

## Bradley Mills Phenolic Core Toilet Partitions

**Bradley Mills Phenolic Core Partitions** are the most popular style of partitions. Bradley's beveled edge panel edge design locks moisture out of the panel cores, preventing delamination, and backed by a 3-year delamination material warranty. Bradley's Phenolic Core Partitions are available in overhead braced, floor braced, ceiling hung, and floor to ceiling configurations, along with urinal and entrance screens with several mounting options. Designers may choose from many popular colors.

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<sup>SM</sup> 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, and washroom accessories that appear in the following CSI MasterFormat 2004<sup>TM</sup> Sections:

Section 10 21 13.13 – Steel Toilet Compartments  
Section 10 21 13.15 – Stainless Steel Toilet Compartments  
Section 10 21 13.16 – Plastic Laminate Toilet Compartments  
Section 10 21 13.17 – Phenolic-Core Toilet Compartments  
Section 10 21 13.19 – Plastic Toilet Compartments  
Section 10 21 13.40 – Stone and Stainless Steel Toilet Compartments  
Section 10 28 13.13 – Commercial Toilet Accessories  
Section 10 28 13.15 – Warm Air Dryers (Aerix<sup>®</sup> Hand and Hair Dryers)  
Section 10 28 13.63 – Detention Toilet 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 (Single and multi-station lavatory systems)  
Section 22 42 16.02 – Commercial Lavatories and Faucets (Bradley Advocate<sup>TM</sup> Lavatory System)  
Section 22 42 16.03 – Commercial Lavatories and Faucets (Bradley Verge<sup>TM</sup> Lavatory System)  
Section 22 42 16.04 – Commercial Lavatory Decks and Faucets (Bradley 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 six programs earning one (1) HS&W Learning Unit each; several qualify for sustainable design (SD) credit.

Lenox<sup>®</sup> and Aerix<sup>®</sup> are registered trademarks of Bradley Corporation.  
Advocate<sup>TM</sup>, Evero<sup>TM</sup> and Verge<sup>TM</sup> are trademarks of Bradley Corporation.  
GREENGUARD Certification Program<sup>SM</sup> is a service mark of GREENGUARD Environmental Institute.

**SECTION 10 21 13.17**  
**PHENOLIC CORE TOILET COMPARTMENTS**

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Phenolic core compartment partitions for following applications:
  - a. Toilet enclosures.
  - b. Privacy screens.
  - c. Urinal screens.

Specifier: Related Requirements paragraph and subparagraphs are included here for information, but are frequently deleted from project specifications. If retaining, edit subparagraphs as required to coordinate with construction documents and components specified.

B. Related Requirements:

1. Division 03 Section "Cast in Place Concrete" for compartment anchorage to concrete substrates.
2. Division 04 Section "Unit Masonry" for compartment anchorage to masonry substrates.
3. Division 05 Section "Metal Fabrications" for miscellaneous structural and support metal components required to secure compartments.
4. Division 06 Section "Rough Carpentry" for compartment anchorage to frame walls.

Specifier: References Article is included here for information, but is frequently deleted from project specifications. If retaining, edit subparagraphs as required to coordinate with construction documents and components specified.

1.2 REFERENCES

A. ASTM International (ASTM):

1. ASTM A 240 - Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.
2. ASTM A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
3. ASTM A 743/A 743M - Standard Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application.
4. ASTM B 86 - Standard Specification for Zinc and Zinc-Aluminum (ZA) Alloy Foundry and Die Castings.
5. ASTM B 221 - Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
6. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.

- B. International Code Council (ICC)/American National Standards Institute (ANSI):
  - 1. ICC/ANSI A117.1 - Accessible and Usable Buildings and Facilities, as applicable to toilet compartments designated as accessible.
- C. United States Department of Justice:
  - 1. ADA - Americans with Disabilities Act, Excerpt from 28 CFR Part 36 - ADA Standards for Accessible Design.

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.

- a. GREENGUARD Environmental Institute (GREENGUARD):
    - 1. GREENGUARD certified low emitting products.
- 1.3 ACTION SUBMITTALS
- A. Product Data: Manufacturer's data sheets for each type of product indicated. Include fabrication details, description of materials and finishes.
    - 1. Product Test Reports: When requested by Architect, submit documentation by qualified independent testing agency indicating compliance of products with requirements.
  - B. Shop Drawings: Include overall product dimensions, floor plan, elevations, sections, details, and attachments to other work. Include choice of options with details.

Specifier: Delete Samples for Selection paragraph if Architect has already made product and color selections.

- C. Samples for Selection: Furnish samples of manufacturer's full range of colors for initial selection.
- D. Samples for Verification: Furnish physical sample of material in selected color.
  - 1. Size: 2 by 2 inch (52 by 52 mm) minimum, in type of finish specified.
- E. LEED Submittals:

Specifier: Retain below if selecting products with recycled content, applicable to LEED-NC, LEED-CS, LEED-CI, and LEED for Schools.

- 1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include breakout costs for each product with recycled content.

Specifier: Retain below if selecting products required to meet California DHS requirements, applicable to LEED for Schools.

2. Laboratory Test Reports for Credit IEQ 4: For adhesives, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Warranty: Sample of special warranty.

#### 1.5 CLOSEOUT SUBMITTALS

- A. Maintenance and cleaning instructions.

#### 1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Approved manufacturer listed in this section, with minimum [5] years experience in the manufacture of toilet compartments.

Specifier: Retain paragraph above or below based on project requirements. Retain paragraph below when owner will allow substitution requests.

- B. Manufacturer Qualifications: Approved manufacturer listed in this section, with minimum [5] years experience in the manufacture of toilet compartments. Manufacturers seeking approval must submit the following in accordance with Instructions to Bidders and Division 01 requirements:
  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.
- C. Installers Qualifications: Experienced Installer regularly engaged in installation of toilet compartments for minimum 3 years.
- D. Source Limitations: Obtain toilet compartment components and accessories from single manufacturer.

Specifier: Bradley offers handicapped-accessible toilet compartments conforming to requirements of ICC/ANSI A117.1. Show accessible unit locations and details on Drawings.

- E. Accessibility Requirements: Comply with requirements of ICC/ANSI 117.1, and with requirements of authorities having jurisdiction.
- F. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  1. Flame-Spread Index: 30.
  2. Smoke-Developed Index: 110.

Specifier: Bradley's Mills Phenolic Core Toilet Compartments exceed LEED for Schools IEQ requirements as certified by GREENGUARD.

a. Indoor Environmental Quality Certification: Provide certificate indicated that products 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.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver toilet compartments to site until building is enclosed and HVAC systems are in operation.

1. Deliver toilet compartments in manufacturer's original packaging.
2. Store in an upright condition.

#### 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 during the following period after substantial completion:

1. Phenolic Core Toilet Partitions: Against delamination: 3 years.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

A. Basis-of-Design Manufacturer: Subject to compliance with requirements, provide products of **Bradley Corporation, Mills Metals Division, Menomonee Falls, WI 53051.**

1. Contact Information: (800)272-3539, fax (262)251-5817; Email [info@BradleyCorp.com](mailto:info@BradleyCorp.com); Website [www.bradleycorp.com](http://www.bradleycorp.com).

#### 2.2 MATERIALS

A. Phenolic Core: Compressed cellulose impregnated with phenolic resins. Provide smooth material, without creases or ripples.

B. Zinc Aluminum Magnesium and Copper Alloy (Zamac): ASTM B 86.

C. Stainless Steel Sheet: ASTM A 240 or A 666, 300 series.

D. Stainless Steel Castings: ASTM A 743/A 743M.

E. Aluminum: ASTM B 221.

## 2.3 PHENOLIC CORE TOILET COMPARTMENTS

Specifier: Select among following 4 paragraphs and subparagraphs to coordinate partition mounting style with Drawings. Be sure to verify the structural supports required for ceiling hung units.

- A. Toilet Compartment Type:
  - 1. Overhead braced.
    - a. Basis of Design Product: **Bradley, Mills Partitions, Sentinel, Series 400.**
  - 2. Floor anchored.
    - a. Basis of Design Product: **Bradley, Mills Partitions, Floor Braced, Series 500.**
  - 3. Ceiling hung.
    - a. Basis of Design Product: **Bradley, Mills Partitions, Ceiling Hung, Series 600.**
  - 4. Floor and ceiling anchored.
    - a. Basis of Design Product: **Bradley, Mills Partitions, Floor to Ceiling, Series 700.**
- B. Privacy Screen Type:
  - 1. Floor anchored.
    - a. Basis of Design Product: **Bradley, Mills Partitions, Floor Braced, Series 500.**
  - 2. Floor and ceiling anchored.
    - a. Basis of Design Product: **Bradley, Mills Partitions, Floor to Ceiling, Series 700.**
- C. Urinal Screen Style:
  - 1. Wall hung with wing bracket:
    - a. Basis of Design Product: **Bradley, Mills Partitions, Model No. 2.**
    - b. Provide chrome plated wing bracket for mounting to wall.
  - 2. Floor anchored:
    - a. Basis of Design Product: **Bradley, Mills Partitions, Model No. 3.**
    - b. Floor mounted, requiring concrete floor, minimum 3 inches thick for anchoring.
    - c. Where indicated on Drawings, modify to become floor-to-ceiling mounted by changing mounting pilaster.
  - 3. Wall hung with brackets:
    - a. Basis of Design Product: **Bradley, Mills Partitions, Model No. 4.**

4. Government-flanged with Wing Bracket:
  - a. Basis of Design Product: **Bradley, Mills Partitions, Model No. 5.**
  - b. Provide with continuous bracket in addition to wing bracket.

Specifier: Bradley phenolic panels utilize 15 degree beveled edges, and finished smooth, a protection against delamination.

- D. Door, Panel, and Pilaster Construction, General: Form edges with 15 degree bevel without crown molding. Finish edges smooth.
  1. Provide exposed surfaces free of pitting, visible seams and fabrication marks, stains, telegraphing of core material, or other imperfections.
  2. Core Material: Manufacturer's standard solid resin core of thickness required to provide finished thickness for doors, panels and pilasters.
- E. Door Construction: 3/4 inch (19 mm) thick.
- F. Panel Construction: 1/2 inch (13 mm) thick.
- G. Pilaster Construction: 3/4 inch (19 mm) thick.
  1. Provide pilaster with mechanically fastened leveling bar reinforcement with zinc-plated jack bolt for leveling.
- H. Headrail: Extruded anodized aluminum headrail with anti-grip profile. Provide clamps for attachment to pilaster and stainless steel brackets to secure to wall.
- I. Shoes: 4 inches (102 mm) high minimum, Type 304 stainless steel with No. 4 satin brushed finish. Provide concealed retainer clips to attach to pilaster.
- J. Urinal-Screen Construction: Matching toilet compartment panel construction

Specifier: Retain first paragraph below for floor-anchored, overhead-braced, and post-to-ceiling urinal screens.

- K. Urinal-Screen Post: Manufacturer's standard post design of [material matching the thickness and construction of pilasters] [or] [1-3/4-inch- (44-mm-) square, aluminum tube with satin finish]; with shoe [and sleeve (cap)] matching that on the pilaster.
- L. Brackets (Fittings):

Specifier: Retain one or both subparagraphs below; if retaining both, indicate locations of each type of fitting on Drawings or by inserts. If necessary, revise to indicate fitting requirements for specific applications, e.g., "heavy-duty" urinal-screen brackets.

1. Stirrup Type: Ear or U-brackets; [chrome-plated zamac] [stainless steel].
2. Full-Height (Continuous) Type: Manufacturer's standard design; [aluminum] [stainless steel].

- M. Phenolic Core Finish: Manufacturer's standard impregnated, with [one color] [two colors] in each room.
1. Color: As selected by Architect from manufacturer's full line.

## 2.4 HARDWARE

Specifier: Retain paragraph and subparagraphs below for projects where standard hardware is adequate for traffic and use.

- A. Hardware, Standard Duty: Manufacturer's standard chrome-plated zamac castings, including corrosion-resistant, tamper-resistant fasteners:
1. Hinges: Self-closing surface mounted, through bolted, with gravity cams, adjustable to hold doors open at any angle up to 90 degrees, with emergency access by lifting door.
  2. Latch and Keeper: Surface-mounted slide latch with flat rubber-faced combination door strike and keeper, with provision for emergency access, meeting requirements for accessibility at accessible compartments.
  3. Coat Hook: Combination hook and rubber-tipped stop, sized to prevent door from hitting compartment-mounted accessories. Provide wall bumper where door abuts wall. Provide formed L-shaped hook without stop at outswing doors.
  4. Door Pull: Standard unit on outside of inswing doors. Provide pulls on both sides of outswing doors.

Specifier: Retain paragraph and subparagraphs below for projects where heavy duty hardware is required for traffic and use.

- B. Hardware, Heavy Duty: Manufacturer's heavy-duty stainless steel castings, including stainless steel tamper-resistant fasteners:
1. Hinges: Self-closing surface mounted, through bolted, with gravity cams, adjustable to hold doors open at any angle up to 90 degrees, with emergency access by lifting door. Mount with stainless steel through-bolts.
  2. Latch and Keeper: Surface-mounted slide latch with flat rubber-faced combination door strike and keeper, with provision for emergency access, meeting requirements for accessibility at accessible compartments.
  3. Coat Hook: Combination hook and rubber-tipped stop, sized to prevent door from hitting compartment-mounted accessories. Provide wall bumper where door abuts wall. Provide formed L-shaped hook without stop at outswing doors. Mount with stainless steel through-bolts.
  4. Door Pull: Standard unit on outside of inswing doors. Provide pulls on both sides of outswing doors.

## 2.5 FABRICATION

Specifier: Retain one or more paragraphs below that correspond to project requirements.



- A. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.
- B. Floor-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.
- C. Ceiling-Hung Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for connection to structural support above finished ceiling. Provide assemblies that support pilasters from structure without transmitting load to finished ceiling. Provide sleeves (caps) at tops of pilasters to conceal anchorage.
- D. Floor-and-Ceiling-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment at tops and bottoms of pilasters. Provide shoes and sleeves (caps) at pilasters to conceal anchorage.
- E. Urinal-Screen Posts: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment at tops and bottoms of posts. Provide caps, shoes, and covers at posts to conceal anchorage.

Specifier: Retain paragraph below and revise to suit Project if door sizes and swings are not shown on Drawings; verify requirements of authorities having jurisdiction.

- F. Door Size and Swings: Unless otherwise indicated, provide 26-inch- (660-mm-) wide, in-swinging doors for standard toilet compartments and 36-inch- (914-mm-) wide, out-swinging doors with a minimum 32-inch- (813-mm-) wide clear opening for compartments designated as accessible.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine work area to verify that measurements, substrates, supports, and environmental conditions are in accordance with manufacturer's requirements to allow installation.
  - 1. Proceed with installation once conditions meet manufacturer's requirements.

### 3.2 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.
- B. Install toilet partitions and screens in spaces with operating, temperature controlled HVAC systems. Shield partitions and screens from direct sunlight.
- C. Clearances: Install with clearances indicated on Drawings. Where clearances are not indicated, allow maximum 1/2 inch (13 mm) between pilasters and panels, and 1 inch (25 mm) between panels and walls.

Specifier: Retain paragraph below for stirrup brackets. For solid plastic units, three brackets are recommended for panel-to-wall and panel-to-pilaster connections to prevent sagging of panel.

- D. Stirrup Brackets: Secure panels to walls and to pilasters with no fewer than [two brackets attached] [three brackets attached at midpoint and] near top and bottom of panel. Locate wall brackets so holes for wall anchors occur in masonry or tile joints. Align brackets at pilasters with brackets at walls.

### 3.3 ADJUSTING

Specifier: Revise hinge adjustment requirements in this article to suit Project. Verify accessibility requirements of authorities having jurisdiction.

- A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 15 degrees from closed position when unlatched. Set hinges on out-swinging doors [ and doors in privacy screens] to return doors to fully closed position.

### 3.4 FINAL CLEANING

- A. Remove packaging and construction debris and legally dispose of off-site.
- B. Clean partition and screen surfaces with materials and cleansers in accordance with manufacturer's recommendations.

END OF SECTION