

## **BRADLEY COMMERCIAL SINKS**

Bradley Corporation, the industry's leading manufacturer of premium quality commercial sinks and sink faucets, 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, 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

Section 10 28 13.15 – Hand and Hair Dryers

Section 10 28 13.63 – Detention Toilet Accessories

Section 10 51 26.00 – Plastic Lockers (Lenox Plastic Lockers)

Section 10 51 26.13 – Plastic Lockers (Lenox Recycled Plastic lockers)

Section 22 11 19 – Domestic Water Piping Specialties (Thermostatic mixing valves)

Section 22 42 16.01 – Commercial Lavatories and Faucets (Single and multi-station lavatory systems)

Section 22 42 16.02 – Commercial Lavatories and Faucets (Bradley Advocate Lavatory System)

Section 22 42 16.03 – Commercial Lavatories and Faucets (Bradley Verge Lavatory System)

Section 22 42 16.16 – Commercial Sinks and Faucets

Section 22 42 23 – Commercial Showers and Shower Valves

Section 22 42 33 – Wash Fountains

Section 22 43 00 – Healthcare Plumbing Fixtures (Patient care lavatory units)

Section 22 45 00 – Emergency Plumbing Fixtures (Emergency Eyewash Fixtures and Drench 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](http://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.

Terreon® is a registered trademark of Bradley Corporation.

## SECTION 22 42 16.16

### COMMERCIAL SINKS AND FAUCETS

#### 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 SECTION INCLUDES

- A. Commercial countertop sinks.
- B. Commercial service sinks

Specifier: Delete faucets if faucets not required.

- A. Commercial faucets.

Specifier: Delete deck mounted soap dispensers if not required.

- B. Commercial soap dispensers.

##### 1.3 RELATED SECTIONS

Specifier: Delete any paragraphs below that do not apply to this project.  
Specifier: Bradley 10 28 13.13 – Commercial Toilet Accessories (Verge).

- A. Division 10 Section "Toilet, Bath and Laundry Accessories" for matching design soap dispensers.

Specifier: Bradley 22 42 39 – Commercial Soap Dispensers and Faucets (Verge).

- B. Division 22 Section "Domestic Water Piping Specialties" for thermostatic mixing valves.

Specifier: Bradley Section 22 43 00 - Healthcare Plumbing Fixtures (Patient care lavatory units)

- C. Division 22 Section "Healthcare Plumbing Fixtures" for healthcare lavatories.

Specifier: Bradley Section 22 45 00 - Emergency Plumbing Fixtures (Halo□ Emergency eyewash fixtures and showers)

- D. Division 22 Section "Emergency Plumbing Fixtures" for emergency fixtures.

Specifier: Bradley Section 22 46 00 - Security Plumbing Fixtures

- E. Division 22 Section "Security Plumbing Fixtures" for security lavatories.

##### 1.4 REFERENCES

- A. American National Standards Institute (ANSI):
  - 1. ANSI Z 124.3 - Plastic Lavatories.
  - 2. ANSI Z 124.6 - Plastic Sinks.
  - 3. ICC/ANSI A117.1 - Accessible and Usable Buildings and Facilities.

- B. ASME International (ASME):
1. ASME A112.18.1 - Plumbing Fixture Fittings.
  2. ASME A112.18.2 - Plumbing Fixture Waste Fittings.
  3. ASME A112.18.3M - Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings.
  4. ASME A112.19.1M - Enameled Cast Iron Plumbing Fixtures.
  5. ASME A112.19.2M - Vitreous China Plumbing Fixtures.
  6. ASME A112.19.4M - Porcelain Enameled Formed Steel Plumbing Fixtures.
- C. 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.

- D. GREENGUARD Environmental Institute (GEI):
1. GREENGUARD listed and certified low emitting products.
- E. International Association of Plumbing and Mechanical Officials (IAPMO):
1. Uniform Plumbing Code (cUPC).
- F. NSF International (NSF):
1. NSF 61 - Drinking Water System Components - Health Effects; Sections 1 through 9.
- G. Underwriters Laboratories, Inc.:
1. UL 1951 - Electric Plumbing Accessories.

#### 1.5 ACTION SUBMITTALS

- A. Product Data: For each product indicated.
- B. Wiring Diagram: For products requiring electrical power.

Bradley Corporation's TerreonRE recycled solid surface material contains 25-percent preconsumer recycled content and 8-percent rapidly renewable material. 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. Coordinate with Division 01 requirements for LEED MR Credit 5 Regional Materials where applicable.

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

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Counter cutouts and plumbing connections requirements.

#### 1.7 CLOSEOUT SUBMITTALS

- A. Cleaning and maintenance data.

## 1.8 QUALITY ASSURANCE

- A. Laminar-Flow, Faucet-Spout Outlets:
  - 1. NSF Standard: Comply with NSF 372 for faucet-spout outlet materials that will be in contact with potable water.
  - 2. Description: Chrome-plated-brass, faucet-spout outlet that produces non-aerating, laminar stream. Include external or internal thread that mates with faucet outlet for attachment to faucets where indicated and flow-rate range that includes flow of faucet.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Comply with Public Law 102-486, Energy Policy Act.

Specifier: As of January 4, 2014, the Safe Drinking Water Act (SDWA) requires drinking water products sold or installed for use in public water systems, as well as plumbing in facilities, to meet a weighted average of not more than 0.25 percent lead.

- D. Comply with NSF 372, Drinking Water System Components – Health Effects.
  - 1. Product shall meet a weighted average of not more than 0.25 percent lead as required by the U.S. Safe Drinking Water Act.
- E. Solid surface material shall be GREENGUARD certified as low-emitting material.

## 1.9 WARRANTY

- A. Special Manufacturer's Warranty: Provide manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship.
  - 1. Lavatories and sinks: 10 years.
  - 2. Soap Dispenser: Three years.
  - 3. Faucets: Three years.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

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

Specifier: Retain one of three paragraphs below based upon Project requirements.

- 1. Submit comparable products of one of the following for approval by Architect:
  - a. **[Insert name of manufacturer of comparable product.]**
- 2. Submit requests for substitution in accordance with Instructions to Bidders and Division 01 General Requirements.

Specifier: Retain this paragraph below when matching verge soap dispensers are specified in 10 28 00 - Toilet, Bath and Laundry Accessories.

- 3. Provide specified designer matched soap dispenser and faucet products; Owner will not consider substitution requests for designer matched soap dispenser and faucet products.

## 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 unique TerreonRE incorporates recycled content in solid surface material.

- A. Solid Surface Material: Where indicated as constructed of solid surface material, fabricate plumbing fixtures from thermoset bio-based resin certified by approved independent testing agency as complying with the requirements of CSA B45.5/IAPMO Z124 and GREENGUARD® certified as low-emitting materials. with the following minimum properties:
1. Basis of Design Product: **Bradley, [Terreon][TerreonRE]**, or a comparable product fabricated from one of the following materials:
    - a. DuPont, Corian Products.
    - b. Wilsonart International, Inc., Gibraltar Products.
  2. Thickness: **1/2 inch (13 mm)**, minimum.
  3. Liquid Absorption: 0.025 percent in 24 hours, per ASTM D 570.
  4. Tensile Strength: **5000 psi (34 MPa)**, minimum, per ASTM D 638.
  5. Thermal Expansion: 2.30, per ASTM D 696.
  6. Hardness: 55-60, per ASTM D 785.
  7. Fire Resistance: Class 1, per ASTM E 84.

## 2.3 CLASSROOM SINKS

Specifier: **Bradley, Terreon Classroom Sink TCS OmniDeck™ — 3000 Series.** described below features solid surface material Terreon or recycled solid surface material TerreonRE deck, including one or two integral classroom sink(s), accepting faucets and optional soap dispenser, drinking fountain, and waste receptacle openings. Terreon Lav Deck is supported by casework supplied by others. Complies with accessibility requirements when mounted at required height on accessible casework. Always check local codes and ordinances for compliance.

- A. Integral Solid Surface Sink **SNK# \_\_\_\_**: Constructed of **[recycled]** solid surface material with integral bowl, contoured front apron, coved backsplash**[, side splashes][, perimeter drip ledge]**, with deck mounted faucets**[, liquid soap dispensers][, and waste receptacle openings]**. Unit includes waste and supply connections to wall.
1. Basis of Design Manufacturer/Model: **Bradley, [Terreon][TerreonRE] Classroom Sink TCS OmniDeck — 3000 Series.**

Specifier: To be completely ADA compliant, the TCS Series must be equipped with ADA compliant faucet and/or drinking fountain, ADA compliant casework, and 5-1/2 inches depth sink.

Texas Accessibility Height Mounting: The Terreon OmniDeck complies with all Texas Accessibility Standards (TAS) guidelines on reaches, clearances and operation for juvenile users. To comply with TAS for grades Pre-K thru 5 or 6, the rim height of the sink must be 30 inches maximum above finished floor. For grades 6 thru 8 or 9, the unit must be mounted with a rim height of 32 inches maximum above finished floor. To be completely TAS compliant for juveniles, the TCS Series must be equipped with TAS compliant faucet, TAS compliant casework, and 3-1/2 inches depth sink. Delete basin and optional depths not required.

2. 21 Inch Basin Size: **15-3/4 by 20-3/4 inches (400 by 527 mm)** by **[3-1/2 inches (89 mm)][5-1/2 inches (140 mm)][8 inches (203 mm)]** deep. **[Provide recessed drip ledge around perimeter of basin.]**
3. 14 Inch Basin Size: **10 by 14 inches (254 by 356 mm)** by **8 inches (203 mm)** deep. **[Provide recessed drip ledge around perimeter of basin.]**

Specifier: Select from Standard, Designer or TerreonRE colors. Refer to Bradley Terreon Classroom Sink technical document for available colors. Option available for separate back splash, side splash and apron colors.

4. Bowl/Deck Color: **[insert Bradley Terreon color required]**.
5. Bowl Color: **[Match deck color] [insert Bradley Terreon color required]**.

Specifier: Refer to Faucet Article in this specification for Bradley faucet options. Delete if spray head option is required.

6. Faucet: **[insert faucet Manufacturer/Model]**.

Specifier: Refer to Soap Dispenser Article in this specification for Bradley soap dispenser options. Delete if soap dispenser not required.

7. Soap Dispenser: **[insert soap dispenser Manufacturer/Model]**.

Specifier: Some state and local codes require separate sinks for faucets and drinking fountains. Always check local codes and ordinances for compliance. Delete if not required.

8. Drinking Fountain: Push button activated.

Specifier: Delete if not required.

9. Waste Receptacle: **9 inches by 9 inches (229 mm by 229 mm)** deck opening.

- B. Countertop-Mounted Kitchen Sink **SNK#\_\_\_**: **[One][Two][Three]**-bowl, **[stainless-steel][enameled, cast-iron][porcelain-enameled, formed-steel][solid-surface]** residential kitchen sink, counter-mounted, with **[,disposer fitting][,dishwasher air gap fitting][,hot water dispenser]**.
  1. Basis of Design Manufacturer/Model: **[insert manufacturer/model]**.
  2. Size: **33 by 22 by 8-1/4 inches (838 by 559 by 209 mm)**.
  3. Color: **[insert color if required]**.
  4. Faucet: Kitchen sink **[insert faucet description]**.
    - a. Basis of Design Manufacturer/Model: **[Insert manufacturer/model]**.

## 2.4 SERVICE SINKS

- A. Service Sinks **SNK#\_\_\_**: **[Enameled, cast-iron][Vitreous china]** trap standard service sink, wall-mounting.
  1. Basis of Design Manufacturer/Model: **[insert manufacturer/model]**.
  2. Size: **22 by 18 inches (560 by 460 mm)**.
  3. Color: White.

Specifier: Delete if not required.

1. Faucet: **Bradley, Aerada 1000 Series Gooseneck..**

- B. Laundry Trays **SNK#\_\_\_**: Plastic, stand-mounted laundry tray.
  1. Size: **25 by 22 inches (635 by 560 mm)**.
  2. Faucet: Sink, fixture ledge-mounted.

## 2.5 SINK FAUCETS

- A. Sensor-Operated, Gooseneck Metering Faucet with Infrared 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, Aerada 1000 Series Gooseneck**.
  2. Body: Polished chrome plated commercial solid forged brass spout base, with **[centershank][4 inches (102 mm) centerset]** mounting **[with trim plate]**.
  3. Flow Control: Flow rate **0.5 gpm (1.9 Lpm)** at operating range of 20 to 80 psi (138 to 552 kPa). Provide installer-optional **2.2 gpm (8.3 Lpm)** aerator insert.

4. Water Supply: [Single tempered line][Manual mixing valve, deck-mounted][Single thermostatic mixing valve].
5. Sensor Module: Water-conserving, vandal-resistant sensor unit with programmable sensor range, with field-configurable timing turn-off delay and stationary object automatic timed cutoff.
6. Power Supply: [Battery operated][Single faucet 110VAC/6VDC, 50/60Hz plug-in transformer with anti-theft bracket][Existing supply].

## 2.6 SUPPLY FITTINGS

- A. NSF Standard: Comply with NSF/ANSI 61 for supply-fitting materials that will be in contact with potable water.
- B. Standard: ASME A112.18.1/CSA B125.1.
- C. Supply Piping: Chrome-plated brass pipe or chrome-plated copper tube matching water-supply piping size. Include chrome-plated brass or stainless-steel wall flange.
- D. Supply Stops: Chrome-plated brass, one-quarter-turn, ball-type or compression valve with inlet connection matching supply piping.

Specifier: Retain "Wheel handle" option in "Operation" Paragraph below for one-quarter-turn, ball-type stops.

- E. Operation: [Loose key][Wheel handle].
- F. Risers:
  1. Size: [NPS 3/8 (DN 10)][NPS 1/2 (DN 15)].
  2. Type: [Chrome-plated, rigid-copper pipe][Chrome-plated, soft-copper flexible tube][ASME A112.18.6, braided or corrugated stainless-steel flexible hose].

## 2.7 WASTE FITTINGS

- A. Standard: ASME A112.18.2/CSA B125.2.
- B. Drain: Grid type with NPS 1-1/2 (DN 40) offset and straight tailpiece.
- C. Trap:
  1. Size: NPS 1-1/2 inches (DN 40).

Specifier: Retain one of two "Material" subparagraphs below; select chrome-plated trap types used on project.

1. Material: Stainless-steel, two-piece trap and swivel elbow with 0.012 inch- (0.30 mm-) thick stainless-steel tube to wall; and stainless-steel wall flange.
2. Material: Chrome-plated, with and chrome-plated brass or steel wall flange, of the following type:
  - a. Two-piece, cast-brass trap and swivel elbow with 0.032-inch (0.83 mm) thick brass tube to wall
  - b. Two-piece, cast-brass trap and ground-joint swivel elbow with 0.032-inch (0.83 mm) thick brass tube to wall
  - c. One-piece, cast-brass trap with swivel 0.029-inch (73 mm) thick tubular brass wall bend.

## 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 sink installation.
- B. Examine walls, floors, and counters for suitable conditions where sinks will be installed.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Install sinks level and plumb according to roughing-in drawings.
- B. Install supports, affixed to building substrate, for wall-hung sinks.

Specifier: Indicate on Drawings those sinks that are required to be accessible. Confirm rim height with AHJ. At least one basin shall meet dimensional requirements and have proper reach, knee, and toe clearance.

Standard ADA & TAS: 33-1/2 inches. No Adjustment. At least one basin must meet dimensional requirements and have proper reach, knee, and toe clearance.

Juvenile ADA & TAS: 30-1/2 inches. At least one basin must meet dimensional requirements and have proper reach, knee, and toe clearance.

Junior: 26 inches. For use by younger children where ADA guidelines are not a concern.

- C. Install accessible wall-mounted sinks at juvenile/handicapped/elderly mounting heights according to ICC/ANSI A117.1.
- D. Set floor-mounted sinks in leveling bed of cement grout.
- E. Install water-supply piping with stop on each supply to each sink faucet.
  - 1. Exception: Use ball, gate, or globe valves if supply stops are not specified with sink. Comply with valve requirements specified in Division 22 Section "General-Duty Valves for Plumbing Piping."
  - 2. Install stops in locations where they can be easily reached for operation.
- F. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons if required to conceal protruding fittings. Comply with escutcheon requirements specified in Division 22 Section "Escutcheons for Plumbing Piping."
- G. Seal joints between sinks and counters, floors, and walls using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Comply with sealant requirements specified in Division 07 Section "Joint Sealants."

Specifier: Indicate on Drawings those sinks that are required to be accessible.

- H. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible sinks. Comply with requirements in Division 22 Section "Plumbing Piping Insulation."

### 3.3 CONNECTIONS

Specifier: Coordinate piping installations and specialty arrangements with schematics on Drawings and with requirements specified in piping systems. If Drawings are explicit enough, these requirements may be reduced or omitted.



- A. Connect sinks with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.
- B. Comply with water piping requirements specified in Division 22 Section "Domestic Water Piping."
- C. Comply with soil and waste piping requirements specified in Division 22 Section "Sanitary Waste and Vent Piping."

#### 3.4 ADJUSTING

- A. Operate and adjust sinks and controls. Replace damaged and malfunctioning sinks, fittings, and controls.
- B. Adjust water pressure at faucets to produce proper flow.

#### 3.5 CLEANING AND PROTECTION

- A. After completing installation of sinks, inspect and repair damaged finishes.
- B. Clean sinks, faucets, and other fittings with manufacturers' recommended cleaning methods and materials.
- C. Provide protective covering for installed sinks and fittings.
- D. Do not allow use of sinks for temporary facilities unless approved in writing by Owner.

END OF SECTION