

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 FORWARD
 - 1.4 REFERENCES
 - 2.0 PRODUCTS
 - 2.1 REQUIREMENTS
 - 2.2 MATERIALS
 - 3.0 EXECUTION
 - 3.1 INSTALLATION
 - 3.2 EXISTING PENETRATIONS
 - 3.3 MASONRY POINTING PATTERN
 - 3.4 INSPECTING AUTHORITIES
 - 4.0 TRAINING

1.3 **FORWARD**

- .1 Fire-stop systems installed by the Contractor shall meet the requirements of all applicable codes and ULC standards.
- .2 The Contractor shall fire-stop new Communication pathway and / or cable penetrations of building fire barriers with an approved fire-stop system.
- .3 The Contractor shall fire-stop with an approved fire-stop system, any holes created by the Work of this Contract.
- .4 The Contractor shall coordinate all Work with Division 26 and applicable Inspection departments.
- .5 The Contractor shall obtain inspection approval from the applicable Permits and Inspections department and shall be responsible for all associated costs.
- .6 The Contractor shall provide equipment, materials, labour, and services not specifically mentioned or shown which may be necessary to complete or perfect all parts of this installation and in compliance with requirements stated or reasonably inferred by the Contract Documents.
- .7 The intent of the section is to address the firestopping requirements of penetrations where:
 - .1 Telecommunications cables are physically involved in or are part of the penetration
 - .2 the interior dimension of a telecommunications designated pathway allow for air exchange across a fire rated barrier

- .8 This section does not attempt to address and should not be used to address fire barrier penetrations that are applicable to Div 26.

1.4 **REFERENCES**

- .1 BICSI – Current Edition, *Telecommunications Distribution Methods Manual (TDMM)*
- .2 Current Canadian Electrical Code
- .3 Current BC Building Code
- .4 CAN/ULC-S115-11

2.0 **PRODUCTS**

2.1 **REQUIREMENTS**

- .1 The Contractor shall submit to the UBC Information Technology Representative for approval, the following items relating to the fire-stop system if requested:
 - .1 Hilti manufacturer technical data for each product intended to be used on site including product description, specifications and storage requirements.
 - .2 Fire-stop design documentation shall include:
 - .1 Schedule indicating:
 - .1 Number of fire-stop locations
 - .2 Type of penetration
 - .3 Type of building construction at point of penetration
 - .4 Hourly fire-rating of floors and walls
 - .5 Fire-stop device or system proposed.
 - .3 Applicable fire-stop design drawings.
 - .4 Installation Procedures and Material Safety Data Sheets shall be included with products delivered to the job site.
 - .5 Maintenance manuals and maintenance data that may be published by Manufacturer.

2.2 **MATERIALS**

- .1 Only Hilti fire-stop products are approved for fire-stopping Communications infrastructure penetrations of fire barriers at UBC.
- .2 Hilti fire-stop products may be in the form of speed sleeves, traditional sleeves, modular sleeves, caulk, putty, strips, blocks, plugs, or sheet material. The choice of fire-stop products depends on the type of penetration to fill such as holes, spaces, and voids, or

cavities and whether the penetration has or will have cable passing through it. Hilti speed sleeves and modular sleeves are the preferred products and every effort should be made to use these products over other possible solutions.

- .3 The Contractor shall use fire-stop materials that have no irritating or objectionable odors, when fire-stopping occupied areas of existing buildings.
- .4 Fire-stop products used in cross-sectional areas of the pathway such as inside sleeves, or cable tray penetrations of fire barriers shall be re-enterable type to enable future Moves, Adds, or Changes.
- .5 Fire-stopping materials shall provide adhesion to substrates, and maintain fire and smoke seal under normal expected movements of substrates, conduits, and cables.
- .6 The preferred Hilti Fire stop system for new installations is the Gang plate/ Speed sleeve system. CFS-SL GP and CP 653 and modular sleeve CFS-MSL.

3.0 EXECUTION

1. Division 27 contractors are responsible for Firestopping the interior air space of all pathways that are designated for UBC IT Telecommunications and networking cables where firestopping is required.

3.1 INSTALLATION

- .1 The Contractor must receive training from the manufacturer on the proper installation of the fire stop system. The Contractor shall follow the manufactures instructions and guidelines for installation of the chosen fire stop system

3.2 EXISTING PENETRATIONS

- .1 In existing buildings, the Contractor shall fire-stop any gaps or cavities between penetrating cable tray, ducts, or sleeves and surrounding surface area
- .2 The Contractor shall fire-stop with an approved fire-stop system, the following existing penetrations of building fire barriers:
 - .1 Existing Communication pathway, cables, or holes that are not fire-stopped and are within 1m (3') of new Communication pathway, or cable penetrations of fire barriers.
 - .2 Existing Communication cables abandoned by the Work of this Contract.

3.3 MASONRY POINTING PATTERN

- .1 Where fire-stop systems penetrate masonry barriers, the Contractor shall make good surrounding area by replicating original pointing pattern and matching in quality of workmanship.

3.4 INSPECTING AUTHORITIES

- .1 The Contractor shall remove and expose fire-stop systems to the extent directed by Inspecting Authority for the purpose of carrying out the inspection.

- .2 The Contractor shall re-install fire-stop system and restore any affected building components removed for inspection, at no cost to the Owner.

4.0 TRAINING

- .1 The Contractor must receive training from Hilti and possess current Hilti certification prior to installing Hilti fire-stop products.

END OF SECTION 27 05 07