

1. GENERAL

1.1 Sanitary Systems

- 1.1.1 A complete, separate system connecting all plumbing fixtures, equipment, etc. is to be installed. The system is to be designed to flow by gravity to local street sanitary sewers. Provide sewage ejectors for fixtures below outgoing sanitary sewer invert.

1.2 Storm Drainage

- 1.2.1 A complete, separate system within the building connecting all storm water receptors shall be designed to flow by gravity to the local storm sewer system. Provide sediment, oil and sand interceptors. For below outgoing storm sewer invert, provide storm water ejectors to discharge to outgoing gravity storm drain.

1.3 Water Service

- 1.3.1 Provide separate fire and domestic water services for the building. The domestic water service is to be metered.
- 1.3.2 Test and submit written report for all back-flow prevention devices.

1.4 Domestic Hot Water

- 1.4.1 Provide a central arrangement of dedicated domestic hot water heaters and recirculation system to provide 50°C domestic hot water in 10 seconds or less at any domestic hot water outlet. Provide local booster heaters where domestic hot water in excess of 50°C is required.

1.5 Plumbing Fixtures

- 1.5.1 Provide wall hung water closets and urinals on chair carriers, vitreous china recessed counter top hand wash basins with hot and cold mixing faucets, complete with back-flow stops and all necessary fittings and stops. Provide precast terrazzo janitors sinks with hot and cold hose bibs. Provide refrigerated drinking fountains, a minimum of 1 per stairwell *[and one near each physical training areas]*. All washrooms are to be complete with floor drains and barrier-free facilities.
- 1.5.2 Provide sand interceptor for floor cleaning machine in location to be determined during design. Locate central to floor cleaning operations and accessible to pump truck with minimum public exposure.

1.6 Site Service, Street Connections

- 1.6.1 Sanitary, storm, water and natural gas services will terminate 1.5 m outside building wall and be suitably capped. Extend these services to the street services under Site Work.

1.7 Hose Bibs

- 1.7.1 Provide non-freeze hose bibs on the exterior of the building on 20 metre centres and at all entrances/exits.

1.8 Vending Machines

- 1.8.1 Provide sanitary drainage and domestic cold water service with back-flow protection for vending machine stations. Isolation valves shall be at waist level, in a secure area and clearly marked.

1.9 Identification

- 1.9.1 Provide manufacturers nameplate on each piece of equipment indicating size, model, manufacturers name, serial number, voltage, cycle, phase and power of motors. Provide ULC and CSA registration plates as required by the respective agency. Locate nameplates so that they are easily read. Do not insulate or paint over plates.
- 1.9.2 Provide laminated plastic plates with black face and white centre. Minimum size 90 x 40 x 2.5 mm thick, engraved with 6 mm high lettering. Fasten nameplates securely in a location where easily read. Use standoffs where mounting surfaces are warm or hot. Identify equipment type and number and service or area or zone of building served.
- 1.9.3 Provide piping markers for pressure, temperature, service and flow direction in accordance with [CAN/CGSB-24.3-92]. Apply primary colours and secondary colour bands on finished piping surfaces in exposed areas only. Acceptable Material: [W.H Brady, Seton Name Plate Corporation, Setmark pipe markers].
- 1.9.4 Locate markers and classifying colours on piping systems so they can be seen and read from floor or platform. Identify pipe runs as follows:
- 1.9.4.1.1 At least once in each room.
 - 1.9.4.1.2 Maximum 10 m between identifications in open areas.
 - 1.9.4.1.3 Both sides where pipe passes through wall, partition or floor.
 - 1.9.4.1.4 At point of entry and exit of chases and confined spaces and at each access opening.
 - 1.9.4.1.5 At each piece of equipment and at major manual and automatic valves on the upstream side.
- 1.9.5 Provide brass tags with 12 mm stamped code lettering filled with black paint secured with non-ferrous chains for valves and operating controllers. Provide 6 identification flow diagrams for each system. Include valve tag

schedule, designating number, service, function and location of each tagged item and normal operating position of each valve.

1.10 Permits And Testing

- 1.10.1.1 All permits and testing including associated costs and commissioning procedures shall be the sole responsibility of the *[Design Builder]*.

End of Section