

BRADLEY OMNIDECK LAVATORY DECKS AND FAUCETS

Bradley's OmniDeck lavatory decks provide innovative solutions to sustainability, user comfort, sanitation, and site labor cost savings for contemporary washroom lavatory design. Formed with premium recycled content materials, OmniDecks are ergonomically designed for ease of use, easy to clean and maintain, and are equipped with single-point water supply and waste hookups in a factory assembled unit.

Bradley Corporation, the industry's leading manufacturer of premium quality commercial lavatories and wash stations, presents lavatory decks made from **Terreon**, Bradley's premium solid surface material. Terreon solid surface material is noted for its resistance to chemicals, stains, burns and impacts. Surface damage can be easily repaired with everyday cleansers or fine grit abrasives. Bradley's unique **TerreonRE** incorporates recycled content in solid surface material.

Bradley Corporation serves a diverse customer base ranging from local business facilities to international corporations like Wal-Mart, General Motors, U.S. Postal Service, W.W. Grainger, and AMC Theaters Corporation.

Architects, engineers, and specifiers look to Bradley Corporation for innovation in design and leadership in the development of environmentally conscious products. Bradley Corporation, a member of the U.S. Green Building Council, the Wisconsin Green Building Alliance, has several products earning certification by GREENGUARD Environmental Institute, and GREENGUARD Children and Schools program.

Bradley eases the specifying process with a seasoned customer service staff and a range of helpful information tools on an advanced website. For example, easy-to-use sizing software, available on Bradley's website, allows engineers to quickly determine the correct size Thermostatic Mixing Valves.

Bradley is the industry leader in the manufacture of premium quality commercial plumbing fixtures, valves, TMVs and washroom accessories that appear in the following CSI MasterFormat 2004™ Sections:

Section 10 21 13 – TOILET COMPARTMENTS (Mills® Metal, Plastic-laminate, Phenolic, and Plastic units)
Section 10 28 13.13 – COMMERCIAL TOILET ACCESSORIES (Institutional and commercial accessories)
Section 10 28 13.19 – HEALTHCARE TOILET ACCESSORIES (Patient care accessories)
Section 10 28 13.21 – WARM AIR DRYERS (Aerix® hand dryers)
Section 10 28 13.63 – DETENTION TOILET ACCESSORIES
Section 10 28 16 – BATH ACCESSORIES (Hospitality and commercial bath accessories)
Section 10 51 26 – PLASTIC LOCKERS (Lenox® Plastic Lockers)
Section 22 11 19 – DOMESTIC WATER PIPING SPECIALTIES (Thermostatic mixing valves)
Section 22 42 16.01 – COMMERCIAL LAVATORIES AND FAUCETS (Express® and Frequency® Single and multi-station lavatories)
Section 22 42 16.02 – COMMERCIAL LAVATORIES AND FAUCETS (Advocate® lavatories)
Section 22 42 16.03 – COMMERCIAL LAVATORIES AND FAUCETS (Verge™ lavatories)
Section 22 42 16.04 – COMMERCIAL LAVATORIES AND FAUCETS (OmniDecks™ lavatories)
Section 22 42 16.11 – COMMERCIAL SINKS AND FAUCETS
Section 22 42 23 – COMMERCIAL SHOWERS AND SHOWER VALVES
Section 22 42 33 – WASHFOUNTAINS (Sentry™, BradMate™, and Classic wash fountains)
Section 22 43 00 – HEALTHCARE PLUMBING FIXTURES (Patient care lavatory units)
Section 22 45 00 – EMERGENCY PLUMBING FIXTURES (Halo™ Emergency eyewash fixtures and showers)
Section 22 46 00 – SECURITY PLUMBING FIXTURES

Contact Bradley Corporation, Menomonee Falls, WI 53051; Phone: 800-BRADLEY ((800)272-3539) Fax: (262)251-5817, or visit the Bradley web site www.bradleycorp.com.

Bradley Corporation is an AIA/CES registered provider currently offering five programs earning one (1) HS&W Learning Unit each; several qualify for sustainable design (SD) credit. All active AIA members must successfully complete 18 learning unit (LU) hours each year.

GREENGUARD Certification ProgramSM is a service mark of GREENGUARD Environmental Institute.

Mills[®], Aerix[®], Lenox[®], Express[®], Frequency[®], and Advocate[®] are registered trademarks of Bradley Corporation.

Verge[™], OmniDeck[™], Sentry[™], BradMate[™], and Halo[™] are trademarks of Bradley Corporation.

**SECTION 22 42 16
LAVATORY DECKS AND FAUCETS**

PART 1 - GENERAL

1.1 SECTION INCLUDES

1. Commercial lavatory faucets.

1.2 RELATED SECTIONS

Specifier: Delete any paragraphs below that do not apply to this project.

1. Division 22 Section "Domestic Water Piping Specialties" for thermostatic mixing valves.
2. Division 22 Section "Commercial Lavatories and Faucets" for single and multiple user lavatories and lavatory systems.
3. Division 22 Section "Healthcare Plumbing Fixtures" for healthcare lavatories.
4. Division 22 Section "Emergency Plumbing Fixtures" for emergency fixtures.
5. Division 22 Section "Security Plumbing Fixtures" for security lavatories.

1.3 REFERENCES:

Specifier: If retaining References Article in Project specification, edit below to correspond to references that remain in Section after editing.

A. American Society of Sanitary Engineering (ASSE):

1. ASSE 1070 - Water Temperature Limiting Devices.

B. American National Standards Institute (ANSI):

1. ANSI Z 124.3 - Plastic Lavatories.
2. ANSI Z 124.6 - Plastic Sinks.
3. ANSI/ICPA SS-1-2001 - Performance Standard for Solid Surface Materials.

C. American Society of Mechanical Engineers (ASME):

1. ASME A112.18.1 Plumbing Supply Fittings.

D. ASTM International (ASTM):

1. ASTM C 170 - Standard Test Method for Compressive Strength of Dimension Stone.
2. ASTM D 570 - Standard Test Method for Water Absorption of Plastics.
3. ASTM D 785 - Standard Test Method for Rockwell Hardness of Plastics and Electrical Insulating Materials.
4. ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
5. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

E. Canadian Standards Association (CSA):

1. CSA B125 - (See ASME A112.18.1 - Plumbing Fixture Fittings).

Specifier: GREENGUARD Environment Institute is an ANSI Authorized Standards Developer that oversees the GREENGUARD certification program. GEI establishes acceptable indoor air standards for indoor products, environments, and buildings.

- F. GREENGUARD Environmental Institute (GEI):
 - 1. GREENGUARD listed and certified low emitting products.
- G. International Association of Plumbing and Mechanical Officials (IAPMO):
 - 1. Universal Plumbing Code (cUPC both U.S. and Canada).
- H. International Code Council (ICC):
 - 1. ICC/ANSI A117.1 – Accessible and Usable Buildings and Facilities.
- I. National Fire Protection Association (NFPA):
 - 1. NFPA 70 – National Electrical Code.
- J. State of Texas:
 - 1. Texas Accessibility Standards (TAS).
- K. Underwriters Laboratories, Inc. (UL):
 - 1. UL 723 - Test For Surface Burning Characteristics of Building Materials.
 - 2. UL 1951 - Electric Plumbing Accessories.
- L. United States Green Building Council (USGBC):
 - 1. LEED Green Building Rating System (LEED).
- M. US Federal Government:
 - 1. Public Law 102-486 - Energy Policy Act. 1992 (EPACT).
 - 2. U.S. Architectural & Transportation Barriers Compliance Board. Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG).
- N. US Green Building Council (USGBC):
 - 1. LEED Green Building Rating System.

1.4 ACTION SUBMITTALS

- A. Product Data: Manufacturer’s data sheets, installation instructions, and maintenance recommendations.
- B. Product Test Reports: Indicating compliance of products with requirements, from a qualified independent testing agency, when requested by Architect.

- C. Shop Drawings: Prepared by manufacturer. Include rough-in requirements and power, signal, and control wiring diagrams. Provide mounting requirements and rough-in dimensions. Include details of electrical and mechanical operating parts.

Specifier: Retain and edit below as required for LEED-registered products. Coordinate with Division 01 requirements for LEED MR Credit 5 Regional Materials and other credits where applicable.

1.5 LEED Submittals:

Specifier: LEED WE Credit 2 is for 50 percent reduction in water use for building sewer, based on use of water-conserving fixtures documented under Credit WE 3. LEED WE Credit 3 is for 30, 35, or 40 percent reduction in water usage.

1. Product Data for [Credit WE 2] [and] [Credit WE 3]: Documentation indicating compliance with requirements.

Specifier: Bradley's TerreonRe optional solid surface material contains 25 percent preconsumer recycled content.

2. Product data for Credit MR 4: Indicate percentages by weight of postconsumer and preconsumer recycled content, and product cost.

1.6 INFORMATION SUBMITTALS

- A. Sample warranty.
- B. Manufacturer's Certificates.
- C. Indoor environmental quality certificates.

1.7 MAINTENANCE SUBMITTALS

- A. Furnish indicated spare parts that are packaged with identifying labels listing associated products.
- B. Operation, maintenance and cleaning data.

1.8 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Approved manufacturer listed in this section, with minimum [5] years experience in the manufacture of plumbing fixtures. Manufacturers seeking approval must submit the following:
 1. Product data, including test data from qualified independent testing agency indicating compliance with requirements.
 2. Samples of each component of product specified.
 3. List of successful installations of similar products available for evaluation by Architect.
 4. Submit substitution request not less than 15 days prior to bid date.
- B. Source Limitations: Obtain each type of plumbing fixture and compatible accessories through one source from a single approved manufacturer.

Specifier: Bradley offers handicapped-accessible fixtures meeting requirements of ADA, ICC A117.1, and Texas Accessibility Standards.

- C. Accessibility Requirements: Comply with requirements of ADA/ABA and with requirements of authorities having jurisdiction.
- D. Water Flow and Consumption Requirements: Comply with EPACT.
- E. Drinking Water Standard: Comply with NSF 61.
- F. Electrical Components: Listed and labeled per NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.

Specifier: Bradley's OmniDeck lavatory decks exceed LEED for Schools IEQ requirements as certified by GREENGUARD.

- G. Indoor Environmental Quality Certification: Provide certificate indicated that lavatory deck materials have been certified under the following programs, or a comparable certification acceptable to Owner:
 - 1. GREENGUARD Indoor Air Quality Certified.
 - 2. GREENGUARD Certified for Children and Schools.

1.9 COORDINATION

- A. Field Measurements: Verify locations of lavatory decks and adjacent walls prior to fabrication.

1.10 WARRANTY

- A. Special Manufacturer's Warranty: Provide manufacturer's standard form in which manufacturer agrees to repair or replace commercial lavatory decks that fail in materials or workmanship.
 - 1. Solid surface material: 10 years.
 - 2. Faucets: 1 year.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide commercial lavatory decks and faucets manufactured by Bradley Corporation, Menomonee Falls, WI 53051, (800)272-3539, fax (262)251-5817; Email info@BradleyCorp.com; Website www.bradleycorp.com.

Specifier: Retain one of three paragraphs below based upon Project requirements. The manufacturer is not aware of comparable products.

- 1. Submit comparable products of one of the following for approval by Architect:
 - a. [Specifier: Insert name of manufacturer of comparable product.]

2. Submit requests for substitution in accordance with Instructions to Bidders and Division 01 General Requirements.
3. Provide specified product; Owner will not consider substitution requests.

2.2 MATERIALS

Specifier: Below describes **Terreon**, Bradley's premium densified solid surface vandal-resistant material, noted for its resistance to chemicals, stains, burns and impacts. Surface damage can be easily repaired with everyday cleansers or fine grit abrasives. Bradley's extensive Terreon color collection allows for versatility in design options. Option in first paragraph below describes Bradley's unique optional **TerreonRE** which incorporates recycled content in solid surface material. TerreonRE is available in a variety of colors.

- A. **Solid Surface Material:** Where indicated as constructed of solid surface material, fabricate plumbing fixtures from thermoset acrylic modified polyester resin certified by approved independent testing agency as complying with ANSI/ICPA-SS-1, ANSI Z124.3, and ANSI Z124.6, [with minimum 25 percent preconsumer recycled content and] with the following minimum properties:
1. Basis of Design Product: Bradley, **[Terreon] [TerreonRE]**.
 2. Thickness: 1/2 inch (13 mm), minimum.

2.3 LAVATORY DECKS, SINGLE STATION

Specifier: **Bradley OmniDeck Model LD-3010-1 Single-User Decks** described below are constructed of Terreon premium solid surface material. The deck accepts individual wash station faucets and optional soap dispensers, and an optional trap cover concealing supply connections and trap.

- A. ADA/ABA Compliant Wall-Mounted, Single-Station Lavatory Fixture **[LAV# ____]**: With integral bowl, water overflow and ledged back, drain, strainer, and tailpiece.

Specifier: Retain Terreon OmniDeck model option below.

1. Basis of Design Manufacturer/Model: **Bradley, OmniDeck Model [LD-3010-1 Terreon]**.

Specifier: Select applicable material, deck edge treatment, and mounting options in subparagraphs below.

2. Material: **[Solid surface material]**.
3. Deck Edge Accessories: **[Solid surface integral covered backsplash] [Side splashes] [Front apron] [Side aprons]**.
4. Deck Nosing: **[3/8 inch (9.5 mm) radiused (LD-3010)]**.
5. Trap Cover: **[Stainless steel] [None]**.
6. Mounting: **[Stainless steel mounting brackets] [In-wall carriers specified in another section] [Wall cleats specified in another section] [Casework specified in another section]**.
7. Overall Unit Size: 30 by 22 inch (762 by 559 mm).
8. Deck Colors: As selected by Architect from manufacturer's full line.

Specifier: Edit lavatory bowl options below to fit project. Integral bowl is available with solid surface decks; bottom mount bowl is also available with solid surface decks.

9. Integral Molded Lavatory Bowl for Solid Surface Decks:

- a. Bowl Material and Size: [HS-TO1 solid surface material, oval 22 by 14 inch (558 by 355 mm)] [HS-TS1 solid surface material, square, 14 by 14 inch (355 by 355 mm)] [HS-TR1 solid surface material, rectangular, 22 by 16 inch (558 by 406 mm)] [SL-TO1 solid surface material, oval, 16 by 13 inch (406 by 330 mm)] [SL-TR1 solid surface material, rectangular, 17 by 14 inch (432 by 356 mm)].
- b. Color: As selected by Architect from manufacturer's full line of solid surface colors.

Specifier: Insert faucet type; coordinate with Faucet Article below.

10. Faucet: [Insert faucet type].
11. Water Supply: [Single tempered line] [Thermostatic mixing valve assembly], with single point rough-in for unit.
12. Waste Hookup: Single point rough-in for unit.

Specifier: Retain one of two optional soap dispenser paragraphs below and edit as required, or delete if none required.

13. **Sensored Soap Dispenser:** Deck-mounted, sensor-operated, chrome-plated plastic, with LED battery and soap level indicators, [with battery box] [with single dispenser 120VAC power pack] [with 4 dispenser 120VAC power pack], [27 oz. (798 mL) capacity bottle] [54 oz. (1597 mL) capacity bottle (LD-3010 only)] [less bottle].
 - a. Basis of Design Manufacturer/Model: **Bradley, Model 6315.**
14. **Soap Dispenser:** Deck-mounted [16 oz. (473 mL) plastic] [16 oz. (473 mL) stainless steel] [32 oz. (946 mL) plastic] globe, with 4 inch (102 mm) spout.
 - a. Basis of Design Manufacturer/Model: **Bradley, Model 6324.**

2.4 LAVATORY DECKS, MULTIPLE STATION

Specifier: **Bradley OmniDeck multiple-user decks** described below are constructed of Terreon premium solid surface material. Bowls are positioned 30 inches on center handling washroom traffic quickly and economically while providing each user with their own space. The deck accepts individual wash station faucets and optional soap dispensers. Deck extensions with or without waste receptacles are optional on several units.

Bradley multi-user decks are supported by optional stainless steel brackets. Optional trap cover conceals the P-trap and tailpiece, flexible stainless steel supply connections, optional Bradley Vernatherm thermostatic mixing valve with integral strainers and external checkstops, and optional transformers for infrared sensor control.

- A. ADA/ABA Compliant Wall-Mounted, Multiple-Station Lavatory Fixture [**LAV#___**]: With integral bowls, molded water overflow, drain, strainer, and tailpiece.

Specifier: Retain Terreon or Evero OmniDeck model below.

1. Basis of Design Manufacturer/Model: **Bradley, OmniDeck Model [LD-3010 Terreon]**.

Specifier: Select applicable material, configuration, deck edge treatment, and mounting options in subparagraphs below. 4-station configuration is available in solid surface material only.

2. Material: [Solid surface material].
3. Configuration: [1] [2] [3] [4] station deck[, with extended deck as indicated].
4. Deck Edge Accessories: [Solid surface integral covered backsplash] [Side splashes] [Front apron] [Side aprons].
5. Deck Nosing: [3/8 inch (9.5 mm) radiused (LD-3010)].
6. Trap Cover: [Stainless steel] [None].
7. Mounting: [Stainless steel mounting brackets] [In-wall carriers specified in another section] [Wall cleats specified in another section] [Casework specified in another section].

Specifier: All Bradley 3010 decks are made to order. Deck dimensions below are typical, but lengths may be edited to fit opening. Deck depths are available between 22 and 25 inches in 1/4 inch increments. Edit below to fit project conditions. 4-station configuration is available in solid surface material only.

8. Overall Unit Size: [60 by 24 inches (1524 by 610 mm) with 2 bowls] [90 by 24 inches (2286 by 610 mm) with 3 bowls] [120 by 24 inches (30048 by 610 mm) with 4 bowls] [As indicated].
9. Deck Colors: As selected by Architect from manufacturer's full line.

Specifier: Edit lavatory bowl options below to fit project. Integral bowl is available with solid surface decks; bottom mount bowl is also available with solid surface.

10. Integral Molded Lavatory Bowl for Solid Surface Decks:
 - a. Bowl Material and Size: [HS-TO1 solid surface material, oval 22 by 14 inch (558 by 355 mm)] [HS-TS1 solid surface material, square, 14 by 14 inch (355 by 355 mm)] [HS-TR1 solid surface material, rectangular, 22 by 16 inch (558 by 406 mm)] [SL-TO1 solid surface material, oval, 16 by 13 inch (406 by 330 mm)] [SL-TR1 solid surface material, rectangular, 17 by 14 inch (432 by 356 mm)].
 - b. Color: As selected by Architect from manufacturer's full line of solid surface colors.

Specifier: Insert faucet type; coordinate with Faucet Article below.

11. Faucets: [Insert faucet type].
12. Water Supply: [Single tempered line] [Thermostatic mixing valve assembly], with single point rough-in for unit.
13. Waste Hookup: Single point rough-in for unit.

Specifier: Retain one of two optional soap dispenser paragraphs below and edit as required, or delete if none required.

14. **Sensored Soap Dispenser:** Deck-mounted, sensor-operated, chrome-plated plastic, with LED battery and soap level indicators, [with battery box] [with single dispenser 120VAC power pack] [with 4 dispenser 120VAC power pack], [27 oz. (798 mL) capacity bottle] [54 oz. (1597 mL) capacity (LD-3010 only)], [less bottle].
 - a. Basis of Design Manufacturer/Model: **Bradley, Model 6315.**
15. **Soap Dispenser:** Deck-mounted [16 oz. (473 mL) plastic] [16 oz. (473 mL) stainless steel] [32 oz. (946 mL) plastic] globe, with 4 inch (102 mm) spout.
 - a. Basis of Design Manufacturer/Model: **Bradley, Model 6324.**

2.5 2.5 SENSOR-OPERATED LAVATORY FAUCETS

Specifier: Four Bradley/Delta faucets listed below are for use with OmniDeck 3010 Series; retain one or more as required.

- A. Capacitive-Sensor-Operated Faucet with Remote Tempering Control **FCT#___**: Vandal-resistant accessible faucet meeting ASME A112.18.1/CSA B125. ADA/ANSI A117.1 compliant.
 1. Basis of Design Manufacturer/Model: **Bradley CAP-DCA.**
 2. Body: Polished chrome plated commercial solid cast brass spout.
 3. Aerator: Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).
 4. Tempered Water Supply: [Single tempered line] [Manual mixing valve, deck-mounted] [Single thermostatic mixing valve].
 5. Sensor Module: Water-conserving, vandal-resistant adjustable sensor unit with timing turn-off delay and stationary object automatic timed cutoff, with battery diagnostic audible signal, remote serviceable.
 - a. Adjustable Sensing Distance: 0 to 3-1/2 inch (0 to 88.9 mm).
 6. Power Supply: [120/24 VAC plug-in transformer] [Battery-operated].

Specifier: Retain thermostatic mixing valve if required for Project.

7. **Thermostatic Mixing Valve:** Lead-free thermostatic mixing valve, ASSE 1070 listed, with glass-filled polysulfone valve body, thermoplastic polymer cartridge, and integral check valves and strainers.
- B. IR Sensor-Operated Faucet with Infrared Control and External Tempering Control **FCT#___**: Vandal-resistant accessible faucet meeting ASME A112.18.1/CSA B125. ADA/ANSI A117.1 compliant.
 1. Basis of Design Manufacturer/Model: **Bradley IR-DCD.**
 2. Body: Polished chrome plated commercial solid cast brass spout.
 3. Tempered Water Supply: [Single tempered line] [Manual mixing valve, deck-mounted] [Single thermostatic mixing valve].
 4. Aerator: Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).

5. Sensor Module: Water-conserving, vandal-resistant adjustable sensor unit with adjustable timing turn-off delay and stationary object automatic timed cutoff, with battery diagnostic signal light, remote serviceable.
 - a. Adjustable Sensing Distance: 3-1/8 to 11-3/4 inch (80 to 300 mm) inch.
6. Power Supply: [120/24 VAC plug-in transformer] [Battery-operated with six 1.5 V 'AA' batteries]

Specifier: Retain thermostatic mixing valve if required for Project.

7. **Thermostatic Mixing Valve:** Lead-free thermostatic mixing valve, ASSE 1070 listed, with glass-filled polysulfone valve body, thermoplastic polymer cartridge, and integral check valves and strainers.
- C. IR Sensor-Operated Faucet with Infrared Control and External Tempering Control **FCT# ___**: Vandal-resistant accessible faucet meeting ASME A112.18.1/CSA B125. ADA/ANSI A117.1 compliant.
1. Basis of Design Manufacturer/Model: **Bradley IR-DCG.**
 2. Body: Polished chrome plated commercial solid cast brass spout.
 3. Tempered Water Supply: [Single tempered line] [Manual mixing valve, deck-mounted] [Single thermostatic mixing valve].
 4. Aerator: Flow rate 0.5 gpm (1.9 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).
 5. Sensor Module: Water-conserving, vandal-resistant adjustable sensor unit with adjustable timing turn-off delay and stationary object automatic timed cutoff, with battery diagnostic signal light, remote serviceable.
 - a. Sensing Distance: 5 inches (127 mm).
 6. Power Supply: [120/24 VAC plug-in transformer] [Battery-operated]

Specifier: Retain thermostatic mixing valve if required for Project.

7. **Thermostatic Mixing Valve:** Thermostatic mixing valve, ASSE 1070 listed, with stop/strainer/check valves, and flexible stainless steel connectors.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions and verify opening measurements prior to commencing installation. Proceed with installation once conditions meet requirements.

3.2 INSTALLATION

- A. Assemble fixtures and associated fittings and trim in accordance with manufacturer's instructions.
- B. Install fixture supports attached to building structure for fixtures requiring supports.

- C. Install fixtures onto waste-fitting seals or flanges and attach to supports or building structure.
- D. Install fixtures level, plumb, and firmly in place in accordance with manufacturer's rough-in drawings.
- E. Single-Point Connections:
 - 1. Install water supply piping to unit. Provide stop on each supply in readily-serviced location. Fasten supply piping to supports or substrate.
 - 2. Install trap and waste piping to unit.
- F. Install escutcheons at exposed piping penetrations in finished locations and within cabinets.
- G. Seal joints between fixtures and walls, floors, and countertops with joint sealant specified in Division 07 Section "Joint Sealants."

3.3 CLEANING AND PROTECTION

- A. Repair or replace defective work, including damaged fixtures and components.
- B. Clean unit surfaces, test fixtures, and leave in ready-to-use condition.
- C. Install new batteries in battery-operated devices at time of Substantial Completion.
- D. Turn over keys, tools, maintenance instructions, and maintenance stock to Owner.
- E. Protect units with water-resistant temporary covering. Do not allow temporary use of plumbing fixtures unless approved in writing by Architect. Remove protection at Substantial Completion and dispose.

3.4 TESTING AND ADJUSTING

- A. Set field-adjustable temperature set points of temperature-actuated water mixing valves. Adjust set point within allowable temperature range.
- B. Test and adjust installation.
- C. Remove and replace malfunctioning thermostatic mixing valves and retest.

END OF SECTION