

PROJECT SPECIFICATIONS

EXTENSION OF NAUGATUCK STREET HARTFORD, CT

OWNER REP **Capital Region Development Authority (CRDA)**
100 Columbus Blvd, Suite 500
Hartford, CT 06103

ENGINEER: **F. A. Hesketh & Associates, Inc.**
6 Creamery Brook
East Granby, CT 06026

OWNER **City of Hartford (ROW for Naugatuck Street)**

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DIVISION II TECHNICAL SPECIFICATIONS

The City of Hartford specifications and shall govern road and general work on this project.

Those specifications are available at;

<http://www.hartford.gov/dpw/specifications-and-manuals>.

Metropolitan District Commission (MDC) specifications shall govern storm drainage, sanitary sewage and water systems on this project. Those specifications are available at;

<https://themdc.org/what-we-do/engineering-planning/technical-services>

Connecticut Natural Gas (CNG) standard material and installation requirements shall govern gas line work on this project.

Eversource standard material and installation requirements shall govern electrical system work on this project.

Frontier Communications standard material and installation requirements shall govern materials and installation of conduit, structures and appurtenances for the Frontier system work on this project.

Comcast Communications standard material and installation requirements shall govern materials and installation of conduit, structures and appurtenances for the Comcast system work on this project.

Where applicable or when not covered elsewhere Connecticut DOT Form 817 and supplements shall govern. Those specifications are available at;
<http://www.ct.gov/dot/cwp/view.asp?a=3609&q=430362>

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. General administrative and supervisory requirements for Project coordination.
- B. Field records and as-built survey.
- C. General installation provisions.
- D. Cleaning and protection.
- E. Communication requirements.
- F. Request for information.

1.2 RELATED SECTIONS

- A. Drawings and general provisions of Contract Documents, including the Agreement, Attached to the Instruction to Bidders as Attachment 5, and Supplemental Specifications Division 1 and Division 2 apply to this Section.

1.3 ADMINISTRATIVE PROCEDURES

- A. The Contractor working in concert with the Capital Region Development Authority (CRDA) is responsible for the timely coordination and completion of all the Work in accordance with the established project schedule.
Note: The owner of the Naugatuck Street Extension roadway is the City of Hartford. The project is funded by the State of Connecticut. Funds will be administered by the Capital Region Development Authority (CRDA), 100 Columbus Boulevard, Suite 500, Harford, CT 06103-2819, Phone: (860) 527-0100. CRDA will hold the road construction contract and oversee construction. Where "Owner" appears in the RFP and contract documents, it shall refer to CRDA.
- B. Administrative activities include, but are not limited to: preparation of detailed progress schedules, installation and removal of temporary facilities, delivery and processing of submittals, progress meetings and Project closeout activities.
- C. The Contractor, within fourteen (14) calendar days after being awarded the Contract, shall prepare and submit to the CRDA a detailed CPM progress schedule. The progress schedule shall be related to the entire Project and shall provide for expeditious and practicable execution of the Work in accordance with the Completion Date.

This schedule shall indicate the dates for the starting and completion of the various

stages, including the placing of materials orders, delivery of materials and equipment, submission of shop drawings, processing of shop drawings, and all work activities and shall provide estimates of man hours, crew sizes, and proposed number of crews to accomplish the Work.

- D. Any possible means of shortening the schedule, at no additional costs, are encouraged and should be brought to the attention of the CRDA by the Contractor.
- E. The Contractor shall schedule and conduct weekly coordination and progress meetings with CRDA to discuss progress, scheduling, coordination requirements and problems. When required, the Contractor shall furnish information in regard to his proposed effort to overcome any incurred delay. This information shall be in a form acceptable to CRDA.
- F. The Contractor shall coordinate his letting of Sub-contract, material purchases, shop drawing submissions, delivery of materials and sequence of operations, to conform to the schedule and shall furnish proof of same as may be required by the CRDA.
- G. Coordinate work of the various Sections of Specifications to assure efficient and orderly sequence of installation of construction elements with provisions for accommodating items to be installed later.
- H. Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water and materials.
- I. A duly authorized representative of the Contractor shall be available for emergency telephone communication from the CRDA or the Developer on a 24-hour basis, seven (7) days a week during the performance of the Work.
- J. The Contractor shall identify the key personnel he intends to assign to the project, to the CRDA within 48 hours after the Contractor has been notified to proceed. The CRDA, reserves the right to approve the Contractor's proposed personnel, and someone acceptable shall immediately replace anyone not so approved. If, in the course of construction, the CRDA feels that it would be in its best interest to request a change in the Contractor's personnel, he may do so, and the Contractor shall immediately assign an acceptable replacement at no additional cost.
- K. No building, utility, or protection service shall be disrupted without the prior knowledge and consent of the CRDA.
- L. Running parallel to the Naugatuck Extension project, Toraal Development ("Toraal") will be overseeing the construction of two-family and duplex houses including site work on the building lots fronting on this new roadway. The Contractor shall maintain access for Toraal's contractors to the building lots both north and south of the new roadway and

coordinate with Toraal's contractors in the development of a logistics plan that will insure both projects can proceed efficiently. Initially, temporary access to the building lots to the south will be made available to the housing contractor and its subcontractors, pursuant to the Site Logistics Plan attached to the Instruction to Bidders as Schedule C.

- M. Contractor must remain within the Limits of Construction for field office, staging, storage, employee parking and sanitary facilities as shown on the drawings and as directed by the CRDA.
- N. In general, on-site work is to be done between 7 am and 5 p.m., Monday through Saturday. Work required at any other time is to be arranged in advance and will be subject to approval by the CRDA and City of Hartford as applicable for Work within the R.O.W. The Contractor shall conform to the City of Hartford Noise Ordinance. Equipment noise is prohibited before 7 am.

1.4 COMMUNICATIONS

- A. The Contractor shall forward all communications directly to CRDA or CRDA's designated representative with copy to the Engineer.
- B. The Contractor shall promptly return telephone calls or respond to any other forms of communication initiated by CRDA or Engineer. Failure to promptly do so shall be considered lack of performance on the part of the Contractor.
- C. All written correspondence to the CRDA shall be dated, and signed by the Contractor or his authorized representative.
- D. Written notice shall be deemed to have been duly serviced if delivered in person to the individual or member of the firm or entity or to an officer of the corporation for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known to him who gives the notice.

1.5 PRE-CONSTRUCTION MEETINGS, PROJECT REPORTS

- A. Prior to the Start of Work, a meeting will be scheduled by the CRDA at the project site to review project procedures, designation of name and title of the authorized person or persons, representing the Contractor and responsible for project management and/or field operation, designation of Emergency Contact, designation of representative for progress meetings the requirements of daily, weekly and monthly reports and other submittals required to perform and administer to project. Town officials will be invited to this meeting in accordance with town permit requirements.

B. Without limiting the reports required, the Contractor shall prepare the following reports:

1. Periodic evidence and/or certification that Mark-up Field Office Drawings, Test Reports and other Project Record Documents are being maintained for ultimate submittal to the CRDA at the completion of the Work in accordance with Section 01700.

1.6 PRE-CONSTRUCTION SURVEY

A. Prior to initiating any construction, the Contractor shall complete a pre-construction survey:

1. The survey shall cover items within the limits of construction, which are to remain, and all public and private properties adjacent to the limits of construction.
2. The survey record shall be adequate to establish the existing condition of all walls, fences, traffic control devices, sidewalks, roadways, utility and drainage structures, landscaping, and such other structures and items as exist within or adjacent to the limits of construction.
3. The survey record shall be adequate to assess possible claims for damage resulting from the construction to any of the above listed areas and items.
4. The survey shall include photographs, video, written and other methods appropriate to areas or items surveyed.
5. The recording methods, areas and items to be surveyed, level of detail, and all other details of the survey, shall be approved by the insurance carrier prior to conduct of the survey.
6. All records shall be dated. Appropriate indexing shall be provided to facilitate use of the records.
7. A copy of the survey records shall be provided to the Owner.

1.7 PRE-INSTALLATION CONFERENCE

- A. If specified or if required for proper execution of the Work, the Construction Manger shall arrange a conference before starting the Work of an individual Section.
- B. The CRDA shall require attendance of the Contractor and utility companies directly affecting, or affected by, work of the Section.
- C. Such conference shall include review of the conditions affecting the Work to be performed, the preparation and installation procedures, and the coordination with related Work.

1.8 FIELD RECORD DOCUMENTS

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- A. The Contractor shall maintain a set of Field Record Documents separate from those used for construction. Clearly identify it as the Field Record Set and keep it current at the project site in accordance with Section 01700.
1. Do not permanently conceal any work until required information has been accurately noted in the Field Record Documents.
 2. The CRDA and Engineer shall periodically review Field Record Documents for compliance, and notify the Contractor of any concerns regarding completeness, accuracy and keeping current.
- B. Field Record Documents include, but are not limited to:
1. Drawings, Specifications, Addenda, Change Orders, and other Modifications to the Contract, plus Engineer's Clarifications, or other written instructions, reviewed submittals, and test reports to record actual construction conditions.
 2. Accurate and thorough marked-up copies of drawings and specifications.
 3. Accurate and thorough marked-up copies of Proposal Requests, indicating which items were accepted and corresponding Change Order number.
 4. Copies of Addenda, Change Orders, and other Modifications issued.
 5. Copies of "Reviewed" and "Approved" Contractor's submittals, including:
 - a. Reviewed product data.
 - b. Reviewed shop drawings.
 - c. Accepted samples.
 - d. Copies of quality control submittals specified herein.
- C. Field Record Drawings:
1. The Contractor shall maintain a complete set of prints of Contract Drawings in the Field Record Set and shall annotate (red line):
 - a. Depths of various elements.
 - b. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - c. Field changes of dimension and detail.
 - d. Changes made by Field Order or by Change Order.
 - e. Details not on original Contract Drawings.
 2. Record on the Drawings information on construction-in-place, which varies from Contract Document data. Include work covered by supplemental contracts, change orders, addenda, RFI's, supplemental drawings and other bona fide sources.
 3. Carefully locate hidden and underground utilities, as they are uncovered or installed, record location dimensions from permanent structures.
- D. Field Record Specifications:

1. Mark the Record Set of Specifications and Addenda with data, which varies from that specified.
 2. Record the manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
 3. Record changes made by Change Order or Field Order.
 4. Record other data not originally specified.
- E. Field Record Shop Drawings: Maintain approved shop drawings as part of record documents for the Work. Legibly annotate to record changes made after review.

1.9 FINAL RECORD DRAWINGS

- A. On completion of Project, the Contractor shall transfer data from their Field Record Drawings to one fresh set of prints, where all field records will be combined.
- B. Contractor shall be responsible for accuracy and completeness of submitted drawings.
- C. Submit drawings to CRDA and Engineer for review and acceptance.

1.10 FIELD ENGINEERING

- A. The Contractor shall provide all field engineering, field layout, surveying, and verification of field dimensions and flow lines at critical connection points to the existing utilities required for his Scope of Work in accordance with Section 01040.
- B. Establish grades, lines and levels by use of recognized engineering survey practices.
- C. Locate and protect control and reference points.

1.11 AS-BUILT A-2 SURVEY

- A. To be completed by the Engineer at the Owner's Expense at the conclusion of the Project.

1.12 REQUEST(S) FOR INFORMATION (RFI'S)

- A. The Contractor shall submit requests for Contract Document interpretations, coordination clarifications to the Engineer with copy to CRDA.
- B. The Engineer shall receive Requests for Information (RFI's) directly from the Contractor for review and processing with copy to CRDA.
- C. Transmit each RFI to the Engineer with copy to CRDA sufficiently in advance of performance of related construction activities to avoid delay. Allow reasonable and sufficient time for Engineer's adequate review and response of RFI's. Delays in the

Work resulting from failure to promptly submit RFI's to the Engineer shall not be considered as cause for extension of the Project Completion date.

- D. The Engineer will not accept verbal request for interpretation, clarifications or additional information. All requests shall be documented on the RFI Form.
- E. Following the Engineer's response to each RFI, distribute copies of response to those concerned with and affected by the RFI response. Instruct recipients to promptly report any inability to comply with provisions in the RFI response.
- F. The RFI process shall not be used to submit a product substitution, Change Order proposal, or any other modification procedure. Any modifications to the Contract Price or Schedule resulting from an RFI response must be submitted to the CRDA with copy to the Engineer and authorized following the Change Order process.
- G. RFI's returned from the Engineer and issued to Contractor are termed and intended to be supplemental information. If for any reason the RFI "impacts" the Contractor's Scope of Work, monetarily or otherwise, the Contractor must notify CRDA immediately in writing. The Contractor will be given five (5) working days from receipt of said RFI to notify CRDA of said dollar amount. If no dollar amount is provided, no claim is allowed. If at that time CRDA has received no written response, CRDA will assume the Supplemental information attached with the RFI offers clarification as intended.

1.13 WEEKLY PROJECT MEETINGS

- A. There will be a Contractor Coordination Meeting held at the site biweekly or more often if required. **ATTENDANCE IS MANDATORY.** Items discussed will be safety, schedule, trade coordination, material deliveries and clean up. The Contractor will be required to have a "qualified representative" present at these weekly meetings, throughout the duration of his scheduled work activities.

PART 2 PRODUCTS NOT USED

PART 3 EXECUTION

1.14 GENERAL INSTALLATION PROVISIONS

- A. Comply with a product manufacturer's instructions and recommendations to extent printed information are more detailed or stringent than requirements contained directly in Contract Documents.

- B. Where installation of work is required to be in conformance with the product manufacturer's directions or specifications, provide and distribute copies of applicable data as requested by the Engineer.
- C. Inspect substrate conditions for each unit of work before beginning installation. Correct unsatisfactory conditions before work proceeds.
- D. Verify that elements of interrelated operating equipment are compatible.

1.15 MAINTENANCE AND PROTECTION

- A. General:
 - 1. During handling and installation of products at the Project site, clean and protect the work in progress, as well as the adjoining work, as part of a continuing maintenance program.
 - 2. Apply protective covering on installed work, where required to ensure freedom from damage or deterioration, up to Substantial Completion and acceptance of the Work.
- B. Through reasonable control and protection methods, supervise performance of the Work to ensure that no work completed or in progress, will be subjected to harmful, dangerous, damaging or otherwise injurious exposure during the construction period.
- C. Clean each element of work at time of installation. Provide sufficient maintenance and protection during ensuing construction to ensure freedom from damage and deterioration.
- D. Remove and legally dispose of all rubbish, debris, and damaged material off the site at least once per week or as directed by the CRDA.
- E. The Contractor shall have the responsibility to protect the finish product of their subcontractors and shall be fully responsible for the restoration if damages to the work of other trades are incurred by its employees.
- F. Do not allow trash and combustible materials to accumulate on the site. All debris must be removed from the site on a daily basis.

END OF SECTION

PART I - GENERAL

1.1 GENERAL

1. This Section of the Specifications is supplemental to **Exhibit A** of the Contract and covers the general and technical requirements for furnishing all labor, tools, power, material, transportation, pumping, dewatering, excavation support and equipment, coordination, supervision and security, necessary to perform the required Work for completion of the Extension of Naugatuck Street, Hartford, CT, as shown on the plans titled "Extension of Naugatuck Street", dated August 3, 2018, prepared by F. A. Hesketh & Associates, Inc.:
2. The Base Bid Work is generally as shown on the plans and described herein these specifications
3. The Contractor is responsible for all completion of all improvements shown on the plans.

1.2 WORK INCLUDED

1. In general, the Contractor's Base Bid Work shall include, but not be limited to, the following tasks:
 - A. General Requirements
 - a. Procuring all necessary municipal building, roadway work and road closure permits necessary for construction.
 - b. Coordinate and schedule all required inspections; including, but not limited to, City of Hartford, MDC, Connecticut Natural Gas, Eversource, Frontier and Comcast.
 - c. Develop a compressive staging plan for the Owner's approval. Provide a monthly update of the approved staging plan or more often if required.
 - d. Develop a detailed critical path construction schedule for the Owner's approval.
 - e. Maintain overall construction sequence and staging in accordance with the approved staging plan and construction schedule.
 - f. Provide access to the building lots on the south side of the new Naugatuck Street Extension for Toraal, Toraal's site and building contractor(s) in accordance with the Logistics Plan attached hereto as Schedule C. Maintain constant coordination with the Owner, Toraal and Toraal's site and housing contractor(s) and work collaboratively with them to revise the logistics plan as required.
 - g. Provide overall utility coordination and scheduling of inspections.
 - h. Provide quality control testing and certification.
 - i. Provide traffic control as needed.
 - j. Provide temporary facilities, including temporary power necessary to complete

the Work.

- k. Provide temporary signage, barricades and fencing as required to maintain a safe and secure site. All open excavations must be protected with hard fencing.
- l. Conduct biweekly meetings with the Owner.
- m. Provide weekly photo documentation and daily reports documenting construction activity. The daily reports shall include a list of on-site equipment and labor, construction activity, soils leaving site (number of trucks and yardage), soils arriving on site (number of trucks and yardage) and vendor material deliveries.

B. Land Clearing, Rough Grading and Site Preparation

- a. Provide field engineering including survey for stake out. Owner will provide two (2) control points.
- b. Locate and protect existing trees to remain.
- c. Locate and protect existing utility services to remain within the Limit of Construction, including, overhead and subsurface electrical cables, sanitary and storm sewer systems, water and gas service, utility poles, and telephone, security and communications lines.
- d. The Limits of Construction are shown on sheet PP-2 and extend from the Start of Construction line on Naugatuck Street west of the Naugatuck and Clark intersection to the End of Construction line on Clark Street south of the Naugatuck and Clark intersection and the End of Construction line on Hampton Street at the Hampton and Earle Intersection. The Limits of Construction extend to the Easement line north and south of the new Naugatuck Extension and east and west along Hampton Street from the Naugatuck and Hampton intersection north to the beginning of the Hampton Street Road reconstruction. The Limits of Construction extend east and west to the Road Right of Way north of the beginning of the Hampton Street Road reconstruction to the End of Construction line at the Hampton and Earl Intersection.
- e. Complete clearing and grubbing within Limits of Construction including removal of trees, tree stumps and vegetation.
- f. Site Demolition – Remove and properly dispose of debris from project site, including saw cutting, and demolition of miscellaneous structures. Abandon and remove existing utilities as required.
- g. Install and maintain temporary erosion control devices, including dust control and street sweeping as needed on a daily basis.
- h. Rough grade area within the Limits of Construction as defined in 2.1.B.d above.

C. Installation of Site Utilities

- a. Furnish and install sanitary sewer system, including structures, pipes, laterals to five feet beyond the Road Right of Way, trenching, bedding, backfilling,

warning tape, connection to existing system, cleaning, testing, and associated items. Cap, mark and survey location and invert of the end of laterals.

- b. Furnish and install storm drainage system, including structures, pipes, laterals to five feet beyond the Road Right of Way, trenching, bedding, backfilling, warning tape, connection to existing system, and associated items. Cap, mark and survey location and invert of the end of laterals.
- c. Furnish and install electrical system, including structures, conduits, pull rope, trenching, bedding, backfilling, warning tape, connection to existing system, and associated items. Conduit to be installed by a licensed electrician. Circuit installation by utility company.
- d. Furnish and install cable and communication systems including structures, conduits, pull rope, trenching, bedding, backfilling, warning tape, connection to existing system, and associated items. Communications cable installation by communications provider.
- e. Furnish and install domestic and fire water systems including gates, hydrants, pipes, laterals to five feet beyond the Road Right of Way including service curb stops, fittings, trenching, bedding, backfilling, warning tape, connection to existing system, cleaning, testing, and associated items. Cap, mark and survey location and invert of the end of laterals. MDC field personnel will be doing some of the water main work as shown on the plans. The Contractor shall prepare and maintain the excavation necessary for the MDC work and coordinate directly with MDC field personnel.
- f. Provide trenching, bedding, backfilling and warning tape for gas mains and laterals to five feet beyond the Road Right of Way. Gas main installation by utility company.

D. Site Finishes

- a. Furnish and install street lighting system, including bases, poles and luminaires, pull boxes, conduits, wire, trenching, bedding, backfilling, warning tape, connection to existing system, and associated items. Conduit and pull boxes to be installed by a licensed electrician. Circuit installation by utility company.
- b. Furnish and install approved soil and aggregate materials for subgrade, subbase and base for roadway, driveway aprons, curbing, sidewalk, utility structures, etc. Reset manholes, gate boxes, pull boxes, etc. to match proposed grades as needed.
- c. Furnish and install granite curbing.
- d. Furnish and install bituminous concrete pavement for roadway including binder and surface course.
- e. Furnish and install concrete sidewalks, concrete driveway aprons and ramps, including ADA warning detectors.
- f. Mill and resurface Hampton Street including disposal of millings.
- g. Repair/replace damaged sidewalk sections on Hampton Street. Provide a square

foot unit price for demolition and replacement of damaged sections of existing sidewalk.

- h. Furnish and install street trees. Provide topsoil, fine grade seed and mulch.
- i. Install pavement markings.
- j. Furnish and install traffic control signs and street signs.
- k. Incidental Materials, Tools, Equipment, Power, Fuels and Labor not specifically mentioned in the Specifications or shown on the Drawings, but which are inherently necessary to make a complete working installation, shall be included.

E. Project Close-Out

- a. Following site construction, clean all components of site drainage system, including all catch basins, manholes and piping.
- b. Following completion of the work, remove all temporary erosion control devices and temporary facilities.
- c. Assist the Engineer in preparation of as-built drawings.
- d. Complete all required close-out documents

1.3 INTENT OF CONTRACT DOCUMENTS

1. The use of the word (or words):

- 1) "provide" means furnish, install, and connect ready for use.
- 2) "furnish" means supply and deliver to job or where directed.
- 3) "as approved" or "approved" means Engineers' approval.
- 4) "as directed" means Engineers 'or CRDA's direction or instruction.
- 5) "To do", "Provide", "furnish", "install", etc., in these Specifications or on Drawings are directions given to the Contractor.
- 6) "Owner" shall mean CRDA.

Note: The owner of the Naugatuck Street Extension roadway is the City of Hartford. The project is funded by the State of Connecticut. Funds will be administered by the Capital Region Development Authority (CRDA), 100 Columbus Boulevard, Suite 500, Harford, CT 06103-2819. CRDA will hold the road construction contract and oversee construction. Where "Owner" appears in the RFP and contract documents, it shall refer to CRDA.

- 7) "Bidder" shall mean the company submitting a bid.
- 8) "Contractor" shall mean the successful Bidder under contract to do the work covered by these Specifications.
- 9) "Agreement" is a reference to the standard construction contract form.
- 10) "Company's Representative", "Owner", "Engineer", "Site Engineer" and/or "Supervising Engineer" and "Project Manager" designates the person or persons

- appointed by the CRDA to assess that said work is performed in accordance with these Specifications and Drawings.
- 11) "Work" shall mean labor, services, equipment, and material as set forth in the Contract Document.
 - 12) "Equal" shall mean a satisfactory equivalent accepted by the Engineer.
 - 13) "Engineer" or "Site Engineer" shall mean F. A. Hesketh & Associates, Inc., 3 Creamery Brook, East Granby, Connecticut.
 - 14) "Contract Document" shall mean all drawings, Specifications, Addenda, and Revisions thereto: Purchase Order and Supplements to the Purchase Order, Supplier's Drawings as accepted by the CRDA, all of which are a part of the successful Bidder's contract with the CRDA.
 - 15) "Certified" shall mean that the particular documents are signed and dated as being in conformance with the appropriate specifications, codes, and standards by an authorized employee of the certifying organization. The authorized employee shall occupy a more senior position in the certifying organization than those who performed the work that is being certified and shall be technically conversant with the work that is being Certified.
 - 16) "Others" shall refer to any firm exclusive of the Contractor.
 - 17) "Drawings" is synonymous with "Plans".
 - 18) "Project Manager" and "CRDA" are synonymous.
2. The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. The intention of the documents is to include all labor and materials, equipment, and transportation necessary for the proper execution of the work.
 3. All apparent discrepancies between the Drawings and Specifications, or errors or omissions or miss-descriptions in either the Drawings or Specifications, shall be referred to the CRDA and Engineer by the Contractor for interpretation and adjustment prior to the time of bidding.
 - 1) Any such omissions from the Drawings or Specifications, or the mis-description of details or work which are manifestly necessary to carry out the intent of the Drawings or Specifications, or which are customarily performed, shall not relieve the Contractor from performing such omitted or mis-described details of work, but they shall be performed as if fully and clearly set forth and described in the Drawings and Specifications. The risk and expense of proceeding without prior interpretations and adjustment by the CRDA shall rest with the Contractor.
 4. The Drawings are not to be scaled. Calculated dimensions shall in all cases be followed. The absence of required information shall be brought to the attention of the CRDA and Site Engineer, and the work shall proceed only when such information has been supplied. All dimensions shall be checked in the field by the Contractor.
 5. In addition to complying with all pertinent codes and regulations, it is the Contractor's responsibility to determine and comply with:

- 1) All OSHA, NESC (National Electric Safety Code), local, state, and federal regulations or any other personnel safety codes with respect to this job.
 - 2) The High-Voltage Proximity Act.
6. Reference to a technical society, institution, association, or government authority is in accordance with following abbreviations:
- 1) ACI American Concrete Institution
 - 2) AGCA Associated General Contractors of America, Inc.
 - 3) AISC American Institute of Steel Construction
 - 4) ANSI American National Standards Institute
 - 5) ASTM American Society for Testing and Materials
 - 6) AWS American Welding Society Code
 - 7) AWWA American Water Works Association
 - 8) UL Underwriters Laboratories, Inc.
 - 9) CRSI Concrete Reinforcing Standards Institute
 - 10) AASHTO American Association of State Highway and Transportation Officials
 - 11) ConnDOT Connecticut Department of Transportation (aka CTDOT or DOT or District Office)
 - 12) CTDEEP Connecticut Department of Energy and Environment Protection
 - 13) MDC Metropolitan District Commission
7. All references to codes, specifications and standards referred to in the Specifications and on the Drawings shall mean, and are intended to be the latest edition, amendment and/or revision of such reference standard in effect as of the date of these Contract Documents.
8. The Contractor shall perform and install all Work in compliance with:
- 1) City of Hartford ordinances, codes, regulations and standard specifications, including all conditions of approvals issued for the project.
 - 2) Connecticut State Building Code
 - 3) Occupational Safety and Health Administration (OSHA)
 - 4) Plans and Specifications in excess of code requirements and not contrary to same.
 - 5) CTDOT and CTDEEP requirements.
 - 6) Utility company requirements.
 - 7) Other Contract Specific requirements set forth in the Contract.
9. Apply for and obtain all required state and town permits and inspections, pay all fees and charges for same, include all service charges, pavement cuts and temporary and permanent repairs.
10. The Contractor shall coordinate with utility companies regarding existing utilities within the project limits.

11. The Contractor shall comply with all federal, state, and local codes, ordinances, and regulations. In the event that the Contract Documents vary from applicable codes or standards, the applicable codes or standards shall apply.

1.4 USE OF SITE

1. The Contractor shall safeguard the use by the public and CRDA of all adjacent highways, roadways, sidewalks and footpaths, and shall conform to all laws and regulations concerning the use thereof, especially limitations on traffic and the movement of heavy equipment.
2. The Contractor shall limit the extent of his activities to that area of the site defined on the Contract Drawings as being within the limit of work. No work shall be performed outside the limits of work, except for the temporary staging of materials and equipment specifically authorized in advance by the CRDA.
3. All portions of the site and any disturbed abutting property shall be returned to their original condition or better after completion of Work. Such repair work shall include, but not be limited to, re-establishment of lawn areas and pavement repair where required.
4. Parking for the Contractor's employees will be in a designated area to be assigned by the CRDA within the project limits.

1.5 SITE VISITS

1. The undertaking of periodic site visits by the Engineer, CRDA, or Municipal and State Officials shall not be construed as supervision of actual construction, or make them responsible for the safety of workers or the public; or make them responsible for means, methods, techniques, sequences, or procedures of construction selected by the Contractor or his Subcontractors; or make them responsible for safety programs and precautions incidental to the Work.

1.6 EQUIPMENT INSTALLATION

1. Contractor shall furnish all labor, materials, tools, power and equipment necessary to meet all requirements of the Contract Documents at his/her expense.

1.7 OBSTACLES, INTERFERENCE, AND COORDINATION

1. General:
 - 1) Plans show general design arrangement. Install work substantially as indicated and verify exact location and elevations of job; DO NOT SCALE PLANS.
 - 2) Due to small scale of Plans, it is not possible to indicate all offsets, fitting, changes in elevations, interferences, etc. Make necessary changes in the Work,

equipment locations, etc., after notification is given to the CRDA and Site Engineer and approval is received to proceed.

1.8 EXAMINATION OF PREMISES DRAWINGS, ETC.

1. Before Submitting Proposal:
 - 1) Examine all Drawings and Specifications relating to Work of all trades to determine scope and relation to other work.
 - 2) Examine all existing conditions affecting compliance with Drawings and Specifications by visiting site and/or building.
 - 3) Ascertain access to site, available storage and delivery facilities.
2. Before Commencing Work on Any Phase or in any Area:
 - 1) Verify all governing dimensions at site.
 - 2) Inspect all adjacent work.
 - 3) Coordinate all phasing operations with CRDA.
3. Tender of Proposal Confirms Agreement:
 - 1) All items and conditions referred to herein and/or indicated on accompanying Drawings.
 - 2) No consideration, additional monies or time extensions will be granted for alleged misunderstanding.

1.9 TEMPORARY OFFICE TRAILOR, FIRST AID AND TOILET FACILITIES

1. Prior to the start of Work, the Contractor shall furnish and maintain, at his/her expense, proper temporary office facilities, first-aid and toilet facilities for his/her employees and subcontractors during the entire duration of Work of this Contract. The office shall be 250 square feet min. capable of providing suitable space for job site contractor meetings. Office facilities shall include air conditioned and heated office space, fresh water, proper electrical and communication systems, fax, potable water, and all necessary employee safety equipment. The details and specifications and the location of these facilities shall be approved by the CRDA prior to placement on the site.

1.10 TEMPORARY CONSTRUCTION AND CONSTRUCTION AIDS

1. The Contractor shall furnish, install, and maintain such temporary weather tight protective coverings and heating as may be required to properly protect his materials from the weather, and he shall remove such protective coverings at the close of the work, to the satisfaction of the CRDA.
2. The Contractor shall provide and maintain all necessary temporary electric and communications services, construction equipment, tools, hoists, staging, scaffolding, ladders, planking, runways, guards, supports, construction fencing, pumps, generators and other arrangements necessary for the proper execution of his work or required by law, and shall remove them when they are not longer required, or when so directed by the CRDA.

1.11 PROTECTION OF WORK AND PROPERTY

1. The Contractor will, during the performance of said work, obey and comply with the provisions of Workers' Compensation Laws and all lawful requirements, regulations, laws, and ordinances of all legally constituted authorities, in any way affecting the performance of this Agreement, said premises and the buildings, structures, and equipment to be constructed hereunder.
2. The Contractor shall be responsible for the proper security and protection of his/her work, property and equipment, his workmen and other persons. The Contractor will construct, place, maintain and secure all necessary fences, gates, supports, barriers and other safeguards for the prevention of accidents and injuries to persons and other property. He shall secure the Work from injury and/or damage by storm, wind, freezing, water, flood, fire and by any other cause which may be occasioned by or in connection with the doing of said work until completion and acceptance thereof. The Contractor shall remove and replace so as to comply fully with the plans and specifications, any work so injured, stolen, damaged, or destroyed, without expense to the CRDA.

1.12 CLEAN-UP

1. Daily clean-up: The Contractor at all times during the progress of the Work shall keep the site free from accumulation of sediment, waste matter or rubbish and shall confine his apparatus, materials and operations of his/her workmen to the limits prescribed except as the latter may be extended with the approval of the CRDA. Contractor shall at all times keep public roads clean of sediment, mud and construction debris at his/her expense.
2. Final clean-up: Upon completion of the work covered by the Contract, the Contractor shall leave the completed project ready for use without the need of further cleaning of any kind and with all work in new condition and in perfect order. In addition, upon completion of all Work the Contractor shall remove from the vicinity of the Work all plant, buildings, rubbish, unused materials, concrete forms and other materials belonging to him or used under his direction during construction or impairing the use or appearance of the property and shall restore such areas affected by the work to their original condition. In the event of his failure to do so, the same shall be removed by the CRDA at the expense of the Contractor.
3. Disposal: All removed materials not specifically designated for re-use at the site shall be disposed of by the Contractor in accordance with all applicable laws, rules, and regulations at his/her expense.

1.13 SUPERVISION

1. Supervision: The Contractor shall give the work proper supervision, and keep on the job during all working hours a competent superintendent satisfactory to the CRDA and

the CRDA.

2. The Superintendent shall be subject to the CRDA's approval and shall be replaced if not satisfactory to the CRDA at any time during the completion of the Work.

PART 2 MATERIALS
NOT USED

PART 3 EXECUTION
NOT USED

END OF SECTION

PART I - GENERAL

1.1 GENERAL

- A. A detailed sequence plan of construction shall be developed by the Contractor and shall be subject to approval by the CRDA and the Engineer. Prior to the start of Work, the Contractor shall submit to the Construction Manager a detailed proposed work schedule showing anticipated completion dates for various phases and segments of the work. This plan shall contain all temporary measures necessary including temporary fencing, pedestrian access, maintenance and protection of traffic, lighting and temporary employee and visitor parking layouts.

1.2 ANTICIPATED GENERAL SEQUENCE OF CONSTRUCTION

- A. Contact “call before you dig” at 1-800-922-4455 at least 48 hours prior to start of work to have existing utilities marked.
- B. Coordinate/attend pre-construction meeting with CRDA, Engineer and Municipal officials.
- C. Install and maintain protection of traffic including installation of warning signs, flashers & barricades.
- D. Place erosion control devices and construct construction exits.
- E. Complete initial site clearing and grubbing. Dispose of all surplus site material at a suitable off-site location. Coordinate with Engineer on final clearing limits prior to the start of any clearing. Protect trees to remain.
- F. Dig test pits and relay the information to the engineer and custodial utility company of any potential conflicts.
- G. Sawcut & remove pavement, curb, sidewalk & amenities, within construction area or where shown on the plans.
- H. Abandon/remove utilities as required. Coordinate all work with utility companies and MDC
- I. Rough grade road for roadway construction.
- J. Install Storm drainage, sanitary sewer and utilities.
- K. Install granite curbing.
- L. Prepare subgrade and install roadway gravel subbase and processed aggregate base course.

- M. Install driveway aprons.
- N. Install pavement binder course and wearing course.
- O. Install concrete sidewalks and ramps.
- P. Install street lighting.
- Q. Install street trees.
- R. Place topsoil, loam and seed.
- S. Remove erosion controls after disturbed areas are stabilized.
- T. Complete final cleaning of roadway and storm sewer system.

PART II - MATERIALS

Not Used

PART III - EXECUTION

Not Used.

PART IV - MEASUREMENT AND PAYMENT

Not Used

PART I - GENERAL

1.1 GENERAL

- A. The Contractor shall provide and pay for the following field engineering services required for the Work.
1. Field and office survey work required in general execution of the Work.
 2. Verify grades, lines, levels and dimensions shown on Drawings.
 3. Lay out Work from established control points and bench marks.
 4. Coordinate the work of all trades.
- B. Where the proper fabrication or erection of any part of the Contractor's work depends upon other work, whether installed by himself or by other Contractors, the Contractor shall verify all necessary dimensions by field measurement, and shall be entirely responsible for the proper fitting together of all parts of his work.
- C. The Engineer will provide the Contractor with two (2) on-site horizontal control points and two (2) on-site vertical bench marks prior to the start of the Work.

PART II - MATERIALS

Not used

PART III - EXECUTION

Not used

PART IV - MEASUREMENT AND PAYMENT

Not used

PART I - GENERAL

1.1 GENERAL

- A. Submit product data, test results, and, certifications required by the Contract Documents, prior to the start of Work.
- B. Designate in the construction schedule, or in a separate Submittals Schedule, the dates for submission and the dates reviewed shop drawings, product data and samples will be needed.

1.2 PRODUCT DATA

- A. Product Data:
 - 1. Clearly mark each copy to identify pertinent products or models.
 - 2. Show performance characteristics and capacities.
 - 3. Show dimensions and clearances required.
- B. Manufacturer's standard schematic drawings and diagrams:
 - 1. Modify drawings and diagrams to delete information which is not applicable to the Work.
 - 2. Supplement standard information to provide information specifically applicable to the Work.

1.3 CONTRACTOR RESPONSIBILITIES

- A. Review product data, test results, and, certifications prior to submission.
- B. The Contractor shall be responsible for:
 - 1. Compliance with the contract documents.
 - 2. Confirming and correlating quantities and dimensions.
 - 3. Selecting fabrication processes and techniques of construction.
 - 4. Coordination of the work represented by each submittal with other trades.
 - 5. Performing the work in a safe and satisfactory manner.
 - 6. Compliance with the Contractor's construction schedule.
 - 7. All other provisions of the agreements.
- C. It is understood that the Engineer's notation on the submittals is not to be construed as an authorization for additional work or additional cost.
- D. If any notations represent a change to the contract sum, submit a cost proposal for the change in accordance with procedures specified before proceeding with the work.
- E. Notify the Engineer by letter in writing, at time of submission, of any deviations in the submittals from requirements of the contract documents.

- F. Notify the CRDA and Engineer by letter of any notations made by the Engineer which the Contractor finds unacceptable. Resolve such issues prior to proceeding with the Work.
- G. Begin no fabrication of work until all specified submittal procedures have been fulfilled.
- H. Do not submit product data, test results, and certifications representing work for which such submittals are not specified. The CRDA and Engineer shall not be responsible for consequences of inadvertent review of unspecified submittals.

1.4 SUBMISSION REQUIREMENTS

- A. Prepare and transmit each submittal in accordance with the submittals schedule, agreed to by all entities involved, and sufficiently in advance of performing the related work or other applicable activities, so that the installation will not be delayed by processing time including "rejected" and re-submittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery and similar sequenced activities. No extension of time will be authorized because of the contractor's failure to transmit submittals to the Site Engineer sufficiently in advance of the work.
 - 1. Submittals made which do not conform to the schedule are subject to delays in processing by the Engineer.
 - 2. Engineer's Review: Allow five (5) working days for Engineer's initial processing of each submittal requiring his review and response, except for longer periods required as noted below, and where processing must be delayed for coordination with subsequent submittals. The Engineer will advise the Contractor promptly when it is determined that a submittal being processed must be delayed for coordination. Allowing ten (10) working days for Site Engineer's reprocessing of each submittal. Advise the Engineer when processing time for a submittal is critical to the progress of the work, and the work would be expedited if his processing time can be foreshortened.
- B. Number of Submittals required:
 - 1. Four (4) sets unless otherwise specified by the CRDA.
- C. Submittals shall contain:
 - 1. The date of submission and the dates of any previous submissions.
 - 2. The Project title.
 - 3. The names of Contractor, Supplier, and Manufacturer
 - 4. Identification of the product, with the specification section number.
 - 5. Field dimensions, clearly identified as such.
 - 6. Relation to adjacent or critical features of the work or materials.
 - 7. Applicable standards, such as Conn DOT, ASTM or Federal Specification numbers.

8. Identification of deviations from contract documents.
9. Identification of revisions on re-submittals, other than those noted by the Engineer on previous submittals.
10. A 4" x 5" blank space for Contractor and Engineer stamps.
11. Each submittal shall bear the Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the work and of contract documents.

D. Make submittals for related or contiguous work simultaneously.

1.5 RE-SUBMISSION REQUIREMENTS

A. Make any corrections or changes noted on previous submittals and resubmit.

1.6 ENGINEER'S DUTIES

A. Review submittals with reasonable promptness.

B. Notations on the Submittal Review Stamp mean the following:

1. "Approved" means that no deviations from the design concept have been found.
2. "Approved with Corrections as Noted" means that deviations from the design concept which have been found are noted, and the Contractor may proceed accordingly.
3. "Revise and Resubmit" means that the submittal must be revised and resubmitted in response to the Engineer's notations.
4. "Not Approved" means that the submittal does not conform to the design concept or meet requirements of the contract documents.

C. Return submittals to Contractor for distribution, or for resubmission.

1.7 LIST OF SUBMITTALS

A. The Contractor shall provide all submittals as outlined in the Division 2 specification sections.

PART II - MATERIALS

Not Used

PART III - EXECUTION

Not Used

PART IV - MEASUREMENT AND PAYMENT

Not Used

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Codes, ordinances, laws and regulations
- B. Municipal and State Permits
- C. Utility Inspection Fees
- D. Insurance and Bonds
- E. Other Project Requirements

1.2 CODES AND REGULATIONS

- A. Contract Documents incorporate and the Project is governed by requirements of various regulatory agencies.
- B. Do not perform Work, which is known to be, or which the Contractor is in a position to know, is contrary to applicable regulatory requirements. These may include but may not be limited to the following:
 - a. Building and Structural Code: 2018 State Building Code, most recently adopted with Connecticut State Building Code Supplement.
 - b. Fire/ Life Safety Code: 2018 Connecticut State Fire Safety Code, most recently adopted with Connecticut State Fire Code Supplement.
 - c. Current State Electrical and Plumbing Codes.
 - d. CTDEEP and other state environmental codes and regulations.
 - e. City of Hartford Municipal permit conditions, ordinances and regulations.
 - f. OSHA codes and requirements.
 - g. Utility company requirements.
 - h. MDC requirements.

1.3 PERMITS

- A. The Contractor shall obtain all appropriate city building and street work permits required for the Work at his/her expense. The Contractor is responsible for determining such required permits and complying with all permit conditions.
- B. No work shall be initiated until the necessary permits are obtained by the Contractor.

1.4 FEES AND TAXES

- A. Roadway project is CT Sales Tax exempt.
- B. Pay for applicable City and Utility Company inspection and permit fees. The Contractor is responsible for determining permit inspection fees. These may include, but may not be limited to the following:
 - 1. City Building Dept. Permit and/or Street Work Permit Fees.
 - 2. City Inspection Fees.
 - 3. Utility company inspection fees.

Note: Owner is responsible for MDC engineering, property assessment, construction inspection and house service connection fees in accordance with the Developer's Permit Agreement (DPA) executed by the Owner.

1.5 INSURANCE AND BONDS

- A. Provide insurance and bonds required for the Project to the CRDA.

1.6 OTHER PROJECT REQUIREMENTS

- A. Utility company requirements:
 - 1. Comply with utility company and MDC requirements related to abandonment/removal of existing utilities, relocation of utilities and installation of new utilities.

PART 2 PRODUCTS
NOT USED

PART 3 EXECUTION
NOT USED

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Description of Project Quality Assurance and Control Plan.

1.2 CRDA'S RESPONSIBILITIES

- A. Initiate, conduct and pay for independent testing and inspection program for the duration of the Work under the direction of the Engineer.
- B. CRDA will provide testing results to Contractor on weekly basis.

1.3 CONTRACTOR'S RESPONSIBILITIES

- A. In general, it is the Contractor's responsibility to complete whatever additional testing he/she deems required to insure compliance of his/her work and materials to the specifications during the full duration of the Work regardless of the independent testing program initiated by the CRDA.
- B. The Contractor shall arrange and pay for all testing and inspections required to maintain his/her Quality Assurance and Control Plan for the duration of the Work.
- C. Contractor will provide access and cooperate with CRDA's independent testing personnel at all times. Contractor will manage and schedule CRDA's independent testing lab's inspections and testing.

1.4 SUBMITTALS

- A. Comply with Section 01400, unless otherwise indicated.
- B. Quality Control Submittals:
 - 1. Overview of Contractor's Quality Control Program.
 - 2. Statement of Qualification for Contractor provided testing services.
 - 3. Test results and reports for tests, inspections, and laboratory services required by Contract Documents.

1.5 QUALITY ASSURANCE

- A. Laboratory Qualifications: Submit certificate indicating compliance with the following requirements for each laboratory performing tests or inspections.
 - 1. Conform to "Recommended Requirements for Independent Laboratory Qualification", published by American Council of Independent Laboratories.

2. Conform to basic requirements of the following standards:
 - a. ASTM D3740: Evaluation of Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
 - b. ASTM E329: Standard Practice for Inspection and Testing Agencies for Concrete, Steel, and Bituminous Materials as Used in Construction.
3. Laboratory is authorized to work in the State of Connecticut.

1.6 FIELD SAMPLES AND MOCK-UPS

- A. Assemble and erect field samples and mock-ups at Project Site for review as required by Contract Documents.
 1. Coordinate scope, location, and duration with Engineer and CRDA.
 2. Approved field samples and mock-ups represent an acceptable level of quality for the Work.
- B. Remove or disassemble field samples and mock-ups as directed by the Engineer and CRDA unless allowed to remain as part of the completed Work. Clear area and dispose of materials unless otherwise indicated.

PART 2 PRODUCTS
NOT USED

PART 3 EXECUTION
NOT USED

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Safety and Security
- B. Traffic Control
- C. Site Water Control
- D. Site Cleaning
- E. Temporary Field Office, Employee Parking and Sanitary Facilities

1.2 RELATED SECTIONS

- A. Section 02540, Soil Erosion and Sedimentation Controls
- B. Section 01400, Submittals
- C. Section 01000, Project Coordination

1.3 UNIT PRICES
NOT USED

1.4 SUBMITTALS

- A. Comply with requirements of Section 01400, Submittals and this Section.
- B. Submittals are required for portions of work specified in this Section.
 - 1. Materials Qualification Test: Submittal prepared by independent testing lab to indicate that proposed material complies with contract document requirements.
 - 2. Product Data: Provide manufacturers' data and technical specifications on following products; marketing/sales literature is not acceptable.

1.5 REGULATORY REQUIREMENTS

- A. Comply with all city, state and federal laws, ordinances and regulations governing construction site operations.

1.6 PROJECT COORDINATION

- A. Schedule and sequence activities in accordance with the Conditions of the Contract and Division 1 Specifications.

PART 2 PRODUCTS

2.1 MANUFACTURED PRODUCTS

- A. Provide submittals in accordance with Section 01400.

3.1 EXAMINATION

- A. Examine areas and conditions under which temporary site control work is to be performed. Do not proceed with Work until unsatisfactory conditions have been corrected.
- B. Verify and assume full responsibility for adequacy of bearing and foundation conditions for construction equipment and operations.

PART 3 EXECUTION

3.2 PREPARATION

- A. Verify existing site conditions and ongoing Work with daily photographs. Notify the Engineer and CRDA of existing damage in adjacent streets or improvements such as paving, curbs, gutters, sidewalks and alley surfacing, prior to start of Work.
- B. If damage to streets and improvements is discovered after Work has commenced and such damage was not documented and reported before start of Work, Contractor will perform and pay for necessary repairs.
- C. Notify utility companies having jurisdiction of existing damage to utility equipment and/or systems.

3.3 GENERAL:

- A. Do not close or obstruct public streets, easements or sidewalks without proper permit and approval from the CRDA and city or state officials, as applicable.
- B. Protect adjacent structures, utilities, sidewalks, pavements, trees, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by earthwork operations.
- C. Repair damage resulting from construction operations at no additional cost to CRDA.
- D. Provide temporary erosion and sediment control, including dust control, in accordance with Section 02540 and CT DEEP requirements.
- E. Provide temporary traffic control in accordance with City of Hartford requirements.

- F. Provide temporary controls during construction to permit construction to proceed in accordance with the Contract Documents and applicable laws, regulations and codes, including, but not limited to health and safety, dewatering, trench and excavation support, water treatment, soil management, air monitoring and ventilation.
- G. Furnish and install temporary field office, employee parking and sanitary facilities for Contractor employees.

3.4 SAFETY AND SECURITY

- A. Safety of the Public, Contractor, Subcontractor, and all Visitors is the highest priority for the full duration of the Work.
- B. All site workers, supervisors, personnel and visitors shall be properly dressed and equipped and the entire workspace maintained in accordance with all current OSHA and City Ordinance safety requirements.
- C. Provide proper emergency eye and hand wash and medical kit on-site at all times.
- D. Barricade and protect open excavations occurring as part of Work and post with warning lights.
- E. Operate warning lights during hours from dusk to dawn each day and as otherwise required by CRDA, Engineer, or local governing jurisdiction.
- C. Site Area Protection: Take necessary precautions to protect property on or adjacent to the Project Site, including existing building, structure, utilities, street signs, light standards, hydrants, pavements and walks, and planting and natural features, against all damage or injury including settlement or collapse.
- D. Weather Protection: Provide protection against rain, wind, snow storms, heat, and other weather conditions so as to maintain all Work free from injury or damage.
- E. Conduct all Work in City ROW in strict accordance with City of Hartford requirements.

3.4 SITE WATER CONTROL

- A. Maintain positive and effective drainage for site for duration of Project.
 - 1. Provide temporary facilities including diversion channels or conduit systems needed to effectively manage storm water runoff and groundwater to prevent deterioration of site soils due to saturation and to facilitate construction operations.
 - 2. Do not allow groundwater, surface water or direct precipitation to accumulate in excavations or on exposed subgrades.
 - 3. Remove water to prevent softening and undercutting of utility piping and structures, and soil changes detrimental to stability of subgrades and structures.

4. Provide and maintain pumps, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
5. Convey water removed from excavations and precipitation to collecting or run-off areas.
6. Provide and maintain temporary drainage ditches and other diversions outside excavation limits for each structure.
7. Do not use permanent utility trench excavations as temporary drainage ditches.
8. Obtain required permits for dewatering operations and discharge.
9. Remove temporary elements used for drainage control when need is satisfied.

3.5 CONSTRUCTION CLEANING

1. Provide appropriate containers and areas for collection of construction debris miscellaneous garbage.
2. Provide ongoing regular pickup and removal of unused construction materials and debris, including but not limited to bulky debris, packaging, containers, unused materials and equipment, and materials unsuitable for disposal by standard commercial procedures (masonry and concrete materials, crates, combustible materials). to maintain an orderly construction site.
3. Dispose of construction debris at appropriate off-site location(s) and in a responsible manner.
4. Keep loose materials subject to wind pickup to a minimum by regular inspection and removal. Provide fencing to contain loose materials where needed.
5. Participate in applicable recycling programs.
6. Respond promptly to request of Engineer, CRDA or local jurisdiction to increase or improve cleaning measures.
7. It is the responsibility of the Contractor to sweep and clean local streets on a daily basis using appropriate mechanical sweeping and cleaning equipment throughout the duration of the Project should his/her operations result in soil or other site material deposition on the roadway surface.
8. If, in opinion of the Engineer, CRDA or local jurisdiction, Contractor is not providing adequate site and roadway cleaning, CRDA will provide for additional cleaning and reduce Contract amount by CRDAs cost.

3.5 TEMPORARY UTILITIES & FACILITIES

- A. Provide and install temporary site office trailer with first aid, power and communication systems.
- B. Provide potable drinking water facilities from an approved source and serve from single service containers or satisfactory types of sanitary drinking stands or fountains.
- C. Provide and maintain temporary sanitary facilities for employees.
- D. Provide and maintain temporary electric power and lighting necessary for execution of the Work.

3.6 CONSTRUCTION SIGNS

- A. Temporary Signs: Provide and maintain temporary warning signs and other temporary signs required for safe and proper execution of Work.
- B. Do not install billboards, advertisements or other similar signs unless approved by the CRDA.
- C. Sign Maintenance: Protect all signs from damage and maintain in first class condition and in proper position until Final Completion unless approval from the CRDA is given for removal at an earlier date.

3.7 EQUIPMENT AND MATERIALS AREAS

- B. Establish equipment and materials areas in approved locations, as determined by the CRDA.
- C. Construction:
 - 1. Remove existing obstructions or other items designated for removal.
 - 2. Provide appropriate ground surface for proposed use. If indicated or necessary for subgrade stability, apply a reinforcement geotextile in accordance with manufacturer's specifications.
 - 3. Provide necessary access to site, including traffic control and signs.
 - 4. Provide temporary utilities and other items necessary for operation of facility.
 - 5. Install security fencing and barriers.
 - 6. Protect public and adjacent properties.
 - 7. Provide temporary drainage, dewatering, sedimentation and erosion control devices, including construction entrances in accordance with the Plans and Section 02540.
- D. Maintenance:
 - 1. Operate and maintain areas in compliance with permits, regulations and requirements of other sections.
 - 2. Remove immediately materials spilled, dropped, washed, or tracked from vehicles onto public roadways. Remove materials that block or obstruct drainage flow into storm sewer inlets.

3.8 REMOVAL

- A. Completely remove temporary materials, equipment, signage and barricades when their use is no longer required.
- B. Completely remove temporary field office, sanitary facilities and utilities.
- C. Clean and repair damage caused by temporary installation or use of temporary facilities.

- D. Repair or replace materials on existing facilities used for temporary services to specified or original condition.

END OF SECTION

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Final site cleaning.
- B. Procedures for Completion.
- C. Contractor Closeout Submittals.

1.2 RELATED SECTIONS

- A. Section 01000: Project Coordination
- B. Section 01570: Temporary Facilities and Controls

1.3 FINAL CLEANING

- A. Complete final site cleaning prior to Engineer's inspection for Substantial Completion.
- B. Sweep clean exterior paving and sidewalk areas.
- C. Remove waste and debris from Project Site, and adjacent and private property affected by construction activities.
- D. Maintain Work in clean condition until Engineer determines that Work is complete.

1.4 SUBSTANTIAL COMPLETION

- A. Comply with requirements and provisions of the Conditions of Contract.
- B. When Contractor considers the Work in compliance with requirements of Substantial Completion, submit to Engineer:
 - 1. A written notice that the Work, or designated portion thereof, is substantially complete.
 - 2. A list of items to be completed or corrected.
- C. Within a reasonable time after receipt of such notice, Engineer, accompanied by the CRDA and Contractor, shall conduct a preliminary inspection for Substantial Completion. Engineer will prepare a list (punch list for Substantial Completion) of items to be completed or corrected, indicating items which must be completed or corrected before Work can be determined to be substantially complete. Subcontractor shall take necessary action to promptly complete and correct items on the list.
- D. Inspection for Substantial Completion: When items on punch list for Substantial Completion have been completed or corrected, Subcontractor shall return punch list to Engineer indicating action taken for each item, those items completed and reasons for not

completing remaining items, and shall request an inspection for Substantial Completion. Engineer will then establish a date for inspection.

1.5 CLOSEOUT PROCEDURES

- A. Comply with requirements and provisions of the Conditions of the Contract.
- B. When Contractor considers Work is complete, they shall submit written certification that:
 - 1. Contract Documents have been reviewed.
 - 2. Work has been inspected for compliance with Contract Documents.
 - 3. Items on punch list for Substantial Completion have been fully completed or corrected.
 - 4. Work has been completed in compliance with Contract Documents and is ready for final inspection.
- C. Engineer will make an inspection to verify status of completion with reasonable promptness after receipt of Contractor's written certification.
- D. If Engineer considers there is incomplete or defective Work:
 - 1. Engineer will promptly notify the Contractor in writing, listing the incomplete or defective Work.
 - 2. The Contractor shall promptly take steps to remedy the stated deficiencies, and send to Engineer a second written certification that the Work is complete.
- E. When Engineer finds Work is acceptable under the Contract Documents, Engineer will request that Contractor make closeout submittals.

1.6 CONTRACTOR'S CLOSEOUT SUBMITTALS

- A. When Engineer has determined that the Work is acceptable under the Contract Documents and the Contract fully performed, Contractor shall prepare and submit the final Application for Payment to Engineer together with the following:
 - 1. Subcontractor's Affidavit of Payment of Debts and Claims.
 - 2. Subcontractor's Affidavit of Release of Liens.
 - 3. Subcontractor's lien waiver in the full amount of the Contract Sum.
 - 4. Lien waivers from subcontractors, sub-subcontractors, and major material suppliers who have furnished materials or labor for the Contractor or a subcontractor. Lien waivers shall be in the full amount of the contract involved.
 - 5. Consent of surety to final payment on Consent of Surety Company to Final Payment form.
 - 6. Evidence of compliance with requirements of authorities having jurisdiction.
 - 7. Required Certificates of Inspection.
 - 8. Project Record Documents.
 - 9. Warranties and Bonds.

1.7 PROJECT FIELD RECORD DOCUMENTS AND AS-BUILT SURVEY

A. Project Field Record Documents from Contractor in accordance with Section 01000:

1. The original Record Documents including office mark-ups depicting field changes to grading, layout, utility and drainage installations.
2. Copy of the Project Manual including Addenda, Change Orders, and other Modifications to the Contract, plus Engineer's Clarifications, or other written instructions, and test reports, etc.
3. Two (2) copies of all inspection records, monitoring data and other required permit documentation to the CRDA.

PART 2 PRODUCTS
NOT USED

PART 3 EXECUTION
NOT USED

END OF SECTION