

City of New London

Department of Finance-Purchasing Agent
13 Masonic Street • New London, CT 06320 • Phone (860) 447-5215 • Fax (860) 447-5297

Request for Proposals

Specifications and Proposal Documents Attached

Proposal No.: 2020-18

Opening Date and Time: April 22, 2020 @ 2:00 P.M.

Title: On-Call Sidewalk Panel Spot Repair Replacement

Special Instructions:

All questions should be directed to Brian Sear by email at bsear@newlondonct.org no later than April 15, 2020. Please copy Thomas Quintin at tquintin@newlondonct.org and Julie Chapman at Jchapman@newlondon.org on all inquiries.

Due to Covid-19, proposals should be submitted at the drive thru window located at 13 Masonic Street New London, CT 06320. Bid results can be requested via email to Jchapman@newlondonct.org

The following information must appear in the lower left-hand corner of the envelope:

Sealed Proposal No.: 2020-18

Not to be opened until April 22, 2020 at 2:00PM

Return Bid to:

DRIVE-THRU WINDOW AT

13 Masonic Street New London, CT 06320 Julie Chapman; Purchasing Agent

Proposals shall not be accepted after the Opening Date and Time indicated above.



City of New London

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PLEASE RETURN THIS FORM IMMEDIATELY

Acknowledgement: Receipt of Request for Proposals

Bid No.:

2020-18

On-Call Sidewalk Panel Spot Repair Replacement

Please take a moment to acknowledge receipt of the attached documents. Your compliance with this request will help us to maintain proper follow-up procedures and will ensure that you receive any addendum that may be issued.

Date Issued: April 8, 2020			
Date documents received:		/	
Do you plan to submit a respon	se? Yes	No	
Print or type the following inforr	mation:		
Company Name:			
Address:			
Telephone:		Fax:	
E-mail:			
Pacaived by:			

Note: Faxed or e-mailed acknowledgements are requested.

Fax No.: (860)447-5297

E-mail: Jchapman@newlondonct.org

Fax this sheet only. A cover sheet is not required.

CITY OF NEW LONDON, CT PUBLIC WORKS DEPARTMENT

GENERAL CONDITIONS AND SPECIFICATIONS

RFP 2020-18 - ON-CALL SIDEWALK PANEL SPOT REPAIR REPLACEMENT

1.0 INTRODUCTION

- 1.1 The City of New London Public Works Department is requesting bids from qualified contractors in good standing for sidewalk spot repair replacement of damaged sidewalk panels, in the City of New London.
- 1.2 Contractors are required to comply with the instructions contained within these General Conditions and Specifications and to provide information where requested.

2.0 KEY EVENT DATES

2.1 Request for Bids Advertised

April 8, 2020

2.2 Questions Due by

April 15, 2020 (7-Days In)

2.3 Bid Opening

April 22, 2020, 2:00 p.m. (14-Days In)

Purchasing Department, 13 Masonic Street

3.0 BID FORMS AND SUBMISSION INSTRUCTIONS

- 3.1 Ditto marks are not considered writing; shall not be used; and can be reason for non-acceptance of a bid.
- 3.2 All bids must be submitted in a sealed envelope, clearly marked "ON-CALL SIDEWALK PANEL SPOT REPAIR REPLACEMENT" and received in the Purchasing Department office by the time of the bid opening defined in section 2.3 above. Bids, corrections and/or modifications received after the time City officials open the first bid, will not be accepted.
- 3.3 The bid form must be signed by an authorized agent of the submitting company.
- 3.4 All information submitted, must be in ink or typewritten. Mistakes may be crossed out and corrections inserted. The person signing the bid form must initial such corrections.
- 3.5 At the time of bid form submission, Contractors shall be presumed to have read, and be thoroughly familiar with all specifications in this document. Failure of any Contractor to receive or examine any form, instruction or document, shall not relieve any Contractor from obligations with respect to their bid.
- 3.6 The specifications listed are to be interpreted as meaning those acceptable to the City of New London. Substitutions that are "an approved equal," will be considered.
- 3.7 The completed bid package shall be in conformance with all other requirements as stated herein.

4.0 MISCELLANEOUS

- 4.1 The City of New London is exempt from Connecticut Sales and Use Taxes and Federal Excise Taxes. Contractors shall avail themselves of these exemptions.
- 4.2 The City of New London reserves the right to accept any, all or any part of bids, to waive any informalities, to take into account the residency and business location of bidders within the City of New London, and to award the bid deemed by the City of New London to be in its best interest. The lowest price shall not be the sole determining factor when awarding the contract for the proposed work.

- 4.3 The bid price(s) on the submitted bid form shall be held firm from the date of submission through December 31, 2020.
- 4.4 Completion shall be determined by the City of New London, through an authorized representative.
- 4.5 Successful Contractor shall obtain all Local, State and Federal permits, as deemed necessary.
- 4.6 General questions concerning these General Conditions and Specifications shall be directed to the below, **please copy all three parties**.

Brian Sear Director of Public Works bsear@newlondonct.org Thomas Quintin
Engineering Technician
tquintin@newlondonct.org

Julie Chapman
Purchasing Agent
jchapman@newlondonct.org

5.0 **SPECIFICATIONS**

5.1 General

Approximated Quantities

The quantities listed in the bid proposal are estimated and are for comparison bidding purposes only. They are in no way warranted to be the actual quantity of work to be completed.

Isolated Work Areas

Under this program, the Contractor should expect to perform small amounts of work at multiple locations throughout City of New London. The City of New London bids a separate contract for full sidewalk replacement. Under this contract, it is likely that the Contractor will be replacing as little as one or two sidewalk slabs per location. It is also likely that many of the slabs may fall within areas of recent utility pole replacements (i.e. there will be an existing utility pole within the slab repair).

Limited Inconvenience

It is expected that the Contractor shall schedule the work to minimize the duration between sidewalk excavation and completion. In no case, shall a sidewalk be left excavated for more than one week.

Public Safety

The Contractor shall furnish and install barricades, warning tape, or other acceptable material to clearly demarcate and protect any excavated areas.

Disposal of Surplus Material

Surplus materials are the responsibility of the Contractor and shall be properly disposed of in accordance with all local, state and federal regulations.

On-Call Contract

The intent of this contract is for the City of New London to have an on-call contractor to perform miscellaneous curb and sidewalk repair. The City of New London will provide written notice of any work requested along with an estimated quantity and a map showing the work areas. The Contractor shall schedule the work within ten (10) working days of the request. It is the City of New London's intent to group work areas together to minimize the number of "call-outs".

Work on State Roads

The Contractor may be required to perform work under this project on State-owned roads. When work is scheduled within State of Connecticut right-of-way, the Contractor will be required to take out an "Encroachment Permit" with the Connecticut Department of Transportation. The permit fees will be reimbursed by the City of New London with no additional markup.

This Bid Specification pertains to the Contractor's requirements. The Contractor shall furnish all labor, material and equipment to perform the work.

5.2 Scope of Project

The scope of work for this project is generally as follows:

The intent of this contract is for the City of New London to have an on-call contractor to perform miscellaneous curbing and sidewalk repair. The Contractor would perform small amounts of work to replace damaged sidewalk panels at multiple locations throughout City of New London.

5.3 **Description**

The work shall consist of the removal and restoration of damaged sidewalk panels at multiple locations throughout City of New London as described in Sections 5.4 through 5.18.

5.4 Site Preparation/Site Removals

Work under this section shall include, but not limited to the following:

- 1. Setting soil erosion controls around sloped areas and near access road and providing barriers in the construction site to prevent public access.
- 2. Removal of damaged sidewalk panels.
- 3. Prep area for new sidewalk panels.
- 4. Dispose of waste materials.

Contact "Call Before You Dig" (800-922-4455) prior to commencing demolition.

The Contractor shall furnish signs, lights, barricades and other equipment as necessary for the safe operation of their work. All construction staging shall be removed upon completion of the project.

The Contractor shall be responsible for and damages to structures and facilities that are to remain. The Contractor shall repair any damages to the satisfaction of the City of New London at no additional cost.

The Contractor shall clean up and remove debris resulting from demolitions as the work progresses. Debris shall become the property of the Contractor who is responsible for proper disposal. No demolition material shall be left on the site after the completion of the project.

5.5 Granular Fill

Description

"Granular Fill" includes the furnishing and installation of material to be used as a foundation for structures, to replace unstable material in slopes and shoulders, to replace rock and unsuitable material in trenches, and elsewhere as indicated on the Plans or Specifications or where directed by the Engineer. It shall consist of gravel conforming to the requirements of these specifications.

Materials

Granular fill shall conform to the requirements of Section M.02.01 of Form 817.

Construction Details

When granular fill is used for foundation for structures, as backfill or to replace rock or unsuitable material in trenches, it shall be deposited in layers not over six (6) inches in depth, with each layer thoroughly compacted before the addition of other layers.

Measurement

Only granular fill used to replace unsuitable material and rock in trenches or other areas directed by the Engineer will be measured for payment. It will be measured in place by the cubic yard after compaction within the payment lines shown or specified by the Engineer.

Payment

This work will be paid for at the contract unit price per cubic yard for "Granular Fill", complete in place, which price shall constitute full compensation for all materials, tools, equipment and labor incidental thereto.

Pay Item

Granular Fill

Pay Unit Cubic Yard

5.6 Processed Aggregate Base

Description

"Processed Aggregate Base" shall consist of furnishing and installing processed aggregate base as a foundation for bituminous concrete roadways, concrete sidewalks, ramps, driveway aprons, curbing and other items shown on the Plans in accordance with these Specifications and in conformity with the lines, grades, compacted thickness and typical cross-section as shown on the Plans.

Materials

Processed Aggregate Base shall conform to Section M.05.01 of Form 817.

Construction Details

Coarse aggregate shall be broken stone. Only one type of coarse aggregate shall be used on a project unless otherwise permitted by the Engineer.

Prior to placing the bottom course of the processed aggregate base, the prepared subbase shall be maintained true to line and grade. After the aggregate is spread, it shall be thoroughly compacted and bound by use of equipment approved by the Engineer. Water may be used during the compaction and binding operation.

When the bottom course has been completed, as specified above, the top course aggregate shall be spread over it to such thickness that, after final compaction and binding, the total thickness of the two courses will equal that thickness specified for the completed base. The top course shall be spread, compacted and bound exactly as specified above for the bottom course.

The final surface of the subbase course shall be fine graded so that, after final compaction and just prior to placement of base or pavement courses, the surface elevation shall not vary more than one-quarter inch above or below the design grade at any location. The surface shall be completed to the above tolerance and approved by the Engineer prior to any work at a given location to place an overlying course. If after approval, the course becomes displaced or disturbed in any way for any reason, the Contractor shall repair and regrade the damage to the satisfaction of the Engineer prior to placing the overlying course. All repaired sections shall be recompacted until they meet the requirements as stated herein.

Measurement

Processed Aggregate Base shall not be measured for payment. Its costs shall be included in the bid prices for the items which includes this material.

5.7 Bituminous Concrete Pavement Repair

The work under this section shall include temporary and permanent pavement repairs in accordance with the City of New London Standards. (See attached drawings.)

Description

"Permanent Pavement Repair" shall consist of the constructing a full depth pavement repair in an existing roadway of the classification specified where shown on the Plan or where directed by the Engineer. The surface course pavement structure shall consist of bituminous concrete constructed on a prepared stabilized base and in accordance with lines, grades as shown on the Plans, or as directed by the Engineer. It shall also include all excavation, furnishing, installing and compacting of processed aggregate base, sawcutting the existing pavement as required around granite curbing to reset or install new granite curbing and to make grades work for the installation of new concrete driveway aprons to match existing driveway and road pavement and any pavement surrounding these structures.

"Temporary Pavement Repair" shall consist of the constructing a pavement repair in an existing roadway of the classification specified for temporarily repairing all pavement cuts and other pavement areas specified by the Engineer. The surface course pavement structure shall consist of bituminous concrete constructed on a prepared stabilized base and in accordance with lines, grades as shown on the Plans, or as directed by the Engineer. It shall also include all excavation, furnishing, installing and compacting of processed aggregate base, sawcutting the existing pavement as required around granite curbing to reset or install new granite curbing and to make grades work for the installation of new concrete driveway aprons to match existing driveway and road pavement and any pavement surrounding these structures.

Materials

Bituminous Concrete shall conform to the requirements of Section M.04 of Form 817.

All materials will be supplied from a plant certified and approved by the State of Connecticut, Department of Transportation.

Processed aggregate base shall conform to the specification for "Processed Aggregate Base" elsewhere in these Specifications.

If it is found that any Bituminous Mixture, even though meeting the requirements of the Job Mix Formula, fails to perform satisfactorily, the producer shall on notice (1) immediately cease furnishing the material, (2) take immediate corrective steps to provide a mix which does perform satisfactorily.

When bituminous concrete is laid, only material conforming to the requirements of these specifications and approved by the Engineer shall be used in the work. If tests of samples removed from the work reveal that the mixture is inconsistent or that other than approved materials have been incorporated in the mixture, or that the mixture is not in accordance with the specifications and the product proves unsatisfactory, the City of New London reserves the right to demand the replacement of the unsatisfactory bituminous concrete. All expenses of the City of New London incidental to such replacement, including all costs incurred in putting the road in satisfactory condition, shall be paid by the Contractor.

The tack coat to be used on all cold joints shall conform to the requirements of Section M.04 of Form 817.

Construction Details

<u>Transportation of Mixtures</u>: The mixture shall be transported from the paving plant in trucks having tight bodies, which have previously been cleaned of all foreign material. The use of kerosene, gasoline, fuel or similar products for the coating of the inside of truck bodies is strictly prohibited. Such coatings may consist of soapy water or commercial oil emulsions (also known as soluble oils) in the proportion of one (1) part oil to six (6) parts water. When such coatings are applied, truck bodies shall be raised immediately prior to loading to remove any excess coating material. Loaded trucks shall be covered with waterproof canvas or other suitable covers.

The mixture shall be delivered at a temperature within -4 degrees Celsius (25 degrees Fahrenheit) of the approved job mix formula.

<u>Paving Equipment</u>: The paving machine to be used shall be a self-powered type with an adapter to provide guidance of the screeding action. The screed or strike-off member shall be adjustable to the shape of the cross section of the existing pavement. Some method shall be provided for the tilting of the screed while in operation to secure the proper "pulling" and to result in a uniformly screeded surface. The machine shall have sufficient number of driving wheels so that there will be no undue amount of slippage. Means shall be provided for heating the screeding members by some method that will prevent accumulations of bituminous materials.

<u>Placement of Mixture</u>: The areas to be repaired shall be sawcut and the existing pavement and base material removed to the depth shown on the Plan. The excavated area shall then be filled with processed aggregate base to the depth identified on the Plans and shall be installed and compacted in maximum 6" lifts.

The mixture shall be laid only when the surface is free of frost, dried to the satisfaction of the Engineer, and when the weather is not foggy or rainy. Operations shall be carried only when the atmospheric temperature in the shade is not less than 4 degrees Celsius (40 degrees Fahrenheit) unless approval is given by the Engineer. Upon arrival, the mixture shall be immediately spread and struck-off to the width required and to such appropriate loose depth so that the compacted pavement will conform to the specified depth.

In order to obtain tight and well-compacted longitudinal joints, the sequence of the bituminous concrete placing operations shall be subject to the control of the Engineer.

Before any compaction is started, the surface shall be checked and inequities adjusted; all "drippings," i.e. fat, sandy accumulations, and all fat spots from any source, shall be removed and replaced by satisfactory material.

In areas where, on account of physical limitations, it is impractical to operate the paving equipment, the Engineer will permit the use of other type spreader or the mixture may be spread and screeded by hand.

The Contractor shall cut to the limits of the area to be repaired a minimum of 150 mm (six (6) inches) beyond each side of the disturbed area or into the existing pavement with a cutting saw. The saw cut shall be vertical and in straight lines. After the pavement has been removed to a depth of 450 mm (eighteen (18) inches) below the existing pavement surface, the roadway base shall be installed, graded and compacted in accordance with the specification for "Processed Aggregate Base". The roadway base shall be placed in layers not to exceed 150 mm (six (6) inches) in depth and to such a depth that after compaction it shall be at the specified depth shown on the plans. Contact surfaces of curbing, manholes, etc. shall be painted with a thin uniform coat of hot asphalt cement or tack coat just before the material

is placed against them. Such asphalt cement or tack coat shall not be paid for. Hot-laid bituminous concrete shall be placed evenly and uniformly to a minimum compacted thickness of six (6) inches. The maximum thickness to be placed per course shall be two (2) inches. Immediately before placing the mixture, the road surface shall be cleaned by brooming or as otherwise directed by the Engineer.

Refueling of equipment in such a position that fuel might be spilled on bituminous concrete mixtures already placed or to be placed is prohibited.

Solvents and cleaners for use in cleaning mechanical equipment or hand tools shall be stored well clear of areas paved or to be paved.

<u>Compaction</u>: After spreading and when sufficient set has developed to permit proper compaction, each course shall be compacted by rolling, consisting of initial or breakdown rolling, intermediate rolling and final or finish rolling. Initial rolling shall be performed with a power-driven steel wheel tandem or three-wheel rollers weighing not less than ten (10) tons.

Intermediate rolling shall be done by a power-driven steel wheel tandem roller. Final rolling shall be done with a self-propelled pneumatic tire roller equipped with Wide-tread compaction tires capable of exerting an average contact pressure from 60 to 90 pounds per square inch uniformly over the surface, adjusting ballast and tire inflation pressure as required. The Contractor shall furnish evidence regarding tire size, pressure and loading to confirm that the proper contact pressure is being developed and that the loading and contact pressure are uniform for all wheels.

Rolling shall begin at the sides and progress toward the center, parallel to the centerline of the roadway. Alternate trips of the roller shall be terminated in stops at least three feet distant from any preceding stop.

Other rolling procedures may be directed by the Engineer, as conditions may require. Rolling shall be discontinued if the surface shows signs of excessive cracking or displacement and shall be continued later as directed. If it is found that the cracking and displacement continues, the paving operation shall be discontinued until the cause of the condition is corrected.

Rolling shall proceed continuously and in such a manner that all roller marks are eliminated. The rollers shall be in good condition. They shall be operated by experienced roller operators and must be kept in continuous operation as nearly as practicable in such manner that all parts of the pavement shall receive substantially equal compression.

In no case shall the Contractor use methods or equipment, which will result in fractured aggregate or lateral displacement of the material.

In all places inaccessible to a roller, such as adjacent to curbs, headers, gutters, and manholes, the required compression shall be secured with tamps. Depressions which may develop before the completion of the rolling shall be remedied by adding new material to bring such depressions to a true surface. Should any depressions remain after the final compaction has been obtained, new material shall be added to form a true and even surface. All high spots, high joints and other defects shall be adjusted as directed by the Engineer.

Placing of the pavement shall be as nearly continuous as possible and the roller shall pass over the unprotected end of the freshly laid mixture only when laying of the pavement is discontinued or interrupted for an appreciable period and joints shall be formed at such point. Where joints are to be formed, the edge of the existing pavement shall be cut square with the pavement.

Before new material is laid, a thin coating of hot asphalt shall be applied to the vertical face of the cut pavement.

Depressions which may develop after initial rolling shall be remedied by scarifying the surface mixture laid and adding new material to bring such depressions to a true surface.

For permanent pavement repairs, all joints between new and existing pavements shall be sealed with an approved liquid bituminous concrete sealer material.

<u>Protection of the Work</u>: Sections of the newly finished bituminous work shall be protected from traffic to prevent damage to the finished mat.

Measurement

"Permanent Pavement Repair" will be measured by the actual number of square yards of bituminous concrete pavement repair completed and accepted in accordance with pay limits identified in the associated details on the Contract Plans. Excavation, asphalt emulsion tack coat, joint seal material, formation and compaction of subgrade, installation and compaction of processed aggregate base, sawcutting the existing pavement and bituminous concrete pavement shall not be measured for payment; these costs shall be considered as included in the unit price bid for "Permanent Pavement Repair".

"Temporary Pavement Repair" of the type specified will be measured for payment by the actual number of square yards of bituminous concrete pavement repair installed and accepted in accordance with pay limits identified in the associated details on the Contract Plans. Asphalt emulsion tack coat, formation and compaction of subgrade, installation and compaction of processed aggregate base, and sawcutting the existing pavement shall not be measured for payment; these costs shall be considered as included in the unit price bid for "Temporary Pavement Repair" of the type specified.

Due to existing pavement conditions in some areas, the Engineer may direct the Contractor to construct wider pavement repairs to provide suitable joints between new and existing pavement, which shall be measured and paid for in accordance with this Specification.

Payment

The work will be paid for at the contract unit price per square yard for "Permanent Pavement Repair" complete and in place, to the pay limits and dimensions as shown on the plans and details, including all material, labor, tools and equipment incidental to the completion of the work and resetting of granite curbing (as needed) and utility structures including any pavement around the structures. It shall include all excavation, asphalt emulsion tack coat, formation and compaction of subgrade, installation and compaction of processed aggregate base, sawcutting the existing pavement and bituminous concrete pavement.

The work will be paid for at the contract unit price per square yard for "Temporary Pavement Repair" of the type specified complete and in place, to the pay limits and dimensions as shown on the plans and details, including all material, labor, tools and equipment incidental to the completion of the work and resetting of all granite curbing (as needed) and utility structures including any pavement around the structures. It shall include all asphalt emulsion tack coat, formation and compaction of subgrade, installation and compaction of processed aggregate base, and sawcutting the existing pavement.

Due to existing pavement conditions in some areas, the Engineer may direct the Contractor to construct wider pavement repairs to provide suitable joints between new and existing pavement, which shall be measured and paid for in accordance with this Specification.

Pay Item	Pay Unit
Permanent Pavement Repair (Local Road)	Square Yard
Permanent Pavement Repair (Collector Road)	Square Yard
Permanent Pavement Repair (Arterial Road)	Square Yard

5.8 Reinforced Concrete Sidewalk and Reinforced Concrete Sidewalk Ramps

The work under this section shall include installation of processed aggregate base and compact. Install forms for sidewalks and install replacement concrete sidewalk panels and ramps in accordance with City Standards. (See attached drawings.)

Description

"Reinforced Concrete Sidewalk" (5"thick) includes the construction of concrete sidewalk reinforced with welded wire fabric on a prepared processed aggregate base course in conformance with the lines, grades, dimensions and details as shown on the Plans, or as directed by the Engineer. It shall also include the sawcutting, removal and disposal of existing sidewalk, steps, ramps or pavement within the excavation limits for "Reinforced Concrete Sidewalk".

"Reinforced Concrete Sidewalk and Curb Monolithic" (5"thick) includes the construction of concrete curb and sidewalk, monolithically poured, reinforced with welded wire fabric on a prepared processed aggregate base course in conformance with the lines, grades, dimensions and details as shown on the Plans, or as directed by the Engineer. It shall also include the sawcutting, removal and disposal of existing sidewalk, steps, ramps or pavement within the excavation limits for "Reinforced Concrete Sidewalk and Curb Monolithic".

"Reinforced Concrete Sidewalk Ramp" (5" thick) includes the construction of a concrete ramp reinforced with welded wire fabric on a prepared processed aggregate base course in conformance with the lines, grades, dimensions and details as shown on the Plans, or as directed by the Engineer. It shall also include the sawcutting, removal and disposal of existing sidewalk, steps, ramps or pavement within the excavation limits and installation of detectable warning tiles for "Reinforced Concrete Sidewalk Ramp".

Materials

1. Concrete

- a. The concrete furnished shall conform in respects to composition, transportation, mixing and placing to Class "C" Concrete (3,000 PSI) as specified in Section M.03 of Form 817 or as modified herein.
- b. Test concrete in accordance with AASHTO or ASTM Standard Test Methods as listed herein.
- c. All concrete mixes shall include air entraining and water reducing admixtures and as needed, a retarder or accelerator. All admixtures must be on the Connecticut DOT approved list.
- d. Entrained air contents shall be maintained as follows:

Nominal Max `	Average Air
Aggregate Size	Content
3/8"	7.5%
1/2"	7.0%
3/4"	6.0%

A range of $\pm 1.5\%$ from the required average is permissible for field tests. Slump at the point of placement shall be 4"+1".

e. No additional materials will be added to the concrete mix at the job site without the prior approval of the Engineer.

2. Reinforcing

- a. Welded Wire Mesh: WWM shall be used in all driveways and sidewalk locations. The WWM shall be 6" x 6" and conform to the latest AASHTO M 55M/M 55 "Standard Specifications for Welded Steel Wire Fabric for Concrete Reinforcement."
 - Written requests may be made to substitute synthetic fibers such as Fibermesh or approved equal for welded wire mesh with written approval of the Engineer. The addition rate shall be 1.5 lb/cu yard.
- b. Smooth Metal Dowels: Smooth metal dowels shall be ½" in diameter and 18 inches in length. All metal dowels shall conform to the requirements of AASHTO M31-92, Grade 60.
- c. Deformed Bars: Deformed bars shall conform to AASHTO M31-92, Grade 60.
- d. Bond breaker shall be Reed Wax #100 Emulsion as manufactured by Roger A. Reed, Inc., Reading, MA (1-781-944-4640) or approved equal.

3. Construction/Isolation Joint Material

Joint material shall be one-half (1/2) inch in thickness, equal in width to the slab thickness and conform to AASHTO M33, Asphaltic Expansion Joint Materials.

4. Forms

The forms used shall be straight and firmly supported and staked to the line and grades as shown on the plans or as directed by the Engineer. The forms shall be free from warp and shall be of sufficient strength to resist springing out of shape. All forms shall be cleaned and oiled before use.

5. Curing Materials

A liquid membrane curing compound such as Masterkure by Master Builders or approved equal and meeting AASHTO M148 shall be applied in accordance with the manufacturer's instructions over the completed concrete surface area.

6. Processed Aggregate Base

Processed aggregate base shall conform to the requirements of "Processed Aggregate Base" elsewhere in these Specifications.

7. Granite Stone Transition Curbing

Granite stone transition curbing and associated concrete and mortar shall conform to the requirements of "Granite Stone Curbing" elsewhere in these Specifications.

8. Detectable Warning Tiles

Prefabricated detectable warning tiles will be furnished by the Contractor.

1. Excavation

Excavation, including the removal and disposal of any type of existing sidewalk, curbing, ramp, steps or pavement, shall be made to the required depths below the finished grade as shown on the plans or as directed. All soft and yielding material shall be removed and replaced with suitable material.

2. Processed Aggregate Base

The base course shall be placed in layers not to exceed six inches (6") in depth and to such a depth that after compaction it shall be at the specified depth below the finished grade of the walk.

3. Forms

Forms shall be straight, free from warp and of sufficient strength to resist springing from the pressure of the concrete. Forms shall be of minimum 5" depth and shall have a flat surface on the top. Forms shall be securely staked, braced and held firmly to the required line and grade and shall be sufficiently tight to prevent leakage of mortar. All forms shall be cleaned and oiled or wetted before concrete is placed against them. Sheet metal templates one-eighth (1%) inch in thickness, of the full depth and width of the walk, shall be spaced at intervals of fifteen feet (15') or as directed by the Engineer. If the concrete is placed in alternate sections, these templates shall remain in place until concrete has been placed on both sides of the template. As soon as the concrete has obtained its initial set, the templates shall be removed.

4. Joints

a. <u>Construction Joints</u>: At maximum intervals of thirty feet (30'), install a construction joint as detailed on the drawings. Install dowels as shown on the drawings. Minimum embedment on each side of the joints shall be six inches (6"). All dowels shall be straight, square on the ends with no burrs. Locate 12" from the edge of the slab. Bars must be carefully aligned and square with the form face. Prevent bonding to the concrete on one side of the joint by using a plastic sleeve over the dowel or coat with an approved bond breaker. Alternate protected end on each side of the joints.

Dowels are also to be installed between new and existing concrete slabs. Where new or repaired walks abut existing concrete sidewalks, the contractor shall drill holes measuring 3/4 of an inch in diameter and twelve (12) inches in depth at 24" on centers into the existing concrete slab. The dowels, dipped in a liquid asphalt and coated with an approved bond breaker or plastic sleeve shall be set into the existing sidewalk slab prior to the placement of concrete. The dowels are to be level with the latitude pitch of the sidewalk and shall conform to the details of these specifications. Any variations in dowel installation procedures must be approved by the Engineer.

Other locations to which dowels may be required will be directed by the Engineer.

b. <u>Control Joints</u>: Follow joint spacing as shown on the drawings. At intervals of approximately fifteen (15) feet, a full control joint shall be provided. A tooled joint, to the depth of 3/8 of an inch, shall be installed at approximately five (5) foot intervals along the

sidewalk. The resulting areas should be as square as practical. All joints shall be installed using straight guides set at right angles to the longitudinal direction of the walk.

c. <u>Isolation Joints</u> will be installed wherever concrete is placed against already installed concrete of structures such a curbing, building, or other, previously existing paving.

If it becomes necessary to adjust the locations, horizontal or vertical dimensions of the above listed items due to interference with utilities or for other valid reasons, the Contractor, with the approval of the Engineer, shall construct said items to the modified dimensions and locations.

5. Concrete Placement and Finishing

- a. Subgrade preparation: The subgrade shall be approved by the Engineer prior to placement of concrete. The grade will be free of soft areas, roots, rubble and large stones. It shall be fully compacted and graded to provide the specified slab thickness within $\pm \frac{1}{4}$ ".
- b. Forms: Align forms as shown on drawings and secure to provide straight edges and uniform curves. Remove only after the concrete has gained sufficient strength to prevent chipping or raveling of the edges.
- c. Where required, install welded wire mesh. Support the mesh on concrete bricks or other supports so that it will remain in the upper third of the slab.
- d. Moisten the subgrade before starting concrete placement to eliminate water loss.
- e. Place continuously, using construction joints at locations shown on the drawings or as approved by the Engineer. If an interruption occurs of a duration that may cause a cold joint, install a construction joint as described in this specification.
- f. Water may be added to the truck mixer to adjust the slump when the discharge begins, only if the concrete is below the specified water cement ratio and maximum slump upon arrival at the job site. Water shall not be added to the batch at any later time. If higher slumps are required, use a high range water reducer such as Rheobuild 1000 by Master Builders or equal as approved by the Engineer.
- g. Screed the concrete to grade, bull float or darbie, consolidate formed edges by spading with a hand float, and leave until edging can begin. Allow to harden sufficiently so that a foot leaves only a slight imprint. Floating should not begin until the water sheen has disappeared. The surface shall be worked and floated with a wooden, aluminum or magnesium float or finishing machine using float blades. The outside edges of the slab shall be edged with one-quarter (¼) inch radius tool. The slab shall then be broomed crosswise with a fine hair broom leaving the surface free from all tool marks.
- h. Immediately upon the disappearance of the water sheen following the final finishing and before any marked dehydration or checking occurs, the curing compound shall be applied using an approved spraying device. The sprayer shall deliver a fine spray with uniform coverage. Coverage rate shall be that recommended by the curing compound manufacturer.
- i. The Contractor shall have on the job, at all times, sufficient polyethylene film or waterproof paper to provide complete coverage in the event of rain. Protect the surface if rain occurs before final set or use for curing in the event of a breakdown of the spray equipment.
- j. If rain falls on the newly coated sidewalk before the curing film has dried sufficiently to resist damage, or if the film is damaged in any other manner, the contractor shall reapply same. Treated surfaces shall be protected from all foot or vehicular traffic for a sufficient period of time to prevent damage.

6. Reinforcing

Reinforcing of the type specified shall be used in all concrete sidewalk ramps and at concrete sidewalks which cross driveways. Welded wire fabric for concrete reinforcement shall be embedded at mid-depth in the slab.

7. Detectable Warning Tile

All sidewalk ramps shall have detectable warning tiles as shown on the Plan or as directed by the Engineer. The detectable warning tile shall be set directly in poured concrete according to the Plans, the manufacturer's specifications or as directed by the Engineer. The Contractor shall place two 25-pound concrete blocks or sandbags on each tile to prevent the tile from floating after installation in wet concrete. Detectable warning tiles shall be furnished by the Contractor.

8. Special Conditions

- a. Low Temperature Placements: No concrete is to be placed when air temperature is below 50°F unless additional precautions are taken and prior approval is given by the Engineer. The Engineer must approve all placements below 50°F. No concrete will be placed on frozen sub-grade or at temperatures below 20°F. Concrete exposed to temperatures below 40°F after placement must be protected through the use of insulating blankets, a six (6) inch layer of straw that is maintained in a dry condition by a covering of plastic sheeting, or other appropriate methods. Any concrete placed during cold weather that is damaged because of freezing shall be replaced at the Contractor's own expense.
- b. Special consideration for high temperature placements and rapid drying conditions should be discussed with the Engineer. No additional materials will be added to the concrete mix at the job site without the prior approval of the Engineer.
- c. Where reconstruction of an existing approach walk is required, the reconstructed portion of the approach walk shall match the existing approach walk in color, texture and appearance.

9. Curb Transitions

Curb transitions shall be provided when sidewalk ramps are adjacent to existing and proposed curb. Granite stone curb transitions shall be provided adjacent to granite curb and concrete curb transitions shall be provided adjacent to concrete curb and bituminous concrete curb unless approved otherwise by the Engineer.

10. Backfilling and Removal of Surplus Material

The sides of all finished concrete work shall be backfilled to the limits shown on the drawings or as directed by the Engineer, with suitable material thoroughly compacted and finished flush with the top of the concrete. All surplus material shall be removed and the site left in a neat and presentable condition to the satisfaction of the Engineer.

11. Protection

The Contractor shall protect newly poured concrete surfaces so as to prevent damage from falling objects, vandalism, etc. The Contractor shall repair or remove and replace any damaged or defaced concrete surface at his own expense. Determination to repair or remove and replace will be at the sole discretion of the Engineer.

12. Utility Adjustments

If an existing utility box, valve box or manhole is located within the limits of the new sidewalk or ramp, the Contractor shall be responsible for the coordination and scheduling with the owner of the facility, for the adjustment of the facility to grade, if necessary.

13. Signs

Unless otherwise shown on the Plan or directed by the Engineer, the Contractor shall remove

existing signs located within the limits of the sidewalk or ramp construction, erect them on temporary support posts during the construction of new sidewalk or ramp, and reinstall them at their original location set flush to the grade of the new sidewalk.

Measurement

- "Reinforced Concrete Sidewalk" will be measured by the actual number of square feet of completed and accepted reinforced concrete sidewalk 5" thick.
- "Reinforced Concrete Sidewalk and Curb Monolithic" will be measured by the actual number of square feet of completed and accepted reinforced concrete sidewalk 5" thick measured from face of curb to back of walk.
- "Reinforced Concrete Sidewalk Ramps" will be measured by the actual number of square feet of completed and accepted reinforced sidewalk concrete ramps 5"thick.

The following items will not be measured separately for payment, but shall be considered as included in the unit price bid for "Reinforced Concrete Sidewalk", "Reinforced Concrete Sidewalk and Curb Monolithic" or "Reinforced Concrete Sidewalk Ramp" 5" thick:

- 1. Excavation and backfill;
- 2. Furnishing and installing processed aggregate base;
- 3. Forming and compacting of subgrade;
- 4. Expansion joint material, dowels and other reinforcement;
- 5. Sawcutting and removal of existing sidewalks, ramps and/or bituminous concrete pavement within the limits of the new sidewalk or ramp;
 - 6. Installing Contractor-furnished detectable warning tiles;
 - 7. Installing curb transitions;
 - 8. Adjustment of existing valve boxes, utility boxes, or handholes to grade;
 - 9. Removing, temporarily erecting and re-installing existing signs within the limits of new sidewalk or ramps;
 - 10. Cast-in-place concrete curbing associated with sidewalk ramps.

Payment

This work will be paid for at the contract unit price per square foot for "Reinforced Concrete Sidewalk", "Reinforced Concrete Sidewalk and Curb Monolithic" or "Reinforced Concrete Sidewalk Ramp", 5" thick, complete in place, which prices shall include all excavation; formation of subgrade; sawcutting, removal and disposal of existing sidewalk, ramps and pavement; processed aggregate base; concrete curb transitions; backfill, reinforcement, expansion joints, curing, disposal of surplus material, installation of detectable warning tiles, relocation and temporary support of existing signs, equipment, tools, materials and labor incidental thereto.

Granular fill used to replace unsuitable material or used as borrow material to bring the sidewalk subbase to grade will be paid under the item "Granular Fill" elsewhere in these Specifications. Granular fill will only be paid for if directed by the Engineer.

Pay Item	Pay Unit
5" Thk. Reinforced Concrete Sidewalk	Square Foot
5" Thk. Reinforced Concrete Sidewalk and Curb Monolithic	Square Foot
5" Thk. Reinforced Concrete Sidewalk Ramp	Square Foot

5.9 Reinforced Concrete Driveway Apron

The work under this section shall consist of installation of processed aggregate base and compact. Install forms for driveway apron and install replacement reinforced concrete driveway apron in accordance with City Standards. (See attached drawings.)

Description

"(Size) Reinforced Concrete Driveway Apron" includes the construction of concrete driveway aprons on a prepared processed aggregate base in the locations and to the dimensions and details shown on the Plans, as directed by the Engineer, and in accordance with these Specifications.

Materials

Portland cement, fine and coarse aggregate, air-entraining admixtures and water shall conform to the requirements of Section M.03.01 of Form 817 for Class "C" Concrete.

Processed aggregate base shall conform to the requirements of "Processed Aggregate Base" elsewhere in these Specifications.

Reinforcement shall conform to the requirements of Section M.06.01 of Form 817 for concrete pavement.

Granite stone transition curbing and associated concrete and mortar shall conform to the requirements of "Granite Stone Curbing" elsewhere in these Specifications.

Construction Details

Construction methods shall conform to the requirement of the Item, "Reinforced Concrete Sidewalk and Reinforced Concrete Sidewalk Ramps". The surface shall be finished and marked off as directed. The driveway aprons shall be reinforced as indicated on the Plans. They driveways and roadways shall be adjusted to match the grade of the new concrete driveway apron. The concrete shall contain not less than five (5) nor more the seven (7) percent entrained air at the time the concrete is deposited in the forms.

The Contractor shall sawcut the existing pavement and excavate as necessary to perform the work under this item as shown on the Plans.

Curb transitions shall be provided when concrete driveway aprons are adjacent to existing and proposed curb. Granite stone curb transitions shall be provided adjacent to granite curbing and concrete curbing transitions shall be provided adjacent to concrete curbing and bituminous concrete curbing unless approved otherwise by the Engineer.

Measurement

"(Size) Reinforced Concrete Driveway Apron" will be measured for payment by the actual number of square feet of completed and accepted concrete driveway apron.

The following items will not be measured separately for payment, but shall be considered as included in the unit price bid for "Reinforced Concrete Driveway Apron":

- 1 Excavation
- 2. Sawcutting of existing concrete or bituminous surface
- 3. Processed Aggregate Base

- 4. Curb transitions
- 5. Dowels and other reinforcement
- 6. Removal of existing damaged driveway apron, existing driveway or roadway transition sections within the driveway excavation limits to make the grade match the new concrete apron.

Payment

This work will be paid for at the contract unit price per square foot for "(Size) Concrete Driveway Apron" of the type specified, complete in place, which price shall include excavation, sawcutting, removal and disposal of existing driveway, existing driveway or road transitions, granite stone or concrete curb transitions, formation of subgrade and all materials, equipment, tools and labor incidental thereto.

Pay Item	Pay Unit
6" Thk. Reinforced Concrete Driveway Apron (Residential)	Square Foot
8" Thk. Reinforced Concrete Driveway Apron (Commercial)	Square Foot

5.10 Granite Curbing

The work under this section shall consist of new or reset granite curbing, installation of processed aggregate base, backing curbing with concrete 6" reveal or match existing curbing height in accordance with City Standards. (See attached drawings).

Description

"Granite Stone Curbing" and "Radius Granite Stone Curbing" includes the furnishing and installing of straight or curved granite stone curb on a prepared base at the location and to the details shown on the Plans or as directed by the Engineer and in accordance with these Specifications.

"Reset Granite Stone Curbing" includes the removal of existing granite stone curb and the resetting of the curb on a prepared base in accordance with the details shown on the Plans or as directed by the Engineer and in accordance with these Specifications. This work includes reset of both straight and radius granite stone curb.

"Trim and Cut Granite Stone Curbing" includes the sawcutting of existing granite stone curb as required to match new curb, sidewalk or apron to existing or where directed by the Engineer. It shall not include the sawcutting of new granite stone curb sections.

"Remove Granite Stone Curbing" includes the removal of existing granite stone curb where shown on the Plans or as directed by the Engineer and in accordance with these Specifications. This work includes removal of both straight and radius granite stone curb and return of such curb to the City of New London when requested.

Materials

All curbing material shall be created from hard and durable granite, light gray in color, free from seams which impair its structural integrity, and of a smooth splitting character. Natural color variations characteristic of the deposit will be permitted. Granite shall come from approved quarries acceptable to the Engineer.

1. Curved Granite Curbing

Type V 6 x 18 curbstones set on a radius of one hundred (100) feet or less shall be cut to the curve required.

All radius granite stone curb shall be set in a subbase of Class "C" concrete.

2. Straight Granite Stone Curbing

Straight Granite Stone Curbing shall be cut to the following dimensions:

Type	Width At Top, Inches	Depth, <u>Inches</u>	Minimum Length, <u>Feet</u>	Minimum Width At Bot. Inches
V 5 x 18	5	18"- 22"	4	5

Straight granite curbing shall be set in a subbase of Class "C" concrete at the joints only.

3. Mortar

Mortar for pointing joints shall conform to Section M.11.04 of Form 817.

4. Concrete

Class 'C' Concrete shall conform to Section M.03.01 of Form 817.

5. Processed Aggregate Base

Processed Aggregate Base shall conform to the material requirements of the item "Processed Aggregate Base" elsewhere in these Specifications.

Construction Details

1. Delivery

All granite curbing shall be accepted by the City of New London at the time of delivery and prior to installation.

2. Excavation

Excavation shall be made of sufficient depth and width to accommodate the processed aggregate base as shown on the Plans. The processed aggregate base shall be compacted to a firm, even surface and shall be approved by the Engineer.

3. Transition Sections

Roadway Transitions: A six-foot (6') transition section of granite curbing shall be installed at all end sections that do not match to other types of curbing. The end section shall match flush with the existing edge of the pavement or the top of adjacent existing curbing.

Driveway Transitions: All transition sections of granite curbing along driveways shall be set in Class "C" concrete and meet the requirements of the Plans.

4. Backfilling

After all curb is set, the space between it and the wall of the trench shall be backfilled with processed aggregate base material thoroughly tamped to the depth directed, care being taken not to affect the line or grade of the curb. All curbing shall be properly installed and backfilled prior to the placement of the bituminous concrete pavement.

All radius granite stone curbing shall be set in Class "C" concrete as shown on the Plans.

5. Protection

The contractor shall protect all curbing until completion and acceptance.

6. Joints

The maximum joint openings between sections of curbing shall not exceed ½ inch over the entire width of the exposed curb.

Joints are to be mortared to the full depth and width of the curb, and all excess mortar wiped clean off face of curb. At intervals of fifty feet (50'), one joint shall be left open for expansion purposes.

Joints in straight granite curb sections shall be set in a subbase of Class "C" concrete as shown on the Plan or as directed by the Engineer.

7. Removal

The removal of granite curb shall be made in conformity with the requirements of the plans and as ordered by the Engineer. All concrete, dowels, forms and joint material shall be removed. The base material, if any, may remain in place if the required depth for the materials to be placed in that area is provided. All existing curbing which is designated to remain, shall be sawcut at the contract limits or the nearest joint as directed by the Engineer. Sawcut edges shall be protected during construction. Any edges damaged shall be recut and any material required to be placed in that area shall not be measured for payment.

Unless directed otherwise by the Engineer, granite stone curbing removed for this project shall be disposed of in accordance with all applicable regulations. No stockpiling of removed material shall be allowed on site. Granite stone curbing shall be returned to the City of New London only when requested.

Measurement

"Granite Stone Curbing" and "Radius Granite Stone Curbing" will be measured for payment by the actual number of linear feet of granite stone curbing or curved granite stone curbing, installed and accepted. Measurement shall be made along the top axis line of face of curb. Curbing set on a radius of 100 feet or less will be measured for payment as "Radius Granite Stone Curbing".

Transition curbing will be measured for payment as "Granite Stone Curbing" or as "Radius Granite Stone Curbing" as the case may be.

"Reset Granite Stone Curbing" will be measured for payment by the actual number of linear feet of existing granite stone curbing, installed and accepted. Measurement shall be made along the top axis line of face of curb.

"Trim and Cut Granite Stone Curbing" will be measured for payment by the actual number of linear feet of granite stone curb sawcut. Measurement shall be made along the face of curb. The sawcutting of new granite stone curb required to fit to the locations shown on the Plans will not be measured for payment, but its costs shall be included in the item "Granite Stone Curbing" or "Radius Granite Stone Curbing".

"Remove Concrete Curbing" will be measured for payment by the actual number of linear feet of granite stone curb removed and properly disposed of, as shown on the plans or as directed by the Engineer. The pay limits shall be measured in place with the Engineer prior to removal. Any material removed prior to measurement shall not be considered for payment. The sawcutting of existing curb to be removed will not be measured separately for payment, but its costs shall be included in the item "Remove Granite Stone Curbing".

The following will not be measured for payment, but shall be considered as included in the unit price bid for "Granite Stone Curbing", "Curved Granite Stone Curbing", "Reset Granite Stone Curbing", "Trim and Cut Granite Stone Curbing" and "Remove Granite Stone Curbing":

- 1. Excavation
- 2. Removal and disposal of existing curb
- 3. Removal and disposal of existing roadway within excavation limits of new curb
- 4. Removal and disposal of existing concrete around curb (for reset curb)
- 5. Concrete for granite curb subbase
- 6. Processed Aggregate Base
- 7. Mortar or Joint Sealant

Payment

Payment for this work will be made at the contract unit price per linear foot for "Granite Stone Curb", "Radius Granite Stone Curbing", "Trim and Cut Granite Stone Curbing" or "Remove Granite Stone Curbing", complete in place. The prices shall include all sawcutting, removal and disposal of existing curb and/or bituminous concrete; all excavation as shown on the Plans, granite stone curbing, granite stone transition curbing, processed aggregate base, pointing, Class "C" concrete, backfilling, compaction, disposal of all surplus material, equipment, tools and labor incidental thereto. Unless specified otherwise, sawcutting of existing curb to be removed will not be paid for separately, but shall be included in the cost of this or other items.

Payment for resetting existing granite stone curbing will be made at the contract unit price per linear foot of "Reset Granite Stone Curbing", complete in place. The price shall include all sawcutting, removal and disposal of existing bituminous concrete; all excavation as shown on the Plans, processed aggregate base, pointing, Class "C" concrete, backfilling, removal of concrete around existing curb, compaction, disposal of all surplus material, equipment, tools and labor incidental thereto.

Pay Item	Pay Unit
Granite Stone Curbing	Linear Foot
Radius Granite Stone Curbing	Linear Foot
Reset Granite Stone Curbing	Linear Foot
Trim and Cut Granite Stone Curbing	Linear Foot

5.11 Cast-In-Place Concrete Curbing

The work under this section shall consist of excavating and installing processed compacted aggregate base, installing cast-in-place concrete curbing. (See attached drawings)

Description

"Cast-in-Place Concrete Curbing" includes the construction of a cast-in-place concrete curb on a prepared processed aggregate base in accordance with the lines, grades, dimensions and details shown on the Plans or as directed by the Engineer.

Materials

All materials shall conform to the requirements of "Reinforced Concrete Sidewalks and Reinforced Sidewalk Ramps" elsewhere in these Specifications.

Construction Details

Construction methods shall conform to the requirements of "Reinforced Concrete Sidewalks and Reinforced Sidewalk Ramps" elsewhere in these Specifications.

Measurement

"Cast-in-Place Concrete Curbing" will be measured for payment by the actual number of linear feet of concrete curb installed and accepted.

Payment

Payment for this work will be made at the contract unit price per linear foot for "Cast-in-Place Concrete Curbing", complete in place, which price shall include all excavation, sawcutting, removal and disposal of existing curb and/or bituminous concrete, concrete, processed aggregate base, formation of subgrade, joint filler, dowels, backfilling, compaction, disposal of all surplus material, and all materials, equipment and labor necessary to complete the work as specified on the Plans or as directed by the Engineer.

Pay Item

Cast-in-Place Concrete Curbing

Pay Unit Linear Foot

5.12 Bituminous Concrete Curbing

The work under this section shall consist of the installation of the Bituminous Concrete Curbing in areas where there is erosion and where no granite curbing is installed along the roadway. There may be additional prep work to be performed along the edge of the roadway.

Description

"Bituminous Concrete Curbing" of the type specified includes the furnishing and installation of machine laid bituminous concrete, constructed on a prepared bituminous concrete pavement to the dimensions and details shown on the Plans, or as directed by the Engineer, and in conformity with the Specifications.

Materials

All materials for this work, including tack coat, shall meet the requirements of Section M.04, curb mix, of Form 817.

Constriction Details

The methods employed in performing the work and all equipment, tools machinery and plant used in handling material and executing any part of the work shall be subject to the approval of the Engineer before the work is started, and whenever found unsatisfactory, it shall be changed and improved as required by the Engineer. All equipment, tools, machinery and plant used must be maintained in a satisfactory working condition. The curbing shall be constructed in accordance with the following requirements:

Prior to the arrival of the mixture on the work, the surface of the pavement where the curbing is to be constructed shall be cleaned of all loose and foreign material. The surface, which shall be perfectly dry and clean at the time the mix is placed, shall be coated with an approved bitumen tack coat just prior to placing the mixture.

On arrival at the site, the mixture shall be transferred from the truck to the hopper of the curbing machine; and the mixture shall be kept clean and free from dirt or foreign materials at all times.

The surface of the curbing shall be tested with a 10-foot straight-edge, and any variation from a true line exceeding one-quarter of an inch (¼") shall be satisfactorily corrected. The only compaction required shall be that obtained by the approved mechanical curbing machine.

Where machine work is impractical, the Engineer may permit hand laid curbing to be constructed.

If the design of the curbing machine is such that the outside wheels operate outside of the curb, the Contractor will be required to obtain a smooth surface by grading and consolidating the area on which the outside wheel of the machine rides, and this work shall be done at his expense. After the completion of curbing, traffic shall be kept at a safe distance for a period of not less than 24 hours and until the curbing has set sufficiently to prevent damage to the work. Fill material will be placed behind the curb immediately thereafter.

Measurement

"Bituminous Concrete Curbing" of the type specified will be measured for payment by the actual number of linear feet of bituminous concrete lip curb, measured along the top of the curb, completed and accepted.

The following will not be measured separately for payment, but shall be considered as included in the unit price bid for "Bituminous Concrete Curbing" of the type specified:

- 1. Removal and disposal of existing curb
- 2. Surface cleaning and preparation of existing bituminous concrete surface
- 3. Tack Coat

Payment

This work will be paid for at the contract unit price per linear foot for "Bituminous Concrete Curbing" of the type specified, complete in place, which price shall include the removal and disposal of existing curb, the cleaning and preparation of existing bituminous concrete roadway, and all materials, equipment, tools and labor incidental thereto.

<u>Pay Item</u> Bituminous Concrete Lip Curbing Pay Unit Linear Foot

5.13 Restoration of Lawn Areas

The work under this section shall consist of repair to areas disturbed by this construction.

Description

"Restoration of Lawn Areas" includes all work required to establish turf, including the furnishing and installation of screened topsoil and of a specified slurry mixture of seed, fiber, fertilizer and stabilizer emulsion with hydro-mulch equipment, where shown on the Plans or where directed by the Engineer.

"Erosion Control Blanket" includes the furnishing and installation of a manufactured straw/fiber blanket at the locations shown on the Plans or where directed by the Engineer.

Materials

<u>Fertilizer</u>: 18-18-5, (Nitrogen, Phosphoric Acid, Potassium), water-soluble or an approved equal at a rate of 25-lbs per 1,000-sq. ft. Submit Manufacturer's product specifications and guaranteed purity analysis for fertilizer.

<u>Mulch:</u> Cellulose fiber mulch shall conform to the requirements of Section M.13.05.3 of Form 817. Apply at a minimum rate of 40 lbs./1,000 SF.

Tackifier: Organic tackifier shall be applied at rate of 70 lbs./acre

<u>Topsoil</u>: The term topsoil used herein shall mean a soil meeting the soil textural classes established by the United States Department of Agriculture Classification System based upon the proportion of sand, silt, and clay size particles after passing a two (2) millimeter (mm) sieve and subjected to a particle size analysis. The topsoil shall not contain less than 6% nor more than 20% organic matter as determined by loss-on-ignition of oven dried samples dried at 105 degrees centigrade.

The following textural classes shall be acceptable:

Loamy sand, including coarse, loamy fine, and loamy very fine sand Sandy loam, including coarse, fine and very fine sandy loam

Loam

Silt loam, with not more than sixty (60) percent silt

The topsoil to be furnished by the Contractor shall be loose, friable, reasonably free of admixtures of subsoil, free from refuse, stumps, roots, brush, weeds, rocks, and stones ½ inch and over in all dimensions. The topsoil shall also be free from any material that will prevent the formation of a suitable seedbed or prevent seed germination and plant growth.

<u>Seed</u>: Shall be fresh and clean and new crop seed composed of an evenly graded mixture by proportion and testing minimum percentages of purity and germination indicated, or as approved by the Engineer.

The seed mixture for lawns <=3:1 slope with mowing required shall have no noxious weeds in mix and shall be CRCOG General Purpose Mix manufactured by Pro Lawn Supply, Inc., Worcester, MA (1-866-554-SEED) or approved equal and shall generally conform to the following requirements:

Proportion by Weight (Percent)		Minimum Germination (Percent)	
Catalina Perennial Rye	33.0	90	
Boreal Creeping Red Fescue	33.0	87	
Part Kentucky Bluegrass	33.0	85	
Other Ingredients	1.0	·#:	

The seed mixture for channel embankments and lawns >3:1 slope with mowing not required shall have no noxious weeds in mix and shall generally conform to the following requirements:

	on by Weight Percent)	Minimum Germination (Percent)
Creeping Red Fescue	54.0	85
Redtop	5.0	85
Crown Vetch	40.0	90
Other Ingredients	1.0	-

Erosion control blanket: shall be a machine produced mat consisting of 100% coconut fiber. The blanket shall be of consistent thickness with the coconut fiber evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with heavyweight photodegradable polypropylene netting having ultraviolet additives to delay breakdown and an approximate 5/8-inch x 5/8-inch mesh, and on the bottom side with a lightweight photodegradable polypropylene netting with an approximate ½ inch x ½ inch mesh. The blanket shall be sewn together on 1 ½ inch centers with degradable thread.

Coconut fiber erosion control blanket shall be C125 as manufactured by North American Green, or approved equal. The C125 erosion control blanket shall have the following properties:

Material content

Coconut Fiber

100%

Netting

Both sides, heavyweight UV stabilized (3 lb./1000 sq. ft approx. wt.)

Thread

100% Black Polypropylene

Physical Specifications

I II DIOCI DOCULIO	CLOILD
Width	6.67 feet
Length	108 feet
Weight	44 lbs. +/- 10%
Area	80 sq. yds
Stitch spacing	1.5 inches

Wire staples are to be produced from 11 gauge .118 to .120 bright basic industrial quality 1008/1010 wire, minimum cast, light oil protection. The staples shall be produced in a 6" x 1" x 6" U-shaped configuration.

Construction Details

Construction methods shall be those established as agronomically acceptable and feasible and which are approved by the Engineer.

The existing ground shall be graded to a reasonably true surface.

Topsoil shall be spread and shaped to meet existing elevation, after settlement and compaction has occurred, and have a minimum depth of four (4) inches with all stone larger than ½" removed.

It shall be the Contractor's responsibility to restore to the line, grade and surface all eroded areas with approved material and to keep topsoiled areas in acceptable condition until the completion of the construction work.

Examine work area before proceeding with any work and notify the Engineer in writing on conditions which may prevent the proper execution of this work. Failure to report unsuitable conditions will require the contractor to rectify unacceptable work at no additional cost to the City of New London.

Allow the planting area soil surface to dry out for one day only prior to the hydroseeding application. Exercise care not to allow the soil surface to be overly saturated with water prior to the hydroseeding installation. At the same time the soil surface should not become too dry during this period. There should be some residual moisture within the first 1/4 inch of the soil surface.

Notify the Engineer at least 48 hours prior to starting the hydroseeding operation. The Engineer shall be present during the hydroseeding operation and has final determination if conditions are acceptable for hydroseed application.

Application rates for hydroseed shall be as defined by the manufacturer.

Apply the hydroseed in the form of a slurry consisting of organic soil amendments, commercial fertilizer, and any other chemicals that are called out. When hydraulically sprayed onto the soil, the mulch shall form a blotter-like material. Direct the spray operation so that this procedure will drill and mix the slurry components into the soil, the slurry spray will also penetrate the soil surface, thus ensuring maximum impregnation and coverage. The impregnation and mixing of the components will help in retaining moisture while stabilizing soil surface from superficial erosion.

Do not leave the hydroseeding slurry components in the hydroseeding machine for more than two (2) hours because of possible seed destruction. If slurry components are left idle for more than two hours in the machine, add 50% more of the originally specified seed mix to any slurry mixture which has not been applied within the two hours after mixing. Add 75% more of the original seed mix to any slurry mixture which has not been applied eight (8) hours after mixing. All mixtures more than eight (8) hours old, must be disposed, offsite, at the contractor's expense.

Spray the area with a uniform visible coat, using the dark color of the cellulose fiber as a visual guide. The slurry shall be applied in a downward drilling motion via a fan stream nozzle. Ensure that all of the slurry components enter and mix with the soil. Insure the uniformity of the hydroseed application. Exercise special care to prevent any of the slurry from being sprayed onto any hardscape areas including concrete walks, fences, walls, buildings, etc. Remove all slurry sprayed onto these surfaces at the contractor's expense.

Contractor shall save all seed and fertilizer tags and fiber mulch bags for the Engineer to verify compliance with the drawings and specifications.

The Contractor shall maintain the area until sufficient seed growth has occurred to stabilize the soil. This includes the restoration of all eroded areas, and the placing and maintaining of erosion control measures as required to prevent further erosion.

Normal seeding season shall be: <u>For Grass:</u> Spring seeding - April 1 through June 15

Fall seeding - August 15 through October 1

For Wildflower:

Spring seeding - March 1 to May 15 Fall seeding - November 15 to December 15

Seeding at other times will be allowed only with permission of the Engineer.

The Contractor may be required to top dress and reseed certain areas to achieve sufficient, uniform turf establishment.

Maintenance

Upon completion of hydroseeding operations, maintain all hydroseeded areas for a period of 90 calendar days as follows:

- 1. Germination stage irrigation: Approximately 24 hours after hydroseeding the planting areas, initiate the watering sequence. Leave the water on long enough to moisten the soil thoroughly to the depth of the slurry mulch taking care not to super saturate or wash away the slurry and seed. Perform frequent, light irrigation until the seed has germinated. Repair all seed washings and erosion.
- 2. Establishment stage irrigation: After germination, reduce each watering. The specific watering program shall be approved by the Engineer.

Fertilize all hydroseeded areas with an approved commercial fertilizer approximately thirty (30) calendar days from the start of the maintenance period.

Acceptance

Final approval and acceptance will be given in writing by the Engineer following a final acceptance inspection. The Engineer reserves the option to extend the maintenance period to achieve complete germination of all turf or other plant materials with a uniform height, color and density throughout all hydroseeded areas. Final acceptance may be given at the end of the 90-calendar day maintenance period if an acceptable germination of turf and adequate plant establishment has been obtained, as determined by the Engineer.

Guarantee and Replacement

Provide a guarantee for a period of one (1) year after final acceptance, that the installed grass areas be at least the quality and condition as at the time of acceptance. Re-Hydroseed unacceptable areas during the guarantee period. The guarantee shall not include damage or loss of turf due to acts of God, acts of vandalism or negligence on the part of the City of New London.

Measurement

"Restoration of Lawn Areas" will be measured for payment by the actual number of square yards of turf establishment performed in accordance with the Plans and Specifications.

The following items will not be measured separately for payment, but shall be considered as included in the unit price bid for "Restoration of Lawn Areas":

1. Excavation

- 2. Fertilizer, seed or mulch
- 3. Topdressing and reseeding
- 4. Water
- 5. Lawn areas outside the grading limits disturbed by the Contractor

Final payment for this item will not be issued until grass is established to the approval of the Engineer. Partial payments may be made, but in no case will more than 50% of the item be paid until the grass is established to the approval of the Engineer.

"Erosion Control Blanket" will be measured for payment by the actual number of square yards of erosion control matting installed and accepted. Turf establishment under the erosion control blanket will be measured for payment under the "Restoration of Lawn Areas" item.

Payment

This work will be paid for at the contract unit price bid for "Restoration of Lawn Areas", which price shall include all the furnishing and fine grading of slope and lawns areas, topsoil, fertilizer, seed, replacement of lawn structures, labor, tools and equipment incidental thereto.

Any disturbance of lawns beyond the grading limits shown on the Plans shall be restored to its original condition by the Contractor at no expense to the City of New London.

Final payment for this item will not be issued until grass is established to the approval of the Engineer. Partial payments may be made, but in no case will more than 50% of the item be paid until the grass is established to the approval of the Engineer.

"Erosion Control Blanket" will be paid for at the contract unit price bid for "Erosion Control Blanket", which price shall include all materials, labor, tools and equipment necessary to install the erosion control blanket in accordance with the Plans and Specifications.

<u>Pay Item</u> <u>Pay Unit</u> Restoration of Lawn Areas Square Yard

5.14 Erosion and Sediment Controls

The work under this section includes all work necessary or may be required to prevent environmental damage and or pollution to sensitive areas during construction operations.

Description

"Silt Fence" includes the furnishing, placing, maintaining and removal of manufactured geotextile silt fence where shown on the Plans or where directed by the Engineer.

"Hay Bales" includes the furnishing, placing, maintaining and removal of hay bales where shown on the Plans or where directed by the Engineer.

"Silt Sack" includes the furnishing, placing, maintaining and removal of manufactured geotextile silt sacks specifically made to protect catch basins where shown on the Plans or where directed by the Engineer.

Materials

Geotextile shall conform to Section M.08.01.19 of Form 817.

Silt Sack shall be Hi-Flow Siltsack® Type A (for Type "C-L" catch basin tops) and Type B with curb deflector (for Type "C" catch basin tops or other structure with curb inlets) as manufactured by ACF Environmental, Inc., Richmond, VA (800-448-3636) or approved equal. Silt sack shall be provided with internal overflows and meet the following criteria:

<u>Properties</u>	Test Method	<u>Units</u>
Grab Tensile Strength	ASTM D-4632	265 lbs.
Gran Tensile Elongation	ASTM D-4632	20%
Puncture	ASTM D-4833	135 lbs.
Mullen Burst	ASTM D-3786	420 psi
Trapezoid Tear	ASTM D-4533	45 lbs.
UV Resistance	ASTM D-4355	90%
Apparent Opening Size	ASTM D-4751	#20 U.S. Sieve
Flow Rate	ASTM D-4491	200 gal/min/sq. ft.
Permittivity	ASTM D-4491	1.5/sec

Responsibility

It is the Contractor's sole responsibility to provide and continually inspect and maintain all erosion and sedimentation control measures on the site. Failure to do so may result in enforcement actions by the City of New London or State of Connecticut. The erosion and sedimentation control measures shown on the Plans or in these Specifications are intended as a guideline to show the minimal control measures required based on the intended construction. Additional control measures may be necessary depending upon the Contractor's operations and scheduling of the project.

Construction Details

Geotextile sedimentation control systems may consist of either a prefabricated geotextile fence or a geotextile fence assembled by the Contractor in the field. Geotextile sedimentation control systems shall be installed so that the bottom four (4) inches of the fabric is buried by either trenching or by laying the four (4) inch section horizontally on the ground and burying by ramping the soil up to the control fence. All geotextile fences shall be a least 36 inches in exposed height as installed, with not less than a two (2) degree and not more than a 20-degree inclination toward the potential silt source. Hardwood posts shall have a minimum cross-section size of at least 1.5 inches by 1.5 inches and a minimum length of 30 inches. Steel posts shall be at least 0.5 pound per linear foot with a minimum length of 48 inches. Spacing between posts shall not exceed ten (10) feet, and all posts shall be driven a minimum of 12 inches into the ground. When joints between sections of geotextile sedimentation control systems are necessary, geotextile shall be spliced together only at a support post, with a minimum six (6) inch overlap, and securely sealed.

The installations shall be maintained or replaced until they are no longer necessary for the purpose intended or are ordered removed by the Engineer. Cleanout of accumulated sediment shall be accomplished when one-half of the original height of the sedimentation control system, as installed, becomes filled with sediment or as ordered by the Engineer.

The geotextile fence systems will be completely removed from the project at the completion of the project, unless specifically authorized by the Engineer to be left in place.

Unless a specific type of sedimentation control system is indicated on the plans or directed by the Engineer, the type of system will be at the Contractor's option.

Silt sacks shall be installed in accordance with manufacturer's instructions and shall be emptied when they have collected 6" to 12" of sediment and when directed by the Engineer. Silt sacks shall be inspected every 1 to 2 weeks and after every major rainfall event.

Erosion and sedimentation control measures shall be installed prior to any excavation, grubbing or other operation that disturbs existing ground.

Measurement

"Silt Fence" and "Hay Bales" will be measured for payment by the actual number of linear feet of "Silt Fence" or "Hay Bales" installed and accepted. Measurement shall be made along the center-line of the system. Replacement systems will not be measured for payment.

"Silt Sacks" will be measured for payment by the actual number of silt sacks installed and accepted. Different types of silt sacks installed for catch basin tops (with and without curb inlets) and replacement systems will not be measured separately for payment.

Any other erosion and sedimentation control systems required as a result of the Contractor's operation will not be measured for payment.

Payment

"Silt Fence" and "Hay Bales" will be paid for at the contract unit price per linear foot for "Silt Fence" or "Hay Bales", complete in place, which price shall include all materials, equipment, tools and labor incidental to the installation, maintenance, replacement, removal and disposal of the system and surplus material. No payment shall be made for the cleanout of accumulated sediment.

"Silt Sack" will be paid for at the contract unit price each for "Silt Sack" complete in place, which price shall include all materials, equipment, tools and labor incidental to the installation, maintenance, replacement, removal and disposal of the system. No separate payment shall be made for the cleanout of accumulated sediment or for different types of silt sacks installed for catch basin tops (with and without curb inlets) and replacement systems.

<u>Pay Item</u> <u>Pay Unit</u> Silt Sack <u>Each</u>

5.15 **Maintenance and Protection of Traffic**

The work under this section shall consist of signage, cones, barricades to protect and direct traffic around construction area.

Description

"Maintenance and Protection of Traffic" includes the furnishing, installation, maintenance, adjusting, cleaning, storing and removal when no longer required of all temporary signs (sheet aluminum or plywood), sign supports, cones, drums, barricades or other approved traffic control devices necessary to maintain and protect traffic within the project area in accordance with the Plans, Specifications, the Manual of Uniform Traffic Control Devices (MUTCD) or as directed by the Engineer.

Submittals

Unless a Traffic Detour Plan is provided elsewhere in these specifications, all temporary road closures and detours proposed by the Contractor must be approved by the Engineer prior to implementation. In these instances, the Contractor shall submit a plan of the proposed detour, complete with sign patterns, and estimated duration of detour to the Engineer for approval at least seven (7) days prior to execution. Detours will only be considered for infrequent, short-term operations.

Materials

Traffic Drums

The traffic drums shall be manufactured plastic or rubber designed in accordance with the latest edition of the MUTCD. The device shall be stabilized with sandbags or other approved means. The traffic drum shall have, at a minimum, two 4" wide retroreflective orange stripes and two 6" wide retroreflective white stripes. The stripes shall be placed horizontally and alternated with the orange stripe on top. The sections of the traffic drum not covered with retroreflective sheeting shall be orange. Either Type III or Type VI Retroreflective Sheeting, in accordance with Section M.18.09.01 of Form 817 shall be used

Traffic Cones

Traffic Cones shall be constructed of materials to a thickness to withstand impact without damage to cones or to vehicles. The traffic cones shall be 42" tall and of sufficient mass or have bases to which ballast may be added to assure that they will not be blown over or displaced by wind from passing vehicles. Traffic cones shall be reflectorized utilizing Type VI retro reflective sheeting in accordance with Sub article M.18.09.01 of Form 817.

Barricades

Barricades shall conform to the requirements of Section 9.79.02 of Form 817.

Construction Area Signs

Construction Area signs shall be sheet aluminum or plywood with necessary supports. Signs faces shall be of retro reflective sheeting, High Intensity Prismatic (Type III) and conform to section 12.20 of Form 817. When the signs are no longer required on the project, they shall remain the property of the Contractor.

Requirements

The Contractor shall maintain and protect traffic in the project area. Unless otherwise specified, the Contractor must maintain pedestrian and vehicular traffic to permit access to business, factories, residences and intersecting streets.

The Contractor shall observe and obey all local and state laws, ordinances, regulations and permits in relation to the obstruction of streets and highways, keeping passageways open and protecting traffic where there may be construction activities.

Any existing signs that are in conflict with the construction traffic control pattern shall be removed or covered or turned so that they are not readable by oncoming traffic.

Measurement and Payment

"Maintenance and Protection of Traffic" will be measured and paid for by the actual number of days traffic control devices are in use during active construction within contract time requirements. The contract unit price shall include all materials, labor, tools and equipment incidental to furnishing, maintaining and removing approved traffic control devices and other pertinent work necessary to comply with this specification including but not limited to:

- Notifying public authorities of any proposed traffic changes;
- Furnishing, installing relocating, replacing and removal of traffic cones, traffic drums, barricades, construction signs, temporary marking tape, and opposing traffic lane dividers;
- Temporarily relocating/ covering existing signs as necessary to avoid traffic issues.

Pay Item

Pay Unit

Maintenance and Protection of Traffic

Days

5.16 Traffic Person (Uniformed Flaggers)

The work under this section shall include furnishing Certified Uniformed Flag Persons to direct traffic around construction area.

Description

"Traffic Person (Uniformed Flaggers)" includes the furnishing of Certified, Uniformed Flag Persons capable of safely directing traffic around the work area during all lane closures or when directed by the Engineer.

Submittals

A copy of the proposed Flaggers' Training Certificates shall be submitted to the Engineer prior to any work

Materials

Not applicable. (See Section 5.14)

Construction Methods

Construction methods shall conform to Article 9.70.03 of Form 817.

Measurement

"Traffic Person (Uniformed Flaggers)" will be measured and paid for by the actual number of hours for each certified flagger rendering services approved by the Engineer. Services used beyond the limits approved by the Engineer or in conjunction with movement of construction equipment will not be measured for payment. The following will not be measured for payment but its cost shall be considered as included in the unit price bid for "Traffic Person (Uniformed Flaggers)":

- 1. Travel Time.
- 2. Mileage fees/Fuel charges.
- 3. Paddles.
- 4. Safety Equipment.

Payment

Uniformed Flaggers will be paid at the contract unit price per hour for "Traffic Person (Uniformed Flaggers)" which price shall constitute all compensation, benefits, equipment and any other incidental costs associated with the furnishing of Flagger services.

<u>Pay Item</u> Traffic person (Uniformed Flaggers) Pay Unit

Hour

5.17 Traffic Person (Uniformed Police Officers)

The work under this section shall include a uniformed Police Officers with a vehicle in the event of any road closures

Description

"Traffic Person (Uniformed Police Officers)" includes providing a uniformed City of New London Police Officer with a vehicle in the event of any road closures. There may also be some areas of the construction for spot repair of sidewalks that are on State of Connecticut roads.

Materials

Not applicable.

Construction Methods

There may be areas where some areas of the construction for spot repair of sidewalks that require Uniformed Police Officers and a vehicle. Such areas may be State of Connecticut owned roads and where road closure is required. (The New London Police Department is the only organization permitted to close a road.)

Contact The New London Police Department at (860)442-4444 for a Uniformed Officer and a vehicle. The New London Police Department requires at least 48 Hour notice to schedule an Officer and vehicle for traffic control operations.

It is the Contractor's responsibility to schedule, coordinate for the use of Uniformed Police Officer and vehicle for any road closures.

Measurement and Payment

"Traffic Person (Uniformed Police Officer)" will be measured and paid for by the actual number of hours were required for completion of work associated with the project where and when Certified Flaggers cannot provide adequate traffic control.

<u>Pay Item</u> <u>Pay Unit</u> Traffic Person (Uniformed Police Officers) <u>Pay Unit</u> Hour

5.18 Clean Up

The work under this section shall consist of restoration of the areas that were disturbed during construction.

The area shall be left free of debris caused by this installation.

All construction staging (signs, lights, barricades and Contractor equipment) shall be removed upon completion of the project.

Remove soil erosion controls around lawn areas and barriers in the area.

Clean up all work areas and dispose of materials off site.

Repair any and all disturbed turf areas, add screened topsoil as needed. Seed and fertilize with starter fertilizer and mulch with chopped straw.

On- Call Sidewalk Panel Spot Repair Replacement

The On-Call Sidewalk Panel Spot Repair Replacement in New London, Ct. consists of the spot repair replacement of damaged sidewalk panels and aprons. The work to be performed is the following:

- 1. Installation of granular fill to replace unsuitable materials. (See Section 5.5)
- 2. Installation of processed aggregate base. (See Section 5.6)
- 3. Installation of bituminous concrete around granite curbing to be reset or install new and to make grades work for installation of concrete driveway aprons to match existing pavement requirements. (See Section 5.7)
- 4. Installation of forms, compacted processed aggregate base, 6"x 6" Wire Mesh reinforcing, 3,000 PSI Class C Concrete for sidewalks and sidewalk ramps in accordance with City of New London Standards. (See Section 5.8)
- 5. Installation of forms, compacted processed aggregate base, 6"x 6" Wire Mesh reinforcing, 3,000 PSI Class C Concrete for concrete driveway apron in accordance with City of New London Standards. (See Section 5.9)
- 6. Installation of processed aggregate base, backing curbing with concrete with 6" reveal or match existing curbing height for new or reset curbing in accordance with City of New London Standards. (See Section 5.10)
- 7. Installation of processed aggregate base, backing curbing with concrete with 6" reveal or match existing curbing height for cast-in place concrete curbing in accordance with City of New London Standards. (See Section 5.11)
- 8. Installation of bituminous concrete curbing in areas where there is erosion and where no granite curbing is installed along the roadway (See Section 5.12)
- 9. Repair any and all disturbed turf areas, add screened topsoil as needed. Seed and fertilize with starter fertilizer and mulch with chopped straw. (See Section 5.13)
- 10. Install erosion and sediment controls as needed to prevent environmental damage or pollution to sensitive areas during construction operations. (See Section 5.14)
- 11. Install signage, cones, barricades to protect and direct traffic around construction area. (See Section 5.15)
- 12. Furnish Uniformed Flaggers to direct traffic around construction area. (See Section 5.16)
- 13. Furnish Uniformed Police Officers in the event of any road closures. (See Section 5.17)
- 14. Clean up all work areas and dispose materials off site. (See Section 5.18)
- 5.19 The successful Contractor shall submit the final contract documents for publication for the contracted work as soon as practicable.

CITY OF NEW LONDON, CONNECTICUT

BID FORM

The following price quote is being submitted to the City of New London, Connecticut, for <u>On-Call Sidewalk</u> <u>Panel Spot Repair Replacement</u>, the cost of the project should include supplying all labor, material and equipment to perform the work as specified in **General Conditions & Bid Specifications**, **On-Call Sidewalk Panel Spot Repair Replacement**, **New London**, **Connecticut**.

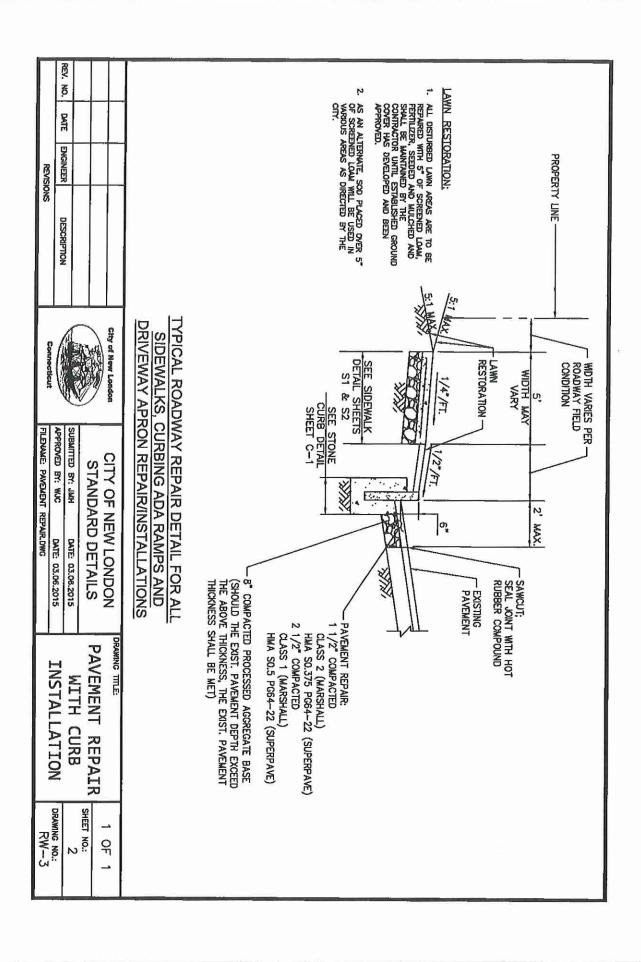
On-Call Sidewalk Panel Spot Repair Replacement

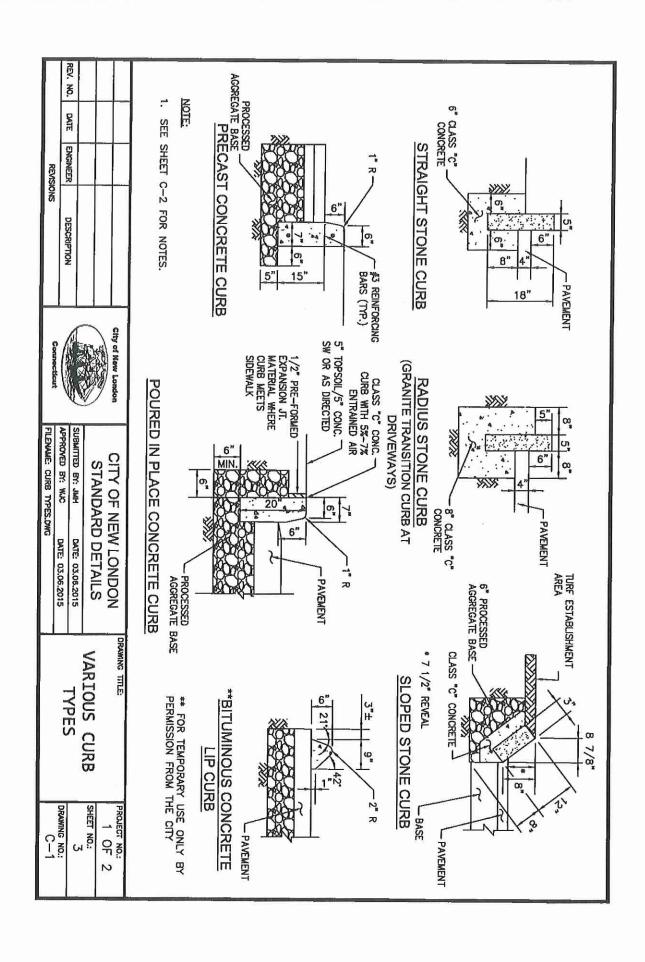
ITEM	ITEM DESCRIPTION	UNIT	BID UNIT
NO			<u>PRICE</u>
1	GRANULAR FILL	CY	\$
2	PERMANENT PAVEMENT REPAIR (LOCAL ROAD)	SY	\$
3	PERMANENT PAVEMENT REPAIR (COLLECTOR)	SY	\$
4	PERMANENT PAVEMENT REPAIR (ARTERIAL)	SY	\$
5	5" THK REINFORCED CONCRETE SIDEWALK	SF	\$
6	5" THK REINFORCED CONCRETE SIDEWALK &	SF	\$
	MONOLITHIC CURBING		
7	5" THK REINFORCED CONCRETE SIDEWALK RAMP	SF	\$
8	6" THK CONCRETE DRIVEWAY APRON (RESIDENTIAL)	SF	\$
9	8" THK CONCRETE DRIVEWAY APRON (COMMERCIAL)	SF	\$
10	RESET GRANITE CURBING	LF	\$
11	NEW GRANITE CURBING	LF	\$
12	NEW RADIUS GRANITE CURBING	LF	\$
13	TRIM & CUT GRANITE CURBING	LF	\$
14	CAST IN PLACE CONCRETE CURBING	LF	\$
15	BITUMINOUS CONCRETE CURBING	LF	\$
16	RESTORATION OF LAWN AREAS DISTURBED BY WORK	SY	\$
17	SILT SACK (EROSION CONTROL)	EA	\$
18	MAINTENANCE & PROTECTION OF TRAFFIC	DAY	\$
19	TRAFFIC PERSON (UNIFORMED FLAGGERS)	HR	\$
20	TRAFFIC PERSON (UNIFROMED POLICE OFFICERS &	HR	\$
	VEHICLE) (FOR ANY ROAD CLOSURES OR STATE ROAD		
	REQUIREMENTS)		
21	CLEAN UP ALL WORK AREAS & DISPOSE MATERIALS OFF		
	SITE		

Clean up all work areas and dispose materials off site.
BID PRICE (Unit Price, complete) \$
ΓΟΤΑL BID PRICE (Unit Price, complete) \$
Fotal Written Price:

The undersigned certifies that he/she has read and understood all of the provisions of the Specifications. Any exceptions to the Specifications are noted below and/or on a separate sheet of paper and made a part of this bid. The undersigned also certifies that this bid is being submitted without collusion with any individual or corporation and agrees, by virtue of submitting this bid, that if accepted by the City of New London, this forms a contractual obligation on the part of the bidder to provide the material as bid.

SIGNATURE:	
FOR:	(Bidder Name)
ADDRESS:	
TOWN/CITY:	STATE: ZIP:
BY:(Print Name & Title)	DATE:
TEL NO. (Area Code)	FAX NO: (Area Code)
EMAIL:	
(CHECK ONE) No exceptions to the Specifications Exceptions taken as noted below or on a	separate sheet of paper





NOTES:

- ALL STONE CURB SHALL CONFORM TO THE STATE OF CONNECTICUT STANDARD SPECIFICATION FORM 816, ARTICLE M12.06 FOR GRANITE CURBING.
- 'n MINIMUM LENGTH OF STONE CURB IS 4'-0".
- STONE CURB SHALL BE FINISH-SAWN TOP AND SPLIT FACE JOINTED.

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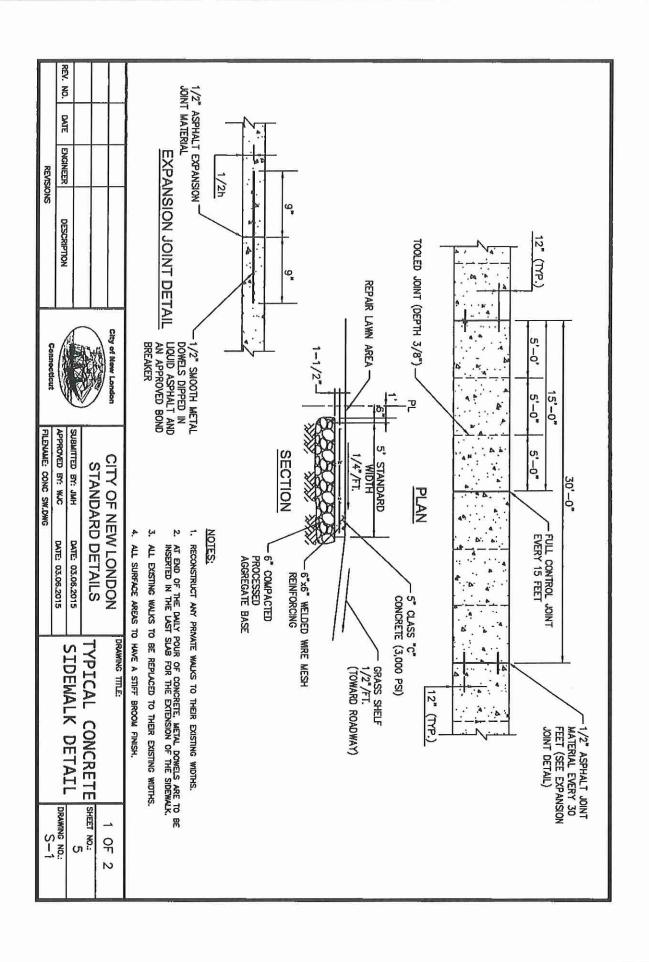
- 4. STONE CURB WITH A RADIUS OF 100° OR LESS SHALL BE BUILT OF CURVED STONE CURB AND SET IN 8" OF CLASS "C" CONCRETE AS SHOWN ON THE DETAIL.
- Ċ ALL OPEN BOTTOM JOINTS BETWEEN SECTIONS OF STRAIGHT STONE CURB SHALL BE BACKFILLED WITH CLASS "C" CONCRETE.
- 9 ALL BACKFILL MATERIAL AROUND STRAIGHT, RADIUS OR RESET STONE CURBING SHALL BE CLASS "C" CONCRETE (3,000 PSI).

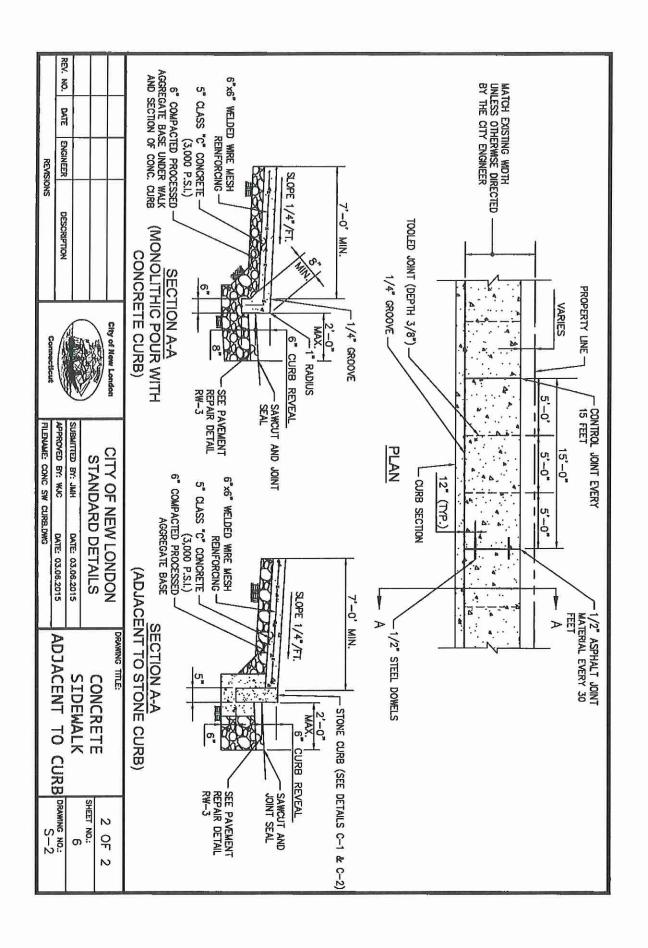
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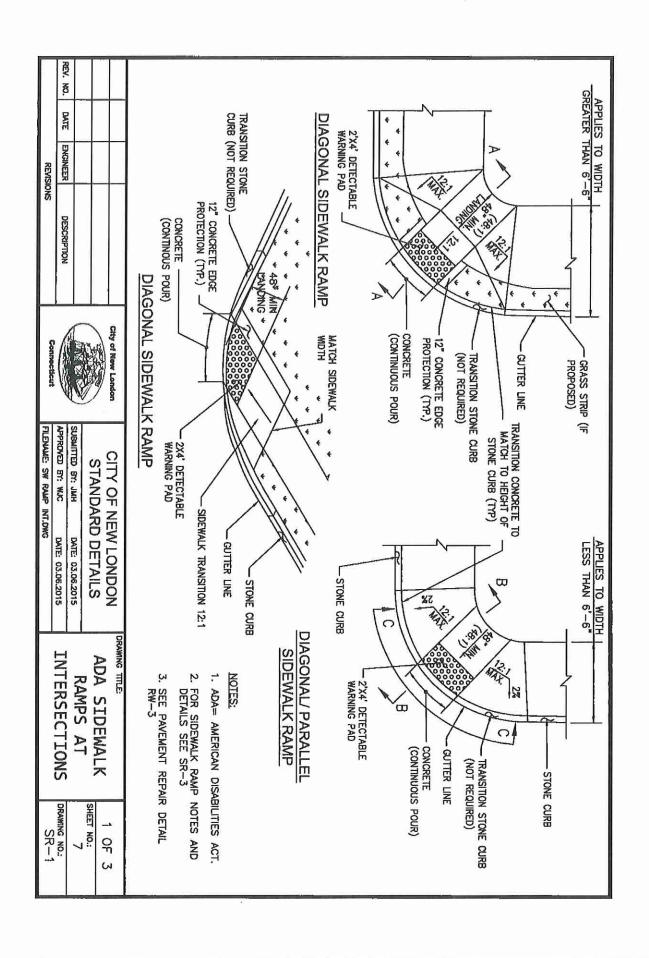
ä TOP OF CONCRETE BACKFILL SHALL BE 10" ON PAVEMENT SIDE AND 5" ON BACK SIDE, MEASURED DOWN, FROM TOP OF CURB.

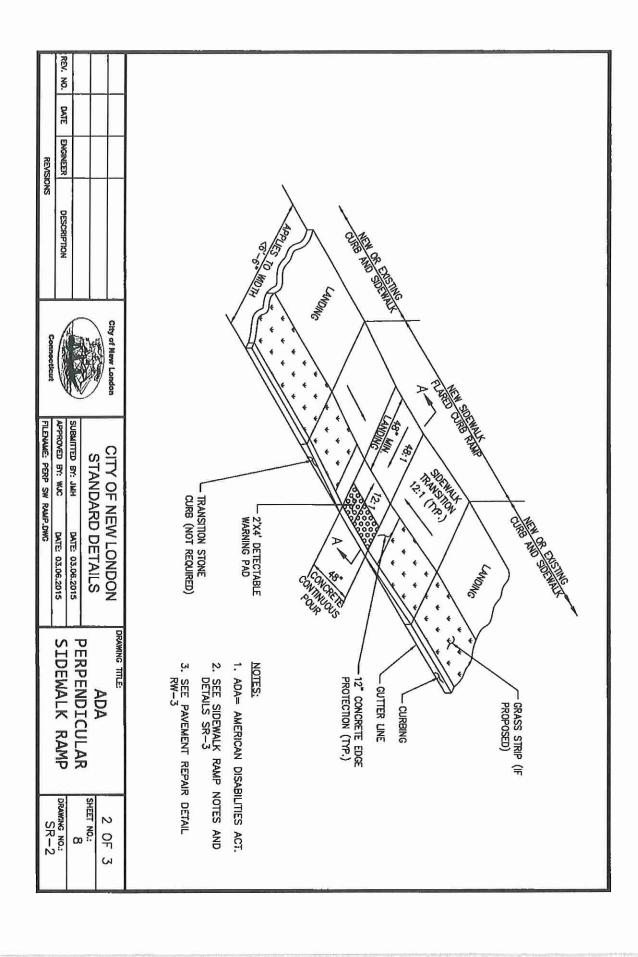
AT ALL BEGINNING AND ENDING POINTS OF ALL STONE CURBING INSTALLATIONS, A 3-FOOT TAPERED CURB SHALL BE USED TO TRANSITION BETWEEN THE EXISTING PAVEMENT/GROUND AND HEIGHT OF THE NEW CURBING, OR AS DIRECTED.

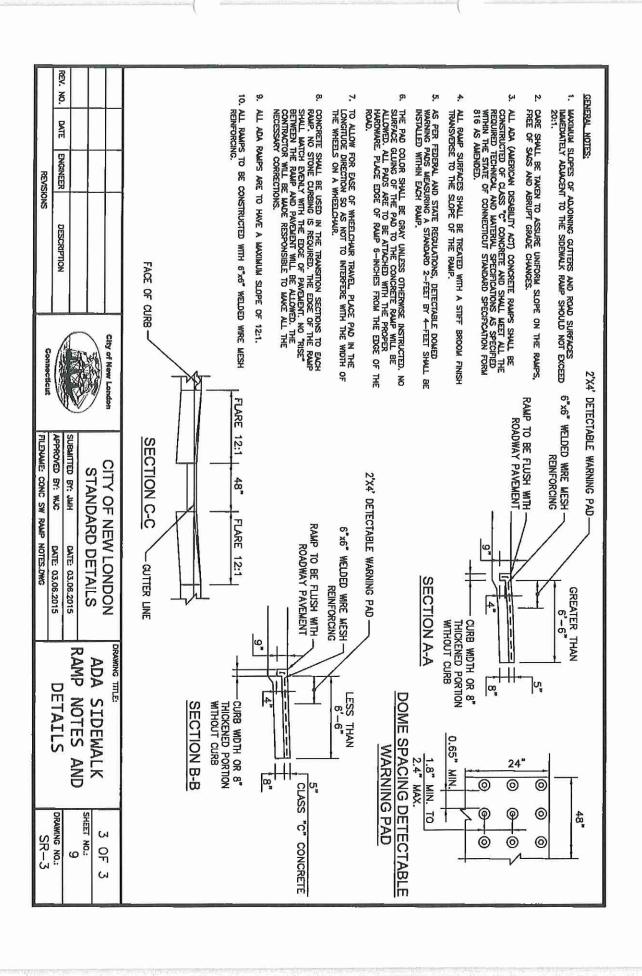
REVISIONS	500	1			000	
FILENAME: CURB TYPE NOTES.DWG	APPROVED BY: WJC DATE: 03.06.2015	SUBMITTED BY: JMH DATE: 03.06.2015		OTANDARD DETAIL O	CITY OF NEW LONDON	
		COKE IYPES NOIES	1		DISTRICT.	E۱
C-2	DRAWING NO.:	4	SHEET NO.:	THE OFFICE OF	2 OF 2	

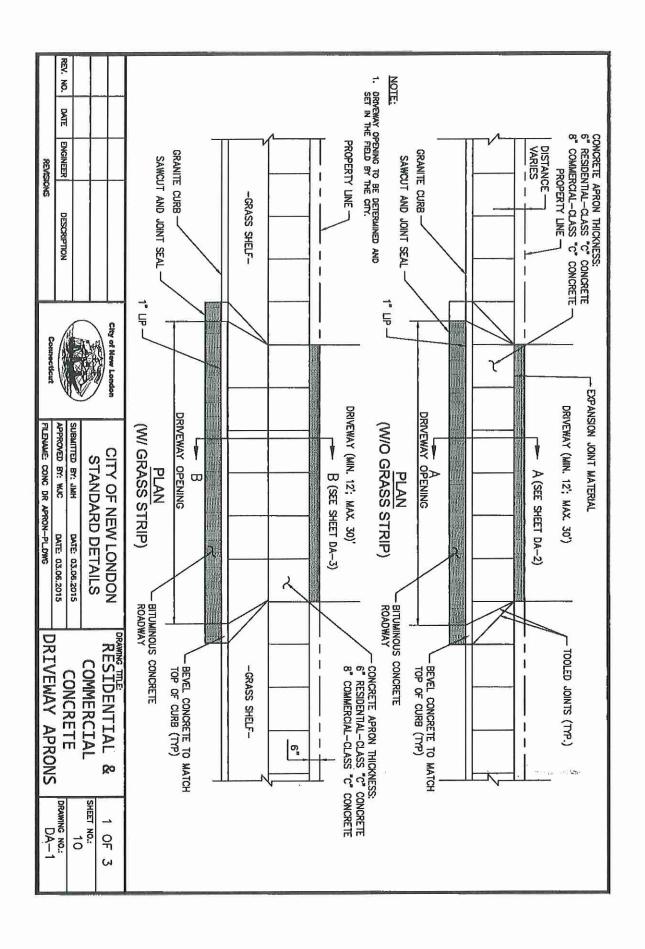


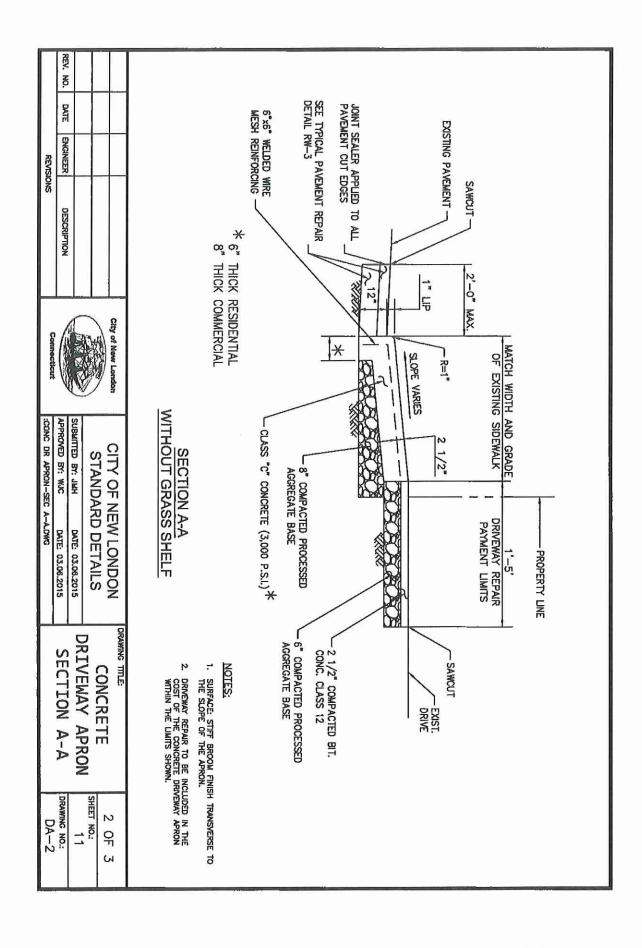


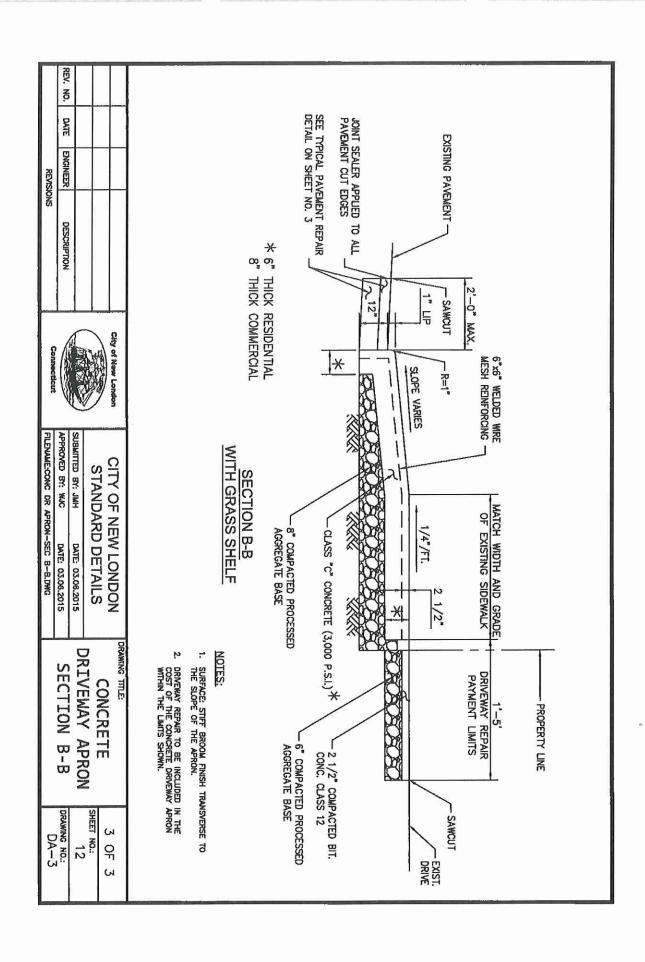












NON COLLUSION AFFIDAVIT OF PRIME BIDDER

State of)		
County of) ss.)		
·	, being first duly sworn,		
deposes and	say that:		
(1)	He is of herein referred to as the "Bidder" that has submitted the attached bid;		
(2)	He is fully informed respecting the preparation and content of the attached Bid and of all pertinent circumstances respecting such Bid;		
(3)	Such Bid is genuine and is not a collusive or sham Bid;		
(4)	Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of New London, CT or any person interested in the proposed Contract; and		
(5)	The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents representatives, owners, employees, or parties of interest, including this affiant.		
(6)	That no officer or employee or person whose salary is payable in whole or in part from the City of New London is directly or indirectly interested in this Bid, or in the supplies, materials, equipment, work or labor to which it relates, or in any of the profits thereof.		
	Signed		
	Title		
Subscribed an	nd sworn before me this		
day o	of20		
(Nota	ary Public)		
My Commission	on expires		

NON COLLUSION AFFIDAVIT OF SUBCONTRACTOR

State of		_)	
County of) ss. _)	
			, being first duly sworn,
deposes and	says that:		
(1)	He isas the "Subcontractor";	of	herein referred to
(2)	He is fully informed resp by the Subcontractor to connection with the Connecticut;	pecting the preparation an	d content of the Subcontractor's Proposal submitted, the Contractor for certain work in Contract pertaining to the Project in New London,
(3)	Such Subcontractor's Pr	roposal is genuine and is	not a collusive or sham Bid;
(4)	Neither the said Subcontractors nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiant, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such Contract, or has in any manner directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in said Subcontractor's Proposal or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City of New London, CT or any person interested in the proposed Contract; and		
(5)	The price or prices quoted in the attached Subcontractor's Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties of interest, including this affiant.		
(6)	(6) That no officer or employee or person whose salary is payable in whole or in part from the City New London is directly or indirectly interested in this Bid, or in the supplies, materials, equ work or labor to which it relates, or in any of the profits thereof.		n this Bid, or in the supplies, materials, equipment,
		:	Signed
		,	Title
Subscribed ar	nd sworn before me this		
day d	of 20		
(Not	ary Public)	7.	
~	on expires		
550	<u> </u>		

Statement of Bidder's Qualifications

All items and questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The bidder may submit any additional information it desires.

1.	Name of Bidder			
2.	Bidder's Tax Identification No.			
3.	Permanent main office address			
4.	When organized			
5.	If corporation, where incorporated			
6.	Number of years have you been engaged in the contracting business under your present firm or trade name			
7.	Contracts on hand: (Schedule these showing amount of each contract and the appropriate anticipated dates of completion)			
8.	General character of work performed by your company			
9.	Have you ever failed to complete any work awarded to you? If so, where and why?			
10.	Have you ever defaulted on a contract? If so, where and why?			
11.	List the more important projects recently completed by your company, stating the approximate cost for each and the month and year completed (use a separate sheet if necessary)			
12.	List your major equipment available for this Contract			
13.	List your experience in work similar to this project			

14.	List the background and experience of the principal members of your organization, including officers		
15.	List the work to be done by Subcontractors	and summarize the dollar value of each Subcontract	
16.	Credit available \$		
17.	Give Bank reference		
18.		ancial statement and furnish any other information that may be	
19.	The undersigned hereby authorizes and rec	quests any person, firm or corporation to furnish any information e recitals comprising this Statement of Bidder's Qualifications.	
Dated		(Name of Bidder)	
		1000 000000 No. 177 No. 177 No. 188	
		By	
State of	of) ss. y of)		
7 41		being duly sworn deposes and says that (s)he is	
	_, and that the answers to the foregoing item	s and questions and all statements therein contained are true and	
	ribed and sworn to before me this		
	day of <u>20</u>		
	(Notary Public)		
My Co	mmission expires		

AFFIRMATIVE ACTION POLICY STATEMENT (must be submitted on your firm's letterhead)

It has always been the policy and	d will continue to be the strong commitment of
and a	Il contractors and subcontractors who do business with this City to provide
	Il qualified persons solely on the basis of job-related skills, ability and meritwill continue to take Affirmative Action to ensure that applicants are
national origin, ancestry, mental disord to blindness), marital status, mental re employment, upgrading, demotion or tra pay or other forms of compensation an	ated during employment without regard to their race, color, religion, sex, ler (present or past history thereof), age, physical disability (but not limited stardation, and criminal record. Such action includes, but is not limited to, ansfer; recruitment or recruitment advertising; layoff or termination; rates of d selection for training including apprenticeship
States Constitution, Civil Rights Act of United States Civil Rights Act, Presiden federal contracts), Act I, Sections 1 an Number 11, Governor O'Neill's Executiv 46a-60-69) of the Connecticut General Civil Rights (46a-58(a)(d)), Public Acce (46a-80), definition of Blind (46a-51(1 Retarded (46a-51(13)), cooperation with the Civil Rights (46a-51(13)), cooperation wi	ion are addressed in the 13th, 14th, and 15th Amendments of the United 1866, 1870, 1871, Equal Pay Act of 1963, Title VI and VII of - the 1964 Itial Executive Orders 11246, amended by 11375, (nondiscrimination under d 20 of the Connecticut Constitution, Governor Grasso's Executive Order ve Order Number 9, the Connecticut Fair Employment Practices Law (Sec. I Statutes, Connecticut Code of Fair Practices (46a-70-81), Deprivation of Emmodations Law (46a-63-64), Discrimination against Criminal Offenders (1)), definition of Physically Disabled (46a-51(15)), definition. of Mentally the Commission on Human Rights and Opportunities (46 - 77), Sexual the Credit Discrimination Law (36-436 through 439), Title I of the State and
This Affirmative Action Policy Employment Opportunity.	Statement re-affirms my personal commitment to the principles of Equal
DATE	Signature of Authorized Signer

CERTIFICATION OF BIDDER REGARDING EQUAL EMPLOYMENT OPPORTUNITY

INSTRUCTIONS

This certification is required pursuant to Executive Order 11246 Part II, Section 203(b), (30 FR 12319, 12935). The implementing rules and regulations provide that any bidder or prospective contractor, or any of its proposed subcontractors, shall state whether it has participated in any previous contract or subcontract subject to the equal opportunity clause; and, if so, whether it has filed all compliance reports due under applicable instructions.

Where the certification indicated that the bidder has not filed a compliance report due under applicable instructions, such bidder shall be required to submit a compliance report within seven (7) calendar days after bid opening. No contract shall be awarded unless such report is submitted.

CERTIFICATION BY BIDDER

Bidder's Name Address and Zip Code _____ 1. Bidder has participated in a previous contract or subcontract subject to the Equal Opportunity Clause. Yes () No () If answer is yes, identify the most recent contract. Compliance reports were required to be filed in connection with such contract or subcontract 2. Yes () No () If answer is yes, identify the most recent contract. Bidder has filed all compliance reports due under applicable instructions, including SF. 100. 3. Not Required () Yes () No () If answer to Item 3 is "No" please explain in detail on reverse side of this Certification. 4. Certification - The information above is true and complete to the best of my knowledge and belief. A willfully false statement is punishable by law (U.S. Code, Title 18, Section 1001). Name and Title of Signer (Please Type)

Date

Signature

CONTRACT FORMS

CONTRACT FOR SERVICES

THIS AGREEMENT made and entered into this XX day of Month, 2020, by and between (Legal Name, address, city & state), hereinafter called "Contractor" and the City of New London, 181 State Street, New London, CT 06320, hereinafter called "City."

WHEREAS, the City desires to enter into a contract for the *(state work being performed)* and the Contractor represents itself as competent and qualified to accomplish the specific requirements of this contract to the satisfaction of the City, therefore this contract is entered into under the following terms and conditions:

- 1. The Contractor agrees to perform the services described below or in attachments if applicable. Only those attachments specifically referenced in this Contract for Services shall apply. The terms and conditions as contained in this Contract for Services shall take precedence over any conflicting terms as may be attached hereto.
- 2. Term of the Contract: The start date for this Contract shall be *Month/Day*, 2020 and the completion date of this Contract shall be *Month/Day*, 2020, time being of the essence.
- 3. Contract Price: The City shall pay the Contractor for the performance of the Contract in current funds, for the total quantities of work performed for the price of (written amount) (\$dollar amount).

Based upon Applications for Payment submitted by the Contractor, the City shall make progress payments on account of the Contract Sum to the Contractor. The period covered by each Application for Payment shall be one calendar month ending on the last day of the month. The City shall make payment to the Contractor within 30 days after the City receives the Application for Payment. With each Application for Payment, the Contractor shall submit the most recent schedule of values, which allocates the Contract Price among the various portions of the Work. The Applications for Payments shall indicate the percentage of completion of each portion of the Work. Such Applications may include requests for payment on account of changes in the Work, but not yet included in Change Orders. Partial payment shall be due Contractor in the amount of 95.0% of the work in place.

Final payment, constituting the entire unpaid balance of the Contract Price, including Change Orders, shall be made by the City to the Contractor no later than 30 days after the Contractor has fully performed the Contract and has provided to the Owner a final Application for Payment.

4. Contract Documents: The Contract Documents consist of this Agreement, the Standard Bid and Contract Terms and Conditions, the Instructions to Bidders, the Contractor's bid as accepted by the City, the General and Special Conditions of the Work, the Technical Specifications, the drawings and all Addenda attached hereto.

The Contract Documents are complementary and what is called for by any one shall be as binding as if called for by all. In the event of any conflict or inconsistency between the provisions of this Agreement and the provisions of any of the other Contract Documents, the provisions of the Agreement shall prevail.

Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the edition of the standard specification, manual, code or laws or regulations identified in the reference. In the event a particular edition is not identified, the reference shall mean the latest edition in effect at the time of receipt of the bid. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall change the duties and responsibilities of the City, the Contractor or any of their consultants, agents or employees from those set forth in the Contract Documents.

5. Obligations And Liability Of The Contractor: The Contractor shall do all the work and perform and furnish all the labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies and all other things (except as otherwise expressly provided herein) necessary and as herein specified for the proper performance and completion of the Work in the manner and within the time hereinafter specified, in strict accordance with the Drawings, Specifications and other Contract Documents, in conformity with the directions and to the satisfaction of the City, and at the prices herein agreed upon therefor.

All parts of the Work and all fixtures, equipment, apparatus and other items indicated on the Drawings and not mentioned in the Specifications, or vice versa, and all work and material usual and necessary to make the Work complete in all its parts, including all incidental work necessary to make it complete and satisfactory and ready for use and operation, whether

or not they are indicated on the Drawings or mentioned in the Specifications, shall be furnished and executed the same as if they were called for both by the Drawings and by the Specifications.

The Contractor shall coordinate his operations with those of any other contractors who may be employed on other work of the City, shall avoid interference therewith, and shall cooperate in the arrangements for storage of materials and equipment.

The Contractor shall conduct his work so as to interfere as little as possible with private business and public travel. Wherever and whenever necessary or required, he shall maintain fences, furnish watchmen, maintain lights, and take such other precaution as may be necessary to protect life and property.

The Contractor shall indemnify and save harmless the City and its officers, agents, servants and employees, from and against any and all claims, demands, suits, proceedings, liabilities, judgments, awards, losses, damages, costs and expenses, including attorneys' fees, on account of bodily injury, sickness, disease or death sustained by any person or persons or injury or damage to or destruction of any property, directly or indirectly arising out of, relating to or in connection with the Work, whether or not due to or claimed to be due in whole or in part to the active, passive or concurrent negligence or fault of the Contractor, his officers, agents, servants or employees, any of his subcontractors, the City or any of their respective officers, agents, servants or employees and/or any other person or persons, and whether or not such claims, demands, suits or proceedings are just, unjust, groundless, false or fraudulent; and the Contractor shall and does hereby assume and agrees to pay for the defense of all such claims, demands, suits and proceedings, provided, however, that the Contractor shall not be required to indemnify the City, its officers, agents, servants, or employees, against any such damages occasioned solely by acts or omissions of the owner other than supervisory acts or omissions of the City in the Work.

The Contractor shall have complete responsibility for the Work and the protection thereof, and for preventing injuries to persons and damage to the Work and property and utilities on or about the Work, until final completion and final acceptance thereof. He shall in no way be relieved of his responsibility by any right of the City to give permission or directions relating to any part of the Work, by any such permission or directions given, or by failure of the City to give such permission or directions. The Contractor shall bear all costs, expenses, losses and damages on account of the quantity or character of the Work or the nature of the land (including but not limited to subsurface conditions) in or under or on which the Work is done being different from that indicated or shown in the Contract Documents or from what was estimated or expected, or on account of the weather, elements, or other causes unless information regarding such condition(s) was known and not disclosed by the City prior to Contractor commencing its work.

The Contractor shall conduct his operations so as not to damage existing structures or work installed either by him or by other contractors. In case of any such damage resulting from his operations, he shall repair and make good as new the damaged portions at his own expense with the consent of the damaged party. In the event that consent is not given, the Contractor shall continue liable for the damage caused.

The Contractor shall be as fully responsible to the City for the acts and omissions of his subcontractors, their officers, agents, servants and employees as he is for his own acts and omissions and those of his own officers, agents, servants and employees.

Should the Contractor sustain any loss, damage or delay through any act or omission of any other contractor or any subcontractor of any such other contractor, the Contractor shall have no claim against the City therefor, other than for an extension of time, but shall have recourse solely to such other contractor or subcontractor.

If any other contractor or any subcontractor of any such other contractor shall suffer or claim to have suffered loss, damage or delay by reason of the acts or omissions of the Contractor or of any of his subcontractors, the Contractor agrees to assume the defense against any such claim and to reimburse such other contractor or subcontractor for such loss or damage.

The Contractor agrees to and does hereby indemnify and save harmless the City from and against any and all claims by such other contractors or subcontractors alleging such loss, damage or delay and from and against any and all claims, demands, suits, proceedings, liabilities, judgments, awards, losses, damages, costs and expenses, including attorneys' fees, arising out of, relating to or resulting from such claims.

The Contractor shall promptly pay all federal, state and local taxes which may be assessed against him in connection with the Work or his operations under this Agreement and/or the other Contract Documents, including, but not limited to, taxes attributable to the purchase of material and equipment, to the performance of services, and the employment of persons in the prosecution of the Work.

Because (i) anticipated damages hereunder are uncertain in amount and difficult to prove, (ii) the parties hereto wish to liquidate said damages in advance, and (iii) monies paid pursuant to this Agreement are not greatly disproportionate to the damage reasonably anticipated in the event of default, it is further agreed that if Contractor shall not complete all of its obligations under this contract within the time period and by the completion date specified in Paragraph 2 herein, Contractor shall pay liquidated damages to the City at a rate of \$___100_____ per day for every day beyond the completion date until such time as the Contractor finally completes all of its obligations under this Contract.

6. Supervision Of Work: The Contractor shall be solely responsible for supervision of the Work, shall give the work the constant attention necessary to ensure the expeditious and orderly progress thereof, and shall cooperate with the City, its officers, agents or employees in every possible way.

At all times, the Contractor shall have as his agent on the Work a competent superintendent capable of reading and thoroughly understanding the Drawings and Specifications, with full authority to execute the directions of the Engineer without delay and to supply promptly such labor, services, materials, equipment, plant, apparatus, appliances, tools, supplies and other items as may be required. Such superintendent shall not be removed from the Work without the prior written consent of the City. If, in the opinion of the City, the superintendent or any successor proves incompetent, the Contractor shall replace him with another person approved by the City; such approval, however, shall in no way relieve or diminish the Contractor's responsibility for supervision of the Work.

Whenever the Contractor or his agent or superintendent is not present on any part of the Work where it may be necessary to give directions or instructions with respect to such work, such directions or instructions may be given by the City to and shall be received and obeyed by the foreman or any other person in charge of the particular work involved.

7. Insurance: The Contractor shall procure and maintain insurance of the types specified below, and to the limits for this insurance specified in the Standard Bid and Contract Terms and Conditions and the City of New London Code of Ordinances, Article IV., Section 2-71. All insurance shall be obtained from companies satisfactory to the City.

Insurance shall be in such forms as will protect the Contractor from all claims and liability for damages for bodily and personal injury, including accidental death, and for property damage, which may arise from operations under the Contract, whether such operations be by himself, his subcontractors, or by anyone directly or indirectly employed or engaged by him.

The following types of insurance shall be provided before starting and until final completion and acceptance of the Work and expiration of the guarantee period provided for in the Agreement.

- a. Workmen's Compensation and Employer's Liability Insurance.
- b. Bodily Injury Insurance for operations and completed operations and Contractor's Protective Bodily Injury Insurance.
- c. Property Damage Insurance for operations and completed operations and Contractor's Protective Property Damage Insurance, each including coverage for injury to or destruction of wires or pipes and similar property and appurtenant apparatus and the collapse of or structural injury to any building or structure except those on which work under the Contract is being done. Blasting and explosion coverage shall be obtained if there is a need for blasting under the Contract, and no blasting shall be performed until such insurance has been secured.
- d. Bodily Injury Insurance covering the operation of all motor vehicles owned by the Contractor.
- e. Personal Injury Insurance to cover claims for personal injury and including claims brought by employees.
- f. Property Damage Insurance covering the operation of all motor vehicles owned by the Contractor.
- g. Insurance to cover bodily injuries and property damage resulting from the use of motor vehicles not owned by the Contractor, while such vehicles are being operated in connection with the prosecution of the Work.

- h. Contractual Liability Insurance covering the liability assumed by the Contractor under the fifth paragraph of that subsection titled "Obligations and Liability of Contractor" of this Agreement.
- i. Owner's Protective Liability and Property Damage Insurance to protect the City and any Engineer against claims for Property damage and for bodily injuries, including accidental death, caused by the operations of the Contractor or his subcontractors on the Work. The policy shall indicate the City and any Engineer as the named insured. A copy of the policy shall be furnished to the City and a Certificate of Insurance shall be furnished to any Engineer.

Any of the above coverages written on a claims made form have an Extended Reporting Period of three years from the termination of the contract.

All policies shall be so written that the owner will be notified in writing of cancellation or restrictive amendment at least 30 days prior to the effective date of such cancellation or amendment.

Certificates from the Contractor's insurance carriers stating the coverages provided, the limits of liability, and expiration dates shall be filed in triplicate with the Engineer before operations are begun. Such certificates shall be on the form furnished by the Engineer.

The CITY requires that the aggregate limits be maintained by the CONSULTANT as required. It is the responsibility of the CONSULTANT or his representative to notify the CITY if ever or whenever claims reduce the General Aggregate below \$1,000,000.

Renewal certificates must be furnished by the Contractor prior to the expiration date of any of the initial insurances.

No insurance required or furnished hereunder shall in any way relieve the Contractor of or diminish any of his responsibilities, obligations and liabilities under the Contract.

- 8. Contract: This Agreement, which includes all the Contract Document elements listed in paragraph 1 above, forms the Contract between the parties identified in the heading of this document. In the event that any provision of the Contract conflicts with any other provision of this Contract, the decision of the City will be final.
- 9. Funding and Fiscal Year Appropriations: Appropriations for expenditures by the City and authorization to spend for a particular purpose are ordinarily made on a fiscal year basis. The fiscal year of the City is the twelve (12) month period ending June 30 of each year. The obligations of the City under this Contract for the present or any subsequent fiscal year following the fiscal year in which this Contract is executed are subject to the appropriation of funds sufficient to discharge the City's obligation, which accrues in this or any subsequent fiscal year. In the absence of such appropriation or authorization, this Contract shall be terminated immediately upon the Contractor's receipt of notice to said effect without liability for damages, penalties or other charges arising from early termination. Expenditures for Contracted services that will extend beyond a single fiscal year shall not exceed in any fiscal year the amount appropriated and authorized for said fiscal year. The Contractor's yearly costs, as contained herein, may not exceed the amount appropriated for said year.
- 10. Termination: The Contract may be terminated without cause by either party by giving written notice to the other at least thirty (30) calendar days prior to the effective date of termination stated in the notice. If Contractor fails to fulfill his obligations, the City may terminate this Contract by giving written notice to the Contractor at least seven (7) calendar days before the effective date of termination stated in the notice. The notice shall state the circumstances of the alleged breach and may state a period during which the alleged breach may be cured, which cure shall be subject to approval by the City.

11. Obligations in Event of Termination:

- A. Upon termination, all finished or unfinished documents, data, studies, and reports prepared by the Contractor pursuant to this Contract, shall become the property of the City.
- B. The City shall promptly pay the Contractor for all services performed to the effective date of termination, subject to indemnification provisions of Paragraph 5 hereof and subject to offset of sums due the Contractor against sums owed by the Contractor to the City.
- 12. Record keeping, Audit, and Inspection of Records: The Contractor shall maintain books, records and other compilations of data pertaining to the requirements of the Contract to the extent and in such detail as shall properly

substantiate claims for payment under the Contract. All such records shall be kept for a period of six (6) years or for such longer period as is specified herein. All retention periods start on the first day after final payment under this Contract. If any litigation, claim, negotiation, audit or other action involving the records is commenced prior to the expiration of the applicable retention period, all records shall be retained until completion of the action and resolution of all issues resulting therefrom, or until the end of the applicable retention period, whichever is later. The Federal grantor agency, the State Auditor, the City, or any of their duly authorized representatives or designees shall have the right at reasonable times and upon reasonable notice, to examine and copy, at reasonable expense, the books, records, and other compilations of data of the Contractor which pertain to the provisions and requirements of this Contract. Such access shall include on-site audits, review, and copying of records.

- 13. Publicity, Publication, Reproduction and Use of Contract Products or Materials: Unless provided otherwise by law or the City, title and possession of all data, reports, programs, software, equipment, furnishings, and any other documentation or product paid for with City funds shall vest with the City at the termination of the Contract. The Contractor shall at all times obtain the prior written approval of the City before it, any of its officers, agents, employees or subcontractors, either during or after termination of the Contract, makes any statement bearing on the work performed or data collected under this Contract to the press or issues any material for publication through any medium of communication. If the Contractor, or any of its subcontractors, publishes a work dealing with any aspect of performance under the Contract, or of the results and accomplishments attained in such performance, the City shall have a royalty-free non-exclusive and irrevocable license to reproduce, publish or otherwise use and to authorize others to use the publication. The Contractor shall use reasonable means to inform the public that the City provides financial support for its operations and services by explicitly stating on publicity material, stationery, posters and other written materials, and on its premises the following: "This program is supported in part (in full) by the City of New London."
- 14. Assignment by Contractor and Subcontracting: The Contractor shall not assign or in any way transfer any interest in this Contract without the prior written consent of the City, nor shall he subcontract any services without the prior written approval of the City.
- 15. Connecticut Law: It is agreed that this contract shall be governed by, construed, and enforced in accordance with the internal laws of the State of Connecticut.
- 16. Venue: In the event of litigation, the parties do agree to be contractually bound to submit themselves to the personal jurisdiction of the state courts of Connecticut. The venue for any court proceeding shall be in the Superior Court for the Judicial District for New London at New London, Connecticut.
- 17. Waiver of Jury Trial: CONTRACTOR HEREBY EXPRESSLY WAIVES ANY AND ALL RIGHTS IT MAY HAVE TO TRIAL BY JURY OF ANY CLAIM, DEMAND, ACTION OR CAUSE OF ACTION (1) ARISING UNDER THIS AGREEMENT OR ANY OTHER INSTRUMENT, DOCUMENT OR AGREEMENT EXECUTED OR DELIVERED IN CONNECTION HEREWITH, OR (2) IN ANY WAY CONNECTED WITH OR RELATED OR INCIDENTAL TO THE DEALINGS OF THE PARTIES HERETO OR ANY OF THEM WITH RESPECT TO THIS AGREEMENT OR ANY OTHER INSTRUMENT, DOCUMENT OR AGREEMENT EXECUTED OR DELIVERED IN CONNECTION HEREWITH, OR THE TRANSACTIONS RELATED HERETO OR THERETO, IN EACH CASE WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER SOUNDING IN CONTRACT OR TORT OR OTHERWISE; AND CONTRACTOR HEREBY AGREES AND CONSENTS THAT ANY SUCH CLAIM, DEMAND, ACTION OR CAUSE OF ACTION SHALL BE DECIDED BY COURT TRIAL WITHOUT A JURY, AND THE CITY MAY FILE AN ORIGINAL COUNTERPART OR A COPY OF THIS SECTION WITH ANY COURT AS WRITTEN EVIDENCE OF CONTRACTOR'S CONSENT TO THE WAIVER OF ITS RIGHT TO TRIAL BY JURY.
- 18. Nondiscrimination and affirmative action provisions, nondiscrimination provisions regarding sexual orientation, Executive Order Number Three and guidelines and rules, Executive Order Number Seventeen, Executive Order Number Sixteen and sexual harassment policy:

For the purposes of this article, the word "contractor" is substituted for and has the same meaning and effect as if it read "Contractor's name." Section A of this article is inserted in connection with subsection (a) of Section 4a-60 of the General Statutes of Connecticut, as revised. Section B of this article is inserted in connection with subsection (a) of Section 4a-60a of the General Statutes of Connecticut, as revised.

A. (a) For the purposes of this section, "minority business enterprise" means any small contractor or supplier of materials fifty-one percent or more of the capital stock, if any, or assets of which is owned by a person or persons: (1) who are active in the daily affairs of the enterprise, (2) who have the power to direct the management and policies of the enterprise, and (3) who are members of a minority, as such term is defined in subsection (a) of Conn. Gen. Stat. Section

32-9n; and "good faith" means that degree of diligence which a reasonable person would exercise in the performance of legal duties and obligations. "Good faith efforts" shall include, but not be limited to, those reasonable initial efforts necessary to comply with statutory or regulatory requirements and additional or substituted efforts when it is determined that such initial efforts will not be sufficient to comply with such requirements.

For the purposes of this section, "Commission" means the Commission on Human Rights and Opportunities.

For the purposes of this section, "public works contract" means any agreement between any individual, firm, or corporation and the State or any political subdivision of the State other than a municipality for construction, rehabilitation, conversion, extension, demolition or repair of a public building, highway or other changes or improvements in real property, or which is financed in whole or in part by the State, including, but not limited to, matching expenditures, grants, loans, insurance, or guarantees.

- (b) (1) The contractor agrees and warrants that in the performance of the contract such contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, religious creed, age, marital status, national origin, ancestry, sex, mental retardation, or physical disability, including, but not limited to, blindness, unless it is shown by such contractor that such disability prevents performance of the work involved, in any manner prohibited by the laws of the United States or of the State of Connecticut. The contractor further agrees to take affirmative action to insure that applicants with job-related qualifications are employed and that employees are treated when employed without regard to their race, color, religious creed, age, marital status, national origin, ancestry, sex, mental retardation, or physical disability, including, but not limited to, blindness, unless it is shown by such contractor that such disability prevents performance of the work involved; (2) the contractor agrees, in all solicitations or advertisements for employees placed by or on behalf of the contractor, to state that it is an "affirmative action-equal opportunity employer" in accordance with regulations adopted by the Commission; (3) the contractor agrees to provide each labor union or representative of workers with which such contractor has a collective bargaining agreement or other contract or understanding and each vendor with which such contractor has a contract or understanding, a notice to be provided by the Commission advising the labor union or workers' representative of the contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (4) the contractor agrees to comply with each provision of this section and Conn. Gen. Stat. Sections 46a-68e and 46a-68f and with each regulation or relevant order issued by said commission pursuant to Conn. Gen. Stat. Sections 46a-56, 46a-68e, and 46a-68f; (5) the contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records, and accounts concerning the employment practices and procedures of the contractor as they relate to the provisions of this section and Conn. Gen. Stat. Section 46a-56. If the contract is a public works contract, the contractor agrees and warrants that he will make good faith efforts to employ minority business enterprises as subcontractors and suppliers of materials on such public works project.
- (c) Determination of the contractor's good faith efforts shall include, but shall not be limited to, the following factors: The contractor's employment and subcontracting policies, patterns and practices; affirmative advertising, recruitment and training; technical assistance activities and such other reasonable activities or efforts as the Commission may prescribe that are designed to ensure the participation of minority business enterprises in public works projects.
- (d) The contractor shall develop and maintain adequate documentation, in a manner prescribed by the Commission, of its good faith efforts.
- (e) The contractor shall include the provisions of subsection (b) of this section in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor, or manufacturer unless exempted by regulations or orders of the Commission. The contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Conn. Gen. Stat. Section 46a-56; provided, if such contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.
- (f) The contractor agrees to comply with the regulations referred to in this section as they exist on the date of this contract and as they may be adopted or amended from time to time during the term of this contract and any amendments thereto.
- B. (a) (1) The contractor agrees and warrants that in the performance of the contract such contractor will not discriminate or permit discrimination against any person or group of persons on the grounds of sexual orientation, in any manner prohibited by the laws of the United States or of the State of Connecticut, and that employees are treated when employed without regard to their sexual orientation; (2) the contractor agrees to provide each labor union or representative

of workers with which such contractor has a collective bargaining agreement or other contract or understanding and each vendor with which such contractor has a contract or understanding, a notice to be provided by the Commission on Human Rights and Opportunities advising the labor union or workers' representative of the contractor's commitments under this section, and to post copies of the notice in conspicuous places available to employees and applicants for employment; (3) the contractor agrees to comply with each provision of this section and with each regulation or relevant order issued by said commission pursuant to Section 46a-56 of the Connecticut General Statutes; (4) the contractor agrees to provide the Commission on Human Rights and Opportunities with such information requested by the Commission, and permit access to pertinent books, records, and accounts concerning the employment practices and procedures of the contractor that relate to the provisions of this section and Section 46a-56 of the Connecticut General Statutes.

- (b) The contractor shall include the provisions of subsection (a) of this section in every subcontract or purchase order entered into in order to fulfill any obligation of a contract with the State and such provisions shall be binding on a subcontractor, vendor, or manufacturer unless exempted by regulations or orders of the Commission. The contractor shall take such action with respect to any such subcontract or purchase order as the Commission may direct as a means of enforcing such provisions including sanctions for noncompliance in accordance with Section 46a-56 of the Connecticut General Statutes; provided, if such contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the Commission, the contractor may request the State of Connecticut to enter into any such litigation or negotiation prior thereto to protect the interests of the State and the State may so enter.
- (c) The contractor agrees to comply with the regulations referred to in this section as they exist on the date of this contract and as they may be adopted or amended from time to time during the term of this contract and any amendments thereto.
- C. This contract is subject to the provisions of Executive Order No. Three of Governor Thomas J. Meskill promulgated June 16, 1971, and, as such, this contract may be cancelled, terminated, or suspended by the State Labor Commissioner for violation of or noncompliance with said Executive Order No. Three, or any State or federal law concerning nondiscrimination, notwithstanding that the State Labor Commissioner is not a party to this contract. The parties to this contract, as part of the consideration hereof, agree that said Executive Order No. Three is incorporated herein by reference and made a part hereof. The parties agree to abide by said Executive Order and agree that the State Labor Commissioner shall have continuing jurisdiction in respect to contract performance in regard to nondiscrimination, until the contract is completed or terminated prior to completion.

The contractor agrees, as part consideration hereof, that this contract is subject to the Guidelines and Rules issued by the State Labor Commissioner to implement Executive Order No. Three, and that he will not discriminate in his employment practices or policies, will file all reports as required, and will fully cooperate with the State of Connecticut and the State Labor Commissioner.

- D. This contract is subject to the provisions of Executive Order No. Seventeen of Governor Thomas J. Meskill promulgated February 15, 1973, and, as such, this contract may be cancelled, terminated, or suspended by the contracting agency or the State Labor Commissioner for violation of or noncompliance with said Executive Order No. Seventeen, notwithstanding that the State Labor Commissioner may not be a party to this contract. The parties to this contract, as part of the consideration hereof, agree that Executive Order No. Seventeen is incorporated herein by reference and made a part hereof. The parties agree to abide by said Executive Order and agree that the contracting agency and the State Labor Commissioner shall have joint and several continuing jurisdiction in respect to contract performance in regard to listing all employment openings with the Connecticut State Employment Service.
- E. This contract is subject to the provisions of Executive Order No. Sixteen of Governor John G. Rowland promulgated August 4, 1999, and, as such, the contract may be canceled, terminated, or suspended by the State for violation of or noncompliance with said Executive Order No. Sixteen. Executive Order No. Sixteen is attached hereto and made a part hereof. The parties agree to comply with such executive order. In addition, the contractor agrees to include a copy of Executive Order No. Sixteen, and the requirement to comply with said executive order, in all contracts with its contractors, subcontractors, consultants, sub-consultants, and vendors.
- F. This contract is subject to the provisions of the City of New London Sexual Harassment Policy ("Policy") and, as such, the contract may be canceled, terminated, or suspended by the City in the event that the contractor, its employees, contractors, subcontractors, consultants, sub-consultants, or vendors engages in behavior prohibited by the provisions of the Policy (a copy of the Policy is attached hereto). The contractor agrees to include a copy of the Policy, and the requirement to prevent behavior as defined in such Policy, in all contracts with its contractors, subcontractors, consultants, sub-consultants, and vendors.

- 19. Force Majeure: Neither party shall be liable to the other or be deemed to be in breach of this Contract for any failure or delay in rendering performance arising out of causes beyond its reasonable control and without its fault or negligence. Such causes may include, but are not limited to, acts of God or of a public enemy, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, or unusually severe weather. Dates or times of performance shall be extended to the extent of delays excused by this section, provided that the party whose performance is affected notifies the other promptly of the existence and nature of such delay.
- 20. Compliance with Laws and Indemnification of the City of New London: The Contractor shall comply with all applicable laws, rules, regulations, ordinances, orders or requirements of the State of Connecticut and any governmental authority relating to the delivery of the services specified in this Contract. The City may require the Contractor to pay fines, penalties, and damages that may arise out of or may be imposed because of, the Contractor's breach or failure to comply with the provisions of this Contract. Unless otherwise provided by law the Contractor shall indemnify and hold harmless the City, its agents, officers and employees against any and all liability, loss, damages, penalties, costs or expenses for personal injury or damage to real or tangible personal property which the City may sustain, incur or be required to pay resulting from, arising out of, or in connection with the services performed or delivered under this Contract by reason of acts, inactions, omissions, negligence, reckless or intentional misconduct of the Contractor, its agent(s), officers, employees or subcontractors; provided that the Contractor is notified of any claim within a reasonable time after the City becomes aware of it, and the Contractor is afforded an opportunity to participate in the defense of such claim. In such event, no negotiated settlement agreement shall be binding on the Contractor without the Contractor's concurrence.
- 21. Waivers And Severability: All conditions, covenants, duties and obligations contained in this Contract can be waived only by written agreement. Forbearance or indulgence in any form or manner by a party shall not be construed as a waiver, nor in any way limit the legal or equitable remedies available to that party. A waiver or breach of any term, condition, or covenant by a party shall not constitute a waiver or breach of any other term, condition or covenant. If any court of competent jurisdiction declares a provision of this Agreement invalid, illegal, or otherwise unenforceable, the remaining provisions of the Agreement shall remain in full force and effect.
- 22. Amendments: No amendment to this Contract shall be effective unless it is signed by authorized representatives of both parties and complies with all other regulations and requirements of law.
- 23. Entire Agreement: The parties understand and agree that this Contract and attachments (if any), which includes all Contract Documents, supersede all other verbal and written agreements and negotiations by the parties relating to the services under this Contract.
- 24. Notice: Unless otherwise specified in an attachment hereto, any notice hereunder shall be in writing addressed to the persons and addresses indicated in the caption of this Contract on page 1.

IN WITNESS WHEREOF, the parties hereto have caused this AGREEMENT to be executed in two (2) original copies on the day and year first above written.

OWNER:	CONTRACTOR:
Michael Passero Its Mayor	Its Duly Authorized Agent
Approved as to form:	
Jeffrey T. Londregan, Esq., Director of Law	
Date Signed	