CHAPTER 14 – CONSTRUCTION SERVICES: PROJECT CLOSE-OUT

SECTION 14.1 GENERAL

14.1.1 Purpose of this Section

This chapter describes project close-out requirements for all projects.

14.1.2 Project Close-Out Goal

The goal for all projects will be completion of all project closeout documentation within 90 days after final completion. The project budget, inclusive of completion of the HECO-14, however, will not be closed until the project warranty expires which is one year after occupancy or final completion, whichever is later, and all warranty items are resolved.

14.1.3 Warranty Inspection

A ten-month inspection will be conducted as part of warranty enforcement to ensure all warranty issues are identified and corrected.

14.1.4 Sequence of Events

The sequence of events to achieve project completion and close-out includes the following milestones which are described in the succeeding sections. It should be noted that occupancy can occur after substantial or final completion depending on the University requirements.

- Completion of W&M Red Zone Checklist
- Substantial completion
- Occupancy
- Final completion
- Project close-out documentation
- Project Management Debrief Documentation
- Ten-month warranty inspection
- Warranty item completion
- Project budget close-out

SECTION 14.2 SUBSTANTIAL COMPLETION

14.2.1 Preparation for Substantial Completion

As a project nears substantial completion, the University Project Manager shall coordinate with the Contractor on the completion of the W&M Design and Construction Red Zone Checklist, ensuring that critical activities have taken place that will enable the achievement of Substantial Completion. This checklist includes a comprehensive listing of requirements in several categories, including:

- System Component Startup
- Testing and Balancing

- Building Automation
- Mechanical Items
- Electrical Items
- Trainings
- Pre-Move In Checklists
- Punchlist
- DCM Figure 14.1 Closeout Requirements
- Additional Contractual Requirements

14.2.2 Determination

When the Contractor determines that the work, or a designated phase or portion thereof, will be substantially complete and ready for testing and inspection, he shall complete and send form HECO-13.2a with a list of the work he knows to be unfinished or defective to the A/E at least ten (10) days prior to the date he has set for substantial completion. The A/E will forward the HECO-13.2a to the University and attach a written endorsement, based on his periodic inspections, as to whether or not he concurs that the project, or phase, should be substantially complete on the date set by the Contractor. The A/E will then coordinate and arrange a date on or shortly after the date set by the Contractor for the substantial completion inspection to be conducted.

14.2.3 Inspection

Participants in the substantial completion inspection shall include representatives of the Contractor, including those of the mechanical, electrical, and major equipment Subcontractors, the A/E, University representatives, and DEB staff. Facilities O&M staff shall be invited to attend. The A/E shall conduct and document the inspection and compile a written list of the work or deficiencies noted (punch list) which need to be completed or corrected. If the A/E, the Fire Marshal's representative and the DEB representatives agree that this project, or this portion of the project being inspected, is substantially complete in accordance with the contract documents, the A/E shall execute the appropriate Certificate of Partial or Substantial Completion (HECO-13.1a), and submit it to the Owner. Attach copies of the punch list, the Contractor's HECO-13.2a, the Certificate of Use and Occupancy HECO-13.3, and other documents as appropriate.

14.2.4 Submission of Documentation to DEB

The University PM may forward this material to DEB and request that a Certificate of Occupancy be issued, or the University may wait to request the Certificate of Use and Occupancy when final completion is achieved. If one or more re-inspections of the work that the Contractor declared to be Substantially Complete are required because the work was not substantially complete as stated, the Contractor shall reimburse the University for the costs of the re-inspections. Do not accept the project as Substantially Complete unless the facility (part or whole) is ready for occupancy.

SECTION 14.3 OCCUPANCY

14.3.1 Definition

Occupancy occurs when the owner moves into and/or initiates use of the facility for its intended functional purpose. This may occur after the substantial or final completion inspections subject to Building Code Official approval.

14.3.2 DEB Inspections

Following issuance of the Substantial Completion Certificate, the University PM will coordinate with DEB for fire safety and code compliance inspections. The University Construction Manager will coordinate a preparatory occupancy inspection, as required, with the University PM and A/E to ensure readiness for occupancy inspections.

14.3.3 Application for Certificate of Use and Occupancy

Upon successful completion of the inspection, the University PM will prepare a HECO- 13.3a (Application for Certificate of Use and Occupancy) for DEB approval. The following documentation will accompany the 13.3a:

- HECO 13.1a (or 13.1 if delayed until after final completion)
- HECO 13.2a (or 13.2 if delayed until after final completion)
- SFMO Letter of Acceptance
- Checklist for Occupancy
- Structural & Special Inspection Report
- Elevator Inspection Report (if applicable)
- Potable Water Report
- Project Deficiency Punchlist
- Sprinkler Head Database Update confirmation

SECTION 14.4 FINAL COMPLETION

14.4.1 Definition

Final completion is the date of the University's acceptance of the project from the Contractor based on A/E and Contractor certification that the project is totally complete in accordance with the contract documents. Procedures for determining Final Completion are set forth in Section 44 of the General Conditions of the Construction Contract (HECO-7).

14.4.2 Determination

When the Contractor determines that the items listed in the "punch list" have been completed and that the work is complete and ready for final testing and inspection, he shall complete Form HECO-13.2 and send it to the A/E at least five (5) days prior to the date the Contractor has set for the work to be ready for Final Inspection. The A/E will forward the HECO-13.2 to the Owner and attach a written endorsement, based on his periodic inspections, as to whether or not he concurs with the date set by the Contractor.

14.4.3 A/E Review

The A/E shall receive the Certificate of Completion (HECO-13.2), the Affidavit of Payment of Claims (HECO-13), written guarantees, equipment and operating Manuals and related documents assembled by the Contractor, review same and turn them over to the University at the final inspection. The A/E shall record any items noted for completion or correction and shall promptly follow up on the items and notify the University, in writing, when they are completed.

14.4.4 A/E Inspection

The A/E shall conduct the final inspection. A representative of the State Fire Marshal's office will either be

present at the inspection or otherwise inspect the completed work and advise the University whether the work meets the fire safety requirements of the applicable building code. The University may have other persons participate in the inspection. If one or more re-inspections are required because the work purported to be complete is not complete, the Contractor shall reimburse the University for all re-inspection costs. If the A/E and the Fire Marshal's representative agree that the building is complete in accordance with the contract documents, and safe to occupy, the A/E shall execute the "Certificate of Completion by the Architect/Engineer" (HECO 13.1) and deliver it, along with the Record Drawings and all other required material, to the University for final acceptance of the project.

14.4.5 Final Completion Certificate

Following issuance of the Final Completion Certificate, the University PM will coordinate with DEB for inspection if these inspections have not been completed for occupancy following substantial completion. The Contractor will coordinate a preparatory occupancy inspection, as required, with the University PM and A/E to ensure readiness for occupancy inspections.

SECTION 14.5 PROJECT CLOSE-OUT DOCUMENTATION

Project close-out check lists are attached at Figures 14-1 and 14-2. These checklists are to be submitted to the Director, Design & Construction, together with all required documentation not later than 90 days after occupancy or final completion as noted above.

14.5.1 Close-Out Documentation

Close-out documentation includes the following:

- Record drawings to include approved single line drawings (refer to Chapter 13 requirements)
- Warranty documentation
    - For all major equipment
    - Roofing
- Operations and maintenance manuals
- Commissioning and Test and Balance reports, with backup
- F-1 Report

14.5.2 Close-Out Briefing

The University PM will schedule a close-out briefing to the Director, Design & Construction and the Executive Director, Facilities Operations to present all close-out documentation. Compliance with the checklists at Figures 14-1 and 14-2 will be standard for successful close-out to include a HECO-14 form prepared at warranty completion and budget close-out.

14.5.3 Scheduling the Ten-Month Warranty Inspection

At this meeting, the University PM will schedule the ten-month warranty inspection described below. Responsibility for administration of the warranty will pass to the Executive Director, Facilities Operations at this time with continuing support by the University PM as outlined below.

14.5.4 Retainage for Preparation

A sufficient amount of contract retainage to cover document preparation will be held by the University until all close-out documentation is provided.

SECTION 14.6 TEN MONTH WARRANTY INSPECTION

14.6.1 Coordination of the Ten-Month Inspection

The University PM will coordinate and conduct a ten-month inspection to ensure that unresolved warranty issues are corrected within the warranty period. The University PM will ensure the A/E, Contractor, O&M staff, and user conduct a joint inspection to review remaining warranty items. The University PM is responsible for ensuring that warranty responsibilities within the contract scope of work, not University maintenance and repair responsibilities or out of scope items, are inspected.

SECTION 14.7 WARRANTY ITEM COMPLETION

Upon expiration of the warranty period, the University PM will provide a formal letter to the Contractor identifying unresolved warranty items. The letter will provide a period commensurate with the nature of the unresolved items for repair. If the items are not repaired within the period allocated without reasonable cause, the letter will note that the University reserves the right to affect repair by alternate means at the Contractor's expense. Upon final completion of all items, the University PM will initiate release of the HECO-14 through the initiation of the PCL process, previously prepared as part of contract close-out documentation may be submitted.

SECTION 14.8 PROJECT BUDGET CLOSE-OUT

Following receipt of University PM confirmation that all warranty items are complete, the completed HECO-14 will be routed for approval and signature as part of the PCL process. An information copy will be provided to DEB for state-funded capital projects. The University PM will then assist with any required information and/or coordination to close out any open purchase orders/contracts to close the project budget.

SECTION 14.9 EVALUATIONS

14.9.1 Project Debrief Form

At the conclusion of a project, the PM is responsible for completing the OUA Project Debrief Form. This form shall be reviewed with the Director of Design & Construction and the University Architect.

Figure 14-1
Project Close-Out Checklist

The College Of WILLIAM & MARY

Department of Facilities Planning, Design and Construction
P.O. Box 8795
Williamsburg, Virginia 23187
757-221-2245, Fax - 757-221-2473

CAPITAL& MR PROJECT CLOSE OUT CHECK LIST FOR ARCHIVE FILES

 # 1: The following documents are included in the final close out archive file maintained in the FPDC department.

#2: These documents may be copied and archived with the Master Files.

*#3: The **original** documents listed are to remain in the close out files.*

Project Name: _____ **Project #:** _____

Project Manager: _____

Banner Index: _____ **Banner Org:** _____

Retain a copy of this check list in the close-out file folder for the project.

DESCRIPTION		DOCUMENT DATE
CO/HECO - 12	Final Payment by Contractor	
Invoice	Final Invoice for A/E	
CO/HECO - 13	Affidavit of Payment of Claims	
CO/HECO - 13.1	Certificate of Completion by A/E or Project Manager	
CO/HECO - 13.1a	Certificate of Substantial Completion by A/E	
CO/HECO - 13.2	Contractor Certificate of Completion	
CO/HECO - 13.2a	Certificate of Partial or Substantial Completion by Contractor	
CO-13.3	Certificate of Use and Occupancy	
CO-14	Close Out Document	
Close out Finanical	1 Year After Occupancy or after final completion, whichever later	
Internally generated	FOAPAL Request Form- Banner Project Set Up	
Internally generated	Final budget for entire project	
Building Permit	Building Permit	
Record Drawings	Includes 4 CD's	
F-1 Report	SCHEV	
Single Line Drawng		
Warrenties/O&M		
Date:10 Mon. Inspect.		

Completed by: _____ File Completion Date: _____

Figure 14-2
Annual Permit Project Close-Out Checklist



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P.O. Box 8795
Williamsburg, Virginia 23187
757-221-2245, Fax - 757-221-2473

PROJECT PERMIT PROJECT CLOSE OUT CHECKLIST FOR ARCHIVE

 # 1: The following documents are included in the final close out archive file maintained in the FPDC department.

#2: These documents may be copied and archived with the Master Files.

*#3: The **original** documents listed are to remain in the close out files.*

Project Name _____ **Project #:** _____

Banner Index: _____ **Banner Org:** _____

Project Manager: _____

Retain a copy of this check list in the close-out file folder for the project.

DESCRIPTION		DOCUMENT DATE
CO - 12 AE Invoice	Final Payment by Contractor/AE (if applicable)	
CO-13.3	Certificate of Use and Occupancy (if applicable)	
Internally generated	FOAPAL Request Form- Banner Project Set Up	
Internally generated	Final budget for entire project	
Project Req. Form Annual Permit	Project Permit Form (original request); with inspections for construction; and final close out signature by Director, FPDC	
Project Permit Form Annual Permit	Project Permit Form (original request); with inspections for construction; and final close out signature by Director, FPDC	
Building Permit	Project Permit Form (original request); with inspections for construction; and final close out signature by Director, CRT	
Record Drawings	Includes 4 CD's	
F-1 Report	SCHEV (if applicable)	
Single Line Drawing		

Completed by: _____ File Completion Date: _____