

PART 1 - GENERAL

1.1 REFERENCES

- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM A126-04(2014), Specification for Gray Iron Castings for Valves, Flanges and Pipe Fittings.
 - .2 ASTM B62-15, Specification for Composition Bronze or Ounce Metal Castings.
- .2 American Water Works Association (AWWA)
 - .1 AWWA C700-15, Cold Water Meters- Displacement Type, Bronze Main Case.
 - .2 AWWA C701-15, Cold Water Meters- Turbine Type for Customer Service.
 - .3 AWWA C702-15, Cold Water Meters- Compound Type.
- .3 American National Standards Institute (ANSI)
 - .1 ANSI Z358.1-13 Emergency eyewash and shower equipment.
- .4 Canadian Standards Association (CSA)
 - .1 CSA-B64 Series-11, Backflow Preventers and Vacuum Breakers.
 - .2 CSA-B356-10(R2015), Water Pressure Reducing Valves for Domestic Water Supply Systems.
- .5 Health Canada/Workplace Hazardous Materials Information Systems (WHMIS).
 - .1 Material Safety Data Sheets (MSDS).
- .6 Plumbing and Drainage Institute (PDI)
 - .1 PDI-G101, Testing and Rating Procedure for Grease Interceptors with Appendix of Sizing and Installation Data.
 - .2 PDI-WH201, Water Hammer Arresters Standard.

1.2 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and datasheet for fixtures and equipment.

- .2 Indicate dimensions, construction details and materials for specified items.
- .3 Submit WHMIS MSDS in accordance with Section 01 33 00 – Submittal Procedures. Indicate VOC's for adhesive and solvents during application and curing.
- .3 Shop Drawings:
 - .1 Submit shop drawings to indicate materials, finishes, method of anchorage, number of anchors, dimensions, construction and assembly details and accessories.
 - .2 Instructions: submit manufacturer's installation instructions.
 - .3 Closeout submittals: submit maintenance and engineering data for incorporation into manual specified in Section 01 78 00. Include:
 - .1 Description of plumbing specialties and accessories, giving manufacturer's name, type, model, year and capacity.
 - .2 Details of operation, servicing and maintenance.
 - .3 Recommended spare parts list.

1.3 QUALITY ASSURANCE

- .1 Health and Safety:
- .2 Do construction occupational health and safety in accordance with Section 01 35 29 – Health and Safety Requirements.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Waste Management and Disposal:
 - .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 – Construction/Demolition Waste Management and Disposal.
 - .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
 - .3 Collect and separate for disposal, paper, plastic, polystyrene, corrugated cardboard packaging materials in appropriate on-site bins for recycling in accordance with Waste Management Plan.
 - .4 Divert unused metal materials from landfill to metal recycling facility as approved by the Departmental Representative.
 - .5 Fold up metal and plastic banding flatten and place in designated area for recycling.

PART 2 - PRODUCTS

2.1 FLOOR DRAINS

- .1 Floor drains:
 - .1 Refer to Schedule on Drawings, minimum size for all floor drains to be 75mm, including for shower drains.
 - .2 Provide trap primers for all floor drains.
 - .3 Acceptable Product: Zurn, Jay R. Smith, MIFAB.

2.2 CLEANOUTS

- .1 Cleanout plugs: heavy cast iron male ferrule with brass screws and threaded brass or bronze plug. Sealing-caulked lead seat or neoprene gasket.
 - .1 Acceptable Product: Zurn ZN-1400, Jay R. Smith, MIFAB.
- .2 Access covers:
 - .1 Wall access: face or wall type, or stainless steel square cover with flush head securing screws, bevelled edge frame complete with anchoring lugs.
 - .2 Floor access: round cast iron body and frame with adjustable secured nickel bronze top.
 - .1 Plugs: bronze with neoprene gasket.
 - .2 Cover for unfinished concrete floors: cast iron round, gasket, vandal-proof screws.
 - .3 Cover for terrazzo finish: polished nickel bronze brass with recessed cover for filling with terrazzo, vandal-proof locking screws.
 - .4 Cover for tile and linoleum floors: polished nickel bronze with recessed cover for linoleum or tile infill, complete with vandal-proof locking screws.
 - .5 Cover for carpeted floors: polished nickel bronze with deep flange cover for carpet infill, complete with carpet retainer vandal-proof locking screws.
 - .6 Cover for finished concrete floors: polished bronze, flush to finished floor, vandal-proof locking screws.
 - .3 Acceptable Product: Zurn ZANB-1460, Jay R. Smith, MIFAB.

2.3 ROOF DRAINS

- .1 Standard roof drains with cast iron body with aluminum or cast iron dome, underdeck clamp extension, roof sump receiver and waterproof flang to suit roof construction, blashing clamp ring with integral gravel stop.

- .1 Acceptable Product: Zurn Z-121; Jay R. Smith; Mifab.

2.4 TRAP SEAL PRIMERS

- .1 Up to 12 floor drains: Electronic trap priming manifold with:
 - .1 Vacuum breaker
 - .2 Two-way ball valve controlled by the building control system complete with manual override switch.
 - .3 Inlet strainer.
 - .4 NPS inlet connection.
 - .5 Calibrated manifold.
 - .6 Water hammer arrestor
 - .7 Mounted in steel cabinet
 - .8 Compression outlet fittings
 - .9 Inlet shut off valve
 - .10 Supplies minimum 59 ml @ 138 kPa.
 - .11 Twenty-four (24) hour timer.
- .2 Provide wall access panels/doors to conceal trap primer valves.

PART 3 - EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Bring cleanouts to wall or finished floor unless serviceable from below floor.
- .2 Building drain cleanout and stack base cleanouts: line size to maximum NPS4.

3.2 CLEANOUTS

- .1 Bring cleanouts to wall or finished floor unless serviceable from below floor.
- .2 Building drain cleanout and stack base cleanouts: line size to maximum NPS 4.

3.3 TRAP SEAL PRIMERS

- .1 Install for floor drains and elsewhere, as indicated.

- .2 Install on cold water supply in concealed space, to approval of the Departmental Representative.

3.4 START-UP AND COMMISSIONING

- .1 Timing: Start-up only after:
 - .1 Pressure tests have been completed.
 - .2 Disinfection procedures have been completed.
- .2 Provide continuous supervision during start-up.

3.5 TESTING AND ADJUSTING

- .1 Timing:
 - .1 After start-up deficiencies rectified.
 - .2 After certificate of completion has been issued by authority having jurisdiction.
- .2 Floor drains:
 - .1 Verify operation of trap seal primer.
 - .2 Prime, using trap primer. Adjust flow rate to suit site conditions.
 - .3 Check operations of flushing features.
 - .4 Check security, accessibility, removability of strainer.
 - .5 Clean out baskets.
- .3 Access doors:
 - .1 Verify size and location relative to items to be accessed.
- .4 Cleanouts:
 - .1 Verify covers are gas-tight, secure, yet readily removable.
- .5 Commissioning:
 - .1 In accordance with the Commissioning Plan and supplemented as specified herein.
- .6 Training:
 - .1 Provide training in accordance with the Commissioning Plan and supplemented as specified herein.
 - .2 Demonstrate full compliance with Design Criteria.

END OF SECTION