**XX Project Close-Out**

**a) Operations & Maintenance manuals/ As Built drawings & Specs/ Startup Reports**

**What Is It?**

* Documents provided by the contractor for all equipment and materials nstalled during construction
* As-Built drawings are submitted by the contractor to document any changes during the construction period.
* Startup Reports for equipment

**Who Is Involved?**

* Contractor
* Sub-contractors
* WSU Project Manager

**How/Process**

* Contractor collects all information from sub-contractors and organizes into Project closeout binders (2 copies). Binders are submitted to A/E for review. Completed Binders are a requirement of release of final retainage payment. Electronic and 2 hard copies of closeout documents are required

**Checklist**

* See checklist later in this chapter

**Timeline Considerations**

* O & M Manuals are typically submitted at the end of the project when installation and training is complete.

**Forms**

* None

**Filing**

* Completed closeout binders are given to the Archivist who transmits copies to Operations for their use and files a copy for our files.

**b) Certificate of Substantial Completion**

**What Is It?**

* Complete by the A/E ( AIA form) or by WSU Project Manager if there is not A/E. This document begins the warranty period and signifies ownership of the project by WSU. This includes WSU responsibility for insurance of the project and the end of the contractor responsibility for the project/insurance with the exception of punchlist items to be completed.

**Who Is Involved?**

* A/E typically issues certificate of substantial complete, often accompanied by the punchlist which is used to quantify/identify the contractor’s remaining tasks.
* General Contractor
* Sub-contractors
* PM
* Architect & engineer
* Archivist

**How/Process**

* Form to be completed by A/E (AIA format) or WSU Project manager (WSU template)
* Project closeout is the process whereby the project manager confirms that all work has been completed by the contractor, all final payments are made, all documentation, warranties, waivers, training etc., have been received and the appropriate parties are notified that the financial accounts may be closed out

**Checklist**

* Indicate work that remains to be completed by listing or attaching the punchlist.
* Indicate date of Substantial Completion.

**Timeline Considerations**

* Substantial Completion is the date when the user may occupy the space and begins the warranty period. This date must be determined using some consideration and is often the date that the Fire Marshal determines the space may be occupied Absent a Fire Marshal inspection, the PM and A/E should determine an appropriate date.

**Forms**

* AIA form Certificate of Substantial complete (completed by the A/E)
* Contractor evaluation?
* WSU Certificate of Substantial Completion
* AIA Certificate of Substantial Completion

**Filing**

1. **Attic Stock**

**What Is It?**

* **Provide materials for repairs or replacement – eg ceiling tile, leftover paint, flooring materials etc . Check with Operations what types of materials we need to keep.**

**Who Is Involved?**

* Project Manager

**How/Process:**

* PM makes sure contractor turns over specified amount of attic stock to building engineer knows where the materials are stored.

**Checklist**

* Make sure contractor obtains signature of building engineer on a transmittal to include in closeout documents

**Timeline Considerations**

* At end of project – need to receive as part of closeout items required before final payment is releaed

**Forms**

* n/a

**Filing**

n/a

1. **Video Training**

**What Is It?**

* **For equipment that requires training coordinate with contractor or appropriate sub-contractor to have their staff train our Operations folks**
* **Student workers or PM does the video-recording.**

**Who Is Involved?**

* PM
* Contractor & Subs
* WSU Operations staff as appropriate to system

**How/Process:**

* Coordinate date/time and staffing to video record the training.

**Checklist**

* Try to capture on video names of folks in attendance, instructions/explanations, questions and answers
* Sign –in sheet to document attendance by our Operations folks
* Keep a copy of any printed instructions provided to include in closeout binders
* Contractor may ask for a copy of sign-in sheet and video for their records

**Timeline Considerations**

* Prior to turnover to Operations.

**Forms**

* Prepare a meeting sign-in sheet for all to sign in to record who attended
* Record on a disk and place disk and sign-in sheet in closeout binders for project.

**Filing**

* File in closeout binders

1. **Warranties & Service Contracts**

**What Is It?**

* **Contractors construction warranty**
* **Product warranties**
* **Service contracts (special equipment)**

**Who Is Involved?**

* PM
* Contracto & Sub Contractorr
* Consultant
* Operations
* Archivist

**How/Process:**

* Contractor provides construction warranty on construction per the contract
* Sub contractors provide construction warranty on construction, per the contract
* Specifications will indicate what equipment is to have a separate equipment or material warranty ( eg roofing, mechanical equipment etc)
* Timeframe for warranties on individual pieces of equipment are indicated in the specifications, by the consultant
* Documents need to be included in contractor’s closeout binders
* Provide copy of all warranties in closeout binders turned over to Operations
* Provide a copy of all roof warranties to D. Kuffner

**Checklist**

* Check to see that each discipline and each sub-contractor is represented by appropriate warranties in closeout binder and that the date of the waqrranty matches the date on the Certificate of Substantial Completion
* Check equipment warranties

**Timeline Considerations**

* Need before final payment is released to contractor

**Forms**

* Xxx

**Filing**

* Xxx

1. **Project Turnover to Plant Operations**

**What Is It?**

* **Archivist provides a copy of Operation and Maintenance manuals, warranties, training videos etc over to Plant Operations**

**Who Is Involved?**

* PM
* Archivist
* Plant Operations

**How/Process:**

* PM archives all documents including (2) two copies of contractor’s closeout binders. Archivist provides documents to Plant Operations as needed

**Checklist**

**Timeline Considerations**

* Turn warranties over to Operations as soon as they are completed so they can follow up under warranty, as needed.

**Forms**

* Archivist prepares a transmittal for docs turned over to Operations

**Filing**

* Xxx

1. **Contractor and A/E Evaluation**

**What Is It?**

* **Post construction evaluation of contractor and consultant**

**Who Is Involved?**

* PM
* Director
* Planner

**How/Process:**

* Xxx

**Checklist**

* Xxx

**Timeline Considerations**

* After contractor’s closeout docs and final invoice have been received

**Forms**

* Contractor Evaluation ( being finalized)
* Consultant Evaluation ( not yet drafted)

**Filing**

* Project file and in central evaluation file ( ?)

1. **Turnover of final project information to Planning/Senior Director etc for future reference**

**What Is It?**

* **Final finish information - to Planning for recording in standard for each building**
* **Final furniture selections - to Planning for recording in standard for each building/department**
* **Detailed information about final project cost including any special quotes/proposals+ quantity information – turn over to Estimator to update estimating database of information ???**
* **Make sure information is filed in the general building file as needed for general reference in future construction.**
* **Changes to design standards – turned over to Senior Director for inclusion in updated Campus Design Standards**
* **Anything special that needs to be kept for future reference – eg locations of mouse alarms in Scott Hall – turn over to Director of Planning and Operations for their reference**
* **?? Location of equipment that requires emergency generator backup or special consideration in an emergency ( labs) or other special attention to maintain critical functions**

**Who Is Involved?**

* PM
* Planner ( project planner or Planner in charge of building finish standards)
* Operations

**How/Process:**

* Provide revised finish schedule, plans or other documents as needed

**Checklist**

* Think about your scope – What information would someone need in the future relative to the scope you have completed

**Timeline Considerations**

* At project completion

**Forms**

* Xxx

**Filing**

* Xxx
* Insert sedction here to include Testing and Balancing
* C & IT rest reports – add infor here
* AHJ approval - eg State, DWSD

1. **Post Mortem Evaluation**

**What Is It?**

* Comprehensive review of the project team to glean “lessons learned” from the project
* Review percentage of change in cost of construction

**Who Is Involved?**

* Planner
* PM
* WSU Customer
* Building Coordinator
* WSU Operations
* Directors
* Senior Director as needed ( larger projects)
* Consultants
* Sub-Consultants
* Contractor or Construction Manager
* Sub-Contractors as needed for large/complex scopes of work
* Siemens?

**How/Process:**

* Coordinate a meeting with all parties present

**Checklist**

* Xxx

**Timeline Considerations**

* Coordinate meeting as soon after project is completed to ensure that details are fresh in stakeholder’s minds

**Forms**

* Post-Mortem Evaluation - adjust as needed to include discussion of special topics relative to project scope
* Change order Summary
* Change Order Summary with allowance

**Filing**

* Xxx

1. **Update Space Management Information**

**What Is It?**

* **Update/maintain current information in university space management system. Minimum information includes any changes to location of walls, doors, windows. And changes to room numbers. Ongoing effort to include mechanical and electrical, fire alarm/suppression information to update/develop the university base files of information on all buildings.**

**Who Is Involved?**

* PM
* Space Manager

**How/Process:**

* PM obtains live( currentlyAutoCAD format) electronic documents to the Space Manager

**Checklist**

* Make sure consultant has bound all x-refs so drawing files open properly and Space Manager can understand the information provided to isolate changes that need to be recorded in the Space Management System

**Timeline Considerations**

* At end of project when consultant has completed record drawings

**Forms**

* Need Space Manager sign-off on Petition to Close

**Filing**

* Petition to Close

**Checklist**

We should reference where in the toolbox that this form can be found instead of inserting it here.

Contractor is Responsible to submit the following:

|  |  |  |  |
| --- | --- | --- | --- |
|  | **CONTRACTOR - CLOSEOUT BINDER TABS** | Electronic | Hard copy |
|  | ***Itemized*** transmittal from General Contractor |  | 3 |
| 1 | Record Drawings/ As-Builts |  | 3 |
| 2 | Record Specifications |  | 3 |
| 3 | Contract |  | 3 |
| 4 | Change Orders & backup docs |  | 3 |
| 5 | Certificate of Substantial Completion |  | 3 |
| 6 | Punchlist & Punchlist Completion sign-off from A/E |  | 3 |
| 7 | Emergency Contact List |  | 3 |
| 8 | List of all Sub-Contractors |  | 3 |
| 9 | Permits, Certificates of Inspection/Acceptance, Occupancy Permit |  | 3 |
| 10 | Warranties |  | 3 |
| 11 | Field Test Records, Commissioning Records |  | 3 |
| 12 | Final Submittal/Shop Drawing Log |  | 3 |
| 13 | Reviewed/Approved Shop Drawings |  | 3 |
| 14 | RFI Log and copy of all RFIs |  | 3 |
| 15 | Attic Stock/Spare Parts - log and sign & off from WSU staff |  | 3 |
| 16 | O & M Manuals |  | 3 |
| 17 | Training/Orientation - sign-in sheets, information meeting mins |  | 3 |
| 18 | Notification of Final Completion and Request for Final Inspection |  | 3 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  | **AE Documents** |  |  |
|  | Record drawings | Live electronic format (.dwg) | 1 |
|  | Record Specifications | live electronic format | 1 |
|  | Copy of all Bulletins, ASI, etc | live electronic format | 1 |

**k. Testing and Inspections**

**l. Project Close-Out Check list - PTS account closeout**

**What Is It?**

* This check list is meant to help you complete all the tasks required at the end of a project within the time frames set out by policy. It is separated into 3 categories, one that the PM completes, one that the supervisor and the PM complete and one that Business Services completes.
* There is a KPI for this. A plant fund must be closed within 150 days of substantial completion.

**Who Is Involved?**

* + Project Manager can work with the students to complete

**How/Process: subtitle**

* Fill out one per project with project information requested. Date and initial as the items below are accomplished.
* SUBSTANTIALY COMPLETE  
  Record the date that the project achieves substantial completion on the left side of the form. In order to determine when all your close out activities should be finished estimate the dates by recording the date 30 days from Substantial completion on the right side under the estimated date on the Final Completion row. Near the bottom of the form record the date 90 working days from substantial completion on the right side under the estimated date on the Plant Fund Closure row.
* FINAL COMPLETION  
  is achieved when the construction including the punch list is completed. You start receiving the documentation listed on the form from the contractor and the design consultant.
* SUBMIT AS-BUILTS and O&M MANUALS  
  A transmittal listing all the documents being turned over to Plant Operations and Maintenance must be ***signed*** by the Senior Director of Plant Operations. If the project was a deferred maintenance project be sure to discuss any outstanding items or items of concern from PO&M at a close out meeting. If there is contingency and the AVP agrees to the spending then complete issue raised by PO&M. If items were not completed due to budget inform PO&M and the deferred maintenance planners so the projects can be placed on the running list of projects.
* SUBMIT ELECTRONIC DOCUMENTS TO:  
  Archivist – Turn over to the Archivist the ACAD documents from the architect. This will include electronic documents and possibly a hardcopy As-Built from the contractor.
* C&IT – If your project installed new fiber or relocated the existing fiber on campus submit with a transmittal which must be ***signed*** by Computer and Information Technology (C&IT).
* SPACE MANAGER – Notify the space manager when the electronic documents have been submitted to the Archivist and turn over the customer contact name and information as well as the room uses (offices, storage, conference, lab etc.) for the space renovated or built by the project. The space manager will input the data into the Archibus space management system.
* VERIFY ALL FINAL INVOICES PROCESSED  
  Motivate the vendors to submit their invoices for payment. When working with a preferred design consultant be sure to evaluate the final construction cost and the fees and adjust accordingly. The student assistants can help track this paperwork down.
* LIQUIDATE ALL ENCUMBERED BALANCES  
  Once all invoices have been paid, if encumbered balances exist print a copy of the Plant Fund Status Sheet and mark the sum to be liquidated. Initial, date and turn in to Business Services. The student assistants can help with this paperwork.
* RECONCILE FINANACIAL SUMMARY  
  Be sure to reconcile the financial summary with the updated plant fund summary once all the invoices are paid and the liquidated balances have been adjusted. This will determine the amount of money to be returned to the funding source. The student assistants can help with this paperwork.
* EMAIL BUSINESS SERVICES REGARDING BALANCE RETURNED  
  If the balance being returned is greater than or equal to 20% of the total original budget send an email to Business Services explaining why. Talk to you supervisor if needed.
* CLOSE FO FOR PM FEES  
  PM fees are submitted monthly however due to the billing cycle in Business Services and Fiscal Operations they are not posted on the plant fund status sheet until two months after they are recorded. (ie. January PM fees will show up on the PFA status sheet in March.) Do not charge time for completing close out activities or the PFA closure will be delayed. On the line *Last day fees were charged* record on the line to the right the date that this occurred. This will help us calculate when the paperwork can be submitted to Business Services to be closed.
* PLANT FUND CLOSURE  
  Sign the petition to close and submit with the check list to your supervisor.
* REVIEW PAPERWORK WITH SUPERVISOR  
  Supervisor to submit paperwork to Business Services after final PM fees are billed. PM to change the Status of the PTS project to “Account to be Closed.”
* BUSINESS SERVICES   
  Business services will verify liquidations, PM fees, and once completed will submit Petition to AVP for signature. The AVP will sign and return to Business Services. The account will then be closed. The PTS status will be changed by Business Services to Plant fund closed and the project will be made inactive. Business Services will issue the Memo to Fiscal Operations to close the account and send a copy to D&CS.

**Timeline Considerations**

* + A plant fund account must be closed within 150 days of substantial completion.

**Forms**

* The form is located within PTS.
* 