
SECTION 22 42 00
SECURITY PLUMBING FIXTURES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Combination Fixture.

1.2 RELATED REQUIREMENTS

- A. Section 22 00 00 - Plumbing Common Work Results; for administrative requirements
- B. Section 22 00 00 - Plumbing Common Work Results; for closeout requirements
- C. Section 22 00 00 - Plumbing Common Work Results; for product requirements
- D. Section 22 00 00 - Plumbing Common Work Results;
- E. Section 07 90 05 - Joint Sealers: Seal fixtures to walls and floors.
- F. Section 22 05 19 - Plumbing Eschutcheons
- G. Section 22 05 19 - Plumbing Meters and Gages
- H. Section 26 05 83 - Wiring Connections: Electrical characteristics and wiring connections.

1.3 REFERENCE STANDARDS

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
- B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- C. NSF 61 - Drinking Water System Components - Health Effects; 2012.
- D. NSF 372 - Drinking Water System Components - Lead Content; 2011.

1.4 SUBMITTALS

- A. See Section 22 00 00 - Plumbing Common Work Results; for submittal procedures.
 - B. Listed manufacturers and series are for reference only and do not promote any single product. Series are provided for reference, and should not be used as an ordering model number. Accessories and options may be custom components purchased separately.
 - C. Product Data: Provide manufacturer's most current catalog data sheet for equipment indicating rough-in size, finish, and accessories. Manufacturer's data sheets on each item of equipment and device, shall be clearly marked up to identify the items, accessories and options to be used on the project. Provide catalog illustrations of fixtures, sizes, utility sizes, trim, and finishes.
 - 1. Combination Fixture. (22 42 00 - 002 -A)
 - D. Manufacturer's Instructions: Indicate installation methods and procedures.
 - E. Maintenance Data: Include fixture trim exploded view and replacement parts lists.
 - F. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.
 - 1. Submit under Operation and Maintenance Data books (22 00 00 - 006 -A)
 - 2. Combination Fixture.
 - G. Project Record Documents: Record actual installed locations of components and tag numbering.
 - 1. Refer to Section 22 00 00 - Plumbing Common Work Results
 - 2. Record Documents (22 00 00 - 005 - A)
 - H. Operation and Maintenance Data: Include installation instructions and spare parts lists.
 - 1. Refer to Section 22 00 00 - Plumbing Common Work Results;
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2. Operation and Maintenance Data Books (22 00 00 - 006 - A)
3. Operation and Maintenance DVD (22 00 00 - 007 - A)

1.5 WARRANTY

- A. See Section 22 00 00 - Plumbing Common Work Results; for additional warranty requirements.
- B. Provide five year manufacturer warranty, including parts, materials and labor for defective parts, for the following:
 1. Include in Closeout Submittals Book.
 2. Combination Fixture.

PART 2 PRODUCTS

2.1 GENERAL

- A. Potable Water Systems: Provide plumbing fittings and faucets that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.

2.2 SECURITY WATER CLOSET WITH INTEGRAL SINK COMBINATION FIXTURE:

- A. Security Water Closet with Integral sink combination, (WC-4): Back access, on floor, cabinet, with water closet and lavatory. For use on 45 Deg chase wall. Welded Construction. Elongated toilet bowl with contoured seat, integral crevice-free self-draining flushing rim, with positive afterfill, bead blast finish bowl, blowout type toilet. Standard lavatory shall be rectangular-shaped bowl, stainless steel bubbler, fast draining type with air vent. Hardwired electronic single temperature push button with bypass valve for bubbler. Provide manufacturer wall cleave for block wall construction
 1. Refer to drawings for Left or Right Orientation
 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Willoughby Industries, Series 1545 L/R
 - b. Acorn Engineering Co.:
 - c. Bradley Corporation.
 - d. Metcraft Industries Inc.
 3. Material: 0.078-inch- minimum-thick stainless steel; corrosion-resistant metal for internal piping and bracing.
 4. Finish: ASTM A480/A480M, No. 4 polished finish on exposed surfaces.
 5. Cabinet: Rectangular apron, with backsplash.
 - a. Water-Closet Bowl Location: refer to drawings of apron.
 6. Accessories:
 - a. Grab bar and lavatory closure plate.
 - b. Suicide prevention skirt.
 7. Mounting: Bolts through wall sleeve into accessible service space. Security frame wall sleeve.
 8. Water Closet:
 - a. Standard: IAPMO PS 61.
 - b. Bowl:
 - 1) Type: Elongated, with back inlet, integral trap, and blowout design with back outlet and contoured seat.
 - 2) Seat Surface: ASTM A480/A480M, No. 7 polished finish.
 - 3) Outlet Connection: NPS 3, horizontal with cleanout and slip joint.

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9. Electronic Flushometer: 1.6 gallons per flush, Vandal resistant stainless steel fixture pushbutton.
 10. Lavatory:
 - a. Standard: ASME A112.19.3/CSA B45.4.
 - b. Location: In top of cabinet.
 - c. Receptor: Rectangular bowl.
 - d. Hardwired Electronic Faucet: Electronic, Single temperature push button.
 - 1) Vandal-resistant pushbutton.
 - e. Drain: Integral punched grid with NPS 1-1/4 minimum waste and trap complying with ASME A112.18.2/CSA B125.2.
 11. Wall Sleeve: Galvanized-steel frame of dimensions required to match fixture. Include steel bars or other design to prevent escape if fixture is removed.
- B. Security Water Closet with Integral sink combination, (WC-3): Back access, on floor, cabinet, with water closet and lavatory. For use on 90 Deg chase wall. Welded Construction. Elongated toilet bowl with contoured seat, integral crevice-free self-draining flushing rim, with positive afterfill, bead blast finish bowl, blowout type toilet. Standard lavatory shall be rectangular-shaped bowl, stainless steel bubbler, fast draining type with air vent. Hardwired electronic single temperature push button with bypass valve for bubbler. Provide manufacturer wall cleave for block wall construction
1. Refer to drawings for Left or Right Orientation
 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Willoughby Industries, Series 4896
 - b. Acorn Engineering Co
 - c. Bradley Corporation.
 - d. Metcraft Industries Inc.
 3. Material: 0.078-inch- minimum-thick stainless steel; corrosion-resistant metal for internal piping and bracing.
 4. Finish: ASTM A480/A480M, No. 4 polished finish on exposed surfaces.
 5. Cabinet: Rectangular apron, with backsplash.
 - a. Water-Closet Bowl Location: refer to drawings of apron.
 6. Accessories:
 - a. Grab bar and lavatory closure plate.
 - b. Suicide prevention skirt.
 7. Mounting: Bolts through wall sleeve into accessible service space. Security frame wall sleeve.
 8. Water Closet:
 - a. Standard: IAPMO PS 61.
 - b. Bowl:
 - 1) Type: Elongated, with back inlet, integral trap, and blowout design with back outlet and contoured seat.
 - 2) Seat Surface: ASTM A480/A480M, No. 7 polished finish.
 - 3) Outlet Connection: NPS 3, horizontal with cleanout and slip joint.
 - c. Electronic Flushometer: 1.6 gallons per flush, Vandal resistant stainless steel fixture pushbutton.
 9. Lavatory:
 - a. Standard: ASME A112.19.3/CSA B45.4.
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- b. Location: In top of cabinet.
 - c. Receptor: Rectangular bowl.
 - d. Hardwired Electronic Faucet: Electronic, Single temperature push button.
 - 1) Vandal-resistant pushbutton.
 - e. Drain: Integral punched grid with NPS 1-1/4 minimum waste and trap complying with ASME A112.18.2/CSA B125.2.
10. Wall Sleeve: Galvanized-steel frame of dimensions required to match fixture. Include steel bars or other design to prevent escape if fixture is removed.

PART 3 EXECUTION

3.1 INTERFACE WITH WORK OF OTHER SECTIONS

- A. Review millwork shop drawings. Confirm location and size of fixtures and openings before rough-in and installation.
- B. Confirm rough-in and framing of walls and partitions with supports for fixtures and accessories.
- C. Confirm rough-in locations and power requirements before rough-in installation. Refer to Section 26 05 83 - Wiring Connections.

3.2 EXAMINATION

- A. Verify that walls and floor finishes are prepared and ready for installation of fixtures.
- B. Electrical:
 - 1. Verify electrical power, voltage, phase and current is available and of the correct characteristics.
 - 2. Verify rough-in for electrical connections to verify actual locations before installing.
 - 3. Verify motor type and VFD or disconnect type for compatibility prior to ordering equipment.
- C. Controls:
 - 1. Verify signal power, voltage, phase and current is available and of the correct characteristics.
 - 2. Verify rough-in for control connections to verify actual locations before installing.
 - 3. Verify motor type and VFD or disconnect type for compatibility with control sequence and control devices prior to ordering equipment.
- D. Maintain service clearances.
- E. Verify that surfaces are suitable for installation.
- F. Verify that field measurements are as shown on the drawings.
- G. Examine areas to receive equipment for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- H. Proceed with installation only after unsatisfactory conditions have been corrected.
- I. Confirm that millwork is constructed with adequate provision for the installation of counter top lavatories and sinks.

3.3 INSTALLATION

- A. Install in accordance with the following:
 - 1. Federal, state and local codes.
 - 2. Manufacturer's instructions.
 - 3. 36 CFR 1191 and ADA standards.
- B. Install each fixture with trap, easily removable for servicing and cleaning.
- C. Provide chrome plated rigid piping with loose key stops, reducers, escutcheons and flexible connector to domestic water connections. Rough-in and connect to equipment and fixtures.

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1. For equipment or fixtures provided under this contract.
 - D. Install components level and plumb.
 - E. Install and secure fixtures in place with wall supports and bolts.
 - F. Seal fixtures to wall and floor surfaces with sealant as specified in Section 07 90 05 - Joint Sealers, color to match fixture.
 - G. Contractor shall be responsible to coordinate the orientation of all plumbing fixtures (i.e. left-hand, right-hand) with ADA requirements and general building conditions.
 - H. Water Closets:
 1. Solidly attach water closets to floor with lag screws. Lead flashing is not intended hold fixture in place.
 2. Install flushometer-valve water-supply fitting on each supply to each fixture.
 3. Attach supply piping to supports or substrate within pipe spaces behind fixtures.
 4. Install handles for accessible fixture with handle mounted on open side of compartment.
 5. Install supports, affixed to building substrate, for fixture.
 6. Seal joints between urinals and walls and floors using sanitary-type, one-part, mildew-resistant silicone sealant.
 - I. Lavatories:
 1. Install supports, affixed to building substrate, for wall-hung sinks.
 2. Install accessible wall-mounted sinks at handicapped/elderly mounting height according to ICC/ANSI A117.1.
 3. Set floor-mounted sinks in leveling bed of cement grout.
 4. Install water-supply piping with stop on each supply to each sink faucet.
 - a. Install stops in locations where they can be easily reached for operation.
 5. Seal joints between sinks and counters, floors, and walls using sanitary-type, one-part, mildew-resistant silicone sealant.
 6. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible sinks.

3.4 START-UP

- A. Provide Start-up per section 22 00 00 - Plumbing Common Work Results.
- B. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.
- C. Adjust sensors for automatic flush valve, faucets and activators.
- D. Shower control valves provided with high limit stops shall be adjusted to a maximum hot water temperature setpoint of 105 degrees Fahrenheit.

3.5 CLEANING

- A. Clean plumbing fixtures and equipment.

3.6 TRAINING

- A. Perform training in accordance with Section 22 00 00 - Plumbing Common Work Results.

3.7 PROTECTION

- A. Protect installed products from damage due to subsequent construction operations.
- B. Do not permit use of fixtures by construction personnel.
- C. Repair or replace damaged products before Date of Substantial Completion.

END OF SECTION 22 42 00