

SECTION 01700

CONTRACT CLOSEOUT

PART 1 GENERAL

1.01 SUMMARY

- A. Work to be performed under this section shall include all labor, equipment, materials and miscellaneous items necessary to provide all documents, information and items as specified herein.

1.02 PROJECT RECORD DOCUMENTS.

- A. Maintain at the job site one record copy of the following (updated daily):
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Reviewed Shop Drawings.
 - 5. Change Orders.
 - 6. Other Modifications to Contract.
 - 7. Field Test Records.
- B. Do not use record documents for construction purposes. Maintain documents in clean, dry legible condition, apart from documents used for construction.
- C. Label each document "Record Document". Mark all information with contrasting color using ink. Keep each record current. Do not permanently conceal any work until required information is recorded.
- D. Record following information on Drawings:
 - 1. Northing and Easting coordinates for all building corners and all buried pipes and utilities (at ends, changes in alignment, fittings and valves). Coordinates shall be in the project coordinate system.
 - 2. Building Locations and depth of foundation elements.
 - 3. Horizontal and vertical location of underground utilities.
 - 4. Location of internal utilities and appurtenances concealed in construction.
 - 5. Structural, architectural, mechanical and electrical installations.
 - 6. Field changes of dimension and detail.
 - 7. Changes by Change Order or field order.
 - 8. Details not on original Contract Drawings.

- E. Record following information on Specifications:
 - 1. Manufacturer, trade name, catalog number and supplier of each product and item of equipment actually installed.
 - 2. Changes by change order or field order.
 - 3. Other matters not originally specified.
- F. Maintain Shop Drawings as record documents recording changes made after review as specified for Drawings above.
- G. At completion of project, deliver record documents to Engineer with transmittal letter containing date, project title and number, contractor's name and address, title and number of each record document, and certification that each document is complete and accurate. Submittal shall be signed by Contractor or his authorized representative.

1.03 CLOSEOUT PROCEDURES.

- A. The following project closeout procedure defines the responsibilities of the Contractor, Owner and Engineer in closing the project. Closeout may be conducted by areas or portions of the work if required by the project or requested by Owner.
 - 1. Step 1: Contractor advises Engineer in writing that he has reached "Substantial Completion" and provides a list of items to be completed or corrected.
 - a. Completion of all testing and training required.
 - b. Have all utilities connected and operational.
 - c. Dismantled and removed temporary construction facilities.
 - d. Completion of Plant Startup and diversion of sewage to the new facility as shown and/or specified.
 - 2. Step 2: Engineer inspects the work to determine if it is substantially complete, and issues a Certification of Substantial Completion plus a "punch list" of items to be completed or corrected.
 - 3. Step 3: Contractor completes and/or corrects all punch list items and notifies in writing that his work is ready for final inspection. At this time, a final application for payment is submitted to the Engineer.
 - a. Engineer's and Contractor's punch list of deficiencies from the substantial completion inspection stating how each item has been corrected or otherwise resolved.
 - b. Submit a final meter reading for all utilities, a measured record of stored fuel and chemicals and similar data as of the time of final inspection.
 - c. Complete listing of all consumables and spare parts used by the contractor to service the elector-mechanical equipment after testing.
 - d. Submittal of Record Drawings.
 - e. Notify the Engineer that the facility is ready for the final inspection

including the punch list items and that all marred or damaged finishes have been repaired or restored in the notification letter.

4. Step 4: Engineer makes final inspection. When the Work is found to be acceptable under the Contract Documents, and the contract fully performed, Engineer will issue a final Certificate of Payment.

1.04 RE-INSPECTION FEES

- A. Should the Contractor fail to complete and/or correct all punch list items such that additional inspections are required by the Engineer, the Contractor will be billed at the Engineer's current rate for additional services. If the Contractor has any question with regard to any items on the punch list, he is to request clarification before final inspection.

1.05 FINAL PAPERWORK

- A. Prior to release of final payment, the General Contractor shall deliver the following items to the Engineer:
 1. Inspection Certificates, as applicable.
 2. Equipment and material guarantees/warranties.
 3. General Contractor's two-year guarantee of materials and workmanship.
 4. Materials and Equipment Manuals and Spare Parts as specified.
 5. All other guarantees, warranties and submittals, as specified.
 6. Receipts for extra materials delivered to the Owner.
 7. Make final change-over of locks and deliver keys.
 8. Final application for payment.
 9. Contractor's affidavit of release of liens (Spec. Section 00691 or AIA Form G706A).
 10. Consent of surety to final payment (Spec. Section 00692 or AIA Form G707).
 11. Final Project Record Documents. The purpose of final project record documents is to provide factual information regarding all aspects of work, both concealed and visible, to enable future modification of work to proceed without lengthy and expensive site measurement, investigation, and examination.
 - a. Transfer of Data to Drawings
 - i. Carefully transfer all data to a clean set of drawings, coordinating changes as required.
 - ii. Clearly indicate at each affected detail and other drawing, a full description of changes made during construction, and the actual location of items to be located.
 - iii. Call attention to each entry by drawing a "cloud" around the area/s affected.
 - iv. Make changes neatly, consistently, and with the proper media to assure longevity and legibility.
 - b. Transfer of Data to other Documents
 - i. If documents other than drawings have been kept clean during progress of work, and if entries thereon have been orderly and acceptable to the Engineer, the job set of those documents other than drawings will be accepted as

- final record documents.
 - ii. If any such document is not acceptable to the Engineer, secure a new copy of that document from the Engineer at Engineer's usual charge for reproduction and handling, and carefully transfer the changed data to the new copy for acceptance by the Engineer.
 - c. Changes subsequent to acceptance
 - i. Contractor has no responsibility for recording changes in work subsequent to final completion, except for changes resulting from warranty work.
12. Contractor acknowledgement of Date of Substantial Completion.
 13. Provide copy of all certificates and approvals required from outside agencies, i.e. State Electrical Board.
 14. The above items are described in following articles or applicable sections of the Specifications.
 15. Inspection Certificates. Each subcontractor shall, upon completion of the Work, secure in triplicate from any state or local governing bodies having jurisdiction in dictating that the Work is in strict accordance with the applicable codes and deliver the same to the General Contractor for transmittal to the Owner.

1.06 WARRANTY

- A. The General Contractor and each subcontractor shall remedy any defects due to faulty materials or workmanship and pay for any damage to other Work resulting therefore, which shall appear in his Work within the specified Warranty Period, as specified in the Supplementary General Conditions. The Contractor's warranty shall begin upon issuance of the Notice of Acceptance and in accordance with the terms of any special warranties provided in the Contract. The Owner shall give notice of observed defects with reasonable promptness.
- B. A final warranty inspection will be required thirty (30) days prior to expiration of the warranty.
- C. Upon completion of his Work, the General Contractor shall deliver to the Engineer in duplicate, a written warranty based on the provision of the Article properly signed and notarized. Warranty shall be address to the Owner and assembled in a binder with a durable plastic cover and with a table of contents.
- D. The warranty period shall begin upon acceptance by Owner with written Notice of Substantial Completion.
- E. In the event that multiple or phased system startups are required, warranty periods will begin upon acceptance by Owner with written Notice of Substantial Completion for each system after successful startup of the complete system.
- F. Equipment warranties shall be the greater of the manufacturer's standard warranty and the project warranty requirement stated in the Supplemental

General Conditions.

1.07 MISCELLANEOUS KEYS, SWITCHES AND WRENCHES

- A. At the completion of the project, all loose keys for hose bibs, adjustment keys and wrenches for door closers and panic hardware, keys of electric switches, electrical panels, etc., shall be accounted for and turned over to the General Contractor for transmittal to the Owner.

1.08 SPARE PARTS

- A. The contractor shall provide all spare parts and products as specified in the technical specifications. Contractor shall submit an itemized list of all items furnished describing each item and citing all appropriate specification sections and paragraphs. Each item shall be packed for long term storage and marked or tagged for easy identification.
 - 1. Items shall be delivered to the project site to an area designated by the Owner.
 - 2. The contractor shall provide an inventory of delivered items and obtain a receipt from the Owner after inspection. The inventory shall be delivered with an affidavit stating these are the specified spare parts or products delivered by the manufacturer or supplier of the installed equipment or material.

1.09 FINAL CLEANING.

- A. Prior to final inspection, the contractor shall clean all interior and exterior surfaces exposed to view but shall avoid disturbing natural weathering of exterior surfaces.
 - 1. Interior Cleaning (During Construction)
 - a. Keep work areas clean so as not to hinder health, safety or convenience of personnel.
 - b. At maximum weekly intervals, dispose of waste materials, debris, and rubbish.
 - c. Vacuum clean interior areas when ready to receive finish painting. Continue vacuum cleaning on as needed basis, until substantial completion.
 - d. Vacuum clean interior spaces, including inside cabinets.
 - e. Control dust in work areas of existing facilities.
 - 2. Interior Cleaning (Final Cleaning)
 - a. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight exposed interior and exterior surfaces.
 - b. Wipe all lighting fixture reflectors, lenses, lamps, and trims clean.
 - c. Wash and shine glazing and mirrors.
 - d. Polish transparent and glossy surfaces.
 - e. Clean or replace all air and oil filters all air filters used during testing operations for mechanical equipment.

- f. Replace all burned out lamps.
- g. Broom clean process area floors.
- h. Mop office and control room floors.

3. Exterior Cleaning (During Construction)

- a. Construction debris shall be confined in strategically located container(s) covered to prevent blowing by wind. Debris shall be removed from the work area to container daily. Debris shall be hauled from the site once a week at a minimum.
- b. Keep weeds and other vegetation trimmed to 3 inch max height.
- c. Remove soils, sand, and gravel deposited on paved areas and walks as required to prevent muddy or dusty conditions.
- d. Comply with stormwater general permit requirements and monitor and employ best management practices.

4. Exterior Cleaning (Final Cleaning)

- a. Remove trash and debris containers from the site. Reseed areas disturbed by location of debris containers.
- b. Broom clean all paved surfaces.
- c. Rake clean other surfaces of grounds.

- B. The contractor shall comply with all safety standards and shall not bury or burn waste on the site.

1.10 CERTIFICATE OF FINAL COMPLETION

- A. The Owner/Engineer will issue a Certificate of Final Completion in writing after successful plant startup with proper operation and control, correction of all punch list items, receipt and acceptance of the verification letter, and all items in Project Closeout section are completed.

END OF SECTION