

LONG-TERM LESSONS

Leveraging experience to improve long-term operation and expense containment in washrooms.

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Public or private, K-12, college or university, no one knows their facilities better than school maintenance and operations staff — from the front-line custodians to facility managers. And, when it comes to planning restrooms for new construction and renovation, operational experience is especially critical. Applying best practices in advance can save headaches and expense down the line.

Architects, including specialist practitioners in the education field, are aware that school facilities vary in many ways, especially with so many districts evolving their operations into community recreation and adult education centers. Consequently, restroom patron demography is changing, as are hours of operation, levels of use, traffic flow, supervision requirements, maintenance regimens, and demands on washroom accessory, toilet partition and plumbing fixture durability.

Open communication between an architect and the staff can determine which products, materials and designs have stood the test of time.

Excessive use, abuse and vandalism, along with moisture-related problems, are common issues in school washrooms. By considering the risks involved with each piece of restroom equipment, schools can gain the upper hand in protecting their facilities and containing costs:

- **Toilet partitions, urinal screens and shower/dressing room dividers.** Materials and mounting configurations should be selected to minimize the following correctable conditions:
 - Corrosion.
 - Rust.
 - Delamination.
 - Permanent graffiti ghosting.
 - Deep scratches and gouges.
 - Doors, stiles out of alignment.
 - Excessive refinishing and maintenance.
 - Frequent replacement.

Consider the features and benefits of the following material options: hollow-core metal, plastic laminate, solid plastic (HDPE), solid phenolic and solid color reinforced composite (SCRC). Consider these hardware choices: Zamak hardware, stainless-steel hardware, aluminum hardware and full-length hardware. Some mounting configurations to consider: overhead-braced, floor-anchored, floor-to-ceiling and ceiling-hung.

One thing to note in respect to toilet partitions is that a school or university should confirm compliance requirements with the proper building code authorities, because materials having a “C” or better Interior Wall and Ceiling Finish Classification may be required. New requirements for urinal screens also should be reviewed during the planning process.

- **Soap and soap dispensers:** Examples of correctable conditions observed:
 - Wall and mirror mounting loose.

- Dispenser spouts knocked off.
- Clogged soap valves.
- Out of soap.
- Long-term soap purchasing agreements.
- **Soap and soap dispenser comparisons:**
 - Stainless steel tank-type vs. higher profile plastic dispensers.
 - Low-profile vs. protruding high-profile soap valves.
 - Open-market universal bulk soaps vs. proprietary cartridge long-term purchase agreements.
 - “Push” designs vs. “pull” mechanisms.
 - Zero-waste bulk vs. disposal of residual cartridge soap during scheduled change-outs.
- **Hand drying.** Examples of correctable conditions observed:
 - Paper towels overflow waste receptacles.
 - Excessive maintenance to clean up floor litter.
 - Paper towels used to start fires.
 - Paper towels used to plug up plumbing fixtures, taking them out of commission and requiring extra service.
 - High cost of paper towels and long-term purchase agreements for proprietary paper dispensers.

Features and benefits of automatic warm-air hand dryers include reduced maintenance costs and durable, vitreous enamel covers. One thing to note about dryer models with upward-pointing, rotating air spouts is that they can be used for practical jokes or can be fire hazards.

Whenever possible, specify low-profile, recessed washroom equipment, including plumbing fixtures and washroom accessories. These are the least likely targets of vandals. If interior wall space is not available, select surface-mounted models with the lowest possible protrusions from the wall to minimize their vulnerability. This applies to handles, levers, pushbuttons and soap valves.

Best practices

School and university operating budget resources are stretched to the limit, and the effects of heavy use, abuse and vandalism in restrooms are rampant. Many school restrooms do not function properly, and large percentages of students refuse to use the facilities. Therefore, within reason and budget capabilities:

- Share the analysis and findings with senior management, board personnel and architects.
- Build the case for the most durable restroom equipment available — even if it is higher in initial cost — by presenting life-cycle economics.
- Provide light colors and adequate lighting; dark facilities invite vandalism.
- Make a renewed effort to improve the maintenance and timely repair of restrooms because students tend to treat facilities with more respect when they are attractive and in good working order.

Some states are adopting school washroom performance standards complete with a reporting process and

financial penalties. However, beyond legal compliance, conventional wisdom would suggest that school restrooms provide:

- A clean environment, hygienically sanitary and free of litter.
- Secure facilities that are safe to visit and use.
- Functional plumbing fixtures, washroom accessories and toilet partitions.
- Fully stocked consumables, soap and paper products, including paper towels (if warm-air dryers are not used).
- Compliance with ADA accessibility guidelines.

Lessons in bookkeeping

The following is a suggested format, but each school should customize a checklist to meet its particular circumstances and needs:

1. Categorize restrooms by patron type such as students, faculty, staff and general public; hours and patterns of operation; and the degree of durability required based on volume, use and abuse, and vandalism, assigning a durability factor of “light,” “moderate” or “severe.”
2. Account for facility-specific conditions, particularly moisture found adjacent to gyms and locker rooms, showers and swimming pools, and where hose-down maintenance is conducted.
3. Evaluate the maintenance and replacement needs of existing restroom and locker-shower room fixtures, accessories and partitions from the date of their installation by assigning “light,” “moderate” or “severe” ratings.

Record the information by:

- Manufacturers, models and materials.
- Purchase and installation costs.
- Replacement history and costs.
- Maintenance expense rating (“high,” “medium” or “low”).
- Cost of consumables (soap and paper towels).

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NOTABLE

- 8 Percentage of a school’s M&O budget spent on equipment and supplies (based on median dollars per FTE student).
- 6 Percentage of a college’s M&O budget spent on equipment and supplies (based on median dollars per FTE student).

Source: AS&U’s Annual M&O Cost Studies, April 2006.

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