SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes requirements for contract closeout, including, but not limited to, the following:
   1. Substantial Completion procedures.
   2. Final Completion procedures.
   3. Warranties.
   4. Final cleaning.

B. Related Sections:
   - Section 012900 Payment Procedures
   - Section 017823 O&M Manuals
   - Section 017839 Project Record Requirements
   - Section 019113 Commissioning Requirements
   - Divisions 02 through 23 for specific closeout and special cleaning

1.2 DEFINITIONS

A. Substantial Completion: This means the Work is ready for preoperational checkout for the purpose for which it was intended, and only minor items remain to be completed or corrected that would either not affect the operation as intended or could be completed prior to the scheduled date of the pre-operational check-out.

B. Final Acceptance: Sufficient tests and inspections have been made by SRP to determine that the Work meets all the requirements of the Contract Documents. Successful completion of the tests and inspections, as determined solely by SRP, shall constitute acceptance.

C. Final Completion: All technical, performance, and commercial requirements of the Contract Documents have been met and all required “affidavit” information, warranty certificates, unconditional lien waivers, O&M manuals, and As-Built drawings have been approved by SRP and SRP is prepared to issue the final payment (including retention).

D. Prefunctional Tests (PFT): Tests that occur prior to starting the equipment. These are normally the completion of the manufacturer’s installation and startup checklists. This is a commissioning term.

E. Functional Performance Test (FPT): Test of the dynamic function and operation of equipment and systems. This commissioning test is performed after prefunctional tests are completed.

1.3 SUBSTANTIAL COMPLETION

A. Prerequisites: Before SRP will declare and document achievement of Substantial Completion, the following must have been accepted or waived in writing by the SRP Project Manager (PM).
1. Prepare a list of items to be completed or corrected (Punch List). As a minimum, all unresolved items from the QC Deficiency List must be included on the Punch List.

2. Prepare and submit one set of As-built (Red Line) Drawings to the SRP PM.

3. Prepare and submit [1] one set of Operation and Maintenance manuals. Submit the O&M Manuals without actual warranty letter since date of Substantial Completion has not been determined.

4. All Prefunctional Tests must be completed, submitted, and accepted prior to declaration of Substantial Completion.

5. Submit the training schedule and all training outlines for approval.

6. Submit the updated schedule or 3 week schedule showing Functional Performance Tests.

7. All assets requiring asset tags are properly labeled with tags supplied by SRP.

8. Acceptance Test for Fire Protection Systems has been conducted by SRP Fire Marshall and a satisfactory report (with unresolved issues) or total acceptance has been recorded on the Inspection Report.

B. Inspection: Submit an e-mail request to the SRP PM for the Substantial Completion inspection by the A/E Team or SRP. On receipt of request, Architect or SRP will proceed with inspection or notify Contractor of unfulfilled prerequisites. Architect or SRP shall provide the following:

1. Prepare the Certificate of Substantial Completion after satisfactory inspection or notify Contractor of issues (whether on Contractor's punch list or items identified by A/E,) that must be completed or corrected before certificate will be issued.

2. Reinspection: Request reinspection when the Work identified in previous inspections is completed or corrected.

C. Functional Performance Testing: The final stage of Commissioning (Functional Performance Testing) will normally begin once SRP or A/E inspection for Substantial Completion has occurred.

1.4 FINAL ACCEPTANCE

A. Final Acceptance occurs after the completion of functional performance tests of designated systems and equipment.

B. Prerequisites:

1. Resolution of all issues on the installation and startup checklists.

2. Completion of Functional Performance Testing

3. Resolution of all Punch List and Commissioning Log issues.

4. Satisfactory completion of all Work.

C. Procedure:

1. In the event that some systems or parts of work were not accepted or approved during the Substantial Completion inspection, request a final acceptance inspection via e-mail to the SRP PM.

2. Schedule a meeting with the SRP PM and A/E to review all prerequisites in 1.4 B.

1.5 FINAL COMPLETION

A. Final Completion encompasses satisfactory completion of all technical requirements, functional performance requirements, all documentation, and all other contractual requirements.

B. Prerequisites:

2. Written certification of satisfactory resolution of all items on Punch List and Commissioning Issue Log (with signature and date).
3. Completion of all training.
4. Final acceptance of O&M manuals.
5. Final acceptance of Contractor’s Red Line Drawings by SRP and the A/E.
6. If applicable, final pest-control inspection report and warranty.
7. Final cleaning.

C. Procedure
1. Submit a final Application for Payment according to Section 012900 “Payment Procedures.”
2. Notify SRP PM of mailing of final Application for Payment.
3. Request date for Business Review Meeting.

1.6 PUNCH LIST
A. Organization of List: Identify each space or area affected with incomplete items and items needing correction including areas disturbed by Contractor that are outside the limits of construction
1. Include name of problem, reason for problem, responsible subcontractor, date item added to list, date resolved, and initials of SRP person inspecting or accepting the corrected work.
2. Submit Punch List in Excel electronic format.

1.7 WARRANTY
A. As defined in Paragraph 4.20 of the General Terms and Conditions of the contract, warranty is 2 years from date of Substantial Completion or 18 months from the date of Final Acceptance whichever is longer.

B. Submit Warranty documents in accordance with Section 017823 O&M Manuals.

PART 2 - PRODUCTS

2.1 MATERIALS
A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

1. Use cleaning products that meet Green Seal GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.
PART 3 - EXECUTION

3.1 FINAL CLEANING

A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.

1. Complete the following cleaning operations before requesting Final Completion:

   a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
   b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
   c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
   d. Remove tools, construction equipment, machinery, and surplus material from Project site.
   e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
   f. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
   g. Sweep concrete floors broom clean and wet mop in unoccupied spaces.
   h. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
   i. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
   j. Remove labels that are not permanent.
   k. Touch up and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

      1) Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates.

   l. Wipe surfaces of mechanical and electrical equipment and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
   m. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
   n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
   o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
   p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and
defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

q. Leave Project clean and ready for occupancy.

C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests. Prepare a report.