

1. MECHANICAL- Section 23 05 00

B1. GENERAL

B1.1 WORKMANSHIP

- (a) All mechanical work is to be performed by licensed mechanics to meet all applicable codes and standards and the Manitoba Plumbing Code Regulations.

B1.2 APPLICATION

- (a) Review the roof plan to determine which portions of this specification apply to this project.

B2. PRODUCTS

(a) ROOF DRAINS

- (i) Hercules RetroDrain HDAL Series by OMG Roofing Products, RD Series Vandalproof by Thaler, Ancon RD-100-BED, Zurn Model Z121 or equal in accordance with B7, complete with cast domes for conventional roof decks to accommodate insulation thickness complete with strainer. Size to suit roof area and existing and/or new drain pipe as required.

(b) PIPE AND SEALER

- (i) Pipe and sealer as required by Code and as recommended by manufacturer where required for new drain pipes, to extend existing drain pipes, vent pipes, mechanical unit pipes or gas lines as necessary to suit site conditions. Provide fire-rated pipe and all associated accessories as required by Code for building area and application.

(c) INSULATION

- (i) Pipe insulation for mechanical unit pipes and drain pipes to be compatible with existing application and new materials specified in other sections. Drainpipe insulation to be 25mm (1") Fiberglas or equal 88 Kg/m (cubed) (52 16/cu. ft.) density pipe insulation with ASJ jacket, complete with vapour barrier. Insulate full length of all drain pipes.

(d) ACCESSORIES

- (i) Provide all accessories required in accordance with manufacturer's recommendations.
- (ii) Ensure compatibility between all components.

B3. EXECUTION

(a) PREPARATION

- (i) Prepare and clean existing drain pipes to receive new roof drains. Complete Mechanical Contractor. Recover any refrigerant from the unit (if applicable).
- (ii) Perform an inspection with the coordination of the Contract Administrator. When necessary or requested, provide additional documentation and photographs. The Contract Administrator and the mechanical contractor must sign the pre-work inspection form.
- (iii) Disconnect any mechanical units or hoods and prepare for reinstallation as required. Ensure all units are in working condition prior to removal. Should the unit require maintenance and/or replacement advise the Contract Administrator prior to removal. If this is not done the Contractor may be held responsible for the repair/replacement of the unit.

(b) DRAINS

- (i) Extend and modify existing drain pipes where required to receive new drains.
- (ii) Set new drains at elevations required by Roofing Division 7 to ensure positive drainage.
- (iii) Clamp, gasket and seal new drains to existing and/or extended drain pipes in accordance with manufacturer's recommendations.
- (iv) Insulate the entire length of all interior drain pipes (to reduce condensation and noise). Install insulation in accordance with manufacturer's recommendations. Provide fire-rated PVC jacketing system where called for on drawing(s) in accordance with manufacturers instructions.

(c) MECHANICAL UNIT OR HOOD RAISING

- (i) Elevate existing mechanical units and/or hoods required by height of new roof assembly.
- (ii) Fasten unit securely to new curbs and seal all joints. Provide all new extensions and flashings as required. Mechanically fasten new flashings and extensions to existing in accordance with A.S.H.R.A.E. and S.M.A.C.N.A. standards.
- (iii) Reconstruct any piping and insulation as required to suit new elevation, including condensate drains.
- (iv) Before a unit is disconnected or removed, contact and coordinate with the Contract Administrator. Perform an inspection with the coordination of the Contract Administrator. When requested, provide additional documentation and photographs.
- (v) Extend wiring, relocate disconnects (if applicable) to suit new location / height or equipment. Must follow Canadian and Manitoba Electrical code.
- (vi) Restore equipment operation and confirm operation with purchaser.

(d) GAS LINES

- (i) Adjust and/or extend gas lines to accommodate new configuration of equipment and roof.
- (ii) Mount gas lines in accordance with manufacturer's recommendations and detail(s) where applicable.
- (iii) All gas piping shall be installed and tested in conformance with CSA and CGA Standards and the requirements and regulations of the Provincial Department of Labour and all other authorities having jurisdiction. Arrange and pay for all necessary inspections, fees and tests required by the authorities.
- (iv) Maximum distance between supports to be 1,800mm o.c. Provide supports at the bases of every up-stand. Provide 1 support at each side of every corner, regardless of angles (i.e. 2 supports at every corner). Supports c/w roof protection scrim sheet. (i.e. TPO, EPDM or SBS secured in-place)

(e) DUCT & DUCT INSULATION

- (i) Remove existing duct insulation and install all new insulation jacketing to ducts. Use 50mm Fibreglass RFFRK reinforced foil-faced vapour seal duct insulation PF335, 340 g. (. lb./ft.3) density. Provide overwrap of 880 kg/m³ (55 lb./cu. ft.) density roofing felt held with fasteners on welded pins. Seams and joints to be sealed with Duro-Dyne F2 fibreglas duct tape imbedded in

Duro-Dyne S-2 duct sealer. Cover with two coats of asphalt paint to make weatherproof.

- (ii) Install TPO covering system as recommended by manufacturer.

END OF SECTION