

## BRADLEY VERGE™ NATURAL QUARTZ LAVATORIES

Bradley Corporation, the industry's leading manufacturer of premium quality commercial lavatories, presents Verge natural quartz lavatories. Verge lavatories marry institutional durability with graceful curves and soft radius edges. Bradley's Evero natural quartz material fuses the elegance of quartz with the durability of granite and the luminance of exotic materials, bringing a new sophistication to commercial washroom design. It is the first and only natural quartz material that can be molded into round and curved shapes, in 12 inspired colors. Evero is made from a blend of acrylic modified bio-based polyester resin, natural quartz, granite, and other exotic minerals. It is resistant to chemicals, stains, burns, and impact. Evero is GREENGUARD certified as a low-emitting material.

Verge lavatories may be equipped with a variety of faucets and soap dispensers, including Bradley's graceful Aerada line of water-saving fixtures. Verge lavatories are perfect for commercial lavatories, movie theaters, auditoriums and the executive washroom.

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 – Warm Air Dryers

Section 10 28 13.63 – Detention Toilet Accessories

Section 10 51 26.00 – 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 (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 16.04 – Commercial Lavatory Decks and Faucets (Single and multi-station Omni Decks™)

Section 22 42 16.11 – 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.

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Advocate™, Evero™, Verge™, and Omni Deck™ are trademarks of Bradley Corporation.

GreenSpec® is a registered trademark of BuildingGreen, LLC

GREENGUARD Certification Program<sup>SM</sup> is a service mark of GREENGUARD Environmental Institute.

**SECTION 22 42 16  
COMMERCIAL LAVATORIES AND FAUCETS**

PART 1 - GENERAL

1.1 SECTION INCLUDES

0.1 Engineered stone commercial lavatory units.

Specifier: Edit below to suit Project.

- a. Lavatory faucets.
- b. Soap dispensers.

1.2 RELATED SECTIONS

Specifier: Retain paragraphs below that apply to Project.

- 0.2 Division 22 Section "Domestic Water Piping Specialties" for thermostatic mixing valves.
- 0.3 Division 22 Section "Commercial Lavatories and Faucets" for single- and multiple- station lavatory systems.
- 0.4 Division 22 Section "Commercial Lavatories" for commercial lavatory units with modular integrated accessories.
- 0.5 Division 22 Section "Commercial Lavatory Decks and Faucets" for single- and multiple- station lavatory decks.
- 0.6 Division 22 Section "Healthcare Plumbing Fixtures" for healthcare lavatories.
- 0.7 Division 22 Section "Emergency Plumbing Fixtures" for emergency shower and eyewash fixtures.

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):
  - 0.8 ASSE 1070 - Water Temperature Limiting Devices.
- B. American National Standards Institute (ANSI):
  - 0.9 ANSI Z 124.3 - Plastic Lavatories.
  - 0.10 ANSI/ICPA SS-1 - Performance Standard for Solid Surface Materials.
- C. American Society of Mechanical Engineers (ASME):
  - 0.11 ASME A112.18.1 - Plumbing Fixture Fittings.
- D. ASTM International (ASTM):
  - 0.12 ASTM C 170 - Standard Test Method for Compressive Strength of Dimension Stone.
  - 0.13 ASTM D 570 - Standard Test Method for Water Absorption of Plastics.

- 0.14 ASTM D 785 - Standard Test Method for Rockwell Hardness of Plastics and Electrical Insulating Materials.
- 0.15 ASTM D 790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- 0.16 ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

E. Canadian Standards Association (CSA):

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

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 (GREENGUARD):

- 0.18 GREENGUARD certified low emitting products.

G. International Association of Plumbing and Mechanical Officials (IAPMO):

- 0.19 Universal Plumbing Code (cUPC both U.S. and Canada).

H. International Code Council (ICC):

- 0.20 ICC/ANSI A117.1 – Accessible and Usable Buildings and Facilities.

I. National Fire Protection Association (NFPA):

- 0.21 NFPA 70 – National Electrical Code.

J. State of Texas:

- 0.22 Texas Accessibility Standards (TAS).

K. Underwriters Laboratories, Inc. (UL):

- 0.23 UL 723 - Test For Surface Burning Characteristics of Building Materials.

- 0.24 UL 1951 - Electric Plumbing Accessories.

L. United States Green Building Council (USGBC):

- 0.25 LEED Green Building Rating System (LEED).

M. US Federal Government:

- 0.26 Public Law 102-486 - Energy Policy Act of 1992 (EPACT).

- 0.27 U.S. Architectural & Transportation Barriers Compliance Board. Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG).

#### 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.

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.

D. LEED Submittals:

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

1.5 INFORMATION SUBMITTALS

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

1.6 MAINTENANCE SUBMITTALS

- A. Operation and Maintenance data.

1.7 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:

0.29 Product data, including test data from qualified independent testing agency indicating compliance with requirements.

0.30 Samples of each component of product specified.

0.31 List of successful installations of similar products available for evaluation by Architect.

0.32 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.
- 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.

- G. Indoor Environmental Quality Certification: Provide certificate indicated that products have been certified under the following programs, or a comparable certification acceptable to Owner:

- 0.33 GREENGUARD Indoor Air Quality Certified.  
0.34 GREENGUARD Certified for Children and Schools.

## 1.8 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 within the following periods:

- 0.35 Engineered natural quartz material: 10 years.  
0.36 Faucets: 1 year.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide products of 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. The manufacturer is not aware of comparable manufactured products.

- 0.37 Submit comparable products of one of the following for approval by Architect:

- a. [Specifier: Insert name of manufacturer of comparable product.]

- 0.38 Submit requests for substitution in accordance with Instructions to Bidders and Division 01 General Requirements.

- 0.39 Provide specified product; Owner will not consider substitution requests.

### B. MATERIALS

Specifier: Bradley's Verge lavatories are formed from Bradley's unique Evero engineered natural quartz material, noted for its elegant surface appearance and resistance to chemicals, stains, burns and impacts. Surface damage can be easily repaired with everyday cleansers or fine grit abrasives.

- C. Lavatory Deck and Bowl Material: Fabricate lavatory units from molded engineered stone material consisting of natural quartz, granite, and other minerals in a matrix of thermoset acrylic modified bio-based polyester resin, certified by approved independent testing agency as complying with ANSI/ICPA-SS-1-2001, ANSI Z124.3, and ANSI Z124.6, with the following minimum properties:

- 0.40 Basis of Design Product: **Bradley, Evero.**  
0.41 Surface Burning Characteristics: Smoke developed, less than 450; flame spread, less than 25, per ASTM E 84.  
0.42 Flexural Strength: 3267 psi (22.5 MPa), minimum, per ASTM D 790.  
0.43 Compressive Strength: 11,500 psi (79 MPa), minimum, per ASTM C 170.  
0.44 Moisture Absorption: 0.065 percent in 24 hours, per ASTM D 570.

- 0.45 Hardness: 6 – 7 Mohs Scale, per ASTM D 785.
- 0.46 Thickness: 1/2 inch.

## 2.2 MULTI-STATION LAVATORY UNITS

Specifier: Retain selected Verge lavatory model selected for Project from two models described below.

- A. Lavatory: Wall-mounted rectilinear, level-surface lavatory deck with rounded edges, formed from molded engineered stone material with integral elongated basin, with stainless steel enclosed pedestal cabinet.

- 0.47 Basis of Design Manufacturer/Model: **Bradley, Verge Lavatory System, Model LVRD.**
- 0.48 Number of Wash Stations: [2] [3].
- 0.49 Unit Length: [60 inches (1524 mm)] [90 inches (2286 mm)].
- 0.50 Soap Dispenser: [Included] [None].
- 0.51 Water Supply: [Single tempered line] [Thermostatic mixing valve assembly].
- 0.52 Color: [As selected by Architect from manufacturer's full line].
- 0.53 Rim Mounting Height: [33.5 inch (859 mm)] [31.5 inch (800 mm)] [30.5 inch (775 mm)] [29.5 inch (749 mm)] [As indicated].

- B. Lavatory: Wall-mounted forward curved lavatory deck with rounded edges, formed from molded engineered stone material with integral elongated basin, with stainless steel enclosed pedestal cabinet.

- 0.54 Basis of Design Manufacturer/Model: **Bradley, Verge Lavatory System, Model LVDG.**
- 0.55 Number of Wash Stations: [2] [3].
- 0.56 Unit Length: [60 inches (1524 mm)] [90 inches (2286 mm)].
- 0.57 Soap Dispenser: [Included] [None].
- 0.58 Water Supply: [Single tempered line] [Thermostatic mixing valve assembly].
- 0.59 Color: [As selected by Architect from manufacturer's full line].
- 0.60 Rim Mounting Height: [33.5 inch (859 mm)] [31.5 inch (800 mm)] [30.5 inch (775 mm)] [29.5 inch (749 mm)] [As indicated].

## 2.3 SENSOR-OPERATED LAVATORY FAUCETS

Specifier: Retain descriptions of required faucets; if more than one faucet is required, insert faucet designation in paragraph below and use faucet designation in Lavatory Deck Article above. For Evero faucets, see Specifier Note below.

- A. Sensor-Operated, High Profile Metering Faucet with Infrared Control and External Temperature Control **FCT#\_\_\_**: Vandal-resistant accessible faucet meeting ASME A112.18.1/CSA B125. ADA/ANSI A117.1 compliant.

- 0.61 Basis of Design Manufacturer/Model: **Bradley, Aerada 1100 Series High Arc.**
- 0.62 Body: Polished chrome plated commercial solid cast brass, with [centershank] [4 inch (102 mm) centerset mounting with anti-rotation trim plate].
- 0.63 Tempered Water Supply: ADA-compliant lever on faucet body.
- 0.64 Aerator: Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).
- 0.65 Sensor Module: Water-conserving, vandal-resistant adjustable sensor unit with timing turn-off delay and stationary object automatic timed cutoff, with battery diagnostic light, serviceable from above deck.

- 0.66 Power Supply: Battery-operated single faucet with 6V lithium battery [ and single 115VAC plug-in adapter] [ and multiple unit 115VAC plug-in adapter].

Specifier: Retain thermostatic mixing valve if required for Project.

- 0.67 Thermostatic Mixing Valve: Thermostatic mixing valve, ASSE 1070 listed, with stop/strainer/check valves, and flexible stainless steel connectors.
- B. Capacitive-Sensor-Operated, Low Profile Metering Faucet with Infrared Control **FCT#\_\_\_**: Vandal-resistant accessible faucet meeting ASME A112.18.1/CSA B125. IPC/cUPC-certified by IAPMO. ADA/ANSI A117.1 compliant.
- 0.68 Basis of Design Manufacturer/Model: **Bradley, Aerada 1200 Series CS.**
- 0.69 Body: Polished chrome plated commercial solid cast brass, with [centershank] [4 inch (102 mm) centerset] [8 inch (203 mm) centerset] mounting [with trim plate].
- 0.70 Aerator: Laminar Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).
- 0.71 Tempered Water Supply: [Single tempered line] [Manual mixing valve, deck-mounted] [Single thermostatic mixing valve].
- 0.72 Sensor Module: Water-conserving, vandal-resistant capacitive-sensing [adjustable sensor unit] with omni-directional sensing zone, timing turn-off delay and stationary object automatic timed cutoff.
- 0.73 Power Supply: Battery-operated with below-deck-mounted battery box [and single faucet 100/120VAC/6VDC plug-in adapter] [and 6-faucet 100/120VAC/6VDC plug-in adapter].

Specifier: Retain thermostatic mixing valve if required for Project.

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

Specifier: Three Bradley/Delta faucets listed below are for use with Evero Lav Decks; retain one or more as required.

- C. 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.
- 0.75 Basis of Design Manufacturer/Model: **Bradley/Delta, Arzo Model 601T050.**
- 0.76 Body: Polished chrome plated commercial solid cast brass spout.
- 0.77 Aerator: Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).
- 0.78 Tempered Water Supply: [Single tempered line] [Manual mixing valve, deck-mounted] [Single thermostatic mixing valve].
- 0.79 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).
- 0.80 Power Supply: [120/24 VAC plug-in transformer] [Battery-operated].

Specifier: Retain thermostatic mixing valve if required for Project.

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

D. 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.

0.82 Basis of Design Manufacturer/Model: **Bradley/Delta, Grail Model 611T50.**

0.83 Body: Polished chrome plated commercial solid cast brass spout.

0.84 Tempered Water Supply: [Single tempered line] [Manual mixing valve, deck-mounted] [Single thermostatic mixing valve].

0.85 Aerator: Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).

0.86 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).

0.87 Power Supply: [120/24 VAC plug-in transformer] [Battery-operated].

Specifier: Retain thermostatic mixing valve if required for Project.

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

E. 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.

0.89 Basis of Design Manufacturer/Model: **Bradley/Delta, Model DEMD-301.**

0.90 Body: Polished chrome plated commercial solid cast brass spout.

0.91 Tempered Water Supply: [Single tempered line] [Manual mixing valve, deck-mounted] [Single thermostatic mixing valve].

0.92 Aerator: Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).

0.93 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.

0.94 Power Supply: Battery-operated single faucet, with six: 1.5V 'AA' cell batteries.

Specifier: Retain thermostatic mixing valve if required for Project.

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

2.4 SOAP DISPENSERS

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

- A. **Sensored Soap Dispenser:** Deck-mounted, sensor-operated, chrome-plated plastic, with LED battery and soap level indicators, [with battery box] [with single dispenser 120VAC powerpack] [with 4 dispenser 120VAC powerpack], [27 oz. (798 mL) capacity bottle] [54 oz. (1597 mL) capacity bottle] [less bottle].

0.96 Basis of Design Manufacturer/Model: **Bradley, Model 6315.**

- B. **Soap Dispenser:** Deck-mounted [16 oz. (473 mL)] [32 oz. (946 mL)] [stainless steel] [plastic] globe, with 4 inch (102 mm) spout.

0.97 Basis of Design Manufacturer/Model: **Bradley, Model 6324.**

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Assemble fixtures, accessories, and associated fittings and trim in accordance with manufacturer's instructions.
- B. Install fixture supports firmly attached to building structure.
- C. Install fixtures level, plumb, and in accordance with manufacturer's rough-in instructions.
- D. Install water supply piping. Provide stop on each supply in readily-serviceable location. Fasten supply piping to supports or substrate.
- E. Install trap and waste piping to each fixture.
- F. Install escutcheons at exposed piping penetrations in finished locations and within cabinets.
- G. Seal joints between fixtures and walls, floors, and countertops with mildew-resistant silicone sealant meeting requirements in Division 07 Section "Joint Sealants."

### 3.2 CLEANING AND PROTECTION

- A. Repair or replace defective work, including damaged fixtures and components.
- B. At time of Substantial Completion:

0.98 Clean unit surfaces, test fixtures, and leave in ready-to-use condition.

0.99 Install new batteries in battery-operated devices.

0.100 Fill soap dispensers.

0.101 Turn over keys, tools, maintenance instructions, and maintenance stock to Owner.

- C. Protect units with water-resistant temporary covering. Do not allow temporary use of plumbing fixtures. Remove protection at Substantial Completion and dispose.

### 3.3 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.

END OF SECTION