



US Army Corps
of Engineers®
New England District

W912WJ-20-Q-0020

PUBLIC WATERLINE EXTENSION

**Northfield Brook Lake Dam
Thomaston, Connecticut**

Construction Solicitation and Specifications

DECEMBER 2019

REVISED OCTOBER 2020

Northfield Dam Lake Public Waterline Extension
Thomaston, Connecticut
STATEMENT OF WORK

Solicitation Number: W912WJ-20-Q-0020
December 2019

A. General Description of the Work to be Performed

The general description below is given to indicate the approximate scope of this project only. It does not limit the work required under the project drawings and specifications.

The dam at Northfield Brook Lake is located 1.3 miles upstream of the brooks confluence with the Naugatuck River. Northfield Brook Lake lies within the boundaries of Thomaston and Litchfield, Conn., with the dam site situated in Thomaston. The reservoir is two miles west of Thomaston on Route 254. The project consists of an earth fill dam with stone slope protection 810 feet long and 118 feet high; a 544-foot-long gated circular concrete conduit with a diameter of three feet; and a chute spillway edged in rock with a concrete weir 72 feet long. The weir's crest elevation is 15 feet lower than the top of the dam. The project stores Northfield Brook floodwaters and helps to lower flood stages in downstream communities along the Naugatuck River.

The dam is situated in a scenic area adjacent to the highly industrialized Naugatuck Valley, where public recreational facilities are at a premium. Trout is stocked in the lake, and the grounds contain picnic tables and two group shelters, fireplaces, a hiking trail, and parking and sanitary facilities. Drinking water is also available.

The Connecticut Department of Public Health regulates the Northfield Dam Water supply wells as a transient Non-Community System. The wells have had water quality issues including occasional E. coli detection along with high iron and manganese levels. Preliminary work was done in 2010 to determine the possibility of connecting to the Connecticut Water company's system at Michelle Lane. A permanent easement was obtained and preliminary topography was developed for a proposed connection. This work will require approximately 4,000 LF of new polyethylene waterline 2 inch or less with associated pressure reducing valves and other appurtenances.

B. General Project Requirements

1. Contractor's Responsibility. The Contractor shall furnish all plant, labor, equipment and materials and carry out all operations as necessary to accomplish the work of this project as described in this document and on the contract drawings.
2. Commencement, Prosecution and Completion of Work. The Contractor shall commence work under this contract within 15 days after the date of receipt of the Notice to Proceed, shall prosecute the work diligently, employing ample personnel and sufficient equipment, and shall complete the entire work ready for use not later than 150 days after the date of receipt of the Notice to Proceed. The time included for completion shall include final cleanup of the project site. Additional restrictions concerning the prosecution and completion of work are as follows:

- A. The Contractor shall attend a Preconstruction Conference prior to the start of on-site construction work (see paragraph entitled "Preconstruction Conference", below).
- B. The on-site work is restricted to daylight hours; generally 0700 (7:00 AM) to 1730 (5:30 PM).

3. Superintendence by the Contractor. At all times during the performance of the contract and until the work is completed and accepted, the Contractor shall directly superintend the work or assign and have on the worksite a competent project superintendent who is satisfactory to the Contracting Officer and has the authority to act for the Contractor. The project superintendent shall maintain a physical presence at the site at all times and be responsible for all construction and related activities at the site, except as otherwise acceptable to the Contracting Officer. Failure to comply with these requirements shall be deemed as cause for a non-compensatory stoppage and suspension of work until the deficiency is remedied.
4. Coordination and Direction During Construction. The Contractor shall not take or accept any direction or instructions issued by any person, employed by the Government or otherwise, other than the Contracting Officer that changes the terms and conditions of contract actions, the scope, or any change that impacts the cost, price, or schedule. Changes authorized by the Contracting Officer will be in the form of a written, official, signed modification to the contract action received by the Contractor before the Contractor will act upon those changes. The Contractor will comply with the changes clause of this contract when the Contractor believes direction has been given from persons other than the Government Contracting Officer that equate to a change by notifying the Contracting Officer as directed by the clause. Any direction given by any Government employee or any other person outside their authority must be reported to the Contracting Officer.
- The Contracting Officer's Representative (COR) is limited to the authorities stated in the COR appointment letter. If a COR is appointed under this contract, they will be appointed by written letter from the Contracting Officer to the Contractor and COR specific to this contract only. COR appointment letters from previous contracts are not valid for this contract.
5. Traffic Regulation and Control. For the work on Michelle Lane the Contractor shall apply for the Town's Road Excavation Permit. During construction the Contractor shall provide access as necessary to maintain traffic and to provide vehicle access to all residential and commercial structures in the project area. The Contractor shall maintain and protect traffic on all affected roads during the construction period, except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads. The Contractor shall be responsible for the repair of any damage to roads caused by construction operations.
6. Construction Site Plan. Prior to the start of work, the Contractor shall submit a site plan showing the locations and dimensions of temporary facilities including layouts and details, equipment and material storage areas, access and haul routes, avenues of ingress/egress to fenced areas (e.g., the assigned storage and staging area), details of the fence installation (if used), and the number of trailers to be used. Identify any areas which may have to be graveled to prevent the tracking of mud. Indicate if the use of a supplemental or other staging area is desired. Show locations of safety and construction fences, site trailers, construction entrances, trash dumpsters, temporary sanitary facilities, and worker parking areas. The plan shall also show where temporary utility hook-ups are to be located, if required, and how grounding of equipment and trailers will be achieved, as appropriate.

7. Temporary Safety Fencing. Temporary safety fencing shall be used to limit access to active construction areas and areas where materials and equipment are being staged. The safety fencing shall be a high visibility orange colored, high density polyethylene grid or approved equal, a minimum of 42 inches high, supported and tightly secured to steel posts located on maximum 10 foot centers. The temporary safety fencing shall be installed as soon as practicable, but not later than 15 days after the date established for commencement of work. The safety fencing shall be maintained by the Contractor during the life of the contract, adjusted and moved as appropriate to the progress of the work and, upon completion and acceptance of the work, shall become the property of the Contractor and shall be removed from the work site.

8. Hours of Operation. Unless otherwise authorized in writing by the Contracting Officer, the project site will be available for construction activities between 7:00 a.m. and 5:30 p.m. Monday through Friday.

Normal work hours are from 7:00 a.m. through 5:30 p.m., Monday through Friday. The Contractor will not be permitted to work on Saturday, Sunday or legal holidays unless otherwise authorized by the Contracting Officer. The exclusion of work on Saturday, Sunday and legal holidays has been considered in computing the performance time of this contract. The following legal holidays are observed:

January 1st
Third Monday in January
Third Monday in February
Last Monday of May
July 4th
1st Monday of September
2nd Monday of October
11th of November
Fourth Thursday of November
25th of December

When one of the above designated legal holidays falls on a Sunday, the following Monday will be observed as a legal holiday. When a legal holiday falls on a Saturday, the preceding Friday is observed as a holiday.

Work outside the normal hours of operation requires Contracting Officer approval. The request to work outside the hours of operation shall be made in writing to the Contracting Officer 10 calendar days prior to such work to allow arrangements to be made by the Government. The request application shall include specific dates, hours, location, type of work to be performed, contract number and project title, and names of all individuals who will be working outside the hours of operations. During periods of darkness, the different parts of the work shall be lighted in a manner approved by the Contracting Officer.

9. Progress Schedule. The initial project schedule shall be in the form of a chart graphically indicating the sequence proposed to accomplish each work feature or operation. The chart shall be prepared to show the starting and completion dates of all work features on a linear horizontal time scale beginning with date of Notice to Proceed and indicating calendar days to completion. The Contractor shall indicate on the chart the important work features or operations that are critical to the timely overall completion of the project. Key dates for such important work features and portions of work features are milestone dates and shall be so indicated on the chart. This schedule will be the medium through which the timeliness of the Contractor's construction effort is appraised. Anticipated adverse weather delay days shall be included in the schedule.

An updated schedule showing actual progress shall be submitted monthly or with each pay request. Changes to the base-line schedule shall be outlined in a narrative describing the reason for the change.

10. Rate of Progress. Should the Contractor fail to maintain a satisfactory rate of progress in accordance with the Contractor's approved progress schedule, the Contracting Officer may require that additional personnel and equipment be placed on the work and weekend and overtime work be performed, in order that the work be brought up to schedule and maintained.

11. Preconstruction Conference. The Contracting Officer will conduct a preconstruction conference after receipt of Notice to Proceed by the Contractor and prior to the start of on-site construction activities. The date, time, and place for this conference shall be mutually agreed upon by the Contractor and the Contracting Officer. It is mandatory that the Contractor's project site supervisory personnel assigned to this project attend the conference; no personnel substitutions will be permitted. The purpose of the conference is to review contract requirements and to establish a working relationship between the Contractor's Staff and the U.S. Army Corps of Engineers personnel who will be closely associated with the project. During the conference, the Contracting Officer's Representative will inform the Contractor concerning job safety, project phasing, work hour restrictions, traffic control, quality control, labor relations, and environmental protection. The Preconstruction Conference will be arranged by the Contracting Officer.

12. Material Substitutions. This contract is based on the materials and methods as shown on the contract drawings and as described in this document and in the technical specifications. The Contractor shall not substitute materials or methods unless such substitution has been specifically approved in writing by the Contracting Officer.

13. Quality Control. The Contractor shall establish a quality control system to perform sufficient inspection of all items of work, including that of any subcontractors, to ensure conformance to this document with respect to materials, workmanship, construction, finish and functional performance. The system shall cover all construction operations, both onsite and offsite. The site project superintendent will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the contract. The site project superintendent in this context shall be the highest level manager responsible for the overall construction activities at the site, including quality and production. The site project superintendent shall maintain a physical presence at the site at all times, except as otherwise acceptable to the Contracting Officer, and shall be responsible for all construction and construction related activities at the site. The CQC System Manager shall be a construction person with a minimum of three years in related work. This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned as System Manager but may have other duties in addition to quality control.

14. Quality Assurance. All items of work not addressed in the contract documents shall be completed in strict accordance with the manufacturers' specifications. The Government is not obligated to inspect the Contractor's work, or to protect the Contractor from the consequences of its work. Government inspections are a general examination of the Contractor's conduct and workmanship and are solely for the purpose of the Government. Government-designated Quality Assurance Representatives (QARs) do not have the authority to accept work, nor is a Government inspection to be construed as conclusive.

Government agents including QARs and project engineers are not authorized to change the contract without the written approval of the Contracting Officer; this lack of authority extends to all situations in which the action of these agents could be construed as constituting a change.

The quality of workmanship is subject to audit by Government or Government-designated QARs at any time during the contract. The Contractor shall cooperate fully and provide all information necessary for this audit.

The Contractor shall submit all requests for changes in writing to the Contracting Officer. Do not proceed with changes without possession of written authorization of the Contracting Officer.

The Contractor shall not conceal any work unless the Contracting Officer has approved all items of work which are to be concealed. The Contractor shall notify the Contracting Officer of its intention to conceal work at least 24 hours in advance of concealment.

15. Utilities. The Government will furnish electricity from existing points of supply free of charge. The Contractor shall make his own investigations as to the suitability of these supplies for use on this project. Electricity required in the prosecution of the work in excess of that available from existing points of supply shall be furnished by the Contractor at his own expense. The Contractor shall conserve government furnished electricity.

16. Temporary Electrical Equipment and Connections. The Contractor, at his own expense and in a workmanlike manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines. All required temporary electrical equipment and lines shall be furnished, installed, connected, and maintained by the Contractor according to EM 385-1-1, Section 11.E, NFPA 241, and NFPA 70, Article 305-6(b), "Assured Equipment Grounding Conductor Program". All temporary equipment and lines shall be removed prior to final acceptance of the work. Materials and equipment need not be new, but must be in good repair and serviceable condition. Periodic inspections of systems and devices will be made by the Contractor at intervals not to exceed one week.

17. Location of Underground Facilities. Obtain necessary digging permits prior to the start of excavation. Verify the elevations of existing piping, utilities, or any type of underground obstruction in locations to be impacted by the work. For excavation work in Connecticut call "Call Before You Dig" at 1-800-322-4844. Notification shall not be earlier than 30 days prior, or later than 3 days prior, to the planned excavation.

18. Environmental Protection. The Contractor shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during the entire duration of this contract. Comply with all applicable environmental Federal, State, and local laws and regulations. Any delays resulting from failure to comply with environmental laws and regulations will be the Contractor's responsibility.

A. Environmental Protection Plan: Prior to commencing construction activities or delivery of materials and equipment to the site, the Contractor shall submit an Environmental Protection Plan for review and approval by the Contracting Officer. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues which the Contractor must address during construction, including final restoration and proposed native seed mix. Issues of concern shall be defined within the Environmental Protection Plan. The Contractor shall address each topic at a level of detail commensurate with the environmental issue and required construction task(s). The Environmental Protection Plan shall be current and maintained onsite by the Contractor.

B. Obtaining and complying with all environmental permits and commitments required by

Federal, State, Regional, and local environmental laws and regulations is the Contractor's responsibility.

- C. Intermittent watercourses shall be identified and marked by a qualified soil or wetland scientist prior to the start of work. No trenching work will occur in these areas. All erosion and sediment control shall be approved in advance by the technical point of contact.
- D. Temporary Erosion and Sediment Controls: The Contractor shall be responsible for providing temporary erosion and sediment control measures for storage and staging areas and other areas as appropriate for the work, in accordance with Federal, State, and local laws and regulations. The erosion and sediment controls selected and maintained by the Contractor shall be such that water quality standards are not violated as a result of the Contractor's construction activities. The area of bare soil exposed at any one time by construction operations should be kept to a minimum. The Contractor shall construct or install temporary and permanent erosion and sediment control best management practices (BMP). BMPs may include, but not be limited to, vegetation cover, slope stabilization, silt fences, sediment traps, and inlet and outfall protection. Any temporary measures shall be removed after the area has been stabilized.

- E. Fuels and Lubricants: Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation. Manage and store fuel, lubricants and oil in accordance with all Federal, State, Regional, and local laws and regulations. Used lubricants and used oil to be discarded shall be stored in marked corrosion-resistant containers and recycled or disposed in accordance with State, and local laws and regulations. Storage of fuel on the project site is not allowed. Fuel shall be brought to the project site each day that work is performed. Storage and usage of lubricants and daily fueling of machinery and equipment shall occur at least 50 feet from any drainage inlets, water bodies (rivers, streams, lakes), environmentally sensitive areas (wetlands, vernal pools).

19. Resources – Submit a historical Resources, archaeological resources, cultural resources, biological resources, and wetlands plan that defines procedures for identifying and protecting historical, archaeological (including stone walls), cultural resources, and biological resources and wetlands known to be on the project site: and/or identifies procedures to be followed if historical archaeological, cultural, and biological resources and wetlands not previously known to be onsite or in the area are discovered during construction. Include in the plan methods to assure the protection of known or discovered resources, identifying lines of communication between Contractor personnel and the Contracting Officer.

20. Waste. The Contractor shall provide on-site containers with covers for the collection of waste materials, debris, and rubbish. The Contractor shall clean the project site on a daily basis to prevent the accumulation of waste materials and rubbish resulting from construction activities. The Contractor shall transport all solid waste off of the project site and dispose of it in compliance with Federal, State and local requirements for solid waste disposal. Upon completion of the construction work, the project site shall be returned to its pre-work condition.

21. Contract Drawings. Contract drawings showing the work of this project are attached at the end of this document.

22. Damages. The Contractor shall exercise caution and follow sound construction practices in the conduct of the work to avoid construction-related damage to existing features to remain.

23. Sequence of Work. In general, the work shall be performed in the following sequence: existing conditions verification, preparation of submittals, material procurement, establish traffic control and site safety, construct project features, and project close out.
24. Contractor's Receipt of Supplies. The Contractor shall be responsible for all arrangements for the receipt of materials and supplies at the job site. Government personnel are not permitted to receive or sign for items delivered to the site.
25. Storage Area. The storage area for use by the Contractor, for work and storage of equipment, materials, and trailers during the life of this contract will be determined at the Preconstruction Conference. The storage area will be located on Federal Property at the Northfield Dam Facility. The Contractor shall confine its storage area to the limits as designated or approved by the Contracting Officer and shall be responsible for the security of the area. Upon completion of the contract, and at no additional cost to the Government, remove all equipment and materials, except as otherwise specified, and restore the site to its original condition as approved by the Contracting Officer.
- Trailers, equipment, or materials must not be open to public view with the exception of those items which are in support of ongoing work on any given day. Do not stockpile materials outside the storage area in preparation for the next day's work. Park mobile equipment, such as tractors, wheeled lifting equipment, cranes, trucks, and like equipment within the storage area at the end of each work day.
- The Contractor may construct a temporary six foot high galvanized chain link fence around trailers and materials at the storage/staging area if desired. Galvanized chain-link fence shall have a minimum height of six feet. The fence posts shall be driven when installed in earth surfaces; concrete bases placed on the ground surface shall be used when installation is in paved or other hard surfaced areas. Except for equipment and materials which are in support of ongoing work on any given day or unless such equipment or materials are assigned a separate and distinct storage area by the Contracting Officer away from the vicinity of the construction site but within the project site boundaries, equipment and materials shall be stored and placed inside the temporary chain-link fencing.
- Trailers, if utilized by the Contractor for administrative or material storage purposes, shall present a clean and neat exterior appearance and shall be in a state of good repair. Trailers which, in the opinion of the Contracting Officer, require exterior painting or maintenance will not be allowed on the project site.
- The temporary six foot high chain link fence, if used, shall be kept in a state of good repair and proper alignment. Should the Contractor elect to traverse, with construction equipment or other vehicles, grassed or unpaved areas which are not established roadways, such areas shall be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation shall be at the Contractor's discretion. Grass located within the boundaries of the construction site shall be mowed for the duration of the project. Grass and vegetation along fences, buildings, under trailers, and in areas not accessible to mowers shall be edged or trimmed neatly.
26. Restoration of Storage Area. Upon completion of the project remove barricades, temporary utilities, sanitation facilities, construction vehicles, materials and equipment, temporary chain-link fencing, and any other temporary equipment, materials, or products from within and around the work areas and temporary storage areas. Clean and repair damage caused by installation or removal of temporary materials, equipment, or utilities. Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition,

including pavement repair, or top soil and seeding as necessary. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including top soil and seeding as necessary.

27. Contractor Use of Premises. Work shall be restricted to the areas shown on the contract drawings in addition to storage areas assigned to this Contractor. Access to the project site is currently available for construction traffic. The Contractor shall be responsible for providing and maintaining access necessary for his equipment and plant to and from the work site.

28. Protection and Security. Protection to Contractor personnel or their equipment cannot be provided at the worksite by the Government. The Contractor shall protect all its personnel, Government personnel, and the general public from injury. The Contractor shall conduct all its work so as to prevent injury or unsafe conditions during construction.

29. Damaged Property. Work shall proceed in a manner which will minimize disturbance or risk of damage to structures and surrounding lands. The Contractor shall repair such items damaged in the course of carrying out the work at no additional cost to the Government. All repairs shall match similar existing items in all aspects. All replacements shall be in kind.

30. Sanitary Facilities. In accordance with Section 2 of EM 385-1-1, provide, maintain, and make available to all workers provisions for sanitation. Maintain these provisions at all times without nuisance. Upon completion of the work, all sanitary provisions and facilities shall be removed from the premises by the Contractor, leaving the premises clean and free from nuisance.

In accordance with Section 2, Subpart 02.C of EM 385-1-1, provide, maintain, and make available to all workers an adequate supply of potable water for both drinking and personal cleansing. During hot weather, provide cool drinking water.

In accordance with Section 2, Subpart 02.E of EM 385-1-1, provide, maintain, and make available to all workers adequate minimum field-type portable toilets. Portable toilets shall be properly secluded from public observation in such a manner as required or approved by the Contracting Officer. Periodically empty wastes into a municipal, district, or station sanitary sewage system, or remove waste to a commercial facility. Include provisions for pest control and elimination of odors. Any penalties and/or fines associated with improper discharge of wastewater shall be the responsibility of the Contractor. Government toilet facilities will not be provided.

31. Preparation of Record Drawings. Maintain at the jobsite one set of full-size contract drawings marked to show all deviations which have been made from the contract drawings, including buried or concealed construction and utility features revealed during the course of construction. Record the horizontal and vertical location of all buried utilities that differ from the contract drawings. These drawings shall be available for review by the Contracting Officer at all times. Upon completion of the work, submit the original marked set of prints to the Contracting Officer for approval. Requests for partial payments will not be approved if the marked prints are not current, and request for final payment will not be approved until the marked prints are submitted to and approved by the Contracting Officer.

The entries shall be made in the jobsite set of prints at the time field changes are made, pertinent information collected, or need for corrections established, as a continuing process during the life of the contract. As revised drawings are issued by the Contracting Officer, revised prints shall be introduced into the set to replace the superseded drawings and all applicable notations previously made on the superseded drawings transferred to the current prints. Carefully prepared sketches, not less than 8-1/2 inch by 11 inch, may be used to depict changes or added information in lieu of

notations on the actual prints. Staple sketches to the prints affected by the change. All plan views, sections, elevations, profiles, diagrams, details, or schedules affected by a change shall be marked up as required to reflect the change. All notations or changes made on the prints shall be in sufficient detail to clearly depict the change. Colored pens or pencils shall be used to make notations on the record prints as follows:

Red pen or pencil shall be employed to indicate added or corrected work or information.

Green pen or pencil shall be used to show the deleted or incorrectly depicted work or information.

Blue or black pen or pencil shall be used to show information not to be recorded on the drawings but included on the marked-up prints for explanatory or clarification purposes for the benefit of the Contracting Officer.

32. Sustainability. All reasonable efforts shall be made to use recycled, recovered and biobased materials in the execution of this work. Deliverables shall be printed double-sided on paper that contains post-consumer fiber content. To the extent feasible, materials with recycled content per EPA-Designated Recovered Materials Requirements as described at <https://www.epa.gov/smm/comprehensive-procurement-guidelines-construction-products> shall be used. Also the Contractor shall meet the USDA-Designated Biopreferred Program requirements at <https://biopreferred.gov/BioPreferred/faces/ProductCategories.xhtml> as feasible.

C. Safety

1. Accident Prevention Plan: The Contractor shall prepare an Accident Prevention Plan (APP) specific to the activities being performed. It shall include an Activity Hazard Analysis (AHA) as described in Paragraph "2" below. All work shall be conducted in accordance with the APP, the U.S. Army Corps of Engineers Safety and Health requirements Manual (EM 385-1-1, 2014 edition), and all applicable Federal, State, and local safety and health requirements. The APP shall detail how safety and health will be managed during the project. The APP shall address the requirements of applicable Federal, State and local safety and health laws, rules, and regulations.

The Contractor shall comply with Federal Acquisition Regulation Clause No. 52.236-13 for Accident Prevention, which is added by reference. Special attention shall focus on the requirements of EM 385-1-1, specifically Section 01.A.11 through 01.A.18, Figure 1-2 AHA, and Appendix A, (Minimum Basic Outline for Accident Prevention Plan). The APP shall be developed by a qualified person. The Contractor shall be responsible for documenting the qualified person's credentials. Work shall not proceed until the APP has been reviewed by the Government Designated Authority (GDA) and deemed acceptable for use on the project.

The APP shall interface with the Contractor's overall safety and health program. Any portions of the Contractor's overall safety and health program referenced in the APP shall be included in the applicable APP element and made site-specific. The Government considers the Prime Contractor to be the "controlling authority" for safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the contract, the penalties for noncompliance, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out.

The Contractor shall conduct a safety meeting at the project site on the first day of work, whenever a new activity or phase of work begins, or at least weekly during the progress of work. All safety meetings shall be documented. A copy of a suggested weekly safety meeting form will

be provided by the Contracting Officer's Representative. Records of the safety briefings shall be submitted to the GDA weekly.

2. AHA: An AHA shall be submitted for each major phase of work. A major phase of work is defined as an operation involving a type of work presenting hazards not experienced in previous operations or where a new subcontractor or work crew is to perform the work. The analysis shall define all activities to be performed, identify the sequence of work, the specific hazards anticipated, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level. Work shall not proceed on a phase of work until the AHA has been accepted by the GDA. A preparatory meeting shall be conducted by the Contractor to discuss the AHA contents with all engaged in the activity. The preparatory meeting shall be conducted by the prime Contractor and shall include all subcontractors and Government on-site representatives. The AHA shall be continuously reviewed and revised to address changing site conditions or operations as appropriate.

3. Accident Reporting: All accidents and near misses shall be investigated by the Contractor. All work-related recordable injuries, illnesses and property damage accidents (excluding on-the-road vehicle accidents), in which the property damage exceeds \$5,000.00, shall be verbally reported to the GDA within 24 hours of the incident. Serious accidents as described in EM 385-1-1, Section 01.D.02, shall be immediately reported to the GDA. ENG Form 3394 (available from the Contracting Officer's Representative) shall be completed and submitted to the GDA within five working days of the incident.

The Contractor shall complete the "USACE Contractor Monthly Summary Record of Injuries/Illness and Work Hour Exposure" (for prime and its subcontractors), an EXCEL spreadsheet available from the Contracting Officer's Representative, and forward the completed form to the GDA no later than close of business on the 10th calendar day of the following month. The method of transmission by the prime contractor to the GDA shall be electronically.

4. Site Safety and Health Officer (SSHO): The Contractor shall designate one individual as the SSHO. Documentation of SSHO qualifications shall be submitted for approval prior to initiating work. The SSHO shall have:

- A. A minimum of two years experience in implementing safety and health programs at similar projects;
- B. Documented experience in personal protective equipment;
- C. Working knowledge of construction safety procedures as well as Federal and state occupational safety and health regulations.
- D. SSHO should have a 30-hour OSHA training, or equivalent.

The SSHO may have other duties in addition to site safety and health, ~~but may not be the Contractor's Site Superintendent~~.

5. Equipment: The Contractor shall submit to the Contracting Officer's Representative a current written safety inspection for all heavy equipment proposed for use on this contract. The Contractor, upon award of the contract, will be required to make available for suitability and safety compliance inspection all equipment proposed for use to perform the work of this contract. Equipment shall be made available for inspection by the Government Representative five working days prior to the start of construction. Any additional equipment added during the

prosecution of the work shall also be made available for inspection prior to its use on the project. The Contractor shall keep equipment available for inspection by the Contracting Officer's Representative during the construction process. Equipment not accepted by the Contracting Officer's Representative should be repaired or replaced by the Contractor.

D. General and Administrative Submittals Required

Items for Submission. The Contractor shall submit the items identified below for approval to the Contracting Officer. Government acceptance, as defined in EM 385-1-1, is required for safety related submittals (identified below with an "S" after the submittal name).. The Contractor shall submit an electronic PDF copy and five paper copies of each submittal item. The Contractor will be informed at the Preconstruction Conference to send all submittals to either the project Resident Office or to the project Area Engineer Office, or other office, as applicable

Preconstruction Submittals: The following submittals shall be made by the Contractor and review action completed by the Contracting Officer prior to the commencement of work at the site.

Initial Progress Schedule: In accordance with the contract clauses, the Contractor shall, within five days after receipt of Notice to Proceed (NTP), or as otherwise determined by the Contracting Officer, submit for approval a practicable Initial Project Schedule. When changes are authorized that result in contract time extensions, the Contractor shall submit a revised project schedule for approval by the Contracting Officer..

Accident Protection Plan (S): The Contractor shall prepare an Accident Prevention Plan (APP) specific to the activities being performed. It shall include an Activity Hazard Analysis (AHA) for each major phase of work

SSHO Qualifications (S): Documentation of SSHO qualifications shall be submitted for approval.

Safety Inspection for all Heavy Equipment (S): The Contractor shall submit a current written safety inspection for all heavy equipment proposed for use on this contract

Construction Site Plan. Prior to the start of work, the Contractor shall submit a site plan showing the locations and dimensions of temporary facilities.

Work Plan: The Contractor shall submit a written Work Plan describing the methods and equipment required to accomplish the work and provide the required environmental and worker protection.

Environmental Protection Plan: The Contractor shall submit an Environmental Protection Plan for review and approval by the Contracting Officer

Other Submittals: The following submittals shall be made by the Contractor to allow sufficient time for review action to be taken by the Contracting Officer and to comply with the approved Project Schedule, as appropriate.

Accident Reports (S)

Monthly Summary Record of Injuries/Illness and Work Hour Exposure (S)

Periodic Schedule Updates: An updated schedule showing actual progress shall be

submitted monthly or with each pay request.

Record Drawings: Record drawings showing all deviations which have been made from the contract drawings shall be submitted to the Contracting Officer for approval at the completion of work. See paragraph RECORD DRAWINGS for record keeping and submittal requirements.

Approved Submittals. The Contracting Officer's approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

Disapproved Submittals. The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice shall be given promptly to the Contracting Officer.

E. Technical Submittals Required

Submittals addressing the technical requirements of this project are described in the technical specifications. The Contractor shall follow the procedures outlined in Part D above when making technical submittals.

F. Technical Requirements

All technical requirements for the work of this project are shown on the contract drawings and described in the technical specifications attached to the end of this document.

G. Delivery, Handling and Storage

As appropriate, materials shall be delivered to the project site in the manufacturer's original packaging with the brand and item identification reference clearly marked. Components shall be stored in a dry location that is adequately ventilated, free from dust, water, or other contaminants, and which is easily accessible for inspection and handling.

H. Material Warranties

Manufacturer's standard performance guarantees or warranties that extend beyond a 1-year period shall be provided.

I. Coordination

Liaison with the U.S. Army Corps of Engineers, New England District, by the Contractor shall be maintained for the duration of the project by communication with the Contracting Officer's Representative assigned to this project. All Contractor project related questions, comments, clarifications, etc. shall be directed to the Contracting Officer's Representative for action.

J. References

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 241 (2009) Standard for Safeguarding Construction, Alteration, and Demolition Operations

NFPA 70 (2014; AMD 1 2013; Errata 1 2013; AMD 2 2013; Errata 2 2013; AMD 3 2014; Errata 3 2014) National Electrical Code

U.S. ARMY CORPS OF ENGINEERS

EM-385-1-1 (2014) Safety and Health Requirements Manual, U.S. Army Engineering Manual

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C651 - (2014) Standard for Disinfecting Water Mains

AWWA C800 - (2014) Underground Service Line Valves & Fittings

AWWA C901 – (2008) Polyethylene Pressure Pipe & Tubing, 1/2" -3" For Water Service

TECHNICAL SPECIFICATIONS

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SECTION 01 30 00

TECHNICAL SUBMITTALS

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submittals with an "S" are for inclusion in the Sustainability eNotebook, in conformance with Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES and see additional technical details concerning these submittal items in the attachment titled "THE CONNECTICUT WATER COMPANY SPECIFICATIONS FOR TRENCHING, BACKFILLING AND INSTALLING DUCTILE IRON WATER MAINS AND APPURTENANCES - GENERIC Revised 07/2018:

SD-01 Preconstruction Submittals

Pavement; G, RO

PRV Vault; G, RO

Water Meter; G, RO

Ball Valve; G, RO

Curb Stop; G, RO

Pipe Material; G, RO

Vault Cover; G, RO

Select Gravel; G, RO

CONNDOT Gravel; G, RO

Tack Coat; G, RO

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

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PART 2 PRODUCTS

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SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Submittal Information

The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

Units of weights and measures used on all submittals are to be the same as those used in the contract drawings.

1.1.2 Project Type

The Contractor's Quality Control (CQC) System Manager are to check and approve all items before submittal and stamp, sign, and date indicating action taken. Proposed deviations from the contract requirements are to be clearly identified. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

1.1.3 Submission of Submittals

Schedule and provide submittals requiring Government approval before acquiring the material or equipment covered thereby. Pick up and dispose of samples not incorporated into the work in accordance with manufacturer's Safety Data Sheets (SDS) and in compliance with existing laws and regulations.

1.2 DEFINITIONS

1.2.1 Submittal Descriptions (SD)

Submittals requirements are specified in the technical sections. Submittals are identified by Submittal Description (SD) numbers and titles as follows:

SD-01 Preconstruction Submittals

Submittals that are required prior to or at the start of construction (work) or the next major phase of the construction on a multiphase contract.

Preconstruction Submittals include schedules and a tabular list of locations, features, and other pertinent information regarding products, materials, equipment, or components to be used in the work.

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Certificates Of Insurance

Surety Bonds

List Of Proposed Subcontractors

List Of Proposed Products

Baseline Network Analysis Schedule (NAS)

Submittal Register

Schedule Of Prices Or Earned Value Report

Accident Prevention Plan

Work Plan

Quality Control (QC) plan

Environmental Protection Plan

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work.

Samples of warranty language when the contract requires extended product warranties.

SD-04 Samples

Fabricated or unfabricated physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged.

Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

Field samples and mock-ups constructed on the project site establish standards by which the ensuring work can be judged. Include assemblies or portions of assemblies that are to be incorporated into the project and those that will be removed at conclusion of the work.

1.2.2 Approving Authority

Office or designated person authorized to approve submittal.

1.2.3 Work

As used in this section, on- and off-site construction required by contract documents, including labor necessary to produce submittals, except those SD-01 Pre-Construction Submittals noted above, construction, materials, products, equipment, and systems incorporated or to be incorporated in such

construction.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with this section.

SD-01 Preconstruction Submittals

Submittal Register; G, RO

1.4 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.4.1 Government Approved (G)

Government approval is required for extensions of design, critical materials, variations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Government.

Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, submittals are considered to be "shop drawings."

1.4.1.1 Approval Codes

- a. Construction Division {"AO" (Area Office), "RO" (Resident Office), or "PO" (Project Office) Reviewer}: An "AO", "RO", or "PO" in column "f" indicates that the submittal review action is by New England District Construction Division. Send all such submittals to the project Resident or Area Engineer, as applicable.
- b. Engineering Division {"DO" (District Office) Reviewer}: A "DO" on the attached submittal register, column "f" indicates that the submittal review action is by the New England District, Engineering Division, or other organization in the District Office. Send all such submittals to the project Resident or Area Engineer for distribution to the appropriate approving authority.
- c. Architect-Engineer Firm {"AE" reviewer}: An "AE" on the attached submittal register, column "f" indicates that the submittal review action is by the Architect-Engineer firm associated with the project.

1.4.1.2 Sustainability Reporting Submittals (S)

Submittals for Guiding Principle Validation (GPV) or Third Party Certification (TPC) are indicated with an "S" designation. These submittals are for information only and for use as specified in Section 01 33 29 SUSTAINABILITY REPORTING.

Schedule submittals for these items throughout the course of construction as provided; do not wait until closeout.

1.4.2 For Information Only

Submittals not requiring Government approval will be for information only.

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Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are not considered to be "shop drawings".

1.5 PREPARATION

1.5.1 Transmittal Form

Use the attached sample transmittal form (ENG Form 4025) for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor and are included in the QCS software that the Contractor is required to use for this contract. Properly complete this form by filling out all the heading blank spaces and identifying each item submitted. Exercise special care to ensure proper listing of the specification paragraph and sheet number of the contract drawings pertinent to the data submitted for each item.

1.5.2 Submittal Format

1.5.2.1 Format of SD-01 Preconstruction Submittals

When the submittal includes a document that is to be used in the project, or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

1.5.2.2 Format for SD-02 Shop Drawings

Provide shop drawings not less than 8 1/2 by 11 inches nor more than 30 by 42 inches, except for full-size patterns or templates. Prepare drawings to accurate size, with scale indicated, unless another form is required. Ensure drawings are suitable for reproduction and of a quality to produce clear, distinct lines and letters, with dark lines on a white background.

- a. Include the nameplate data, size, and capacity on drawings. Also include applicable federal, military, industry, and technical society publication references.
- b. Dimension drawings, except diagrams and schematic drawings. Prepare drawings demonstrating interface with other trades to scale. Use the same unit of measure for shop drawings as indicated on the contract drawings. Identify materials and products for work shown.

Submit an electronic copy of drawings in PDF format.

1.5.2.2.1 Drawing Identification

Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph IDENTIFYING SUBMITTALS.

Number drawings in a logical sequence. Each drawing is to bear the number of the submittal in a uniform location next to the title block. Place the Government contract number in the margin, immediately below the title block, for each drawing.

Reserve a blank space on the right-hand side of each sheet for the

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Government disposition stamp.

1.5.2.3 Format of SD-03 Product Data

Present product data submittals for each section. Include a table of contents, listing the page and catalog item numbers for product data.

Indicate, by prominent notation, each product that is being submitted; indicate the specification section number and paragraph number to which it pertains.

1.5.2.3.1 Product Information

Supplement product data with material prepared for the project to satisfy the submittal requirements where product data does not exist. Identify this material as developed specifically for the project, with information and format as required for submission of SD-07 Certificates.

Provide product data in units used in the Contract documents. Where product data are included in preprinted catalogs with another unit, submit the dimensions in contract document units, on a separate sheet.

1.5.2.3.2 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.5.2.3.3 Data Submission

Collect required data submittals for each specific material, product, unit of work, or system into a single submittal that is marked for choices, options, and portions applicable to the submittal. Mark each copy of the product data identically. Partial submittals will be accepted for expedition of the construction effort.

Submit the manufacturer's instructions before installation.

1.5.2.4 Format of SD-04 Samples

1.5.2.4.1 Sample Characteristics

Furnish samples in the following sizes, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately the same size as specified:

- a. Sample of Equipment or Device: Full size.
- b. Sample of Materials Less Than 2 by 3 inches: Built up to 8 1/2 by 11 inches.

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- c. Sample of Materials Exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by 11 inches and adequate to indicate color, texture, and material variations.
- d. Sample of Linear Devices or Materials: 10 inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.
- e. Sample Volume of Nonsolid Materials: Pint. Examples of nonsolid materials are sand and paint.
- f. Color Selection Samples: 2 by 4 inches. Where samples are specified for selection of color, finish, pattern, or texture, submit the full set of available choices for the material or product specified. Sizes and quantities of samples are to represent their respective standard unit.
- g. Sample Panel: 4 by 4 feet.
- h. Sample Installation: 100 square feet.

1.5.2.4.2 Sample Incorporation

Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples are to be in undamaged condition at the time of use.

Recording of Sample Installation: Note and preserve the notation of any area constituting a sample installation, but remove the notation at the final clean-up of the project.

1.5.2.4.3 Comparison Sample

Samples Showing Range of Variation: Where variations in color, finish, pattern, or texture are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of range. Mark each unit to describe its relation to the range of the variation.

When color, texture, or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

1.5.2.5 Format of SD-05 Design Data

Provide design data and certificates on 8 1/2 by 11 inch paper.

1.5.2.6 Format of SD-06 Test Reports

Provide reports on 8 1/2 by 11 inch paper.

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.2.7 Format of SD-07 Certificates

Provide design data and certificates on 8 1/2 by 11 inch paper.

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1.5.2.8 Format of SD-08 Manufacturer's Instructions

Present manufacturer's instructions submittals for each section. Include the manufacturer's name, trade name, place of manufacture, and catalog model or number on product data. Also include applicable federal, military, industry, and technical-society publication references. If supplemental information is needed to clarify the manufacturer's data, submit it as specified for SD-07 Certificates.

Submit the manufacturer's instructions before installation.

1.5.2.8.1 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.5.2.9 Format of SD-09 Manufacturer's Field Reports

Provide reports on 8 1/2 by 11 inch paper.

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.2.10 Format of SD-10 Operation and Maintenance Data (O&M)

Comply with the requirements specified in Section 01 78 23 OPERATION AND MAINTENANCE DATA for O&M Data format.

1.5.2.11 Format of SD-11 Closeout Submittals

When the submittal includes a document that is to be used in the project or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

1.5.3 Source Drawings for Shop Drawings

The entire set of Source Drawing files (DWG) will not be provided to the Contractor. Only those requested by the Contractor to prepare shop drawings may be provided. Request the specific Drawing Number only for the preparation of Shop Drawings. These drawings may only be provided after award.

1.5.3.1 Terms and Conditions

Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction data for the

referenced project. Any other use or reuse shall be at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim and waives to the fullest extent permitted by law, any claim or cause of action of any nature against the Government, its agents or sub consultants that may arise out of or in connection with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and hold the Government harmless against all damages, liabilities or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

These electronic Source Drawing files are not construction documents. Differences may exist between the Source Drawing files and the corresponding construction documents. The Government makes no representation regarding the accuracy or completeness of the electronic Source Drawing files, nor does it make representation to the compatibility of these files with the Contractor hardware or software. In the event that a conflict arises between the signed and sealed construction documents prepared by the Government and the furnished Source Drawing files, the signed and sealed construction documents govern. The Contractor is responsible for determining if any conflict exists. Use of these Source Drawing files does not relieve the Contractor of duty to fully comply with the contract documents, including and without limitation, the need to check, confirm and coordinate the work of all contractors for the project. If the Contractor uses, duplicates or modifies these electronic Source Drawing files for use in producing construction data related to this contract, remove all previous indicia of ownership (seals, logos, signatures, initials and dates).

1.6 QUANTITY OF SUBMITTALS

Provide submittals in electronic format, with the exception of material samples required for SD-04 Samples items. In addition to the electronic submittal, provide seven hard copies of the submittals in the formats indicated above. Compile the submittal file as a single, complete document, to include the Transmittal Form described within. Name the electronic submittal file specifically according to its contents, coordinate the file naming convention with the Contracting Officer. Electronic files must be of sufficient quality that all information is legible. Use PDF as the electronic format, unless otherwise specified or directed by the Contracting Officer. Generate PDF files from original documents with bookmarks so that the text included in the PDF file is both searchable and can be copied. If documents are scanned, Optical Character Resolution (OCR) routines are required. Index and bookmark files exceeding 30 pages to allow efficient navigation of the file. When required, the electronic file must include a valid electronic signature, or scan of a signature.

Email electronic submittal documents fewer than 10MB to an email address as directed by the Contracting Officer. Provide electronic documents over 10MB on an optical disc, or through an electronic file sharing system such as the AMRDEC SAFE Web Application located at the following website: <https://safe.amrdec.army.mil/safe/>.

Up to two additional hard copies of any submittal may be requested at the discretion of the Contracting Officer, at no additional cost to the Government.

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1.6.1 Number of SD-04 Samples

- a. Submit two samples, or two sets of samples showing the range of variation, of each required item. One approved sample or set of samples will be retained by the approving authority and one will be returned to the Contractor.
- b. Submit one sample panel or provide one sample installation where directed. Include components listed in the technical section or as directed.
- c. Submit one sample installation, where directed.
- d. Submit one sample of nonsolid materials.

1.7 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications, will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work, and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

1.8 PROJECT SUBMITTAL REGISTER

A sample Project Submittal Register showing items of equipment and materials for when submittals are required by the specifications is provided as an attachment at the end of this section."

1.8.1 Submittal Management

Prepare and maintain a submittal register, as the work progresses. Do not change data that is output in columns (c), (d), (e), and (f) as delivered by Government; retain data that is output in columns (a), (g), (h), and (i) as approved. As an attachment, provide a submittal register showing items of equipment and materials for which submittals are required by the specifications. This list may not be all-inclusive and additional submittals may be required. Maintain a submittal register for the project in accordance with Section 01 45 01 RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM). The Government will provide the initial submittal register in electronic format with the following fields completed, to the extent that will be required by the Government during subsequent usage.

Column (c): Lists specification section in which submittal is required.

Column (d): Lists each submittal description (SD Number. and type, e.g., SD-02 Shop Drawings) required in each specification section.

Column (e): Lists one principal paragraph in each specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting the project requirements.

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Thereafter, the Contractor is to track all submittals by maintaining a complete list, including completion of all data columns and all dates on which submittals are received by and returned by the Government.

1.8.2 Preconstruction Use of Submittal Register

Submit the submittal register. Include the QC plan and the project schedule. Verify that all submittals required for the project are listed and add missing submittals. Coordinate and complete the following fields on the register database submitted with the QC plan and the project schedule:

Column (a) Activity Number: Activity number from the project schedule.

Column (g) Contractor Submit Date: Scheduled date for the approving authority to receive submittals.

Column (h) Contractor Approval Date: Date that Contractor needs approval of submittal.

Column (i) Contractor Material: Date that Contractor needs material delivered to Contractor control.

1.8.3 Contractor Use of Submittal Register

Update the following fields in the Government-furnished submittal register program or equivalent fields in the program used by the Contractor with each submittal throughout the contract.

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (j) Action Code (k): Date of action used to record Contractor's review when forwarding submittals to QC.

Column (l) Date submittal transmitted.

Column (q) Date approval was received.

1.8.4 Approving Authority Use of Submittal Register

Update the following fields:

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (l) Date submittal was recieved.

Column (m) through (p) Dates of review actions.

Column (q) Date of return to Contractor.

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1.8.5 Action Codes

1.8.5.1 Contractor Action Codes

DESIGN BID BUILD SUBMITTALS			
Submittal Classifications shown in UFGS Sections	Submittal Classification	Corresponding SpecsIntact Submittal Register Code which is populated in the SI Submittal Register. Software Limitations: (The software shows one character delineation in the SpecsIntact Submittal Register)	RMS - The following Submittal Classifications are populated in RMS when the SpecsIntact Submittal Data File is pulled into RMS)
G	Submittal requires Government	G	GA
BLANK	Submittal is For Information Only (FIO)	BLANK	FIO
S	Submittal is for documentation of Sustainable requirements	S	S/FIO

1.8.6 Delivery of Copies

Submit an updated electronic copy of the submittal register to the Contracting Officer with each invoice request. Provide an updated Submittal Register monthly regardless of whether an invoice is submitted.

1.9 VARIATIONS

Variations from contract requirements require Contracting Officer approval pursuant to contract Clause FAR 52.236-21 Specifications and Drawings for Construction, and will be considered where advantageous to the Government.

1.9.1 Considering Variations

Discussion of variations with the Contracting Officer before submission will help ensure that functional and quality requirements are met and minimize rejections and resubmittals. When contemplating a variation that results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).

Specifically point out variations from contract requirements in transmittal letters. Failure to point out variations may cause the Government to require rejection and removal of such work at no additional cost to the Government.

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1.9.2 Proposing Variations

When proposing variation, deliver a written request to the Contracting Officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to Government. Include the DOR's written analysis and approval. If lower cost is a benefit, also include an estimate of the cost savings. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

Check the column "variation" of ENG Form 4025 for submittals that include variations proposed by the Contractor. Set forth in writing the reason for any variations and note such variations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted variations.

1.9.3 Warranting that Variations are Compatible

When delivering a variation for approval, the Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

1.9.4 Review Schedule Extension

In addition to the normal submittal review period, a period of 14 calendar days will be allowed for the Government to consider submittals with variations.

1.10 SCHEDULING

Schedule and submit concurrently product data and shop drawings covering component items forming a system or items that are interrelated. Submit pertinent certifications at the same time. No delay damages or time extensions will be allowed for time lost in late submittals.

- a. Coordinate scheduling, sequencing, preparing, and processing of submittals with performance of work so that work will not be delayed by submittal processing. The Contractor is responsible for additional time required for Government reviews resulting from required resubmittals. The review period for each resubmittal is the same as for the initial submittal.
- b. Submittals required by the contract documents are listed on the submittal register. If a submittal is listed in the submittal register but does not pertain to the contract work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Contracting Officer does not relieve the Contractor of supplying submittals required by the contract documents but that have been omitted from the register or marked "N/A."
- c. Resubmit the submittal register and annotate it monthly with actual submission and approval dates. When all items on the register have been fully approved, no further resubmittal is required.

Contracting Officer review will be completed within 21 calendar days after the date of submission.

Northfield Dam Lake Public Water Line Extension

1.11 GOVERNMENT APPROVING AUTHORITY

When approving authority is Contracting Officer, the Government will:

- a. Note date on which submittal was received.
- b. Review submittals for approval within scheduling period specified and only for conformance with project design concepts and compliance with contract documents.
- c. Identify returned submittals with one of the actions defined in paragraph entitled, "Review Notations," of this section and with markings appropriate for action indicated.

Upon completion of review of submittals requiring Government approval, stamp and date approved submittals. Two copies of the approved submittal will be retained by the Contracting Officer and the remaining copies of the submittal will be returned to the Contractor.

1.11.1 Review Notations

Submittals will be returned to the Contractor with the following notations:

- a. Submittals marked "approved" or "accepted" authorize proceeding with the work covered.
- b. Submittals marked "approved as noted" or "approved, except as noted, resubmittal not required," authorize proceeding with the work covered provided that the Contractor takes no exception to the corrections.
- c. Submittals marked "not approved," "disapproved," or "revise and resubmit" indicate incomplete submittal or noncompliance with the contract requirements or design concept. Resubmit with appropriate changes. Do not proceed with work for this item until the resubmittal is approved.
- d. Submittals marked "not reviewed" indicate that the submittal has been previously reviewed and approved, is not required, does not have evidence of being reviewed and approved by Contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by Contractor or for being incomplete, with appropriate action, coordination, or change.
- e. Submittals marked "receipt acknowledged" indicate that submittals have been received by the Government. This applies only to "information-only submittals" as previously defined.

1.12 DISAPPROVED SUBMITTALS

The Contractor shall make corrections required by the Contracting Officer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications, give notice to the Contracting Officer as required under the FAR clause titled CHANGES. The Contractor is responsible for the dimensions and design of connection details and the construction of work. Failure to point out variations may cause the Government to require rejection and removal of such work at the Contractor's expense.

If changes are necessary to submittals, the Contractor shall make such revisions and submission of the submittals in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved. Submittals requiring resubmittal shall be resubmitted within 14 calendar days unless additional time is granted by the Government.

1.13 APPROVED SUBMITTALS

The Contracting Officer's approval or acceptance of submittals is not to be construed as a complete check, and indicates only that the general method of construction, materials, detailing and other information are satisfactory.

Approval or acceptance will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contractor Quality Control (CQC) requirements of this contract is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work.

After submittals have been approved or accepted by the Contracting Officer, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.14 APPROVED SAMPLES

Approval of a sample is only for the characteristics or use named in such approval and is not be construed to change or modify any contract requirements. Before submitting samples, provide assurance that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved.

Match the approved samples for materials and equipment incorporated in the work. If requested, approved samples, including those that may be damaged in testing, will be returned to the Contractor, at its expense, upon completion of the contract. Unapproved samples will also be returned to the Contractor at its expense, if so requested.

Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make as that material. The Government reserves the right to disapprove any material or equipment that has previously proved unsatisfactory in service.

Samples of various materials or equipment delivered on the site or in place may be taken by the Contracting Officer for testing. Samples failing to meet contract requirements will automatically void previous approvals. Replace such materials or equipment to meet contract requirements.

1.15 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

Northfield Dam Lake Public Water Line Extension

1.16 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements is to be similar to the following:

CONTRACTOR	
(Firm Name)	
_____ Approved	
_____ Approved with corrections as noted on submittal data and/or attached sheets(s)	
SIGNATURE: _____	
TITLE: _____	
DATE: _____	

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

CONTRACT NO.

Northfield Dam Lake Public Water Line Extension

CONTRACTOR: SCHEDULE DATES	CONTRACTOR ACTION		APPROVING AUTHORITY		
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[illegible]

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each Transmittal shall be numbered consecutively. The Transmittal Number typically includes two parts separated by a dash (-). The first part is the specification section number. The second part is a sequential number for the submittals under that spec section. If the Transmittal is a resubmittal, then add a decimal point to the end of the original Transmittal Number and begin numbering the resubmittal packages sequentially after the decimal.
3. The "Item No." for each entry on this form will be the same "Item No." as indicated on ENG FORM 4288-R.
4. Submittals requiring expeditious handling will be submitted on a separate ENG Form 4025-R.
5. Items transmitted on each transmittal form will be from the same specification section. Do not combine submittal information from different specification sections in a single transmittal.
6. If the data submitted are intentionally in variance with the contract requirements, indicate a variation in column h, and enter a statement in the Remarks block describing the detailed reason for the variation.
7. ENG Form 4025-R is self-transmitting - a letter of transmittal is not required.
8. When submittal items are transmitted, indicate the "Submittal Type" (*SD-01 through SD-11*) in column c of Section I.
 Submittal types are the following:

SD-01 - Preconstruction	SD-02 - Shop Drawings	SD-03 - Product Data	SD-04 - Samples	SD-05 - Design Data	SD-06 - Test Reports
SD-07 - Certificates	SD-08 - Manufacturer's Instructions	SD-09 - Manufacturer's Field Reports	SD-10 - O&M Data	SD-11 - Closeout	
9. For each submittal item, the Contractor will assign Submittal Action Codes in column g of Section I. The U.S. Army Corps of Engineers approving authority will assign Submittal Action Codes in column i of Section I. The Submittal Action Codes are:

A -- Approved as submitted. B -- Approved, except as noted on drawings. Resubmission not required. C -- Approved, except as noted on drawings. Refer to attached comments. Resubmission required. D -- Will be returned by separate correspondence. E -- Disapproved. Refer to attached comments.	F -- Receipt acknowledged. X -- Receipt acknowledged, does not comply with contract requirements, as noted. G -- Other action required (<i>Specify</i>) K -- Government concurs with intermediate design. (<i>For D-B contracts</i>) R -- Design submittal is acceptable for release for construction. (<i>For D-B contracts</i>)
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10. Approval of items does not relieve the contractor from complying with all the requirements of the contract.

Northfield Dam Lake Public Water Line Extension

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SOURCES FOR REFERENCE PUBLICATIONS

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1.2	ORDERING INFORMATION
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PART 3	EXECUTION

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SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization (e.g. ASTM B564 Standard Specification for Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

-- End of Section --

Northfield Dam Lake Public Water Line Extension

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SECTION 31 11 00

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3.2.3 Grubbing

3.3 DISPOSAL OF MATERIALS

3.3.1 Saleable Timber

-- End of Section Table of Contents --

SECTION 31 11 00

CLEARING AND GRUBBING

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. Submittals with an "S" are for inclusion in the Sustainability eNotebook, in conformance to Section 01 33 29 SUSTAINABILITY REPORTING. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Nonsaleable Materials; G, RO

SD-04 Samples

Tree Wound Paint

1.2 DELIVERY, STORAGE, AND HANDLING

Deliver materials to the site, and handle in a manner which will maintain the materials in their original manufactured or fabricated condition until ready for use.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Tree Wound Paint

Use bituminous based paint from standard manufacture specially formulated for tree wounds.

PART 3 EXECUTION

3.1 PREPARATION

3.1.1 Protection

3.1.1.1 Roads and Walks

Keep roads and walks free of dirt and debris at all times.

3.1.1.2 Trees, Shrubs, and Existing Facilities

Protect trees and vegetation to be left standing from damage incident to clearing, grubbing, and construction operations by the erection of barriers or by such other means as the circumstances require.

3.1.1.3 Utility Lines

Protect existing utility lines that are indicated to remain from damage. Notify the Contracting Officer immediately of damage to or an encounter with an unknown existing utility line. The Contractor is responsible for the repair of damage to existing utility lines that are indicated or made known to the Contractor prior to start of clearing and grubbing operations. When utility lines which are to be removed are encountered within the area of operations, notify the Contracting Officer in ample time to minimize interruption of the service.

3.2 CLEARING

Clearing shall consist of the felling, trimming, and cutting of trees into sections and the satisfactory disposal of the trees and other vegetation designated for removal, including downed timber, snags, brush, and rubbish occurring within the areas to be cleared. Trees, stumps, roots, brush, and other vegetation in areas to be cleared shall be cut off flush with or below the original ground surface, except such trees and vegetation as may be indicated or directed to be left standing. Trees designated to be left standing within the cleared areas shall be trimmed of dead branches 1-1/2 inches or more in diameter and shall be trimmed of all branches to the heights indicated or directed. Limbs and branches to be trimmed shall be neatly cut close to the bole of the tree or main branches. Cuts more than 1-1/2 inches in diameter shall be painted with an approved tree-wound paint.

3.2.1 Tree Removal

Where indicated or directed, trees and stumps that are designated as trees shall be removed from areas outside those areas designated for clearing and grubbing. This work shall include the felling of such trees and the removal of their stumps and roots as specified in paragraph GRUBBING. Trees shall be disposed of as specified in paragraph DISPOSAL OF MATERIALS.

3.2.2 Pruning

Trim trees designated to be left standing within the cleared areas of dead branches 1-1/2 inches or more in diameter; and trim branches to heights and in a manner as indicated. Neatly cut limbs and branches to be trimmed close to the bole of the tree or main branches. Paint cuts more than 1-1/4 inches in diameter with an approved tree wound paint.

3.2.3 Grubbing

Grubbing consists of the removal and disposal of stumps, roots larger than 3 inches in diameter, and matted roots from the designated grubbing areas. Remove material to be grubbed, together with logs and other organic or metallic debris not suitable for foundation purposes, to a depth of not less than 18 inches below the original surface level of the ground in areas indicated to be grubbed and in areas indicated as construction areas under this contract, such as areas for waterline installation, and areas to be paved. Fill depressions made by grubbing with suitable material and compact to make the surface conform with the original adjacent surface of the ground.

3.3 DISPOSAL OF MATERIALS

All wood or wood like materials, except for saleable timber, remaining from

clearing, pruning or grubbing such as limbs, tree tops, roots, stumps, logs, rotten wood, and other similiar materials shall become the property of the Contractor and disposed of as specified. All non-saleable timber and wood or wood like materials remaining from timber harvesting such as limbs, tree tops, roots, stumps, logs, rotten wood, and other similiar materials shall become the property of the Contractor and disposed as specified.

3.3.1 Saleable Timber

1. All timber on the project site noted for clearing and grubbing shall become the property of the Contractor, and shall be removed from the project site and disposed of as specified or directed.

-- End of Section --



**THE CONNECTICUT WATER
COMPANY SPECIFICATIONS FOR**

**~~IRON~~ TRENCHING, BACKFILLING AND INSTALLING ~~DUCTILE~~
WATER MAINS AND APPURTENANCES – GENERIC**

Revised 07/2018

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SECTION I.

GENERAL CONDITIONS

DEFINITION OF TERMS

The word "CWS" or "COMPANY" is used to designate Connecticut Water Services, whose principal place of business is at Clinton, Connecticut, or its duly authorized representatives for whom the work is to be performed. The word "Contractor" is used to designate the party or parties contracting or agreeing to perform the work or his or their heirs, executors, administrators, successors or assigns.

The word "Inspector" or "Engineer" refers to the person appointed by CWS to inspect the work and shall extend to and include any assistant whom he may designate.

The word "Work" is used to designate the work, materials and things required to be done, furnished or performed by the Contractor under the specifications.

Wherever the words "directed", "required", "performed", or words of like import are used, it shall be understood that the direction, requirement or permission of CWS is intended, and similarly the words "approved", "acceptable", "satisfactory" or words of like import shall mean approved by or acceptable or satisfactory to CWS.

WORK TO BE DONE

The work to be done includes (except as here-in-after otherwise specified) furnishing all materials, labor, tools, plant and equipment required for receiving, inspecting, hauling, distributing, installing, testing and disinfecting the water pipes and appurtenances including valves, fittings, hydrants, excavation and backfill; removing and replacing pavements, proper retirement/abandonment-in-place of existing mains, all as shown on the drawings, mentioned in the specifications or ordered by CWS, complete in every detail, ready for operation.

MATERIALS MANAGEMENT

The Contractor will order, schedule delivery, receive, unload and store all water pipe, fittings, valves, valve boxes, tapping sleeves, joint restraints, fire hydrants, chlorine tablets, polyethylene wrap, service line copper and brass, curb boxes, marking tape, etc., and all other materials required for completion of the project. The Contractor shall procure all materials necessary for completion of the project (in accordance with CWS Purchasing Standards), schedule delivery, unload and store the materials until needed for the project. Certain items may be procured directly by CWS from designated suppliers with the contractor handling those items as indicated above. Upon delivery to the project or storage site the Contractor is responsible for the safe keeping of all delivered materials.

INSPECTION DURING CONSTRUCTION

CWS will appoint an Inspector to: inspect all materials and workmanship; document project safety compliance; and see that the work conforms to the specifications and drawings.

The failure of the Inspector to reject or condemn improper materials and workmanship shall not prevent CWS from rejecting materials and workmanship found defective at any time prior to the final acceptance of the completed work, nor shall it be considered as a waiver of any defects which may be discovered later, or as preventing CWS at any time subsequently from recovering damages for work actually defective.

The Contractor shall provide sufficient, safe and proper facilities at all times for inspection.

The Inspector shall be furnished by the Contractor with every reasonable facility for examining and inspecting the work and for ascertaining that the Work is being performed in accordance with the requirements and intent of the Contract, even to the extent of requiring the uncovering of portions of finished work by the Contractor.

Should the work thus uncovered prove satisfactory, the cost of uncovering and the replacement thereof shall be considered as extra work unless the original work was done in violation of the Contract or in the absence of the Inspector and without his written authorization, in which case said cost shall be borne by the Contractor. Should the work uncovered prove unsatisfactory, said cost shall be borne by the Contractor.

WAIVER OF SUBROGATION

Contractor waives all rights against CWS and their agents, officers, directors and employees for recovery of damages to the extent these damages are covered by commercial general liability, commercial umbrella liability, business auto liability or workers compensation and employers liability insurance maintained by the requirements stated or referred to in the insurance section above.

SECTION II

TRENCHING, BACKFILLING AND INSTALLING WATER MAINS AND APPURTENANCES

WORK TO BE DONE

The work to be done includes furnishing all materials, labor, tools, plant and equipment required for receiving, inspecting, hauling and distributing materials, removing pavement; excavation and backfill; and installing, disinfecting and testing the water piping and appurtenances including valves and fittings; proper retirement/abandonment-in-place of existing mains; providing As Built installation sketches; all as shown on the drawings, (when available) specified herein or ordered by CWS; complete in every detail, ready for operation.

REMOVING PAVEMENTS

Where existing streets, road or highways are paved within the limits of the trench, such pavement or surfacing shall be removed to the extent necessary for the work.

Prior to pavement removal, the pavement shall be cut by jackhammer, wheel, trench milling or saw cut. Saw cutting of pavement where required prior to permanent pavement placement.

DIMENSIONS

The width of trenches shall be sufficient to permit proper alignment of the pipes and thorough tamping of the backfill around and under the pipes in their final location. There shall be at least twelve (12) inches clear opening at all points between the outside of the pipe and the sides of the trench. Where trenches are sheeted, the specified clear opening shall be provided between the inside face of the sheeting and the outside of the pipe.

All water mains shall be installed as shown on the plans and to the line and grades as shown on the profiles, if provided. The minimum depth of cover shall be 4 feet unless otherwise noted. For the crossing of sewers, storm drainage or other utilities the water main shall be laid to the elevations as shown on the plans, or as directed by the Inspector but in no case shall the separation between the two be less than 18" vertical unless specifically approved by the Inspector.

Where necessary to avoid existing structures, to secure suitable foundations or to conform to future grading of streets or side-walks, a greater or lesser depth may be authorized by CWS. If the trench is excavated to a depth greater than specified or authorized, the Contractor shall refill the trench to the required depth with suitable material thoroughly tamped.

TRENCHING

In excavating trenches, the Contractor may use such methods as CWS will approve. Where the use of trenching machines is permitted, he shall before starting work, obtain all available information as to the location of existing underground structures, and shall plainly mark their location in advance of the excavation. The length of trench excavated ahead of the pipe laying, and the length of trench which may remain open at one time shall at all times be subject to the approval of CWS. It shall at no time be greater than can properly be protected from caving.

TUNNELING

Excavation shall be made in open cut. No tunneling will be permitted unless under written authorization of CWS.

EXCAVATION AND BACKFILLING

The Contractor shall perform all necessary excavation and backfilling called for in these specifications or as required by CWS, including the necessary sheeting, shoring, pumping, bailing, supporting and protecting existing structures and repairing them when damaged, and removing or altering existing underground obstructions which are owned by private parties.

ROCK EXCAVATION

~~Rock excavation and replacement backfill shall include the cost of excavating, hauling and disposing of material classified as rock, the dressing of surface to receive structures, refilling trenches under pipelines, the exclusion and removal of water from the site of the work, and the furnishing of all materials and labor, tools, plant and equipment necessary to the performance of the work herein specified, permits for rock excavation will be pass through costs with no markup.~~

~~If material suitable for backfilling is not available in sufficient quantity from other excavations, the Contractor shall, at his own expense, furnish suitable material from outside sources.~~

~~Rock excavation shall include solid rock in place, detached rocks, sound masonry and concrete, measuring more than one (1.0) cubic yard, but shall not include pavements or sidewalks.~~

~~The Contractor shall obtain all permits and observe all rules and regulations of authorities having jurisdiction relative to the handling, storing and use of explosives, and shall exercise every care in blasting operation to protect life and property.~~

~~No charge shall be used which is larger than necessary to split the rock.~~

~~When, in the opinion of CWS, it is desirable to do so, CWS may prohibit blasting and order rock to be removed by mechanical means. Mechanical means shall be classified as rock removed by jackhammer or hoe ram. Rock removed by pounding or scraping with an excavator bucket and rock teeth shall not be classified as removal by mechanical means.~~

~~Excavation in rock trench for pipelines shall provide at least twelve (12) inches clearance below the outside bottom of the pipe and around the pipe with the space refilled with acceptable well-compacted sand.~~

ADDITIONAL EXCAVATION

If, in the opinion of the Engineer, the material below normal grade of the excavation is unsuitable for foundation, it shall be removed and disposed of to such limits as the Engineer may direct.

BACKFILL

Backfilling material for at least one (1) foot above the top of the pipe shall consist of selected fine material containing no stones larger than one-half inch in size. Backfill of the fine selected material shall be carefully and thoroughly tamped with approved tools in such a manner as to prevent settlement. Special care shall be taken to place the best sandy or gravelly material under the pipe on the quarters and to bring it up solidly so as to furnish a hard bed for the whole of the lower part of the pipe.

The required backfill above the one-foot layer of fine selected material may be placed in one layer provided it is compacted by means of a hoe-pack to achieve a 95% modified proctor density. If a hoe-pack is not used, the backfill shall be spread in layers not exceeding twelve (12) inches in depth prior to compaction. Each layer shall be carefully and thoroughly tamped with approved tools in such a manner as to prevent settlement after the backfill has been completed and to achieve a 95% modified proctor density. If in the opinion of the "Engineer or Inspector" the compaction of the backfilled trench is not suitable, compaction tests will be required to verify that proper compaction was achieved. All costs for compaction tests will be borne by the Contractor.

Blue marking tape reading "Caution - Water Line Below" shall be placed a minimum of 24" above the top of the water main.

The use of frozen material will not be permitted. The excavated paving, either bituminous or other, shall not be placed in the trench as backfill.

All settlement in backfill shall be repaired by the Contractor at his expense.

Prior to placement of permanent pavement all trenches shall have sufficient compaction to achieve a 95% modified proctor density.

BANK RUN GRAVEL

All excavation shall be classed as earth excavation or rock excavation.

Earth excavation shall include sand, gravel, ashes, loam, clay, swamp muck, soft or disintegrated rock or hardpan which can be removed with a pick, or a combination of such materials, and

boulders measuring less than one (1.0) cubic yard whether the boulders are blasted or removed intact.

At the option of the inspector, replacement gravel shall be either bank run gravel or select gravel which meet the following gradations.

A.Bank Run Gravel

Bank run gravel shall have a gradation within the limits given below. It shall be obtained from approved natural deposits and unprocessed except for the removal of unacceptable material and stones larger than the maximum size permitted. It shall not contain vegetation, masses of roots, or individual roots more than 18 inches long or more than 1/2 inch in diameter. It shall be substantially free from loam and other organic matter, clay, and other fine or harmful substances.

<u>Sieve Size</u>	<u>Percentage by Weight Passing</u>
6 in.	100
3-1/2 in.	90-100
1-1/2 in.	55-95
1/4 in.	25-60
No. 10	15-45
No. 40	5-25
No. 100	0-10
No. 200	0-5

B.Select Gravel

Select gravel shall have a gradation within the limits given below. It shall be obtained from approved natural deposits and unprocessed except for the removal of unacceptable material and stones larger than the maximum size permitted. It shall not contain vegetation. It shall be free from loam and other organic matter, clay, and other fine or harmful substances.

<u>Sieve Size</u>	<u>Percentage by Weight Passing</u>
3 in.	100
1/2 in.	80-100
No. 4	60-80
No. 40	10-30
No. 200	0-10

CUTTING PIPE

Pipe shall be cut by means of a pipe saw or other approved method in accordance with the manufacturer's operating instructions for the equipment to produce a clean true cut, free from

irregularities and leave a smooth end at right angles to the axis of the pipe. All bevels shall be made with appropriate grinding equipment

INSTALLING PIPE

All pipes shall be carefully examined for defects and no piece shall be installed which is known to be defective. If any defective piece is discovered after having been installed, it shall be removed and replaced with a sound one at the expense of the Contractor. All pipes and fittings shall be thoroughly cleaned before they are installed and shall be kept clean until they have been accepted in the completed work.

Where directed by CWS, each piece of pipe and each fitting shall be installed upon blocking set at no less than two (2) different points along its length. The blocking shall be sound timber two (2) inches thick, twelve (12) inches wide and of a length equal to the diameter of the pipe. Wedges twelve (12) inches long, of four (4) inch by four (4) inch sound timber, shall be placed on the blocking to hold the pipes and special castings in position.

Blocks shall be firmly bedded on the trench bottom slightly below the grade of the finished pipe before the pipes are placed. After the pipes have been lowered into the trench, the wedges shall be placed and adjusted so as to bring the pipe to proper alignment and grade.

OBSTRUCTIONS

The Contractor shall lay the pipes or pipe lines through or around all permanent obstructions which may be encountered on or below the surface, and make all necessary removals or alterations of existing underground structures which are owned by private parties.

The attention of the Contractor is directed to the fact that there may be existing sanitary sewers and laterals, gas and water mains with services in all streets along with telephone, electric, cable TV or other underground utilities. CWS will furnish assistance to the Contractor in establishing the location of these systems on the site. If the Contractor should damage or break any of the above items, he shall repair the damaged service at his own cost.

JOINTS

All pipe joints will be push-on type rubber gasketed unless otherwise specified. ~~All fittings and valves will be of the mechanical joint type with Mega-Lug retainers unless otherwise specified. Locking gaskets shall be placed a minimum 3 full pipe lengths from the end of all dead end lines and blow offs. At all change of direction, locking gaskets shall be installed a minimum of 2 full pipe lengths from the fitting.~~

RUBBER GASKET JOINT

Rubber gasket joints will be of the compressed rubber ring gasket type. The joints shall be thoroughly cleaned, prepared and installed in strict accordance with the requirements, instructions and recommendations of the joint manufacturer and of CWS.

Only rubber gaskets furnished by the manufacturer of the pipe shall be used. Gaskets which have become damaged or which are defective in any way shall not be used in the work. Gaskets shall be stored in a cool, dark and dry place and shall be kept warm prior to their use in cold weather. Jointing materials in addition to the gaskets, if required by the type of joint furnished, shall fully comply with and be installed in accordance with the requirements of the manufacturer of the joint.

POLYETHYLENE ENCASEMENT

Polyethylene encasement shall be installed around water main ductile iron pipe and appurtenance installations including hydrant laterals and barrel to ground level and all associated service lines, three (3) feet from the main connection, and also shall be installed as directed by CWS Project Personnel and as directed by the Inspector.

Polyethylene encasement shall be installed in accordance with AWWA standard C105-99 method "A", or latest revision thereof, at locations as directed. The polyethylene tube shall be cut to a length approximately 2 feet longer than that of the pipe section. Slip the tube around the pipe, providing a 1-foot overlap at each end. Lower the pipe into the trench and make up the pipe joint, overlapping the wrap at the joint. Take up the slack width to make a snug, but not tight, fit along the barrel of the pipe. Repair any rips, punctures, or other damage with adhesive tape or with a short length of polyethylene tube cut open then wrapped around the pipe and secured in place.

TESTS AFTER INSTALLATION

After the pipe has been installed and backfilled, all newly installed pipe shall be subjected to a pressure and leakage test conducted in accordance with AWWA Standard C600-99, Section 5 and as follows.

A)Pressure Test:

All newly installed pipe shall be subjected to a hydrostatic pressure of 1.5 times the working (system) pressure at the point of testing, but in no case less than 1.25 times the working pressure at the highest point along the test section. The test pressure shall not exceed pipe or thrust restraint design limits, twice the rated pressure of closed valves or hydrants located within the test area, or the rated pressure of closed resilient-seated gate or butterfly valves. The test shall be maintained for a minimum of two hours with no more than a 5 psi variation during the test period. **Pressure at Michelle Lane is 90 psi.**

B)Leakage Test:

The leakage test will be conducted at the same time as the pressure test. Leakage is the quantity of water required to maintain the pressure within 5 psi of the specified test pressure, it is not the measured drop in pressure. Leakage shall not exceed the number of

gallons per hour as determined by the inspector, and is indicated in Table 6 of the above specified AWWA Section.

C)General.

Before applying the specified test pressure, all air shall be expelled from the pipe. If hydrants or blow offs are not available at high places, the Company shall make the necessary taps at points of highest elevation before the test is made and insert the plugs, if desired, after the test has been completed. The section to be tested shall be closed by valves, temporary flanges, plugs or bulkheads as required.

Each valved section of pipe shall be slowly filled with water and the specified test pressure shall be applied by means of a pump connected to the pipe in a manner satisfactory to the inspector. The pipe connection and all necessary apparatus including pump shall be furnished by the Contractor. The Contractor shall furnish all necessary labor and materials for conducting the tests.

If leakage is either visible or indicated by the above test procedure, the Contractor shall do whatever is necessary to locate and repair said leak at his own expense. Upon completion of the repair the pipeline shall be retested.

DISINFECTION

Before any section of pipeline is put into service, it shall be thoroughly disinfected in accordance with AWWA Standard C651-99, Section 4.4.2.

Chlorine tablets (5 G calcium hypochlorite) shall be supplied and placed by the Contractor on the inside top of each length of main as it is laid using Dow Corning 732 adhesive or an approved NSF-61 equal. The number of tablets used per length of pipe shall be as is indicated in Table 2 of the above specified AWWA Section (one for 6", two for 8", four for 12", etc.).

The completed line shall be slowly filled with water and allowed to stand under pressure for at least 24 hours before being thoroughly flushed. A sample of water from the section shall be collected for analysis in a sterilized bottle by CWS.

No section of main shall be put into service without the approval of CWS, and should the analysis be unsatisfactory, the section shall again be disinfected and retested until an analysis satisfactory to CWS is obtained. All costs for a second disinfection and retesting shall be borne by the Contractor.

APPURTENANCES

The Contractor shall exercise care in planning the work to arrange for the proper setting of all fittings, valves and other appurtenances required in the completed pipe lines. Fittings shall be properly supported with additional blocking if required to maintain the pipe lines in alignment. All bends and tees shall be securely anchored by poured concrete blocking or dry wedged

blocking. As needed, all friction clamps, thrust rods and miscellaneous exposed metal threads are to be coated with asphaltum.

Special attention shall be given to the accurate placing of valves so that they will not be subject to undue strains, and where required by CWS, they shall be supported on sound timber blocking. Valves shall be set with their stems truly vertical. Valve boxes shall be carefully placed to insure the free and proper operation of the valves.

PROTECTION OF THE PUBLIC

Improved streets, roads, driveways and sidewalks shall be kept open over all trenches and excavations and the use thereof rendered safe by the construction of substantial timber bridges with proper handrails where required.

MATERIAL HANDLING

The Contractor will order, schedule delivery, receive, unload, and store until required for installation all materials necessary to complete the project complete and ready for use in accordance with the project plans

TRAFFIC CONTROL

Traffic control will be the responsibility of the Contractor. Traffic control is to be provided to the satisfaction of CWS and the governing authority.

BARRICADES, FLASHERS AND SIGNING

Any construction equipment plant, materials or obstruction placed on streets, roads or walks, and all open excavations shall be carefully marked and protected by barricades with flashers and construction safety fence.

The Contractor shall supply, place, and maintain traffic signs and cones to the extent necessary to provide the signing pattern(s) required by the state, local, or governing agency or as requested by the Company.

ROADWAYS TO BE KEPT CLEAR

The Contractor shall dispose of his plant, construction and excavated materials so as not to obstruct streets, roads, highways or private rights of way. He shall not obstruct the gutter of any street, road or highway, but shall take such measures as will insure the free passage of surface and storm waters along the gutters. All excavated materials shall be placed in a neat manner on one side of the trenches and shall be kept trimmed up so as to inconvenience the traveling public and adjacent property owners as little as possible. The utmost care shall be used to avoid interference with the ordinary use of the existing streets, roads or highways.

No portion of any street shall be closed to traffic unless written permission of the proper Civil Authorities has first been obtained.

DUST CONTROL

The Contractor shall keep on the job sufficient supplies of calcium chloride to be applied at locations and at such times and in amounts as directed for the purpose of allaying dust conditions. Roadway sweeping shall be performed at the end of each workday to remove all debris from the roadway surface. The cost of such work shall be included in prices submitted for excavation, backfilling and laying of ~~ductile-iron~~ water main.

SHEETING, BRACING AND COFFERDAMS

To prevent injury to the work or delay in construction, all excavations shall be maintained in good order and all necessary precautions taken to prevent movement of the sides.

HANDLING OF WATER

The Contractor shall at all times take such precautions as are necessary to keep the work free from ground or surface water. He shall provide pumps of adequate capacity to remove from the excavations the water which may enter and in such a manner that it will not interfere with the progress of the work or the proper placing of the pipe.

HANDLING MATERIALS

Proper and suitable tools for safe and convenient handling and installation of pipes, fittings and valves shall be used. Great care shall be taken to prevent damage to the protective coating. Minor damage to exterior coating may be patched with asphaltum. Excessively damaged material shall be removed.

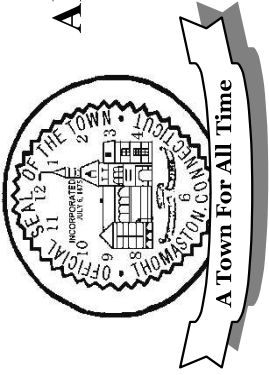
LOAMING AND SEEDING

Shall include all labor, material, including top soil, and equipment required to loam and seed areas as directed. A limit of ten (10) feet wide shall be utilized unless otherwise indicated or field conditions require additional loaming and seeding.

Areas to be seeded shall be carefully graded, raked, fertilized and seeded with first quality grass seed, applied in accordance with the directions of the supplier. The Contractor shall place approved loam or topsoil on those surfaces and at the locations directed by CWS. All topsoil shall be screened containing stones no larger than ½ in diameter. It shall be placed accurately to a thickness of not less than two (2) inches and to the lines and grades directed by CWS. It shall be rolled with a light roller. After placing loam or topsoil, the surface shall be fertilized and seeded with suitable materials as approved by CWS. Seeding shall be done immediately after preparation of the top surface for which it is ordered. Seeded areas are to be covered with shredded straw. Hydro seeding of topsoil is the approved alternative to traditional seeding with straw cover.

If there is delay for which the Contractor is responsible and weeds grow on such surfaces, they shall be removed by the Contractor and the area resurfaced. After reseeding, the surfaces shall be hand raked and rolled with a light roller.

Care shall be taken to have the surfaces conform to the proper lines and grades and any sliding or settlement which may occur shall be repaired by the Contractor at his own expense. All seeded or re-sodded areas shall be thoroughly watered when required by CWS. They shall be maintained by the Contractor until permanently established and shall be subject to the one (1) year guarantee of his work.



APPLICATION FOR ROAD EXCAVATION PERMIT

Permit No. _____

Fee Paid: \$125.00 _____

Application is to be filled out completely and return with sketch to:

Building and Land Use Office

158 Main Street

Thomaston CT 06787

Location of work: _____

Road Excavation \$5,000.00

An acceptable form of a bond is cash, a bank check or a money order. Bonds will be released upon final inspections.

Bond Company: _____

Application is hereby made for a permit to excavate in town road/right-of-way in accordance with the construction specifications of the Town of Thomaston, Connecticut.

CONTRACTOR: _____

ADDRESS: _____

LICENSE NUMBER: _____

TELEPHONE: _____

CELL PHONE: _____ FAX: _____

PROPOSED START DATE: _____

PROPOSED BACKFILL DATE: _____

PERMIT ISSUED TO: _____

AREA OF EXCAVATION IN SQUARE YARDS: _____

A sketch is required to be submitted with the application

I agree to reimburse the Town of Thomaston for any expenses caused by the execution of the work, and to perform the work in accordance with the plan as submitted.

Signed: _____ Date: _____ Phone: _____

Witness: _____ Date: _____

Please give Call Before You Dig Permit number: _____
Give accurately and include the above information, which depicts the proposed work, and drawings with measurements on the back of this application. If another sheet is necessary please attach to this sheet.

FOR OFFICE USE ONLY

Approved By: _____

Date: _____

Inspected By: _____

Date: _____

Bond Released By: _____

Date: _____

Chapter 315

ROAD EXCAVATION PERMIT REGULATIONS

§ 315-1. Purpose; compliance required; title.	§ 315-7. Bonding.
§ 315-2. Authority; utilities; other regulations.	§ 315-8. Insurance.
§ 315-3. Definitions.	§ 315-9. Warranty of work.
§ 315-4. Permit requirements and obligations.	§ 315-10. Emergencies.
§ 315-5. Winter moratorium.	§ 315-11. Exemptions.
§ 315-6. New surface moratorium.	§ 315-12. Backfill requirements.
	§ 315-13. Curb cut.
	§ 315-14. Additional specifications.
	§ 315-15. Revocation of permit.

[HISTORY: Adopted by the Town of Thomaston effective 2-9-2006. Amendments noted where applicable.]

§ 315-1. Purpose; compliance required; title.

- A. The purpose of these regulations is to maintain the quality of community life by establishing a fair and reasonable method to protect the roadway infrastructure of the Town of Thomaston. It is the intent of these regulations to allow qualified contractors to work in the streets of the Town without compromising the aesthetics, safety, integrity or longevity of the Town's ways.
- B. Compliance with these regulations is mandatory for all excavation within the Town of Thomaston rights-of-way. Requests for waivers from any part of these regulations shall be made in writing to the Superintendent of Highways or Facility Superintendent WPCA. Waivers will be considered on a per-job basis only. A waiver may be granted if the contractor demonstrates to the Superintendent(s) that the issuance of a waiver will not deviate from the intent of these regulations.
- C. Material and construction methods shall conform, insofar as applicable, to the requirements of the State of Connecticut Department of Transportation, Standard Specifications for Roads and Bridges.
- D. From this point on these specifications will be referred to as "Form 814A."

§ 315-2. Authority; utilities; other regulations.

- A. These regulations have been adopted pursuant to the Town of Thomaston ordinances adopted December 3, 1969, and amended October 27, 1992,¹ as authorized by Connecticut General Statutes, § 7-148(c)(6)(B) and (C).

1. Editor's Note: See Ch. 240, Streets and Sidewalks, Art. I, Excavations.

- B. In developing these regulations, the Town of Thomaston recognizes that utilities regulated by Chapter 293 of the Connecticut General Statutes are not subject to inspection and maintenance fees. The Town directs these utilities to the provisions for remedy under this and other chapters and hereby serves notice that the Town will exercise all rights and privileges pertinent to the maintenance and protection of all ways within the Town of Thomaston. Any utility or corporation able to demonstrate and prove to the Town and/or Town Counsel that it is subject to the duties and charges of a similar provision of the Connecticut General Statutes relative to the operation and construction of said utility shall be given a waiver to the relevant fees.
- C. Also the regulations that are stated in the "Call Before You Dig" Excavator's Manual will be followed.
- D. All contractors excavating within the Town's rights-of-way shall adhere to all regulations under Title 13, Chapter 236 (§§ 13-a to 13-13a), Chapter 238 (§§ 13-a-36 to 13-a-153) and Chapter 241 (§§ 13-a-247 to 13-a-258).

§ 315-3. Definitions.

As used in this chapter, the following terms shall have the meaning indicated:

CONTRACTOR — A person, company, corporation, partnership, firm, association, society, organization, district, federal, state or local agency or department, commission, public or private utility or other legal entity.

CURB CUT — Access to a public way from private property for the purpose of vehicular or wheelchair access.

EXCAVATE — Removal of any portion of an existing road, include curbing, sidewalks or grass areas, within the Town's right-of-way.

PERMIT — Written permission from the administering agency, the Town of Thomaston Highway Department.

RIGHT-OF-WAY — Property between the street lines as defined by the street layout or the area within the traveled way. In case of uncertainty as to the true location of a street right-of-way in a particular instance, for the purpose of this specification a reference right-of-way line shall be established by measuring 25 feet from the center line of the existing pavement. However, this definition shall not be construed as establishing any rights of land, its purpose being merely to establish a reference line for excavations.

ROAD — Any way, highway or street, public or private, which is or has historically been maintained by the Town of Thomaston Highway Department.

SAFETY EQUIPMENT —

- A. Cones, barrels, warning signs, barricades or other device to provide adequate notification to motorists and pedestrians. The use and specification of such devices are defined in the current Federal Highway Administration's Manual for Uniform Traffic Control Devices.
- B. Any procedures outlined in current OSHA regulations.

SUPERINTENDENT — The Superintendent of Highways or his/her duly authorized designee for the Town of Thomaston.

TEMPORARY COVER — Cold patch acceptable, 24 hours maximum, unless hot mix asphalt plants are not open (this rule shall be under the discretion of the Superintendent of Highways or his/her designee).

TRENCH — Excavation usually made for installing, repairing or replacing a utility device, conduit, pipe structure or appurtenance.

WARRANTY — All work within a Town of Thomaston right-of-way will be guaranteed by the contractor for a period of one year against surface deficiencies, settlements or any structural failure.

WORK — Any surface treatment, surfacing, resurfacing, excavation or modification of a paved or graveled surface within the right-of-way.

§ 315-4. Permit requirements and obligations.

A. Permit process.

- (1) Permit applications are available between the hours of 9:00 a.m. and 4:00 p.m. in the First Selectmen's office at the Thomaston Town Hall, 158 Main Street, Thomaston.
- (2) Permits are required for work in any public rights-of-way, including sidewalks and driveway construction or repair within the right-of-way.
- (3) The permit fee shall cover the cost of processing the permit application, recordkeeping associated with the issuance of the permit, research of the road and its condition, inspection of the work area, inspection of the work while the work is in progress and inspection of the required restoration of the work area. The fee consists of \$25 for administration and \$100 for all inspection up to 200 square yards. Should the excavation exceed 200 square yards an additional fee of \$50 will be charged for each additional 100 square yards.
- (4) Completed applications for permits will be approved or denied within five business days of receiving all required bonds, insurance certificates, fees and "Call Before You Dig" information. Should the Superintendent or his designee not act on the permit within five days, the permit shall be considered to be approved and valid until such time as the permit is revoked or expires or upon the completion of the work. The contractor shall also be responsible for notifying all nonparticipating utilities not covered by "Call Before You Dig." The contractor may pick up the approved permit at the Selectmen's office between the hours of 9:00 a.m. and 4:00 p.m. or, at the contractor's request, the permit will be mailed to the contractor for an additional fee of \$5. The contractor shall make adequate provisions and allow sufficient time for the approval process.
- (5) The contractor shall not render any road impassable without the written permission of the Thomaston Police Department. It is the responsibility of the contractor to notify the Thomaston Police Department to determine if a police detail is

necessary. Any Town of Thomaston agency performing work in the right-of-way may use departmental flaggers in substitution for a police detail. Evidence of said determination by the Thomaston Police Department must be provided at the time of application. Failure to notify emergency services of an impassible road shall be grounds for the revocation of the permit.

- (6) The cost of all police details shall be the responsibility of the contractor. Prior to any road being rendered impassable, the contractor shall notify police dispatch at 860-283-4344 to report road closures. The contractor shall sufficiently address the concerns of emergency personnel such that public safety is not compromised by the contractor's actions.
- (7) The contractor may commence work when he/she has the approved permit in hand and after receiving approval of the Thomaston Police Department. The approved permit shall be at the site of the work at all times. The Highway Department and the emergency services should be kept informed daily of the progress of the work.
- (8) The Highway Department or the WPCA shall provide inspection(s) as it deems necessary.

B. Subsurface utilities.

- (1) Any utility company with facilities within the Town of Thomaston's right-of-way shall be obligated for the proper maintenance, repair and replacement of said facility. If the failure of any utility located within or outside the Town right-of-way causes damage to public or private property, the owner of said utility shall be responsible for the repair/restoration of any damage caused.
- (2) If the contractor damages or suspects an existing utility has been damaged directly or indirectly by the contractor's actions, the contractor shall notify the Highway Department and the owner of the damaged utility. The contractor shall not continue work until authorized by the Superintendent of Highways or his/her designee.
- (3) The method of repair to a damaged utility must meet with the approval of the Superintendent of Highways and the owner of the utility. The method of repair will be decided on a case-by-case basis at the time of damage; in no case shall the method of repair compromise the structural integrity, capacity or longevity of the utility without the expressed written consent of Superintendent of Highways or his/her designee.

C. Backfill of excavation.

- (1) The contractor shall backfill all excavations with the native material if suitable. If, in the opinion of the Superintendent of Highways, the native material is unsuitable, the contractor will bring in suitable fill at the cost of the contractor. All backfill material shall be compacted to not less than 92% and gravel shall be compacted to not less than 95% of the maximum dry density.
- (2) The Superintendent of Highways may require soil testing to determine gradation, compaction and other parameters relevant to the proper construction of the

roadway. Should the Town require said testing, the expense shall be borne entirely by the contractor.

- (3) The approved road opening permit will be valid for a period of 30 days unless otherwise stipulated.

§ 315-5. Winter moratorium.

- A. No work will be allowed in the area of pavement between November 15 and April 1, except in case of emergency. Emergency work necessary for the protection of life or property may be conducted with the written approval of the Board of Selectmen or its designee. A waiver for extenuating circumstances may be approved by the Board of Selectmen only after consultation with the Superintendent of Highways.
- B. See emergency work § 315-10.

§ 315-6. New surface moratorium.

- A. Excavation will not be allowed in rights-of-way that have been newly surfaced or resurfaced for a period of one year, except for emergency work (see § 315-10). Extenuating circumstances may be approved by the Board of Selectmen only after consultation with the Superintendent of Highways.
- B. In the event an excavation is allowed during the one-year moratorium, the contractor shall conduct his work as directed by the Superintendent of Highways. The completed work shall provide a life expectancy comparable to the surrounding work. Possible special provisions to allow for proper stabilization and surfacing include, but are not limited to, the use of infrared technology on joints within the excavation.
- C. Applicable procedures and testing results may be required by the Superintendent of Highways. Said testing shall be conducted by a testing agent or engineer approved by the Superintendent of Highways.
- D. All work allowed must be bonded, guaranteed and maintained for a period of not less than one year after excavation of the road.

§ 315-7. Bonding.

- A. The contractor shall provide a bond to be held by the Town for the duration of the warranty period. The bond shall be issued in such manner as it may not be cancelled without the written approval of the Superintendent of Highways.
- B. The amount of the bond shall be as defined in the following table:

Square Yards	Amount
0 to 499	\$5,000
500 to 999	\$10,000

Square Yards	Amount
1,000 to 2,000	\$20,000
Over 2,000	\$20,000 plus \$5 per square yard over 2,000, or as approved by the Board of Selectmen

§ 315-8. Insurance.

- A. The contractor shall provide contractors' public liability insurance providing for a limit of not less than \$500,000 for all damages arising out of bodily injuries to or death of one person and, subject to that limit for each person, a total limit of \$1,000,000 for all damages arising out of bodily injuries to or death of two or more persons in any one accident and regular contractors' property damage liability providing for a limit of not less than \$500,000 for all damages arising out of injury to or destruction of property in any one accident and, subject to that limit per accident, a total or aggregate limit of \$1,000,000 for all damages arising out of injury to or destruction of property during the policy period.
- B. All insurance policies shall contain suitable endorsements providing for blasting operations if and when required.

§ 315-9. Warranty of work.

To allow the most reasonable method to insure the quality of work, the contractor has two options available to adjust the duration of the warranty period and the responsibility of the contractor during the warranty period. The options are as follows:

- A. Standard construction methods.
- (1) Prior to execution of the work, the contractor shall saw cut the pavement over the area of proposed excavation. Should the Superintendent of Highways reject the material, the contractor shall remove the material from the site at the contractor's expense. At no time shall bituminous material be returned to the trench.
 - (2) After excavation, the contractor shall backfill using the material removed from the trench if approved by the Superintendent of Highways. All material shall be compacted in six inches lifts with mechanical compaction equipment and/or the use of jetting (with the approval of the Superintendent of Highways). The method used to compact this material shall produce a rate of compaction of 92% of the maximum dry density of the material. This material should be placed to within 22 inches of the surrounding finished surface. Eighteen inches of gravel shall be placed in six-inch lifts and compacted to 95% of the maximum dry density of the material; this shall be followed by two lifts of Class 2 asphalt first 2.5 inches and then 1.5 inches. Both courses shall comply with the Connecticut Department of Transportation (ConnDOT) Standard Specifications for Highways and Bridges. In the event hot mix asphalt cannot be used in the repair, the contractor shall place 16 inches of gravel in six-inch lifts and six inches of cold temporary patch, which will

be removed as soon as weather conditions allow, at which time the contractor shall complete the work in conformance with the above. The contractor shall maintain the trench patch and maintain the required bond for one year after completion of the work.

B. Payment of a repair and maintenance fee.

- (1) To reduce the warranty period defined in § 315-3, a contractor may choose to pay a repair and maintenance fee.
- (2) Within 12 months of receiving the repair and maintenance fee, a Highway Department crew will re-excavate the contractor's work and restore the work as directed by the Superintendent of Highways. After the restoration by the Highway Department, the contractor will be released further warranty.
- (3) During the construction, the contractor shall comply with the construction techniques described in Subsection A of this section and elsewhere in this regulation and shall maintain the work for a period of not more than 12 months, or until such time as the contractor's work is replaced by the Highway Department.
- (4) The cost of the repair and maintenance fee shall be based on the current Town bid prices for reclamation, preparation and paving of the area of the work plus 50% for depths of excavation up to five feet. Excavations over five feet in depth will require that the cost of the repair and maintenance fee be based on Town bid prices for reclamation, preparation and paving of 200% of the area of the excavation. In lieu of bid prices, the Town may publish a standard rate schedule to be maintained on an annual basis by the Superintendent of Highways.

§ 315-10. Emergencies.

Work completed under the classification of emergency, because of threat of personal injury or property damage, shall be allowed to commence prior to attaining the permit, provided that notification of "Call Before You Dig" and the public safety dispatch has been achieved. The contractor shall contact the Superintendent of Highways or his/her designee within 24 hours to apply for permit. Should the Superintendent of Highways find that the situation surrounding the work does not constitute an emergency, the contractor shall be assessed a fine of \$200 per day until such time as the work is complete and the permit fee paid.

§ 315-11. Exemptions.

The Town of Thomaston Highway Department is exempt from the application process. Fees and bonds may be reduced or waived for other public agencies at the discretion of the Board of Selectmen; however, the application process and all construction specifications and warranty periods shall apply.

§ 315-12. Backfill requirements.

- A. With the exception of an in-place reclamation project, or the use of processed gravel or recycled asphalt pavement, no excavated bituminous material shall be returned to the trench.
- B. Unless the gravel base material has been removed per § 315-9A, the contractor will stockpile (off the road) gravel found in the roadbed and place it in six-inch compacted lifts at the top of the trench as a base material whenever possible.

§ 315-13. Curb cut.

Driveway openings shall be constructed in conformance with the Town of Thomaston's driveway permit regulations.²

§ 315-14. Additional specifications.

- A. All pavements to be removed, including curbing and sidewalks, shall be saw cut prior to excavation.
- B. Unless otherwise directed by the Superintendent of Highways, all excavated material shall be loaded directly into trucks, not stacked on the pavement or shoulder, so as to minimize damage to the remaining pavement and existing shoulder, minimize dust, and facilitate the safe flow of traffic during construction.
- C. Any water encountered during excavation shall be discharged into an approved sediment control system prior to release to the existing gutter, swale, or other drainage structure. It is the contractor's responsibility to get approval from the Inland Wetlands and Watercourses Commission and any other governmental body that may have jurisdiction.
- D. Excavated material shall be used as backfill to minimize differential frost action in the road subgrade. Exceptions to this will be made when the excavated material is too wet to be used as backfill/or contains excessive unstable organic material. Application of this subsection shall be at the discretion of the Superintendent of Highways.
- E. All backfill shall be compacted with equipment that is specifically designed for that purpose. Lifts of fill compacted with hand-directed or -operated equipment shall not exceed six inches in thickness. Lifts compacted with self-propelled heavy equipment shall not exceed 12 inches in thickness.
- F. Gravel subgrade shall match the thickness of the gravel existing adjacent to the excavation, but in no case shall it be less than 18 inches in thickness.
- G. All gravel used for road base material shall comply with standards set forth in the ConnDOT Standard Specifications for Highways and Bridges.

2. Editor's Note: See Ch. 142, Driveways.

- H. The placement of temporary pavement is required immediately after completion of backfill and compaction. Cold patch is not a suitable long-term temporary pavement and must be replaced within 24 hours with Class 2 asphalt.
- I. The existing pavement shall be cut back one foot prior to the placement of permanent pavement. The pavement shall be mechanically cut in lines perpendicular or parallel to the direction of travel of the street.
- J. The edges of the existing pavement cut to receive permanent pavement shall have asphalt emulsion applied to the vertical surfaces prior to paving.
- K. All permanent pavements shall conform to the ConnDOT Standard Specifications for Highways and Bridges, specifications for Class 2 hot mix asphalt base and top as specified previously.
- L. All temporary and permanent repairs to the rights-of-way shall be constructed to match existing grades and graded to drain in the same manner as the original pavement or as directed by the Superintendent of Highways.
- M. All work performed is subject to inspection by the Superintendent of Highways at all times. The schedule of inspection shall be at the discretion of the Superintendent of Highways. Excavations shall not be backfilled without prior notification of the Superintendent of Highways.
- N. All work with the right-of-way shall comply with current federal and state Americans with Disabilities Act regulations (42 U.S.C. § 1201 et seq.).
- O. Excavations shall not be left unattended. At the end of every day the excavation shall be backfilled or covered with a suitable h-20 plate. Machinery shall not be left in the road without the consent of the Superintendent of Highways.
- P. The contractor shall be responsible to observe all applicable OSHA regulations.

§ 315-15. Revocation of permit.

- A. The Superintendent may revoke the permit at any time for failure to comply with these regulations.
- B. If a permit is revoked, the work will cease and the road shall be repaired as called for in these regulations. No work will continue until the Superintendent of Highways is certain the situation that caused the revocation has been rectified.
- C. If while the work is suspended the work is left in or becomes an unsafe condition, there shall be a fine of \$200 per day levied against the contractor, and the Highway Department will make the work safe. The Town may pull the contractor's bond, if the Superintendent believes that to be in the Town's best interest.
- D. A reinstatement fee of \$200 shall be required before the contractor can continue work.

2006 ALTA OWNERS POLICY
SCHEDULE A

First American Title Insurance Company

SCHEDULE A

TITLE NUMBER: HART1606281

POLICY NUMBER: 1018007-0012321

POLICY PREMIUM: \$75.00 (gov't rate)

ENDORSEMENT FEES: \$

AMOUNT OF INSURANCE **\$16,000.00**

DATE OF POLICY: December 15, 2011

1. NAME OF INSURED:

United States of America

2. THE ESTATE OR INTEREST IN THE LAND WHICH IS COVERED BY THIS POLICY IS:

Easement

3. TITLE TO THE ESTATE OR INTEREST IN THE LAND IS VESTED IN:

**Fec: Katherine A. Palmer and Martin J. Palmer
Easement: United States of America**

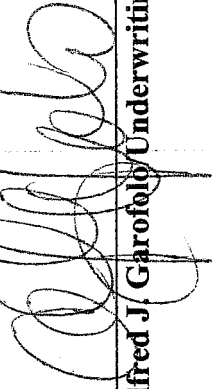
4. THE LAND REFERRED TO IN THIS POLICY IS DESCRIBED AS FOLLOWS:

SEE SCHEDULE A ATTACHED HERETO AND MADE A PART HEREOF.

ADDRESS: Portion of 560 Michelle Lane North, Thomaston, CT

FIRST AMERICAN TITLE INSURANCE COMPANY

By



Alfred J. Garofolo Underwriting Counsel

SCHEDULE A
PROPERTY DESCRIPTION

Tract No. 114E

Beginning at a point on the southerly streetline of Michelle Lane S., said point being the northeasterly corner of land now or formerly of Martin J. & Katherine A. Palmer and the northwesterly corner of land now or formerly of John L. & Laura Haase;

Thence running southerly along land now or formerly of said Haase, S14° 05' 00" E Thirty-Two and Seventy-One Hundredths (32.71) feet to a point in the easterly line of land now or formerly of Martin J. & Katherine A. Palmer;

Thence running southeasterly and southwesterly through said land now or formerly of Martin J. & Katherine A. Palmer the following eight (8) courses and distances:

S23° 54' 00" W	Forty-Seven and Seventy-One Hundredths (47.71) feet;
S01° 33' 50" E	Ten and Thirty-one Hundredths (10.31) feet;
S13° 19' 39" E	Forty-Three and Ninety Hundredths (43.90) feet;
S35° 50' 51" E	Fifty-Three and Twenty Hundredths (53.20) feet;
S52° 13' 41" E	Eighty-Three and Forty-Two Hundredths (83.42) feet;
S39° 07' 10" E	One Hundred and Fifty-Two Hundredths (100.52) feet;
S11° 09' 06" W	Thirty-Seven and Ninety-Three Hundredths (37.93) feet; and
S55° 46' 06" W	One Hundred Forty-Seven and Fifty-Five Hundredths (147.55) feet to a point in the northerly line of land now or formerly of the Town of Thomaston;

Thence running southwesterly along said land now or formerly of the Town of Thomaston, S71° 45' 25" W One Hundred Thirty-Seven and Forty-Seven Hundredths (137.47) feet to a point in the easterly line of land now or formerly of the United States of America;

Thence running northwesterly along said land now or formerly of the United States of America, N23° 44' 07" W Twenty and Nine Hundredths (20.09) feet to a point;

Thence running northeasterly and northwesterly through land now or formerly of Martin J. & Katherine A. Palmer the following eight (8) courses and distances:

N71° 45' 25" E One Hundred Thirty-Six and Fifty-Nine Hundredths (136.59) feet;
N55° 46' 06" E One Hundred Thirty-Six and Fifty-Three Hundredths (136.53) feet;
N11° 09' 06" E Twenty and Thirty-Four Hundredths (20.34) feet;
N39° 07' 10" W Eighty-Eight and Eighty-Four Hundredths (88.84) feet;
N52° 13' 41" W Eighty-Four and One Hundredths (84.01) feet;
N35° 50' 51" W Sixty and Six Hundredths (60.06) feet;
N13° 19' 39" W Forty-Nine and Ninety-Four Hundredths (49.94) feet; and
N01° 33' 50" W Sixteen and Eighty-Nine Hundredths (16.89) feet to a point in the southerly property line of land now or formerly of Arthur & Joyce Williams;

Thence running northerly and northeasterly along said land now or formerly of Arthur & Joyce Williams, the following two (2) courses and distances:

N23° 54' 00" E Forty-Five and Thirty-Four Hundredths (45.34) feet; and
N14° 05' 00" W Thirty (30.00) feet to a point in the southerly streetline of Michelle Lane S.;

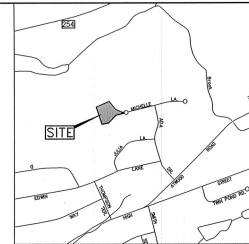
Thence running easterly along said streetline of Michelle Lane S., on a curve to the left having a radius of 50.00 feet and an arc length of 20.58 feet to the point or place of beginning.

Said easement contains an area of 13,618 square feet, more or less.

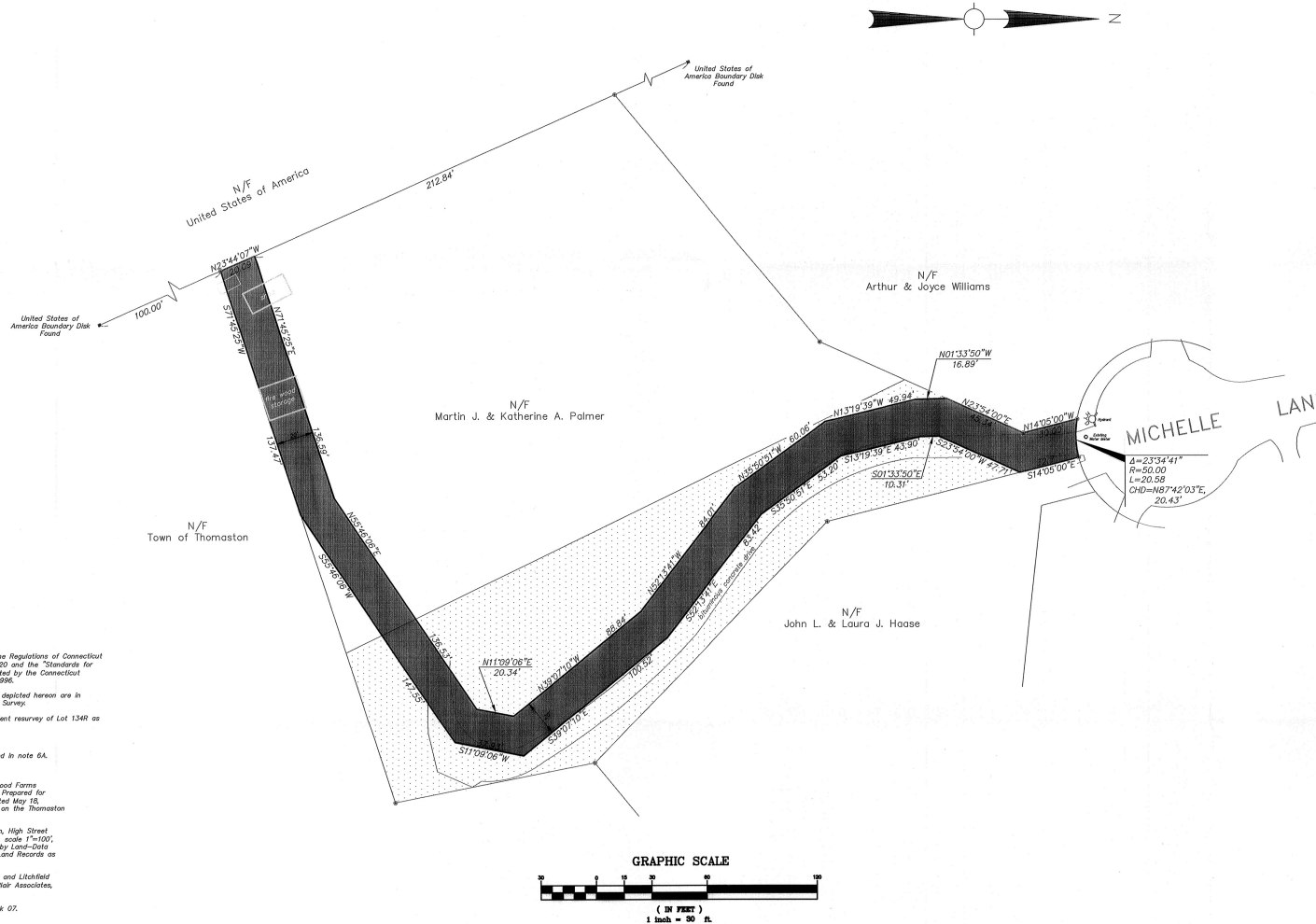
Meaning and intending to describe Tract No. 114E depicted as "Proposed Watermain Easement in Favor of the United States of America" on a map entitled "Water Main Easement Across Land of Martin J. & Katherine A. Palmer, Tract 114E, Northfield Brook Lake, 560 Michelle Lane S., Thomaston Connecticut", prepared by Conklin & Soroka, Inc., Cheshire, CT, scale: 1" = 30', dated 09/03/2008, revised on 03/25/10,

LEGEND

- Existing Access Easement in Favor of the Town of Thomaston & Crossroad Development
- Proposed Watermain Easement in Favor of the United States of America
Area=13,618 Sq. Ft.

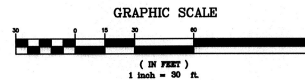


Vicinity Map
1"=1000'±



NOTES

- This survey and map have been prepared pursuant to the Regulations of Connecticut State Agencies Sections 20-306-1 through 20-306-20 and the "Standards for Survey and Maps in the State of Connecticut" as adopted by the Connecticut Association of Land Surveyors, Inc., on September 26, 1996.
- The type of survey performed and the mapped features depicted hereon are in accordance with the requirements of a Limited Property Survey.
- Boundary determination/opinion is based upon a dependent resurvey of Lot 134R as depicted on the map reference in note 6A.
- This survey conforms to a Class A-2.
- Bearings as depicted are based upon the map referenced in note 6A.
- Reference is made to the following maps:
 - Lot Line Revision Map, Lot 134 and Lot 135, Highwood Farms Subdivision, Michelle Lane, Thomaston, Connecticut, Prepared for Long Horizon Development, L.L.C., scale 1"=40', dated May 18, 1995, prepared by Land-Data Engineers and filed on the Thomaston Land Records as map #95-5.
 - Record Subdivision Map, Highwood Farms Subdivision, High Street Extension & Atwood Road, Thomaston, Connecticut, scale 1"=100', May 25, 1993, revised January 26, 1997, prepared by Land-Data Surveying Company and filed on the Thomaston Land Records as map #97-5.
 - Boundary Survey, Northfield Brook Lake, Thomaston and Litchfield Connecticut, scale 1"=200', prepared by Clarence Blair Associates, Inc., Sheets 1 and 2 of 2.
- Parcel is depicted as Lot 01 on Assessor's Map 15 Block 07.



REVISION	DATE	PROFESSIONAL SEAL			 Watermark Engineering • Construction • Operations 175 CABOT STREET LOWELL, MA 01854		
		TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON. Todd A. Andrews C.T. L.S. #701001			CONKLIN & SOROKA, INC. 1484 HIGHLAND AVENUE CHESTER, CONNECTICUT 06410 TELEPHONE (203) 272-1135 FAX (203) 272-0316 www.conklinandsoroka.com		
					CONSULTING ENGINEERS LAND SURVEYORS LAND PLANNERS		
					Water Main Easement Across Land of Martin J. & Katherine A. Palmer Tract 114E, Northfield Brook Lake 560 Michelle Lane S. Thomaston, Connecticut		
					DRAWN: TAA DESIGN: CJC CHECK: CJC	DATE: 09/03/2008 SCALE: 1"=30'	M-1