

## **PART 1 - GENERAL**

### **1.1 RELATED SECTIONS**

- .1 Section 01 78 00 – Closeout Submittals.
- .2 Section 01 91 33 – Commissioning Forms

### **1.2 SUMMARY**

- .1 Section Includes:
  - .1 This section is limited to portions of the Building Management Manual (BMM) provided to Departmental Representative by Contractor.
- .2 Acronyms:
  - .1 BMM - Building Management Manual.
  - .2 Cx - Commissioning.
  - .3 PI - Product Information.
  - .4 PV - Performance Verification.
  - .5 WHMIS - Workplace Hazardous Materials Information System.

### **1.3 GENERAL REQUIREMENTS**

- .1 Standard letter size paper 216 mm x 279 mm.
- .2 Methodology used to facilitate updating.
- .3 Drawings, diagrams and schematics to be professionally developed.
- .4 Electronic copy of data to be in a format accepted and approved by Departmental Representative.

### **1.4 APPROVALS**

- .1 Prior to commencement, co-ordinate requirements for preparation, submission and approval with Departmental Representative.

### **1.5 GENERAL INFORMATION**

- .1 Provide Departmental Representative the following for insertion into appropriate Part and Section of BMM:
  - .1 Complete list of names, addresses, telephone and fax numbers of contractor, sub-contractors that participated in delivery of project;
  - .2 Summary of architectural, structural, fire protection, mechanical and electrical systems installed and commissioned;
    - .1 Including sequence of operation as finalized after commissioning is complete;
  - .3 Description of building operation under conditions of heightened security and emergencies;

- .4 System, equipment and components Maintenance Management System (MMS) identification;
- .5 Operating and maintenance manual;
- .6 Final commissioning plan as actually implemented.
- .7 Completed commissioning checklists.
- .8 Commissioning test procedures employed.
- .9 Completed Product Information (PI) and Performance Verification (PV) report forms, approved and accepted by Departmental Representative.
- .10 Commissioning reports.

## **1.6 CONTENTS OF OPERATING AND MAINTENANCE MANUAL**

- .1 For detailed requirements refer to Section 01 78 00 - Closeout Submittals.
- .2 Departmental Representative to review and approve format and organization within twelve (12) weeks of award of contract.
- .3 Include original manufactures brochures and written information on products and equipment installed on this project.
- .4 Record and organize for easy access and retrieval of information contained in BMM.
- .5 Include completed PI report forms, data and information from other sources as required.
- .6 Inventory directory relating to information on installed systems, equipment and components.
- .7 Approved project shop-drawings, product and maintenance data.
- .8 Manufacturer's data and recommendations relating: manufacturing process, installation, commissioning, start-up, O M, shutdown and training materials.
- .9 Inventory and location of spare parts, special tools and maintenance materials.
- .10 Warranty information.
- .11 Inspection certificates with expiration dates, which require on-going re-certification inspections.
- .12 Maintenance program supporting information including:
  - .1 Recommended maintenance procedures and schedule.
  - .2 Information to removal and replacement of equipment including, required equipment, points of lift and means of entry and egress.

## **1.7 LIFE SAFETY COMPLIANCE (LSC) MANUAL**

- .1 Samples of LSC Manual will be available from Departmental Representative.
- .2 Content of Manual:
  - .1 All possible Emergency situations modes including: presence of fire and smoke, power failure, lose of water or pressure, chemical spills and refrigerant release.
  - .2 Failure of elevators and escalators.
  - .3 Intrusion and security breach.
  - .4 Emergency provisions for natural disasters, bomb threats and other disruptive situations.
  - .5 Dedicated emergency generators for high security projects, medical facilities and computer systems.
  - .6 Emergency control procedures for fire, power and major equipment failure.
  - .7 Emergency contacts and numbers.
  - .8 Manual to be readily available and comprehensible to non-technical readers.

## **1.8 SUPPORTING DOCUMENTATION FOR INSERTION INTO SUPPORTING APPENDICES**

- .1 Provide Departmental Representative supporting documentation relating to installed equipment and system, including:
  - .1 General:
    - .1 Finalized commissioning plan.
    - .2 WHMIS information manual.
    - .3 Approved "as-built" drawings and specifications.
    - .4 Procedures used during commissioning.
    - .5 Cross-Reference to specification sections.
  - .2 Electrical:
    - .1 Installation permits, inspection certificates.
    - .2 TAB and PV reports.
    - .3 Electrical work log book.
    - .4 Charts and schedules.
    - .5 Copies of posted instructions.
- .2 Assist Departmental Representative with preparation of BMM.

## **1.9 LANGUAGE**

- .1 English and French Language to be in separate binders.

## **1.10 IDENTIFICATION OF FACILITY**

- .1 When submitting information to Departmental Representative for incorporation into BMM, use system for identification of documentation.

## **USE OF CURRENT TECHNOLOGY**

- .2 Use current technology for production of documentation. Emphasis on ease of accessibility at all times, maintain in up-to-date state, compatibility with user's requirements.
- .3 Obtain Departmental Representative's approval before starting Work.

## **PART 2 - PRODUCTS**

### **2.1 NOT USED**

- .1 Not used.

## **PART 3 - EXECUTION**

### **3.1 NOT USED**

- .1 Not used.

**END OF SECTION**