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:

1.3 CONTRACTOR'S FOREMAN

.1 The Contractor shall designate a Foreman to remain on the job site from the time construction commences until final completion and acceptance of the Work

.2 The Foreman shall not be changed unless satisfactory reasons are given in writing to UBC Information Technology Representative.

1.4 PROJECT MEETINGS

.1 The Foreman shall attend all meetings with the General, Mechanical, and Electrical Contractors as requested, as well as meetings that may be requested by the Project Manager, Consulting Engineer, or UBC Information Technology Representative.

1.5 COORDINATION ON SITE

.1 The Contractor shall coordinate their work with the General, Mechanical, and Electrical Contractors to ensure that all required supporting structures such as (conduits and trays) are in place prior to commencing work.

.2 Any conduit, outlet boxes, J-hooks or cable trays that are installed at locations that contradict instructions on the drawings, or in the specifications, shall be immediately identified and reported to the Consulting Engineer and UBC Information Technology Representative.

.3 The Contractor shall promptly advise the Consulting Engineer and UBC Information

Technology Representative of any specific equipment, materials or installation that are non–conforming with or in violation of laws, by-laws or regulations of authorities having jurisdiction.

1.6 SEQUENCE AND SCHEDULING

.1 The Contractor shall submit a complete Construction Schedule for the installation of equipment (if specified), and cabling within seven (7) days of Awarding of Contract.

.2 The Construction Schedule shall indicate delivery, installation, and testing dates for conformance to specific task completion dates. As a minimum, the Contractor shall provide the following dates:

.1 Bid Submission

.2 Start and Completion of Demolition

.3 Installation – Start

.4 Completion of Horizontal and Backbone Cable Installation

.5 Completion of Labeling

.6 Completion of Testing

.7 Completion of Cut-over

.8 Substantial Performance of structured cabling system

.9 UBC Information Technology Representative Acceptance

.3 The Contractor shall submit a separate demolition time schedule with applicable cut-overs in areas that have existing Users.

NOTE:
This applies to any areas where systems will need to be taken off-line.

1.7 PRICING

.1 The Contractor shall provide all separate, alternate and unit pricing as specified in this, or any other documents relevant to this project.

1.8 PERMITS, FEES, TAXES, AND INSPECTIONS

.1 Contractor is fully responsible for compliance with Federal, Provincial and Municipal laws and regulations.

.2 The Contractor shall, prior to commencement of the project, obtain low voltage permit and, at the end of project, submit request for final inspection to the Provincial Electrical Inspection Authority.

.3 Technical Safety BC is responsible for issuing electrical permits at the University of British Columbia.

.4 The Contractor shall submit to Technical Safety BC the necessary number of drawings and specifications for examination and approval, prior to commencement of work.

.5 The Contractor shall pay all associated permitting and inspection fees.

.6 The Contractor shall be responsible and pay for any additional time and expense occurred if re-inspections are required for deficiencies which have not been corrected to the Owner's satisfaction.

.7 The Contractor shall pay for all associated taxes.

.8 Contractor shall obtain and pay for all necessary key deposits, permits and licenses.

.9 Prior to commencement of work, the Contractor shall provide a copy of all permits the UBC Information Technology Representative.

.10 The Consulting Engineer shall be required to provide drawings and specifications to Technical Safety BC. All costs associated with this requirement shall be included in the Consultant's fee proposal.

.11 The Consulting Engineer shall be required to notify the UBC Information Technology Representative of changes required by Provincial Electrical Inspection Department prior to making changes.

.12 Upon substantial performance and before final payment, the Contractor shall submit a confirmation copy of acceptance for all work by Technical Safety BC, to the consulting engineer and UBC Information Technology Representative.

1.9 COORDINATION, CLARIFICATION AND ADDENDA

.1 Questions about the meaning and intent of this document that may require clarification shall be submitted to the UBC Information Technology Representative.

.2 Replies to tender questions will be issued in writing in the form of Addendum. Replies or modifications made in any other manner will not be binding and have no legal effect.

.3 Addenda issued by the Consulting Engineer during the tender period shall be incorporated into Contractor's response, shall become part of the contract documents, and shall be reflected in the Contractor's price.

1.10 INSPECTIONS

.1 The Contractor shall request, and coordinate representation from the Consulting Engineer and UBC Information Technology Representative for inspection of cabling system during, but not limited to the following stages of construction:

.1 Cable rough-in

.2 Communications room construction

.3 Testing

.4 Completion.

2.0 SUBMITTALS

.1 The Contractor shall submit the following items to the UBC Information Technology Representative:

.1 Bill of materials, noting long lead-time items.

.2 Complete test results of UTP/STP and fibre optic horizontal and backbone cables.

.3 Project schedule including all major work components that materially affect any other work on the project.

.4 Completed electronic UBC IT CCT spread sheet.

2.1 INFORMATION TECHNOLOGY REVIEW AND APPROVAL

.1 The UBC Information Technology Representative's approval of the Contractor's shop drawings, product data, and samples submitted shall not relieve the Contractor of responsibility for errors, omissions, or deviations from requirements of the Contract Documents, unless the Contractor has specifically informed the UBC Information Technology Representative in writing of such deviation at time of submittal, and the UBC Information Technology Representative has given written approval of the specific deviation.

.2 The UBC Information Technology Representative's review and approval, of shop drawings, product data, and samples, is for the limited purpose of checking for conformance with information given and design concept expressed in the Contract Documents.

.3 The UBC Information Technology Representative's review of Contractor's submittals is not conducted for the purpose of determining accuracy and completeness of details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor.

.4 The UBC Information Technology Representative's review shall not constitute approval of safety precautions or of construction means, methods techniques, sequences or procedures.

.5 The UBC Information Technology Representative's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

2.2 DRAWINGS AND SPECIFICATIONS

.1 The Contract drawings and specifications form an integral part of the contract documents. Neither the drawings nor the specifications shall be used alone. Work omitted from the drawings but mentioned or reasonably implied in the specifications, or vice versa, shall be considered as properly and sufficiently specified and shall be provided.

.2 Misinterpretation of any requirements on drawings, or specifications shall not relieve the Contractor of his, or her responsibility of properly completing the Contract.

.3 Where conflict exists between drawings and specifications, the Contractor shall make allowance for provision of the component, system, or installation process in a manner which will provide UBC with the highest monetary cost components, systems, or installation process.

.4 Drawings are generally diagrammatic and are intended to indicate the scope and general

arrangement of the Work. The Contractor shall not scale the drawings, but rather take field measurements in existing buildings particularly where equipment and material dimensions are dependent on building dimensions.

.5 The Contractor shall obtain information from the Consultant where exact locations are not indicated.

.6 The UBC Information Technology Representative has the option of changing the location of Electrical and Communication outlets to within 1 m of designed location prior to rough-in stage at no extra cost to UBC.

2.3 CONSTRUCTION DOCUMENTATION

.1 The Contractor shall submit to the UBC Information Technology Representative for approval:

.1 Product data (including cut sheets and catalogue information) for products not on the approved product list

.2 Samples required by the Contract Documents

.2 All above submittals must be forwarded promptly and, in such sequence, as to cause no delay in the work or in the activities of the other trades.

.3 The UBC Information Technology Representative shall indicate approval of product data, and samples submitted by stamping such submittals with the word: "APPROVED".

.4 Submittals shall be signed by the Contractor, imprinted with the date submitted, and shall bear the Contractor's legitimate Company name.

.5 By submitting product data, and samples, the Contractor signifies that he, or she has carefully reviewed and verified materials, quantities, field measurements, and related field construction criteria. It also signifies the Contractor has checked, coordinated, and verified that all information contained with product data, and samples conforms to the requirements of the Work and of the Contract Documents.

.6 The Contractor shall perform no portion of the Work requiring submittal and review of product data, or samples until the UBC Information Technology Representative has approved the respective submittal.

.7 The Contractor shall submit product data, and samples to the UBC Information Technology Representative as a complete set within fifteen (15) days subsequent to Award of-Contract and prior to start of Work.

.1 For initial and re-submission for approval, the Contractor shall submit two copies of each proposal.

.2 The Contractor shall create reproductions as required for his, or her own use and distribution to subcontractors.

.3 The UBC Information Technology Representative shall not accept illegible submittals.

.8 Prior to the start of installation, the Consultant shall submit an electronic copy of the

following shop drawings and construction documents to the UBC Information Technology Representative for approval:

.1 Plan view drawings illustrating the layout of all Mechanical, Electrical, and Communication components and equipment in each Communication room.

.2 Elevation drawings of all walls of each Communication room, clearly showing the layout of all termination hardware, grounding & bonding components, equipment cabinets, Communications equipment, power receptacles, lighting fixtures, cable tray, conduit, entry ducts, etc.

.3 Vertical and horizontal Backbone cable topology, riser duct, and horizontal cable count diagrams in a one-line format.

.4 System block diagrams depicting the interconnection between Communication rooms, system components, sub-systems and equipment cabinet layouts.

.5 Communication Bonding & Grounding System.

.6 Fire-stop design, identifying all locations to be fire-stopped, complete with documentation, a list of all fire-stopping materials to be used, and fire-stop systems to be installed.

.7 Cabling installation schedule based on overall construction schedule for the project.

.8 Manufacturer specification sheets.

.9 The Consultant shall submit the following to the UBC Information Technology Representative at the conclusion of the project and within (2) weeks of forwarding notification that Substantial Performance has been achieved:

.1 (1) electronic set of As-Built drawings to UBC Information Technology Representative
.2 (1) full size set of As-Built drawings to Campus & Community Planning

NOTE:

.1 As-Built drawings shall confirm location and identification of all:
- .1 Communication Outlets
- .2 Communication Rooms
- .3 Backbone Cable Runs
- .4 Fire stop design and records documentation as per Section 270507

.2 As-Built drawings shall be drawn with current release AutoCAD software and shall conform to UBC's AutoCAD Drawing Format and use UBC Standards Symbols. A UBC standard symbols sample is included in Appendix A.

2.4 SUBSTANTIAL PERFORMANCE

.1 The Contractor shall advise the UBC Information Technology Representative in writing when Substantial Performance has been achieved and shall request at the same time a Deficiencies Inspection be made.

.2 The UBC Information Technology Representative may request to be present during actual live testing of the cable system.

.3 The Contractor shall not issue a Substantial Performance Deficiencies Inspection request until the following work has been completed and specified documentation forwarded to the UBC Information Technology Representative:

.1 Verification of new fire alarm demarcation jack has been completed.

.2 All deficiencies noted during job inspection have been completed.

.3 Warranty certificates have been provided.

.4 All systems have been tested and passed and are ready for operation.

.5 Completed test results for the structured cabling system have been provided in a readily readable format such as PDF. Cable tester manufacturer proprietary file formats are not acceptable for submission to UBC IT.

.6 The cleanup is finished in all respects.

.7 All inspection certificates have been furnished including final low voltage and or electrical inspection certificates.

2.5 FIELD QUALITY CONTROL

.1 Fire-stop installation shall be performed as per Fire-stop Section 27 05 07.

.2 Manufacturer's certificate or letter shall be provided to confirm that the entire installation is installed according to manufacturer's instructions.

.3 At UBC IT’s option, tests shall be carried out in presence of UBC Information Technology Representative.

.4 Instruments, meters, equipment and personnel shall be provided to conduct tests during and at conclusion of the project.

.5 Test results shall be submitted to for UBC Information Technology Representatives for review.

2.6 CERTIFICATION OF A COMMUNICATIONS SYSTEM

.1 The Contractor shall ensure that the cabling system installed and the Contractor's Employees working on this project are Certified and Warranted by the Cable Manufacturer.

.2 The Contractor shall only use Certified Personnel who are trained and equipped to properly install a structured cabling system, including but not limited to supporting pathways, cable, termination hardware, bonding and grounding systems, equipment cabinets or equivalent, and associated Communications equipment, in order to obtain system acceptance.

END OF SECTION 27 05 02