

PART 1 GENERAL

1.1 WORK INCLUDED

- .1 This section specifies requirements for dampproofing under slabs as specified and where indicated on the drawings.

1.2 STORAGE AND HANDLING

- .1 Provide and maintain dry, off-ground weatherproof storage, at temperatures above freezing, free from contact with cold or frozen surfaces.
- .2 Store materials on supports to prevent deformation.
- .3 Remove only in quantities required for same day use.
- .4 Store materials in accordance with manufacturers written instructions.

1.3 ENVIRONMENTAL REQUIREMENTS

- .1 Do not proceed with work when wind chill effect would tend to set bitumen before proper curing takes place.
- .2 Maintain air temperature and substrate temperature at dampproofing installation area above 5°C for 24 hours before, during and 24 hours after installation.
- .3 Do not apply dampproofing in wet weather.
- .4 Provide forced air circulation during installation and curing periods for enclosed applications.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Under slab damp proofing vapour barrier: 10 mils sheet membrane, reinforced polyethylene, complete with lapped/sealed joints.

PART 3 - EXECUTION

3.1 APPLICATION

- .1 Under slabs:
 - .1 Install sheet membrane of reinforced poly dampproofing/vapour

barrier below concrete floor slab and extend 100mm up vertical face of concrete walls.

.2 Lap joints of sheet dampproofing/vapour barrier 150mm minimum and apply a continuous heavy bead of acoustic sealant or Building Wrap Tape, to seal joints.

.3 After concrete slab has been poured, install continuous perimeter caulked joint between foundation wall and slab.

END OF SECTION

PART 1 GENERAL

1.1 WORK INCLUDED

- .1 This section specifies requirements for supplying and installing the sheet membrane air/vapour barrier system to walls and ceilings, where shown on the Project Drawings and herein specified.

1.2 RELATED WORK

- .1 Rough Carpentry: Section 06 10 00
- .2 Sealants: Section 07 92 00
- .3 Hollow Metal Doors and Frames Section 08 11 14

1.3 REFERENCES

- .1 CAN/CGSB-51.34-M86 Vapour Barrier, Polyethylene Sheet, for Use in Building Construction.
- .2 CAN/CGSB-51.32-M77 Sheathing, Membrane Breather Type.

PART 2 PRODUCTS

2.1 SHEET VAPOUR BARRIER

- .1 Polyethylene film: to CAN/CGSB-51.34-M86, Type 1, 6 mil thick interior ceiling vapour barrier.
- .2 Exterior wall building wrap: single ply spunbonded polyolefin type.

2.2 ACCESSORIES

- .1 Joint sealing tape: air resistant pressure sensitive adhesive tape, type recommended by vapour barrier manufacturer, 50mm wide for lap joints and perimeter seals, 25mm wide elsewhere.
- .2 Sealants: as specified in Section 07 92 00.
- .3 Staples: minimum 6mm leg.
- .4 Moulded box vapour barrier: factory-moulded polyethylene box for use with recessed electric switch and outlet device boxes.

PART 3 EXECUTION

3.1 INSTALLATION

- .1 Install and inspect services prior to installation of retarder.
- .2 Install sheet vapour retarder ceiling assemblies prior to installation of plywood to form continuous retarder.

- .3 Use sheets of largest practical size to minimize joints.
- .4 Inspect for continuity. Repair punctures and tears with sealing tape before work is concealed to the satisfaction of the Consultant.

3.2 EXTERIOR SURFACE OPENINGS

- .1 Cut sheet vapour retarder to form openings and ensure material is lapped and sealed to frame.

3.3 PERIMETER SEALS

- .1 Seal perimeter of sheet vapour barrier as follows:
 - .1 Apply continuous bead of sealant to substrate at perimeter of sheets.
 - .2 Lap sheet over sealant and press into sealant bead.
 - .3 Install staples through lapped sheets at sealant bead into wood substrate.
 - .4 Confirm that no gaps exist in sealant bead. Smooth out folds and ripples occurring in sheet over sealant.

3.4 LAP JOINT SEALS

- .1 Seal lap joints of sheet vapour barrier as follows:
 - .1 Attach first sheet to substrate.
 - .2 Apply continuous bead of sealant over solid backing at joint.
 - .3 Lap adjoining sheet minimum 150mm and press into sealant bead.
 - .4 Install staples through lapped sheets at sealant bead into wood substrate.
 - .5 Allow for no gaps to exist in sealant bead. Smooth out folds and ripples occurring in sheet over sealant.

3.5 ELECTRICAL BOXES

- .1 Seal electrical switch and outlet device boxes that penetrate vapour barrier as follows:
 - .1 Install moulded box vapour barrier.
 - .2 Apply sealant to seal edges of flange to main vapour barrier and seal wiring penetrations through box cover.

3.6 OPENINGS

- .1 Equip window frames with factory site installed air barrier and vapour retarder material for sealing to building air barrier and vapour retarder.
 - .1 Material: compatible with building air barrier and vapour retarder materials to provide required air tightness and vapour diffusion control.
 - .2 Material width: adequate to provide required air tightness and vapour diffusion control to building air barrier and vapour retarder from interior.

END OF SECTION

PART 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 06 10 00 - Rough Carpentry.

1.2 REFERENCES

- .1 American National Standards Institute (ANSI)
 - .1 ANSI A135.6-2012, Hardboard Siding Standard.
- .2 ASTM International
 - .1 ASTM D 5116-10, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.
- .3 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type.
- .4 CSA International
 - .1 CSA O121-17, Douglas Fir Plywood.
 - .2 CSA O151-17, Canadian Softwood Plywood.
 - .3 CAN/CSA-Z809-08, Sustainable Forest Management.
- .5 Environmental Choice Program (ECP)
 - .1 CCD-045-95, Sealants and Caulking Compounds.
- .6 Forest Stewardship Council (FSC)
 - .1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.
- .7 National Lumber Grading Authority (NLGA)
 - .1 NLGA Standard Grading Rules for Canadian Lumber, 2014.
- .8 Sustainable Forestry Initiative (SFI)
 - .1 SFI-2010-2014 Standard.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for wood siding and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Submit two (2) copies of WHMIS MSDS in accordance with Section 01 35 29 - Health and Safety Requirements. Indicate VOC's for caulking materials during application and curing.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by professional engineer registered or licensed in Province of New Brunswick, Canada.

1.4 QUALITY ASSURANCE

- .1 Test Reports: submit certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials in a dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect wood siding from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Lumber siding: to NLGA Standard Grading Rules for Canadian Lumber.
 - .1 Bevel siding: western red cedar grade, factory primed, 12mm thick, 140mm wide, mitred trim pieces and corner width.
 - .2 CAN/CSA-Z809 or FSC certified.
- .2 Exterior wall sheathing paper: to CAN/CGSB-51.32 spunbonded olefin type coated as indicated.
- .3 Fasteners: hot galvanized steel sized as required, ring thread type with flat head.
- .4 Sealants: to Section 07 92 00.

PART 3 EXECUTION

3.1 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of the Departmental Representative.
 - .2 Inform the Departmental Representative of unacceptable conditions

immediately upon discovery.

.3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from the Departmental Representative.

3.2 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.3 INSTALLATION

- .1 Install hardboard to manufacturers' written instructions.
- .2 Install one layer sheathing paper horizontally by stapling, lapping edges 100 mm.
- .3 Install sill flashings, wood starter strips, inside corner flashings, edgings and flashings over openings.
- .4 Fasten wood siding in straight, aligned lengths to furring and blocking at 400mm on centre maximum using two nails at each fixing location. Intermediate butt joints are not permitted. Stagger butt joints not less than 800 mm and distribute evenly over wall faces. Cut butt joints at 45 degrees and for vertical siding slope to outside. Seal cut surfaces. Apply mm battens over vertical joints.
- .5 Fasten plywood siding so that edges are supported. Maintain 1.5 mm wide gap between sheets. Nail at 300 mm on centre along intermediate supports 400mm on centre and 150 mm along edges. Caulk vertical joints, windows and doors.
- .6 For plywood clapboard siding: install starter strip. Place bottom of first course 3 mm below starter strip. Nail along bottom edge at studs, penetrate siding and courses lap. Butt joints on studs and nail top and bottom each side. Adjacent siding pieces to touch lightly at butt joints. Leave 5 mm space between siding and window and door trim, caulk with sealant.

3.4 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of

materials at appropriate facility.

3.5 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by wood siding installation.

END OF SECTION

PART 1 GENERAL

1.1 WORK INCLUDED

- .1 This section includes requirements for providing sloped metal roofing on the Building as indicated on the Drawings and as specified herein.

1.2 RELATED WORK

- .1 Metal Fabrications: Section 05 50 00
- .2 Sealants: Section 07 92 00

1.3 REFERENCES

- .1 ASTM A653/653M-15, Standard Application for Steel Sheet, Zinc Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot Dip Process.
- .2 Canadian Sheet Steel Building Institute (CSSBI).

1.4 SAMPLES

- .1 Submit samples in accordance with Section 01 33 00.
- .2 Submit duplicate 300 x 300 mm samples of roofing material, of colour and profile specified.

1.5 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Section 01 33 00.
- .2 Indicate dimensions, profiles, attachment methods, schedule of wall elevations, trim and closure pieces, metal furring, and related work.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Prefinished steel roofing: factory-formed, lappable, exposed fastener steel roofing system, nominal core thickness of 28 ga, Z275 galvanized sheet steel conforming to ASTM A653M, prefinished to CSSBI 40.7, Series 8000 finish, profile and color to match existing roof.
- .2 Roof Underlayment:
 - .1 40 mil thick SBS modified bitumen self-adhesive membrane.
 - .1 Primer: composed of SBS synthetic rubbers and adhesive enhancing resins.
 - .2 Joint Sealing: solvent-based mastic containing SBS modified bitumen, fibres and mineral fillers.
- .3 Prefinished sheet metal flashings, ridge vents, foam and metal closures, and trim: factory pre-coated sheet steel of same material,

thickness and finish as exterior roofing.

- .4 Sealants: in accordance with Section 07 92 00, colour selected by the Consultant.
- .5 Snow guard: 6061-T6 aluminum extrusions, mechanically attached with clamps, colour to match steel roofing.

PART 3 EXECUTION

3.1 PREPARATION

- .1 Protect metal surfaces in contact with concrete, mortar, or other cementitious surface with isolation coating.
- .2 Have waterproofing membrane/flashings in place prior to installing curved/sloped metal roofing.
- .3 Touch up roofing and flashings with matching paint at abrasions of screw fasteners.

3.2 INSTALLATION - ROOFING

- .1 Install roofing over support system in accordance with manufacturer's instructions.
- .2 Install exterior corners, fillers and closures with individually formed and profiled work.
- .3 Maintain joints true to line, tight fitting.
- .4 Seal in accordance with Section 07 92 00.

3.3 INSTALLATION - FLASHINGS

- .1 Install prefabricated flashings in accordance with applicable CRCA FL Series specifications.
- .2 Install flashing to form weathertight junction. Caulk flashings in accordance with Section 07 92 00.

END OF SECTION

PART 1 GENERAL

1.1 RELATED WORK

- .1 Rough Carpentry: Section 06 10 00
- .2 Sealants: Section 07 92 00

1.2 REFERENCES

- .1 ASTM D523-2014 Test Method for Specular Gloss.
- .2 CAN/CGSB-51.32-M77 Sheathing, Membrane, Breather Type.
- .3 CAN/CGSB-93.1-M85 Sheet, Aluminum Alloy, Prefinished, Residential.
- .4 Aluminum Association Aluminum Sheet Metal Work in Building Construction.
- .5 Canadian Roofing Contractors Association (CRCA) Manual.

1.3 SUBMITTALS

- .1 Submit shop drawings in accordance with Section 01 33 00.
- .2 Submit duplicate 50 mm x 50 mm samples of each type of sheet metal material, colour and finish.

PART 2 PRODUCTS

2.1 PREFINISHED STEEL SHEET FLASHING

- .1 Prefinished steel, with factory applied silicone modified polyester.
 - .1 Class F1S.
 - .2 Colour to match existing building.
 - .3 Specular gloss: 30 units +/- 5 in accordance with ASTM D523.
 - .4 Thickness - 0.76 mm (22 gauge).

2.2 ALUMINUM SHEET

- .1 Base sheet: proprietary utility sheet, plain, 0.60 mm (24 gauge) minimum thickness.
- .2 Finish: factory applied coating to CAN/CGSB-93.1 supplemented and amended as follows:
 - .1 Type 1 - post forming sheet.
 - .2 Class F1S - finish coated one side.
 - .3 Colour of coating: to be commercially uniform and match the colour of the existing building.

2.3 ACCESSORIES

- .1 Isolation coating: alkali resistant bituminous paint.
- .2 Underlay for metal flashing: dry sheathing to CAN/CGSB-51.32.
- .3 Sealants: as per Section 07 92 00.
- .4 Cleats: of same material as flashing specified, and temper as sheet metal, minimum 50 mm wide. Thickness 0.76 mm (22 gauge).
- .5 Fasteners: of same material as sheet metal, ring thread flat head roofing nails of length and thickness suitable for metal flashing application.
- .6 Washers: of same material as sheet metal, with rubber packings.

2.4 FABRICATION

- .1 Fabricate metal flashings and other sheet metal work in accordance with applicable CRCA 'FL' series details.
- .2 Fabricate aluminum flashings and other sheet aluminum work in accordance with Aluminum Association Aluminum Sheet Metal Work in Building Construction.
- .3 Form pieces in 2400 mm maximum lengths. Make allowance for expansion at joints.
- .4 Hem exposed edges on underside 12 mm. Miter and seal corners with sealant.
- .5 Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.
- .6 Apply isolation coating to metal surfaces to be embedded in concrete or mortar.

2.5 METAL CAP FLASHINGS

- .1 Form flashings, copings and fascia's to profiles of prefinished steel.
- .2 Form flashings in accordance with CRCA FL series details. Provide slotted fixing holes and steel/plastic washer fasteners. Cover face and ends with plastic tape.

PART 3 EXECUTION

3.1 INSTALLATION

- .1 Install sheet metal work in accordance with CRCA FL series details, Aluminum Sheet Metal Work in Building Construction.

- .2 Use concealed fastenings except where approved before installation.
- .3 Provide underlay under sheet metal. Secure in place and lap joints 100 mm.
- .4 Counter flash bituminous flashings at intersections of roof with vertical surfaces and curbs. Flash joints using S-lock forming tight fit over hook strips.
- .5 Lock end joints and caulk with sealant.
- .6 Install surface mounted reglets true and level, and caulk top of reglet with sealant.
- .7 Insert metal flashing into reglets under cap flashing to form weathertight junction.
- .8 Caulk flashing at reglet cap flashing with sealant.

END OF SECTION

PART 1 GENERAL

1.1 WORK INCLUDED

- .1 This section specifies requirements for supplying and applying firestopping and smoke seal material as required for wall/floor/ceilings in areas/rooms which are fire-rated, as noted in Room Finish Schedule.

1.2 RELATED WORK

- .1 Firestopping and smoke seals within electrical assemblies (i.e. inside conduits) are specified in Division 26.

1.3 REFERENCES

- .1 ASTM E2174-2014B, Standard Practice for On-site Inspection of Installed Fire Stops.
- .2 ULC S115-2011, Method of Fire Tests of Firestop Systems.
- .3 International Firestop Council Guidelines for Evaluating Firestop Systems Engineering Judgments.
- .4 National Building Code, 2010.

1.4 SAMPLES

- .1 Submit samples in accordance with Section 01 33 00.
- .2 Submit duplicate 300 x 300 mm samples showing actual firestop material proposed for project.

1.5 SUBMITTALS

- .1 Submit shop drawings and product and safety data in accordance with Section 01 33 00.
- .2 Submit shop drawings to show proposed material, including composition and limitations, reinforcement, anchorage, fastenings and method of installation. Construction details should accurately reflect actual job conditions.
- .3 Provide manufacturer's engineering judgments identification number and drawing details when no ULC or UL system are available for an application. Engineered judgments must include both project name and contractor's name who will install firestop system as described in drawing.
- .4 Submit material safety data sheets provided with product delivered to job site.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Firestopping and smoke seal systems: in accordance with ULC-S115.
 - .1 Asbestos-free materials and systems capable of maintaining an effective barrier in compliance with requirements of ULC-S115 and not to exceed opening sizes for which they are intended.
 - .2 Firestop system rating: F.
- .2 Service penetration assemblies: certified by ULC in accordance with ULC-S115 and listed in ULC Guide No. 40 U19.
- .3 Service penetration firestop components: certified by ULC in accordance with ULC-S115 and listed in ULC Guide No. 40 U19.13 and ULC Guide No. 40 U19.15 under the Label Service of ULC.
- .4 Fire-resistance rating of installed firestopping assembly in accordance with NBC.
- .5 Firestopping and smoke seals at openings intended for ease of re-entry such as cables: elastomeric seal.
- .6 Firestopping and smoke seals at openings around penetrations for pipes, ductwork and other mechanical items requiring sound and vibration control: elastomeric seal.
- .7 Primers: to manufacturer's recommendation for specific material, substrate, and end use.
- .8 Water (if applicable): potable, clean and free from injurious amounts of deleterious substances.
- .9 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.
- .10 Sealants for vertical joints: non-sagging.

PART 3 EXECUTION

3.1 PREPARATION

- .1 Examine sizes and conditions of voids to be filled to establish correct thicknesses and installation of materials. Confirm substrates and surfaces are clean, 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 without interruption to vapour barrier.

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

3.2 COORDINATION

- .1 Coordinate location and proper selection of cast-in-place firestop devices with trade responsible for the work. Install device before placement of concrete.
- .2 Provide adequate spacing of field run pipes to allow for installation of cast-in-place firestop devices without interference.

3.3 INSTALLATION

- .1 Install firestopping material and components in accordance with ULC certification and manufacturer's instructions.
- .2 Install firestopping and smoke seal material and components at all walls, floors and ceilings in fire rated rooms as noted on Room Finish Schedule on Drawings and also for all floor to floor penetrations.
- .3 Install firestopping and smoke seal on both sides of wall or slab where penetration or opening exists in fire rated rooms.
- .4 Seal holes or voids made by through penetrations, poke-through termination devices, and unpenetrated openings or joints to ensure continuity and integrity of fire separation are maintained.
- .5 Provide temporary forming as required and remove forming only after materials have gained sufficient strength and after initial curing.
- .6 Tool or trowel exposed surfaces to a neat finish.
- .7 Remove excess compound promptly as work progresses and upon completion.

3.4 INSPECTION

- .1 Notify the Departmental Representative when ready for inspection and prior to concealing or enclosing firestopping materials and service penetration assemblies.

3.5 SCHEDULE

- .1 Firestop and smoke seal at:
 - .1 Penetrations through fire-resistance rated masonry, concrete, and gypsum board partitions and walls.
 - .2 Top of fire-resistance rated masonry and gypsum board partitions.
 - .3 Intersection of fire-resistance rated masonry and gypsum board partitions.
 - .4 Control and sway joints in fire-resistance rated masonry and gypsum board partitions and walls.
 - .5 Penetrations through fire-resistance rated floor slabs, ceilings

and roofs.

.6 Openings and sleeves installed for future use through fire separations.

.7 Around mechanical and electrical assemblies penetrating fire separations.

.8 Rigid ducts (greater than 129 cm³): fire stopping to consist of bead of firestopping material between retaining angle and fire separation and between retaining angle and duct, on each side of fire separation.

3.6 FIELD QUALITY CONTROL

.1 Examine sealed penetration areas to ensure proper installation before concealing or enclosing areas.

.2 Keep areas of work accessible until inspection by applicable code authorities.

.3 Perform inspection of through-penetration firestopping in accordance with ASTM E2174.

.4 Perform under this section patching and repairing of firestopping caused by cutting or penetrating of existing firestop systems already installed by other trades.

.5 Install a warning card that is clearly visible adjacent to all large and medium openings that may be re-penetrated. This card should contain the following information:

.1 Warning that the opening has been firestop protected.

.2 Indicate the firestop system used (ULC).

.3 F rating or FT rating.

.4 Firestop product(s) used.

.5 Person to contact and phone number in case of modification or new penetration of firestop system.

3.7 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.

END OF SECTION

PART 1 GENERAL

1.1 WORK INCLUDED

- .1 This Section specifies requirements for supplying, and applying sealants as indicated.

1.2 RELATED WORK

- .1 Cast-in-place Concrete: Section 03 30 00
- .2 Dampproofing: Section 07 11 13
- .3 Hollow Metal Doors and Frames: Section 08 11 14

1.3 REFERENCES

- .1 ASTM C920-2014, Specification for Elastomeric Joint Sealants.
- .2 CAN/CGSB-19.13-M87 Sealing Compound, One Component, Elastomeric, Chemical Curing.
- .3 CAN/CGSB-19.24-M90 Multi-component, Chemical Curing Sealing Compound.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Deliver and store materials in original wrappings and containers with manufacturer's seals and labels intact. Protect from freezing, moisture and water.

1.5 ENVIRONMENTAL AND SAFETY REQUIREMENTS

- .1 Sealant and substrate materials to be minimum 5°C.
- .2 Should it become necessary to apply sealants below 5°C, consult sealant manufacturer and follow their recommendations.
- .3 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada.
- .4 Conform to manufacturer's recommended temperatures, relative humidity and substrate moisture content for application and curing of sealants including special conditions governing use.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Primers: type recommended by sealant manufacturer.
- .2 Joint fillers:

- .1 General: compatible with primers and sealants, outsized 30 to 50%.
- .2 Polyethylene, urethane, neoprene or vinyl: extruded closed cell foam, Shore A hardness 20.
- .3 Bond breaker: pressure sensitive plastic tape, which will not bond to sealants.
- .4 Sealants:
 - .1 Interior and exterior caulking around perimeter of pressed steel frames and to base of frames to flooring: to CAN/CGSB-19.13, one-component, moisture curing, modified polyurethane, paintable, normal temperature range dry conditions, movement range to 10%.
 - .1 Interior control and expansion joints: to CAN/CGSB-19.24 multi-component sealant, self levelling, for joint movement up to 25%.
 - .2 Interior locations including: at corner joints where masonry walls butt into continuous walls, at masonry walls and concrete floor slabs, and at equipment pads to floor slabs, except where another sealant is specified: to CGSB 19.13.
 - .3 Mildew resistant silicone sealant for use around sinks and washroom fixtures: Silicone, non-sag, single component, to CGSB 19.18.
- .5 Joint cleaner: xylol, methylethyleketon or non-corrosive type recommended by sealant manufacturer and compatible with joint forming materials.

PART 3 EXECUTION

3.1 PREPARATION

- .1 Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants.
- .2 Remove by brushing, scrubbing, scraping or grinding loose mortar, dust, oil, grease, oxidation, mill scale, coatings and all other materials affecting bond of compounds from surfaces to which sealant compounds must adhere, except for painted surfaces.
- .3 Clean down caulked metal surfaces with clean cellulose sponges or rags soaked in solvent recommended by sealant manufacturer, and wipe dry with clean cloths. Confirm solvent is not injurious to painted surfaces.
- .4 Confirm releasing agents, coatings or other treatments have either not been applied to joint surfaces, or that they are entirely removed.
- .5 Confirm joint surfaces are dry and frost free.

3.2 APPLICATION

- .1 Apply sealant products where indicated on the drawings and as outlined in Clause 2.1 of this Section.

- .2 Where necessary to prevent staining, mask adjacent surfaces before priming and caulking.
- .3 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.
- .4 Apply sealants, primers, joint fillers, and bond breaker if required, to manufacturer's instructions. Apply sealant using gun with proper size nozzle. Use sufficient pressure to fill voids and joints solid. Superficial pointing with skin bead is not acceptable.
- .5 Form surfaces of sealant with full bead, smooth, free from ridges, wrinkles, sages, air pockets, embedded impurities. Neatly tool surface to a slight concave joint.

3.3 CURING

- .1 Cure sealants in accordance with sealant manufacturer's instructions.
- .2 Do not cover up sealant until proper curing has taken place.

3.4 CLEANING

- .1 Clean adjacent surfaces immediately and leave work neat and clean.
- .2 Remove excess and droppings, using recommended cleaners as work progresses.
- .3 Remove masking tape after initial set of sealant.
- .4 Do not use chemicals, scrapers, or other tools which would damage surfaces of caulked materials when excess compounds or droppings are removed. Repair Work damaged by cleaning.

END OF SECTION