

1.0 **GENERAL**

1.1 **DOCUMENTS**

- .1 This section of the Specification forms part of the Contract Documents and is to be read, interpreted, and coordinated with all other parts.

1.2 **SUMMARY**

- .1 Section Includes:
 - 1.0 GENERAL
 - 1.1 DOCUMENTS
 - 1.2 SUMMARY
 - 1.3 REFERENCED CODES AND STANDARDS
 - 1.4 CONTRACTOR RESPONSIBILITIES
 - 1.5 MATERIALS
 - 1.6 DRAWINGS
 - 1.7 ACCEPTANCE CONDITIONS
 - 1.8 PRE-INSTALLATION SITE SURVEY

1.3 **REFERENCED CODES AND STANDARDS**

- .1 The contractors must comply with the latest British Columbia Building Code, and Canadian Electrical Code, including all Provincial and other amendments, any local by-laws or rules and regulations requirements of UBC Land & Building Services regulating the installation of Communication facilities.
- .2 Materials shall bear the approval of the Canadian Standards Association and where applicable, the Underwriters Laboratories of Canada or alternately shall bear local approval from the Electrical Inspection Department having jurisdiction. Include in the contract all costs associated with obtaining local approvals.
- .3 If there is a conflict between the Drawings and Specifications and the above noted codes, by-laws, rule and orders, the codes, by-laws, rules and orders shall govern. In no instance, however shall the standards established by the Contract Documents be reduced by any of these codes or regulations.
- .4 Install and test telecommunications cabling networks per the latest manufacturer requirements and in accordance with the following standards:

NOTE:

Only the greater titles are referenced in this document but all current details and specifications that appear in each of the standards are relevant and apply to installations covered by this document. Please contact UBCO IT – Infrastructure if any clarification is required about the codes and standards that apply to any work done under these guidelines.

- .1 The Canadian Electrical Code (CEC)
- .2 BC Amendments to the CEC and associated bulletins.
- .3 ANSI/TIA/EIA Telecommunication Standards.

- .4 IEEE Ethernet Standards.
- .5 IEEE Wireless Standards.
- .6 ISO Telecommunications Standards.
- .7 BICSI Standards.
- .5 If the Contractor should note items in the drawings or in the specifications, or on the construction site, which would result in a code violation, promptly bring them to the attention of the Consulting Engineer and Information Technology Representative in writing. Where the requirements of other sections of the specifications are more stringent than applicable codes, rules, regulations, and ordinances, the specifications shall apply.
- .6 Conform to current safety and security standards, codes, and practices in effect at UBC including, but not limited to:
 - .1 Technical Safety BC
 - .2 BC Electrical Safety Act.
 - .3 The BC Building Code with Amendments.
- .7 Any other reference material must be approved by UBC before work commences.

1.4 CONTRACTOR RESPONSIBILITIES

- .1 The Communications guideline specifications generally describe the work of the Sub-Contractors, but does not intend to define the responsibility between the General Contractor and his/her Sub-Contractors.
- .2 The complete scope of all work is fully described in Division 27 drawings and technical specifications described herein.
- .3 The words “provide”, “supply”, “furnish”, and “install” shall imply that the applicable Contractor shall provide all necessary labor, materials, and equipment to complete the installation and where applicable, test same to the approval of the Consultant.
- .4 Unless otherwise noted or specified, the Contractor shall provide all equipment and / or materials shown on the drawings and defined in the specifications.
- .5 Any apparatus, appliances, materials, or work not shown on the drawings, but mentioned in the specifications, or vice versa, or any incidental accessories necessary to make the work complete and perfect in all respects and ready for operation, even if not particularly specified, shall be furnished, delivered, and installed by the Contractor, without additional expense to the Owner.
- .6 Establishment and verification of dimensions, elevations, grades, boundaries shown on drawings and, reporting of any errors or inconsistencies to the Communications Consultant before starting Work. Starting Work shall imply that the Contractor has verified all items and found them to be correct. Additional costs arising out of any subsequent rectifications shall be borne by the Contractor.
- .7 The maintenance of discipline and general orderliness of the progress of the Project.

- .8 The coordination of Work of all trades in an efficient manner and on a continuous basis.
- .9 For the protection of all existing work, including buildings, finishing's, fixtures, paving, landscaping and other property against damage of any kind arising out of the Work and, reinstatement of anything spoiled or damaged, as directed. Special attention to be given by protecting elevators with plywood and the carpets with material sufficient to avoid staining and damage.
- .10 The coordination of patching, furring, re-finishing, including painting as required for performance of the Work.
- .11 To take measures to maintain security and prevent unauthorized access to existing Communication rooms, Classrooms, Offices, Study Rooms and Lecture Theatres.
- .12 To take steps throughout the Construction process, to prevent dust from escaping the immediate Construction zone and from settling on or contaminating existing Communications equipment terminal hardware, or classroom, and office furniture and equipment.
- .13 The maintenance on site of one complete set of white prints to be used exclusively for purposes of recording changes, deviations and revisions from the original contract. Care shall be taken by directing particular attention to the location of pipes, conduits etc.
- .14 Scheduling the Work in a manner acceptable to the Consulting Engineer and Information Technology Representative.
- .15 The Contractor has the responsibility to ensure that all provisions of these Standards are met and to specifically advise the Information Technology Representative in writing of any contemplated exceptions and obtain approval in writing for these changes.

1.5 **MATERIALS**

- .1 Materials shall be delivered on site in original containers and packages with labels and seals intact. Use in strict accordance with manufacturer's latest printed directions and instructions unless otherwise specified. Materials not approved or not conforming to the Contract Documents will be rejected. Contractor to order materials with long delivery times immediately upon award of Contract and with concurrence of Information Technology Representative.
- .2 Material deliveries to site shall be the responsibility of the Contractor. Post-delivery, the Contractor shall take responsibility to protect material during storage and handling to prevent damage and theft. Do not store equipment or materials where conditions fall outside manufacturer's recommendations for environmental conditions. Do not install damaged material or equipment. Material or equipment damaged during installation, shall be replaced at no cost to the University.

1.6 **DRAWINGS**

- .1 The location of various items indicated in IT drawings, are approximate except where specifically mentioned.
- .2 Drawings are generally diagrammatic and are intended to indicate the scope and general arrangement of work.

- .3 The Contractor is responsible to take field measurements where equipment and material dimensions are dependent upon building dimensions.
- .4 The Contractor shall coordinate with General, Mechanical and Electrical trades as well as Furniture Layout Designer for final User outlet locations.
- .5 If any discrepancies or omissions are found in the drawings, or if the intent is not clear, the Contractor shall obtain clarification from the Consulting Engineer or UBC IT representative.

1.7 ACCEPTANCE CONDITIONS

- .1 The installed system will be deemed acceptable when the Contractor delivers the documentation as specified in Section 27 08 00 and 27 05 09 to the UBC Information Technology Representative.
- .2 The Consulting Engineer must supply completed IT Infrastructure as-built drawings.

1.8 PRE-INSTALLATION SITE SURVEY

- .1 Prior to start of systems installation, the Contractor shall meet at the project site with the UBC Information Technology Representative and Representatives of trades performing related work to co-ordinate efforts.
- .2 The Contractor shall review areas of potential interference and resolve conflicts before proceeding with the work. Facilitation with other trades shall be necessary to meet critical deadlines for completion of Communications Rooms and Closets.
- .3 Examine areas and conditions under which the system is to be installed. Do not proceed with the work until satisfactory conditions have been achieved.

END OF SECTION 27 05 01