Designing Public Rest Rooms: Privacy is in the Details

Planning criteria address aesthetics, safety, maintenance, and sustainability

Provided by Hadrian

By Virginia A. Greene, AIA

The design of public rest rooms is essential to the success and function of all building projects. Among the most important design criteria are public health, privacy, safety, and welfare issues governing these spaces. Good planning, combined with lighting and ventilation, creates safe, clean, and comfortable public environments.

Large, high-traffic venues, such as airports, sports arenas, and theatres, rely upon efficient and functional public restroom design to accommodate significant numbers of people on tight schedules. Plumbing fixture counts for men and women, whether determined by codes, ratios, building owners, or design professionals, are critical factors that can result in effective traffic and circulation flow, or long lines of patrons at peak hours. Regardless of the project building type, location, size or scale, the success of public rest room design is in the details. When appropriately planned and specified, toilet partitions provide solutions for public health, safety, and accessibility.

Maintenance and Safety

Design criteria for public rest rooms must include practical maintenance solutions. All public rest room facilities are subjected to health department inspections to maintain health standards. Architects can specify internal central floor drains to collect water used in cleaning and maintaining "wet" spaces in public buildings, such as multi-plex theaters, where large numbers of people gather.

CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **Designing Public Rest Rooms: Privacy is in the Details** To earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 219, then follow the reporting instructions on page 353 or go to the Continuing Education section on *archrecord.construction.com* and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Discuss the aesthetic and functional elements of public bathroom design*
- *Analyze code requirements for handicapped bathroom design and accessibility*
- *Specify toilet partitions, hardware, and materials for public rest rooms*
- *Understand planning criteria when calculating the number of plumbing fixtures for men and women in public buildings*

Most public facilities use toilet partitions in rooms with ceramic tile on floors and walls, and less frequently, on ceilings, thereby creating a continuous impervious surface to withstand frequent cleaning. Ceramic provides the best water resistance for all wall and floor surfaces in bathroom design. Specifying ceramic tile in wet zones also allows flexibility for introducing color, texture, and light to interior spaces. Tile borders, edge treatments, and color bands further enhance aesthetics and design options. The overall effect is a uniform surface for efficient cleaning and maintenance.

Public safety is the primary design consideration in public rest rooms. Partitions protect the public from undue exposure, theft, and injury. Toilet partitions are usually found in public rest rooms, but can also be used as shower compartments in public facilities, such as gyms and health clubs. These partitions are subject to accessibility design standards for handicapped or challenged patrons, and to vandalism, graffiti, and surface-damage criteria.

Toilet Partition Panel Systems

Toilet partitions are made to be permanently affixed to a building. They are wall systems used primarily as privacy enclosures, which can be mounted or anchored to the floors and ceilings of public bathrooms. Standard toilet partitions subdivide public bathroom spaces in accordance with code requirements for safe exiting and handicapped accessibility, and are made of fire-resistant materials to meet fire code ratings. Most standard partitions made of metal have a one-hour fire rating. Although they are not defining fire separation walls, partitions create subdivisions, or individual compartments, within public rest rooms. The structural requirements for some toilet partitions demand free-standing, self-supporting wall supports, called pilasters or stanchions.

Fixture Counts

Determining the total number of fixture compartments per rest room depends upon the number of patrons and relevant code requirements. Plumbing fixture count for public toilet rooms is determined by the total number of seats in an assembly building, such as a building with auditorium seating. For design purposes, total seat count is distributed as 50 percent male occupants and 50 percent female occupants. Based on the numbers calculated for each gender, the architect follows governing codes, which often use a ratio basis for factoring the minimum number of toilet-room fixtures required.

Determining the total number of fixture compartments per rest room depends upon the number of patrons and relevant code requirements.

Typically, twice as many water closets, or toilets, are provided for females than for males. In addition, a urinal can be substituted for water closets for up to

Architectural Record Version: 01
Issue Date: November 2003
Page No: 215
Filename: 11/03Vistawall.qxd
Writer/Designer: Kenneth Kaiser
Last Revision: xx
Black Cyan Magenta Yellow
RHP
5 25 50 75 95

one half the total required number of fixtures for males. Panels surrounding urinals are typically either wall or floor mounted systems, and are available in washable materials, such as metal, plastic, or composites. Specifications may also address the lateral stability to withstand 40 pounds of pressure per square foot, and frequent use.

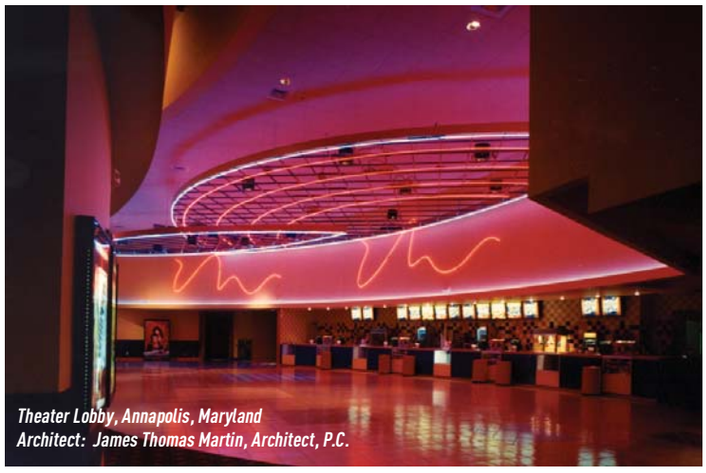
Privacy, Health, and Safety

Public rest rooms should be clean, safe environments. Designing private bathroom spaces with partitioned toilets requires attention to privacy, security, health, and sanitary conditions. Public and private areas may be clearly defined by the location of toilet partitioning systems. Aligning the toilet and sink areas opposite one another using toilet partitions as space dividers separates public and private zones. Successful public spaces prioritize user comfort, ease of movement through the space, cleanliness, and the brevity of time required to use the facility.

Public rest rooms should be clean, safe environments.

Theater design is a case in point. "In the movie theater and exhibition industry, the ability to move people is very similar to the approach applied at Disney properties. Movie show times are staggered to control and mitigate ingress and egress of hundreds of moviegoers, or patrons. Convenient location, disbursement of facilities throughout the theater complex, and the number of rest room facilities for men and women follow the same theory," said James T. Martino, AIA, principal of James Thomas Martino Architect, P.C., in Port Washington, New York.

The use of toilet partitions to sub-divide a bathroom facility can affect air circulation. If not properly planned, poor air circulation in a bathroom space with toilet partitions can cause moisture pockets and air circulation barriers. The building design must provide appropriate mechanical systems, which require careful review and coordination of architectural, mechanical, electrical, and plumbing systems to ensure proper ventilation.



Theater Lobby, Annapolis, Maryland
Architect: James Thomas Martin, Architect, P.C.

The architect reviews toilet partition shop drawings from the manufacturer and coordinates the design with mechanical systems for air and moisture control in wet zones. Architects should review the location of fresh air and return air ducts in conditioned bathroom facilities, as these systems may impact the location of toilet partitions, panel heights, quantities of toilet partitions, frequency of use, and proximity to heating, ventilation, and air conditioning (HVAC) systems. When these design factors are well orchestrated, bathroom areas in public facilities provide comfort and optimal airflow.

Public rest rooms should be safe spaces. When planning high-traffic public areas, architects must consider the possibility that individuals may try to damage, destroy, or vandalize the finishes, furnishings, and equipment in a space. Toilet partition design must address minimizing damage from vandalism, theft, and defacement.

Toilet partition design must address minimizing damage from vandalism, theft, and defacement.

These factors impact the design for secure closing mechanisms, variable partition heights, finish surfaces, and panel spacing. Various surfaces may be specified to provide durability, such as a washable, stain-resistant, painted-on finish for metal panels that addresses ease of maintenance due to vandalism. Continuous hinge-side fillers enhance privacy by visually sealing the gap between the compartment door and the vertical support, or stanchion. A full height continuous stop and keeper eliminates the sight gap on the stop side of the door, and protects against vandalism because doors cannot be "racked," or bent, by pulling on the top corner of the door, as can occur with a single-point stop and keeper.

Design of High Traffic Areas

Toilet partitions must be strong and durable, to withstand daily abuse caused by normal traffic, including dents to scratches. When specifying toilet partitions, architects should consider materials that are compatible with peak demands of high traffic and frequency of use.

The huge volume of people using public bathroom facilities at a sports stadium can be as many as one quarter of the seating capacity during a timed break in the action. Building owners expect architects to consider these volumes, along with cost-effective facility maintenance. Public rest room facilities are subject to daily maintenance procedures to meet health department standards. Employees are required to wash their hands after using the facilities, and standards govern daily sanitization and bathroom cleaning. Toilet partitions, which are ceiling mounted or hung from the structure above, allow open floor space, better accessibility, and maintenance flexibility for mopping and cleaning each partitioned toilet area. Ideally, toilets are wall mounted for the same reasons, to save time and money, and to provide clean environments.

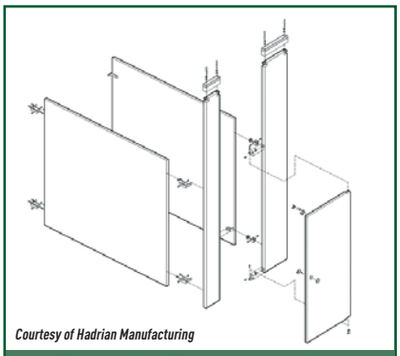
Hardware

During a concert performance intermission, especially at older theaters, it is not unusual to see lines of women waiting to use the rest rooms. Appropriate rest room design results in better fixtures, spatial relationships, and more individually partitioned toilet compartments. In older public rest rooms, the owner often must hire a monitor to expedite the flow of people. While not ideal, this step can ease the pressure of partition use and provide a measure of safety.

Some toilet partitions contain special color-coded indicator latches that signal if the stall is occupied, as used on commercial aircraft. These indicators consist of slide hardware in the latch mechanism exposing a red bar when the stall is occupied, and a green bar when unoccupied.

The simple style and lines of toilet partitions can be emphasized or streamlined through hardware details. Zinc, steel, and aluminum are materials used in hardware for toilet partitions. Heavy traffic can cause undue wear and tear on the toilet partition anchors. Panels should be durable enough to function well and withstand daily use in all public facilities, such as airports, which have high traffic volumes, and require frequent hardware checks and adjustments. Even though these areas must accommodate space for packages, luggage, and carry-on baggage, rest rooms are often designed with limited space to access these items.

Architectural Record Version: 01
Issue Date: November 2003
Page No: 216
Filename: 11/03Vistawall.qxd
Writer/Designer: Kenneth Kaiser
Last Revision: xx
Black Cyan Magenta Yellow
LHP
5 25 50 75 95



Courtesy of Hadrian Manufacturing

Exploded ceiling-hung partition.

Higher panels and appropriate hardware details contribute to safe toilet compartments, thereby preventing theft or the ability of an individual to reach underneath or overhead. This type of protection is often used within public rest rooms at train stations, airports, and bus terminals, where passengers are laden with packages and may be easily distracted. Most toilet partitions have internal latches and locking mechanisms, which are easy to use and prevent getting locked into a stall. Longer panels are mounted for more coverage and protection. Some building owners have posted signage in rest rooms, indicating that the public is responsible for their own property. This signage is often integrated into the design.

The Numbers Game

Hadrian Manufacturing

Reliant Stadium, Houston, Texas.
Architect: HOK Sports

Designing public rest rooms to accommodate a large volume of people in a short period of time is challenging. The user time frame is estimated at a minimum of two to three minutes per person, or more. The traffic involved in off loading people from buses, airplanes, trains or other forms of public assembly exiting, such as that experienced at a movie theater, when one movie ends and another begins, raises issues about whether rest room design varies significantly for men and women. Either way, toilet partition material standards are gauged to meet the highest traffic needs. Wherever partitioned toilet panels are used, whether in an airport terminal, train station, hotel or sports facility, panel systems should be specified to best fit the design criteria and space program.

At major-league sports facilities, with seating capacities for thousands of fans, this issue is critical. "Project design teams will meet or exceed the code-required numbers of plumbing fixtures. Priorities include plans for numbers that do not cause long waits at the toilet rooms for either gender," states Gina Leo, media relations representative at The HOK Sport Companies, in Kansas City, Missouri. Even while there are design pressures on some venues for increasing revenues, architects must consider how rest room configurations in premium seating areas, and luxury boxes, increase the level of amenities. The experience architects have had in successful venues suggests that the 2 to 1 ratio is not always the best tool to apply, as it tends to result in too few men's fixtures being provided in order to make room for the very large number of women's fixtures required to meet the ratio.

In some stadium and arena projects where the 2 to 1 ratio has been applied, the unreasonably long lines at men's rooms, rather than at the women's rooms, have resulted in many upset men. "Planning the appropriate fixture ratios for each plumbing fixture, men's and women's, to minimize waiting, has proven more successful than simply applying a ratio between the number of fixtures for men to the number of fixtures for women," Leo adds.

Rest Room Design: Code Ratios and Timing are Key Factors

Architect: J.K. Roller Architects

Hoyts Cinemas, Philadelphia, PA. Exterior view at night.

Architect J.K. Roller Architects.

Hoyts Cinemas, Philadelphia, PA, Bathroom Interior. Toilet partitions separate public sink areas and private toilet areas in theater rest rooms.

Public rest room design must interpret code restrictions, as they relate to creating the ideal layout for men's and women' facilities. In theaters, which are classified as assembly use, architects must meet codes for all public spaces. Design factors drive the numbers of toilet partitions required. The code, rather than the client or the architect, determines the number of individual enclosed water closets in rest room design.

"Rest room use occurs primarily upon arriving at the theater or leaving after a movie is over. With this in mind, toilet rooms are located adjacent to the lobby, and in the most likely path of travel when exiting the building. Time factors into rest room use, as women often require more time than men. The number of water closets provided should address these peak demands," said Paul Georges, AIA, of J.K. Roller Architects, Philadelphia, Pennsylvania.

While some designers may believe that water closet ratios should be higher, such as twice as many water closets for women than for men, the code establishes criteria to calculate these requirements. In the design for assembly occupancies A-1, the International Building Code (IBC) states that for every 125 male occupants, one water closet, or enclosed partitioned toilet fixture, should be provided. The requirement is increased to one water closet for every 65 female occupants.

For example, consider a movie theater designed with a total of 2,000 seats. When divided equally, 1,000 occupants count for the men's room calculations and 1,000 for women. In the men's category, for every 125 of 1,000 occupants, one water closet is required, for a total of eight toilet fixtures. For women, every 65 of 1,000 occupants requires one water closet, for a total of 16 fixtures. The IBC allows up to two-thirds of the required water closets for men to be substituted with urinals, which are typically screened.

When designing for the numbers, the 2 to 1 ratio method isn't the rule. "Prior to the adoption of IBC, the Pennsylvania Code recognized the delays women faced with the use of rest room facilities in public places," said Georges. The Rest Room Equity Act of 1990 required that the toilet fixture count for women be a minimum of twice the amount of fixtures for men. This requirement was commonly referred to as "potty parity." With the adoption of IBC, depending on the actual occupant count, the fixture ratio can be less strict.

Architectural Record Version: 01
Issue Date: November 2003
Page No: 217
Filename: 11/03Vistawall.qxd
Writer/Designer: Kenneth Kaiser
Last Revision: xx
Black Cyan Magenta Yellow
RHP
5 25 50 75 95

Handicapped Accessible Design

The Americans with Disabilities Act (ADA) is a federal civil rights law that ensures people with disabilities have equal access to goods and services. The law applies to most types of facilities and public rest rooms, regardless of local building codes. (Figure 4) While wheelchair accessible bathrooms are required in new facilities, not all accessible toilet partitions are designed for the required five-foot wheelchair turning radius.

All new public bathroom details must plan fixtures and partitions to accommodate the wheelchair-turning radius within a partitioned space. Some designs provide large accessible stalls, and standard access compartments with out-swinging doors clearing 32 inches, for direct wheelchair access to wall-mounted toilet compartments without turning space. These designs have accordingly increased the depth of each stall from 48 inches to 56 inches in depth. By comparison, floor mounted toilets require 59 inches for accessible design.

First door on left: Out-swinging handicapped toilet partition doors.

It is important to note that handicapped-accessible partitions and stalls are not interchangeable with standard partition stalls because they accommodate specific accessibility needs. These unique stalls therefore have specific design criteria with a separate set of standards within the toilet partition system. For example, toilet partition door hinges are out-swinging to meet code standards for 32 inches clear when open at 90 degrees. Handicapped accessible partitions must provide mounted grab bars at 33-inches to 36-inches above the finished floor material. Horizontal grab bars are to be mounted on the nearest sidewall and behind the toilet.

Architects specify hardware designed for accessibility, but should always adhere to the latest ADA specifications. Requirements can vary by region and state. Accessible hardware includes lever-type door handles, which must be operable without a twist or turning movement. Additionally, standard ADA-compliant hardware, with safety release latches in case of an emergency, should also be considered. According to Martino, theater design is increasingly including the convenience of an additional, separate ADA rest room facility, with one toilet and one sink, thus allowing the wheelchair user to be accompanied by someone for assistance. "This concept allows ease of moving the patrons within the theater complex," Martino observes.

The use of multiple handicapped accessible direct access partitions in a bathroom provides everyone a more accessible experience. When the same accessible hardware is used uniformly throughout the design, such as lever-type handles, users may experience greater ease in using the rest room, such as opening and closing a partition door if their arms are full of packages, or if they are carrying a child into the bathroom. Also, providing access and orientation for a person entering a rest room facility is an important design objective, which can be achieved by the layout of the space, and by use of accessory elements for each application. Toilet partitions can typically be customized from a selection of options.

Standard Toilet Partitions and Urinal Screens

The type of metal toilet partition that architects generally specify has 58-inch-high doors and panels and is "headrail braced," which is also referred to as 'floor mounted-overhead braced.' This standard height for metal toilet partitions is also available in ceiling-hung, floor-mounted, and floor-to-ceiling styles. Floor-to-ceiling mounted partitions and screens are the strongest and are specified where extra durability is required. There are several choices affecting cost, such as mounting and material expense.

Toilet partitions should be designed and specified for privacy, security, design flexibility, use of quality materials, and ease of installation. The same design standards apply to urinal screens, which are used as visual barriers only, and are not required to enclose the urinal space. The installation and alignment of these screens is key to their successful use.

Toilet partitions should be designed and specified for privacy, security, design flexibility, use of quality materials, and ease of installation.

A honeycombed core, or corrugated internal panel structural design, improves the strength and impact resistance of metal toilet partitions. Some industry standards have developed over time, such as concealed hinge mounting for better appearance, and higher-quality hardware. Continuous hinge partition doors and flange mounting of screens are simpler in their design and easier to clean. Hinges designed for high use are able to take asymmetrical loading situations, such as packages hung on coat hooks on the backs of stall doors. The metal plates at the foot of partition stanchions or pilasters, which are referred to as shoes, protect and conceal the floor and ceiling mounting hardware. This can give a clean line to the design and increase washable surfaces, which do not collect dirt and debris.

Variety of Styles

There are many different types of partitions, including square edge and arched, or curved designs. Toilet partitions are offered in several styles, including enclosures where the standard partition height is 58 inches high, with doors and panels mounted 12 inches above the finished floor material, and 14 inches above the finished floor material for standard plastic doors and panels. Partitions are also designed full height for the most privacy and security, as vandalism includes using the toilet fixture as a stepping platform to gain access to another partition from overhead. These secure systems are 64 inches-high material with a six-inch gap from the bottom of the door to the finished floor material. These are also available with 72-inch doors and 76-inch panels. Some highly reflective panel and ceiling finishes are not desirable, as they may compromise privacy.

Standard toilet partition systems are manufactured to save time and money because they can be efficiently shipped and installed relatively quickly. In high-traffic areas, long-term use of these systems demands that toilet partitions be interchanged and upgraded over

Architectural Record Version: 01
Issue Date: November 2003
Page No: 218
Filename: 11/03Vistawall.qxd
Writer/Designer: Kenneth Kaiser
Last Revision: xx
Black Cyan Magenta Yellow
LHP
5 25 50 75 95

time. Facility managers often renovate highly used or outdated public rest rooms with a new design, material change, or panel replacement. The flexibility and workability of metal toilet partitions enables replacement of damaged components, providing significant cost savings, compared to purchasing and installing all new toilet partitions.

Material Strength and Durability

Heavy use can cause partitions to rack and doors to pinch when opening and closing. Proper mounting and hardware is key to preventing this type of damage. Headrail bracing is recommended in heavy-use areas, such as schools and industrial settings. The top rail is designed with an anti-grip feature to deter climbing.

Most partitions are adjustable with floor mounting hardware, able to accommodate sloping floors to floor drains. As concrete sub-floors are most often involved in these installations, architects should look for adaptable product designs. Architects also periodically review available alternate panels for replacement and alternate color selections. Generally, panels are developed to withstand impacts and offer dent resistance, depending upon the panel construction. Standard metal panels are typically one inch thick and constructed with an internal cell structure for added strength, while others are constructed of solid material. ■

CLICK FOR ADDITIONAL REQUIRED READING

The article continues online at ***http://archrecord.construction.com/resources/conteduc/archives/0512hadrian-1.asp.*** To receive AIA/CES credit, you are required to read this additional text. The quiz questions below include information from this online reading. To receive a faxed copy of the material, call Hadrian Manufacturing at 1-905-333-0300.

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION Series

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Discuss the aesthetic and functional elements of public bathroom design*
- *Analyze code requirements for handicapped bathroom design and accessibility*
- *Specify toilet partitions, hardware, and materials for public rest rooms*
- *Understand planning criteria when calculating the number of plumbing fixtures for men and women in public buildings*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self report form on page 353. Follow the reporting instructions, answer the test questions, and submit the form. Or use the Continuing Education self report form on *Record's* web site—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. What toilet partition mounting standard provides the best maintenance flexibility?
- **a.** Floor mounted
- **b.** Ceiling mounted
- **c.** A combination floor and ceiling mounted
- **d.** Unmounted

2. What are the most important issues for the architect in the design of toilet partitions for public rest rooms?
- **a.** Using extruded steel tubing
- **b.** Strength, durability, and low maintenance
- **c.** Health, safety, welfare issues
- **d.** Maintenance schedule

3. What is the best material for water resistance in bathroom design?
- **a.** Plastic or composite panels
- **b.** Perforated steel panels
- **c.** Ceramic tile
- **d.** Insulation

4. What part of the toilet partition panel system is not interchangeable?
- **a.** Handicapped-accessible stall
- **b.** Panel door heights
- **c.** Door latches
- **d.** Hinges

5. What organization represents the industry on environmental building matters and advocates change in the way buildings are designed, built, and maintained?
- **a.** Leadership in Energy and Environmental Design
- **b.** American Medical Association
- **c.** International Building Code
- **d.** United States Green Building Council

6. Toilet partitions are usually found in public rest rooms, but can also be used as shower compartments at gyms and health clubs.
- **a.** True
- **b.** False

7. Materials chosen for panel durability, like solid plastics, provide the best sound absorption.
- **a.** True
- **b.** False

8. Public rest rooms should be designed only for privacy.
- **a.** True
- **b.** False

9. Toilet partition types include square edge, arched, or curved designs.
- **a.** True
- **b.** False

10. Brushed metal surfaces for toilet-partition panels is preferred where scuffing or marking the surface is a concern in high-traffic areas.
- **a.** True
- **b.** False

Architectural Record Version: 01
Issue Date: November 2003
Page No: 219
Filename: 11/03Vistawall.qxd
Writer/Designer: Kenneth Kaiser
Last Revision: xx
Black Cyan Magenta Yellow
RHP

Most solid plastic toilet partitions are one inch thick, however because polypropylene solid plastic is more rigid than high-density polyethylene, (HDPE), three-quarter-inch thick doors and panels can be used as well. These lighter, solid plastic panels are more manageable than traditionally specified solid plastic and plastic laminate panels.

Solid materials, such as polypropylene, have many advantages over other materials because they are more rigid, will not dent or crack, and never need repainting. The internal structure of the panel is made to take potential abuse from denting or lateral forces. Scratching has been considered by using new techniques to powder coat metals, brushed metal surfaces, and solid, composite or plastic laminate surfaces. Textured steel panels hide fingerprints, and offer improved acoustic qualities.

The use of brushed metal surfaces for toilet partition panels is preferred where scuffing or marking the surface is a concern in high-traffic areas. Embossed and textured stainless-steel partitions are generally available, along with a range of basic color choices and finishes. Architects can specify a metal powder-coated finish on steel toilet partitions because of the affordability, strength of the steel, and durable quality of the finish. Attached metal splash plates and grab bars are used with every type of toilet-partition material available. Plastic panels do not have the sound absorption qualities that textured steel panels provide.

For large exposed surface areas, cleaning graffiti can be a large percentage of personnel and maintenance supply budgets. A polypropylene solid plastic surface typically does not leave ghosting after cleaners are used. Advances in powder-coating technology include finishes with anti-graffiti properties.

Sustainable Design: Using Reclaimed Materials

Many materials are eligible for Leadership in Energy and Environmental Design (LEED) ratings, as developed by the U.S. Green Building Council (USGBC), but not all toilet partitions meet sustainability goals. The LEED Green Building Rating System® is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. Recycling is an area of manufacturing addressing the use of environmentally sensitive or sustainable design.

Some, but not all, toilet partitions offer recycled content in doors, panels, and pilasters. Architects should carefully investigate material content of building products when specifying or considering sustainability ratings, because the details can vary considerably. Researching materials and processes will determine whether certain toilet partitions are eligible to earn LEED points, which contribute to a building's overall rating.

For example, some available powder-coated metal toilet partitions and screens are manufactured from material containing approximately 50 percent recycled steel (36 percent post-commercial, and 14 percent post-industrial). Other stainless-steel toilet partitions typically contain approximately 75 percent recycled stainless steel. The honeycomb core of some partition doors, panels, and pilasters is composed of 18 to 24 percent recycled content.

Similarly, some available solid plastic toilet partitions are made from marine-grade polypropylene, an environmentally responsible choice. The post-industrial content for these types of partitions ranges from one percent to 10 percent, and the long lifespan of plastic equates to less material used over the long term, due to minimal replacement needs. Widely used, powder paints are safe on the environment, as there is virtually no waste, energy consumption is low, and there are no solvent emissions in the painting process.

A green, or sustainable, building should maintain a balance with the natural environment, including indoor air quality. The use of composite recycled materials provides durability and maintenance solutions in high-traffic areas. Many types of panels can last as long as 20 years, thus minimizing replacement and enhancing sustainability. A long product life span means systems are replaced less often, and therefore less material will be used over time. As the leading organization representing the industry on environmental building matters, USGBC advocates changes in the way buildings are designed, built, and maintained. Similar types of building products, including toilet partitions, can vary widely regarding materials, content, manufacturing processes, and other sustainable qualities, which all must be carefully investigated before specifying. Architects can access the certification process through the USGBC and local affiliates for sustainable design standards. (www.usgbc.org)

Coloring Impressions

The use of color to influence the perceived openness of a space can dramatically affect the experience in a public bathroom. When fully occupied, a public bathroom can seem claustrophobic or compressed, but good task lighting and use of color can enhance the space.

Most toilet partitions are available in a range of color options and powder-coated special effects finishes, which are visually interesting, and help hide fingerprints and marks. When used to enhance the design of the rest of the building by coordinating colors and textures as part of the detail, color selection is very important.

Toilet Partition Accessories

Researching appropriate accessories and hardware, and checking the shear stress capacity of each is important for specifying coat hooks and related items. Coat hooks for hanging outer garments when using the rest room should be provided. Often, the hook is too small to support the size and weight of a long, heavy coat. Sometimes the coat hook is stressed to the maximum degree, and gives way or completely shears off under the extreme pressure placed upon it by too many heavy, hanging packages and improper use. Some coat hook designs feature solid-cast zinc hooks and oversized black rubber bumpers that function as both doorstop and bag hook. From well-anchored coat hooks to purse shelves, hardware attachments are the primary accessory in the toilet partition system.

Some bathroom designs call for the use of air-freshening systems and air-circulation accessories to be installed between individual partitions. Fans to exhaust air and increased fresh-air circulation measures help, but the entire room should be taken into consideration for proper humidity control, and total air and heat exchanges.

Architects can specify products for air-drying machines, paper dispensers, shelves, changing surfaces, racks, and towel dispensers. Additional coordinated accessories include amenities such as sanitary disposals, wall-mounted garbage receptacles, hand dryers, toilet paper dispensers, and sanitary toilet seat cover dispensers. Without these accessories, public rest room design does not achieve the expected comfort and convenience. A sophisticated audience, the general public has come to recognize and expect high standards in the design of public rest rooms.

Virginia A. Greene, AIA, president of New York-based Virginia A. Greene, Architect, PC, is an author and frequently writes about design.