SECTION 224213.13 - COMMERCIAL WATER CLOSETS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY
A. Section Includes:
   1. Water closets.
   2. Flushometer valves.
   3. Toilet seats.

1.3 ACTION SUBMITTALS
A. Product Data: For each type of product.
   1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for water closets.
   2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

1.4 CLOSEOUT SUBMITTALS
A. Operation and Maintenance Data: For flushometer valves to include in operation and maintenance manuals.

PART 2 - PRODUCTS

2.1 WALL-MOUNTED, BACK-OUTLET WATER CLOSETS
A. Water Closets WC-1: Floor mounted, bottom outlet, top spud.
   1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
      a. American Standard America. Equal to Madera #2234.001
      b. Gerber Plumbing Fixtures LLC.
      c. Kohler Co.
      d. Mansfield Plumbing Products LLC.
      e. TOTO USA, INC.
      f. Zurn Industries, LLC; Commercial Brass and Fixtures.
   2. Bowl:
      b. Material: Vitreous china.
      c. Type: Siphon jet.
      d. Style: Flushometer valve.
      e. Height: Standard.
      f. Rim Contour: Elongated.
      g. Water Consumption: 1.6 gal. per flush.
      h. Spud Size and Location: NPS 1-1/2; top.
      i. Color: White.
3. Bowl-to-Drain Connecting Fitting: ASTM A 1045 or ASME A112.4.3.
5. Toilet Seat: Open front - required.

B. Water Closets WC-2: Accessible Floor mounted, bottom outlet, top spud.
   1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
      a. American Standard America. Equal to Madera # 3043.001
      b. Gerber Plumbing Fixtures LLC.
      c. Kohler Co.
      d. Mansfield Plumbing Products LLC.
      e. TOTO USA, INC.
      f. Zurn Industries, LLC; Commercial Brass and Fixtures.
   2. Bowl:
      b. Material: Vitreous china.
      c. Type: Siphon jet.
      d. Style: Flushometer valve.
      e. Height: Accessible/"Right height”.
      f. Rim Contour: Elongated.
      g. Water Consumption: 1.6 gal. per flush.
      h. Spud Size and Location: NPS 1-1/2; top.
      i. Color: White.
   3. Bowl-to-Drain Connecting Fitting: ASTM A 1045 or ASME A112.4.3.
   5. Toilet Seat: Open front - required.

2.2 FLUSHOMETER VALVES
A. Manual, Diaphragm Type Flushometer Valves FV-1:
   1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
      a. American Standard America
      b. Sloan Valve Company. Equal to Regal #111XL
      c. Zurn Industries, LLC; Commercial Brass and Fixtures.
   4. Features: Include integral check stop and backflow-prevention device.
   5. Material: Brass body with corrosion-resistant components.
   7. Panel Finish: Chrome plated or stainless steel.
   9. Consumption: 1.6 gal. per flush.

2.3 TOILET SEATS
A. Toilet Seats:
1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
   b. Bemis Manufacturing Company.
   c. Church Seats.
   d. Olsonite Seat Co.
   e. TOTO USA, INC.
   f. Zurn Industries, LLC; Commercial Brass and Fixtures.


4. Type: Commercial (Heavy duty).

5. Shape: Elongated rim, open front.


8. Seat Cover: Not required.


PART 3 - EXECUTION

3.1  EXAMINATION

A. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before water-closet installation.

B. Examine walls and floors for suitable conditions where water closets will be installed.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2  INSTALLATION

A. Water-Closet Installation:
   1. Install level and plumb according to roughing-in drawings.
   2. Install floor-mounted water closets on bowl-to-drain connecting fitting attachments to piping or building substrate.
   3. Install accessible, wall-mounted water closets at mounting height for handicapped/elderly, according to ICC/ANSI A117.1.

B. Flushometer-Valve Installation:
   1. Install flushometer-valve, water-supply fitting on each supply to each water closet.
   2. Attach supply piping to supports or substrate within pipe spaces behind fixtures.
   3. Install lever-handle flushometer valves for accessible water closets with handle mounted on open side of water closet.
   4. Install actuators in locations that are easy for people with disabilities to reach.

C. Install toilet seats on water closets.

D. Wall Flange and Escutcheon Installation:
   1. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations and within cabinets and millwork.
   2. Install deep-pattern escutcheons if required to conceal protruding fittings.
   3. Comply with escutcheon requirements specified in Section 220518 "Escutcheons for Plumbing Piping."
E. Joint Sealing:
   1. Seal joints between water closets and walls and floors using sanitary-type, one-part, mildew-resistant silicone sealant.
   2. Match sealant color to water-closet color.
   3. Comply with sealant requirements specified in Section 079200 "Joint Sealants."

3.3 CONNECTIONS
A. Connect water closets with water supplies and soil, waste, and vent piping. Use size fittings required to match water closets.
B. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."
C. Comply with soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."
D. Where installing piping adjacent to water closets, allow space for service and maintenance.

3.4 ADJUSTING
A. Operate and adjust water closets and controls. Replace damaged and malfunctioning water closets, fittings, and controls.
B. Adjust water pressure at flushometer valves to produce proper flow.

3.5 CLEANING AND PROTECTION
A. Clean water closets and fittings with manufacturers' recommended cleaning methods and materials.
B. Install protective covering for installed water closets and fittings.
C. Do not allow use of water closets for temporary facilities unless approved in writing by Owner.

END OF SECTION 224213.13