

SECTION 01700**CONTRACT CLOSEOUT****PART 1 GENERAL****1.01 SUMMARY**

- A. This Section describes requirements for contract closeout, including but not limited to final cleaning, spare parts and special tools, equipment start-up services, final inspection, punchlisting and final payment.

1.02 RELATED SECTIONS

- A. Section 01050 – Field Engineering
- B. Section 01300 – Submittals
- C. Section 01380 – Construction Video Recording and Photographs
- D. Section 01730 – Operations & Maintenance Data

1.03 CODES AND STANDARDS (NOT USED)**1.04 SUBMITTALS**

- A. Submit the following in accordance with Section 01300 – Submittals:
 - 1. When the Work is complete, submit written certification that:
 - a. Contract Documents have been reviewed.
 - b. Work has been inspected for compliance with the Contract Documents.
 - c. Work has been completed in accordance with Contract Documents.
 - d. Equipment and systems have been tested in the presence of the Authority and are operational.
 - e. Work is complete and ready for final inspection.
 - 2. At contract close-out, deliver the following to the Authority:
 - a. Project Record Documents:
 - i. Project Redline Drawings as defined in Section 01050 – Field Engineering

- ii. Specifications
 - iii. Addenda
 - iv. Change Orders and other modifications to the Contract
 - v. Field Orders and/or written instructions
 - vi. Approved Shop Drawings, product data, test records, and miscellaneous requested submittal data
 - vii. Field test records, startup and test reports, and certifications
 - viii. Inspection reports and approvals
 - ix. Permits and permit closeout documents
 - x. Operations and maintenance manuals in accordance with Section 01730 – Operations and Maintenance Data
 - xi. Key Documents
 - xii. Additional Documents
 - xiii. Construction Photographs and Videos in accordance with Section 01380 – Construction Video Recording and Photographs
- b. Final Inspection Package.
 - c. Spare parts and maintenance instructions.
 - d. Evidence of Payment and Release of Liens.
 - e. Two (2) copies of each warranty and consent of surety for payment as specified.
3. Submit Final Inspection Package:
- a. Provide a final inspection package detailing each valve and appurtenance location separately.
 - b. Package shall be submitted on 8.5 x 11-inch sheet paper, except for the Contract Drawings which shall be submitted on 24 x 36-inch paper.
 - c. Each appurtenance location shall include:
 - i. Contract Drawing of Site

- ii. Redline Drawings
 - iii. Detail Record
 - iv. Valve Database Collection Sheet
 - v. Valve Submittal Cut-Sheet(s)
 - vi. Pressure Test Data Sheet
 - vii. Disinfection Data Sheet with Water Quality Sample Results
- d. Collect and provide the Authority as-built global positioning survey (GPS) points for the pipelines installed under this contract. GPS survey points shall be performed by a Licensed Professional Land Surveyor or Licensed Professional Engineer Registered in the Commonwealth of Massachusetts as specified in Section 01050 – Field Engineering.
4. Submit a Final Statement of Accounting, reflecting all adjustments to the Contract Price, stating:
- a. Original contract sum
 - b. Additions and deletions resulting from:
 - i. Change orders
 - ii. Deductions for uncorrected work
 - iii. Deductions for liquidated damages
 - iv. Deductions for re-inspection payments
 - v. Other adjustments
 - c. Total contract sum, as adjusted
 - d. Previous payments
 - e. Amount remaining due
5. Submit final application for payment.
6. Final payment will not be made until all requirements contained in this Section have been met and all spare parts, maintenance materials, and special tools specified herein have been delivered to the Authority in new and undamaged condition.

7. Accompany submittal with transmittal letter in duplicate containing:

- a. Date
- b. Contract name and number
- c. Contractor's name and address
- d. Title and number of each document
- e. Signature of Contractor or authorized representative

1.05 QUALITY ASSURANCE (NOT USED)

1.06 QUALIFICATIONS (NOT USED)

1.07 DELIVERY, STORAGE, AND HANDLING

- A. At or prior to time of inspection for Substantial Completion, deliver all required items to the Authority.
 1. The Contractor and Authority shall inspect and inventory all items delivered.
 2. Submit to the Authority a detailed invoice of all items delivered.
 - a. Organize invoice by specification sections.
 - b. Indicate on invoice any items delivered which were damaged or unsatisfactory.
 - c. The Contractor and the Authority shall sign the invoice certifying that all items listed were delivered, and that unless otherwise noted on invoice, all items were in good condition at the time of delivery to the Authority.
 3. The Authority will review the invoice for completeness and inform the Contractor promptly of any deficiencies therein.
 4. Deliver all additional items identified by the Authority and replace, at no additional cost to the Authority, all damaged and unsatisfactory items noted on original invoice before requesting final inspection.
 5. Invoices for additional and replacement items, signed by the Contractor and the Authority, shall be submitted.
 6. Store items in a clean, dry, heated, storage shed or bonded warehouse.
 7. Protect all items from damage during storage.

1.08 PROJECT/SITE CONDITIONS (NOT USED)

1.09 DEFINITIONS (NOT USED)

1.10 TOLERANCE (NOT USED)

1.11 REQUIREMENTS

A. Final Cleaning

1. At the completion of the work, remove all rubbish from and about the Site of the Work, and all temporary structures, construction signs, tools, scaffolding, materials, supplies and equipment used in the performance of the work. Broom clean paved surfaces and rake clean other surfaces of grounds.
2. Thoroughly clean all materials, equipment and structures; all marred surfaces shall be touched up to match adjacent surfaces.
3. Maintain cleaning until Project, or portion thereof, is occupied by the Authority.

B. Spare Parts and Special Tools:

1. As soon as practicable after approval of the list of equipment, furnish spare parts data for each different item of equipment listed. The data shall include a complete list of parts and supplies, with current unit prices and source or sources of supply.
2. Furnish a list of parts and supplies that are either normally furnished at no extra cost with the purchase of the equipment or specified to be furnished as part of the Contract and a list of additional items recommended by the Manufacturer to assure efficient operation for a period of 120 days for the particular installation.
3. Parts shall be securely boxed and tagged, and clearly marked on the box and individually for identification as to the name of Manufacturer or Supplier, applicable equipment, part number, description and location in the equipment. Parts shall be protected and packaged for a shelf life of at least ten (10) years.
4. Furnish, with each piece of equipment as a minimum, one (1) complete set, or the number of sets called for in the Specifications, of suitably marked special tools and appliances which may be needed to adjust, operate, maintain, or repair the equipment.
5. Submit, for approval by the Authority, a complete list of the special tools and appliances to be furnished. Such tools and appliances shall be furnished in approved painted steel cases properly labeled and equipped with good grade cylinder locks and duplicate keys.

C. Equipment Start-Up Services

1. Equipment start-up period, for the training of Authority personnel, shall begin after satisfactory completion and acceptance of the field tests for the part of the Work for which the equipment is included.
2. During the equipment start-up period, furnish the services of factory trained representatives of the equipment manufacturers for the equipment designated in the Specifications to:
 - a. Assist in the start-up and operations of the equipment.
 - b. Assist in the training of Authority personnel, designated by the Authority, in the proper operation and maintenance of the equipment.
3. The Authority Shall:
 - a. Provide the necessary personnel to be instructed in the operation and maintenance of the equipment. The Authority's personnel shall operate all equipment.
 - b. Pay for all fuel, power and chemicals consumed beyond quantities specified in the Contract Documents. Pay for fuel, power, and chemicals consumed up to the date of the Certificate of Substantial Completion except as otherwise specified herein.
4. Be available to promptly repair all work during the start-up period so as to cause minimum disruption to the total operation.
5. If the equipment malfunctions during this start-up period, the start-up period will be repeated until satisfactory operation is achieved.
6. In the event a system, equipment or component proves defective or is unable to meet specified performance criteria, replace the defective item. The minimum one (1) year warranty period, or the warranty period called for in the Specifications for the item, shall commence after satisfactory replacement and testing of the item.

D. Final Cleanup – Site Rehabilitation:

1. Before finally leaving the Site, wash and clean all exposed surfaces which have become soiled or marked, and remove from the Site of work accumulated debris and surplus materials of any kind which result from the work, including construction equipment, tools, sheds, sanitary enclosures, etc. Leave all equipment, fixtures, and work installed, in a clean condition. The completed Project shall be turned over to the Authority in a neat and orderly condition.

2. The Site of the Work shall be rehabilitated or developed in accordance with other Specifications and the Contract Drawings. In the absence of other Contract requirements, completely rehabilitate the Site to a condition and appearance equal or superior to that which existed just prior to construction, except for those items whose permanent removal or relocation was required in the Contract Documents or ordered by the Authority.

E. Final Inspection

1. Final cleaning shall be so arranged as to be finished upon completion of the construction work. Any portion of the work inspected and finally accepted by the Authority shall be kept clean, until the final acceptance of the entire work.
2. When the whole or any portion of the work is finally cleaned, notify the Authority that the work is ready for final inspection, and the Authority will thereupon inspect the work. If the work is not found satisfactory, the Authority will order further cleaning, repairs, or replacement.
3. When such further cleaning or repairing is completed, the Authority, upon further notice, will again inspect the work. The "Final Payment" will not be processed until the requirements set forth are complied with, and the Authority has made its final inspection of the entire work and is satisfied that the entire work is properly and satisfactorily constructed in accordance with the requirements of the Contract Documents.
4. All Town of Needham water, sewer and drain work shall be completed and tested in accordance with the requirements of the Contract Documents and the Town of Needham standards.

F. Contract Close Out

1. As construction of the Project enters the final stages of completion, in concert with completing all other requirements set forth in the Contract Documents, attend to or complete the following items:
 - a. Scheduling equipment Manufacturers' visits to the Site.
 - b. Performing required testing of Project components.
 - c. Scheduling start-up and initial operation.
 - d. Scheduling and furnishing skilled personnel during initial operation.
 - e. Correcting or replacing defective work, including completion of items previously overlooked or work which remains incomplete, all as evidenced by the Authority's "Punch" Lists.

- f. Attend to any other items listed herein or brought to attention by the Authority.
- 2. Just before the Authority's Certificate of Substantial Completion is issued, complete the cleaning and final adjustment of the various building components as specified in the Specifications, and as follows:
 - a. Clean all glass and adjust all windows and doors for proper operation.
 - b. Clean all finish hardware after adjustment for proper operation.
 - c. Touch up marks or defects in painted surfaces and touch up any similar defects in factory finished surfaces.
 - i. Immediately after installation, sand smooth any rusted or damaged areas of shop paint and primer.
 - ii. Remove bitumen from gravel stops, fascias, and other exposed surfaces.
 - iii. Remove all stains, marks, fingerprints, soil, spots, and blemishes from all finished surfaces, tile, stone, brick, and similar surfaces.
- 3. In addition, and before the Certificate of Substantial Completion is issued, submit to the Authority records, certifications, etc., specified elsewhere in the Contract Documents in accordance with the specified submission schedule for each item. A partial list of such items appears below, but it is the Contractor's responsibility to submit any other items which are required by the Contract Documents:
 - a. Test results of Project components.
 - b. Performance Affidavits for equipment.
 - c. Warranties for equipment, materials, and workmanship, as specified.
 - d. Certification of equipment or materials in compliance with the Contract Documents.
 - e. Operation and Maintenance instructions or manuals for equipment.
 - f. One (1) complete set of electronic Redline Drawings showing as-built changes and additions to the Work under the Contract. Where Contract Drawings are provided in Revit format, Redline Drawings shall be provided to the Authority in Revit format. Where Contract Drawings are provided in AutoCAD 2019 format, Redline Drawings shall be provided in AutoCAD 2019 format. The Authority shall refer to these Redline Drawings to develop the Record Drawings.
 - g. Any special guarantees or bonds.

1.12 PUNCHLISTING

- A. Punchlisting is a survey of the work by the Authority, performed prior to Substantial Completion in order to create a list of incomplete or unsatisfactory items of work.
- B. The punchlist will include all items of work found to be unsatisfactory, missing, incomplete, damaged, incorrect, or improperly installed or constructed. Prior to Final Payment, correct the punchlist items by, at the option of the Authority, re-work, modification, or replacement, and at no additional cost to the Authority. The Authority will re-inspect punchlist items upon notice that they are complete.
- C. Prior to Substantial Completion, the punchlist will include items of work such as the Contractor's responsibilities during performance testing and post startup vendor training to be completed during and/or after the starting of systems.

1.13 FINAL PAYMENT

- A. In addition to other requirements of this Section, the following items shall be submitted and completed prior to Final Payment:
 - 1. Completion of the punchlist items developed as described in Paragraph 1.12 of this Section.
 - 2. Application for Final Payment.
 - 3. Operation and Maintenance Manuals as specified in Section 01730 – Operations & Maintenance Data.
 - 4. All Manufacturer's warranties.
 - 5. Submit the following documents with Application for Final Payment: Consent of Surety to Final Payment, Affidavit of Release of Liens and Claims, Affidavit of Payment of Debts and Claims, and remaining releases, waivers, and all submittals and documentation required by the Contract Documents.

PART 2 PRODUCTS (NOT USED)**PART 3 EXECUTION (NOT USED)**

**** END OF SECTION ****