

## **PROCEDURE FOR TURNOVER OF NEW BUILDINGS FROM UBCPT TO UBC BUILDING OPS**

The Construction Manager at UBC Properties Trust (currently Michael Beza) is responsible for ensuring O&M Manuals, As Built drawings and other documentation as noted in Appendix A (attached) is forwarded to UBC Records, Attention Robson Agnew, 2329 West Mall (Tel. 604 822 7217.) (Note: Inspection Report, Building Location Survey and Specifications should be forwarded to Records at the beginning of the project but they are noted on this list as a reference.)

- O&M Manuals (Provide 2 paper copies and if possible a CD with a digital copy in word, word perfect, PDF or TIFF. Note: this is now part of the Technical Guidelines and should be included on new projects.)
- As builts/Record drawings – 2 sets full size (D 36" x 24") paper copies plus a CD with AutoCAD and PDF versions (underground utility drawings ONLY should be on E size 34" x 44")

### **6 months prior to occupancy**

- In consultation with the uses, UBCPT Development Manager to coordinate:
  - Key plans
  - Signage
  - Final FF&E budget
  - Electrical requirements
  - Move coordination logistics
  - IT requirements (ensure a jack is installed in the elevator machine room)
  - Elevator phone line request. Submit to Supervisor, Mechanical Maintenance and Electrical (currently Robert Nugent) or call Lorraine Beckett at 822 4178.
- UBCPT DM & UBCPT CM arrange a preliminary tour for Plant Ops staff. Request their comments within 1 week.

### **3 months prior to occupancy**

- UBCPT Construction Manager (UBCPT CM) begins familiarization process by attending Owner and User meetings
- Construction Project Manager initiates commissioning meetings to ensure schedules are adhered to and/or impact of amendments is discussed and info disseminated. Plant Ops representative required to attend.
- UBCPT CM to ensure UBC IT Services and Secure Access are aware of construction schedules and occupancy timeline; facilitate inclusion in meetings as required.

### **2 months prior to occupancy**

- UBCPT CM to arrange 2<sup>nd</sup> walk through for Plant Ops staff. Consultants are present to respond to questions. Request deficiency/wish list within 1 week. Follow up to ensure it is received.
- Review list with the UBCPT DM and Construction PM. Forward to consultant team. Follow up to ensure issues are responded to &/or resolved.

## 2 weeks prior to occupancy

- Final 'construction clean' of building (including mechanical and electrical rooms - MCC's & transformers.) **NOTE:** If UBC Custodial has not been contracted to do the final clean, UBCPT CM to arrange a walk through with their rep to identify any potential concerns and ensure they are addressed prior to the custodial turnover at occupancy.
- UBCPT CM to liaise with UBC Locksmiths to ensure keying of the building is on track for occupancy. **Note:** Keying of mechanical and electrical rooms is an ongoing issue with new buildings because during the turnover period (approx. 2-3 months) both UBC Building Ops and the Construction Company require access. The decision was made that these rooms would be keyed with a lower level key that all parties would be issued but despite best intentions this process is lagging behind and causing problems with access for all concerned. James Bellavance suggested that these rooms be rekeyed with the lower level key at the beginning of the project and this may be worth considering.
- UBCPT CM to arrange a walk through with Marcus von Minden from Fire Prevention Services, UBC (Office 604-654-0611, Cell 604-603-3245) to review what access the Fire Department requires in the event of an emergency. Marcus is responsible for submitting the appropriate paperwork to the UBC Key Desk and ensuring required keys are deposited in the Lockbox.
- Ensure the Field Safety Representative (elevators) receives a copy of Certificate of Inspection for each elevator and that any deficiencies have been rectified by the contractor. Elevator emergency telephones to be programmed to ring through to Campus Security at 822-0445.

## 1 week prior to occupancy

- PRELIMINARY OCCUPANCY WALKTHROUGH: Ensure UBC Fire Life Safety staff is included in the occupancy walk through with the Fire Department. Provide them with the Sequence of Operation in advance (as programmed in by manufacturer's representative.) They also require a copy of the completed verification report and a copy of the device list in word text format (programmers report.) If possible, assist UBC FLS in obtaining a copy of the electrical as built drawings from the contractor. UBC FLS will generally take the initiative and make direct contact with the contractor to arrange for a copy of the red line working drawings. Ensuring these requirements are met facilitates a timely turnover.

## Prior to Occupancy

- FINAL OCCUPANCY WALKTHROUGH: Occupancy Permit obtained
- ADDITIONAL TESTING FOR NEW BUILDINGS ONLY:
  - **FULL POWER-OFF TEST.** The main power switch to the building to be turned off by Utilities. This will check the emergency generator system, confirm what is on emergency power and more importantly allow start up the building, after an outage, under controlled conditions
  - **FULL SUPPLY FANS-OFF TEST.** This is to check operation, interlocks and ensure that all doors are able to be opened in the case of an emergency.
  - **FULL FIRE ALARM TEST.** Initiated by a pull station or other actual device. This allows a physical check of the FA operation in a full alarm

condition. Fans should be tested to operate safely on fire alarm without any BMS involvement.

- **ELEVATOR FIRE ALARM RECALL (if applicable)** Full operational test of elevator FA recall system. This is no longer a simple test because depending on where in the building the fire is located the elevators will operate differently. It must be tested in all modes which has not happened in the past. There is also some confusion as to whether this is the FA or elevator installer responsibility.

### **Occupancy**

- Establish deficiency protocol with Users; advise UBC Facility Manager and Trouble Calls on how to manage calls from Users
- UBCPT CM to communicate with UBC Custodial staff to assume operational responsibility for the building.

### **2-4 weeks post occupancy**

- Coordinate turnover to UBC Plant Operations.
  - Ensure FLS & BMS connections are complete and the building is monitored (essential)
  - Ensure all mechanical and electrical equipment demonstrations have taken place including Controls, FLS and Elevator crew. Invitations must be issued to Plant Operations 1 week in advance (currently through Jim Leggott.) Attend demonstrations, take attendance, and note dates on Turnover Checklist. Demonstrations should consist of two parts:
    - \* Classroom style to explain design and theory
    - \* Demonstration of equipment
  - Provide up to date deficiency list and building turnover checklist for discussion at turnover meeting.
  - At turnover meeting identify deficiency items to be reviewed at 3 month follow up meeting.
- UBCPT CM to arrange security review with UBC Secure Access, Campus Security and the Users.

### **2-3 months post occupancy**

- Construction company departs; UBCPT CM ensures one page summary of warranty information is provided
- UBCPT CM consolidates all deficiency lists into one master list and manages through to resolution. Enlists on site assistance as required.
- UBCPT CM works with consultants & Plant Operations to ensure all systems are commissioned and functioning properly.
- UBCPT CM ensures all documentation on the Turnover Checklist is received and forwarded to UBC Records ASAP.

### **3 month follow-up post occupancy**

- UBCPT CM to coordinate 3 month follow-up meeting to review deficiency list & address any new or ongoing problems.
- Plant Operations to provide UBCPT with final deficiency list (including any concerns about physical accessibility of equipment.)

### **10 months post occupancy**

- UBCPT/UBC Plant Operations to perform a warranty and post occupancy review with project consultants. UBCPT CM to continue to assist with any significant warranty issues requiring attention.

- As the year after occupancy progresses discernment between deficiencies and warranty work becomes more important. Educate building manager/occupants on who to contact for warranty repairs as required.

**12-18 months post occupancy**

- UBC Board 4 Project Completion Report process – review/consultation with stakeholders

- **APPENDIX A**

**DOCUMENTATION REQUIRED TO COMPLETE TURNOVER FROM UBCPT TO UBC**

|   |
|---|
|   |
| Inspection Report   |
| Occupancy Permit  |
| Building Location Certificate (Survey)  |
|   |
| <b><u>SPECIFICATIONS</u></b>  |
| Architectural and Structural Specifications   |
| Architectural Schedules and Details   |
| Mechanical Specifications   |
| Electrical Specifications   |
|   |
| <b><u>AS BUILT DRAWINGS</u></b>   |
| <b><i>Mechanical</i></b>  |
|   |
| <b><i>Electrical</i></b>  |
| <i>Electrical/Fire Alarm as built at turnover (can copy working drawing)</i>          |
|   |
| <b><i>Architectural</i></b>   |
|   |
| <b><i>Structural</i></b>  |
|   |
| <b><i>Civil</i></b>   |
|   |
| <b><i>Landscaping</i></b>   |
|   |
| <b><i>Irrigation</i></b>  |
|   |
| <b><u>OPERATIONS AND MAINTENANCE MANUALS</u></b>                                      |
| <b><i>Mechanical</i></b>  |
|   |
| <b><i>Electrical</i></b>  |
|   |
| <b><i>Fire Life Safety</i></b>  |
| Sequence of Operations (provide in advance of occupancy walk through)                 |
| Fire Alarm verification report & device list in word text format (programmers report) |
| Vesda Commissioning form (if applicable)  |
|   |
| <b><i>Architectural</i></b>   |
|   |
| <b><i>Sprinkler</i></b>   |
|   |
| <b><u>DEMONSTRATIONS AND TRAINING</u></b>   |
| <b><i>Mechanical</i></b>  |
|   |
| <b><i>Elevator</i></b>  |

|   |
|---|
|   |
| <b>Electrical</b>   |
|   |
| <b>Fire Alarm</b>   |
|   |
| <b>OH Door Operation</b>  |
|   |
| <b>Lighting Control</b>   |
|   |
| <b>Irrigation</b>   |
|   |
| <b>BMS</b>  |
|   |
| <b>Audio Visual</b>   |
|   |
| <b>These system tests are to be performed just prior to occupancy FOR NEW BUILDINGS ONLY:</b> |
| Full Power-Off Test   |
| Full Supply Fans-Off test   |
| Full Fire Alarm Test  |
| Elevator Fire Alarm Recall  |
|   |
| <b>REPORTS</b>  |
| Air Balance Report  |
|   |
| Water Balance Report  |
|   |
| Commissioning Documentation   |
|   |
| <b>Turnover Maintenance Materials</b>   |
|   |
| Excess Materials  |
| Paint   |
| Spare Sprinkler Heads   |
|   |
| <b>Keys to Building</b>   |