Part 1 GENERAL

1.1 GENERAL REQUIREMENTS

1. Division One, General Requirements, is a part of this Section and shall apply as if repeated here.

1.2 WORK INCLUDED

1. Firestopping and smoke seals at wall to above grade floors and roof assemblies at all corridors and all other vertical fire separations, at fire rated walls (including 0 hr. rated walls), mechanical rooms, janitor rooms, washroom, servery, changerooms, etc., at both drywall and masonry walls. Firestopping and smoke seals for all openings and penetrations through second and third floors. Division 15 and 16 of firestopping and smoke seals shall be by Mechanical and Electrical Contractors where their equipment and materials penetrated rated walls. See Ground Floor Plan 2.1 and Second Floor Plan 2.2 for exact location of smoke/fire rated walls including 'O' hour rated walls.

1.3 RELATED SECTIONS

1. Concrete - Section 03 30 00, 03 39 00, 03 11 00
2. Masonry Units - Section 04 04 25
3. Gypsum Wallboard Systems - Section 09 29 00
4. Mechanical – Section 20 - 23
5. Electrical – Section 26 - 28

1.4 SAMPLES

1. Submit samples in accordance with Section 01 33 00 - Shop Drawings, Product Data, Samples and Mock-ups.

2. Submit 1'-0" (300 mm) x 1'-0" (300 mm) sample of each actual firestop material proposed for project.

1.5 QUALITY ASSURANCE

1. Applicator shall be licensed by the manufacturer of fireproofing materials with minimum three years documented experience for installing firestopping and smoke seal systems.

2. Submit manufacturer's certification that materials meet or exceed specified requirements.

3. Product manufactured under ULC Follow-up Program. Each container or package shall bear ULC label or listing mark.

1.6 SHOP DRAWINGS

1. Submit shop drawings and product data in accordance with Section 01 33 00 - Shop Drawings, Product Data, Samples and Mock-ups.

2. Submit shop drawings to show proposed material, reinforcement, anchorage, fastenings and method of installation. Construction details should accurately reflect

actual job conditions.

3. Submit manufacturer's product data for materials and prefabricated devices, providing descriptions are sufficient for identification at job site. Include manufacturer's printed instructions for installation.

1.7 SEQUENCING AND SCHEDULING

1. Sequence work to permit installation of firestopping and smoke seal materials to be installed after adjacent work is complete and before closure of spaces.

1.8 MUNICIPAL AUTHORITY APPROVAL

1. Discuss firestopping and smoke seal requirements with municipal building inspector to obtain their approval prior to installation. Determine which products and/or procedures will be required to obtain final approval.

2. Submit in writing, prior to commencing installation, full detailed descriptions of materials and methods to be employed for firestopping work to achieve full final approval of authorities having jurisdiction.

Part 2 PRODUCTS

2.1 MATERIALS

1. Firestopping and smoke seal systems: A/D FIREBARRIER Firestop Systems by A/D Fire Protection Systems Inc., capable of maintaining an effective barrier against flame, smoke and gases in compliance with requirements of CAN4-S115-M85, and not to exceed opening sizes for which they are intended. Other manufacturers shall not be used unless approved in writing (5) days prior to tender closing. Approved Alternate Manufacturer: Tremco Ltd., Fire Stopping Systems.

2. Mineral Wool Backing Insulation: ULC Labelled, preformed non-combustible material A/D FIREBARRIER Mineral Wool by A/D Fire Protection Systems Inc.

3. Firestopping Sealant: ULC labelled, single component silicone based, A/D Silicone FIREBARRIER Sealant by A/D Fire Protection Systems Inc.

4. Firestopping Seal: ULC labelled, single component water-based seal, A/D FIREBARRIER Seal by A/D Fire Protection Systems Inc.

5. Spray-On Firestopping Sealant: ULC labelled, high performance single component, water-based, elastomeric acrylic firestop sealant, "TREMstop Acrylic SP" (sprayable grade) by Tremco Ltd.

6. Fire resistance rating of installed firestopping assembly not less than the fire resistance rating of surrounding floor and wall assembly as indicated on the drawings.

7. Firestopping system at openings around penetrations for pipes, ductwork, conduit and other mechanical and electrical items requiring sound and vibration control; elastomeric sealant type with mineral wool; do not use a cementitious or rigid seal at such location.

8. Primers: to manufacturer's recommendation for specific material, substrate, and end use.

9. Water (if applicable): potable, clean and free from injurious amounts of deleterious substances.

10. Damming and backup materials, supports and anchoring devices: to manufacturer's recommendations and in accordance with tested assembly being installed as acceptable to authorities having jurisdiction.

11. Sealants for vertical joints: non-sagging.

12. Firestopping mortar is not acceptable for this project.

Part 3 EXECUTION

3.1 EXAMINATION

1. Examine existing conditions to receive this work prior to submitting shop drawings.

2. Examine surfaces to receive work of this Section and report any defects which may affect the Work of this Section.

3. Verify that openings are ready to receive the Work of this Section.

4. Confirm compatibility of surfaces to receive firestopping and smoke seal materials.

5. Beginning of installation means acceptance of existing surfaces and substrate.

3.2 PREPARATION

1. Examine sizes and conditions of voids to be filled to establish correct thicknesses and installation of materials. Ensure that substrates and surfaces are dry and frost free.

2. Prepare surfaces in contact with firestopping materials and smoke seals to manufacturer's instructions.

3. Maintain insulation around pipes and ducts penetrating fire separation.

4. Mask where necessary to avoid spillage and over coating onto adjoining surfaces; remove stains on adjacent surfaces.

3.3 INSTALLATION

1. Install firestopping and smoke seal material and components in accordance with ULC certification and manufacturer's instructions.

2. Seal holes or voids made through penetrations, poke-through termination devices, and unpenetrated openings or joints to ensure continuity and integrity of fire separation are maintained. For vertical sections, sealant is required only on the top side of the mineral wool. It is required on both sides for horizontal sections except only one side on 0 hr. rated walls.

3. Provide temporary forming as required and remove forming only after materials have gained sufficient strength and after initial curing.

4. Tool or trowel exposed surfaces to a neat finish.

5. Remove excess compound promptly as work progresses and upon completion.

6. Install firestopping with smoke seal sealant on both sides of all fire rated walls except for 0 hr. rated walls where sealant is required continuously only one side of mineral wool backing insulation.

3.4 INSPECTION

1. Notify the Consultant when ready for inspection and prior to concealing or enclosing firestopping and smoke seal materials and service penetration assemblies.

2. Arrange for final inspection of the work of this Section by firestopping manufacturer and municipal building inspector prior to concealing or enclosing work. Make corrections required.

3.5 SCHEDULE

1. Fire and smoke seal at all areas where work is indicated on drawings (corridors, mechanical rooms, ceilings, janitor's room, washrooms, changerooms, servery, etc. fire separations), and at locations as follows:

   .1 Generally all locations required by code.

   .2 Penetrations through fire resistance rated (including 0 hour rated fire separations) masonry and concrete walls (except mechanical and electrical penetrations which will be firestopped by the mechanical and electrical contractors).

   .3 Top of fire resistance rated masonry and gypsum rated partitions and walls (Includes corridors noted as 0 hr. fire rating)
   NOTE: Refer to the architectural drawings for locations of vertical fire separations.

   .4 Intersection of fire resistance rated masonry.

   .5 Control and sway joints in fire resistant rated masonry.

   .6 Penetrations through all floor slabs and fire rated ceilings (except mechanical and electrical penetrations which will be firestopped by the mechanical and electrical contractors).

   .7 Openings and sleeves installed for future use through fire resistant rated separations.

3.6 CLEAN-UP

1. Remove excess materials and debris and clean adjacent surfaces immediately after application.

2. Remove temporary dams after initial set of firestopping and smoke seal materials.

3.7 CERTIFICATION

1. The manufacturer of the firestopping and smoke seal products shall inspect each application on site and certify in writing its fire rating.

2. Costs for manufacturer's site inspection of firestopping and smoke seals application and certification shall be included in this Contractor's base bid.

End of Section 07 84 00