butt joints between lanes placed separately in a slipform paving operation.
- Constructing longitudinal joints in wheelpaths.

**502-5.08 Sealing Transverse Joints.** Include the cost of all labor, material, and equipment necessary to satisfactorily perform the work in the unit price bid for Sealing Transverse Joints.

**502-5.09 Sealing Longitudinal Joints.** Include the cost of all labor, material, and equipment necessary to satisfactorily perform the work in the unit price bid for Sealing Longitudinal Joints. Placing the inside shoulder and inside lane simultaneously, at the Contractor’s option, will not generate a Significant Change in the Character of Work.

**Payment will be made under:**

Item No.	Item	Pay Unit
502.0001	Portland Cement Treated Permeable Base	Cubic Yard
502.RPCF	PCC Pavement	Cubic Yard
<u>R – Pavement &amp; Reinf.</u>	<u>P – Profilographing</u>	<u>C – Concrete Class</u>
0 – Unreinforced	0 – Nonprofilographed	1 – Class C
1 – Mesh Reinforced	1 – Level 1	3 – HES
2 – Heavily Reinforced	2 – Level 2	
		<u>F – Friction Type</u>
		1 – Type 1
		2 – Type 2
		3 – Type 3
		9 – Type 9

502.9010	Smoothness Quality Adjustment	Quality Unit
502.91	Constructing Transverse Joints	Foot
502.9110	Constructing Longitudinal Joints	Foot
502.92	Sealing Transverse Joints – Silicone Joint Sealant	Foot
502.9201	Sealing Transverse Joints – Preformed Elastic Joint Sealer	Foot
502.9210	Sealing Transverse Contraction Joints – Highway Joint Sealant	Foot
502.93	Sealing Longitudinal Joints – Silicone Joint Sealant	Foot
502.9301	Sealing Longitudinal Joints – Preformed Elastic Joint Sealer	Foot

## SECTION 503 - PORTLAND CEMENT CONCRETE FOUNDATION FOR PAVEMENT

**503-1 DESCRIPTION.** Construct a portland cement concrete (PCC) foundation for pavements and shoulders, if required, as detailed in the contract documents.

### 503-2 MATERIALS.

Portland Cement Concrete	501
Anchoring Materials - Chemically Curing	701-07
Premoulded Resilient Joint Filler	705-07
Longitudinal Joint Ties	705-14
Transverse Joint Supports	705-15
Epoxy Coated Bar Reinforcement, Grade 60	709-04
Quilted Covers (for curing)	711-02
Plastic Coated Fiber Blankets (for curing)	711-03
Polyethylene Curing Covers (white opaque)	711-04
Form Insulating Materials for Winter Concreting	711-07
Water	712-01

In addition to meeting the requirements of §701-07, Anchoring Materials - Chemically Curing, the material used to anchor longitudinal joint ties, dowels, or other miscellaneous items into hardened concrete must be a pourable, two-component, 100% solids structural epoxy dispensed:

- From side-by-side cartridges by manual or pneumatically powered injection guns.
- Through a static mixing nozzle that homogeneously mixes the material without any hand mixing.

Apply the requirements of the following in accordance with the contract documents:

§502-2.01, Concrete.

§502-2.02, High-Early-Strength (HES) Concrete.

§502-2.03, Portland Cement Treated Permeable Base.

§502-2.04, Equipment.

§502-2.04A, Slipform Paving.

§502-2.04B, Fixed Form Paving.

§502-2.04C, Vibrators.

§502-2.04D, Permeable Base Paving Equipment.

§502-2.04E, Saw Cutting Equipment.

§502-2.04I, Drills.

§502-2.04L, Air Blasting Equipment.

**503-3 CONSTRUCTION REQUIREMENTS.** Apply the requirements of §502-3, Portland Cement Concrete Pavement, except as modified herein.

**503-3.01 Placement of Reinforcement.** Place bar reinforcement around utilities, drainage structures, and other projections into the pavement as depicted in the Standard Sheets for PCC Pavements. Use telescoping manholes when required by the contract documents in accordance with §502-3.06C, Utility and Drainage Structure Isolation Joint Systems and Telescoping Manholes.

**503-3.02 Joints.** Transverse joint supports are not required for contraction joints. Saw cut skewed contraction joints at a “6 on 1” skew across the pavement (approximately 10° from perpendicular to the centerline) before uncontrolled cracking occurs. Saw cut in accordance with the first-stage saw cut details in the Standard Sheets.

Use a maximum joint spacing of 20 feet and a minimum spacing that satisfies the geometric requirements of §502-3.06A, Transverse Joints. Center utilities and drainage structures between saw cuts. Skewed joints may be cut at the same angle across the pavement or chevron-shaped with the vertex at a longitudinal joint between separate placements. Maintain the same technique once selected. Construct transverse construction joints perpendicular to the centerline in accordance with §502-3.06A3, Transverse Construction Joints.

Construct longitudinal joints in accordance with §502-3.06B, Longitudinal Joints.

**503-3.03 Finishing.** Hand finish the pavement to correct surface irregularities.

**503-3.04 Testing the Surface.** Immediately after placement, test the entire longitudinal center of each travel lane with a 10 feet, minimum, long straight edge laid longitudinally. Immediately correct any surface irregularity exceeding 3/8 inches in 10 feet.

**503-3.05 Texturing.** Immediately after testing the surface, apply an aggressive transverse broom finish.

**503-3.06 Curing.** Cure in accordance with §502-3.11, except the impervious membrane method, i.e., curing compound, is not be permitted.

**503-3.07 Surface Test.** No surface test on the hardened concrete will be required.

**503-3.08 Sealing Joints.** Typically, no joint sealing is required in the PCC foundation course. Seal skewed contraction joints in accordance with §502-3.12A, Sealing Transverse Contraction Joints – Highway Joint Sealant, if a construction delay occurs that prevents the placement of the final pavement course until the subsequent construction season.

#### **503-4 METHOD OF MEASUREMENT.**

**503-4.01 Portland Cement Concrete Foundation for Pavement.** The work will be measured for payment as the number of cubic yards of Portland Cement Concrete Foundation for Pavement based on the payment lines shown in the contract documents. No deductions will be made for catch basins, manholes, or other similar pavement obstructions.

**503-4.02 Constructing Longitudinal Joints.** The work will be measured for payment as the number of feet of longitudinal joints satisfactorily constructed.

#### **503-5 BASIS OF PAYMENT.**

**503-5.01 Portland Cement Concrete Foundation for Pavement.** Include the cost of all labor, material, and equipment necessary to satisfactorily perform the work in the unit price bid for Portland Cement Concrete Foundation for Pavement. No payment will be made for areas that do not meet



minimum plastic thickness requirements as described in §502-3.08, Plastic Thickness Determination. No additional payment will be made for Contractor-requested HES concrete mixes.

**503-5.02 Constructing Longitudinal Joints.** Include the cost of all labor, material, and equipment necessary to satisfactorily perform the work in the unit price bid for Constructing Longitudinal Joints.

*Payment will be made under:*

<b>Item No.</b>	<b>Item</b>	<b>Pay Unit</b>
503.1010	PCC Foundation for Pavement, Class C	Cubic Yard
503.1011	PCC Foundation for Pavement, Class F	Cubic Yard
503.1012	PCC Foundation for Pavement, HES Concrete	Cubic Yard
503.9110	Constructing Longitudinal Joints in Foundation Pavement	Foot

**SECTIONS 504 THRU 549 (VACANT)**



NATURAL RESOURCES CONSERVATION SERVICE

CONSTRUCTION SPECIFICATION

00 – BIO-ENGINEERING

1. SCOPE

This work shall consist of identifying, supplying, and planting dormant live cuttings of the species indicated on the plant list at the locations and spacing shown on the Drawings. Work includes identifying, harvesting, storage, and delivery to the construction site for plantings.

2A. MATERIALS

A. Live Branches

1. Cuttings will come from shrubs and young trees and will have basal branch diameters of 0.25 to 1 inch. Each stem shall contain at least two healthy side branches; side branches shall not be trimmed off.
2. Species listed in Section 5 C (3.) Group 1 are preferred. Species from Group 2 are acceptable when insufficient quantities of the preferred species are available.

B. Live Stakes

1. Cuttings will come from willow shrubs and young trees and have basal ends 1 to 2 inches in diameter.
2. Include at least one of the species listed in Section 5 B. (Group 1).
3. Collect cuttings during the dormant season (approximately two weeks after leaf-off) and deliver to the project site as soon as possible.
4. Plant material showing desiccation, abrasion, sun-scalded injury, disfigurement, or unauthorized substitution shall be rejected.

C. In-Situ Soils

In-situ soils proposed for tilling, amending and conditioning shall be free from slag, cinders, stones, lumps of soil, sticks, roots, trash or other materials over a minimum 3 inch diameter. In-situ soils shall be free from viable plants and plant parts.

E. Twine

Twine used for tying live branch cuttings in fascines shall be natural jute twine or an approved equal. Twine shall be untreated and free from preservatives.

3. PRODUCT HANDLING

- A. General: Carefully pack dormant live cuttings (with all growing tips in one direction) to prevent desiccation, breaking, damage to bark and branches. Provide adequate ventilation. Protect from sun, drying wind and freezing. Do not drop cuttings from vehicles. Legibly label cuttings with correct botanical name, common name, and date collected.
- B. Transport: Transport cuttings in covered, unheated vehicles, moistened and covered with moisture retaining medium.
- C. Storage:
  - 1. If cuttings cannot be delivered to the construction site within 24 hours, store off-site in specially prepared facilities specifically constructed to store dormant live plant material. Maintain facilities at a constantly cool temperature (34 deg F to 50 deg F) and with adequate humidity levels.
  - 2. Keep cuttings moist and covered with moisture-retaining medium throughout the time in storage. Periodically water to maintain moisture levels. While at construction site, ensure plants are not left in sun to dry out; keep in shaded area and keep moist.
  - 3. Store on pallets above ground surface. Provide adequate ventilation.

4. SOURCE OF SUPPLY

Harvest cuttings during the dormant season from within the project watershed, as designated or approved by the Contracting Officer. Any necessary harvesting permits are the responsibility of the contractor.

5. DORMANT LIVE CUTTINGS

- A. Notify the Contracting Officer 72 hours prior to harvesting at the approved sites.

The Contractor shall schedule his cutting and delivery to the planting site so that the materials can be installed within 48 hours after they arrive.

- 1. Collect only specimens deemed suitable for harvesting.
- 2. Harvest cuttings during the dormant season (November 1 to March 1) only.

3. Substitutions will not be permitted without written request and approval from the Contracting Officer.

B. Live Branches

1. Brush Cultivar:

Live brush for brush layers shall be 3 to 7 feet in length, as shown on the plans, with a basal end of 0.25 to 1 inch in diameter. Each stem shall contain at least two healthy side branches; side branches shall not be trimmed off. All live brush plant materials are subject to inspection and approval by the Contracting Officer.

2. Quality:

Dormant live brush shall be cut from approved harvesting sites during the dormant season or purchased from a source approved by the Contracting Officer.

3. Species

Group 1 (Recommended)

<u>Botanical Name</u>	<u>Common Name</u>
Cornus stolonifera	Red Osier Dogwood
S. exigua	Sandbar Willow
Salix purpurea	Purpleosier Willow "Streamco"
Salix x cottetii	Dwarf Willow "Bankers"

Group 2 (Acceptable)

<u>Botanical Name</u>	<u>Common Name</u>
Viburnum acerifolium	Mapleleaf viburnum
Viburnum lentago	Nannyberry viburnum
Viburnum alnifolium	Hobblebush
Viburnum recognitum	Arrowwood viburnum
Cephalanthus occidentais	Buttonbush

6. INSTALLATION

A. General

Live branches shall be installed from September 1<sup>st</sup> to December 1<sup>st</sup> and March 15<sup>th</sup> to June 1<sup>st</sup> (unless otherwise specified). Brush layering shall be installed only during periods when beneficial results can be obtained. When drought, excessive moisture, or other unsatisfactory conditions prevail, the work shall be stopped when directed. When special conditions warrant a variance to the brush layering operations proposed alternative times shall be submitted for approval.

#### B. In-Situ Soil

It is intended that the in-situ soil material, as defined herein and approved by the Contracting Officer, be obtained from approved on-site excavation operations, and be used in constructing the brush layer bioengineering systems after fertilizer and lime have been mixed with the material. Additional required suitable fill material shall be obtained from sources selected by the Contractor and approved by the Contracting Officer and meet the requirements specified herein.

The in-situ soil material shall be natural, viable soil capable of supporting plant growth. In addition, fertilizer and lime shall be mixed into the material as needed (in accordance with soil tests). The material shall be free of any admixture of subsoil, foreign matter, objects larger than three (3) inches in any dimension, toxic substances, or any material or substance which could be harmful to plant growth. Gravel alone shall not be considered a suitable material for use around live cut plant materials. Muddy (over-saturated) soils, which otherwise meet these requirements, shall not be considered suitable material until they have been dried to a workable moisture content. Heavy clays shall be mixed with sandy and/or organic soils to increase porosity. Acceptability of materials used to prepare the select fill shall be determined on-site by the Contracting Officer.

#### C. Installing Brush Layers

1. Brush layers are as indicated on the drawings. A trench shall be excavated into the slope, on contour, sloping downward from the face of the bank 10 degrees below horizontal as shown on the drawings. Live branches of willow and other species as listed in this specification, shall be placed in the trench with their basal end pointed inward and no less than 5 inches or more than 18 inches of the tips extending beyond the face of the slope. Brush layers shall be from 3 to 4 feet in length at a density of 10 stems per foot of bank. Branches shall have a basal end of 0.25 to 1 inch in diameter and crisscrossed. Brush layers shall be covered with at least 4 to 5 inches of in-situ soil or topsoil immediately following placement and the material compacted firmly, so as to create good stem to soil contact throughout the brush layer. Other brush layers shall be placed, as needed, on contour intermittently upslope as indicated on the drawings. If cohesionless, disturbed, or fill soil is encountered in between brush layers, it will be necessary to cover that soil with 900 cm./sp. Meter coir fabric. The coir-covered zone in between the brush layers shall be seeded with a native grass seed mix and staked

as shown on the drawings. Coir fabric shall be overlapped at all seams a minimum of 12”.

D. Installing Live Branches

1. Live Branches are an element of the Vegetation Reinforced Soil System constructed above the top of channel lining riprap on the slopes of the flood control channel, as indicated on the drawings. Above the top of the channel lining riprap, a series of 12” soil lifts will be constructed of two 6” compacted soil lifts and completely wrapped in a layer of Coir or Burlap Fabric and then a layer of geogrid. Live branches of shrub willow and other species, as listed in this specification, shall be placed between successive soil lifts with their basal end pointed inward and no less than 8 inches or more than 12 inches of the tips extending beyond the face of the slope. Live Branches shall have a minimum embedment depth of 3 to 7 feet at a density of 10 stems per foot of bank. Branches shall have a basal end of 0.25 to 1 inch in diameter. Coir/burlap fabric shall be overlapped at all seams a minimum of 12”.

E. Installing Live Stakes

1. Live stakes for Fascine installation shall be 18”-24” in length with a basal end of 1 to 2 inches diameter. All live stakes are subject to inspection and approval by the Contracting Officer.
2. Dormant live stakes shall be cut from approved harvesting sites during the dormant season or purchased from a source approved by the Contracting Officer.
3. Only species of willow shall be used for live stakes for fascine installation.

7. MAINTENANCE DURING STORAGE

- A. If immediate delivery to the construction site is not possible, maintain cuttings throughout the storage period as specified in Section 3.
- B. Materials in storage may be viewed periodically by the Government. Provide access to the Government when desired.

8. DELIVERY

- A. Coordinate with the Contracting Officer to ensure that materials are delivered to the job site in a timely manner. Report any practices planned during construction that may prevent establishment of the cuttings.
- B. Deliver as specified in Section 3. Maintain conditions of cuttings throughout transport and delivery. Provide instructions on the proper handling and protection of cuttings prior to installation.

9. PLANTING

- A. Depth, spacing, and limits of plantings are shown on the Drawings.
1. The geometric pattern of the planting may be interrupted by the presence of mature trees within the planting area.
    - a. Resume plant spacing as soon as practicable adjacent to the mature trees.

10. MAINTENANCE OF PLANTED AREAS

Maintenance operation shall begin immediately after planting and shall continue as required until final acceptance, and for a one-year guaranty period after final acceptance. Plants shall be kept in a healthy, growing condition by watering, pruning, spraying, weeding, mulching and any other necessary operations of maintenance. The Contractor may pump water from the river for watering during construction and the one-year maintenance period.

11. MEASUREMENT AND PAYMENT

Method 1 For items of work for which specific unit prices are established in the contract, each area treated will be measured as specified in Section 12 and the area calculated to the nearest 0.1 acre. Payment for treatment will be made at the contract unit price for the designated treatment which will constitute full compensation for completion of the work.

When specified as an item of work, mesh or netting will be measured to the nearest square yard of surface area covered and accepted. Payment will be made at the contract unit price and will constitute full compensation for completion of the work.

Method 2 For items of work for which specific lump sum prices are established in the contract, the quantity of work will not be measured for payment. Payment for this item will be made at the contract lump sum price for the item and will constitute full compensation for the completion of the work.

All Methods The following provisions apply to all methods of measurement and payment. Compensation for any item of work described in the contract but not listed in the bid schedule will be included in the payment for the item of work to which it is made subsidiary. Such items and the item(s) to which they are made subsidiary are identified in Section 7.



# Construction Specification 6—Seeding, Sprigging, and Mulching

## 1. Scope

The work consists of preparing the area for treatment; furnishing and placing seed, sprigs, mulch, fertilizer, inoculant, lime, and other soil amendments; and anchoring mulch in designated areas as specified.

## 2. Material

**Seed**—All seed shall conform to the current rules and regulations of the state where it is being used and shall be from the latest crop available. It shall meet or exceed the standard for purity and germination listed in section 7.

Seed shall be labeled in accordance with the state laws and the U.S. Department of Agriculture rules and regulations under the Federal Seed Act in effect on the date of invitations for bids. Bag tag figures are evidence of purity and germination. No seed will be accepted with a test date of more than 9 months before the delivery date to the site.

Seed that has become wet, moldy, or otherwise damaged in transit or storage will not be accepted. The percent of noxious weed seed allowable shall be as defined in the current State laws relating to agricultural seeds. Each type of seed shall be delivered in separate sealed containers and fully tagged unless exception is granted in writing by the contracting officer.

**Fertilizer**—Unless otherwise specified, the fertilizer shall be a commercial grade fertilizer. It shall meet the standard for grade and quality specified by State law. Where fertilizer is furnished from bulk storage, the contractor shall furnish a supplier's certification of analysis and weight. When required by the contract, a representative sample of the fertilizer shall be furnished to the contracting officer for chemical analysis.

**Inoculants**—The inoculant for treating legume seeds shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species and shall not be used later than the date indicated on the container or as otherwise specified. A mixing medium, as recommended by the manufacturer, shall be used to bond the inoculant to the seed. Two times the amount of the inoculant recommended by the manufacturer shall be used except four times the amount shall be used when seed is applied using a hydraulic seeder. Seed shall be sown within 24 hours of treatment and shall not remain in the hydraulic seeder longer than 4 hours.

**Lime and other soil amendments**—Lime shall consist of standard ground agriculture limestone, or approved equivalent. Standard ground agriculture limestone is defined as ground limestone meeting current requirements of the State Department of Agriculture. Other soil amendments shall meet quality criteria and application requirements specified in section 7.

**Mulch tackifiers**—Asphalt emulsion tackifiers shall conform to the requirements of ASTM D 977, Specification for Emulsified Asphalt. The emulsified asphalt may be rapid setting, medium setting, or slow setting. Nonasphaltic tackifiers required because of environmental considerations shall be as specified in section 7.

**Straw mulch material**—Straw mulch shall consist of wheat, barley, oat or rye straw, hay, grass cut from native grasses, or other plants as specified in section 7. The mulch material shall be air-dry, reasonably light in color, and shall not be musty, moldy, caked, or otherwise of low quality. The use of mulch that contains noxious weeds is not permitted. The contractor shall provide a method satisfactory to the contracting officer for determining weight of mulch furnished.

Other mulch materials—Mulching materials, such as wood cellulose fiber mulch, mulch tackifiers, synthetic fiber mulch, netting, and mesh, are other mulching materials that may be required for specialized locations and conditions. These materials, when specified, must be accompanied by the manufacturer's recommendations for methods of application.

### **3. Seeding mixtures, sod, sprigs, and dates of planting**

The application rate per acre for seed mixtures, sprigs, or sod and date of seeding or planting shall be as shown on the plans or as specified in section 7.

### **4. Seedbed preparation and treatment**

Areas to be treated shall be dressed to a smooth, firm surface. On sites where equipment can operate on slopes safely, the seedbed shall be adequately loosened (4 to 6 inches deep) and smoothed. Depending on soil and moisture conditions, disking or cultipacking, or both, may be necessary to properly prepare a seedbed. Where equipment cannot operate safely, the seedbed shall be prepared by hand methods by scarifying to provide a roughened soil surface so that broadcast seed will remain in place.

If seeding is to be accomplished immediately following construction operations, seedbed preparation may not be required except on a compacted, polished, or freshly cut soil surface.

Rocks larger than 6 inches in diameter, trash, weeds, and other debris that will interfere with seeding or maintenance operations shall be removed or disposed of as specified in section 7.

Seedbed preparation shall be discontinued when soil moisture conditions are not suitable for the preparation of a satisfactory seedbed as determined by the contracting officer's technical representative (COTR).

### **5. Seeding, sprigging, fertilizing, mulching, and stabilizing**

All seeding or sprigging operations shall be performed in such a manner that the seed or sprigs are applied in the specified quantities uniformly in the designated areas. The method and rate of seed application shall be as specified in section 7. Unless otherwise specified, seeding or sprigging shall be accomplished within 2 days after final grading is completed and approved.

Fertilizer, lime, and other soil amendments shall be applied as specified in section 7. When specified, the fertilizer and soil amendments shall be thoroughly incorporated into the soil immediately following surface application.

The rate, amount, and kind of mulching or mesh shall be as specified in section 7. Mulches shall be applied uniformly to the designated areas. They shall be applied to areas seeded not later than 2 working days after seeding has been performed. Straw mulch material shall be stabilized within 24 hours of application using a mulch crimper or equivalent anchoring tool or by a suitable tackifier. When the mulch crimper or equivalent anchoring tool is used, it shall have straight blades and be the type manufactured expressly for and capable of firmly punching the mulch into the soil. Where the equipment can be safely operated, it shall be operated on the contour. Hand methods shall be used where equipment cannot safely operate to perform the work required.

The tackifier shall be applied uniformly over the mulch material at the specified rate, or it shall be injected into the mulch material as it is being applied. Mesh or netting stabilizing materials shall be applied smoothly, but loosely on the designated areas. The edges of these materials shall be buried or securely anchored using spikes or staples as specified in section 7.

The contractor shall maintain the mesh or netting areas until all work under the contract has been completed and accepted. Maintenance shall consist of the repair of areas damaged by water erosion, wind, fire, or other causes. Such areas shall be repaired to reestablish the intended condition and to the design lines and grades required by the contract. The areas shall be refertilized, reseeded, and remulched before the new application of the mesh or netting.

## **6. Measurement and payment**

**Method 1**—For items of work for which specific unit prices are established in the contract, each area treated is measured as specified in section 7 and the area calculated to the nearest 0.1 acre. Payment for treatment is made at the contract unit price for the designated treatment, which will constitute full compensation for completion of the work.

When specified as an item of work, mesh or netting is measured to the nearest square yard of surface area covered and accepted. Payment is made at the contract unit price and will constitute full compensation for completion of the work.

**Method 2**—For items of work for which specific lump sum prices are established in the contract, the quantity of work will not be measured for payment. Payment for this item is made at the contract lump sum price for the item and will constitute full compensation for the completion of the work.

**Method 3**—For items of work for which lump sum prices are established in the contract, payment is made as the work proceeds. Progress payments will be determined as specified in section 7. Payment of the lump sum contract price will constitute full compensation for completion of the work.

**All Methods**—The following provisions apply to all methods of measurement and payment. Compensation for any item of work described in the contract, but not listed in the bid schedule is included in the payment for the item of work to which it is made subsidiary. Such items and the item(s) to which they are made subsidiary are identified in section 7.

## **7. Items of work and construction details**

## **215.0-TREES AND SHRUBS**

### **215.1-GENERAL**

This specification covers furnishing all materials, equipment, and labor for planting trees and shrubs as required by the plans or as directed by the Engineer.

### **215.2-MATERIALS**

#### **215.2.1-Plant Stock:**

##### **215.2.1.1-General:**

Plant stock for this item shall be trees and shrubs specified by the Planting Plan and the Engineer. All Plant Stock must be healthy, vigorous, and free of damage and disease. Plant stock shall be healthy representatives typical of their species or variety and exhibit a normal habit of growth.

##### **215.2.1.2-Supplier Requirements:**

The Plant Supplier for all plant stock shall be approved by the Engineer in writing. The Plant Supplier shall certify that all Plant Stock were produced from USDA Hardiness Zone 6 and written certification shall be provided to the Engineer upon request. Plant stock collected from “the wild” is prohibited.

##### **215.2.1.3-Substitutions:**

All proposed species substitutions or changes in percent composition of species or USDA Hardiness Zone must be approved by the Engineer in writing prior to purchase and planting. Only specified plant species will be accepted. Cultivated varieties (cultivars) will be rejected.

#### **215.2.2-Staking Materials:**

##### **215.2.2.1-Bracing Stakes:**

Bracing stakes for this item shall be hardwood or fir; rough sawn, free from knots, rot, cross grain, or other defects that would impair their strength. Wood bracing stakes shall be a minimum 2 x 2 inch square and a minimum of 8-feet long with a point at one end.

##### **215.2.2.2-Ground Stakes:**

Ground stakes for this item shall be hardwood or fir; rough sawn, free from knots, rot, cross grain, or other defects that would impair their strength. Wood ground stakes shall be a minimum of 2 x 2 inch square and a minimum 3-feet long with a point at one end.

##### **215.2.2.3-Metal Guying Material:**

Metal guying material for this item shall be a minimum 12-gauge wire. Multi-strand cable shall be woven wire. Guying material tensile strength shall conform to the size of tree to be held firmly in place. Metal guying material must be covered in a rubber hose sleeve.

##### **215.2.2.4-Rubber Chafing Guards:**

Rubber chafing guards for this item shall be 1.5 times the circumference of the base of the plant trunk. Rubber chafing guards for this item shall consist of recycled material and shall be the same color throughout the project.

### **215.3-EXECUTION**

**215.3.1-Schedule and Conditions:** Planting operations shall be performed only from March 1 to May 31 for spring establishment, and from September 1 to November 1 for fall establishment, when beneficial results can be obtained. When drought, excessive moisture, frozen ground or other unsatisfactory conditions prevail, the work shall be stopped when directed by the Engineer. When special conditions warrant a variance to the planting operations, proposed planting times shall be submitted for approval by the Engineer.

**215.3.2-Protection During Delivery:** Plant stock shall be protected during delivery to prevent desiccation and damage to the branches, trunk, root system, or earth ball. Branches shall be protected by tying-in. Exposed branches shall be covered during transport.

**215.3.3-Inspection:** Plant stock shall be inspected upon delivery to the project site for conformity to species and quality. Plants shall be well shaped, vigorous and healthy with a well branched root system, free from disease, harmful insects and insect eggs, sun-scald injury, disfigurement, abrasion, mishandling or poor pruning. Plant stock shall be inspected for unauthorized substitution and to certify nursery grown status. Plant stock shall be inspected to certify production in USDA Hardiness Zone 6.

Plants showing desiccation, abrasion, sun-scald injury, disfigurement, or unauthorized substitution shall be rejected. Container-grown plant stock shall have new fibrous roots and the root mass shall contain its shape when removed from the container. Plants with broken or cracked balls shall be rejected. Plants with broken containers shall be rejected. Bare-root plant stock that is not dormant or is showing roots where pulled from the ground shall be rejected. Plants that have evidence of stress, disease, dieback or mishandling will be rejected. Plants damaged in handling or transportation may be rejected by the Engineer.

**215.3.4-Storage:** Plants not installed on the day of arrival at the site shall be stored and protected in areas approved by the Engineer. Plants shall not be stored longer than 30 days. Plants shall be protected from direct exposure to wind and sun. Containerized trees and shrubs shall be kept in a moist condition by watering the base of each plant. Bare-root trees and shrubs shall be stored in buckets of water so that the water level covers the roots.

**215.3.5-Site Preparation:** Planting locations and bed outlines shall be staked on the project site before any excavation is made. Planting locations may be adjusted to meet field conditions following approval by the Engineer.

### **215.3.6-Installation:**

#### **215.3.6.1-Containerized Trees and Shrubs:**

##### **215.3.6.1.1-Planting Pits**

Excavate the planting pit to at least 1½ times the width of the root mass of the plant to be installed. Excavate the planting pit to a depth that allows the surface of the containerized plant to be flush with the existing grade after the soil in the bottom of the pit is tamped.

#### **215.3.6.1.2-Planting**

For burlap containers, remove burlap from top 1/3 of rootball. For other containers, remove the plant by inverting the container and pushing on the container bottom. Place the plants in the center of the planting pit by carrying the plant by the root mass.

#### **215.3.6.1.3-Backfill**

Backfill the planting pit with native soil to a depth equal to 2/3 times the depth of the root ball. Cover the native soil with a soil mix composed of 5 parts topsoil to 1 part organic matter and a 2” layer of wood cellulose fiber mulch to a depth equal to 1/3 times the depth of the rootball.

#### **215.3.6.1.4-Staking Materials**

Bracing stakes and guying material shall be installed according to the Plans. Bracing stakes shall be set without damaging rootball. Rubber chafing guards shall be used to protect tree trunks and branches when metal guying material is applied.

#### **215.3.6.1.5-Watering**

The Contractor shall water plant thoroughly immediately after planting. Water shall be of a sufficient quantity to saturate the backfill, and shall be applied slowly enough to infiltrate the soil without runoff. The need for additional watering shall be at the discretion of the Engineer.

**215.3.7-Pruning:** Pruning shall be accomplished by trained and experienced personnel. The pruning of trees and shrubs shall be in accordance with ANSI A300. Only dead or broken material shall be pruned from installed plants. The typical growth habit of individual plant material shall be retained. Clean cuts shall be made flush with the parent trunk. Improper cuts, stubs, dead and broken branches shall be removed. “Headback” cuts at right angles to the line of growth will not be permitted. Trees shall not be poled or the leader removed, nor shall the leader be pruned or “topped off”.

#### **215.3.8-Tree Establishment Period:**

##### **215.3.8.1-Commencement:**

Upon completion of the last day of the planting operation, the plant establishment period for maintaining installed plant material in a healthy growing condition shall commence and shall be in effect for a minimum of 1 year. A written calendar time period shall be furnished for the plant establishment period. When there is more than one plant establishment period, the boundaries of the planted area covered for each period shall be described. The plant establishment period shall be modified for inclement weather shut down periods, or for separate completion dates for areas.

##### **215.3.8.2-Maintenance During Plant Establishment Period:**

Maintenance of plant material shall include straightening plant material, supplementing mulch; pruning dead or broken branch tips; watering; eradicating weeds, insects and disease; post-fertilization; and removing and replacing unhealthy plants. At the end of the 12-month

establishment period, the Contractor shall remove all stakes and guying material. The plant material shall be watered as necessary to prevent desiccation and to maintain an adequate supply of moisture within the root zone. An adequate supply of moisture is estimated to be the equivalent of 1 inch of absorbed water per week, delivered in the form of rain or augmented by watering. Run-off, puddling and wilting shall be prevented. Unless otherwise directed, watering trucks shall not be driven planted areas. Watering of other adjacent areas or existing plant material shall be prevented.

#### **215.4-METHOD OF MEASUREMENT**

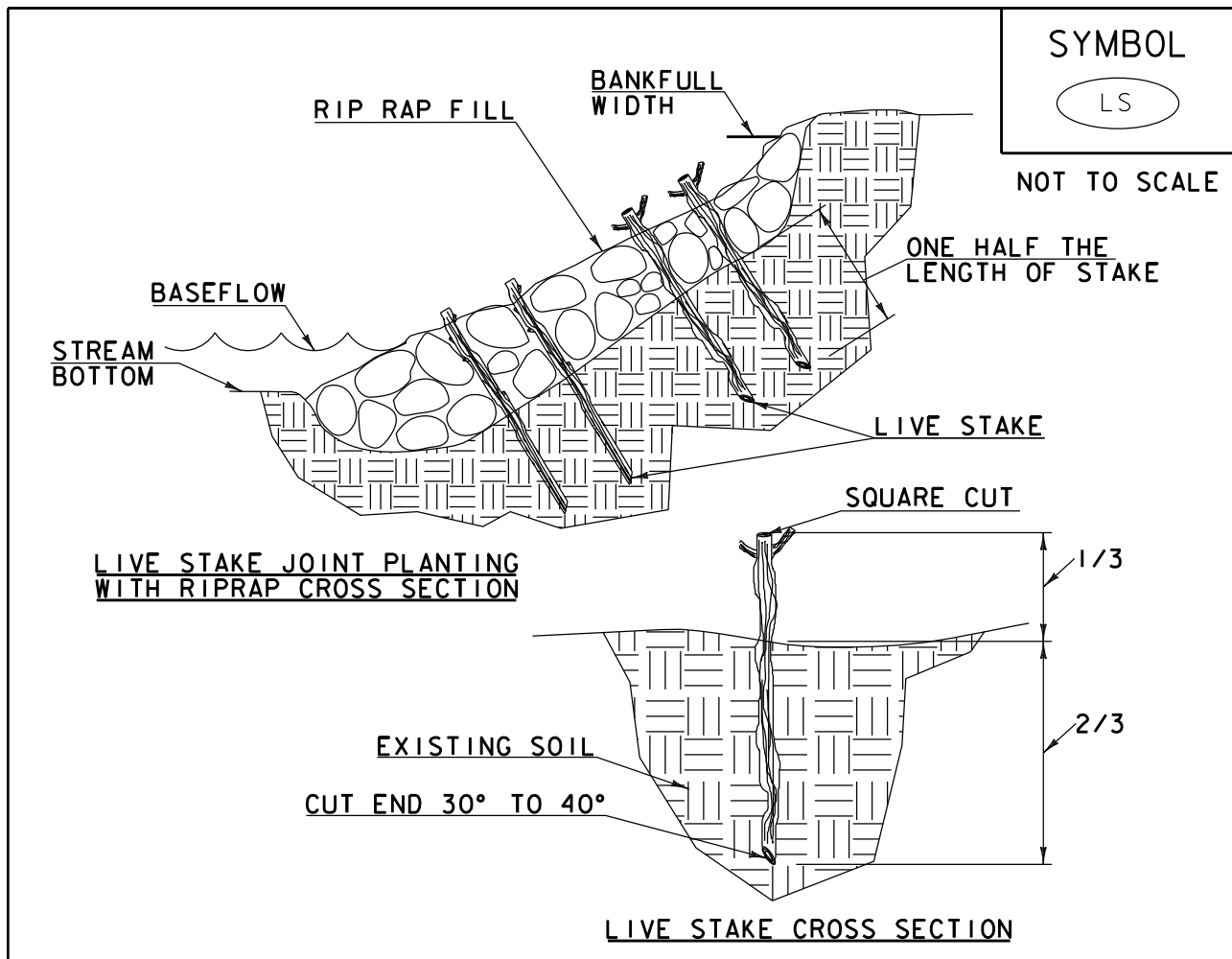
Trees and Shrubs will be measured per each, installed to the satisfaction of the Engineer.

#### **215.5-BASIS OF PAYMENT**

For items of work for which lump sum prices are established in the contract, payment will be prorated and provided in equal amounts on each monthly progress payment estimate. The number of months used for prorating shall be the number estimated to complete the work as outlined in the contractor's approved construction schedule. The final month's prorate amount will be provided with the final contract payment. Payment as described will constitute full compensation for completion of the work. Compensation for any item of work described in the contract, but not listed in the bid schedule is included in the payment for the item of work to which it is made subsidiary.







CONSTRUCTION SPECIFICATIONS

1. LENGTH OF STAKE DEPENDS UPON APPLICATION
2. LIVE STAKES SHALL BE CUT TO A POINT ON THE BASAL END FOR INSERTION IN THE GROUND.
3. A DIBBLE, IRON BAR, OR SIMILAR TOOL SHALL BE USED TO MAKE A PILOT HOLE PRIOR TO INSERTING STAKE IN GROUND.
4. A MINIMUM OF 2" TO 4" AS WELL AS 2 LIVE BUDS SHALL BE EXPOSED ABOVE THE GROUND OR RIP RAP.
5. TAMP SOIL AROUND STAKE.
6. CARE SHALL BE TAKEN TO MINIMIZE DAMAGE TO STAKE. ANY DAMAGE SHALL BE TRIMMED BACK TO AN UNDAMAGED CONDITION.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE  
 DECORIGINALLY DEVELOPED BY USDA-NRCSVERMONT DEPARTMENT  
 OF ENVIRONMENTAL CONSERVATION

LIVE STAKE

NOTES:  
 REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR  
 EROSION PREVENTION & SEDIMENT CONTROL -2006- " FROM  
 THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL  
 GUIDANCE.

REVISIONS	
MARCH 21, 2008	WHF
JANUARY 27, 2009	WHF

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH  
 SECTION 653 FOR LIVE STAKE (PAY ITEM 653.70)



## **217.0-CONSTRUCTION LAYOUT STAKING**

### **217.1-GENERAL**

This item shall consist of furnishing, placing, and maintaining construction layout stakes necessary for the proper prosecution of the work under the Contract, all in accordance with these Specifications.

### **217.2-MATERIALS**

18" wooden surveying stakes shall be free from knots, rot, cross grain, or other defects that would impair their strength.

### **217.3-EXECUTION**

The Contractor will locate and reference the baseline and will establish bench marks along the line of the improvement for the proper layout of the work. The Contractor shall make all calculations involved and shall furnish and place all layout stakes. The Contractor shall provide field forces and shall set all additional stakes needed, such as offset stakes, reference point stakes, slope stakes, supplementary bench marks, and any other horizontal or vertical controls necessary to secure a correct layout of the work. The Contractor shall be responsible for having the layout staking work conform to the lines, grades, elevations, and dimensions called for on the Plans.

The Contractor shall furnish a copy of their survey records for checking by the Engineer and for the District's permanent file. These records shall be furnished as they are completed during the progress of the work. Any inspection or checking of the Contractor's layout by the Engineer and the acceptance of all or any part of it shall not relieve the Contractor of their responsibility to secure the proper dimensions, grades, and elevations of the several parts of the work.

The Contractor shall exercise care in the preservation of stakes and bench marks and shall have them reset at their expense when any are damaged, lost, displaced or removed. The Contractor shall use competent personnel and suitable equipment for the layout work required.

### **217.4-METHOD OF MEASUREMENT**

Construction Layout Staking will be measured as a lump sum item.

### **217.5-BASIS OF PAYMENT**

Construction Layout Staking, determined as provided above, will be paid for at the contract price bid as a lump sum item, which price and payment shall be full compensation for furnishing, setting, maintaining, and resetting, when necessary, the stakes, and for furnishing all engineering personnel, equipment, materials, and all incidentals.



## 733-21 B STONE FILLING

**SCOPE.** This specification covers the material requirements and methods of testing stone filling generally used in stream bank channel protection. The following stone filling types are evaluated in this specification:

- 733.2101 – Stone Filling, Fine
- 733.2102 – Stone Filling, Light
- 733.2103 – Stone Filling, Medium
- 733.2104 – Stone Filling, Heavy

Stone filling types are based on the gradation of the material as outlined in Table 733-21A *Stone Filling Gradation* and Table 733-21B *Stone Filling Approximate Shape*.

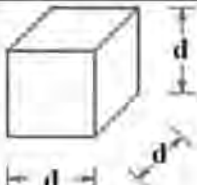
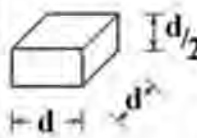
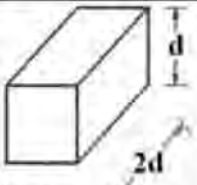

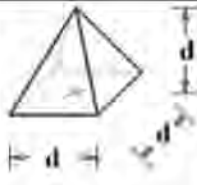
**SAMPLING.** Perform material tests and assurance methods pertaining to stone filling requirements in conformance with the procedures contained in the geotechnical control procedure “*Procedure for the Control of Stone Filling and Rip-Rap Items*”.

### MATERIAL REQUIREMENTS.

**A. STOCKPILE.** Stockpile stone filling in accordance with the geotechnical control procedure “*Procedure for the Control of Stone Filling and Rip-Rap Items*” except as noted herein.

**B. GRADATION.** Provide material having a gradation in accordance with TABLE 733-21A *Stone Filling Gradation* and Table 733-21B *Stone Filling Approximate Shape*.

TABLE 733-21A STONE FILLING GRADATION			
Stone Filling Item	See Notes	Stone Size	Percent of Total by Weight
Fine	2, 3, 4	Smaller than 8 in.	90-100
		Larger than 3 in.	50-100
		Smaller than No. 10 sieve	0-10
Light	2, 3, 4	Lighter than 100 lbs.	90-100
		Larger than 6 in.	50-100
		Smaller than ½ in.	0-10
Medium	2, 4	Heavier than 100 lbs.	50-100
		Smaller than 4 in.	0-10
Heavy	2, 4, 5	Heavier than 600 lbs.	50-100
		Smaller than 6 in.	0-10

TABLE 733-21B STONE FILLING APPROXIMATE SHAPE					
Specified Weights and Sizes					
600 lbs.	d=18 in.	d=23 in.	d=15 in.	d=23 in.	d=27 in.
300 lbs.	d=15 in.	d=18 in.	d=12 in.	d=18 in.	d=21 in.
150 lbs.	d=12 in.	d=15 in.	d=9 in.	d=15 in.	d=17 in.
100 lbs.	d=10 in.	d=13 in.	d=8 in.	d=13 in.	d=15 in.

d = 8 in.	50 lbs.	25 lbs.	100 lbs.	25 lbs.	16 lbs.
d = 6 in.	20 lbs.	10 lbs.	40 lbs.	10 lbs.	7 lbs.

**Notes:**

1. Stone sizes, other than weights, refer to the average of the maximum and minimum dimensions of a stone particle as estimated by the Engineer.
2. Materials shall contain less than 20% of stones with a ratio of maximum to minimum dimension greater than three.
3. Air-cooled blast furnace slag, cobbles or gravel having at least one fractured face per particle are acceptable substitutes for stone under these items, provided that the soundness and gradation requirements are met.
4. Materials shall contain a sufficient amount of stones smaller than the average stone size to fill in the spaces between the larger stones.
5. Heavier gradings of this item may be required on some projects, in which case the requirements will be stated in the contract documents.

**C. DURABILITY.** The soundness of all material used for stone filling shall be approved on the basis of a geologic evaluation in accordance with the geotechnical control procedure *“Procedure for the Control of Stone Filling and Rip-Rap Items”*.

Where the State elects to conduct soundness tests, stone filling shall have a Magnesium Sulfate Soundness loss less than 10%, by weight, after 10 cycles.

**BASIS OF APPROVAL.** Stockpiles of stone filling will be approved in accordance with the geotechnical control procedure *“Procedure for the Control of Stone Filling and Rip-Rap Items”*.

**BASIS OF ACCEPTANCE.** Stone filling from approved stockpiles will be accepted upon successful completion of the Quality Assurance (QA) program indicating that the material conforms to the specification. If the QA program is not introduced, stone filling will be accepted upon the basis of the stockpile approval.

**733-22 B RIP-RAP**

**SCOPE.** This specification covers the material requirements and methods of testing rip-rap generally used in stream bank channel protection. The following rip-rap types are evaluated in this specification:

- 733.2201 – Dry Rip-Rap
- 733.2202 – Grouted Rip-Rap

**SAMPLING.** Perform material tests and assurance methods pertaining to rip-rap requirements in conformance with the procedures contained in the geotechnical control procedure *“Procedure for the Control of Stone Filling and Rip-Rap Items”*.

**MATERIAL REQUIREMENTS.**

**A. STOCKPILE.** Stockpile rip-rap in accordance with the geotechnical control procedure *“Procedure for the Control of Stone Filling and Rip-Rap Items”* except as noted herein.

**B. GRADATION.** Provide material consisting of stones shaped as nearly as practicable in the form of right rectangular prisms having a gradation in accordance with TABLE 733-22A *Rip-Rap Gradation*. One dimension of each of the stones furnished shall be at least equal to the thickness of the rip-rap shown in the contract documents.

## **219.0-EXISTING UTILITIES AND UNDERGROUND OBSTRUCTIONS**

### **219.1-WORK INCLUDES**

- A. Identifying, locating and repairing underground utilities and obstructions.
- B. Information or data relative to existing subsurface utilities are approximate and therefore shall not be used by the CONTRACTOR for reference during construction of the Work (see 3.02 of this Section).

### **219.2-PROJECT RECORD DOCUMENTS**

Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts and slope gradients.

### **219.3-EXECUTION**

The CONTRACTOR shall perform all required work necessary to properly locate, protect and repair existing underground utilities and obstructions per utility company requirements.

### **219.4-LOCATING EXISTING UTILITIES**

Prior to commencing any work, the CONTRACTOR shall contact DigSafe and/or the appropriate utility companies for information regarding the location of all underground utilities and obstructions. Failure to ensure that the proper utilities and obstructions have been identified and located shall not relieve the CONTRACTOR of any responsibilities described herein.

### **219.5-UTILITY COMPANY REQUIREMENTS**

When a utility line or cable is exposed or damaged, the CONTRACTOR shall comply with the repair requirements of the affected utility company.





## **SECTION 606 - GUIDE RAILING**

**606-1 DESCRIPTION.** This work shall consist of the construction, reconstruction, removal, disposal, storage, and resetting of highway barrier systems and component parts in accordance with the specifications, standard sheets, manufacturer's drawings, manufacturer's directions and contract documents to the lines and grades shown on the plans or established by the Engineer.

The types of barrier systems are designated as follows:

Cable Guide Railin and Median Barrier.

Corrugated Beam Guide Railing and Median Barrier  
 Heavy Post Blocked-Out Corrugated Beam Guide Railing and Median Barrier  
 Box Beam Guide Railing and Median Barrier  
 Concrete Barrier  
 Pier Protection

**606-1.01 I-Beam Posts for Existing Highway Barrier.** Under this work the Contractor shall furnish and install I-beam posts and necessary hardware for existing highway barriers in accordance with the plans, specifications, and as directed by the Engineer.

**606-1.02 Guide Railing with Extra Long Posts.** Under this work the Contractor shall furnish and install guide railing of the type specified with extra long (7 foot) posts in accordance with the contract documents, and as directed by the Engineer.

**606-1.03 Retensioning Existing Cable Guide Railing And Median Barrier.** Under this work the Contractor shall retension existing guide rail and median barrier cables in accordance with the Contract Documents.

**606-2 MATERIALS.** Materials shall meet the requirements specified in the following subsections of Section 700-- Materials and Manufacturing and ASTM Specifications:

Concrete Grouting Material	701-05
Precast Concrete Barrier	704-05
Premoulded Resilient Joint Filler	705-07
Joint Filler	ASTM D1056
Wire Fabric For Concrete Reinforcement	709-02
Epoxy Coated Bar Reinforcement, Grade 60	709-04
Wood and Timber Posts and Timber Blockouts	710-13
Galvanized Steel Barrier Posts	710-14
Corrugated Beam Guide Railing End Terminal (Energy-Absorbing)	710-17
Heavy Post Blocked-Out Corrugated Beam Guide Railing End Terminal (Energy-Absorbing)	710-18
Heavy-Post, Blocked-Out Corrugated Beam Median Barrier End Terminal (Energy-Absorbing)	710-19
Corrugated Beam Guide Railing and Median Barrier	710-20
Box Beam Guide Railing and Median Barrier	710-21
Cable Guide Railing and Median Barrier.	710-22
Box Beam End Assembly Type III and Box Beam Median Barrier End Assembly, Type C	710-24
Plastic and Synthetic Block-Outs for Heavy Post Guiderail Systems	710-26
Galvanized Coatings And Repair Methods	719-01
Epoxy Polysulfide Grout	721-03
Anchor Bolts	723-60
Reflective Sheeting	730-05 (Materials Designation 730-05.02)
Paint for Galvanized Surfaces	708-06
Rolled Steel Channels for Continuity Connections	ASTM A36
Steel Plates for Continuity Connections	ASTM A36

**606-2.01 Steel Hardware.** Steel posts, plates, channels, stiffeners, block-outs, angles, brackets, slipbases and other miscellaneous steel hardware not referenced to or specified by §710-14, §710-20, §710-21, §710-22, §710-24 or other sections of this specification shall be fabricated as shown in the contract plans and documents from steel meeting the requirements of ASTM A36 unless specified otherwise. All components shall be galvanized in accordance with §719-01, Type I or II. Components shall be fabricated prior to galvanizing. **606-2.02 Anchor Bolts and Studs.** Anchor bolts and studs embedded or grouted in concrete for securing post and railing base plates shall meet the requirements of §723-60. Nuts and washers shall meet the requirements of ASTM A325.

Anchor studs, bolts or rods embedded in concrete anchorage units for terminating guide rail and median barrier systems shall have minimum yield and tensile strength meeting the requirements of ASTM A307 Grade A.

Anchor studs, bolts, rods, nuts and washers shall be galvanized in accordance with §719-01, Galvanized Coatings and Repair Methods, Type II unless indicated otherwise on the plans or standard sheets.

Grout for anchor studs and bolts shall conform to the requirements of §721-03, §701-07 or §701-05.

**606-2.03 Fasteners.** Bolts, nuts and washers shall conform to the following, unless specified otherwise on the plans, standard sheets, manufacturer's drawings', or in the contract documents.

Bolts	ASTM A307 Grade A
Nuts	ASTM A563 Grade A or Better
Washers	ASTM F436

Bolts, nuts and washers shall be galvanized in accordance with the provisions of §719-01 Galvanized Coatings and Repair Methods, Type II.

**606-2.04 I-Beam Posts for Existing Highway Barrier.** I-beam posts for existing highway barrier shall conform to the requirements of §710-14 Galvanized Steel Barrier Posts. Posts shall conform to the details shown on the plans or the latest edition of the standard sheet for the guide railing or median barrier affected. Hardware (nuts, bolts, "J" bolts, offset beams or block-outs, back up plates, washers, and shelf angles) necessary shall conform to the requirements of the current specifications and standard sheets for the highway barrier affected.

**606-2.05 Extra Long Guide Rail Posts.** Extra long Guide Rail Posts shall conform to the requirements of §710-14 Galvanized Steel Barrier. The posts shall conform to the details for extra long posts shown on the standard sheets or plans.

**606-2.06 Concrete for End Assembly Anchorage Units.** Cast-in-place concrete shall meet the requirements of Class A Concrete in Section 501 Portland Cement Concrete-General. The Contractor may submit, for approval by the Director of the Materials Bureau, a mix at least equivalent to the specified Class A Concrete, with a minimum cement content of 575 lb/cu yd.

Precast concrete anchorage units, when selected as an alternate to cast-in-place units by the Contractor, shall meet the requirements of Section 704-03 Precast Concrete-General.

#### **606-2.07 Concrete Barrier**

**A. Precast Concrete Barrier.** The requirements of §704-05 shall apply

**B. Cast-in-Place Concrete Barrier.** Concrete shall meet the requirements specified for Class A Concrete in §501, Portland Cement Concrete--General. Reinforcement shall meet the material requirements §606-2 and be of the type and sizes as indicated on the standard sheets and plans.

**C. Machine Formed Concrete Barrier.** The concrete shall meet the requirements specified for Class I Concrete in §501, Portland Cement Concrete--General. Reinforcement shall meet the material requirements of §606-2 and shall be of the type and sizes as indicated on the standard sheets and plans.

**606-2.08 Resetting Guide Railing, Median Barrier, Anchorage Unit Assemblies and End Assemblies.** The materials comprising the existing system shall be used if they conform to the materials requirements specified for new guide rail systems and are found to be in satisfactory condition as determined by the Engineer. The Contractor shall supply all new hardware (splice tongues, plates, nuts, bolts, washer, etc.) Replacement materials shall meet the material requirements specified for new guide rail systems. Galvanizing of railing and posts may be repaired in accordance with §719-01, Galvanized Coatings and Repair Methods.

**606-2.09 Heavy Post Blocked-Out Corrugated Beam Guide Railing and Median Barrier.** The material requirements for §710-20 Corrugated Beam Guide Railing and Median Barrier shall apply except that posts, timber, plastic or synthetic block-outs, soil plates, expansion anchors, hardware and fasteners shall be as detailed on the standard sheets for Heavy Post Blocked-Out Corrugated Beam Guide Railing and Median Barrier. The Wood and Timber Posts and Timber Block-Outs shall conform to §710-13. The Plastic and Synthetic Block-Outs for Heavy Post Guiderail Systems shall conform to §710-26.

**606-2.10 Corrugated Beam Guide Rail Transition To Bridge Rail, Concrete Barrier and Concrete Parapets.** Corrugated beam rail sections shall conform to the requirements of §710-20. All remaining material shall conform to the requirements of §710-23 except that:

A. Block-outs and stiffening channels shall conform to ASTM A36.

B. All components shall be galvanized in accordance with §719-01 *Galvanized Coating and Repair Methods*, Type I or Type II. If required by the plans, the components shall be painted to match the existing railing. Painting shall be done in accordance with Section 657 except that:

1. Painting with rollers will not be permitted.

2. Spray painting will be allowed only if the components are painted at a location, away from the work site, acceptable to the Engineer.

C. Shop drawings will not be required. Approval of the system will be made by the Engineer.

**606-2.11 Vacant.**

**606-2.12 Pier Protection.** Half section concrete barrier units shall be precast and conform to the requirements of §704-05 Precast Concrete Median Barrier. The box beam guide rail shall conform to the requirements of §710-21 Box Beam Guide Railing and Median Barrier.

**606-2.13 (Vacant)**

**606-2.14 Transitions Constructed of, or with, Concrete.** Concrete transition between concrete barriers of different shapes and the concrete elements of transitions between metal barriers and concrete barriers shall conform to §606-2.07 Concrete Barrier, A. Precast Concrete Barrier or, with the permission of the Engineer, B. Cast-in-Place Concrete Barrier.

## **606-3 CONSTRUCTION DETAILS**

**606-3.01 General.** All barrier systems and transitions described by these specifications shall be subject to the following requirements.

**A. Inspection of Rail Elements.** Immediately prior to erection, the rail elements shall be inspected for damage. Bends or kinks in the railing, not specifically required by the contract documents, shall constitute sufficient cause for rejection. Straightening of such bends or kinks will not be allowed.

Erection of all guide rail, median barrier, transitions and connections shall be subject to the inspection of the Engineer who shall be given all facilities required for a visual inspection of workmanship and materials.

**B. Field Galvanizing For Repair.** Field galvanizing repair shall be allowed only when the total damaged area on each piece or component is less than 2 percent of the coated surface, or 16 square inches, whichever is less. Any single piece or component with total damaged area greater than the amount specified above shall be rejected and replaced by the Contractor. Field galvanizing repair shall be done in accordance with the requirements of the Repair section of §719-01 Galvanized Coating And Repair Methods.

**C. Field Welding.** Field welding shall not be permitted unless noted in the contract documents. When specified, welding shall comply with the requirements of the SCM.

**D. Erection.** Posts, railing, barrier systems, rail transitions, end assemblies, anchorage units, and pier protection shall be erected in the position and manner indicated on the standard sheets, manufacturer's drawings, manufacturer's directions and contract plans and in a manner approved by the Engineer. Rail mounting height shall be within  $\pm 1/4$  inch of that indicated on the standard sheets and plans.

Prior to installing guide rail, median barrier, transitions, or end terminals, the Contractor shall determine the locations of all structures, including underground structures, that may be affected by the installation. If the determinations disclose that there are conflicts between the proposed installation of guide rail, median barrier, transition, or end terminal and other structures, including underground structures, the Contractor shall discuss with and recommend to the Engineer alternative locations or types of guide rail, median barrier, transition, or end terminal, subject to the approval of the Engineer, that will not be in conflict with the structure, including underground structure.

Posts and foundation tube(s) shall be driven unless otherwise specified by the Engineer. The driving shall be accomplished with approved equipment and methods that will leave the posts and foundation tube(s) in their final position, free of any distortion, burring or other damage. When posts and foundation tube(s) are driven through asphalt concrete or a bituminous treated material, the Contractor shall take care to prevent damage to the paved or treated areas. Large holes and voids caused by driving the posts and foundation tube(s) shall be filled and compacted with a bituminous treated material or asphalt concrete similar to that damaged. The small area adjacent to the post and foundation tube(s) disturbed during installation or where gaps exist at the post and foundation tube(s) after pavement repairs shall be sealed with a bituminous material approved by the Engineer.

As an alternate to driving posts and foundation tube(s) on unpaved medians and where site conditions are such that driving is not possible, the Contractor shall carefully excavate for all post and foundation tube(s) holes. Post and foundation tube(s) holes and post and foundation tube(s) foundation structures shall be backfilled and backfilled material compacted in accordance with Section 203, *Select Granular Fill*.

On structures, concrete anchors and paved medians, base plates for posts shall be anchored as shown in the Contract Documents and as specified by the Engineer. Where drilling and grouting is required, the Contractor shall take care to prevent damage to the concrete, asphalt or other paved surfaces. The proposed construction method and equipment for drilling and grouting of holes shall be submitted to the Engineer for approval before drilling and grouting operations begin. Anchoring devices shall be grouted with §701-05 Concrete Grouting Material, §701-07 Anchoring Materials-Chemically Curing or §721-03 Epoxy Polysulfide Grout.

The work of installing the guide railing system when it abuts stabilized shoulder courses shall be coordinated and progressed to provide the least disturbance between the two phases of the work.

All posts shall be aligned to a tolerance of 1/4 inch for plumb and grade line.

Box beam to be installed on a curved alignment shall be shop bent or shop curved in accordance with Table 606-1.

<b>TABLE 606-1 SHOP BENDING AND SHOP MITERING OF BOX BEAM GUIDE RAILING AND MEDIAN BARRIER</b>		
<b>Barrier Type</b>	<b>Shop Bending Required</b>	<b>Shop Mitering Required</b>
Box Beam Guide Railing	Radius over 20 ft and less than 720 ft	Radius of 20 ft or less
Box Beam Median Barrier	Radius over 30 ft and less than 1525 ft	Radius of 30 ft or less

When shop bending or shop mitering of box beam guide railing or box beam median barrier is required, the rail element shall be shop-worked to the radius that the barrier will be installed on.

Corrugated beam guide railing and median barrier shall require shop curving if the radius is equal to or less than 150 feet. When shop curving of corrugated beam is required, the rail element shall be shop-worked to the radius that the barrier will be installed on.

**E. Concrete Anchorage Units.** Concrete anchors shall be constructed as detailed on the standard sheets. Excavation shall meet the requirements of §206-3 of the Standard Specifications. The bottom of the anchor shall have a full and even bearing on the surface under it. After the concrete anchor is in place, the excavation shall be backfilled in accordance with Section 203, *Select Granular Fill*.

**F. End Terminals and Assemblies.** Installation of all proprietary products shall follow the manufacturer's instructions. The following shall apply to end terminals or assemblies to be installed under this section.

**1. Drawings.** For end terminals and end assemblies not shown on standard sheets or detailed in the plans, the Contractor shall submit two copies of the manufacturer's drawings, modified as necessary to reflect site conditions, to the Engineer for approval prior to ordering any materials required under this section. Drawings of parts not detailed on the plans, but which are necessary to develop the full performance of the end assemblies or terminals shall also be provided. The Contractor shall commence work of installation of end assemblies or terminals only after approval of the above mentioned drawings and authorization from the Engineer to do so.

**2. Manuals.** In addition to the drawings mentioned above, the Contractor shall deliver to the Engineer two (2) copies of design manuals, installation manuals, parts lists, and maintenance manuals prepared for each type end terminal or assembly being installed but not shown on the standard sheet.

**3. Coordination with Other Work.** The work of furnishing and installing all types of end assemblies shall be coordinated with the removal of existing impact attenuators or end assemblies, the installation of guide railing or median barrier, or the installation of the object to be shielded, so as to minimize the time that motorists are exposed to the possibility of collision with the shielded object, unprotected ends of barriers, or incomplete end terminals or assemblies. Also, the contractor shall minimize exposure of approaching vehicular traffic to the possibility of impact on the back of the end assembly. Unless modified in the Contract Documents, minimization shall mean seven (7) or fewer calendar days.

**4. Traffic Protection.** Traffic protection devices, such as cones, drums, lights, signs, barricades, or other articles directed by the Engineer, shall be provided and maintained under their respective pay items. These devices shall not be removed until the end assembly, including required transition pieces, is fully operational. If the end assembly is to be installed in lighted areas, or in areas to be lighted, the mentioned traffic protection articles shall also be maintained until the lighting system is operational.

**5. Reflective Sheeting.** End terminals and assemblies which have a vertical face towards approaching traffic and are located on or closely adjacent to the shoulder shall be provided with reflective sheeting in accordance with Section 2C.65 of the MUTCD. The yellow and black stripe widths shall be 4 inches.

**606-3.02 Cable Guide Railing and Median Barrier.** Beginning with the first post where the rail is parallel to the edge of pavement, every sixth post in the line of guide rail shall be reflectorized (96 foot spacing for reflectors) except those posts in the approach terminal and intermediate anchorage area, which curve away from the shoulder, or used in a median barrier. The reflector and method of attachment shall be as indicated on the standard sheet.

**A. Anchorage Unit Assemblies.** After the posts are driven to the specified line and grade, anchor angles and anchor posts shall be adjusted in the field to provide a full and even bearing on the underlying surface.

**B. Cable Tensioning.** The Contractor shall install and tension the cable of guide railing and median barrier as follows: Properly seat the spring compensation device and then permanently mark the unloaded position. Complete the assembly of the guide railing and set the compensating devices to a spring compression of 3 1/2 inches. Leave the springs at this setting for at least 2 weeks, then set them to the proper setting according to temperature from the data in the table on the standard sheets.

**C. Cable Splicing.** The Contractor shall install cable splices in the following manner: Place a splice end over the cable. Twist the cable to separate the three strands. Insert the wedge into the center of the strands, leaving at least one inch of excess cable, and pull the cable back until the wedge is snug to the splice. Pound the wedge into the splice. Crimp at least one wire of the cable over the wedge. Repeat the procedure for the other cable. Connect the two splice ends together.

**606-3.03 Box Beam Guide Railing and Median Barrier.** Rail sections for tangent runs shall be at least 18 feet long. Rail splices shall be a minimum of 18 inches from the centerline of any post.

During non-working hours, exposed approach ends (free ends) of the box beam guide railing or median barrier shall be temporarily terminated with box beam guide railing end assemblies utilizing two splice plates and eight bolts per temporary termination connection. No posts for anchorages will be required. Special temporary splice plates will be needed to adapt box beam guide railing end assemblies to box beam median barrier.

**606-3.04 Corrugated Beam Guide Railing and Median Barrier, and Heavy Post Blocked-Out Corrugated Beam Guide Railing and Median Barrier.** In the erection procedures, the free end of the rail element shall not be allowed to swing free and cantilever around the mounting bolt. The free end shall be supported in a manner approved by the Engineer while the splice bolts and mounting bolts are fastened.

During non-working hours, exposed approach ends (free ends) of the guide railing or median barrier shall be dropped to the ground and pinned in a manner approved by the Engineer.

**A. Corrugated Beam Guide Railing and Median Barrier.** The rail elements shall be installed so the weight of the beam rests on the double nutted support bolt before the 5/16 inch mounting bolts are torqued. Before the final torquing, six of the 5/16 inch mounting bolts in the installation shall be selected at random and with a suitable torque wrench tightened to failure. The six readings shall be averaged, the six failed bolts replaced and all the mounting bolts in the installation torqued to 50% of the average value.

Support bolts shall be installed on all the guide rail posts except the three posts adjacent to the anchors.

**B. Heavy Post Blocked-Out Corrugated Beam Guide Railing and Median Barrier.** The heavy post blocked-out corrugated beam guide railing shall be erected from the approach end anchorage unit and down stream along the flow of traffic.

The heavy post blocked-out median barrier shall be erected from one of the anchorage sections and shall be completed as the work progresses. During non-working hours no uncompleted anchorage units or heavy posts without rail will be permitted on either heavy post blocked-out guide railing or median barrier.

For heavy post blocked-out corrugated beam guide railing connections to walls (trailing ends), the holes for the expansion anchors shall be drilled to the minimum depths and diameters shown on the plans or standard sheets or to larger values if specified by the manufacturer. The holes shall be drilled with care to avoid damage to the wall. Any damage caused by the drilling operation shall be repaired by the Contractor and to the satisfaction of the Engineer.

**606-3.05 Concrete Barrier.** Unless specified otherwise in the contract documents the Contractor shall have the option of providing precast concrete barrier, cast-in-place concrete barrier, or machine formed barrier. No intermixing in any run of barrier will be permitted unless shown otherwise in the contract documents except that precast transition sections and ends may be used with cast-in-place or machine formed concrete barriers.

Half section concrete barrier shall be erected with the appropriate back-up posts and continuity plates or earth back-up as shown on the standard sheets and plans.

#### **A. Precast Concrete Barrier**

**1. Placement.** Immediately prior to installation, the Engineer shall inspect the sections for manufacturing defects or shipment damage. Damaged or defective sections shall be rejected or repaired in accordance with §704-05. Precast Concrete Barrier, Repair. The sections shall be placed in accordance with the contract plans and proposals.

**2. Vertical Expansion Joint.** Sections shall be separated by 1/2 inch nominal joint openings. The joint opening, at any point in the plane of the joint, shall not vary by more than 1/4 inch. Premoulded Resilient Joint Filler conforming to the requirements of §705-07 or Joint Filler conforming to the requirements of ASTM D1056 class 2B1 or 2B2 shall be placed in the joint as shown on the plans, standard sheet or as directed by the Engineer.

#### **3. Dimensional Tolerance.**

- a. Cross-sectional dimensions shall not vary from the dimensions shown by more than 1/4 inch.
- b. The barrier shall not be out of plumb by more than 1/4 inch.
- c. Longitudinal dimensions shall not vary from the dimensions shown by more than 1/4 inch per 10 foot of the barrier.
- d. When checked with a 10 foot straight edge, irregularities shall not exceed 1/4 inch.



## **B. Cast-in-Place Concrete Barrier**

**1. Placing.** The Contractor shall have the option of placing the cast-in-place concrete barrier in monolithic form or with a horizontal construction joint between the stem and the rectangular footing.

*a. Horizontal Construction Joint Option.* When the Contractor elects to use a horizontal construction joint between the stem and the rectangular footing, joint details must be prepared and submitted to the Regional Director for approval. The footing shall be placed in lengths not exceeding 60 feet except when the barrier system abuts a reinforced Portland Cement concrete pavement, then it shall match the length of the pavement slab. Every third vertical joint of the barrier stem shall exactly match the joint formed in the footing.

When the barrier abuts an unreinforced pavement slab, the vertical joint in the footing and stem shall match the pavement joint at every third pavement slab.

*b. Monolithic Barrier.* When the Contractor elects to use a monolithic barrier the lengths of the sections shall not exceed 20 feet except when the barrier abuts a Portland Cement concrete pavement. Then the sections shall be cast in uniform lengths so that every third joint will exactly match the transverse joint in the pavement when reinforced concrete is used and every joint when unreinforced concrete is used.

**2. Joints.** The sections of barrier, in monolithic barrier, and of stem in horizontal construction joint barrier shall be separated by vertical expansion joints with provisions for expansion of 1/2 inch at each joint. Premoulded Resilient Joint Filler conforming to the requirements of §705-07 shall be placed in the joint as shown on the plans, standard sheet, or as directed by the Engineer.

**3. Forms.** Forms shall be metal and of such construction that there will be minimum interference to inspection for grade and alignment. Forms shall be braced and secured adequately so that no discernible displacement from alignment or grade will occur during placement of concrete.

**4. Concrete Placing and Vibrating.** Concrete shall be placed in the barrier forms in accordance with the requirements of §555-3.04 Handling and Placing Concrete. Concrete shall be compacted by means of immersion type mechanical vibrators approved by the Engineer. The vibrator shall be inserted into the concrete at one foot intervals. The vibrators shall be of size and weight sufficient to thoroughly vibrate the entire concrete mass without damaging or misaligning the forms or reinforcement.

**5. Removal of Forms and Finishing Surfaces.** Forms shall be left in place for 24 hours or until, in the judgment of the Engineer, the concrete has sufficiently set so that the forms may be removed without injury to the barrier. Immediately after the forms have been removed, surfaces exposed to view shall have all projections and irregularities carefully removed and all cavities neatly filled with mortar of the proportion used in the concrete. The same brand of cement and the same kind of fine aggregate shall be used for filling cavities as was used in the original concrete mix. Surfaces repaired by plastering will not be allowed.

**6. Concrete Curing.** Curing of concrete median barriers shall conform to the requirements given in 555-3.08 Curing. Other methods of curing may be used only when so indicated on the plans or in the itemized proposal.

**7. Reinforcement.** The Contractor shall incorporate reinforcement as indicated on the standard sheets and plans. All reinforcing steel shall be epoxy coated meeting the requirements of §709-04.

**8. Placement Adjacent to Cement Concrete Pavement or Shoulders.** The barrier shall be separated from the cement concrete pavement or shoulder by a 1/2 inch wide vertical joint extending down to the bottom of the pavement or shoulder. The joint shall be formed with and contain Premoulded Resilient Joint Filler conforming to the requirements of §705-07. A recess of approximately one inch shall be provided at the top of the joint for installation of a backer rod and joint sealant. The joint sealant shall be a silicone sealant appearing on the Department's Approved List and shall be applied in accordance with the manufacturer's instructions.

### **9. Dimensional Tolerance**

- a. Cross-sectional dimensions shall not vary from the dimensions shown by more than 1/4 inch.
- b. The barrier shall not be out of plumb by more than 1/4 inch.
- c. Longitudinal dimensions shall not vary from the dimensions shown by more than 1/4 inch per 10 foot of the barrier.
- d. When checked with a 10 foot straight edge, irregularities shall not exceed 1/4 inch.

## **C. Machine Formed Concrete Barrier**

**1. Weather Limitations.** The requirements of §502-3.01 shall apply.

**2. Equipment.** The slipforming equipment shall be self-propelled and shall be capable of placing, consolidating and finishing concrete to the proper line and grade. The Engineer may require the Contractor to demonstrate that the specific equipment proposed for use is capable of satisfactorily placing the concrete mix. The Contractor shall furnish the manufacturer's data regarding machine operation to the Engineer.

**3. Preparation of the Subbase Course.** Before any concrete may be placed, the subbase course shall be compacted and fine graded to a tolerance of  $\pm 1/2$  inch of the true grade at any location under the barrier. Whenever possible, as determined by the Engineer, concrete placing operations shall not begin until the subbase course has been fine graded ahead at least 1000 feet.

**4. Reinforcement.** The Contractor shall incorporate reinforcement as indicated on the standard sheets and plans. All reinforcing steel shall be epoxy coated meeting the requirements of §709-04.

### **5. Placing Operations**

*a. Central and Transit Mixed Concrete.* The provisions of §501-3.03 C and D shall apply for Central Mixed and Transit Mixed Concrete respectively, except that water may be added at the point of deposition to maintain the desired slump. The water addition may be made at any time after the beginning of the discharge until approximately two-thirds (2/3) of the load, as determined by the Engineer, has been discharged. After the water addition the concrete shall be mixed at least 30 revolutions in the mixing range. When the water additions made after discharge the total number of revolutions shall not be more than 190.

*b. Truck Mixed Concrete.* The provisions of §501-3.03 E shall apply except that after the initial slump has been achieved, water may be added to the mixture one additional time to maintain the desired slump. The water addition may be made anytime after the beginning of discharge until approximately two-thirds (2/3) of the load, as determined by the Engineer, has

been discharged. After the water addition, the concrete shall be mixed at least 30 revolutions in the mixing range.

The slipforming equipment shall have as nearly a continuous forward movement as possible to provide uniform progress with stopping and starting of the equipment held to a minimum. Any edge slump resulting from slipforming operations in excess of 1/4 inch, as measured from the top surface of the median barrier, exclusive of edge rounding, shall be corrected before the concrete has hardened.

Concrete supply shall be sufficient to produce a continuous, completely shaped barrier. If concrete placement is interrupted for a period of time where the delay will affect the quality and structural integrity of the barrier, the contractor shall terminate his operations by one of the following procedures. The Engineer shall determine when the slipform operation is to be terminated.

*Method A.* Construct a cast in place expansion joint system as detailed on the standard sheets.

*Method B.* Remove existing unset concrete to a vertical score line with hand tools. The vertical surface resulting from the removed concrete shall remain reasonably rough and unfinished to facilitate interlock and increased bond area when concrete operations are to be resumed. The vertical surface shall be touched up with hand tools, as directed by the Engineer, to correct unacceptable voids, tears and lack of consolidation resulting from the concrete removal. The surface shall be covered with several layers of wet burlap to prevent drying. All reinforcing steel shall extend beyond the face to provide adequate lapping.

Concreting operations may resume at the terminated face when the terminated portion has achieved enough rigidity to withstand the sequence of operations it will be subjected to without sustaining damage. All loose or unacceptable concrete and material shall be removed from the terminated face as directed by the Engineer. Concrete barrier damaged as a result of the contractor's operations shall be repaired to the satisfaction of the Engineer.

Termination of slipform operations at the end of the day for an uncompleted run shall be by method A or B above.

**6. Curing.** The median barrier shall be cured using a clear curing compound meeting the requirements of §711-05. The compound shall be sprayed on the concrete surface immediately following the placing operation at a rate of 1 gal/ 150 sf.

**7. Placement Adjacent to Cement Concrete Pavement or Shoulders.** The barrier shall be separated from the cement concrete pavement or shoulder by a 1/2 inch wide vertical joint extending down to the bottom of the pavement or shoulder. The joint shall be formed with and contain Premoulded Resilient Joint Filler conforming to the requirements of §705-07. A recess of approximately one inch shall be provided at the top of the joint for installation of a backer rod and joint sealant. The joint sealant shall be a silicone sealant appearing on the Department's Approved List and shall be applied in accordance with the manufacturer's instructions.

**8. Contraction Joints.** Contraction joints shall be formed or saw cut normal to the pavement. The spacing shall be every 20 feet, as shown on the plans or as ordered by the Engineer. The joints shall conform to the dimensions as shown on the plans or standard sheets. If the joints are saw cut, they shall be saw cut as soon as no damage to the concrete will result, with a maximum time of 8 hours. The clear curing compound shall be reapplied at the saw cut.

**9. Expansion Joints.** Expansion joints shall be formed normal to the pavement with Premoulded Resilient Joint Filler meeting the requirements of §705-07 and shall provide for expansion of 1/2 inch. The filler material shall be cut to conform to the cross section of the barrier.

The expansion joints shall be located at all immovable objects (bridge substructures, etc.), where shown on the plans, and/or as directed by the Engineer. Expansion joints shall not be required at regular intervals unless shown on the plans.

**10. Tolerances.** All concrete barrier produced by this method shall conform to the following tolerances:

*a. Placing Tolerances*

- (1) Bar Reinforcement Cover 0 to + 1/2 inch.
- (2) Width (top) 0 to + 1/4 inch.
- (3) Width (base) 0 to + 1/2 inch.

*b. Dimensional Tolerance*

- (1) Cross-sectional dimensions shall not vary from the dimensions shown by more than 1/4 inch.
- (2) The barrier shall not be out of plumb by more than 1/4 inch.
- (3) Longitudinal dimensions shall not vary from the dimensions shown by more than 1/4 inch per 10 foot of the barrier.
- (4) When checked with a 10 foot straight edge, irregularities shall not exceed 1/4 inch.

**11. Defects.** Defects are divided into two categories Minor defects and major defects. Minor defects in the barrier may be repaired in the field. Major defects shall be cause for rejection of the section, or the section shall be repaired in the manner directed by the Engineer.

*a. Minor Defects.* Minor defects are defined as holes, honeycombing or spalls which are 6 inches or less, in diameter, and which do not expose the outermost surface of the steel reinforcement. Surface voids 5/8 inch, or less, in diameter and 1/4 inch, or less, in depth are not considered defects and they do not require repair.

*b. Major Defects.* Major defects are defined as:

- (1) Any defect which does not meet the definition of a minor defect.
- (2) Minor defects which, in aggregate, comprise more than five percent (5%) of the surface area of the barrier section.

**12. Repair.** Repair of hardened concrete shall be as follows:

*a. Minor Defect Repair.* Repair shall be made with a material meeting the requirements of §701-04 or §701-12. Methods of repair shall be acceptable to the Engineer. The color of the repaired portion shall match as nearly as practicable, the color of the surrounding concrete. Repaired portions shall exactly match shape requirements. The repaired portion shall withstand a moderate blow from a 16 ounce hammer.

*b. Major Defect Repair.* Major defect repair shall be preapproved by the Engineer.

**13. Hand Finishing.** The Contractor shall make provisions to allow hand finishing, when directed by the Engineer, on all surfaces. Hand finishing, if done shall be done immediately after

the passage of the slipforming equipment. Curing compound shall be applied only after hand finishing has been completed at any particular location.

**14. Transitions and Tapered End Sections.** Transitions and tapered end sections shall be either cast-in-place or precast, at the Contractor's option."

**606-3.06 Resetting Guide Railing, Median Barrier and Precast Concrete Barrier.** The Contractor shall remove, store, clean and reset railing, posts, and precast concrete barrier as shown on the plans or as directed by the Engineer. The reset guide railing and/or median barrier shall be placed in accordance with the requirements of §606-3.01 General. Reset concrete barrier shall be placed in accordance with the requirements of §606-3.05 Concrete Barrier. During non-working hours, exposed approach ends (free ends) of the reset guide railing and/or median barrier shall be temporarily terminated as follows: Box beam guide railing and/or median barrier shall be temporarily terminated with box beam guide railing end assemblies utilizing two (2) splice plates per temporary termination connection. No posts for anchorages shall be required. Special temporary splice plates will be needed to adopt box beam guide rail end assemblies to box beam median barriers. Corrugated guide railing and/or median barrier, and heavy post blocked-out corrugated guide railing and/or median barrier shall be temporarily terminated by dropping the exposed approach ends (free ends) of the rail element to the ground and pinning it in a manner approved by the engineer. Any rail element or component of the barrier damaged shall be replaced by the Contractor.

**606-3.07 Resetting Guide Railing and Median Barrier (New Posts).** The construction details of §606-3.06 shall apply, except that the Contractor shall furnish and install new posts.

**606-3.08 Removing and Storing Guide Railing, Median Barrier, and Precast Concrete Barrier.** The Contractor shall remove designated existing guide railing, median barrier and precast concrete barrier and neatly store the component parts in separate piles at locations designated for future pick up by Department forces, or its designee. The work shall be done in a workmanlike manner so as to salvage all usable parts. Unusable material shall be disposed of by the Contractor.

**606-3.09 Removing and Disposing of Guide Railing, Median Barrier, Concrete Barrier, Guide Posts, Guide Rail Posts, and Median Barrier Posts.** The Contractor shall remove designated existing guide railing, median barrier, concrete barrier, guide posts, guide rail posts, and median barrier posts and remove them from the site of work. Holes shall be backfilled with a suitable material and compacted in a manner approved by the Engineer.

**606-3.10 I-Beam Posts for Existing Highway Barrier.** I-beam posts for existing highway barrier shall be installed at the locations indicated in the contract documents or where directed by the Engineer. The driving shall be in accordance with the requirements of §606-3.01 and the applicable standard sheet(s). All hardware necessary for mounting the rail elements or cable to the post shall be supplied by the Contractor. New heavy post steel block-outs shall be supplied to replace damaged or unusable block-outs. S3x5.7 posts installed as intermediate posts to reduce post spacing on corrugated beam guide railing, corrugated beam median barrier, and box beam guide railing shall not be attached to the rail element.

All reflectors, delineators, reference markers, or other items, which are to remain in place, that are damaged by the Contractor's operations shall be replaced by the Contractor.

**606-3.11 Retensioning Existing Cable Guide Railing and Median Barrier.** Cable guide rail and median barrier shall be retensioned in accordance with the cable tensioning requirements of §606-3.02.

**606-3.12 Resetting Anchorage Unit Assemblies and End Assemblies for Guide Rail and Median Barrier.** The Contractor shall remove, store, clean and reset existing anchorage units and end assemblies for Guide Railing and Median Barrier as shown on the plans or as directed by the Engineer. The anchorage units and end assemblies shall be reset and placed in accordance with the requirements of §606-3.01 General.

Existing concrete anchors and deadman may be left in place and replaced with new ones if the top of the existing anchor or deadman is at least 6 inches below final grade and the anchor or deadman will not be an obstruction to other construction.

The Contractor shall take care so reusable parts are not damaged by his operations. Any parts damaged in handling and placing shall be replaced by the Contractor. Unusable material shall be disposed of by the Contractor.

Surface areas disturbed during the removal operations shall be reestablished, as nearly as possible, to match the adjacent surfaces to remain.

**606-3.13 Removing and Storing Anchorage Unit Assemblies and End Assemblies for Guide Railing and Median Barriers.** The construction details of §606-3.08 shall apply. Excavation and backfill shall be in conformance with the requirements outlined in §606-3.01E.

Existing concrete anchors and deadman may be left in place if the top of the existing anchor or deadman is at least 6 inches below final grade and the anchor or deadman will not be an obstruction to other construction.

**606-3.14 Removing and Disposing Anchorage Unit Assemblies and End Assemblies for Guide Railing and Median Barriers.** The construction details of §606-3.13 shall apply except the Contractor shall dispose of the Anchorage Unit Assemblies and End Assemblies in a manner approved by the Engineer.

**606-3.15 Box Beam Guide Rail Transition to Concrete Barrier.** The contractor shall construct a guide rail transition from concrete barrier to box beam guide rail at the locations indicated and as detailed on the contract plans. The work shall conform to the requirements of §606-3.01.

**606-3.16 Corrugated Beam Guide Rail Transition to Bridge Rail, Concrete Barrier and Concrete Parapets.** The contractor shall construct corrugated beam guide transitions to bridge rail, concrete barrier and/or concrete parapets at the locations and as detailed on the contract plans. The requirements of §606-3.01 shall apply together with the following: Railing shall be erected so that the rails are parallel to the roadway, except in those sections where it is necessary to vertically transition the highway barrier to the bridge railing, or barrier. Bending or curving of rail elements in order to fit alignment requirements in the field shall not be permitted. The Engineer may order some bending or curving to allow for necessary minor adjustments. The Contractor shall exercise care in attaching the guide rail to the bridge rail so as not to damage the rails, posts, or joints, or splices. Any damage to the material attributable to the Contractor's operation shall require that the material be repaired, or replaced. The decision to repair, or replace, shall rest solely with the Engineer.

**606-3.17 Vacant.**

**606-3.18 Pier Protection.** Pier protection shall be installed in accordance with the standard sheets, contract documents and directions of the Engineer. The half section precast concrete barrier units shall be backed up with either fully compacted excavated material or steel backup posts except when only one method is specified or indicated in the contract documents. Steel continuity connections shall be required on the half section barrier units when back up posts are utilized.

**606-3.19 Transitions Constructed of, or with, Concrete.** Transitions constructed of concrete and the concrete elements of transitions constructed of metal components and concrete elements shall be constructed at the locations indicated in the contract documents, or those indicated by the Engineer, in accordance with these specifications, the contract documents, and the directions of the Engineer. The shapes indicated on the Standard Sheets are standard. The Deputy Chief Engineer (Design) will consider other shapes for approval.

§606-3.05 Concrete Barrier, A. Precast Concrete Barrier and B. Cast-in-Place Concrete Barrier shall apply.

## **606-4 METHOD OF MEASUREMENT**

**606-4.01 Cable, Corrugated Beam or Box Beam Guide Railing and Median Barrier.** The quantity to be measured for payment will be in feet to the nearest foot of guide railing or median barrier installed, measured along the axis of the railing and between its pay limits as shown on the plans and/or standard sheets. The quantity to be measured for payment will be in feet to the nearest foot of shop bent or shop mitered guide railing or median barrier installed. If the guide railing does not terminate at an anchorage unit, end assembly, or transition to another type of barrier, but is anchored to a structure, the railing will be measured up to the structure.

**606-4.02 Anchorage Units, End Assemblies and Transitions for Guide Railing or Median Barrier.** Anchorage units, end assembly units and transitions between various highway guide railing and median barrier systems will be measured by the actual number of units installed in accordance with the plans, standard sheets, manufacturer's drawings', manufacturer's directions and/or as directed by the Engineer.

The payment limits for the Box Beam Guide Rail End Assembly Type III and Box Beam Median Barrier End Assembly, Type C will be separated by a distance of 50 feet extending along the end assembly from the front of the Nose Assembly to a point 50 feet removed. These payment limits apply regardless of whether the Type III End Assembly or Type C End Assembly employs crushable fiberglass elements or beam bursting type mandrels to absorb the energy of the impacting vehicle.

The limits of payment for the Corrugated Beam Guide Railing End Terminal (Energy-Absorbing) will extend a distance of 100 feet from the outer end of the terminal. At that point, payment will begin for corrugated beam guide railing.

The limits of payment for Heavy Post Blocked-Out Corrugated Beam Guide Railing End Terminal (Energy-Absorbing) will extend a distance of 50 feet from the outer end of the terminal. At that point, payment will begin for heavy post blocked-out corrugated beam guide railing.

The limits of payment for Heavy-Post, Blocked-Out Corrugated Beam Median Barrier End Terminal (Energy-Absorbing) will extend a distance of 50 feet from the outer end of the terminal. At that point, payment will begin for heavy post blocked-out corrugated beam median barrier.

**606-4.03 Concrete Barrier and Terminal Sections.** The quantity of concrete barrier and terminal sections measured for payment will be the number of feet placed in accordance with the plans and specifications, measured along the axis of the barrier and between its extreme outer limits, unless otherwise indicated on the plans or in the proposal.

**606-4.04 Resetting Guide Railing, Median Barrier and Precast Concrete Barrier.** The quantity of reset guide railing or median barrier measured for payment will be the number of feet reset in accordance with the specifications, plans and as directed by the Engineer, exclusive of anchorage units and end assemblies. If the guide railing is anchored to a structure instead of an anchorage unit or end assembly, measurement will be made up to the structure. The quantity of reset precast concrete barrier measured for payment will be the number of feet placed in accordance with the plans and specifications measured along the axis of the barrier between its extreme outer limits.

**606-4.05 Resetting Guide Railing and Median Barrier (New Posts).** The Method of Measurement of §606-4.04 will apply.

**606-4.06 Removing and Storing Guide Railing, Median Barrier and Precast Concrete Barrier.** The quantity of removed and stored guide rail and median barrier measured for payment will be the number of feet removed in accordance with the specifications, plans, and as directed by the Engineer, exclusive of anchorage units and end assemblies. If the guide rail or median barrier is anchored to a structure, measurement will be made up to the structure. The quantity of removed and stored precast concrete barrier measured for payment will be the number of feet removed in accordance with the specifications and plans, measured along the axis of the barrier between its extreme outer limits.

**606-4.07 Removing and Disposing of Guide Railing, Median Barrier and Concrete Barrier.** The quantity of guide rail and median barrier measured for payment will be the number of feet removed and disposed of in accordance with the specifications, plans, and as directed by the Engineer, exclusive of anchorage units and end assemblies. The quantity of concrete barrier measured for payment will be the number of feet removed and disposed of in accordance with the specifications and plans measured along the axis of the barrier between its extreme outer limits.

**606-4.08 Removing and Disposing of Guide Posts, Guide Rail Posts, and Median Barrier Posts.** The quantity to be measured for payment will be the number of posts removed and disposed of in accordance with the specifications and plans and as directed by the Engineer.

**606-4.09 Resetting Anchorage Unit Assemblies and End Assemblies for Guide Railing and Median Barrier.** This work shall be measured by the number of anchorage units and/or end assemblies reset in accordance with the requirements of the contract documents and in a manner approved by the Engineer.

**606-4.10 Removing and Storing or Disposing of Anchorage Unit Assemblies and End Assemblies for Guide Railing and Median Barrier.** This work shall be measured by the number of Anchorage Units or End Assemblies properly removed and stored for pick up by others or removed and disposed of in accordance with the contract documents and to the satisfaction of the Engineer.

**606-4.11 Retensioning Existing Cable Guide Railing and Median Barrier.** Quantity measured for payment will be the number of sections retensioned. A section shall consist of the length of cable guide rail or median barrier running between two concrete anchorage units.

**606-4.12 Heavy Post Blocked-Out Corrugated Beam Guide Railing Connections to Walls (Trailing Ends).** Guide railing connections to walls will be measured by the number furnished and installed in accordance with the plans, specifications, standard sheets, and as directed by the Engineer.

**606-4.13 Corrugated Beam Guide Rail Transition to Bridge Rail, Concrete Barrier and Concrete Parapets.** Measurement will be taken as the actual number of transition units installed in accordance with the plans and specifications.

**606-4.14 Box Beam Guide Rail Transition to Concrete Barrier.** Measurement will be taken as the actual number of transition units installed in accordance with the specifications, plans and standard sheets.

**606-4.15 Pier Protection.** Pier protection shall be measured by the number of feet measured along the top centerline of the steel box beam and between the pay limits as shown on the plans and/or standard sheets.



**606-4.16 I-Beam Posts for Existing Highway Barrier.** I-beam posts for existing highway barrier will be measured by the actual number of posts installed in accordance with the contract documents and as directed by the Engineer.

**606-4.17 Transition between Concrete Sections.** Transitions will be measured by the actual number of units installed in accordance with the plans, standard sheets and/or as directed by the Engineer.

<b>TABLE 606-2 PAYMENT FACTORS FOR GUIDE RAIL AND MEDIAN BARRIER POST SPACING</b>							
<b>Payment Factor</b>	<b>1.0</b>	<b>1.1</b>	<b>1.3</b>	<b>1.4</b>	<b>1.6</b>	<b>1.8</b>	<b>1.9</b>
<b>Rail Type</b>	<b>Post Spacing Center to Center in Feet &amp; Inches</b>						
Cable*	16'	12'	---	8'	---	---	4'
Box Beam	6'	---	3'	---	---	---	---
Corrugated Beam	12'6"	---	---	6'3"	4'2"	---	3' 1 1/2"
Heavy Post Blocked Out Corrugated Beam	6'3"	---	---	---	---	3' 1 1/2"	---
* For cable guide rail, the post spacing in the typical approach, terminal sections and typical intermediate anchorage sections as indicated on the standard sheets, shall have payment factors of 1.0.							

## **606-5 BASIS OF PAYMENT**

**606-5.01 Guide Railing, Median Barrier, Concrete Barrier and Terminal Sections; Various Types.** The unit price bid per foot for the above work shall include the cost of all labor, equipment and material necessary to complete the work, including the cost of any repairs required, and the costs of bending any rail element to the required curvature.

Payment for corrugated guide rail and median barrier, or bent box beam guide rail, will be determined using the payment factors for the various typical post spacings listed in Table 606-2. Payment will be the sum of the products obtained by multiplying the unit price bid for a rail or median barrier by the payment factors listed in Table 606-2 for the relevant post spacings and multiplying each of those products by the length of rail having that given post spacing.

Payment for mitered box beam and median barrier with 6 foot post spacings will be made at the unit prices bid. If a reduced post spacing of 3 feet is used for mitered box beam guide rail, the payment will be determined by multiplying the unit price bid by a payment factor of 1.1 for the length installed.

When posts are driven through asphalt concrete or bituminous treated material, any repairs to damage paved or treated areas shall be at the Contractor's expense. Progress payments will be made when the metal railing and/or metal barrier is erected in the position and manner indicated on the standard sheets and in a manner approved by the Engineer, exclusive of bituminous repair and final alignment. Payment will be made, at the unit price bid, for 90% of the measured quantity erected. The balance of the quantity erected will be paid for upon proper repair to the bituminous surfaces and alignment of the metal railing and/or metal barrier to the specified tolerances.

**606-5.02 End Assembly, End Anchorage Units and Transitions for Guide Railing and Median Barrier.** The unit price bid for each end assembly, end anchorage unit or transition shall include the cost of furnishing all labor, materials and equipment necessary to complete the work, including the necessary concrete, excavation, backfill, reflectorization, object markers when required at driveways and vehicle openings, and spring cable assembly (compensating device) and/or steel turnbuckle cable end assembly required for cable guide rail.

**606-5.03 Resetting; Removing and Storing; Removing and Disposing; of Guide Railing, Median Barrier and Concrete Barrier.** The unit price bid per foot for the above work items shall include the cost of furnishing all labor, equipment and materials necessary to complete the work.

Any materials damaged due to Contractor's operation shall be replaced by him and the cost shall be included in the price bid for this item.

Payment for resetting guide rail and median barrier shall include the unit price bid multiplied by the measured quantity multiplied by the payment factor for the various typical post spacings listed in Table 606-2, except that posts required to reduce the post spacing from the original post spacing shall be paid for under the appropriate I-beam post for existing highway barrier item.

A. Progress payments for resetting guide rail, median barrier and precast concrete barrier will be made as follows:

1. 25% of the unit price bid for the quantity of guide rail, median barrier or precast concrete barrier removed and stored in accordance with the provisions of §606.3-06 Resetting Guide Railing, Median Barrier and Precast Concrete Barrier.
2. 65% of the unit price bid for the measured quantity of guide railing, median barrier or precast concrete barrier cleaned and reset in accordance with the provisions of §606-3.06.
3. The balance of the unit price bid for the quantity of the guide railing, median barrier or concrete barrier will be paid upon repair to the bituminous surfaces damaged by the resetting operations.

B. Progress payments for removing and disposing or storing of guide railing, median barrier or concrete barrier will be made as follows:

1. 75% of the unit price bid for the measured quantity of guide railing, median barrier or concrete barrier removed and stored or disposed of as specified.
2. The balance of the unit price bid for the measured quantity of guide railing and/or median barrier removed and stored or disposed of as specified will be paid when any voids have been backfilled and disturbed areas are reestablished to the satisfaction of the Engineer.

**606-5.04 Removing and Disposing of Guide Posts, Guide Rail Posts and Median Barrier Posts.** The unit price bid per post for the above work items shall include the cost of furnishing all labor, equipment and material necessary to complete the work.

**606-5.05 Resetting; Removing and Storing; Removing and Disposing; of Anchorage Unit Assemblies and End Assemblies for Guide Railing and Median Barrier.** The unit price bid for each of these items shall include the cost of furnishing all labor, equipment and material necessary to complete the work including excavation and backfill.

If the Contractor elects to install new concrete anchors, in lieu of removing and resetting the existing ones, the cost of furnishing and installing the new anchor as well as the cost for necessary adjustments to the existing one shall be included in the price bid for these items.

A. Progress payments for resetting anchorage unit assemblies and end assemblies for guide railing and median barrier will be made as follows:

1. 25% of the unit price bid for the quantity of anchorage unit assemblies and/or end assemblies removed and stored in accordance with the provisions of §606-3.12 Resetting Anchorage Unit Assemblies and End Section Assemblies for Guide Railing and Median Barrier.
2. 65% of the unit price bid for the quantity of anchorage unit assemblies and/or end assemblies cleaned and reset in accordance with the provisions of §606-3.12 Resetting Anchorage Unit Assemblies and End Section Assemblies for Guide Railing and Median Barrier.
3. The balance of the unit bid price for the quantity of anchorage units assemblies reset upon the reestablishment of surface areas disturbed.

B. Progress payments for removing and storing or removing and disposing of anchorage unit assemblies and/or end assemblies for guide railing and/or median barriers will be made as follows:

1. 75% of the unit price bid for the quantity of anchorage unit assemblies and/or end assemblies removed and stored or disposed of as specified.
2. The balance of the unit price bid for the quantity of anchorage unit assemblies and/or end assemblies removed and stored or disposed of as specified will be paid upon the establishment of surface areas disturbed.

**606-5.06 Heavy Post Blocked-Out Corrugated Beam Guide Railing Connections to Walls (Trailing Ends).** The price bid for each guide railing connection shall include the cost of all labor, material, equipment and the repair of any damage caused by the Contractor's operations.

**606-5.07 Corrugated Beam Guide Rail Transition to Bridge Rail, Concrete Barrier and Concrete Parapets.** The unit price bid per guide rail transition shall include the cost of all labor, materials, and equipment necessary to satisfactorily complete the work, including back-up posts, connections and hardware.

**606-5.08 Box Beam Guide Rail Transition to Concrete Barrier.** The unit price bid per guide rail transition shall include the cost of all labor, equipment, and material necessary to satisfactorily complete the work, including back-up posts, necessary rail curvature, splices, connections and hardware.

**606-5.09 Pier Protection.** The price bid per foot of pier protection shall include the cost of all labor, materials and equipment necessary to complete the work. The curved box beam guide rail at each end of the assembly designed for two way traffic and on the approach end of the assembly designed for one way traffic, and the terminal sections shall be paid for under their own items.

**606-5.10 I-Beam Posts for Existing Highway Barrier.** The unit price bid for I-beam posts for existing highway barrier shall include the cost of furnishing all labor equipment and material necessary to complete the work. Removal of damaged posts and hardware is included in other items of work.

When posts are driven through asphalt concrete or bituminous treated material, any repairs to damaged paved or treated areas shall be at the Contractor's expense.

**606-5.11 Retensioning Existing Gable Guide Railing and Median Barrier.** The unit price bid for retensioning a section of cable guide railing or median barrier shall include the cost of all labor, materials and equipment necessary to complete the work.

**606-5.12 Transition between Concrete Sections.** The unit price bid per concrete transition shall include the cost of all labor, equipment, and material necessary to satisfactorily complete the work, including back-up posts, connections and hardware.

*Payment will be made under:*

<b>Item No.</b>	<b>Item</b>	<b>Pay Unit</b>
606.01	Cable Guide Railing	Foot
606.0101	Cable Guide Railing With Extra Long Posts	Foot
606.0201	Anchorage Units for Cable Guide Railing	Each
606.03	Cable Median Barrier	Foot
606.0310	Anchorage Units for Cable Median Barrier	Each
606.10	Box Beam Guide Railing	Foot
606.100002	Box Beam Guide Railing (Shop Bent or Shop Mitered)	Foot
606.100003	Box Beam Guide Railing (Shop Mitered)	Foot
606.1001	Box Beam Guide Railing With Extra Long Posts	Foot

606.100102	Box Beam Guide Railing with Extra Long Posts (Shop Bent or Shop Mitered)	Foot
606.100103	Box Beam Guide Railing with Extra Long Posts (Shop Mitered)	Foot
606.11	Box Beam Median Barrier	Foot
606.110002	Box Beam Median Barrier (Shop Bent or Shop Mitered)	Foot
606.110003	Box Beam Median Barrier (Shop Mitered)	Foot
606.120101	Box Beam End Piece	Each
606.120102	Box Beam Guide Railing End Assembly Type I	Each
606.120103	Box Beam Guide Railing End Assembly Type I with 18 ft Extension	Each
606.120201	Box Beam Guide Railing End Assembly Type IIA	Each
606.1203	Box Beam End Assembly Type III	Each
606.1401	Box Beam Median Barrier End Assembly, Type A	Each
606.1402	Box Beam Median Barrier End Assembly, Type B	Each
606.1403	Box Beam Median Barrier End Assembly, Type C	Each
606.16	Corrugated Beam Guide Railing	Foot
606.160001	Corrugated Beam Guide Railing (Shop Curved)	Foot
606.1601	Corrugated Beam Guide Railing With Extra Long Posts	Foot
606.160101	Corrugated Beam Guide Railing With Extra Long Posts (Shop Curved)	Foot
606.17	Corrugated Beam Median Barrier	Foot
606.170001	Corrugated Beam Median Barrier (Shop Curved)	Foot
606.18	Modified Weak-Post, Corrugated Beam Guide Rail	Foot
606.180001	Modified Weak-Post, Corrugated Beam Guide Rail (Shop Curved)	Foot
606.1801	Modified Weak-Post, Corrugated Beam Guide Rail With Extra Long Posts	Foot
606.180101	Modified Weak-Post, Corrugated Beam Guide Rail With Extra Long Posts (Shop Curved)	Foot
606.22	Anchorage Units for Corrugated Beam Guide Railing	Each
606.23	Anchorage Units for Corrugated Beam Guide Railing (Driveways, Walkways, and Other Openings)	Each
606.24	Anchorage Units for Corrugated Beam Median Barrier	Each
606.25	Special Anchorage Units for Corrugated Beam Median Barrier	Each
606.26	Corrugated Beam Guide Railing End Terminal (Energy-Absorbing)	Each
606.27	Heavy Post Blocked-Out Corrugated Beam Guide Railing End Terminal (Energy-Absorbing)	Each
606.28	Heavy-Post, Blocked-Out Corrugated Beam Median Barrier End Terminal (Energy-Absorbing)	Each
606.3001	Concrete Barrier Type A (Optional)	Foot
606.3002	Concrete Barrier Type B (Optional)	Foot
606.3003	Concrete Barrier Type C (Optional)	Foot
606.3004	Half Section Concrete Barrier (Optional)	Foot
606.3011	Concrete Barrier Type A (Precast)	Foot
606.3012	Concrete Barrier Type B (Precast)	Foot
606.3013	Concrete Barrier Type C (Precast)	Foot
606.3014	Half Section Concrete Barrier (Precast)	Foot
606.3021	Concrete Barrier Type A (Cast-in-Place)	Foot
606.3022	Concrete Barrier Type B (Cast-in Place)	Foot
606.3023	Concrete Barrier Type C (Cast-in Place)	Foot
606.3024	Half Section Concrete Barrier (Cast-in Place)	Foot
606.3031	Concrete Barrier Type A (Machine Formed)	Foot
606.3032	Concrete Barrier Type B (Machine Formed)	Foot
606.3033	Concrete Barrier Type C (Machine Formed)	Foot

606.3034	Half Section Barrier (Machined Formed)	Foot
606.3041	Single-Slope Concrete Median Barrier (Optional)	Foot
606.3042	Single-Slope Concrete Median Barrier (Precast)	Foot
606.3043	Single-Slope Concrete Median Barrier (Cast-in-Place)	Foot
606.3044	Single-Slope Concrete Median Barrier (Machine Formed)	Foot
606.3051	Single-Slope Concrete Median Barrier - Wide (Optional)	Foot
606.3052	Single-Slope Concrete Median Barrier - Wide (Precast)	Foot
606.3053	Single-Slope Concrete Median Barrier - Wide (Cast-in-Place)	Foot
606.3054	Single-Slope Concrete Median Barrier - Wide (Machine Formed)	Foot
606.3061	Single-Slope Concrete Half Section Barrier (Optional)	Foot
606.3062	Single-Slope Concrete Half Section Barrier (Precast)	Foot
606.3063	Single-Slope Concrete Half Section Barrier (Cast-in-Place)	Foot
606.3064	Single-Slope Concrete Half Section Barrier (Machine Formed)	Foot
606.32	Heavy Post Blocked-Out Corrugated Beam Guide Railing	Foot
606.320001	Heavy Post Blocked-Out Corrugated Beam Guide Railing (Shop Curved)	Foot
606.3201	Heavy Post Blocked-Out Corrugated Beam Guide Railing With Extra Long Posts	Foot
606.320101	Heavy Post Blocked-Out Corrugated Beam Guide Railing With Extra Long Posts (Shop Curved)	Foot
606.33	Heavy Post Blocked-Out Corrugated Beam Median Barrier	Foot
606.330001	Heavy Post Blocked-Out Corrugated Beam Median Barrier (Shop Curved)	Foot
606.34	Anchorage Units for Heavy Post Blocked-Out Corrugated Beam Guide Railing	Each
606.35	Anchorage Units for Heavy Post Blocked-Out Corrugated Beam Median Barrier	Each
606.4701	I-Beam Posts for Existing Cable Median Barrier	Each
606.48	Retensioning Existing Cable Guide railing or Median Barrier	Each
606.4801	I-Beam Posts for Existing Cable Guide Railing	Each
606.4803	Extra Long I-Beam Posts for Existing Cable Guide Railing	Each
606.4805	I-Beam Posts for Existing Corrugated Beam Guide Railing	Each
606.4807	Extra Long I-Beam Posts for Existing Corrugated Beam Guide Railing	Each
606.4809	I-Beam Posts for Existing Box Beam Guide Railing	Each
606.4811	Extra Long I-Beam Posts for Existing Box Beam Guide Railing	Each
606.4813	I-Beam Posts for Existing Corrugated Beam Median Barrier	Each
606.4815	I-Beam Posts for Existing Box Beam Median Barrier	Each
606.4817	I-Beam posts for Existing Heavy Post Blocked-Out Corrugated Beam Guide Railing	Each
606.4819	Extra Long I-Beam posts for Existing Heavy Post Blocked-Out Corrugated Beam Guide Railing	Each
606.4821	I-Beam posts for Existing Heavy Post Blocked-Out Corrugated Beam Median Barrier	Each
606.4823	Extra Long I-Beam posts for Existing Heavy Post Blocked-Out Corrugated Beam Median Barrier	Each
606.50	Resetting Cable Guide Railing	Foot
606.5010	Resetting Cable Median Barrier	Foot
606.5048	Resetting Cable Guide Railing (New Posts)	Foot
606.5049	Resetting Cable Median Barrier (New Posts)	Foot
606.51	Resetting Corrugated Beam Guide Railing	Foot
606.5148	Resetting Corrugated Beam Guide Railing (New Posts)	Foot
606.52	Resetting Corrugated Beam Median Barrier	Foot

606.5248	Resetting Corrugated Beam Median Barrier (New Posts)	Foot
606.53	Resetting Box Beam Guide Railing	Foot
606.5348	Resetting Box Beam Guide Railing (New Posts)	Foot
606.54	Resetting Box Beam Median Barrier	Foot
606.5448	Resetting Box Beam Median Barrier (New Posts)	Foot
606.55	Resetting Heavy Post Blocked-Out Corrugated Beam Guide Railing	Foot
606.56	Resetting Heavy Post Blocked-Out Corrugated Beam Median Barrier	Foot
606.57	Resetting Precast Concrete Barrier	Foot
606.5710	Resetting Precast Concrete Barrier- Half Section	Foot
606.5901	Resetting Anchorage Units for Cable Guide railing or Median Barrier	Each
606.5910	Resetting Anchorage Units for Corrugated Beam Guide Railing or Median Barrier	Each
606.5920	Resetting Box Beam Guide Railing End Assembly	Each
606.5930	Resetting Box Beam Median Barrier End Assembly--Type A	Each
606.5931	Resetting Box Beam Median Barrier End Assembly--Type B	Each
606.5940	Resetting Anchorage Units for Heavy Post Blocked-Out Corrugated Beam Guide Railing	Each
606.5945	Resetting Anchorage Units for Heavy Post Blocked-Out Corrugated Beam Median Barrier	Each
606.60	Removing and Storing Cable Guide Railing	Foot
606.6010	Removing and Storing Cable Median Barrier	Foot
606.61	Removing and Storing Corrugated Beam Guide Railing	Foot
606.62	Removing and Storing Corrugated Beam Median Barrier	Foot
606.63	Removing and Storing Box Beam Guide Railing	Foot
606.64	Removing and Storing Box Beam Median Barrier	Foot
606.65	Removing and Storing Precast Concrete Barrier	Foot
606.6510	Removing and Storing Precast Concrete Barrier-Half Section	Foot
606.69	Removing and Storing Anchorage Units for Cable Guide railing or Median Barrier	Each
606.6910	Removing and Storing Anchorage Units for Corrugated Beam Guide Railing and Median Barriers	Each
606.6920	Removing and Storing Box Beam Guide Railing End Assembly	Each
606.6930	Removing and Storing Box Beam Median Barrier End Assembly -Type A	Each
606.6931	Removing and Storing Box Beam Median Barrier End Assembly -Type B	Each
606.6940	Removing and Storing Anchorage Units for Heavy Post Blocked-Out Corrugated Beam Guide Railing	Each
606.6945	Removing and Storing Anchorage Units for Heavy Post Blocked-Out Corrugated Beam Median Barrier	Each
606.70	Removing and Disposing Cable Guide Railing	Foot
606.7010	Removing and Disposing Cable Median Barrier	Foot
606.71	Removing and Disposing Corrugated Beam Guide Railing	Foot
606.72	Removing and Disposing Corrugated Beam Median Barrier	Foot
606.73	Removing and Disposing Box Beam Guide Railing	Foot
606.74	Removing and Disposing Box Beam Median Barrier	Foot
606.75	Removing and Disposing Concrete Barrier	Foot
606.7510	Removing and Disposing Concrete Barrier-Half Section	Foot
606.76	Removing and Disposing of Guide Posts, Guide Rail Posts, and Median Barrier Posts	Each
606.79	Removing and Disposing Anchorage Units for Cable Guide railing or Median Barrier	Each

606.7910	Removing and Disposing Anchorage Units for Corrugated Beam Guide Railing and Median Barrier	Each
606.7920	Removing and Disposing Box Beam Guide Railing End Assembly	Each
606.7930	Removing and Disposing Box Beam Median Barrier End Assembly-Type A	Each
606.7931	Removing and Disposing Box Beam Median Barrier End Assembly--Type B	Each
606.7940	Removing and Disposing Anchorage Units for Heavy Post Blocked-Out Corrugated Beam Guide Railing	Each
606.7945	Removing and Disposing Anchorage Units for Heavy Post Blocked-Out Corrugated Beam Median Barrier	Each
606.8101	Guide Rail Transition Weak-Post Corrugated Beam to Box Beam Guide Rail (One or Two Way Operation)	Each
606.8201	Guide Rail Transition Box Beam to Weak-Post Corrugated Beam Guide Rail (One Way Only)	Each
606.83	Guide Rail Transition Cable to Box Beam (One or Two Way Operation)	Each
606.84	Guide Rail Transition Box Beam to Cable (One Way Only)	Each
606.8501	Median Barrier Transition Weak-Post Corrugated Beam to Box Beam	Each
606.86	Guide Rail Transition Corrugated Beam to Thrie Beam	Each
606.8701	Corrugated Beam Guide Railing Transition Assembly Two Rail Steel Bridge Railing	Each
606.8702	Corrugated Beam Guide Railing Transition Assembly Four Rail Steel Bridge Railing	Each
606.8703	Corrugated Beam Guide Railing Transition Assembly Discontinuous Steel Bridge Railing	Each
606.8704	Corrugated Beam Guide Railing Transition Assembly Concrete Parapets, or Concrete Barrier	Each
606.8705	HPBO Corrugated Median Barrier Transition to Single Slope Concrete Median Barrier	Each
606.8706	HPBO Corrugated Median Barrier Transition to Jersey Shape Concrete Median Barrier	Each
606.8707	Transition Between Concrete Half Section Barrier and HPBO Corrugated Beam Guide Railing	Each
606.8801	Box Beam Guide Rail Transition to Concrete Barrier (One or Two Way Operation)	Each
606.8802	Box Beam Guide Rail Transition to Concrete Barrier (One Way-Trailing End)	Each
606.8803	Transition Between Box Beam Guide Rail and Single Slope Half Section Concrete Barrier (One or Two Way Operation)	Each
606.8804	Transition Between Single Slope Half Section Concrete Barrier and Box Beam Guide Rail (One Way - Trailing End of Barrier)	Each
606.8805	Transition Between Box Beam Median Barrier and Single Slope Concrete Median Barrier	Each
606.89	Guide Rail Transition Box Beam to Heavy Post Blocked-Out Corrugated Beam	Each
606.9001	Transition between Standard (NJ) Concrete Barrier and Single-Slope Concrete Barrier	Each
606.9002	Transition between Wide and Normal Single Slope Concrete Median Barrier	Each
606.9401	Pier Protection (One Way)	Foot
606.9402	Pier Protection (Two Way)	Foot

606.9601	Median Barrier Transition Weak-Post Corrugated Beam to Heavy Post Blocked-out Corrugated Beam	Each
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## Material Specification 592—Geotextile

### 1. Scope

This specification covers the quality of geotextile, including geotextile for temporary silt fence.

### 2. General requirements

Fibers (threads and yarns) used in the manufacture of geotextile shall consist of synthetic polymers composed of a minimum of 85 percent by weight polypropylenes, polyesters, polyamides, polyethylene, polyolefins, or polyvinylidene-chlorides. They shall be formed into a stable network of filaments or yarns retaining dimensional stability relative to each other. The geotextile shall be free of defects, such as holes, tears, and abrasions. The geotextile shall be free of any chemical treatment or coating that significantly reduces its porosity. Fibers shall contain stabilizers and/or inhibitors to enhance resistance to ultraviolet light. Geotextile other than for temporary silt fence shall conform to the requirements in tables 592-1 or 592-2, as applicable. Geotextile for temporary silt fence shall conform to the requirements in table 592-3.

Thread used for factory or field sewing shall be of contrasting color to the fabric and made of high strength polypropylene, polyester, or polyamide thread. Thread shall be as resistant to ultraviolet light as the geotextile being sewn.

### 3. Classification

Geotextiles shall be classified based on the method used to place the threads or yarns forming the fabric. The geotextiles will be grouped into woven and nonwoven types. Geotextile for temporary silt fence may be either woven or nonwoven. Slit film woven geotextile may not be used except for temporary silt fence.

**Woven**—Fabrics formed by the uniform and regular interweaving of the threads or yarns in two directions. Woven fabrics shall be manufactured from monofilament yarn formed into a uniform pattern with distinct and measurable openings, retaining their position relative to each other. The edges of fabric shall be selvaged or otherwise finished to prevent the outer yarn from unraveling.

**Nonwoven**—Fabrics formed by a random placement of threads in a mat and bonded by needle punching, heat-bonding, or resin-bonding. Nonwoven fabrics shall be manufactured from individual fibers formed into a random pattern with distinct, but variable small openings, retaining their position relative to each other when bonded by needle punching, heat-, or resin-bonding. The use of heat- or resin-bonded nonwovens is restricted as specified in note 2 of table 592-2.

### 4. Sampling and testing

The geotextile shall meet the specified requirements (tables 592-1, 592-2, or 592-3, as applicable) for the product type shown on the label. Product properties as listed in the latest edition of the "Specifiers Guide," Geosynthetics, (Industrial Fabrics Association International, 1801 County Road B, West Roseville, MN 55113-4061 or at <http://www.geosindex.com>) and that represent minimum average roll values, are acceptable documentation that the product style meets the requirements of these specifications.

For products that do not appear in the above directory or do not have minimum average roll values listed, typical test data from the identified production run of the geotextile will be required for each of the specified tests (see table 592-1, 592-2, or 592-3, as applicable) as covered under clause AGAR 452.236-76.

### 5. Shipping and storage

The geotextile shall be shipped/transported in rolls wrapped with a cover for protection from moisture, dust, dirt, debris, and ultraviolet light. The cover shall be maintained undisturbed to the maximum extend possible before placement.

Each roll of geotextile shall be labeled or tagged to clearly identify the brand, class, and the individual production run in accordance with ASTM D 4873.

**Table 592-1** Requirements for woven geotextiles 1/

Property	Test Method	Units	Class I	Class II	Class III	Class IV
Grab Tensile Strength	ASTM D 4632	pounds	247 min.	180 min.	180 min.	315 min.
Elongation at Failure	ASTM D 4632	percent	< 50	<50	<50	<50
Trapezoidal Tear Strength	ASTM D 4533	pounds	90 min.	67 min.	67 min.	112 min.
Puncture Strength	ASTM D 6241	pounds	495 min.	371 min.	371 min.	618 min.
Ultraviolet Stability (retained strength)	ASTM D 4355	percent	50 min.	50 min.	50 min.	50 min.
Permittivity	ASTM D 4491	sec <sup>-1</sup>	0.7 min. or as specified			
Apparent Opening Size (AOS) 2/	ASTM D 4751	mm	0.22 max. or as specified			
Percent Open Area (POA)	USACE CWO-02215	percent	4 min.			

1/ All values are minimum average roll values (MARV) in the weakest principal direction, unless otherwise noted.

2/ Maximum average roll value.

Note: CWO is a USACE reference.

**Table 592-2** Requirements for nonwoven geotextiles 1/

Property	Test Method	Units	Class I 2/	Class II 2/	Class III 2/	Class IV 2/
Grab Tensile Strength	ASTM D 4632	pounds	202 min.	157 min.	112 min.	202 min.
Elongation at Failure	ASTM D 4632	percent	50 min.	50 min.	50 min.	50 min.
Trapezoidal Tear Strength	ASTM D 4533	pounds	79 min.	56 min.	40 min.	79 min.
Puncture Strength	ASTM D 6241	pounds	433 min.	309 min.	223 min.	433 min.
Ultraviolet Stability (retained strength)	ASTM D 4355	percent	50 min.	50 min.	50 min.	50 min.
Permittivity	ASTM D 4491	sec <sup>-1</sup>	0.7 min. or as specified			
Apparent Opening Size (AOS) 3/	ASTM D 4751	mm	0.22 max. or as specified			

1/ All values are minimum average roll values (MARV) in the weakest principal direction, unless otherwise noted.

2/ Needle punched geotextiles may be used for all classes. Heat-bonded or resin-bonded geotextiles may be used for classes III and IV only. They are particularly well suited to class IV.

3/ Maximum average roll value.

**Table 592-3** Requirements for Temporary Silt Fence 1/

Property	Test Method	Units	Requirements, Supported Silt Fence 2/	Requirements, Unsupported Silt Fence 2/	
				Woven Geotextile (Elongation < 50% 3/)	Nonwoven Geotextile (Elongation ≥ 50% 3/)
Maximum Post Spacing		ft	4	6.5	4
Grab Tensile Strength:	ASTM D 4632	pounds			
Machine Direction			90	124	
X-Machine Direction			90	101	
Permittivity	ASTM D 4491	sec-1	0.05	0.05	
Apparent Opening Size (AOS) 4/	ASTM D 4751	mm	0.60	0.60	
Ultraviolet Stability (retained strength)	ASTM D 4335	%	70% after 500 hours of exposure	70% after 500 hours of exposure	

1/ All values are minimum average roll values (MARV) in the weakest principal direction, unless otherwise noted.

2/ Silt fence support shall consist of 14-gage steel wire with a mesh spacing of 6 inches each way or prefabricated polymeric mesh of equivalent strength.

3/ As measured in accordance with ASTM D 4632.

4/ Maximum average roll value.



## Material Specification 523—Rock for Riprap

### 1. Scope

This specification covers the quality of rock to be used in the construction of rock riprap.

### 2. Quality

Individual rock fragments shall be dense, sound, and free from cracks, seams, and other defects conducive to accelerated weathering. Except as otherwise specified, the rock fragments shall be angular to subrounded. The least dimension of an individual rock fragment shall be not less than one-third the greatest dimension of the fragment. ASTM D 4992 provides guidance on selecting rock from a source.

Except as otherwise provided, the rock shall be tested and shall have the following properties:

#### Rock type 1

- **Bulk specific gravity (saturated surface-dry basis)**—Not less than 2.5 when tested in accordance with ASTM C 127 on samples prepared as described for soundness testing.
- **Absorption**—Not more than 2 percent when tested in accordance with ASTM C 127 on samples prepared as described for soundness testing.
- **Soundness**—The weight loss in 5 cycles shall not be more than 10 percent when sodium sulfate is used or more than 15 percent when magnesium sulfate is used.

#### Rock type 2

- **Bulk specific gravity (saturated surface-dry basis)**—Not less than 2.5 when tested in accordance with ASTM C 127 on samples prepared as described for soundness testing.
- **Absorption**—Not more than 2 percent when tested in accordance with ASTM C 127 on samples prepared as described for soundness testing.

- **Soundness**—The weight loss in 5 cycles shall be not more than 20 percent when sodium sulfate is used or more than 25 percent when magnesium sulfate is used.

#### Rock type 3

- **Bulk specific gravity (saturated surface-dry basis)**—Not less than 2.3 when tested in accordance with ASTM C 127 on samples prepared as described for soundness testing.
- **Absorption**—Not more than 4 percent when tested in accordance with ASTM C 127 on samples prepared as described for soundness testing.
- **Soundness**—The weight loss in 5 cycles shall be not more than 20 percent when sodium sulfate is used or more than 25 percent when magnesium sulfate is used.

### 3. Methods of soundness testing

**Rock cube soundness**—The sodium or magnesium sulfate soundness test for all rock types (1, 2, or 3) shall be performed on a test sample of  $5,000 \pm 300$  grams of rock fragments, reasonably uniform in size and cubical in shape, and weighing, after sampling, about 100 grams each. They shall be obtained from rock samples that are representative of the total rock mass, as noted in ASTM D 4992, and that have been sawed into slabs as described in ASTM D 5121. The samples shall further be reduced in size by sawing the slabs into cubical blocks. The thickness of the slabs and the size of the sawed fragments shall be determined by the size of the available test apparatus and as necessary to provide, after sawing, the approximate 100-gram samples. The cubes shall undergo five cycles of soundness testing in accordance with ASTM C 88.

Internal defects may cause some of the cubes to break during the sawing process or during the initial soaking period. Do not test any of the

**Material Specification 523** Rock for Riprap (continued)

cubes that break during this preparatory process. Such breakage, including an approximation of the percentage of cubes that break, shall be noted in the test report.

After the sample has been dried following completion of the final test cycle and washed to remove the sodium sulfate or magnesium sulfate, the loss of weight shall be determined by subtracting from the original weight of the sample the final weight of all fragments that have not broken into three or more fragments.

The test report shall show the percentage loss of the weight and the results of the qualitative examination.

**Rock slab soundness**—When specified, the rock shall also be tested in accordance with ASTM D 5240. Deterioration of more than 25 percent of the number of blocks shall be cause

for rejection of rock from this source. Rock shall also meet the requirements for average percent weight loss stated below.

- For projects located north of the Number 20 Freeze-Thaw Severity Index Isoline (fig. 523–1). Unless otherwise specified, the average percent weight loss for Rock Type 1 shall not exceed 20 percent when sodium sulfate is used or 25 percent when magnesium sulfate is used. For Rock Types 2 and 3, the average percent weight loss shall not exceed 25 percent for sodium sulfate soundness or 30 percent for magnesium sulfate soundness.
- For projects located south of the Number 20 Freeze-Thaw Severity Index Isoline, unless otherwise specified, the average percent weight loss for Rock Type 1 shall not exceed 30 percent when sodium sulfate is used or 38 percent when magnesium sulfate is used.

**Figure 523–1** Number 20 freeze-thaw severity index isoline (map approximates the map in ASTM D 5312)



**Material Specification 523** Rock for Riprap (continued)

For Rock Types 2 and 3, the average percent weight loss shall not exceed 38 percent for sodium sulfate soundness or 45 percent for magnesium sulfate soundness.

**4. Field durability inspection**

Rock that fails to meet the material requirements stated above (if specified), may be accepted only if similar rock from the same source has been demonstrated to be sound after 5 years or more of service under conditions of weather, wetting and drying, and erosive forces similar to those anticipated for the rock to be installed under this specification.

A rock source may be rejected if the rock from that source deteriorates in 3 to 5 years under similar use and exposure conditions expected for the rock to be installed under this specification, even though it meets the testing requirements stated above.

Deterioration is defined as the loss of more than one-quarter of the original rock volume, or severe cracking that would cause a block to split. Measurements of deterioration are taken from linear or surface area particle counts to determine the percentage of deteriorated blocks. Deterioration of more than 25 percent of the pieces shall be cause for rejection of rock from the source.

**5. Grading**

The rock shall conform to the specified grading limits after it has been placed within the matrix of the rock riprap. Grading tests shall be performed, as necessary, according to ASTM D 5519, Method A, B, or C, as applicable.





# SECTION 601

## SPECIAL CONDITIONS FOR ASBESTOS ABATEMENT

### ***PART 1 - GENERAL***

This section of the specification outlines the special conditions associated with the abatement of Asbestos Containing Materials (ACMs) at the Boquet River Stabilization Project – Phase II Site. ACMs have been identified in the form of loose pieces of Transite siding on the ground surface and require asbestos abatement. Identification of the specific areas are shown on the project drawings.

The Owner will obtain a site-specific variance for cleanup of the incidentally disturbed ACMs. Additional relief from NYS ICR 56, other than the relief provided for cleanup of the incidental disturbance of Transite siding, will be the responsibility of the Bidder to obtain. The Bidder is responsible for the abatement, transport and disposal of all ACMs. As required by NYS ICR 56, the Owner Representative will conduct asbestos air/project monitoring separately. The air/project monitoring will accommodate the Bidder's schedule.

### ***1.1 REFERENCES***

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

40 CFR 61-SUBPART M	National Emission Standard for Asbestos
12 NYCRR Part 56 (NYS ICR 56) Dated January 11, 2006	Asbestos, Part 56 of Title 12 of the Official Compilation of Codes, Rules and Regulations of the State of New York (commonly known as New York State Industrial Code Rule 56)
29 CFR 1926.1101	Safety and Health Regulations for Construction – Toxic and Hazardous Substances

### ***1.2 GENERAL REQUIREMENTS***

**1.2.1 SCOPE:** Supply all parts, labor, equipment, appliances and materials, and perform all operations required to furnish a complete job in strict accordance with this specification, and subject to the terms and provisions of the contract. All references in the contract documents to any trade Bidder shall be deemed to be a reference to the Bidder. This is a single bid general construction project; the Bidder is responsible for all work except for asbestos air/project monitoring and project clearance visual and air monitoring.

**1.2.3 DESCRIPTION OF WORK:** The following outline of the principal features of work do not in any way limit the responsibility of the Bidder to perform all work and furnish all materials required to do a complete job within the intent and scope of the plans and specifications. General work requirements include removal and disposal of all ACMs from the site within the area of disturbance required for construction. With the exception of the variance to be obtained for cleanup of the incidental disturbance, the Bidder will be responsible for any additional relief, notifications and condemnation letters (if required). The areas where abatement is accomplished are to be deemed asbestos free when removal is completed and the contractor and an independent asbestos consultant (Owner Representative) hired by the Owner concurs.

**1.2.4 EXECUTION AND CORRELATION:** The areas of abatement will not be occupied during the abatement project. The work shall also be performed in accordance with current Town of Willsboro and Essex County fire and safety regulations. The work shall be closely coordinated with the Owner's representative prior to commencement of work. Owner shall separately retain an independent asbestos consultant to perform air/project monitoring during abatement including clearance air monitoring. Unsatisfactory air monitoring results will result in project shutdown at Bidder's expense until procedures are changed to achieve satisfactory air monitoring results.

**1.2.5 SUPERVISION:** The Bidder is required to maintain continuous supervision throughout the contract. It is required that the on-property supervisor be able to speak English at all times while the project is in progress.

### ***1.3 REGULATORY AND SAFETY REQUIREMENTS***

Bidder must comply with all federal, state, and local asbestos abatement, hauling and disposal regulations. Additionally, the Bidder shall provide the necessary safeguards to prevent accidents, to avoid all necessary hazards and protect the public, employees, and property at all times, including Saturdays, Sundays and holidays and other times when no work is being done. The Bidder shall maintain and remove appropriate barriers or other devices as required by the condition of the work for the protection of users of the project area, the protection of work being done or the containment of dust and debris. All such barriers or devices shall be provided in conformance with all applicable codes, laws and regulations, including OSHA and National Fire Protection Association 241, for safeguarding structures during construction.

### ***1.4 ACCESS TO WORK AREAS***

At least twenty-four (24) hours prior to the start of work, the Bidder will provide the Owner a list of employees working on the project, the name and 24 hour telephone number of the overall supervisor of the job property and a list of vehicles (make, model, license plate number) that will be entering the property.

## ***PART 2 - ASBESTOS REMOVAL***

### ***2.1 OVERVIEW***

The work area includes the entire area that is to be disturbed for the construction of Phase II of the Boquest River Nonpoint Source Pollution Prevention Improvement Project located on Mill Street in Willsboro, New York. The Bidder is required to comply with all applicable federal, state and local rules, laws and regulations pertaining to the removal and disposal of asbestos containing materials including but not limited to New York State Industrial Code Rule 56 – Asbestos and the USEPA 40 CFR Part 61 Asbestos NESHAP. Bidder is also required to comply with all applicable OSHA rules and regulations.

### ***2.2 PROJECT NOTIFICATIONS***

Pre-abatement notifications to the United States Environmental Protection Agency (USEPA) and the State of New York must be made at least ten (10) working days in advance of asbestos abatement project start. Appropriate waiting periods must be observed before start of work. Copies of notifications must be submitted to the Owner prior to start of work.

### **2.3 ABATEMENT WORK PLAN**

Provide plans which clearly indicate all work areas (numbered sequentially) including the locations and types of all decontamination chambers, entrances and exits to the work area, type of abatement activity/technique, number and location of negative air units and exhaust points including calculations, and the proposed location and construction of storage facilities and field office.

### **2.4 SAFETY DATA SHEETS (SDS)**

Submit copies of SDSs for each chemical used on the project (encapsulant, surfactant, spray adhesive, etc.).

### **2.5 PROJECT SUPERVISOR**

Submit the resume of the proposed English speaking Project Supervisor.

### **2.6 WORKER'S ACKNOWLEDGMENTS**

Submit statements signed by each employee that the employee has received training in the proper handling of ACMs: understands the health implications and risks involved; and understands the use and limitations of the respiratory equipment to be used.

### **2.7 ASBESTOS WASTE DISPOSAL**

Containers of asbestos waste generated by abatement activity must be secured during the period of abatement activity and should not accumulate to significant amounts. Shipments of waste must be documented in accordance with regulations with copies of said documents submitted to the Owner as shipments occur. Final payment of invoices may not occur until all waste documents have been submitted.

### **2.8 PROJECT LOGS**

Daily activity logs and work area entrance/exit logs will be maintained on-property and will be provided to the Owner at the conclusion of the project.

### **2.9 ASBESTOS HANDLING LICENSES AND MEDICAL CERTIFICATIONS**

The Bidder and any Sub-Bidders directly involved with asbestos abatement must possess a current State of New York asbestos handling license and all workers must possess current State of New York abatement supervisor, worker or allied trades handling certificates. Copies of the asbestos abatement firm's entity license, all handling certificates, and each property workers' medical certifications (to include proof of respirator fit-testing) must be provided to the Owner prior to the start of the work.

### **2.10 ORDER OF WORK**

Work on this project will commence in the order provided in the schedule. No deviation from this order will be permitted without prior approval from the Owner and Owner's Representative.



## **PERMITS / AUTHORIZATIONS**

NYSDEC GENERAL PERMIT GP-5-09-002 – SOIL AND WATER CONSERVATION  
DISTRICTS – PERMIT PENDING – **2014 PERMIT PROVIDED FOR REFERENCE**  
US ARMY CORPS OF ENGINEERS PERMIT – PERMIT PENDING – **2014 PERMIT  
PROVIDED FOR REFERENCE** - PROPERTY EASEMENT





**PERMIT**  
Under the Environmental Conservation Law (ECL)

**GENERAL PERMIT GP-5-09-002**  
Soil & Water Conservation Districts

**Permittee and Facility Information**

**Permit Issued To:**

TOWN OF WILLSBORO  
FARREL ROAD  
WILLSBORO NY 12996

**Facility:**

JOHN LUNDO PROPERTY  
BOGGET RIVER  
BELOW DAM

**Applicable DEC Region(s): 5**

**General Permit Authorized Activity:** The following activities may be conducted as authorized only by the County Soil & Water Conservation District or Natural Resources Conservation Service :

1. Installation or placement of single culverts and single-span bridges with no central supports;
2. Maintenance dredging;
3. The installation construction or placement of non-vertical erosion protection practices;
4. The implementation of instream habitat, feature and/or stabilization techniques;
5. Removal of impeding debris from waterbodies;
6. The maintenance, repair, in-kind and in-place replacement of existing structures and improved areas, including but not limited to erosion protection practices, culverts, stormwater and infrastructure facilities and in-stream sediment basins;
7. The installation of dry hydrants.

**Permit Authorizations**

**Excavation & Fill in Navigable Waters - Under Article 15, Title 5**

Effective Date: 05/19/2010 Expiration Date: 05/18/2020

**Freshwater Wetlands - Under Article 24**

Effective Date: 05/19/2010 Expiration Date: 05/18/2020

**Stream Disturbance - Under Article 15, Title 5**

Effective Date: 05/19/2010 Expiration Date: 05/18/2020

**Water Quality Certification - Under Section 401 - Clean Water Act**

Effective Date: 05/19/2010 Expiration Date: 05/18/2020



**NYSDEC Approval**

By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with the ECL, all applicable regulations, and all conditions included as part of this permit.

**General Permit Authorized by**

Permit Administrator: MARC S MIGLIORE, Deputy Regional Permit Administrator

Address: REGION 5 WARRENSBURG SUB-OFFICE

232 GOLF COURSE RD

WARRENSBURG, NY 12885-0220

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

Date: 05/19/2010

**Permit Components**

NATURAL RESOURCE PERMIT CONDITIONS

WATER QUALITY CERTIFICATION SPECIFIC CONDITION

GENERAL CONDITIONS, APPLY TO ALL AUTHORIZED PERMITS

NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

**NATURAL RESOURCE PERMIT CONDITIONS - Apply to the Following Permits: WATER QUALITY CERTIFICATION; STREAM DISTURBANCE; FRESHWATER WETLANDS; EXCAVATION & FILL IN NAVIGABLE WATERS**

- 1. Project Continuance and Coverage** Projects or activities authorized by the previous General Permit GP-5-04-004, which have not commenced, or are currently being undertaken, shall be granted continuance and coverage under this GP-5-09-002.
- 2. Project Segmentation Prohibited** This General Permit (GP) shall be applied to single and complete projects. All components of a single project shall be treated together as constituting one single and complete project. This GP may be used for an activity that is a component of an overall project provided no individual DEC permit is required, and State Environmental Quality Review is completed for such overall project. This GP shall not be used for any activity that is part of an overall project for which an individual NYS DEC permit is, or would be, required.





**3. Consultation For Special Streams and Rivers** The following regulated watercourses require technical consultation with the Department prior to undertaking or authorizing any activities pursuant to this General Permit:

- Great Chazy River from I-87 (Northway) downstream to Lake Champlain;
- West Branch Ausable River in its entirety;
- Boquet River from the falls north of CR22 in Wadhams downstream to Lake Champlain;
- Ausable River from Rainbow Falls downstream to Lake Champlain;
- Saranac River from Kents Falls downstream to Lake Champlain;
- Raquette River from Lower Falls downstream to the boat ramp off Rtes 3 & 30 (t/o Harrietstown);
- Sacandaga River from the dam at the campground just north of the West Branch confluence downstream to Great Sacandaga Lake;
- West Stony Creek from the State Forest Preserve boundary downstream to the Sacandaga River;
- Lake Pleasant outlet (to Sacandaga Lake) in its entirety;
- Batten Kill from the NY/VT border downstream to Center Falls.

**4. Consultation For Instream Projects** In addition to Natural Resources Condition #1, consultation with the Department prior to District authorization is required for any project which is proposed as an instream habitat or feature improvement project that includes the construction of instream structures (cross-vanes, weirs, j-hooks, e.g.), or for any project that requires machinery operation in a protected waterbody or regulated DEC Fresh Water Wetland.

**5. Authorization Reporting Requirements** On or before January 31 of each year the District shall submit, to the DEC Region 5 Regional Permit Administrator, a report or log itemizing each individual project authorized during the prior year pursuant to this General Permit. Such a report or log shall contain information of sufficient detail to demonstrate project scope and permit compliance and, at a minimum, include the name and mailing address of the legally responsible party, the project location, a summary of activities authorized and conducted, and the dates of permit authorization, work commencement and work completion.

**6. Invasive Species** To prevent the unintentional introduction or spread of invasive species, the Districts must ensure that all construction equipment be cleaned of mud, seeds, vegetation and other debris before allowed to enter any approved work areas within the waters of the state and NYS DEC regulated Freshwater Wetlands and its Adjacent Areas.

**7. Creosote and Penta Wood Prohibited** The use of wood treated with Pentachlorophenol or creosote is prohibited.

**8. No Interference With Navigation** There shall be no unreasonable interference with navigation by the work herein authorized.

**9. Conformance With Plans** All activities authorized by this permit must be in strict conformance with the approved plans submitted by the applicant or applicant's agent as part of the permit application. Such approved plans were prepared by the S&WCD, NRCS, agent, or permittee.

**10. Conditions Prevail Over Plans** If any condition of this permit conflicts with the approved plans, the permit condition shall prevail over the plans.



**11. Work Supervision by USDA NRCS or S&WCD** All work authorized under this permit shall be done under the supervision of an agent of the U.S. Department of Agriculture, Natural Resources Conservation Service or the County Soil & Water Conservation District.

**12. NRCS Field Office Technical Guide** When applicable, activities authorized herein must be planned, designed, installed, operated, and maintained in strict conformance with the conservation practice criteria, standards and specifications contained within the regionally appropriate and current NRCS Field Office Technical Guides (FOTGs).

**13. Post Permit Sign** The permit sign enclosed with this permit shall be posted in a conspicuous location on the worksite and adequately protected from the weather.

**14. Prohibition Period for Trout** All instream work, as well as any work that may result in the suspension of sediment, is prohibited during the trout spawning and incubation period commencing October 1 and ending April 30, unless prior project-specific approval is granted by the Department.

**15. Turbid Discharges** Visibly turbid discharges from land clearing, grading or excavation activities, or de-watering operations shall not enter the stream, navigable water, or wetland. Prior to entry into stream, navigable water or wetland, any such discharge shall be:

- a. retained in an appropriately maintained upland settling basin;
- b. filtered through crushed stone, sand, straw bales, silt screening (maximum opening size of U.S. Sieve Number 20), etc.; or,
- c. directed to a grassy upland area a sufficient distance from the stream to prevent change in turbidity of the receiving water.

**16. Work Within Project Site or Upland Areas** The storage of construction equipment and materials shall be confined to within the project work site and/or upland areas greater than 100 linear feet distant from the wetland boundary.

**17. Install and Maintain Erosion Controls** Staked straw bales, silt fence or other DEC-approved erosion control measures are to be installed on the downslope edge of any disturbed areas. This barrier to sediments is to be put in place before any disturbance of the ground occurs and is to be maintained in a functional condition until all disturbed ground is heavily vegetated or otherwise stabilized. All erosion control measures intended to stabilize the work site shall be completed by October 1st of any calendar year. If work authorized by this permit cannot be completed by October 1st, interim stabilization measures consisting of erosion control matting or mulching shall be installed by October 1st and maintained in an effective condition until such time as authorized work resumes in the spring. Upon completion of work and satisfactory stabilization of disturbed areas, all erosion controls shall be entirely removed immediately.



18. **Filter Fabric Curtain** A filter fabric (turbidity) curtain weighted across the bottom and suspended at the top by floats shall be positioned to enclose the aquatic work site before commencing the authorized activity. The curtain shall remain in place and in functional condition during in-water operations and remain in place until turbidity inside the curtain no longer exceeds ambient levels. In association with the consultation requirements of Condition #2, this condition may be waived by the Department for certain habitat restoration projects.
19. **Structure or Facility Replacement** The new structure or facility shall not encroach into the waterbody beyond the limits of the old structure or facility to be removed, and if applicable, it shall tie in evenly with and not encroach beyond adjacent property walls.
20. **Concrete Leachate** During construction, no wet or fresh concrete or leachate shall be allowed to escape into any wetlands or waters of New York State, nor shall washings from ready-mixed concrete trucks, mixers, or other devices be allowed to enter any wetland or waters. Only watertight or waterproof forms shall be used. Wet concrete shall not be poured to displace water within the forms.
21. **Culvert Installation** The culvert shall be installed in the dry or in isolation from the stream flow by the installation of a bypass flume or culvert, or by pumping the stream flow around the work area. An exception may be allowed, upon prior consultation with the Department, if the District expects that siltation or turbidity will be insignificant or reduced by installing the culvert in the flowing stream.
22. **Bridge and Culvert Size** The minimum bridge span (abutment to abutment) and culvert diameter or span shall be equal to or greater than 1.25 times the channel bed width. The channel bed width shall be an average width measured at the project location and straight sections of stream upstream and downstream, which are not influenced by structures or representative of unusual channel characteristics. If this condition cannot be met, an individual permit will be required. Notwithstanding the aforementioned, all culverts must be designed to meet appropriate hydraulic capacity and structural integrity criteria.
23. **Culvert Slope** For streams which have a slope of three percent (3%) or less at the project area, the embedded culvert shall be installed with a zero percent (0%) slope. For streams which have a slope of more than 3%, but less than six percent (6%) at the project area, a bottomless culvert or bridge or an embedded bottomed culvert must be installed at the same general stream gradient measured at natural, stable reference reaches. An individual permit is required for projects which deviate from this condition.
24. **Box Culvert Installation** For flat bottom concrete box culverts, the invert of the culvert must be installed a minimum of one foot below the existing streambed elevation. The streambed material that was excavated to accommodate this placement shall then be spread evenly throughout the bottom of the new culvert as practicable.
25. **Round or Oval Pipe Culvert Installation** For round or oval pipe type culverts, the invert must be installed to a depth equal to 20% of the culvert diameter or at least one foot (whichever is greater). The streambed material that was excavated to accommodate this placement shall then be spread evenly throughout the bottom of the new culvert as practicable.
26. **Allowable Culvert Fill Material** Fill associated with the culvert installation and approach material shall be structurally stable and shall be composed of natural material that, if eroded into the watercourse, shall not be detrimental to aquatic life.



27. **Maintain Channel Geometry** The stream channel bed width, depth and bank height immediately upstream and downstream of the of a road crossing site, and any restoration thereof, shall be consistent with the average geometry of the stable stream reference reach.
28. **Stabilize Disturbed Areas** All disturbed stream banks below the normal high water elevation must be graded to a steeper than 1 vertical to 2 horizontal slope, and adequately stabilized (native material preferred). All other areas of soil disturbance above the ordinary high water elevation, or elsewhere, shall be seeded with an appropriate perennial grass seed and mulched with straw within two (2) days of final grading. Mulch shall be maintained until suitable vegetative cover is established. Destroyed bank vegetation shall be replaced appropriate native vegetation.
29. **Removal Of Erosion Controls** Before erosion controls are removed, any sediment that has accumulated at such controls shall be removed to an upland location.
30. **Materials Disposed at Upland Site** Any demolition debris, excess construction materials, and/or excess excavated materials shall be immediately and completely disposed of on an approved upland site more than 100 feet from any regulated freshwater wetland. These materials shall be suitably stabilized so as not to re-enter any water body, wetland, or wetland adjacent area.
31. **State May Require Site Restoration** If upon the expiration or revocation of this permit, the project hereby authorized has not been completed, the applicant shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore the site to its former condition. No claim shall be made against the State of New York on account of any such removal or alteration.
32. **Precautions Against Contamination of Waters** All necessary precautions shall be taken to preclude contamination of any wetland or waterway by suspended solids, sediments, fuels, solvents, lubricants, epoxy coatings, paints, concrete, leachate or any other environmentally deleterious materials associated with the project.
33. **State May Order Removal or Alteration of Work** If future operations by the State of New York require an alteration in the position of the structure or work herein authorized, or if, in the opinion of the Department of Environmental Conservation it shall cause unreasonable obstruction to the free navigation of said waters or flood flows or endanger the health, safety or welfare of the people of the State, or cause loss or destruction of the natural resources of the State, the owner may be ordered by the Department to remove or alter the structural work, obstructions, or hazards caused thereby without expense to the State, and if, upon the expiration or revocation of this permit, the structure, fill, excavation, or other modification of the watercourse hereby authorized shall not be completed, the owners, shall, without expense to the State, and to such extent and in such time and manner as the Department of Environmental Conservation may require, remove all or any portion of the uncompleted structure or fill and restore to its former condition the navigable and flood capacity of the watercourse. No claim shall be made against the State of New York on account of any such removal or alteration.
34. **State Not Liable for Damage** The State of New York shall in no case be liable for any damage or injury to the structure or work herein authorized which may be caused by or result from future operations undertaken by the State for the conservation or improvement of navigation, or for other purposes, and no claim or right to compensation shall accrue from any such damage.



**WATER QUALITY CERTIFICATION SPECIFIC CONDITIONS**

**1. Water Quality Certification** The NYS Department of Environmental Conservation hereby certifies that the subject project will not contravene effluent limitations or other limitations or standards under Sections 301, 302, 303, 306 and 307 of the Clean Water Act of 1977 (PL 95-217) provided that all of the conditions listed herein are met.

**GENERAL CONDITIONS - Apply to ALL Authorized Permits:**

**1. Facility Inspection by The Department** The permitted site or facility, including relevant records, is subject to inspection at reasonable hours and intervals by an authorized representative of the Department of Environmental Conservation (the Department) to determine whether the permittee is complying with this permit and the ECL. Such representative may order the work suspended pursuant to ECL 71- 0301 and SAPA 401(3).

The permittee shall provide a person to accompany the Department's representative during an inspection to the permit area when requested by the Department.

A copy of this permit, including all referenced maps, drawings and special conditions, must be available for inspection by the Department at all times at the project site or facility. Failure to produce a copy of the permit upon request by a Department representative is a violation of this permit.

**2. Relationship of this Permit to Other Department Orders and Determinations** Unless expressly provided for by the Department, issuance of this permit does not modify, supersede or rescind any order or determination previously issued by the Department or any of the terms, conditions or requirements contained in such order or determination.

**3. Applications For Permit Renewals, Modifications or Transfers** The permittee must submit a separate written application to the Department for permit renewal, modification or transfer of this permit. Such application must include any forms or supplemental information the Department requires. Any renewal, modification or transfer granted by the Department must be in writing. Submission of applications for permit renewal, modification or transfer are to be submitted to:

Regional Permit Administrator  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**4. Submission of Renewal Application** The permittee must submit a renewal application at least 30 days before permit expiration for the following permit authorizations: Excavation & Fill in Navigable Waters, Freshwater Wetlands, Stream Disturbance, Water Quality Certification.



**5. Permit Modifications, Suspensions and Revocations by the Department** The Department reserves the right to modify, suspend or revoke this permit. The grounds for modification, suspension or revocation include:

- a. materially false or inaccurate statements in the permit application or supporting papers;
- b. failure by the permittee to comply with any terms or conditions of the permit;
- c. exceeding the scope of the project as described in the permit application;
- d. newly discovered material information or a material change in environmental conditions, relevant technology or applicable law or regulations since the issuance of the existing permit;
- e. noncompliance with previously issued permit conditions, orders of the commissioner, any provisions of the Environmental Conservation Law or regulations of the Department related to the permitted activity.

**6. Permit Transfer** Permits are transferrable unless specifically prohibited by statute, regulation or another permit condition. Applications for permit transfer should be submitted prior to actual transfer of ownership.

### NOTIFICATION OF OTHER PERMITTEE OBLIGATIONS

**Item A: Permittee Accepts Legal Responsibility and Agrees to Indemnification**

The permittee, excepting state or federal agencies, expressly agrees to indemnify and hold harmless the Department of Environmental Conservation of the State of New York, its representatives, employees, and agents ("DEC") for all claims, suits, actions, and damages, to the extent attributable to the permittee's acts or omissions in connection with the permittee's undertaking of activities in connection with, or operation and maintenance of, the facility or facilities authorized by the permit whether in compliance or not in compliance with the terms and conditions of the permit. This indemnification does not extend to any claims, suits, actions, or damages to the extent attributable to DEC's own negligent or intentional acts or omissions, or to any claims, suits, or actions naming the DEC and arising under Article 78 of the New York Civil Practice Laws and Rules or any citizen suit or civil rights provision under federal or state laws.

**Item B: Permittee's Contractors to Comply with Permit**

The permittee is responsible for informing its independent contractors, employees, agents and assigns of their responsibility to comply with this permit, including all special conditions while acting as the permittee's agent with respect to the permitted activities, and such persons shall be subject to the same sanctions for violations of the Environmental Conservation Law as those prescribed for the permittee.

**Item C: Permittee Responsible for Obtaining Other Required Permits**

The permittee is responsible for obtaining any other permits, approvals, lands, easements and rights-of-way that may be required to carry out the activities that are authorized by this permit.



**Item D: No Right to Trespass or Interfere with Riparian Rights**

This permit does not convey to the permittee any right to trespass upon the lands or interfere with the riparian rights of others in order to perform the permitted work nor does it authorize the impairment of any rights, title, or interest in real or personal property held or vested in a person not a party to the permit.



DEPARTMENT OF THE ARMY  
US Army Corps of Engineers, ATTN: CENAN-OP-RU  
Upstate Regulatory Field Office  
1 Buffington St., Building 10, 3<sup>rd</sup> Fl. North  
Watervliet, New York 12189-4000

Upstate New York Section

OCT 09 2014

SUBJECT: Permit Application No. NAN-2013-01201-UCO  
by the Town of Willsboro  
Town of Willsboro, Essex County, New York

Shaun Gilliland, Supervisor  
Town of Willsboro  
5 Farrell Road, PO Box 370  
Willsboro, NY 12996

Dear Mr. Putnam:

This office has reviewed your Joint Application Form dated May 1, 2014, which was submitted by your consultants, ESPC Civil and Environmental Engineering, by letter dated May 1, 2014, and clarifying information submitted by letter dated May 30, 2014, including the attached drawing entitled "Boquet River Non-Point Source Pollution Prevention Improvement Project, U.S. Army Corps of Engineering – Request for Information Plan: Permit# NAN-2013-01201", sheet ACOE.1, prepared by ESPC Civil and Environmental Engineering, and dated May 28, 2014, and in an electronic mail message dated August 20, 2014. The submitted information describes a proposal that would consist of the following:

**The excavation of 2,033 cubic yards of streambed material and the backfill of 2,427 cubic yards of rock and gravel fill material, and the placement of four (4) engineered log jam structures, in 0.2 acres of the Boquet River below its ordinary high water mark (OHWM) to facilitate the stabilization of approximately 350 linear feet of the western bank of the River. Approximately half of the proposed excavation and backfill activities would also occur below the OHWM of Lake Champlain. All excess excavated material would be disposed of in uplands and stabilized to prevent reentry into waters or wetlands. No tree clearing activities to be undertaken for this project would occur from April 1<sup>st</sup> to October 31<sup>st</sup> of any calendar year and all potential habitat areas to be avoided would be demarcated with bright orange construction fencing.**

Based upon the information provided, it appears that your proposed work may be authorized under Department of the Army nationwide general permit number: 13. The nationwide permits are prescribed as a Reissuance of Nationwide Permits in the Federal Register dated February 21, 2012 (77 FR 10184).

The work may be performed without further authorization from this office provided the activity complies with the terms and conditions of the Nationwide Permits (NWP) and the permit conditions listed in Section B, No. 13, Section C, any applicable

PLEASE USE THE ABOVE 18-CHARACTER FILE NUMBER ON ALL CORRESPONDENCE WITH THIS OFFICE



New York District regional conditions, and any applicable regional conditions added by the State of New York. Please note that NWP General Condition No. 12 requires the installation and maintenance of proper soil erosion and sediment controls during construction.

The 2012 Nationwide Permits, including their final regional conditions, water quality certifications, and coastal zone concurrence statements are available at:

[http://www.nan.usace.army.mil/Portals/37/docs/regulatory/geninfo/natp/NWP\\_PN\\_30MAY12.pdf](http://www.nan.usace.army.mil/Portals/37/docs/regulatory/geninfo/natp/NWP_PN_30MAY12.pdf)

Please review and familiarize yourself with all relevant terms and conditions of the nationwide permit prior to proceeding with your project, and subsequently ensure you adhere to all conditions through the duration of the project. If you do not have internet access and require a specific paper copy, please contact the undersigned to request one be mailed to you. Please be sure to have your permit application number readily available when you call.

This verification is valid until March 18, 2017, unless the nationwide permit is modified, reissued, or revoked. This verification will remain valid until March 18, 2017, if the activity complies with the terms of any subsequent modifications of the nationwide permit authorization. If the nationwide permits are suspended, revoked, or modified in such a way that the activity would no longer comply with the terms and conditions of a nationwide permit, and the proposed activity has commenced, or is under contract to commence, the permittee shall have 12 months from the date of such action to complete the activity.

Please note that this nationwide permit (NWP) authorization is based on a preliminary jurisdictional determination (JD), a copy of which is enclosed. A preliminary JD is not appealable. If you wish, prior to commencement of the authorized work you may request an approved JD, which may be appealed, by contacting the New York District, U.S. Army Corps of Engineers for further instruction. To assist you in this decision and address any questions you may have on the differences between preliminary and approved jurisdictional determinations, please review the U.S. Army Corps of Engineers Regulatory Guidance Letter (RGL) No. 08-02, which can also be found at:

<http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl08-02.pdf>

Please note that this determination does not eliminate the need to obtain any other Federal, State or local authorizations required by law for the above described work, including any required permit from the NYSDEC.

In order for us to better serve you, please complete our Customer Service Survey located at:

<http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx>

Any inquiries can be directed to the undersigned at (518) 266-6357.

Sincerely,

A handwritten signature in black ink, appearing to read "John R. Connell". The signature is fluid and cursive, with the first name "John" being particularly prominent.

John R. Connell  
Senior Project Manager  
Upstate New York Section

Enclosures

Cc (via email only):

E. Burns - NYSDEC, Region 5 (Ray Brook)  
T. Saehrig - APA  
V. Putnam - Greater Adirondack RC&D  
E. Sandblom - ESPC  
E. Fitzgerald - Fitzgerald Environmental Associates  
J. Lease III



**DEPARTMENT OF THE ARMY**  
 US Army Corps of Engineers, ATTN: CENAN-OP-RU  
 Upstate Regulatory Field Office  
 1 Buffington St., Building 10, 3<sup>rd</sup> Fl. North  
 Watervliet, New York 12189-4000

CENAN-OP-RU

**NATIONWIDE PERMIT COMPLIANCE CERTIFICATION AND REPORT FORM**

Permittee: Town of Willsboro Permit No. NAN-2013-01201-UCO

Date Permit Issued: OCT 09 2014

Location: Town of Willsboro, Essex County, New York

Within 30 days of the completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the address at the bottom of this form.

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of said permit, and required mitigation was completed in accordance with the permit conditions.

\_\_\_\_\_  
 Signature of Permittee

\_\_\_\_\_  
 Date

Fold this form into thirds, with the bottom third facing outward. Tape it together and mail to the address below or FAX to (518) 266-6366.

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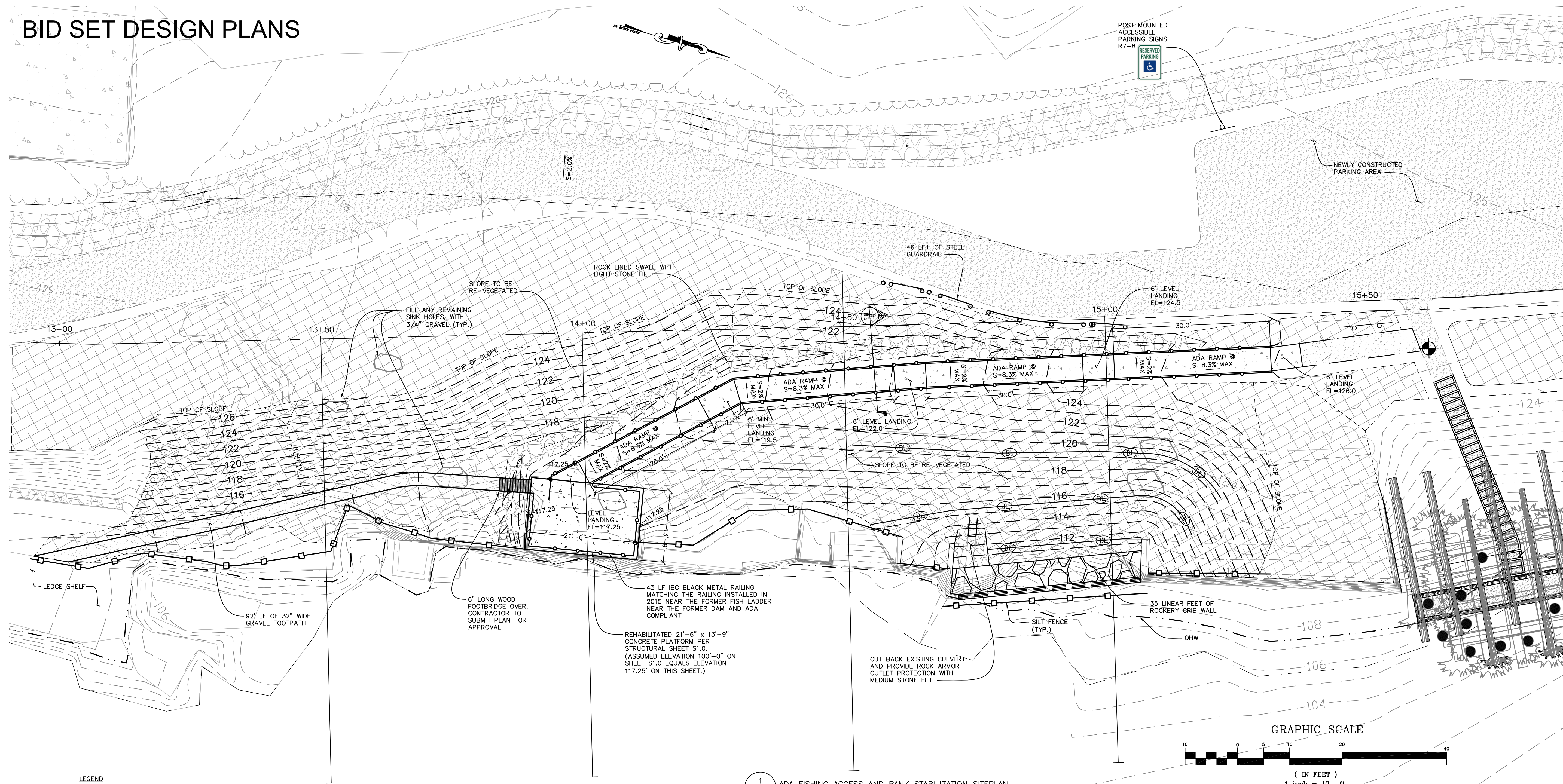
**DEPARTMENT OF THE ARMY**  
 US Army Corps of Engineers  
 ATTN: CENAN-OP-RU  
 Upstate Regulatory Field Office  
 1 Buffington St., Bldg. 10, 3<sup>rd</sup> Fl. North  
 Watervliet, New York 12189-4000



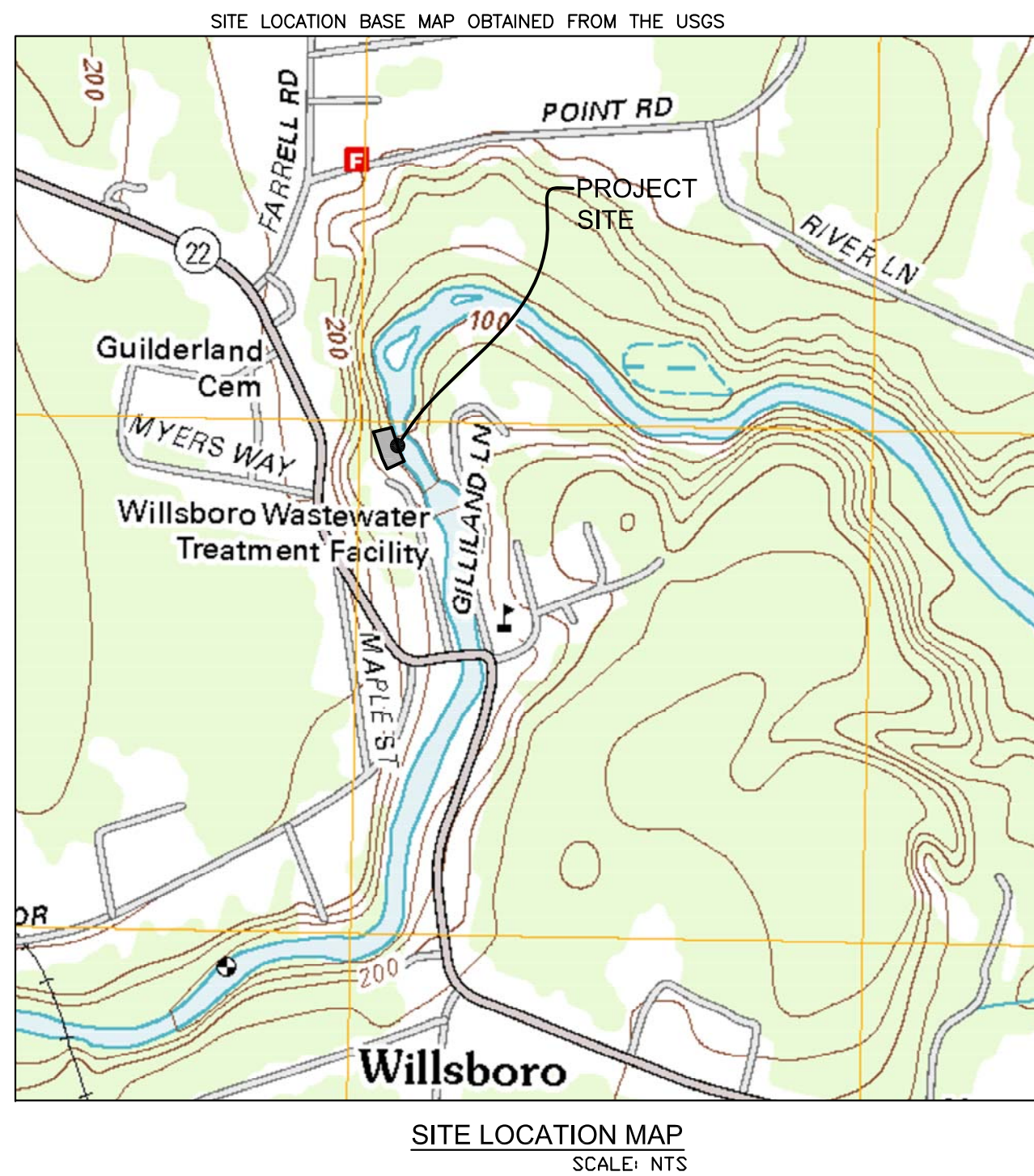
## **DESIGN PLANS**

- SP.1: Civil Site Plan – 7/10/17
- D.1: Details and Notes – 7/10/17
- D.2: Cross Sections – 7/10/17
- S1.0: Structural Design – 4/8/2016

# BID SET DESIGN PLANS



LEGEND	
PROPOSED	EXISTING
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**Reference Deed**  
 Willsboro Citizens Committee, Inc.  
 to  
 Willsboro Industries, Inc.  
 Deed Volume 457 Page 150

**Datum**  
 Vertical Datum Based on NAVD 1988 Datum  
 per GPS observations reduced by  
 NGS OPUS from CORS Stations VTSA, VTUV & NYPB.

1  
 SP.3  
 ADA FISHING ACCESS AND BANK STABILIZATION SITEPLAN  
 1"=10'

- GENERAL CONSTRUCTION NOTES**
- 1) ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE TECHNICAL SPECIFICATIONS FOR THE PROJECT AND THE NEW YORK STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION (LATEST REVISION).
  - 2) PRIOR TO ORDERING MATERIALS OR BREAKING GROUND, THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL CONTRACT DOCUMENTS INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, DESIGN PLANS, TECHNICAL SPECIFICATIONS AND OTHER RELATED DOCUMENTS TO VERIFY AND COORDINATE DIMENSIONS, LAYOUTS, PLACEMENT, AND APPLICABILITY. THE CONTRACTOR SHALL CONDUCT FIELD CHECKS TO VERIFY THE ACCURACY OF DIMENSIONS, TOPOGRAPHY, AND EXISTING CONDITIONS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE INFORMATION SHOWN ON THESE PLANS AND THE CONDITIONS EXISTING IN THE FIELD. IF THE CONTRACTOR FAILS TO REPORT ANY DISCREPANCIES DISCOVERED TO THE PROJECT ENGINEER, THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ERRORS WHICH MIGHT HAVE BEEN AVOIDED THEREBY.
  - 3) THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE NOT BASED ON "DIG SAFE" MARKINGS AND ARE NOT WARRANTED TO BE EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITY STRUCTURES, WHETHER SHOWN OR NOT, AND TO NOTIFY ALL UTILITY COMPANIES TO VERIFY IN THE FIELD THE LOCATION OF THEIR INSTALLATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL UTILITY STRUCTURES FROM DAMAGE. THE EXPENSE OF REPAIR OR REPLACEMENT SHALL BE BORNE SOLELY BY THE CONTRACTOR. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT DIG SAFELY NEW YORK 1-800-962-7962 AND THE TOWN OF WILLSBORO DEPARTMENT OF PUBLIC WORKS 518-963-4556 AT LEAST 72 HOURS PRIOR TO ANY SUBGRADE CONSTRUCTION. THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES, AND UTILITY LINES FROM ANY DAMAGE.
  - 4) JOB-SITE SAFETY CONDITIONS SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR IS RESPONSIBLE FOR THE ADEQUATE BRACING AND/OR SHORING OF STRUCTURAL AND NON-STRUCTURAL ITEMS DURING CONSTRUCTION. THE CONTRACTOR SHALL CONSTRUCT APPROPRIATE FENCES AND BARRIERS AROUND ALL CONSTRUCTION SITES, STORAGE SITES, AND EXCAVATIONS TO SAFE GUARD THE PUBLIC. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE OSHA REGULATIONS.
  - 5) ALL EXCAVATION AND BACKFILL SHALL BE COMPLETED AS SOON AS POSSIBLE. ALL IN-RIVER WORK SHALL BE CONDUCTED IN A DRY CHANNEL. THIS MAY BE ACCOMPLISHED BY USE OF TEMPORARY DIVERSION DAMS PER THE EROSION AND SEDIMENT CONTROL PLAN.
  - 6) THE CONTRACTOR SHALL RESTORE ALL SURFACES TO THEIR ORIGINAL CONDITION AT THE COMPLETION OF CONSTRUCTION. ANY NATIVE RIVER BOTTOM OR RIVER ISLAND MATERIAL THAT IS UTILIZED FOR TEMPORARY DIVERSION SHALL BE RETURNED. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS, BUILDINGS, OR OTHER STRUCTURES RESULTING FROM HIS CONSTRUCTION ACTIVITIES. REPAIRS SHALL BE MADE TO THE SATISFACTION OF THE TOWN OF WILLSBORO, THE PROPERTY OWNER, AND THE ENGINEER AT NO ADDITIONAL COST.
  - 7) THE CONTRACTOR SHALL COOPERATE WITH OTHER CONTRACTORS OR UTILITY COMPANY FORCES WHO MAY BE INVOLVED WITH CONSTRUCTION OF OTHER WORK ADJACENT TO OR IN THE PROXIMITY OF THE LOCATION OF THE PROJECT SITE.
  - 8) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK NECESSARY FOR COMPLETE AND OPERABLE FACILITIES AND UTILITIES.
  - 9) THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING STAGING AREA LOCATIONS.
  - 10) PAYMENT FOR WORK SHOWN ON THESE PLANS EITHER SPECIFICALLY OR INFERRED, BUT NOT INCLUDED IN THE BID FORM, SHALL BE CONSIDERED INCLUDED IN THE PRICE PAID FOR OTHER ITEMS OF WORK.
  - 11) ANY CONFLICTS OR INCONSISTENCIES WITH THE PLANS OR SPECIFICATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.
  - 12) ENGINEER ASSUMES NO RESPONSIBILITY FOR THE CONTINUED PROPER USE OR MAINTENANCE OF THE SYSTEM.

- ADA RAMP REQUIREMENTS:**  
 SHOULD SITE CONSTRAINTS RESULT IN THE NEED TO ALTER THE ADA PATH LAYOUT, THE MINIMUM FOLLOWING ADA REQUIREMENTS MUST BE MAINTAINED:
1. SLOPE AND RISE: THE LEAST POSSIBLE SLOPE SHALL BE USED FOR ANY RAMP. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION SHALL BE 1:12 (8.33%). THE MAXIMUM RISE FOR ANY RUN SHALL BE 30 IN (2.5').
  2. CLEAR WIDTH: THE MINIMUM CLEAR WIDTH OF A RAMP SHALL BE 36 IN (48 IN USED FOR THIS DESIGN).
  3. LEVEL LANDINGS: RAMP SHALL HAVE LEVEL LANDINGS AT BOTTOM AND TOP OF EACH RAMP AND EACH RAMP RUN. LANDINGS SHALL HAVE THE FOLLOWING FEATURES:
    - a. THE LANDING SHALL BE AT LEAST AS WIDE AS THE RAMP RUN LEADING TO IT.
    - b. THE LANDING LENGTH SHALL BE A MINIMUM OF 60 IN (5 FT) CLEAR.
    - c. IF RAMP CHANGE DIRECTION AT LANDINGS, THE MINIMUM LANDING SIZE SHALL BE 60 IN BY 60 IN (5' X 5').
  4. IF A RAMP RUN HAS A RISE GREATER THAN 6 IN OR A HORIZONTAL PROJECTION GREATER THAN 72 IN, THEN IT SHALL HAVE HANDRAILS ON BOTH SIDES. HANDRAILS SHALL HAVE THE FOLLOWING FEATURES:
    - a. IF HANDRAILS ARE NOT CONTINUOUS, THEY SHALL EXTEND AT LEAST 12 IN (305 MM) BEYOND THE TOP AND BOTTOM OF THE RAMP SEGMENT AND SHALL BE PARALLEL WITH THE FLOOR OR GROUND SURFACE.
    - b. THE CLEAR SPACE BETWEEN THE HANDRAIL AND THE WALL SHALL BE 1 - 1/2 IN (38 MM).
    - c. GRIPPING SURFACES SHALL BE CONTINUOUS.
    - d. TOP OF HANDRAIL GRIPPING SURFACES SHALL BE MOUNTED BETWEEN 34 IN AND 38 IN ABOVE RAMP SURFACES.
    - e. ENDS OF HANDRAILS SHALL BE EITHER ROUNDED OR RETURNED SMOOTHLY TO FLOOR, WALL, OR POST.
    - f. HANDRAILS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
  5. CROSS SLOPE AND SURFACES: THE CROSS SLOPE OF RAMP SURFACES SHALL BE NO GREATER THAN 1:50.
  6. EDGE PROTECTION: RAMP AND LANDINGS WITH DROP-OFFS SHALL HAVE CURBS, WALLS, RAILINGS, OR PROJECTING SURFACES THAT PREVENT PEOPLE FROM SLIPPING OFF THE RAMP. CURBS SHALL BE A MINIMUM OF 2 IN (50 MM) HIGH.
  7. OUTDOOR CONDITIONS: OUTDOOR RAMPS AND THEIR APPROACHES SHALL BE DESIGNED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACE.

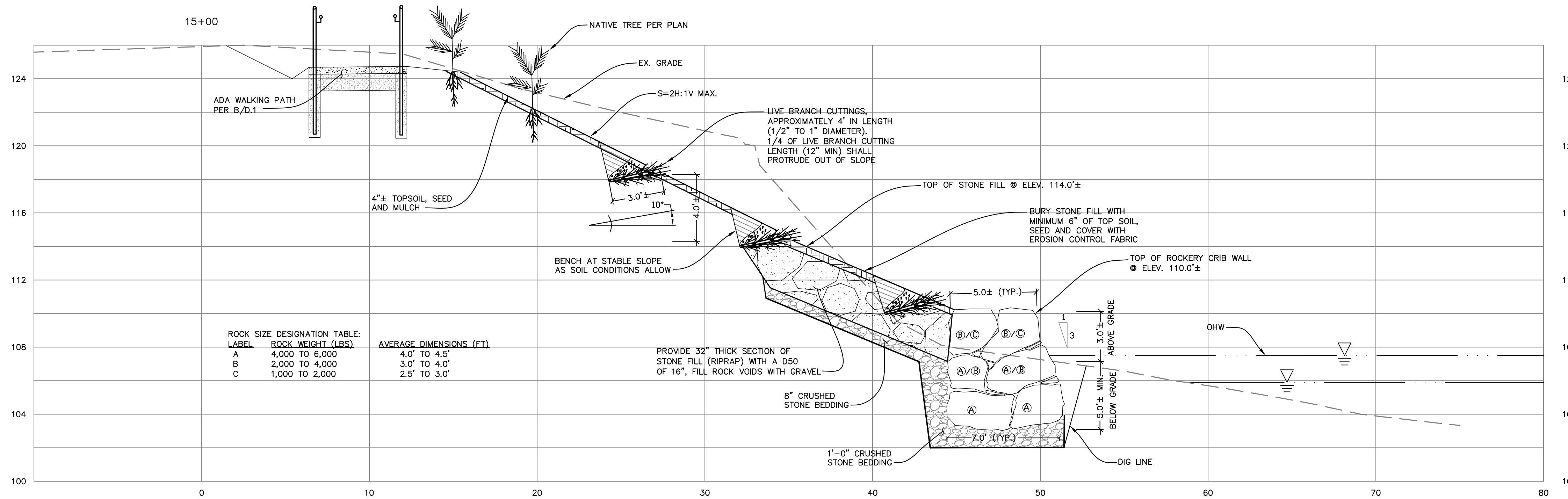
REVISIONS	BY

**ESPFC**  
 CIVIL AND ENVIRONMENTAL ENGINEERING  
 P.O. BOX 2787 / 43 DURKEE STREET, STE 500, PLATTSBURGH, NY 12901  
 WWW.ESPFC-CONSULTING.COM  
 TEL: 518-563-9445 FAX: 518-562-5189

BOQUET RIVER NON-POINT SOURCE POLLUTION  
 PREVENTION IMPROVEMENT PROJECT  
 PHASE II ADA FISHING ACCESS  
 AND BANK STABILIZATION  
 CIVIL SITE PLAN  
 WILLSBORO, NY

DRAWN	SJD
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DATE	7/10/17
SCALE	1"=10'
JOB NO.	
KAS #: 804130093	ESPFC #: 20121237
SHEET 1 OF 4	

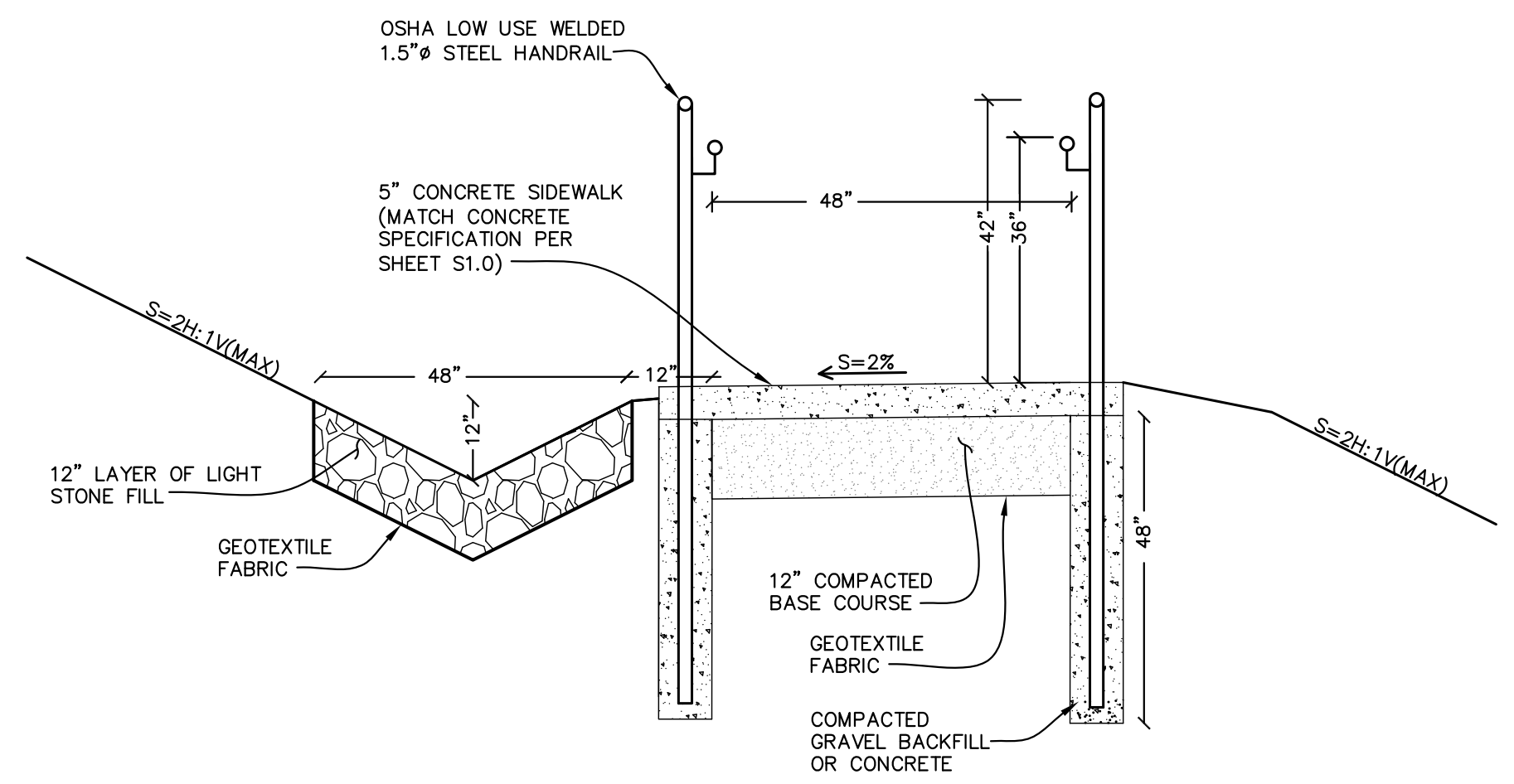
SP.1



ROCK SIZE DESIGNATION LABEL	ROCK WEIGHT (LBS)	AVERAGE DIMENSIONS (FT)
A	4,000 TO 6,000	4.0' TO 4.5'
B	2,000 TO 4,000	3.0' TO 4.0'
C	1,000 TO 2,000	2.5' TO 3.0'

**A** TYPICAL BANK STABILIZATION CROSS SECTION @ STATION 15+00  
D.1 1"=4'

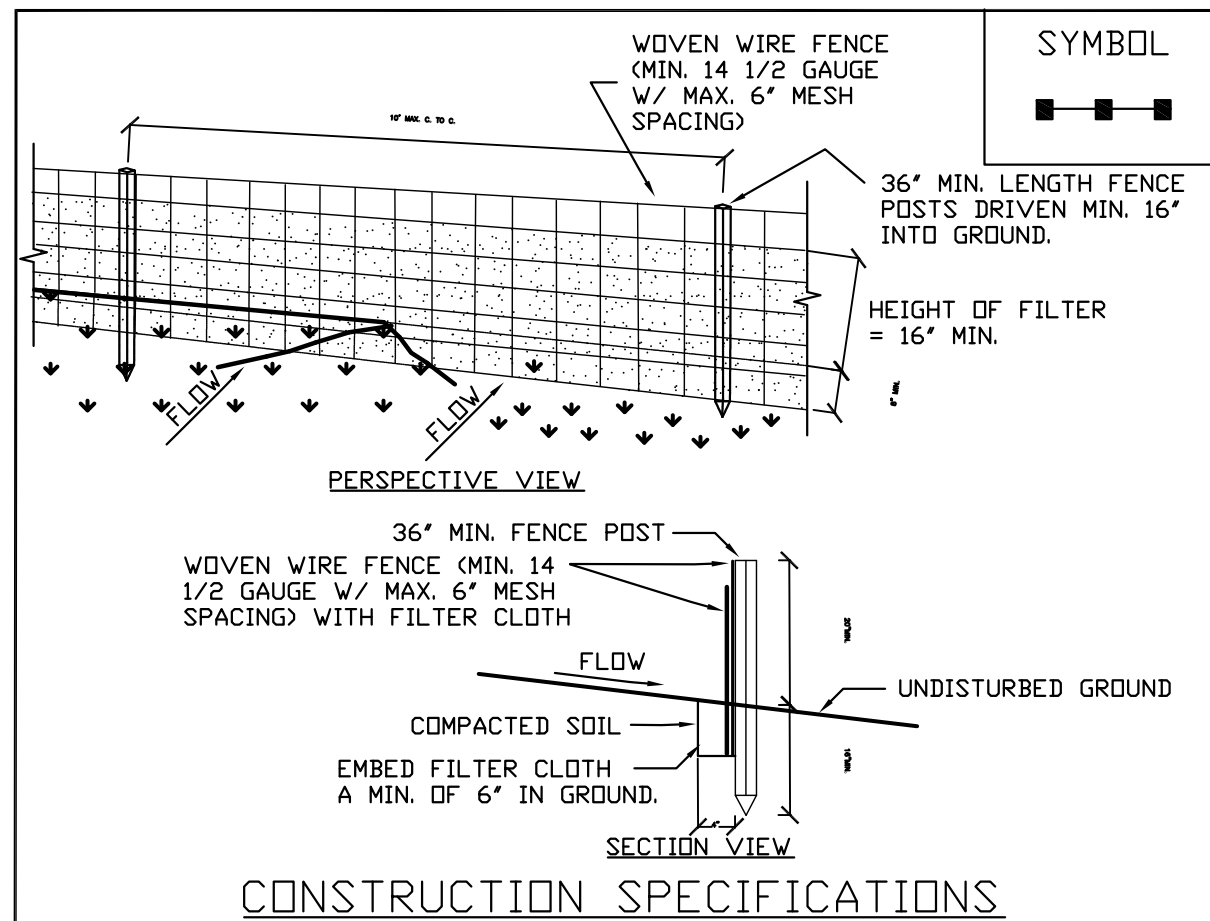
- ROCKERY CRIB WALL NOTES:**
- ROCK SELECTION:**
- ROCKS MUST BE CUBICAL, TABULAR, OR RECTANGULAR SO THAT THEY REST UPON EACH OTHER IN THE WALL.
  - ROCKS MUST BE HARD, STRONG, RESISTANT TO WEATHERING, AND RING WHEN STRUCK WITH A GEOLOGY HAMMER.
  - ROCKS MUST BE FREE OF MAJOR WEAK ZONES SUCH AS CRACKS, SEAMS, AND FOLIATION.
- ROCK PLACEMENT RECOMMENDATIONS:**
- FIRST LAYER OF ROCK SHALL BE PLACED ON A FIRM, UNYIELDING BASE LAYER CONSISTING OF A 12" THICK BEDDING MATERIAL, COMPACTED TO 95% MAX DENSITY AT OPTIMUM MOISTURE CONTENT PER ASTM 1557. THE FIRST LAYER OF ROCK SHOULD FULLY CONTACT THE BASE LAYER, WHICH MAY BE ACCOMPLISHED BY DROPPING OR POUNDING THE ROCK INTO THE BASE.
  - AS THE WALL IS CONSTRUCTED, THE ROCKS SHOULD BE PLACED SO THAT THERE ARE NO CONTINUOUS JOINT SEAMS IN THE LATERAL AS WELL AS VERTICAL.
  - THE ROCK ABOVE THE FIRST LAYER SHOULD BE PLACED SO THAT THERE ARE AT LEAST TWO ROCKS BELOW IT. ROCKS SHALL BE PLACED SO THAT THEY BEAR SOLELY ON THE ROCKS BELOW.
  - ROCKS SHOULD BE PLACED SO THAT THE LONG DIMENSION IS PLACED INTO THE SLOPE (PERPENDICULAR TO THE SLOPE).
  - ROCKS SHOULD BE SET SUCH THAT THERE ARE NO SLOPING FACES OUT OF THE ROCK WALL, WHICH COULD CREATE A PLANE OF WEAKNESS OR FAILURE.
  - THE BATTER (INCLINATION) OF THE FRONT FACE (FF) OF THE ROCK WALL SHALL BE SET BACK AT A RATIO OF 3V:1H.
  - VOIDS OF 6" AND GREATER SHALL BE CHINKED, AND CHINKING ROCKS SHOULD NOT BE MOVABLE BY HAND. CHINKING ROCKS SHALL BE OF THE SAME QUALITY AS THE LARGE ROCKS.



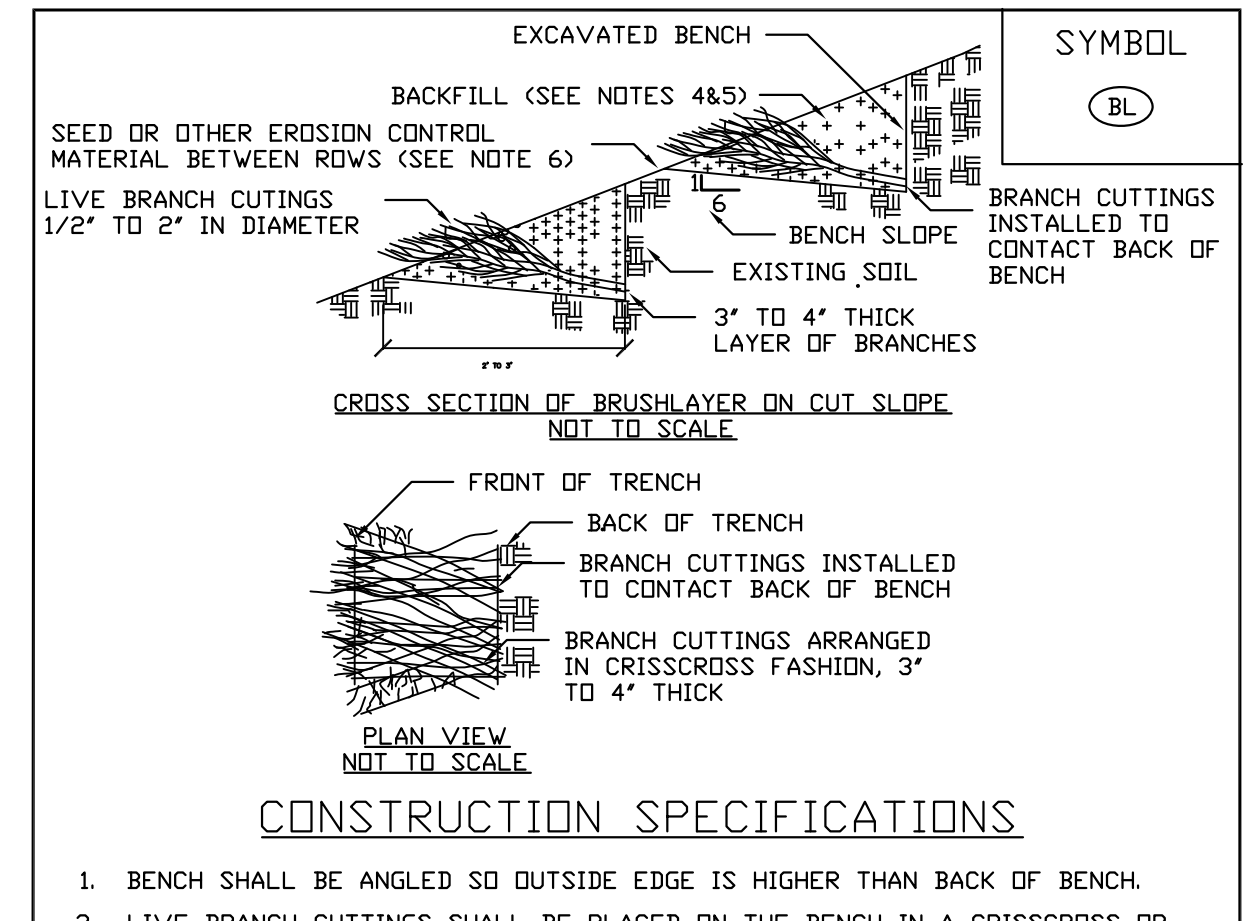
**B** ADA ACCESS PATH TYPICAL SECTION  
D.1 1"=2'

**PLANTING AREA 2: PLANT SCHEDULE**

Planting Density Calculator	Common Name	Taxonomic Name	Form	Size	Quantity
Project: Boquet River, Willisboro, NY	American elm	<i>Ulmus americana</i>	1 or 2 gal. cont.	4-5'	30
	Cottonwood	<i>Populus deltoides</i>	1 or 2 gal. cont.	4-5'	30
Planting Area (acres): 0.25	Elderberry	<i>Sambucus canadensis</i>	1 gal. cont.	2-3'	40
Planting Area (sqft): 10,890	Red maple	<i>Acer rubrum</i>	1 or 2 gal. cont.	4-5'	30
Target Spacing (ft): 8	Red osier dogwood	<i>Cornus sericea</i>	1 gal. cont.	2-3'	40
Quantity Needed: 217	White Ash	<i>Fraxinus americana</i>	1 or 2 gal. cont.	4-5'	30
Density (plants/acre): 867			Total Trees/Shrubs:		200



- CONSTRUCTION SPECIFICATIONS**
- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER 'T' OR 'U' TYPE OR HARDWOOD.
  - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
  - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
  - PREFABRICATED UNITS SHALL BE GEDFAB, ENVIRDFENCE, OR APPROVED EQUIVALENT.
  - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN 'BULGES' DEVELOP IN THE SILT FENCE.
- U.S. DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE  
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE
- SILT FENCE**



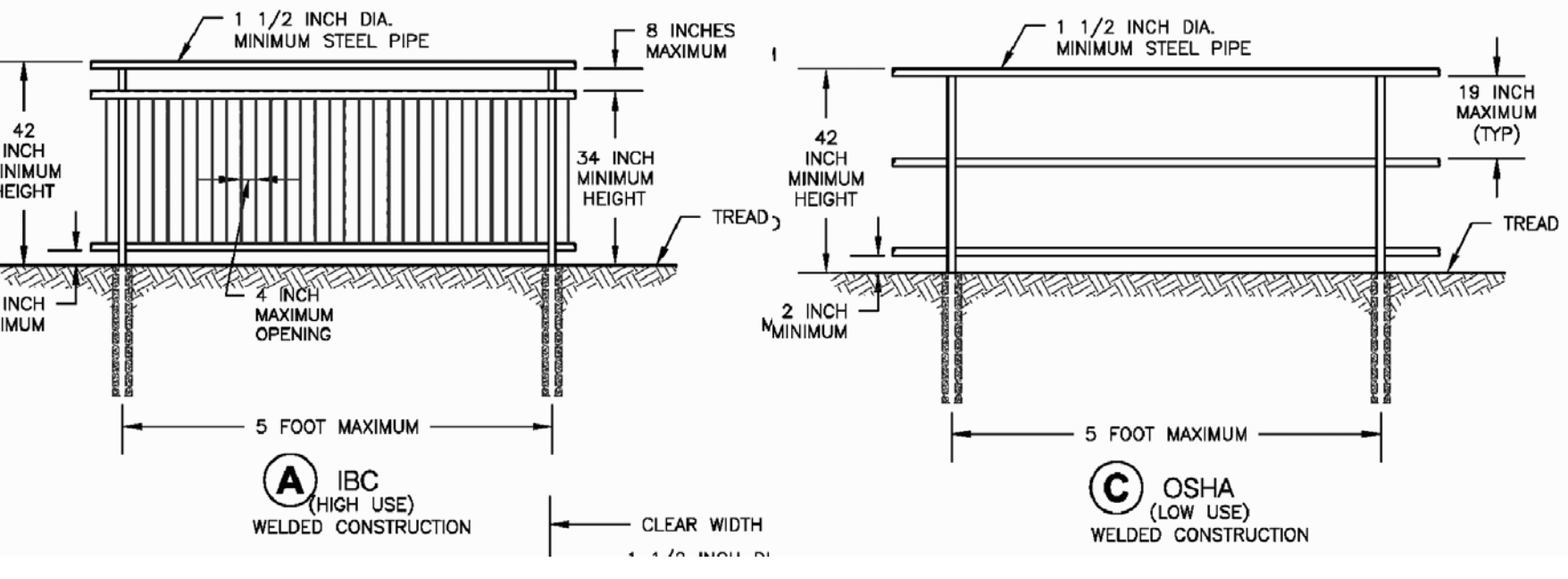
- CONSTRUCTION SPECIFICATIONS**
- BENCH SHALL BE ANGLED SO OUTSIDE EDGE IS HIGHER THAN BACK OF BENCH.
  - LIVE BRANCH CUTTINGS SHALL BE PLACED ON THE BENCH IN A CRISSCROSS OR OVERLAP CONFIGURATION, 3' TO 4' THICK.
  - GROWING TIPS SHALL BE ALIGNED OUT OF THE SLOPE FACE AND SHALL EXTEND SLIGHTLY BEYOND THE FILL AREA.
  - FILL EACH LOWER BENCH WITH SOIL EXCAVATED FROM THE BENCH ABOVE. TOP BENCH TO BE BACKFILLED WITH INITIAL EXCAVATION.
  - PLACE BACKFILL ON TOP OF BRANCHES AND HAND TAMP IN 6" LIFTS TO REDUCE AIR POCKETS.
  - SEED OR OTHER EROSION CONTROL MATERIAL SHALL BE USED BETWEEN THE ROWS AS STATED IN THE CONTRACT DOCUMENTS.
  - BRUSHLAYER BENCHES SHALL BE FROM 3' TO 5' VERTICAL APART, DEPENDING ON SLOPE, AS SHOWN ON THE PLANS MEASURED BETWEEN FRONT EDGE OF BENCHES.
- USDA - NATURAL RESOURCES CONSERVATION SERVICE  
NEW YORK STATE DEPARTMENT OF TRANSPORTATION  
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE
- BRUSH LAYER**

**CONSTRUCTION SPECIFICATIONS**

- ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED SEDIMENT CONTROL PLAN UNTIL THEY ARE PERMANENTLY STABILIZED.
  - ALL SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED SEDIMENT CONTROL PLAN AND THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS".
  - TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNT NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS.
  - AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL.
  - AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF FOUR INCHES PRIOR TO PLACEMENT OF TOPSOIL.
  - ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
  - ALL FILL TO BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
  - EXCEPT FOR APPROVED LANDFILLS, FILL MATERIAL SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOIL, OR OTHER FOREIGN OR OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
  - FROZEN MATERIALS OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED IN FILLS.
  - FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
  - ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
  - SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
  - ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
  - STOCKPILES, BORROW AREAS AND SPOIL AREAS SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATION.
- U.S. DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE  
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE
- LANDGRADING SPECIFICATIONS**

**EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) PLAN NOTES**

- 1.1 PROJECT DESCRIPTION**  
THIS PROJECT INVOLVES THE CONSTRUCTION OF A CONCRETE ADA ACCESS PATH, REHABILITATION/CONSTRUCTION OF A CONCRETE PLATFORM, AND THE TEMPORARY AND PERMANENT MEASURES TO STABILIZE AN ERODED PORTION OF THE RIVER BANK. RIVER BANK STABILIZATION WORK INCLUDES EXCAVATION TO RE-GRADE THE BANK TO A 2H:1V SLOPE, CONSTRUCTION OF A ROCKERY CRIB WALL AT THE BASE OF THE RIVER BANK, INSTALLATION OF 3 BRUSH LAYERS ALONG UPPER BANK, AND NATIVE LANDSCAPE PLANTINGS.
- THE TOTAL AREA OF DISTURBANCE IS APPROXIMATELY 0.25 ACRES.
- 1.2 SITE INVENTORY**  
THE SUBJECT PROPERTY HAS AN INDUSTRIAL HISTORY AS A PAPER MILL. DEBRIS, REFUSE, HISTORIC FOUNDATIONS, AND COAL ASH ARE LOCATED THROUGHOUT THE SITE.
- 1.2.1 TOPOGRAPHY**  
THE TOPOGRAPHY OF THE PROJECT AND ADJACENT AREA CONSISTS OF STEEP SLOPES AND RIVER BANKS WITH TERRACED AND BENCH AREAS.
- 1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MANMADE WATER FEATURES**  
THE BOQUET RIVER RUNS THROUGH THE PROJECT SITE. CONSTRUCTION IS PROPOSED BELOW THE ORDINARY HIGH WATER MARK OF THE RIVER.
- 1.2.3 VEGETATION**  
THE VEGETATION IN THE PROJECT AREA CONSISTS MAINLY OF HARD WOOD AND SOFT WOOD TREES, SHRUBS, AND UNDERGROWTH. THE IMPACT TO VEGETATION WILL BE LIMITED TO THAT WHICH IS DISTURBED FOR THE CONSTRUCTION OF PROPOSED SITE IMPROVEMENTS. A LANDSCAPING AND EROSION CONTROL PLAN WILL REESTABLISH AND ENHANCE VEGETATION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
- 1.2.4 SOILS**  
GENERAL DESCRIPTIONS OF SOILS OBSERVED AT THE SITE:
- COARSE TO VERY FINE BLACK CINDER/ASH, FRAGILE AND COMPACTABLE.
  - MEDIUM TO COARSE BROWN SAND, FRAGILE TO FIRM.
  - VERY FINE COMPACTED WHITE WOLLASTONITE TAILINGS.
  - BROWN /GRAY SILT WITH SOME SAND.
  - DENSE CHUNKY WOLLASTONITE WITH MINE TAILINGS AND WOOD MIXED IN.
- 1.3 JURISDICTIONAL DETERMINATION**  
THIS PROJECT WILL DISTURB LESS THAN 1 ACRE, AND WILL INCLUDE WORK NEXT TO AND WITHIN THE BOQUET RIVER, WHICH HAS BEEN DESIGNATED BY THE STATE TO BE A SCENIC AND RECREATIONAL RIVER CORRIDOR. THIS PROJECT WILL FALL UNDER THE JURISDICTIONS OF THE ARMY CORPS OF ENGINEERS, ADIRONDACK PARK AGENCY, NYSDEC, ESSEX COUNTY SOIL AND WATER CONSERVATION DISTRICT, AND THE TOWN OF WILLISBORO.



**C** U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE RAILING SYSTEM DETAIL (STD 937-10-01)  
D.1

REVISIONS	BY

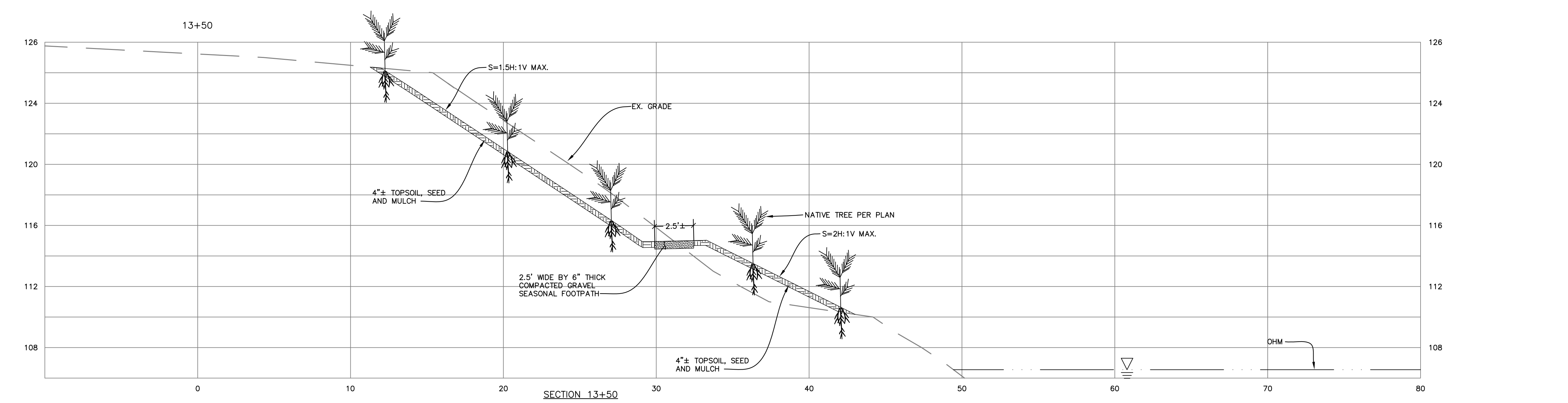
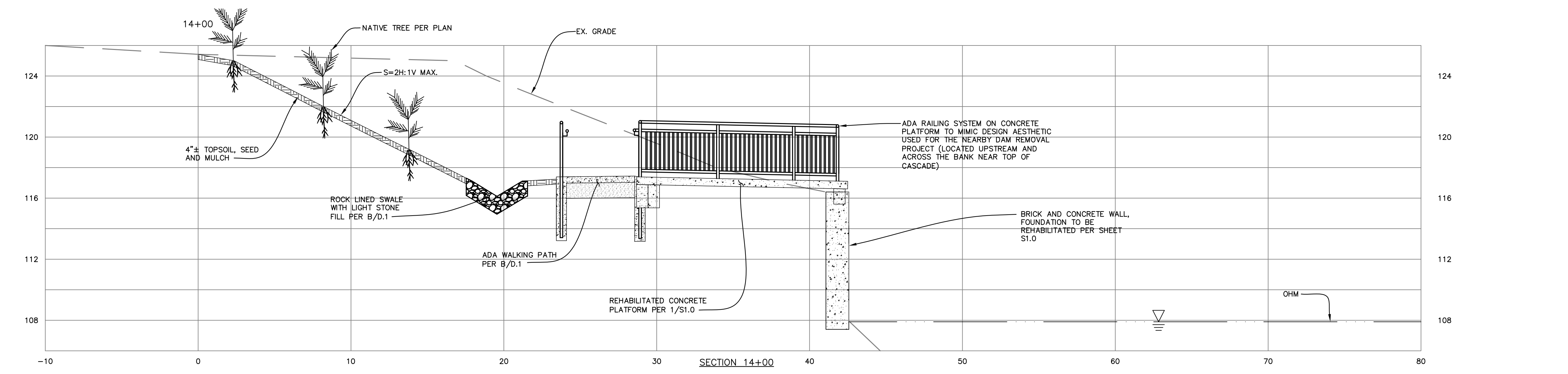
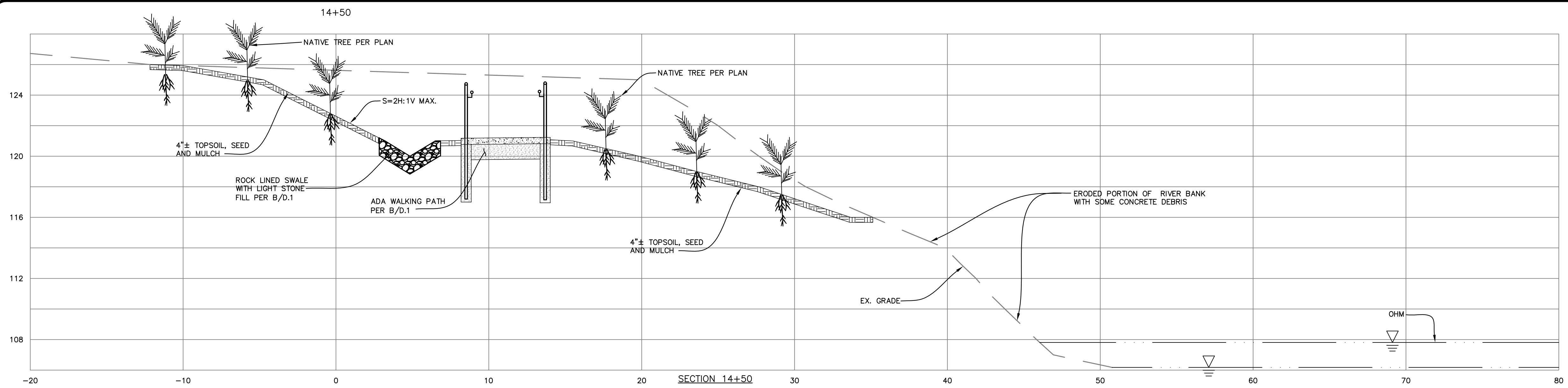
**ESPC**  
CIVIL AND ENVIRONMENTAL ENGINEERING  
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TEL: 518-563-9445 FAX: 518-562-5189

BOQUET RIVER NON-POINT SOURCE POLLUTION  
PREVENTION IMPROVEMENT PROJECT  
PHASE II ADA FISHING ACCESS  
AND BANK STABILIZATION  
DETAILS AND NOTES  
WILLISBORO, NY

DRAWN	SJD
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SCALE	AS SHOWN
JOB NO.	
KAS #: 804130093	ESPC #: 20121240
SHEET 2 OF 4	

**BID SET  
DESIGN PLANS**

**D.1**



REVISIONS	BY

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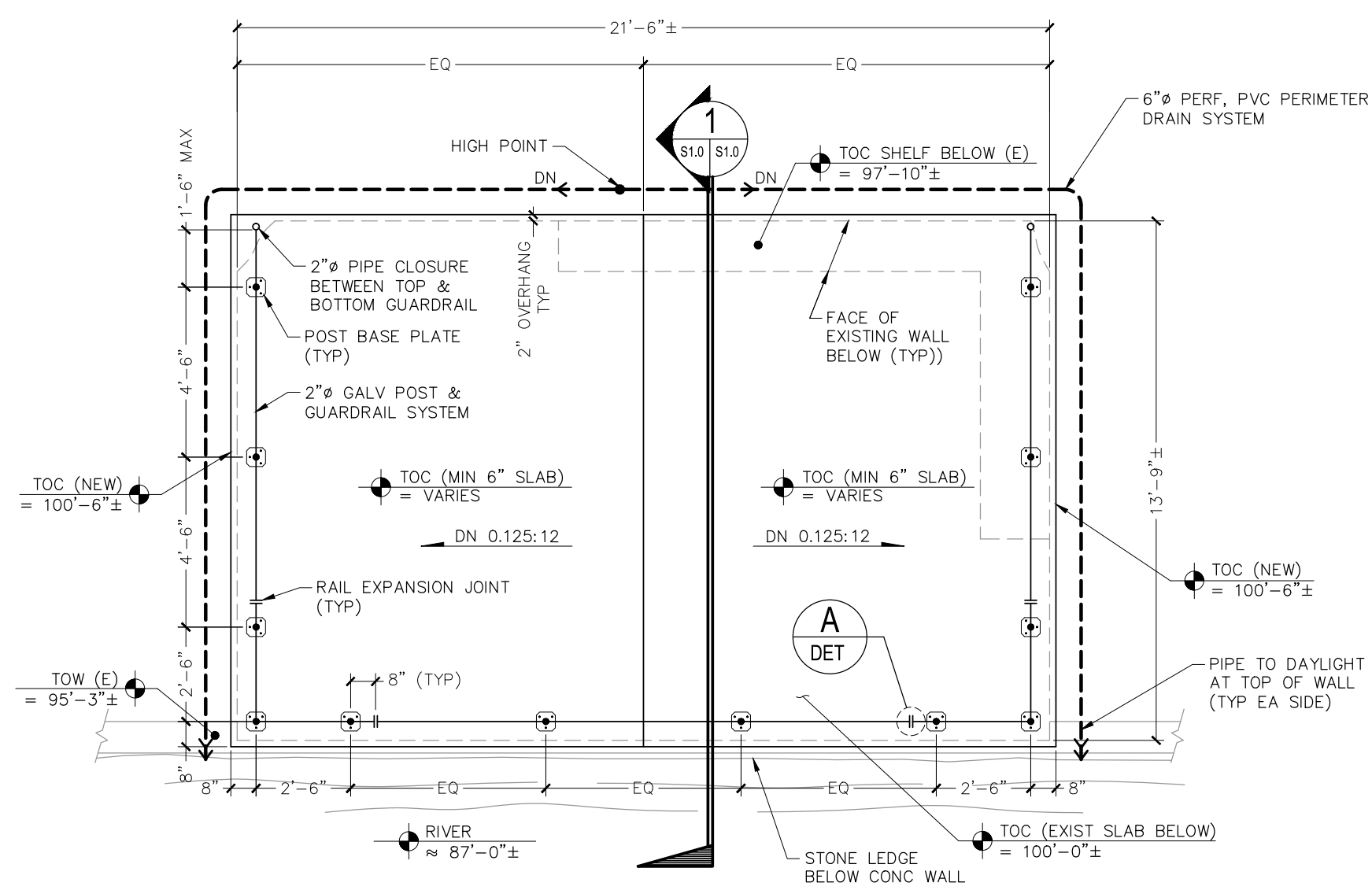
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SHEET 3 OF 4	

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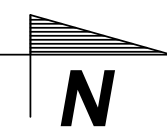
D.2





PLAN: PLATFORM

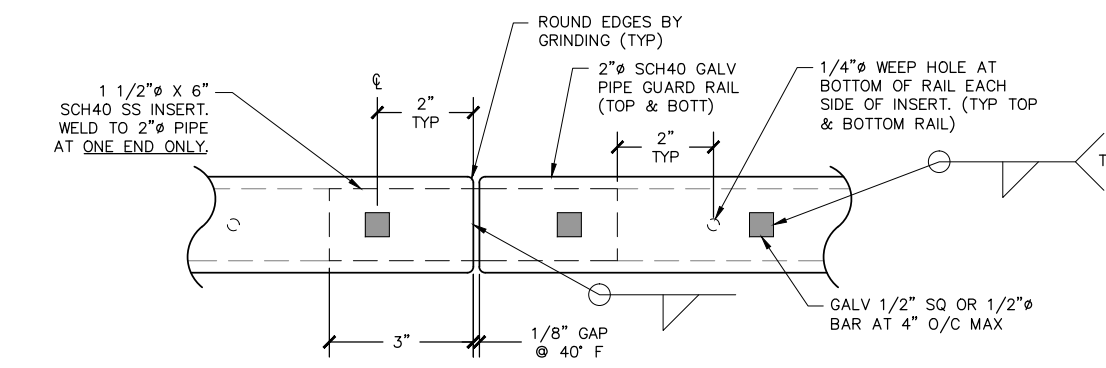
SCALE: 1/4" = 1'



**PROJECT SCOPE**

PROJECT IS INTENDED TO REHABILITATE AND RE-USE EXISTING STONE, BRICK AND CONCRETE FOUNDATION STRUCTURE TO CREATE A NEW OBSERVATION AND FISHING PLATFORM. IN ADDITION TO OTHER WORK SPECIFIED/DETAILED ON THIS SHEET CONTRACTOR SHALL:

- EXCAVATE AROUND EXISTING STRUCTURE AND CLEAN WALLS (REMOVE DIRT) TO EXPOSE BELOW GRADE SURFACES ON (3) SIDES AND TO PERMIT INSPECTION BY THE ENGINEER. TAKE PRECAUTIONS TO PREVENT UNDERMINING BOTTOM OF STRUCTURE AND DO NOT EXCAVATE BELOW BOTTOM OF WALL.
- DEMOLISH AND REMOVE CONCRETE FROM SMALL AREA (36" X 36" +/-) AT CENTER OF EXISTING SLAB TO EXPOSE "FILL" MATERIAL BELOW (IF ANY) AND TO PERMIT INSPECTION BY THE ENGINEER. TAKE PRECAUTIONS TO PREVENT WATER FROM ENTERING THE OPENING UNTIL OPENING CAN BE RESEALED.
- CAREFULLY REMOVE DETERIORATED AND UNSOUND BRICK AND/OR CONCRETE FROM SIDES OF STRUCTURE (ABOVE AND BELOW GRADE). CAREFULLY (TO PREVENT DAMAGE TO STRUCTURE) REMOVE ALL BOLTED STEEL ELEMENTS AND CUT BACK PROTRUDING STEEL EMBEDMENTS SO EXPOSED STEEL IS RECESSED A MINIMUM OF 6" INTO THE WALL/SLAB. PATCH ALL WALL Voids WITH APPROPRIATE MATERIALS; SUBJECT TO ACCEPTANCE (OF PROPOSED MATERIAL AND PROCESS) BY THE ENGINEER.
- ROUTER OUT (1" DEEP) AND REPOINT ALL MORTAR JOINTS THAT SHOW SIGNS OF DETERIORATION (ABOVE AND BELOW GRADE).
- CLEAN AND PREP WALL SURFACES (3 SIDES), ACCORDING TO MANUFACTURER RECOMMENDATIONS, BEFORE APPLYING BITUMINOUS WATERPROOF MEMBRANE TO WALLS BELOW GRADE.



A RAIL EXP JOINT  
DET SCALE: 3" = 1'

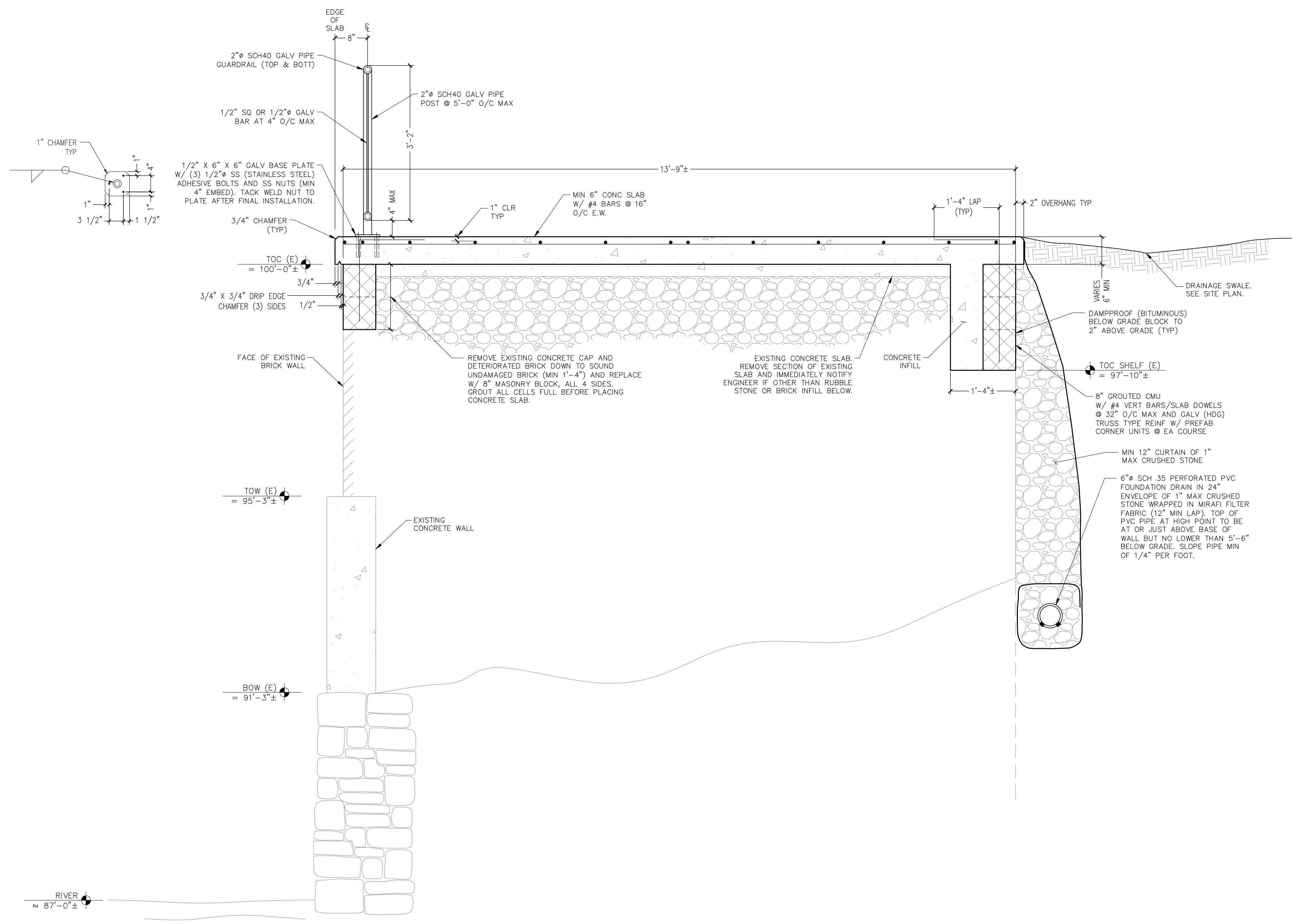
**STRUCTURAL BASIS OF DESIGN**

- CODES AND STANDARDS**  
CONSTRUCTION TO COMPLY WITH THE REQUIREMENTS/RECOMMENDATIONS FOUND IN THE FOLLOWING CODES AND STANDARDS UNLESS OTHERWISE SPECIFIED IN THESE DOCUMENTS.
- BUILDING CODE: NY STATE FIRE PREVENTION AND BUILDING CODE 2010
  - STEEL: AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), AMERICAN WELDING SOCIETY (AWS)
    - AISC 325-05: STEEL CONSTRUCTION MANUAL, 13TH ED.
    - AWS D1.1-08: STRUCTURAL WELDING CODE - STEEL
  - CONCRETE: AMERICAN CONCRETE INSTITUTE (ACI)
    - ACI 318-05: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
    - MASONRY: AMERICAN CONCRETE INSTITUTE/AMERICAN SOCIETY OF CIVIL ENGINEERS
      - ACI 530-05/ASCE 5-05: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
      - ACI 530.1-05/ASCE 6-05: SPECIFICATIONS FOR MASONRY STRUCTURES
- DESIGN LOADS**
- LIVE LOAD 100 PSF
- MATERIALS & PRODUCTS**
- A. CRUSHED STONE: UNIFORMLY GRADED CLEAN, HARD CRUSHED STONE AS FOLLOWS:
 

SIEVE DESIGNATION	% PASSING
1 1/2"	100
1"	90-100
3/4"	0-15
3/8"	0-5
  - B. CONCRETE (CIP) - DO NOT USE ADMIXTURES CONTAINING CALCIUM CHLORIDE:
    - ASTM C150, TYPE I PORTLAND CEMENT, 3/4" MAX CONCRETE AGGREGATE (PER ASTM C33); POTABLE WATER
    - ADMIXTURES: AIR ENTRAINMENT AGENT (ASTM C260), WATER REDUCING AGENT (ASTM C494; TYPE A-MID RANGE, TYPE F-HIGH RANGE), SET ACCELERATOR (ASTM C494 - TYPE C)
    - WALLS, INFILL, EXTERIOR SLABS - 3500 PSI (MIN) NORMAL WEIGHT CONCRETE WITH MAXIMUM W/C RATIO OF 0.50, 4 TO 6% AIR
  - C. CONCRETE MASONRY UNITS (CMU): NORMAL WEIGHT BLOCK, ASTM C90, GRADE N, TYPE 1 (MIN 2000 PSI COMPRESSIVE STRENGTH).
  - D. MORTAR: ASTM C270, TYPE M (2500 PSI).
  - E. GROUT (MASONRY): ASTM C476 (MIN 2000 PSI COMPRESSIVE STRENGTH)
  - F. REINFORCEMENT STEEL: ASTM A615, GRADE 60 (DEFORMED BARS)
  - G. MASONRY JOINT REINFORCEMENT: ASTM A951-02 GALVANIZED IN CONFORMANCE WITH ASTM A153
  - H. STEEL PIPE ASTM A53, TYPE E OR S, GRADE B (FY=35 KSI), GALVANIZED PER ASTM A123.
  - I. BOLTS: ANCHOR BOLT (ROD) - SS (STAINLESS STEEL) PER ASTM F593 - AISI 304/316
  - J. NUTS/WASHERS: STANDARD NUTS AND/OR WASHERS TO MATCH TYPE AND GRADE OF BOLT.

**PROCEDURES & PRACTICE**

- GENERAL NOTES**
- DRAWINGS ARE DRAWN TO AN APPROXIMATE SCALE. DO NOT SCALE DRAWINGS TO DETERMINE STRUCTURAL MEMBER SIZES, LENGTHS OR SPACING.
- EXISTING CONDITIONS**
- EXISTING DIMENSIONS/ELEVATIONS ARE APPROXIMATE AND EXISTING CONSTRUCTION, DETAILED ON DRAWINGS, IS BASED ON: A LIMITED INSPECTION, REASONABLE ASSUMPTIONS AND "BEST AVAILABLE INFORMATION" AT TIME OF DESIGN. CONTRACTOR TO VISIT THE SITE PRIOR TO ORDERING, FABRICATING OR INSTALLING/CONSTRUCTING STRUCTURAL ELEMENTS/SYSTEMS, TO VERIFY EXISTING DIMENSIONS, ELEVATIONS AND CONDITIONS AFFECTING WORK SHOWN. NOTIFY ENGINEER IMMEDIATELY OF SIGNIFICANT DISCREPANCIES AND CONFLICTS WITH OR DEVIATIONS FROM CONTRACT DOCUMENTS (DRAWING) AND/OR THE PRESENCE OF ANY UNFORESEEN CONDITIONS THAT MIGHT IMPACT THE PERFORMANCE OF STRUCTURAL SYSTEMS/COMPONENTS. AWAIT FURTHER INSTRUCTIONS BEFORE PROCEEDING.
- DEMOLITION**
- THE EXTENT OF THE DEMOLITION WORK IS INDICATED ON THE DRAWINGS. CONTRACTOR SHALL VISIT THE SITE (PRIOR TO SUBMITTING A BID) TO VERIFY THAT DEMOLITION CAN BE PERFORMED IN ACCORDANCE WITH THESE DOCUMENTS WITHOUT HINDERANCE OR ENCUMBRANCE.
  - CONFORM TO ALL APPLICABLE CODES AND REGULATIONS FOR THE DEMOLITION OF STRUCTURES AND FOR ENSURING THE SAFETY OF PERSONS AND ADJACENT STRUCTURES.
  - ALL DEMOLISHED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROPERTY AND DISPOSED OF IN A LEGAL, ENVIRONMENTALLY SAFE MANNER.
- FOUNDATION/CONCRETE**
- SLAB REINFORCEMENT TO BE CONTINUOUS. PROVIDE MINIMUM 32" LAP AT SPICE LOCATIONS AND OFFSET ADJACENT SPICES BY 48" (MIN).
  - FOLLOW AMERICAN CONCRETE INSTITUTE RECOMMENDATIONS (ACI 308 - HOT WEATHER CONCRETE AND ACI 306 - COLD WEATHER CONCRETE) WHEN CONCRETE IS TO BE PLACED AT TEMPERATURES ABOVE 90° OR BELOW 40°.
  - ALL CONCRETE SHALL BE PROTECTED AND CURED FOR A MINIMUM OF 7 DAYS USING "WET CURE" BY FLOODING OR CONTINUOUS SOAKING.
- REINFORCED MASONRY CONSTRUCTION**
- WHERE AIR TEMPERATURES ARE OR ARE EXPECTED TO FALL BELOW 40 DEGREES (F) OR RISE ABOVE 90 DEGREES (F) OR WHERE MASONRY CONSTRUCTION IS EXPOSED TO EXCESSIVE WIND AND/OR RAIN, MODIFY CONSTRUCTION PROCEDURES AND PROTECT (BY TENTING, HEATING, ETC.) WORK FROM THE ELEMENTS IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICES AND THE CODES NOTED ABOVE.



1 SECTION  
SCALE: 3/4" = 1'

REVISIONS	BY

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**BOQUET RIVER NON-POINT SOURCE POLLUTION PREVENTION IMPROVEMENT PROJECT**  
PHASE II ADA FISHING ACCESS

**STRUCTURAL DESIGN**  
WILLISBORO, NY

DRAWN	FMP
CHECKED	RVD
DATE	4/8/16
SCALE	AS NOTED
JOB NO.	KAS # 804130093 ESPC # 20121237
SHEET	1 OF 1

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