Design Guide for the Built Environment of Behavioral Health Facilities

by David M. Sine, ARM, CSP, CPHRM
and James M. Hunt, AIA, NCARB

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“The hospital plans activities to minimize risks in the environment of care.”

“The hospital manages safety and security risks.”

“Listen to the patients, they’ll tell you what you need to know.”
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In an effort to keep up with the rapidly increasing number of new products that are becoming available for use in behavioral healthcare facilities, this document will be updated more frequently. The date of the latest posting will be provided in the upper left corner of the cover page and at the bottom of each page.

Readers are urged to check www.naphs.org whenever referring to this document to assure that the latest information is being accessed.

NEW WITH EDITION 4.3
All revisions and/or additions from the previous edition are shown in blue, including the boarders of images.

INTRODUCTION
This document is intended to address the built environment of the general adult inpatient behavioral healthcare unit. Additional considerations that are not addressed here are required for child and adolescent patients, patients with medical care needs, geriatric patients, and some patients with diagnoses such as substance abuse and eating disorders.

This document is not a replacement for regulatory requirements, but rather augments them to detail practical means of protecting patients and staff. It is
not intended to be employed as a legal “Standard of Care” which facilities are in any way required to follow.

**NOTE:**

Product information included in this document is intended for illustration of one or more specific items that are deemed appropriate for use in this type of facility. Comparable products by other manufacturers meeting the same design criteria may be substituted after careful comparison.
A WORD FROM THE AUTHORS

Our first edition of the Guidelines for the Built Environment of Behavioral Health Facilities opened as follows:

“Having spent our careers working to improve patient and staff safety, we welcome the opportunity to share our experiences with you. What we have learned is that, while a safe environment is critical, no environment of care can be totally safe and free of risk. No built environment – no matter how well designed and constructed – can be relied upon as an absolute preventative measure. Staff awareness of their environment, the latent risks of that environment, and the behavioral characteristics and needs of the patients served in that environment are absolute necessities. We also know that different organizations and different patient populations will require greater or lesser tolerance for risk; an environment for one patient population will not be appropriate for another. Each organization should continually visit and revisit their tolerance for risk and changes in the dynamics of the patient population served.”

The Design Guide continues to be based upon our experiences in the field as operators, designers, consultants, and surveyors: what we have seen that is working and what we have seen that has not worked. Since this was first electronically published by NAPHS in 2003, we have received and welcomed countless suggestions, commendations, and comments. New products have been introduced while others have been withdrawn from the market, and innovation continues to provide new approaches to the conundrum of providing a therapeutic environment that is also as safe as possible. Codes have been updated to more specifically address the needs of the behavioral health patient, and reduction of patient suicide is a National Patient Safety Goal. [See www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals/.

We are grateful for how well our suggestions have been received. We hope that this latest edition of the Design Guide will also prove useful to the designers, operators, and clinicians who are entrusted with both the care of behavioral health patients and with the environment of care in which those patients are treated and cared for.

-continued-
As before, we have highlighted products that we have found to be both safe and able to withstand the rigors of use in the behavioral healthcare environment. However, inclusion or exclusion of a product does not indicate endorsement or disapproval (nor that any product we identify is free of risk). There may be equivalent products available: all facilities should continually look to the marketplace to find products that are safer and more cost-effective.

**SHARE YOUR BRIGHT IDEAS**

A continuing feature in this updated edition is the inclusion of Bright Ideas that are indicated by the graphic shown at the left. These are applications that we have thought of, or that have been suggested by readers, that do not require the use of any specific product, but utilize readily available items in creative ways to improve the safety of these units. Most of these Bright Ideas can be implemented by maintenance staff at nominal cost. We thank those who have contributed these ideas and information on new products. We encourage this kind of input and invite feedback from you, the readers. With your help, this can become a compilation of the best thinking of the industry. We promise to include more of your Bright Ideas in the future.

We hope that this document continues to provide a starting point in your search for resources that can enhance the safety of behavioral healthcare patients.

There continues to be a lot of attention and activity around “Suicide Prevention” and many new products are on the market and in development. Edition 4.0 is an attempt to keep up with this rapidly changing marketplace and keep you informed about these exciting new products.

David M. Sine, ARM, CSP, CPHRM  
President  
SafetyLogic Systems  
Austin, TX  
info@safetylogicsystems.com  
www.safetylogicsystems.com

James M. Hunt, AIA, NCARB  
President  
Behavioral Health Facility Consulting, LLC.  
2342 SE Alamar Road  
Topeka, KS 66605  
jim@bhfcllc.com  
www.bhfcllc.com
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A WORD FROM NAPHS

THE VALUE OF FOCUSING ON THE BEHAVIORAL HEALTH ENVIRONMENT

The National Association of Psychiatric Health Systems (NAPHS) is proud to partner with authors David Sine and Jim Hunt to bring you this unique, valuable, and newly revised resource. The earlier editions of this publication were extremely well received by the behavioral healthcare field, and we appreciate the authors’ efforts to incorporate new products and thinking into this fourth edition.

Whether you are involved in designing a new building, renovating space, or maintaining an existing behavioral healthcare program, this document is designed to help you think through the many aspects of the environment that can have a significant impact on patient safety.

In behavioral health care, this is particularly important as many patients are admitted because they are at risk of harming themselves or others. In every aspect of building design and maintenance, it is essential to make determinations about the built environment based on the potential risk to the specific patient populations you serve. This requires a continuous process of review and evaluation. This document is unique in that it gives you a concrete starting point for your internal discussions.

There are no hard and fast answers, and there may on occasion be conflicting state or federal requirements that you will need to discuss with your own attorneys. Some questions to consider:

- Could a patient be hurt by this aspect of the environment? Could they use it to harm someone else?
- Can staff easily navigate the environment to get to patients in need of assistance?
- Is it possible to maintain patient privacy in this environment?
- Does the environment convey a hopeful, helpful atmosphere that will contribute to recovery?

NAPHS does not endorse or recommend any specific product, nor does exclusion of a product indicate disapproval. However, we believe that it is important to share ideas that can help you in the process of continuously enhancing patient safety and improving patient care.

Mark Covall
President/CEO
National Association of Psychiatric Health Systems
900 17th Street, NW, Suite 420
Washington, DC 20006-2507
Phone: 202/393-6700
Web: www.naphs.org

Kathleen McCann, R.N., Ph.D.
Director of Quality and Regulatory Affairs
GENERAL COMMENTS

1. Space Planning Considerations:

A. **Behavioral health units and facilities should be designed to appear comfortable, attractive, and as residential in character as possible.** Every effort should be made to avoid an “institutional” look while still meeting the vast array of applicable codes and regulations and meeting the therapeutic and safety needs for patients and staff. The Planetree organization actively advocates for patient centered design and has made a significant positive impact on the general hospital therapeutic environment. However, many of its features do not adapt well to behavioral health units and hospitals. Planetree is currently conducting a pilot program that uses their principles in behavioral healthcare environments. Visit their Web site ([www.planetree.com](http://www.planetree.com)) for updates, or check back here for more information. The importance of this effort cannot be overstated. The recent focus on patient and staff safety has had the tendency to push the aesthetics of these units toward the appearance of a prison environment. It is important to constantly strive for the safest possible healing environment while also striving for as much of a non-institutional appearance as possible.

B. **Nurse stations should provide the least possible barrier between staff and patients.** HIPAA (*Health Insurance Portability and Accountability Act of 1996*) privacy regulations make an “open” design increasingly challenging. Patient records, electronic or otherwise, must be protected from view of other patients, visitors, and unauthorized staff. Care must also be taken to shield computer monitors from unauthorized viewing. Areas must be provided in which clinical staff may discuss patients without being overheard by other patients or visitors. Provision should be made to accommodate storage of charts and patients’ valuables in appropriately secure areas. The advancements in electronic medical records have somewhat reduced the need to provide all of the charting-related activities and spaces in the area behind the nurse station. Since the electronic “chart” can be accessed from many locations, the area around the nurse station can be utilized for more patient-centered activities in many cases.

C. **Gathering areas for patients near the nurse station are encouraged because patients often congregate near there to socialize.** It is far better to plan for this in the original design and to accommodate this behavior. This area should encourage comfortable seating and places for conversation, card or board games, and other quiet activities that will not be distractions for staff working in the nursing station. Television sets, CD players, etc. should not be included at these locations. Many facilities are now experiencing issues, especially with younger patient populations, regarding use of electronic devices (e.g., iPods, MP-3 players, and similar devices). Many patients like these electronics and say they help keep them calm, but the wires on the earphones can be hazardous. This is just one of many decisions that facilities will need to weigh to determine the level of risk they are willing to accept for the
perceived benefit. It should always be remembered that a patient who is assessed as safe to have the player may set it down where another patient may pick it up to gain access to the wires.

D. **Chart rooms and other staff areas should be located so that staff members may have conversations regarding patients and other clinical matters without being overheard by patients or visitors.** Teaching hospitals that have a large number of residents and/or students making rounds will need larger spaces for confidential conversations.

E. **Medication rooms should be sized to accommodate the number of staff that will be necessary at peak times as well as planned for future (if not current) computer systems.** HVAC and electrical systems should have sufficient capacity to accommodate the cooling load of the refrigerator, computer, automated medication systems, and the number of people who may be in the room at peak times. The medication room should also have a hand-washing sink. The room should be sized to accommodate storage of the medication cart when not in use without restricting use of the space by staff. (See “Guidelines for Design and Construction of Hospital and Health Care Facilities - 2010;” 2.1-2.6.6.1.)

F. **When possible, locate service areas (such as trash rooms and clean and soiled utility rooms) so that they are accessible both from the unit and from a service corridor.** This eliminates the need for environmental staff servicing these rooms to enter the treatment areas of the unit and possibly disturb patient activities. All doors to these rooms must be kept locked at all times.

G. **Traditional nurse call systems for patients to use to get assistance from nursing staff are not required** in behavioral health units. There are significant new developments in duress alarm systems that greatly improve safety for staff when in a threatening situation with patients. Some of these utilize sensors located in all patient-accessible areas and a device the size of a small flashlight that the staff members wear. If the staff feel threatened and want other staff to come in a “show of force,” a button on the bottom of the device can be pressed. If the threat is imminent and immediate assistance is required, the device can be pulled from its holder and a different alarm is sounded. Local lights outside the room are activated and a read-out at the central nurse station will give the exact location of the staff activating the alarm.

H. When possible, have all **electrical outlets** in each patient room should be tamper resistant, hospital grade units on separate Ground Fault Interrupted Circuits (GFCI) and have the breakers for these circuits located where they are readily available to staff without entering the patient rooms. This is easily accomplished in new construction and very difficult to accomplish in remodeling projects.

I. **All electrical circuits** having receptacles near sources of water (such as sinks, lavatories, and toilets) must be protected by (GFCI) breakers. Simply replacing one
receptacle on a circuit with a GFCI-equipped receptacle provides that protection for the entire circuit. It should be noted that this can cause complications in that poorly maintained equipment (such as vacuums and floor polishers) may trip these devices.

J. When possible, locate **water shut-off valves** in corridor walls where they are accessible from the corridor by opening a locked access door. This has been successfully accomplished during remodeling projects of existing units.

K. When possible, locate **serviceable parts of patient-room HVAC systems** where they can be serviced without entering the patient rooms. In new construction, consideration should be given to radiant heating and cooling systems that greatly reduce the need for mechanical devices in the patient rooms.

L. **Housekeeping rooms should be large enough to lock away the carts when not in use.** All cleaning materials must be locked inside at all times when the carts are in patient areas or corridors and not attended by staff.

M. **Smoking areas (if provided) should be outdoors.** These can be in the form of screened-in porches using heavy stainless steel screen fabric similar to that specified in Level 3.H.1. below. Furniture should be securely anchored in place. Provision should be made for staff observation without having to breathe the second-hand smoke. No waste baskets should be allowed in these areas. Indoor smoking is not permitted now in most facilities, and many hospitals have gone to smoke-free campuses.

N. **At the time of this writing, the applicable standards** [Guideline for Design and Construction of Hospital and Health Care Facilities, published by the facility Guidelines Institute, 2010 edition] **require 100 net usable square feet per private patient room and 80 net usable square feet per patient in semi-private rooms (2.3-2.1.1.2(2))**. All requirements of the Guidelines, NFPA 101 Life Safety Code (2009 edition), The Joint Commission Standards, as well as state and local regulations and building codes must be incorporated into the planning.

2. **Safety:**

The level of concern for the safety of patients and staff due to the design of the built environment is not the same in all parts of a behavioral health unit or facility. The level of precautions necessary depends on the staff’s knowledge of the patient and the amount of supervision the patient will have while using that part of the facility. The level of concern falls roughly into five categories (with 5 being the highest level of concern):

- **Level 1.** Staff and service areas where patients are not allowed.
- **Level 2.** Corridors, counseling rooms, interview rooms and smoking rooms – where patients are highly supervised and not left alone for periods of time.
- **Level 3.** Lounges and Activity Rooms – where patients may spend time with...
minimal supervision.

Level 4. Patient rooms (semi-private and private) and patient toilets – where patients spend a great deal of time alone with minimal or no supervision.

Level 5. Admissions rooms, examination rooms, and seclusion rooms – where staff interact with newly admitted patients that present potential unknown risks and/or where patients may be in a highly agitated condition.

3. Outdoor Areas:

Outdoor areas (e.g. enclosed courtyards, fenced areas adjacent to the treatment unit, or simply an open campus) are considered to be of great therapeutic benefit. In all cases, careful consideration should be given to exterior landscaping and furniture in the vicinity of patient-use buildings. Trees should be located away from buildings to prevent access to building roofs. Climbable fences can permit, if not encourage, unauthorized access to windows and roofs or elopement over walls. Shrubbery should be non-toxic and low-growing. Avoid planting shrubbery close together as it can create visual barriers that patients or unauthorized visitors may hide behind. Landscape or decorative rocks that can be thrown and injure staff or other patients should not be used.

All outdoor furniture should be anchored firmly in place. This is to prevent the furniture from being moved to create barricades or stacked to allow climbing over fences, into windows, or onto buildings. Levels of staff supervision for patients using outdoor areas should be carefully reviewed by the facility and be dependent the acuity and assessment of patients using the area. There are many types of furniture commercially available that can be anchored or are made of concrete or other heavy materials.

Buildings, walls, or fences may be used to establish clear boundaries and impede elopement to a degree appropriate to the patient population being served. Some facilities are comfortable with providing a perimeter enclosure that is not particularly difficult to climb and simply make any elopements a treatment issue if the patients return. Other facilities have a very high need to reduce elopements to the extent possible. Where this is the case, the enclosures may take on a very prison-like appearance. If views to the distance are not required, one approach is to treat the outdoor areas as meditation gardens with solid masonry walls that have a smooth interior surface and are twelve to fourteen feet high.
One facility has installed large (22”-24”) diameter plastic pipe on top of the wall to resist patients being able to get a grip on the top surface. This pipe can be painted to match the color scheme of the building and provides a much less institutional appearance than concertina wire. Another option a fine mesh chain link fence fabric\textsuperscript{49} that can be installed over the existing fence material. This fabric comes in a range of sizes down to as small as 3/8” openings. This makes it more difficult to climb and the openings are too small for most bolt cutters. Care should be taken when using this material to assure that fence posts and rails are sufficiently strong to support the fabric and the additional wind loading that can occur. There has been at least one verified instance of a patient successfully climbing a mini-mesh fence, so it is suggested that a section at the top be angled inward to further increase the difficulty of climbing.

All areas surrounding patient-use buildings and areas where staff will be walking or escorting patients at night should be well lighted. Care should be taken that exterior lights do not shine directly into patient room windows. Parking areas for staff and visitors should be well lighted and reviewed regularly for design features that encourage personal and property security. While security is generally beyond the intended scope of this document, closed circuit television monitoring and video surveillance recording of these semi-public areas (i.e., where there is no expectation of privacy) should be considered.

All manhole covers, access panels, and area drain grates should be anchored firmly in place to prevent them being removed and used as weapons or allowing patients to enter the underground piping.

\textbf{NOTE:} Product information included in this document is intended for illustration of one or more specific items that are deemed appropriate for use in this type of facility. Comparable products by other manufacturers meeting the same design criteria may be substituted after careful comparison.
CONSTRUCTION AND MATERIALS
CONSIDERATIONS

Each of these levels of concern requires increasing attention to the built environment to reduce the potential of the patients being afforded a means of doing harm to themselves or others. These levels are cumulative, and all steps taken for lower levels are also required for a higher level. For example: all steps recommended for Levels 1, 2, and 3 are also recommended for Level 4.

**Level 1. Staff and Service Areas** – Compliance with all applicable codes and regulations. All unattended service areas should be locked at all times to reduce the possibility of patients entering these areas.

**Level 2. Corridors, Counseling, and Interview Rooms** - Minimize blind spots in corridors where patients cannot be observed from an attended nurse’s station. All unattended counseling and interview rooms should be locked at all times to reduce the possibility of patients entering these areas. Counseling rooms and interview rooms should have a “classroom”-type lockset which requires a key to lock or unlock the outer handle, but the inside handle is always free.

A. **Floors** – Carpet or vinyl tile meeting class A rating. Avoid patterns and color combinations that may appear to “animate” into objects that could contribute to visual misperception by patients. Anti-microbial carpet with solution-dyed yarn and moisture-resistant backing generally works well in these facilities and is available from most major carpet companies.

B. **Walls** – Lightweight concrete block, abrasion resistant, and/or impact-resistant gypsum board on a minimum of 20 gage metal studs spaced at sixteen inches to center. Consult manufacturers regarding the characteristics of the specific material most appropriate for a particular installation. These products are now available from several manufacturers. A painted finish is preferred because of easy reparable and the relatively low cost of renewing or changing colors to keep up with current trends. This helps with minimizing the institutional qualities of the space and aids in providing as residential (or home-like) an ambiance as possible while meeting the institutional requirements.
C. Ceiling – May be lay-in acoustic tile if needed for accessibility to equipment. However, a solid ceiling is preferred in interview rooms used for patient intake and assessment purposes (see section 5a: Admissions). If a “lay-in” ceiling is used, consideration should be given to the use of clipped-in-place ceiling tiles. If clips are used, regular safety rounds should include checking to see that the clips are in place. Frequently, they do not get replaced after maintenance is performed on equipment above the ceiling.

D. Glass

1. Safety glazing - All glazing should be safety glass. The "Guidelines" Appendix A2.5-7.2.2.3e calls for glazing to pass, "The Dade County hurricane test, ASTM E1886, and ASTM E1996 as alternate impact tests." Several glass manufacturers are now producing products that may be appropriate for use in these facilities. Actual products will vary depending on the size of the opening, the type of frame and the patient population being served. It is suggested that the manufactures be contacted directly to determine exact products that may be appropriate for a specific project. If wire glass is required by code, install ¼” polycarbonate type glazing on side(s) to which patient has access if allowed by authority having jurisdiction.

2. Window film - If replacing existing glass is cost prohibitive, application of a window film security laminate to existing glass may be an alternative. However, these films may be susceptible to scratching and being defaced by patients. Additional protection may be obtained by using impact protection adhesives and a perimeter tape system to help hold the glass in the frame if broken. Claims that these window films will prevent the glass from breaking should not be relied upon in these authors' opinion.

3. Observation mirrors - Convex mirrors installed in corridors, seclusion rooms, and other locations to assist with the observation of patients that are in locations accessible to patients should be made of a minimum 1/4” thick polycarbonate, be filled with a high-density foam, and have a heavy metal frame that fits tightly to the wall and ceiling. Convex mirrors made of steel.
are also available. Additionally, the perimeter should be sealed with a pick-resistant caulking.

E. Hardware

1. Hinges – Continuous hinges are preferred for all patient-accessible areas because they minimize possible attachment points. Barrel type are preferred because they are available with the top edge sloped, or "hospital tip." Geared-type continuous hinges are available with a closed-sloped top and continuous gears that resist ligature attachment.

2. Closers – Closers are generally not required for patient room doors in most jurisdictions but may be required for other doors. When needed, it is suggested that parallel arm security-rated closers be mounted on corridor side of door away from rooms where patients will be alone or in groups be used.

3. Locksets – All doors in patient-accessible areas are recommended to have some type of anti-ligature lockset. There are three ways that a lockset can be used for ligature attachment: pulling down; pulling up and over the top of the door; and tying something around the latch side of the door using both the inside and outside handles (transverse). The latchbolt itself has even been used successfully as an attachment point. In these authors’ opinion, the perfect solution for this dilemma does not exist at this time. Several of the better options are discussed below.

   a. Lever handle lockset effectively deals with up and down pressure, but is susceptible to transverse attachment. This lever is considered Americans with Disabilities (ADA)-compliant. Several manufacturers now have similar locksets, but their quality and/or durability has not been verified at this time.

   b. Crescent handle lockset is available which utilizes a top pivoted handle and thumb turn that are ligature resistant and may meet ADA requirements. The operation of this lockset may not be as intuitive as some and some medicated patients may find it confusing.
c. **Push/Pull Handle locksets** installed with both handles pointing down resists pulling down and, to some extent, the transverse attachment. However, it is very susceptible to pulling up and looping something over the top of the door. This hazard can be reduced by installing an Over-the-Door Alarm as discussed later in this paper. This type of device is generally considered to be ADA-compliant.

d. **Conical knobs with flutes** are used by some facilities and resist up and down pressure and to some extent transverse attachment. These devices are not ADA compliant and require tight gripping with the fingers to turn the knob. Some models provide a textured surface in the flutes to assist with gripping the knob to pull it shut. It is sometimes necessary to provide a recessed pull on the door for use in pulling it closed.

4. **Unit entrance doors** – Provide intercom (or telephone) for communication to nurse stations from outside the unit if needed. Electronically controlled access systems that utilize electric strikes or electromagnetic locks are preferred. These may be operated by a switch at the nurse station if the door is clearly visible from the location of the release button. Care should be taken to assure that patients are not in the area when the door is released. Card readers or keypads adjacent to the door are also commonly used. These are readily available from hardware suppliers and are generally extensions of systems currently in place at most facilities.

5. **All exit doors** (including stairway doors) may be locked at all times. Exit doors may be locked with electromagnetic locks that are connected to fire alarm system and may either stay locked when the fire alarm is activated (fail secure) or release when alarm is activated (fail safe) as deemed appropriate for patient population. The acceptability of this type of hardware and its operating mode should be verified with the authority having jurisdiction at location of the facility. When extraordinary circumstances exist, a vertical magnetic-jam strip with at least two magnetic-hold devices (1100 lb holding force) should be installed.
6. **All doors** on the unit that are required by applicable codes and regulations to have a closer, but need to be open to provide observation of patients by staff shall be provided with approved device. If the door has a standard closer, provide an accessory magnetic hold-open device\(^\text{10}\). If a new closer is being provided, it is recommended to use a closer with a built-in release\(^\text{11}\) that will allow the door to close automatically when fire alarm is activated.

7. **Smoke seals** are often applied with adhesive strips that can allow patients to remove them to use as ligatures. Smoke seals that break into 8” long pieces\(^\text{136}\) are preferred for use on all doors that patients will pass through.

8. **All fire alarm pull stations and all fire extinguisher cabinets should be locked.** All staff on duty must carry keys for these at all times. Key should be provided with a red plastic ring or other means of providing quick identification.

9. **Lighted exit signs\(^\text{81,123}\)** or Photoluminescent signs\(^\text{82}\) should be vandal-resistant and installed tight to the ceiling with a full-length mounting bracket to avoid use as a hanging device. Wall mounting these signs perpendicular to a wall is not recommended because it leaves the top exposed as a possible attachment point.
F. **Light fixtures** – If located at a height or location that is not easily accessible to patients, these may be normal fixtures and lamps as long as staff observation from the nursing station is good and staff are in attendance, but tamper-resistant fixtures are preferred. Where they can be reached by the patients or are in areas that are not readily observable by staff, they must be tamper-resistant type 40, 134, 138 or have minimum ¼” thick polycarbonate prismatic lenses securely fixed in the frame, and the covers must be firmly secured with tamper-resistant screws12. No glass components should be used in any fixture. Use of table lamps or desk lamps is strongly discouraged, but if used, must be firmly attached to the surface on which they sit. Neither incandescent light bulbs or fluorescent tubes should ever be accessible to patients.

G. **It has been suggested that corridor light fixtures (other than minimal night lighting) be controlled at night by motion detectors.** This would allow staff to know immediately when a patient leaves his or her room.

H. **Fire sprinklers – institutional heads**14 which will break-away under 50-pound load dropped from one inch. Another option96 does not have the break-away feature, but appears to provide very little opportunity for attachment. This head can yield some small parts, and it is suggested that it only be used where it will be difficult for patients to reach the head.

I. **HVAC grilles and equipment** – Standard grilles with small perforations that are secured in place with tamper-resistant fasteners are generally acceptable in these areas as long as the ceilings are high enough to net be easily reachable by the patients.

J. **Window covering hardware** –
   1. **Mini-blinds** mounted between layers of glass or polycarbonate are preferred because they are not accessible to patients. Care should be taken to assure that any exposed devices to control the tilt of the blinds not create a potential ligature attachment point. Exposed mini-blinds should never be used.
2. **Roller Shades**\(^{115}\) that are specifically manufactured for use in psychiatric hospitals are another option. These have enclosed security roller boxes, security fasteners, cordless operation and locking devices that resist tampering by patients.

3. If **curtain tracks**\(^{15}\) are used, they must be flush mounted tight to the ceiling or soffit and must have no cords or chains. The minimum number of hook and loop (or snap) tabs should be used to limit the amount of weight that can be supported if the fabric is bunched together. This product can be used with a wide variety of window and shower curtain fabrics. It should be noted that these curtains can be easily removed and used as ligatures.

   NOTE: It has been mentioned that the notch provided to make inserting new tabs may also be used by patients to insert other objects to be used as ligatures. It is suggested that this section of track be cut off before installation.

K. **Miscellaneous** –

1. No plastic trash can liners should be allowed in any space accessible to the patient. Breathable paper liners should be provided.

2. All operable windows in these areas should have opening limited to four inches\(^{23}\).

3. Telephones located in corridors or common spaces for patient use should have stainless steel case\(^{52,97}\), be securely wall mounted, have a non-removable shielded cord of minimal length (14 inches maximum), and may be equipped either with or without touch pads for placing outbound calls. It has been mentioned that if a patient pulls very hard on the receiver that the armored cable can unwind and provide sharp edges. This risk should be weighed against the ease of removal of standard cords.

4. Cabinet pulls should be either recessed, with no protruding openings or of a closed type\(^{47,75}\).
5. Room Signs\textsuperscript{124} are available in a flexible material that is adhesively applied and will not provide a weapon to the patients if removed.

L. Furniture –

1. Should be easily cleaned, easily reupholstered, very sturdy, and as heavy as possible to minimize likelihood of patients throwing chairs, tables, etc. It is recommended that as much furniture as practical be built-in or securely anchored in place to prevent stacking or barricading of doors. The remaining loose items (such as chairs) can vary from high-quality wood-frame upholstered chairs\textsuperscript{60,165} that resemble typical residential furniture in appearance to polyethylene rotationally-molded\textsuperscript{62} and sand-ballasted seating that is very institutional-looking. The selection depends on the facility’s determination regarding the patient population to be served.

2. Provide lockable storage cabinets and drawers and the means to lock phones and computers away from patients.

3. All upholstery and foam used in furniture should have flame spread ratings that comply with the requirements of NFPA 101 Section 10.3.

M. All pictures and art work mounted on walls should have polycarbonate\textsuperscript{2} -type glazing, and heavy frames should be screwed to the walls with a minimum of one tamper-resistant screw\textsuperscript{12} per side. Care should be taken to reduce the opportunity of attaching ligatures to the frame or the joint between the top of the frame and the wall. The frame should be beveled to slope away from the wall, and the joint at the top should be sealed with a pick-resistant sealant\textsuperscript{77,98}. Murals have been used very effectively in some facilities. These can be very effective in brightening and adding interest to corridors and day rooms. It is usually a good idea to cover them with at least two coats of a clear sealer for protection, but patients typically enjoy these and defacing them is not usually a problem.
Another option is to print art work on flexible vinyl\textsuperscript{126} that can be attached to the walls with hook and loop fasteners. This reduces the risk of patients obtaining harmful materials and also provides the opportunity to change the art displayed on a seasonal or other basis. It also allows hospitals to give the patients a choice of art work to display in their rooms which can contribute to them having more control over their environment.

**Level 3. Lounges and Activity Rooms**

A. **Floors** - Use sheet vinyl\textsuperscript{27}, vinyl tile\textsuperscript{28} or seamless flooring\textsuperscript{20} where wet or potentially messy activities will be conducted. Carpet should have solution-dyed yarn and non-moisture absorbing backing\textsuperscript{16}.

B. **Walls** - Same as for corridors in #2 above.

C. **Ceiling** – Prefer non-accessible solid gypsum board ceiling. If more sound attenuation is desired, apply 1’x1’ acoustic tile to the gypsum board with adhesive. A nine-foot-high ceiling is highly desirable in that the added height makes it more difficult to reach and therefore decreases patient tampering with ceiling-mounted devices.

D. **Glass** - Same as for corridors in #2 above.

E. **Hardware** - Same as for counseling and interview rooms in #2 above.

F. **Light fixtures** - Same as for corridors in #2 above.

G. **Fire sprinklers** – Institutional type – Same as for corridors in #2 above.

H. **HVAC grilles and equipment** –Only grilles with small perforations\textsuperscript{17} complying with the National Institute of Corrections standards,
   1. If other types exist and must remain, cover with heavy gauge stainless steel screen fabric\textsuperscript{18}.
   2. If individual fan/coil type units exist and must remain, secure all access panels, grilles, and controls with tamper-resistant screws\textsuperscript{12} and cover all supply and return air openings with stainless steel screen fabric\textsuperscript{18} or perforated sheet metal or
plastic. All coverings should be securely attached with tamper-resistant fasteners.

I. Window covering hardware – Same as for counseling and interview rooms in #2 above.

J. Furniture – All lounge furniture requirements listed for counseling and interview rooms in Level #2 above apply to this level also. Where movable seating is required such as dining and activity rooms, polypropylene very lightweight chairs\(^74\) that resist breaking into sharp pieces are preferred.

K. Kitchen appliances

1. All cooking appliances (ranges, microwaves, coffee makers, etc.) should have key operated lock-out switches\(^19\) to disable the appliance.

2. Patients’ access to coffee should be carefully considered by each facility’s Risk Management Program. If access to this (and other potentially scalding liquids) is allowed, the location of the coffeemaker should be chosen so it is readily observable by staff. Glass coffee pots should never be available to patients. Insulated plastic dispensers are preferable.

3. All garbage disposal units should have a key operated lock-out switch\(^19\) to disable the device.

4. GFCI-protected receptacles must be provided near all sources of water including sinks.

L. Miscellaneous

1. All electrical device (switches, outlets, etc.) cover plates must be attached with tamper-resistant screws\(^12\). Electrical cover plates for switches and receptacles should be made of polycarbonate\(^91,100\) materials and secured with tamper-resistant screws.

2. All Miscellaneous requirements listed for counseling and interview rooms in Level #2 above apply to this level also.
3. Television – TV sets should not be mounted on walls using brackets because of the risk presented to patients. All cords and cables should be as short as possible. Consideration should be given to providing built-in TV or media centers and installing an isolation switch that staff can control. Manufactured covers with sloped tops are now available to fit a variety of TV set sizes. For maximum safety, the electrical outlet and cable TV outlet should be located inside the cover to keep the wires and cables away from the patients. One facility utilized unused platform bed frames mounted vertically on the wall to house television sets and conceal all wires and cables.

Level 4a. Patient Rooms

A. Floors – Same as lounges and activity rooms in #3 above. If some of patient population have problem with urinating on the floor, provide some rooms with seamless epoxy flooring with integral cove base or sheet vinyl flooring with integral cove base.

B. Walls – Impact resistant gypsum board on metal studs – paint finish preferred.

C. Ceiling - Non-accessible solid gypsum board ceiling - paint. Provide key-lockable access panels at all locations where access is required.

D. Doors - Strongly recommend that door to corridor swing into corridor if this can be accomplished without creating alcoves that are difficult to observe. This greatly reduces the risk of patients being able to barricade themselves in rooms. When this is difficult or impossible to accomplish in remodeling or new construction, there are still a range of options available.

1. The door-within-a-door (sometimes referred to as a “wicket” door) has a portion of the center of the door hinged to swing into the corridor. This hinged panel is mounted on a continuous hinge, and the panel is secured with a deadbolt lock.

2. If space is available, a separate narrow (18”-24”) wide door that swings into the corridor. This smaller leaf can either be mounted in the same frames as the main door in a “double egress” configuration, or there can be a Mullion between the two leaves.
3. There is now a double acting continuous hinge\textsuperscript{110} that can be used on patient room to corridor doors to assist with barricading without the hazard presented by pivot hinges.

4. Integral system doors\textsuperscript{89} are available that have a nearly flush push plate on the outside that releases the continuous latch bar and a tapered pull handle that releases the latch bar from the other side. A recessed-pull handle is necessary on the push side to aid in closing the door. These doors come as an assembly including the door itself, lockset, and a continuous hinge. This assembly is very resistive to upward, downward, and transverse attachment. The over-the-door alarm is still recommended to guard against tying a knot in something and closing the door. This product is also available with an “Emergency Release Hinge” that can be unbolted and allows an in-swinging door to be pulled into the corridor in the event that it is barricaded. A standard latchbolt is not used with this system, but the top of the latching bar may still provide an attachment point. Maintenance staff may need to be available on all shifts to remove this door if required for emergency access.

The top of all tight-fitting doors provides a pinch point that allows a patient to tie a knot (in a sheet, the leg of a pair of jeans or other object), place it over the top of the door, and close the door. This provides a hanging device. One way to reduce this risk is with a pressure-sensitive device placed on the top of the door that sounds an alarm\textsuperscript{31, 32, 33}.
Some facilities have begun to address a desire by female patients to lock themselves in their rooms to avoid unwanted entrance by other patients. The challenges with this are to provide individual security for the patient without restricting access to the room by staff. Locksets with specialized locking functions and ligature resistant turnpieces for the inside of the door are now available. A cylinder protector to cover the lock cylinder on the corridor side of the door resists attempts to insert objects in the keyway. Options are also available to control these locks with card access technology.

E. Glass

1. **Exterior windows** – (See Level 2.D.1 Safety Glazing above.) Advances in different types of safety glass make it worthwhile to consult an expert for advice for any specific project. The height above the ground, patient population and many other factors should be taken into account in making these decisions. Comply with all applicable codes and regulations for operable sash. Fixed windows or units equipped with sash control devices that limit amount of opening and can be released using a key to full opening for evacuation purposes are preferred.

2. **Security screens** - If replacing the windows presents a prohibitive cost in remodeling work, provision of a security screen with a very sturdy steel frame designed to resist deflection with multiple key locks and equipped with heavy gage stainless steel screen fabric may be used. These are very functional and secure, but create a very “institutional” appearance and can be defaced by writing obscene words with toothpaste (or other material).

3. **Mirrors** – Radiused stainless steel framed security mirrors are preferred for patient-room mirrors, and the reflective surface may be polycarbonate, tempered glass, stainless steel, or chrome-plated steel. Each has durability and distortion characteristics.
4. **View windows to corridors in doors or sidelights** – Use polycarbonate\(^2\) (if possible). If wire glass is required by codes, request permission from the authority having jurisdiction to install a layer of polycarbonate\(^2\) on each side of the wire glass. (Wire glass can be broken and yield shards of glass that can be used as weapons.)

**F. Hardware** – See comments under Level 2 E above. It is highly desirable to keep vacant patient rooms locked at all times to avoid other patients entering these rooms without staff’s knowledge. Many jurisdictions do not allow the capability of locking a patient in a room. Therefore, “classroom”-type locks are recommended. These can always be opened from the inside, and the corridor side may be either locked or unlocked with a key.

**G. Light fixtures** – Same as in Level 2 above except that all light fixtures should be security-type fixtures\(^{40, 134, 138}\). These do have more of an “institutional” look, but the level of patient safety provided is much higher. No glass components should be used in any fixture, and table lamps are strongly discouraged. If used, they should be anchored in place and access to the bulb limited or shatter proof bulbs should be provided and power cords shortened.

**H. Fire sprinklers** – Institutional type – Same as for corridors in Level 2 above.

**I. HVAC grilles and equipment** –

1. Fully recessed vandal-resistant grilles with S-shaped air passageways\(^41, 137\) are recommended for all ceiling and wall-mounted grilles.
2. In new construction or major remodeling, locate individual room HVAC equipment (such as fan/coil units) in an adjacent corridor or in other location (such as an interstitial space) where they can be serviced without entering the patient’s room.
3. In existing facilities that have units located below the windows, care should be taken to secure all access panels with tamper-resistant screws. All supply and return air grilles should also be covered with perforated grilles or stainless-steel screen fabric.

**J. Window covering hardware** – Same as for counseling and interview rooms in Level 2 above.
K. Furniture -

1. Furniture – Sturdy wood, thermoplastic or composite furniture should be bolted to the floor or walls whenever possible. Care must be taken to assure that the furniture will withstand abuse, will not provide opportunities for hiding contraband, and will resist being dissembled to provide patients with weapons.

Open-front units with fixed shelves and no doors or drawers\(^79, 116, 132\) are recommended. Doors should not be provided because they can be used by patients to hang themselves. Drawers should not be provided because they can be removed by the patients and broken to use as weapons. If drawers and doors are provided, they should be lockable, and the keys should be controlled by staff. They should have pulls that are flush\(^77\) or cup type\(^75\) that cannot be used for ligature attachment, and the doors should have continuous hinges. All upholstery and foam used in furniture and mattresses should have flame spread ratings that comply with the requirements of NFPA 101 Life Safety Code, Section 10.3.

2. Bed –

a. **Non-adjustable platform beds**\(^24, 26, 79\) without wire springs or storage drawers are needed. It is recommended that these beds be securely anchored in place to prevent patients from being able to use them to barricade the door. If use of a portable lifting device is needed, these are available with an opening under the bed to accommodate the legs of the lift\(^108\).

b. **Mattresses** for platform beds\(^6\) should be specifically designed for use in these facilities and be resistant to abuse and contamination.

c. If medical necessity is present, **manual hospital beds**\(^25\) are preferred. It is recommended that the wheels of hospital-type beds be removed or rendered inoperable to reduce the opportunity of using them to barricade the door. It should be noted that the bed rails, headboard and footboard all present hazards for these patients.
d. If electrically operable beds are needed to reduce risk of staff injuries (especially on geriatric units), new beds are available that will sense obstructions and reverse direction\(^8\). If existing beds must be used for financial reasons, use only beds that require a constant pressure on a switch located on the bed rail (not a remote control device or paddle that can be placed on the floor). If existing electric beds are to be used, provide key lockout switches on beds (or removable pigtail) so that only staff can operate the beds. All electrical cords should be secured and shortened. Key lock-out switch preferred\(^9\) It is recommended that the wheels of hospital type beds be removed or rendered inoperable to reduce the opportunity of using them to barricade the door. It should be noted that the bed rails, headboard and footboard all present hazards for these patients.

3. Wardrobe -
Wardrobe units should not have doors and should have fixed (non-adjustable) shelves\(^79,106\). They should be securely anchored in place and have sloped tops. Wardrobes with clothes poles requiring hangers are discouraged because, while the bar itself can be made safe, the hangers themselves present serious hazards. It should be noted that the current (2010) edition of the “Guidelines” no longer calls for patient rooms to have accommodations for “hanging full length clothing”. The average length of stay in many facilities is now in the 7- to 10-day range, and patients no longer come with clothing that needs to be hung-up.

L. Miscellaneous –

1. Pull cords on nurse call and/or emergency call switches (where required or provided) shall be no longer than 12” and as lightweight as possible.

2. All Miscellaneous requirements listed for lounges and activity rooms in Level #4 above apply to this level also.
3. In new construction, or major remodeling, provide a dedicated circuit for all electrical outlets in each patient room and bath. This will allow power to the outlets in a specific room to be turned off if necessary for patients’ safety. Where this is not practical, the outlet may be temporarily covered. It is strongly recommended that all electrical outlets in patient rooms and patient toilet rooms be hospital grade, tamper-resistant type. It is also preferred that they be GFCI receptacles\(^{50}\) to greatly reduce the risk of patients being able to harm themselves by tampering with the receptacles.

All electrical switches and outlets should be made of polycarbonate\(^{91,100}\) to reduce the risk of being broken to obtain access to the wiring or to obtain sharp pieces of plastic, and they should be secured with tamper resistant fasteners.

4. Coat hangers are not recommended. There are some made of cardboard, but (when several of them are grouped together) they can hold the body weight of some patients.

5. Curtain cubicle tracks should be prohibited because of the risk to patients.

6. Telephone – If desired, cordless phones may be provided to allow the patient to check out a phone for private conversations when appropriate. Phones should not be left in patient rooms permanently because they can be used as weapons.

7. Television sets should not be provided in patient rooms to encourage patients to use activity areas with other patients and allow easier supervision.

8. Medical gas outlets – These are not normally required for behavioral health units. If there is medical necessity or the outlets are a pre-existing condition in remodeling projects, they should be covered with panels that are lockable\(^{117}\) or are attached with tamper-resistant screws\(^{12}\). These should be removed only for medical necessity of the current patient and replaced when that patient is discharged or moved. Special care must be taken in semi-private rooms to assure that
access to the medical gasses does not present a safety risk to the other patient. Some manufacturers can provide these lockable covers for their outlets.

9. **Trash cans and liners** – Trash cans and liner requirements listed for counseling and interview rooms in Level #2 above apply to this level also. In choosing trash cans and liners, the potential for patient risk should always be assessed. Plastic liners should be prohibited because of their potential risk of suffocation. A substitute liner made of paper may be used.

10. **Baseboards** of any kind that are applied to the surface of the wall (vinyl, rubber, wood, etc.) intended to cover the joint between the wall and floor is strongly discouraged. They become prime targets for patients to tamper with and can be used to conceal contraband. Seamless epoxy flooring that has an integral coved base is an exception to this as long as there is no metal edge strip on the top of the base. Finishing the wall surface to the floor, sealing the joint with pick-resistant sealant, and painting a contrasting color stripe at the floor is preferred. In some cases wood-base material (of a minimum ¾” thickness that is adhered to the wall, secured with countersunk tamper-resistant fasteners, and sealed with tamper-resistant sealant) has been used successfully.

**Level 4b. Patient Toilets**

A. **Floors** – Use one of the following depending on acuity of patient population:

1. Seamless epoxy flooring with integral cove base including shower. Do not use metal strip at top of base as this can be removed by patients and used as a weapon.

2. Sheet vinyl flooring with integral cove base in room and ceramic tile floor in shower.

3. Ceramic tile is still frequently used and is acceptable as long as it is maintained in good condition. The use of larger pieces reduces the number of joints and generally preferred.
4. One piece floor units\textsuperscript{128} are now available that provide a monolithic floor (European style) for the entire patient toilet room that drains the shower to a central location and, if used in conjunction with location of the shower enclosure and shower head can eliminate the need for shower curtains.

5. Shower floors pre-cast artificial stone shower floor\textsuperscript{29}. Solid surface material floors are also available that include a trench drain\textsuperscript{103} across the entire front opening of the stall which not only helps control water from getting into the room, but also makes the drain more difficult for patients to intentionally clog. Fiberglass shower stalls and floors are generally not durable enough. Ceramic tile may also be used for shower floors if desired.

B. \textbf{Walls} - Use one of the following depending on acuity of patient population and budget.
   1. Avonite\textsuperscript{30}
   2. Ceramic tile
   3. Gypsum board that is impact-resistant with mold- and moisture-resistant facing\textsuperscript{1} with epoxy paint and ceramic tile in shower.

C. \textbf{Ceiling} – Gypsum board with mold- and moisture-resistant facing\textsuperscript{1} with epoxy paint.

D. \textbf{Glass} – Mirrors, same as patient rooms in #4 above.
   1. \textbf{Door} – A “\textit{Soft Suicide Prevention Door}” (SSPDoor)\textsuperscript{56} has been developed that eliminates many of the hanging hazards associated with a typical door. The door is attached by magnets and may be easily removed by staff and used as a shield against an attacking patient and can have a photograph printed on its faces. This door cannot be locked or latched in any manner. (Use of this product eliminates the need for the items listed under “Hardware” below.)
   2. \textbf{Sentinel Event Reduction Door}\textsuperscript{101} (without movable top panel) is another option. Privacy for two patient rooms can be improved slightly by installing the door a little higher than normal.
   3. A similar result can be obtained by using a \textbf{solid-core wood door}, cutting the top at an angle, and mounting it so there is a large gap at the bottom. A stainless steel
channel probably will need to be installed at the cut edge on top, and the door should be mounted on a continuous hinge and provided with a ball latch and recessed pulls on both sides.

4. Some facilities with single patient rooms are electing to remove the doors entirely from the patient toilet rooms. The practicality of this depends on the sight lines into the toilet room from the corridor door.

5. If there is a need to be able to lock patients out of the toilet room, a full door will need to be installed with similar hardware as described above and with a classroom function lockset. With the tight-fitting door, an over-the-door alarm should also be provided\textsuperscript{31,32,33}.

F. Hardware - See Level 2 E above.

G. Light fixtures – Same as patient rooms in Level 4 above except that fixtures inside showers shall be water-resistant type with a sealed polycarbonate lens. No glass components should be used in any fixture.

H. Fire sprinklers – institutional type – Same as for corridors in Level 2 above.

I. HVAC grilles and equipment – Fully recessed vandal-resistant grilles with S-shaped air passageways\textsuperscript{41,137}

J. Miscellaneous
   1. **Medicine cabinets** should not be provided because of difficulty in observing potentially dangerous items that may be placed in them.
   
   2. Evaluate the risk of using **robe hooks**. If you require them, they should be the collapsible type\textsuperscript{34}.
   
   3. **Towel bars** should not be used. Provide collapsible hooks\textsuperscript{34} for towels.
   
   4. **Grab bars** for toilets and showers are preferred to be removable and installed only when patient have medical necessity. Grab bars should be removed when the patient with medical necessity is discharged or moved to another room. Special care should be taken in semi-private.
rooms to assure that access to the grab bars does not present a safety risk to the other patient. However, when this is not practical, a SafeBar\textsuperscript{45,85} may be installed on a slight slope with one end cap on the higher end or SR Draining grab bar may be used. This provides a high degree of safety and is also self-draining and easy to clean and sanitize.

5. **Shower curtain rods** are to be avoided but, if used, should be of a tamper-resistant design and the same as curtain rods.\textsuperscript{15}

Another solution that has proven effective is to take a shatter-resistant plastic sleeve (made to slip over a fluorescent tube), slit it from end to end, and use it as a shower curtain rod. It will hold minimal weight and does not give the patient a weapon to use for harming himself/herself or others.

6. **Shower curtain material** should be made of cloth treated with waterproofing\textsuperscript{72} so the fabric is “breathable.” No plastic shower curtains should be allowed due to risk of suffocation by patients. If water that gets out of the shower will drain to a floor drain, consideration could be given to using the SSPD\textsuperscript{56} door mentioned in paragraph E above in lieu of a shower curtain.

The Soft Suicide Prevention Door\textsuperscript{56} mentioned above is available with clear vinyl strips at the bottom for use as a shower door. This provides an alternative to the typical issues associated with shower curtains and their hanging devices.

7. **Pull cords** on nurse call switches (where required or provided) should be no longer than 4” and as lightweight as possible.

8. **Lavatories** — Vanity top-type lavatories\textsuperscript{66} are preferred because they provide the patients a place to set their toothbrush, etc. and have a more residential appearance. The enclosure below should have an access panel that is secured with tamper-resistant
screws in lieu of a door. This enclosure can be designed to be wheelchair-accessible, if needed.

Wall-hung lavatories are available that make it very difficult to tie anything around them. These are made from solid surface material and have optional stainless steel or acrylic pipe covers that fit beneath the unit. If these are used, a shelf (surface-mounted or recessed) that limits attachment of a ligature may be needed.

9. **Lavatory and sink faucets and valves** provide attachment points for ligatures. A unit is now available that uses a shower valve fitted with a ligature resistant handle to allow patients control over the temperature (thermostatically limited to prevent scalding) and duration of the water flow. Faucets are available in a variety of materials and configurations that range from push button to sensor activation.

10. All **lavatory waste and supply piping** must be enclosed and should not accessible to patients. Extreme care should be taken when doing this that the material is trimmed to fit tightly to the underside of the lavatory fixture to prevent the patient from using this to hide contraband.

11. **Soap dishes** should not have handles and should be recessed.

12. Disposable sheets of paper that are impregnated with anti-bacterial soap and shampoo are available in packets of 30 sheets that can be given to patients as an option to using either liquid or bar soap.

13. Many facilities are now using **liquid soap** in patient areas. The hard plastic dispensers in use in many facilities are problematic in that they can fairly easily be pulled off of the wall and broken to provide sharp shards that can be used as weapons. One solution is a
dispenser that is made of solid-surface material\textsuperscript{67} that is commonly used for countertops and is relatively tamper-resistant. There are some commercially available stainless steel dispensers that are reasonably ligature-resistant\textsuperscript{86}.

14. \textbf{Toilets} used by these patients in new construction should be floor mounted, back outlet, back water supply type\textsuperscript{3,42} in lieu of wall-mounted fixtures which can be broken off of their hangers. Where wall-hung toilets exist and replacing them is not practical, a wall-hung toilet support\textsuperscript{65} can be used if it can be secured in place so that patients cannot remove it to use as a weapon. Movable seats provide attachment points for ligatures and should be considered carefully by each hospital. The solution is to use a fixture with an integral seat as suggested above. Some facilities feel this is too prison-like and choose to accept the risk of the movable seat. China fixtures themselves can be broken (both floor- and wall-mounted) and yield large, sharp shards. Toilet fixtures made of solid surface material\textsuperscript{92} and powder-coated stainless steel\textsuperscript{55} are now available and are much more resistant to breaking.

\textbf{Toilet fixtures that will support the weight of bariatric patients}\textsuperscript{129} are also available to withstand loads in excess of 2,500 pounds.
15. **Flush valves** are preferred to be recessed in the wall and activated by a push button. Where this is not practical, the flush valve and/or all related pipes should be enclosed with a stainless steel or plastic that has a sloped top that incorporates a push-button activator for the valve.

16. **Toilet Paper Holders**
   a. Fully recessed stainless steel units. These have been used widely for a number of years, however, some facilities feel this creates an infection control problem because the users have to handle the entire roll.

   b. Another toilet paper holder now available uses a bar that pivots down when vertical pressure is imposed.

   c. Solid surface holders are available that use a foam tube to hold the roll. The manufacturer will provide extra foam tubes at no charge when needed.

   d. One facility developed a custom holder and had it fabricated by a local shop. This is now commercially available.
17. **Shower Control Valves** - NOTE: Provide *thermostatically limited hot water* to prevent accidental or intentional scalding in all patient-accessible toilet rooms.

a. Single knob mixing valves that provide minimal opportunity for tying anything around are preferred\(^{46,121}\). These give the patients control of the water temperature and duration of flow.

b. If it is only necessary to replace the valve handles and the valve itself in working properly, a replacement valve handle\(^{70}\) that can be adapted to a variety of valves might be considered.

c. Another option is an infrared-controlled, “no touch” valve\(^{93}\).

d. “Wall Pak” one piece units that contain shower head and push button valves as a recessed soap dish are available and work well for remodeling projects because they reduce the amount of repair needed for wall finishes. These are also available with removable hand held shower heads if needed for ADA purposes. The hand held shower heads should always be removed after every use and the bracket for mounting the hand held shower head should not be provided.

18. **Shower heads** should be institutional type\(^{35}\).

19. **Shower seats** that fold away typically have many tubes and brackets that are hazardous. If a folding shower seat is necessary, one without the tubes and brackets\(^{94}\) is suggested.

20. Provide ground fault circuit interrupter (GFCI)-type electrical circuit breakers for all receptacles near sources of water such as lavatories, toilets, and showers.
21. **Shelves** to hold miscellaneous items are often requested in shower stalls. A stainless steel suicide-resistant shelf$^{78,13}$ may be considered for these applications.

22. **Paper towel dispensers** in patient-accessible toilets are a concern if they have sharp edges and are not securely constructed. Some commercially available tri-fold dispensers are acceptable$^{83}$ in locations where high abuse is not anticipated.

23. **Existing tri-fold paper towel dispensers** may be left in use if desired and covered with heavy-duty secure cover$^{83}$. 
Level 5a. Admissions (especially emergency admissions which frequently occur at night and on weekends). A separate room that has direct access from both outside and inside the unit should be considered for this purpose. This allows for the patient to be brought directly into the admissions area without entering the unit directly. At admission, unit staff members know very little about the new patient and his or her trigger points. A separate room avoids disrupting either the unit or the patient, due to the agitation of either. This room should be pleasant and welcoming and should be minimally furnished (with a minimum of loose pieces of furniture). The room should be large enough to allow for several staff to physically manage the patient if necessary. If possible, the admitting staff member should not be in the room alone with the patient. After the admitting process is complete, the patient can be taken through the second door and directly onto the unit.

A. Floors - Same as activity rooms and lounges in Level #3 above.

B. Walls - Same as patient rooms in Level #4 above.

C. Ceiling - Same as patient rooms in Level #4 above.

D. Glass –
   1. Same as in Level #4 above.
   2. Provide small (12”x12” or 4”x24”) view window in door to patient unit.
   3. If privacy is desired on occasion, panels are available that can be changed from 50% transparent to 100% frosted by turning a key.

E. Hardware - Same as in Level #4 above.

F. Light fixtures - Same as in #4 above.

G. Fire sprinklers – institutional type – Same as in Level #4 above.

H. HVAC grilles - Fully recessed vandal-resistant grilles with S-shaped air passageways.

I. Window covering hardware – Same as in Level #4 above.

J. Miscellaneous –
1. All Miscellaneous requirements listed for corridors in Level 2 above apply to this level also.

2. An emergency call button should be provided so the staff may summon additional staff if necessary.

3. “Baseboards” same as patient rooms in Level #4 above.

K. Furniture –
1. This room should have a built-in desk or table that is firmly attached to the floor or walls and contain a lockable file drawer for forms and a lockable box drawer for pens, pencils, staplers, etc. All loose items should be kept in drawers and out of sight.

2. The computer, printer, and telephone should be located so they are not easily reached by the patient.

3. Seating should be heavy-weight as discussed above.

Level 5b. Seclusion Rooms – should be no less than 7 feet wide and no greater than 11 feet long and designed to minimize blind spots where patients cannot be observed by staff without entering the room. A minimum of a 9’ ceiling height is preferred. The distance of the seclusion room from the nurse’s station needs to be considered. The goal is to avoid excessive distance so that staff can be readily available as needed. The door should open directly into an Anteroom to separate these activities from the other patients as well as provide access to a patient toilet to be used by these patients without entering the corridor.

B. Floor – Continuous sheet vinyl with foam backing and heat-welded seams.

B. Walls – Impact resistant gypsum board over ¾” plywood on 20 gauge metal studs at 16” on center with Deco Coat finish. If wall padding is desired, a Kevlar-faced product or a heavy, heavy vinyl material with a 1 1/2” thick foam backing may be considered.

If padding is not used, or additional strength is desired, plywood is often fastened to the studs before the gypsum board is installed. One facility has encountered issues with
regulating authorities with using plywood for this purpose and has substituted 25 gauge sheet metal which stiffens the wall, is easily cut and does not require wider door frames.

C. Ceiling – Impact resistant gypsum board\(^1\), \(^{99}\), painted at 9’-0” minimum height.

D. Glass – All glazing exposed to patients should be polycarbonate\(^2\). Care must be taken on the size of the individual pieces and the amount of recess in mounting frames that an impact to the center of the piece will not cause it to flex to the extent that it comes out of the frame. If exterior windows exist in seclusion rooms, the glazing should be replaced with polycarbonate whenever possible. If replacement is not feasible, either security laminate\(^37\) or polycarbonate\(^2\) may be applied to cover the glass and keep the patient from having access to broken glass.

E. Hardware –
1. Doors – Commercial-grade steel doors that are a minimum of 3’-8” wide and frames hinged to open out of room with a polycarbonate\(^2\) view window not to exceed 100 square inches.

2. No exposed hardware in the room except for a flush pull on door\(^38\).

The Anteroom side shall have three surface bolts which may be individual bolts\(^39\) or included in one piece of hardware with a single lever to operate all three\(^64\).

F. Light fixtures – Fully recessed, moisture resistant, vandal resistant fixtures\(^40\) in ceiling are recommended.

G. Fire sprinklers–institutional type – Same as for in Level #4 above.

H. HVAC grilles –
1. Fully recessed vandal-resistant grilles with S-shaped air passageways\(^41, 137\).

2. Thermostats should be digital-type mounted on wall in Anteroom with sensors in return air ducts serving the room.
I. **Window Covering** – No window covering material or hardware should be accessible to the patient. An option would be electronically controlled blinds or shades behind polycarbonate². If chosen, controls should be by electric switches located outside the room.

J. **Miscellaneous** –
1. No electrical outlets, switches, thermostats, blank cover plates, or similar devices are permitted inside these rooms.

2. Toilets same as Toilets in Level 4B above or prison-type stainless steel fixtures combining toilet and lavatory are preferred by some facilities. These are now available in powder-coated finishes in a variety of colors.

3. “Baseboards—” No baseboards should be used in these rooms.

4. Install a convex mirror same as for glass in Corridors in Level 2 above. Locate the mirror in the upper corner of the room and opposite the seclusion room door. Make sure the mirror can be seen when viewing it from the window in the door. By installing this mirror, you are now providing staff with a 360-degree view of the room prior to opening the door. Care shall be taken to assure that the attachment is secure so the patient will not be able to remove it and have a weapon

**SUMMARY**

Thoughtful consideration of these design elements and materials by design professionals and healthcare professionals can result in a very aesthetically pleasing environment, which will enhance the treatment process and help maximize safety for all patients, staff, and visitors.
APPENDIX

1. Abrasion resistant wallboard

   *National Gypsum Hi-Abuse Brand Wallboard*
   
   National Gypsum Company
   
   2001 Rexford Road
   
   Charlotte, NC 28211
   
   1-800-628-4662
   
   [http://www.nationalgypsum.com](http://www.nationalgypsum.com)

   Impact-resistant wallboard

   *National Gypsum Hi-Impact Brand Fire Shield Wallboard*
   
   National Gypsum Company
   
   2001 Rexford Road
   
   Charlotte, NC 28211
   
   1-704-365-7300
   
   [http://www.nationalgypsum.com](http://www.nationalgypsum.com)

2. Polycarbonate sheet glazing

   *GE brand “Lexan” MR10 Sheet with Margard II UV and Abrasion-Resistant Coating*
   
   GE Structured Products, GE Plastics
   
   One Plastics Avenue
   
   Pittsfield, MA 01201
   
   1-800-451-3147
   
   [http://www.geplastics.com](http://www.geplastics.com)

3. Toilet fixture – floor mounted, back outlet

   *American Standard; Neolo 2531.016 Elongated Flush Valve Bowl, Floor Mounted, Back Outlet, Concealed Back Spud Bowls, integral seat*
   
   American Standard
   
   P. O. Box 6820
   
   1 Centennial Way
   
   Piscataway, NJ 08855-6820
   
   1-800-442-1902
   
   [http://www.americanstandard-us.com](http://www.americanstandard-us.com)

4. Security arm door closers

   *LCN 4510T Series Security Track Closer*
   
   Ingersoll-Rand
   
   Architectural Hardware
   
   LCN Division
   
   P. O. Box 100
   
   121 West Railroad Avenue
   
   Princeton, IL 61356-0100
   
   1-815-875-3111
   
   [http://www.lcnalliance.com](http://www.lcnalliance.com)

5. Push/pull latches
   Sargent Lock Company; 8200 Series with ALP Trim or 114 Hospital Latches for Push-Pull Doors
   Sargent Manufacturing Company, 100 Sargent Drive
   P. O. Box 9725
   New Haven, CT 06536-0915
   1-800-727-5477
   http://www.sargentlock.com

6. Behavioral Health Mattresses
   Derby Industries; Secure Care Pinnacle Mattresses
   Derby Industries
   24350 State Road 23 South
   South Bend, IN 46614
   866-233-4500
   www.derbyindustries.com

7. Anti Ligature Lockset
   Stanley Security Solutions; SPSL Stanley Patient Safety Lever
   Stanley Security Solutions
   6161 East 75th Street
   Indianapolis, IN 46250
   800-392-5209
   www.stanleysecuritysolutions.com

8. Electrically adjustable hospital bed
   Stryker; S3 Med/Surg Bed
   Stryker
   3800 East Centre Avenue
   Portage, MI 49002
   1-800-787-9537
   www.stryker.com

9. Electromagnetic lock
   Dynalock Corp. series 2011 Full Size Series
   DynaLock Corporation
   705 Emmett Street
   P.O. Box 9470
   Forestville, CT 06011-9470
   1-877-DYNALOCK
   http://www.dynalock.com
10. Magnetic hold open device

   **LCN SEM7800 Series**
   Ingersoll-Rand
   Architectural Hardware
   LCN Division
   P.O. Box 100
   121 West Railroad Avenue
   Princeton, IL  61356-0100
   1-815-875-3111
   [http://www.lcnclosers.com](http://www.lcnclosers.com)

11. Sentronic closer

   **LCN Fire/Life Safety Series Sentronic closer**
   Ingersoll-Rand
   Architectural Hardware
   LCN Division
   P.O. Box 100
   121 West Railroad Avenue
   Princeton, IL  61356-0100
   1-815-875-3111
   [http://www.lcnclosers.com](http://www.lcnclosers.com)

12. Tamper-resistant screws

   **Tamperproof Screw Company, Inc.**
   Tamperproof Screw Company, Inc.
   30 Laurel Street
   Hicksville, NY  11801
   516-931-1616
   [http://www.tamperproof.com](http://www.tamperproof.com)

13. Recessed shelf

   **Norix Group Inc.; Recessed Stainless Steel Shelf**
   Norix Group, Inc.
   1000 Atlantic Drive
   West Chicago, IL 60185
   1-800-234-4900
   [http://www.norix.com](http://www.norix.com)

14. Institutional fire sprinkler head

   **Reliable Automatic Sprinkler Company, Inc.; Model ZX-QR-INST**
   The Reliable Automatic Sprinkler Co., Inc.
   525 N. MacQuesten Parkway
   Mt. Vernon, NY 10552
   1-800-431-1588
   [http://www.reliablesprinkler.com](http://www.reliablesprinkler.com)
15. Curtain track – flush mounted

*Imperial Fastener Company, Inc.; IFC-69 Jiffy curtain track and ‘safety tabs’*

Imperial Fastener Company, Inc.
1400 SW 8th Street
Pompano Beach, FL 33069-9794
954-782-7130
http://www.imperialfastener.com

16. Carpet

*Lees Tenure Broadloom; Product Number L3106*

Lee’s Carpets
3330 W. Friendly Avenue
Greensboro, NC 27410
336-379-3897
http://www.leescarpets.com

17. Perforated air grilles

*Carnes; Stamped, Perforated Diffuser; see catalog D-22*

Carnes Company
448 South Main Street
Verona, WI 53593
608-845-6411
http://www.carnes.com

18. Stainless steel screen fabric

*McMaster-Carr; Type 304 Stainless Steel, Standard Grade Woven Wire Cloth*

McMaster-Carr Supply Company
P.O. Box 4355
Chicago, IL 60680-4355
1-630-833-0300
http://www.mcmaster.com

19. Key operated electric switches

*Hubbell Locking Type Switch #5Z724*

Hubbell, Inc.
584 Derby Milford Road
Orange, CT
http://www.hubbell.com
20. Seamless floors
   **Dex-O-Tex Cheminert “K” Flooring**
   Dex-O-Tex
   Division of Crossfield Products Corp.
   140 Valley Road
   Roselle Park, NJ 07204
   1-908-245-2800
   [http://www.dexotex.com](http://www.dexotex.com)

21. Continuous hinges – gear type
   **Hager – Roton Hinges**
   Hager Hinge Company
   139 Victor Street
   St. Louis, MO 63104
   800-255-3590

22. Access panel – lockable
   **J. L. Industries, Inc. Standard SP Security Panel with mortise prep**
   J.L. Industries, Inc.
   4450 West 78th Street Circle
   Bloomington, MN 55435
   1-612-835-6850
   [http://www.jlindustries.com](http://www.jlindustries.com)

23. Life safety window hardware
   **Truth Hardware; Limit Device**
   Truth Hardware
   700 West Bridge St.
   Owatonna, MN 55060
   1-800-866-7884
   [http://www.truth.com](http://www.truth.com)

24. Platform bed
   **Norix Group Inc.; Roto Cast Series**
   Norix Group, Inc.
   1000 Atlantic Drive
   West Chicago, IL 60185
   1-800-234-4900
   [http://www.norix.com](http://www.norix.com)
25. Manually adjustable hospital bed
   **Stryker; Psych Bed**
   Stryker
   3800 East Centre Avenue
   Portage, MI 49002
   1-800-787-9537
   [www.stryker.com](http://www.stryker.com)

26. Patient room furniture
   **Hill-Rom, Harbor Glen Series**
   Hill-Rom
   Batesville, IN 47006
   1-812-934-7777
   [www.hill-rom.com](http://www.hill-rom.com)

27. Sheet vinyl flooring
   **Armstrong World Industries, Inc. Commercial Flooring, vinyl, homogeneous**
   Armstrong World Industries, Inc.
   P.O. Box 3001
   Lancaster, PA 17604
   1-877-ARMSTRONG
   [http://www.armstrong.com](http://www.armstrong.com)

28. Vinyl floor tile
   **Armstrong World Industries, Inc. Commercial Flooring, vinyl composition tile**
   Armstrong World Industries, Inc.
   P.O. Box 3001
   Lancaster, PA 17604
   1-877-ARMSTRONG
   [http://www.armstrong.com](http://www.armstrong.com)

29. Shower floor basin
   **The Swan Corporation, Swanstone Solid Surface Shower Floors**
   The Swan Corporation
   One City Centre, Suite 2300
   St. Louis, MO. 63101
   1-314-231-8148
   [http://www.theswancorp.com](http://www.theswancorp.com)
30. Synthetic wall material
   *Avonite Solid Surface Wall Panels*
   Avonite
   1945 Highway 304
   Belen, NM  87002
   1-800-4-AVONITE
   [http://www.avonitesurfaces.com](http://www.avonitesurfaces.com)

31. Over door alarm
   *Stanley Security Solutions; SEDA - Stanley Emergency Door Alarm*
   Stanley Security Solutions, Inc.
   6161 East 75th Street
   Indianapolis, IN 46250
   800-392-5209
   [www.stanleysecuritysolutions.com](http://www.stanleysecuritysolutions.com)

32. Over door alarm
   *The Door Switch*
   11772 Westline Industrial Drive
   St. Louis, MO 63146
   314-373-7214
   [http://www.thedoorswitch.com](http://www.thedoorswitch.com)

33. Over door alarm
   *Door Control Services, Inc; Top Door Alarm*
   Door Control Services, Inc.
   321 VZ County Road 4500
   Ben Wheeler, TX 75754
   800-356-2025
   [www.doorcontrolservices.com/topdooralarm](http://www.doorcontrolservices.com/topdooralarm)

34. Robe hook – break-away
   *Odd Ball Industries; SP6 Robe/Towel Hook*
   Odd Ball Industries Mfg. Co., Inc.
   P.O. Box 376
   Greenlawn, NY  11740
   631-754-0400
   [http://www.oddballindustries.com](http://www.oddballindustries.com)
35. Shower head – institutional
   *Odd Ball Industries; SP7 Shower Head with Quick Disconnect Hand Held Shower*
   Odd Ball Industries Mfg. Co., Inc.
   P.O. Box 376
   Greenlawn, NY  11740
   631-754-0400
   [http://www.oddballindustries.com](http://www.oddballindustries.com)

36. Seclusion room floor material
   *Lonseal, Inc. LonFloor plain, smooth*
   Lonseal, Inc.
   928 East 238th Street, Building A
   Carson, California  90745
   1-800-832-7111
   [http://lonseal.com](http://lonseal.com)

37. Security Glass Laminates
   *ACE Security Laminates, 200 Series – High-end Safety*
   Ace/Security Laminates, Inc.
   200 Isabella St., Ste. 500
   Ottawa, ON, Canada
   K1S 1V7
   1-888-607-0000
   [http://www.smashandgrab.com](http://www.smashandgrab.com)

38. Flush mounted door pull
   *Stanley Hardware cast, flush door pulls*
   Stanley Hardware
   480 Myrtle Street
   New Britain, CT  06053
   1-800-337-4393
   [http://www.stanleyworks.com](http://www.stanleyworks.com)

39. Surface mounted slide bolt
   *Stanley Hardware CD4060 solid brass 6inch long surface bolts*
   Stanley Hardware
   480 Myrtle Street
   New Britain, CT  06053
   1-800-337-4393
   [http://www.stanleyworks.com](http://www.stanleyworks.com)
40. Light fixture

The L. C. Doane Company; CRN Series with polycarbonate external lens TP door fasteners

The L.C. Doane Company
P.O. Box 975
Essex, CT. 06426
1-860-767-8295
http://www.lcdoane.com

41. Air grilles –

Anemostat Products Model SSV42, SSV49 and SSV432 – Supply/Return Grille, Heavy Duty with "S" Channel Design

Anemostat Products
P.O. Box 4938
1220 Watson Center Road
Carson, CA. 90745
1-310-835-7500
http://www.anemostat.com

42. Toilet fixture – floor mounted, back outlet

Eljer; Newark Flush Valve Bowl 111-0527 Elongated Flush Valve Bowl, Floor Mounted, Back Outlet, Concealed Back Spud Bowls, integral seat

Eljer Plumbingware, Inc.
14801 Quorum Drive
Dallas, TX 75254
1-800-423-5537
http://www.eljer.com

43. Recessed flush valve

Sloan Valve Company Regal 153 & WB-1-A Easy Access Wall Box

Sloan Valve Company
10500 Seymour Avenue
Franklin Park, IL 60131-1259
1-800-9-VALVE-9
http://www.sloanvalve.com

44. Trash can liner

Sani-Liner ®

Wisconsin Converting
Green Bay, WI
1-800-544-1935
http://www.wisconsinconverting.com
45. Grab bar

*Cascade Specialty Hardware; Safebar*
Cascade Specialty Hardware, Inc.
1413 Lincoln Avenue
Vancouver, WA 98660
3690-823-3995
www.safebarinc.com

46. Shower valve

*Odd Ball Industries; SP-10 Shower Valve*
Odd Ball Industries Mfg. Co., Inc.
P.O. Box 376
Greenlawn, NY 11740
631-754-0400
http://www.oddballindustries.com

47. Flush cabinet pulls

*Sugatsune America, Inc.; UT-105/S*
Sugatsune America, Inc.
18101 Savarona Way
Carson, CA 90746
800-562-5267
www.sugatsune.com

48. Outdoor furniture

*Norix; Hilltop Outdoor Furniture*
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
http://www.norix.com

49. Security fencing

*Fence Factory; Miniature Mesh*
Fence Factory
1606 Los Angeles Ave.
Ventura, CA 93004
1-800-613-3623
http://www.fencefactory.com
50. Convex mirrors

    Norix Group Inc.; Duarvision, Model QD18
    Norix Group, Inc.
    1000 Atlantic Drive
    West Chicago, IL 60185
    1-800-234-4900
    http://www.norix.com

51. Toilet paper holder

    Odd Ball Industries; SP-5 Toilet Paper Holder
    Odd Ball Industries Mfg. Co., Inc.
    P.O. Box 376
    Greenlawn, NY 11740
    631-754-0400
    http://www.oddballindustries.com

52. Stainless steel wall phones

    TWAcomm.com; Ceeco Stainless Steel Wall Phone Model #SW-321-X
    TWAcomm.com
    Oceanview Promenade
    101 Main Street, 3rd Floor
    Huntington Beach, CA 92648
    1-877-892-2666
    http://www.twacomm.com

53. Soap dish

    Norix Group Inc.; Recessed Soap Dish
    Norix Group, Inc.
    1000 Atlantic Drive
    West Chicago, IL 60185
    1-800-234-4900
    http://www.norix.com

54. Toilet paper holder

    Norix Group Inc.; Model ITP-110
    Norix Group, Inc.
    1000 Atlantic Drive
    West Chicago, IL 60185
    1-800-234-4900
    http://www.norix.com
55. Prison toilet

*Acorn Engineering Company; Penal-Ware 1426FA Series*

Acorn Engineering Company
P.O. Box 3257
City of Industry, CA 91744
1-800-488-8999
http://www.acorneng.com

56. Patient toilet door

*Soft Suicide Prevention Door*

Kennon Products, Inc.
Sheridan, WY
307-674-6498
http://www.suicideproofing.com

57. Deco Coat

*Sto-ex, Inc.; DecoCoat*

Sto-ex, Inc.
3932 N Greenbrooke Dr. SE
Kentwood, MI 49512
1-800-782-3162
http://www.sto-ex.com

58. Kane Security Screens

*Kane Manufacturing Corporation*

Kane Manufacturing Corp.
515 North Fraley Street
Kane, PA 16735
1-800-952-6399
http://www.kanescreens.com

59. Truebro Lav Shield

*Truebro, IPS Corporation*

Truebro
202 Industrial Park Lane
Collierville, TN 38017
http://truebro.com/lav_shield.html

60. Upholstered seating

*Norix Group Inc.; Sierra Series*

Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
http://www.norix.com
62. PVC molded seating

Norix Group Inc.; Roto-Mold
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
http://www.norix.com

63. Lavatories

Bradley Corporation - Model HSL1 SafeCare Ligature Resistant Single Station Lavatory
Bradley Corporation
PO. Box 309
Menomonee Falls, WI 53052
1-800-BRADLEY
http://www.bradleycorp.com

64. Seclusion room door lock

Stanley Security Solutions; SSRL Stanley Seclusion Room Lock
Stanley Security Solutions, Inc.
6161 East 75th Street
Indianapolis, IN 46250
800-392-5209
www.stanleysecuritysolutions.com

65. Wall-hung toilet support

Big John Products, Inc.; Big John Toilet Support
Big John Products, Inc.
8533 Canoga Avenue, Suite D
Canoga Park, CA 91304
1-866-366-0669
www.bigjohn toilets.com

66. Lavatory faucet

Norva Plastics – Suicide Prevention Patient Sink Faucet
Norva Plastics, Inc
3911 Killam Ave.
Norfolk, VA 23508
800-826-0758
www.norvaplastics.com
67. Soap dispenser
   *Norva Plastics – Soap Dispenser*
   Norva Plastics, Inc
   3911 Killam Ave.
   Norfolk, VA 23508
   800-826-0758
   [www.norvaplastics.com](http://www.norvaplastics.com)

68. Stainless steel flush valve cover
   *Bradley Corporation – Model No. HSC79 SafeCare Ligature Resistant Flush Valve with Cover*
   Bradley Corporation
   P. O. Box 309
   Menomonee Falls, WI 53052
   800 BRADLEY
   [www.bradleycorp.com](http://www.bradleycorp.com)

69. Wall padding
   *Padded Surfaces*
   Padded Surfaces
   5323 W. Minnesota Street
   Indianapolis, IN 46241
   888-243-8788
   [www.pddedsurfaces.com](http://www.pddedsurfaces.com)

70. Shower valve control handle
   *Weizel Security; 834-S40 SafeSupport Retrofit Shower Knob*
   Weizel Security
   P.O. Box 276
   Blaine, WA 98231-0276
   800-308-3627
   [www.securinghospitals.com](http://www.securinghospitals.com)

71. Continuous hinges – barrel type
   *Markar Architectural Products, Inc; FM-3500, stainless steel edge mount, hospital tip security hinge*
   Markar
   260 Santa Fe Street
   Pamona, CA  91767
   800-872-3267
72. Fabric shower curtains  
*Vita Futura*  
Vita Futura  
215 Willowick Avenue  
Tampa, FL 33617  
206-666-4583  
www.vitafutura.com/curtains/fabric

73. Vision Panels  
*Vistamatic, LLC.; Vision Panels, key operation*  
Vistamatic, LLC  
7351 Wiles Road, Unit 202  
Coral Springs, FL 33067  
866-466-9525  
www.Vistamatic.com

74. Light weight seating  
*Norix Group Inc.; Integra Series*  
Norix Group, Inc.  
1000 Atlantic Drive  
West Chicago, IL 60185  
1-800-234-4900  
http://www.norix.com

75. Cabinet pulls  
*Top Knobs – Mayfair cup pull attached with tamper resistant fasteners*  
My Knobs.com  
19-22 45th Street  
Astoria, NY 11105  
866-695-6627  
www.myknobs.com

76. “Wall Pak” shower  
*Acorn Engineering, Penal-Pak Wall Shower*  
Acorn Engineering Company  
P.O. Box 3257  
City of Industry, CA 91744  
1-800-488-8999  
http://www.acorneng.com
77. Pick-resistant sealants

*Sika Corporation; Silkaflex-2c NS*

Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
800-933-7452
www.sikainfo@silka-corp.com

78. Suicide-resistant shelf

*Norix; Suicide Resistant Stainless Steel Shelf*

Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
http://www.norix.com

79. Patient room furniture

*Blockhouse Contract Furniture Company; Vista Casegoods*

Blockhouse Contract Furniture Company
3285 Farmtrail Road
York, PA 17406
800-346-1126
www.blockhouse.com

80. Hospital-grade receptacles

*Hubbell Incorporated; Hospital Grade GFCI Receptacles*

Hubbell Incorporated
Wiring Device-Kellems
185 Plains Road
Milford, CT 06461
800-255-1031
www.hubbell-wiring.com

81. Exit signs, lighted – vandal-resistant

*Chloride Systems; Tuff Act Series*

Chloride Systems
272 W. Stag Park Service Road
Burgaw, NC 28425
910-259-1000
www.chloridesys.com
82. Exit signs - photoluminescent
Access Products Inc.; Photoluminescent Exit Sign, Model EX424246-100G
Access Products Inc.
241 Main Street, Suite 100
Buffalo, NY 14203
888-679-4022
www.us.ecoglo.com

83. Paper towel dispenser
Weizel Security; Paper Towel Dispenser Model 817-S45
Weizel Security
P. O. Box 276
Blaine, WA 98231-0276
800-308-3627
www.securinghospitals.com

84. Security mirrors
American Specialties, Inc.; Roval Inter-Lok stainless steel framed mirror
American Specialties, Inc.
441 Saw Mill River Road
Yonkers, NY 10701
914-476-9000
www.americanspecialties.com

85. Grab bars
Weizel Security; Safe Grab Bar and Self-Draining Grab Bar
Weizel Security
P. O. Box 276
Blaine, WA 98231-0276
800-308-3627
www.securinghospitals.com

86. Liquid soap dispenser
Saniflow; Soap Dispenser Medigel
Saniflow Corp.
2655 Le Jeune Road, Suite 810
Coral Gables, FL 33134
1-877-222-9125
www.saniflo.com
88. Wireless duress alarm

*Pinpoint, Inc.; Instant Alarm 5000*

Pinpoint, Inc.
2100 Southbridge Parkway, Suite 650
Birmingham, AL 35209
205-414-7541
www.david.bivin@pinpointinc.com

89. Emergency release hinge door

*Total Door; Emergency Release Hinge Door*

Total Door
6145 Delfield Dr.
Waterford, MI 48329
800-852-6660
http://total-door.com

91. Polycarbonate electrical coverplates

*Mulberry; Unbreakable Endura Molded of Lexan Resin*

Mulberry
2199 Stanley Terrace
Union, NJ 07083
201-688-8850
http://www.mulberrymetal.com

92. Solid surface toilet fixture

*Wallgate Products; Solid Surface WCs*

Wallgate Products
44(0)1722-744-594

93. Shower control valve

*Armstrong Hot Water Group; brainwave Model DMV2-Individual Shower with optimal stainless steel control panel*

Armstrong Hot Water Group
221 Armstrong Blvd
Three Rivers, MI 49093
269-279-3602
http://armstronginternational.com
94. Shower seat

Norix; ADA Shower Seat
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
http://www.norix.com

95. Continuous hinge

Ives, Ingersoll Rand; 700 stainless steel full mortise pin and barrel with hospital tip
Ives
2720 Tobey Dr.
Indianapolis, IN 46219
877-613-8766
www.ivesinfo@irco.com

96. Fire sprinklers

Tyco Fire and Building Products; Raven Fire Sprinkler Head
Tyco Fire And Building Products
451 N. Cannon Avenue
Lansdale, PA 19446
215-362-0700
www.Tyco-Fire.com

97. Stainless steel wall phones

Allen Tel Products, Inc.; Model GB306V-14 (with key pad)
Allen Tel Products, Inc.
30 TVS Drive
Henderson, NV 89014
702-855-5700
www.allentel.com

98. Pick-resistant caulk

Pecora Corporation; DynaFlex SC
Pecora Corporation
165 Wambold Road
Harleysville, PA
800-532-6688
www.pecora.com
99. Impact-resistant gypsum board

**USG; SHEETROCK® Brand Abuse-Resistant Gypsum Panels**

USG
800-874-4968
www.usg.com

100. Electrical device covers - polycarbonate

**AZ Partsmaster; lexan wall plates**

AZ Partsmaster - Corporate Headquarters
15 N. 57th Drive
Phoenix, AZ 85043
(602) 233-3580
www.azpartsmaster.com

101. Patient toilet door

**Norva Plastics, Inc.; Sentinel Event Reduction Door**

Norva Plastics, Inc
3911 Killam Ave.
Norfolk, VA 23508
800-826-0758
www.norvaplastics.com

102. Wall padding

**Marathon Engineering Corporation; Gold Medal Safety Padding**

Marathon Engineering Corporation
5615 2nd Street West
Leigh Acres, FL 33971
239-303-7378
www.goldmedalsafetypadding.com

103. Shower floors

**Watermark;**

Watermark
2969 armory Drive, Suite 400
Nashville, TN 37204
615-291-6111
www.watermarksolidssurface.com

104. Window film

**3M; Scotchshield Ultra or ACE Security Laminates; 200 Series**

3M Specified Construction Products Department
3M Center Building 225-4S-08
St. Paul, MN 55144
800-480-1704
www.3m.com/windowfilm
105. Lounge furniture

*Blockhouse Contract Furniture Company; Endurance Series*
Blockhouse Contract Furniture Company
3285 Farmtrail Road
York, PA 17406
800-346-1126
www.blockhouse.com

106. Patient room furniture

*Norix Group Inc.; Attenda Series*
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
http://www.norix.com

107. Push/pull locksets

*Glynn-Johnson; HL6SeriesPush/ Pull Latches*
Glynn-Johnson
2720 Tobey Drive
Indianapolis, IN 46219
877/613-8766
http://glynnjohnson.ingersollrand.com/

108. Platform bed - lift accessible

*Norix; Sleigh Bed*
Norix Group, Inc.
1000 Atlantic Drive
West Chicago, IL 60185
1-800-234-4900
http://www.norix.com

THE FOLLOWING ITEMS WERE ADDED IN EDITION 4.1; WINTER, 2010

109. Crescent Handle Lockset

*Accurate Lock and Hardware; Crescent Handle Lockset*
Accurate Lock and Hardware
1 Annie Place
Stamford, CT 06902
203-348-8865
http://www.accuratelockandhardware.com
110. Double Acting Continuous Hinge

*Weizel Security; 824-S60 SafeSupport SR Anti-Barricade Inswing DR Retro*

Weizel Security
P. O. Box 276
Blaine, WA 98231-0276
800-308-3627
[www.securinghospitals.com](http://www.securinghospitals.com)

111. Toilet Paper Holder

*Weizel Security; 817-S59 SafeSupport SR Maryland Dispenser*

Weizel Security
P. O. Box 276
Blaine, WA 98231-0276
800-308-3627
[www.securinghospitals.com](http://www.securinghospitals.com)

**THE FOLLOWING ITEMS WERE ADDED IN EDITION 4.2; MARCH 27, 2011**

112. Toilet Paper Holder

*Cascade Specialty Hardware; Safety Toilet Paper Holder, Model C-400*

Cascade Specialty Hardware, Inc.
1413 Lincoln Avenue
Vancouver, WA 98660
3690-823-3995
[www.safebarine.com](http://www.safebarine.com)

113. Soap dispenser

*Norva Plastics – Soap Dispenser*

Norva Plastics, Inc
3911 Killam Ave.
Norfolk, VA 23508
800-826-0758
[www.norvaplastics.com](http://www.norvaplastics.com)

114. Safety Glass

*Oldcastle Building Envelope – 9/16” Glassclad; #121100*

Oldcastle Building Envelope
5631 Ferguson Drive
Los Angeles, CA 90022
320 3887 6000
[www.oldcastlebe.com](http://www.oldcastlebe.com)
115. Roller shades
   *Webb Shade; Level-Lok*
   Webb Designs, Inc.
   P. O. Box 1405
   El Cajon, CA 92022
   800.262.9322
   [www.webbshade.com](http://www.webbshade.com)

116. Patient room furniture
   *Norix- Safehouse Series*
   Norix Group, Inc.
   1000 Atlantic Drive
   West Chicago, IL 60185
   1-800-234-4900
   [http://www.norix.com](http://www.norix.com)

117. Medical gas covers
   *Hospital Systems, Inc. – PTC Series Security Patient Console*
   Hospital Systems, Inc.
   750 Garcia Avenue
   Pittsburg, CA 94565
   925.427.7800

118. TV enclosures
   *Behavioral Safety Products; Suicide Resistant Protective TV Enclosure*
   Behavioral Safety Products
   29A N. Main St., Suite 3
   Watkinsville, GA 30677
   706-705-1500
   [www.besafepro.com](http://www.besafepro.com)

119. Lavatory faucet
   *Odd Ball Industries; SP-11 Lavatory Valve*
   Odd Ball Industries Mfg. Co., Inc.
   P.O. Box 376
   Greenlawn, NY  11740
   631-754-0400
   [http://www.oddballindustries.com](http://www.oddballindustries.com)
120. Lavatory faucet

*Behavioral Safety Products; Anti-Ligature Sensor Faucet – SF370*

Behavioral Safety Products  
29A N. Main St., Suite 3  
Watkinsville, GA 30677  
706-705-1500  
[www.besafepro.com](http://www.besafepro.com)

121. Flush valve covers

*Behavioral Safety Products; Two Piece Anti-Ligature Flush Valve Cover #FV500*

Behavioral Safety Products  
29A N. Main St., Suite 3  
Watkinsville, GA 30677  
706-705-1500  
[www.besafepro.com](http://www.besafepro.com)

122. Safety Glass

*Global Security Glazing – 9/16” Glassclad; #217*

Global Security Glazing  
616 Selfield Road  
Selma, AL 36703  
(800) 633-2513  
[www.security-glazing.com](http://www.security-glazing.com)

123. Exit signs, lighted – vandal-resistant

*Kenall – Mighty Mac; MMEX Series with full length mounting canopy*

Kenall Manufacturing  
1020 Lakeside Drive,  
Gurnee, IL 60031  
847.360.8200  
[www.kenall.com](http://www.kenall.com)

124. Room Signs

*2/90 Sign Systems – Flxsigns*

2/90 Sign Systems  
5350 Corporate Grove Blvd. SE  
Grand Rapids, MI 49512  
800.777.4310  
[www.290signs.com](http://www.290signs.com)
125. Ball Catch

*Ives - #347 Dual Adjustable Ball Catch*

Ives
2720 Tobey Dr.
Indianapolis, IN 46219
877-613-8766
www.ivesinfo@irco.com

THE FOLLOWING ITEMS WERE ADDED IN EDITION 4.3; MAY 31, 2011

126. Art

*Flexible Art Work*
Kennon Products, Inc.
Sheridan, WY
307-674-6498
http://www.suicideproofing.com

127. Paper Soap

*NPW USA; Paper Soap and Shampoo*
NPW USA
1205 Hilltop Parkway
Steamboat Springs, CO 80487
970-879-5242
www.npw-usa.com

128. One Piece Patient Toilet Room Floor

*Best Bath Systems; UniFloor*
Best Bath Systems
4545 Enterprise Street
Boise, ID 83705
800-727-9970
www.best-bath.com

129. Bariatric Toilet Fixtures

*Willoughby Healthcare Products; Bariatric Toilet*
Willoughby Healthcare Products
2210 W Morris Street
Indianapolis, IN 46221
800-428-4065
www.willooughby-ind.com
130. Female Patient Privacy Lockset

*Stanley Security Solutions; Female Patient Privacy Lockset*

*SPSL-ML-RF-16F-630 & SPSL-ML-LTF-16F-630*

Stanley Security Solutions
6161 East 75th Street
Indianapolis, IN 46250
800-392-5209
[www.stanleysecuritysolutions.com](http://www.stanleysecuritysolutions.com)

131. Cylinder Protector

*Stanley Security Solutions; Cylinder Protector*

Stanley Security Solutions
6161 East 75th Street
Indianapolis, IN 46250
800-392-5209
[www.stanleysecuritysolutions.com](http://www.stanleysecuritysolutions.com)

132. Patient room furniture

*This End Up Furniture Company, Inc.; Safe and Tough*

This End Up Furniture Company, Inc.
500 N. 7th Street
Sanford, NC 27331
800-979-4579
[www.thisendup.com](http://www.thisendup.com)

133. Recessed flush valve

*Zurn Plumbing Products; 3” Push Button Assembly for Concealed Flush Valves- P6000-NL3*

Zurn Plumbing Products
5900 Elwin Buchanan Drive
Sanford, NC 27330-9525
(919) 775-2255
[www.zurn.com](http://www.zurn.com)

134. Light fixture

*Cooper Lighting; Fail Safe SGI with Flat Polycarbonate Lens*

Cooper Lighting
1121 Highway 74 South
Peachtree City, GA 30269
770-486-4800
[www.cooperindustries.com](http://www.cooperindustries.com)
135. Convex mirrors

*Weizel Security; SR815-S51 SafeSupport Steel Dome Mirror*
Weizel Security
P. O. Box 276
Blaine, WA 98231-0276
800-308-3627
[www.securinghospitals.com](http://www.securinghospitals.com)

136. Smoke Seals: Break-away

*DHSI, Door and Hardware Systems, Inc.; Cush-N-Seal with break-away anti-ligature option*
DHSI
17 Silver Street
Rochester, NY 14611
585-235-8543
[www.dhsi-seal.com](http://www.dhsi-seal.com)

137. Air Grille

*Weizel Security; SR814-R17 SS-Vent High Security Grille*
Weizel Security
P. O. Box 276
Blaine, WA 98231-0276
800-308-3627
[www.securinghospitals.com](http://www.securinghospitals.com)

138. Light Fixture

*Weizel Security; SR818-R13Recessed Security Lighting with polycarbonate lens*
Weizel Security
P. O. Box 276
Blaine, WA 98231-0276
800-308-3627
[www.securinghospitals.com](http://www.securinghospitals.com)
ABOUT THE AUTHORS

David M. Sine, ARM, CSP, CPHRM, has had over a 25-year career in safety, risk management, human factors, and organizational consulting. He has been the state Safety Director of two eastern states, the Senior Staff Engineer for The Joint Commission, and a Senior Consultant for the American Hospital Association. Founding partner and one time contributing editor for Briefings on Hospital Safety, co-author of Quality Improvement Techniques for Hospital Safety, one time Vice Chair of the board of Brackenridge Hospital in Austin, Texas, Mr. Sine is certified by the Joint Board of the American Board of Industrial Hygiene and Certified Safety Professionals and as a Certified Professional Healthcare Risk Manager by ASHRM. He has been a healthcare risk management consultant since 1980 and has conducted more than 1,300 Joint Commission compliance assessment surveys. He serves as a member of the NFPA 101 Life Safety Code Subcommittee on Health Care Occupancies, The Joint Commission Committee on Healthcare Safety, and acts as a risk management advisor to the National Association of Psychiatric Health Systems. Mr. Sine served in the corporate offices of the Tenet HealthSystem in Dallas as Director of Risk Assessment and Loss Prevention and Vice President of Occupational Health and Safety. Mr. Sine continues to write and lecture extensively on healthcare policy, governance, quality improvement, and risk management as President of SafetyLogic Systems in Austin, TX, or email info@safetylogicsystems.com.

James M. Hunt, AIA, NCARB, is a practicing architect and facility management professional with over 30 years experience. He is a registered Architect, holds a certificate from the National Council of Architectural Registration, and began his career practicing architecture for several major healthcare projects. He then served as director of facilities management for the Menninger Clinic for 20 years. In addition to managing their main campus, he also consulted on behavioral healthcare unit remodeling projects for their Clinical Network program, which involved work in eight states including both coasts and the Midwest. During this time he was a founding member of the Health Care Council of the International Facility Management Association. He held several offices in the council, including chair. He was featured in a cover story of Facility Design and Management magazine and continues to publish articles and speak at major conferences. He is now the president of Behavioral Health Facility Consulting, LLC, an organization that works with psychiatric hospitals and behavioral health facilities with improving patient and staff safety in 21 states and Canada. He also works with hospitals and architects on the design of new construction and remodeling projects. He can be reached at 2342 SE Alamar Rd., Topeka, KS 66605 or jim@bhfcllc.com.
ABOUT NAPHS

The National Association of Psychiatric Health Systems (NAPHS) advocates for behavioral health and represents provider systems that are committed to the delivery of responsive, accountable, and clinically effective prevention, treatment, and care for children, adolescents, adults, and older adults with mental and substance use disorders. The NAPHS vision is of a society that values and maximizes the potential of all its citizens by helping them to achieve overall health. To achieve healthy communities, behavioral health will be recognized, respected, and allocated resources with fairness and equity. Through NAPHS representation within accreditation organizations – for example, with representatives on both the Hospital and Behavioral Health Professional and Technical Advisory Committees of The Joint Commission – NAPHS is able to provide input into and advance warning of regulatory and accreditation developments that affect behavioral healthcare providers.
DEFINITIONS / RESOURCES

**Americans with Disabilities Act (ADA).** The *Americans with Disabilities Act* gives civil rights protections to individuals with disabilities similar to those provided to individuals on the basis of race, color, sex, national origin, age, and religion. It guarantees equal opportunity for individuals with disabilities in public accommodations, employment, transportation, State and local government services, and telecommunications. See [www.ada.gov](http://www.ada.gov/).


**Health Insurance Portability and Accountability Act of 1996 (HIPAA).** The Office for Civil Rights within the U.S. Department of Health and Human Services (HHS) enforces the HIPAA Privacy Rule, which protects the privacy of individually identifiable health information; the HIPAA Security Rule, which sets national standards for the security of electronic protected health information; and the confidentiality provisions of the Patient Safety Rule, which protect identifiable information being used to analyze patient safety events and improve patient safety. See [http://www.hhs.gov/ocr/privacy/](http://www.hhs.gov/ocr/privacy/).

**The Joint Commission.** See [www.jointcommission.org](http://www.jointcommission.org) for their standards.


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