



**TOWN OF RIVERHEAD  
SUFFOLK COUNTY, NEW YORK**

**2023 ANNUAL CONSTRUCTION  
CONTRACT**

**APRIL 2023**

Prepared By:  
Engineering Department  
Town of Riverhead  
1295 Pulaski Street  
Riverhead, NY 11901  
(631) 727-3200 Ext. 201

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**TOWN OF RIVERHEAD  
NOTICE TO BIDDERS**

Sealed bids for **ANNUAL CONSTRUCTION CONTRACT** will be received by the Town Clerk of the Town of Riverhead at Town Hall, 200 Howell Avenue, Riverhead, New York, 11901, until **11:00 a.m.** on **April 27, 2023**, at which time all bids received shall be opened and read aloud.

Bid Specifications and/or Plans may be obtained by visiting the Town of Riverhead website at [www.townofriverheadny.gov](http://www.townofriverheadny.gov) on or after **April 13, 2023**. Click on "Bid Requests" and follow the instructions to register.

**BY ORDER OF THE TOWN BOARD  
OF THE TOWN OF RIVERHEAD**

**DIANE M. WILHELM, TOWN CLERK**

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## **INSTRUCTIONS TO BIDDERS**

### **1. RECEIPT AND OPENING OF BIDS**

Pursuant to Town Board Resolution, the Town of Riverhead invites bids on the forms herein provided for the 2023 Annual Construction Contract, with associated time, date and place indicated in the Notice to Bidders.

### **2. FORM, PREPARATION AND PRESENTATION OF PROPOSAL**

In submitting the bid, the bid sheets furnished are to be filled in but not detached from the Contract Form. In no case is the Contract Form to be filled in or signed by the bidder. The complete bid for this work shall be enclosed in a sealed envelope properly endorsed. All blank spaces for bid prices must be filled in, in ink, in both words and figures, with the total or gross sum for which the bid is made. Bids that contain any omission, erasure, alteration, addition or items not called for in the itemized proposal form or that contract irregularities of any kind may be rejected. In case of discrepancy between the unit price and total amount bid for any item, the unit price, as expressed in words, shall govern.

### **3. BID SECURITY**

- (A) The bid must be accompanied by a certified check on the solvent bank or trust company with its principal place of business in New York State, or an acceptable bid bond, in an amount equal to not less than five percent (5%) of the total bid, made payable to the Town of Riverhead (herein identified as the Town), as assurance that the bid is made in good faith. The certified checks or bid bonds will be returned after execution of the contract between the Town and the successful bidder; the certified check or bid bond of the successful bidder will be retained until signing and execution of the conformed contract.
- (B) The successful bidder, upon his failure or refusal to execute and deliver the contract insurance and bonds required within fourteen (14) days after the date of notice of acceptance of his bid, shall forfeit to the Town, as liquidated damages for such failure or refusal, the security deposited with his bid.

### **4. QUALIFICATIONS OF BIDDERS**

- (A) Forms or qualifications of bidders, giving evidence of sufficient facilities, equipment, experience and financial ability to ensure completion of the work will be provided, and the three lowest bidders shall be prepared to file at the option of the Town said form, properly filled in and sworn to in the Office of the Town Clerk within seven (7) days after the opening of bids.
- (B) Information contained in any statement of financial ability shall be not more than thirty (30) days old at the time of submission. If a financial statement is already

on file with the Town Clerk, a new one need not be submitted provided the information contained therein is not more than thirty (30) days old at the time of the opening of bids and provided the contractor has not materially changed since submission of said statement.

**5. REJECTION OF BIDS**

- (A) The Town Board reserves the right to reject any bid if the evidence submitted in the qualifications statement of an investigation of such bidder fails to satisfy the Town Board that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be accepted.
- (B) The Town Board reserves the right to reject any and all bids, in whole or in part, to waive any information in any or all bids, and to accept the bid or part thereof which it deems most favorable to the Town after all bids have been examined and/or checked. No bid shall be withdrawn for a period of forty-five (45) days after being publicly opened and read.
- (C) The Town Board reserves the right to reject any bids, in whole by a low bidder in which the owner of the low bidder has violated Prevailing Wage and Supplemental Payment Requirements of the Labor Law, and any other labor provisions, including but not limited to child labor violations, failure to pay wages, or unemployment insurance tax delinquencies within the past five (5) years. An owner is defined in this paragraph as an individual who owns more than 50% of a past or present company.

**6. WITHDRAWAL OF BID**

- (A) Any bid may be withdrawn prior to the Bid Opening Date and Time specified above or authorized postponement.
- (B) Bids may not be withdrawn before forty-five (45) days after the Bid Opening Date and Time, unless a clerical mistake or error is claimed by the Bidder.
- (C) If a Bidder claims to have made a clerical mistake or error in his Bid, he shall notify the Owner within the time limitations set forth in General Municipal Law Section 103 (11) (a) together with all documentary evidence in support of the Bidder's claim of a bid mistake or error.

**7. BIDDER'S RESPONSIBILITY**

- (A) The Bidder shall include the complete cost of furnishing all materials, labor and equipment necessary to complete the work in accordance with the plans and specifications, including all other expenses incidental thereto.

- (B) Bidders must examine the plans and specifications and exercise their own judgement as to the nature and amount of the whole of the work to be done, and for the bid prices, must assume all risks of variance by whomever made in computation or statement of amounts or quantities necessary to fully complete the work in strict compliance with the contract documents.
- (C) The contractor shall assume all risks and responsibility and shall complete the work in whatever material and under whatever conditions he may encounter or create, without extra cost to the Town.
- (D) No plea of ignorance or misunderstanding of conditions that exist or that may hereafter exist, or of conditions or difficulties that may be encountered in the execution of the work under this contract, as a result of failure to make the necessary examinations and investigations, will be to fulfill in every detail all of the requirements of the contract documents, or will be accepted as a basis for any claims whatsoever for extra compensation or for extension of time.

**8. CONSTRUCTION TERMS AND CONDITIONS**

The successful bidder is warned that the work specified in the Conditions of Contract, together with the Information to Bidders, Form of Bid, Plans and Specifications and Instruction of the Town Engineer will be strictly enforced.

The term Town Engineer shall include his duly authorized representative.

**9. SECURITY FOR FAITHFUL PERFORMANCE AND MAINTENANCE**

(NOT APPLICABLE FOR THIS CONTRACT)

**10. FOREIGN CONTRACTORS**

Foreign contractors must comply with the provisions of Articles 9A and 16 of the Tax Law, as amended, prior to submission of a bid for the performance of this work. The certificate of the New York State Tax Commission to the effect that all taxes have been paid by the foreign contractor shall be conclusive proof of the payment of taxes. The term “foreign contractor” as used in this subdivision means in the case of an individual, a person who is a legal resident of another state or foreign country; and in the case of a foreign corporation, one organized under the laws of a state other than the State of New York.

## **11. LIEN LAW**

All persons submitting bids represent and warrant that they have reviewed, are aware, and agree to be bound by is specifically called to the provisions of Section 25, including Subdivision 5, Section 25A and 25B of the New York State Lien Law, as amended, which mandates that every assignment of moneys, or any part thereof, due or to become due under a contract for a public improvement shall contain a covenant by the assignor that he will receive any moneys advanced thereunder by the assignee and will hold the right to receive such moneys as a trust fund to be first applied to the payment of trust claims as defined in section seventy-one of the lien law, and that he will apply the same to such payments only, before using any part of the moneys for any other purpose.in relation to funds being received by a contractor for a public improvement declared to constitute trust funds in the hands of such contractor to be applied first to the payment of certain claims. Pursuant to Section 220-a of the Labor Law all contractors and subcontractors and subcontractors to subcontractors shall file an affidavit attesting to the payment to employees.

## **12. SUBCONTRACTORS AND SUPPLIERS**

Within five days after receipt from the Town Engineer of notice to begin work, the contractor will furnish written notice of names of all subcontractors to be employed on the project and the general items of work to be dome by them. Simultaneously, the contractor shall furnish written notice of the names and suppliers of materials to be used on the project. The town may disapprove, for good cause, any subcontractor or material supplier selected by the contractor by giving written notice of its disapproval within five (5) days after receiving the names of subcontractors and material suppliers, to the contractor who shall thereupon promptly notify the town of the names of the subcontractor or material supplier selected in replacement which shall again be subject to approval by the town.

## **13. PROTECTION OF UNDERGROUND FACILITIES**

Attention is called to New York State General Business Law Article 36, section 764; New York State Public Service Law section 119-b and New York State Code Rule 753, also known as Dig Safely New York. The successful bidder acknowledges, agrees and warrants that bidder has read, is familiar with and agrees to comply with the provisions addressed in the afore-mentioned legal sections. Section 1918 of the Penal Law as follows:

### **Subpart 753-3 DUTIES OF EXCAVATORS**

#### **753-3.1 Timing of notice for excavation or demolition.**

- a. 1. Before commencing or engaging in any non-emergency excavation or demolition, each excavator shall provide notice of the location and date of the planned excavation or demolition to the one-call notification system serving the vicinity in which the excavation or demolition is to take place.

2. Such notice shall be served at least two (2) but not more than ten (10) working days, not including the date of the call, before the commencement date of the excavation or demolition.

**14. REFUSAL TO WAIVE IMMUNITY**

Pursuant to the provisions of Section 103-A of the General Municipal Law, in the event that the bidder or any members, partner, director or officer of the bidder, should refuse 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, of any political subdivision thereof or of an authority, to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant questions concerning such transaction or contract, such person, and any firm, partnership or corporation of which he is a member, partner, firm director or officer shall be disqualified from thereafter selling to or submitting bids to or receiving awards from or entering into any contracts with any municipal corporation or any public department, agency, or official thereof, for goods, work or services, for a period of five (5) years after such refusal, and any and all contracts made with any municipal corporation or any public department, agency or official thereof on or after the first day of July, 1959, by, such person and any firm, partnership or corporation of which he is a member, partner, director or officer may be canceled or terminated by the municipal corporation without incurring any penalty or damages on account of such cancellation of termination, but any monies owing by the municipal corporation for goods delivered or work done prior to the cancellation or termination shall be paid.

**15. ADDENDA AND INTERPRETATIONS**

Every request for information or interpretation of the Contract Documents or Drawings must be emailed to: Drew Dillingham, P.E., Town Engineer, email address: [dillingham@townofriverheadny.gov](mailto:dillingham@townofriverheadny.gov) or mailed to: Drew Dillingham, P.E., Town Engineer, Town of Riverhead, 1295 Pulaski Street, Riverhead, NY 11901, and to be given any consideration, must be received at least five (5) days prior to the date fixed for the opening of bids. Any such interpretations or supplemental instructions will be in the form of written addenda, and will be mailed to all prospective bidders. The failure of any bidder to receive any such addenda will not relieve the bidders of any obligations under his bid as submitted. Any addenda so issued shall become part of the Contract Documents.

**16. LIQUIDATED DAMAGES**

Liquidated damages in the amount of Two Hundred Fifty Dollars and 00 Cents (\$250.00) will be assessed for each consecutive calendar day of delay in starting or completing assigned work not excusable as provided in the Contract Documents.

**17. EXEMPTION FROM SALES AND USE TAXES**

In accordance with Chapter 513 of the laws of 1974 adopted by the New York State Legislature, amending Section 1115(a) of the Tax Law, specifically paragraphs 15 and 16, regarding political subdivisions, such as the Town of Riverhead, as described in subdivision (a) paragraph (L) of Section 1116 of the tax laws, of the State of New York are exempt from the payment of sales and use taxes imposed on tangible personal property within the limitations specified in Tax Law Section 1115 (a) (15) and (16).

- (15) Tangible personal property sold to a contractor, subcontractor or repairman for use in erecting structure or building of an organization described in subdivision (a) of Section 1116, or adding to, altering or improving real property, property or land of such an organization, as the terms real property, property and land are defined in the real property tax law; provided, however, no exemption shall exist under this paragraph unless such tangible personal property is to become an integral component part of such structure, building or real property.
- (16) Tangible personal property sold to a contractor or repairman for use in maintaining, servicing or repairing real property, or land of an organization described in subdivision (a) of Section 1116, as the terms real property, property or land are defined in the real property tax law are also exempt from payment of sales and use taxes; provided, however, no exemption shall exist under this paragraph unless such tangible personal property is to become an integral component part of such structure, building or real property.

Contractors entering into contract with the Town of Riverhead shall be exempt from payment of sales and use tax described above. Procedures and forms are available to the contractor direct from the Instructions and Interpretations Unit, State of New York, Department of Taxation and Finance, State Campus, Albany, New York 12227.

**18. METHOD OF AWARD**

This bid and bid specifications are part of a competitive procurement process, which is intended to serve the best interests of the Town of Riverhead. The Town will award to the vendor(s)/bidder(s) whose proposal is determined to be the lowest responsible bidder.

Notwithstanding an award pursuant to these specifications, the Town does not guarantee that the Town will purchase any goods or services awarded under these specifications and the Town reserves the right to purchase any goods or services included as a part of this bid from any means legally available to it, including but not limited to New York State Office of General Services, County of Suffolk Shared Services Initiative/Purchasing Cooperative, and such other governmental entities as set forth under and in compliance with New York State General Municipal Law without notice to the vendor if it is deemed appropriate and in the best interests of the Town and the vendor/bidder shall have no recourse to the Town for any lost profit resulting from this action. In addition, the Town

of Riverhead reserves the right to allow all municipal and not for profit organizations authorized under the General Municipal Laws of the State of New York, to purchase any goods and/or services awarded as a result of this bid in accordance with the latest amendments to NYS GML 100 through 104. However, it is understood that the extension of such contracts is at the discretion of the vendor and the vendor is only bound to any contract between the Town of Riverhead and the vendor.

## **19. TIME FOR COMMENCEMENT OF WORK**

The bidder, when submitting his bid, must be prepared to commence work not later than ten (10) days after receiving a Town of Riverhead Purchase Order and the scope of work from the Town Engineer unless the Town Engineer shall authorize a different commencement time.

Work shall commence as stipulated in the construction schedule provided by the Town of Riverhead or alternate schedule provided by the Contractor subject to approval by the Town Engineer and/or other Town personnel and shall meet the stipulations of this contract. The entire work must be satisfactorily completed and the project improvements available for use within the completion time stipulated. For additional information see Conditions of Contract, Section 5, Time of Completion.

## **20. PAYMENTS**

Upon completion of the work under this contract, the contractor shall notify the Town Engineer of his completion. The Town Engineer will then make a final inspection and submit to the contractor a “punch list” if required. Upon final acceptance of the work by the Town Engineer, the contractor shall be paid one lump sum payment equal to the final progress payment and the amount retained from previous progress payments. On large projects exceeding 60 days to complete, the Contractor shall submit monthly progress payments based on applicable contract items unit price bid or percentage complete for lump sum items as confirmed by the Town Engineer. The Contractor shall review proposed quantities/percentages with site inspector prior to submittal for confirmation of accuracy. Contractor shall submit a Receipt on company letterhead in the amount billed, a signed Town of Riverhead Voucher, Certified Payroll Records, Wage Disclaimer and the No Lien Affidavit attesting to the payment of employees. Payment shall not be processed until all necessary paperwork is received.

## **21. NYS LABOR LAW**

The contractor and each and every subcontractor performing work at the site of the project to which this contract relates shall comply with the applicable provisions of the Labor Law, as amended, of the State of New York.

**22. NYS WAGE RATES**

The rates of wages determined by the New York State Industrial Commissioner pursuant to the Labor Law, which are to be paid on this project, are set forth herein immediately following.

## Introduction to the Prevailing Rate Schedule

### Information About Prevailing Rate Schedule

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

#### Classification

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

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

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

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

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

#### Payrolls and Payroll Records

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

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

#### Paid Holidays

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

#### Overtime

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

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

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

#### Supplemental Benefits

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

#### Effective Dates

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

#### Apprentice Training Ratios

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

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

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

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

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

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

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

**Suffolk County General Construction**

**Asbestos Worker**

**04/01/2023**

**JOB DESCRIPTION** Asbestos Worker

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour: 07/01/2022

Asbestos Worker \$ 44.00  
Removal & Abatement Only\*

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

**SUPPLEMENTAL BENEFITS**

Per Hour:

Asbestos Worker \$ 8.70  
Removal & Abatement Only

**OVERTIME PAY**

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

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

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6, 8) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Apprentice Removal & Abatement Only:

1000 hour terms at the following percentage of Journeyman's rates.

1st	2nd	3rd	4th
78%	80%	83%	89%

**SUPPLEMENTAL BENEFIT**

Per Hour:

Apprentice  
Removal & Abatement \$ 8.70

4-12a - Removal Only

**Boilermaker**

**04/01/2023**

**JOB DESCRIPTION** Boilermaker

**DISTRICT 4**

**ENTIRE COUNTIES**

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

**WAGES**

Per Hour: 07/01/2022

Boilermaker \$ 63.38  
Repairs & Renovations 63.38

**SUPPLEMENTAL BENEFITS**

Per Hour:

Boilermaker 32% of hourly  
Repair \$ Renovations Wage Paid  
+ \$ 25.38

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay.

Repairs & Renovation Includes replacement of parts and repairs & renovation of existing unit.

**OVERTIME PAY**

See (D, O) on OVERTIME PAGE

Repairs & Renovation see (B,E,Q)

**HOLIDAY**

Paid: See (8, 16, 23, 24) on HOLIDAY PAGE  
Overtime: See (5, 6, 8, 11, 12, 15, 16, 22, 23, 24, 25) on HOLIDAY PAGE

NOTE: \*Employee must work in pay week to receive Holiday Pay.

\*\*Employee gets 4 times the hourly wage rate for working Labor Day.

**REGISTERED APPRENTICES**

Wage per hour:

(1/2) Year Terms at the following percentage of Boilermaker's Wage

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

Supplemental Benefits Per Hour:

Apprentice(s)	32% of Hourly Wage Paid Plus Amount Below
1st Term	\$ 19.41
2nd Term	20.26
3rd Term	21.11
4th Term	21.96
5th Term	22.82
6th Term	23.68
7th Term	24.52

NOTE: "Hourly Wage Paid" shall include any and all premium(s)

4-5

**Broadband** **04/01/2023**

**JOB DESCRIPTION** Broadband

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour:	10/01/2022	06/15/2023
Field Tech Install/Repair	\$ 48.91	\$ 50.87

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

**SUPPLEMENTAL BENEFITS**

Per Hour:	\$ 23.17	\$ 23.24
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**OVERTIME PAY**

See (B, K, \*R) on OVERTIME PAGE

Note: \*Two and one half times the hourly rate after the 8th hour

**HOLIDAY**

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

4-CWA-Dist1

**Carpenter** **04/01/2023**

**JOB DESCRIPTION** Carpenter

**DISTRICT 8**

**ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

**WAGES**

Per hour:	07/01/2022
Piledriver	\$ 58.16 + 9.54*
Dockbuilder	\$ 58.16 + 9.54*

\*This portion is not subject to overtime premiums

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyworker \$ 44.54

**OVERTIME PAY**

See (B, E2, O) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

**REGISTERED APPRENTICES**

Wages per hour

(1)year terms:

1st	2nd	3rd	4th
\$24.60	\$30.20	\$38.58	\$46.97
+ 5.05*	+ 5.05*	+ 5.05*	+ 5.05*

\*This portion is not subject to overtime premiums

Supplemental benefits per hour:

All Terms: \$ 31.03

8-1556 Db

**Carpenter**

**04/01/2023**

**JOB DESCRIPTION** Carpenter

**DISTRICT 8**

**ENTIRE COUNTIES**

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

**WAGES**

Per hour: 07/01/2022

Carpet/Resilient

Floor Coverer \$ 55.05  
 + 8.25\*

\*This portion is not subject to overtime premiums

INCLUDES HANDLING & INSTALLATION OF ARTIFICIAL TURF AND SIMILAR TURF INDOORS/OUTDOORS.

**SUPPLEMENTAL BENEFITS**

Per hour: \$ 39.40

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (18, 19) on HOLIDAY PAGE.

Paid for 1st & 2nd yr.

Apprentices See (5,6,11,13,16,18,19,25)

Overtime: See (5,6,11,13,16,18,19,25) on HOLIDAY PAGE.

**REGISTERED APPRENTICES**

Wage per hour - (1) year terms:

1st	2nd	3rd	4th
\$ 24.80	\$ 27.80	\$ 32.05	\$ 39.93
+ 1.85*	+ 2.35*	+ 2.85*	+ 3.85*

\*This portion is not subject to overtime premiums

Supplemental benefits per hour:

1st	2nd	3rd	4th
\$ 14.80	\$ 15.80	\$ 18.90	\$ 19.90

8-2287

**Carpenter**

**04/01/2023**

**JOB DESCRIPTION** Carpenter

**DISTRICT 8**

**ENTIRE COUNTIES**

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

**WAGES**

Per Hour: 07/01/2022

Marine Construction:

Marine Diver \$ 73.03  
+ 9.54\*

Marine Tender \$ 62.11  
+ 9.54\*

\*This portion is not subject to overtime premiums

**SUPPLEMENTAL BENEFITS**

Per Hour:

Journeyworker \$ 44.54

**OVERTIME PAY**

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

**HOLIDAY**

Paid: See (18, 19) on HOLIDAY PAGE

Overtime: See (5, 6, 10, 11, 13, 16, 18, 19) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wages per hour:

One (1) year terms.

1st year \$ 24.60  
+ 5.05\*  
2nd year 30.20  
+ 5.05\*  
3rd year 38.58  
+ 5.05\*  
4th year 56.97  
+ 5.05\*

\*This portion is not subject to overtime premiums

Supplemental Benefits

Per Hour:

All terms \$ 31.03

8-1456MC

**Carpenter**

**04/01/2023**

**JOB DESCRIPTION** Carpenter

**DISTRICT 8**

**ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Putnam, Queens, Richmond, Rockland, Suffolk, Westchester

**WAGES**

Per hour: 07/01/2022

Building  
Millwright \$ 57.80  
+ 12.62\*

\*This portion is not subject to overtime premiums

**SUPPLEMENTAL BENEFITS**

Per hour:

Millwright \$ 43.16

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (18,19) on HOLIDAY PAGE.

Overtime See (5,6,8,11,13,18,19,25) on HOLIDAY PAGE.

**REGISTERED APPRENTICES**

Wages per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$31.24	\$36.69	\$42.14	\$53.04
+ 6.75*	+ 7.92*	+ 9.09*	+ 11.43*

\*This portion is not subject to overtime premiums

Supplemental benefits per hour:

One (1) year terms:

1st.	2nd.	3rd.	4th.
\$29.01	\$31.54	\$34.72	\$39.14

8-740.1

**Carpenter**

**04/01/2023**

**JOB DESCRIPTION** Carpenter

**DISTRICT 8**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour:

07/01/2022

Timberman \$ 53.05  
+ 10.01\*

\*This portion not subject to overtime premiums

**SUPPLEMENTAL BENEFITS**

Per Hour:

07/01/2022

\$ 43.75

**OVERTIME PAY**

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

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE.

Paid: for 1st & 2nd yr.

Apprentices See (5,6,11,13,25)

Overtime: See (5,6,11,13,25) on HOLIDAY PAGE.

**REGISTERED APPRENTICES**

Wages per hour:

One ( 1 ) year terms:

1st	2nd	3rd	4th
\$22.42	\$27.53	\$35.18	\$42.84
+ 5.30*	+ 5.30*	+ 5.30*	+5.30*

\*This portion is not subject to overtime premiums

Supplemental benefits per hour:

All terms \$ 30.74

8-1556 Tm

**Carpenter**

**04/01/2023**

**JOB DESCRIPTION** Carpenter

**DISTRICT 8**

**ENTIRE COUNTIES**

Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Westchester

**PARTIAL COUNTIES**

Orange: South of but including the following, Waterloo Mills, Slate Hill, New Hampton, Goshen, Blooming Grove, Mountainville, east to the Hudson River.

Putnam: South of but including the following, Cold Spring, TompkinsCorner, Mahopac, Croton Falls, east to Connecticut border.

Suffolk: West of Port Jefferson and Patchogue Road to Route 112 to the Atlantic Ocean.

**WAGES**

Per hour:	07/01/2022	10/18/2022
Core Drilling:		
Driller	\$ 42.27	\$ 43.38
	+ 2.30*	+ 2.50*
Driller Helper	33.47	34.47
	+ 2.30*	+ 2.50*

Note: Hazardous Waste Pay Differential:

For Level C, an additional 15% above wage rate per hour

For Level B, an additional 15% above wage rate per hour

For Level A, an additional 15% above wage rate per hour

Note: When required to work on water: an additional \$ 3.00 per hour.

\*This portion is not subject to overtime premiums

**SUPPLEMENTAL BENEFITS**

Per hour:

Driller and Helper	\$ 28.30	\$ 28.85
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**OVERTIME PAY**

See (B, G, P) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6) on HOLIDAY PAGE

Overtime: See (5, 6) on HOLIDAY PAGE

8-1536-CoreDriller

**Carpenter - Building / Heavy&Highway**

**04/01/2023**

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

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour:	07/01/2022	12/01/2022	05/01/2023
Carpenter			Additional
(Building)	\$ 50.16	\$ 50.87	\$0.75/hr
Carpenter			
(Heavy Highway)	50.16	50.87	

"NOTE" ADD 15% to straight time hourly wage for NEW YORK STATE D.O.T. and other GOVERNMENTAL MANDATED Off-Shift Work.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday, with one-half (1/2) hour allowed for a lunch period.

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:

Both Carpenter		
Categories	\$ 33.58	\$ 33.58

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

One(1) Year Terms at the following :

Per Hour:

	1st	2nd	3rd	4th	5th
07/01/2022	\$ 24.70	\$ 29.02	\$ 31.18	\$ 33.35	\$ 37.67
12/01/2022	\$ 25.05	\$ 29.45	\$ 31.64	\$ 33.84	\$ 38.24

Supplemental Benefits

Per Hour:

All Terms: \$ 18.40

4-Reg.Council Nass/Suff

**Electrician**

**04/01/2023**

**JOB DESCRIPTION** Electrician

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour: 07/01/2022

Tree Trimmer/Remover  
 Line Clearance Specialist \$ 37.74

Groundman\* \$22.64

These rates apply to all tree trimming/removal contracts including but not limited to "Electrical Line Clearance"/"Long Island Railroad Right of Ways".

For Building Construction or Road/Highway Construction Contracts, Heavy & Highway Laborer and Operating Engineer classifications Apply.

\* Note: Groundman Classification not to exceed 20% of the company(s) workforce on Project. Please contact local office for clarification.

**SUPPLEMENTAL BENEFITS**

Per Hour: 07/01/2022

Tree Trimmer 5% of Hourly  
 Line Clearance Specialist Wage Paid +  
 and Groundman \$17.51

NOTE: "Hourly Wage Paid" shall include any and all premium(s) paid

**OVERTIME PAY**

See (B, E, P, S) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6, 8, 16, 23, 24, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 16, 23, 24, 25, 26) on HOLIDAY PAGE

4-1049/Tree

**Electrician**

**04/01/2023**

**JOB DESCRIPTION** Electrician

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour: 07/01/2022 10/29/2022 04/29/2023

Electrician/Wireman \$ 56.50 \$ 57.50 \$ 59.50  
 Inside/Outside

**SUPPLEMENTAL BENEFITS**

Per Hour:

Electrician/Wireman (all categories)	16% of Hourly Wage Paid + \$ 31.10	16% of Hourly Wage Paid + \$ 31.95	16% of Hourly Wage Paid + \$ 33.23
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NOTE: "Hourly Wage Paid" shall include any and all premium[s]

**OVERTIME PAY**

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

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 15, 16, 25, 26) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Terms at the following Percentage of Journeyman(s) Wage:

Indentured Before 4/25/2020:

1st 6mth	35%
2nd 6mth	35%
2nd year	40%
3rd year	45%
4th year	60%
5th year	75%

Indentured After 4/25/2020 (6 month terms):

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
35%	35%	37.5%	40%	42.5%	45%	50%	55%	65%	75%

Supplemental Benefits Per Hour:

	7/01/2022	10/29/2022	4/29/2023
Indentured Before 4/25/2020:			
1st 6 Months	3% + \$ 5.10	3% + \$ 5.27	4% + \$ 5.57
2nd 6 Months	8% + \$ 6.29	8% + \$ 6.49	9% + \$ 6.70
2nd Year	9% + \$ 7.51	9% + \$ 7.65	10% + \$ 7.94
3rd Year	10% + \$ 8.71	10% + \$ 8.96	11% + \$ 9.31
4th Year	13% + \$ 10.93	13% + \$ 11.26	14% + \$ 11.70
5th Year	14% + \$ 17.27	14% + \$ 17.78	15% + \$ 18.46

Indentured After 4/25/2020 (6 month terms):

1st	3% + \$ 5.10	3% + \$ 5.27	4% + \$ 5.44
2nd	8% + \$ 6.29	8% + \$ 6.49	9% + \$ 6.70
3rd	9% + \$ 7.42	9% + \$ 7.65	10% + \$ 7.95
4th	10% + \$ 8.71	10% + \$ 8.96	11% + \$ 9.31
5th	10% + \$ 8.73	10% + \$ 8.99	11% + \$ 9.33
6th	10% + \$ 8.74	10% + \$ 9.00	11% + \$ 9.34
7th	13% + \$ 10.95	13% + \$ 11.29	14% + \$ 11.72
8th	13% + \$ 10.98	13% + \$ 11.32	14% + \$ 11.75
9th	14% + \$ 17.27	14% + \$ 17.78	15% + \$ 18.46
10th	14% + \$ 17.30	14% + \$ 17.69	16% + \$ 19.10

NOTE: Percentages are on "Hourly Wage Paid"  
 NOTE: "Hourly Wage Paid" shall include any and all premium(s).

**Electrician**

**04/01/2023**

**JOB DESCRIPTION** Electrician

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour:	07/01/2022	04/23/2023
Telephone and Integrated Tele-Data System Electrician	\$ 39.68	\$ 40.43

This rate classification applies to ALL Voice, Data & Video work.: Excluding Fire Alarm Systems and Energy Management Systems (HVAC Controls), in those cases the regular Electrician rate applies. To ensure proper use of this rate please call Nassau Offices at (516)228-3912 or Suffolk Offices at (631)687-4882.

**SUPPLEMENTAL BENEFITS**

Per Hour:

Tele-Data Electrician	17.5% of Hourly Wage Paid + \$21.39	18% of Hourly Wage Paid + \$ 22.36
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NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

**OVERTIME PAY**

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

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

4-25tela

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**Electrician** **04/01/2023**

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**JOB DESCRIPTION** Electrician

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour:	07/01/2022	3/25/2023
Electrician		
Electrical Maintenance	\$ 45.79	\$ 46.79
Traffic Signal	46.75	47.75

**"PLEASE NOTE"**

Applicable to "EXISTING ELECTRICAL SYSTEMS" including, but not limited to TRAFFIC SIGNALS & STREET LIGHTING. Not used for add-ons.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday, with one-half (1/2) hour allowed for a lunch period.

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:

Electrician	13.5% of Hourly Wage Paid + \$21.79	14% of Hourly Wage Paid + \$22.73
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NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

**OVERTIME PAY**

See (B, E2, K, P) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Term(s) at the following Percentage of Journeyman(s) Wage:

1st 6mns	40%
2nd 6mns	50%
2nd year	60%
3rd year	70%
4th year	80%
5th year	90%

Supplemental Benefits:

	07/01/2022	3/25/2023
1st 6mns	4.5% + \$4.61	5% + \$4.83
2nd 6mns	9.5% + \$5.36	10% + \$5.64
2nd year	10.5% + \$6.65	11% + \$6.99

3rd year	11.5% + \$8.76	12% + \$9.21
4th year	12.5% + \$12.42	13% + \$13.02
5th yea	13.5% + \$15.82	14% + \$16.56

NOTE: Percentages are on "Hourly Wage Paid"  
 NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

4-25m

**Electrician** **04/01/2023**

**JOB DESCRIPTION** Electrician **DISTRICT 4**

**ENTIRE COUNTIES**  
 Nassau, Suffolk

**WAGES**  
 Per Hour: 07/01/2022  
 Electrician  
 Pump & Tank \$ 42.65

**SUPPLEMENTAL BENEFITS**  
 Per Hour:  
 Electrician  
 Pump & Tank 16% of \*Wage  
 paid + \$22.35

\*Wage Paid includes any and all Premiums

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

**HOLIDAY**  
 Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**  
 1 Year Terms at the Following:  
 Per Hour:

1st	2nd	3rd	4th	5th	6th
\$15.90	\$16.90	\$17.90	\$18.90	\$25.59	\$29.86

**SUPPLEMENTAL BENEFITS**  
 Per Hour:

1st	13% of *Wage paid + \$5.40
2nd	16% of *Wage paid + \$5.90
3rd	16% of *Wage paid + \$6.15
4th	16% of *Wage paid + \$6.50
5th	16% of *Wage paid + \$18.22
6th	16% of *Wage paid + \$19.16

\*Wage Paid includes any and all Premiums

4-25 Pump & Tank

**Electrician Lineman** **04/01/2023**

**JOB DESCRIPTION** Electrician Lineman **DISTRICT 4**

**ENTIRE COUNTIES**  
 Nassau, Queens, Suffolk

**WAGES**  
 For Utility Distribution & Transmission Line Construction:  
 Per Hour: 07/01/2022 4/02/2023

Lineman/Splicer	\$ 63.20	\$ 65.25
Material Man	54.98	56.77
Heavy Equip. Operator	50.56	52.20
Groundman	37.92	39.15
Flagman	28.44	29.36

For Natural Gasline Construction:

Per Hour:  
 Journeyman U.G.Mech 53.80 53.80

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday.

NOTE - In order to use the '4 Day/10 Hour Work schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

**SUPPLEMENTAL BENEFITS**

Per Hour:  
 Utility Distribution & Transmission Line Construction:

All Classifications	32.75% of Hourly Wage Paid + \$ 14.46	32.75% of Hourly Wage Paid + \$ 15.04
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NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

Natural Gasline Construction:  
 Per Hour:

Journeyman U.G.Mech.	30.90	30.90
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**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE  
 OVERTIME for Natural Gas Mechanic:(B,G,P)

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 8, 16, 23, 25, 26) on HOLIDAY PAGE  
 Same as Above for Natural Gas Mechanic.

**REGISTERED APPRENTICES**

1000 hour Terms at the following Percentage of Journeyman's Wage.  
 (Lineman Only)

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

**SUPPLEMENTAL BENEFIT:**

All Terms	31.75% of Hourly Wage Paid + \$ 14.46	31.75% of Hourly Wage Paid + \$ 15.04
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4-1049 Line/Gas

**Elevator Constructor**

**04/01/2023**

**JOB DESCRIPTION** Elevator Constructor

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**PARTIAL COUNTIES**

Rockland: Entire County except for the Township of Stony Point  
 Westchester: Entire County except for the Townships of Bedford, Lewisboro, Cortland, Mt. Kisco, North Salem, Pound Ridge, Somers and Yorktown.

**WAGES**

Per hour:	07/01/2022	03/17/2023
Elevator Constructor	\$ 75.14	\$ 77.49
Modernization & Service/Repair	59.09	60.89

Four(4), ten(10) hour days may be worked at straight time during a week, Monday thru Friday.

NOTE- In order to use the '4 Day/10 Hour Work Schedule', as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 IS NOT SUBMITTED you will be liable for overtime payments for work over the allotted hours per day listed.

**SUPPLEMENTAL BENEFITS**

Per Hour:

Elevator Constructor	\$ 43.914	\$ 45.574
Modernization & Service/Repairs	42.787	44.412

**OVERTIME PAY**

Constructor See ( D, M, T ) on OVERTIME PAGE.

Modern/Service See ( B, F, S ) on OVERTIME PAGE.

**HOLIDAY**

Paid: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE  
 Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

WAGES PER HOUR:

\*Note:1st, 2nd, 3rd Terms are based on Average wage of Constructor & Modernization.  
 Terms 4 thru 9 Based on Journeyman's wage of classification Working in.

6 MONTH TERMS:

1st Term* 50%	2nd & 3rd Term* 50%	4th & 5th Term 55%	6th & 7th Term 65%	8th & 9th Term 75%
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**SUPPLEMENTAL BENEFITS**

Elevator Constructor		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	34.772	36.024
4th & 5th Term	35.606	36.943
6th & 7th Term	37.052	38.448
8th & 9th Term	38.497	39.953

Modernization & Service/Repair		
1st Term	\$ 0.00	\$ 0.00
2nd & 3rd Term	34.672	35.694
4th & 5th Term	35.195	36.525
6th & 7th Term	36.571	37.948
8th & 9th Term	37.938	39.38

4-1

**Glazier** **04/01/2023**

**JOB DESCRIPTION** Glazier

**DISTRICT** 8

**ENTIRE COUNTIES**

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

**WAGES**

Per hour:	7/01/2022	11/01/2022
Glazier	\$ 59.59	\$ 60.34
*Scaffolding	61.55	62.55
Glass Tinting & Window Film	30.11	30.11
**Repair & Maintenance	30.11	30.11

\*Scaffolding includes swing scaffold, mechanical equipment, scissor jacks, man lifts, booms & buckets 24' or more, but not pipe scaffolding.

\*\*Repair & Maintenance- All repair & maintenance work on a particular building whenever performed, where the total cumulative contract value is under \$148,837. All Glass tinting, window film, regardless of material or intended use, and all affixing of decals to windows or glass.

**SUPPLEMENTAL BENEFITS**

Per hour:	7/01/2022	11/01/2022
Journeyworker	\$ 37.55	\$ 38.05
Glass tinting &	22.01	22.01
Window Film		
Repair & Maintenance	22.01	22.01

**OVERTIME PAY**

See (B,H,V) on OVERTIME PAGE.  
 For 'Repair & Maintenance' see (B, B2, I, S) on overtime page.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (4, 6, 16, 25) on HOLIDAY PAGE

For 'Repair & Maintenance'

Paid: See(5, 6, 16, 25)  
 Overtime: See(5, 6, 16, 25)

**REGISTERED APPRENTICES**

Wage per hour:  
 (1) year terms at the following wage rates:

	7/01/2022	11/01/2022
1st term	\$ 21.15	\$ 21.45
2nd term	29.07	29.45
3rd term	35.20	35.65
4th term	47.38	47.98

Supplemental Benefits:

(Per hour)		
1st term	\$ 17.15	\$ 17.35
2nd term	24.42	24.67
3rd term	27.06	27.36
4th term	32.15	32.55

8-1087 (DC9 NYC)

**Insulator - Heat & Frost**

**04/01/2023**

**JOB DESCRIPTION** Insulator - Heat & Frost

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour:	07/01/2022	06/01/2023
Insulators		Additional
Heat & Frost	\$ 70.01	\$ 1.10/Hr.

**SUPPLEMENTAL BENEFITS**

Per Hour:	
Insulators	\$ 35.16
Heat & Frost	

**OVERTIME PAY**

See (B, E, \*Q, V) on OVERTIME PAGE  
 \* Triple time for Labor Day (If worked)

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wages:  
 1 year terms.  
 Wages Per Hour:

1st	2nd	3rd	4th
\$ 28.00	\$ 35.02	\$ 42.01	\$ 49.02



Guide Rail 46.65 46.90

**SUPPLEMENTAL BENEFITS**

Per hour:  
 Journeyworker: \$ 62.04 \$ 63.04

**OVERTIME PAY**

See (B, B1, Q, V) on OVERTIME PAGE

**HOLIDAY**

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

**REGISTERED APPRENTICES**

Apprentices Hired after 9/1/18:

1 year terms

	07/01/2022	01/01/2023
1st Term	\$ 20.63	\$ 21.13
2nd Term	24.22	24.77
3rd Term	27.80	28.40
4th Term	31.38	32.06

Supplemental Benefits per hour:

1st Term	\$ 17.90	\$ 17.90
2nd Term	19.15	19.15
3rd Term	20.41	20.41
4th Term	21.67	21.67

4-580-Or

**Ironworker**

**04/01/2023**

**JOB DESCRIPTION** Ironworker

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**WAGES**

PER HOUR:

	07/01/2022	01/01/2023
Ironworker:		
Structural	\$ 55.70	\$ 56.45
Bridges		
Machinery		

**SUPPLEMENTAL BENEFITS**

PER HOUR PAID:

Journeyman \$ 85.35 \$ 86.35

**OVERTIME PAY**

See (B, B1, Q, \*V) on OVERTIME PAGE

\*NOTE: Benefits are calculated for every hour paid

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 18, 19) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

WAGES PER HOUR:

6 month terms at the following rate:

1st	\$ 28.97	\$ 29.35
2nd	29.57	29.95
3rd - 6th	30.18	30.56

Supplemental Benefits

PER HOUR PAID:

All Terms \$ 59.18 \$ 59.94

4-40/361-Str

**Ironworker**

**04/01/2023**

**JOB DESCRIPTION** Ironworker

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**PARTIAL COUNTIES**

Rockland: Southern section - south of Convent Road and east of Blue Hills Road.

**WAGES**

Per hour:	07/01/2022	07/01/2023
Reinforcing & Metal Lathing	\$ 56.90	Additional \$ 1.50
"Base" Wage	\$ 55.20 plus \$ 1.70	

"Base" Wage is used to calculate overtime hours only.

**SUPPLEMENTAL BENEFITS**

Per hour:	
Reinforcing & Metal Lathing	\$ 41.18

**OVERTIME PAY**

See (B, E, Q, \*X) on OVERTIME PAGE

\*Only \$23.50 per Hour for non worked hours

Supplemental Benefit Premiums for Overtime Hours worked:

Time & One Half	\$ 47.68
Double Time	\$ 54.18

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 11, 13, \*18, \*\*19, 25) on HOLIDAY PAGE

\*Note: Work performed after first 4 Hours.

**REGISTERED APPRENTICES**

(1) year terms at the following wage rates:

1st term	2nd term	3rd term	4th Term
Wage Per Hour: \$ 22.55	\$ 23.60	\$ 24.60	\$ 37.18
"Base" Wage \$ 21.00 plus \$1.55	\$ 22.00 plus \$1.60	\$ 23.00 plus \$1.60	\$ 35.60 plus \$1.58

"Base" Wage is used to calculate overtime hours ONLY.

**SUPPLEMENTAL BENEFITS**

Per Hour:			
1st term	2nd term	3rd term	4th Term
\$ 18.17	\$ 17.17	\$ 16.22	\$ 22.50

4-46Reinf

**Laborer - Building**

**04/01/2023**

**JOB DESCRIPTION** Laborer - Building

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour:	07/01/2022	01/02/2023
Asbestos, Lead and Hazardous Material Abatement Laborer	\$ 38.05	\$ 39.50*

(Re-Roofing Removal See Roofer)

NOTE: Asbestos removed from Mechanical Systems not to be scrapped

See Asbestos Worker

**SUPPLEMENTAL BENEFITS**

Per Hour:

Laborer	\$ 19.10	\$ 19.65
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**OVERTIME PAY**

See (B, B2, I) on OVERTIME PAGE

\*Calculate at \$38.55 per hour then add \$0.95

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 28) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

1000 hour terms at the following;

Per Hour:

1st term	\$ 20.00	\$ 20.50*
2nd Term	21.00	21.50**
3rd Term	24.00	24.50***
4th Term	26.00	26.50****

**SUPPLEMENTAL BENEFIT**

Per Hour:

All Terms	\$ 14.25	\$ 14.25
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**OVERTIME PAY:**

\*Calculate at \$20.00 per hour then add \$0.50

\*\*Calculate at \$21.00 per hour then add \$0.50

\*\*\*Calculate at \$24.00 per hour then add \$0.50

\*\*\*\*Calculate at \$26.00 per hour then add \$0.50

4-NYDC(78)

**Laborer - Building**

**04/01/2023**

**JOB DESCRIPTION** Laborer - Building

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour:	07/01/2022	07/01/2023
Building Laborer	\$ 42.45	Additional \$ 1.35

**SUPPLEMENTAL BENEFITS**

Per Hour:

Building Laborer	\$ 31.21
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**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

See also(H)for Fire Watch on OVERTIME PAGE

Asbestos Worker See (B, H)

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

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

Asbestos Worker see (5,6,8 & 28)

**REGISTERED APPRENTICES**

Regular Hours Work Terms

Term #1	1 hr to 1000hrs
Term #2	1001hrs to 2000hrs
Term #3	2001hrs to 3000hrs
Term #4	3001hrs to 4000hrs

Wages per hour:

1st Term	\$ 18.15
2nd Term	22.50
3rd Term	27.79

4th Term	32.53
Benefits per hour	
1st Term	\$ 21.50
2nd Term	23.29
3rd Term	23.29
4th Term	23.29

4-66

**Laborer - Heavy&Highway**

**04/01/2023**

**JOB DESCRIPTION** Laborer - Heavy&Highway

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Laborer (Heavy/Highway):

GROUP # 1: Asphalt Rakers, Concrete Curb Formsetters.

GROUP # 2: Asphalt Shovelers, Roller Boys and Tampers.

GROUP # 3: Basic Laborer, Power Tool(Jackhammer), Landscape Construction(Non-Building), Traffic Control Personnel(flaggers)

**WAGES PER HOUR:**

	07/01/2022	06/01/2023
GROUP # 1		
Total Wage Paid	\$ 58.44	Additional
"Base Wage"	49.93	\$ 2.55
GROUP # 2		
Total Wage Paid	56.97	
"Base Wage"	48.46	
GROUP # 3		
Total Wage Paid	52.50	
"Base Wage"	43.99	

NOTE: "Base Wage" for Premium/Overtime calculation Only. \$8.51 is difference between "Base" and "Total".  
 Additional 30% to "Base Wage" for all hours worked on New York State D.O.T. and/or other Government Mandated Off-Shift Work.  
 Hazardous Material Work add an Additional 10% of base wage.

**SUPPLEMENTAL BENEFITS**

Per Hour:

ALL GROUPS \$ 34.92

After Forty (40)paid hours in a work week

OVERTIME PAY 21.34

**OVERTIME PAY**

OVERTIME PAY

See (B, E2, F) on OVERTIME PAGE

NOTES: Premium/Overtime Pay to be calculated on "Base Wage" ONLY

Example Group# 3: \$43.99 X Time and One Half = \$65.99 + \$8.51 = \$74.50

**HOLIDAY**

HOLIDAY

Paid: See (1) on HOLIDAY PAGE

Overtime: See (1) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

1000 hour(s) Terms at the following Percentage of the "Base Wage" except  
 4th Term calculate at Total Wage Paid.

1st 0-1000/Hrs.	60%
2nd 1001-2000/Hrs.	70%
3rd 2001-3000/Hrs.	80%
4th 3001-4000/Hrs.	90%

Supplemental Benefits per hour:

All APPRENTICES \$ 34.92  
 After Forty(40) paid hours in a work Week  
 21.34

4-1298

**Mason**

**04/01/2023**

**JOB DESCRIPTION** Mason

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour:	07/01/2022	07/01/2023
		Additional
Brick/Block Layer	\$ 65.23	\$ 2.41
Base Wage for OT Calculation	54.18	

**SUPPLEMENTAL BENEFITS**

Per Hour:

Brick/Block Layer \$ 30.60

**OVERTIME PAY**

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

Note: OT Calculated on Base Wage plus \$ 11.10/hr.

**HOLIDAY**

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

**REGISTERED APPRENTICES**

(800 hour) Terms at the following Percentage of Journey workers "Base Wage" plus \$ 6.35/hr.:

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

Supplemental Benefits per hour:

All Apprentices \$ 21.45

4-1Brk

**Mason - Building**

**04/01/2023**

**JOB DESCRIPTION** Mason - Building

**DISTRICT 9**

**ENTIRE COUNTIES**

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

**WAGES**

Building	07/01/2022
Wages per hour:	
Mosaic & Terrazzo Mechanic	\$ 59.21
Mosaic & Terrazzo Finisher	57.60

**SUPPLEMENTAL BENEFITS**

Per hour:

Mosaic & Terrazzo Mechanic	\$ 26.21*
	+ \$11.73
Mosaic & Terrazzo Finisher	\$ 26.21*
	+ \$11.72

\*This portion of benefits subject to same premium rate as shown for overtime wages.

**OVERTIME PAY**

See (A, E, Q) on OVERTIME PAGE

07/01/2022- Deduct \$7.00 from hourly wages before calculating overtime.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

Easter Sunday is an observed holiday. Holidays falling on a Saturday will be observed on that Saturday. Holidays falling on a Sunday will be celebrated on the Monday.

**REGISTERED APPRENTICES**

Wages Per hour:

1st 0- 1500	2nd 1501- 3000	3rd 3001- 3750	4th 3751- 4500	5th 4501- 5250	6th 5251- 6000
\$ 22.82	\$ 29.34	\$ 31.32	\$ 36.55	\$ 41.77	\$ 46.99

Supplemental Benefits per hour:

\$4.62*	\$5.94*	\$15.73*	\$18.35*	\$20.97*	\$23.59*
+\$6.56	+\$8.43	+\$11.24	+\$13.11	+\$14.99	+\$16.85

\*This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/3

**Mason - Building**

**04/01/2023**

**JOB DESCRIPTION** Mason - Building

**DISTRICT** 9

**ENTIRE COUNTIES**

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

**WAGES**

Per hour: 07/01/2022

Building-Marble Restoration:  
 Marble, Stone & \$ 46.60

Terrazzo Polisher, etc

**SUPPLEMENTAL BENEFITS**

Per Hour:  
 Journeyworker:

Building-Marble Restoration:  
 Marble, Stone &  
 Polisher \$ 29.77

**OVERTIME PAY**

See (B, \*E, Q, V) on OVERTIME PAGE

\*ON SATURDAYS, 8TH HOUR AND SUCCESSIVE HOURS PAID AT DOUBLE HOURLY RATE.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE  
 1ST TERM APPRENTICE GETS PAID FOR ALL OBSERVED HOLIDAYS.

**REGISTERED APPRENTICES**

WAGES per hour:

900 hour term at the following wage:

1st 1- 900	2nd 901- 1800	3rd 1801- 2700	4th 2701
\$ 32.61	\$ 37.28	\$ 41.94	\$ 46.60

Supplemental Benefits Per Hour:

27.07	27.97	28.87	29.77
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9-7/24-MP

**Mason - Building**

**04/01/2023**

**JOB DESCRIPTION** Mason - Building

**DISTRICT** 9

**ENTIRE COUNTIES**

Bronx, Dutchess, Kings, Nassau, New York, Orange, Putnam, Queens, Richmond, Rockland, Suffolk, Sullivan, Ulster, Westchester

**WAGES**

Wages: 07/01/2022

Marble Cutters & Setters \$ 62.17

**SUPPLEMENTAL BENEFITS**

Per Hour:

Journeyworker \$ 38.27

**OVERTIME PAY**

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

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wage Per Hour:

750 hour terms at the following wage.

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
1-750	751-1500	1501-2250	2251-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6751	6751-7500
\$ 24.88	\$ 27.97	\$ 31.08	\$ 34.17	\$ 37.29	\$ 40.39	\$ 43.51	\$ 46.61	\$ 52.82	\$ 59.05

Supplemental Benefits per hour:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 20.55	\$ 22.04	\$ 23.52	\$ 25.01	\$ 26.47	\$ 27.96	\$ 29.42	\$ 30.91	\$ 33.86	\$ 36.81 9-7/4

**Mason - Building**

**04/01/2023**

**JOB DESCRIPTION** Mason - Building

**DISTRICT** 9

**ENTIRE COUNTIES**

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

**WAGES**

Per hour: 07/01/2022

Marble, Stone, etc.  
 Maintenance Finishers: \$ 27.01

Note 1: An additional \$2.00 per hour for time spent grinding floor using "60 grit" and below.  
 Note 2: Flaming equipment operator shall be paid an additional \$25.00 per day.

**SUPPLEMENTAL BENEFITS**

Per Hour:

Marble, Stone, etc.  
 Maintenance Finishers: \$ 14.40

**OVERTIME PAY**

See (B, \*E, Q, V) on OVERTIME PAGE

\*Double hourly rate after 8 hours on Saturday

**HOLIDAY**

Paid: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 15, 25) on HOLIDAY PAGE

1st term apprentice gets paid for all observed holidays.

**REGISTERED APPRENTICES**

WAGES per hour:

07/01/2022

0-750	\$ 21.67
751-1500	22.38
1501-2250	23.10
2251-3000	23.80
3001-3750	24.87
3751-4500	26.29
4501+	27.01

Supplemental Benefits:

Per hour:

0-750	11.52
751-1500	11.90
1501-2250	12.29
2251-3000	12.67
3001-3750	13.25
3751-4500	14.01
4501+	14.40

9-7/24M-MF

**Mason - Building**

**04/01/2023**

**JOB DESCRIPTION** Mason - Building

**DISTRICT** 9

**ENTIRE COUNTIES**

Nassau, Rockland, Suffolk, Westchester

**WAGES**

Per hour:	07/01/2022	12/05/2022	06/05/2023 Additional \$ 0.73
Tile Setters	\$ 62.01	\$ 62.62	

**SUPPLEMENTAL BENEFITS**

Per Hour:	\$ 26.13*	\$ 25.26*
	+ \$10.02	+ \$10.03

\* This portion of benefits subject to same premium rate as shown for overtime wages.

**OVERTIME PAY**

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

Work beyond 10 hours on Saturday shall be paid at double the hourly wage rate.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wage per hour:

(750 hour) term at the following wage rate:

Term:	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
	1-750	751-1500	1501-2250	2251-3000	3001-3750	3751-4500	4501-5250	5251-6000	6001-6750	6501-7000
07/01/2022	\$21.23	\$26.11	\$33.26	\$38.14	\$41.67	\$45.04	\$48.60	\$53.47	\$56.25	\$60.33
12/05/2022	\$21.47	\$26.39	\$33.60	\$38.52	\$42.06	\$45.47	\$49.05	\$53.96	\$56.77	\$60.90

Supplemental Benefits per hour:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
07/01/2022									

\$12.55*	\$12.55*	\$15.16*	\$15.16*	\$16.75*	\$18.30*	\$19.35*	\$19.40*	\$17.45*	\$22.80*
+\$ .69	+\$ .74	+\$ .84	+\$ .88	+\$ 1.28	+\$ 1.33	+\$ 1.70	+\$ 1.75	+\$ 5.90	+\$ 6.42
12/05/2022									
\$12.55*	\$12.55*	\$15.16*	\$15.16*	\$16.16*	\$17.66*	\$18.66*	\$18.66*	\$16.66*	\$21.91*
+\$ .71	+\$ .76	+\$ .86	+\$ .90	+\$ 1.32	+\$ 1.37	+\$ 1.76	+\$ 1.81	+\$ 5.96	+\$ 6.51

\* This portion of benefits subject to same premium rate as shown for overtime wages.

9-7/52A

**Mason - Building** **04/01/2023**

**JOB DESCRIPTION** Mason - Building **DISTRICT 9**

**ENTIRE COUNTIES**  
 Nassau, Rockland, Suffolk, Westchester

**WAGES**

Per hour:	07/01/2022	12/05/2022	06/05/2023
Tile Finisher	\$ 47.60	\$ 48.04	Additional \$ 0.58

**SUPPLEMENTAL BENEFITS**

Per Hour:	\$ 22.16*	\$ 22.31*
	+ \$9.85	+ \$9.85

\*This portion of benefits subject to same premium rate as shown for overtime wages

**OVERTIME PAY**

See (B, E, Q, \*V) on OVERTIME PAGE

\*Work beyond 10 hours on a Saturday shall be paid at double the hourly wage rate.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 11, 15, 16, 25) on HOLIDAY PAGE

9-7/88A-tf

**Mason - Building / Heavy&Highway** **04/01/2023**

**JOB DESCRIPTION** Mason - Building / Heavy&Highway **DISTRICT 9**

**ENTIRE COUNTIES**  
 Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk, Westchester

**WAGES**

Per hour:	07/01/2022
Marble-Finisher	\$ 48.97

**SUPPLEMENTAL BENEFITS**

Journeyworker: per hour	
Marble- Finisher	\$ 35.76

**OVERTIME PAY**

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

Work beyond 8 hours on a Saturday shall be paid at double the rate.

**HOLIDAY**

Overtime: See (5, 6, 8, 11, 15, 16, 25) on HOLIDAY PAGE  
 When an observed holiday falls on a Sunday, it will be observed the next day.

9-7/20-MF

**Mason - Building / Heavy&Highway** **04/01/2023**

**JOB DESCRIPTION** Mason - Building / Heavy&Highway **DISTRICT 4**

**ENTIRE COUNTIES**  
 Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

**WAGES**

Per Hour:	07/01/2022
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Cement Mason \$ 53.77

**SUPPLEMENTAL BENEFITS**

Per Hour:

Cement Mason \$ 34.16  
 1.5 X overtime rate \$ 61.70  
 2 X overtime rate \$ 68.32

**OVERTIME PAY**

See (B1, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 8, 11, 13, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

( 1 ) year terms at the following Percentage of Journeyworkers Wage.

1st Term \$ 19.92  
 2nd Term \$ 24.82  
 3rd Term \$ 30.22

Supplement Benefits per hour paid:

		1.5X OT	2X OT
1st Term	\$ 14.36	\$ 21.55	\$ 28.72
2nd Term	\$ 14.66	\$ 22.00	\$ 29.32
3rd Term	\$ 14.77	\$ 22.16	\$ 29.54

4-780

**Mason - Building / Heavy&Highway**

**04/01/2023**

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

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**WAGES**

NOTE: Shall include but not limited to Precast concrete slabs (London Walks)Marble and Granite pavers 2'x 2' or larger.

Per Hour:

	07/01/2022	05/01/2023 Additional
Stone Setter	\$ 69.72	\$ 2.17
Base Rate	52.06	
Stone Tender	52.12	
Base Rate	44.54	

**SUPPLEMENTAL BENEFITS**

Per Hour:

Stone Setter \$ 37.07  
 Stone Tender 21.35

**OVERTIME PAY**

See (\*C, \*\*E, Q) on OVERTIME PAGE

Base Rates are use to Calculate Overtime Premiums then adding in:

\$16.70/Hr. for Stone Setter and \$7.58/Hr. for Stone Tender

\* On weekdays the eighth (8th) and ninth (9th) hours are time and one-half all work thereafter is paid at double the hourly rate.

\*\* The first nine (9) hours on Saturday is paid at time and one-half all work thereafter is paid at double the hourly rate.

**HOLIDAY**

Paid: See (\*18) on HOLIDAY PAGE  
 Overtime: See (5, 6, 10) on HOLIDAY PAGE

Paid: \*Must work first 1/2 of day

**REGISTERED APPRENTICES**

Per Hour:

Stone Setter(800 hour) terms at the following Percentage of Stone Setters Base wage rate per hour plus \$8.16:

1st 2nd 3rd 4th 5th 6th

50%      60%      70%      80%      90%      100%

Supplemental Benefits:  
 All Apprentices      \$ 23.95

4-1Stn

**Mason - Heavy&Highway**

**04/01/2023**

**JOB DESCRIPTION** Mason - Heavy&Highway

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour:      07/01/2022

Pointer, Caulkers &  
 Cleaners      \$ 59.09

**SUPPLEMENTAL BENEFITS**

Per Hour:

Pointer, Cleaners &  
 Caulkers      \$ 31.22

**OVERTIME PAY**

See (B, E2, H) on OVERTIME PAGE

**HOLIDAY**

Paid:      See (1) on HOLIDAY PAGE  
 Overtime:      See (5, 6, 25, 26) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wages per hour:

One (1) year terms at the following wage rates.

	1st	2nd	3rd	4th
	\$ 29.86	\$ 33.74	\$ 39.02	\$ 47.05

Apprentices Supplemental Benefits:  
 (per hour paid)

	\$ 15.30	\$ 19.85	\$ 23.60	\$ 24.60
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4-1PCC

**Operating Engineer - Building**

**04/01/2023**

**JOB DESCRIPTION** Operating Engineer - Building

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

BUILDING CATEGORIES:

CLASS " AA "CRANES:

ABI Machine (150,000lbs and over or 149,999lbs and under when driving steel sheet piles),Crane, Truck Crane, Hydraulic Crane(Over 75 tons), Derrick, Dragline, Dredge, Crawler Crane, Tower Crane & Pile Driver, Vertical Drill Rig (115,000lbs and over and 114,999lbs and under).

CLASS "A":

ABI Machine (149,999 and under used for augering and drilling), Asphalt Spreader, Backhoe Crawler(360 swing), Barrier Machine, CAP (ice machine), Cherrypicker CAP (over 70 tons), CMI or Maxim Spreader, Concrete Pump, Directional Boring, GradAll, Grader, Hydraulic Cherrypicker/Crane (2seats), Hoist (3drum or multi platform), Laser Screed, Loading Machine (Bucket/CAP 10yrds or more), Milling Machine (Large), Pipeline Welder, Plant Engineer, Power Winch (stone setting/structural steel), Powerhouse, Scoop Carry-All Scraper (in tandem), Sideboom Tractor (includes tank work), Track Alignment Machine, Stone Spreader (self propelled), Striping Machine (long line/truck mounted), Tree Grapple, Zamboni.

CLASS "B":

Backhoe (other than 360), Belt Screte, Boom Truck, Bulldozer, Boring Machine/Auger, Cherry Picker(under 70 Tons), Hydraulic Crane(under 75 Tons), Conveyor-Multi, Curb Machine (asphalt or concrete), Dinky Locomotive, Drill Rig (dowels)Fork Lift, Hoist (2 Drum), Loading Machine & Front End Loader, Mechanical Compactors (machine drawn), Mulch Machine(Machine Fed), Post Hole/Auger, Power Wincher (Not Included in Class "A"), Asphalt Roller, Hydraulic Pump with Boring Machine, Scoop, Carryall/Scaper, Skid Loader/Skid Steer/Bobcat, Trenching Machine, Vermeer Cutter, Work Boat, Inspection/Safety Boat.

**CLASS "C":**

Concrete Finish/Saw/Spreader, Dirt Roller, Hoist (1 drum, Clam Shell), Interior Hoist, Milling Machine (small), Oiler Truck Crane (pile work), Power Broom, Vactor Truck, VacAll.

**CLASS "D":**

Boiler (thermoplastic), Concrete Breaker, Conveyer, Curing Machine, Fork Lift or Walk Behind (power operated), Generator, Hydra Hammer, Compactors (mechanical or hand operated), Maintenance Engineer (small equipment/well point/welding & burning), Mechanic (field man), Micro-Trap with Compressor, Oiler (Truck Crane Boom 100ft or more) Power Winch Truck Mounted (Stone Setter/Struct. Steel), Pin Puller, Portable Heaters, Power Buggies, Pump (double action diaphragm), Pump (4 inch or over), Pump (hydraulic/submersible) Jet Pump, Pulvi-Mixer, Ridge Cutter, Shot Blaster.

**CLASS "E":**

Batching Plant, Compressor (structural steel/2 or more battery), Generator (small), Grinder, Ground Heater, Power Grinder, Mixer with Skip, Mulching Machine (hand fed), Oiler, Pipeline Welder Helper, Power Washer, Pumps (up to 3 inch/single action 1 to 3 inches), Pump (gypsum), Root Cutter, Stump Chipper, Track Tamper, Tractor (caterpillar or wheel), Trenching Machine (hand), Welding Machine (pile work/structural steel), Deckhand on Work/Inspection/Safety Boat.

07/01/2022

Class "AA"	\$ 87.04
Cranes:	
Boom length over 100 feet add	\$ 1.00
Boom length over 150 feet add	\$ 1.50
Boom length over 250 feet add	\$ 2.50
Boom length over 350 feet add	\$ 3.00

Class "A"	72.61
Add \$3.50 for Hazardous Waste Work	

Class "B"	68.95
Add \$2.50 for Hazardous Waste Work	

Class "C"	66.53
Add \$1.50 for Hazardous Waste Work	

Class "D"	50.70
Add \$1.00 for Hazardous Waste Work	

Class "E"	48.25
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**SUPPLEMENTAL BENEFITS**

Per Hour:

All Classes	\$ 39.80
Overtime Rate	35.60

**OVERTIME PAY**

See (D, O) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6, 15, 16, 25) on HOLIDAY PAGE  
 Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

"NOTE" Employee must be Employed day before and day after Holiday to receive Holiday Pay.

**REGISTERED APPRENTICES**

One(1) Year Terms at the following Rate:

1st Term	\$ 28.00
2nd Term	29.00
3rd Term	30.00

Supplemental Benefits per hour:

All Apprentices	\$ 15.64
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Overtime Rate 5.60

4-138

**Operating Engineer - Building / Heavy&Highway** **04/01/2023**

**JOB DESCRIPTION** Operating Engineer - Building / Heavy&Highway **DISTRICT 4**

**ENTIRE COUNTIES**  
 Bronx, Kings, Nassau, New York, Queens, Richmond, Suffolk

**WAGES**

Per Hour: 07/01/2022 08/01/2022

Well Driller \$ 39.45 \$ 40.63

Well Driller Helper 34.17 34.17

Hazardous Waste Differential  
 Added to Hourly Wage:

Level A	\$ 3.00	\$ 3.00
Level B	2.00	2.00
Level C	1.00	1.00

Monitoring Well Work  
 Add to Hourly Wage:

Level A	\$ 3.00	\$ 3.00
Level B	2.00	2.00

**SUPPLEMENTAL BENEFITS**

Per Hour:

Well Driller & Helper	10% of straight time rate plus \$ 13.50	10% of straight time rate plus \$ 13.50
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Additional \$ 4.25/Hr. for Premium Time Hours Worked

**OVERTIME PAY**

See (B2, P, S) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6, 16, 23) on HOLIDAY PAGE  
 Overtime: See (5, 6, 16, 23) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Apprentices at 12 Month Terms

Wages Per Hour:

1st Term	\$ 28.00	\$ 28.00
2nd Term	29.00	29.00
3rd Term	30.00	30.00

**SUPPLEMENTAL BENEFITS**

Per Hour:

All Terms 10% of Wage + \$ 13.50

Additional \$4.25/Hr. for premium time hours worked.

4-138well

**Operating Engineer - Heavy&Highway** **04/01/2023**

**JOB DESCRIPTION** Operating Engineer - Heavy&Highway **DISTRICT 4**

**ENTIRE COUNTIES**  
 Nassau, Suffolk

**WAGES**

Party Chief - One who directs a survey party  
 Instrument Man - One who runs the instrument and assists Party Chief  
 Rodman - One who holds the rod and in general, assists the survey party  
 Categories cover GPS & Under Ground Surveying

Per Hour: 07/01/2022  
Heavy Highway/Building

Party Chief \$ 74.47  
Instrument Man 56.00  
Rodman 47.55

**SUPPLEMENTAL BENEFITS**

Per Hour:

Heavy Highway/Building \$ 39.39

Premium\*:  
Heavy Highway/Building 48.29

Premium\*\*:  
Heavy Highway/Building 58.09

\* Applies to instances where 1-1/2 regular rate are paid

\*\*Applies to instances where 2 times the rate are paid.

**OVERTIME PAY**

See (B, \*E, Q) on OVERTIME PAGE

\* Doubletime paid on the 9th hour on Saturday.

**HOLIDAY**

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

4-15D-N/S co.

**Operating Engineer - Heavy&Highway**

**04/01/2023**

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

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

HEAVY and HIGHWAY CATEGORIES:

**CLASS "AA" CRANES:**

ABI Machine (150,000lbs and over), ABI Machine (149,000lbs and under driving steel sheets), Crane, Truck Crane, Derrick, Dragline, Dredge, Crawler Crane, Tower Crane, Pile Driver, Hydraulic Crane (75 Tons & Over).

**CLASS "A":**

ABI Machine (149,000lbs and under for Augering or Drilling), Asphalt Spreader, Backhoe Crawler (360 Swing & over 150,000lbs), Backhoe Crawler (360 Swing & under 149,000lbs), Barrier Machine, Cherrypicker Cap (over 70 tons), CMI or Maxim Spreader, Concrete Pump, Directional Boring, Grader, Gradall, Hoist (3 drum or multi-platform), Hydraulic Cherrypicker/crane (2 seats), Loading Machine (bucket 10 yds. or more), Laser Screed, Milling Machine (Large), Pipeline Welder, Plant Engineer. Power Winch-Stone Setting/Structural Steel or Truck Mounted, Powerhouse, Scoop-Carryall-Scaper in Tandem, Side Boom Tractor, Side Boom Tractor (Tank Work), Stone Spreader(self propelled), Striping Machine (long line/truck mounted), Tree Grapple, Tank Work, Track Alignment Machine.

**CLASS "B":**

Backhoe (other than 360), Belt Screte, Boom Truck, Bulldozer, Boring Machine/Auger, Hydraulic Crane(75 Tons & Under),Cherry Picker (under 70 tons), Conveter-Multi, Curb Machine Asphalt/Concrete, Dinky Locomotive, Drill Rig for Dowels, Field Mechanic, Fork Lift, Hoist (2 Drum), Loading Machine, Loading Machine (Front End), Mechanical Compactors (Machine Drawn), Mulching Machine (Machine Fed), Post Hole/Auger, Power Winch (other than structural steel), Pump Hydraulic (with boring machine), Asphalt Roller, Scoop (carry-all, scraper), Skid Loader/Steer, Vermeer Cutter, Work Boat, Inspection & Safety Boat.

**CLASS "C":**

Concrete Finish/Saw/Spreader Machines, Dirt Roller, Hoist (1 drum, clam shell), Interior Hoist, Oiler Truck Crane(Pile work), Power Broom(Sweeper), Small Milling Machine, Vactor Truck/Vac-All Truck, Tack Oil Truck.

**CLASS "D":**

Boiler (Thermoplastic), Concrete Breaker, Conveyor, Curing Machine, Fireman, Fork lift (walk behind), Generator, Hydra Hammer, Maintenance Engineer (small equipment/Well Point/Welding & Burning), Compactors (hand operated), Pin Puller, Portable Heaters, Power Buggies, Pulvi Mixer, Pumps (double action/4 inch and over/Hydraulic/Submersible & Jet), Ridge Cutter, Robotic Unit Operator(Trenchless Pipe Rehab-Cleaning & Television of Sewers/CCTV Inspection), Shotblaster.

**CLASS "E":**

Batching Plant (On Job Site), Compressor (structural steel/2 or more in battery), Generator(small), Grinder, Ground Heater(boilers), Power Grinder, Mixer (with skip), Mulching Machine (hand feed), Oiler, Pipeline Welder Helper, Power Washer, Pump(up to 3 inches/Gypsum/Single action 1 to 3 inches), Root Cutter, Stump Grinder, Track Tamper, Tractor (caterpillar or wheel), Trenching Machine (hand), Welding Machine (Pile Work/Structural Steel), Deckhand (on Work/Inspection/Safety Boat).

07/01/2022

Class "AA" \$ 86.25  
 Cranes: Boom Length over 100 feet add \$ 1.00 per hour  
 Boom Length over 150 feet add \$ 1.50 per hour  
 Boom Length over 250 feet add \$ 2.00 per hour  
 Boom Length over 350 feet add \$ 3.00 per hour

Class "A" 76.52  
 Add \$3.50 for Hazardous Waste Work.

Class "B" 71.60  
 Add \$2.50 for Hazardous Waste Work.

Class "C" 69.06  
 Add \$1.50 for Hazardous Waste Work

Class "D" 52.88  
 Add \$1.00 for Hazardous Waste Work

Class "E" 50.68

"NOTE": ADD 30% to straight time hourly wage for NEW YORK STATE D.O.T. and other GOVERNMENTAL MANDATED off-shift work.

**SUPPLEMENTAL BENEFITS**

Per Hour:

ALL CLASSES \$ 40.05

Note: OVERTIME AMOUNT 35.60

**OVERTIME PAY**

See (D, O) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 8, 15, 20, 22, 25, 26) on HOLIDAY PAGE

Overtime: See (5, 8, 15, 20, 22, 25, 26) on HOLIDAY PAGE

"Note" Employee must be employed day before and day after a holiday to receive holiday pay.

**REGISTERED APPRENTICES**

Wage per hour:

REGISTERED APPRENTICES

One(1) Year Terms at the following Rate:

1st Term \$ 28.00  
 2nd Term 29.00  
 3rd Term 30.00

**SUPPLEMENTAL BENEFITS:**

APPRENTICES 15.64  
 Note: Overtime Amount 5.60

**Operating Engineer - Marine Dredging 04/01/2023**

**JOB DESCRIPTION** Operating Engineer - Marine Dredging

**DISTRICT** 4

**ENTIRE COUNTIES**

Albany, Bronx, Cayuga, Clinton, Columbia, Dutchess, Essex, Franklin, Greene, Jefferson, Kings, Monroe, Nassau, New York, Orange, Oswego, Putnam, Queens, Rensselaer, Richmond, Rockland, St. Lawrence, Suffolk, Ulster, Washington, Wayne, Westchester

**WAGES**

These wages do not apply to Operating Engineers on land based construction projects. For those projects, please see the Operating Engineer Heavy/Highway Rates. The wage rates below for all equipment and operators are only for marine dredging work in navigable waters found in the counties listed above.

Per Hour:	07/01/2022	10/01/2022
CLASS A1 Deck Captain, Leverman Mechanical Dredge Operator Licensed Tug Operator 1000HP or more.	\$ 42.66	\$ 43.94
CLASS A2 Crane Operator (360 swing)	38.02	39.16
CLASS B Dozer, Front Loader Operator on Land	To conform to Operating Engineer Prevailing Wage in locality where work is being performed including benefits.	
CLASS B1 Derrick Operator (180 swing) Spider/Spill Barge Operator Operator II, Fill Placer, Engineer, Chief Mate, Electrician, Chief Welder, Maintenance Engineer Licensed Boat, Crew Boat Operator	36.89	38.00
CLASS B2 Certified Welder	34.73	35.77
CLASS C1 Drag Barge Operator, Steward, Mate, Assistant Fill Placer	33.78	34.79
CLASS C2 Boat Operator	32.69	33.67
CLASS D Shoreman, Deckhand, Oiler, Rodman, Scowman, Cook, Messman, Porter/Janitor	27.16	27.97

**SUPPLEMENTAL BENEFITS**

Per Hour:  
 THE FOLLOWING SUPPLEMENTAL BENEFITS APPLY TO ALL CATEGORIES

All Classes A & B	\$ 11.40 plus 6% of straight time wage, Overtime hours add \$ 0.63	\$ 11.85 plus 6% of straight time wage, Overtime hours add \$ 0.63
All Class C	\$ 11.10 plus 6% of straight time wage, Overtime hours add \$ 0.48	\$ 11.60 plus 6% of straight time wage, Overtime hours add \$ 0.50
All Class D	\$ 10.80 plus 6% of straight time wage, Overtime hours add \$ 0.33	\$ 11.35 plus 6% of straight time wage, Overtime hours add \$ 0.38

**OVERTIME PAY**  
 See (B2, F, R) on OVERTIME PAGE

**HOLIDAY**  
 Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 8, 15, 26) on HOLIDAY PAGE

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**Operating Engineer - Survey Crew - Consulting Engineer****04/01/2023****JOB DESCRIPTION** Operating Engineer - Survey Crew - Consulting Engineer**DISTRICT 9****ENTIRE COUNTIES**

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

**PARTIAL COUNTIES**

Dutchess: That part in Dutchess County lying South of the North City line of Poughkeepsie.

**WAGES**

Feasibility and preliminary design surveying, any line and grade surveying for inspection or supervision of construction.

Per hour: 07/01/2022  
Survey ClassificationsParty Chief \$ 46.44  
Instrument Man 38.60  
Rodman 33.64**SUPPLEMENTAL BENEFITS**

Per Hour:

All Crew Members: \$ 21.60

**OVERTIME PAY**

OVERTIME:.... See ( B, E\*, Q, V ) ON OVERTIME PAGE.

\*Doubletime paid on the 9th hour on Saturday.

**HOLIDAY**

Paid: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

Overtime: See (5, 6, 7, 11, 16) on HOLIDAY PAGE

9-15dconsult

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**Operating Engineer - Trenchless Pipe Rehab****04/01/2023****JOB DESCRIPTION** Operating Engineer - Trenchless Pipe Rehab**DISTRICT 4****ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**IMPORTANT NOTE: This Category & Classifications are now located in  
Operating Engineers/Heavy Highway & Laborers/ Heavy Highway.Per Hour: 07/01/2022  
(SEE)  
Robotic Unit Operator Operator(class D)  
Technician/Boiler, Generator Operator(class D)  
AM Liner/Hydra Seal Laborer(Grp#3)  
Hobas Pipe, Polyethylene Pipe or  
Pull and Inflate Liner Laborer(Grp#3)**OVERTIME PAY****HOLIDAY**

4-138TrchPReh

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**Painter****04/01/2023****JOB DESCRIPTION** Painter**DISTRICT 8****ENTIRE COUNTIES**

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

**WAGES**

Per hour: 07/01/2022

Brush	\$ 51.45*
Abatement/Removal of lead based or lead containing paint on materials to be repainted.	51.45*
Spray & Scaffold	\$ 54.45*
Fire Escape	54.45*
Decorator	54.45*
Paperhanger/Wall Coverer	53.83*

\*Subtract \$ 0.10 to calculate premium rate.

**SUPPLEMENTAL BENEFITS**

Per hour:

Paperhanger	\$ 33.15
All others	30.88
Premium	37.72**

\*\*Applies only to "All others" category, not paperhanger journeyworker.

**OVERTIME PAY**

See (A, H) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

One ( 1 ) year terms at the following wage rate.

Per hour:	07/01/2022
Appr 1st term...	\$ 19.95*
Appr 2nd term...	25.56*
Appr 3rd term...	31.00*
Appr 4th term...	41.52*

\*Subtract \$ 0.10 to calculate premium rate.

Supplemental benefits:

Per Hour:	
Appr 1st term...	\$ 15.22
Appr 2nd term...	18.90
Appr 3rd term...	21.81
Appr 4th term...	27.58

8-NYDC9-B/S

**Painter**

**04/01/2023**

**JOB DESCRIPTION** Painter

**DISTRICT 8**

**ENTIRE COUNTIES**

Putnam, Suffolk, Westchester

**PARTIAL COUNTIES**

Nassau: All of Nassau except the areas described below: Atlantic Beach, Ceaderhurst, East Rockaway, Gibson, Hewlett, Hewlett Bay, Hewlett Neck, Hewlett Park, Inwood, Lawrence, Lido Beach, Long Beach, parts of Lynbrook, parts of Oceanside, parts of Valley Stream, and Woodmere. Starting on the South side of Sunrise Hwy in Valley Stream running east to Windsor and Rockaway Ave., Rockville Centre is the boundary line up to Lawson Blvd. turn right going west all the above territory. Starting at Union Turnpike and Lakeville Rd. going north to Northern Blvd. the west side of Lakeville road to Northern blvd. At Northern blvd. going east the district north of Northern blvd. to Port Washington Blvd. West of Port Washington blvd.to St.Francis Hospital then north of first traffic light to Port Washington and Sands Point, Manor HAven, Harbour Acres.

**WAGES**

Per hour:	07/01/2022
Drywall Taper	\$ 51.45*

\*Subtract \$ 0.10 to calculate premium rate.

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyman	\$ 30.88
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**OVERTIME PAY**

See (A, H) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wages - Per Hour:

1500 hour terms at the following wage rate:

1st term	\$ 19.95*
2nd term	25.56*
3rd term	31.00*
4th term	41.52*

\*Subtract \$ 0.10 to calculate premium rate.

Supplemental Benefits - Per hour:

One year term (1500 hours) at the following dollar amount.

1st year	\$ 15.22
2nd year	18.90
3rd year	21.81
4th year	27.58

8-NYDCT9-DWT

**Painter - Bridge & Structural Steel**

**04/01/2023**

**JOB DESCRIPTION** Painter - Bridge & Structural Steel

**DISTRICT 8**

**ENTIRE COUNTIES**

Albany, Bronx, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Kings, Montgomery, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

**WAGES**

Per Hour:

STEEL:

Bridge Painting:	07/01/2022	10/01/2022
	\$ 53.00	\$ 54.50
	+ 9.63*	+ 10.10*

ADDITIONAL \$6.00 per hour for POWER TOOL/SPRAY, whether straight time or overtime.

NOTE: All premium wages are to be calculated on base rate per hour only.

\* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (no cap).

NOTE: Generally, for Bridge Painting Contracts, ALL WORKERS on and off the bridge (including Flagmen) are to be paid Painter's Rate; the contract must be ONLY for Bridge Painting.

SHIFT WORK:

When directly specified in public agency or authority contract documents for an employer to work a second shift and works the second shift with employees other than from the first shift, all employees who work the second shift will be paid 10% of the base wage shift differential in lieu of overtime for the first eight (8) hours worked after which the employees shall be paid at time and one half of the regular wage rate. When a single irregular work shift is mandated in the job specifications or by the contracting agency, wages shall be paid at time and one half for single shifts between the hours of 3pm-11pm or 11pm-7am.

**SUPPLEMENTAL BENEFITS**

Per Hour:

Journeyworker:	\$ 10.90	\$ 11.78
	+ 30.60*	+ 30.75*

\* For the period of May 1st to November 15th, this amount is payable up to 40 hours. For the period of Nov 16th to April 30th, this amount is payable up to 50 hours. EXCEPTION: First and last week of employment, and for the weeks of Memorial Day, Independence Day and Labor Day, where the amount is paid for the actual number of hours worked (no cap).

**OVERTIME PAY**

See (B, F, R) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (4, 6) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wage - Per hour:  
 Apprentices: (1) year terms

1st year	\$ 21.20 + 3.86	\$ 21.80 + 4.04
2nd year	\$ 31.80 + 5.78	\$ 32.70 + 6.06
3rd year	\$ 42.40 + 7.70	\$ 43.60 + 8.08
Supplemental Benefits - Per hour:		
1st year	\$ .25 + 12.24	\$ .25 + 12.34
2nd year	\$ 10.90 + 18.36	\$ 10.90 + 18.51
3rd year	\$ 10.90 + 24.48	\$ 10.90 + 24.68

NOTE: All premium wages are to be calculated on base rate per hour only.

8-DC-9/806/155-BrSS

**Painter - Line Striping**

**04/01/2023**

**JOB DESCRIPTION** Painter - Line Striping

**DISTRICT 8**

**ENTIRE COUNTIES**

Albany, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Nassau, Orange, Putnam, Rensselaer, Rockland, Saratoga, Schenectady, Schoharie, Suffolk, Sullivan, Ulster, Warren, Washington, Westchester

**WAGES**

Per hour:

Painter (Striping-Highway):	07/01/2022
Striping-Machine Operator*	\$ 31.53
Linerman Thermoplastic	38.34

Note: \* Includes but is not limited to: Positioning of cones and directing of traffic using hand held devices. Excludes the Driver/Operator of equipment used in the maintenance and protection of traffic safety.

Four (4), ten (10) hour days may be worked at straight time during a week, Monday thru Thursday. Friday may be used as a make-up day.

NOTE - In order to use the '4 Day/10 Hour Work Schedule,' as your normal schedule, you must submit an 'Employer Registration for Use of 4 Day/10 Hour Work Schedule,' form PW30.1; and there must be a dispensation of hours in place on the project. If the PW30.1 is not submitted you may be liable for overtime payments for work over 8 hours per day.

**SUPPLEMENTAL BENEFITS**

Per hour paid:

Journeyworker:	
Striping Machine Operator:	\$ 10.03
Linerman Thermoplastic:	10.03

**OVERTIME PAY**

See (B, B2, E2, F, S) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 20) on HOLIDAY PAGE

Overtime: See (5, 20) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

One (1) year terms at the following wage rates:

1st Term:	\$ 15.00
2nd Term:	18.92
3rd Term:	25.22

Supplemental Benefits per hour:

1st term:	\$ 9.16
2nd Term:	10.03
3rd Term:	10.03

8-1456-LS

**Painter - Metal Polisher**

**04/01/2023**

**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**

	07/01/2022
Metal Polisher	\$ 37.78
Metal Polisher*	38.80
Metal Polisher**	41.78

\*Note: Applies on New Construction & complete renovation

\*\* Note: Applies when working on scaffolds over 34 feet.

**SUPPLEMENTAL BENEFITS**

Per Hour:	07/01/2022
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Journeyworker: All classification	\$ 11.24
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**OVERTIME PAY**

See (B, E, P, T) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE  
Overtime: See (5, 6, 9, 11, 15, 16, 25, 26) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wages per hour:

One (1) year term at the following wage rates:

	07/01/2022
1st year	\$ 16.00
2nd year	17.00
3rd year	18.00
1st year*	\$ 16.39
2nd year*	17.44
3rd year*	18.54
1st year**	\$ 18.50
2nd year**	19.50
3rd year**	20.50

\*Note: Applies on New Construction & complete renovation

\*\* Note: Applies when working on scaffolds over 34 feet.

Supplemental benefits:  
Per hour:

1st year	\$ 7.99
2nd year	7.99
3rd year	7.99

8-8A/28A-MP

**Plasterer**

**04/01/2023**

**JOB DESCRIPTION** Plasterer

**DISTRICT 9**

**ENTIRE COUNTIES**

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

**WAGES**

Per hour:

07/01/2022

Building:

Plasterer/Traditional & Spraying Fireproofing \$ 51.00\*

**SUPPLEMENTAL BENEFITS**

Per hour:

Journeyworker \$ 23.15

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

\*When calculating overtime pay, subtract \$5.00 from wages.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

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

**REGISTERED APPRENTICES**

Wages:

(per hour)

800 hours term:

1st term	\$ 28.19
2nd term	30.59
3rd term	35.88
4th term	38.43

Supplemental Benefits:

(per hour):

(800) hours term:

1st term	\$ 14.70
2nd term	15.60
3rd term	17.43
4th term	18.35

9-262

**Plumber**

**04/01/2023**

**JOB DESCRIPTION** Plumber

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour:

07/01/2022

05/01/2023

Plumber/

PUMP & TANK \$ 46.49 \$ 46.99

**SUPPLEMENTAL BENEFITS**

Per Hour:

Plumber \$ 33.64 \$ 35.39

**OVERTIME PAY**

See (B, B2, E2, Q, \*V) on OVERTIME PAGE

(V) For Sundays & Holidays if Worked Only

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

One(1) Year Terms at the Following  
 Percentage of Journeyman's wage:

1st Term	30%
2nd Term	40%
3rd Term	50%
4th Term	60%
5th Term	70%

Supplemental Benefits Per Hour:

1st Term	\$ 21.72	\$ 23.47
2nd Term	22.36	24.11
3rd Term	23.43	24.93
4th Term	23.56	25.31
5th Term	26.79	28.54

4-200 Pump & Tank

**Plumber**

**04/01/2023**

**JOB DESCRIPTION** Plumber

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour:

07/01/2022

Plumber

MAINTENANCE ONLY

\$ 35.05

Maintenance: Correction of problem(s)with the existing fixture or group of fixtures, preventive repairs or servicing of said fixtures

**SUPPLEMENTAL BENEFITS**

Per Hour:

Plumber

Maintenance

\$ 19.30

**OVERTIME PAY**

See (B, B2, J) on OVERTIME PAGE

**HOLIDAY**

Paid:

See (1) on HOLIDAY PAGE

Overtime:

See (5, 6, 15, 16) on HOLIDAY PAGE

4-200 Maintance

**Plumber**

**04/01/2023**

**JOB DESCRIPTION** Plumber

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour:

07/01/2022

11/01/2022

05/01/2023

Plumber

\$ 55.48

\$ 56.48

\$ 57.23

**SUPPLEMENTAL BENEFITS**

Per Hour:

Plumber

\$ 49.20

\$ 49.20

\$ 49.70

**OVERTIME PAY**

See (A, E, Q, \*V) on OVERTIME PAGE

CODE "V" is only for SUNDAYS and HOLIDAYS THAT ARE WORKED

**HOLIDAY**

Paid:

See (1) on HOLIDAY PAGE

Overtime:

See (5, 6, 15, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

One(1) Year Terms at the following percentage of Plumbers Rate:

1st 30%	2nd 40%	3rd 50%	4th 60%	5th 70%
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Supplemental Benefits per hour:

	07/01/2022	11/01/2022	05/01/2023
1st Term	\$ 34.52	\$ 34.52	\$ 35.02
2nd Term	37.01	37.01	37.51
3rd Term	38.53	38.53	39.03
4th Term	40.18	40.18	40.68
5th Term	41.91	40.91	42.41

4-200

**Roofer** **04/01/2023**

**JOB DESCRIPTION** Roofer **DISTRICT 4**

**ENTIRE COUNTIES**  
 Nassau, Suffolk

**WAGES**

Per Hour 07/01/2022  
 ROOFER/Waterproofers

Total Wage \$ 52.75  
 to be Paid

"Base" Wage 46.75\*\*

**SUPPLEMENTAL BENEFITS**

Per Hour:  
 ROOFER/Waterproofers \$ 34.86

**OVERTIME PAY**

Per Hour:  
 NEW ROOF SEE (B,E,Q)  
 RE-ROOF SEE (B,E,E2,Q)  
 \*\* Overtime Pay to be calculated on "BASE" Wage then add \$6.00.  
 (Example: \$46.75 x time and one half = \$70.13 + \$6.00 = \$76.13)

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 13, \*16, \*\*25) on HOLIDAY PAGE  
 Note: Time and One Half the Hourly Base Rate + \$6.00 if worked.

**REGISTERED APPRENTICES**

(1) Year terms at the following Percentage of Roofers/Waterproofers Base Wage.

1st 40%	2nd 50%	3rd 70%	4th 80% + \$ 4.80/Hr.
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Supplemental Benefits per hour:

1st Term	\$ 9.94
2nd Term	12.26
3rd Term	24.60
4th Term	28.02

4-154

**Sheetmetal Worker** **04/01/2023**

**JOB DESCRIPTION** Sheetmetal Worker **DISTRICT 4**

**ENTIRE COUNTIES**  
 Bronx, Kings, Nassau, New York, Queens, Richmond, Rockland, Suffolk, Westchester

**WAGES**

Per Hour: 07/01/2022

Sign Erector \$ 53.79

NOTE: Structurally Supported Overhead Highway Signs(See STRUCTURAL IRON WORKER CLASS)

**SUPPLEMENTAL BENEFITS**

Per Hour: 07/01/2022

Sign Erector \$ 53.33

**OVERTIME PAY**

See (A, F, S) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

Overtime: See (5, 6, 10, 11, 12, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Per Hour:

6 month Terms at the following percentage of Sign Erectors wage rate:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
35%	40%	45%	50%	55%	60%	65%	70%	75%	80%

**SUPPLEMENTAL BENEFITS**

Per Hour:

07/01/2022

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
\$ 14.34	\$ 16.26	\$ 18.17	\$ 20.10	\$ 28.02	\$ 30.47	\$ 33.72	\$ 36.27	\$ 38.77	\$ 41.29

4-137-SE

**Sheetmetal Worker**

**04/01/2023**

**JOB DESCRIPTION** Sheetmetal Worker

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour: 07/01/2022

Sheetmetal Worker \$ 57.60

Temporary Operation or Maintenance of Fans 47.33

**SUPPLEMENTAL BENEFITS**

Per Hour:

Sheetmetal Worker \$ 49.24

Maintenance Worker 49.24

**OVERTIME PAY**

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

For Maintenance See Codes B,E, Q & V

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 11, 15, 16, 25, 26) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Per Hour:Wages

Six(6) Month Terms As Follows:

1st & 2nd Term	\$ 20.19
3rd & 4th Term	25.96
5th & 6th Term	31.71
7th & 8th Term	40.37
9th Term	46.10

Per Hour: Supplemental Benefits

1st & 2nd Term	\$ 18.10
3rd & 4th Term	24.79

5th & 6th Term	29.25
7th & 8th Term	35.90
9th Term	40.37

4-28

**Steamfitter**

**04/01/2023**

**JOB DESCRIPTION** Steamfitter

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour: 07/01/2022

AC Service/Heat Service & Refrigeration \$ 43.85

Refrigeration, A/C, Oil Burner and Stoker Service and Repair.

NOTE: Refrigeration Compressor installation. (Not to exceed 5 Hp combined on any one project).

NOTE: Air Condition / Heating Compressor installation.(Not to exceed 15 tons combined on any one project).

**SUPPLEMENTAL BENEFITS**

Per Hour Worked:

AC Service/Heat Service \$ 19.96  
 Per Hour Paid: 16.45

**OVERTIME PAY**

See (B, E, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6, 11, 15, 25, 26) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

1 year terms

Wages per hour:

1st Term	\$ 21.23
2nd Term	25.63
3rd Term	29.85
4th Term	36.05

Benefits per hour Worked:

Per Hour Paid:

1st Term	\$ 13.29	\$ 9.78
2nd Term	14.57	11.06
3rd Term	15.91	12.40
4th Term	17.72	14.21

4-638B-StmFtrRef

**Steamfitter**

**04/01/2023**

**JOB DESCRIPTION** Steamfitter

**DISTRICT 4**

**ENTIRE COUNTIES**

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

**WAGES**

Per Hour: 07/01/2022

Sprinkler/Steam AC/Heat Fitter \$ 68.61

Temporary Heat & AC Fitter 52.16

Note: Add 15% to Hourly Wage for "Contracting Agency" Mandated Off Shift Work.

**SUPPLEMENTAL BENEFITS**

Per Hour:

Sprinkler/Steam \$ 52.74

Fitter

Temporary 43.29  
 Heat & AC  
 Fitter

Note: Add 15% to Hourly Benefit for "Contracting Agency" Mandated Off Shift Work.

**OVERTIME PAY**

Note: The posted overtime rates are applicable after 8 hours plus Saturday, Sunday and Holidays on Fire Protection/Sprinkler contracts under \$3,000,000.00 and HVAC/Mechanical contracts under \$30,000,000.00:

Sprinkler/Steam	Wages \$ 137.22	Benefit \$ 103.50
Temp Heat/AC	Wages \$ 104.32	Benefit \$ 84.60

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 11, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

1 year Terms at the Following:

WAGES per hour:

1st Term	2nd Term	3rd Term	4th Term	5th Term
\$ 27.48	\$ 34.34	\$ 41.19	\$ 48.05	\$ 54.90

SUPPLEMENTAL BENEFIT per hour:

1st Term	2nd Term	3rd Term	4th Term	5th Term
\$ 21.60	\$ 26.80	\$ 31.98	\$ 37.18	\$ 42.36

Premium Time Amounts:

41.52	51.86	62.18	75.52	82.84
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4-638A-StmSpFtr

**Teamster - Asphalt Delivery**

**04/01/2023**

**JOB DESCRIPTION** Teamster - Asphalt Delivery

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour:

Heavy Construction Work:

Shall include the supply of Asphalt for construction, improvement and modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools, Power Generation Plants, where distance between project and asphalt plant is not more than 50 miles.

TRUCK DRIVER

Asphalt Delivery	07/01/2022
	\$ 41.255

Light Construction Work:

Shall include the supply of Asphalt for construction of Single & Multi Family Homes, Town Houses, Apartment Buildings, including Driveways, Streets and Curbs within those projects. Parking Lots, Office Buildings, where distance between project and asphalt plant is not more than 50 miles.

TRUCK DRIVER

Asphalt Delivery	\$ 35.99
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**SUPPLEMENTAL BENEFITS**

Per Hour:

Heavy Construction Work

TRUCK DRIVER

Asphalt Delivery	\$ 50.3125
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Light Construction Work

TRUCK DRIVER

Asphalt Delivery \$ 13.05

**OVERTIME PAY**

See (B, \*B2, E, \*\*I, P, R, T, \*\*\*U) on OVERTIME PAGE

(NOTE) PREMIUM PAY of 25% on straight time hours for New York State D.O.T. and or other GOVERNMENTAL MANDATED off shift work.

Note: (B,E,P,T&\*U) Apply to Heavy Construction.

Note: (B2,I,T&\*U) Apply to Light Construction.

Note: (\*U) Only applies after 8 hours worked on holiday.

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, \*16, \*\*25) on HOLIDAY PAGE

NOTE:(\*16) Paid at Double if Worked; (\*\*25) Paid at Double if Worked.

4-282

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**Teamster - Building**

**04/01/2023**

**JOB DESCRIPTION** Teamster - Building

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour:

Truck Driver (Building Demolition & Debris, Cesspool & Leachate Pumping)

07/01/2022

Trailers \$ 35.77

Straight Jobs \$ 35.47

**SUPPLEMENTAL BENEFITS**

Per Hour:

All Classifications

\$ 38.85

**OVERTIME PAY**

See (B, E, S1) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE

Overtime: See (5, 6, 8, 11, 12, 15, 25, 26) on HOLIDAY PAGE

4-282

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**Teamster - Delivery of Concrete**

**04/01/2023**

**JOB DESCRIPTION** Teamster - Delivery of Concrete

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour:

Heavy Construction Work:

Shall Include the supply of Ready-Mix Concrete for construction, improvement and modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools & Power Generation Plants, where distance between project and asphalt plant is not more than 50 miles.

TRUCK DRIVER

07/01/2022

Concrete Delivery \$ 40.005

Light Construction Work:

Shall include the supply of Ready-Mix Concrete for construction of Single & Multi Family Homes, Town Houses, Apartment Buildings, including Driveways, Streets and Curbs within those projects. Parking Lots and Office Buildings, where distance between project and asphalt plant is not more than 50 miles.

TRUCK DRIVER

Concrete Delivery 36.815

**SUPPLEMENTAL BENEFITS**

Per Hour:

Heavy Construction Work  
Concrete Delivery \$ 45.475

Light Construction Work  
Concrete Delivery 15.355

**OVERTIME PAY**

NOTE: Heavy Construction:B2,I  
Light Construction:B,E,P

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6, \*16, \*\*25) on HOLIDAY PAGE  
NOTE:(\*16) Paid at Double if Worked. (\*\*25) Paid at Double if Worked.

4-282ns

**Teamster - Heavy&Highway 04/01/2023**

**JOB DESCRIPTION** Teamster - Heavy&Highway

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour:

Heavy Construction Work:

Shall include the construction, improvement or modification of all or any part of Streets, Highways, Bridges, Tunnels, Railroads, Canals, Dams, Airports, Schools, Power Generation Plants.

07/01/2022

Site Excavating  
(Chauffeurs) \$ 41.255

Light Construction Work:

Shall include the construction, improvement and modification of Single & Multi Family Homes, Town Houses, Apartment Buildings, including Driveways, Streets and Curbs within those projects. Parking Lots and Office Buildings.

Site Excavating  
(Chauffeurs) \$ 35.99

**SUPPLEMENTAL BENEFITS**

Per Hour:

Heavy Construction Work  
Chauffeurs \$ 50.3125

Light Construction Work  
Chauffeurs \$ 13.05

**OVERTIME PAY**

See (B, \*B2, E, \*\*I, P, \*\*\*R, \*\*\*\*U) on OVERTIME PAGE  
(NOTE) PREMIUM PAY of 25% on straight time hours for NEW YORK STATE D.O.T. and or other GOVERNMENTAL MANDATED off shift work.

Note: (B,E,P,T & \*U) Apply to Heavy Construction.

Note: (B2,I,T & \*U) Apply to Light Construction.

Note: (\*U) Only applies after 8 hours work on holiday

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6, \*16, \*\*25) on HOLIDAY PAGE  
NOTE:(\*16) Paid at Double if Worked. (\*\*25) Paid at Double if Worked.

4-282

**Welder 04/01/2023**

**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 07/01/2022

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

**Suffolk County Residential**

**Carpenter - Residential**

**04/01/2023**

**JOB DESCRIPTION** Carpenter - Residential

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour: 07/01/2022  
Carpenter  
(Residential) \$ 32.62

\*\*\*NOTE: Construction, Re-Construction, Alterations and Repairs of all residential units on housing, whether singular or multiple, condominiums, town houses and walk-up garden apartments not to exceed four (4) stories (four stories shall be above ground level and shall not include the buildings basement nor unfinished attic space). Receiving, fastening and putting in place all modular units when used for construction of the above referenced units, regardless of from what material they are made of, such as wood, masonry, metal or plastic. Hi-Rise apartments, Motels, Nursing Homes and other Institutional type living facilities are not covered under Residential Construction.

**SUPPLEMENTAL BENEFITS**

Per Hour:

Carpenter  
(Residential) \$ 21.89

**OVERTIME PAY**

See (B2, J) on OVERTIME PAGE

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
Overtime: See (5, 6, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

One(1) Year Terms at the Following:

1st Yr \$ 17.02  
2nd Yr \$ 18.89  
3rd Yr \$ 20.29  
4th Yr \$ 21.70  
5th Yr \$ 24.51

Supplemental Benefits per hour:

Apprentice(s) \$ 12.03

4-Reg Council Nass/Suff-r

**Electrician - Residential**

**04/01/2023**

**JOB DESCRIPTION** Electrician - Residential

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

Per Hour: 07/01/2022  
Electrician/  
Residential Wireman \$ 32.15

**"PLEASE NOTE"**

Shall apply to wiring of all Single or Multiple Family Dwellings and Apartment Buildings up to (3) stories.

**SUPPLEMENTAL BENEFITS**

Per Hour:

Electrician 13% of Hourly  
Wage Paid +  
\$ 13.90

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

**OVERTIME PAY**

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

**HOLIDAY**

Paid: See (1) on HOLIDAY PAGE  
 Overtime: See (5, 6, 15, 16, 25) on HOLIDAY PAGE

**REGISTERED APPRENTICES**

Wages per hour:

One(1) Year Term(s) at the Following Percentage  
 of Journeyman(s) Wage:

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

Supplemental Benefits per hour:

07/01/2022

Apprentices  
 ALL TERMS 3% of Hourly  
 Wage Paid +  
 \$ 9.88

NOTE: "Hourly Wage Paid" shall include any and all premium(s) pay

4-25resd

**Iron Worker - Residential**

**04/01/2023**

**JOB DESCRIPTION** Iron Worker - Residential

**DISTRICT 4**

**ENTIRE COUNTIES**

Kings, Nassau, Queens, Suffolk

**WAGES**

Per Hour

\*\*\*IMPORTANT NOTE: These rates are limited to Residential Construction, Affordable Housing Projects, Residential Modular Erection and Pre-Fabricated Engineered Buildings.

07/01/2022

Iron Worker \$ 48.00  
 Iron Worker Tender 28.00

**SUPPLEMENTAL BENEFITS**

Per Hour

\$ 16.63

**OVERTIME PAY**

See (B, B1, Q) on OVERTIME PAGE

**HOLIDAY**

Paid: See (5, 6, 18, 19) on HOLIDAY PAGE

4-361Resd

**Plumber - Residential**

**04/01/2023**

**JOB DESCRIPTION** Plumber - Residential

**DISTRICT 4**

**ENTIRE COUNTIES**

Nassau, Suffolk

**WAGES**

PER HOUR:

07/01/2022

Plumber  
 Residential \$ 33.05

(NOTE) Only to be used for One, Two or Multiple Family Dwellings  
 Two Floors or less and no Communal Kitchens or Medical Facilities.

**SUPPLEMENTAL BENEFITS**

PER HOUR:

Plumber  
Residential                      \$ 19.30

**OVERTIME PAY**

See (B, B2, J) on OVERTIME PAGE

**HOLIDAY**

Paid:                                See (1) on HOLIDAY PAGE  
Overtime:                        See (5, 6, 15, 16) on HOLIDAY PAGE

4-PLUM200RT

## Overtime Codes

Following is an explanation of the code(s) listed in the OVERTIME section of each classification contained in the attached schedule. Additional requirements may also be listed in the HOLIDAY section.

NOTE: Supplemental Benefits are 'Per hour worked' (for each hour worked) unless otherwise noted

- ( AA ) Time and one half of the hourly rate after 7 and one half hours per day
- ( A ) Time and one half of the hourly rate after 7 hours per day
- ( B ) Time and one half of the hourly rate after 8 hours per day
- ( B1 ) Time and one half of the hourly rate for the 9th & 10th hours week days and the 1st 8 hours on Saturday.  
Double the hourly rate for all additional hours
- ( B2 ) Time and one half of the hourly rate after 40 hours per week
- ( C ) Double the hourly rate after 7 hours per day
- ( C1 ) Double the hourly rate after 7 and one half hours per day
- ( D ) Double the hourly rate after 8 hours per day
- ( D1 ) Double the hourly rate after 9 hours per day
- ( E ) Time and one half of the hourly rate on Saturday
- ( E1 ) Time and one half 1st 4 hours on Saturday; Double the hourly rate all additional Saturday hours
- ( E2 ) Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- ( E3 ) Between November 1st and March 3rd Saturday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather, provided a given employee has worked between 16 and 32 hours that week
- ( E4 ) Saturday and Sunday may be used as a make-up day at straight time when a day is lost during that week due to inclement weather
- ( E5 ) Double time after 8 hours on Saturdays
- ( F ) Time and one half of the hourly rate on Saturday and Sunday
- ( G ) Time and one half of the hourly rate on Saturday and Holidays
- ( H ) Time and one half of the hourly rate on Saturday, Sunday, and Holidays
- ( I ) Time and one half of the hourly rate on Sunday
- ( J ) Time and one half of the hourly rate on Sunday and Holidays
- ( K ) Time and one half of the hourly rate on Holidays
- ( L ) Double the hourly rate on Saturday
- ( M ) Double the hourly rate on Saturday and Sunday
- ( N ) Double the hourly rate on Saturday and Holidays
- ( O ) Double the hourly rate on Saturday, Sunday, and Holidays
- ( P ) Double the hourly rate on Sunday
- ( Q ) Double the hourly rate on Sunday and Holidays
- ( R ) Double the hourly rate on Holidays
- ( S ) Two and one half times the hourly rate for Holidays

- ( S1 ) Two and one half times the hourly rate the first 8 hours on Sunday or Holidays One and one half times the hourly rate all additional hours.
- ( T ) Triple the hourly rate for Holidays
- ( U ) Four times the hourly rate for Holidays
- ( V ) Including benefits at SAME PREMIUM as shown for overtime
- ( W ) Time and one half for benefits on all overtime hours.
- ( X ) Benefits payable on Paid Holiday at straight time. If worked, additional benefit amount will be required for worked hours. (Refer to other codes listed.)

## Holiday Codes

### PAID Holidays:

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

### OVERTIME Holiday Pay:

Overtime holiday pay is the premium pay that is required for work performed on specified holidays. It is only required where the employee actually performs work on such holidays. The applicable holidays are listed under HOLIDAYS: OVERTIME. The required rate of pay for these covered holidays can be found in the OVERTIME PAY section listings for each classification.

Following is an explanation of the code(s) listed in the HOLIDAY section of each classification contained in the attached schedule. The Holidays as listed below are to be paid at the wage rates at which the employee is normally classified.

- ( 1 ) None
- ( 2 ) Labor Day
- ( 3 ) Memorial Day and Labor Day
- ( 4 ) Memorial Day and July 4th
- ( 5 ) Memorial Day, July 4th, and Labor Day
- ( 6 ) New Year's, Thanksgiving, and Christmas
- ( 7 ) Lincoln's Birthday, Washington's Birthday, and Veterans Day
- ( 8 ) Good Friday
- ( 9 ) Lincoln's Birthday
- ( 10 ) Washington's Birthday
- ( 11 ) Columbus Day
- ( 12 ) Election Day
- ( 13 ) Presidential Election Day
- ( 14 ) 1/2 Day on Presidential Election Day
- ( 15 ) Veterans Day
- ( 16 ) Day after Thanksgiving
- ( 17 ) July 4th
- ( 18 ) 1/2 Day before Christmas
- ( 19 ) 1/2 Day before New Years
- ( 20 ) Thanksgiving
- ( 21 ) New Year's Day
- ( 22 ) Christmas
- ( 23 ) Day before Christmas
- ( 24 ) Day before New Year's
- ( 25 ) Presidents' Day
- ( 26 ) Martin Luther King, Jr. Day
- ( 27 ) Memorial Day
- ( 28 ) Easter Sunday

( 29 )      Juneteenth

## **23. INSURANCE REQUIRED BY THE TOWN OF RIVERHEAD**

The successful bidder will be required to procure and pay for the following types of insurance, in accordance with the provisions of the Conditions of Contract:

- (A) Workers' Compensation Insurance.
- (B) Public Liability and Property Damage.
- (C) Contractor's Liability and Contractor's Property Damage.
- (D) Owner's Protective Public Liability and Property Damage.

Insurance documents meeting the requirements of Conditions of Contract, Section 38, Contractor's Insurance, shall be submitted within 14 calendar days from the date of award. Failure to provide acceptable insurance certificate(s) within this time frame shall result in the termination of Primary Contractor status.

## **24. TERM OF CONTRACT**

The term of the contract award shall be one year from award of contract. The Town of Riverhead shall have the option of extending the awards of this contract in six (6) month intervals when mutually agreed upon by Town and contractor. If not extended, the end date of this contract shall be one year from the date of contract award.

## **25. CERTIFIED PAYROLL RECORDS**

State of New York Department of Labor

On September 10, 1997, Governor Pataki signed into law Assembly Bill 6394-B amending Article 8, Section 220, of the NYS labor Law to include the following language:

Every contractor and sub-contractor shall submit to the department of jurisdiction within thirty (30) days after issuance of its first payroll, and every thirty (30) days thereafter, a transcript of the original payroll record, as provided by this article, subscribed and affirmed as true under penalties of perjury. The DEPARTMENT OF JURISDICTION shall be required to receive and maintain such payroll records.

The original payrolls or transcripts shall be preserved for three years from the completion of the work on the awarded project.

This law took effect on November 9, 1997.

Form PW12 is included in this package for contractor's convenience and must be completed, for the current payment request period, including all payroll information for all employees and subcontractor employees including but not limited to laborers, mechanics, foremen, supervisors, etc.





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, Bidder/Contractor (or any assignee) certifies that once the prohibited entities list is posted on the OGS website, any Contractor seeking to renew or extend a Contract or assume the responsibility of a Contract awarded in response to the 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 OF RIVERHEAD receive information that a person is in violation of the above-referenced certification, the TOWN OF RIVERHEAD will offer the person an opportunity to respond. If the person fails to demonstrate that is has ceased its engagement in the investment which is in violation of the Act within 90 days after the determination of such violation, then the TOWN OF RIVERHEAD shall take such action as may be appropriate including, but not limited to, imposing sanctions, seeking compliance, recovering damages, or declaring the Contractor in default.

The TOWN OF RIVERHEAD reserves the right to reject any bid or request for assignment for an entity that appears on the Department of Labor's prohibited entities list prior to the award of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the Department of Labor's prohibited entities list after contract award.

Signature: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Company: \_\_\_\_\_  
Date: \_\_\_\_\_

PERSONAL PERFORMANCE FORM  
STATEMENT TO BE SUBMITTED  
WHEN WORK IS PERFORMED PERSONALLY  
(SECTION 10001, TITLE 18, US CODE)

I, \_\_\_\_\_, hereby certify that I am the

\_\_\_\_\_ of \_\_\_\_\_  
**Title** **Name of Firm Submitting Statement**

\_\_\_\_\_ for \_\_\_\_\_  
**Prime Contractor or Subcontractor** **Nature of Work**

at \_\_\_\_\_, located in \_\_\_\_\_  
**Name of Building work being done** **City and State**

under contract number \_\_\_\_\_  
**Government Contract No. (See No. 3 Below)**

that \_\_\_\_\_  
**State All Work or List the Specific Classes of Work**

was done personally by \_\_\_\_\_  
**Names of Person(s) Performing Work & Their Connection w/ Firm**

that no wages were received for the labor performed; that no mechanics or laborers were employed in the prosecution thereof; and that the work was done during the following periods: \_\_\_\_\_ to \_\_\_\_\_  
**Beginning Date** **Ending Date**

Last date on which work was performed at the site was \_\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Title**

Section 10001 of Title 18 of the United State Code (Criminal Code and Criminal Procedures) shall apply to such statements – 72 Stat 887, 18 U.S.C., among other things, provides that whoever knowingly and willfully makes or uses a document or writing containing any false, fictitious or fraudulent statement or entry, in any matter within the jurisdiction of any department or agency of the United State, shall be fined not more than \$10,000 or imprisoned not more than five years, or both)

## **Instructions for Submission of Statements of Work Performed Personally**

**1. Prime contractors or subcontractors who perform the work are required to submit in lieu of weekly statements of compliance and payrolls with respect to the payment of wages pursuant to the Copeland Anti-kickbacks regulations, a certified statement clearly showing (1) their contractual relationship; (2) the scope and dates of work performed (3) that they received no wages; and (4) that no mechanics or laborers were employed in the prosecution of the work. The aforementioned sample form sets forth the wording described for such certified statements.**

**2. Prime contractors are responsible for the submission of the certified statements of subcontractors. Subcontractors' statement should be forwarded to the prime contractor for transmission to the Government contracting officer or his designated representative. Statements of prime contractors and subcontractors should be submitted as soon as possible after the last date on which work was performed at the site.**

**3. To facilitate identification of the project involved, prime contractors should provide their subcontractors with the Government contract number (if exists) or project name as called for on statement form.**

**4. Prime contractors should furnish their subcontractors with copies of the sample statement form so as to facilitate submission of the necessary information.**

**26. NO LIEN AFFIDAVIT & WAGE DISCLAIMER**

State of New York Department of Labor

Pursuant to Section 220-a of the New York State Labor Law all contractors, subcontractors and subcontractors to subcontractors must file an affidavit pertaining to the payment of all laborers and mechanics, exclusive of supervisory employees.

Affidavit Form 220 and Town of Riverhead Wage Disclaimer Form is included in this package for contractor's convenience. Unless given at later date, leave project number blank.

NOTE: Bidders are advised that this is not a contract authorizing any work. It is the option of the Town to authorize work at any time of the year. Any Town department or agency can use this contract. Work will be assigned as project develop and purchase orders will be issued to the contractor for projects as they arise in accordance with the specifications and bid price of applicable items of this contract.

MUNICIPAL CORPORATION

TOWN OF RIVERHEAD  
200 HOWELL AVENUE  
RIVERHEAD, NY 11901

CONTRACT NAME: \_\_\_\_\_ PROJECT No.: \_\_\_\_\_

AFFIDAVIT

Pursuant to Section 220-a of the Labor Law and Town of Riverhead Requirements

Note: All contractors, subcontractors, and subcontractors of subcontractors must file this statement for each payment period requested.

I, \_\_\_\_\_  
Name Title

of \_\_\_\_\_ Contractor  
Name of Firm Subcontractor

Project No.: \_\_\_\_\_ With: \_\_\_\_\_  
Contractor Name

for \_\_\_\_\_  
Indicate Nature of Work

at \_\_\_\_\_ hereby certify that all laborers have been paid in full for period ended \_\_\_\_\_, 20\_\_\_\_, and that there is now due and owing from it/me to any and all laborers (laborers include all laborers, mechanics, foremen and supervisory employees) for daily or weekly wages or supplements on account of labor performed upon the work under said contract, the following amounts to the persons whose names are set forth below opposite such amounts. (If none, so state.)

\$ \_\_\_\_\_ due and owing to \_\_\_\_\_  
\$ \_\_\_\_\_ due and owing to \_\_\_\_\_  
\$ \_\_\_\_\_ due and owing to \_\_\_\_\_  
\$ \_\_\_\_\_ due and owing to \_\_\_\_\_

Use additional sheet if necessary.

I further certify that I have contracted with the firms listed below as subcontractors, for labor to be performed upon the work under said contract for the current pay period requested. (If none, so state.)

Names and Address of Subcontractors	Type of Work
_____	_____
_____	_____
_____	_____

Use additional sheet if necessary

\_\_\_\_\_  
Signature

STATE OF NEW YORK  
SS:

COUNTY OF: \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared before me \_\_\_\_\_  
to me known and known to me who being by me duly sworn said that he is \_\_\_\_\_  
(Officer)

of \_\_\_\_\_ the \_\_\_\_\_  
(Contractor or Subcontractor) (Corporation or Partnership)

for which he executed the foregoing statement, for and in behalf of the said \_\_\_\_\_ contractor; that he has read the said statement so signed by him and known to be the seal thereof and that the same is true and to his own knowledge.

\_\_\_\_\_  
Notary Public Dated: \_\_\_\_\_

Section 220-c Labor Law. Any Contractor or subcontractor who shall upon his oath verify any statement required to be filed under this act which is known by him to be false, shall be guilty of perjury and punishable as provided by Section One Thousand Six Hundred and Thirty-Three of the Penal Law.

TOWN OF RIVERHEAD  
WAGE DISCLAIMER

Note: All contractors, subcontractors, and subcontractor of subcontractors must file this statement for each payment period request.

DATE: \_\_\_\_\_

TO: TOWN OF RIVERHEAD

FROM: \_\_\_\_\_  
(Contractor)

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

To our knowledge, the laborers listed on the attached certified payrolls have been paid the prevailing wage rates as established by the Department of Labor.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

**27. MINORITY AND WOMEN OWNED BUSINESSES (MWBE)**

(Not applicable to this contract)

**PROPOSAL FORM**

**TOWN OF RIVERHEAD  
SUFFOLK COUNTY, NEW YORK**

**PROPOSAL  
FOR**

**2023 ANNUAL CONSTRUCTION CONTRACT**

**TOWN OF RIVERHEAD  
200 HOWELL AVENUE  
RIVERHEAD, NEW YORK 11901**

Town of Riverhead  
Riverhead, NY

The undersigned bidder has carefully examined the Contract Documents for the proposed construction and will provide all necessary labor, materials, equipment and incidentals as necessary and called for by the said Contract Documents in the manner prescribed therein and in said contract, and in accordance with the requirements of the Town Engineer at the following unit and/or lump sum prices:

ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023 Rev. 4.5.23

COMPANY NAME : \_\_\_\_\_

<b>Award No. 1 - Mixed in Place Road Reconstruction - Low Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
1	2	Unclassified Excavation	CY	1-200	100		
	2U	Removal of Unsuitable Material	CY	1-200	100		
	3S-B	Embankment - Borrow	CY	1-200	100		
	3S-SGF	Embankment - Select Granular Fill	CY	1-200	100		
	3S-GS	Embankment - Grading Subgrade	SY	1-200	100		
	4	Stabilized Mixed-In-Place Recycled Base Course	SY	1 - 2,000	1,000		
	4-P	Recycled Concrete Aggregate	CY	1-200	100		
	25-C	Casting Adjustment	Ea.	1-5	3		
	25-S	Subgrade Area Material	CY	1-5	3		
	25-P	10'x10' Pavement Patch	Ea.	1 - 5	3		
	49	Rut Avoidance Asphalt Concrete, Type 6FRA Top Course	Ton	1-200	100		
	52	Rut Avoidance Asphalt Concrete, Type 3RA Binder Course	Ton	1-200	100		
	55	Asphalt Concrete Type 1, Base Course	Ton	1-200	100		
	57	Asphalt Emulsions	Gal	1,000-5000	3000		
	112	Topsoil and Seed	SY	1-500	250		
	116	Pavement Markings	LF	1-1000	500		
<b>Total Bid Comparison Price Award No. 1</b>							

<b>Award No. 2 - Mixed in Place Road Reconstruction - High Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
2	2	Unclassified Excavation	CY	201 - 500	350		
	2U	Removal of Unsuitable Material	CY	201 - 500	350		
	3S-B	Embankment - Borrow	CY	201 - 500	350		
	3S-SGF	Embankment - Select Granular Fill	CY	201 - 500	350		
	3S-GS	Embankment - Grading Subgrade	SY	201 - 500	350		
	4	Stabilized Mixed-In-Place Recycled Base Course	SY	2,001 - 5,000	3500		
	4-P	Recycled Concrete Aggregate	CY	201 - 500	350		
	25-C	Casting Adjustment	Ea.	6 - 10	8		
	25-S	Subgrade Area Material	CY	6-10	8		
	25-P	10'x10' Pavement Patch	Ea.	6 - 10	8		
	49	Rut Avoidance Asphalt Concrete, Type 6FRA Top Course	Ton	201-500	350		
	52	Rut Avoidance Asphalt Concrete, Type 3RA Binder Course	Ton	201-500	350		
	55	Asphalt Concrete Type 1, Base Course	Ton	201-500	350		
	57	Asphalt Emulsions	Gal	5001 - 15,000	10000		
	112	Topsoil and Seed	SY	501 - 1,500	1000		
	116	Pavement Markings	LF	1,001-5000	3,000		
<b>Total Bid Comparison Price Award No. 2</b>							

**ALL ITEMS IN AN AWARD GROUPING (I.E. 2, 3, 4.....) MUST BE COMPLETED TO BE CONSIDERED A COMPETITIVE BID**

ESTIMATED QUANTITIES LISTED ARE SOLELY FOR BIDDING PURPOSES. THE TOWN RESERVES THE RIGHT TO INCREASE OR DECREASE QUANTITIES AS DEEMED NECESSARY. ITEMS FROM ANY AWARD MAY BE UTILIZED WITH OUT UTILIZING SOME OR ALL ITEMS IN THE SAME AWARD GROUPING

ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023 Rev. 4.5.23

COMPANY NAME : \_\_\_\_\_

<b>Award No. 3 - Roadway/Parking Lot Construction - Low Quantity</b>							
<b>Award No.</b>	<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Estimated Quantity</b>	<b>Unit Cost</b>	<b>Total Price</b>
3	1	Clearing and Grubbing	Acre	0-2.5	1		
	2	Unclassified Excavation	CY	1-200	100		
	3S-B	Embankment - Borrow	CY	1-200	100		
	3S-SGF	Embankment - Select Granular Fill	CY	1-200	100		
	3S-GS	Embankment - Grading Subgrade	SY	1-200	100		
	4	Stabilized Mixed-In-Place Recycled Base Course	SY	1 - 2,000	1,000		
	4-P	Recycled Concrete Aggregate	CY	1-200	100		
	25-C	Casting Adjustment	Ea.	1-5	3		
	25-S	Subgrade Area Material	CY	1-5	3		
	25-P	10'x10' Pavement Patch	Ea.	1 - 5	3		
	49	Rut Avoidance Asphalt Concrete, Type 6FRA Top Course	Ton	1-200	100		
	52	Rut Avoidance Asphalt Concrete, Type 3RA Binder Course	Ton	1-200	100		
	55	Asphalt Concrete Type 1, Base Course	Ton	1-200	100		
	57	Asphalt Emulsions	Gal	1,000-5000	3000		
	112	Topsoil and Seed	SY	1-500	250		
	116	Pavement Markings	LF	1-1000	500		
	118-SWM	Straw/Wood Fiber Mulch-Temporary	SY	1-500	250		
	118-SM	Seed and Mulch - Temporary	SY	1-500	250		
	118-SSWM	Seed and Straw/Wood Fiber Mulch - Temporary	SY	1-500	250		
	118-S	Straw Bale - Temporary	LF	1-500	250		
	118-G	Geotextiles	SY	1-200	100		
	118-SF	Silt Fence - Temporary	LF	1-500	250		
	118-D	Drainage Structure Inlet Protection, Prefabricated - Temporary	Ea.	1-5	3		
	118-J	Jute Mesh	SY	1-200	100		
	118-SCE	Stabilized Construction Entrance	SY	1-200	100		
<b>Total Bid Comparison Price Award No. 3</b>							

**ALL ITEMS IN AN AWARD GROUPING (I.E. 2, 3, 4.....) MUST BE COMPLETED TO BE CONSIDERED A COMPETITIVE BID**

ESTIMATED QUANTITIES LISTED ARE SOLELY FOR BIDDING PURPOSES. THE TOWN RESERVES THE RIGHT TO INCREASE OR DECREASE QUANTITIES AS DEEMED NECESSARY. ITEMS FROM ANY AWARD MAY BE UTILIZED WITH OUT UTILIZING SOME OR ALL ITEMS IN THE SAME AWARD GROUPING

ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023 Rev. 4.5.23

COMPANY NAME : \_\_\_\_\_

<b>Award No. 4 - Roadway/Parking Lot Construction - High Quantity</b>							
<b>Award No.</b>	<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Estimated Quantity</b>	<b>Unit Cost</b>	<b>Total Price</b>
4	1	Clearing and Grubbing	Acre	2.6-5	5		
	2	Unclassified Excavation	CY	201 - 500	350		
	3S-B	Embankment - Borrow	CY	201 - 500	350		
	3S-SGF	Embankment - Select Granular Fill	CY	201 - 500	350		
	3S-GS	Embankment - Grading Subgrade	SY	201 - 500	350		
	4	Stabilized Mixed-In-Place Recycled Base Course	SY	2,001 - 5,000	3500		
	4-P	Recycled Concrete Aggregate	CY	201 - 500	350		
	25-C	Casting Adjustment	Ea.	6 - 10	8		
	25-S	Subgrade Area Material	CY	6-10	8		
	25-P	10'x10' Pavement Patch	Ea.	6 - 10	8		
	49	Rut Avoidance Asphalt Concrete, Type 6FRA Top Course	Ton	201-500	350		
	52	Rut Avoidance Asphalt Concrete, Type 3RA Binder Course	Ton	201-500	350		
	55	Asphalt Concrete Type 1, Base Course	Ton	201-500	350		
	57	Asphalt Emulsions	Gal	5001 - 15,000	10000		
	112	Topsoil and Seed	SY	501 - 1,500	1000		
	116	Pavement Markings	LF	1,001-5000	3,000		
	118-SWM	Straw/Wood Fiber Mulch - Temporary	SY	500-1500	1,000		
	118-SM	Seed and Mulch - Temporary	SY	500-1500	1,000		
	118-SSWM	Seed and Straw/Wood Fiber Mulch - Temporary	SY	500-1500	1,000		
	118-S	Straw Bale - Temporary	LF	500-1500	1,000		
	118-G	Geotextiles	SY	201 - 500	350		
	118-SF	Silt Fence - Temporary	LF	501 - 1,500	1000		
	118-D	Drainage Structure Inlet Protection, Prefabricated - Temporary	Ea.	6-10	8		
	118-J	Jute Mesh	SY	201 - 500	350		
	118-SCE	Stabilized Construction Entrance	SY	201 - 500	350		
<b>Total Bid Comparison Price Award No. 4</b>							

**ALL ITEMS IN AN AWARD GROUPING (I.E. 2, 3, 4.....) MUST BE COMPLETED TO BE CONSIDERED A COMPETITIVE BID**

ESTIMATED QUANTITIES LISTED ARE SOLELY FOR BIDDING PURPOSES. THE TOWN RESERVES THE RIGHT TO INCREASE OR DECREASE QUANTITIES AS DEEMED NECESSARY. ITEMS FROM ANY AWARD MAY BE UTILIZED WITH OUT UTILIZING SOME OR ALL ITEMS IN THE SAME AWARD GROUPING

ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023 Rev. 4.5.23

COMPANY NAME : \_\_\_\_\_

<b>Award No. 5 Drainage Installation</b>							
<b>Award No.</b>	<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Estimated Quantity</b>	<b>Unit Cost</b>	<b>Total Price</b>
5	2	Unclassified Excavation	CY	201 - 500	350		
	4-P	Recycled Concrete Aggregate	CY	1 - 100	50		
	7RR	Remove and Replace Concrete Curb	LF	1-100	50		
	7ARR	Remove and Replace Concrete Header	LF	1-100	50		
	9RR	Remove and Replace Conc. Sidewalk	SY	1-50	25		
	13U-4"	Underdrain Pipe -4" Dia.	LF	1-100	50		
	13U-6"	Underdrain Pipe -6" Dia.	LF	1-100	50		
	13U-8"	Underdrain Pipe -8" Dia.	LF	1-100	50		
	13P-4"	Polyethylene Pipe-4" Dia.	LF	1-100	50		
	13P-12"	Polyethylene Pipe -12" Dia.	LF	1-100	50		
	13P-15"	Polyethylene Pipe -15" Dia.	LF	1-100	50		
	13P-18"	Polyethylene Pipe -18" Dia.	LF	1-100	50		
	13P-24"	Polyethylene Pipe -24" Dia.	LF	1-100	50		
	13P-30"	Polyethylene Pipe -30" Dia.	LF	1-100	50		
	13P-36"	Polyethylene Pipe -36" Dia.	LF	1-100	50		
	13P-48"	Polyethylene Pipe -48" Dia.	LF	1-100	50		
	21A	Leaching Pools (8' Dia.x 4'L)	Ea.	1 - 5	3		
	21B	Leaching Pools (8' Dia.x 8'L)	Ea.	1 - 5	3		
	21C	Leaching Pools (8' Dia.x 12'L)	Ea.	1 - 5	3		
	21D	Leaching Pools (10' Dia.x 4'L)	Ea.	1 - 5	3		
	21E	Leaching Pools (10' Dia.x 8'L)	Ea.	1 - 5	3		
	21F	Leaching Pools (10' Dia.x 12'L)	Ea.	1 - 5	3		
	23A	Catch Basins Type A	Ea.	1 - 5	3		
	23B	Catch Basins Type B	Ea.	1 - 5	3		
	23AXD	Catch Basins Type A- Add Dept	VF	1 - 5	3		
	23BXD	Catch Basins Type B - Add Depth	VF	1 - 5	3		
	25-C	Casting Adjustment	Ea.	1-5	3		
	25-S	Subgrade Area Material	CY	1	1		
	25-P	10'x10' Pavement Patch	Ea.	1 - 5	3		
	27-MH	Manholes-4'ID/Base Section 3'-6"	Ea.	1 - 5	3		
	27-MHADX	Manholes-4'ID/Additional Depth	VF	1 - 5	3		
	27-DI	Drop Inlets-2' ID/Base Section 3'	Ea.	1 - 5	3		
	53	Tack Coat	Gal	1-10	5		
	112	Topsoil and Seed	SY	1-500	250		
<b>Total Bid Comparison Price Award No. 5</b>							

**ALL ITEMS IN AN AWARD GROUPING (I.E. 2, 3, 4.....) MUST BE COMPLETED TO BE CONSIDERED A COMPETITIVE BID**

ESTIMATED QUANTITIES LISTED ARE SOLELY FOR BIDDING PURPOSES. THE TOWN RESERVES THE RIGHT TO INCREASE OR DECREASE QUANTITIES AS DEEMED NECESSARY. ITEMS FROM ANY AWARD MAY BE UTILIZED WITH OUT UTILIZING SOME OR ALL ITEMS IN THE SAME AWARD GROUPING

ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023 Rev. 4.5.23

COMPANY NAME : \_\_\_\_\_

<b>Award No. 6 - Mill and Overlay - Low Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
6	2U	Removal of Unsuitable Material	CY	1 - 50	25		
	4-SS	Stabilized Soil Aggregate Subbase	CY	1-25	10		
	48	Asphalt Concrete Truing and Leveling Course	Ton	1-200	100		
	49	Rut Avoidance Asphalt Concrete, Type 6FRA Top Course	Ton	1-200	100		
	52	Rut Avoidance Asphalt Concrete, Type 3RA Binder Course	Ton	1-200	100		
	59	Milling of Asphaltic Concrete Pavement	SY	1-3000	1,500		
	116	Pavement Markings	LF	1 - 2,000	1,000		
	118-SWM	Straw/Wood Fiber Mulch - Temporary	SY	1-500	250		
	118-SM	Seed and Mulch - Temporary	SY	1-500	250		
	118-SSWM	Seed and Straw/Wood Fiber Mulch - Temporary	SY	1-500	250		
	118-S	Straw Bale - Temporary	LF	1-500	250		
	118-G	Geotextiles	SY	1-200	100		
	118-SF	Silt Fence - Temporary	LF	1-500	250		
	118-D	Drainage Structure Inlet Protection, Prefabricated - Temporary	Ea.	1-5	5		
	118-J	Jute Mesh	SY	1-200	100		
	118-SCE	Stabilized Construction Entrance	SY	1-200	100		
<b>Total Bid Comparison Award No.6</b>							

<b>Award No. 7 - Mill and Overlay - High Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
7	2U	Removal of Unsuitable Material	CY	51-100	75		
	4-SS	Stabilized Soil Aggregate Subbase	CY	26-50	35		
	48	Asphalt Concrete Truing and Leveling Course	Ton	201-1000	600		
	49	Rut Avoidance Asphalt Concrete, Type 6FRA Top Course	Ton	201-1000	600		
	52	Rut Avoidance Asphalt Concrete, Type 3RA Binder Course	Ton	201-1000	600		
	59	Milling of Asphaltic Concrete Pavement	SY	3001-5000	4,000		
	116	Pavement Markings	LF	1 - 2,000	1,000		
	118-SWM	Straw/Wood Fiber Mulch - Temporary	SY	501-1000	750		
	118-SM	Seed and Mulch - Temporary	SY	501-1000	750		
	118-SSWM	Seed and Straw/Wood Fiber Mulch - Temporary	SY	501-1000	750		
	118-S	Straw Bale - Temporary	LF	501-1000	750		
	118-G	Geotextiles	SY	201-500	350		
	118-SF	Silt Fence - Temporary	LF	501-1000	750		
	118-D	Drainage Structure Inlet Protection, Prefabricated - Temporary	Ea.	6-10	10		
	118-J	Jute Mesh	SY	201-500	500		
	118-SCE	Stabilized Construction Entrance	SY	201-500	350		
<b>Total Bid Comparison Award No.7</b>							

**ALL ITEMS IN AN AWARD GROUPING (I.E. 2, 3, 4.....) MUST BE COMPLETED TO BE CONSIDERED A COMPETITIVE BID**

ESTIMATED QUANTITIES LISTED ARE SOLELY FOR BIDDING PURPOSES. THE TOWN RESERVES THE RIGHT TO INCREASE OR DECREASE QUANTITIES AS DEEMED NECESSARY. ITEMS FROM ANY AWARD MAY BE UTILIZED WITH OUT UTILIZING SOME OR ALL ITEMS IN THE SAME AWARD GROUPING

ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023 Rev. 4.5.23

COMPANY NAME : \_\_\_\_\_

<b>Award No. 8 - Concrete Flatwork and Curbing - Low Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
8	2U	Removal of Unsuitable Material	CY	1-10	5		
	6	Detectable Warning Units	SF	1 - 25	10		
	7	Concrete Curb	LF	1-200	100		
	7A	Concrete Header	LF	1-200	100		
	7RR	Remove and Replace Concrete Curb	LF	1-200	100		
	7ARR	Remove and Replace Concrete Header	LF	1-200	100		
	8	Jumbo Belgian Block Curb	LF	1-200	100		
	8RR	Remove and Replace Jumbo Belgian Block Curb	LF	1-200	100		
	9	Concrete Sidewalk	SY	1-100	50		
	9RR	Remove and Replace Concrete Sidewalk	SY	1-100	50		
	10-4"	Colored and Imprinted Concrete Sidewalk - 4"	SY	1-100	50		
	10-6"	Colored and Imprinted Concrete Sidewalk - 6"	SY	1-100	50		
	10-4"RR	Remove and Replace Colored and Imprinted Concrete Sidewalk - 4"	SY	1-100	50		
	10-6"RR	Remove and Replace Colored and Imprinted Concrete - 6"	SY	1-100	50		
	11	Concrete Aprons	SY	1-50	25		
	11RR	Remove and Replace Concrete Aprons	SY	1-25	10		
	112	Topsoil and Seed	SY	1-200	100		
<b>Total Bid Comparison Award No. 8</b>							

<b>Award No. 8A - Trench Drain and Polyethylene Pipe-4" Dia. Low Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
8A	12	Trench Drain	LF	1-100	50		
	13P-4"	Polyethylene Pipe-4" Dia.	LF	1-200	100		
<b>Total Bid Comparison Award No. 8A</b>							

<b>Award No. 8B - Trench Drain and Polyethylene Pipe -4" Dia. High Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
8B	12	Trench Drain	LF	101-300	200		
	13P-4"	Polyethylene Pipe -4" Dia.	LF	201-500	350		
<b>Total Bid Comparison Award No. 8B</b>							

**ALL ITEMS IN AN AWARD GROUPING (I.E. 2, 3, 4.....) MUST BE COMPLETED TO BE CONSIDERED A COMPETITIVE B**

ESTIMATED QUANTITIES LISTED ARE SOLELY FOR BIDDING PURPOSES. THE TOWN RESERVES THE RIGHT TO INCREASE OR DECREASE QUANTITIES AS DEEMED NECESSARY. ITEMS FROM ANY AWARD MAY BE UTILIZED WITH OUT UTILIZING SOME OR ALL ITEMS IN THE SAME AWARD GROUPING

**ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023**

COMPANY NAME : \_\_\_\_\_

<b>Award No. 9 - Concrete Flatwork and Curbing - High Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
9	2U	Removal of Unsuitable Material	CY	11 - 20	15		
	6	Detectable Warning Units	SF	26 - 100	60		
	7	Concrete Curb	LF	201 - 1,000	600		
	7A	Concrete Header	LF	201 - 1,000	600		
	7RR	Remove and Replace Concrete Curb	LF	201 - 1,000	600		
	7ARR	Remove and Replace Concrete Curb	LF	201 - 1,000	600		
	8	Jumbo Belgian Block Curb	LF	201 - 1,000	600		
	8RR	Remove and Replace Jumbo Belgian Block Curb	LF	201 - 1,000	600		
	9	Concrete Sidewalk	SY	101-500	300		
	9RR	Remove and Replace Concrete Sidewalk	SY	101-500	300		
	10-4"	Colored and Imprinted Concrete Sidewalk - 4"	SY	101-500	300		
	10-6"	Colored and Imprinted Concrete Sidewalk - 6"	SY	101-500	300		
	10-4"RR	Remove and Replace Colored and Imprinted Concrete Sidewalk - 4"	SY	101-500	300		
	10-6"RR	Remove and Replace Colored and Imprinted Concrete - 6"	SY	101-500	300		
	11	Concrete Aprons	SY	51-100	75		
	11RR	Remove and Replace Concrete Aprons	SY	26 - 100	60		
	112	Topsoil and Seed	SY	201-500	350		
<b>Total Bid Comparison Award No. 9</b>							

<b>Award No. 10 - Permeable Paver Parking Lot/Roadway - Low Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
10	2	Unclassified Excavation	CY	1-500	300		
	6	Detectable Warning Units	SF	1-100	50		
	7	Concrete Curb	LF	1-500	250		
	8	Jumbo Belgian Block Curb	LF	1-500	250		
	9	Concrete Sidewalk	SY	1-50	25		
	10-4"	Colored and Imprinted Concrete Sidewalk - 4"	SY	1-50	25		
	11	Concrete Aprons	SY	1-50	25		
	12	Trench Drain	LF	1-100	50		
	13P-4"	Polyethylene Pipe-4" Dia.	LF	1-100	50		
	74	Painted Lines	LF	1-1000	500		
	112	Topsoil and Seed	SY	1-200	100		
	190-O	Concrete Grid Pavements	SY	0 - 1,000	500		
	190-P	Permeable Interlocking Concrete Pavement – Eco-ridge	SY	0 - 1,000	500		
	190- PP	Permeable Interlocking Concrete Pavement – SF-Rima	SY	0 - 1,000	500		
	191	Unit Pavers	SY	0 - 1,000	500		
<b>Total Bid Comparison Award No. 10</b>							

**ALL ITEMS IN AN AWARD GROUPING (I.E. 2, 3, 4.....) MUST BE COMPLETED TO BE CONSIDERED A COMPETITIVE BID**  
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**ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023**

COMPANY NAME : \_\_\_\_\_

<b>Award No. 11 - Permeable Paver Parking Lot/Roadway - High Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
11	2	Unclassified Excavation	CY	501-1000	750		
	6	Detectable Warning Units	SF	101-200	150		
	7	Concrete Curb	LF	501-1000	750		
	8	Jumbo Belgian Block Curb	LF	501-1000	750		
	9	Concrete Sidewalk	SY	51-100	75		
	10-4"	Colored and Imprinted Concrete Sidewalk - 4"	SY	51-100	75		
	11	Concrete Aprons	SY	51-100	75		
	12	Trench Drain	LF	101-200	150		
	13P-4"	Polyethylene Pipe -4" Dia.	LF	101-200	150		
	74	Painted Lines	LF	1001-5000	3,000		
	112	Topsoil and Seed	SY	201-500	750		
	190-O	Concrete Grid Pavements	SY	1001-5000	3,000		
	190-P	Permeable Interlocking Concrete Pavement – Eco-ridge	SY	1001-5000	3,000		
	190- PP	Permeable Interlocking Concrete Pavement – SF-Rima	SY	1001-5000	3,000		
	191	Unit Pavers	SY	1001-5000	3,000		
<b>Total Bid Comparison Award No. 11</b>							

<b>Award No. 12 - Surface Treatments - Low Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
12	100	Bituminous Surface Treatment	SY	1-1000	500		
	104	Asphalt Emulsion Slurry	SY	1 - 1,000	500		
<b>Total Bid Comparison Award No. 12</b>							

<b>Award No. 13 - Surface Treatments - High Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
13	100	Bituminous Surface Treatment	SY	1001-5000	2,500		
	104	Asphalt Emulsion Slurry	SY	1001-5000	2,500		
<b>Total Bid Comparison Award No. 13</b>							

<b>Award No. 14 - Crack Sealants</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
14	44	Elastomeric Pavement Crack Sealant	LF	1 - 1,000	500		
	46	Fiber Reinforced Polymer Modified Pavement Crack Sealant	LF	1 - 1,000	500		
<b>Total Bid Comparison Award No. 14</b>							

**ALL ITEMS IN AN AWARD GROUPING (I.E. 2, 3, 4.....) MUST BE COMPLETED TO BE CONSIDERED A COMPETITIVE BID**  
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 AWARD GROUPING

**ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023**

COMPANY NAME : \_\_\_\_\_

<b>Award No. 15 - Chain Link Fence - Low Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
15	108-4'	Vinyl Coated Chain Link Fencing	LF	0 - 100	50		
	108-6'	Vinyl Coated Chain Link Fencing	LF	0 - 100	50		
	108-8'	Vinyl Coated Chain Link Fencing	LF	0 - 100	50		
	108SG-4'	Vinyl Coated Chain Link 3' Single Gate	Ea	0-5	1		
	108SG-6'	Vinyl Coated Chain Link 3' Single Gate	Ea	0-5	1		
	108SG-8'	Vinyl Coated Chain Link 3' Single Gate	Ea	0-5	1		
	108SG-4'	Vinyl Coated Chain Link 8' Double Gate	Ea	0-5	1		
	108SG-6'	Vinyl Coated Chain Link 8' Double Gate	Ea	0-5	1		
	108SG-8'	Vinyl Coated Chain Link 8' Double Gate	Ea	0-5	1		
<b>Total Bid Comparison Award No. 15</b>							

<b>Award No. 16 - Chain Link Fence - High Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
16	108-4'	Vinyl Coated Chain Link Fencing	LF	101-500	300		
	108-6'	Vinyl Coated Chain Link Fencing	LF	101-500	300		
	108-8'	Vinyl Coated Chain Link Fencing	LF	101-500	300		
	108SG-4'	Vinyl Coated Chain Link 3' Single Gate	Ea	0-10	2		
	108SG-6'	Vinyl Coated Chain Link 3' Single Gate	Ea	0-10	2		
	108SG-8'	Vinyl Coated Chain Link 3' Single Gate	Ea	0-10	2		
	108SG-4'	Vinyl Coated Chain Link 8' Double Gate	Ea	0-10	2		
	108SG-6'	Vinyl Coated Chain Link 8' Double Gate	Ea	0-10	2		
	108SG-8'	Vinyl Coated Chain Link 8' Double Gate	Ea	0-10	2		
<b>Total Bid Comparison Award No. 16</b>							

<b>Award No. 17 - Asphalt Top Course Installed - Low Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
17	49	Rut Avoidance Asphalt Concrete, Type 6FRA Top Course	Ton	1-500	250		
<b>Total Bid Comparison Award No. 17</b>							

<b>Award No. 18 - Asphalt Top Course Installed - Mid Quantity</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
18	49	Rut Avoidance Asphalt Concrete, Type 6FRA Top Course	Ton	501-1000	750		
<b>Total Bid Comparison Award No. 18</b>							

**ALL ITEMS IN AN AWARD GROUPING (I.E. 2, 3, 4.....) MUST BE COMPLETED TO BE CONSIDERED A COMPETITIVE BID**

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ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023

COMPANY NAME : \_\_\_\_\_

Award No. 19 - Asphalt Top Course Installed - High Quantity							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
19	49	Rut Avoidance Asphalt Concrete, Type 6FRA Top Course	Ton	1001-5000	3000		
<b>Total Bid Comparison Award No. 19</b>							

Award No. 20 - Asphalt Binder Course Installed - Low Quantity							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
20	52	Rut Avoidance Asphalt Concrete, Type 3RA Binder Course	Ton	1-500	250		
<b>Total Bid Comparison Award No. 20</b>							

Award No. 21 - Asphalt Binder Course Installed - Mid Quantity							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
21	52	Rut Avoidance Asphalt Concrete, Type 3RA Binder Course	Ton	501-1000	750		
<b>Total Bid Comparison Award No. 21</b>							

Award No. 22 - Asphalt Binder Course Installed - High Quantity							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
22	52	Rut Avoidance Asphalt Concrete, Type 3RA Binder Course	Ton	1001-5000	3000		
<b>Total Bid Comparison Award No. 22</b>							

Award No. 23 - Pavement Patches - Low Quantity							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
23	51	Pavement Patches	SF	0-1,000	500		
<b>Total Bid Comparison Award No. 23</b>							

Award No. 24 - Pavement Patches - High Quantity							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
24	51	Pavement Patches	SF	1001-5000	3,000		
<b>Total Bid Comparison Award No. 24</b>							

Award No. 25 - Latex Modified Surface Treatment - Low Quantity							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
25	106	Latex Modified Surface Treatment	SY	1-1000	500		
<b>Total Bid Comparison Award No. 25</b>							

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ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023

COMPANY NAME : \_\_\_\_\_

Award No. 26 - Latex Modified Surface Treatment - High Quantity							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
26	106	Latex Modified Surface Treatment	SY	1001-5000	3,000		
<b>Total Bid Comparison Award No. 26</b>							

Award No. 27 - Sodding - Low Quantity							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
27	113	Sodding	SY	1-5000	1,000		
<b>Total Bid Comparison Award No. 27</b>							

Award No. 28 - Sodding - High Quantity							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
28	113	Sodding	SY	5001-10000	7,500		
<b>Total Bid Comparison Award No. 28</b>							

Award No. 29 - Poured In Place Safety Surface							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
29	151-6'	Poured in Place Safety Surface - 6' Critical Fall Ht.	SY	1-1000	500		
	151-8'	Poured in Place Safety Surface - 8' Critical Fall Ht.	SY	1-1000	500		
	151-10'	Poured in Place Safety Surface - 10' Critical Fall Ht.	SY	1-1000	500		
<b>Total Bid Comparison Award No. 29</b>							

Award No. 30 - Painted Lines - Low Quantity							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
30	74	Painted Lines	LF	1-1000	500		
<b>Total Bid Comparison Award No. 30</b>							

Award No. 31 - Painted Lines - High Quantity							
No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
31	74	Painted Lines	LF	1001-5000	3,000		
<b>Total Bid Comparison Award No. 31</b>							

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ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023

COMPANY NAME : \_\_\_\_\_

<b>Award No. 32 - Concrete Roadway/Parking Lot Patches</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
32	50	Asphaltic Concrete Top Course	Tons	0-500	250		
	52	Asphaltic Concrete Binder Course	Tons	0-500	250		
	51-A	Concrete used for Roadway Replacement	CU. FT	0-500	250		
	4-P	Recycled Concrete Aggregate	CU. FT	0-500	250		
	51-AR	Reinforcement	SQ FT	0-500	250		
	74	Painted Lines	LF	0-100	50		
	116	Pavement Marking	LF	0-100	50		
<b>Total Bid Comparison Award No. 32</b>							

<b>Award No. 33 - ASPHALT TENNIS COURT SURFACE COLOR COATING SYSTEM</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
33	200	Asphalt Tennis Court Surface Color Coating System	SQ YD	1-1500	1000		
<b>Total Bid Comparison Award No. 33</b>							

<b>Award No. 34 – Directional Boring of 1-1/2” Conduit</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
34	300	Directional Boring of 1-1/2” Conduit	LF	1-100	100		
34	300	Directional Boring of 1-1/2” Conduit	LF	101-500	500		
34	300	Directional Boring of 1-1/2” Conduit	LF	501-1000	1000		
34	300	Directional Boring of 1-1/2” Conduit	LF	Over 1000	1500		
<b>Total Bid Comparison Award No. 34</b>							

<b>Award No. 35 – Directional Boring of 2” Conduit</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
35	300	Directional Boring of 2” Conduit	LF	1-100	100		
35	300	Directional Boring of 2” Conduit	LF	101-500	500		
35	300	Directional Boring of 2” Conduit	LF	501-1000	1000		
35	300	Directional Boring of 2” Conduit	LF	Over 1000	1500		
<b>Total Bid Comparison Award No. 35</b>							

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ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023

COMPANY NAME : \_\_\_\_\_

<b>Award No. 36 – Directional Boring of 4” Conduit</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
36	300	Directional Boring of 4” Conduit	LF	1-100	100		
36	300	Directional Boring of 4” Conduit	LF	101-500	500		
36	300	Directional Boring of 4” Conduit	LF	501-1000	1000		
36	300	Directional Boring of 4” Conduit	LF	Over 1000	1500		
<b>Total Bid Comparison Award No. 36</b>							

<b>Award No. 37 – Directional Boring of 6” Conduit</b>							
Award No.	Item No.	Description	Unit	Quantity	Estimated Quantity	Unit Cost	Total Price
37	300	Directional Boring of 6” Conduit	LF	1-100	100		
37	300	Directional Boring of 6” Conduit	LF	101-500	500		
37	300	Directional Boring of 6” Conduit	LF	501-1000	1000		
37	300	Directional Boring of 6” Conduit	LF	Over 1000	1500		
<b>Total Bid Comparison Award No. 37</b>							

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**PROPOSAL FORM**

The undersigned hereby acknowledges receipt of the following Addenda (if any):

<u>Addendum No.</u>	<u>Dated</u>
_____	_____
_____	_____

Signature of person, firm or corporation making this proposal:

\_\_\_\_\_  
(Contractor)

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

P.O. Address: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ Dated: \_\_\_\_\_

The full names and address of all persons interested in the Proposal or principals are as follows:

<u>Name</u>	<u>Address</u>
_____	_____
_____	_____
_____	_____

The Town Board reserves the right to award this contract to the lowest qualified bidder and to reject and declare invalid any or all bids deemed not in the best interest of the Town. In awarding this contract, the Town is not bound by the quantities stated in the Proposal Form. It is emphasized that the quantities are approximations only. No guarantee is made for any quantities stated not is a guarantee made to the total bid or alternate total bid. Such total bid or alternate total bid is for the purpose of guidance in awarding the contract only. Payment shall be on the basis of actual work done at the unit prices quoted.

Upon acceptance of this bid, the undersigned binds himself or themselves to enter into a written contract with the Town not later than fourteen (14) days after the date of notice of the acceptance of his bid and to furnish the required security for faithful performance of the terms of said contract and the insurance as required by the Conditions of Contract, and to process the work diligently so as to complete all the work required under this contract within the time frame as dictated by the Town Engineer.

**STATEMENT OF NON-COLLUSION**

As per Chapter 751 of the Laws of 1965, an amendment to the General Municipal Law sponsored by the New York State Department of Law, all bids, proposals and contracts awarded or accepted by a municipality must contain a statement of non-collusion. By submission of this bid or proposal, the bidder certifies that:

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

Resolved that \_\_\_\_\_ be authorized  
(Name of Corporation)  
to sign and submit the bid or proposal of this corporation for the following project:

\_\_\_\_\_  
\_\_\_\_\_  
(Describe Project)

and to submit in such bid or proposal the certificate as to non-collusion required by Section One Hundred Three D (103-D) of the General Municipal Law as the act and deed of such corporation and for any inaccuracies or misstatements in such certificates, this corporate bidder shall be liable under the penalties of perjury.

The following is a true and correct copy of the resolution adopted by:

\_\_\_\_\_  
Corporation at a meeting of its Board of Directors on the \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

(Seal of Corporation)

\_\_\_\_\_  
Secretary

Legal name of person, firm or corporation making this Bid:

\_\_\_\_\_

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

(Bidder's Seal)

NOTES:

- (1) Where a bidder is a firm, the bid must be signed in the name of the firm by a member of the firm who must sign his own name immediately thereunder as \_\_\_\_\_, Partner.
- (2) Where a bidder is a corporation, the bid must be signed in the name of the corporation by a duly authorized officer or agent thereof having knowledge of the matters stated in the bid and such officer or agent shall also subscribe his own name, the office he holds, and the seal of the corporation must be affixed.
- (3) The bid must be sworn to by the person signing it, using one of the appropriate forms of acknowledgement that follow.
- (4) The bidders shall date the Form of Affidavit, fill in all blank spaces and complete the "Questionnaire" which follows as part of the bid.
- (5) In case of any discrepancy in the bidder's extensions or total, the Town Engineer's computation of extensions and totals will govern.









**FORM OF BID BOND**

The Form of Bid Bond shall be AIA Document A310

## **CONDITIONS OF CONTRACT**

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## **CONDITIONS OF CONTRACT**

### **1. CONTRACT DOCUMENTS AND DEFINITIONS**

The Notice to Bidders, Instructions to Bidders, Proposal Form, Form of Bond, Conditions of Contract, General Conditions, Specifications, Form of Contract, Construction Drawings, together with any Addenda, shall form part of this Contract, and the provisions thereof shall be as binding upon the parties hereto, as if they were herein fully set forth. The table of contents, titles, heading, headlines, and marginal notes contained herein are solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or cast light upon the interpretation of the provisions to which they refer. Whenever the term “Contract Documents” is used, it shall mean and include the Notice to Bidders, Instructions to Bidders, Proposal Form, Form of Bond, Conditions of Contract, General Conditions, Plans & Specifications, Form of Contract and any Addenda. In case of any conflict or inconsistency between the provisions of the contract and those of the Specifications, the provisions of this contract shall govern.

Extra Work: The term “extra work” as used herein, refers to and includes all work required by the Town, which in the judgement of the Town Engineer involves changes in or additions to work required by the Specifications and any Addenda in their present form and which is not covered by the price in the Form of Bid.

Subcontractor: The term “subcontractor” shall mean any person, firm, or corporation supplying labor and material for work at the site of the project but not including the parties to this contract.

Notice: The term “notice” as used herein, shall mean and include written notice. Written notice shall be deemed to have been duly served when delivered to, or at last known business address of, the person, firm or corporation for who intended, or his, their, or its duly authorized agents, representatives, or officer, or when enclosed in a postage prepaid wrapper or envelope addressed to such person, firm or corporation at his, their or its last known business address and deposited in a United States mailbox.

Directed, Required, Approved, Acceptable: Whenever the Contract Documents refer to the work or its performance, “directed”, “required”, “permitted”, imply the direction, requirement, permission, order, designation or prescription of the Town Engineer and “approved”, “satisfied”, or “satisfactory”, “in the judgement of”, and words of like import, shall mean approved, or acceptable to, or satisfactory to, or in the judgement of the Town Engineer.

### **2. SCOPE OF SERVICES**

The contractor will furnish all labor, materials, suppliers, equipment and other facilities necessary or proper for, or incidental to, the work contemplated by this contract as required by, and in strict accordance with the applicable Plans and Specifications and Addenda prepared by the Town Engineer and/or required by, and in strict accordance

with, such changes as are ordered and approved pursuant to this contract, and will perform all other obligations imposed on him by this contract. It is specifically understood that this contract does not guarantee any minimum or maximum quantities of work. Quantities will be as ordered by the Town from time to time, and unit bid prices will govern. The quantities in the proposal are for bidding purposes only.

### **3. COMPENSATION TO BE PAID TO THE CONTRACTOR**

- (A) Agreed Prices: It is understood and agreed that the contractor will accept as payment in full the summation of the products of the actual quantities in place upon the completion of the work, as determined by the Town Engineer's measurements, by the unit prices bid, no allowances being made for anticipated profit or for reasons of variations from the estimated quantities set forth in the Form of Bid.
- (B) Extra Work: The town may, at any time, by a written order and without notice to the sureties, require the performance of such extra work or changes in the work as it may find necessary or desirable. The amount of compensation to be paid to the contract for any extra work, as so ordered, shall be determined as follows:
1. By such applicable unit prices, if any, as set forth in the contract; or
  2. If no such unit prices are set forth, then by unit price or by a lump sum mutually agreed upon by the town and the contractor; and
  3. If no such unit prices are set forth and if the parties cannot agree upon unit prices or a lump sum; then by actual net cost in money to the contractor of the materials, permits, wages of applied labor, premiums for Worker's Compensation Insurance, payroll taxes required by law, rental for plant and equipment used (excluding small tools) to which total cost will be added twenty (20) percent as full compensation for all other items of profit costs and expenses, including administration, overhead, superintendency, insurance, insurance other than Workers' Compensation Insurance, materials used in temporary structures, allowances made by the contractor to subcontractors, additional premiums upon the performance bond of the contractor and the use of small tools.

### **4. TIME OF ESSENCE**

Inasmuch as the provisions of the contract relating to the time of performance and completion of the work are for the purpose of enabling the town to proceed with the construction of a public improvement in accordance with a predetermined program, such provisions are of the essence of this contract.

### **5. TIME OF COMPLETION**

The Town shall assign a construction schedule indicating a start date and a completion date. If said schedule is not acceptable to the contractor, the contractor shall notify the town in writing, postmarked within 14 days from date of receipt of construction schedule. This notification shall include an alternative construction schedule. The alternative

construction schedule completion date shall not exceed twenty-eight (28) calendar days from the original completion date assigned by the Town. Failure to comply with time of completion shall constitute liquidated damages and termination of primary contractor.

## **6. LIQUIDATED DAMAGES**

The time limit being essential to and of the essence of this contract, the primary contractor hereby agrees that the Town shall be and is hereby authorized to deduct and retain out of the money which may be due or may become due to said contractor under this agreement, the sum of the cost of completing the work by the secondary contractor, including overhead charges, services, inspector's wages, and interest on the money invested that the Town will suffer by reason of such default. The Town shall have the right to extend the time for the completion of said work.

## **7. TERMINATION OF PRIMARY CONTRACTOR**

Termination of primary contractor shall include all work in progress and pending. All existing and pending purchase orders pertaining to work issued through the Town-wide Construction Contract shall be hereby considered void. All items previously awarded to terminated contractor shall be hereby awarded to corresponding secondary contractors. Termination of primary contractor shall extend the duration of the contract. At the discretion of the Town of Riverhead, termination of contractor shall warrant disqualification from awarding specific items or all items in succeeding Town construction contracts or other capital improvement projects, etc.

## **8. EXTENSIONS OF TIME. NO WAIVER.**

If the contractor shall be delayed in the completion of his work by reason or reasons of unforeseeable causes beyond his control and without his fault or negligence, including but not restricted to; acts of God, the public enemy, fires, floods, epidemics, quarantine restrictions, strikes, riots, civil commotion or freight embargoes, the period herein specified for completion of his work shall be extended by such time as shall be fixed by the Town.

No such extension of time shall be considered a waiver by the Town of its right to terminate the contract for abandonment or delay by the contractor as hereinafter provided, or relieve the contractor from full responsibility for performance of his obligations hereunder.

## **9. WEATHER**

During unsuitable weather, all work must stop when such work would be subject to injury and the contractor shall transfer his men and materials to those parts of the work where weather conditions will not have any effect on the workmanship to any damages on account of such damages or suspension, and he must protect any work that might be injured by the elements and make good any work that is injured.

## **10. CONTRACT SECURITY**

**(Not Applicable to this contract)**

## **11. LAWS AND ORDINANCES**

In the execution of the contract, the contractor will be required to observe and obey all federal, state, county and local laws, ordinances, codes and regulations relating to the performance of the contract including but not limiting labor employed thereon, materials supplied, obstructing streets and highways, maintaining signals, storing, handling and use of explosives and all other general ordinances and state statutes affecting him or his employees of his work hereunder in his relations with the municipality or any other persons, and also all laws, codes, ordinances controlling or limiting the contractor while engaged in executing the work under the contract.

As a condition of the contract, the contractor shall and does hereby agree to comply with all requirements of the Labor Laws of the State of New York.

The contractor shall comply with the provisions of Sections 291-299 of the Executive Law and Civil Rights Law, shall furnish all information and reports deemed necessary by the State Commission for Human Rights, the Attorney General and the Industrial Commissioner for purposes of investigation to ascertain compliance with such sections of the Executive Law and Civil Rights Law.

The contract may be forthwith canceled, terminated or suspended, in whole or in part, by the contracting agency upon the basis of a finding made by the State Commissioner for Human Rights that the contractor has not complied with these laws.

The contract hereby expressly agrees to comply with all the provisions of the Labor Law and any and all amendments thereto, insofar as the same are applicable to the contract. The Labor Law, as amended, provides that no laborer, workman or mechanic in the employ of the contractor, subcontractor or other person doing or contracting to do the whole or a part of the work contemplated by this contract, shall be permitted or required to work more than eight (8) hours in any one (1) calendar day, except in cases of extraordinary emergency caused by fire, flood or danger to life or property; that no such person shall be employed more than eight (8) hours in any day or more than five (5) days in any week except in such emergency; that the wages to be paid for a legal day's work as herein before defined, to laborers, workmen or mechanics upon the work called for under this contract or upon any materials used upon, or in connection therewith, shall not be less than the prevailing rate for a day's work in the same trade or occupation in the locality within the State where such work is to be done and each laborer, workman or mechanic employed by the contractor, subcontractor or other person about or upon the work shall be paid the wages herein provided; that employees engaged in the construction

maintenance, and repair of highways and in water works construction outside the limits of cities and villages are no longer exempt from the provisions of the labor Law which require that payment of the prevailing rate of wages and the eight (8) hour day.

Section 222 of the Labor Law, as amended by Chapters 556 and 557 of the Laws of 1933, provides that preference in employment shall be given to citizens of the State of New York who have been residents of Suffolk County for at least six (6) consecutive months immediately prior to the commencement of their employment. Each person so employed shall furnish satisfactory proof of residence in accordance with rules adopted by the Industrial Commissioner. Person other than citizens of the State of New York shall be employed only when such citizens are not available. Section 222 further provides that upon the demand of the State Industrial Commissioners, the contractor shall furnish a list of names and addresses of all his subcontractors and further provides that a violation of this section shall constitute a misdemeanor and shall be punishable by a fine of not less than Fifty Dollars (\$50.00) nor more than Five Hundred Dollars (\$500.00) or by imprisonment for not less than thirty nor more than ninety days, or both fine and imprisonment.

Section 220-A of the Labor Law, as amended by Chapter 472 of the Laws of 1932, provides that before payment is made by or on behalf of the State or any city, county, town or village or other civil division of the state of any sums due on account of a contract for a public improvement, it is the duty of the comptroller or the financial officer of the municipal corporation to require the contractor and each and every subcontractor to file a certified statement in writing, in satisfactory form, certifying to the amount then due and owing to any and all laborers for daily or weekly wages on account of labor performed upon the work of the contractor, setting forth herein the names of the persons whose wages are unpaid and the amount due each respectively.

Section 220-B of the Labor Law, as so amended, provides that any interested person who shall have previously filed a protest in writing objecting to the amounts due or to become due to him for daily or weekly wages for labor performed on the public improvement for which the contract was entered into, or if for any reason, it may be deemed advisable, the comptroller of the state or financial officer of the municipal corporation may deduct from the whole amount of any payment on account thereof of the sums or sum admitted by any contractor or subcontractor in such statement or statements so filed to be due and owing by him on account of labor performed and may withhold the amount so deducted for the benefit of the laborers for daily work, weekly wages, whose wages are unpaid as shown by the verified statements filed by any contractor or subcontractor and may pay directly to any person the amount or amounts so shown to be due for such wages.

Section 220-C of the Labor Law, as so amended, provides the penalty for making of a false oath or verification.

Section 220-D of the Labor Law provides that the advertised specifications for every contract for the construction, reconstruction, maintenance and/or repair of highways to which the state, county, town and/or village is a party shall contain a provision stating the

minimum rate of hourly wage that can be paid, as shall be designated by the Industrial Commissioner, to the laborers employed in the performance of the contract whether by the contractor, subcontractor or other person doing or contracting to do the whole or part of the work completed by the laborers shall be paid not less than such hourly minimum rate of wage. Any person or corporation that willfully pays, after entering into such contract, less than such stipulated minimum hourly wage scale shall be guilty of a misdemeanor and upon conviction, shall be punished for a first offense by a fine of Five Hundred Dollars (\$500.00) or by imprisonment; for a second offense by a fine of One Thousand Dollars (\$1,000.00) and in addition thereto, the contract on which the violation has occurred shall be forfeited, and no such person or corporation shall be entitled to receive any sum nor shall any officer, agent or employee of the state pay the same or authorize its payment from the funds under his charge or control to any person or corporation for work done upon any contract, on which the contractor has been convicted or a second offense in violation of the provisions of this section.

The minimum wage rates established by the Industrial Commissioner, State of New York, for this contract are set forth herein above as part of "Instructions to Bidders, Section 21 "NYS Wage Rates"

## **12. QUALIFICATIONS FOR EMPLOYMENT**

No person under the age of sixteen (16) years and no person currently serving sentence in a penal or correctional institution shall be employed to perform any work on the project under this contract. No person whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health or safety of others, shall be employed to perform any work on this project; provided, however, that such restrictions shall not operate against the employment of physically handicapped persons, otherwise employable, where each person may be safely assigned to work which they can ably perform.

## **13. NONDISCRIMINATION**

There shall be no discrimination because of race, creed, or color in the employment of persons for work under this contract, whether performed by the contractor or any subcontractor. Neither shall the contractor or subcontractor or any person acting on behalf of the contractor or subcontractor discriminate in any manner against or intimidate any employee hired for the performance of work under this contract on account of race, creed, or color.

## **14. PAYMENTS OF EMPLOYEES**

The contractor and each of his subcontractors shall pay each of his employees engaged in work on the project under this contract in full (less deductions made mandatory by law) not less often than once each week. Certified payrolls shall be submitted to the Town Engineer before payment to the contractor is processed. Affidavit attesting to payment or amount owed to employees shall be submitted before payment to contractor is processed.

## **15. ESTIMATES AND PAYMENTS**

Upon successful completion of all work, the contractor shall submit an invoice to the Town Engineer for approval. Upon approval by the Town Engineer, payment will be made to the contractor within thirty (30) calendar days provided the payment request is correct and complete. Where large projects exist that will take more than 60 days to complete the contractor may submit monthly invoices for work completed as follows.

- (A) Monthly: At the end of each calendar month during the progress of the work, the Town Engineer shall make an approximate estimate of the work satisfactorily completed, based upon the prices set forth in the Form of Bid. In consideration of the work completed, the Town will pay or cause to be paid to the contractor the amount estimated by the Town Engineer as due him less five (5%) percent.

The making of any such estimate or payment made thereon shall not be taken or construed as an acceptance by the Town of any work so estimated and paid for. The five (5%) percent of the amount of the monthly estimate remaining unpaid will be retained by the Town as a guarantee that the contractor will faithfully and completely fulfill all obligations imposed by the contract and specifications, and against any damages caused the Town by reason of any failure on the part of the contractor to fulfill all conditions and obligations herein contained.

- (B) Final Estimate: After the completion and acceptance of the work specified and contracted for, the Town Engineer will make a final estimate of all the work done. Thereafter, the Town will pay the full amount, less prior payments, less any amounts retained to complete the work according to the provisions of the specifications, less any money paid by the Town by reasons of said contractor having failed to carry out faithfully and completely all the obligations and requirements herein contained. Upon final settlement, according to the conditions herein specified and not until such settlement shall have been made, will the contractor be relieved from the obligations assumed in the contract.

- (C) Measurement for Payment: The Town Engineer shall make due measurement of work completed during the progress of the work and his estimate shall be final and conclusive evidence of the amounts of work performed by the contractor under and by virtue of this agreement and shall be taken as full measure of compensation to be received by the contractor.

- (D) No payments will be made for materials delivered to the site which have not been incorporated into the work.

## **16. ACCEPTANCE OF FINAL PAYMENT CONSTITUTES RELEASE**

The acceptance by the contractor of final payment shall be, and shall operate as a release to the Town from all claims and all liabilities to the contractor for all the things done or

furnished in connection with this work and for every act and neglect of the Town and others relating to or arising out of, this work, excepting to the contractor's claims for interest upon the final payment, if this payment be improperly delayed. No payment, however, final or otherwise, shall operate to release the contractor or his sureties from any obligations under this contract or the performance bond or maintenance bond.

## **17. CONSTRUCTION REPORTS**

The contractor shall submit to the Town Engineer prior to commencing any work under this contract, a detailed schedule and plan of operations indicating the manner in which the contractor proposes to prosecute the work and a time schedule therefor. Such schedules are not intended to bind the contractor to a predetermined plan or procedure, but rather to enable the Town Engineer to coordinate the work of the contractor with work required of and to be performed by others. The detailed schedule shall include a list of the subcontractors and material suppliers he proposes to use on the work.

## **18. INSPECTION AND TESTS**

All material and workmanship shall be subject to inspection, examination and test by the Town Engineer at any time during the construction and at any and all places where manufacturing of materials used and/or construction is carried on.

If at any time before final acceptance of the entire work, the Town Engineer considers necessary or advisable an examination of any portion of the work already completed, by removing the same, the contractor shall upon request, furnish promptly all necessary facilities, labor and materials for such examination. If such work is found to be defective in any material respect, due to the fault of the contractor or any subcontractor, contractor shall be liable for the expense for such examination and of satisfactory reconstruction.

If, however, such approval and consent shall have been given and such work is found to meet the requirements of this contract, the contractor shall be recompensed for the expense of such examination and reconstruction in the manner herein provided for the payment of cost of extra work.

The selection of laboratories and/or agencies for the inspection and tests of supplies, materials or equipment shall be subject to the approval of or designated by the Town. Satisfactory documentary evidence that the material has passed the required inspection and tests must be furnished to the Town Engineer prior to the incorporation of the material in the work.

Any rejected work will be removed from the site of the project completely at the expense of the contractor.

**19. PLANS AND SPECIFICATIONS: INTERPRETATIONS**

The contractor shall keep at the site of the work one copy of the plans and specifications. Bidding of this contract shall be based on the information and data contained herein. Materials of construction and component installation shall conform to the general requirements of the specifications and details contained at the end of the specifications. The Town Engineer will provide plans and directions for specific drainage projects as projects arise. System configurations, arrangements, elevations, materials and methods are to be as directed by the Town Engineer on a specific project basis.

**20. SUPERINTENDENCY BY CONTRACTOR**

At the site of the work, the contractor shall give his constant, personal attention to the work or employ a construction superintendent or foreman who shall have full authority to act for the contractor. It is understood that such representative shall be acceptable to the Town Engineer and shall be one who can be contained in that capacity for the particular job involved unless he ceases to be on the contractor's payroll. The contractor's superintendent and foreman must be able to read and speak the English language.

**21. CONTRACTOR'S TITLE TO MATERIALS**

No materials or supplies for the work shall be purchased by the contractor or any subcontractor subject to a chattel mortgage or under a conditional sale or other agreement by which an interest is retained by the seller. The contractor warrants that he has good title to all materials and supplies used by him in the work.

**22. PROTECTION OF WORK, PERSONS AND PROPERTY**

Precaution shall be exercised at all times for the proper protection of all persons, property and work the contractor shall give notice to the owners of utilities which may serve the area and request their assistance in predetermining the location and depth of various pipes, conduits, manholes, and other underground facilities. The safety provisions of applicable laws and building and construction codes shall be observed. Machinery, equipment and all hazards shall be guarded or eliminated in accordance with the safety provisions of the manual of Accident Prevention in Construction published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable law. The contractor shall furnish entirely at his own expense any and all additional safety measures deemed necessary by the Town to adequately safeguard the traveling public.

**23. REPRESENTATIONS OF CONTRACTOR**

The contractor represents and warrants:

- (A) That he is financially solvent and that he is experienced in, and competent to, perform the type of work involved under this contract and able to furnish the plant, materials, supplies and/or equipment to be furnished for the work; and
- (B) That he is familiar with all federal, state and municipal law, ordinances and regulations which may in any way affect the work of those employed thereunder, including but not limited to any special acts relating to the work; and
- (C) That such work required by these contract documents as is to be done by him can be satisfactorily constructed and used for the purpose for which is intended and that such construction will not injure any person or damage any property; and
- (D) That he has carefully examined the specifications and project site and that from his own investigations he has satisfied himself as to the nature of the work, the character of equipment and other facilities needed for the performance of the work, and the general local conditions which may in any way affect the work or its performance.

#### **24. AUTHORITY OF THE TOWN ENGINEER**

In the performance of the work, the contractor shall abide by all orders and directions and requirements of the Town Engineer and shall perform work to the satisfaction of the Town Engineer at such time and places, by such methods, and in such manner and sequence as he may require. The Town Engineer shall determine the amount, quality, acceptability, and fitness of all parts of the work, shall interpret the plans, specifications, contract documents and any extra work orders and shall decide all other questions in connection with the work. The Town Engineer may require contractor to amend, adjust, or modify plans prior to and during progress of work as may be necessary in his or her reasonable opinion to prevent improper execution of the work and/or public necessity or welfare require. The Town Engineer shall confirm in writing any oral orders, directions, requirements or determinations. The enumeration herein or elsewhere in the contract documents of particular instance in which the opinion, judgement, discretion or determination of the Town Engineer shall control or in which work shall be performed to his satisfaction or subject to his approval or inspection, shall not imply that only matters similar to those enumerated shall be so governed and performed, but without exception all the work shall be governed and so performed. Note, in the event the contractor shall refuse or fail to prosecute the work, including but not limited to, amend, adjust, or modify plans or any part thereof, with due diligence as will ensure its commencement and completion within such period of time herein specified (or any duly authorized extension thereof) or set by the Town Engineer, the Town may exercise its right to terminate the contract (See Contract Provision 29 "Town's Right to Terminate Contract").

## **25. CHANGES AND ALTERATIONS**

The Town Engineer reserves the right to make alterations in locations, line, grade, plan, form or dimensions of the work, or any part thereof, either before or after the commencement of construction. If such alteration diminishes the amount of work to be done, no claim for damages or anticipated profits will be warranted on the work which may be dispensed with. If such alterations increase the amount of work, such increases shall be paid for according to the quantity of work actually done and at the prices for such work as contained in the schedule of prices.

## **26. CORRECTION OF WORK**

All work and all materials whether incorporated into the work or not, all processes of manufacture and all methods of construction shall be at all times and places subject to the inspection of the Town Engineer who shall be the final judge of quality, materials, processes of manufacture and methods of construction suitable for the purpose for which they are used. Should they fail to meet his approval, they shall be forthwith reconstructed, made good and replaced and/or corrected as the case may be, by the contractor, at his own expense.

If, in the opinion of the Town Engineer it is not desirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the contract documents, the compensation to be paid to the contractor thereunder shall be reduced by such amount as in the judgement of the Town Engineer shall be equitable. The contractor expressly warrants that his work shall be free from any defects in materials or workmanship and agrees to correct any defects which may appear within one year following the final completion of the work. Neither the acceptance of the completed work nor payment therefor shall operate to release the contractor or his sureties from any obligations under or upon this contract.

## **27. WEATHER CONDITIONS**

In the event of temporary suspension of work or during inclement weather or whenever the Town Engineer shall direct, the contractor will, and will cause his subcontractor to sufficiently protect his and their work and materials against damage or injury from the weather. If, in the opinion of the Town Engineer any work or material shall have been damaged or injured by reason of failure on the part of the contractor or any of his subcontractors to protect his or their work, such work and materials shall be removed and replaced at the expense of the contractor.

**28. THE TOWN'S RIGHT TO WITHHOLD PAYMENTS**

The Town may withhold from the contractor so much of any approved payments due him as may, in the judgement of the Town be necessary:

- (A) To assure the payment of just claims then due and unpaid of any persons supplying labor or materials for the work;
- (B) To protect the Town from loss due to defective work not remedied; or
- (C) To protect the Town from loss due to injury to persons or damage to the work or property of other contractors or subcontractors or others, caused by the act or neglect of the contractor or any of his subcontractors. The Town shall have the right, as agent for the contractor, to apply such amounts so withheld in such manner as the town may deem proper to satisfy such claims or to secure such protection. Such applications of such money shall be deemed payments for the account of the contractor.

**29. THE TOWN'S RIGHT TO TERMINATE CONTRACT**

The Town of Riverhead may terminate this contract if:

- (A) the contractor shall be adjudged bankrupt or make an assignment for the benefit of creditors; or
- (B) a receiver or liquidator shall be appointed for the contractor for any of his property and shall not be dismissed within 20 days after such appointment, or the proceedings in connection therewith shall not be stayed on appeal within the said 20 days; or
- (C) the contractor shall refuse or fail, after notice or warning from the Town Engineer to supply enough properly skilled workmen or proper materials to the job; or
- (D) the contractor shall refuse or fail to prosecute the work or any part thereof with such diligence as will ensure its completion within the period herein specified (or any duly authorized extension thereof) or shall fail to complete the work within said period; or
- (E) the contractor shall fail to make prompt payments to persons supplying labor or materials for the work; or
- (F) the contractor shall fail or refuse to comply with laws, ordinances or the instruction of the Town Engineer or otherwise be guilty of a substantial violation of any provisions of this contract.

- (G) the contractor refuses or fails to meet one or more of the time frames indicated in 41. Term of Contract.
- (H) The contractor is found to not be in compliance with New York State Department of Labor prevailing wage rate requirements.

Upon the determination by the Town of Riverhead to terminate this contract, and in any such event, the Town, without prejudice to any other rights or remedy it may have, may give seven (7) days notice to the contractor, terminate the employment of the contractor and his rights to proceed with as to the entire work or (or at the option of the Town) as to any portion thereof as to which delay shall have occurred, and may take possession of the work and complete the work by contract, secondary contractor or otherwise, as the Town may deem appropriate. In such case, the contractor will not be entitled to receive any further payment until the work is finished. If the unpaid balance of the compensation to be paid to the contractor thereunder shall exceed the expense of so completing the work (including compensation for additional managerial, administrative and inspection services and any damages for delay), such excess shall be paid to the contractor. If such expense shall exceed such unpaid balance, the contractor and his sureties shall be liable to the Town for such excess. If the right of the contractor to proceed with the work is so terminated, the Town may take possession of and utilize in completing the work, such materials, appliances, supplies, plant and equipment as may be on the site of the work and necessary thereof. In addition, the Town may terminate this contract immediately upon its determination that a safety hazard exists that cannot be corrected in any other fashion other than contract termination. Contractor shall be entitled to payment for services rendered to the point of contract termination.

### **30. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT**

If the work shall be stopped by order of the court or other public authority for a period of three (3) months or more without act or fault of the contractor or any of his agents, servants, employees or subcontractors, the contractor may, upon ten (10) days' notice to the town, discontinue his performance of the work and/or terminate the contract; in which event, the liability of the Town immediately preceding (Paragraph 31), the contractor shall not be obligated to pay to the Town any excess of the expense of completing the work over the unpaid balance of the compensation to be paid to the contractor thereunder.

### **31. RESPONSIBILITY FOR WORK**

The contractor agrees to be responsible for the entire work embraced in this contract until its completion and final acceptance by the Town of Riverhead. The contractor further agrees that any imperfect and/or damaged work that may be discovered at any time before the completion and acceptance of work shall be removed and/or replaced in conformity with the requirements of this contract without charge to the Town. Such removal and replacement will be performed as soon as practicable following receipt of written notice from the Town Engineer that the work is imperfect and/or damaged. The

contractor further agrees that the inspection of the work by the Town Engineer of his or her designee shall not relieve him of any obligation to do sound and reliable work. Furthermore, such inspection and/or partial payment for work shall not preclude the Town Engineer from requiring removal and/or replacement at a later time. Neither shall such inspection or partial payment be deemed to be acceptance of any work.

## **2. USE OF PREMISES AND REMOVAL OF DEBRIS**

The contractor expressly undertakes at his own expense:

- (A) To store his apparatus, materials, supplies and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any of his subcontractors;
- (B) To frequently clean up all refuse, rubbish, scrap materials and debris caused by the operations to the end that at all times, the site of the work shall present a neat, orderly and workmanlike appearance;
- (C) Before final payment hereunder to remove all surplus material, temporary structures, plants of any descriptions and debris of every nature resulting from his operations.

## **33. SUITS OF LAW**

The contractor shall indemnify and hold harmless the Town and its employees from and against all suits, claims, demands or actions for any injury sustained or alleged to be sustained by any party or parties in connection with the construction of the work or any part thereof, or any commission or omission of the contractor, his employees or agents of any subcontractor, and in case of any such action shall be brought against the Town, the contractor shall immediately take charge of and defend the same at his own cost and expense.

## **34. POWER OF THE CONTRACTOR TO ACT IN AN EMERGENCY**

In case of an emergency which threatens loss or injury to property and/or safety of life, the contractor will be permitted to act as he sees fit without previous instructions from the Town Engineer. He shall notify the Town Engineer thereof immediately and any compensation claimed by the contractor due to extra work made necessary because of his acts in such emergency shall be submitted to the Town Engineer for approval.

Where the contractor has not taken action but has notified the Town Engineer of an emergency indicating injury to persons or damage to adjoining property or to the work being accomplished under this contract, then upon authorization from the Town Engineer to prevent such threatened injury or damage, he shall act as instructed by the Town Engineer. The amount of reimbursement claimed by the contractor on account of any such action shall be determined in the manner provided herein for the payment of extra work.

**35. PROVISION REQUIRED BY LAW DEEMED INSERTED**

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall read and be enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall be forthwith physically amended to make such insertion.

**36. SUBLETTING – SUCCESSOR AND ASSIGNS**

The contractor shall not sublet any part of the work under this contract nor assign any money due him hereunder without first obtaining the written consent of the town. This contract shall insure the benefit of and shall be binding upon the parties hereunder and upon their respective successors and assigns, but neither party shall assign or transfer his interest herein in whole or in part without consent of the other.

**37. GENERAL MUNICIPAL LAW CLAUSE**

Pursuant to the provisions of Section 103-a of the General Municipal Law, in the event that the bidder or any member, partner, director or officer of the bidder, should refuse, 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 any public department, agency or official of the state or of any political subdivision thereof or of a public authority, to sign a waiver of immunity against subsequent criminal prosecution or to answer any relevant question concerning such transaction or contract, 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 contracts with any municipal corporation or any public department, agency or official thereof for goods, work or services for a period of five (5) years after such refusal, and any and all contracts made with any municipal corporation or any public department, agency or official thereof on or after the first day of July, 1959, by such person, and by any firm, partnership or corporation of which he is a member, partner, director or officer may be canceled or terminated by the municipal corporation without incurring any penalty or damages on account of such corporation for goods delivered or work done prior to the cancellation or termination shall be paid.

**38. CONTRACTOR'S INSURANCE**

The contractor shall not commence any work until he has obtained, and had approved by the Town, all the insurance required under this contract as enumerated herein:

Workers' Compensation Insurance  
Public Liability and Property Damage Insurance

Contractor's Protective Liability and Property Damage Insurance  
Owner's Protective Public Liability and Property Damage Insurance  
Automobile Public Liability and Property Damage Insurance

The contractor shall not permit any subcontractor to commence any operation on the site until satisfactory proof of carriage of the above-required insurance has been posted with and approved by the Town.

(A) Workers' Compensation Insurance: The contractor shall take out and maintain, during the life of this contract, Workers' Compensation Insurance for all his employees employed at the site of the project, and in case of any of the work being sublet, the contractor shall require all subcontractors similarly to provide Workers' Compensation Insurance for all the latter's employees unless such employees are covered by the protection afforded by the contractor. Limits: statutory for Workers' Compensation, One Million Dollars (\$1,000,000) Employers Liability.

(B) Public Liability and Property Damage Insurance: The contractor shall take out and maintain during the life of this contract such Public Liability and Property Damage Insurance as shall protect him or any subcontractor performing work covered by this contract from claims for damages for personal injury including accidental death as well as from claims for property damage which may arise from operations under this contract, whether such operations be completed by the contractor or by any subcontractor, or by anyone directly or indirectly employed by either of them, and the amounts of such insurance shall be as follows:

Public Liability Insurance in an amount not less than Two Million Dollars (\$2,000,000) combined single limit for bodily injuries, including wrongful death, and property damage. The Town of Riverhead must be named as an additional insured.

(C) Liability and Property Damage Insurance: the above policies for Public Liability and Property Damage Insurance must be so written as to include Contractor's Protective Liability and Property Damage Insurance to protect the contractor against claims arising from the operations of any subcontractor. The Town of Riverhead shall be named as additional insured.

(D) Owner's Protective Public Liability and Property Damage Insurance: The contractor shall furnish to the Town, with respect to the operations he or any of his subcontractors perform, a regular Protective Public Liability Insurance policy for, and in behalf of the Town, providing for a limit of not less than Two Million Dollars (\$2,000,000) for all damages arising out of bodily injuries to, or death of, one person and subject to that limit for each person, a total limit of Four Million Dollars (\$4,000,000) for all damages arising out of bodily injuries to, or death of, two or more persons in any one accident; and regular Protective Property Damage Insurance providing for a limit of not less than Four Million Dollars (\$4,000,000)

for damages arising out of injury to, or destruction of, property during the liability of the Town. The coverage provided under this policy must not be affected if the Town performs work in connection with the project either for or in cooperation with the contractor or as an aid thereto whether the same be a part of the contract or separate therefrom, by means of its own employees or agents, or if the Town directs or supervises the work to be performed by the contractor.

- (E) Automobile Public Liability and Property Damage Insurance: The contractor shall take out and maintain during the life of the contract such Automobile Public Liability and Property Damage Insurance as shall protect him and any subcontractor performing work covered by this contract from claims for damages for personal injury, including accidental death as well as from claims for property damage which may arise from operations under this contract, whether such operations be by himself or by a subcontractor or by anyone directly or indirectly employed by either of them and the amounts of such insurance shall be as follows:

Automobile Public Liability Insurance in an amount not less than One Million Dollars (\$1,000,000) combined single limit for bodily injuries, including wrongful death, and property damage. The Town of Riverhead must be named as an additional insured.

Automobile Property Damage Insurance in an amount of not less than Two Million Dollars (\$2,000,000) for damages on account of any accident and in an amount of not less than Two Million Dollars (\$2,000,000) for damages on account of all accidents.

**38A. HOLD HARMLESS CLAUSE**

To the fullest extent permitted by law, the contractor shall indemnify and hold harmless the Owner and their agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (i) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (ii) is caused in whole or in part by any negligent act or omission of the contractor, any subcontractor, and anyone directly or indirectly employed by any of them or anyone for whose acts may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Town shall be entitled to retain an attorney of its own choosing with the cost of legal fees, including appeals, to be borne by the Contractor. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in the paragraph.

**39. CLAIMS AGAINST TOWN OFFICIALS AND EMPLOYEES**

The Contractor expressly agrees and represents that the contractor shall make no claim and shall bring no action pursuant to any federal or state laws, including, but not limited to 42 U.S.C. § 1983, against any Town official or employee in his/her individual or personal capacity for any act, omission, or statement made or done relating to, or arising out of, this contract and expressly waives its rights to bring such a claim pursuant to any federal or state laws, including, but not limited to 42 U.S.C. § 1983.

**40. PROOF OF CARRIAGE OF INSURANCE**

The contractor shall furnish the Town with certificates of each insurer insuring the contractor under this contract except with respect to subdivision “D”. In respect to this paragraph, the contractor shall furnish the Town with the original insurance policy.

Both certificates, as furnished, and the insurance policy, as required, shall bear the policy numbers, the expiration date of the policy and the limits of liability thereunder. Both the certificates and the policy shall be endorsed to provide the Town with any notice of cancellation at least five (5) days prior to the actual date of such cancellation.

The insurance company utilized must have a minimum AM Best Rating of “A-VII”.

**41. TERM OF CONTRACT**

Upon request for proposal by the Town, the Contractor shall provide a complete proposal, acceptable to the Town and suitable for Purchase Requisition preparation within 30 days of the request. The Contractor further agrees that he will begin the work herein embraced within ten days of issuance of a Town of Riverhead Purchase Order, unless the consent of the Town, in writing, is given to begin at a later date, and that he will prosecute the same so that it shall be entirely completed and performed within 30 days of the issuance of a Purchase Order or the Town prescribed completion date. No extension beyond the date of completion fixed by the terms of this contract shall be effective unless in writing signed by the Town. The extension will be granted if in the opinion of the Engineer the Contractor has exercised all due diligence to complete the work by the town prescribed completion date. This extension shall be for such time and upon such terms and conditions as shall be fixed by the Town, which may include a charge for engineering and inspection expenses actually incurred upon the work. Notice of application for such extension shall be filed with the Town Engineer at least fifteen days prior to the date of completion fixed by the terms of this agreement. Unless individual awards from the contracts are extended the end date of this contract shall be one year from the date of contract award.

**41. FAILURE TO PERFORM**

In the event that the contractor shall refuse or fail to prosecute the work or any part thereof with such diligence as will ensure its completion within the period herein specified (or any duly authorized extension thereof) or shall fail to complete the work within said period the Town reserves the right to terminate this contract and the bidder/contractor MAY BE BARRED FROM BIDDING ON FUTURE TOWN CONTRACTS FOR A PERIOD AS DETERMINED BY THE TOWN.

## **GENERAL CONDITIONS**

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## 1. DEFINITION OF TERMS

Whenever the following words and expressions are used in the Specifications, it is understood that they have the meaning defined below:

Plans: All official drawings or reproductions of drawings pertaining to the work or to any structure connected therewith.

Specifications: The body of directions, requirements, descriptions, etc. contained in this document, together with all documents of any description and agreements made (or to be made) pertaining to the methods or manner of performing the work and/or to the quantities and quality of materials to be furnished and accepted under this contract.

Town: Town Board of the Town of Riverhead.

Town Engineer: The Town Engineer or his duly authorized representative.

Contract: Collectively, the contract executed by the Town and the contract, Notice to Bidders, Instruction to Bidders, Proposal Form, Form of Bond, Conditions of Contract, General Conditions, Specifications, Addenda, Performance Bonds, and all supplemental agreements made or to be made.

Instructor: An authorized representative of the Town assigned to make any and all necessary inspections of the work performed and the materials furnished by the contractor.

Materials: Any approved materials acceptable to the Town and conforming to the requirements of these specifications.

Work: All of the work proposed to be accomplished at the site of the project, and all such other work as is in any manner required to accomplish the complete project. This includes all plant, labor, materials, supplies, equipment and other facilities and acts necessary or proper or incidental to the carrying out and completion of other terms of this contract. The term "work performed" shall be construed to include the materials delivered to and suitably stored at the site of the project.

## 2. STANDARDS OF WORKMANSHIP

The apparent silence of the specifications as to any detail or and apparent omission from them of a detailed description concerning any work to be done and materials to be furnished shall be regarded as meaning that only the best general practice observed in the latest current construction work is to prevail and that only material and workmanship of first quality is to be used in this connection and all interpretations of these specifications shall be made upon this basis.

### **3. SAMPLES**

The contractor shall furnish for approval, all samples as directed. The work shall be in accordance with approved samples. Samples shall be submitted in ample time so as to prevent delay in fabrication or ordering of materials, allowing for a reasonable time for the Town Engineer to consider the samples submitted, and is necessary, to permit a re-submission of samples to the Town Engineer until approval is given.

Work and material shall be furnished and executed in accordance with approved samples, in every aspect. Each sample shall be labeled, bearing material, name and quality, contractor's name, date and other pertinent data. Unless otherwise specified, samples shall be in duplicate and of adequate size to show quality, type, color, range and finish and texture of material. Materials shall not be ordered until approval is received in writing from the Town Engineer.

### **4. MANUFACTURED MATERIALS**

Where several materials are specified by name, the Town Engineer shall have the right, before execution of the contract, to require any and all bidders to state the materials upon which they based their bid. Where any materials are specified by name or trade name, or by catalog number of a company or companies, the contractor shall furnish the article mentioned unless approval of the Town Engineer is obtained in writing for a substitution. Should the contractor desire to substitute other materials for one or more specified by name, he shall apply in writing for such permission and state credit or extra involved. He shall also provide supporting data and samples for the consideration of the Town Engineer.

Unless particularly specified otherwise, all manufactured articles, materials and equipment shall be applied, assembled, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer and including the necessary preparation to properly install the work. Where reference is made to manufacturer's directions, the contractor shall submit such directions to the Town Engineer as required.

The materials used in construction shall be disposed so as not to endanger the work, and so that full access may at all times be had to partly completed work and structures and they shall be so disposed as to cause no injury to those having access to the work or any of the units.

All labor shall be performed in the best and most workmanlike manner by mechanics skilled in their respective trades. Standards of work required throughout shall be of such grades as will bring first-class results only. The type of labor employed by the contractor shall be such as will ensure the uninterrupted continuity of the entire work, without conflict of any kind.

## 5. LABORATORY

Laboratories shall be designated by the Town Engineer for testing the materials to be used under the contract. Where tests are made by other than the designated laboratories, two certified copies showing correctly the chemical analysis and physical tests shall be furnished to the Town Engineer.

## 6. SHOP DRAWINGS

The contractor shall submit to the Town Engineer, four (4) copies of all shop drawings and schedules and no work shall be fabricated until his approval has been given. All shop drawings submitted to the Town Engineer must bear the contractor's stamp of approval evidencing that the drawings have been checked.

The contractor will make any corrections in the drawings required by the Town Engineer and will file with the Town Engineer four (4) corrected copies. Approval by the Town Engineer of such drawings or schedules shall not relieve the contractor from responsibility for:

- (a) Errors of any sort in shop or setting drawings or schedules;
- (b) Deviations from Plans and Specifications unless the contractor, at the time of submission of said drawings and schedules, has given notice to the Town Engineer of any such deviations.

## 7. PERMITS

7.1 Municipal: All work in connection with the installation of pipes or other underground structures of a like nature either within or without the limits of the highway, shall follow all the provisions as contained herein together with the provisions, as they apply, of the Highway Law, Road Openings, Section 149 and Section 198 of Town law, with all subsequent changes, additions or corrections thereto.

7.2 Suffolk County: All permits required for opening country roads and making connections with county drains will be obtained by the Town. A copy of the permit which must be kept on the job site at all times will be supplied to the contractor. The contractor will not be permitted to open any county road or make any connection to any county drain until he has been supplied with the necessary permit.

7.3 State of New York: The contractor shall obtain all necessary New York State highway permits whenever the contract requires any work to be done within or upon existing state highway right-of-ways. These permits shall be obtained from the District Office in Hauppauge prior to the performance of the work. Upon application for the permit, the contractor will be required to supply the following:

- (1) Three (3) copies of a sketch or print showing description and location of the proposed work. These prints will be supplied to the contractor by the Town Engineer.
- (2) Contingent liability insurance for the state (in addition to his own liability insurance) shall be furnished in amounts and manner as required by the State of New York. The contingent protective liability and complete operations liability insurance policy to cover:

“The people of the State of New York and/or the Highway Superintendent covering liability arising with respect to all operations through highway permits by permitted by anyone acting by, through or for the permitted, including omissions and supervisor acts of the State”, in the amount of personal injury (including death) and property damage as required.

## **8. PLANS AND SPECIFICATIONS**

The contractor will be furnished with five (5) sets of Plans and Specifications giving all the details and dimensions necessary for carrying out the work. One copy of Plans and Specifications furnished to the contractor must be kept constantly at the site. Anything shown on the Plans and not mentioned in the Specifications or mentioned in the Specifications and not shown on the Plans and all work and materials necessary for the completion of the work according to the intent and meaning of the contract shall be furnished, performed and done as if the same were both mentioned in the Specifications and shown on the Drawings. Any conflict or inconsistency between the figures and scale of Drawings shall be submitted by the contractor to the Town Engineer whose decisions hereon shall be conclusive.

In the event the meaning of any portion of the Specifications or Drawings or any supplementary drawings or instructions of the Town Engineer is deemed ambiguous, the same shall be understood to call for the best type of construction, both as to materials and workmanship, which reasonably can be interpreted.

All materials and workmanship must be strictly in accordance with the Plans and Specifications.

Additional copies of Plans and Specifications, when requested will be furnished to the contractor at cost of reproduction.

The contractor shall furnish to each of the subcontractors and materials men such copies of the Contract Documents as may be required for their work.

## **9. CUTTING, PATCHING AND DIGGING**

The contractor shall do all curing, fitting or patching of his work that may be required to make its several parts come together properly and fit it to receive or be received by work

of other contractors shown upon or reasonably implied by Drawings and Specifications for the completed structure, and he shall make good after them as the Town Engineer may direct. Any cost caused by defective or ill-timed work shall be borne by the party responsible therefor.

The contractor shall not endanger any work by cutting, digging or otherwise, and shall not cut or alter the work of any other contractor except with the consent of the Town Engineer.

#### **10. ERRORS, OMISSIONS AND DISCREPANCIES**

- a) If any errors, omissions or discrepancies appear in the drawings, specifications or other documents, the contractor shall, within ten (10) days from receiving such drawings, specifications or documents, notify the Town Engineer in writing of such errors or omissions. In the event of the contractor's failing to give such notice, he will be held responsible for the results of any such errors or omissions and the cost of rectifying the same.
- b) If, in the opinion of the contractor, any work is shown on drawings, or details, or is specified in such a manner as will make it impossible to produce a first class piece of work, or should discrepancies appear between the drawings and/or specifications, he shall refer the same to the Town Engineer or his representative for interpretation before proceeding with the work. If the contractor fails to make such references to the Town Engineer no excuse will thereafter be entertained for failure to carry out the work in a satisfactory manner as directed.
- c) Should a conflict occur in or between the drawings and specifications and/or existing conditions, the contractor shall be deemed to have estimated on the more expensive way of doing the work, unless he shall have asked for and obtained the decision in writing from the Town Engineer before the submission of bids, as to which method or materials will produce the results to the best interests of the Town.

#### **11. TEMPORARY TOILET**

The contractor shall provide and maintain a sanitary temporary toilet where deemed necessary and as directed by the Town Engineer. The temporary toilet shall be enclosed and weatherproof and kept in a sanitary condition at all times. Upon removal of the temporary outside toilet, the vault shall be disinfected, filled and all evidence of the toilet removed from the site.

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

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

If at anytime before the commencement or during the progress of the work the materials and appliances used or to be used appear to the Town Engineer as insufficient or improper for assuring the quality of the work required, or the required rate of progress, he may order the contractor to increase their efficiency or to improve their character, and the failure of the Town 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.

During freezing 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. All work shall be done in such a manner as will properly protect and support existing permanent structures, pipe lines, etc.

### **13. INSPECTION**

Inspectors shall be authorized to inspect all work done on materials furnished. Such inspections may extend to all parts of the work and to the preparation or manufacture of the materials to be used. In case of any dispute arising between the contractor and the inspector as to materials furnished or the manner of performing the work, the inspector shall have the authority to reject material or suspend the work until the question at issue shall be referred to and decided by the Town Engineer. The inspector shall not be authorized to revoke, alter, enlarge, relax or release any requirements of these specifications, not to approve or accept any portion of the work, not to issue instruction contrary to the plans and specifications. The inspector shall in no case act as foreman or perform other duties for the contractor or interfere with the management of the work by the latter.

Any advice which the inspector may give the contractor shall in no way be construed as binding the Town Engineer nor the Town in any way, nor releasing the contractor from the fulfillment of the terms of the contract.

The contractor shall be conclusively presumed to be acquainted with all existing conditions and to guarantee that all work and materials shall, upon final completion of the work, be turned over to the Town in a complete and perfect condition and the contractor shall be responsible for the proper care, maintenance and protection of all work and material until his entire contract is completed and all work and materials found in good condition and accepted. The contractor will be held responsible for the entire work until completed and accepted by the Town.

The contractor shall, at all times, provide the Town Engineer, assistants and inspectors under him with necessary facilities for determining both on the job and at the places of manufacture, that all work being performed and all materials being manufactured are strictly in accordance with the contract.

Until acceptance of work by the Town, the contractor shall be responsible for all damages to the work including action of the elements or any other cause whatsoever. The

contractor shall continuously and adequately protect the work against damage from any cause.

**14. WAIVER**

Neither the inspection by the Town or any part of their employees, nor any order, measurement or certificate by the Town Engineer nor any order by the Town for the payment of any money, nor any payment for or acceptance of, the whole or any part of the work by the Town Engineer or the Town nor any extension of time nor any possession taken by the Town or its employees shall operate as a waiver of any provision of this contract or of any power herein reserved to the Town or any right to damages herein provided; nor shall any waiver of any breach of the contract constitute a waiver of any subsequent breach. Any remedy provided in this contract shall be construed as cumulative in addition to each and every remedy herein provided.

**15. WATER AND ELECTRIC POWER**

All water and electric power supply for construction purposes must be provided by the contractor. The cost shall be borne by the contractor. The Contractor shall obtain all permits and utilize portable RPZ's as required by the Riverhead Water District when requesting connection to hydrant.

**16. MACHINERY AND EQUIPMENT**

All machinery, equipment, trucks and vehicles used in the prosecution of the work or in connection therewith, shall at times be in proper working condition.

The contractor shall be responsible for curtailing noise, smoke, fumes, or any other nuisance resulting from his operations. He shall, upon written notification from the Town Engineer, make any repairs, replacements, adjustments, and additions and furnish mufflers when necessary to fulfill these requirements.

**17. RIGHT TO USE WORK**

The Town may enter upon and use the whole or any portion of the work, which may be in condition to use any time previous to its final acceptance by the Town. Such use shall not constitute or be evidence of acceptance by the Town of the whole or any part of the material furnished or work performed under the contract.

**18. NOTICE OF WARNING**

If the contractor shall fail to make prompt payment to persons supplying labor or materials for the work, or refuse or fail to supply enough properly skilled workmen or proper materials or refuse or fail to prosecute the work or any part thereof with such diligence as will insure its completion within the period herein specified (or any duly authorized extension thereof) or fail to complete the work within said period or refuse or

fail to regard laws, ordinances, codes, instruction of the Town Engineer then the Town shall forward by registered mail to the contractor, at the address given in the contract, a Notice of Warning, and in the event the contractor fails to comply with said Notice of Warning within five (5) days from receipt thereof, the Town shall have the right to terminate the contract.

#### **19. WARNING SIGNS**

Contractor shall provide and maintain proper luminous warning and detour signs where directed by the Town Engineer and as directed by the Contract Documents.

Obstruction such as stored materials, equipment and excavations shall be marked with no less than two (2) lights which shall be no more than four (4) feet apart.

All lights shall be kept burning from one-half hour before sunset until one-half hour after sunrise.

#### **20. ACCIDENT PREVENTION**

During the performance of the work, the contractor shall exercise all reasonable precautions for the protection of persons and property. The safety provisions of applicable laws, building and construction codes shall be observed. Machinery, equipment and all other physical hazards shall be guarded in accordance with the safety provisions of the Manual of Accident Prevention in Construction published by the Associated General Contractors of America to the extent that such provisions are not inconsistent with federal, state or municipal laws or regulations.

If any operation, practice or condition is deemed by the Town Engineer to be unsafe, he shall notify the contractor in writing to take corrective action. Where in the opinion of the Town Engineer any operation, practice or condition shall be promptly discontinued and before the affected part of the work is resumed, remedial action taken.

The Town reserves the right to remedy any neglect on the part of the contractor as regards the protection of the work which may come to its attention, after twenty-four (24) hours notice in writing; except that in cases of emergency, it shall have the right to remedy any neglect without notice, and in either case to deduct the cost of such remedy from money due the contractor.

Nothing in the foregoing paragraphs shall be construed as relieving the contractor from full responsibility at all times for safe prosecution of the work.

#### **21. DAMAGES**

The contractor shall pay and make good all losses or damages arising out of any cause connected with the contract and shall indemnify and save harmless the Town from any and all claims and any and all liability or responsibility of every nature against the Town

or any of its officers or agents, by reason of, or connected with the work or materials furnished under the contract and shall pay all costs and expenses of every kind, character, and nature whatsoever, occurring upon or arising out of the contract.

## **22. MAINTENANCE OF TRAFFIC**

Under this Contract no asphaltic or concrete material is to be placed unless the Town Engineer is present. In addition, no work is to be performed until the methods used to control traffic at the job site in accordance with the New York State Department of Transportation's Manual of Uniform Traffic Control Devices (MUTCD) are approved by the Town Engineer. Failure to comply with this requirement will lead to non-payment and possible replacement of any material placed.

The requirements of Item 619.01 of the Standard Specifications of the New York State Department of Transportation shall be adhered to, with the following additions:

- a) Access to private driveways must be maintained at all times.
- b) All piles of excavated material shall be removed from the roadway area daily.
- c) The Contractor shall also inspect the contract area after and/or during every rainstorm or windstorm to ascertain what work is necessary to properly maintain and protect pedestrian, vehicular safety, new and/or adjacent work, and existing property. This is especially true on nights and weekends and at other times when no work is in progress. The cost of this inspection and execution of the work required shall be included in the unit price bid for various other items.
  1. Any costs to correct adverse conditions expended by the Town or other outside forces will be deducted from monies owed the Contractor at a rate of two and one-half (2-1/2) times the actual cost incurred.
  2. All provisions of Item 61901, "Maintenance and Protection of Traffic," must also be complied with. Non-conformance with the above requirements of performance may be the basis for implementation of the non-payment clause as specified under "Basis of Payment" for each item.
- d) It shall be required that the length of the existing curb or sidewalk removal or excavation necessary in advance of daily installation of new curb or sidewalk shall be limited to the average length, as determined by the Town Engineer of the new concrete curb or sidewalk that can be placed in the following day of operation.
- e) Construction shall also be limited to one side of any continuous street or intersection only until said side construction is completed and open to traffic.

The Contractor's attention is directed to the following checklist of the most prevalent undesirable traffic and safety conditions that occur during construction:

- a) Traffic Control Devices - Signs, barricades, barrels, etc. shall conform with the New York State Manual of Uniform Traffic Control Devices, and/or as directed by the Commissioner.
- b) Improper Detouring of Traffic - Contractors shall submit detour plans to the Town Engineer prior to construction. Insufficient and improper detour signs shall not be used and the Town Engineer will not accept the excuse that signs were stolen or vandalized. It shall be the Contractor's Responsibility to maintain these signs at all times.
- c) Storing Building Materials - Materials, dirt piles, etc., shall not be stored in or adjacent to intersections or at any locations where sight distance is critical.
- d) The Contractor shall maintain a safe, unobstructed area for pedestrian and vehicular traffic.
- e) The Contractor shall provide sufficient signs, flashers, etc., at locations where there are obstructions in the roadway. All manholes and appurtenances protruding two inches or more above the existing ground shall have a flasher and a barrel conforming to N.Y.S. M.U.T.C.D.
- f) The Contractor shall notify the Police Department, Fire Department, U.S. Post Office, Suffolk County, the School District, Town Jitney Program, etc., of street closings daily. Confirmation of daily notices of agencies contacted, including Town services contacted, shall be faxed to the Highway Department every day.
- g) The Contractor shall maintain at all times, one lane of roadway, suitable for emergency vehicles.
- h) The Contractor shall maintain all existing official traffic control devices, stop signs, parking signs, street signs, etc.
- i) The Contractor shall maintain traffic on fill or other surfaces that are subject to the development of pot holes.
- j) The Contractor shall use sufficient flagmen equipped with two-way radios, if required (minimum of two (2) flag people at all times) at locations where traffic or physical conditions require their services. (Note: N.Y.S. M.U.T.D. requires the use of a proper flag and a traffic vest.) Side streets shall be properly closed with cones and/or barricades, or the use of flagmen to prevent traffic from entering the work zone.

- k) When directed, the Contractor shall furnish and apply liquid calcium chloride daily for the prevention of dust nuisance.

In addition, the Contractor may be directed to furnish and apply liquid calcium chloride on a Saturday, Sunday, or a legal holiday for the prevention of dust nuisance.

Non-conformance with any of the above requirements shall be the basis for implementation of a non-conformance fine of Five Hundred Dollars (\$500.00) a day, for each and every day of non-conformance.

**23. PROTECTION OF LAND MARKERS, TREES, SHRUBS, AND PROPERTY**

Wherever in the conduct of the work, a monument making a point of public or private survey is encountered or brought to view by excavation, the fact shall at once be communicated to the Town Engineer. In no case shall the contractor remove the same until the location for resetting shall have been made by the Town Engineer. All monuments or land markings exposed to view when the work is first undertaken shall be carefully preserved and the greatest care exercised to prevent injury to or disturbance of position of the monument.

The unit price of all items shall include the cost of restoring to its former condition any sidewalks or curbs, as well as restoring any trees, shrubs or lawns that may be damaged during this construction. No additional payment will be made.

The contractor is required at his own expense to obtain any and all permits for use of private property if he uses such property for storage, transportation or accomplishment of the work under the contract. Private property shall be cleaned up neatly, any damage repaired and premises restored to their original condition.

**24. PROTECTION OF UTILITIES**

The contractor shall familiarize himself with the existence of structures of municipal and other public service corporations on or adjoining the site of the work, for the area within the scope of the contractor's work. The contractor shall be responsible for calling for a mark out given reasonable opportunity to work in cooperation with the owners of these utilities in the work, reconstruction or alteration of these structures. Such reconstruction and alteration shall be so conducted as to delay or interfere as little as practicable with the work of the contractor. Any additional cost of various items or work because of these utilities shall be included in the price bid for these items.

The Town Engineer shall direct the public utility corporations to shift or remove those utility structures that may be necessary to permit the contractor to carry out the work in accordance with the plans. The contractor shall not remove or cause to be removed, any

structure or part of a structure owned by a public utility corporation without the approval of the Town Engineer.

The contractor shall cooperate with the public utility corporation whose structures (aerial, surface or subsurface) are within the limits of or along the outside of the right-of-way, to make it possible for them to maintain uninterrupted service. The contractor shall conduct his operations in such a way as not to delay or interfere as little as practicable with the work of the utility corporation.

**TOWN OF RIVERHEAD  
SUFFOLK COUNTY, NEW YORK**

**2023 ANNUAL CONSTRUCTION CONTRACT**

**TECHNICAL SPECIFICATIONS**

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ANNUAL CONSTRUCTION AND ASPHALT INSTALLATION CONTRACT 2023  
TECHNICAL SPECIFICATIONS**

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Item No. 61	Saw Cutting Existing Asphalt Pavement
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Item No. 74	Painted Lines
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Item No. 104	Asphalt Emulsion Slurry
Item No. 106	Latex Modified Surface Treatment
Item No. 108	Vinyl Coated Chain Link Fencing and Gates
Item No. 112	Topsoil and Seed
Item No. 113	Sodding
Item No. 116	Pavement Markings
Item No. 118	Erosion and Sediment Control

Item No. 151	Poured in Place Safety Surface
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Item No. 190-P & PP	Permeable Interlocking Concrete Pavement
Item No. 191	Unit Pavers

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ITEM NO. 1 CLEARING AND GRUBBING

**1. DESCRIPTION** - Under this item the Contractor shall clear and grub the area where construction is to be done; and such other areas as specified or directed; he shall clear such additional areas within the limits of the right of way, easement lines or other designated areas as specified or directed by the Town Engineer. The Contractor shall protect existing features which are to be retained and repair injuries as specified and as directed by the Town Engineer.

**2. MATERIALS** - The Contractor shall utilize all means and methods available to him to clear and grub area as shown on the plans or as directed by the Town Engineer.

**3. CONSTRUCTION DETAILS**

**Location of Work** - The Town Engineer will define the limit of areas where clearing and grubbing is to be done. They shall be the areas of construction which include the road section, stream channels, ditches, temporary approaches, detours and new drainage areas shown on the plans or as specified or as directed. The Engineer will designate the fences, structures, and debris and trees and bushes to be cleared where grubbing is not required. Clearing beyond the areas of construction shall be only where specified or directed. It shall not include all trees within the right-of way which are dead or in a hazardous condition and it may include a strip above the upper limits of cut slopes.

**Grubbing and Cutting** - All roots and stumps within the limits of the road section shall be grubbed and excavated unless otherwise specified or approved. Where trees are cleared and grubbing is not required the trunks shall be cut off not more than six (6) inches above the original ground surface. At the completion of the work on the contract the Contractor shall cut all grass, weeds and brush within the limits of the right-of-way and easement lines as directed by the Engineer.

**Disposal** – All wood and brush shall be chipped where permitted or otherwise disposed of as specified or approved. All elm wood cut by the Contractor shall be disposed of in a manner satisfactory to the Engineer. No tree trunks, stumps or other debris shall be felled, sidecast or placed outside the limits of the right-of-way. No debris shall be left within 300 feet of the roadway unless approved in writing by the Engineer. The location of disposal areas shall be approved in writing by the Engineer and shall be acquired by the Contractor at his own expense.

**Protection and Restoration** – The Contractor shall prevent all damage to pipes, conduits, wires, cables, monuments, or structures above or below ground. No land monuments, property markers, or official datum points shall be damaged or removed until an authorized agent has witnessed or otherwise referenced their location and approved their removal. The Contractor shall so control his operations as to prevent damage to trees and shrubs which are to be preserved. Protection may include fences and boards lashed to trees to prevent damage from blasting or machine operations. The Contractor shall off all branches of trees hanging within 16' above any part of the roadway or which have been

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broken or injured during construction. All tree repairs and painting of tree wounds shall be as directed by the Town Engineer. Where soil over the roots of trees to be preserved has become compacted it shall be restored by proper cultivation to a condition to permit adequate aeration of the soil. The Contractor will be required to replace at his own expense all plants destroyed or damaged beyond repair as determined by the Engineer. The species and size of the replacements shall be as determined by the Engineer except that their maximum size shall not exceed four (4) inches caliper. Areas disturbed beyond the limits of work as shown on the plans or as determined by the Engineer shall be regarded, fertilized, seeded and mulched, as provided for in the rest of the contract or as ordered by the Engineer. Where such areas extend beyond the limits covered by the contract payment items, the cost of this work shall be included in the price bid for the various items of the contractor.

**4. METHOD OF MEASUREMENT** – The quantity of clearing and grubbing to be paid for under this item will be the number of acres or percentage thereof as determined by the Engineer of clearing and grubbing measured in its original state and shall not exceed those shown on the plans or as set forth by the Engineer.

**5. BASIS OF PAYMENT** – The unit price bid per acre for this item shall include the cost of furnishing all labor, materials and equipment necessary to complete the work.

END OF SECTION

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ITEM NO. 2 UNCLASSIFIED EXCAVATION

**1. DESCRIPTION** - The Contractor shall remove and dispose of earth excavation including soil, hardpan, topsoil, grass, weeds, brush and sod as shown on the plans or as directed by the Engineer. The Town Engineer shall determine if any excavated material remains on site.

**2. MATERIALS**

The Contractor shall utilize all means and methods available to him to excavate the area as shown on the plans or as directed by the Town Engineer.

**3. CONSTRUCTION DETAILS**

Location of Work- The Town Engineer will define the limit of areas where unclassified excavation is to be done. They shall be the areas of construction which include the road section, stream channels, ditches, temporary approaches, detours and new drainage areas shown on the plans or as specified or as directed.

Unsuitable and unusable material not approved for use in widening the slopes outside the pavement or for drainage purposes shall be disposed of outside the right-of-way limits. At the Contractor's expense and in conformity with all local laws and ordinances. Existing structures which are to be abandoned and left in place, shall be broken up to a depth of four feet below finished grade and the hole backfilled with suitable material and compacted, as directed by the Engineer. No additional payment will be made for the demolition of the abandoned structures or for backfilling and compacting the hole.

Protection and Restoration – The Contractor shall prevent all damage to pipes, conduits, wires, cables, monuments, or structures above or below ground. No land monuments, property markers, or official datum points shall be damaged or removed until an authorized agent has witnessed or otherwise referenced their location and approved their removal. The Contractor shall so control his operations as to prevent damage to trees and shrubs which are to be preserved. Protection may include fences and boards lashed to trees to prevent damage from blasting or machine operations. The Contractor shall off all branches of trees hanging within 16' above any part of the roadway or which have been broken or injured during construction. All tree repairs and painting of tree wounds shall be as directed by the Town Engineer. Where soil over the roots of trees to be preserved has become compacted it shall be restored by proper cultivation to a condition to permit adequate aeration of the soil. The Contractor will be required to replace at his own expense all plants destroyed or damaged beyond repair as determined by the Engineer. The species and size of the replacements shall be as determined by the Engineer except that their maximum size shall not exceed four (4) inches caliper. Areas disturbed beyond the limits of work as shown on the plans or as determined by the Engineer shall be regarded, fertilized, seeded and mulched, as provided for in the rest of the contract or as ordered by the Engineer. Where such areas extend beyond the limits covered by the contract payment items, the cost of this work shall be included in the price bid for the various items of the contractor.

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4. **METHOD OF MEASUREMENT** – The quantity of excavation to be paid for under this item will be the number of cubic yards of unclassified material measured in its original position, excavated and disposed of as required by the plans and specifications. The payment limits of the excavation shall not exceed those shown on the plans unless otherwise ordered in writing by the Engineer. For computations of the quantities of excavation, no deduction shall be made in the area of any cross-section for any pipe or similar obstruction unless the end area shall be greater than four square feet.
  
5. **BASIS OF PAYMENT** – The unit price bid for cubic yard for this item shall include the cost for furnishing all labor, materials and equipment necessary to complete the work. Material designated as select material and which is excavated or stripped and placed directly on the prepared areas to be seeded, as shown on the plans or as directed by the Engineer, will be paid for only under Unclassified Excavation.

END OF SECTION

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ITEM NO. 2U REMOVAL OF UNSUITABLE MATERIAL

1. **DESCRIPTION** - The requirements of Item 2 – Unclassified Excavation shall apply except as modified herein. The Contractor shall remove unsuitable material within the roadway prism or areas as designated by the Engineer. Unsuitable materials may include but not limited to mulch, clay, boulders, concrete curb, sidewalk, pavement, old macadam, buried debris (including concrete), existing leaching pools, pumping material, or any strata that a minimum 95% compaction cannot be reached. The Engineer shall designate and specify those materials to be removed when encountered.
2. **MATERIALS** - The Contractor shall utilize all means and methods available to him to remove unsuitable material as directed by the Town Engineer.
3. **CONSTRUCTION DETAILS** - Unsuitable and unusable materials not approved for use in widening the slopes outside the pavement or for drainage purposes shall be disposed of outside the right-of-way limits.
4. **METHOD OF MEASUREMENT** – The quantity of excavation to be paid for under this item will be the number of cubic yards of material removed, measured in its original position below
5. **BASIS OF PAYMENT** – The unit price bid for cubic yard for this item shall include the cost for furnishing all labor, materials and equipment necessary to complete the work. Material designated as select material and which is excavated or stripped and placed directly on the prepared areas to be seeded, as shown on the plans or as directed by the Engineer, will be paid for only under Unclassified Excavation.

END OF SECTION

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ITEM NO. 3S EMBANKMENT

**1. DESCRIPTION**

This work shall consist of placement and compaction of all materials that are provided under this section and shall be executed in conformance with payment lines, grades, thicknesses and typical sections specified in the contract documents. Common Fill and Select Granular Fill shall be used as instructed by the Town Engineer or as shown on the Contract Drawings.

- 1.1 Unclassified Excavation – Unclassified excavation is covered under Item 2 and shall consist of the excavation and disposal of materials encountered in the course of construction as described in Item 2.
- 1.2 Embankment - The embankment is the portion of a fill section situated between the embankment foundations and the subgrade surface, excluding any material placed under any other section of these specifications.
- 1.3 Embankment Foundation – The embankment foundation is the surface upon which an embankment is constructed.
- 1.4 Subgrade Surface – The subgrade surface is the surface of the grass area, driveway or parking lot section upon which borrow, subbase or base materials, respectively are placed.
- 1.5 Subgrade Area – The subgrade area is that portion of an embankment situated above either of the following, but excluding any material placed under another section of the specifications:
  - 1.5.1 A line located two feet below the subgrade surface and extended to the intersection with the embankment side slopes, or
  - 1.5.2 The embankment foundation, whichever is higher.The material and compaction requirements for the subgrade area in embankments are found in paragraph 3.10.
- 1.6 Embankment Side Slope Area – The embankment side slope areas are those cross-sectional areas of an embankment situated outside of lines projected downward and outward on a one on one slope from the edges of the subgrade surface to their intersection with the embankment foundation, but excluding any portion lying within a subgrade area.
- 1.7 Suitable Material – A material whose composition is satisfactory for use in embankment construction is a suitable material. The moisture content of the material has no bearing upon such designation. In general, any mineral (inorganic) soil, blasted or broken rock and similar materials of natural origin, including mixtures thereof, are considered suitable materials. Determinations of whether a specific natural material is a suitable material shall be made by the Engineer on the above basis.
- 1.8 Unsuitable Materials – Any material containing vegetable or organic matter, such as muck, peat, organic silt, topsoil or sod, that is not satisfactory for use in embankment construction under Section 2.1 is designated under 2.1 as an unsuitable material. Man made deposits of industrial waste, toxic or contaminated materials, sludge, landfill or other material are also unsuitable materials.

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- 1.9 Borrow Material – Borrow material required for earthwork construction in excess of the quantity of suitable material available from the required grading, cuts and excavations. Borrow may be necessary even though not shown on the plans.
- 1.10 Proof Rolling – Proof rolling consists of applying test loads over the subgrade surface by means of a heavy pneumatic-tired roller of specified design, to locate and permit timely correction of deficiencies likely to adversely affect performance of the pavement structure.
- 1.11 Graded Surfaces – The Contractor shall form and trim all graded surfaces to the lines and grades shown on the plans or as directed by the Town Engineer.
- 1.12 Select Granular Fill – This work shall consist of excavating for, furnishing, and installing granular fill below foundations or as slope protection in accordance with these specifications, conforming to the lines and grades shown on the plans, or where directed by the Town Engineer.
- 1.13 Applying Water – Under this work, the Contractor shall furnish and apply water for dust control, for compaction purposes and for such other purposes (not provided in other sections) as called for on the plans, or as directed by the Engineer. Water shall not be applied in inclement weather or when the temperature is below 0 degrees C. No separate payment will be made for application of water.

**2. MATERIALS**

- 2.1 Subgrade Area Material – Subgrade area material shall consist of any suitable material having no particles greater than six inches in maximum dimension.
- 2.2 Borrow - Material furnished for this item shall be suitable material having no particles greater than 3 inch in maximum dimension. Of the portion passing the 4 inch square sieve, the material shall have the following gradation:

Sieve Size	Percent Passing By Weight	Sieve Size	Percent Passing By Weight
40	0 to 70	No. 200	0 to 15

- 2.2.1 Soundness – The material shall be sound and durable. A material with a Magnesium Sulfate Soundness Loss exceeding 35 percent will be rejected.
- 2.2.2 Composition – RAP, RCA, shall not be accepted.
- 2.3 Select Granular Fill and Select Structural Fill – Materials furnished under this item shall be suitable and conform to the following requirements:
  - 2.3.1 Gradation – except when used as backfill material for aluminum pipe with spiral ribs or plastic pipe, the material shall have the following gradation:
 

<u>Sieve Size</u>	<u>Percent Passing by Weight</u>
3 in.	100
No. 40	0 to 70
No. 200	0 to 15
  - 2.3.2 When used as backfill for Corrugated Aluminum Pipe with spiral ribs, 100% of the material shall also pass the 1.5” Sieve. When used as backfill for plastic pipe, 100% f the material shall bass the ¾” sieve.
  - 2.3.3 Soundness – The materials shall be substantially free of shale and soft, poor durability particles. A material with Magnesium Sulfate Soundness Loss exceeding 30% will be rejected.

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- 2.3.4 Composition – RAP shall not be used. When used as backfill for aluminum pipe, the material shall be free of Portland cement or Portland cement concrete.
- 2.3.5 pH – Where the Town elects to test for this requirement, a material with pH of less than 5 or more than 10 shall be rejected.
- 2.4 Select Granular Fill Slope Protection – Material furnished for use under this item shall consist of rock, stone, slag, cobbles, or gravel, substantially free of shale or other soft, poor durability particles.
- 2.4.1 Gradation – Broken or blasted un-weathered rock used for this item shall be well graded, having no particles greater than two feet in maximum dimension, and substantially free from particles greater than one foot in maximum dimension, containing litter or no material passing the No. 10 sieve. All materials, other than broken or blasted un-weathered rock, shall meet the following gradation requirements.
- | <u>Material Size</u>     | <u>Percent Passing By Weight</u> |
|--------------------------|----------------------------------|
| 2 Foot maximum dimension | 100                              |
| 6" maximum dimension     | 90 to 100                        |
| 1.5"                     | 0 to 30                          |
| No. 4 sieve              | 0 to 10                          |
- 2.4.2 Soundness – Where the Town elects to test for this requirement, a material with a Magnesium Sulfate Soundness Loss exceeding 35% will be rejected.
- 2.4.3 Composition – RAP shall not be used.
- 2.5 Water - Water used for dust control or compaction purposes may be obtained from any source. When used for watering seeded or sodded areas, or surfaces to be seeded or sodded, water and water source shall be as approved by the Town Engineer. Water is incidental to applicable excavation items.

**3. CONSTRUCTION DETAILS**

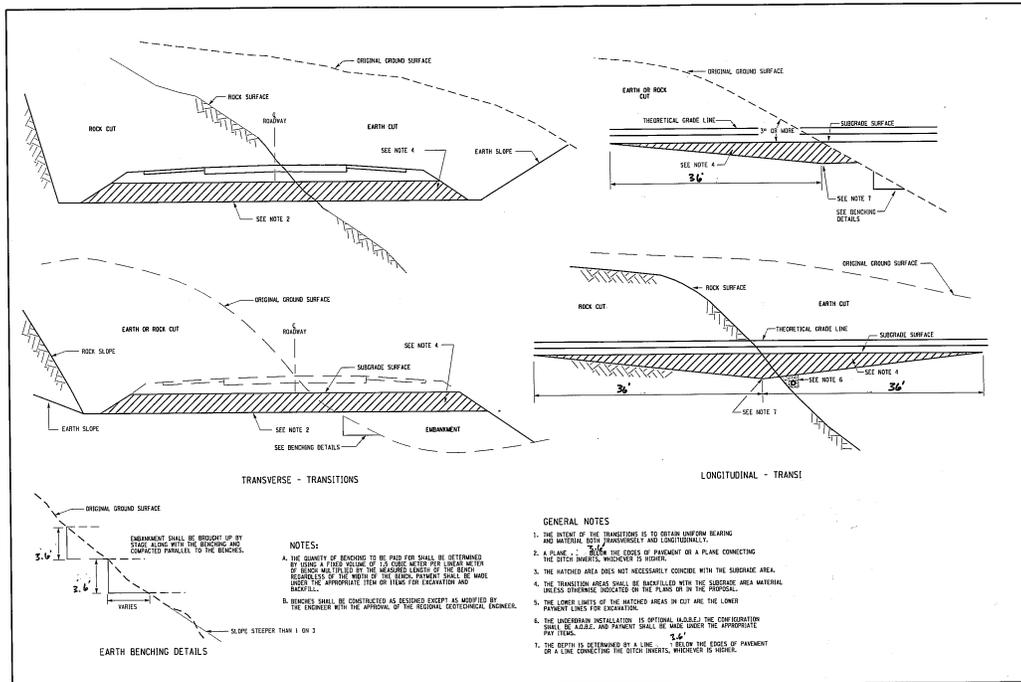
- 3.1 General – The Contractor shall remove all soil, rock, and other material, and utilize or dispose of these materials as required by the plans and specifications. All embankment work shall be executed to payment lines shown on the plans, or as directed by the Town Engineer. All graded earth surfaces shall be smoothed and trimmed in reasonably close conformity of true grade. After trimming, the area shall be left in the compacted and satisfactory condition, free of large stones or other objectionable materials, as determined by the Engineer. Earthwork construction operations requiring compaction shall not be performed from November thru April 1 except with written permission of, and under such special conditions and restrictions as may be imposed by, the Town Engineer. Under no conditions will the contractor be permitted to place material that is frozen, or place fill material on frozen ground.
- 3.2 Scheduling of Work to Minimize Soil Erosion and Water Pollution – The Contractor shall ensure effective and continuous soil erosion and sedimentation control, in accordance with Item 118, throughout the construction period.
- 3.3 Drainage and Grading – The Contractor shall provide and maintain slopes, crowns, and ditches on all excavation and embankments to ensure satisfactory

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surface drainage at all times. Ditches and other drainage facilities necessary to remove ponded water shall be constructed as soon as practical to have the work area dry during the progression of work. All existing culverts and drainage systems shall be maintained in satisfactory operating condition throughout the course of the work. If it is necessary to interrupt existing surface drainage, sewers or under-drainage, then temporary drainage facilities shall be provided until the permanent drainage work is complete. Top of slope interceptor ditches, where shown on the plans, shall be completed before adjacent excavation operations are begun. The construction of these temporary drainage facilities shall be considered as incidental to the construction of the project and no additional payment will be allowed. Any portion of an embankment or subgrade which has, in the opinion of the Town Engineer, been damaged by the Contractor's equipment during the course of construction, shall be repaired and recompacted by the Contractor to the satisfaction of the Engineer, and no extra payment will be made therefore. Where seepage causes instability of slopes, excavation and backfill or other corrective measures shall be performed as ordered by the Town Engineer.

- 3.4 Suitable Materials – Moisture content has no bearing on the suitability of material to be used for embankment construction, however, the moisture content of a material may be such that its use will require manipulation. It is the Contractor's responsibility to determine the economics of using, or disposing and replacing, of such materials. Material determined by the Contractor to be uneconomical for use may be disposed of under paragraph 3.6 and replaced with other material at no additional cost to the Town.
- 3.5 Embankment Foundation - Upon completion of all clearing and grubbing work, the embankment foundation shall be prepared. Sod and topsoil shall be removed as instructed by the Engineer. Prior to embankment construction and subbase course placement, the surface on which the embankment and /or subbase is to be placed shall be thoroughly compacted to the satisfaction of the Engineer. Unsuitable materials other than sod and topsoil shall be removed to the depths shown in the plans or as directed by the Engineer. Where embankments are to be constructed over ground that will not adequately support embankment construction equipment, an initial layer of fill may be allowed to form a working platform. The need, manner of construction, and thickness of such a layer shall be subject to approval of the Engineer, and the layer will be permitted only in the area of inadequate support, as determined by the Town Engineer, not due to deficient ditching, grading or drainage practices or where the embankment could be constructed in the approved manner by the use of different equipment or procedures. Thicknesses of up to three feet may be permitted for such a layer. In locations where embankments are to be constructed on hillsides or against existing embankments with slopes steeper than 1 vertical on 3 horizontal, the slopes shall be benched unless otherwise approved by the Engineer. Required benches shall be constructed as shown below.

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- 3.6 Embankments – The embankment shall be constructed of suitable material as defined by paragraph 1.7, Suitable Material. Embankment material shall not be placed on frozen earth, nor shall frozen soils be placed in any embankments. Embankment material shall be placed and spread in lifts (layers) of uniform thickness, then uniformly compacted as specified under paragraph 3.10, Compaction. During embankment construction operations, earth moving equipment shall be routed so as to prevent damage to any compacted lift. Damage to any compacted lift at any time during the course of construction, such as rutting under the loads imposed by earth moving equipment, shall be fully repaired by the Contractor at his/her own expense prior to placement of any overlying materials. At the close of each day's work, the working surface shall be crowned, shaped and rolled with smooth steel wheel or pneumatic tired rollers, for positive drainage. Particles with a dimension in excess of two-thirds of the loose lift thickness are designated as oversized particles. Oversized particles shall be removed prior to compaction of the lift and may be placed in the Embankment Side Slope Area.
- 3.7 Subgrade Area – Where a subgrade area is defined in an embankment by paragraph 1.5, Subgrade Area, the material placed shall conform to paragraph 2.1 Subgrade Area Material, and placed and compacted in conformance with paragraphs 3.8 and 3.10. Prior to subbase course placement, the surface on which the subbase is to be placed shall be thoroughly compacted to the satisfaction of the Engineer.

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3.8 Compaction

3.8.1 General Requirements – It shall be the Contractor’s responsibility to properly place and compact all materials in the proposed work and other locations specified in the contract documents, and to correct any deficiencies resulting from insufficient or improper compaction of such materials throughout the contract period. The Contractor shall determine the type, size and weight of compactor best suited to the work at hand, select and control the lift (layer) thickness, exert control over the moisture content of the material, and other details necessary to obtain satisfactory results. During the progression of the work, the Town will inspect the Contractor’s operations and will permit the work to continue where:

- A. Lift thickness is controlled and does not exceed the maximum allowed according to the equipment classifications in subparagraph 3.10.2 of this subsection, and the equipment meets all specified class criteria. Thinner lifts and lighter equipment than the maximum allowed may be necessary for satisfactory results on some materials.
- B. The compactive effort (number of passes and travel speed) is uniformly applied and not less than that specified for the given equipment class and lift thickness. Higher efforts than the minimum allowed may be necessary for satisfactory results on some materials.
- C. The Engineer concludes from a visual observation that adequate compaction has been attained, with the exception of backfill at structures, culverts, pipes, conduits, and direct burial cables. However, the Town reserves the right to perform density tests at any time. When tests are performed, the results shall indicate that not less than 90 percent of Standard Proctor Maximum Density is attained in any portion of an embankment, or 95 percent in subgrade area, or as specified for other items with percent maximum density requirements.
- D. Significant rutting under the action of the compactor is not observed on the final passes on a lift.

Whenever the Contractor’s operations do not conform to the above criteria or requirements contained in other subparagraphs of this subsection, the Engineer will prohibit placement of an overlying lift until the Contractor takes effective corrective action.

When the Engineer determines that density tests are necessary, the Contractor shall provide any assistance requested to facilitate such tests. Such assistance shall include but will not be limited to excavation and backfill of test pits and holes. This work shall be considered incidental construction.

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Damage to any compacted lift at any time during the course of construction such as rutting under the loads imposed by earth moving equipment, shall be fully repaired by the Contractor at his/her own expense prior to placement of any overlying materials.

3.8.2 Compaction Equipment –

The selection of compaction equipment is the Contractor’s responsibility, but shall be subject to meeting the requirements of this subparagraph and approval by the Town Engineer with respect to its provisions. All compaction equipment shall be marked by a permanently attached manufacturer’s identification plate designating the name of the manufacturer, model number and serial number of the machine as minimum identification. This plate shall be installed in a readily visible location. Compaction equipment lacking such an original manufacturer’s identification plate, or with altered or illegible plates will not be recognized as acceptable compaction equipment. Any equipment not principally manufactured for compaction purposes and equipment which is not in proper working order in all respects shall not be approved or used. The Engineer will also withhold approval of any compactor for which the Contractor cannot furnish manufacturer’s specifications covering data not obvious from a visual inspection of the equipment and necessary to determine its classification. The term “pass” for any type of compactor, shall denote one direct vertical application of compactor effort over all elemental areas of a lift surface. Terms in common parlance, such as “coverage”, “trips,” etc. have no significance, equivalence, or application under these specifications.

Figure 3-1

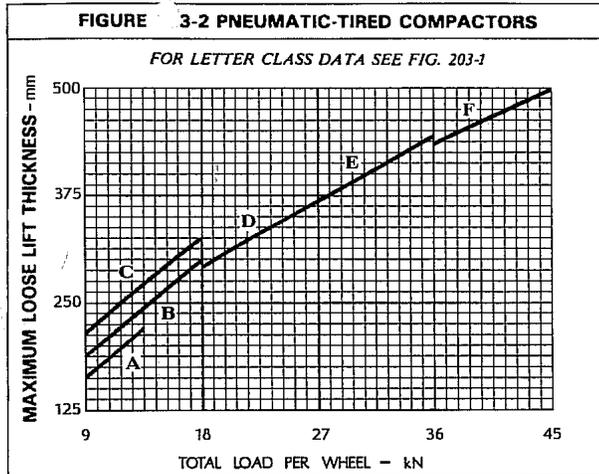
Pneumatic-Tired Compactor Classifications

Pneumatic Compactor Class	Tire Requirements			Range of Ballasted Wheel Loads (Kilonewtons Per Wheel)
	Tire Size	No. Plys	Infl. Pressure. (kPa)	
A	7.50 X 15	4	240	9 – 14
B	7.50 X 15	6	415*	9 – 18
		10	620*	
C	7.50 X 15	14	900*	9 – 18
D	9.00 X 20	10	520*	18 – 27
		12	620*	
E	11.00 X 20	12	620*	27 – 36
		18		
F	13.00 X 24	18	690*	36 - 45

\*Infiltration pressure for not less than the last two passes on each lift. May be reduced during earlier passes and gradually increased to this level.

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3.10.3 Pneumatic-Tired Compactors – This type of compactor shall be classified for use according to the requirements of Figure 3-1. For the lift thickness selected by the Contractor, the minimum class and wheel load which will be allowed on that lift thickness, shall be as shown in Figure 3-2.



The minimum effort for all pneumatic compactors shall be 6 passes, at speeds up to 3.6 m/s on no more than the first 2 passes, and all subsequent passes at speeds of 1.8 m/s or less.

3.10.4 Smooth Drum Vibratory Compactors – This type of compactor is defined as a machine which primarily develops its compactive effort from the vibrations created and is classified for use according to the developed compactive force rating (CFR) per linear meter of drum width. The CFR is defined as follows:

$$\text{CFR} = \frac{\text{Unsprung Drum Weight (kN)} + \text{Dynamic Force (kN)}}{\text{Drum Width (m)}}$$

The unsprung drum weight is the static weight of the drum and appurtenances without any reaction transmitted to the drum from the main chassis of the compactor. The dynamic force produced is dependent on the frequency of vibration, and therefore, CFR ratings shall be determined for the actual operating frequency of the compactor. Approval for vibratory compactors shall be confined, however, to equipment operating at not less than 18 Hz, nor more than 25 Hz, and those where the actual dynamic force at the actual operating frequency is at least 2.5 times the unsprung drum weight. Conversion of manufacturer's published ratings, at a given frequency, shall be made with the following equation:

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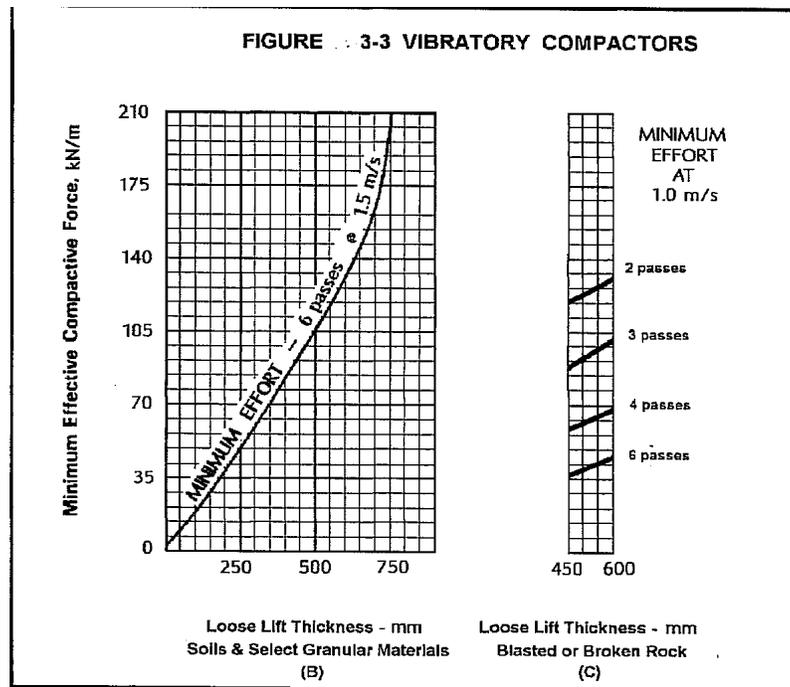
$$F_2 = \frac{F_1(V_2)^2}{(V_1)^2}$$

Where: F1=Dynamic Force at Rated Freq.  
F2=Dynamic Force at Operating Freq.  
V1=Rated Frequency

For the lift thickness selected by the Contractor, the minimum CFR rating and minimum effort on such a lift shall be as shown in Figure 3-3 B&C, respectively. Non-Centrifugal (vertical force only) types of vibratory compactors shall be approved as above, less 30 kN/m before using Figures 3-3 B&C as a minimum number of passes at a single specified speed. An equivalent effort, relating varying numbers of passes to other speeds is given by the equation:

$$\text{Speed } x = \frac{(\text{Specified Speed}) (\text{Min. Passes at Speed } x)}{(\text{Specified Min. Passes})}$$

The Contractor may choose to alter the specified minimum pass requirement, provided that speed is adjusted to the value given by this equation and does not exceed 1.8 m/s.



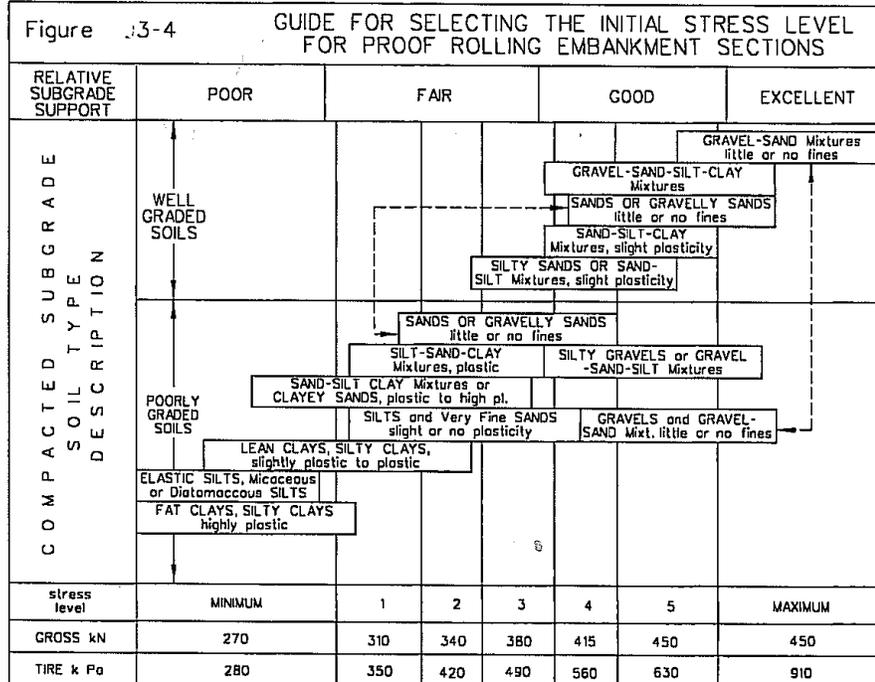
Where vibratory compactors are used on a project, the Contractor shall furnish for the exclusive use of the Engineer, one vibrating reed tachometer per project, plus one additional tachometer for each group of two vibratory compactors in excess of two per project. Tachometers shall have a frequency range adequate to cover operating frequencies of all vibratory compactors used on the project and shall have scale divisions of 1 Hz or less. Tachometers may be placed on the ground surface near the compactor when making readings, or with suitable damping materials

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interposed, placed directly on the compactor drum frame. The dispensations permitted under this specification for vibratory compactors are contingent upon proper operation of the equipment at all times during compaction operations. In any instance where the Engineer encounters any problems with operators rolling without vibration, for any reason, and immediate and effective corrective action is not taken by the Contractor; the Engineer will halt the work until the problem is resolved. If continuing problems of this nature occur, the Engineer may suspend all provisions of this subparagraph and consider the vibratory compactors as smooth steel wheel rollers classified according to their gross weight.

- 3.10.5 Compaction Equipment for Confined Areas – In areas inaccessible to conventional compactors, or where maneuvering space is limited, impactor rammers, plate or small drum vibrators, or pneumatic buttonhead compaction equipment may be used with layer thickness not exceeding 150 mm (6 in.) before compaction. However, materials placed for subbase course construction shall have a maximum compacted thickness of 150 mm (6 in.). Hand tampers shall not be permitted. The Engineer may approve or reject any of the above described mechanical devices based upon the results of appropriate on-site field tests.
- 3.11 Moisture Control – All fill or backfill material to be compacted, shall be at a moisture content for adequate compaction of that material using the compactor selected by the Contractor to perform the work. The Contractor shall be responsible for determining the appropriate moisture content, and for controlling it within the proper limits as the work is progressed. When water must be added to a material, it may be added on the lift or in the excavation or borrow pit. Water added on the lift, however, shall be applied by use of an approved pressure distributor. Distributors must be approved and documented by the Engineer. Documentation by the Engineer shall be adequate evidence of approval. Water added shall be thoroughly incorporated in the soil, and manipulation shall be provided whenever necessary to attain uniformity of moisture distribution in the soil. When the moisture content of a lift about to be compacted exceeds the required amount, compaction shall be deferred until the layer has dried back to the required amount. Natural drying may be accelerated by blending in a dry material or manipulation alone, to increase the rate of evaporation. Increased loose lift thickness caused by blending in a dry material, however, may necessitate a change in compaction equipment to meet the minimum provisions of subparagraph 3.10.2 this subsection.

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3.12 Proof Rolling in Embankment Sections – Immediately prior to final trimming of the subgrade surface and placement of subbase materials in embankment sections, all areas of the subgrade surface within the roadway limits shall be proof rolled according to the requirements of this subsection. This work, and any delays due to this work, shall be considered incidental to the embankment item.

3.12.1 Equipment – The proof roller shall consist of a chariot type rigid steel frame with a box body for ballast loading up to forty-five Mtons (50.4 Tons), and mounted on four (4) pneumatic tired wheels acting in a single line across the width of the roller on its transverse load center line. The wheels shall be equipped with 18.00 x 24 or 18.00 x 25, 24 ply tires, and shall be suspended on articulated axles such that all wheels carry approximately equal loads when operating over uneven surfaces.

3.12.2 Determination of Roller Stress – Initially, the gross ballasted weight and tire inflation pressure of the proof roller shall be adjusted to the highest stress level shown in Figure 3-4 based on:

1. The Engineer’s general description of the subgrade soils.
2. The Engineer’s estimation of the relative subgrade support within the subgrade soil description range. The initial roller stress for embankments constructed of rock shall be the maximum level listed in Figure 3-4 (Gross Metric Tons 45 (50.4 Tons), Tire kPa 910).

The roller shall be operated briefly to establish the acceptability of the initial stress level. Proof rolling of the embankment shall be performed at the next lower stress level whenever operation of the roller at a higher stress level is accompanied by consistent lateral displacement of soil out of the wheel paths.

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- 3.12.3 Procedure – After an acceptable stress level is established, two complete passes of the roller shall be applied over all elements of the area to be proof rolled. Any deficiencies disclosed during the proof rolling operation shall be corrected. Subsidence depressions shall be filled with material similar to the subgrade soil and then compacted in a normal manner. After compaction, these areas shall be proof rolled again. Corrective work shall be judged complete and accepted by the Engineer when all elements of the subgrade surface over a given embankment show a satisfactory uniform response to the proof roller.
- 3.12.4 Exceptions – Proof rolling of the subgrade surface in embankment sections will not be required in any area where:
1. Due to restrictions in available access and/or maneuvering space, use of the proof roller may damage adjacent work;
  2. The proof roller will approach a culvert, pipe or other conduit closer than 5.0 ft in any direction.
- 3.13 Proof Rolling in Cut Sections – Immediately prior to final trimming of the subgrade surface and placement of subbase materials in cut sections, all areas of the subgrade surface within roadway limits shall be proof rolled according to the requirements of this subsection. This work, and any delays due to this work, shall be considered incidental to the Item 2.
- 3.13.1 Purpose – In cut sections, the purpose of proof rolling is to determine the location and extent of areas below the subgrade surface that require corrective undercutting and are not so specified in the contract plans.
- 3.13.2 Equipment – The proof roller used in embankment sections, as specified above, shall be employed for proof rolling in cut sections except that the roller shall be loaded to achieve a single stress level in operation, using a gross ballasted weight of thirty tons (30 tons) and all tires inflated to 40 psi.
- 3.13.3 Procedure – Two complete passes shall be applied over all elements of the area to be proof rolled. Where any portion of the cut subgrade surface other than that which has been damaged by the Contractor's operations fails to provide a satisfactory support for the proof rolling operation, the Engineer may order corrective undercut and backfill work performed. Backfill of undercuts shown on the plans or ordered by the Engineer shall meet the requirements of Select Granular Subgrade, placed and compacted as approved by the Engineer. Where natural soil below this course will not support the weight of the construction equipment, and when ordered by the Engineer, the course shall be placed in one lift. No additional proof rolling shall follow corrective work.
- 3.13.4 Exceptions – Proof rolling of the subgrade surface in cut sections will not be required in any area where the subgrade surface is in a rock cut, or where undercut and backfill have been previously performed. The Engineer may order undercutting and backfill without proof rolling of any cut where the need for corrective work, as determined by the Engineer, is obvious without actual proof rolling. The Engineer may also waive proof rolling in any cut section, where based upon a written

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evaluation by a Geotechnical Engineer Professional Engineer licensed to practice in the State of New York, proof rolling would be detrimental to the work.

- 3.14 Fill and Backfill at Structures, Culverts, Pipes, Conduits and Direct Burial Cables – The type of material to be used in bedding, filling and backfill at structures, culverts, pipes, conduit and direct burial cable and payment lines therefore shall be in conformance with the details or as noted on the plans or as ordered by the Engineer. Do not use RAP. Do not use slabs or pieces of either concrete or asphalt.

Fill or backfill material at structures, culverts and pipes shall be deposited in horizontal layers not exceeding 6 inches in thickness prior to compaction. Compaction of each layer shall be as specified under Compaction of this specification. A minimum of 95% of Standard Proctor Maximum Density will be required. When placing fill or backfill around culverts and pipes, layers shall be deposited to progressively bury the pipe or culvert to equal depths on both sides. When filling behind abutments and similar structures, all material shall be placed and compacted in front of the walls prior to placing fill behind the walls to a higher elevation. The limits to which this subsection will apply shall be in accordance with the plans.

Fill or backfill for conduit or cable placed in a trench shall be carefully placed in a horizontal layer to a depth of 6" over the top of the conduit or cable. This layer of material shall not be compacted, however, the remaining portion of the trench shall be backfilled in accordance with the preceding paragraph. Where cables or conduits are placed and backfilled by a machine in one operation, the above requirements for backfilling do not apply.

Where sheeting has been used for the excavation, and incremental removal of sheeting is not specified in the plans or proposal, sheeting shall be pulled when the trench has been backfilled to the maximum unsupported trench depth allowed by 29 CFR 1926.

- 3.15 Borrow – The management of a borrow source and the acceptability of all borrow material shall be subject to the approval of the Engineer at all times. The Contractor shall notify the Engineer at least ten (10) work days in advance of opening any borrow area, and request approval of the source under the pay item involved. Test pits required by the Engineer to evaluate the acceptability and limits of the source, shall be provided by the Contractor at the Contractor's own expense. Concurrent removal of material for more than one pay item from a single source or pit shall be prohibited except with the written permission of, and under such conditions and restrictions as may be imposed by, the Engineer. All borrow pits shall be stripped of sod, topsoil and vegetable matter well in advance of any working face. Where a borrow source is not under direct control of the Contractor or where special conditions exist, the Engineer may waive any of the above requirements and establish alternative provisions for the control and acceptability of borrow.

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Ordinary borrow will be accepted for use where the material qualifies under the definition of Suitable Material. The borrow of select granular material enumerated shall be accepted subject to meeting the additional provisions contained, therein. All borrow, whether ordinary borrow or select borrow placed within the limits of Embankments or the Subgrade Area shall be placed in conformance with section 3.8 or 3.9 respectively, as appropriate, or where used for fill or backfill at structures, culverts and pipes, in conformance with Section 3.14.

- 3.16 Select Granular Fill, Slope Protection – The Contractor shall perform the excavation in accordance with the requirements for Item 2 as described elsewhere in these specifications. The Contractor shall then spread material conforming to the requirements given in section 2.4, in one layer to its full thickness by a method approved by the Engineer. The work shall be performed where shown on the plans or where directed by the Engineer in accordance with the details shown on the plans. Compaction of the slope protection is not required. Slope Protection shall be either of two types, as described below:
- 3.16.1 Select Granular Fill, Slope Protection – Type A. Under this type, the Contractor shall furnish and install the slope protection where shown on the plans in accordance with the details.
- 3.16.2 Select Granular Fill, Slope Protection – Type B. Under this type, the Contractor shall furnish and install the slope protection where directed by the Engineer in accordance with the details shown on the standard detail sheet.
- 3.17 Embankment Construction Control Devices
- 3.17.1 Settlement Gages and Settlement Rods. Settlement gages and rods shall be constructed, installed, and maintained where shown on the plans and in accordance with the details contained in the current publication issued by the New York State Department of Transportation (NYSDOT) covering construction, installation, maintenance, and abandonment of these devices.

Where settlement gages are called for, it will be the Contractor's option to install pipe gages or manometer gages, unless a definite type is specified on the plans or in the proposal. Settlement gages and settlement rods will be accepted for conformance with the specification requirements on the basis of an inspection of the installation by the Town Engineer.

- 3.17.2 Piezometers. Piezometers shall be constructed, installed, and maintained at the locations shown on the plans and in accordance with the detailed drawings and specifications included in the proposal.
- 3.18 Cleaning Culverts and Closed Drainage Systems. Culverts, closed drainage systems, drainage structures and manholes shall be thoroughly cleaned and maintained clean as determined by the Engineer for the duration of the contract. Materials removed shall be disposed of in accordance with Item 2.

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- 3.19 Subgrade Surface Tolerance. After compaction, the subgrade surface shall not be above design elevation at any location.
- 3.20 Clean, Grade and Shape Existing Roadside Section. The Contractor shall remove earth, turf, brush and debris, or provide necessary fill material to restore adequate roadside drainage. Ditches shall be shaped as shown on the plans. Material removed shall be disposed of in conformance with the provisions of Item 2.

Under General Provisions, the Contractor shall protect all fences, markers, culverts, underground structures, utilities and other appurtenances adjacent to the work area. Any damaged facilities and/or disturbed areas shall be replaced in kind at no additional cost to the Town.

**4. METHOD OF MEASUREMENT** – The quantity of embankment to be paid for under this item will be the number of cubic yards, or square yards as specified, of material measured in its final compacted position, satisfactorily placed and compacted as required by the plans and specifications within the payment limits shown on the plans unless otherwise ordered in writing by the Engineer. Applying water shall be considered incidental and included in the costs of other applicable pay items.

**5. BASIS OF PAYMENT** - The unit price bid per cubic yard or per square yard for this item shall include the cost of furnishing all labor, materials and equipment necessary to complete the work, including furnishing water equipment and applying water for compaction. No direct payment will be made for any losses of material which may result from shrinkage, compaction, foundation settlement, waste, overflow, erosion, leakage or any other cause; the cost of such losses shall be included in the unit price bid for this item.

*Payment will be made under:*

<b>Item No.</b>	<b>Item</b>	<b>Pay Unit</b>
3S-B	Borrow	Cubic Yard
3S-SGF	Select Granular Fill	Cubic Yard
3S-GS	Grading Subgrade	Square Yard

END OF SECTION

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ITEM NO. 4 STABILIZED MIXED-IN-PLACE RECYCLED BASE COURSE

**1. DESCRIPTION** - Under this Item, the Contractor shall construct a stabilized mixed-in-place recycled base course on various roadways, located throughout Suffolk County conforming to the lines, grades, thickness and cross slopes as shown on the plans or as directed by the Engineer.

The work shall consist of techniques used to pulverize, stabilize and incorporate asphalt emulsions with recycled asphalt pavement and aggregate to various depths (approximate range of 10-12 inches).

**2. MATERIALS** - Recycled asphalt pavement shall consist of the existing asphalt pavement, which has been scarified and pulverized in place so that the maximum size of any material does not exceed 2 inches.

Virgin aggregates may be added, if deemed necessary by the Town Engineer to change the gradation or raise the grade. The new material shall conform to the specification for Item 4-P.

Emulsified asphalt for the mixture shall meet the requirements of CSS-1, CSS-1h, SS-1, SS-1h or HFMS-2 as described in 618-02 of the New York State Department of Transportation Standard Specifications.

Additives may be used by the Contractor to meet the requirements of the job mix formula. These additives shall meet the requirements of quicklime or hydrated lime. The cost of the additive and the cost of the application of the additive shall be included under Item 4.

Approval for the job mix formula – all testing shall be performed by a laboratory of the Contractor's choice, approved by the Town Engineer. Testing shall be in accordance with ASTM D-1559 as amended in Appendix A of this specification.

A minimum of one sample per five hundred linear feet shall be obtained by the Contractor from the existing roadway, at the direction of the Town Engineer. Materials, which are similar in gradation and appearance, may be mixed together for testing to develop the job mix formula.

Prior to the start of any pulverization work, a test report for the job mix formula must be submitted by the Contractor to the Town Engineer for approval. As a minimum this report should indicate the following:

- a. A gradation of the on-site aggregate to a depth of 12 inches below the surface.
- b. When more than 4 inch of bituminous surface is present, an extraction analysis (gradation, asphalt content) shall be performed.
- c. Optimum moisture content of the existing aggregate base within 12-inches of the surface (ASTM D-1557).

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- d. The recommended emulsion content for the mixed and the manufacturer of the emulsion.
- e. Air voids, Marshall Stability and flow, when testing in accordance with Appendix A of this specification.
- f. Density of the mixture in pounds per cubic foot (PCF) for both wet and dry, in accordance with Appendix A.

After the job mix formula is established, all mixtures furnished for the project shall conform thereto. When unsatisfactory results or other conditions make it necessary, the Town Engineer may require the establishment of a new job mix formula.

- a. The stability at 140 degrees F shall not be less than 500 lbs.
- b. The flow shall not be less than 6 or more than 8.
- c. The optimum moisture content of the material (no emulsion added) shall be determined by ASTM D-1557. The total liquid content of the mixture shall be the sum of the water in the aggregate and the total percentage of the emulsion added. The total liquid content of the mix shall be within 10% of the optimum moisture content.

**3. CONSTRUCTION DETAILS** - The Contractor may use any equipment approved by the Town Engineer, which will produce the completed base course meeting these specifications:

An asphalt emulsion stabilized recycled base course within 1/8 inch of design grade specified in the plans and containing the amount of emulsion specified by the job mix formula within 0.5%.

Scarification and pulverization of the existing asphaltic concrete pavement so that the usable material is less than 2 inches in diameter. Scarification shall be done with a motor grader or any pulverizing machine acceptable to the Engineer. Prior to the start of any scarification and pulverization work the Contractor shall have all existing utilities marked out in accordance with NY State Law and Industrial Rule 53. During scarification and pulverization the Contractor shall protect all utility valve boxes, drainage structures (inlets, manholes, etc.) and sanitary sewer manholes from possible damage by this operation.

Regrading of the roadway – following the pulverization and stabilization operations, and prior to placement of a surfacing course, the mixed-in-place base within the roadway shall be graded. The grading of the completed base must meet the following criteria:

- a. Final gutter elevation where curb and gutter exist shall be plus or minus ¼ inch of existing gutter elevation.
- b. Final gutter elevation where standard curbs exist shall be plus or minus ¼ inch of theoretical base elevation.
- c. Final elevation at existing pavement lines shall be plus or minus ¼ inch of theoretical base elevation.
- d. Final centerline elevation shall be plus or minus ¼ inch of theoretical base elevation.

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If additional fill material is required in order to raise the grades as shown on the plans, and there is not sufficient quantities of material existing within the roadway for this purpose the material must be added in, then the material added shall conform to the specification for Recycled Concrete Aggregate. Payment for this Item will then be made at the unit price bid per cubic foot for Item No. 4-P. If removal of material is required in order to lower the grades as shown on the plans and there is an excess of material remaining after all roadway grading is complete, then all excavation required shall conform to the specification for Unclassified Excavation, Item 2, paid per cubic foot.

If necessary to change the gradation of the existing material in order to provide a gradation suitable for stabilization, the material added shall conform to the specification for Recycled Concrete Aggregate. The RCA shall be spread evenly over the pavement and mechanically blended with the on site material to form a mixture with the desired gradation and uniformity. No additional payment will be made for the blending of the dense graded material with the existing material. Payment for this work shall be included in the unit price bid per cubic yard, Recycled Concrete Aggregate.

Moisture Content:

- a. The moisture content of the recycled aggregate at the time of the addition or application of the asphalt emulsion shall be uniformly distributed through the recycled aggregate and shall be at a level such that the required total liquid content of the mix may be obtained. The total liquid content shall be within the limits described herein and based on that established in the approved mix design.
- b. Aerating of the mixture may be required to reduce the excess water so that the liquid content does not exceed the requirements described herein.
- c. A water truck approved by the Town Engineer shall be available when it is necessary to add water as required herein.
- d. The Contractor must have equipment on hand to determine the moisture content and monitor such during the mix operations.

The temperature range of the respective bituminous materials at the time of addition or application shall be as specified, between ambient and 150 degrees F. Bituminous materials shall not be added or applied to the aggregate when the air temperature in the shade is below 50 degrees F or when the weather conditions are otherwise unfavorable. The mixture shall not be placed on an area, which is excessively wet, or at a lower temperature than the air temperature shown above. Mixing operations shall be suspended when the descending air temperature fall below 50 degrees F.

Mixing:

- a. Addition of Additives – if the Town Engineer elects to add an approved additive (quicklime or hydrated lime) to the pulverized material prior to the

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application of the asphalt emulsion, a plan should be submitted describing the method of application to be used to the Town Engineer for approval prior to the application of the additive.

- b. In-Place-Mixing – the required amount of approved asphalt emulsion shall be incorporated into the recycled asphalt/aggregate material at the cutting head. The metering equipment shall be approved by the Engineer and shall be capable of applying all the required asphalt emulsion in one pass.

Descriptive information on the mixing and application equipment as well as all calibration information and curves on all metering equipment used shall be submitted for approval to the Engineer not less than five (5) days before work starts.

Aeration and Compaction:

- a. Aeration – Once a uniform mixture of aggregate and emulsion is obtained manipulation of the mixture shall continue until the volatiles or water, or both, are removed in sufficient quantities to provide a mixture suitable for compaction.
- b. Compaction – After the mixture has been aerated, it shall be spread to a uniform grade and cross-section and compacted with a pneumatic tired roller for the full width of the roadway. Rolling shall continue until the entire roadway is at finished grade.

Once finished grade is obtained, the mixture shall be compacted again. The type, size and weights of the compaction equipment used for finished rolling shall be the option of the Contractor, and shall be capable of attaining the density requirements listed below.

The maximum depth of any compacted layer shall be 6 inches. Where the required course is more than 7 inches in total compacted depth, it shall be constructed in approximately equal depth layers.

The Contractor shall employ an independent testing laboratory approved by the Town Engineer to perform quality control testing during the compaction process.

During the testing the average in-place density shall be at least 98% of the lab density when tested. The testing laboratory shall provide a Nuclear-Density meter to control the final in-place density of the stabilized material. The meter shall also be used to determine the optimum number of roller passes required to achieve an acceptable density. The meter will be required for each day that the in-place stabilization operation is in progress.

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Finish Grading – The finish grading operation shall conform to the required line and grade and cross sections specified herein. A period of curing of the recycled base will be required. The application of the surface course shall be begin until approved by the Town Engineer.

Stabilization of Soft Area – Following the grading and stabilization operations and after a minimum curing period of 2 days, a deflection survey will be performed by the Contractor on the top of the completed stabilized in-place recycled base. The procedure used will utilize a “Benkelman Beam” and shall conform to the “Canadian Good Roads Association” (CGRA) Method.

- a. If any unstable areas appear, the Contractor shall pulverize the area and test for the moisture content. If the moisture content is high the Contractor shall aerate the material to reduce the moisture content. The material will then be regarded and recompact. No additional payment will be made for the repairing of unstable areas found by the deflection survey.
- b. If unstable areas still remain, the Town Engineer may direct the Contractor to remove the existing base material to a depth determined by the Engineer and refill the area and selected fill. The material will be compacted as specified. Payment for this work will be under Item 2U.

**4. METHOD OF MEASUREMENT** – The quantity to be paid for under this item shall be the number of square yards of roadway or pavement that is pulverized, graded, stabilized, and compacted and tested in accordance with the plans, specifications and as directed by the Town Engineer.

Any necessary excavation will be paid for under the Item for Unclassified Excavation. Any requirement for additional suitable aggregate will be paid for under the Item for Recycled Concrete Aggregate. The liquid asphalt emulsion shall be paid for under the Bituminous Material Emulsified Asphalt Item.

**5. BASIS OF PAYMENT** – The unit price bid per square yard for this Item shall include the cost of all labor, materials, additives, tools, equipment, laboratory and quality control testing, reports, and all incidentals necessary to satisfactorily complete the in-place pulverization, stabilization, grading, aeration, compacting of the completed base and repair of unstable areas of pavement. The approximate depth of cut shall be 10 inches to 12 inches.

END OF SECTION

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APPENDIX “A”

Modifications made to ASTM D-1559 for mixes made with asphalt emulsions: SS-1, SS-1h, CSS-1h, and CSS-1.

- All mixes will be made at a total liquid content as defined in Section 2.3 of this specification. Mixing will be at ambient temperature (i.e., 77 +/-7 degrees F).
- Compaction of the specimen will be made at ambient temperature. No heating of molds or other material will be necessary.
- Apply 75 blows with the compaction hammer per face.
- Remove from mold within one hour of compaction
- Weight and measure with a caliper to the nearest 1/32 of an inch. Determine the “Wet Density” (lb. per cubic foot) as follows:
  - $((\text{Weight})/(\text{thickness in inches} * 205.926))^*62$
- Place specimen on its side in a flat pan and allow to sit at 77 +/-7 degrees F for a minimum of 2 hours.
- Transfer specimens to a force air oven maintained at 105 +/- 2 degrees F for 18 +/-4 hours.
- Remove from oven and allow to cool for a minimum of 2 hours.
- Determine the Bulk Specific Gravity by ASTM D-27 6.
- Determine the Theoretical Maximum Specific Gravity by ASTM D-2041. (Use volume only)

**Wet Stability**

- Place 3 specimens in a high walled pan and place in a 140 +/- 1.8 degrees F water bath for 30 to 35 minutes.
- Determine the stability and flow within 30 seconds after removal from the water bath.

**Dry Stability**

- Place 3 specimens in an oven maintained at 140 +/- 1.8 degrees F for 2 hours.
- Determine the stability and flow within 30 seconds of removal from the oven.

**Reporting**

- Report the “wet stability”.
- Report the “dry stability” after oven conditioning.
- Compare the “wet”/”dry” stability ratio.
- The percent stability loss shall be a maximum of 50%.

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ITEM NO. 4-P RECYCLED CONCRETE AGGREGATE

**1. DESCRIPTION** - The work consists of furnishing, placing and compacting a recycled concrete subbase course in conformity with the lines, grades, thickness and typical sections shown on the plans, or as determined by field conditions and ordered in writing by the Engineer.

Unless otherwise stated in the plans or in the proposal, select any of the four (4) options as follows:

- Option A. Subbase construction consisting of two (2) separate layers of Type 4 and Type 3 Subbase Course.
- Option B. Subbase construction consisting of a single layer of Type 1 Subbase Course
- Option C. Subbase construction consisting of a single layer of Type 2 Subbase Course.
- Option D. Subbase construction consisting of a single layer of Type 4 Subbase Course.

**2. DEFINITIONS**

Deleterious: Any material that does not consist of concrete, asphalt, glass, brick, stone, sand, gravel or blast furnace slag, when these materials are used in subbase in conformance with the specification requirements, OR any material which, in the opinion of the Town Engineer, may adversely affect the performance of the product either during handling, during construction, or in its final application.

**3. MATERIALS** - RCA shall be supplied from either a NYSDOT approved stockpile, or the Contractor shall provide documentation showing that the material obtained is from a NYSDEC registered or permitted construction and demolition (C&D) debris processing facility as specified in NYSDOT SS Section 360-16.1 of 6NYCRR Part 360, "Solid Waste Management Facilities".

If Blast Furnace Slag is to be used, provide documentation showing that it has undergone a NYSDEC beneficial use determination (BUD) prior to its use as specified in 6NYCRR Part 360-1.15, "Solid Waste Management Facilities".

For Types 1, 3, and 4 furnish materials consisting of approved Blast Furnace Slag, Stone, Sand and Gravel, or blends of these materials with not more than 5 percent by weight of glass. Alternately, the following materials are also acceptable under these types as a replacement for the materials mentioned above:

Alternate A. At least 95 percent, by weight, of RCA, and free from organic and other deleterious material. This material may contain up to 5% by weight asphalt and /or brick.

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Alternate B. A mixture of RCA conforming to Alternate A above mixed with stone, sand, gravel or blast furnace slag. This material may contain up to 5% by weight asphalt and/or brick.

Alternate C. Bituminous material that is reclaimed from bituminous pavement and /or shoulders (Reclaimed Asphalt Pavement, or RAP) on a project constructed by the Town of Riverhead and is well-graded from coarse to fine and free from organic or other deleterious material, including tar. This material is at least 95%, by weight, reclaimed bituminous material and has a maximum top size, at time of placement, of 2 inches. The gradation requirements for the different Types listed below do not apply when the material consist of RAP. No soundness or Plasticity Index testing will be required for this Alternate.

For Type 2, furnish materials consisting of approved Blast Furnace Slag or of Stone which is the product of crushing or blasting ledge rock, or a blend of Blast Furnace Slag and of Stone. If in the opinion of the Town Engineer, this material becomes unstable during construction, it may be necessary to add a mixture of natural suitable material to the RAP. Acceptance of the final product shall be based on an evaluation by the Town Engineer.

Provide written documentation that the reclaimed bituminous material originated on either a Town of Riverhead Municipal Project or on a Department of Transportation project.

<b>Table 4-P – Percent Passing by Weight</b>				
Sieve Size Designation	Type			
	1	2	3	4
4 in.	-	-	100	-
3 in.	100	-	-	-
2 in.	90 - 100	100	-	100
¼ in.	30 - 65	25 -60	30 – 75	30 – 65
#40	5 - 40	5 - 40	5 - 40	5 – 40
#200	0 - 10	0 - 10	0 - 10	0 - 10

Soundness – Materials for Types 1, 2 and 4 will be accepted on the basis of Magnesium Sulfate Soundness Loss after four (4) cycles of 20 percent or less, unless material meeting the requirements of Alternate C is used. Material for Type 3 will be accepted on the basis of a Magnesium Sulfate Soundless Loss after four (4) cycles of 30 percent or less. All testing costs shall be incurred by the Contractor.

Plasticity Index – The required Plasticity Index of the material passing the #40 mesh sieve is 5.0 or less.

Elongated Particles – A flat or elongated particle is defined herein as one which has its greatest dimension more than three times its least dimension. Provide material consisting of particles where not more than 30 percent, by weight, of the particles retained on a ½

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inch sieve are flat or elongated. When the State elects to test for this requirement, material with a percentage greater than 30 will be rejected. Acceptance for this requirement will normally be based on a visual inspection by the Engineer.

Stockpiling – Stockpile all material except as noted herein.

Material furnished under Type 3 will not be required to be stockpiled unless it contains RCA or glass.

Stockpiling of the reclaimed bituminous material for Alternate C is not required.

Stockpile construction requirements, sampling, testing and acceptance/rejection procedures are stipulated in the appropriate Departmental publication.

#### 4. CONSTRUCTION DETAILS

General - Notify the Engineer in writing of which placement option, material option (if applicable) and/or material type is proposed for use, at least 14 calendar days prior to performing the work. If it is proposed that more than one option or type is to be used, submit a plan to the Engineer describing where each option or type is proposed for use. This plan must be approved by the Engineer prior to incorporating it into the project. The Town reserves the right to disapprove the use of more than one option on a project. Use uniform subbase types and materials between the roadbed limits.

Placement –

- A. Place the upper course material on the grade in a manner to minimize segregation, using equipment and procedures approved by the Engineer. Do not perform uncontrolled spreading from piles dumped on the grade.
- B. The maximum compacted layer thickness is 8 inches, or as shown on the plans. In confined areas as defined by the Engineer the maximum compacted layer thickness is 6 inches. The minimum loose lift thickness is 1.5 times the maximum particle size.
- C. Place Type 1 with a minimum compacted layer thickness of 6 inches.
- D. Do not place Type 3 material within 4 inches of the bottom of a pavement course.
- E. Do not place materials blended with glass in contact with synthetic liners, geogrids, geotextiles or other geosynthetics. Ensure that glass incorporated into subbase is thoroughly mixed so that glass constitutes no more than 30 percent by weight anywhere in the subbase.
- F. When placing material under Option A, place and compact each material in a separate lift.

Compaction – When the moisture content is within the limits for proper compaction, compact the material in accordance with the requirements of Item 3S section 3.10. If a subbase course is disturbed by frost action prior to paving, re-compact the subbase where directed by the Engineer.

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Tolerance – Place Types 1, 2 or 4 so that after compaction the top surface of the course does not extend more than ¼ inch above nor more than ¼ inch below true grade for the course at any location. Place Type 3 course so that the finished surface does not extend above the true grade and surface for this course at any location.

**5. METHOD OF MEASUREMENT**

**Item 4-P** – The quantity is the number of compacted cubic yards of material, computed from payment lines shown on the plans or, where changes have been ordered, from payment lines established by the Engineer.

**6. BASIS OF PAYMENT**

**Item 4-P** – The unit price bid for this work includes the cost of furnishing all labor, material and equipment necessary to complete the work. Include the cost of adding water in the price bid unless the items for furnishing and applying water are included in the contract. No direct payment will be made for losses of material resulting from compaction, foundation settlement, erosion, or any other cause. Include the cost of such losses in the price bid for this item. No deductions will be made for the volumes occupied by manholes, catch basins and other such objects. Progress payments will be made after the subbase course has been properly placed and compacted. Payment will be made at the unit price bid for seventy-five (75%) percent of the quantity. The balance of the quantity will be paid for after the final finishing to the required tolerance and just prior to the placing of the next course.

Payment will be made under:

Item No.	Item	Pay Unit
4-P	Recycled Concrete Aggregate	CY

END OF SECTION

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ITEM NO. 4-SS STABILIZED SOIL-AGGREGATE SUBBASE

**1. DESCRIPTION** - Under this item, the Contractor shall furnish and place a "Stabilized Soil-Aggregate Subbase" of a natural or artificial mixture of soils and/or crushed materials in the places designated on the plans and in such other "Stabilized Soil Aggregate Subbase" will be as shown on the plans or as determined by field conditions and ordered by the Engineer. The material for this item must be brought in from outside the contract limits at the expense of the Contractor.

**2. MATERIALS**

All material acceptable for this item shall consist of a natural or artificial mixture of soils and/or crushed materials well graded from coarse to fine. Gradation of the granular material shall conform to the proportions indicated below:

<u>Sieve</u>	<u>% Passing</u>
2"	100
1"	80 - 100
1/4"	50 - 85
#10	30 - 70
#40	15 - 40
#200	6 - 12

The source of material shall be stripped of all sod, topsoil, overburden and other objectionable materials before the excavation operations for the material are started, and shall be kept stripped for a minimum of thirty (30) feet from the top of the working face of the source at all times. Should, at any time during work and for any reason the material fail to conform with the specified quality and gradation requirements, the Contractor shall, by the addition of selected acceptable material, and/or satisfactory manipulation, produce a material meeting the requirements detailed herein.

Control graded recycled Portland Cement Concrete and recycled plant mixed bituminous concrete materials may be used in conjunction with or in place of native materials to construct the stabilized soil base course item, provided the materials comply with all requirements herein. The final gradation obtained from the intermixing of coarse, fine and binder materials shall be within the limits stated for this item.

If the contractor chooses to utilize recycled materials, he shall submit a written request to the Engineer and provide a Laboratory analysis of the material. Final approval will be made on the basis of the submitted laboratory analysis. Work shall not start until such approval is received.

The coarse fraction of the recycled material shall have a resistance to abrasion by the Los Angeles Abrasion Test of not more than 50%, (ASTM C131), nor show a total soundness loss greater than 25 percent using magnesium sulfate (ASTM C88). Of the particles retained on the 1/2" square sieve, not more than 30 percent by weight shall consist of flat

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or elongated pieces. A flat or elongated piece is defined herein as one, the greatest dimension of which is more than 3 times the least dimension.

The fine aggregate portion passing the No. 200 sieve shall not be greater than two-thirds of the fraction passing the No. 40 sieve, as determined by the wet analysis method. The fraction passing the No. 40 sieve shall have a liquid limit not greater 25, and a plasticity index not greater than 4.

### **3. CONSTRUCTION DETAILS**

**Stockpiling and Sampling:** After excavation from the source, and processing and blending in a manner approved by the Engineer, the material shall be stockpiled. During the blending operation, the materials shall be thoroughly mixed with the required amount of water to obtain maximum density. Stockpiles shall be located at a distance of not less than fifty (50) feet from the outside bottom edge of the conical stockpile built up under the processing plant conveyer, or not less than 50 feet from the toe of the working face of the source. Unless otherwise approved, in writing, these stockpiles shall be formed in layers having a maximum thickness of two (2) feet and to a height not exceeding twelve (12) feet, and shall contain not less than 1,000 cubic yards or the amount needed for the job, whichever is smaller. Removal of material from stockpiles for placement on the grade shall be by side excavation along nearly vertical faces for the full depth of stockpile. The use of a clam shell type bucket for loading the removal trucks or the use of pan type scrapers for moving the stockpile material to its final position as subbase course will not be permitted. No material shall be added to a stockpile after the stockpile has been sampled for approval. Only material from approved stockpiles shall be placed on the grade for this item. The presence of any oversize particles in the stockpile will be cause for rejection of the entire stockpile.

No material shall be removed for use from any stockpile until the stockpile has been sampled, tested, and approved in writing, by the Engineer, for placement on the grade. It shall be the duty of the Contractor to furnish suitable and approved excavating equipment for such sampling. Approval of a stockpile for placement on the grade shall not relieve, in any degree, the full responsibility of the Contractor to furnish, in its compacted position, a subbase course of select granular materials, the final condition of which conforms to all the requirements of the specifications for this item.

In the event the Contractor shall have a plant or procedure to produce Item 4-SS material of uniform quality, at a rate satisfactory to the Engineer, and such that satisfactory samples for tests can be obtained, the requirement for stockpiling may be waived. Prior approval of the Engineer must be obtained and the work must be done in accordance with such conditions as may be imposed in the approval. Such waiver shall remain in force only so long as a satisfactory material is produced.

**Placing:** The spreading of any layer of this material shall be done with spreader equipment approved by the Engineer, and shall be spread to such thickness that the maximum depth of the layer, after compacting, will be as shown on the plans. Spreading

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from piles dumped on the roadway will not be permitted. The material, as spread, shall be well graded, with no pockets of fine material. Segregation occurring during the spreading operation shall be corrected by remixing until a homogeneous mixture has been obtained.

Water shall be added in such amounts as the Engineer may consider necessary to obtain satisfactory compaction. It shall be the contractor's responsibility to properly place and compact the stabilized soil aggregate subbase in the road section, and to correct any deficiencies occurring during the contract period.

The contractor shall determine the type, size, and weight of compactor best suited to the work at hand, select and control the lift (layer) thickness, exert proper control over the moisture content of the material, and other details necessary to obtain a density of 100 percent of maximum dry weight density in pounds per cubic foot as determined by A.S.T.M. Designation: D698-78.

In all cases, the subbase course must be so thoroughly compacted that significant rutting under the action of the compactor is not observed in the final passes on a lift.

After compaction, the top surface of this course shall be tested for smoothness and accuracy of grade and pitch with a sixteen (16) foot edge. Any portion found to vary by more than three-eighths of an inch in sixteen feet shall be scarified, reshaped, recompact, finished and otherwise completed to the above tolerance, and approved by the Engineer, before any succeeding course is placed at that location. Any depressions or holes shall be filled with approved material meeting the requirements for this item and the surface re-rolled.

The width of the layer of this subbase shall be restricted to that required for placement of the lane being paved and shall not be laid in excess of 500 linear feet without being compacted. No traffic, or hauling other than that necessary for bringing material for the next course, shall be permitted over this course. Should the subgrade, subbase course granular material or any other material become churned up into, or mixed with this subbase course through any reasons whatsoever, the Contractor shall, at this own expense, remove such mixtures and replace with select granular material acceptable for this item.

The Contractor shall assume full responsibility for any contamination and/or degradation of any part of this course during construction and shall, at his own expense, remove any and all portions of this course which do not conform to the requirements of these specifications and replace these portions with specified material.

The Contractor shall provide this item to the Town in accordance with a schedule specified by the Superintendent of Highways. Significant deviation from this schedule may cause disqualification of the Contractor from providing this item at the discretion of the Highway Superintendent.

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**4. METHOD OF MEASUREMENT** - The quantity to be paid for under this item will be the number of cubic yards of compacted material measured in place, furnished and placed as shown on the plans or as ordered by the Engineer in accordance with the specifications.

**5. BASIS OF PAYMENT** - The unit price bid per cubic yard shall cover the cost of furnishing all labor, materials, and equipment necessary to complete the work. The cost of adding water shall be included in the price bid. No direct payment will be made for any losses of material which may result from shrinkage, compaction, foundation settlement, waste, overflow, erosion, leakage, or any other causes; the cost of such losses shall be included in the price bid for this item.

END OF SECTION

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ITEM NO. 6 DETECTABLE WARNING UNITS

**1. DESCRIPTION** - Under Item 6, the Contractor shall install detectable warning units as described herein and as determined by the Engineer. A detectable warning unit is a walkway surface treatment detectable by people with vision impairments, to alert them of their approach to streets and hazardous drop-offs. Section 4.29 of the Americans with Disabilities Act Accessibility Guidelines (ADAAG), requires detectable warnings on new and altered sidewalk curb ramps and at other locations. Stamped concrete is also a viable option for producing the required detectable warning pattern where required.

**2. MATERIALS**

- A. Surface-Applied Detectable Warning Units - Surface-applied detectable warning units shall meet the requirements of New York State Department of Transportation Standard Specification most recent edition (NYSDOTSS) (not included measurement and payment) 726-01 and shall be the color as specified in the Contract Documents to provide the required contrast, light-on-dark or dark-on-light, with the adjacent surface. If no color is specified, the color shall be dark gray Federal Standard 595B #36081 or darker. Setting bed material and/or surface preparation materials for installation of detectable warning units shall be in accordance with manufacturer's recommendations.
- B. Embedded Detectable Warning Units - Embedded detectable warning units shall meet the requirements of NYSDOTSS most recent edition (not included measurement and payment) 726-02 and shall be the color as specified in the Contract Documents to provide the required contrast, light-on-dark or dark – on- light, with the adjacent surface. If no color is specified the color shall be dark gray Federal Standard 595B #36081, or darker. Setting bed material and/or surface preparation materials for installation of detectable warning units shall be in accordance with the manufacturer's recommendations.
- C. Stamped Concrete Detectable Warnings - Imprinted or stamped concrete detectable warning units shall comply with the specifications for Class D concrete as outlined in NYSDOTSS, most recent edition 501 Portland Cement Concrete – General. The color shall be an approximate visual match to the color specified in the contract documents. If no color is specified, the color shall be dark gray Federal Standard 595B #36081 or darker. The color shall be incorporated into the concrete surface immediately prior to stamping the detectable warnings, or integrally incorporated throughout the mix. Color admixtures for integrally colored concrete shall meet the requirements of ASTM C979. Imprinting tools shall be capable of imprinting the surface of the concrete with a uniform and aligned pattern meeting the required dimensions.

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**3. CONSTRUCTION DETAILS**

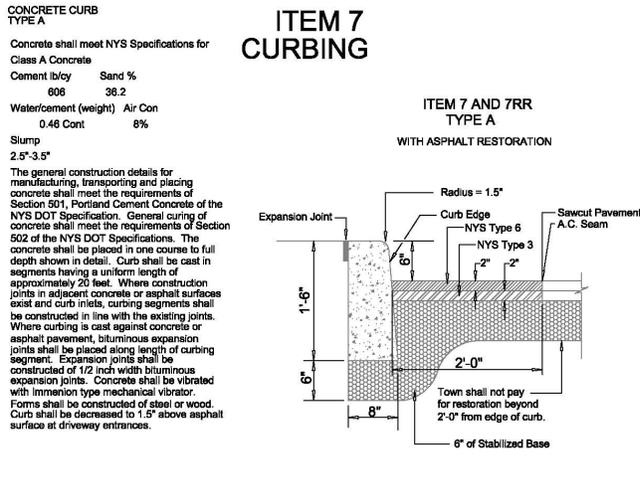
- A. Surface-Applied Detectable Warning Units - Surface-applied detectable warning units may be applied to existing curb ramps, formed and bonded to existing curb ramps, or as otherwise directed by the manufacturer or specified in the Contract Documents.
  - B. Embedded Detectable Warning Units - Embedded detectable warning units may be installed in plastic concrete, installed directly on existing subbase prior to placing concrete, inlaid on prepared concrete surfaces or otherwise directed by the manufacturer or specified in the Contract Documents. Follow all applicable manufacturers' requirements for environmental conditions, surface preparation, installation procedures, curing procedures, and materials compatibility.
  - C. Stamped Concrete Detectable Warnings - Apply NYSDOTSS, most recent edition Section 608-2.08 with the following modifications: Prior to the start of work, the Contractor shall provide a contract-site sample that meets the dimensional requirements of the current standard sheet for detectable warnings. The sample may be constructed as part of the contract. Color hardening powder, if used to color the surface of the concrete, shall be applied to the finished concrete in accordance with the manufacturer's recommendations.
4. **METHOD OF MEASUREMENT** - Detectable Warning Surface will be measured as the number of square feet, measured to the nearest ½ square foot, computed from project limit lines as determined and agreed upon by the Engineer and Contractor.
5. **BASIS OF PAYMENT** - The unit price bid shall include all labor, material, and equipment necessary to complete the work, including job site samples as requested. Sidewalk curb ramps and other locations where detectable warnings will be furnished and installed will be paid for under the sidewalk or other applicable items in the Contract.

**END OF SECTION**

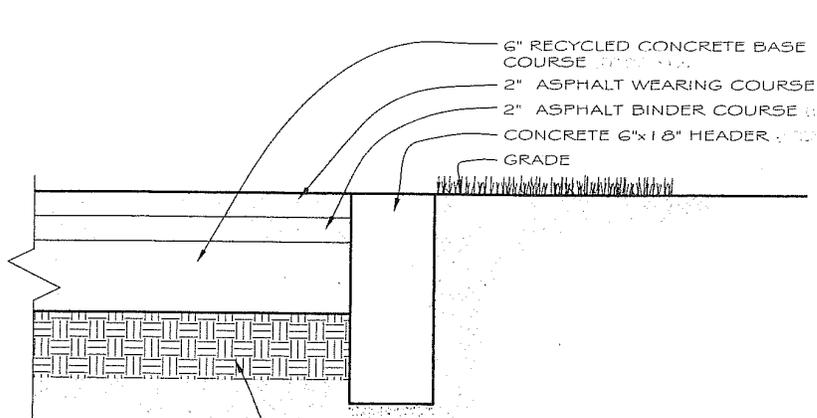
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ITEM NO. 7 CONCRETE CURB AND HEADER

**1. DESCRIPTION**

- A. The work under this item includes excavating, or filling and compacting, and fine grading the subgrade, furnishing, installing and placing concrete curbing as shown in the attached detail and at locations shown on the plans or where directed by the Town Engineer or his representative.



- B. The work under this item also includes excavating, or filling and compacting, and fine grading the subgrade, furnishing, installing and placing concrete header as shown in the attached detail and at locations shown on the plans or where directed by the Town Engineer or his representative.



- C. The work shall include but is not restricted to all demolition of existing curb as required, excavating, or filling, compacting, fine grading, formwork, furnishing and placing reinforcement, furnishing, placing concrete, and performing all other operations necessary to complete the work the specifications and grades. Excavating necessary to install curbing is not considered demolition. The Contractor shall be required to have area marked out for utilities. The Contractor is required to work around existing drainage and other existing structures. The

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Contractor is responsible for replacing or fixing damaged utilities as a direct result from this work.

- D. The removal of existing driveways, curbing, driveway aprons, trees and shrubs is included within the scope of work as the payment item no. distinguishes. Asphalt patching is performed and paid under various other items.. When installing curbing which requires the demolition of pavement, asphalt shall be sawcut a maximum 2” from the face of the curb and removed before installation of curbing.
- E. All materials and workmanship shall conform to the requirements of Section 501 of the Standard Specification of the New York State Department of Transportation. The Contractor is responsible for back filling and compacting behind the new curb to match existing conditions. This back fill shall consist of clean top soil unless otherwise directed by the Town Engineer or his representative.
- F. There demolition is required to install new curbing, the Contractor shall not remove beyond the nearest expansion joint. The Town shall not pay for demolition of curbing that goes beyond the expansion joint.
- G. The Contractor is responsible for repairing any Town utilities damaged during work or pay the Town for repairing any utilities damaged as a result of work.
- H. At the option of the Town, the Contractor shall be responsible for removing existing curbing. This will be distinguished by the Pay Item.

**2. MATERIALS**

- A. Individual materials shall conform to the appropriate section of the Standard Specifications of the New York State Department of Transportation with the following modifications.
  - a. The coarse aggregate shall be non reactive crushed stone or screened gravel conforming to Section 703-02 of the New York State Department of Transportation Standard Specifications. The fine aggregate shall conform to the requirements of Section 703-07.
  - b. The air entraining agent shall conform to the requirements of Section 711-08 of the Standard Specification of the New York State Department of Transportation.
  - c. The water for mixing and washing the aggregates shall be completely free from organic acids, alkaloids, and shall be suitable for drinking.
  - d. The pre-molded joint filler shall conform to the requirements of Section 705-07 of the Standard Specification of the New York State Department

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of Transportation.

- e. The membrane curing compound shall be clear or white and shall conform to the requirements of Section 711-05 of the Standard Specifications of the New York State Department of Transportation.
- f. The forms shall be wood or steel. If wood is used, it shall be composed of first quality timber of a species approved by the Town Engineer or his representative. Wood forms shall be not less than two inches wide by five inches deep and shall be maintained in excellent condition at all times. Any warped, bent or otherwise damaged pieces shall be immediately discarded. All forms shall be kept thoroughly cleaned and oiled before placing concrete against them.
- g. Joint sealer shall be premoulded resilient joint filler conforming to Section 705-07 of the NYSDOT Standard Specifications.
- h. Backfill shall be clean top soil unless otherwise directed by the Town Engineer of his representative.

**3. CONSTRUCTION DETAILS**

A. Mixing Requirements

- a. The minimum cement factor shall be seven sacks per cubic yard of concrete.
- b. The minimum permissible water-cement ratio shall be five gallons per sack of cement.
- c. The average air content shall be five percent. The fine aggregate shall be reduced accordingly to provide the required air content.
- d. The slump of the concrete shall not exceed four inches when tested in accordance with ASTM C-143. Batches or trucks showing more than this slump will be rejected and the Contractor shall have no claim against the municipality of the Town Engineer or his representative for such rejection. This is the maximum limit and no tolerance above this limit will be permitted.

B. Sampling and Testing

- a. Sampling and testing will be done in accordance with the requirements of ASTM C-39 "Method of Test for Compressive Strength of Molded Cylinders". The testing shall be performed by a laboratory, to be approved by the Town Engineer or his representative, and all testing cost will be borne by the Contractor.

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- b. Tests of the concrete on random batches shall be supervised by the Town Engineer or his representative. At least one test comprising at least four cylinders shall be obtained each day when a minimum of 100 cubic yards of concrete is placed.
- c. The concrete shall show an average strength in compression of 4,000 p.s.i. when sampled, screeded and tested in 28 days in accordance with the above specification. To conform to this average strength the following requirements must be met:
  - i. The average of five consecutive tests shall be a minimum of 3,650 p.s.i. A test shall be the average strength found by testing two or more cylinders from a single batch.
  - ii. Four consecutive test falling below 4,000 p.s.i. shall constitute failure to meet the specifications and shall be sufficient basis to reject the areas continuing concrete delivered in those days.
  - iii. Not more than two tests in ten shall fall below 3,650 p.s.i.
  - iv. Where there is a question as to the quality of the concrete because of strength test failure, approval may be given to the Contractor to sponsor alternate strength tests to verify or disprove the results. The tests and the basis of acceptance (or rejection) of the quality of the concrete by these alternate tests shall be agreed upon by the Town Engineer or his representative and the Contractor when approval is granted.

C. Excavation and Fill

- a. The Contractor shall perform all excavation, borrow fill, and fine grading required to construct the curbing to the grades shown on the plan or as directed by the Town Engineer or his representative. This shall include the removal and disposal of existing sidewalks, curbing, driveways, driveway aprons, asphalt, trees, shrubs, etc. where shown on the plans or as required to construct the sidewalk. Note that removal of existing sidewalks, curbs, driveways, driveway aprons, asphalt, trees, shrubs shall be paid under appropriate Pay Item 7 or 7RR.
- b. Fill sections shall be placed in loose layers of not more than four inches and shall be thoroughly compacted with a mechanical tamper or a vibratory compactor. Where this work involves replacing curbing that borders existing asphalt, the Contractor shall saw cut pavement no more than two feet from edge of curbing to be replaced.
- c. The subgrade in excavated sections shall be thoroughly compacted with a

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mechanical tamper or vibratory compactor.

- d. Fine grading shall be such that the curbing will have a minimum thickness of six inches when measured or cored in place. The Contractor shall provide a scratch template for use by the Town Engineer or his representative to check for the proper thickness before the concrete is placed.

D. Forms - The side forms shall be placed true to line and grade and rigidly held in place by proper pins or stakes in such a manner that the section, when completed, will have the required thickness.

E. Joints

- a. Expansion joints  $\frac{1}{2}$  inch tick shall be placed at all points where the curbing abuts buildings, sidewalk, catch basin inlets and between sections of new curbing and existing curbing and at each side of driveways. The expansion joints shall be at twenty foot intervals along the longitudinal axis. Expansion joint filler shall be set  $\frac{1}{4}$  inches below the finished driveway and driveway apron grade and shall extend to the subgrade. The joint shall be sealed with the specified joint sealer.
- b. The edges of the sidewalk shall be finished with an approved edger not more than two inches wide with a radius of  $\frac{1}{4}$  inch that leaves a smooth finished edge.

F. Placing Concrete

- a. Before concrete may be placed each section of the subgrade shall be checked for depth with a scratch template and the subgrade corrected where insufficient depth is found.
- b. The subgrade shall not be frozen or muddy at the time the concrete is placed.
- c. The concrete shall be placed and thoroughly compacted. It shall be screeded flush with the top of the forms. After screening, it shall be further compacted with a wood float. The surface shall be tested with a straight edge ten feet long and all irregularities over  $\frac{1}{8}$  inch shall be immediately corrected.
- d. The final finish shall be delayed sufficiently so as to allow the concrete to set to such an extent that an excess of fine material will not be worked to the top in the finishing operations. No dry cement or mixture of dry cement and sand shall be sprinkled on the surface of the top course. The surface should be left slightly roughened so as to insure the greatest safety

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of foothold under all weather conditions.

- e. Sidewalks across driveways shall be constructed and paid for as specified under Item No. 9. Aprons and ramps shall be constructed and paid under Item no. 11. Curbing associated with drop curbing across driveway aprons and sidewalk ramps shall be constructed and paid under this item.
- f. Weather limitation for concrete placement shall conform to the requirements of Section 502-3.01 of the Standard Specification of the New York State Department of Transportation.

G. Curing And Protection

- a. Upon stripping the side forms, the sides shall be immediately backfilled.
- b. The Contractor shall protect the curbing and keep it in first class condition until the completion of work. Any curbing which is damaged at any time previous to the final acceptance of the work shall be removed and replaced with a satisfactory curb at the expense of the Contractor.
- c. No traffic of any kind will be permitted on the curbing for a period of at least five days after the curb has been placed. Barricades and warning lights shall be provided by the Contractor to warn and protect the public.
- d. When conditions indicate that the temperature may drop to 35 degrees or below, the Contractor shall provide insulating blankets to cover and protect all work from freezing.

**4. METHOD OF MEASUREMENT**

A. Item 7 – Concrete Curb

- a. The quantity to be paid for Items 7 shall be the number of linear feet completed and measured in place and accepted in accordance with the provisions of these specifications. Where work involves piece meal sections such as replacing deteriorated curbing, the measurement shall be the sum of all sections. Curb inlets that become part of curbing is not included in this measurement.
- b. Total measurement shall be based on the total quantity of curbing installed for that job as indicated on a Town of Riverhead Purchase order. For example, where the job requires two sections of one hundred linear feet of curbing, the total shall be two hundred feet, not two jobs of one hundred feet. A job may also include several separate locations.

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B. Item 7RR – Remove and Replace Concrete Curb

- a. The quantity to be paid for Items 7RR shall be the number of linear feet of existing curb to be removed and replaced and measured in place and accepted in accordance with the provisions of these specifications. Where work involves piece meal sections such as replacing deteriorated curbing, the measurement shall be the sum of all sections. Curb inlets that become part of curbing is not included in this measurement.
- b. Total measurement shall be based on the total quantity of new curbing installed for that job as indicated on a Town of Riverhead Purchase order. For example, where the job requires two sections of one hundred linear feet of curbing, the total shall be two hundred feet, not two jobs of one hundred feet. A job may also include several separate locations.

C. Item 7A – Concrete Header

- a. The quantity to be paid for Items 7A shall be the number of linear feet completed and measured in place and accepted in accordance with the provisions of these specifications.
- b. Total measurement shall be based on the total quantity of concrete header installed for that job as indicated on a Town of Riverhead Purchase order.

D. Item 7A RR - Remove and Replace Concrete Header

- a. The quantity to be paid for Items 7A RR shall be the number of linear feet of existing concrete header to be removed and replaced and measured in place and accepted in accordance with the provisions of these specifications. Where work involves piece meal sections such as replacing deteriorated concrete header, the measurement shall be the sum of all sections.
- b. Total measurement shall be based on the total quantity of new concrete header installed for that job as indicated on a Town of Riverhead Purchase order. For example, where the job requires two sections of one hundred linear feet of concrete header, the total shall be two hundred feet, not two jobs of one hundred feet.

**5. BASIS OF PAYMENT**

A. Item 7 – Curb

- a. The price bid shall include all necessary aggregates, cement reinforcement, mixing, placing, screeding, finishing, curing, filling joints of all types, protecting the work, and all labor, materials, tools, supplies, equipment, testing and all incidentals necessary to complete the work.

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Payment shall be made according to Item 7. Where work involves piece meal sections, payment unit price shall be based on the sum of all sections. Excavations in existing soil or grass areas is not considered demolition. Curb inlets that become part of curbing is not considered.

B. Item 7RR - Remove and Replace Curb

- a. The price bid shall include all necessary labor, equipment, and material required to remove and replace curb including aggregates, cement, reinforcement, mixing, placing, screeding, finishing, curing, filling joints of all types, and protection of work necessary to complete the work. Payment shall be made according to Item 7RR. Where work involves piece meal sections, payment unit price shall be based on the sum of all sections. Excavations in existing soil or grass areas is not considered demolition. Curb inlets that become part of curbing is not considered.

C. Item 7A – Concrete Header

- a. The price bid shall include all necessary aggregates, cement reinforcement, mixing, placing, screeding, finishing, curing, filling joints of all types, protecting the work, and all labor, materials, tools, supplies, equipment, testing and all incidentals necessary to complete the work. Payment shall be made according to Item 7A. Where work involves piece meal sections, payment unit price shall be based on the sum of all sections. Excavations in existing soil or grass areas is not considered demolition.

D. Item 7A RR – Remove and Replace Concrete Header

- a. The price bid shall include all necessary labor, equipment, and material required to remove and replace concrete header including aggregates, cement, reinforcement, mixing, placing, screeding, finishing, curing, filling joints of all types, and protection of work necessary to complete the work. Payment shall be made according to Item 7A RR. Where work involves piece meal sections, payment unit price shall be based on the sum of all sections. Excavations in existing soil or grass areas is not considered demolition.

END OF SECTION

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ITEM NO. 8 JUMBO BELGIAN BLOCK CURB

**1. DESCRIPTION** - The work includes furnishing all labor, equipment and appliances necessary for the construction of Belgian Block (supplied by the Town) curb in accordance with these specifications, at the locations and to the dimension shown on the plans provided by the Town, and as directed by an to the approval of the Town Engineer.

**2. MATERIALS**

- A. Block – Block shall be jumbo granite Belgian block, 7” to 8” high by 10” to 12” long by 4” to 5” wide. Blocks shall be supplied by the Town and shall not be included in the cost.
- B. Concrete – shall consist of Portland Cement and fine and coarse aggregate in the proportionate quantities necessary to produce a concrete which shall attain a minimum compressive strength of 4,000 psi in 28 days. The total water content shall not exceed five (5) gallons per sack of cement. The air content should be 4-1/2 percent and the cement content shall be a minimum of 560 pounds per cubic yard. The Contractor shall provide the Engineer with a mix design prior to work.

**3. CONSTRUCTION DETAILS**

- A. Excavation and Fill - The Contractor shall perform all excavation, borrow fill, disposal of excess soil and fine grading required to construct the curbing to the grades shown on the plan or as directed by the Town Engineer or his representative. This shall include the removal and disposal of existing sidewalks, curbing, driveways, driveway aprons, asphalt, trees, shrubs, etc. where shown on the plans or as required to construct the sidewalk. Note that removal of existing Belgian block curbs, asphalt, trees, shrubs shall be paid under appropriate Pay Item 8 or 8RR.
  - 1. Fill sections shall be placed in loose layers of not more than four inches and shall be thoroughly compacted with a mechanical tamper or a vibratory compactor. Where this work involves replacing curbing that borders existing asphalt, the Contractor shall saw cut pavement no more than two feet from edge of curbing to be replaced.
  - 2. The subgrade in excavated sections shall be thoroughly compacted with a mechanical tamper or vibratory compactor.
  - 3. Material remaining from excavation shall be disposed of off site.
  - 4. Fine grading shall be such that the curbing will have a minimum thickness of six inches when measured or cored in place. The Contractor shall provide a scratch template for use by the Town Engineer or his

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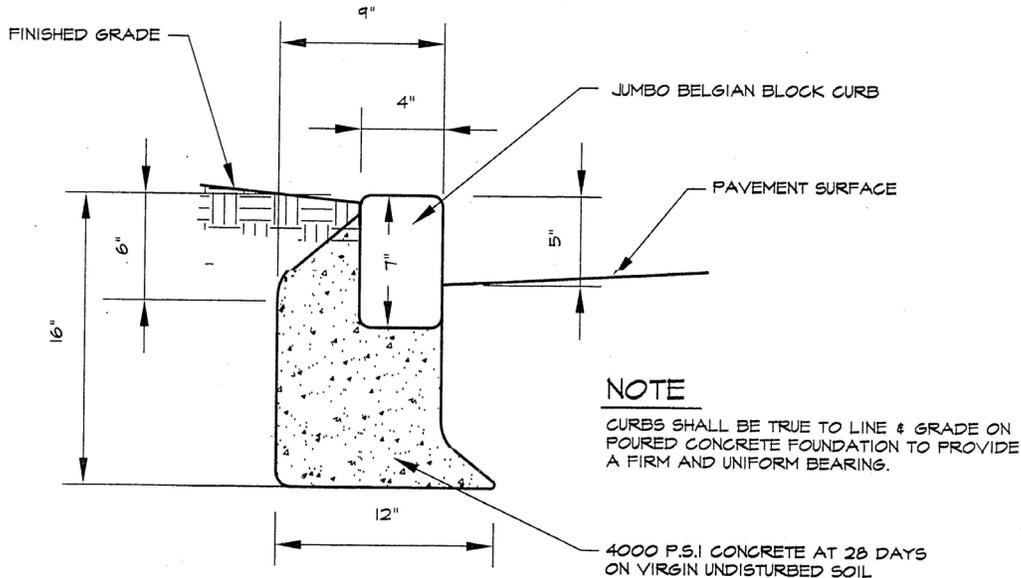
representative to check for the proper thickness before the concrete and block is placed.

B. PLACING CONCRETE

1. The subgrade shall not be frozen or muddy at the time the concrete is placed.
2. Weather limitation for concrete placement shall conform to the requirements of Section 502-3.01 of the Standard Specification of the New York State Department of Transportation.

G. CURING AND PROTECTION

1. When conditions indicate that the temperature may drop to 35 degrees or below, the Contractor shall provide insulating blankets to cover and protect all work from freezing.



4. METHOD OF MEASUREMENT

**Item 8 – Jumbo Belgian Block Curb** - The quantity to be paid for Item 8 shall be the number of linear feet completed and measured in place and accepted in accordance with the provisions of these specifications. The Town shall supply the Contractor with Belgian blocks. Where work involves piece meal sections such as replacing deteriorated curbing, the measurement shall be the sum of all sections. Curb inlets that become part of curbing is not included in this measurement.

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Total measurement shall be based on the total quantity of jumbo Belgian block curbing installed for that job as indicated on a Town of Riverhead Purchase order. For example, where the job requires two sections of one hundred linear feet of curbing, the total shall be two hundred feet, not two jobs of one hundred feet. A job may also include several separate locations.

**Item 8RR – Remove and Replace Jumbo Belgian Block Curb** - The quantity to be paid for Items 8RR shall be the number of linear feet of existing curb to be removed and replaced and measured in place and accepted in accordance with the provisions of these specifications. Where work involves piece meal sections such as replacing deteriorated curbing, the measurement shall be the sum of all sections. Curb inlets that become part of curbing is not included in this measurement. The Town shall supply the Contractor with Belgian blocks.

Total measurement shall be based on the total quantity of new curbing installed for that job as indicated on a Town of Riverhead Purchase order. For example, where the job requires two sections of one hundred linear feet of curbing, the total shall be two hundred feet, not two jobs of one hundred feet. A job may also include several separate locations.

**5. BASIS OF PAYMENT**

**Item 8 – Jumbo Belgian Block Curb** The price bid shall include all necessary placing, screeding, finishing, curing, filling joints of all types, protecting the work, and all labor, tools, supplies, materials, equipment, testing and all incidentals necessary to complete the work. The Town shall supply the Contractor with Belgian blocks. Payment shall be made according to Item 8. Where work involves piece meal sections, payment unit price shall be based on the sum of all sections. Excavations in existing soil or grass areas is not considered demolition. Curb inlets that become part of curbing is not considered.

**Item 8RR – Remove and Replace Jumbo Belgian Block Curb** – The price bid shall include all necessary labor, equipment, and material required to remove and replace curb including reinforcement, mixing, placing, screeding, finishing, curing, filling joints of all types, and protection of work necessary to complete the work. The Town shall supply the Contractor with Belgian blocks. Payment shall be made according to Item 8RR. Where work involves piece meal sections, payment unit price shall be based on the sum of all sections. Excavations in existing soil or grass areas is not considered demolition. Curb inlets that become part of curbing is not considered.

END OF SECTION

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ITEM NO. 9 CONCRETE SIDEWALK

**1. DESCRIPTION**

- A. The work under this item shall consist of excavating, filling, compacting, disposal of excess soil, fine grading the subgrade, furnishing and installing cement concrete sidewalk four inches thick to the dimensions, details and at locations shown on the plans or where directed by the Town Engineer or his representatives.
- B. The work shall include, but is not limited to, all excavating, filling, compacting, disposing of excess soil, fine grading, formwork, furnishing and placing reinforcement, furnishing, placing concrete, and performing all other operations necessary to complete the work according to specifications and grades. Excavating necessary to install sidewalk in is not considered demolition. Contractor shall be required to have area marked out for utilities. Contractor is required to work around existing drainage and other existing structures. Contractor is responsible for replacing or fixing damaged utilities as a direct result from this work.
- C. All materials and workmanship shall conform to the requirements of Section 501 of the Standard Specifications of the New York State Department of Transportation.
- D. At Town's option, Contractor shall be responsible for removing existing sidewalk as distinguished by pay item. When installing concrete sidewalk which requires the demolition of pavement, asphalt shall be sawcut a maximum 2' from the edge of the former or new sidewalk and removed before installation of new sidewalk.

**2. MATERIALS**

- A. Individual materials shall conform to the appropriate section of the Standard Specifications of the New York State Department of Transportation with the following modifications.
- B. The aggregates shall be non-reactive crushed stone or screened gravel and section 703-07 of the Standard Specification of the New York State Department of Transportation.
- C. The air entraining agent shall conform to the requirements Section 711-08 of the Standard Specification of the New York State Department of Transportation.
- D. The water for mixing and washing the aggregates shall be completely, free of organic acids, alkalis, oil and shall be suitable for drinking.
- E. The premolded joint filler shall conform to the requirements Section 705-07 of the

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Standard Specification of the New York State Department of Transportation.

- F. The joint sealer shall be a polysulfide type self leveling sealer “Coma Self Leveling Sealer” manufactured by Sika Chemical Corporation, Passaic, New Jersey, or an approved equal.
- G. Reinforcement shall be number 6 gauge cold drawn steel wire mesh, spacer size inches apart longitudinally and six inches apart transversely, and shall be placed three inches above the bottom of the slab. The reinforcement shall conform to the requirements of Section 709-02 of the Standard Specification of the New York State Department of Transportation.
- H. The membrane curing compound shall be clear or white and shall conform to the requirements Section 711-05 of the Standard Specification of the New York State department of Transportation.
- I. The forms shall be wood or steel. If wood is used, it shall be composed of first quality ACQ timber of a species approved by the Town Engineer or his representative. Wood forms shall be not less than two inches wide by five inches deep and shall be maintained in excellent condition at all times. Any warped, bent or otherwise damaged pieces shall be immediately discarded. All forms shall be kept thoroughly cleaned and oiled before placing concrete against them.

**3. CONSTRUCTION DETAILS**

A. Mixing Requirements

- a. The minimum cement factor shall be seven sacks per cubic yard of concrete.
- b. The minimum permissible water-cement ratio shall be five gallons per sack of cement.
- c. The average air content shall be five percent. The fine aggregate shall be reduced accordingly to provide the required air content.
- d. The slump of the concrete shall not exceed four inches when tested in accordance with ASTM C-143. Batches or trucks showing more than this slump will be rejected and the contractor shall have no claim against the municipality of the Town Engineer or his representative for such rejection. This is the maximum limit and no tolerance above this limit will be permitted.

B. Sampling and Testing

- a. Sampling and testing will be done in accordance with the requirements of

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ASTM C-39 “Method of Test for Compressive Strength of Molded Cylinders”. The testing shall be performed by a laboratory, to be approved by the Town Engineer or his representative and all testing cost will be borne by the Contractor.

- b. Tests of the concrete on random batches shall be supervised by the Town Engineer or his representative. At least one test comprising at least four cylinders shall be obtained each day when a minimum of 100 cubic yards of concrete is placed.
- c. The concrete shall show an average strength in compression of 4,000 p.s.i when sampled, cured and tested in 28 days in accordance with the above specification. To conform to this average strength the following requirements must be met.
  - i. The average of five consecutive tests shall be a minimum of 3,650 p.s.i. A test shall be the average strength found by testing two or more cylinders from a single batch.
  - ii. Four consecutive test falling below 4,000 p.s.i. shall constitute failure to meet the specifications and shall be sufficient basis to reject the areas continuing concrete delivered in those days.
  - iii. Not more than two tests in ten shall fall below 3,650 p.s.i.
  - iv. Where there is a question as to the quality of the concrete because of strength test failure, approval may be given to the contractor to sponsor alternate strength tests to verify or disprove the results. The tests and the basis of acceptance (or rejection) of the quality of the concrete by these alternate tests shall be agreed upon by the Town Engineer or his representative and the Contractor when approval is granted.

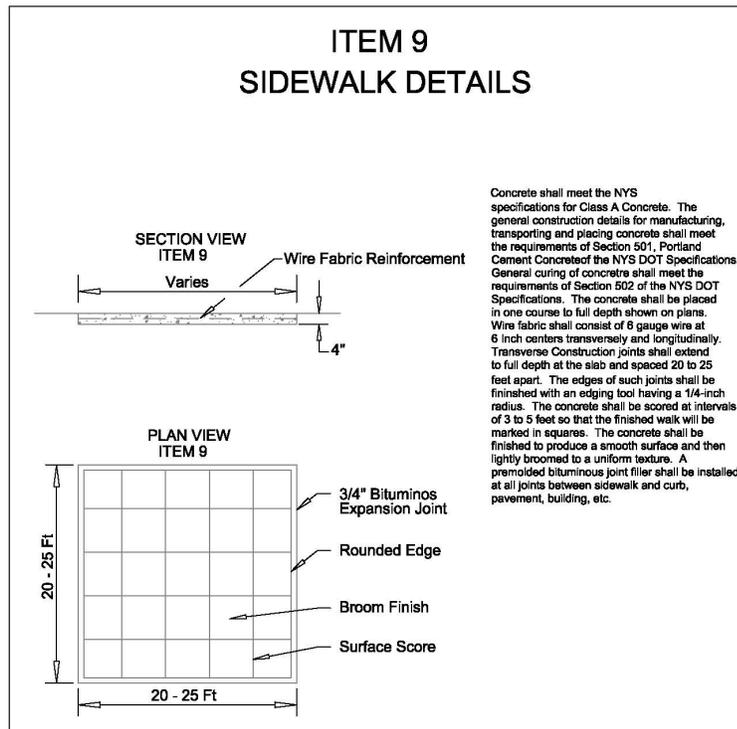
C. Excavation And Fill

- a. The Contractor shall perform all excavation, borrow fill, and fine grading required to construct the sidewalk to the grades shown on the plan or as directed by the Town Engineer or his representative. This shall include the removal and disposal of existing sidewalks, curbing, driveways, driveway aprons, asphalt, trees, shrubs, excess fill, etc. where shown on the plans or as required to construct the sidewalk. Note that removal of existing sidewalks, curbs, driveways, driveway aprons, asphalt, trees, shrubs etc. is a separate line Item No. 2U. The Town may use in-house labor to remove and dispose debris.
- b. Fill sections shall be placed in loose layers of not more than four inches

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and shall be thoroughly compacted with a mechanical tamper or a vibratory compactor.

- c. The subgrade in excavated sections shall be thoroughly compacted with a mechanical tamper or vibratory compactor.
- d. Fine grading shall be such that the sidewalk will have a minimum thickness of four inches when measured or cored in place. The contractor shall provide a scratch template for use by the Town Engineer to check for the proper thickness before the concrete is placed.



D. Forms - The side forms shall be placed true to line and grade and rigidly held in place by proper pins or stakes in such a manner that the section, when completed, will have the required thickness.

E. Joints

- a. Expansion joints 1/2 inch thick shall be placed at all points where the sidewalk abuts buildings, curb inlets, and at each side of driveways. The expansion joints at twenty four foot intervals along the longitudinal axis and at fifteen foot intervals along the transverse axis. Expansion joint filler shall be set 1/4 inches below the finished driveway and driveway apron grad and shall extend to the subgrade. The joint shall be sealed with the specified joint sealer.

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- b. Contraction joints shall be scored at intervals of three to five feet both longitudinally and transversely. For normal sidewalk work, these joints shall be installed at intervals equal to the width of the sidewalk but not less than five feet. The jointer or groover shall produce a groove 3/8 inches deep with a 1/4 inch radius at the surface. The groover shall produce a smooth finished joint having a width twice that of the edging tool.
- c. The edges of the sidewalk shall be finished with an approved edge not more than two inches wide with a radius of 1/4 inch that leaves a smooth finished edge.
- d. If shown on plans or ordered by the Town Engineer or his representative expansion joints as described in Section 2-5 of this specification shall be placed where the sidewalk abuts concrete curb or other structure and in lieu thereof the Contractor shall provide a cut joint 1/4 inch wide by 1/2 inch deep. This joint shall be filled with the specified joint sealer.

F. Placing of Concrete

- a. Before concrete may be placed each section of the subgrade shall be checked for depth with a scratch template and the subgrade corrected where insufficient depth is found.
- b. The subgrade shall not be frozen or muddy at the time the concrete is placed.
- c. The concrete shall be placed and thoroughly compacted. It shall be screeded flush with the top of the forms. After screeding it shall be further compacted with a wood float. The surface shall be tested with a straight edge ten feet long and all irregularities over 1/8 inch shall be immediately corrected.
- d. The final finish shall be delayed sufficiently so as to allow the concrete to set to such an extent that an excess of fine material will not be worked to the top in the finishing operations. No dry cement or mixture of dry cement and sand shall be sprinkled on the surface of the top course. The surface should be left slightly roughened so as to insure the greatest safety of foothold under all weather conditions.
- e. Sidewalks across driveways shall be constructed and paid for as specified under Item 11 "Cement Concrete Aprons".
- f. Weather limitation for concrete placement shall conform to the requirements of Section 502-3.01 of the Standard Specification of the New York State Department of Transportation.

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G. Curing and Protection

- a. Upon stripping the side forms the sides shall be immediately backfilled.
  - b. The contractor shall protect the sidewalk and keep it in first class condition until the completion of work. Any sidewalks that are damaged at any time previous to the final acceptance of the work shall be removed and replaced with a satisfactory sidewalk at the expense of the Contractor.
  - c. No traffic of any kind will be permitted on the sidewalk for a period of at least five days after the sidewalk has been placed. Barricades and warning lights shall be provided by the Contractor to warn and protect the public.
  - d. When conditions indicate that the temperature may drop to 35 degrees or below, the Contractor shall provide insulating blankets to cover and protect all work from freezing.
5. Contractor shall remove excess materials and grade up to either side of new sidewalk.

**6. METHOD OF MEASUREMENT**

A. Item 9 – Concrete Sidewalk

- a. The quantity to be paid for shall be the number of square yards completed and measured in place and accepted in accordance with the provisions of these specifications. Where work involves piecemeal section such as replacing deteriorated sidewalk, the measurement shall be the sum of all sections.
- b. Total measurement shall be based on the total quantity of sidewalk installed for that job requires two sections of one hundred square yards of sidewalk. The total shall be two hundred yards, not two jobs of one hundred square yards. A job may also include several separate locations.

B. Item 9RR – Remove and Replace Concrete Sidewalk

- a. The quantity to be paid for shall be the number of square yards completed and measured in place and accepted in accordance with the provisions of these specifications. Where work involves piecemeal section such as replacing deteriorated sidewalk, the measurement shall be the sum of all sections.

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**7. BASIS OF PAYMENT**

A. Item 9 – Concrete Sidewalk

- a. The price bid shall include all necessary labor, equipment, machinery, aggregates, cement reinforcement, mixing, placing, screeding, finishing, curing, filling joints of all types, protecting the work, and all labor, materials, tools, supplies, equipment, testing, and all incidentals necessary to complete the work as specified herein. Excavations in existing soil or grass areas is included in this section.

B. Item 9RR – Remove and Replace Concrete Sidewalk

- a. The price bid shall include all necessary labor, equipment, machinery, aggregates, cement reinforcement, mixing, placing, screeding, finishing, curing, filling joints of all types, protecting work including all work required to remove and dispose of old sidewalk and replace with new sidewalk as specified herein.

END OF SECTION

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ITEM NO. 10 COLORED AND IMPRINTED CONCRETE SIDEWALK

**1. DESCRIPTION**

- A. Under these items the Contractor shall construct Portland Cement concrete sidewalks on a prepared subbase, having the surface colored and imprinted with a pattern, and of the thickness and locations shown on the plans or as directed by the Engineer. The pattern and color shall be as indicated on the plans.

**2. MATERIALS**

- A. The following materials shall meet the requirements of the indicated NYSDOT materials specifications.

<u>Materials</u>	<u>NYSDOT Specification</u>
Portland Cement	701-01
Coarse Aggregate	703-02
Concrete Sand	703-07
Premoulded Resilient Joint Filler	705-07
Wire Fabric for Concrete Reinforcement	709-02
Admixtures	711-08
Water	712-01

- B. Concrete shall meet the requirements of the NYSDOT Specification 501, except that it shall have a minimum 28 day compressive strength of 4,000 psi, an air content of 6.5%, and shall contain synthetic fiber reinforcement at the rate of 0.1% by volume, minimum. The contractor shall submit a concrete design mix for approval by the Town Engineer.
- C. Portland Cement shall be Type I or II.
- D. Synthetic fiber reinforcement shall meet the requirements of the ASTM C1116.
- E. Bomanite Color Hardener, Bomacron Release Agent and Bomanite Sealer shall be distributed by Bomanite of New York and Long Island, 699 Tennent Road. Manalapan, NJ 07726-3127 (800-972-0668), or approved equal.
- F. Lithochrome Colorcalk shall be manufactured by L.M. Scofield Company (800-800-9900) or approved equal.

**3. CONSTRUCTION DETAILS**

- A. The general construction details for manufacturing, transporting and placing concrete shall meet the requirements of NYSDOT Specification or Section 501-3, Portland Cement Concrete.

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- B. The concrete containing synthetic fiber reinforcement shall be placed on the prepared subbase in one course to the full depth shown on the plans.
- C. Wire fabric for the concrete reinforcement shall be embedded at mid-depth in the slab. The wire fabric shall consist of W2.0 or W3 at 6" centers transversely and longitudinally.
- D. Transverse expansion joints shall extend to the full depth of the slab and shall be spaced 20 – 25 feet apart.
- E. The concrete shall be placed and screeded to the finished grade and floated to a uniform surface.
- F. Bomanite Color Hardener shall be applied evenly to the plastic surface by the dry-shake method at a rate of 60 pounds per 100 square feet, minimum. It shall be applied in two or more shakes, floated after each and toweled only after final floating.
- G. Bomacron Clear, Non pigmented Release Agent shall be applied evenly to the surface, as required.
- H. While the concrete is still in the plastic stage of set, the Bomanite printing tools shall be applied to make the desired impression to the surface. Impressions shall be not be deeper than three-eighths of an inch.
- I. The surface shall be scored at intervals shown on the plans by means of a tool or may be saw cut. The depth of the score shall be one inch. If the saw cut option is used, the saw cutting must be performed later the same day.
- J. Pre-moulded resilient joint filler shall be installed at all joints and between the sidewalk and curb, to within one inch of the top of the slab. The top one inch of the joint shall be caulked with LITROCROME Colorcalk Sealant in the matching color.
- K. The surface shall be sealed with 2 coats of Bomanite Sealer.

**4. METHOD OF MEASUREMENT**

- A. Item 10-4 and Item 10-6– Colored and Imprinted Concrete Sidewalk
  - a. The quantity to be paid for shall be the number of square yards, in 4" thickness or 6" respectively, completed and measured in place and accepted in accordance with the provisions of these specifications. Where work involves piecemeal section such as replacing deteriorated sidewalk, the measurement shall be the sum of all sections.

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- b. Total measurement shall be based on the total quantity of sidewalk installed for that job requires two sections of one hundred square yards of sidewalk. The total shall be two hundred yards, not two jobs of one hundred square yards. A job may also include several separate locations.
- B. Item 10-4RR and Item 10-6RR – Remove and Replace Concrete Sidewalk with Colored and Imprinted Concrete Sidewalk
- a. The quantity to be paid for shall be the number of square yards, in 4” thickness or 6” respectively, completed and measured in place and accepted in accordance with the provisions of these specifications. Where work involves piecemeal section such as replacing deteriorated sidewalk, the measurement shall be the sum of all sections.

**5. BASIS OF PAYMENT**

- A. Item 10-4 and Item 10-6 – Colored and Imprinted Concrete Sidewalk
- a. The price bid shall include all necessary labor, equipment, machinery, fine and coarse aggregates, cement, cement reinforcement, mixing, placing, screeding, finishing, curing, filling joints of all types, protecting the work, and all labor, materials, tools, supplies, equipment, testing, and all incidentals necessary to complete the work as specified herein. Excavations in existing soil or grass areas is included in this section.
- B. Item 10-4RR and Item 10-6RR – Remove and Replace Concrete Sidewalk with Colored and Imprinted Concrete Sidewalk
- a. The price bid shall include all necessary labor, equipment, machinery, fine and coarse aggregates, cement, cement reinforcement, mixing, placing, screeding, finishing, curing, filling joints of all types, protecting work including all work required to remove and dispose of old sidewalk and replace with new sidewalk as specified herein.

END OF SECTION

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ITEM NO. 11 CONCRETE APRONS

**1. DESCRIPTION**

- A. The work under this item shall consist of excavation of filling, compacting and fine grading the subgrade, furnishing, installing and placing reinforcement cement concrete driveways and driveway aprons six inches thick to the dimensions, details and at locations shown on the plans or where directed by the Town Engineer or his representative.
- B. The work shall include but is not restricted to all excavating, or filling, compacting, fine grading, formwork, furnishing and placing reinforcement, furnishing, placing concrete, and performing all other operations necessary to complete the work the specifications and grades. Excavating necessary to install apron in is included in pay item. Contractor shall be required to have area marked out for utilities. Contractor is required to work around existing drainage and other existing structures. Contractor is responsible for replacing or fixing damaged utilities as a direct result from this work.
- C. All materials and workmanship shall conform to the requirements of Section 501 of the Standard Specification of the New York State Department of Transportation and Sections 170.1-4 of the New York State Construction for the Physically Handicapped.
- D. At the option of the Town, the Contractor shall be responsible for removing existing driveway aprons as distinguished by pay item. When installing concrete apron which requires the demolition of pavement, asphalt shall be sawcut a maximum 2' from the edge of the apron/driveway and removed before installation of new apron/driveway.

**2. MATERIALS**

- A. Individual materials shall conform to the appropriate section of the Standard Specification of the New York State Department of Transportation with the following modifications.
  - a. The aggregates shall be non reactive crushed stone or screened gravel and fine aggregate shall conform to the requirements of Section 703-07 of the Standard Specification of the New York State Department of Transportation.
  - b. The air entraining agent shall conform to the requirements of Section 711-08 of the Standard Specification of the New York State Department of Transportation.
  - c. The water for mixing and washing the aggregates shall be completely free

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from organic acids, alkaloids, and shall be suitable for drinking.

- d. Reinforcement shall be number 6 gauge cold drawn steel wire mesh, spacer size inches apart longitudinally and six inches apart transversely, and shall be placed three inches above the bottom of the slab. The reinforcement shall conform to the requirements of Section 709-02 of the Standard Specification of the New York State Department of Transportation.
- e. The pre-molded joint filler shall conform to the requirements of Section 705-07 of the Standard Specification of the New York State Department of Transportation.
- f. The membrane curing compound shall be clear or white and shall conform to the requirements of Section 711-05 of the Standard Specification of the New York State Department of Transportation.
- g. The forms shall be wood or steel. If wood is used, it shall be composed of first quality timber of a species approved by the Town Engineer or his representative. Wood forms shall be not less than two inches wide by five inches deep and shall be maintained in excellent condition at all times. Any warped, bent or otherwise damaged pieces shall be immediately discarded. All forms shall be kept thoroughly cleaned and oiled before placing concrete against them.

The joint sealer shall meet the material requirements of NYSDOT Standard Specifications Section 705-12 for Preformed Elastic Transverse Contraction and Expansion Joint Seal.

**3. CONSTRUCTION DETAILS**

**A. Mixing Requirements**

- a. The minimum cement factor shall be seven sacks per cubic yard of concrete.
- b. The minimum permissible water-cement ratio shall be five gallons per sack of cement.
- c. The average air content shall be five percent. The fine aggregate shall be reduced accordingly to provide the required air content.
- d. The slump of the concrete shall not exceed four inches when tested on accordance with ASTM C-143. Batches or trucks showing more than this slump will be rejected and the Contractor shall have no claim against the municipality or the Town Engineer or his representative for such rejection.

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This is the maximum limit and no tolerance above this limit will be permitted.

B. Sampling and Testing

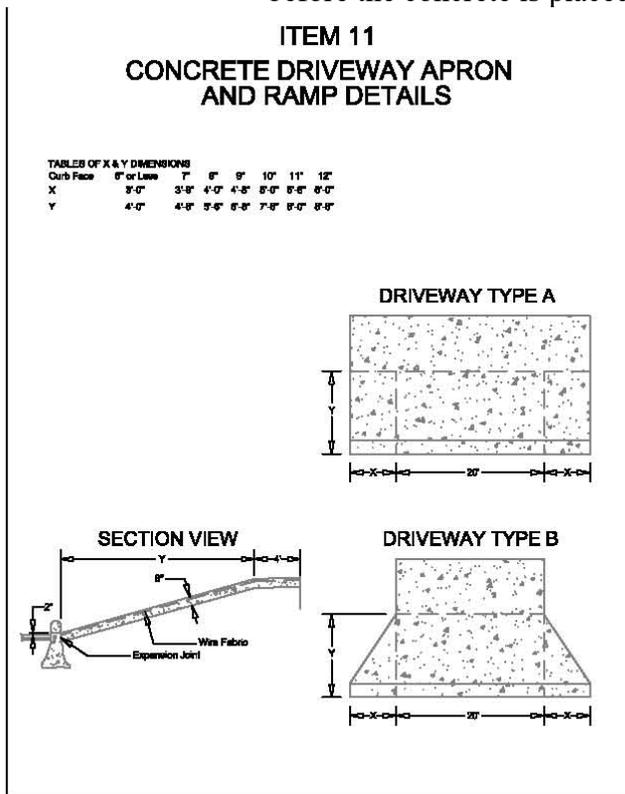
- a. Sampling and testing will be done in accordance with the requirements of ASTM C-39 "Method of Test for Compressive Strength of Molded Cylinders". The testing shall be performed by a laboratory, to be approved by the Town Engineer or his representative, and all testing costs will be borne by the Contractor.
- b. Tests of the concrete on random batches shall be supervised by the town Engineer or his representative. At least one test comprising at least four cylinders shall be obtained each day when a minimum of a 100 cubic yards of concrete is placed.
- c. The concrete shall show an average strength in compression of 4,000 p.s.i. when sampled, cured and tested in 28 days in accordance with the above specification. To conform to this average strength the following requirements must be met.
  - i. The average of five consecutive tests shall be a minimum of 3,650 p.s.i. A test shall be the average strength found by testing two or more cylinders from a single batch.
  - ii. Four consecutive tests falling below 4,000 p.s.i. shall constitute failure to meet the specifications and shall be sufficient basis to reject the areas continuing concrete delivered in those days.
  - iii. Not more than two tests in ten shall fall below 3,650 p.s.i.
  - iv. Where there is a questions as to the quality of the concrete because of strength test failure, approval may be given to the contractor to sponsor alternate strength tests to verify or disprove the results. The tests and the basis of acceptance (or rejection) of the quality of the concrete by these alternate tests shall be agreed upon by the Town Engineer or his representative and the Contractor when approval is granted.

C. Excavation and Fill

- a. The Contractor shall perform all excavation, borrow fill, and fine grading required to construct the apron to the grades shown on the plan or as directed by the Town Engineer or his representative. This shall include the removal and disposal of existing aprons. where shown on the plans or as required to construct the apron as distinguished by Pay Item.

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- i. Fill sections shall be placed in loose layers of not more than four inches and shall be thoroughly compacted with a mechanical tamper or a vibratory compactor.
- ii. The subgrade in excavated sections shall be thoroughly compacted with a mechanical tamper or vibratory compactor.
- iii. Fine grading shall be such that the sidewalk will have a minimum thickness of four inches when measured or cored in place. The contractor shall provide a scratch template for use by the Town Engineer or his representative to check for the proper thickness before the concrete is placed.



D. Forms - The full depth of the apron shall be six inches. The side forms shall be placed true to line and grade and rigidly held in place by proper pins or stakes in such a manner that the section, when completed, will have the required thickness.

E. Joints

- a. Expansion joints ½ inch thick shall be placed at all points where the apron abuts buildings, curbing and sidewalks and at each side of driveways. The expansion joints shall be at twenty foot intervals along the longitudinal axis and at fifteen foot intervals along the transverse axis. Expansion joint filler shall be set ¼ inches below the finished driveway and driveway

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apron grade and shall extend to the subgrade. The joint shall be sealed with the specified joint sealer.

- b. Contraction joints shall be scored at intervals of three to five feet both longitudinally and transversely. For normal sidewalk work, these joints shall be installed at intervals equal to the width of the sidewalk but not less than five feet. The jointer or groover shall produce a groove 3/8 inches deep with a 1/4 inch radius at the surface. The groover shall produce a smooth finished joint having a width twice that of the edging tool.
- c. The edges of the sidewalk shall be finished with an approved edge not more than two inches wide with a radius of 1/4 inch that leaves a smooth finished edge.
- d. If shown on plans or ordered by the Town Engineer or his representative, expansion joints as described in Section 2-5 of this specification shall be placed where the sidewalk abuts concrete curb or other structure and in lieu thereof the Contractor shall provide a cut joint 1/4 inch wide by 1/2 inch deep. This joint shall be filled with the specified joint sealer.

F. Placing Concrete

- a. Before concrete may be placed each section of the subgrade shall be checked for depth with a scratch template and the subgrade corrected where insufficient depth is found.
- b. The subgrade shall not be frozen or muddy at the time the concrete is placed.
- c. The concrete shall be placed and thoroughly compacted. It shall be screeded flush with the top of the forms. After screeding, it shall be further compacted with a wood float. The surface shall be tested with a straight edge ten feet long and all irregularities over 1/8 inch shall be immediately corrected.
- d. The final finish shall be delayed sufficiently so as to allow the concrete to set to such an extent that an excess of fine material will not be worked to the top in the finishing operations. No dry cement or mixture of dry cement and sand shall be sprinkled on the surface of the top course. The surface should be left slightly roughened so as to insure the greatest safety of foothold under all weather conditions.
- e. Sidewalks across driveways shall be constructed and paid for as specified under this item. Drop curbing associated with driveway apron and ramps shall be constructed and paid under Item 7.

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- f. Weather limitation for concrete placement shall conform to the requirements of Section 502-3.01 of the Standard Specification of the New York State Department of Transportation.

G. Curing and Protection

- a. Upon stripping the side forms, the sides shall be immediately backfilled.
- b. The Contractor shall protect the sidewalk and keep it in first class condition until the completion of work. Any sidewalk which is damaged at any time previous to the final acceptance of the work shall be removed and replaced with a satisfactory sidewalk at the expense of the Contractor.
- c. No traffic of any kind will be permitted on the sidewalk for a period of at least five days after the sidewalk has been placed. Barricades and warning lights shall be provided by the Contractor to warn and protect the public.
- d. When conditions indicate that the temperature may drop to 35 degrees or below, the Contractor shall provide insulating blankets to cover and protect all work from freezing.
- e. The contractor shall remove excess materials and grade up to either side of new sidewalk.

H. Reinforcement

- a. The contractor shall utilize 6x6 Welded Wire Fabric in all driveway aprons.

**4. METHOD OF MEASUREMENT**

A. Item 11 – Concrete Aprons

- a. The quantity to be paid for shall be the number of square yards completed and measured in place and accepted in accordance with the provisions of these specifications. Where work involves piecemeal sections such as replacing deteriorated sidewalk, the measurement shall be the sum of all sections.
- b. Total measurement shall be based on the total quantity of sidewalk installed for that job. A job may also include several separate locations.

B. Item 11RR – Remove and Replace Concrete Aprons

- a. The quantity to be paid for shall be the number of square yards completed and measured in place and accepted in accordance with the provisions of

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these specifications. Where work involves piecemeal sections such as replacing deteriorated sidewalk, the measurement shall be the sum of all sections.

**5. BASIS OF PAYMENT**

A. Item 11 – Concrete Aprons

- a. The price bid shall include all necessary labor, equipment, machinery, aggregates, cement reinforcement, mixing, placing, screeding, finishing, curing, filling joints of all types, protecting the work, and all labor, materials, tools, supplies, equipment, testing, and all incidentals necessary to complete the work as specified herein. Excavations in existing soil or grass areas is included in this section.

B. Item 11RR – Remove and Replace Concrete Aprons

- a. The price bid shall include all necessary labor, equipment, machinery, aggregates, cement reinforcement, mixing, placing, screeding, finishing, curing, filling joints of all types, protecting work including all work required to remove and dispose of old sidewalk and replace with new sidewalk as specified herein.

END OF SECTION

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ITEM 12 TRENCH DRAIN

**1. DESCRIPTION**

- A. Under Item 12, the Contractor shall install a trench drain system to be integral with a new curb and sidewalk system as specified by the Engineer.
- B. The Trench Drain system shall be ACO PowerDrain S100K 4" internal width trench drain or approved equal and shall be complete with gratings secured with a boltless locking mechanism supplied by the manufacturer.

**2. MATERIALS**

- A. The trench system bodies shall be manufactured from polymer concrete with minimum properties as follows:
  - Compressive strength : 14,000 psi
  - Flexural Strength: 4,000 psi
  - Water Absorption 0.07%
  - Frost Proof
  - Salt Proof
  - Dilute Acid and Alkali resistant

- B. The nominal opening shall be 4" with overall width of 6.3". Pre-cast units shall be manufactured with either an invert slope of 0.6% or with neutral invert and have a wall thickness of at least 0.67". Each unit will feature a full radius in the trench bottom and a male to female interconnecting end profile. Units shall have horizontally cast anchoring features on the outside wall to ensure maximum mechanical bond to the surrounding bedding material and pavement surface. The stainless steel edge rail will be integrally cast by the manufacturer to ensure maximum homogeneity between polymer concrete body and edge rail. Each edge rail shall be at least 1/4" thick. Outlet system shall be a 4" round bottom.

Grates shall be pedestrian rated and shall be certified to DIN 19580 Load Class F-200,000lbs - 4,182 psi. Ductile iron to ASTM 536-84 - Grade 65-45-12. Boltless locking system. Bicycle Tire Penetration Resistant to AS3996-2006.

**3. CONSTRUCTION DETAILS**

- A. Trench drain system shall be installed in accordance with Manufacturer's instructions for installation. The system shall be interconnected by poly pipe which will be installed and paid for under a separate line item within the award grouping.

**4. METHOD OF MEASUREMENT**

- A. Item 12 – Trench Drain

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- a. The quantity to be paid for Items 12 shall be the number of linear feet completed and measured in place and accepted in accordance with the provisions of these specifications.
- b. Total measurement shall be based on the total quantity of curbing installed for that job as indicated on a Town of Riverhead Purchase order.

**5. BASIS OF PAYMENT**

A. Item 12 – Trench Drain

- a. The price bid shall include all necessary, trench drain components, grates, excavation, backfill, cement reinforcement, leveling and all labor, materials, tools, supplies, equipment, testing and all incidentals necessary to complete the work. Payment shall be made according to Item 12.

END OF SECTION

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ITEM NO. 13 PIPE

**1. DESCRIPTION** - The work shall consist of furnishing and installing polyethylene pipe and underdrain pipe in accordance with this specification and in conformity with the lines, grades and sections shown on the plans or as directed by the Engineer.

**2. MATERIALS**

A. Underdrain Pipe - Shall meet the requirements of 706-18 of the New York State Department of Transportation Standard Specifications, May 1, 2008 (NYSDOT standard specifications) for 4", 6" and 8" perforated polyvinyl chloride underdrain pipe.

B. High Density Polyethylene Pipe, Fittings and Joint Performance and Materials

- a. Polyethylene pipe shall have a smooth interior and annular exterior corrugations.
- b. 4- through 10-inch (100 to 250 mm) pipe shall meet AASHTO M252, Type S.
- c. 12- through 60-inch (300 to 1500 mm) pipe shall meet AASHTO M294, Type S.

**3. CONSTRUCTION DETAILS** - Underdrain Pipe shall be installed in accordance with 605-3 of the New York State Department of Transportation Standard Specifications, May 1, 2008 (NYSDOT standard specifications). Installation of High Density Polyethylene pipe shall comply with ASTM D2321 and manufacturer's recommended installation guidance.

**4. METHOD OF MEASUREMENT** - This work will be measured as the number of Linear Feet of pipe installed (Laying Length) in accordance with the Pay Items shown below. The price bid shall include the cost of all labor, equipment and materials necessary to complete the work.

**5. BASIS OF PAYMENT**

- A. The unit price per linear foot shall include the cost of furnishing all labor, materials, and equipment necessary to complete the work including excavation, temporary sheet piling, dewatering, granular fill, backfill, and cost of water for compaction of granular fill and backfill.
- B. The cost of connecting proposed pipe to existing drainage structures, including all cutting and patching, shall be included in the unit price bid for this item.

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C. The cost of connecting proposed pipe to proposed drainage structures shall be included in the unit price bid for that structure.

<b>Payment Item</b>	<b>Pipe Type</b>	<b>Pipe Diameter</b>
<b>13U-4"</b>	<b>Underdrain</b>	<b>4"</b>
<b>13U-6"</b>	<b>Underdrain</b>	<b>6"</b>
<b>13U-8"</b>	<b>Underdrain</b>	<b>8"</b>
<b>13P-4"</b>	<b>High Density Polyethylene</b>	<b>4"</b>
<b>13P-12"</b>	<b>High Density Polyethylene</b>	<b>12"</b>
<b>13P-15"</b>	<b>High Density Polyethylene</b>	<b>15"</b>
<b>13P-18"</b>	<b>High Density Polyethylene</b>	<b>18"</b>
<b>13P-24"</b>	<b>High Density Polyethylene</b>	<b>24"</b>
<b>13P-30"</b>	<b>High Density Polyethylene</b>	<b>30"</b>
<b>13P-36"</b>	<b>High Density Polyethylene</b>	<b>36"</b>
<b>13P-48"</b>	<b>High Density Polyethylene</b>	<b>48"</b>

END OF SECTION

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ITEM NO. 21 LEACHING POOLS

**1. DESCRIPTION** - Under these items the Contractor shall furnish and install leaching pools of the kind and in the quantity shown on the plans or as requested by the Town Engineer and in the itemized proposal. Work under this item includes but is not restricted to:

Furnishing footing ring, leaching ring sections, traffic bearing top slab, brick collar, and castings as shown on the plans or required.

Excavation for and installation of the required number of sections in the manner specified.

All sheeting and bracing required to protect adjacent structures and pavements and to conform to Part 23 Protection In Construction, Demolition And Excavation Operations of the New York State Industrial Code. This rule shall govern all excavation practices relative to persons working within an excavated area.

Backfilling the disturbed portion around the leaching pool to the specified grades. The backfill shall consist of bank run gravel with a maximum of 85% by weight passing the 1 ½" sieve and a maximum of 5% by weight passing the No. 40 sieve. The cost for furnishing, backfilling and compacting this material shall be included in the price bid for this item.

Disposal of excess soil.

Installing the brick collar and castings to the grade shown on the plans or required by the Engineer.

**2. MATERIALS**

The castings shall be of the type required by the details or ordered by the Engineer. One field coat of black asphaltic material, as approved by the Engineer, shall be applied to all exposed surfaces of the castings.

The footing ring, leaching ring sections, and top slab shall conform in all respects to material and dimensional details of Suffolk County Department of Public Works Standard Sheets for Precast Leaching Basin Types F1, F2, F3, G1, G2, and G3. They shall be constructed of concrete having a minimum strength of 4000 p.s.i, when cured and tested at 28 days in accordance with ASTM Designation; C-31 and C-39 as currently revised.

Reinforcing shall conform to the requirements of "Specifications for Welded Steel Wire Fabric for Concrete Reinforcement" ASTM Designation: A-185, as currently revised and of "Specifications for Billet-Steel Bars for Concrete Reinforcement" ASTM Designation A-615, as currently revised, for deformed steel bars intermediate grade.

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**3. CONSTRUCTION DETAILS**

Excavation shall include the demolition of all curbs, pavement, and other structures that fall within the limits. Attention is called to Part 23 Protection In Construction, Demolition And Excavation Operations the New York State Industrial Code which shall govern all excavation practices with respect to persons working within an excavation.

The Contractor shall provide detailed designs of sheeting and bracing when working in the vicinity of buildings, structures or other superimposed loads. This information shall be provided when an influence line at 45 degrees to the horizontal drawn from the lowest point, of the closet point, of the structure intersects the proposed excavations.

The leaching pools can be excavated for and installed by techniques used in sinking caissons. If the pools cannot be sunk to the depth required, the Contractor shall excavate for and cast the remaining sections in place.

Leaching rings shall be wrapped with geotextile fabric as shown in the details.

When the hole for the leaching pool is over-excavated, the Contractor shall backfill around the structure with bank run gravel with a maximum of 85% by weight passing the 1 ½" sieve and a maximum of 5% by weight passing the No. 40 sieve. The backfill shall be placed in loose layers of not more than twenty-four (24) inches and compacted with vibratory compactors to a minimum of 95% of the maximum density of the soil. The cost of placing and compacting this material shall be included in the price bid for this item and no extra compensation will be allowed for over-excavation and backfill. The method of compaction may be varied if approved by the Engineer in writing.

Unless otherwise shown or ordered by the Engineer, the top slab shall be placed approximately twelve (12) inches below the proposed grade, a collar constructed and the castings placed.

Provisions for connections of proposed pipes shall be either made at the time of manufacture of the ring sections or they shall be made in the field. When openings are made in the field the Contractor shall cut a hole in the concrete at the proper grade and of the appropriate size to receive the connecting pipe. Reinforcing when encountered shall be cut back only as required to provide a proper bond for the new patch material. The pipe shall be set to required grade and the masonry wall shall be replaced, repaired and patched as required to provide a secure and waterproof connection. Ends of the pipe projecting into the structure shall be neatly cut off and trimmed flush with the inside face of the structure.

In addition to mechanical compaction of the subgrade, an additional method to accelerate settlement of the perimeter backfill around the pool shall be employed. This method could include but not limited to:

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The perimeter backfill shall be water jetted to 1 (one) foot above subgrade prior to setting castings to their final grade. The jetting operation shall be progressed uniformly around the pool to fully consolidate the material.

The leaching pool shall be flooded with water prior to setting castings to their final grade. The volume of water required is that which shall fully consolidate the material.

Excess soil must be disposed of off site.

**4. METHOD OF MEASUREMENT**

The quantity to be paid for under the Pay Items shown below shall be the number of leaching pools as shown on the plans, installed and accepted in place complete with rings, footings, cover slab, collar, and castings.

<b>Drainage Payment Items</b>		
<b>Payment Item</b>	<b>Leaching Ring Diameter (ft.)</b>	<b>Total Leaching Ring Depth (ft.)</b>
21A	8	4
21B	8	8
21C	8	12
21D	10	4
21E	10	8
21F	10	12

**5. BASIS OF PAYMENT**

The unit price bid for these items, paid by the number of leaching pools installed, shall include the cost of all labor, materials, equipment and other incidentals required to complete the installation as specified, including rings, footing, top slab, furnishing and placing castings, painting of castings, reinforcement, sheeting and bracing, trench excavation, dewatering, geotextile wrapping, furnishing, placing and compacting backfill material, disposal of excess soil, and connecting to existing or proposed pipe.

END OF SECTION

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ITEM NO. 23 CATCH BASINS

**1. DESCRIPTION** - Under these items the Contractor shall furnish and install catch basins of the kind and in the quantity shown on the plans or as requested by the Town Engineer and in the itemized proposal. Work under this item includes but is not restricted to:

Furnishing catch basin, top slab, brick collar, and castings as shown on the plans or required.

Excavation for and installation of the required number of sections in the manner specified.

All sheeting and bracing required to protect adjacent structures and pavements and to conform to Part 23 Protection In Construction, Demolition And Excavation Operations of the New York State Industrial Code. This rule shall govern all excavation practices relative to persons working within an excavated area.

Backfilling the disturbed portion around the catch basin to the specified grades. The backfill shall consist of bank run gravel with a maximum of 85% by weight passing the 1 ½" sieve and a maximum of 5% by weight passing the No. 40 sieve. The cost for furnishing, backfilling and compacting this material shall be included in the price bid for this item.

Installing the brick collar and castings to the grade shown on the plans or required by the Engineer.

**2. MATERIALS**

The castings shall be of the type required by the details or ordered by the Engineer. One field coat of black asphaltic material, as approved by the Engineer, shall be applied to all exposed surfaces of the castings.

The catch basin, and top slab shall conform in all respects to the details included in the Contract Drawings. The catch basin and top slab shall conform in all dimension and material respects to the details of Suffolk County Department of Public Works Standard Sheets for Catch Basins and Manholes for Item 102S Catch Basin Type – A, and Type – B. Catch basins shall have a depth of 5' not inclusive of the top slab. They shall be constructed of concrete having a minimum strength of 4000 p.s.i, when cured and tested at 28 days in accordance with ASTM Designation; C-31 and C-39 as currently revised.

Reinforcing shall conform to the requirements of "Specifications for Welded Steel Wire Fabric for Concrete Reinforcement" ASTM Designation: A-185, as currently revised and of "Specifications for Billet-Steel Bars for Concrete Reinforcement" ASTM Designation A-615, as currently revised, for deformed steel bars intermediate grade.

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**3. CONSTRUCTION DETAILS**

Excavation shall include the demolition of all curbs, pavement, and other structures that fall within the limits. Attention is called to Part 23 Protection In Construction, Demolition And Excavation Operations of the New York State Industrial Code which shall govern all excavation practices with respect to persons working within an excavation.

The Contractor shall provide detailed designs of sheeting and bracing when working in the vicinity of buildings, structures or other superimposed loads. This information shall be provided when an influence line at 45 degrees to the horizontal drawn from the lowest point, of the closet point, of the structure intersects the proposed excavations.

The catch basins can be excavated for and installed by techniques used in sinking caissons. If the basins cannot be sunk to the depth required, the Contractor shall excavate for and cast the remaining sections in place.

When the hole for the catch basin is over-excavated, the Contractor shall backfill around the structure with suitable backfill material as approved by the Town Engineer. The backfill shall be placed in loose layers of not more than twenty-four (24) inches and compacted with vibratory compactors to a minimum of 95% of the maximum density of the soil. The cost of placing and compacting this material shall be included in the price bid for this item and no extra compensation will be allowed for over-excavation and backfill. The method of compaction may be varied if approved by the Engineer in writing.

Unless otherwise shown or ordered by the Engineer, the top slab shall be placed approximately twelve (12) inches below the proposed grade, a collar constructed and the castings placed.

Provisions for connections of proposed pipes shall be either made at the time of manufacture of the ring sections or they shall be made in the field. When openings are made in the field the Contractor shall cut a hole in the concrete at the proper grade and of the appropriate size to receive the connecting pipe. Reinforcing when encountered shall be cut back only as required to provide a proper bond for the new patch material. The pipe shall be set to required grade and the masonry wall shall be replaced, repaired and patched as required to provide a secure and waterproof connection. Ends of the pipe projecting into the structure shall be neatly cut off and trimmed flush with the inside face of the structure.

**4. METHOD OF MEASUREMENT**

The quantity to be paid for under the Pay Items shown below shall be the number of catch basins as shown on the plans, installed and accepted in place complete with rings, footings, cover slab, collar, and castings. Base bid will be based on a structure depth (not including top slab) of 5'. Depending on site conditions Item 23 (A or B) XD shall be

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used to account for additional depth required as per the Town Engineer’s request for utility conflict issues and shall be used as a per linear cost beyond a 5’ depth.

<b>Drainage Payment Items</b>			
<b>Payment Item</b>	<b>CB Outer Width (ft.)</b>	<b>CB Outer Length (ft.)</b>	<b>CB Depth (ft)</b>
23A	3’-10 1/3”	5’-4”	5
23B	5’-4”	5-4”	5
23AXD	3’-10 1/3”	5’-4”	VF
23BXD	5’-4”	5-4”	VF

**5. BASIS OF PAYMENT**

The unit price bid for these items, paid by the number of catch basins installed, shall include the cost of all labor, materials, equipment and other incidentals required to complete the installation as specified, including catch basin and top slab, furnishing and placing castings, painting of castings, reinforcement, sheeting and bracing, trench excavation, dewatering, furnishing, placing and compacting backfill material, and connecting to existing or proposed pipe.

END OF SECTION

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ITEM NO. 25 CASTING ADJUSTMENT

**1. DESCRIPTION**

Under this item, the Contractor shall adjust the frame or casting elevation up or down for each drainage basin and/or manhole as indicated on the plans or as directed by the Engineer. If necessary the supporting masonry collar shall be repaired, as directed by the Engineer.

This item shall include the removal and replacement of a ten-foot by ten-foot area of pavement, centered about the casting to be adjusted. If necessary, the grade within this area that has settled shall be raised to its original elevation prior to paving.

**2. MATERIALS**

Unless otherwise indicated in the plans or directed by the Engineer, the materials for repairing the existing drainage structure shall meet the requirements of Suffolk County Department of Public Work Standard Specifications for Item Nos. 100, 102AR, 102BR, 102CR or 102DR.

Castings shall be of the type as shown on the plans or as ordered by the Engineer. One field coat of black asphaltic material, as approved by the Engineer, shall be applied to all exposed surfaces of the castings.

Material to be used for backfilling settled areas to grade shall comply with Subgrade Area Material of Item 3S Excavation and Embankment.

The ten-foot square pavement patch shall consist of the following in accordance with Item No. 51 Pavement Patches:

Item No. 4-P Recycled Concrete Aggregate

Item No 50 Asphalt Top Course Type 6F

Item No. 55 Asphalt Concrete Type 1, Base Course

**3. CONSTRUCTION DETAILS**

The Contractor shall exercise care in adjusting the existing casting. Any part of the frame, grate or cover damaged or lost by the contractor shall be replaced by him at no additional cost to the Town. The Contractor shall remove and replace any loose or damaged brick, block or mortar immediately under the new casting so that the casting has a full and even bearing on the underlying surface. The lower limit of masonry repair shall be 12 inches below the bottom of the existing casting or the top of the structural top slab (if applicable), whichever is lower, and as directed by the Engineer.

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All work shall be done in a workmanlike manner by competent masons.

Installation and compaction of Subgrade Area Material shall comply with Embankments, Subgrade Area and Compaction under Construction Details of Item 3.

Installation of the ten foot by ten foot pavement patch around the adjusted casting shall comply with the Construction Details of Item 51.

**4. METHOD OF MEASUREMENT**

- A. Casting Adjustment - The quantity of casting adjusted to be paid for under this item will be the number of basin or manhole frames and grates adjusted.
- B. Subgrade Area Material - The quantity of Subgrade Area Material to be paid for under this item will be the number of cubic yards of material measured in its final compacted position, satisfactorily placed and compacted as required by the Plans and Specification within the payment limits shown on the plans unless otherwise ordered in writing by the Engineer.
- C. Pavement Patches - The quantity of Pavement Patch to be paid for shall be the actual number of square feet of pavement removed and reinstalled, per location measured in place in accordance with the Specifications. A job may also include several separate locations.

**5. BASIS OF PAYMENT**

- A. Casting Adjustment - The unit price bid for each basin or manhole adjusted shall include the cost of furnishing all labor, materials and equipment necessary to complete the work.
- B. Subgrade Area Material - The unit price bid per cubic yard for Subgrade Area Material shall include the cost of furnishing all labor, materials and equipment necessary to complete the work, including furnishing water equipment and applying water for compaction. No direct payment will be made for any losses of material which may result from shrinkage, compaction, foundation settlement, waste, overflow, erosion, leakage or any other cause; the cost of such losses shall be included in the unit price bid for this item.
- C. Pavement Patches - The unit price bid for Pavement Patches shall include all labor, equipment, and material required to saw cut the patch perimeter, excavate for the placement of base course, placing of the base course and the asphalt concrete surface, fine grading, tack coating, disposal of excess materials and debris and all other incidentals required to complete the work.

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D. Payment will be made under:

<b>Item No.</b>	<b>Item</b>	<b>Pay Unit</b>
25-C	Casting Adjustment	Each
25-S	Subgrade Area Material	Cubic Yard
25-P	10'x10' Pavement Patch	Each

END OF SECTION

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ITEM NO. 27 MANHOLES AND DROP INLETS

**1. DESCRIPTION:** Under this Item, the Contractor shall build and install any block construction, manhole or drop inlet constructed over existing drainage pipes. The Contractor shall build field inlets, manholes and drop inlets as shown on the plans or as directed by the Engineer. They shall be precast units built of Class A Concrete.

The Contractor shall verify the dimensions shown on the plan, by field measurements and testholes, if deemed necessary. Two copies of shop drawings for the proposed basins shall be submitted before fabrication.

**2. MATERIALS -**

**2.1 Precast Concrete Pavers** – Materials used in the manufacture of precast concrete pavers shall meet the following SCDPW Standard Specification Subsections:

Cement	M1
Concrete Sand	M3
Fine Aggregate Mortar Sand	M3A
Grout Sand	M3B
Coarse Aggregate	M4
Water	M46

NO admixtures are required. Other materials may be used in the manufacture only as approved by the Engineer.

**2.2 Sampling and Testing** –Precast concrete pavers produced from plants which are on the Approved Material list of the New York State Department of Transportation will be acceptable.

<u>Property</u>	<u>Requirement</u>
Compressive Strength, psi, Min., 28 days	8,000
24 Hour Adsorption, % Max.	5.0
Freeze-Thaw, % Loss, Maximum (25 cycles, one per day, 10% NaCl solution)	1.0

**2.3 Mortar** –Portland Cement Type II shall conform to the requirements of SCDPW M1, Portland Cement. Masonry Cement shall conform to ASTM C91. Sand shall conform to the requirements of SCDPW M3A, Mortar Sand.

The mortar shall be proportioned as follows:

Portland Cement Type II (Parts)	Masonry Cement (Parts)	Mortar Sand (parts)
1	1	4-1/2 to 6

All cementitious materials and aggregate shall be mixed for at least three minutes with the maximum amount of water to produce a workable consistency in a mechanical batch mixer. Hand mixing of the mortar may be permitted only for small quantities as approved by the Engineer. Mortars that have stiffened because of evaporation of water from the mortar may be re-tempered by adding water as needed to restore the required consistency. Mortars shall be used and placed in final position within 2-1/2 hours after mixing.

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All pavers shall be laid in full mortar beds. Mortar used for filling vertical or inclined joints shall be of such consistency that it will require rodding. The mortar shall be rodded until it rises to the top and completely fills the joints.

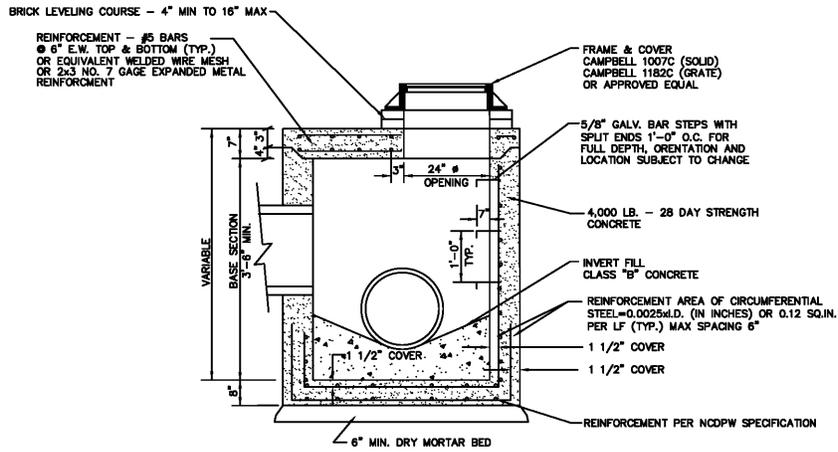
Precast Reinforced Concrete Units shall conform to the requirements of M25A, Reinforced Concrete Pipe, except that the three edge bearing test will not be required, and those provisions of ASTM Designation C478 Precast Reinforced Concrete Manhole Risers and tops covering "Design" shall apply except as modified below.

Manhole steps shall be one of the following materials:

Cast Iron	-M-8, except that Class 25A will be required
Malleable Iron Castings	-M-13 Grade 35018
Wrought Iron	-M-10
Cast Aluminum	-M-7A, Alloy 356-T6
Wrought Aluminum	-M-7B, 6061-T6 or 6005
Reinforced Plastic	-M-137

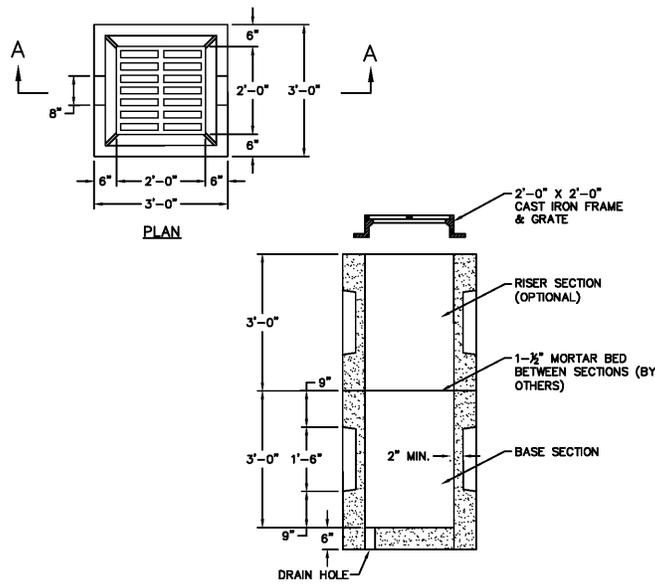
Manhole steps may be cast in place, bolted or mortared in place after fabrication. Manhole steps affixed to the manhole wall after fabrication of the manhole section shall be affixed to the wall with a rapid hardening hydraulic cement meeting the requirements of SCDPW M2RH.

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**4' DIAMETER PRECAST DRAINAGE MANHOLE DETAIL (DMH)**

- NOTES:
1. MANHOLE SHALL CONFORM TO TOWN STANDARDS.
  2. ALL PRECAST DRAINAGE STRUCTURES SHALL BE FURNISHED WITH PRECAST OPENINGS FOR DRAINAGE PIPE.
  3. ALL DRAINAGE PIPE SHALL HAVE 2' MINIMUM COVER



SECTION A-A

**AREA DRAIN DETAIL**

1. ALL CONCRETE SHALL TEST 4,000 P.S.I. @ 28 DAYS
2. REINFORCEMENT MEETS A.S.T.M A-615, GRADE 60, A.S.T.M. A-185.

**3. CONSTRUCTION DETAILS –**

**3.1 Excavation** –Excavation shall be in conformance with Item No. 2 Unclassified Excavation.

**3.2 Concrete Drainage Structures and Manholes** –Concrete drainage structures and manholes shall be constructed in accordance with the requirements of these specifications. The Contractor shall have the option of erecting either cast-in-place or precast structures unless specified otherwise. Cast-in-place drainage structures shall be constructed of Class A concrete and to the requirements of NYSDOT Section 555 Structural Concrete.

The Contractor shall have the option of constructing either a rectangular or circular drainage structure when such option is specified and allowed in the contract documents. When the circular structure is selected, it shall conform to these specifications and will require submission of complete working drawings to the Engineer for review and approval.

**3.3 Masonry Construction** –Masonry construction, when indicated on the plans or standard sheets, shall consist of concrete pavers laid in full mortar beds. All joints shall be full mortar joints not greater than ½ inch wide. When specified, the outside of the masonry construction shall be plastered with ½ inch thick mortar coat.

**3.4 Pipe Entries** – All pipe(s) built into the wall(s) of a drainage structure shall be flush with the inside face of the drainage structure wall and shall project outside a sufficient distance to allow connection with the adjoining section. The wall knockouts and sealing the space around the pipe shall be in accordance with the standard sheets and shall sealing shall be performed on the interior and exterior surfaces of the pipe and structure. The bell of concrete pipe shall be cut off at every pipe entry where the bell enters the drainage structure.

**3.5 Frames and Grates** – Frames and grates shall be as specified in the contract documents. All products shall be manufactured in the United States of America. Frames located in the top slab or top of the uppermost riser shall be secured and held in place by a minimum of 4 stirrups or studs per frame, welded to the frame near the corners. Parallel bar frames shall contain shear stud anchors, for the purpose of transferring loads, as required and detailed on the standard sheet for parallel bar grates and frames. Shear stud anchors, when required shall replace the frame securing stirrups or studs.

**3.6 Adjustment Rings and Frames for Drainage Structures and Manholes** –Prior to the placement of the surface course and after the placement of the binder course, when required the Contractor shall install adjustment rings and frames for manholes and drainage units. The adjustment ring or frame shall be placed so the manhole cover or drainage unit grate will not protrude above the finished surface of the pavement.

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To assure a firm and secure fit with the adjustment ring or frame, the seat of the existing manhole casting or drainage unit frame shall be free of all foreign material at the time of installation. The entire assembly shall be set on the seat of the existing manhole casting or drainage unit frame and the locking devices shall be tightened evenly. The manhole cover or drainage unit grate shall be set upon the seat of the adjustment ring or frame.

The Contractor shall be responsible for insuring that the adjustment rings and frames are compatible with the existing manhole castings and covers or drainage frames and grates.

All rings or frames shall be protected from displacement caused by traffic maintained on the roadway or equipment used in the paving operation.

The Contractor shall have the option of removing and resetting the existing manhole casting or drainage unit frames to the required grade where shown on the plans or approved by the Engineer.

**3.7 Traverse Drainage Interceptors** – This work shall consist of the construction of reinforced concrete transverse drainage interceptors with frames and grates, and dowels as shown on the plans or Standard Sheets. Unless specifically designated on the plans and/or in the proposal, the Contractor shall have the option of construction cast-in-place or precast transverse drainage interceptors.

**3.7.1 Cast-In-Place** – Cast-in-Place transverse drainage interceptors shall conform to the requirements of NYSDOT Section 555 Structural Concrete. The cast-in-place interceptors shall be constructed so they have construction joints at a maximum spacing of 24 feet, unless the Engineer gives written directions otherwise or a longer length is specified on the plans.

**3.7.2 Precast Interceptors** – Precast interceptors shall be laid in reasonably close conformity to line and grade and shall have a full, firm and even bearing at each joint and along their entire length.

They shall be handled and assembled in accordance with the manufacturer's instructions. Six (6) ¼ inch thick Pre-moulded resilient joint filler shall be placed in the joint between the units, and the lifting hole and dowels shall be grouted with material conforming to NYSDOT Section 701-04 or 701-05.

**3.8 Backfill** –No structure shall be backfilled until all the mortar has completely set. The requirements of Item 3S Excavation and Embankment shall apply.

**4. METHOD OF MEASUREMENT** – The quantity to be paid for under the Pay Items shown below shall be the number of manholes and Drop Inlets as shown on the plans, installed and accepted in place complete with rings, footings, cover slab, collar, and castings.

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<b>Payment Items</b>		
<b>Payment Item</b>	<b>Manhole Diameter (ft.)</b>	<b>Manhole Depth</b>
<b>27-MH</b>	<b>4' ID</b>	<b>Base Section 3'-6"</b>
<b>27-MHADX</b>	<b>4' ID</b>	<b>Add. Vertical - VF</b>
<b>27-DI</b>	<b>2' ID</b>	<b>Base Section 3'</b>

**5. BASIS OF PAYMENT**

The unit price bid for these items, paid by the number manholes and drop inlets installed, shall include the cost of all labor, materials, equipment and other incidentals required to complete the installation as specified, including rings, bottom slab, top slab, stairs, furnishing and placing castings, painting of castings, reinforcement, sheeting and bracing, trench excavation, dewatering, placing and compacting backfill material and connecting to existing or proposed pipe.

END OF SECTION

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ITEM NO. 44 ELASTOMERIC PAVEMENT CRACK SEALANT

**1. DESCRIPTION** - Under this item the contractor shall prepare the random pavement cracks in excess of ¼ inch and furnish and apply elastomeric sealant from an approved heating and application system in accordance with the plans or sketches or as directed by the Town Engineer or his representative.

**2. MATERIALS** - The rubberized asphalt dispersion shall be formulated from first grade raw materials. It shall be modified with wetting agents and other surfactants to enhance its adhesion to the walls and bottoms of the cracks or joints. The compound shall be further modified with approved mineral fillers. The material shall comply with the application specifications of ASTM D-1190 Federal Specifications SS-S-164 and Amendments. The joint sealing compound shall be composed of a mixture of materials which will form a resilient and adhesive compound and will effectively seal joints and cracks in the pavement against the infiltration of moisture throughout repeated cycles of expansion and contraction. The sealant shall not flow from the joint or be picked up by vehicle tires at an ambient temperature of 125 degrees F.

**3. CONSTRUCTION DETAILS**

A. General – The contractor shall provide this item to the Town in accordance with a schedule specified by the Superintendent of Highways. Significant deviation from this schedule may cause disqualification of the contractor from providing this item at the discretion of the Highway Superintendent.

B. Application of Crack Sealant – All random, traverse and longitudinal cracks must be blown and heated via the hot air lance within 10 minutes of being sealed. The distance between the hot air lance and the crack sealing unit should be no more than fifty feet to eliminate reinvasion of water, debris and other incompressible as much as possible. All debris vegetation and water should be removed to enhance adhesion of the crack sealing material.

a. Melting and Application Equipment. The melter unit shall be of the double boiler type of equipment with an agitator using high flash oil, 600 degrees F minimum as a heat transfer medium. The material kettle and oil jacket must have thermometers that have been calibrated. Heating must be thermostatically controlled to hold the desired temperature. The melting unit shall be equipped with a pump capable of circulating the material from top to bottom of the kettle. The sealing compound shall be agitated continuously during the melting and pouring process.

b. Hot Air Lance. This equipment should operate with propane and compressed air in combination at 2,000 degrees F to 3,000 F. The lance should draw propane from smaller than a 100 pound tank. Separate hoses for propane and air draw are required. The hoses shall be wrapped with reflectorized tape to keep them together and protect workers in low light

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situations.

- c. Installation of Sealant Joints should be filled to 1/8 inch to 1/4 inch below the pavement surface.

**4. METHOD OF MEASUREMENT** – The quantity measured under this work shall be the number linear feet of sealant as specified above furnished and incorporated into the work in accordance with the specifications as directed by the Town Engineer or his representative.

**5. BASIS OF PAYMENT** – The unit price bid per linear feet for this item shall include the cost of furnishing, hauling, heating, manipulating the sealant and shall include the cost of furnishing all labor and equipment necessary to complete the work including the preparation of all cracks and joints.

END OF SECTION

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ITEM NO. 46 FIBER REINFORCED POLYMER MODIFIED PAVEMENT CRACK SEALANT

**1. DESCRIPTION** – Under this item, the contractor shall prepare and seal all random, transverse, and longitudinal joints and cracks in accordance with the Plans or Sketches, or as directed by the Engineer.

**2. MATERIALS** – The joint sealing compound shall be composed of a blend of Asphalt Cement and Polyester Fiber, which will form a resilient and adhesive compound and will effectively seal joints and cracks in the pavement against the infiltration of moisture throughout repeated cycles of expansion and contraction. The sealant shall not flow from the joint or be picked up by vehicle tires at an ambient temperature of 125 degrees F.

A. Asphalt Cement – shall be NYSDOT material designation 702-0700.

B. Polyester Fiber – shall be introduced to the liquid asphalt in the mixing chamber at a rate of 5% of the total mix design or as directed by the Engineer. The fiber shall be GFC Materials type 402-1N or equivalent meeting the following specifications:

Length	0.25 in. +/-0.04
Elongation at Break	38%
Melting Point	>475 degrees F
Crimps/Inch	None
Cross Section	Round
Denier	4.5 Nominal dpf
Tensile Strength	>70,000 psi
Diameter	0.00085 in.
Specific Gravity	1.32 to 1.40

**\*\*(Pre-Packaged Block Material will not be accepted)**

**3. CONSTRUCTION EQUIPMENT** – The heating applicator unit shall be an insulated double boiler type with a minimum capacity of 900 gallons. It shall also be equipped with automatic thermostat controls, continual recirculation, agitation, and pressure-fed hose with wand. A “shoe” or dish style wand tip must be used to insure uniformity to band-aid type application of fiber material.

The air compressor shall be a minimum of 100 CFM emitting 75 to 150 psi pressure at the nozzle. The compressor shall be equipped with a filter trap to eliminate oil and moisture from the air line.

The hot air lance shall operate with propane and compressed air in combination at 2,000 degrees F to 3,000 degrees F. The lance shall draw propane from no smaller than a 100 pound tank; separate hoses are required for propane and air draw.

**4. CONSTRUCTION DETAILS** – Before any work is begun, a schedule of operations shall be submitted for the approval of the Engineer.

ITEM NO. 46 FIBER REINFORCED POLYMER MODIFIED PAVEMENT CRACK SEALANT

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The pavement should be dry with ambient temperature no less than 20 degrees F and no more than 85 degrees F.

The crack sealing material shall be heated to the manufacturer's recommended application temperature (not to exceed 425 degrees F), agitated on a continual basis and kept circulating while cracks are prepared.

All debris, vegetation and water should be removed to enhance adhesion of the crack sealing material. All random, transverse and longitudinal cracks must be blown and heated via the hot air lance within ten minutes of being sealed. The distance between the hot air lance and the crack sealing unit shall not be more than seventy-five feet to eliminate reinvasion of water and debris.

The sealant shall be pumped at a temperature of 350 deg. F to 400 deg. F onto the pavement and leveled using a "shoe" attachment to form a sealant band to a width as directed by the Engineer.

**4. METHOD OF MEASUREMENT** – The quantity measured under this work shall be the number of lineal feet of sealant as specified above furnished and incorporated into the work in accordance the Specification and as directed by the Engineer.

**5. BASIS OF PAYMENT** – The unit price bid per lineal foot for this item shall include the cost of furnishing all materials, labor and equipment necessary to satisfactorily complete the work.

END OF SECTION

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ITEM NO. 48 ASPHALT CONCRETE TRUING AND LEVELING COURSE

The requirements of the New York State Department of Transportation Standard Specifications, as amended for Item 403.21, Asphalt Concrete Truing and Leveling, shall apply with the following modifications:

- 1. CONSTRUCTION DETAILS:** Where the compacted thickness of truing and leveling is greater than 3/4 inch and less than 1-1/2 inches, a Type 7F Top Course shall be used. Where the compacted thickness exceeds 1-1/2 inches, a Type 6F Top Course shall be used. Where the compacted thickness exceeds 3 inches, Type 3 Base Course shall be used.

Prior to the placement of the top course, the Contractor shall clean the existing surface in accordance with the requirements of Item 63, Cleaning Existing Pavement.

No additional payment will be made for cleaning the existing surface. The cost is to be included in the unit price bid for Item 48.

Prior to paving the Contractor shall paint and seal all surfaces of curbs, aprons, gutters, castings, pavement edges, joints, or other surfaces adjacent to the areas to be paved with bituminous material in accordance with Item 53, Applying Bituminous Materials (Tack Coat) of these specifications.

No additional payment will be made for furnishing and applying the required bituminous materials. The cost is to be included in the unit price bid for Items 48.

Directly ahead of paving, the Contractor shall Tack Coat the existing pavement surface in accordance with Item 53, Applying Bituminous Materials (Tack Coat) of these specifications.

No additional payment will be made for furnishing and applying the required Tack Coat. The cost is to be included in the unit price bid for Item 48.

- 2. BASIS OF PAYMENT:** The unit price bid per ton for this Item shall include the cost of furnishing all materials including the bitumen, the mixing, transporting, cleaning the existing surface in accordance with Item 63, Cleaning Existing Pavement, painting and sealing, and tack coating in accordance with Item 53, Applying Bituminous Materials (Tack Coat), placing, compacting, any mix designs and job mix formulas, quality control testing, and all laboratory tests and reports, repair of any area found not to be in conformance with the specifications, and all other incidentals required for satisfactory completion of the work.

END OF SECTION

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ITEM NO. 49 RUT AVOIDANCE ASPHALT CONCRETE, TYPE 6FRA TOP  
COURSE

**1. DESCRIPTION:**

Under this Item, the Contractor shall construct an asphalt concrete top course upon a previously prepared foundation, conforming to the lines, grades, thickness and cross slopes as shown on the plans or as directed by the Town Engineer.

**2. REQUIREMENTS:**

The requirements for Item 18403.1733 Rut Avoidance Asphalt Concrete, Type 6FRA Top Course, as listed in the Standard Specifications of the New York State Department of Transportation, shall be used with the following modifications:

**3. MATERIALS:**

Aggregates

Wappinger Dolomite as defined by the New York State Department of Transportation shall be excluded from use in Item 49.

Reclaimed Asphalt Pavement (RAP)

Reclaimed Asphalt Pavement (RAP) meeting the following may be utilized in Item 49:

- a. The RAP shall be tested by an approved laboratory and certified to be 100% free of Wappinger Dolomite as defined by the New York State Department of Transportation.
- b. A maximum of 20% RAP may be used.
- c. A separate mix design for the RAP mixture must be submitted to the Town Engineer for approval. The resultant mixture of reclaimed asphalt pavement (RAP), new aggregates and asphalt cement must meet all material and Marshall properties as specified for Item 18403.1733.

In addition, the Contractor will supply the Town Engineer with the following information:

- d. Gradation and Asphalt content of the RAP.
- e. Penetration of recovered asphalt cement.
- f. New aggregate blend percentages.
- g. RAP/new aggregate blend percentages.

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COURSE

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- h. Combined aggregate gradations.
- i. Total asphalt demand.
- j. Percent of new asphalt required.
- k. Penetration blending chart and grade on new asphalt selected.

As well as a summation of the established job mix formula which contains the following:

- a. Gradation of the recycled mixture.
- b. Percentage of RAP added.
- c. Percentage of new aggregate added.
- d. Optimum asphalt cement content from graphs.
- e. Added asphalt cement content.
- f. Grade of added asphalt cement.

Once the job mix formula is established and approved by the Town Engineer, all mixtures furnished for the project shall conform thereto. If any of the materials used to develop the original job mix formula change (RAP source or stockpile, new aggregates, asphalt cement) the Contractor will be required to submit a new mix design based upon the properties of the materials presently being used.

The Contractor's attention is directed to the relative flat profile roadway grades which may be encountered, necessitating accurate control of the paving of the Top Course to provide proper drainage along the roadway.

The bituminous paving machine used shall be equipped with an electronic grade and slope control system.

Prior to the placement of the top course, the Contractor shall clean the existing surface in accordance with the requirements of Item 53, Cleaning Existing Pavement.

No additional payment will be made for cleaning the existing surface. The cost is to be included in the unit price bid for Item 49.

Prior to paving the Contractor shall paint and seal all surfaces of curbs, aprons, gutters, castings, pavement edges, joints, or other surfaces adjacent to the areas to be paved with bituminous material in accordance with Item 63, Applying Bituminous Materials (Tack Coat) of these specifications.

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No additional payment will be made for furnishing and applying the required bituminous materials. The cost is to be included in the unit price bid for Item 49.

Directly ahead of paving, the Contractor shall Tack Coat the existing pavement surface in accordance with Item 53, Applying Bituminous Materials (Tack Coat) of these specifications.

No additional payment will be made for furnishing and applying the required Tack Coat. The cost is to be included in the unit price bid for Item 49.

**3. METHOD OF MEASUREMENT:**

The quantity to be paid for under this Item shall be the number of tons of compacted material satisfactorily furnished, placed and incorporated in the completed work in accordance with the plans, specifications and orders of the Town Engineer.

**4. BASIS OF PAYMENT:**

The unit price bid per ton for this Item shall include the cost of furnishing all materials including the bitumen, the mixing, transporting, cleaning the existing surface in accordance with Item 63, Cleaning Existing Pavement, painting and sealing, and tack coating in accordance with Item 53, Applying Bituminous Materials (Tack Coat), placing, compacting, any mix designs and job mix formulas, quality control testing, and all laboratory tests and reports, repair of any area found not to be in conformance with the specifications, and all other incidentals required for satisfactory completion of the work.

END OF SECTION

TOWN OF RIVERHEAD  
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ITEM NO. 50 RUT AVOIDANCE ASPHALT CONCRETE, TYPE 7FRA TOP COURSE

**1. DESCRIPTION:**

Under this Item, the Contractor shall construct an asphalt concrete top course upon a previously prepared foundation, conforming to the lines, grades, thickness and cross slopes as shown on the plans or as directed by the Town Engineer.

**2. REQUIREMENTS:**

The requirements for Item 18403.1933, Rut Avoidance Asphalt Concrete, Type 7FRA Top Course, as listed in the Standard Specifications of the New York State Department of Transportation, shall be used with the following modifications:

Materials

Aggregates

Wappinger Dolomite as defined by the New York State Department of Transportation shall be excluded from use in Item 50.

Reclaimed Asphalt Pavement (RAP)

Reclaimed Asphalt Pavement (RAP) meeting the following may be utilized in Item 50:

- a. The RAP shall be tested by an approved laboratory and certified to be 100% free of Wappinger Dolomite as defined by the New York State Department of Transportation.
- b. A maximum of 20% RAP may be used.
- c. A separate mix design for the RAP mixture must be submitted to the Town Engineer for approval. The resultant mixture of reclaimed asphalt pavement (RAP), new aggregates and asphalt cement must meet all material and Marshall Properties as specified for Item 18403.1933.

In addition, the Contractor will supply the Town Engineer with the following information:

- d. Gradation and Asphalt content of the RAP.
- e. Penetration of recovered asphalt cement.
- f. New aggregate blend percentages.

ITEM NO. 50 RUT AVOIDANCE ASPHALT CONCRETE, TYPE 7FRA TOP COURSE

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- g. RAP/new aggregate blend percentages.
- h. Combined aggregate gradations.
- i. Total asphalt demand.
- j. Percent of new asphalt required.
- k. Penetration blending chart and grade on new asphalt selected.

As well as a summation of the established job mix formula which contains the following:

- l. Gradation of the recycled mixture.
- m. Percentage of RAP added.
- n. Percentage of new aggregate added.
- o. Optimum asphalt cement content from graphs.
- p. Added asphalt cement content.
- q. Grade of added asphalt cement.

Once the job mix formula is established and approved by the Town Engineer, all mixtures furnished for the project shall conform thereto. If any of the materials used to develop the original job mix formula change (RAP source or stockpile, new aggregates, asphalt cement) the Contractor will be required to submit a new mix design based upon the properties of the materials presently being used.

The Contractor's attention is directed to the relative flat profile roadway grades which may be encountered necessitating accurate control of the paving of the Top Course to provide proper drainage along the roadway.

The bituminous paving machine used shall be equipped with an electronic grade control system.

Prior to the placement of the top course, the Contractor shall clean the existing surface in accordance with the requirements of Item 63, Cleaning Existing Pavement.

No additional payment will be made for cleaning the existing surface. The cost is to be included in the unit price bid for Items 50.

ITEM NO. 50 RUT AVOIDANCE ASPHALT CONCRETE, TYPE 7FRA TOP COURSE

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Prior to paving the Contractor shall paint and seal all surfaces of curbs, aprons, gutters, castings, pavement edges, joints, or other surfaces adjacent to the areas to be paved with bituminous material in accordance with Item 53, Applying Bituminous Materials (Tack Coat) of these specifications.

No additional payment will be made for furnishing and applying the required bituminous materials. The cost is to be included in the unit price bid for Item 50.

Directly ahead of paving, the Contractor shall Tack Coat the existing pavement surface in accordance with Item 53, Applying Bituminous Materials (Tack Coat) of these specifications.

No additional payment will be made for furnishing and applying the required Tack Coat. The cost is to be included in the unit price bid for Items 50.

**3. METHOD OF MEASUREMENT:**

The quantity to be paid for under this Item shall be the number of tons of compacted material satisfactorily furnished, placed and incorporated in the completed work in accordance with the plans, specifications and orders of the Town Engineer.

**4. BASIS OF PAYMENT:**

The unit price bid per ton for this Item shall include the cost of furnishing all materials including the bitumen, the mixing, transporting, cleaning the existing surface in accordance with Item 63, Cleaning Existing Pavement, painting and sealing, and tack coating in accordance with Item 53, Applying Bituminous Materials (Tack Coat), placing, compacting, any mix designs and job mix formulas, quality control testing, and all laboratory tests and reports, repair of any area found not to be in conformance with the specifications, and all other incidentals required for satisfactory completion of the work.

END OF SECTION

ITEM NO. 50 RUT AVOIDANCE ASPHALT CONCRETE, TYPE 7FRA TOP COURSE

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ITEM NO. 51 PAVEMENT PATCHES

**1. DESCRIPTION**

- A. The work under this item includes the replacement of failed pavement with: 4-1/2" Asphalt Concrete Type 1-Base Course for residential roads and 6" base course for commercial roads; 2-1/2" Asphalt Binder Course Type 3; and 4-1/2" Asphalt Top Course Type 6 for residential roads and 6" top course for commercial roads. The work shall be done in accordance with the Specifications and as directed by the Engineer. Some areas of failed pavement may be as small as five feet by five feet. Item 51 is also responsible for asphalt restoration along new curb or utility installation.

**2. MATERIALS**

- A. Item No. 55 Asphaltic Concrete Type 1-Base Course.
- B. Item No. 52 Asphaltic Concrete Binder Course Type 3
- C. Item No. 50 Asphaltic Concrete Top Course Type 6
- D. Item No. 53 Tack Coat

**3. CONSTRUCTION DETAILS**

- A. The outline of the failed pavement area shall be cut at the locations directed by the Engineer. The outline shall be rectangular with two of the sides at right angles to the direction of traffic. Edge between existing and removed asphalt shall be cut to provide a clean uniform edge.
- B. The existing pavement, base and subgrade will be excavated to the depth required for the proposed base, binder course and top course. Any additional excavation to remove unsuitable subgrade soils or additional thickness due to existing pavement construction shall be performed at the direction of the Engineer.
- C. All excess material must be removed immediately from the project limits.
- D. The base material shall be placed on a prepared subgrade and compacted to a minimum dry density of not less than 95% of maximum dry density as determined by ASTM D-1557.
- E. A tack coat, meeting the requirements of Item No. 53., shall be applied to the vertical faces of the excavation.
- F. Open, unattended excavation for the base course shall not be permitted. The excavation, backfilling, grading, and placement of asphalt surface shall be

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completed in the same day.

G. Seam between new and existing asphalt surface shall be sealed with “AC”.

H. The contractor shall provide this item to the Town in accordance with a schedule specified by the Superintendent of Highways. Significant deviation from this schedule may cause disqualification of the contractor from providing this item at the discretion of the Highway Superintendent.

**4. METHOD OF MEASUREMENT**

The quantity to be paid for shall be the actual number of square feet of pavement repaired, per location measured in place in accordance with the Specifications. A job may also include several separate locations.

**5. BASIS OF PAYMENT**

The unit price bid for this item shall include all labor, equipment, and material required to saw cut the patch perimeter, excavate for the placement of base course, placing of the base course and the asphalt concrete surface, fine grading, tack coating, disposal of excess materials and debris and all other incidentals required to complete the work.

END OF SECTION

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ITEM NO. 51A CONCRETE/COMPOSITE ROADWAY PATCHES

**1. DESCRIPTION**

The work under this item includes the cutting out (by an approved means), removal, lawful disposal and restoring to full depth of failed concrete or composite patches replacement on New York State, Suffolk County, or Town Highways using calcium chloride as an accelerant.

Work under this item may also be done by cutting out (by an approved means) removal, lawful disposal and restoring (a composite Road) bituminous surfaces with concrete base on New York State, Suffolk County, or Town highways using calcium chloride as an accelerant.

Note that typical restoration for composite roads requires that the asphalt be cut back an additional foot on all sides of the patch. This shall be deemed to be included in this item.

The work shall be done in accordance with the Specifications and as directed by the Engineer. Item 51A is also responsible for concrete or composite roadway restoration along new curb or utility installation.

**MATERIALS**

The concrete/composite roadway patch shall, where required and applicable, consist of the following:

Item No. 4-P Recycled Concrete Aggregate

Item No 50 Asphalt Top Course Type 6

Item No. 52 Asphaltic Concrete Binder Course Type 3

Item No. 53 Tack Coat

Item No. 74 Painted Lines

Item No. 116 Pavement Markings

Item No. 51-AR Reinforcement

Item No. 51-A Concrete used in Roadway Replacement

Concrete used in Roadway Replacement shall conform to the following specifications:

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- A. All materials and work performed on all highways must be in accordance with the latest specifications of New York State Department of Transportation (NYSDOT) Standard Specifications 501-503 for concrete pavement.
- B. Bituminous joints shall be placed to conform with the existing expansion joints.
- C. All patches shall be made using a high early strength cement with calcium chloride added as an accelerant. Only a true Portland cement can be used.
- D. The concrete pavement patches shall consist of a mixture of Portland cement, fine and coarse aggregate (measured separately) with calcium chloride and an air entraining being added.
- E. All materials used such as Portland cement, fine and coarse aggregate, water, joint fillers, calcium chloride, etc., shall meet the requirements given in the DETAILED SPECIFICATIONS OF THE STATE OF NEW YORK, UNDER MATERIALS OF CONSTRUCTION.
- F. The concrete shall be composed of one part of High Early Strength Portland Cement, one part of fine and two and one-half parts of coarse aggregate (stone, not gravel) measured separately.
- G. The proportions may be varied by the Engineer, but the total amount of coarse aggregate shall not be varied by more than ten percent from the amount indicted.
- H. The following is the approved mix design per cubic yard for calcium chloride, which will be used on ALL patches:
  - 826 lbs. Portland III Cement
  - 1327 lbs. Coarse Aggregates (3/4 Stone)
  - 1267 lbs. Fine Aggregates (Sand)
  - 99.9 ozs. Air Entraining Agent
  - 30 ozs. Calcium Chloride
- I. At no time shall aggregates be piled upon the ground.
- J. Wheelbarrows or shovels will not be permitted for measuring aggregates. The materials shall be measured separately and accurately, by approved means. An accurate measure shall be provided for water. (The usual means of measuring sand and stone in small quantities is with a wooden box of one (1) cubic foot capacity, that is 1' x 1' x 1'.)
- K. The mixture shall contain only sufficient water to produce a concrete, which will come up and quake when deposited in place, but not enough to cause it to flow.
- L. No concrete shall be mixed while the air temperature is at, or lower than, forty

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degrees F., and no materials containing frost shall be used. Cement or fine aggregates containing lumps or crusts of hardened materials shall not be used. The concrete shall be mixed only in such quantity as is required for immediate use, and any which has developed initial set shall not be used. No concrete is to be placed on a frozen subgrade.

- M. All equipment necessary for the laying of pavement must be on hand and must be inspected and approved before concreting operations are begun. Concrete shall be mixed thoroughly in a batch mixer of an approved type and capacity for a period of not less than two minutes after all material is in the drum, and during this period, the drum shall make not less than fifteen nor more than twenty-three revolutions per minute.
- N. The entire contents shall be removed from the drum before materials are placed therein for the succeeding batch.

**CONSTRUCTION DETAILS**

- A. The contractor shall maintain adequate signs, barricades and flashing lights on all roads under construction. This is in accordance with the standards of the New York State Traffic Commission Manual of Uniform Traffic Control. The contractor shall be responsible for providing maintenance and protection of vehicular and pedestrian traffic associated with this work. Cost included in the price bid. Also, if necessary, a watchman or flagman must be used to protect the public during the course of the construction. No pavement cuts are to be left open overnight except in extraordinary cases, with the contractor assuming full responsibility. All protection devices shall be on job site prior to any actual work being started. Barricades, whether in sidewalk or roadway area, shall have prominently displayed, for police convenience, an address and telephone number of 24-hour availability of someone who will re-establish same, in emergency.
- B. The outline of the failed pavement area shall be cut with a diamond saw at the locations directed by the Engineer. The outline shall be rectangular with two of the sides at right angles to the direction of traffic. Edge between existing and removed asphalt shall be cut to provide a clean uniform edge.
- C. The existing pavement, base and subgrade will be excavated to the depth required for the proposed work. Any additional excavation to remove unsuitable subgrade soils or additional thickness due to existing pavement construction shall be performed at the direction of the Engineer.
- D. The existing pavement, base and subgrade which has been removed and all excess material must be removed immediately from the project limits and will be disposed of lawfully.
- E. All valve boxes and manholes and other castings shall be set to the proper grade

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- before any concrete and/or asphalt replacement is made.
- F. Before any concrete may be placed, each section of the subgrade must be checked and approved. Loose, dry material shall be thoroughly tamped into the subgrade, and all soft or objectionable material be removed from the subgrade, before any concrete is placed. Concrete shall be placed only on a moist subgrade. If the subgrade is dry, it shall be sprinkled with as much water as will be absorbed readily. All structures which project through the pavement shall be cleaned thoroughly to permit adhesion of the concrete. The concrete shall be laid in sections, as directed by the Engineer. The concrete base material shall be placed on a prepared subgrade and compacted to a minimum dry density of not less than 95% of maximum dry density as determined by ASTM D-1557.
  - G. A tack coat, meeting the requirements of Item No. 53, shall be applied to the vertical faces of the excavation, if required, and shall be included in the cost of this item.
  - H. Open, unattended excavation for the base course shall not be permitted. The excavation, backfilling, grading, and placement of concrete/asphalt surface shall be completed in the same day.
  - I. The concrete shall be deposited on the subgrade in successive batches, directly from the mixer. Concrete shall be distributed to the required depth and for the entire width of the slab by shoveling or any approved method, which will preserve the integrity of the mixture. Concrete shall be thoroughly spaded along all joints and on the inside of forms. The concrete shall be struck off by means of a template to the required depth below the surfaces of the finished pavement before the reinforcement is placed.
  - J. Reinforcement, if called for by the Highway Superintendent, the Engineer or representative of governing agency, shall conform to the New York State Specifications. Reinforcement shall include metal reinforcement consisting of No. 6 gauge wire at six (6) inch centers transversely and longitudinally. At the direction of the N.Y.S.D.O.T. Engineer, dowels may have to be placed, some reinforcement may require epoxy coating. Dowels are to be installed as per D.O.T. requirements, i.e., with a doweling jig. Reinforcement is an additional item and will be paid under item 51-AR
  - K. Joints shall be formed as directed by the Engineer. They shall be perpendicular to the surface of the pavement for the full depth of the section and extend in a straight line. All joints shall be tested with a 10-foot straight edge or template immediately after forming and any variation from the true surface shall be immediately corrected.
  - L. The surface of the concrete shall be screeded by means of an approved screed. The screed shall be at least 2 feet longer than the width of pavement and shall be

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- constructed of a channel or angle irons weighing not less than 15 pounds per foot. The screed shall be 10 inches in width and shall be operated by two men. The screed shall be moved forward with a longitudinal and crosswise movement. Tamping shall be done only after screeding and then only where the mortar fails to properly come to the surface by screeding.
- M. After the screeding has been completed, the concrete shall be finished by using a belt of wood not less than 10 or more than 12 inches in width. The belt shall be worked with a longitudinal and crosswise motion.
- N. Necessary hand finishing of joints and surface irregularities shall be done with a wooden float. All ends and edges of the concrete slab shall be rounded with an approved edging tool, to a radius of approximately one-half of an inch.
- O. The surface of the pavement shall be tested, immediately after finishing, with the standard ten foot straight edge laid parallel with the center line of the pavement, and any irregularity exceeding one quarter of an inch shall be immediately corrected to the satisfaction of the Engineer.
- P. After the pavement has been completed, the surface shall be given a finish as nearly as possible matching that of the adjacent existing pavement.
- Q. Forms shall not be removed until the day after the concrete is placed.
- R. Traffic shall be excluded from the concrete by the erection and maintenance of at least seven barricades for the entire period during which the pavement is to remain closed to traffic. All signs, barricades, lights shall be placed in accordance with the standards of New York State Traffic Commission Manual of Uniform Traffic Control Devices, Sub-chapter G. All barricades to be properly lighted at night.
- S. The barricades, whether in sidewalk or roadway area shall be prominently displayed, for police convenience, an address and telephone number of 24-hour availability of someone who will re-establish same, in an emergency.
- T. During threatening weather, the concrete shall be protected with canvas as soon as it is finished. Sufficient canvas to cover shall be provided and available for immediate use.
- U. On patches where calcium chloride is used as an accelerant, the concrete shall be covered by a four-mil thick polyethylene sheet with a two-inch solid closed cell extruded polystyrene insulation board.
- V. The cover, curing and opening period shall be 24 hours for pavement laid between June 1st and September 15th and seven days for pavement laid outside this period when the average temperature is above 45 degrees F. Any concrete

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laid during cold weather is done at the applicant's risk and damaged sections of concrete must be removed and replaced by him at his own expense.

- W. All expansion and construction joints and all cracks shall be sealed before the pavement is open to traffic. The joints and cracks shall be cleaned thoroughly and when they are dry, hot bituminous material shall be poured into them, care being exercised to prevent the bituminous material from spreading over the surface of the pavement for a width of more than one inch on either side of the joint. The bituminous material shall then be covered with coarse sand. This item is deemed to be included in the cost of Item 51-A
- X. For concrete pavement with asphaltic concrete wearing surface, finishing shall be to a broomed surface coincident with the existing concrete pavement. An approved asphaltic concrete surfacing may be applied only upon a cured concrete surface, after an approved tack coat is placed.

The materials shall conform to section 501-503 of the NYSDOT Standard Specifications.

**4. METHOD OF MEASUREMENT**

- A. Asphaltic Concrete Binder Course Type 3: The quantity of Asphaltic Concrete Binder Course Type 3 to be paid for under this item will be the number of cubic feet of material measured in its final compacted position, satisfactorily placed and compacted as required by the Plans and Specification within the payment limits shown on the plans unless otherwise ordered in writing by the Engineer.
- B. Asphaltic Concrete Top Course: the quantity of Type 6 Asphaltic Concrete Top Course Type 6 to be paid for under this item will be the number of cubic feet of material measured in its final compacted position, satisfactorily placed and compacted as required by the Plans and Specifications within the payment limits shown on the plans unless otherwise ordered in writing by the Engineer.
- C. Tack Coat shall be deemed to be included.
- D. Concrete used for Roadway Replacement: the Concrete used for Roadway Replacement to be paid for under this item will be the number of cubic feet of material measured in its final position, satisfactorily placed and installed as required by the Plans and Specifications within the payment limits shown on the plans unless otherwise ordered in writing by the Engineer.
- E. Recycled Concrete Aggregate: the quantity of Recycled Concrete Aggregate to be paid for under this item will be the number of cubic feet of material measured in its final compacted position, satisfactorily placed and compacted as required by the Plans and Specifications within the payment limits shown on the plans unless otherwise ordered in writing by the Engineer.

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- F. Reinforcement: the quantity of Reinforcement to be paid for under this item will be the number of square feet of the final patch measured in its final position, satisfactorily placed as required by the Plans and Specification within the payment limits shown on the plans unless otherwise ordered in writing by the Engineer.
- G. Painted Lines: The quantity of painted lines to be paid for under this item will be the number of linear feet of 4" wide painted lines applied in accordance with specifications.
- H. Pavement marking: Paving Markings shall be measured in linear feet along the centerline and will be based on a 4-inch wide stripe. Computed quantity shall be as follows:

$$\frac{\text{Actual Width of Striping (inched) x linear feet}}{4 \text{ (inches)}}$$

For each pavement symbol, the Contractor shall be paid for a quantity of 100 linear feet under this Item.

**5. BASIS OF PAYMENT**

- A. Asphaltic Concrete Binder Course Type 3 - The unit price bid per cubic feet for Asphaltic Concrete Binder Course Type shall include all labor, equipment, and material required in the placing of the asphalt concrete binder course, fine grading, tack coating, disposal of excess materials and debris and all other incidentals required to complete the work.
- B. Asphaltic Concrete Top Course: The unit price bid per cubic feet for Asphaltic Concrete Top Course Type 6 shall include all labor, equipment, and material required placing of the asphalt concrete top course, fine grading, tack coating, disposal of excess materials and debris and all other incidentals required to complete the work.
- C. Concrete used for Roadway Replacement: the Concrete used for Roadway Replacement to be paid for under this item will be the number of cubic feet and shall include all labor, equipment, and material required to saw cut the patch perimeter, excavate for the placement of base course, compacting of subgrade, placing of the base course and/or full depth concrete roadway, fine grading, screeding and or floating of surface, tack coating, disposal of excess materials and debris and all other incidentals required to complete the work.
- D. Recycled Concrete Aggregate: the quantity of Recycled Concrete Aggregate to be paid for under this item will be the number of cubic feet of material measured in its final compacted position, satisfactorily placed and compacted as required by

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the Plans and Specifications within the payment limits shown on the plans unless otherwise ordered in writing by the Engineer.

- E. Reinforcement: the quantity of Reinforcement to be paid for under this item will be the number of square feet of the final patch measured in its final position, satisfactorily placed as required by the Plans and Specifications within the payment limits shown on the plans unless otherwise ordered in writing by the Engineer.
- F. Painted Lines: the quantity of Painted Lines to be paid for is total footage for this item; it shall include the cost of furnishing all materials including the paint, the mixing, transporting, placing, rolling and all labor and equipment necessary to complete the work.
- G. Paving Marking: the quantity of Paving Marking to be paid shall be the total number of linear feet measured as measured by using the method described in pervious section. The price bid for this Item shall include the cost of furnishing all labor, materials, equipment and all incidentals necessary to satisfactorily complete the work in accordance with these specifications.

H. Payment will be made under:

<b>Item No.</b>	<b>Item</b>	<b>Pay Unit</b>
50	Asphaltic Concrete Top Course	Cubic Feet
52	Asphaltic Concrete Binder Course	Cubic Feet
51-A	Concrete used for Roadway Replacement	Cubic Feet
4-P	Recycled Concrete Aggregate	Cubic Feet
51-AR	Reinforcement	Square Feet
74	Painted Lines	Linear Foot
116	Paving Marking	Linear Foot

END OF SECTION

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ITEM NO. 52 RUT AVOIDANCE ASPHALT CONCRETE, TYPE 3RA BINDER  
COURSE

**1. DESCRIPTION:**

Under this Item, the Contractor shall construct an asphalt concrete binder course upon a previously prepared foundation, conforming to the lines, grades, thickness and cross slopes as shown on the plans or as directed by the Town Engineer.

**2. REQUIREMENTS:**

The requirements for Item 18403.1333, Rut Avoidance Asphalt Concrete, Type 3RA, as listed in the Standard Specifications of the New York State Department of Transportation, shall be used with the following modifications:

Materials

Aggregates

Wappinger Dolomite as defined by the New York State Department of Transportation shall be excluded from use in Item 52.

Reclaimed Asphalt Pavement (RAP)

Reclaimed Asphalt Pavement (RAP) meeting the following may be utilized in Item 52.

1. The RAP shall be tested by an approved laboratory and certified to be 100% free of Wappinger Dolomite as defined by the New York State Department of Transportation.
2. A maximum of 20% RAP may be used.
3. A separate mix design for the RAP mixture must be submitted to the Town Engineer for approval. The resultant mixture of reclaimed asphalt pavement (RAP), new aggregates and asphalt cement must meet all material and Marshall properties as specified for Item 18403.1333.

In addition, the Contractor will supply the Town Engineer with the following information:

4. Gradation and Asphalt content of the RAP.
5. Penetration of recovered asphalt cement.
6. New aggregate blend percentages.

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7. RAP/new aggregate blend percentages.
8. Combined aggregate gradations.
9. Total asphalt demand.
10. Percent of new asphalt required.
11. Penetration blending chart and grade on new asphalt selected.

As well as summation of the established job mix formula which contains the following:

1. Gradation of the recycled mixture.
2. Percentage of RAP added.
3. Percentage of new aggregate added.
4. Optimum asphalt cement content from graphs.
5. Added asphalt cement content.
6. Grade of added asphalt cement.

Once the job mix formula is established and approved by the Town Engineer, all mixtures furnished for the project shall conform thereto. If any of the materials used to develop the original job mix formula change (RAP source or stockpile, new aggregates, asphalt cement) the Contractor will be required to submit a new mix design based upon the properties of the materials presently being used.

The Contractor's attention is directed to the relative flat profile roadway grades that may be encountered, necessitating accurate control of the paving of the Binder Course to provide proper drainage along the roadway.

The bituminous paving machine used shall be equipped with an electronic grade control system.

Prior to the placement of the top course, the Contractor shall clean the existing surface in accordance with the requirements of Item 63, Cleaning Existing Pavement.

No additional payment will be made for cleaning the existing surface. The cost is to be included in the unit price bid for Items 52.

Prior to paving the Contractor shall paint and seal all surfaces of curbs, aprons, gutters, castings, pavement edges, joints, or other surfaces adjacent to the areas to

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be paved with bituminous material in accordance with Item 508, Applying Bituminous Materials (Tack Coat) of these specifications.

No additional payment will be made for furnishing and applying the required bituminous materials. The cost is to be included in the unit price bid for Item 52.

Directly ahead of paving, the Contractor shall Tack Coat the existing pavement surface in accordance with Item 53, Applying Bituminous Materials (Tack Coat) of these specifications.

No additional payment will be made for furnishing and applying the required Tack Coat. The cost is to be included in the unit price bid for paving Items.

**3. METHOD OF MEASUREMENT:**

The quantity to be paid for under this Item shall be the number of tons of compacted material satisfactorily furnished, placed and incorporated in the completed work in accordance with the plans, specifications and order of the Town Engineer.

**4. BASIS OF PAYMENT:**

The unit price bid per ton for this Item shall include the cost of furnishing all materials including the bitumen, the mixing, transporting, cleaning the existing surface in accordance with Item 63, Cleaning Existing Pavement, painting and sealing, and tack coating in accordance with Item 53, Applying Bituminous Materials (Tack Coat), placing, compacting, any mix designs and job mix formulas, quality control testing, and all laboratory tests and reports, repair of any area found not to be in conformance with the specifications, and all other incidentals required for satisfactory completion of the work.

END OF SECTION

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ITEM NO. 53 APPLYING BITUMINOUS MATERIAL (TACK COAT)

1. **DESCRIPTION:** Under these Items the Contractor shall furnish and apply approved bituminous materials of the kinds and quantities specified at the location shown, or as ordered by the Town Engineer.
2. **MIXING AND APPLICATION TEMPERATURES:** Under Item 53, the supplier shall furnish the Town Engineer with data on the temperature - viscosity relationship for each lot of asphalt to be used on the project. These data shall take the form of a graph as approved by the Laboratory and shall cover the range of temperature and viscosity within which the asphalt may be used.
3. **MATERIALS AND METHODS:** All bituminous materials furnished and incorporated in the work under these items shall conform to the requirements of Item 407.0101 Tack Coat as listed in the Standard Specifications of the New York State Department of Transportation.

Bituminous material shall be applied only to surfaces which are dry and clean of all dirt, dust and other foreign material.

The Contractor shall paint and seal all surfaces of curbs, aprons, gutters, castings, pavement edges, joints, or other surfaces abutting or adjacent to the area to be paved with bituminous material.

The Contractor shall apply a tack coat on existing pavement surfaces for the width of pavement, as shown on the plans, or as directed by the Town Engineer.

The tack coat shall be an emulsified asphalt meeting the requirements of CSS-1h, SS-1h or HFMS-2h and shall be applied at a rate of 0.05 to 0.15 gallons per square yard.

The bituminous material shall be applied with an acceptable truck-mounted pressure type distributor capable of maintaining the specified temperature and rate of application and equipped with an in-cab computer. The surface shall be allowed to dry until it is in a proper condition of tackiness (barely sticky to the touch), to receive the asphalt concrete resurfacing course, and be applied only so far in advance of resurfacing course placement as is necessary to obtain this proper condition of tackiness. Until resurfacing course is placed, the Contractor shall protect the tack coat from damage, and conduct the sequence of this application in such manner as to exclude traffic from the tack coated surface. The Contractor shall be responsible for all claims of damage made by residents caused by the tack coat.

4. **BASIS OF PAYMENT:** There is no payment associated with this Item. The total cost of furnishing all labor, materials, tools, equipment, and incidentals

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necessary to satisfactorily complete these Items shall be included in the unit price bid for paving Items.

END OF SECTION

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ITEM NO. 55 ASPHALT CONCRETE TYPE 1, BASE COURSE

**1. DESCRIPTION** – Under this item, the contractor shall furnish and construct a Asphalt Concrete Type 1, Base Course to conform with the details as ordered by the Town Engineer or his representative or as shown in the typical sections on the contract plans and in accordance with the New York State Department of Transportation (NYSDOT) Standard Specifications.

**2. MATERIALS** - The materials shall conform to section 403-02 of the NYSDOT Standard Specifications.

**3. CONSTRUCTION DETAILS**

A. The construction details shall conform to section 403-03 of the NYSDOT Standard Specifications.

B. The contractor shall be responsible for providing maintenance and protection of vehicular and pedestrian traffic associated with this work. Cost included in the price bid.

C. The contractor shall provide this item to the Town in accordance with a schedule specified by the Superintendent of Highways. Significant deviation from this schedule may cause disqualification of the contractor from providing this item at the discretion of the Highway Superintendent.

**4. METHOD OF MEASUREMENT** – The quantity to be paid for under this item will be the number of tons of material placed and compacted in accordance with the specifications and orders of the Town Engineer or his representative.

**5. METHOD OF PAYMENT** – The unit price bid per ton for this item shall include the cost of furnishing all labor, materials and equipment necessary to complete the work, including bitumen, mixing, transporting, placing and rolling.

END OF SECTION

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ITEM NO. 57 ASPHALT EMULSIONS

**1. DESCRIPTION** – Under this Item the Contractor shall furnish and place the required quantity of asphalt emulsion, as determined by the job mix formula, which will be incorporated into the recycled asphalt/aggregate material in order to form the stabilized mixed-in-place recycled base course.

**2. MATERIALS** – The emulsified asphalt furnished shall meet the requirements of Grades CSS-1, CSS-1h, SS-1 or SS-1h as it is described in the NYSDOT Standard Specifications. This will be determined by the job mix formula. The Contractor shall furnish a certified statement from the manufacturer giving analysis of the base asphalt used in the manufacture of the emulsion. The statement shall also certify that the material represented is a true emulsion, passing all the requirements of ASTM and AASHTO tests for the emulsion furnished.

**3. CONSTRUCTION DETAILS** - The contractor shall provide this item to the Town in accordance with a schedule specified by the Superintendent of Highways. Significant deviation from this schedule may cause disqualification of the contractor from providing this item at the discretion of the Highway Superintendent.

**4. METHOD OF MEASUREMENT** – The quantity to be paid for under this item shall be the number of measured gallons of emulsified asphalt determined by the temperature, volume corrections actually furnished, placed and incorporated into the recycled base course. The quantity to be paid for shall not exceed the theoretical yield by more than 5 percent (5%). The number of gallons shall be determined from the original ticket gross weight of the tanker minus the return ticket gross weight after the tanker returned to its terminal and prior to being refilled.

**5. METHOD OF PAYMENT** – The unit price bid per gallon for this Item shall include the cost of all labor, materials, tools and equipment necessary to furnish and place the required quantity of asphalt emulsion which will be incorporated into the recycled asphalt/aggregate material.

The contractor shall provide this item to the Town in accordance with a schedule specified by the Superintendent of Highways. Significant deviation from this schedule may cause disqualification of the contractor from providing this item at the discretion of the Highway Superintendent.

END OF SECTION

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ITEM NO. 59 MILLING OF ASPHALTIC CONCRETE PAVEMENT

1. **DESCRIPTION:** The work under this Item shall consist of removing and salvaging the existing bituminous pavement by milling. The work shall be done in accordance with these specifications and in close conformity to the lines, grades and cross slopes as shown on the plans or as directed by the Town Engineer. The removal and disposal of the milled pavement material beyond the limits of the project shall also be included under this Item. All milling materials from the contract are the property of the Town of Riverhead and such material shall be legally disposed of as ordered by the Town Engineer at no additional cost to the Town.
  
2. **EQUIPMENT:** The milling machine shall be self-propelled, specifically designed for automatically-controlled profiling, and shall be capable of milling without tearing or gouging the underlying surface. The machine shall consist of a cutting drum with carbide or diamond tipped teeth. The teeth shall be spaced on the drum so that the equipment is capable of producing an acceptable surface finish. The drum shall be shrouded to prevent discharge of any loosened material into adjacent work areas or traffic lanes.

The automatic controls shall provide for accurately establishing profile grades at each edge of the machine by referencing from the existing pavement or an independent grade reference, where required, or be capable of automatically maintaining a designated cross slope from a single reference.

The machine shall be equipped with a system to effectively control dust generated by the cutting operation.

Adequate loading and sweeping equipment shall be provided to remove all cuttings from the surface on a daily basis.

Asphalt concrete that cannot be removed by the milling machine, because of physical restraints (i.e., at valves), shall be removed by the Contractor using other methods as approved by the Town Engineer.

3. **CONSTRUCTION DETAILS:**

- a. Milling. The existing pavement shall be broom cleaned of all dirt, dust and other foreign or deleterious materials, prior to milling. The pavement surface shall be removed by cold planing to the depth, width, grade and cross slope as shown on plans or as directed by the Town Engineer. The milling operation shall be performed in a manner to preclude damage to the remaining pavement. The resulting finished pavement should be a reasonably uniform planed surface free of excessively large scarification marks. Transverse and longitudinal faces existing at the end of the work period shall be tapered, in a manner approved by the Town Engineer, in

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order to avoid a hazard for traffic. Windrowing or storing of the salvaged bituminous material on the roadway will only be permitted in conjunction with a continuous pick-up and removal operation. All loose material shall be removed from the pavement by the end of each working day. During non-working hours, the roadway shall be cleared of all materials and equipment. Any valve boxes, manhole covers, frames and grates or any appurtenances that are damaged or misaligned by the Contractor during the milling operation shall be replaced or adjusted at no additional cost to the Town.

Cleanup around valves, castings, grates, etc., and at the face of curbs must be performed prior to the completion of the milling operation.

Where required after milling, the Contractor shall saw cut as directed by the Town Engineer to establish a neat, true joint line of required depth between the existing pavement, walk, driveway, driveway apron, etc. retained and the abutting construction to be placed subsequently.

4. **METHOD OF MEASUREMENT:** The quantity to be paid for under this Item shall be the number of square yards of surface area of pavement milled to the lines, grades and cross slopes as shown on the plans or as directed by the Town Engineer.
5. **BASIS OF PAYMENT:** The unit price bid per square yard for this Item shall include the cost of furnishing all labor, materials, tools and equipment including surface preparation, removing, loading and hauling the milled material to the disposal site, all removals at valves, casting, grates, etc., maintenance and protection of traffic, saw cutting and all other incidentals necessary to satisfactorily complete the work as required. The approximate depth of cut shall be up to and including 4 inches. Depths of greater than 4 inches shall be paid for in the following manner: For each 2 inches or fraction in excess of 4 inches in depth, the pay item shall be increased by 10% per square yard for the area in which the additional depth is found.

END OF SECTION

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ITEM NO. 60 SAW CUTTING EXISTING PORTLAND CEMENT CONCRETE  
AND ITEM NO. 61 SAW CUTTING EXISTING ASPHALT PAVEMENT

1. **DESCRIPTION:** Under these Items the Contractor shall cut existing Portland cement concrete, asphalt or other materials used in pavements, walks, driveways, aprons, etc., preparatory to its removal where and to the lines shown on the plans and/or as directed by the Town Engineer.
2. **METHOD GENERAL:** The work performed under these Items is to establish a neat, true joint line of required depth between the existing pavement, walk, driveway, driveway apron, etc., retained and the abutting construction to be placed subsequently.
3. **METHOD DETAIL: Item 60 - Saw Cutting Existing Portland Cement Concrete** - The equipment to be employed shall be a rotary blade, power driven concrete saw of an approved type and/or sufficient capacity to efficiently accomplish the required work.

The depth of the cut shall be one hundred percent (100%) of the thickness of the existing concrete course but in no case shall this depth of cut be less than one inch (1"). The cut shall be made plumb, to a true line and in such manner as will permit breaking and removal of the abandoned concrete without damage or injury to the sawn face of the cut. Where necessary to obtain the required depth, the saw cutting shall be performed in stages. To avoid damage to the existing concrete to remain, full depth saw cutting may be required.

4. **METHOD DETAIL: Item 61 - Saw Cutting Existing Asphalt Pavement** - For saw cutting existing asphalt pavement, walk, driveway, driveway apron, etc., the above method may be employed except the depth of the cut shall be one hundred percent (100%) of the thickness of the pavement but in no case shall be less than one and one-half inches (1-1/2").

The cut shall be made plumb, to a true line and in such a manner as will permit breaking and removal without damage to the retained pavement. Where necessary to obtain the required depth, the saw cutting shall be performed in stages. To avoid damage to the existing asphalt to remain, full depth saw cutting may be required.

5. **BASIS OF PAYMENT:** There is no payment associated with these Items. The total cost of all labor, materials, tools, equipment and incidentals necessary to satisfactorily complete the required work, including breaking and removal of existing materials, shall be included in the unit price bid for various other Items.

END OF SECTION

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ITEM NO. 62 FURNISHING AND APPLYING CALCIUM CHLORIDE (DUST CONTROL)

1. **DESCRIPTION:** Under this item the Contractor shall furnish and apply liquid calcium chloride for the prevention of dust nuisance. The liquid calcium chloride shall be applied on all projects unless otherwise directed by the Town Engineer.
2. **MATERIALS:** Calcium chloride shall be in the liquid form and shall meet the requirements of the Standard Specifications for Calcium Chloride ASTM Designation D98-90.
3. **APPLICATION:** The Contractor shall treat the roadway with liquid calcium chloride at locations and at times prescribed by the Town Engineer. The liquid calcium chloride shall be applied with an acceptable pressure type distributor or other pressure type equipment capable of maintaining a specified rate of application.
4. **BASIS OF PAYMENT:** There is no payment associated with this Item. The total cost of furnishing all labor, materials, tools, equipment, and incidentals necessary to satisfactorily complete these Items shall be included in the unit price bid for various other Items.

END OF SECTION

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ITEM NO. 63 CLEANING EXISTING PAVEMENT

1. **DESCRIPTION:** Under this Item the Contractor shall clean and prepare the existing pavement surface prior to the application of any tack coat or bituminous materials.
2. **CONSTRUCTION DETAILS:** The existing pavement surface shall be cleaned of all loose material, silt spots, vegetation and all other objectionable material. The cleaning equipment and disposal location of the removed material shall be approved by the Town Engineer. Any standard cleaning method may be approved except water flushing will not be permitted. The use of a power broom or tractor-drawn sweeper is recommended for cleaning the surface.
3. **BASIS OF PAYMENT:** There is no payment associated with this Item. The total cost of furnishing all labor, materials, tools and equipment necessary to complete the work, including the loading, hauling and disposal of all materials and debris, shall be included in the unit price bid for various other Items.

END OF SECTION

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ITEM NO. 70 ASPHALT PRICE ADJUSTMENT

1. **DESCRIPTION:** This item will provide for additional compensation to, or repayment by, the Contractor for increases or decreases in the price of asphalt throughout the life of the Contract. This adjustment will be computed within the prescribed conditions and in conformance with written procedures of the Town.

A. **ELIGIBLE ITEMS.** Price adjustments will be determined for eligible items listed elsewhere in this proposal. No adjustment will be provided for any new items incorporated into the work by orders-on-contract or those items paid for under force account or agreed unit prices. In addition, work ordered by the Town Engineer and performed by the Contractor at his own expense will not be eligible for asphalt price adjustment.

B. **METHOD OF COMPUTATION**

1. **ASPHALT PRICE ADJUSTMENT**

a. The quantity of asphalt (tons) considered for adjustment will be determined by multiplying the quantity of eligible items placed by their conversion factor as listed in the table below.

b. Asphalt price adjustment will be based on the following formulas:

- **When the price increases:**

Asphalt adjustment = ((quantity of asphalt) X (conversion factor)) X ((average posted price)-(asphalt price index price + **\$15.00**))

- **When the price decreases:**

Asphalt adjustment = ((quantity of asphalt) X (conversion factor)) X ((average posted price)-(asphalt index price - **\$15.00**))

Where the:

*Asphalt Index Price.* A fixed price per ton of asphalt. This price is used solely as a base from which to compute asphalt price adjustments. Its dollar amount is specified in the asphalt price adjustment note, as listed in the table below.

*Average Posted Price.* The average FOB terminal price for Performance Graded Binder Type 64-22 or approved equal, without

ITEM NO. 70 ASPHALT PRICE ADJUSTMENT

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anti-stripping agent, will be determined by the Town monthly, based on prices of the New York State Department of Transportation (NYSDOT) approved primary sources of performance graded binder as posted on the New York State DOT Website.

The asphalt price adjustment will be based solely on the price changes for asphalt as determined by the above formulas. No consideration will be given to the situation where an individual supplier's price exceeds the Average Posted Price, nor shall any adjustment be made unless the Average Posted Price is either \$15.00 greater than or less than the Asphalt Index Price.

2. **METHOD OF MEASUREMENT:** The necessary (NEC) lump sum shown in the proposal for this item shall be considered the price bid, although actual payment will be based on the work performed. The NEC lump sum is not to be altered in any manner by the bidder.
3. **BASIS OF PAYMENT:** The actual asphalt price adjustment will be made every thirty (30) days and will be based on the methods of computation previously described in this specification. No adjustments, either positive or negative, will be made until payment of the final estimate.

The adjustment will be based on the quantity of eligible items placed and the Average Posted Price in effect for that thirty (30) day period. The index price which shall apply to the contract shall be **\$612/ton** as posted on the NYSDOT web site (<https://www.dot.ny.gov/main/business-center/contractors/construction-division/fuel-asphalt-steel-price-adjustments>) for NYSDOT Average Posted Prices for Asphalt (Performance Graded Binder), April 2023.

**ASPHALT PRICE ADJUSTMENT**

**ITEMS ELIGIBLE FOR ASPHALT PRICE ADJUSTMENT**

Item No.	Description	Conversion Factor <sup>1</sup>
49	Rut Avoidance Asphalt Concrete Type 6FRA Top Course	0.067 (0.059)
52	Rut Avoidance Asphalt Concrete, Type 3RA Binder Course	0.049 (0.036)
Note 1: <b>“Conversion Factor”</b> for computation of the quantity of asphalt cement considered for adjustment shall be the target asphalt cement content as established in the approved design mix submitted by the Contractor and approved by the Engineer. The Conversion Factors displayed in the Table (above) shall be the maximum allowed. “Conversion Factors” in parenthesis are for use with “reclaimed Asphalt Pavement (RAP).”		

END OF SECTION

ITEM NO. 70 ASPHALT PRICE ADJUSTMENT

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ITEM NO. 74 PAINTED LINES

**1. DESCRIPTION** – Under this item, the Contractor shall furnish and apply white or yellow painted lines (4” wide) in patterns and locations indicated on the plans and in accordance with these specifications, or as directed by the Engineer.

**2. MATERIALS AND CONSTRUCTION DETAILS** – Construction methods and materials shall conform to the applicable requirements of Section 640-Reflectorized Pavement Marking Paints of the New York State Department of Transportation Standard Specifications, latest revision.

**4. METHOD OF MEASUREMENT** – The quantity to be paid for under this item will be the number of linear feet of 4” wide painted lines applied in accordance with specifications.

**5. BASIS OF PAYMENT** – The unit price bid per foot for this item shall include the cost of furnishing all materials including the paint, the mixing, transporting, placing, rolling and all labor and equipment necessary to complete the work.

END OF SECTION

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ITEM NO. 100 BITUMINOUS SURFACE TREATMENT

1. **DESCRIPTION** – This work shall consist of the construction of a single or double course of bituminous surface treatment in accordance with these specifications.
2. **MATERIALS**
  - A. The materials required for the surface treatment shall meet the requirements of Section 410-2 Bituminous Materials in the Standard Specifications of the New York State Department of Transportation (NYSDOT).
  - B. The materials shall meet the requirements for NYSDOT material specification 702-3101, NYSDOT Item No. 618.3101 Anionic Asphalt Emulsions (Grade R-2).
  - C. Material shall be RS-2 by Martin Asphalt Company or approved equal.
3. **CONSTRUCTION DETAILS**
  - A. All work shall be executed as described in Section 410 of the Standard Specification of the New York State Department of Transportation.
  - B. The contractor shall provide this item to the Town in accordance with a schedule specified by the Superintendent of Highways. Significant deviation from this schedule may cause disqualification of the contractor from providing this item at the discretion of the Highway Superintendent.
4. **METHOD OF MEASUREMENT** – Bituminous surface treatment will be measured by the number of square yards of compacted material in place per course making no deductions for minor untreated areas such as catch basins and manholes. The bituminous material will be measured by the number of gallons used.
5. **BASIS OF PAYMENT** – The unit price per square yard shall include the cost of furnishing the bituminous material, aggregate, all labor and all equipment necessary to complete the work.

END OF SECTION

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ITEM NO. 104 ASPHALT EMULSION SLURRY

**1. DESCRIPTION** – The work covered by this specification consists of furnishing all material, labor, equipment and labor in performing all operations necessary in connection with application of slurry seal surface on the designated area in complete and strict accordance with the specifications.

**2. MATERIALS** – The asphalt emulsion shall be SS-1, SS-1h, CSS-1 or CSS-1h as Polymer-Modified Asphalt Emulsions in accordance with 618-2 of the New York State Department of Transportation Standard Specifications (grade specified by the Town Engineer or his representative). The contractor shall be equipped to prevent water from entering the emulsion. The contractor shall be provided if necessary to prevent freezing. Mineral aggregate shall consist of natural or manufactured crushed stone or slag. The aggregate shall be clean and free from organic matter.

**3. CONSTRUCTION** – The asphalt emulsion slurry treatment shall not be applied if either the pavement or the air temperature is 55 degrees or below and falling. The mixture should not be applied if high relative humidity prolongs the curing time beyond a reasonable time as determined by the Town Engineer or his representative. At least three days prior to the start of slurry application of job mix formula for the slurry mixture shall be submitted to the Town Engineer or his representative for approval. No slurry shall be applied until such approval is received in writing from the Town Engineer or his representative. The job mix formula shall include the following:

1. Sieve analysis of aggregate used.
2. Percent and type of mineral filler.
3. Percent water.
4. Percent of asphalt emulsion.
5. Unit weight of dry aggregate both loose and compacted.
6. Sample mixes should be evaluated as to their setting time, mixing characteristics, resistance to rain and abrasion. The results of wet track abrasion should be included.
7. Observed effects of moisture content on the specific weights of the test aggregate.

The amount of asphalt emulsion to be blended with the aggregate shall be that as determined by the laboratory report after final adjustments in the field. A minimum amount of water shall be added a necessary to obtain a fluid mixture. The rate of application shall be a minimum of ten pounds per square yard, but not greater than fifteen pounds per square yard. The rate shall be based on dry aggregate weight for normal aggregates. The Town Engineer or his representative shall give final approval to the design and rate of application used. Immediately prior to the application of the tack coat or the slurry seal, the surface of the pavement and all crack faces shall be wetted thoroughly with water. All surfaces shall be in a uniformly damp condition and no free water will be allowed on the surface of in the cracks when the tack coat or a slurry seal is applied. On old dry bituminous pavements a tack coat shall be applied. The slurry seal mixture shall be prepared in a slurry mixer. The mixer shall be charged with materials in

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the proportions specified in the following order: water, aggregate, and asphalt emulsion. The mixing cycle shall be sufficient to produce a uniform coating of the aggregate. It shall be continued until the slurry mixture is discharged into the spreader box. The spreader box for placing the slurry mixture shall be towed by or be an integral part of the mixer truck and capable of maintaining a uniform speed. The slurry mixture shall be chuted into the moving spreader box at a sufficient rate to maintain an ample supply of the mixture across the full width of the strike-off squeegee at all times.

The contractor shall provide this item to the Town in accordance with a schedule specified by the Superintendent of Highways. Significant deviation from this schedule may cause disqualification of the contractor from providing this item at the discretion of the Highway Superintendent.

**4. METHOD OF MEASUREMENT** – Asphalt emulsion slurry will be measured by the number of square yards of material in place making no deductions for minor untreated areas such as catch basins and manholes.

**5. BASIS OF PAYMENT** – The unit price per square yard shall include the cost of furnishing and installing the emulsion slurry, all labor, and all equipment necessary to complete the work.

END OF SECTION

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ITEM NO. 106 LATEX MODIFIED SURFACE TREATMENT

**1. DESCRIPTION** – The work covered by this specification consist of furnishing all material, labor, equipment and labor in performing all operations necessary in connection with application of a latex modified asphalt pavement course on the designated area in complete and strict accordance with the specifications. Contractors are required to submit the following information with bids.

- A. A letter of availability
- B. A typical analysis of Ralumac Emulsion
- C. A certified mix design from Koch Materials, Inc.

**2. MATERIALS** – The asphalt emulsion shall be produced by Koch Materials, Inc. or equal and meet the following requirements:

Viscosity, Saybolt Furol @ 77 Seconds	20-100
Storage Stability Test, 1 Day	1.0
Particle Charge	Positive
Sieve %	0.1%
Residue by distillation, %	62
Mixing Test (a)	
Breaking Time (sec)	40-120
Set Time (min)	10
Set/Cure Direction	Bottom to Top
Cohesion (Min)	20
% Polymer (b)	3.0
Test on residue from distillation @ 350 F	
Penetration, 77 F 100g 5 sec	40-80
Ductility, 77 f 5cm/min.cm	60
Absolute viscosity @ 140 F-Poise	8000
Solubility in trichloroethylene	97.5
Softening Point, night & ball, F	140

All mixing tests shall be performed using approved job aggregate and materials. Polymers shall not be post added to the finished emulsion. All polymers shall be incorporated during the milling process at the producer's manufacturing facility. AASHTO T 59 modified to maintain a 350 F +/- 10 F Maximum temperatures for 15 minutes.

The asphalt emulsion shall meet the requirements of the department's specification. The contractor shall be equipped to prevent water from entering the emulsion. The contractor shall be equipped to prevent water from entering the emulsion. Suitable heat shall be provided if necessary to prevent freezing. Mineral aggregate shall consist of natural or manufactured crushed stone or slag.

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The aggregate shall be clean and free from organic matter. The combined aggregate and mineral filler shall have a sand, slag, crushed fines, crushed stone. Sand or less than 1.25% water absorption, as tested by ASTM C-128 shall not exceed 50% of total aggregate. Sand shall exhibit an equivalent value sixty-five or more when tested in accordance with ASTM D-2419.

The aggregate shall have a weighted loss of not more than 15% when the sodium sulfate test is used or 20% when the magnesium sulfate test is used.

The aggregate wear, from resistance to abrasion, shall be a maximum of 35% when tested in accordance with ASTM C-131.

Water shall be potable and free of salts.

Before work begins the contractor shall submit a signed mix design report covering the specific materials to be used on the project. This design shall be performed by the emulsion producer. Once the materials are approved, no substitutions will be permitted unless first tested and approved by emulsion producer and the Town Engineer or his representative.

Koch Materials, Inc. shall develop the job mix design and present certified test results for the Town Engineer's approval. Compatibility of the aggregate and emulsion shall be verified by Marshall Stability of 1,800 pounds and a flow of 6 to 16 units when tested according to ASTM 1559 or AASHTO 2450 procedure. All representatives of material proposed by the contractor for use on the project.

The component materials shall be within the following limits:

Residual Asphalt	-5% to 9% by dry weight of asphalt
Mineral Additive	-0.5% to 3% by dry weight of aggregate
Latex Modifier	-minimum 3% by weight of asphalt cement
Field Control Additive	-as required to provide specified properties
Water	-as required to provide specified consistency

<u>Aggregate Size</u>	
<u>Sieve Size</u>	<u>% Passing</u>
3/8"	100
No. 4	90-100
No. 8	65-90
No. 16	40-65
No. 30	25-45
No. 60	15-30
No. 100	10-21
No. 200	5-13

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Submittals: Letter of availability, typical analysis of Ralumac emulsion and certified mix design from Koch Materials, Inc.

**3. CONSTRUCTION**

- A. All equipment, tools and machines used in the performance of this work shall be maintained in satisfactory working order at all times. Descriptive information on the mixing and application equipment to be used shall be submitted for approval not less than ten days before work starts.
- B. Mixing equipment shall be a continuous flow mixing unit able to accurately deliver and proportion the aggregate, emulsified revolving multi-blade mixer and discharge the thoroughly mixed product on a continuous flow basis. The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, adequate supply to the proportioning controls.
- C. Proportioning devices shall proportion each material to be added to the mix calibrated and properly marked. They shall be accessible for ready calibration and be quipped with a revolution counter or similar device so that the Town Engineer or his representative may determine the amount of each material.
- D. Emulsion pump shall be a heated positive displacement type.
- E. Spreading equipment shall be a mechanical squeegee type box, equipped with paddles to agitate and spread the materials throughout the box. The equipment shall provide sufficient turbulence to prevent the mix from setting in the box or causing excessive side buildup lumps. Flexible seals shall be in contact with the road to prevent loss of mixture from the box. The rear seal shall act as a final strike off and shall be adjustable. The contractor shall operate the spreading equipment in such a manner to prevent the loss of mixture on super elevated curves. The mixture shall be spread to fill cracks and minor surface irregularities and leave a uniform skid-resistant surface without causing skips, lumps or tears in the finished surface.
- F. The roller if required shall be a self propelled, 10 ton pneumatic tire roller capable of exerting a contact pressure during rolling of 50 pounds per square inch.
- G. Other tools such as brushes, squeegees, hoses, tank trucks, blowers, barricades, etc. shall be provided by the contractor.
- H. Each mixing unit shall be calibrated in the presence of the Town Engineer previous calibration documentation covering the exact materials to be used may be acceptable provided they were made during the calendar year.
- I. The material shall be spread only when the road surface and atmospheric temperatures are at least 45 degrees F and rising and the weather is not foggy or rainy and there is no forecast of temperatures below 32 degrees F within 48 hours from the

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time of placement of the mixture.

- J. The area to be surfaced shall be thoroughly cleaned of vegetation, loose aggregate, dirt, grease, oil or any other objectionable surface film. Manholes, valve boxes and other service entrances will be protected from surfacing materials. This work shall be performed by others.
- K. Cracks in the surface shall be sealed with a crack sealer prior to the resurface operation. This work shall be performed by others.
- L. The finished surface shall present a uniform and skid resistant texture satisfactory to the Town Engineer or his representative.
- M. The contract shall permit the Town Engineer to take samples of the aggregate and asphalt emulsion for testing. If any two successive tests fail, the job shall be stopped, the contractor shall bear cost of test and the contractor shall bear the cost of inadequate work already in place.
- N. The contractor shall be responsible for providing maintenance and protection of vehicular and pedestrian traffic associated with this work.

**4. METHOD OF MEASUREMENT** – The quantity to be paid for under this item shall be the number of square yards of pavement covered in accordance with the specification.

**5. BASIS OF PAYMENT** – Payment shall be made at the contract unit price per square yard for Item 106. The price shall be full compensation for furnishing all materials, for preparing, mixing and applying these materials, traffic control and all labor, equipment, tools and incidentals necessary to complete the work under Item 106.

END OF SECTION

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ITEM NO. 108 VINYL COATED CHAIN LINK FENCING AND GATES

**1. DESCRIPTION** - Under this item the Contractor shall furnish and erect chain link fencing and gates with vinyl-clad galvanized steel fabric and galvanized standard full-weight steel posts embedded in concrete footings. The fencing and gates shall be of four, six or eight foot height in the size and the location shown on the plans or ordered by the Engineer. Single gates shall be three feet nominal width and double gates shall be eight feet nominal width.

**2. MATERIALS**

A. Fence fabric shall be black vinyl-clad galvanized open hearth steel wire of No. 9 gauge core, coated to 6 gauge having a minimum tensile strength of 70,00 lbs. per square inch helically woven in a two (2) inch chain link diamond pattern. The fabric shall meet the minimum requirements of AASHTO M181 Chain Link Fence, latest revision for Type IV Fabric. The height of the fabric shall be as specified by the Pay Item No... For example, Item 108-4' shall be mean a vinyl coated chain link fence 4' high. The top and bottom selvage of the fabric shall be twisted and barbed or knuckled as required by the Town Engineer.

B. Vinyl shall be polyvinyl chloride meeting the following requirements:

- i. Specific gravity shall be minimum of 1.30 tested in accordance with ASTM D-792.
- ii. Hardness shall have a minimum durometer reading of A-95 in accordance with ASTM D-676.
- iii. Ultimate elongation shall be 275% in accordance with ASTM D-412.
- iv. Tensile strength shall have a test minimum of 3,300 psi in accordance with ASTM D-412.
- v. Vinyl shall be dense and impervious covering free of voids, having a smooth lustrous surface without pinholes, bubbles or voids, rough or blistered surface.
- vi. The vinyl coating shall be plasticized and unfilled polyvinyl chloride (PVC) with non-migratory low temperature plasticizer shall not support combustion and shall be effective insulation for 12,000 volts. Pigment system shall be stabilized and tested to withstand minimum Weather-O-Meter 1,000 hour test without visible fading, discoloration or other deterioration. The vinyl covered wire shall withstand an accelerated aging test of 2,000

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hours at 14 degrees F without cracking or peeling. The vinyl shall have a specific gravity of not less than 1.3, hardness not less than Durometer A-95, minimum tensile strength of 3,300 psi, elongation of 275% maximum deformation of 15% at 12 degrees C. (U.L. Test) under 500 gram load and compression cut-through of 1,800 psi. The vinyl covering shall, in addition, withstand prolonged exposure to:

1. Sea Water at 10 degrees F.
  2. Salt solutions: CaCl<sub>2</sub>, NH<sub>4</sub>NO<sub>3</sub>, NaCl, CuCl<sub>2</sub>, CuSO<sub>4</sub>, SnCl<sub>2</sub>, HCl, and others.
  3. Alkalis: Sodium, magnesium, calcium, barium, ammonium, hydroxide and others.
  4. Acids: Dilute sulphuric, nitric, hydrochloric, acetic, boric, carbonic, citric acids and others.
  5. Petroleum products, mineral oils and fats.
  6. Fungus inducing atmospheres.
- vii. The vinyl shall be hot extruded (not sprayed or dipped) over the galvanized steel wire by the Thermal Extrusion process under pressure to 5,000 psi to insure a dense and impervious covering free of voids having a smooth lustrous surface appearance. The wire shall be vinyl clad before weaving, and shall be free and flexible at all joints.
- viii. Fittings – Fittings.
- ix. Fittings shall be manufactured of weldable steel, malleable iron, cast steel, cast iron, or aluminum alloy.
1. Weldable Steel. Weldable steel shall be commercial quality or better, produced by one of the following processes: Open-Hearth, Electric Furnace, or Basic Oxygen.
  2. Malleable Iron. Malleable Iron shall conform to the requirements of ASTM A47M. The Grade shall be Grade 225010 or Grade 22018.
  3. Cast Iron. Cast iron shall conform to the requirements of ASTM A48, Class No. 30.

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4. Cast Steel. Cast steel shall conform to the requirements of steel castings shall conform to the requirements of ASTM A27M. All steel castings shall be Grade 485-275 Class 1.
5. Aluminum Alloy. Aluminum alloy shall meet the material requirements of the Appropriate ASTM standards.

x. Vinyl Coating

1. Fittings and accessories shall comply with the above material requirements and in addition be resin-clad with either an epoxy modified poly (vinyl chloride), or a thermoplastic polyester resin. The coating shall have a minimum thickness of 0.178 mm and shall be of the sample color as the fabric.
2. The epoxy modified poly (vinyl chloride) coating shall be chemically bonded to the fittings and accessories or the fitting and accessory shall be clad with a heavy molecule, saturated, linear thermoplastic polyester resin applied by electrostatic spray and fusing or equal method.

C. Posts and Braces shall be of the type, size, and shape indicated on the detail below or approved equivalent. All materials shall be new and first class and shall not include reconditions thin wall, re-rolled, or open seam pipe. Posts and Braces shall be manufactured by cold-rolling and electric resistance welding of steel strip conforming to ASTM A569 or ASTM A607.

- i. Corrosion protection shall be in accordance with either of the following.
- ii. All tubing shall be thoroughly galvanized on the side and outside surface in accordance with the latest ASTM 120 specification (1.8 oz./sq.ft.).
- iii. Class A, Schedule 40 Pipe – posts, rails and braces shall be standard weight Schedule 40 pipe, manufactured in accordance with ASTM F1083, except that the protective coating system shall be as specified herein.
- iv. Class B, Steel Tubing – Posts, rails and braces shall be manufactured by one of the following methods with the steel conforming to ASTM A569M or ASTM A607 with a minimum yield strength of 50,000 psi:

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1. Furnace butt welded, continuous welded
2. Cold rolled and electric resistance welded
3. Seamless.

Nominal Size <u>Inches</u>	Outside Diameter <u>Inches</u>	Wall Thickness <u>Inches</u>	Weight <u>PLF</u>
1-5/8	1.660	0.111	1.82
2	1.900	0.120	2.28
2-1/2	2.375	0.130	3.12
3	2.875	0.160	4.64
3-1/2	3.500	0.160	5.71
4	4.000	0.160	6.56

D. Protective Coatings - Posts, rails and braces shall be coated with a protective coating system conforming to one of the following depending on structure member:

i. Class A Schedule 40 Pipe; and Class B Steel Tubing.

1. Galvanized Coatings. Galvanized both inside and out in accordance with ASTM F 1083.
2. Combined Coatings.
3. External surface shall be coated with the following combined coating system:
  - a. Hot Dip Galvanizing. The external surface shall be hot-dip galvanized with "Special High Grade" or "High Grade" slab zinc conforming to ASTM B6. The weight of the coating shall be a minimum of 0.80 oz/ft<sup>2</sup>.
  - b. Chromate Conversion Coating. Chromate conversion coating shall be specifically designed for use as a pretreatment of galvanized surfaces. The coating shall be applied prior to the application of the thermoplastic acrylic coating at the manufacturer's recommended rate.

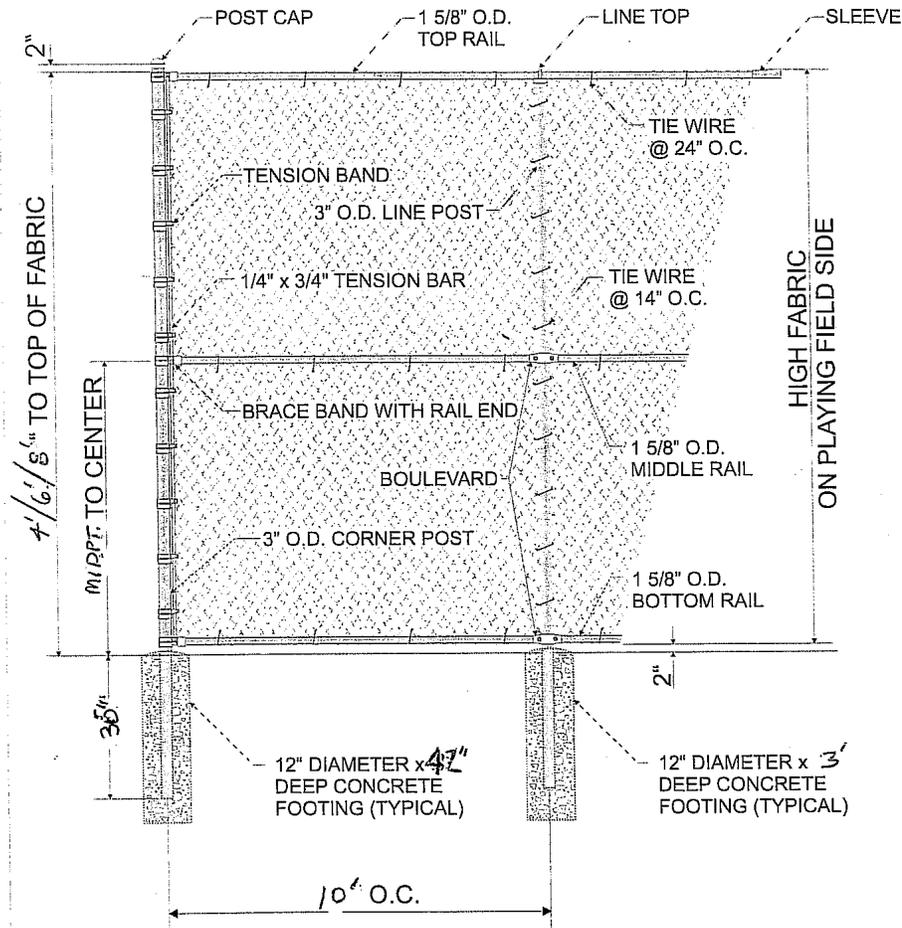
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- c. Thermoplastic Acrylic Coating. A thermoplastic acrylic coating shall be electrostatically applied with a minimum dry film thickness of 0.3 mils.
  4. Internal Surfaces. Zinc coating having a minimum dry film thickness of 0.3 mils. The rich zinc coating shall contain not less than 80% zinc dust by weight and shall be capable of providing galvanic protection.
  5. Vinyl Coating:
    - a. Material Requirements. Posts, rails and braces shall comply with the above material requirements and in addition be resin-clad with either an epoxy modified poly (vinyl chloride), or a thermoplastic polyester resin. The coating shall have a minimum thickness of 0.178 mm and shall be of the same color as the fabric.
    - b. Fabrication Requirements. The epoxy modified poly (vinyl chloride) coating shall be chemically bonded to heated pipe or the pipe shall be clad with a heavy molecule, saturated, linear thermoplastic polyester resin applied by electrostatic spray and fusing or equal method.

**3. CONSTRUCTION DETAILS**

- A. All line posts shall be spaced equidistant in the fence line on a maximum of 10 feet centers. Posts shall be set plumb in concrete bases of the depth and diameter indicated. Line posts shall be set in 8" Dia. X 36" Deep concrete foundations, terminal posts shall be set in 16" dia. X 42" deep concrete footings. The top of the posts shall be brought to a smooth grade line. The concrete for the post holes shall be SCDPW Class B concrete. It shall be cast rough in the ground around the post and the top surface shall be domed to shed water and provide a neat, workmanlike appearance when completed.

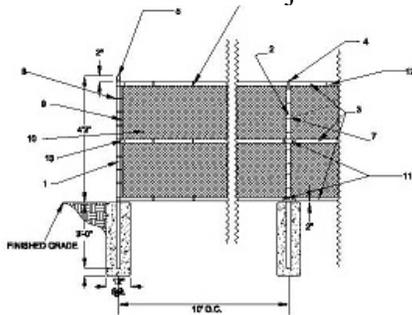
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- B. Terminal posts shall be placed at the following locations: corners, changes in direction, abrupt changes in grade, intervals no greater than 500 feet in the fence line, or as directed by the Engineer. When the fence is on a long curve the intermediate posts shall be evenly spaced so that the strain of the fence will not bend the line posts.
- C. All top rails shall pass through the base of the post caps and shall form a continuous brace from end to end of each stretch of fence. Top rail lengths shall be joined with sleeve couplings with expansion sleeves provided at 100 ft. intervals. Top rails shall be securely fastened to terminal posts by means of approved rail end connectors. Horizontal braces shall be provided at all terminal posts, corner posts and intermediate posts, as shown on the plans, and shall extend from the above-mentioned posts to the first adjacent line post. Braces shall be securely fastened to the line posts by brace ends and brace bands, and to the terminal posts by approved rail end connectors. Diagonal brace rods shall be trussed from the brace end on the line post back to the terminal post, corner post or intermediate post and fastened to it by an approved connector.

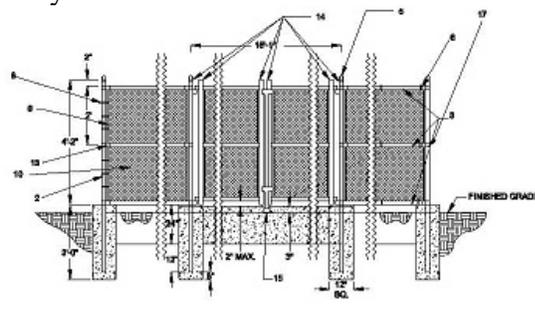
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D. The fabric shall be fastened to the line posts and braces with 9 gauge galvanized vinyl coated clip or an equivalent thereof, spaced not more than 14" on centers. It shall be attached to the toprail, middle and bottom tension wire by means of 12-1/2 gauge galvanized rings or as shown on the plans, spaced not more than 12" on centers. The fabric shall be secured to all corner, gate and terminal posts with tension bars fastened to posts with galvanized steel bands at approximately 12" intervals with all terminal adjustments completely housed.



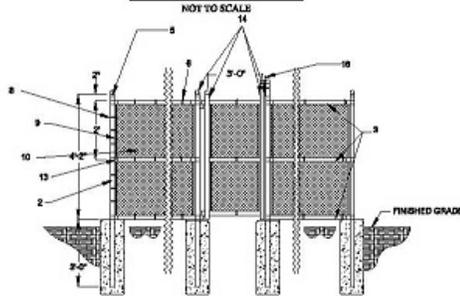
**FENCE DETAIL**

NOT TO SCALE



**DOUBLE LEAF GATE DETAIL**

NOT TO SCALE



**SINGLE LEAF GATE DETAIL**

NOT TO SCALE

1. 3" O.D. CORNER POST @ 78' R.L.F.
2. 3" O.D. LINE POST @ 78' R.L.F.
3. 1 1/2" O.D. RAIL @ 2.578' R.L.F.
4. LINE TOP
5. POST CAP
6. TIE WIRE @ 34" O.C.
7. TIE WIRE @ 14" O.C.
8. TENSION BAND
9. 1/4" X 3/4" TENSION BAR
10. 1/2" X 1/2" X 1/2" CHAIN LINK MESH
11. BOLLIVARD
12. SLEEVE
13. BRACE BAND WITH RAIL END
14. 4" O.D. GATE POST @ 11' R.L.F.
15. PROVIDE HOLE 1" GREATER THAN DIA. OF GATE BOLT, DEPTH MUST BE GREATER BY 1/2" THAN BOLT TRAVEL.
16. AUTO LATCH FOR GATE (LOCATED 54" ABOVE GRADE) FOR ASTM F2049-11, 7.8.2
17. WELD ALL RAILS OF GATE TO FRAME, PAINT ALL WELDS.



PLAN VIEW  
FOOTING  
FOR POSTS

**FENCE AND GATE DETAIL**

NOT TO SCALE

**NOTES**

- ALL CHAIN LINK FENCE CONFORM TO ASTM F2049-11
- ALL POSTS HOT DIPPED GALV.
- CONCRETE FOOTINGS: 3000 P.S.I. @ 28 DAYS. EXPANSION JOINTS 200" O.C. (1:2:4 MIX)
- SINGLE LEAF PEDESTRIAN ACCESS GATES OPEN OUTWARD AWAY FROM THE PLAY ENVIRONMENT, SELF-CLOSING, AND HAVE A SELF-LATCHING DEVICE.
- THE OPENING BETWEEN THE HINGE SIDE OF THE SQUARE FRAME SINGLE LEAF PEDESTRIAN GATE AND THE SQUARE GATEPOST DO NOT CLOSE TO A DIMENSION LESS THAN 1/2 INCH.
- DOUBLE LEAF ACCESS GATES FOR MAINTENANCE SERVICE EQUIPPED WITH A KEY-OPERATED LOCKING DEVICE THAT IS ALWAYS LOCKED.

4. **METHOD OF MEASUREMENT** – The quantity to be paid for under this item will be the number of linear feet of four, six or eight foot chain link fencing or each four, six or eight foot chain link single (three-foot wide) or double (eight-foot wide) gate measured along the bottom of fencing between centers of end posts that are properly furnished and installed in accordance with the requirements of the plans, specifications, details and orders of the Town Engineer.

5. **BASIS OF PAYMENT** - The unit price bid per linear foot of fencing or each single or double gate shall include the cost of furnishing all labor, materials, tools and equipment necessary to satisfactorily complete the work and shall include the

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transportation of, clearing and grubbing, excavation, fill, cement, concrete, line posts, top, mid, and bottom rail, hardware, fencing and all other necessary materials or work.

<b>Payment Item</b>	<b>Item Description</b>	<b>Unit of Measure</b>
108-4'	Vinyl Coated Chain Link Fencing	LF
108-6'	Vinyl Coated Chain Link Fencing	LF
108-8'	Vinyl Coated Chain Link Fencing	LF
108SG-4'	Vinyl Coated Chain Link 3' Single Gate	Ea
108SG-6'	Vinyl Coated Chain Link 3' Single Gate	Ea
108SG-8'	Vinyl Coated Chain Link 3' Single Gate	Ea
108SG-4'	Vinyl Coated Chain Link 8' Double Gate	Ea
108SG-6'	Vinyl Coated Chain Link 8' Double Gate	Ea
108SG-8'	Vinyl Coated Chain Link 8' Double Gate	Ea

END OF SECTION

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ITEM NO. 112 TOPSOIL AND SEED

**1. DESCRIPTION** – This work shall consist of furnishing and placing topsoil and seed at locations shown on the plans or elsewhere as designated by the Engineer in conformance with the lines and grades shown in the contract documents or as directed by the Engineer.

**2. MATERIALS**

A. Topsoil shall be as specified for M47 – Topsoil from Borrow of Part II, Section 6, “Materials of Construction” of the SCDPW Standard Specifications.

B. Fertilizer shall be as specified for M54, type 3; the lime shall be limestone as specified for M52; and seed shall be as required for M58 and as follows:

(A=% Purity; B=Min. % Germination; C= Pounds of Pure Live Seed)

<b>Name</b>	<b>Variety</b>	<b>A</b>	<b>B</b>	<b>C</b>
Red Fescue ( <i>Festuca rubra</i> )	Chewings or Creeping	98	85	50
Tall Fescue ( <i>Festuca elatior</i> <i>Arundinacea</i> )	Alta or Kentucky	97	90	18
Kentucky Bluegrass ( <i>Poa</i> <i>Pratensis</i> )	Commercial	85	75	30
Common Ryegrass (Domestic) ( <i>Lolium perenne</i> ) ( <i>Lolium multiflorum</i> )	Commercial	98	90	20
Alsike Clover ( <i>Trifolium</i> <i>Hybridum</i> )	Commercial Max. 25% hard seed	95	85	4
White Clover ( <i>Trifolium</i> <i>Repens</i> var.)	Ladino Max. 25% hard seed	98	85	3

**3. CONSTRUCTION DETAILS**

A. Preparation of Subgrade - The Contractor shall complete subgrading within the areas to be covered by topsoil by bringing the surface of subgrade to the lines and grades as specified on the plans, or as directed by the Engineer. Where specified or directed, the Contractor shall scarify or till the surface of the subsoil before the topsoil is placed to permit bonding the topsoil layer with the subsoil. Equipment

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shall pass in such a manner that depressions and ridges shall be parallel to the contours. Tillage shall be accomplished by disking, harrowing, raking, or by other approved methods.

- B. Handling Topsoil - If the condition of the soil is unsuitable due to excessive moisture, frost or other conditions, the Contractor shall cease work under this item until the soil is in a suitable condition.
- C. Placing Topsoil - Topsoil shall be placed and spread over the areas shown on the plans, or as directed, to a 4" depth so that the completed work shall conform to the lines, thickness and grades specified. After the topsoil is spread, all large stiff clods, rocks, roots or other foreign matter shall be cleared and disposed of by the Contractor as approved so that the finished surfaces will be acceptable for subsequent work of seeding, sodding, planting or mulching.
- D. Seeding Season - The seasons for seeding shall be March 15 to May 1 and August 15 to October 1 unless otherwise approved. The Contractor shall notify the Engineer at least 48 hours in advance of the time he intends to begin sowing seed and shall not proceed with such work until permission to do so has been obtained. When delays in operations carry the work beyond the dates which are specified, or when conditions of high winds, excessive moisture or ice are such that satisfactory results are not likely to be obtained for any stage of the work, the Engineer will stop the work. The work shall be resumed with the Engineer's approval when the desired results are likely to be obtained or when approved corrective measures and procedures are adopted. When sodding is to be done on the same general areas under the same contract, the sodding shall be done before the seed is sown and equipment used during seeding shall cause no damage to the sodded areas.
- E. Rates - Application rates for turf establishment materials shall be as specified in the contract documents. When no rates for establishing turf are specified in the contract documents, the following shall apply per NYSDOT 610-3.02 A.:

Fertilizer	800 pounds per acre
Seed	85 pounds pure live seed per acre
Mulch	2 tons per acre
Mulch Anchorage	Manufacturer's recommended rate
- F. Limitations - The contractor shall notify the Engineer at least 2 working days before the start of any seeding operation and shall not begin the work until the Engineer has given permission. When sodding and turf establishment are to be done in the same general areas, the sodding shall be done first, and equipment used during turf establishment shall not damage the sodded areas.
- G. Inoculation of Leguminous Seeds - All seeds of leguminous plants requiring inoculation shall be inoculated prior to mixing or sowing unless otherwise

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specified or approved or unless accompanied by a certificate of preinoculation. When seeds requiring inoculation are to be sown dry, the inoculant shall be applied in accordance with its accompanying instructions and the seeds allowed to dry sufficiently for proper handling. Seeds shall be sown within thirty hours after this treatment. When seeds requiring inoculation are to be sown by water pressure, the inoculant may be added to the water and seed mixture, together with limestone and/or fertilizer as specified, providing the pH of the solution does not exceed 8.

- H. Ground Preparation and Seeding - The Engineer prior to seeding shall approve all turf establishment areas. Areas to be seeded with turf seeds shall be maintained at approved grades and irregularities that will hold water shall be eliminated. Weed growth that, in the Engineer's judgment, may adversely affect germination or growth shall be removed or controlled as approved or as directed by the Engineer prior to seeding. Limestone, fertilizer and seeds in the amounts specified shall be evenly distributed on the areas to be seeded. All mechanical equipment used for soil preparation or seeding shall be as approved. Equipment shall pass parallel to the contours unless otherwise approved except that crawler tractors shall pass at right angles to the contours.

The finished surface of any area that is seeded shall not be rougher, more uneven or have more or larger stones, clods, roots, or other foreign materials than the area it adjoins. In built up and residential areas hand raking will usually be necessary to produce the required smoothness and uniformity, particularly where grading and turf establishment is to be adjacent to lawns.

Areas to be seeded shall be scarified sufficiently to break up the surface crust immediately before seeding except where in the judgment of the Engineer, the ground is already loose and friable as immediately following grading. All stones and other objects over two inches in greatest dimension or other sizes as specified shall be removed and disposed of as approved. Unless otherwise specified in the contract documents, only limestone and/or fertilizers may be mixed together with the seeds (including legume inoculants when required) immediately before sowing. Any method of sowing that does not injure the seeds in the process of spreading will be acceptable.

- I. Mulching - Mulch shall be spread uniformly in a continuous blanket of sufficient thickness to hide the soil from view, taking care not to over apply. Mulch may be spread by hand or by machinery. Mulch may be spread before seeding turf but not later than 72 hours after seeding turf unless otherwise approved or directed. Anchorage is required unless otherwise specified in the contract documents. Mulch and mulch anchorage shall be applied separately from seeds unless otherwise specified in the Contract Documents.
- J. Liability - When the Engineer determines that any seeded area has failed for any reason to produce a satisfactorily established turf after a suitable period of time

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has elapsed, the Contractor shall repeat all the work required by this Section until a satisfactory growth of turf has been established. Any work to be corrected shall be at the Contractor's expense. The contract will not be accepted until a satisfactory turf has been established.

- K. Care During Construction - The Contractor shall care for seeded turf areas until final acceptance of the contract. Care shall consist of providing protection against traffic by providing approved warning signs or barricades; and shall consist of repairs to any seeded turf areas damaged by wind, water, fire, traffic or other causes. Damaged areas shall be repaired to re-establish the condition and grade of the area prior to seeding and shall then be refertilized, reseeded and remulched as specified herein.

**4. METHOD OF MEASUREMENT** - Topsoil and Seed furnished and placed shall be measured in square yards after it has been acceptably placed.

**5. BASIS OF PAYMENT** – Topsoil and Seed furnished and placed will be paid for at the unit price bid per square yard of topsoil acceptably furnished and placed, which payment shall include the cost of furnishing all equipment, labor and materials required to complete the work as specified.

END OF SECTION

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ITEM NO. 113 SODDING

**1. DESCRIPTION**

- A. This work shall consist of preparing the sod bed including topsoil, furnishing, delivering, placing, and caring for sod in the locations shown and specified in the contract drawings.

**2. MATERIALS**

- A. Materials for sodding shall meet the following requirements of the sections indicated from the New York State Department of Transportation Standard Specifications (NYSDOT SS):

Water 712-01

Topsoil 713-01

Sod 713-14

Fertilizer as specified in the contract documents. Where not specified, fertilizer shall be 713-03 Type No. 3 or as approved by the Engineer.

**3. CONSTRUCTION DETAILS**

A. Limitations.

- a. The Contractor shall notify the Engineer at least two working days before beginning to place sod. The Contractor shall not begin the work until written permission from the Engineer has been received.
- b. No frozen sod shall be placed nor shall sodding be done when the ground surface is frozen. When frost or excessive moisture are present which will prevent satisfactory results from being obtained for any stage of work, the Engineer will stop the work and it shall be resumed only when allowed by the Engineer.

B. Procuring Sod.

- a. The Contractor shall exercise maximum care to retain the soil existing on the roots of the sod during transporting, handling and transplanting operations. Dumping or dropping of sod from vehicles will not be permitted. Sod shall be planted within twenty-four hours from the time of harvesting, unless it is tightly rolled, or stored roots-to-roots. All sod in stacks shall be kept moist and protected from exposure to the sun and from freezing. The maximum period of time from harvesting to planting shall not exceed forty-eight hours. Sod that is stored on the project site prior to planting shall meet the moisture requirements of 713-14 of the NYSDOT SS at the time of planting.

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C. Ground Preparation.

- a. There shall be a minimum of 2 inches of topsoil under all sod unless otherwise specified. The subgrade of areas to be sodded shall be excavated and firmed to a sufficient depth below the finished grade of the sod to accommodate the tamped or rolled thickness of topsoil and sod.
- b. Fertilizer shall be applied at a rate of 50 lbs of nitrogen per acre unless otherwise specified in the contract drawings.
- c. Fertilizer applied under this work shall be uniformly mixed with the topsoil to a depth of at least 2 inches before the sod is laid, unless otherwise specified or approved.

D. Finished Grade for Sod.

- a. When laid in strips adjacent to paths, pavements, drain inlets and other structures, the finished sod surface shall be flush with surface of the adjacent soil and the adjacent structures. Sod laid in drainage ways, and areas to be continuously or solidly sodded shall meet the finished grades as shown in the contract documents. Grades shall be formed with special care at the junction of drainage ways.

E. Placing Sod.

- a. The soil on which the sod will be laid shall be moist. The soil shall be watered prior to sodding, if so directed. The sod shall be laid smoothly, edge to edge and all openings shall be plugged with sod. In drainage ways and where continuous or solid sodding is indicated and/or specified in the contract documents, the sod shall be laid with the longest dimension parallel to the contours. Sodding shall start at the base of slopes and progress upwards in continuous parallel rows.
- b. Vertical joints between sides shall be staggered. Immediately after laying, sod shall be pressed firmly into contact with the sod bed by tamping, rolling, or by any other method that will eliminate air pockets, provide true and even surfaces, ensure knitting and protect all exposed sod edges, but without damaging or displacing the sod or deforming the finished sod surface. At the time of placing, the sodded areas shall be watered evenly and at a rate of 5 gallons per square yard, unless otherwise directed.

F. Anchoring.

- a. Sod shall be firmly anchored in all drainage ways, on slopes 1 on 2 or steeper, and wherever else specified or directed. Sod shall be anchored immediately after tamping. All anchors shall be driven flush to the ground.

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G. Finishing.

- a. Excess sod or excess soil resulting from the sodding operation shall be disposed of by the Contractor. Excess soil shall not be left to form a ridge adjacent to the sodded area or sodded strips.

H. Care During Construction.

- a. The Contractor shall care for the sodded areas until all work on the entire contract has been completed and accepted. When necessary, such care shall consist of providing protection against traffic by warning signs or barricades. In locations where mowing is specified, the grass shall be mowed until the acceptance of the Contract to a height of 3 inches when the growth reaches a height of 5 inches or as directed.
- b. All sod shall be watered at weekly intervals for a minimum of four weeks following installation and in accordance with 615-3.01 of the NYSDOT SS, unless otherwise specified or directed. Additional watering shall be performed if specified in contract documents. When watered, sufficient water shall be applied to wet the sod at least 2 inches into the sod bed. Watering shall be done in a manner that will not cause erosion or other damage to the finished surfaces. Any surfaces that have settled, become gullied or otherwise damaged shall be repaired at the Contractor's expense to re-establish the grade and conditions of the soil prior to sodding and shall then be re-fertilized and re-sodded as specified under this work.

I. Period of Establishment.

- a. When the Engineer decides that any area that has been sodded fails for any reason to produce a satisfactory turf after a suitable period of time has elapsed, the Contractor shall re-sod such areas in the same manner as specified in the contract until a satisfactory turf has been established. Any work to be corrected shall be at the Contractor's expense. The contract will not be accepted until a satisfactory turf has been produced unless the work necessary to assure satisfactory turf will be done under the provisions of an uncompleted work agreement.

**4. METHOD OF MEASUREMENT**

- A. Sodding including topsoil bed will be measured as the number of square yards of surface area that have been acceptably completed.

**5. BASIS OF PAYMENT**

- A. The unit price bid per square yard shall include the cost of all labor, equipment, materials, including topsoil placed under the sod, watering necessary to establish

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the sod, and necessary excavation, equipment and incidentals necessary to acceptably complete and care for the work as specified.

END OF SECTION

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ITEM NO. 116 PAVEMENT MARKINGS

1. **DESCRIPTION:** Under this Item, the Contractor shall furnish and apply white and/or yellow thermoplastic reflectorized pavement markings at the locations and in the patterns shown on the contract plans and as ordered by the Engineer.
2. **MATERIALS AND METHODS:** Construction details and materials shall conform in every respect to the applicable requirements of Section 687 Thermoplastic Reflectorized Pavement Markings and Section 727 Pavement Marking Materials of the New York State Department of Transportation Standard Specifications of January 2, 1990 as amended, except as modified herein.
3. **METHOD OF MEASUREMENT:** Pavement marking shall be measured in linear feet along the centerline and will be based on a 4-inch wide stripe. Computed quantity shall be as follows:

$$\frac{\text{Actual Width of Striping (inched) x linear feet}}{4 \text{ (inches)}}$$

For each pavement symbol, the Contractor shall be paid for a quantity of 100 linear feet under this Item.

4. **BASIS OF PAYMENT:** Payment shall be made at the unit price bid for the total number of linear feet measured as described above. The price bid for this Item shall include the cost of furnishing all labor, materials, equipment and all incidentals necessary to satisfactorily complete the work in accordance with these specifications.

END OF SECTION

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ITEM NO. 118 EROSION AND SEDIMENT CONTROL

**1. DESCRIPTION** - This work shall consist of furnishing, installing, inspecting, maintaining, and removing soil erosion and sediment control measures as shown on the contract documents or as ordered by the Engineer during the life of the contract to provide soil erosion and sediment control. This work shall be coordinated with the soil erosion and sediment control features specified elsewhere in the contract documents to the extent practical to assure effective and continuous soil erosion and sediment control throughout the construction and post construction period.

- A. Erosion Control - The following items of work are provided in this section to address soil erosion control – mulch, straw/wood fiber mulch, jute mesh.
- B. Sediment Control - The following items of work are provided in this section to address sediment control - strawbale, silt fence, stabilized construction entrance, inlet controls.

**2. MATERIALS** - Unless otherwise stated elsewhere in the contract documents, materials shall be as stated herein.

- A. Mulch – Mulch shall conform to 713-19 for straw and 713-11 for wood fiber mulch per the New York State Department of Transportation Standard Specifications, May 1, 2008 (NYSDOT Standard Specifications).

- B. Seed - Seed shall be ryegrasses (annual or perennial) or cereal grasses suitable to the area and as a temporary cover which will not compete with the grasses sown later for permanent cover.

- C. Strawbale

- a. Strawbales shall meet the requirements of 713-19 of the NYSDOT Standard Specifications.

- b. All bales shall be tightly bound; loose or broken bales will not be accepted. Hardwood stakes shall be at least 1 1/4 x 1 1/4 inches and a minimum of 2 feet long.

- D. Geotextiles - Geotextiles shall meet the requirements of Item 207.12 Geotextile Drainage of the NYSDOT Standard Specifications. UV sensitive geotextiles shall be protected from exposure to sunlight during transport and storage. Specific make and manufacturer shall be as approved by the Engineer.

- E. Drainage Structure Inlet Protection

- a. Drainage structure inlet protection shall be triangular shaped in cross section, and have a height of at least 8 to 10 inches in the center with two equal sides and an 18 to 24 inch base. The triangular-shaped inner material shall be urethane foam. The

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outer cover shall be a woven bedding type geotextile placed around the inner triangle and extend 24 to 36 inches beyond each side of the triangle base.

- b. Other materials may be proposed by the Contractor who shall be solely responsible for their performance.
- F. Silt Fence – The proposed silt fence material must be included in the approved list issued by the NYSDOT’s Materials Bureau. A geotextile sample and specifications for the proposed silt fence shall be submitted to the Engineer for approval. A silt fence assembly shall consist of silt fence geotextile, posts, and fasteners and may include mesh support.
- a. Posts - Posts shall meet the following requirements:
    - i. Either wood, metal, or synthetic posts may be used. Softwood post shall be 1 1/2 x 3 1/2 inches, hardwood post shall be at least 1 1/4 x 1 1/4 inches, steel post shall be "T" or "L" shaped in cross section, with a minimum weight of 1.3 lb/ft.
    - ii. Posts shall be a minimum of 4 feet long and shall be spaced consistent with the material selected.
  - b. Mesh Support – Mesh support shall consist of 14 gauge (min) welded wire mesh with a maximum 6 x 6 inch opening or polymeric mesh. All mesh support shall be a minimum of 30 inches in height.
  - c. Fasteners - Fasteners shall be heavy duty staples, hog rings, tie wires, or any other fastener compatible with the post material.
- G. Mulch Anchorage – Mulch anchorage shall meet the requirements of 713-12, Type A of the NYSDOT Standard Specifications.
- H. Stabilized Construction Entrance – Stabilized construction entrances shall consist of a geotextile, crushed stone or gravel and, if necessary, a drainage pipe to maintain ditch flow.
- a. Geotextile - Geotextile shall meet the requirements of 207-2, Geotextile Stabilization, Strength Class 1 of the Standard Specifications.
  - b. Crushed stone or gravel shall be 6 inches of coarse aggregate material meeting the gradation requirements of size designation #3 on Table 703-4 of the Standard Specifications.
  - c. Drainage Pipe - Contractor shall provide a drainage pipe sized with sufficient capacity to carry ditch flow. The pipe dimension shall be consistent with the modified soil erosion and sediment control plan approved by the Engineer. The drainage pipe may consist of new or used material in satisfactory condition and

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suitable for the intended use. The Engineer will reject any materials determined to be unsatisfactory.

- I. Jute Mesh - Jute mesh shall be a uniform, open, plain weave cloth of undyed and unbleached single jute yarn. The yarn shall be of a loosely twisted construction and it shall not vary in thickness more than one-half its normal diameter.
  - a. Jute mesh shall be furnished in rolled strips and shall meet the following requirements:
    - Width – 48 inches, plus or minus one inch
    - Length – approximately 225'
    - 78 warp-ends per width of cloth (minimum)
    - 41 weft-ends per yard (minimum)
    - Weight shall average 1.22 pounds per linear yard with a tolerance of plus or minus 5%.
  - b. Contractor shall supply U-Shaped staples approximately 6 inches long and one inch wide. Machine made staples shall be or No. 11 gauge or heavier steel wire. Contractor shall supply approximately 100 staples per role of jute mesh.

**3. CONSTRUCTION DETAILS**

A. General

- a. In the event of conflict between these specification requirements and pollution control laws, rules, regulations or permit conditions by other federal or state or local government agencies, the more restrictive laws, rules or regulations shall apply.
- b. The Contractor shall begin earthwork only after receiving written approval from the Engineer for the scheduling of earthwork and work covered under this section.
- c. The Contractor shall designate to the Engineer an erosion and sediment control supervisor with adequate training, experience, and authority to implement and maintain all erosion and sediment control measures.
- d. Perimeter sediment controls shall be installed prior to performing grubbing, excavation, and borrow or fill operations. The Contractor shall limit the area of clearing and grubbing, excavation, borrow and embankment operations in progress, commensurate with their capability and progress in keeping the finish grading, mulching, seeding and other temporary and/or permanent control measures current in accordance with the approved schedule. Under no condition shall earth material exposed by grubbing, excavation, borrow or fill or other work be left without application of temporary or permanent erosion controls for a period of greater than 7 days. The Engineer may determine that a potential for erosion or sediment transport exists and order the Contractor to install temporary erosion controls earlier. When permanent soil erosion and sediment control measures cannot be

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installed due to seasonal or other limitations, temporary soil erosion and sediment control measures shall be installed. Prior to removing or disturbing any erosion or sediment control measure that may be required to be reestablished due to continual grading operations, the Contractor shall verify the proposed progression of operations and the reestablishment of control measures with the Engineer to ensure the continuity of erosion and sediment control.

- e. Sediment control measures shall not be removed without the Engineer's approval.

B. Inspection and Maintenance

- a. Soil erosion and sediment control measures shall be inspected and maintained by the Contractor during the life of the project, including winter shutdown, etc. Such inspection and maintenance shall continue until after the permanent stabilization measures are in place and the temporary control measures are ordered to be removed by the Engineer. The remaining disturbed area shall be permanently stabilized as indicated in the contract documents.
- b. All temporary controls shall be inspected by the Contractor every seven calendar days, after each rainfall of 1/2 inch or more within a 12 hour period, or daily during prolonged rainfall to determine if the measure is functioning as intended. All inspections shall be completed within one calendar day.
- c. Within 3 calendar days from completion of the inspection, the Contractor shall:
  - i. Repair or rebuild the control measure to function as originally intended.
  - ii. Remove sediment deposition which reaches one half the height of the control measure. All sediment deposits shall be considered unsuitable material and disposed of in accordance with 203-3.08 of the Standard Specifications. Material shall be disposed of away from wetlands, water courses or other bodies of water.
  - iii. Torn or punctured silt fence fabric may be repaired by the placement of a patch, on the upstream side, consisting of an additional layer of fabric over the damaged area, or replacement of the damaged section.
  - iv. Where erosion control materials have been used on final grade that have been permanently seeded, the Contractor shall care for the areas until acceptance of the Contract or acceptance of the turf, whichever is later. Where necessary, such care may include, but is not limited to providing warning signs or barricades for protection against traffic. Any surfaces that have settled, become gullied, or otherwise damaged due to the Contractor's operations shall be repaired at no additional expense to reestablish the grade and soil conditions that existed prior to placing erosion control materials.

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C. Temporary Mulch

- a. The Contractor shall have the capability to mulch any disturbed areas on any given day (e.g., those areas where earthwork operations are ongoing, etc.). The Contractor shall apply mulch on disturbed areas consistent with the approved project schedule.
- b. Mulch shall be spread uniformly in a continuous blanket at an approximate rate of 2 t/acre. Mulch may be spread by hand, mechanical spreaders, or blowers.

D. Temporary Seed and Mulch

- a. The Contractor shall apply seed and mulch on disturbed areas consistent with the approved project schedule.
- b. Prior to the application of seed, all areas where compaction has occurred shall be scarified. The seed bed shall be loose and friable for positive seed retention.
- c. Ryegrasses shall be spread at a rate of 30 lb/acre to uniformly cover the ground. Cereal grasses shall be spread at a rate of 100 lb/acre to uniformly cover the ground. Seeds shall be evenly distributed by any method of sowing that does not injure the seeds in the process of spreading.
- d. Mulch shall be spread immediately following application of seed. Mulch shall be spread uniformly in a continuous blanket at an approximate rate of 2 t/acre. Mulch may be spread by hand, mechanical spreaders, or blowers. Mulch and seed shall not be placed simultaneously, except in the case of hydroseeding.

E. Temporary Strawbale - Bales shall be placed with the cut ends vertical as shown in the contract documents. Each bale shall be embedded into the soil a minimum of 4 inches, and be securely anchored. Hardwood stakes shall be installed a minimum of 1 foot into the ground below the bale. The first stake in each bale shall be driven at an angle toward the previously laid bale to force the bales together.

F. Geotextiles - Geotextiles shall be placed between different layers of soil/aggregate to prevent migration of one material to the other. Geotextiles shall be placed where shown in the contract documents and constructed in accordance with the standard sheets.

G. Temporary Silt Fence

- a. Unless otherwise detailed in the contract documents, silt fence shall be installed as follows:
  - i. Posts shall be driven into the ground.
  - ii. Geotextile and any mesh support (if applicable) shall be placed on the upstream side of the posts.

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- iii. The geotextile shall be fastened to each post in no less than 4 locations with approved fasteners.
  - iv. The mesh support shall be fastened to each post at the top, bottom, and two additional evenly spaced locations, or by a continuous corded attachment along the top of the assembly.
  - v. Any geotextile or mesh splices necessary for fence erection shall be continuous between two post sections.
  - vi. Geotextile at the bottom of the fence shall be buried in a trench to a depth of 6 inches. The trench shall be back filled with the excavated soil and the soil compacted by tamping.
- H. Drainage Structure Inlet Protection - Drainage structure inlet protection shall be placed where shown in the contract documents and constructed in accordance with the standard sheets.
- I. Jute Mesh - Jute mesh shall be placed without stretching on the freshly prepared surface so that it lays loosely on the soil and in contact with the soil at all points; and then it shall be rolled or tamped firmly into the soil surface. The upper end of each roll shall be turned down and buried to a depth of 6 inches with the soil firmly tamped against it. Unless otherwise specified in the contract documents, check slots shall be constructed at 50 foot intervals down the slope. The construction procedure shall consist of placing a fold of material 6 inches vertically into the ground and tamping soil firmly against it. Jute mesh shall be placed so that all edges shall have a minimum overlap of 6 inches. The ends of rolls shall be placed with the upgrade section on top. Jute mesh shall be held tightly to the soil by anchors driven firmly into the ground. Anchors shall be spaced not more than 3 feet apart on the sides and along the centerline of all drainage ways. Jute mesh ends and check slots shall have anchors spaced at 1 foot intervals.
- J. Stabilized Construction Entrances
- a. Stabilized construction entrances shall be placed where shown in the contract documents and constructed in accordance with the standard sheets.
  - b. The Contractor shall grade, including excavating or placing fill, to prepare the original ground surface for the placement of a stabilized pad of 6 inches of coarse aggregate material, underlain by a geotextile.
  - c. If necessary, a drainage pipe shall be installed to maintain the capacity of the ditch. The pipe dimension shall be consistent with the modified soil erosion and sediment control plan approved by the Engineer.

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- d. All areas cut or filled and not stabilized by the construction entrance material shall be covered with an erosion control treatment (temporary mulch, temporary seed and mulch, etc.) and shall be included in this pay item.
  - e. When washing is performed, the washing area within the construction entrance shall be located in an area which will drain into an approved sediment control measure(s).
  - f. The construction entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto the right-of-way. All sediment spilled, dropped, washed or tracked onto the right-of-way shall be removed immediately. In the event the entrance is no longer performing properly (i.e. the entrance aggregate becomes clogged with sediment), the Contractor shall top-dress the entrance with additional coarse aggregate material.
- 4. METHOD OF MEASUREMENT** - Measurement will be made for installation or reinstallation of temporary soil erosion and sediment controls shown in the contract documents.
- A. Temporary Mulch - Measurement will only be made for work directed or approved by the Engineer. This work will be measured as the number of square feet of mulch to the nearest square foot.
  - B. Temporary Seed and Mulch - Measurement will only be made for work directed or approved by the Engineer. This work will be measured as the number of square feet to the nearest square foot.
  - C. Temporary Strawbale - Bales will be measured by the number of feet to the nearest foot.
  - D. Geotextiles – Geotextiles will be measured as the number of square feet to the nearest square foot.
  - E. Temporary Silt Fence - Silt fence will be measured by the number of feet of silt fence to the nearest foot. No measurement will be made for seams or overlaps.
  - F. Drainage Structure Inlet Protection - Prefabricated drainage structure inlet protection measures will be measured by the number of measures, i.e., each structure.
  - G. Jute Mesh – Jute mesh will be measured as the number of square feet to the nearest square foot.
  - H. Stabilized Construction Entrances – Stabilized construction entrances shown in the contract documents will be measured by the number of square feet to the nearest square foot. Measurement will not be made for construction entrances associated with the contractor’s operations (e.g., staging areas, storage yards, borrow sites, etc.).

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**5. BASIS OF PAYMENT**

A. General

- a. The unit price bid for all work items shall include the cost of furnishing all labor, equipment, and materials necessary to satisfactorily complete the work as shown in the contract documents, including the cost of excavation associated with the removal of accumulated sediment and the installation of erosion and sediment control measures covered by this Section.
- b. Progress payments will be made for silt fence. Fifty percent of the price bid will be paid after installation. The remaining percentage will be paid when the temporary control measure is removed and the remaining area is permanently stabilized.
- c. Payment will not be made for work which is attributed to the Contractor's negligence, carelessness or failure to install temporary or permanent controls in accordance with the contract documents.

B. Mulch - Mulching will only be paid for when directed or approved by the Engineer.

C. Seed and Mulch - Seed and mulch will only be paid for when directed or approved by the Engineer. In addition to the provisions of 209-5.01 of the Standard Specifications, the unit price bid for this item shall include water.

D. Stabilized Construction Entrances

- a. In addition to the provisions of 209-5.01 of the Standard Specifications, the unit price bid for this item shall include any erosion control treatments (temporary mulch, temporary seed and mulch, etc.) required to stabilize an erodible surface produced by the installation of the construction entrance, periodic top-dressing with additional coarse aggregate material, and washing station provisions.
- b. Additional sediment control measures (silt fence, strawbale, etc.) required to control a washing area will be paid for under their respective item(s).

E. Payment will be made under:

<b>Item No.</b>	<b>Item</b>	<b>Pay Unit</b>
118-SWM	Straw/Wood Fiber Mulch – Temporary	Square Yard
118-SM	Seed and Mulch – Temporary	Square Yard
118-SSWM	Seed and Straw/Wood Fiber Mulch – Temporary	Square Yard
118-S	Strawbale – Temporary	Foot
118-G	Geotextiles	Square Yard
118-SF	Silt Fence – Temporary	Foot
118-D	Drainage Structure Inlet Protection, Prefabricated – Temporary	Each

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118-J	Jute Mesh	Square Yard
118-SCE	Stabilized Construction Entrance	Square Yard

END OF SECTION

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ITEM NO. 151 POURED IN PLACE SAFETY SURFACE

**1. DESCRIPTION**

- A. This work includes furnishing and installing GT Impax recycled poured rubber surface or approved equal for six, eight or ten foot critical fall heights.
- B. GT Impax recycled poured rubber surface or approved equal shall be poured in place and trowelled to provide for a resilient, seamless rubber surface installed over the specified base. The surfacing provider shall be responsible for all labor, materials, tools, equipment, to perform all work and services for the installation of the surface. The surface shall be stable and slip resistant to comply with all requirements set forth in the Americans with Disabilities Act. The surfacing installer must be certified by the poured in place manufacturer as a qualified installer.
- C. Work shall include installation of stone base beneath the safety surface and preparation of subgrade including excavation for stone and safety surface installation.

**2. QUALITY ASSURANCE**

A. Impact Attenuation

- a. ASTM F1292-04
- b. Impact attenuation test results will be provided to the owner or owner's representative. These test results shall be certified and submitted on the letterhead of an independent testing lab. Impact attenuation test results shall meet or exceed Consumer Product Safety Commission Guidelines for impact attenuation (G-max and Head Injury Criteria (HIC)).

B. Accessibility of Surface Systems

- a. ASTM F1951-08
- b. All Playground surfacing products must pass testing to ensure wheelchair access under and around playground equipment as required by the American Disabilities Act.

C. Coefficient of Friction

- a. ASTM D2047-82
- b. All products must meet a minimum standard on coefficient of friction of .9-wet, 1.0 dry.

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- D. Permeability - Product shall meet or exceed a coefficient of permeability of 0.4 gallons per square yard per second.
- E. Flammability of Finished Floor Cover - Product shall meet requirements of ASTM D2859.
- F. Tensile Strength
  - a. ASTM D412-87 - This test indicates a product's ability to stretch, and how far it will stretch before it breaks.
  - b. Test results for wear course must be a minimum tensile strength of 60 PSI and minimum % elongation @ break of 140%.
- G. IPEMA Certification - Manufacturer must provide proof of certification. "In the interest of public playground safety, IPEMA provides an independent laboratory which validates a manufacturer's certification of conformance to ASTM F1292-04. A list of current validated products, their thickness and critical heights may be viewed at [www.ipema.org](http://www.ipema.org)."

**3. SUBMITTALS**

- A. Submittal Details - Submittal packages shall include but not be limited to:
  - a. Product samples
  - b. Supplier's written warranty, and
  - c. Independent laboratory results for tests described above.

**4. MATERIALS**

- A. Polyurethane Primer and Binder
  - a. 100% Single Component Polyurethane Binding Agent
  - b. Methylene Diphenyl Isocyanate (MDI) based binder.
- B. Aromatic Binder – All projects will include aromatic binder unless project specifies the use of aliphatic binder. The natural properties of the aromatic binder are to present a yellow tint which may cause some EPDM/TPV colors to amber. The yellowing affect is more common on lighter EPDM colors and will wear off with foot traffic and weathering.
- C. Aliphatic Binder – This binder is available upon request but at an added cost to

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the over all project. Aliphatic binder is all clear providing full EPDM/TPV color from day one. This binder has a higher resistance to ultra violet light and provides a greater resistance to wear.

- D. Impact Course – The impact layer is to be a precise combination of 100% recycled black Styrene Budadine Rubber (SBR) and polyurethane binder. SBR is manufactured as a liquid, poured into molds and generally used by the automobile industry. This recycled rubber is shredded, mixed with binder and hand-trowelled to create a seamless application. The impact course thickness, as specified by owner or architect, must be composed of recycled rubber and free of foreign matter.
- E. Wear Course
  - a. The wear course is made of Ethyl Propolyne Dione Monomer (EPDM) or Thermal Plastic Vulcanized (TPV) pigmented rubber granules with polyurethane binder. Thickness of the wear course shall be a minimum ½”.
  - b. EPDM – The granule size will be 1-3 mm in diameter.
  - c. TPV – the granule size will be 1-4 mm in diameter.
- F. Colors - The color of GT Impax recycled poured rubber surfacing or approved equal will be indicated on plans. Owner or owner’s representative will be responsible for selecting standard blends. Selection of either standard color blends or custom color blends much be made at time quotation is being requested. EPDM colors are available in 100% black and a variety of colors. Ask your GameTime representative for available color combinations. Standard Color(s) to be determined by the Town of Riverhead.

**Physical Properties**

Tensile Strength (ASTM D412)	60 PSI, minimum
Elongation at Break (ASTM D412)	140%, minimum
Flammability (ASTM D2859)	Pass
Coefficient of Friction (ASTM D204)	
Wet	0.9, minimum
Dry	1.0, minimum
Water Permeability	0.4 gal. /sq. yd./sec., minimum

- G. Sub-base Requirements - The base shall have the specific maximum slope (2%) and shall vary no more than 1/8” when measured in any direction with a 10’ straight edge.

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H. Stone

- a. The density requirement is 90% to 95% compaction with final condition of stone as level and stable so as not to shift when traveled on or during surface installation process. A compaction test is required and must be submitted to safety surfacing manufacturer prior to installation of poured rubber surfacing. Recycled Concrete Aggregate (RCA), or mixtures which include concrete, brick, asphalt or any deleterious material will NOT be acceptable.
- b. Depth - 4 inch minimum thickness.
- c. Slope - Stone elevation shall maintain ¼” per foot toward low end.
- d. Porosity - Base course shall maintain porosity for direct drainage.
- e. Enclosure - Stone base course must be surrounded by a retaining curb.
- f. Drainage - Subsurface drainage is recommended under and around a stone base. Perforated pipe or similar system is acceptable.
- g. Tolerances - ¼” in any 10-foot direction and 1/8” in any 3-foot direction.
- h. Stone Selection - It is critical that different size stones are used so that the base shall be uniformly mixed. The material shall be wetted during mixing operations if necessary for proper blending.
- i. Stone Gradation

U.S. Sieve	Percent Passing
1"	100
3/4"	90 - 100
No. 4	35 - 60
No. 30	10 - 30
No. 200	2 - 9

**5. CONSTRUCTION DETAILS**

- A. Excavation for Subgrade Preparation – Excavate below finished grade to a depth equal to 4” for the stone and additional depth for the poured in place safety surface based on the table below. Subgrade surface shall be proof rolled and smooth. Replace unsuitable material with select fill as needed.

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- B. Stone Base – After excavation is complete install and compact 4” stone base in one layer prior to installation of safety surface.
- C. Drainage - Having proper drainage at the low end of the concrete slab is of utmost importance. Any brick walls or curbs at the low end of the slab shall have drainage access through weep holes. Concrete curbing weep holes should be level with finish grade of sub-base or a minimum of 1/8" below top of concrete slab, as GT IMPAX recycled poured rubber surfacing or approved equal shall be porous and water drains immediately through it. Weep holes shall be 2" high and 3" wide and shall be installed every three (3) feet. If weep holes are smaller than the recommended size, they shall be installed every 18". Floor drains shall be located outside the high impact areas, as the drains may not be covered with GT IMPAX poured rubber surfacing or approved equal. Recommended locations for drains are under play unit or against low-end wall or curb.
- D. Security and Waste Disposal - The Contractor shall be responsible for the protection of surface during the installation process while on site, during the curing period and upon completion of the installation and overnight during the installation. The Contractor shall be responsible for having a dumpster on site for all waste and debris.
- E. Utilities and Access – The Contractor shall supply power and water for construction activities under this contract.
- F. Weather Conditions – Because the polyurethane agents are moisture or heat sensitive, the nighttime temperatures must be above 40 degrees with daytime temperatures around 50 degrees. These temperatures must be consistent for several days before and after the poured rubber installation period. Complying with these weather conditions will prevent poured rubber from freezing which prevents proper curing.
- G. Thickness – Overall depth of the poured rubber will vary based on critical fall heights and installers test results. Depth of EPDM will be no less than 0.5”. Installation is performed by technically trained GameTime approved specialists or approved equal. Your GameTime dealer or approved equal, will schedule installation of playground surfacing to meet your requirements. If the Contractor utilizes a different manufacturer of poured in place safety surface, then the Contractor has to provide the Town with the appropriate thickness and design for the alternative system. The Contractor must be a certified installer for whichever system is utilized.

**Thickness Chart**

(Below depths include 0.5” EPDM Topcoat for Game Time System only)

1’ to 4’ Critical Fall Height	1.5” to 2”	Total Depth
5’ Critical Fall Height	2” to 2.5”	Total Depth

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6' Critical Fall Height	2.5" to 3"	Total Depth
7' to 8' Critical Fall Height	3" to 3.5"	Total Depth
9' to 10' Critical Fall Height	4" to 4.5"	Total Depth
11' to 12' Critical Fall Height	5.5"	Total Depth

- H. Cold Joints – Areas in excess of 2,000 square feet or areas that require adjacent color pours will have a cold joint or seam. Although seldom visible, seams are necessary when large pads require more than one day pours.
- I. Edges - Surface edges shall be flush, beveled or rolled.
- J. Flush - When curbing is provided around the outside perimeters of the pad, the poured rubber will be adhered to the edge of the curbing so that the rubber surfacing is flush. This allows for a smooth transition in to the play area. However, the sub-base should be installed to allow the proper depth of poured rubber so that the flush edge can be installed without having to fill voids by increasing the depth SBR materials.
- K. Cure Time - The poured rubber will require 72 hours (3 days) to properly cure. Security is required by the owner during this time so to avoid unnecessary damages.

**6. WARRANTY**

- A. The poured in place safety surface shall be warranted against defects in materials and workmanship for five years through the material manufacturer. The warranty shall provide for 100% of the cost for necessary repairs caused by the failure of the manufacturer's poured rubber surfacing only.
- B. This limited warranty includes only the manufacturer's obligation to repair and/or replace any defective materials or workmanship in the surface area or surface areas that have failed during the warranty period. A failed area or failed areas include edge raveling, bubbling, delamination, peeling, and loss of integrity as a result of the SurfaceMax recycled poured rubber degradation. The manufacturer is under no obligation or responsibility to repair and/or replace the poured rubber surface if damaged by vandalism (including cuts, burns, gouges, etc.), product misuse, abuse or alteration, improper slab or base or sub-base design or construction, improper drainage, improper or lack of maintenance, any foreign residue that may be deposited on the surface, normal wear and tear, damage from sharp objects (high heels, spikes, etc.) or acts of God.

**7. METHOD OF MEASUREMENT**

**Item 151**– The quantity is the number of compacted square yards of material, installed as specified including but not limited to the subbase preparation, stone base, wear, the poured in place safety material as per the contract specifications and the EPDM top

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course, as specified by the manufacturer's installation instructions, specifications, drawings or as ordered by the Engineer. The safety surface shall be constructed to accommodate six, eight or ten foot critical fall heights as shown on the drawings or specified by the engineer.

**8. BASIS OF PAYMENT**

**Item 151** - The unit price per square yards bid for this work includes the cost of furnishing all labor, materials and equipment necessary to complete the work.

END OF SECTION

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ITEM NO. 190-O CONCRETE GRID PAVEMENTS

**1. DESCRIPTION**

- A. The work under this item includes furnishing and installing concrete grid units on a sand bedding course over a compacted dense-graded aggregate base. The aggregate base shall be placed on geotextile separation fabric over compacted subgrade. This specification covers H20/HS20 traffic loading.
- B. The work herein also includes installation of topsoil and grass seed in the grid openings over bedding sand.
- C. Edge restraints shall be installed around the outside edge of the grid pavers where shown on the plans.

**2. QUALITY ASSURANCE**

- A. ASTM C 33, Specification for Concrete Aggregates.
- B. ASTM C 136, Method for Sieve Analysis for Fine and Coarse Aggregate.
- C. ASTM C 140, Standard Test Methods of Sampling and Testing Concrete Masonry Units.
- D. ASTM C 979, Standard Specification for Pigments for Integrally Colored Concrete.
- E. ASTM C 1319, Standard Specification for Concrete Grid Paving Units.
- F. ASTM D 698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort.
- G. ASTM D1557 - 07 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort.
- H. ASTM D 2940, Standard Specification for Graded Aggregate Material for Bases or Subbases for Highways or Airports.
- I. ASTM D 5268, Specification for Topsoil Used for Landscaping Purposes.
- J. Canadian Standards Association (CSA) 1. CSA A23.1, Concrete Materials and Methods of Concrete Construction.
- K. Interlocking Concrete Pavement Institute (ICPI), Tech Spec technical bulletins.

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**3. SUBMITTALS**

- A. In accordance with General Conditions, 3. Samples and 6. Shop Drawings.
- B. Manufacturer's Drawings and Details - Indicate perimeter conditions, relationship to adjoining materials and assemblies, expansion and control joints, paving slab layout, installation and setting details.
- C. Sieve analysis per ASTM C 136 for grading of bedding and base materials.
- D. Source and content of topsoil and grass seed.
- E. Concrete Grid Units
  - 1. One representative full-size sample of grid unit, thickness, color, expected in the finished installation.
  - 2. Accepted samples become the standard of acceptance for the work.
  - 3. Test results from an independent testing laboratory for strength compliance requirements to ASTM C39.
  - 4. Manufacturer's catalog literature, installation instructions, and material safety data sheets for the safe handling of the specified materials and products.

**4. QUALITY ASSURANCE**

- A. Paving Subcontractor Qualifications
  - 1. Engage an experienced installer who has successfully completed grid pavement installations similar in design, material, and extent indicated for this Project.

**5. DELIVERY, STORAGE, AND HANDLING**

- A. Deliver concrete grid units to the site in steel banded, plastic banded, or plastic wrapped packaging capable of transfer by forklift or clamp lift. Unload grids at job site in such a manner that no damage occurs to the product or existing construction.
- B. Cover sand with waterproof covering to prevent exposure to rainfall or removal by wind. Secure the covering in place.
- C. Coordinate delivery and paving schedule to minimize interference with normal use of buildings adjacent to paving.

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**6. ENVIRONMENTAL CONDITIONS**

- A. Do not install bedding materials or grid units during heavy rain or snowfall.
- B. Do not install bedding materials and grid units over frozen base materials.
- C. Do not install frozen bedding materials.

**7. GRID PAVER MAINTENANCE MATERIALS**

- A. Supply Checker Block in unopened pallets with contents labeled. Store where directed.

**8. MATERIALS**

A. Concrete Grid Units

- 1. Checker Block - Manufacturer: Hastings Pavement Company, LLC. DBA Hastings Architectural & Ornamental Concrete  
200 Henry Street  
Lindenhurst, NY 11757  
Contact: Kevin Earley, 631-774-6431
- 2. Color – Natural (stock color)
- 3. Size - 24 inches x 24 inches x 4 inches thick
- 4. Reinforcement - 6”/6” x 6 gauge welded wire
- 5. Minimum Average Compressive Strength: 5,000 psi at 28-days per ASTM C-39

B. Product Substitutions

- 1. No substitutions permitted.

C. Bedding Materials

- 1. General – Sieved per ASTM C 136.
- 2. Bedding Sand
  - a. Washed, clean, hard, durable crushed gravel or stone, free from shale, clay, friable materials, organic matter, frozen lumps, and other deleterious substances.

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- b. Conforming to the grading requirements in Table 1 below.
- c. Do not use limestone screenings.

Table 1  
Grading Requirements for Bedding Sand  
ASTM C33 or CSA A23.1-FA1

Sieve Size	Percent Passing	Sieve Size	Percent Passing
3/8 in. (9.5 mm)	100	10 mm	100
No. 4 (4.75 mm)	95 to 100	5 mm	95 to 100
No. 8 (2.36 mm)	85 to 100	2.5 mm	80 to 100
No. 16 (1.18 mm)	50 to 85	1.25 mm	50 to 90
No. 30 (0.600 mm)	25 to 60	0.63 mm	25 to 65
No. 50 (0.150 mm)	0 to 30	0.315 mm	10 to 35
No. 100 (0.150 mm)	2 to 10	0.160 mm	2 to 10

D. Base Materials

ASTM D 2940 Gradation for Dense-Graded, Crushed Stone Base	
Sieve Size	Percent Passing
2 in. (50 mm)	100
1 1/2 in. (37.5 mm)	95 to 100
3/4 in. (19.0 mm)	70 to 92
3/8 in. (9.5 mm)	50 to 70
No. 4 (4.75 mm)	35 to 55
No. 30 (0.600 mm)	12 to 25
No. 200 (0.075 mm)	0 to 8

E. Accessories

- 1. Accessory Materials
  - a. Geotextile separation fabric material: Mirafi 160N.
- 2. Edge Restraints Installed Between Concrete Grid Paving Unit Areas And Asphalt Handicapped Parking
  - a. Material - BrickStop Aluminum Paver Edging System 1-1/2" Wide x 1-3/8" high x 8'-4" long anchored with 12" common spike or approved equal.

**9. EXECUTION**

A. Examination

- 1. Acceptance of site verification conditions:

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- a. Contractor shall inspect, accept and verify in writing to the grid installation subcontractor that site conditions meet specifications for the following items prior to installation of bedding materials and concrete grid units:
  - i. Verify that drainage and subgrade preparation, compacted density and elevations conform to specified requirements.
  - ii. Verify that geotextiles, if applicable, have been placed according to drawing and specifications.
  - iii. Verify that base materials, thickness, compacted density, surface tolerances and elevations conform to specified requirements.
  - iv. Provide written density test results for the soil subgrade, base materials to the Owner, Contractor, and grid installation subcontractor.
- b. Do not proceed with installation of bedding materials and concrete grids until subgrade soil and base conditions are corrected by the Contractor or designated subcontractor.

B. Preparation

1. Verify that base is dry, certified by Contractor as meeting material, installation and grade specifications are ready to support sand, grids and imposed loads.
2. Edge Restraint Preparation:
  - a. Install edge restraints per the drawings and manufacturer's recommendations at the indicated elevations.
  - b. Mount directly to finished base. Do not install on bedding sand.
  - c. The minimum distance from the outside edge of the base to the spikes shall be equal to the thickness of the base.

C. Installation

1. Compact soil subgrade to 95% standard Proctor density per ASTM D 698.
2. Install a minimum of 12 in. of compacted (95% standard Proctor density) dense-graded base course, or greater thickness as directed by Engineer.

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3. Spread the 1" bedding sand layer evenly over the compacted, base course and screed uniformly.
4. Ensure the grid units are free from foreign materials before installation.
5. Lay the grid units on the bedding sand in the pattern shown on the drawings. Maintain straight joint lines.
6. Joints between the grids shall be maintained so that units do not touch but not exceed 3/16 in. (5 mm).
7. Ensure that grid pavers are seated and leveled with roller compactor or static roller drum.
8. Use tie rods to anchor units on slopes steeper than 3:1.
9. Sweep top soil into the joints and openings until full.
10. Broadcast grass seed at the rate recommended by seed source. Place sod plugs into openings. Add topsoil to the surface to cover the seeds.
11. Remove excess topsoil on surface when the job is complete.
12. Distribute straw covering to protect germinating grass seed or sod. Water entire area. Do not traffic pavement for 30 days, if seeded.

D. Field Quality Control

1. Check final elevations for conformance to the drawings. Allow 1/8 to 1/4 in. (3 to 6 mm) above specified surface elevations to compensate for minor settlement.
2. The final surface tolerance from grade elevations shall not deviate more than  $\pm 3/8$  in. (10 mm) over a 10 ft (3 m) straightedge.
3. The surface elevation of grid units shall be 1/8 to 1/4 in. (3 to 6 mm) above adjacent drainage inlets, concrete collars or channels.
4. Lippage: No greater than 1/8 in. (3 mm) difference in height between adjacent grid units.

E. Protection

1. After work in the section is complete, the Contractor shall be responsible for protecting work from damage due to subsequent construction activity on the site.

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**10. METHOD OF MEASUREMENT**

- A. Concrete Grid Pavements will be measured by the number of square yards placed as shown in the contract documents, or as ordered by the Engineer.

**11. BASIS OF PAYMENT**

- A. The price bid per square yard of Concrete Grid Pavements shall include the cost of furnishing all labor, materials and equipment necessary to complete the work, including setting bedding and base material, as specified except that any necessary excavation will be paid for under the appropriate item.

*Payment will be made under:*

<b>Item No.</b>	<b>Item</b>	<b>Pay Unit</b>
190-O	Concrete Grid Pavements	Square Yards

**END OF SECTION**

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ITEM NOS. 190-P AND 190-PP PERMEABLE INTERLOCKING CONCRETE PAVEMENT

**PART 1        GENERAL**

1.01    SUMMARY

A. Section Includes

1. Permeable interlocking concrete pavers.
2. Crushed stone bedding material.
3. Open-graded subbase aggregate.
4. Open-graded base aggregate.
5. Bedding and joint/opening filler materials.
6. Edge restraints.
7. Geotextiles.

B. Related Sections

1. Item No. 7 Concrete Curb.
2. Item No. 4-SS Stabilized Soil Aggregate Subbase.
3. Item No. 13U Underdrain Pipe.
6. Item No. 13P Polyethylene Pipe.
7. Item No. 2 Unclassified Excavation.
8. Item No. 3 Excavation and Embankment.

1.02    REFERENCES

A. American Society for Testing and Materials (ASTM)

1. C 131, Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
2. C 136, Method for Sieve Analysis for Fine and Coarse Aggregate.
3. C 140, Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units.
4. D 448, Standard Classification for Sizes of Aggregate for Road and Bridge Construction.
5. C 936, Standard Specification for Solid Interlocking Concrete Pavers.
6. C 979, Specification for Pigments for Integrally Colored Concrete.
7. D 698, Test Methods for Moisture Density Relations of Soil and Soil Aggregate Mixtures Using a 5.5-lb (2.49 kg) Rammer and 12 in. (305 mm) drop.
8. D 1557, Test Methods for Moisture Density Relations of Soil and Soil Aggregate Mixtures Using a 10-lb (4.54 kg) Rammer and 18 in. (457 mm) drop.
9. D 1883, Test Method for California Bearing Ratio of Laboratory-Compacted Soils.
10. D 2922 Standard Test Methods for Density of Soil and Soil-Aggregate In-Place by Nuclear Methods (Shallow Depth).
11. D 4254, Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.

B. Interlocking Concrete Pavement Institute (ICPI)

1. Permeable Interlocking Concrete Pavement manual.
2. Permeable Design Pro software for hydrologic and structural design

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1.03 SUBMITTALS

- A. In accordance with General Conditions, 3. Samples and 6. Shop Drawings.
- B. Paver manufacturer's/installation subcontractor's drawings and details: Indicate perimeter conditions, junction with other materials, expansion and control joints, paver layout, patterns, color arrangement, installation and setting details. Indicate layout, pattern and relationship of paving joints to fixtures, and project formed details.
- C. Minimum 3 lb (2 kg) samples of subbase, base and bedding aggregate materials.
- D. Sieve analysis of aggregates for subbase, base and bedding materials per ASTM C 136.
- E. Project specific or producer/manufacturer source test results for void ratio and bulk density of the base and subbase aggregates.
- F. Soils report indicating density test reports, classification, and infiltration rate measured on-site under compacted conditions, and suitability for the intended project.
- G. Erosion and sediment control plan.
- H. Permeable concrete pavers:
  - 1. Paver manufacturer's catalog sheets with product specifications.
  - 2. One representative full-size sample of each paver type, thickness, color, and finish. Submit samples indicating the range of color expected in the finished installation.
  - 3. Accepted samples become the standard of acceptance for the work of this Section.
  - 4. Laboratory test reports certifying compliance of the concrete pavers with ASTM C 936.
  - 5. Manufacturer's certification of concrete pavers by ICPI as having met applicable ASTM standards.
  - 6. Manufacturers' material safety data sheets for the safe handling of the specified paving materials and other products specified herein.
  - 7. Paver manufacturer's written quality control procedures including representative samples of production record keeping that ensure conformance of paving products to the product specifications.
- J. Paver Installation Subcontractor:
  - 1. Demonstrate that job foremen on the project have a current certificate from the Interlocking Concrete Pavement Institute Concrete Paver Installer Certification program.
  - 2. Job references from projects of a similar size and complexity. Provide Owner/Client/General Contractor names, postal address, phone, fax, and email address.
  - 3. Written Method Statement and Quality Control Plan that describes material staging and flow, paving direction and installation procedures, including representative reporting forms that ensure conformance to the project specifications.

1.04 QUALITY ASSURANCE

- A. Paver Installation Subcontractor Qualifications:
  - 1. Utilize an installer having successfully completed concrete paver installation similar in design, material and extent indicated on this project.

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2. Utilize an installer with job foremen holding a current certificate from the Interlocking Concrete Pavement Institute Concrete Paver Installer Certification program.
  - B. Review the manufacturers' quality control plan, paver installation subcontractor's Method Statement and Quality Control Plan with a pre-construction meeting of representatives from the manufacturer, paver installation subcontractor, general contractor, engineer and/or owner's representative.
- 1.05 DELIVERY, STORAGE, AND HANDLING
- A. General: Comply with Conditions of Contract, 32. Use of Premises and Removal of Debris.
  - B. Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.
  - C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged container packaging with identification tags intact on each paver bundle.
    1. Coordinate delivery and paving schedule to minimize interference with normal use of buildings adjacent to paving.
    2. Deliver concrete pavers to the site in steel banded, plastic banded, or plastic wrapped cubes capable of transfer by forklift or clamp lift.
    3. Unload pavers at job site in such a manner that no damage occurs to the product or existing construction
  - D Storage and Protection: Store materials in protected area such that they are kept free from mud, dirt, and other foreign materials.
- 1.06 ENVIRONMENTAL REQUIREMENTS
- A. Do not install in rain or snow.
  - B. Do not install frozen bedding materials.
- 1.07 MAINTENANCE
- A. Extra materials: Provide additional material for use by owner for maintenance and repair.
  - B. Pavers shall be from the same production run as installed materials.

**PART 2 PRODUCTS**

- A. Manufacturer: Nickolock of Long Island
  1. Contact: 640 Muncy Avenue  
Lindenhurst, NY 11757  
Phone: (631) 669-0700  
Fax: (631) 669-0711
- B. Permeable Interlocking Concrete Paver Units:
  1. Paver Type: Eco-ridge or SF-Rima.
    - a. Material Standard: Comply with ASTM C 936.
    - b. Color and finish: As shown on the plans.
    - c. Color Pigment Material Standard: Comply with ASTM C 979.
    - d. Size: Eco-ridge: 4-3/4"x9-1/2"x3-1/8".

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SF-Rima: 8"x8"x3-1/8"

- e. The compressive strength test results per ASTM C 140 for each paver type shall be adjusted by multiplying by 1.18 to equate the results to that from 2-3/8" thick pavers.

2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: Permitted for gradations for crushed stone jointing material, base and subbase materials. Base and subbase materials shall have a minimum 0.32 void ratio. All substitutions shall be approved in writing by the project engineer.

2.03 CRUSHED STONE FILLER, BEDDING, BASE AND SUBBASE

- A. Crushed stone with 90% fractured faces, LA Abrasion < 40 per ASTM C 131, minimum CBR of 80% per ASTM D 1883.
- B. Do not use rounded river gravel for vehicular applications.
- C. All stone materials shall be washed with less than 1% passing the No. 200 sieve.
- D. Joint/opening filler, bedding, base and subbase: conforming to ASTM D 448 gradation as shown in Tables 1, 2 and 3 below:

Table 1  
ASTM No. 8 Grading Requirements  
Bedding and Joint/Opening Filler

Sieve Size	Percent Passing
12.5 mm (1/2 in.)	100
9.5 mm (3/8 in.)	85 to 100
4.75 mm (No. 4)	10 to 30
2.36 mm (No. 8)	0 to 10
1.16 mm (No. 16)	0 to 5

Table 2  
ASTM No. 57 Base  
Grading Requirements

Sieve Size	Percent Passing
37.5 mm (1 1/2 in.)	100
25 mm (1 in.)	95 to 100
12.5 mm (1/2 in.)	25 to 60
4.75 mm (No. 4)	0 to 10
2.36 mm (No. 8)	0 to 5

Table 3  
Grading Requirement for ASTM No. 2 Subbase

Sieve Size	Percent Passing
75 mm (3 in.)	100
63 mm (2 1/2 in.)	90 to 100
50 mm (2 in.)	35 to 70
37.5 mm (1 1/2 in.)	0 to 15
19 mm (3/4 in.)	0 to 5

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Table 4

Grading Requirement for ASTM No. 89 Alternate Jointing Material for Narrow Joints

Sieve Size	Percent Passing
12.5 mm (1/2 in.)	100
9.5 mm (3/8 in.)	90 to 100
4.75 mm (No. 4)	20 to 55
2.36 mm (No. 8)	5 to 30
1.16 mm (No. 16)	0 to 10
0.300 mm (No. 50)	0 to 5

Table 5

Grading Requirement for ASTM No. 9 Alternate Jointing Material for Narrow Joints

Sieve Size	Percent Passing
12.5 mm (1/2 in.)	---
9.5 mm (3/8 in.)	100
4.75 mm (No. 4)	85 to 100
2.36 mm (No. 8)	10 to 40
1.16 mm (No. 16)	0 to 10
0.300 mm (No. 50)	0 to 5

2.04 ACCESSORIES

A. Accessories

1. Accessory Materials
  - a. Geotextile separation fabric material: Mirafi 160N.
2. Edge Restraints Installed Between Concrete Grid Paving Unit Areas And Asphalt Handicapped Parking
  - a. Material - BrickStop Aluminum Paver Edging System 1-1/2" Wide x 1-3/8" high x 8'-4" long anchored with 12" common spike or approved equal.

**PART 3 EXECUTION**

3.01 EXAMINATION

A. Acceptance of Site Verification of Conditions:

1. General Contractor shall inspect, accept and certify in writing to the paver installation subcontractor that site conditions meet specifications for the following items prior to installation of interlocking concrete pavers.
  - a. Verify that subgrade preparation, compacted density and elevations conform to specified requirements.
  - b. Provide written density test results for soil subgrade to the Owner, General Contractor and paver installation subcontractor.
  - c. Verify location, type, and elevations of edge restraints, utility structures, and drainage pipes and inlets.
2. Do not proceed with installation of bedding and interlocking concrete pavers until subgrade soil conditions are corrected by the General Contractor or designated subcontractor.

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3.03 PREPARATION

- A. Verify that the soil subgrade is free from standing water.
- B. Stockpile joint/opening filler, base and subbase materials such that they are free from standing water, uniformly graded, free of any organic material or sediment, debris, and ready for placement.
- C. Edge Restraint Preparation:
  - 1. Install edge restraints per the drawings.

3.04 INSTALLATION

- A. General
  - 1. Any excess thickness of soil applied over the excavated soil subgrade to trap sediment from adjacent construction activities shall be removed before application of the geotextile and subbase materials.
  - 2. Keep area where pavement is to be constructed free from sediment during entire job. Geotextiles, base and bedding materials contaminated with sediment shall be removed and replaced with clean materials.
  - 3. Do not damage drainpipes, overflow pipes, observation wells, or any inlets and other drainage appurtenances during installation. Report any damage immediately to the project engineer.
- B. Geotextiles
  - 1. Place on bottom and sides of soil subgrade. Secure in place to prevent wrinkling from vehicle tires and tracks.
  - 2. Overlap as specified by manufacturer in the direction of drainage.
- C. Open-graded subbase and base
  - 1. Moisten, spread and compact the No. 2 subbase in one 6 in. (100 to 150 mm) lift without wrinkling or folding the geotextile. Place subbase to protect geotextile from wrinkling under equipment tires and tracks.
  - 2. Make at least two passes in the vibratory mode then at least two in the static mode with a minimum 10 t (10 T) vibratory roller until there is no visible movement of the No. 2 stone. Do not crush aggregate with the roller.
  - 3. The surface tolerance of the compacted No. 2 subbase shall be  $\pm 2 \frac{1}{2}$  in. ( $\pm 65$ mm) over a 10 ft (3 m) straightedge.
  - 4. Moisten, spread and compact the No. 57 base layer in one 4 in. (100 mm) thick lift.
  - 5. On this layer, make at least two passes in the vibratory mode then at least two in the static mode with a minimum 10 t (10 T) vibratory roller until there is no visible movement of the No. 2 stone. Do not crush aggregate with the roller.
- D. Bedding layer
  - 1. Moisten, spread and screed the No. 8 stone bedding material to nominal depth of 2 in.
  - 2. Fill voids left by removed screed rails with No. 8 stone.
  - 3. The surface tolerance of the screeded No. 8 bedding layer shall be  $\pm 3/8$  in (10 mm) over a 10 ft (3 m) straightedge.
  - 4. Do not subject screeded bedding material to any pedestrian or vehicular traffic before paving unit installation begins.

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- E. Permeable interlocking concrete pavers and joint/opening fill material
1. Lay the paving units in the pattern(s) and joint widths shown on the drawings. Maintain straight pattern lines.
  2. Fill gaps at the edges of the paved area with cut units. Cut pavers subject to tire traffic shall be no smaller than 1/3 of a whole unit.
  3. Cut pavers and place along the edges with a double-bladed splitter or masonry saw.
  4. Fill the openings and joints with No. 8 stone. Paver joint widths which are narrow and do not accept No. 8 stone must be filled with washed ASTM No. 89 or No. 9 stone.
  5. Remove excess aggregate on the surface by sweeping pavers clean.
  6. Compact and seat the pavers into the bedding material using a low-amplitude, 75-90 Hz plate compactor capable of at least 5,000 lbf (22 kN) centrifugal compaction force. This will require at least two passes with the plate compactor.
  7. Do not compact within 6 ft (2 m) of the unrestrained edges of the paving units.
  8. Apply additional aggregate to the openings and joints if needed, filling them completely. Remove excess aggregate by sweeping then compact the pavers. This will require at least two passes with the plate compactor.
  9. All pavers within 6 ft (2 m) of the laying face must be left fully compacted at the completion of each day.
  10. The final surface tolerance of compacted pavers shall not deviate more than  $\pm 3/8$  in. (10 mm) under a 10 ft (3 m) long straightedge.
  11. The surface elevation of pavers shall be 1/8 to 1/4 in. (3 to 6 mm) above adjacent drainage inlets, concrete collars or channels.

3.05 FIELD QUALITY CONTROL

- A. After sweeping the surface clean, check final elevations for conformance to the drawings.
- B. Lippage: No greater than 1/8 in. (3 mm) difference in height between adjacent pavers.
- C. The surface elevation of pavers shall be 1/8 to 1/4 in. (3 to 6 mm) above adjacent drainage inlets, concrete collars or channels.
- D. Bond lines for paver courses:  $\pm 1/2$  in. ( $\pm 15$  mm) over a 50 ft (15 m) string line.

3.06 PROTECTION

- A. After work in this section is complete, the General Contractor shall be responsible for protecting work from sediment deposition and damage due to subsequent construction activity on the site.
- B. PICP installation contractor shall return to site after 6 months from the completion of the work and provide the following as required: fill paver joints with stones, replace broken or cracked pavers, and re-level settled pavers to initial elevations. Any additional work shall be considered part of original bid price and with no additional compensation.

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**PART 4 METHOD OF MEASUREMENT**

4.01 Each type of Permeable Interlocking Concrete Pavement – Eco-ridge or SF-Rima - will be measured by the number of square yards placed as shown in the contract documents, or as ordered by the Engineer.

**PART 5 BASIS OF PAYMENT**

5.01 The price bid per square yard of each type of Permeable Interlocking Concrete Pavement – Eco-ridge or SF-Rima - shall include the cost of furnishing all labor, materials and equipment necessary to complete the work, including setting bedding and base material, as specified except that any necessary excavation will be paid for under the appropriate item.

*Payment will be made under:*

<b>Item No.</b>	<b>Item</b>	<b>Pay Unit</b>
190-P	Permeable Interlocking Concrete Pavement – Eco-ridge	Square Yards
190-PP	Permeable Interlocking Concrete Pavement – SF-Rima	Square Yards

END OF SECTION

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ITEM NO. 191 UNIT PAVERS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Interlocking unit pavers and accessories with sand-filled joints, with setting bed as follows:
  - 1. Sand setting bed.

1.2 REFERENCES

- A. ASTM International
  - 1. ASTM C 33 - Standard Specification for Concrete Aggregates.
  - 2. ASTM C 67 - Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile, Section 8, Freezing and Thawing.
  - 3. ASTM C 136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
  - 4. ASTM C 140 - Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units.
  - 5. ASTM C 144 - Standard Specification for Aggregate for Masonry Mortar.
  - 6. ASTM C 936 - Standard Specification for Solid Concrete Interlocking Paving Units.
  - 7. ASTM C 979 - Standard Specification for Pigments for Integrally Colored Concrete.
  - 8. ASTM C 1645 - Standard Test Method for Freeze-thaw and De-icing Salt Durability of Solid Concrete Interlocking Paving Units.
  - 9. ASTM D 698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,000 ft-lbf/ft<sup>3</sup>/600 kN-m/m<sup>3</sup>).
  - 10. ASTM D 1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup>/2,700 kN-m/m<sup>3</sup>).
  - 11. ASTM D 2940 - Standard Specification for Graded Aggregate Material for Bases or Subbases for Highways or Airports.
- B. Interlocking Concrete Pavement Institute (ICPI):
  - 1. ICPI Tech Spec Technical Bulletins.
- C. BEES Database: National Institute for Standards and Technology (NIST) Building for Environmental and Economic Sustainability Database.

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1.3 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including but not limited to the following:
  - 1. Storage and handling requirements and recommendations.
  - 2. Installation methods.
- C. Shop Drawings: Drawings with details including but not limited to relationship to adjoining materials and assemblies, indication of perimeter conditions, expansion and control joints, paver layout, patterns, color arrangement, installation, and setting details.
- D. Test Reports:
  - 1. Sieve analysis for grading of bedding and joint opening aggregates.
  - 2. Test results from an independent testing laboratory for compliance of concrete pavers with ASTM C 936.
- E. Verification Samples: For each finish product specified, four representative full-size samples of each paver type, thickness, color and finish specified that indicate the range of color variation and texture expected in the finished installation.

1.4 QUALITY ASSURANCE

- A. Source Limitations for Pavers: For each color required, provide pavers of uniform texture and color, or a uniform blend within the ranges accepted for these characteristics from a single manufacturer to the greatest extent possible.
- B. Product Certificates:
  - 1. Signed by manufacturer, including name and address of contractor, project location, and the quantity, and date or dates of shipment of delivery to which certificate applies.
  - 2. Indicating that pavers meet specified requirements.
  - 3. Indicating testing laboratory's facilities and qualifications of its principals and key personnel to perform tests specified.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened labeled packaging.

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- B. Comply with instructions and recommendations of manufacturer for special delivery, storage, and handling requirements.
  - 1. Coordinate delivery and paving schedule to minimize interference with normal use of buildings adjacent to paving.
  - 2. Deliver concrete pavers to the site in steel banded, plastic banded or plastic wrapped packaging capable of transfer by forklift or clamp lift.
  - 3. Unload pavers at job site in such a manner that no damage occurs to the product.
  
- C. Storage and Protection: Store materials protected such that they are kept free from mud, dirt, and other foreign materials.
  - 1. Cover bedding sand and joint sand with waterproof covering if needed to prevent exposure to rainfall or removal by wind. Secure the covering in place.

1.6 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
  - 1. Do not install sand or pavers during heavy rain or snowfall.
  - 2. Do not install sand and pavers over frozen base materials.
  - 3. Do not install frozen sand or saturated sand.
  - 4. Do not install concrete pavers on frozen or saturated sand.

1.7 EXTRA MATERIALS

- A. Extra Materials: Furnish extra units amounting to 2 percent of installed materials, for each color or color blend of pavers installed.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: CalStar Products, Inc; 6851 Mowry Ave., Newark, CA 94560. ASD. Toll Free: 877-700-9501. Phone: 510-793-9500. Fax: 510-793-9501 Email: [info@calstarproducts.com](mailto:info@calstarproducts.com). Web: <http://www.calstarproducts.com>.
  
- B. Substitutions: Approved equal.

2.2 INTERLOCKING CONCRETE PAVERS

ITEM NO. 191 UNIT PAVERS

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- A. Interlocking Concrete Pavers: Non-Fired Holland Pavers; unit pavers composed of Class C fly ash and fine aggregates as manufactured by CalStar Products, Inc.
  - 1. Pavers for Standard Installation:
    - a. Nominal Size: 4 inches wide by 2-3/8 inches high by 8 inches long.
    - b. Actual Dimensions: 98.5 mm wide by 60 mm high by 198.5 mm long.
    - c. Average Compressive Strength (ASTM C 140): 8000 psi (55 MPa) with no individual unit under 7200 psi (50 MPa).
    - d. Spacers for Pavers: Standard, integral spacers for 1/16 inches (1.5 mm) gaps.
  
- B. Materials: Comply with material standards set forth in ASTM C 936.
  - 1. Fabrication: Non-fired paver with no Portland cement.
  - 2. Curing: Fly ash, aggregate, mineral oxide pigments, and proprietary ingredients mixed with water, vibro-compacted, and cured into stable cementitious solid.
  - 3. Composition: Primary ingredients are ASTM C 618 Class C fly ash, self-cementing byproduct of coal combustion and sand.
  - 4. Average Water Absorption (ASTM C 140): 5 percent with no unit greater than 7 percent.
  - 5. Freeze/Thaw Resistance (ASTM C 1645): Resistant to 28 freeze/thaw cycles with no greater than 225 g/m<sup>2</sup> loss of material, or 49 freeze/thaw cycles with no greater than 500 g/m<sup>2</sup> loss of material. Freeze-thaw testing requirements shall be waived for applications not exposed to freezing conditions.
  - 6. Dimensional Tolerance: Exceeds tolerance requirements of ASTM C 936 for Concrete Paver.
  
- C. Color and Texture: Provide fly ash pavers colored with pigments conforming to ASTM C 979, Solar Reflectance Index (SRI) calculated according to ASTM E 1980.
  - 1. Color: Natural, tumbled. with Solar Reflectance (SRI) of 29 or greater.
  - 2. Color: Natural, untumbled.
  - 3. Color: Tan, tumbled. with Solar Reflectance (SRI) of 29 or greater.
  - 4. Color: Tan, untumbled
  - 5. Color: Tangerine, tumbled.
  - 6. Color: Tangerine, untumbled.
  - 7. Color: Light Red, tumbled.
  - 8. Color: Light Red, untumbled.
  - 9. Color: Light Gray, tumbled.
  - 10. Color: Light Gray, untumbled.
  - 11. Color: Brown, tumbled.

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12. Color: Brown, untumbled.
13. Color: Dark Red, tumbled.
14. Color: Dark Red, untumbled.
15. Color: Dark Gray, tumbled.
16. Color: Dark Gray, untumbled.
17. Color: Autumn Range, tumbled.
18. Color: Autumn Range, untumbled.
19. Color: Harvest Range, tumbled.
20. Color: Harvest Range, untumbled.
21. Color: Olive Range, tumbled.
22. Color: Olive Range, untumbled.
23. Color: Prairie Range, tumbled.
24. Color: Prairie Range, untumbled.
25. Color: As selected by Architect from manufacturer's full range.
26. Color: As indicated on Drawings.

D. Environmental Performance:

1. Recycled Content: 37 percent post-industrial waste by weight, fly ash content.
2. Embodied Energy: Not to exceed 1000 BTUs per paver, as certified by manufacturer.
3. Carbon Footprint: Not to exceed 0.045 kg (0.1 lb) of carbon dioxide per paver, as certified by manufacturer.

E. Paving Cleaner: Cleaner type in compliance with manufacturer's instructions.

1. Detergent type cleaner selected for each type of paver used and recommended in writing by paver manufacturer.
2. Muriatic acid cleaners are not acceptable.

2.3 BEDDING AND JOINT SAND FOR STANDARD PAVER INSTALLATION

A. Bedding and Joint Sand:

1. Provide bedding and joint sand as follows:
  - a. Washed, clean, non-plastic, free from deleterious or foreign matter, symmetrically shaped, natural or manufactured from crushed rock.
  - b. Do not use limestone screenings, stone dust, or sand for bedding sand material that does not conform to grading requirements of ASTM C 33.
  - c. Do not use mason sand or sand conforming to ASTM C 144 for bedding sand.

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- d. Where concrete pavers are subject to vehicular traffic, utilize sands that are as hard as practically available.
- e. Sieve according to ASTM C 136.
- f. Bedding Sand Material Requirements: Conform to the grading requirements of ASTM C 33 with modifications as shown below:
  - 1) Grading Requirements for Bedding Sand:
    - (a) Sieve Size: 3/8 inch (9.5 mm).
      - (1) Percent Passing: 100.
    - (b) Sieve Size: No. 4 (4.75 mm).
      - (1) Percent Passing: 95 to 100.
    - (c) Sieve Size: No. 8 (2.36 mm).
      - (1) Percent Passing: 85 to 100.
    - (d) Sieve Size: No. 16 (1.18 mm).
      - (1) Percent Passing: 50 to 85.
    - (e) Sieve Size: No. 30 (0.600 mm).
      - (1) Percent Passing: 25 to 60.
    - (f) Sieve Size: No. 50 (0.300 mm).
      - (1) Percent Passing: 10 to 30.
    - (g) Sieve Size: No. 100 (0.150 mm).
      - (1) Percent Passing: 2 to 10.
    - (h) Sieve Size: No. 200 (0.075 mm).
      - (1) Percent Passing: 0 to 1.
  - g. Joint Sand Material Requirements: Conform to the grading requirements of ASTM C 144 as shown with modifications below:
    - 1) Grading Requirements for Natural Joint Sand:
      - (a) Sieve Size: No. 4 (4.75 mm).
        - (1) Percent Passing: 100.
      - (b) Sieve Size: No. 8 (2.36 mm).
        - (1) Percent Passing: 95 to 100.
      - (c) Sieve Size: No. 16 (1.18 mm).
        - (1) Percent Passing: 70 to 100.
      - (d) Sieve Size: No. 30 (0.600 mm).
        - (1) Percent Passing: 40 to 75.
      - (e) Sieve Size: No. 50 (0.300 mm).
        - (1) Percent Passing: 10 to 35.
      - (f) Sieve Size: No. 100 (0.150 mm).
        - (1) Percent Passing: 2 to 15.
      - (g) Sieve Size: No. 200 (0.075 mm).
        - (1) Percent Passing: 0 to 1.
    - 2) Grading Requirements for Manufactured Joint Sand:

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- (a) Sieve Size: No. 4 (4.75 mm).  
(1) Percent Passing: 100.
- (b) Sieve Size: No. 8 (2.36 mm).  
(1) Percent Passing: 95 to 100.
- (c) Sieve Size: No. 16 (1.18 mm).  
(1) Percent Passing: 70 to 100.
- (d) Sieve Size: No. 30 (0.600 mm).  
(1) Percent Passing: 40 to 100.
- (e) Sieve Size: No. 50 (0.300 mm).  
(1) Percent Passing: 20 to 40.
- (f) Sieve Size: No. 100 (0.150 mm).  
(1) Percent Passing: 10 to 25.
- (g) Sieve Size: No. 200 (0.075 mm).  
(1) Percent Passing: 0 to 10.

2.4 EDGE RESTRAINTS

- A. Provide edge restraints installed around the perimeter of all interlocking concrete paving unit areas as follows:
  - 1. Manufacturer: BrickStop Aluminum Paver Edging System, 1-1/2" Wide x 1-3/8" high x 8'-4" long anchored with 12" common spike or approved equal.

2.5 ACCESSORIES

- A. Geotextile Fabric:
  - 1. Material Type, Manufacturer and Description: Geotextile separation fabric Mirafi 160N.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates, subgrade and base have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, do not proceed with installation. Notify Architect of unsatisfactory preparation immediately.
- C. Commencement of full installation represents acceptance of existing substrate conditions.

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3.2 NON-PERMEABLE INSTALLATION

- A. Comply with recommendations for installation, progress cleaning, and final cleaning of pavers in accordance with manufacturer's instructions and recommendations.
- B. Install in accordance with ICPI publication Tech Spec No. 2, Construction of Interlocking Concrete Pavements
  - 1. Spread bedding sand evenly over the base course and screed to a nominal 1 inch (25 mm) thickness, not exceeding 1-1/2 inch (40 mm) thickness. Spread bedding sand evenly over the base course and screed rails, using the rails and/or edge restraints to produce a nominal 1 inch (25 mm) thickness, allowing for specified variation in the base surface.
    - a. Do not disturb screeded sand.
    - b. Screeded area shall not substantially exceed that which is covered by pavers in one day.
    - c. Do not use bedding sand to fill depressions in the base surface.
  - 2. Lay pavers in patterns shown on Drawings. Place units hand tight without using hammers. Make horizontal adjustments to placement of laid pavers with rubber hammers and pry bars as required.
  - 3. Provide joints between pavers between 1/16 inch and 3/16 inch (2 mm and 5 mm) wide. No more than 5 percent of the joints shall exceed 1/4 inch (6 mm) wide to achieve straight bond lines.
  - 4. Joint (bond) lines shall not deviate more than +/-1/2 inch (+/- 15 mm) over 50 ft (15 m) from string lines.
  - 5. Fill gaps at the edges of the paved area with cut pavers or edge units.
  - 6. Cut pavers to be placed along edge with double blade paver splitter or masonry saw.
- C. Do not use polymeric sands.

3.3 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

PART 4 METHOD OF MEASUREMENT

Unit Pavers will be measured by the number of square yards placed as shown in the contract documents, or as ordered by the Engineer

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PART 5 BASIS OF PAYMENT

The price bid per square yard of Unit Pavers shall include the cost of furnishing all labor, materials and equipment necessary to complete the work, including setting bedding and base material, as specified except that any necessary excavation will be paid for under the appropriate item.

*Payment will be made under:*

<b>Item No.</b>	<b>Item</b>	<b>Pay Unit</b>
191	Unit Pavers	Square Yards

END OF SECTION

TOWN OF RIVERHEAD  
ANNUAL CONSTRUCTION CONTRACT

ITEM NO. 200 ASPHALT TENNIS COURT SURFACE COLOR COATING SYSTEM

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Asphalt tennis court surface color coating system.

**1.3 REFERENCE STANDARDS**

- A. American Sports Builders Association (ASBA).
- B. United States Tennis Association (USTA) Rules of Tennis.
- C. International Tennis Federation (ITF).
- D. United States of America Pickleball Association (USAPA) Rules of Pickleball

**1.4 SUBMITTALS**

- A. Comply with Section 01330 (01 33 00) – Submittal Procedures.
- B. Product Data: Submit manufacturer's product data, including surface and crack preparation and application instructions.
- C. Samples: Submit manufacturer's color samples of color coating.
- D. Test Reports:
  - 1. Submit independent test results for solar reflectance index.
  - 2. Submit independent test results for 2000 Hour ASTM G154, accelerated weathering UV test, to demonstrate long-term durability and fade resistance.
  - 3. Submit independent test results for 2000 Hour, accelerated weathering ASTM G155 Xenon Arc test, to demonstrate long-term fade resistance and quality of pigment.
- E. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- F. Manufacturer's Project References: Submit manufacturer's list of successfully completed asphalt tennis court surface color coating system projects, including project name, location, and date of application.
- G. Applicator's Project References: Submit applicator's list of successfully completed asphalt tennis court surface color coating system projects, including project name, location, type and quantity of color coating system applied, and date of application.

ITEM NO. 200 ASPHALT TENNIS COURT SURFACE COLOR COATING SYSTEM

TOWN OF RIVERHEAD  
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- H. Warranty Documentation: Submit manufacturer's standard warranty.

**1.5 QUALITY ASSURANCE**

A. Manufacturer's Qualifications:

1. Manufacturer regularly engaged, for past 5 years, in manufacture of asphalt tennis court surface color coating systems of similar type to that specified.
2. United States owned company.
3. Member: ASBA.
4. Manufacturer has surfaces that are classified by the ITF's (International Tennis Federation) pace classification program.

B. Applicator's Qualifications:

1. Applicator regularly engaged, for past 3 years, in application of tennis court surface color coating systems of similar type to that specified.
2. Employ persons trained for application of tennis court surface color coating systems.

**1.6 DELIVERY, STORAGE, AND HANDLING**

- A. Delivery and Acceptance Requirements: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Storage and Handling Requirements:

1. Store and handle materials in accordance with manufacturer's instructions.
2. Keep materials in manufacturer's original, unopened containers and packaging until application.
3. Store materials in clean, dry area indoors.
4. Store materials out of direct sunlight.
5. Keep materials from freezing.
6. Protect materials during storage, handling, and application to prevent contamination or damage.
7. Close containers when not in use.

**1.7 AMBIENT CONDITIONS**

- A. Do not apply asphalt tennis court surface color coating system when air or surface temperatures are below 50 degrees F during application or within 24 hours after application.
- B. Do not apply asphalt tennis court surface color coating system when rain is expected during application or within 24 hours after application.

**PART 2 PRODUCTS**

**2.1 MANUFACTURER**

TOWN OF RIVERHEAD  
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- A. SportMaster Sport Surfaces, PO Box 2277, 2520 South Campbell Street, Sandusky, Ohio 44870. Toll Free 800-326-1994. Fax 877-825-9226. Website www.sportmaster.net. E-mail info@sportmaster.net.

**2.2 MATERIALS**

- A. Asphalt Tennis Court Surface Color Coating System: SportMaster Color Coating System.
- B. Crack Sealant: SportMaster "Crack Magic".
1. 100 percent acrylic emulsion elastomeric crack sealant.
  2. Seals cracks up to 1/2 inch wide in asphalt pavement.
  3. Weight per Gallon at 77 Degrees F: 8.8 lbs., plus or minus 0.5 lbs.
  4. Non-Volatile Material: 61 percent, plus or minus 5 percent.
  5. Color: [Green] [Neutral] [Red].
- C. Crack Filler: SportMaster "Acrylic Crack Patch".
1. 100 percent acrylic emulsion trowel-grade crack filler.
  2. Fills cracks in asphalt pavement up to 1 inch wide.
  3. Chemical Characteristics, by Weight, Minimum:
    - a. Acrylic Emulsion: 10.0 percent.
    - b. Hiding Pigment: 0.2 percent.
    - c. Mineral Inert Fillers: 78.0 percent.
    - d. Film Formers, Additives: 1.8 percent.
    - e. Water: 8.5 percent.
  4. Weight per Gallon at 77 Degrees F: 15.2 lbs., plus or minus 1.0 lbs.
  5. Non-Volatile Material: 80 percent, plus or minus 5 percent.
  6. Color: [Green] [Neutral] [Red].
- D. Patch Binder: SportMaster "Acrylic Patch Binder".
1. 100 percent acrylic emulsion liquid binder.
  2. Mix on-site with sand and cement.
  3. Levels and repairs low spots and depressions up to 3/4 inch deep in asphalt pavement.
  4. Fills Cracks in Asphalt up to 1" in width.
  5. Weight per Gallon at 77 Degrees F: 8.8 lbs., plus or minus 0.5 lbs.
- E. Filler Course: SportMaster "Acrylic Resurfacer".
1. 100 percent acrylic emulsion resurfacer.
  2. Mix on-site with silica sand.
  3. Apply to asphalt surfaces or previously colored acrylic surfaces in preparation of color coating system.
  4. Chemical Characteristics, by Weight, Minimum:
    - a. Acrylic Emulsion: 44.0 percent.
    - b. Hiding Pigment: 2.0 percent.
    - c. Mineral Inert Fillers: 5.0 percent.
    - d. Film Formers, Additives: 0.2 percent.
    - e. Water: 45.0 percent.
  5. Weight per Gallon at 77 Degrees F: 8.5 lbs., plus or minus 0.5 lbs.
  6. Non-Volatile Material: 27.5 percent, plus or minus 5.0 percent.
  7. Color: [Black] or [Neutral].
- F. Color Coating: SportMaster "ColorPlus System".

TOWN OF RIVERHEAD  
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1. 100 percent acrylic emulsion coating.
  2. Mix on-site with silica sand and water.
  3. Color coats tennis and multipurpose courts.
  4. Weight per Gallon at 77 Degrees F: 9.2 lbs., plus or minus 0.5 lbs.
  5. Colors: [Beige] [Blue] [Brown] [Dark Green] [Dove Gray] [Forest Green] [Gray] [Ice Blue] [Light Blue] [Light Green] [Maroon] [Red] [Sandstone] [Tournament Purple] [Orange] [Yellow].
- G. Line Markings Primer: SportMaster "Stripe-Rite".
1. 100 percent acrylic emulsion primer, clear drying.
  2. Primes line markings and prevents bleed-under for sharp lines.
  3. Chemical Characteristics, by Weight, Nominal:
    - a. Acrylic Emulsion: 38.0 percent.
    - b. Hiding Pigment: 0.0 percent.
    - c. Mineral Inert Fillers: 7.0 percent.
    - d. Film Formers, Additives: 1.5 percent.
    - e. Water: 50.0 percent.
  4. Weight per Gallon at 77 Degrees F: 8.9 lbs., plus or minus 0.5 lbs.
  5. Non-Volatile Material: 29 percent, plus or minus 5 percent.
- H. Line Paint: SportMaster "Textured Line Paint".
1. Pigmented, 100 percent acrylic emulsion line paint.
  2. Line marking on asphalt tennis courts.
  3. Chemical Characteristics, by Weight, Nominal:
    - a. Acrylic Emulsion: 25.89 percent.
    - b. Pigment: 14.90 percent.
    - c. Mineral Inert Fillers: 13.12 percent.
    - d. Additives: 4.73 percent.
    - e. Water: 41.36 percent.
  4. Weight per Gallon at 77 Degrees F: 10.65 lbs., plus or minus 0.75 lbs.
  5. Non-Volatile Material: 45.17 percent, plus or minus 5 percent.
  6. Color: White.

**PART 3 EXECUTION**

**3.1 EXAMINATION**

- A. Examine asphalt tennis court surfaces to receive color coating system.
- B. Verify asphalt tennis courts meet ASBA requirements.
- C. Notify Architect of conditions that would adversely affect application or subsequent use.
- D. Do not begin surface preparation or application until unacceptable conditions are corrected.

**3.2 SURFACE PREPARATION**

- A. Protection of In-Place Conditions: Protect adjacent surfaces and landscaping from contact with asphalt tennis court surface color coating system.

TOWN OF RIVERHEAD  
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- B. Prepare surfaces in accordance with manufacturer's instructions.
- C. Cure new asphalt surfaces a minimum of 14 to 30 days before application of asphalt tennis court surface color coating system.
- D. Remove dirt, dust, debris, oil, grease, vegetation, loose materials, and other surface contaminants which could adversely affect application of asphalt tennis court surface color coating system. Pressure wash entire surface.
- E. Repair cracks, depressions, and surface defects in accordance with manufacturer's instructions before application of filler course and color coating.
- F. Level depressions 1/8 inch and deeper with patch binder in accordance with manufacturer's instructions.
- G. Apply 1 or 2 coats of filler course as required by surface roughness and porosity to provide smooth underlayment for application of color coating.
- H. Ensure surface repairs are flush and smooth to adjoining surfaces.

**3.3 APPLICATION**

- A. Apply asphalt tennis court surface color coating system in accordance with manufacturer's instructions at locations indicated on the Drawings.
- B. Mix materials in accordance with manufacturer's instructions.
- C. Apply Filler Course and Color Coating with a 50-60 durometer, soft rubber squeegee.
- D. Filler Course:
  - 1. Apply 2 coats on new asphalt or existing acrylic surfaces with extensive cracks or low spot repair.
  - 2. Apply 1 coat on existing acrylic surfaces with minimal repairs.
- E. Color Coating: Apply a minimum of 2 coats of color coating to prepared surfaces in accordance with manufacturer's instructions.
- F. Allow material drying times in accordance with manufacturer's instructions before applying other materials or opening completed surface to foot traffic.

**3.4 LINE MARKINGS**

- A. Lay out tennis court line markings in accordance with USTA Rules of Tennis or, if applicable, the United States of America Pickleball Association (USAPA) Rules of Pickleball
- B. Apply line markings primer, after masking tape has been laid, to seal voids between masking tape and tennis court surface to prevent bleed-under when line paint is applied.
- C. Apply a minimum of 1 coat of line paint in accordance with manufacturer's instructions.

**3.5 PROTECTION**

ITEM NO. 200 ASPHALT TENNIS COURT SURFACE COLOR COATING SYSTEM

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- A. Allow a minimum of 24 hours curing time before opening tennis courts for play.
- B. Protect applied asphalt tennis court surface color coating system to ensure that, except for normal weathering, coating system will be without damage or deterioration at time of Substantial Completion.

**END OF SECTION**

# **ITYEM 300 DIRECTIONAL BORING**

## **PART 1 - GENERAL**

- 1.01 Work Included
- 1.02 Quality Assurance

## **PART 2 - EQUIPMENT REQUIREMENTS**

- 2.01 General
- 2.02 Boring System
  - A. BORING RIG
  - B. BORE HEAD
  - C. MUD MOTORS
  - D. DRILL PIPE
- 2.03 Guidance System
- 2.04 Boring Fluid (Mud) System
  - A. MIXING SYSTEM
  - B. BORING FLUIDS
  - C. DELIVERY SYSTEM
- 2.05 Other Equipment
  - A. PIPE ROLLERS
  - B. PIPE RAMMERS
  - C. RESTRICTIONS

## **PART 3 - OPERATIONS**

- 3.01 General
- 3.02 Personnel Requirements
- 3.03 Drilling Procedures
  - A. SITE PREPARATION
  - B. BORE PATH SURVEY
  - C. UTILITY LOCATES
  - D. ENVIRONMENTAL PROTECTION
  - E. SAFETY

## **PART 1 - GENERAL**

### 1.01 Work Included

The work specified in this section consists of furnishing and installing underground utilities using the directional boring (horizontal directional drilling, HDD) method of installation, also commonly referred to as guided horizontal boring. This work shall include all services, equipment, materials, and labor for the complete and proper installation, testing, restoration of underground utilities and environmental protection.

### 1.02 Quality Assurance

The requirements set forth in this document specify a wide range of procedural precautions necessary to insure that the very basic, essential aspects of a proper directional bore installation are adequately controlled. Strict adherence shall be required under specifically covered conditions outlined in this specification. Adherence to the specifications contained herein, or the Engineer's approval of any aspect of any directional bore operation covered by this specification, shall in no way relieve the Contractor of their ultimate responsibility for the satisfactory completion of the work authorized under the Contract.

## **PART 2 - EQUIPMENT REQUIREMENTS**

### 2.01 General

The directional boring equipment shall consist of a directional boring rig of sufficient capacity to perform the bore and pullback the pipe, a boring fluid mixing & delivery system of sufficient capacity to successfully complete the crossing, a guidance system to accurately guide boring operations and trained and competent personnel to operate the system. All equipment shall be in good, safe operating condition with sufficient supplies, materials and spare parts on hand to maintain the system in good working order for the duration of this project.

## 2.02 Boring System

A. BORING RIG: The directional boring machine shall consist of a hydraulically powered system to rotate, push and pull hollow drill pipe into the ground at a variable angle while delivering a pressurized fluid mixture to a guidable drill (bore) head. The machine shall be anchored to the ground to withstand the pulling, pushing and rotating pressure required to complete the crossing. The hydraulic power system shall be self-contained with sufficient pressure and volume to power boring operations. Hydraulic system shall be free of leaks. Rig shall have a system to monitor and record maximum pull-back pressure during pull-back operations. The rig shall be grounded during boring and pull-back operations. Sufficient spares shall be kept on hand for any break-downs which can be reasonably anticipated.

B. BORE HEAD: The bore head shall be steerable by changing it's rotation and shall provide the necessary cutting surfaces and boring fluid jets.

C. MUD MOTORS (if required): Mud motors shall be of adequate power to turn the required boring tools.

D. DRILL PIPE: Shall be constructed of high quality 4130 seamless tubing, grade D or better, with threaded box and pins. Tool joints should be hardened to 32-36 RC.

## 2.03 Guidance System

The Guidance System shall be of a proven type and shall be setup and operated by personnel trained and experienced with this system. The Operator shall be aware of any magnetic anomalies and shall consider such influences in the operation of the guidance system if using a magnetic system.

## 2.04 Boring Fluid (Mud) System

A. MIXING SYSTEM: A self-contained, closed, boring fluid mixing system shall be of sufficient size to mix and deliver boring fluid composed of bentonite clay, potable water and appropriate additives. Mixing system shall be able to molecularly shear individual bentonite particles from the dry powder to avoid clumping and ensure thorough mixing.

B. Boring FLUIDS: Drilling fluid shall be composed of clean water and an appropriate additive. Water shall be from a clean source with a pH of 8.5 - 10. Water of a lower pH or with excessive calcium shall be treated with the appropriate amount of sodium carbonate or equal. The water and additives shall be mixed thoroughly and be absent of any clumps or clods. No hazardous additives may be used. Boring fluid shall be maintained at a viscosity sufficient to suspend cuttings and maintain the integrity of bore wall.

C. DELIVERY SYSTEM: The mud pumping system shall be capable of delivering the boring fluid at a constant pressure. The delivery system shall have filters in-line to prevent solids from being pumped into the drill pipe. Connections between the pump and drill pipe shall be relatively leak-free.

#### 2.05 Other Equipment:

A. PIPE ROLLERS: Pipe rollers, if required, shall be of sufficient size to fully support the weight of the pipe while being hydro-tested and during pull-back operations. Sufficient number of rollers shall be used to prevent excess sagging of pipe.

B. PIPE RAMMERS/PULLERS: Hydraulic or pneumatic pipe rammers or pullers may only be used if necessary and with the authorization of Engineer.

#### 2.05 Other Equipment

Other devices or utility placement systems for providing horizontal thrust other than those previously defined in the preceding sections shall not be used unless approved by the Engineer prior to commencement of the work. Consideration for approval will be made on an individual basis for each specified location. The proposed device or system will be evaluated prior to approval or rejection on its potential ability to complete the utility placement satisfactorily without undue stop- page and to maintain line and grade within the tolerances prescribed by the particular conditions of the project.

### **PART 3 - OPERATIONS**

#### 3.01 General

The Engineer must be notified 24 hours in advance of starting work.

#### 3.02 Personnel Requirements

All personnel shall be fully trained in their respective duties as part of the directional boring crew and in safety. Training shall be provided specific to the project if any potential hazards may be encountered which has not already been included in personnel's training.

### 3.03 Boring Procedure

A. **SITE PREPARATION:** Prior to start of work the contractor shall meet on site with the engineer to go over the work to be performed and the routes to be taken while boring to assure full agreement with the work to be performed. Contractor shall confine all activities to designated work areas.

B. **BORE PATH:** The path to be taken by the boring tool shall be approved by the engineer or his/her representative prior to start of work. Careful care must be taken by the contractor to avoid any potential underground obstructions or utilities.

C. **ENVIRONMENTAL PROTECTION:** Contractor shall take measures to avoid the flow of boring fluids and/or other potential contaminants from entering storm drains or surface water bodies. Contractor shall adhere to all applicable environmental regulations. Fuel or oil may not be stored in bulk containers within 200' of any water-body or wet-land.

D. **UTILITY LOCATES:** Contractor shall notify all companies with underground utilities in the work area via the state or local "one-call" to obtain utility locates. Once the utilities have been located Contractor shall physically identify the exact location of the utilities by vacuum or hand excavation, when possible, in order to determine the actual location and path of any underground utilities which might be within 20 feet of the bore path. Contractor shall not commence boring operations until the location of all underground utilities within the work area have been verified.

E. **SAFETY:** Contractor shall adhere to all applicable state, federal and local safety regulations and all operations shall be conducted in a safe manner.

**BID AWARD ACKNOWLEDGEMENT**

I, \_\_\_\_\_ on behalf of \_\_\_\_\_

(Name)

(Identify Contractor/Vendor, i.e.: Self, Business or

Corporate Entity)

acknowledge that I have read the bid specifications and all such terms and conditions, including the Town reservation of right to make purchases of materials, equipment, or supplies, or to contract for services, when available, through the county in which the political subdivision or district is located or through any county with-in the state as set forth in General Municipal Law 103(3) and the TOWN reserves the right to make purchases of materials, equipment, or supplies, or to contract for services available pursuant to sections one hundred sixty-one and one hundred sixty-seven of the state finance law through the office of general services as set forth in General Municipal Law 104 provided such purchase or service may be made upon the same terms, conditions and specifications at a lower price and fully understand and agree to all such terms and conditions set forth in the bid specifications.

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

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

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

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

**TOWN OF RIVERHEAD  
SUFFOLK COUNTY, NEW YORK**

**2023 ANNUAL CONSTRUCTION CONTRACT**

**FORM OF CONTRACT**

**FORM OF CONTRACT**

THE TOWN OF RIVERHEAD 2023 ANNUAL CONSTRUCTION CONTRACT,  
RIVERHEAD, NEW YORK

CONTRACT DATED \_\_\_\_\_, 20 \_\_\_\_ BY AND BETWEEN THE TOWN OF  
RIVERHEAD (HEREIN CALLED THE "OWNER" AND \_\_\_\_\_  
(HEREIN CALLED THE "CONTRACTOR")

WITNESSETH, the Town and the Contractor, in consideration of the premises and of the mutual covenants, considerations and agreements contained, agree as follows:

The Notice to Bidders, Instruction to Bidders, Proposal Form, Form of Bond, Conditions of Contract, General Conditions, Specifications, Form of Contract, Construction Drawings, and Plans, together with any Addenda, shall form part of this contract, and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth. The Table of Contents, title, heading, headlines and marginal notes contained herein are solely to facilitate reference to various provisions of the Contract Documents and in no way affect, limit or case light upon the interpretation of the provisions to which they refer. Whenever the term "Contract Documents" is used, it shall mean and include the Notice to Bidders, Instruction to Bidders, Proposal Form, Form of Bond, Conditions of Contract, General Conditions, Specifications, Form of Contract, Construction Drawings, and any Addenda. In case of any conflict or inconsistency between the provisions of the conditions of this contract shall govern.

IN WITNESS THEREOF, the parties hereunto set their hands and seals, and such of them as are corporations have caused these presents to be signed by their duly authorized officers.

NOTE:Quantities of any or all items may be increased, decreased or eliminated in their entirety at the option of the Town prior to or after award of the contract.  
Total Bid

\_\_\_\_\_ Dollars \_\_\_\_\_  
(written in words) (figures)

ATTEST:

TOWN OF RIVERHEAD

\_\_\_\_\_  
SUPERVISOR

\_\_\_\_\_  
CONTRACTOR

\_\_\_\_\_  
TITLE

**FORM OF CONTRACT**

STATE OF NEW YORK

)

)ss:

COUNTY OF SUFFOLK )

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

\_\_\_\_\_.

(Town Supervisor)

The duly elected and qualified Supervisor of the Town of Riverhead, the corporation described in and which executed the foregoing instrument, to me known and known to me to be such Supervisor of the Town of Riverhead; and he being by me duly sworn did depose and say; that he is the Supervisor of the Town of Riverhead; that he resided at

\_\_\_\_\_, Suffolk County, New York; that he knows the corporation seal of said Town of Riverhead; that the seal affixed to said instrument is such corporate seal; and that he executed the same as such Supervisor for the purpose herein mentioned.

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





VENDOR NAME \_\_\_\_\_

**BID AWARD ACKNOWLEDGEMENT**

I, \_\_\_\_\_ on behalf of \_\_\_\_\_  
(Name) (Identify Contractor/Vendor, i.e.: Self, Business or Corporate Entity)

acknowledge that I have read the bid specifications and all such terms and conditions, including the Town's reservation of right to make purchases of materials, equipment, or supplies, or to contract for services, when available, through the county in which the political subdivision or district is located or through any county within the state as set forth in General Municipal Law 103(3) and the Town reserves the right to make purchases of materials, equipment, or supplies, or to contract for services available pursuant to sections 161 and 167 of the state finance law through the office of general services as set forth in General Municipal Law 104 provided such purchase or service may be made upon the same terms, conditions and specifications at a lower price and fully understand and agree to all such terms and conditions set forth in the bid specifications.

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

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

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

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

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

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

VENDOR NAME \_\_\_\_\_ -

**ACCEPTANCE SHEET**

(MUST BE COMPLETED, SIGNED, AND RETURNED WITH BID)

**I/WE FULLY UNDERSTAND THAT THE ACCEPTANCE OF THIS BID IS SUBJECT TO THE PROVISIONS OF SECTION 103A AND 103B OF THE GENERAL MUNICIPAL LAW.**

\_\_\_\_\_  
**NAME OF CONTRACTOR**

\_\_\_\_\_  
**ADDRESS**

\_\_\_\_\_  
**CITY, STATE, ZIP CODE**

\_\_\_\_\_  
**CONTACT PERSON**

\_\_\_\_\_  
**EMAIL**

\_\_\_\_\_  
**TELEPHONE**

\_\_\_\_\_  
**DATE**

\_\_\_\_\_  
**SIGNATURE OF CONTRACTOR**

VENDOR NAME \_\_\_\_\_

### IRAN DIVESTMENT ACT CERTIFICATION

As a result of the Iran Divestment Act of 2012 (Act), Chapter 1 of the 2012 Laws of New York, a new provision has been added to the State Finance Law (SFL), § 165-a, effective April 12, 2012. Under the Act, the Commissioner of the Office of General Services (OGS) will be developing a list (prohibited entities list) of “persons” who are engaged in “investment activities in Iran” (both are defined terms in the law). 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, Bidder/Bidder/contractor (or any assignee) certifies that once the prohibited entities list is posted on the OGS website, it will not utilize on such Contract any subbidder/contractor that is identified on the prohibited entities list.

Additionally, Bidder/Bidder/contractor is advised that once the 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 the 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 OF RIVERHEAD receive information that a person is in violation of the above-referenced certification, the TOWN OF RIVERHEAD will offer the person an opportunity to respond. If the person fails to demonstrate that it has ceased its engagement in the investment which is in violation of the Act within 90 days after the determination of such violation, then the TOWN OF RIVERHEAD 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 OF RIVERHEAD reserves the right to reject any bid or request for assignment for an entity that appears on the prohibited entities list prior to the award of a contract, and to pursue a responsibility review with respect to any entity that is awarded a contract and appears on the prohibited entities list after contract award.

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

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

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

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

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

VENDOR NAME \_\_\_\_\_ -

**STATE FINANCE LAW § 139-L CERTIFICATION**

New York State implemented a sexual harassment policy effective January 1, 2019. New York State law requires that by the submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that the bidder has and has implemented a written policy addressing sexual harassment prevention in the workplace and provides annual sexual harassment prevention training to all of its employees. I state that such policy meets the requirements of Section 201-G of the Labor Law.

Signature of Bidder/Contractor: \_\_\_\_\_

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

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

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

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

VENDOR NAME \_\_\_\_\_

Please complete and affix to your sealed bid envelope.



**BIDS MUST BE DELIVERED TO THE TOWN CLERK**

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

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

\_\_\_\_\_

**BID NAME: 2023 ANNUAL  
CONSTRUCTION CONTRACT**

**BID OPENING DATE: April 27, 2023**

**TIME: 11:00AM**

**BIDS MUST BE DELIVERED TO:**

**TOWN OF RIVERHEAD  
TOWN CLERKS OFFICE  
200 HOWELL AVENUE  
RIVERHEAD, NY 11901**

**PRIOR TO 11AM ON APRIL 27, 2023**

**LATE BIDS WILL NOT BE ACCEPTED FOR ANY REASON**