



# Patient Safety Standards, Materials and Systems Guidelines

Recommended by the  
New York State Office of Mental Health



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\* All products are not appropriate for all applications. Please read the introductory language on page 4 prior to proceeding.

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# Introduction



This document offers guidance with respect to patient safety features in the inpatient psychiatric environments throughout New York State. It grows out of the standards of new construction for the New York State Office of Mental Health's (NYS-OMH) inpatient hospitals in order to provide guidance for:

- ◆ Existing NYS-OMH state-operated inpatient facilities
- ◆ Psychiatric units in NYS-OMH licensed Article 28 general hospitals
- ◆ NYS-OMH licensed Article 31 hospitals

This document is not intended to provide guidance for outpatient psychiatric facilities. Generally the risks associated with outpatient facilities may not warrant special environmental precautions.

# Introduction

## Purpose



The purpose of these guidelines is to provide a selection of materials, fixtures, and hardware that the NYS-OMH has reviewed and supports for use within inpatient psychiatric units to further the agency's goal of reducing the risk of harm to individuals in inpatient settings. Utilization of any of these products is not mandatory.

The NYS-OMH would be pleased to evaluate other products identified by hospitals.

Many of the items in this document represent the current state of the art. It is anticipated that additional or more effective products will continue to be developed. The NYS-OMH intends to periodically update these guidelines to keep current with these changes, but the hospitals also have an obligation to continue to review products that will assist in this goal.

The products and systems included in this document have been tested for patient safety in conformance with OMH testing protocols, but the existing or built environment introduces a unique complexity that must be considered prior to incorporating any of these products. Evaluation of programmatic appropriateness and architectural detailing shall not be omitted from the product selection process. In particular, retrofit conditions must be understood before a product is provided for the facility.

The items selected here represent styles and properties of products that help lower patient risk while on an inpatient psychiatric unit.

**However, installation of these products will not eliminate all risks.**

# Introduction

## Approach



OMH supports a multi-directed approach to the reduction of patient harm on inpatient psychiatric units including the following:

- ◆ Completion of a patient risk assessment
- ◆ Completion of a physical plant risk assessment
- ◆ Ongoing staff training to ensure awareness of potential risks on units
- ◆ Installation of products in all patient areas that reduce risk
- ◆ Routine inspections of inpatient psychiatric units to ensure safety levels are maintained

Additional and more detailed information on some of the items found in these standards may be available from NYS-OMH.

By providing these guidelines the New York State Office of Mental Health neither endorses nor promotes any product or manufacturer. OMH does not guarantee the performance of any product. OMH recognizes that it is not possible to evaluate all products that are for sale. Under these circumstances it is at NYS-OMH's discretion which products are selected for review.

The absence of any product from the guidelines does not necessarily mean that the product is unsafe or unacceptable for use (refer to the paragraphs that follow). If a health care facility has installed products that were previously recommended in an earlier edition of the Patient Safety Standards (PSS) but are no longer listed in the PSS, it is the responsibility of the health care facility to reassess that product to determine whether its continued use is consistent with that hospital's safety risk assessment policies.

It is crucial that hospital managers complete risk assessments that go beyond the selection of the materials, furnishings, and fixtures found in these Patient Safety Standards. The Facilities Guidelines Institute (FGI), "2010 Guidelines for the Construction of Hospitals and Outpatient Facilities" provides clear, detailed direction regarding a hospital's responsibility to be in compliance with patient safety requirements. Section 1.2-3 Safety Risk Assessment (SRA) and Appendix A1.2-3 cover general risk assessment procedures. Section 1.2-3.6 and Appendix A1.2-3.6, Behavioral and Mental Health (Psychiatric Patient Injury and Suicide Prevention) provide additional guidance for healthcare providers serving this population.

Within this larger construct, the selection of products to be used in the built environment is but one component of risk management policies and procedures that every healthcare facility is responsible for developing and maintaining.

# Introduction

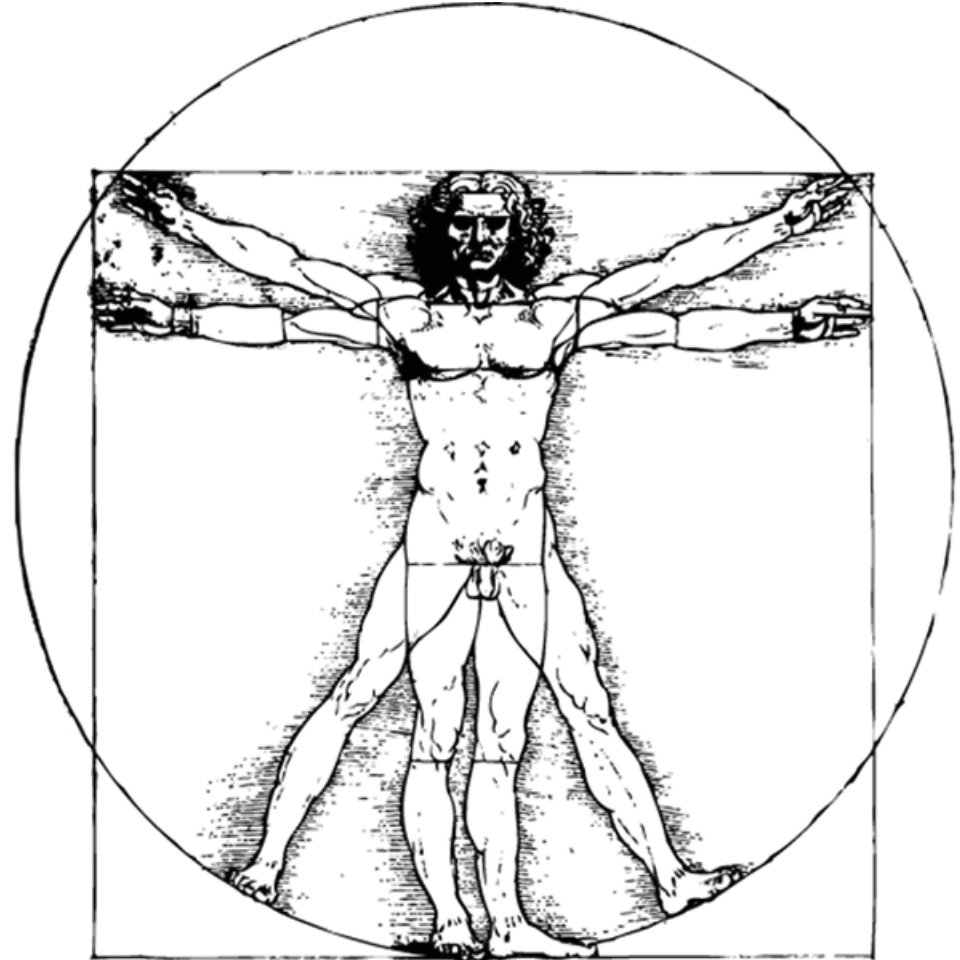
## Best Practice 1980 to Early 1990's

### Focus Above the Waist

The reduction of self harm incidents is often a matter of life or death. Suicide attempts using a ligature (e.g. strangulation) are the most prevalent form of self harm. This was initially addressed in modern hospital design by strongly focusing on the elimination of ligature attachment points that were above the waist line.

### Above the Waist Ligature Attachment Points:

- ◆ Fasteners
- ◆ Door Hinges
- ◆ Door Closers
- ◆ Windows & Vision Panels
- ◆ Access Doors
- ◆ Ceiling Systems
- ◆ Shower & Privacy Curtains
- ◆ Clothes & Towel Hooks
- ◆ Closet Bars
- ◆ Mirrors
- ◆ Toilet Partitions
- ◆ Window Treatments
- ◆ Bulletin Boards
- ◆ Picture Hanging Systems
- ◆ Cabinet Hardware
- ◆ Sprinklerheads
- ◆ Showerheads
- ◆ Medical Gas Enclosures
- ◆ HVAC Devices & Covers
- ◆ Thermostats
- ◆ Electrical Receptacles
- ◆ Light Fixtures
- ◆ Fire Alarm Components



# Introduction

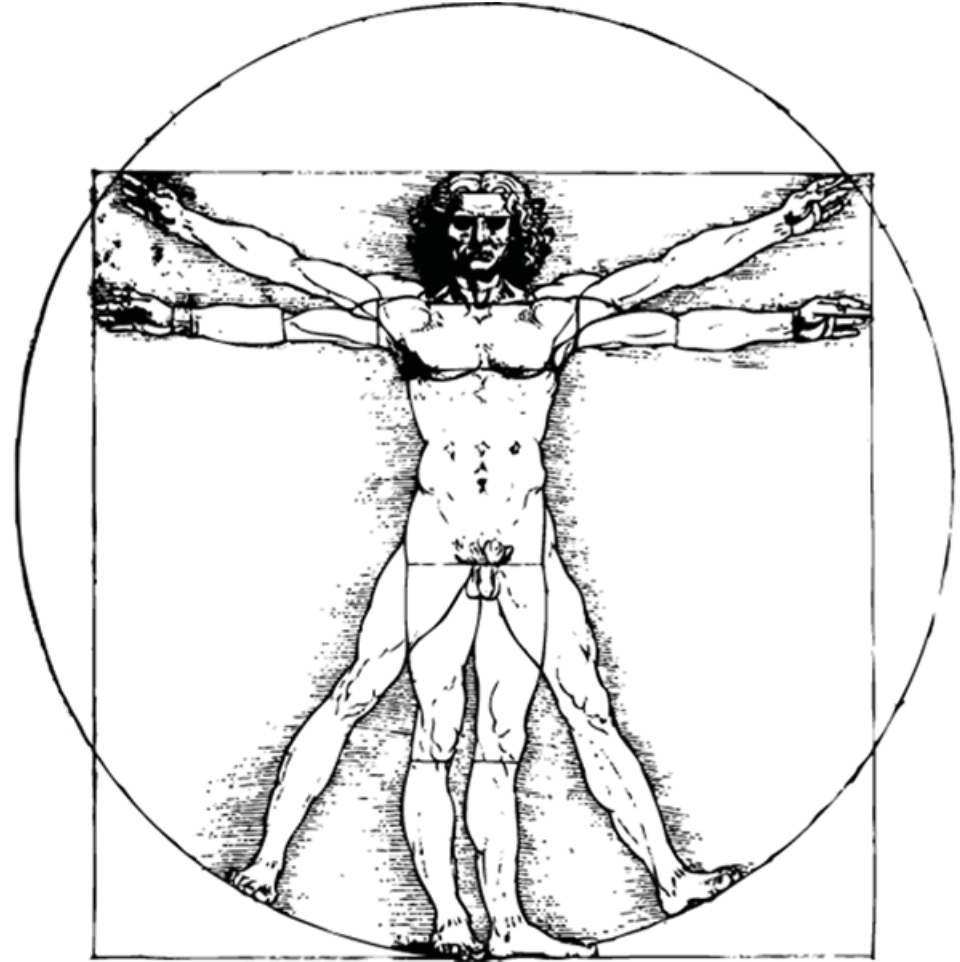
## Current Best Practice

### Focus Everywhere

Today, all behavioral healthcare facilities, whether new or existing, are required to meet comprehensive accreditation standards to ensure that the risks to patient safety are minimized. Principles that support patient safety strategies avoid systems, assemblies and materials that can be weaponized, yield sharp edges, or provide ligature points in all locations accessible to patients.

### Additional Ligature Attachment Points to Consider:

- ◆ Caulk & Sealants
- ◆ Door Handles
- ◆ Door Bumpers
- ◆ Wall Base
- ◆ Trim Strips between Assemblies
- ◆ Toilet Accessories
- ◆ Grab Bars
- ◆ Fire Extinguisher & Hose Cabinets
- ◆ Furniture
- ◆ Lavatories
- ◆ Lavatory Faucets
- ◆ Valves
- ◆ Shower Controls & Activators
- ◆ Plumbing Traps & Piping



# Introduction

## Risk Management



### **Risk Management, Not Risk Elimination**

**AIA Guidelines for the Design and Construction of Healthcare Facilities, 2010 Edition, Appendix**

#### **A1.2 Environment of Care**

A safe environment is critical; however, no environment can be entirely safe and free of risk. The majority of persons who attempt suicide suffer from a treatable mental disorder or a substance abuse disorder or both. Patients of inpatient psychiatric treatment facilities are considered at high risk for suicide; the environment should avoid physical hazards while maintaining a therapeutic environment. The built environment, no matter how well it is designed and constructed, cannot be relied upon as an absolute preventive measure. Staff awareness of their environment, the latent risks of that environment, and the behavior risks and needs of the patients served in the environment are absolute necessities. Different organizations and different patient populations will require greater or lesser tolerance for risk.



# Introduction

## Risk Assessment

High Risk approved products are safe for all locations. Though High Risk products may be safe for all areas, they may not be appropriate for all areas. In many cases the High Risk product will look too institutional for the area. Determining an individual room's risk assignment will depend on a room by room Risk Assessment of all areas of the facility which has been conducted specifically for each facility using that hospital or system's own risk assessment tool. The following are typical groupings of room by risk. Each hospital's assessment may vary based upon patient profile, staffing, or unit geography.



### Typical High Risk Areas

Patient is difficult to manage, or risk of solitary and/or unsupervised use:

- ◆ Patient Bedrooms
- ◆ Bathrooms & Toilet Rooms
- ◆ Seclusion Rooms
- ◆ Comfort Rooms
- ◆ Special care to be taken in on-unit patient spaces with ceilings less than 9'-0" above finished floor



### Typical Medium Risk Areas

Patient access is controlled, or use is supervised with no solitary and/or unsupervised use:

- ◆ Living Rooms
- ◆ Dining Rooms
- ◆ Group Rooms
- ◆ Corridors



### Typical Low Risk Areas

No patient use or constantly supervised:

- ◆ Medication Rooms
- ◆ Offices
- ◆ Clean & Soiled Utility Rooms

# Introduction

## Nomenclature & Applicability

Notes like this on each page will identify additional considerations that are applicable, and also will identify alternative products that are acceptable as minimum standards for Article 31 hospitals, Article 28 hospitals, and as existing conditions in state-operated hospitals.



### Accepted by OMH

Items with this symbol constitute a best practice for all existing facilities and a minimum standard for new construction and renovation projects at NYS-OMH's state-operated inpatient hospitals. Unless alternatives are identified in the notes section of the page, such items are also minimum standards for Article 31 and Article 28 hospitals.



### Under NYS-OMH Evaluation

Items with this symbol are currently being assessed by NYS-OMH for suitability in NYS inpatient psychiatric hospitals or units.



### Retrofit

Items with this symbol are not suitable for use in new construction but are acceptable for renovation in NYS inpatient psychiatric hospitals or units.



### Use with Caution

Items with this symbol might be suitable for certain inpatient environments; however, they should be used with caution. Some of these items have institutional characteristics that are not appropriate for an environment that is certified by the Joint Commission, which requires non-institutional fittings and fixtures. Others items have inherent risks that must be evaluated for their appropriateness for the intended application. Typically, the associated notes describe why the device is to be used with caution.



### NYS-OMH Rejected

Items with this symbol are unsuitable for use in new construction or renovation in NYS inpatient psychiatric hospitals or units.



### Gold Seal

Items with this symbol have withstood paper clip testing in addition to all other applicable testing methods.

# Introduction

## Product Evaluation Process



NYS-OMH evaluates products for inclusion into its Patient Safety Standards using a variety of criteria. These criteria fall into two categories; Primary Criteria and Secondary Criteria.

### Primary Criteria

- ◆ Ligature Resistance: Looping
- ◆ Ligature Resistance: Wedging
- ◆ Cutting
- ◆ Jumping
- ◆ Tamper Resistance
- ◆ Weaponization
- ◆ Contraband Storage
- ◆ PICA/Ingestion

### Secondary Criteria

- ◆ Ligature Resistance by combining a ligature with other readily available objects
- ◆ Ligature Resistance that is the result of the configuration in which a product is installed
- ◆ Codes & Regulations
- ◆ Therapeutic Environment & Appearance
- ◆ Constructibility
- ◆ Durability
- ◆ Maintenance

The presence of paper clips in even the most rigorously monitored inpatient environment is difficult to control. Because paper clips may be available to patients, tests for product inclusion in the OMH Patient Safety Standards include an attempt to utilize paper clips in concert with other objects to develop ligature on tested items. It should be assumed that almost anything in the patient environment can be compromised by a paper clip; for those items that withstand the ligature testing with use of paper clips, a product may be accepted by OMH and receive a special notation indicating that it has withstood such testing methods. 🟡 indicates a product withstanding paper clip testing in addition to all other applicable methods of testing and is appropriate for use in high risk areas.

As is written on page 4 of this document, a much more comprehensive assessment of risk in the patient environment is always necessary in order to meet the spirit of the Patient Safety Standard recommendations.

The availability of safe products for the inpatient environment is a growing and evolving market. New products are routinely introduced by manufacturers. Products that were once accepted by NYS-OMH in previous versions of the Patient Safety Standard may be rejected or phased out in future versions in light of new products or new knowledge about their risks. For more information about the NYS-OMH Product Evaluation Process, contact NYS-OMH.

# Anti-Barricade Strategies

An unintended consequence of providing more patient privacy is the increased opportunity for a patient to use a bedroom or bathroom door as a barricade. Solutions range from direct penetration of the door by force to using advanced door systems that can be opened outward in an emergency situation. The direct solution is more economical at first, but will require replacement of the door. The advanced door technology does not harm the door, but significantly increases the initial construction cost. The ten options listed below span this continuum.

ANTI-BARRICADE STRATEGIES AT PATIENT ROOMS AND BATHROOMS							
ANTI-BARRICADE STRATEGIES	DESCRIPTION	DOOR TYPE	RELATIVE COST	REVERSIBILITY	FIRE/ SMOKE RATABLE	ACOUSTIC & VISUAL PRIVACY	COMMENTS
1 Standard Inswinging Door Non-Mechanical Means Destructive Removal	Use of Jaws of Life, wrecking bar or other method to remove door.	All Types	Low	No	Yes/Yes	Yes/Yes	Risk of injury. Requires stock replacement doors and significant labor.
2 Outswinging Doors	Door can be opened from outside room. However, it may compromise path of egress.	All Types	Low	Yes	Yes/Yes	Yes/Yes w/edge strip No/No w/out	Risk of injury. Requires wide corridors or deep niches at entries with risk of reduced visibility. Not recommended.
3 Double Swinging (DS) Doors with Rescue Stop	Typical. Anyone can override stop to gain access.	All Types	Medium	Yes	No/Yes	Yes/Yes	Privacy mitigation required. Provide compressible material at strike edge. Pay attention to NFPA tolerances for fire and smoke rating. Consider multiple stops.
4 Double Swinging (DS) Doors with Removable Stop	Provide removable stops fixed to frame with tamper-resistant fasteners.	All Types	Low	Yes	Yes/Yes	Yes/Yes	Requires removal of stops to open door into corridor.
5 Inswinging Door with Removable Frame or Split Frame	Door and split frame can be detached from outside room.	All Types	Medium	Yes	Possible	Yes/Yes	Research needed to develop and test prototype.
6 Door within a Door (Wicket) with Concealed Hinges	Allows secondary access through inset wicket door.	Wood	High	Yes	No/Yes	Yes/Yes	Non-normative. Meets smoke requirements but may not meet fire ratings due to its design.
7 Secondary Door in Sidelite Frame	Provide secondary access through door in sidelite frame.	All Types	High	Yes	Yes/Yes	Yes/Yes	Requires outswinging door in adjacent sidelite opening in hollow metal frame.
8 Double Leaf Door with Inactive Leaf	Recessed throw bolts; top and bottom, activator on Corridor face of door.	All Types	High	Yes	Yes/Yes	Yes/Yes	Provide keyed bolts at top and bottom of inactive leaf. Privacy mitigation required. Provide compressible material at strike edge. Pay attention to NFPA tolerances for fire and smoke rating. Reinforce bottom of active rescue leaf at recessed floor bolt.
9 Outswinging or Double Swinging Bathroom Door with Roller Latch	Recessed pull with roller latch strike.	All Types	Medium	Yes	No/No	Yes/Yes	En-Suite Bathrooms. Equip with ligature resistant institutional privacy function.
10 Sentinel Event Reduction (SER) Partition Door	Expanded PVC collapsible top partition w/continuous hinge and flexible rubber flap.	PVC	Low	Yes	No/No	No/No	En-Suite Bathrooms.

# Anti-Barricade Strategies

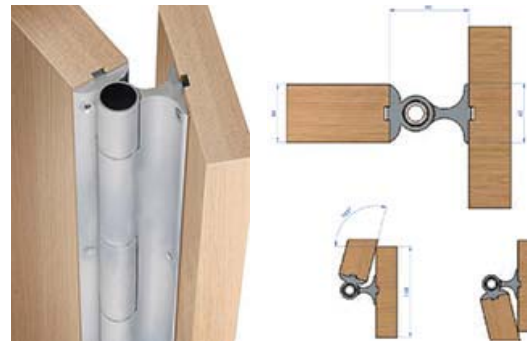
ANTI-BARRICADE STRATEGIES	
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10	Sentinel Event Reduction (SER) Partition Door



## Kingsway Group

[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

### Swing Hinge KG202

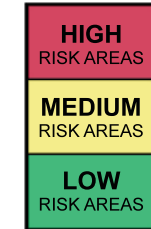


## Markar Architectural Products

[www.markar.com](http://www.markar.com)

### Double Swing Hinge DSH1000 (Barrel-Style)

Alternate Hinge Option for use with Emergency Stop (ERS)



**Caution:** All hinges inherently carry risk due to multiple joints between moving parts, and extremely low acceptable tolerances. Consistent quality in manufacturing may be difficult to achieve and should be inspected in the field.

**Note:** Coordination between door opening width, hinge width, and door panel width is required.

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## Pemko

[www.pemko.com](http://www.pemko.com)

### Double Swing Hinge (Geared-Style) DSHP01

Alternate Hinge Option for use with Emergency Stop (ERS)



**Caution:** All hinges inherently carry risk due to multiple joints between moving parts, and extremely low acceptable tolerances. Consistent quality in manufacturing may be difficult to achieve and should be inspected in the field.

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## Accurate Lock & Hardware

[www.accuratelockandhardware.com](http://www.accuratelockandhardware.com)

### Keyed Emergency Stop ADL-CEK, ADL-OEK

Double lip strikes with keyed emergency stop. Designed to restrict and protect against unauthorized outswinging door. Key locks emergency stop into projected position.



#### Anti-Barricade Hardware | Code Notes

For corridor doors, verify Life Safety Code requirements to limit passage of smoke. Specify appropriate gap tolerances at top and jambs.

#### Anti-Barricade Hardware | Constructibility Notes

- ◆ Add compression seal at jamb and strike edge of doors for privacy. May be omitted on private bathroom doors opening into private bedrooms. Doors that are not steel or solid core require reinforcing for top and bottom pivots.
- ◆ Coordinate backset of lockset/handle when providing swing/emergency stops.
- ◆ Refer to manufacturer's data when using removable stops in fire rated assemblies.

#### Cautions:

- ◆ **A non-locking hospital stop may allow patients to depress the stop and swing the door in the opposite direction. Overpronation of the door in this direction has, in some instances, resulted in patients breaking the door.**
- ◆ **Small hospital stops that concentrate the door closing pressure on a small surface area have been known to result in breakage of structural composite lumber doors when doors are slammed by patients.**
- ◆ **In situ evaluation reveals that the use of a single rescue stop in line with the latch is insufficient in acting as a reliable stop when a door is being subjected to abuse (i.e. being repeatedly slammed). It is recommended that at least two stops be used: one at the top 1/3 point along the height of the door and one at the bottom 1/3 point along the height of the door to better distribute the force of the slamming along the door stile.**



## Kingsway Group

[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

**Swing Stop**  
**KG 205/206 Anti-Barricade Door Stop, Hardwood**  
**KG 207/208 Anti-Barricade Door Stop, Aluminum**



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**Pemko**  
[www.pemko.com](http://www.pemko.com)

## Emergency Stop (ERS)

Pemko Continuous Swing-Away Door-stop provides emergency outward opening operation of doors that normally open inwards. The stop hinge has a hospital tip, unlocks by a tool and swings open with an integral grab handle.



### Anti-Barricade Hardware | Code Notes

For corridor doors, verify Life Safety Code requirements to limit passage of smoke. Specify appropriate gap tolerances at top and jambs.

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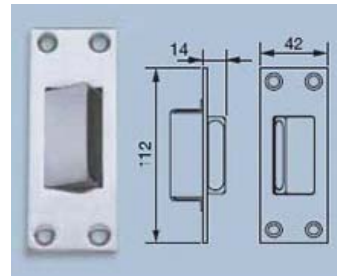
## Royde & Tucker Ltd.

[www.ratman.co.uk](http://www.ratman.co.uk)

### Emergency Stop H131-105

The release device can be depressed to allow the door to open outward and allow access to the room.

**Note: Allows for wedging ligature.**



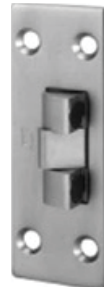
## McKinney

[www.mckinneyhinge.com](http://www.mckinneyhinge.com)

### DS-6 Emergency Stop

The release device can be depressed to allow the door to open outward and allow access to the room.

**Note: Allows for wedging ligature.**

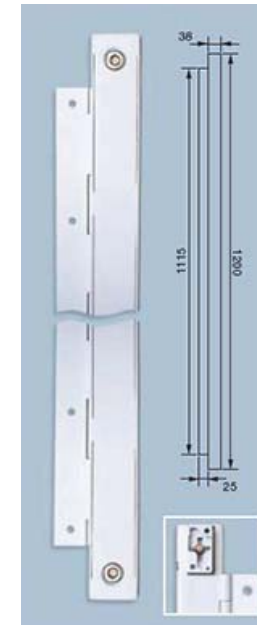


## Laidlaw

[www.laidlawdirect.com](http://www.laidlawdirect.com)

### Swing Away Stop

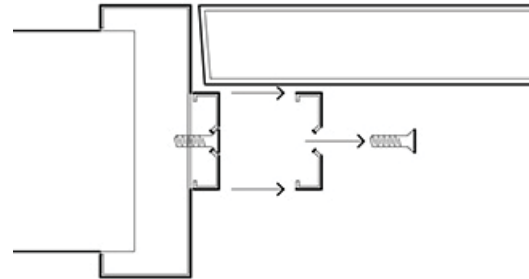
**Note: Potential for looping with this hardware. Stop is not continuous and creates a ligature point.**



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## Alternate Removable Stop



### Anti-Barricade Hardware | Constructibility Notes

Refer to manufacturer's data when using removable stops in fire rated assemblies.

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5	Inswinging Door with Removable Frame or Split Frame
6	Door within a Door (Wicket) with Concealed Hinges
7	Secondary Door in Sidelite Frame
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9	Outswinging or Double Swinging Bathroom Door with Roller Latch
10	Sentinel Event Reduction (SER) Partition Door



## Ceco Door

[www.cecodoor.com](http://www.cecodoor.com)

## Medallion BH-PRA, Behavioral Healthcare Patient Room Access Door

## Curries

[www.curries.com](http://www.curries.com)

## 47 Series BH-PRA, Behavioral Healthcare Patient Room Access Door

## Fleming Door Products

[www.flemingdoor.com](http://www.flemingdoor.com)

## Wicket Door

Hollow metal construction.



### Anti-Barricade Hardware | General Notes

Primary door requires continuous hinges with hospital tips. Edge bevel may need to be increased. Edge strip shall be securely fastened.

### Anti-Barricade Hardware | Constructibility Notes

Custom screw length is required to reach solid material on door edge.

### Anti-Barricade Hardware | Code Notes

Manufacturer must verify the fire rating of the door.

ANTI-BARRICADE STRATEGIES	
1	Standard Inswinging Door Non-Mechanical Means Destructive Removal
2	Outswinging Doors
3	Double Swinging (DS) Doors with Rescue Stop and Pivot Hinge
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## Construction Specialties

[www.c-sgroup.com](http://www.c-sgroup.com)

### Wicket Door

### Acrovyn Barrier Resistant Door

Bonded SCL core 5-ply construction.

**Note: OMH does not promote the use of plastic clad laminate doors.**



#### Anti-Barricade Hardware | General Notes

Primary door requires continuous hinges with hospital tips. Edge bevel may need to be increased. Edge strip shall be securely fastened.

#### Anti-Barricade Hardware | Constructibility Notes

Custom screw length is required to reach solid material on door edge.

#### Anti-Barricade Hardware | Code Notes

Manufacturer must verify the fire rating of the door.

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## Wood Wicket Door

### Custom Wood Wicket Door

Multiple Manufacturers

#### Note:

- ◆ **Manufacturing and Installation tolerances result in a wedgeable gap between door leaf and wicket leaf.**
- ◆ **The primary door leaf's integrity is inherently compromised with the introduction of a wicket door, making it susceptible to breakage.**

Door, Hallway Side



Lock & Handle



Concealed Hinge



# Anti-Barricade Strategies

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## Secondary Door in Sidelite Frame

### Inswinging Main Door and Outswinging SideLite Door with Center Mullion

#### Assembly

This assembly uses a hollow metal frame sidelite with an out-swinging panel for anti-barricade. The normal-use door is fitted with anti-ligature door hardware and has a full hollow metal stop. The sidelite panel can be made of wood or hollow metal and be outfitted with a keyed deadbolt on the corridor side.

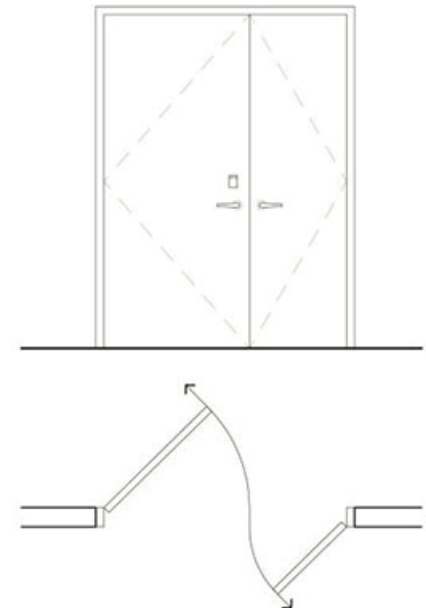


## Double Leaf Door with Inactive Leaf

### Inswinging Active Main Door and Outswinging Inactive Door

Provide keyed flush bolts activated from corridor side on top and bottom of the inactive leaf.

**Caution:** Door configuration may require special installation requirements when utilizing Door Top Sensor protection.



# Anti-Barricade Strategies

## Bathrooms

ANTI-BARRICADE STRATEGIES	
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**Ives**  
<http://us.allegion.com>

### Ives RL32 Roller Latch with ASA Strike

**Note:** Roller latch is loopable.



#### Anti-Barricade Hardware | General Notes

Ideally, provide external keyed locking and ligature resistant privacy latching with external anti-barricade override (typically found in institutional privacy latch sets) for emergency access. There are few auxiliary latches or latchsets that can provide all four levels of functionality.

While we recommend use of the roller latch for en suite bathroom doors, there may be occasions where a lever latch set could be used, with the following cautions:

- ♦ A “Dormitory” function is preferred because it provides simultaneous retraction of the latch bolt and privacy lock bolt. It’s not currently available with ligature resistant trim except from Accurate Lock and Hardware.
- ♦ An “Institutional” function (available with ligature resistant trim) provides privacy, but does not provide the ability to lock the user out of the room except from Accurate Lock and Hardware.
- ♦ A “Classroom” function (available with ligature resistant trim) provides the ability to lock the user out of the room, but does not provide privacy.

#### Anti-Barricade Hardware | Code Notes

Do not use the roller latch on corridor doors; to be used only for en suite bathroom doors.



**Rockwood Manufacturing Company**  
[www.rockwoodmfg.com](http://www.rockwoodmfg.com)

### 592 Roller Latch with 161 Strike

**Note:** Roller latch is loopable.



# Anti-Barricade Strategies

## Bathrooms

ANTI-BARRICADE STRATEGIES	
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### Kingsway Group

[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

#### KGDS05 Override Washroom Door Set with Classic Grip Handle

Anti-Barricade Indicator Lockset with Internal Thumb Turn Pull & External Anti-Ligature Pull Handle with Safe Sure Mechanism

**Note: Roller latch is loopable.**





# Anti-Barricade Strategies

## Bathrooms

ANTI-BARRICADE STRATEGIES	
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**Norva Plastics, Inc.**  
[www.norvaplastics.com](http://www.norvaplastics.com)

### Toilet Partitions, Sentinel Event Reduction (SER) Door with Sloped Top

Use only in suite or gang bathrooms. Never use in bathrooms shared between two bedrooms. Expanded PVC door can be painted with Lexan paint to match desired color scheme. To be used with roller latch hardware.

#### Cautions:

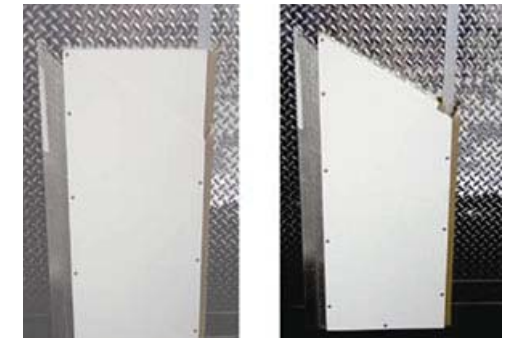
- ◆ Equip with flexible fire rated material.
- ◆ Maintain large 3" gaps to prevent wedging.
- ◆ Velcro may be used as a latching mechanism but should be limited to a small piece so as to not provide a tie-off ligature point.
- ◆ Can't be latched (privacy caution).



**Norva Plastics, Inc.**  
[www.norvaplastics.com](http://www.norvaplastics.com)

### Toilet Partitions, Sentinel Event Reduction (SER) Door with Collapsible Top

**Note: Privacy can't be achieved with this option. OMH has rejected this product as it contains features that may allow injury to patients including pinched fingers, and if the collapsible edge malfunctions, it provides a ligature point. Also, since the top portion of the door is hollow, the design allows for the possibility of contraband to be placed in the top of the door.**



# Seclusion Room Standards

## General Notes

Avoid protrusions and outside corners in Seclusion Rooms. Use polycarbonate mirrors for visibility in the corners of room adjacent to the door. The Gold Medal Padding System is recommended on vertical and horizontal surfaces including the door, door frame, window jambs and stool; however, the use of padding is not mandatory. Provide hardware with immediate positive latching (Slam Lock Function). Provide Cremona bolts, multi-bolt or multiple face mounted magnetic locks on exterior of Seclusion Room (frame and angle at edge of door) with uninterruptable power supply.

## Installation Notes

The shear lock alignment is critical for proper function. Shear locks have a tendency to become misaligned over time.

## Code Notes

Provide a one hour fire rating at Seclusion Suites. Refer to FGI Guidelines for other specific requirements.

## Cautions

- ◆ Do not provide electrical switches or receptacles.
- ◆ Use hinges, sprinklerheads, louvers, grilles, and light fixtures recommended elsewhere in this document.
- ◆ Windows should either be flush with the inside face of the wall or provided with supplemental polycarbonate shielding or detention screens flush with the inside face of the room.



## Securitech

[www.securitech.com](http://www.securitech.com)

### Multi-Point Deadbolt Mortise Lock

Select lock function from options below:  
 USL-K3-IHB2: (slam)  
 Latches upon closure.  
 Key only projects/retracts bolts and latch.  
 Exterior side of door has freely rotating lever/pull.  
 Interior cylinder optional.  
 UML-K3-IHB2:  
 Does not latch upon closure.  
 Key only projects/retracts bolts.  
 Exterior side of door has freely rotating lever/pull.  
 Interior cylinder optional.



## Marathon Engineering Corporation

[www.goldmedalsafetypadding.com](http://www.goldmedalsafetypadding.com)

### Gold Medal Safety Padding

Resinous coating is scuff-resistant and long lasting. Padding material is uniform and smooth with no cracks or open seams.

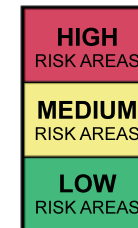
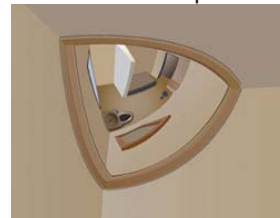


## DuraVision Mirror Systems

[www.correctionsmirror.com](http://www.correctionsmirror.com)

### Polycarbonate Mirror

Quarter dome polycarbonate mirror. Ligature resistant connections and tamper resistant fasteners. Provide tamper-resistant sealant at mirror frame perimeter.



## Prime Coat Coating Systems

[www.primecoat.com/safecell/](http://www.primecoat.com/safecell/)

### PC Safe Cell 4730 System

Unified system of high density, high impact rubberized core with bonded polymer topcoats. Padding material is uniform and smooth with no cracks or open seams.

# Patient Safety Standards Materials & Systems



# Division 01 | General Requirements



# Division 01 | General Requirements

## Tamper Resistant Fasteners

### General Notes

Tamper resistant fasteners are to be used for all fasteners exposed to view on every product and assembly accessible in the inpatient environment, and should be noted explicitly in the construction documents.

### Performance Criteria

All fasteners accessible to patients shall be tamper resistant of the hexalobular (6-lobed), pin reject, internal drive system, meeting ISO Standard 10664.

### Alternates

Minimum standard for facilities other than NYS operated: 2-pin spanner head fasteners.

### Additional Notes

McGard and Bryce are just two among many acceptable manufacturers of tamper resistant fasteners relying on limited distribution tools or custom keyed fasteners. Generally custom tooled fasteners like McGard will cost more than stock fasteners.



### Torx Fastener

[www.acument.com](http://www.acument.com)

### Tamper Resistant Fasteners

ISO Standard 10664 fasteners.



### Bryce Fastener

[www.brycefastener.com](http://www.brycefastener.com)

### Tamper Resistant Fasteners

Custom fasteners.



# Division 07 | Thermal & Moisture Protection



# Division 07 | Thermal & Moisture Protection

## Security Sealants, Tamper Resistant

### General Notes

Picking and Pica behaviors can impact sealant choices. Consider security grade sealants at inpatient areas. Tamper resistant sealants are suitable for supervised locations. Tamper resistant sealants are generally flexible, abrasion resistant and highly tenacious. They're usually based on urethane or silicone sealant technology, in both one and two-component formulas.

### Performance Criteria

ASTM C290.

### Installation Notes

All sealants must be installed per manufacturer's recommendations for ventilation, safety and cure times.

### Additional Notes

Some sealants may not be suitable for use where contact with food may occur. Some sealants may have VOC or other chemical content that generates odors and fumes during curing. All sealants must be reviewed for potential impact on occupants prior to use.



### Master Builders Solutions

[www.master-builders-solutions.basf.us](http://www.master-builders-solutions.basf.us)

#### MasterSeal CR 195

One-component, moisture-curing, aliphatic, non-sag, polyurethane sealant.



### Pecora Corporation

[www.pecora.com](http://www.pecora.com)

#### DynaFlex

Two-component, non-sag, elastomeric polyurethane joint sealant.

#### DynaFlex SC

One-component, non-sag elastomeric polyurethane joint sealant.



### Sika Corporation

[www.usa.sika.com](http://www.usa.sika.com)

#### Sikaflex 11FC

One-component, gun grade, moisture cure, polyurethane based elastomeric sealant.

#### Sikaflex 2 C NS TG

Two-component, premium grade, polyurethane based elastomeric sealant.



### Dow Corning

[www.dowcorning.com](http://www.dowcorning.com)

#### 995 Silicone Structural Sealant

One-component, silicone sealant.

# Division 08 | Openings





# Division 08 | Openings

## Door Hardware, Door Top Sensors

### General Notes

An electric transfer hinge is required. Refer to the continuous hinges in this document. Alarm annunciation may be visual and/or audio, located at the door and/or nurse's station. Installing alarm resets at the alarmed doors will require staff response to the alarm location.

### Installation Notes

For the Top Door Alarm photoelectric sensors are positioned on the door frame and on the door within anti-ligature casings. This ensures maximum coverage by detecting the presence of any foreign objects interrupting the thru-beams between the transmitters and receivers.

### Additional Notes

Two configurations of the photoelectric sensor type of system are offered;  
Configuration A: Two sets of Alarm Light Sensors for top door detection.  
Configuration B: One set of Alarm Light Sensors for bottom door detection.



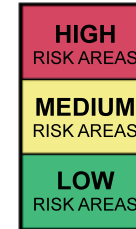
### Door Control Services, Inc.

[www.doorcontrolservices.com](http://www.doorcontrolservices.com)

#### Top Door Alarm

Top Door Alarm is a custom-manufactured alert system that can be installed on new or existing applications. A photoelectric sensor detects ligature ahead of pressure application. This product produces a visible light beam that may be disturbing to patients. It should be noted that beam is continuously visible to patients, especially when bedroom is dark.

**Caution: Use with caution in a double leaf door configuration with an inactive leaf.**



### The Door Switch

[www.thedoorswitch.com](http://www.thedoorswitch.com)

#### The Door Switch

Top of door, weight pressure activated sensor that extends above the door.



# Division 08 | Openings

## Door Hardware, Door Top Sensors



### Stanley Security Solutions | Grainger Industrial Supply

[www.stanleysecuritysolutions.com](http://www.stanleysecuritysolutions.com)

[www.grainger.com](http://www.grainger.com)



### SEDA (Stanley Emergency Door Alarms) | LISA (Ligature-Resistant Door Alarm)

A pressure activated switch, mounted on the face of a door, provides notification when a foreign object passes over the door and a downward pressure is applied. Notification is sent to a console indicating where a response is required.



# Division 08 | Openings

## Door Hardware, Door Top Sensors, Alarm Visual Notifiers



### Cooper Industries

[www.cooperindustries.com](http://www.cooperindustries.com)

#### Cooper Eaton Series RSSB

Multi-color candela, ceiling mount installation only. Notifiers shall be ceiling mounted.



### Gentex Corporation

[www.gentex.com](http://www.gentex.com)

#### Gentex GCSB24PCW Strobe

Multi-color candela, wall or ceiling mount installation. A mechanical attachment or set screw is required for the cover. Notifiers shall be ceiling mounted.



# Division 08 | Openings

## Door Hardware, Continuous Hinges

### General Notes

Continuous hinges are recommended for all inswinging and outswinging doors within inpatient units.

### Performance Criteria

Specify Hospital Tips (HT) to eliminate ligature point at top of hinge.

### Installation Notes

Prepare and reinforce door frame in strict compliance with hardware manufacturer's written instructions and installation templates.

### Additional Notes

Architectural steel and stainless steel barrel type continuous hinges distribute door weight and stress along the full length of the door and frame.

**Caution: All hinges inherently carry risk due to multiple joints between moving parts, and extremely low acceptable tolerances. Consistent quality in manufacturing may be difficult to achieve and should be inspected in the field.**



### Architectural Builders Hardware Mfg. Inc.

[www.abhmfg.com](http://www.abhmfg.com)

#### A500-HT

Stainless steel pin & barrel, full mortise, full concealed edge mount with hospital tip.

### Markar Architectural Products

[www.markar.com](http://www.markar.com)

#### FM300-HT

Edge mount stainless steel.

#### FS301-HT & FS301-HT

Full surface flush mount stainless steel. Can be installed in existing doors.

### PBB, Inc.

[www.pbbinc.com](http://www.pbbinc.com)

#### CH51-HT SS Pin & Barrel Series

Stainless steel pin & barrel, full mortise, edge mount with hospital tip.



### Select Hinges

[www.select-hinges.com](http://www.select-hinges.com)

#### SL-57 with Tipit Hinge Top

Full surface geared continuous hinge with Tipit Hinge Top Protectors (wide)



# Division 08 | Openings

## Door Hardware, Continuous Hinges

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### Stanley Security Solutions

[www.stanleyhinges.com](http://www.stanleyhinges.com)

#### LifeSpan 600 Series

##### 641-HT-Standard Duty

Steel for 1/8" inset doors.

##### 651-HT-Standard Duty

Stainless steel for 1/8" inset doors.

Hospital Tip



# Division 08 | Openings

## Door Hardware, Locks & Handles

### General Notes

Not all door hardware manufacturer's provide an institutional privacy function and not all institutional privacy functions are ligature resistant.

Specify tamper resistant, flush mounted set screws. A recessed set screw shaft provides a ligature opportunity for the stiff end of a shoelace.

Beveled latchbolts can be compromised, permitting access to rooms and therefore should never be used on doors to potentially hazardous locations such as electrical rooms and housekeeping closets.

Specify a 2-piece stainless steel mechanical anti-friction latchbolt for staff-only rooms and other areas identified as low or medium risk.

### Additional Notes

See the Anti-Barricade Strategies pages for additional information relative to hardware functions on locksets and deadlatches.



### Accurate Lock & Hardware

[www accuratelockandhardware.com](http://www accuratelockandhardware.com)

#### Crescent Handle (CH) & 9100 Mortise Lockset

Specify with security grade lock mechanism and narrow escutcheon.



### Accurate Lock & Hardware

[www accuratelockandhardware.com](http://www accuratelockandhardware.com)

#### Crescent Handle (CH-CYL) & Cylindrical Lockset



### Accurate Lock & Hardware

[www accuratelockandhardware.com](http://www accuratelockandhardware.com)

#### 9100ALP Push Plate with Mortise Lockset



# Division 08 | Openings

## Door Hardware, Locks & Handles

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### Additional Notes

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### Sargent

[www.sargentlock.com](http://www.sargentlock.com)

#### BHW Trim (Mortise)

The BHW style door trim is not a traditional lever design and can be safely used in a high risk environment.

**Caution: Installation tolerances must be tight to ensure proper operation. Adjustments shall be made in the field.**



### TownSteel Architectural Hardware Manufacturing

[www.townsteel.com](http://www.townsteel.com)

#### MRX-A Mortise Lock with Ligature Resistant Trim-Arch



### TownSteel Architectural Hardware Manufacturing

[www.townsteel.com](http://www.townsteel.com)

#### CRX-A Cylindrical Lock with Ligature Resistant Trim-Arch



# Division 08 | Openings

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### General Notes

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### Additional Notes

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### Accurate Lock & Hardware

[www accuratelockandhardware.com](http://www accuratelockandhardware.com)

#### Cylindrical Deep Detent Safety Knob (CDDSK)

Caution: Cone shaped door knobs and thumb turns do not comply with ADA requirements for graspability.



### Corbin Russwin

[www.corbinrusswin.com](http://www.corbinrusswin.com)

#### Anti-Harm Knob HSS (Mortise)

Caution: Cone shaped door knobs and thumb turns do not comply with ADA requirements for graspability.

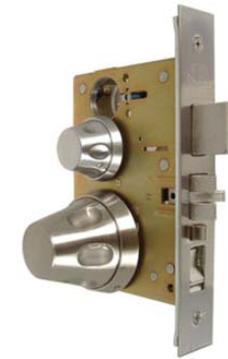


### Marks USA

<http://marksusa.com>

#### Institutional Life Safety Mortise 5SS50 Series Lockset

Caution: Cone shaped door knobs and thumb turns do not comply with ADA requirements for graspability.



### Schlage

<http://us.allegion.com>

#### SK1 Ligature Resistant Knob (Cylindrical)

Caution: Cone shaped door knobs and thumb turns do not comply with ADA requirements for graspability.





# Division 08 | Openings

## Door Hardware, Locks & Handles

### General Notes

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Specify a 2-piece stainless steel mechanical anti-friction latchbolt for staff-only rooms and other areas identified as low or medium risk.

### Additional Notes

See the Anti-Barricade Strategies pages for additional information relative to hardware functions on locksets and deadlatches.



### TownSteel Architectural Hardware Manufacturing

[www.townsteel.com](http://www.townsteel.com)

### CRX-K Ligature Resistant Trim Knob (Cylindrical)

**Caution: Cone shaped door knobs and thumb turns do not comply with ADA requirements for graspability.**



# Division 08 | Openings

## Door Hardware, Locks & Handles

### General Notes

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### Additional Notes

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### Corbin Russwin

[www.corbinruswin.com](http://www.corbinruswin.com)

### BHSS Trim (Mortise)

The BHSS style door trim is not a traditional lever design.



### Sargent

[www.sargentlock.com](http://www.sargentlock.com)

### Anti-Harm Knob BHD (Mortise)

**Note:** A ligature point can be established between the knob and escutcheon plate.



### Corbin Russwin

[www.corbinruswin.com](http://www.corbinruswin.com)

### HPSK Push/Pull Paddle

### Sargent

[www.sargentlock.com](http://www.sargentlock.com)

### ALP Push/Pull Paddle

**Note:** A wedge point can be created in the gap required for operational clearance of the paddle. This wedge point can occur when paddles are mounted in either the up, down or side positions.



# Division 08 | Openings

## Door Hardware, Sliding Door System



### Accurate Lock & Hardware

[www.accuratelockandhardware.com](http://www.accuratelockandhardware.com)

### LR-SDS Anti-Ligature Sliding Door System



Concealed track system hangs a 1 3/4 inch door.

Concealed floor guide keeps door flush against wall.

Concealed vertical rod bolt locks into track.  
Ligature resistant thumb turn LR-ADA-F and flush pull U7001UL.

Top door edge not accessible.  
Dampened closure.



TRACK CLOSE UP



TRACK CUTAWAY



FLOOR GUIDE

# Division 08 | Openings

## Door Hardware, Lever Handles



**Caution: Lever style door trim is not appropriate for high risk areas. It is nearly impossible to completely avoid ligature opportunities with lever style door trim, even if designed to be ligature resistant. At best, lever style door trim is only appropriate for medium and low risk areas.**

# Division 08 | Openings

## Door Hardware, Lever Handles

### General Notes

Not all door hardware manufacturer's provide an institutional privacy function and not all institutional privacy functions are ligature resistant.

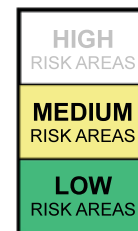
Specify tamper resistant, flush mounted set screws. A recessed set screw shaft provides a ligature opportunity for the stiff end of a shoelace.

Beveled latchbolts can be compromised, permitting access to rooms and therefore should never be used on doors to potentially hazardous locations such as electrical rooms and housekeeping closets.

Specify a 2-piece stainless steel mechanical anti-friction latchbolt for staff-only rooms and other areas identified as low or medium risk.

### Additional Notes

See the Anti-Barricade Strategies pages for additional information relative to hardware functions on locksets and deadlatches.



### Best Access Systems| Grainger Industrial Supply

[www.bestaccess.com](http://www.bestaccess.com)  
[www.grainger.com](http://www.grainger.com)

#### Ligature Resistant Lever Set SPSL Series| LISL/LISE (Mortise)

The ligature resistant lever handle "free-wheels" in both directions on both sides of the door whether the door is locked or unlocked. Proprietary finish resists looping by earbuds.



### TownSteel Architectural Hardware Manufacturing

[www.townsteel.com](http://www.townsteel.com)

#### Ligature Resistant Lever Set TRXL Series (Cylindrical)

Whether Locked or Unlocked, this lever set "Free-Wheels" up and down on both the keyed and non-keyed sides of the door. This "Free-Wheeling" action is standard on double cylinder functions.

#### Cautions:

- ♦ Earbuds can be easily looped around lever handle and remain in place due to friction.
- ♦ Do not specify with push-button privacy function, push-button is loopable.



### Sargent

[www.sargentlock.com](http://www.sargentlock.com)

#### BHL Trim (Mortise)

Whether Locked or Unlocked, this lever set "Free-Wheels" up and down on both the keyed and non-keyed sides of the door. This "Free-Wheeling" action is standard on double cylinder functions.

**Caution: Earbuds can be easily looped around lever handle and remain in place due to friction.**



### Schlage

<http://us.allegion.com>

#### Anti-Ligature Lever SL1 Series & L9000 Mortise Locks

Whether Locked or Unlocked, this lever set "Free-Wheels" up and down on both the keyed and non-keyed sides of the door. This "Free-Wheeling" action is standard on double cylinder functions.

**Caution: Earbuds can be easily looped around lever handle and remain in place due to friction.**



# Division 08 | Openings

## Door Hardware, Lever Handles

### General Notes

Not all door hardware manufacturer's provide an institutional privacy function and not all institutional privacy functions are ligature resistant.

Specify tamper resistant, flush mounted set screws. A recessed set screw shaft provides a ligature opportunity for the stiff end of a shoelace.

Beveled latchbolts can be compromised, permitting access to rooms and therefore should never be used on doors to potentially hazardous locations such as electrical rooms and housekeeping closets.

Specify a 2-piece stainless steel mechanical anti-friction latchbolt for staff-only rooms and other areas identified as low or medium risk.

### Additional Notes

See the Anti-Barricade Strategies pages for additional information relative to hardware functions on locksets and deadlatches.

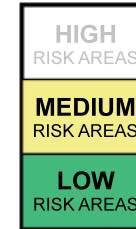


### Marks USA

<http://marksusa.com>

#### Institutional Life Safety Mortise 5SS19 Series Lockset

**Caution: Earbuds can be easily looped around lever handle and remain in place due to friction.**



### Marks USA

<http://marksusa.com>

#### Institutional Life Safety Cylindrical Lockset, Series 195SS

Do not specify with push-button privacy function.

- ♦ Earbuds can be easily looped around lever handle and remain in place due to friction.
- ♦ Do not specify with push-button privacy function, push-button is loopable.



# Division 08 | Openings

## Door Hardware, Lever Handles

### General Notes

Not all door hardware manufacturer's provide an institutional privacy function and not all institutional privacy functions are ligature resistant.

Specify tamper resistant, flush mounted set screws. A recessed set screw shaft provides a ligature opportunity for the stiff end of a shoelace.

Beveled latchbolts can be compromised, permitting access to rooms and therefore should never be used on doors to potentially hazardous locations such as electrical rooms and housekeeping closets.

Specify a 2-piece stainless steel mechanical anti-friction latchbolt for staff-only rooms and other areas identified as low or medium risk.

### Additional Notes

See the Anti-Barricade Strategies pages for additional information relative to hardware functions on locksets and deadlatches.



### Corbin Russwin

[www.corbinruswin.com](http://www.corbinruswin.com)

### BLSS Trim (Mortise)

**Note: A variety of ligatures can be looped on lever resulting in downward ligatures.**



### TownSteel Architectural Hardware Manufacturing

[www.townsteel.com](http://www.townsteel.com)

### Ligature Resistant Lever Set MRXL Series (Mortise)

**Note: A variety of ligatures can be looped on lever resulting in downward ligatures.**



# Division 08 | Openings

## Door Hardware, Privacy Thumbturns

### General Notes

Institutional Privacy Locksets utilize privacy thumbturns. There are 5 key criteria for a successful assembly. Listed below each product are notes identifying whether each criterion is met. The criteria are as follows:

- ◆Ligature resistance
- ◆Release of lock upon door closure
- ◆Outside key override of thumbturn
- ◆Outside locking of door by key
- ◆ADA compliance

### Performance Criteria

Specify tamper resistant, flush mounted set screws. A recessed set screw shaft provides a ligature opportunity for the stiff end of a shoelace.

### Additional Notes

See the Anti-Barricade Strategies pages for additional information relative to hardware functions on locksets and deadlatches.



### Accurate Lock & Hardware

[www accuratelockandhardware.com](http://www accuratelockandhardware.com)

#### ALT-ADA Thumb Turn

- ◆Ligature resistant
- ◆Lock releases upon closing door
- ◆Outside key overrides thumbturn
- ◆Outside key locks door
- ◆ADA compliant



### Schlage

<http://us.allegion.com>

#### Anti-Ligature Thumb Turn SL1

- ◆Ligature resistant
- ◆Lock does not release upon closing door
- ◆Outside key overrides thumbturn
- ◆Outside key locks door
- ◆ADA compliant

**Caution: Due to manufacturing tolerances, some samples allow for looping behind thumbturn.**



### Corbin Russwin

[www.corbinrusswin.com](http://www.corbinrusswin.com)

### Sargent

[www.sargentlock.com](http://www.sargentlock.com)

#### Behavioral Health Thumbturn for use with Sargent Ligature Resistant Trims

- ◆Ligature resistant
- ◆Lock releases upon use of inner lever
- ◆Outside key does **NOT** override thumbturn
- ◆Outside key locks door
- ◆ADA compliant

Note: Because outside key does not override thumbturn, an alternative anti-barricade strategy may be warranted.





# Division 08 | Openings

## Door Hardware, Privacy Thumbturns

### General Notes

Institutional Privacy Locksets utilize privacy thumbturns. There are 5 key criteria for a successful assembly. Listed below each product are notes identifying whether each criterion is met. The criteria are as follows:

- ◆Ligature resistance
- ◆Release of lock upon door closure
- ◆Outside key override of thumbturn
- ◆Outside locking of door by key
- ◆ADA compliance

### Performance Criteria

Specify tamper resistant, flush mounted set screws. A recessed set screw shaft provides a ligature opportunity for the stiff end of a shoelace.

### Additional Notes

See the Anti-Barricade Strategies pages for additional information relative to hardware functions on locksets and deadlatches.



### Marks USA

<http://marksusa.com>

### Life Safety Thumb Turn GL

- ◆Ligature resistance - UNKNOWN
- ◆UNKNOWN if lock releases upon closing door
- ◆UNKNOWN if outside key overrides thumbturn
- ◆UNKNOWN if outside key locks door
- ◆NOT ADA compliant



# Division 08 | Openings

## Door Hardware, Privacy Thumbturns

### General Notes

Institutional Privacy Locksets utilize privacy thumbturns. There are 5 key criteria for a successful assembly. Listed below each product are notes identifying whether each criterion is met. The criteria are as follows:

- ◆Ligature resistance
- ◆Release of lock upon door closure
- ◆Outside key override of thumbturn
- ◆Outside locking of door by key
- ◆ADA compliance

### Performance Criteria

Specify tamper resistant, flush mounted set screws. A recessed set screw shaft provides a ligature opportunity for the stiff end of a shoelace.

### Additional Notes

See the Anti-Barricade Strategies pages for additional information relative to hardware functions on locksets and deadlatches.



### TownSteel Architectural Hardware Manufacturing

[www.townsteel.com](http://www.townsteel.com)

#### Anti Ligature Thumb Turn

**Note: A shoelace can be easily slid behind the thumbturn to present ligature opportunity.**



### Corbin Russwin | Sargent

[www.corbinrusswin.com](http://www.corbinrusswin.com)

[www.sargentlock.com](http://www.sargentlock.com)

#### BLSS | 130KBH Thumbturn For Use with BLSS | BHL Trim

**Note: A shoelace can be easily slid behind the thumbturn to present ligature opportunity.**



### Stanley/Best Access Systems

[www.bestaccess.com](http://www.bestaccess.com)

#### Female Patient Privacy Thumb Turn LTF

**Note: A shoelace can be easily slid behind the thumbturn to present ligature opportunity.**



# Division 08 | Openings

## Door Hardware, Pulls

**Performance Criteria**  
Specify tamper resistant, flush mounted set screws. A recessed set screw shaft provides a ligature opportunity for the stiff end of a shoelace.



**Kingsway Group**  
[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

**KG61 Classic Grip Pull Handle**



**Kingsway Group**  
[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

**KG40 Ergogrip Pull Handle on Back Plate**



**Kingsway Group**  
[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

**KG30 Easy Grip Pull Handle on Back Plate**



# Division 08 | Openings

## Door Hardware, Pulls

### Performance Criteria

Specify tamper resistant, flush mounted set screws. A recessed set screw shaft provides a ligature opportunity for the stiff end of a shoelace.



### Accurate Lock & Hardware

[www accuratelockandhardware.com](http://www accuratelockandhardware.com)

#### Crescent Pull (CP) Rigid Handle



### Accurate Lock & Hardware

[www accuratelockandhardware.com](http://www accuratelockandhardware.com)

#### Accurate Recessed ADA Pull (U700IAL)



# Division 08 | Openings

## Door Hardware, Pulls

### Performance Criteria

Specify tamper resistant, flush mounted set screws. A recessed set screw shaft provides a ligature opportunity for the stiff end of a shoelace.



### Kingsway Group

[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

#### KG70 Face Fixed Recessed Pull Handle

**Note:** Pull handle can be wedged with a knot to create a downward ligature opportunity.



### Rockwood Manufacturing Company

[www.rockwoodmfg.com](http://www.rockwoodmfg.com)

#### D89 - Heavy Duty Security Flush Pull

**Note:** Depth and profile of recess does not provide adequate functionality.



# Division 08 | Openings

## Door Hardware, Stops

### General Notes

Wall mounted door stops should be selected based upon door knob/lever type and should be mechanically fastened to resist twist off. Stops should be installed with solid wood blocking behind and with a construction adhesive applied to the backside of the base plate prior to mechanical attachment with tamper resistant fasteners. Sealant should be applied around the perimeter of the stop.

**Caution: Traditional style door stops do not have concealed fasteners with a clamping ring to secure the stop. These can be removed by hand and ingested.**

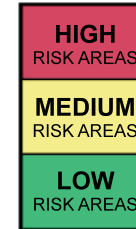


### Kingsway Group

[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

#### KG182 Wall Mounted Door Stop

Solid stainless steel surround with high pressure rubber dome. Security screws pass through the rubber part to ensure it can't be removed.



### Kingsway Group

[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

#### KG183 Large Rubber Wall Mounted Door Stop

Solid high pressure domed rubber door stop.



# Division 08 | Openings

## Door Hardware, Closers

### General Notes

Mount closers on public side of doors to rooms with patient access, or on the secure side of doors that need to automatically lock or latch, such as Store Rooms, Soiled Utility Rooms, and doors with card access readers.

Consider use of concealed closers where risk assessment indicates that surface mounted closers are not acceptable.

### Performance Criteria

Specify gap tolerance at top to be 1/8" maximum. Doors with concealed closers that are intended to receive door top sensors must use a face mounted sensor to avoid conflict with the closer arm.

### Additional Notes

Required use of closers is greatly reduced by NFPA 101: Life Safety Code for sprinklered buildings.

**Caution: All closers inherently carry risk. Do not use closers unless required by code.**



### Rixson

[www.rixson.com](http://www.rixson.com)

#### 51 Series Offset Floor Closer

Fully concealed, single acting, handed. For use with top pivot hinge.

#### Notes:

- ♦ Fully concealed closers have no readily visible or accessible components.
- ♦ Floor closers require special preparation.



### Rixson

[www.rixson.com](http://www.rixson.com)

#### 700 Series Overhead Concealed Closer

Double-acting, non-handed closer concealed in door frame head. For use with bottom pivot hinge.

**Note: Fully concealed closers have no readily visible or accessible components.**



# Division 08 | Openings

## Door Hardware, Closers

### General Notes

Mount closers on public side of doors to rooms with patient access, or on the secure side of doors that need to automatically lock or latch, such as Store Rooms, Soiled Utility Rooms, and doors with card access readers.

Consider use of concealed closers where risk assessment indicates that surface mounted closers are not acceptable.

### Performance Criteria

Specify gap tolerance at top to be 1/8" maximum. Doors with concealed closers that are intended to receive door top sensors must use a face mounted sensor to avoid conflict with the closer arm.

### Additional Notes

Required use of closers is greatly reduced by NFPA 101: Life Safety Code for sprinklered buildings.

**Caution: All closers inherently carry risk. Do not use closers unless required by code.**



### Sargent

[www.sargentlock.com](http://www.sargentlock.com)

#### 268/269 Series Overhead Concealed Closer

Fully concealed closer body in frame head. Fully concealed track in door. Track arm is only visible when door is open.

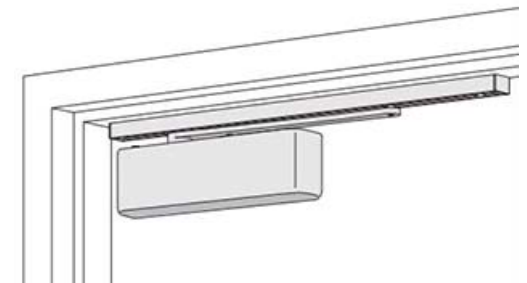
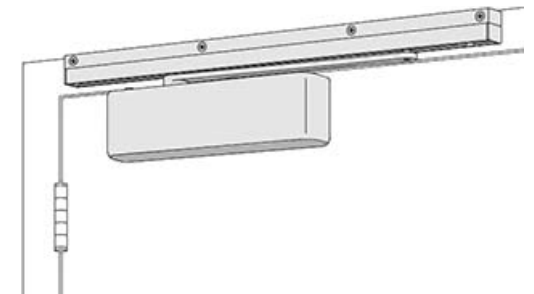


### LCN

<http://us.allegion.com>

#### 4510T SMOOTHIE Series Closer

Heavy duty track closer.





# Division 08 | Openings

## Door Hardware, Gasketing

### General Notes

NYS-OMH discourages the use of perforated anti-ligature gasketing because it can easily be torn off, creating an ongoing maintenance concern and reducing the life safety compliance of the physical buildings.

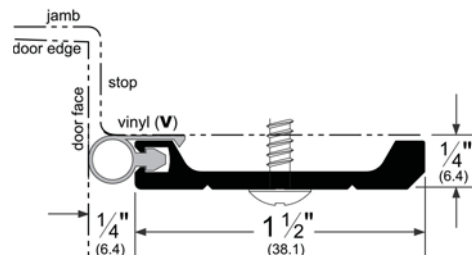


### Pemko

[www.pemko.com](http://www.pemko.com)

#### 290AV Perimeter Gasketing Aluminum with Vinyl Insert

Fasteners to be installed 1" from ends and at 6" on center, maximum.

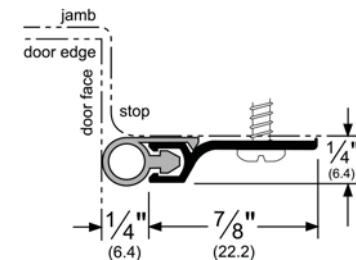


### Pemko

[www.pemko.com](http://www.pemko.com)

#### 303APK Perimeter Gasketing Aluminum with Thermal Plastic Elastomer Insert

Fasteners to be installed 1" from ends and at 6" on center, maximum.

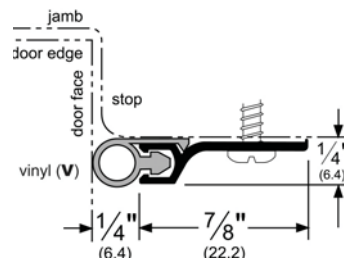


### Pemko

[www.pemko.com](http://www.pemko.com)

#### 303AV Perimeter Gasketing Aluminum with Vinyl Insert

Fasteners to be installed 1" from ends and at 6" on center, maximum.

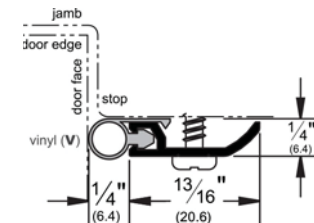


### Pemko

[www.pemko.com](http://www.pemko.com)

#### 316AV Perimeter Gasketing Aluminum with Vinyl Insert

Fasteners to be installed 1" from ends and at 6" on center, maximum.



# Division 08 | Openings

## Door Hardware, Gasketing

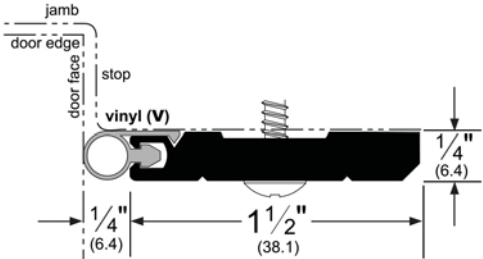
**General Notes**  
NYS-OMH discourages the use of perforated anti-ligature gasketing because it can easily be torn off, creating an ongoing maintenance concern and reducing the life safety compliance of the physical buildings.



**Pemko**  
[www.pemko.com](http://www.pemko.com)

### 2891AV Perimeter Gasketing Aluminum with Vinyl Insert

Fasteners to be installed 1" from ends and at 6" on center, maximum.



# Division 08 | Openings

## Glazing, General



### General Notes

The following are risks and performance criteria to consider when specifying glazing in both supervised and unsupervised areas that are accessible to patients. All windows and glazing in areas accessible to patients should be evaluated as part of the facility risk assessment. Windows and glazing in areas that are not routinely accessible to patients, but may become accessible to patients (e.g. a staff office that is left unlocked, or a staff office that is later converted to a Consult Room or Bedroom) should also be considered as part of the facility risk assessment. Windows and glazing that are considered a risk to patients for the behaviors listed below should be constructed in accordance with this standard. The design of the entire window and glazing system must be considered.

Polycarbonate glazing provides the best protection for the patient against the risks listed below. Laminated safety glazing, other than the laminate specifically identified in this standard, should be used with caution. Glazing products other than polycarbonate or laminated safety glazing should never be used in patient areas. The NYS-OMH does not permit the use of wire glass in its facilities.

### Escape

Exterior windows, interior windows, and glazing are a primary target for patients trying to escape. Windows and glazing in both supervised and unsupervised areas provide potential opportunities for patients to escape. It is critical to consider the design of the entire window, together with the installation in wall openings, when designing to prevent elopement.

### Jumping

Patients will jump in order to hurt themselves, or push others through window openings in order to hurt others. Jumping is a concern for spaces accessible to patients above grade level.

### Ingesting

Patients will eat things for a variety of reasons, including a wish to cause themselves personal harm. Polycarbonate or laminated glazing protected with a surface film should always be used in patient accessible areas. Even small fragments that can come from tempered or laminated glazing can cause severe internal injuries or death. When considering using laminated glazing, care must be taken to select glazing that meets the following criteria:

- ◆ The laminated glazing should wholly resist the breakage (penetration) of the glazing panel.
- ◆ The laminated glazing should wholly retain broken glass in a manner that prevents dislodging from the interlayer.

### Laceration

Patients will cut themselves. Glass presents an obvious opportunity for such behavior. When considering using laminated glazing, care must be taken to select glazing that meets the following criteria:

- ◆ The laminated glazing should wholly resist the breakage (penetration) of the glazing panel.
- ◆ The laminated glazing should wholly retain broken glass in a manner that prevents dislodging from the interlayer.
- ◆ The laminated glazing should prevent access to the sharp edges of broken glass, even if they are retained on the interlayer.

(continued on the next page)

# Division 08 | Openings

## Glazing, General



### Weaponizing

Patients will use objects in their environment to harm others. Glass presents an obvious opportunity for such behavior. When considering using laminated glazing, care must be taken to select glazing that meets the following criteria:

- ◆ The laminated glazing should wholly resist the breakage (penetration) of the glazing panel.
- ◆ The laminated glazing should wholly retain broken glass in a manner that prevents dislodging from the interlayer.
- ◆ The laminated glazing should prevent access to the sharp edges of broken glass, even if they are retained on the interlayer.

The glass industry's standard test for penetration and impact resistance for laminated glass is conducted on a very small unit (approximately 24" square), and is designed to approximate potential for incidental harm from accidental impact. Similar performance to the test sample should not be expected on a 4'-0" x 6'-0" window. New York State requires the use of the AAMA A501.8 Standard Test Method for Determination of Resistance to Human Impact of Window Systems Intended for Use in Psychiatric Applications.

Note: If the intention is to specify laminated glazing in a window unit, confirm that the selected window(s) have passed the aforementioned impact testing with the specified laminated glazing.

# Division 08 | Openings

## Glazing, Exterior Windows, Polycarbonate Glazing

### General Notes

Glazing products other than polycarbonate or laminated safety glazing should never be used in patient areas.

In all patient areas where the applicable codes and regulatory authority permit the use of polycarbonate glazing, polycarbonate glazing provides the best protection for the patient against the previously listed risks.



### Sabic Innovative Plastics

[www.sabic-ip.com](http://www.sabic-ip.com)

**FOR USE AS INNERMOST SURFACE OF EXTERIOR WINDOWS**

### Lexan SL-4855 Polycarbonate Glazing

1/2" thick with Marguard II-UV coating. Specify MR10 with 10 year warranty.



### Sheffield Plastics Inc.

[www.sheffieldplastics.com](http://www.sheffieldplastics.com)

**FOR USE AS INNERMOST SURFACE OF EXTERIOR WINDOWS**

### Makrolon 15 Polycarbonate Glazing

1/2" thick. Use with NYS-OMH 15 year warranty.

# Division 08 | Openings

## Glazing, Exterior Windows, Laminated Safety Glazing

### General Notes

Glazing products other than polycarbonate or laminated safety glazing should never be used in patient areas.

Laminated safety glazing, other than the laminate specifically identified, should be used with caution.



### Oldcastle Building Envelope

[www.oldcastlebe.com](http://www.oldcastlebe.com)

#### FOR USE AS INNERMOST SURFACE OF EXTERIOR WINDOWS

#### ArmorProtect Plus 161000 Laminated Security Glazing

3/8" thick. 3M film is scratchable and may be removed from the laminated glass panel and new film installed by trained maintenance staff. Curing time for the film installation is two weeks minimum. Maintenance staff should be advised to keep spare stock that is fully cured to eliminate down time. Install in frames with a 1" continuous edge bite if dry glazed or 1/2" continuous edge bite if silicone glazed.

- No. 1 Surface:  
5/32" heat-strengthened glass
- No. 2 Surface:  
0.090" Dupont SentryGlas Plus interlayer
- No. 3 Surface:  
5/32" heat-strengthened glass
- No. 4 Surface:  
3M Ultra S600 anti-spall film installed to edge of glass

**Caution: Wet-glazing compounds and cleaning agents have been known to compromise the integrity of the interlayer, and care should be taken with their use. Care should be taken to properly identify the tin side of the glass and to handle it according to manufacturers' instructions.**



### Oldcastle Building Envelope

[www.oldcastlebe.com](http://www.oldcastlebe.com)

#### FOR USE AS OUTERMOST SURFACE OF EXTERIOR WINDOWS

#### Laminated Security Glazing

3/8" thick. Intended for use at grade, courtyards or porches with supervised patient access as an exterior lite in an insulated glazing unit where either 1/2" polycarbonate or 3/8" ArmorProtect Plus 161000 already provides primary patient safety from inside the building.

- No. 1 Surface:  
3/16" heat-strengthened glass
- No. 2 Surface:  
0.060" PVB interlayer
- No. 3 Surface:  
3/16" heat-strengthened glass

**Caution: Do not use in any area where patients may be left unsupervised.**

# Division 08 | Openings

## Glazing, Exterior Windows, Safety Film

### General Notes

Films are used on interior glazing between spaces on the same floor level and only when the use of polycarbonate is impractical.

Anti-spall films are designed to be applied to conventional glazing to prevent showering of shards in the event of failure. Films may prevent off-sharding, laceration, weaponizing, and ingestion. Anti-spall films may provide a cost-effective safety improvement for pre-existing conventional glazing materials by increasing the penetration resistance of any thickness of glass.

Each facility shall conduct their own risk assessment to determine the appropriateness of film applications for use in their specific situations.

### Performance Criteria

Extend film to edge of glazing beyond the face of the glazing bead/stop.

### General Cautions:

- ◆ **Applied films do not provide security.**
- ◆ **Films shall not be used in NYS-OMH facilities to prevent escape or jumping.**
- ◆ **Films are not for use at interior glazing one or more stories above the adjacent floor space.**
- ◆ **Films are not for use at any upper story exterior glazing.**
- ◆ **Films are not for use at exterior glazing facing non-secure open spaces.**



### Ace Security Laminates

[www.usace.com](http://www.usace.com)

#### 200 Series - High End Security

2-ply laminate, 99% UV resistant for use on exterior windows. Lifetime warranty.

# Division 08 | Openings

## Glazing, Interior Windows, Glazing

### General Notes

Glazing products other than polycarbonate or laminated safety glazing should never be used in patient areas.

Laminated safety glazing, other than the laminate specifically identified, should be used with caution.

3/8" polycarbonate is recommended where ingesting, laceration, and weaponization are the risks to be mitigated.

1/2" polycarbonate is recommended where escape or jumping are the risks to be mitigated.



### Sabic Innovative Plastics

[www.sabic-ip.com](http://www.sabic-ip.com)

#### Lexan SL-4855 Polycarbonate Glazing

3/8" or 1/2" thick with Marguard II-UV coating. Specify MR10 with a 10 year warranty. Install in hollow metal frames with a 1" continuous edge bite.



### Sheffield Plastics Inc.

[www.sheffieldplastics.com](http://www.sheffieldplastics.com)

#### Makrolon 15 Polycarbonate Glazing

1/2" thick. Use with NYS-OMH 15 year warranty. Install in hollow metal frames with a 1" continuous edge bite.

### Oldcastle Building Envelope

[www.oldcastlebe.com](http://www.oldcastlebe.com)

#### ArmorProtect Plus 161000 Laminated Security Glazing

3/8" thick. 3M film is scratchable and may be removed from the laminated glass panel and new film installed by trained maintenance staff. Curing time for the film installation is two weeks minimum. Maintenance staff should be advised to keep spare stock that is fully cured to eliminate down time. Install in hollow metal frames with a 1" continuous edge bite if dry glazed or 1/2" continuous edge bite if silicone glazed.

- No. 1 Surface:  
3M Ultra S600 anti-spall film installed to edge of glass
- No. 2 Surface:  
5/32" heat-strengthened glass
- No. 3 Surface:  
0.090" DuPont SentryGlas Plus interlayer
- No. 4 Surface:  
5/32" heat-strengthened glass
- No. 5 Surface:  
3M Ultra S600 anti-spall film installed to edge of glass

**Caution: Wet-glazing compounds and cleaning agents have been known to compromise the integrity of the interlayer, and care should be taken with their use. Care should be taken to properly identify the tin side of the glass and to handle it according to manufacturers' instructions.**



# Division 08 | Openings

## Glazing, Interior Windows, Safety Film

### General Notes

Films are used on interior glazing between spaces on the same floor level and only when the use of polycarbonate is impractical.

Anti-spall films are designed to be applied to conventional glazing to prevent showering of shards in the event of failure. Films may prevent off-sharding, laceration, weaponizing, and ingestion. Anti-spall films may provide a cost-effective safety improvement for pre-existing conventional glazing materials by increasing the penetration resistance of any thickness of glass.

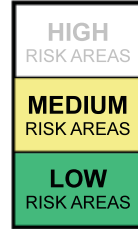
Each facility shall conduct their own risk assessment to determine the appropriateness of film applications for use in their specific situations.

### Performance Criteria

Extend film to edge of glazing beyond the face of the glazing bead/stop.

### General Cautions:

- ◆ Applied films do not provide security.
- ◆ Films shall not be used in NYS-OMH facilities to prevent escape or jumping.
- ◆ Films are not for use at interior glazing one or more stories above the adjacent floor space.
- ◆ Films are not for use at any upper story exterior glazing.
- ◆ Films are not for use at exterior glazing facing non-secure open spaces.



### 3M

[www.3m.com](http://www.3m.com)

#### Ultra S600 Film

3M film is scratchable. When damaged, it may be removed from the glass panel and new film installed by trained maintenance staff. Curing time for the film installation is two weeks minimum. Exact curing time should be verified with the manufacturer. Maintenance staff should be advised to keep spare stock that is fully cured to eliminate down time.



### DuPont

[www.dupont.com](http://www.dupont.com)

#### Spallshield CPET Film

Hard-coated PET film helps stop the showering of small glass particles (called "spall") that can occur when conventional glass fails.

# Division 08 | Openings

## Glazing, Interior Windows, Safety Film

### General Notes

Films are used on interior glazing between spaces on the same floor level and only when the use of polycarbonate is impractical.

Anti-spall films are designed to be applied to conventional glazing to prevent showering of shards in the event of failure. Films may prevent off-sharding, laceration, weaponizing, and ingestion. Anti-spall films may provide a cost-effective safety improvement for pre-existing conventional glazing materials by increasing the penetration resistance of any thickness of glass.

Each facility shall conduct their own risk assessment to determine the appropriateness of film applications for use in their specific situations.

### Performance Criteria

Extend film to edge of glazing beyond the face of the glazing bead/stop.

### General Cautions:

- ◆ **Applied films do not provide security.**
- ◆ **Films shall not be used in NYS-OMH facilities to prevent escape or jumping.**
- ◆ **Films are not for use at interior glazing one or more stories above the adjacent floor space.**
- ◆ **Films are not for use at any upper story exterior glazing.**
- ◆ **Films are not for use at exterior glazing facing non-secure open spaces.**



### Madico

[www.safetyshield.com](http://www.safetyshield.com)

### Safetyshield 1500 Film

High strength glazing film applied to the exposed surface of glass reduces glass breakage and holds broken glass in place until glazing can be replaced.

# Division 08 | Openings

## Glazing, Interior Windows, Fire Rated

**General Notes**

Do not use wire glazing in new applications.

Existing wire glazing should be removed and replaced with safety glazing, or protected with either an aftermarket vandal resistant protective film or surface mounted 3/8" polycarbonate on face of glazing accessible to patients.

**Code Notes**

For 1 Hour Openings:  
Use 3/8" polycarbonate in conjunction with sprinklerheads and 5/8" stops where the authority having jurisdiction will accept NYS-OMH's Warnock Hersey test (not tested per ASTM F1233).  
OR  
Provide fire-rated glazing clad with 1/4" polycarbonate on each side accessible to patients.

For Greater than 1 Hour Openings:  
FireLite and FireLite PLUS products can be used.



**Technical Glass Products**

[www.fireglass.com](http://www.fireglass.com)

**FireLite PLUS**

5/16" thick laminated, polished, fire rated, and impact safety rated glazing. Listed for use in doors, sidelites, and transoms with fire rating requirements ranging from 20 minutes to 3 hours.

**Caution: FireLite PLUS was the safest ceramic glazing tested. However, all the FireLite products produced shards of glass by impact.**



FIRELITE ASSEMBLIES				
RATING	ASSEMBLY	MAX. EXPOSED AREA	MAX. WIDTH OF EXPOSED GLAZING	MAX. HEIGHT OF EXPOSED GLAZING
20 to 60 min.	DOORS (non-temp rise)	3,204 sq.in./22.25 sq.ft.	36"	89"
	DOORS (temp rise)	100 sq.in./0.69 sq.ft.	12"	33"
	OTHER THAN DOORS	3,325 sq.in./23.09 sq.ft.	95"	95"
90 min.	DOORS (non-temp rise)	2,034 sq.in./14.13 sq.ft.	36"	56-1/2"
	DOORS (temp rise)	100 sq.in./0.69 sq.ft.	12"	33"
	OTHER THAN DOORS	2,627 sq.in./18.24 sq.ft.	56-1/2"	56-1/2"
3 hours	DOORS	100 sq.in./0.69 sq.ft.	12"	33"

Check with frame manufacturer for maximum tested glass sizes and required stop height.  
NOTE: Individual lite sizes cannot exceed "Max. Exposed Area" listed above.

FireLite PLUS



FireLite NT Standard



FireLite NT Premium



# Division 08 | Openings

## Glazing, Interior Windows, Fire Rated

### General Notes

Do not use wire glazing in new applications.

Existing wire glazing should be removed and replaced with safety glazing, or protected with either an aftermarket vandal resistant protective film or surface mounted 3/8" polycarbonate on face of glazing accessible to patients.

### Code Notes

For 1 Hour Openings:

Use 3/8" polycarbonate in conjunction with sprinklerheads and 5/8" stops where the authority having jurisdiction will accept NYS-OMH's Warnock Hersey test (not tested per ASTM F1233).

OR

Provide fire-rated glazing clad with 1/4" polycarbonate on each side accessible to patients.

For Greater than 1 Hour Openings:

FireLite and FireLite PLUS products can be used.



### SaftiFirst

[www.safti.com](http://www.safti.com)

### SuperLite Fire Rated Glazing

1/4" monolithic safety and positive pressure fire rated glazing. For use in wood, hollow metal, aluminum or any equally fire rated framing systems.

Traditional fire rated glass with a tough, durable fire rated safety film applied to meet the highest impact safety standard, CPSC 16CFR 1201 Cat. II, which requires withstanding 400 ft. lbs. due to accidental impact.

### Notes:

- ◆ **These products are rejected because of breakage and shard production.**
- ◆ **These products are not tested per ASTM F1233 and therefore are not considered Security Glazing.**
- ◆ **Impact safety ratings do not equal security ratings.**
- ◆ **While these products have many applications as Safety Impact Glazing, such as in schools and public buildings, they are not intended for special populations where security is also required.**

# Division 08 | Openings Glazing, Observation Mirrors

## Installation Notes

Installation Option 1:  
Install glazing in a hollow metal frame  
with glazing stops that provide a 5/8”  
continuous edge bite.



Installation Option 2:  
Install glazing in a hollow metal frame  
with glazing stops that provide a 1/2”  
continuous edge bite with structural  
silicone sealant at the full perimeter.



## Plaskolite, Inc.

[www.plaskolite.com](http://www.plaskolite.com)

### See-Thru Mirror

Two-way observation polycarbonate mirror,  
0.236” thick minimum. Product is semi-  
transparent.



Transparency



Reflectivity



# Division 08 | Openings

## Exterior Windows

### General Notes

See the NYS-OMH Specification Guideline for 085653 Security Windows for additional information.



### Performance Criteria

Alternate minimum standard for facilities other than the newly constructed NYS-OMH operated: Provide detention screen, or windows with sash, frame, and glazing capable of withstanding 2,000 ft-lb impact loads from a 1 foot diameter impact object without breach, dislodging or breakage. The use of alternative window treatments identified elsewhere in this document are an option to integral blinds.



### Caution:

- ◆ Exercise caution when window size exceeds 4'-0" x 6'-0".

### Note:

- ◆ Structural and architectural detailing of psychiatric windows is critical.

### Britplas

[www.britplas.com](http://www.britplas.com)

### Safevent Windows

#### New Exterior Window Applications

Horizontal Sliders. Sliding window assembly with perforated metal screen. Install with operable slider on the exterior. Comply with 2,000 ft-lb impact test as specified by NYS-OMH and AAMA 501.8 -14 Standard Test Method for Determination of Resistance to Human Impact of Window Systems Intended for Use in Psychiatric Applications.

- ◆ No security screens required.
- ◆ Provide 4" opening restriction for operable windows.
- ◆ Provide one of the following for interior glazing. When specifying laminated glazing, first verify that the window has passed the above referenced impact test with laminated glazing.
  - ◆ 1/2" polycarbonate with 1" continuous edge bite, dry glazed for interior glazing.
  - ◆ Glass-clad polycarbonate.
- ◆ Provide ligature resistant manual window operator or electric operator.
- ◆ Provide concealed operable blinds with ligature resistant operator.
- ◆ See NYS-OMH Specification Guideline for 085653 Security Windows for acceptable locking mechanisms.

View from Interior - Screen on left panel



Window Operator - Manual Knob|Lock



# Division 08 | Openings

## Exterior Windows

### General Notes

See the NYS-OMH Specification Guide-line for 085653 Security Windows for additional information.



### Performance Criteria

Alternate minimum standard for facilities other than the newly constructed NYS-OMH operated: Provide detention screen, or windows with sash, frame, and glazing capable of withstanding 2,000 ft-lb impact loads from a 1 foot diameter impact object without breach, dislodging or breakage. The use of alternative window treatments identified elsewhere in this document are an option to integral blinds.



### Cautions:

- ◆ Exercise caution when window size exceeds 4'-0" x 6'-0".
- ◆ Windows with casement sashes can be easily looped.

### Note:

- ◆ Structural and architectural detailing of psychiatric windows is critical.

## Graham Architectural Products

[www.grahamwindows.com](http://www.grahamwindows.com)

### S6300 Series Human Impact Window

#### New Exterior Window Applications

Comply with 2,000 ft-lb impact test as specified by NYS-OMH and AAMA 501.8 -14 Standard Test Method for Determination of Resistance to Human Impact of Window Systems Intended for Use in Psychiatric Applications.

- ◆ Casement, projected or fixed.
- ◆ No security screens required.
- ◆ Provide 4" opening restriction for operable windows.
- ◆ Provide 1/2" polycarbonate with 1" continuous edge bite, dry glazed for interior glazing.
- ◆ Provide concealed operable blinds with ligature resistant operator.
- ◆ See NYS-OMH Specification Guideline for 085653 Security Windows for acceptable locking mechanisms.



# Division 08 | Openings

## Exterior Windows

### General Notes

See the NYS-OMH Specification Guide-line for 085653 Security Windows for additional information.



### Performance Criteria

Alternate minimum standard for facilities other than the newly constructed NYS-OMH operated: Provide detention screen, or windows with sash, frame, and glazing capable of withstanding 2,000 ft-lb impact loads from a 1 foot diameter impact object without breach, dislodging or breakage. The use of alternative window treatments identified elsewhere in this document are an option to integral blinds.



### Cautions:

- ◆ Exercise caution when window size exceeds 4'-0" x 6'-0".
- ◆ Windows with casement sashes can be easily looped.

### Note:

- ◆ Structural and architectural detailing of psychiatric windows is critical.

## Oldcastle Building Envelope

[www.oldcastlebe.com](http://www.oldcastlebe.com)

### Pinnacle Series 66P Moduline Windows

#### New Exterior Window Applications

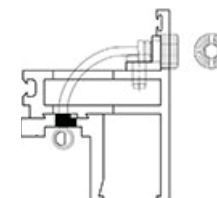
Pinnacle Series Moduline Windows, 66P; 4" for use with 1" exterior insulated glazing. Comply with 2,000 ft-lb impact test as specified by NYS-OMH and AAMA 501.8 -14 Standard Test Method for Determination of Resistance to Human Impact of Window Systems Intended for Use in Psychiatric Applications.

- ◆ No security screens required.
- ◆ External insect screens are available.
- ◆ Provide 4" opening restriction for operable windows.
- ◆ Provide 1/2" polycarbonate with 1" continuous edge bite, dry glazed for interior glazing.
- ◆ Provide concealed operable blinds with ligature resistant operator (e.g. blind tilt control knob or 1/8" vertical thumb wheel).
- ◆ See NYS-OMH Specification Guideline for 085653 Security Windows for acceptable locking mechanisms.

**Caution: Do not use low profile, side mount angled or vertical mount angled operators for concealed operable blinds because they create ligature points.**



Blind Operators  
Tilt Control Knob      Vertical Thumb Wheel





# Division 08 | Openings

## Exterior Windows

### General Notes

See the NYS-OMH Specification Guide-line for 085653 Security Windows for additional information.



### Performance Criteria

Alternate minimum standard for facilities other than the newly constructed NYS-OMH operated: Provide detention screen, or windows with sash, frame, and glazing capable of withstanding 2,000 ft-lb impact loads from a 1 foot diameter impact object without breach, dislodging or breakage. The use of alternative window treatments identified elsewhere in this document are an option to integral blinds.



### Cautions:

- ♦ Exercise caution when window size exceeds 4'-0" x 6'-0".
- ♦ Windows with casement sashes can be easily looped.

### Note:

- ♦ Structural and architectural detailing of psychiatric windows is critical.

## Wausau Window & Wall Systems

[www.wausauwindow.com](http://www.wausauwindow.com)

### 4000i-DT Psychiatric Windows 2187-DT SEAL TM Windows

#### New Exterior Window Applications

- 4000i-DT in-projected casement and fixed units.
- ♦ No security screens required.
  - ♦ External insect screens are available.

#### Retrofit Exterior Window Applications

2187-DT SEAL TM can be installed over existing in-place windows, or as part of aluminum storefront or curtain wall installation.

#### New & Retrofit Exterior Window Applications

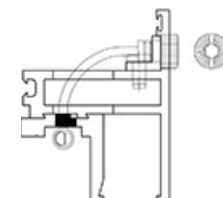
Comply with 2,000 ft-lb impact test as specified by NYS-OMH and AAMA 501.8 - 14 Standard Test Method for Determination of Resistance to Human Impact of Window Systems Intended for Use in Psychiatric Applications.

- ♦ Provide 4" opening restriction for operable windows.
- ♦ Provide 1/2" polycarbonate with 1" continuous edge bite, dry glazed for interior glazing.
- ♦ Provide concealed operable blinds with ligature resistant operator (e.g. blind tilt control knob).
- ♦ See NYS-OMH Specification Guide-line for 085653 Security Windows for acceptable locking mechanisms.

**Caution: Do not use low profile, side mount angled or vertical mount angled operators for concealed operable blinds because they create ligature points.**



Blind Operator  
Tilt Control Knob



# Division 08 | Openings

## Access Doors

### General Notes

Avoid the use of access doors in patient areas to the greatest extent possible, particularly in unsupervised areas such as patient bedrooms and bathrooms.



### Installation Notes

Access door frames shall be 16 gauge steel. Access door shall be 20 gauge steel, welded pan type. Door flange shall be 1" wide minimum, for embedment in drywall compound. Hinges shall be continuous. Base metal shall be steel with primer coat of rust inhibitive electrostatic powder baked gray enamel or stainless steel.



The access door may be filled with fire rated insulation. The door shall be automatic closing, self-latching and contain an interior latch release.



Locks shall be mortise slam latch with keyed cylinder. All locks shall be keyed alike.

### Cendrex

[www.cendrex.com](http://www.cendrex.com)

### PFI Series Fire Rated Access Doors

**Caution: Corners of door panel are not fully mitered, provide sealant bead to close the corner.**



### J. L. Industries

[www.jlindustries.com](http://www.jlindustries.com)

### FDWB Fire Rated Access Panel



# Division 09 | Finishes



# Division 09 | Finishes

## Wall Assemblies, General



### Ceiling Assemblies

The Designer should determine walls that are required to have an STC rating by the applicable codes, regulations, and the Joint Commission.

- OMH Wall Assembly 1: 1 layer 1/2" or 5/8" drywall, 3-5/8" 20 ga. structural steel studs @ 16" oc. Refer to other wall assemblies for opposite side wall materials.
  - ◆ Provide Type-X or Type-C drywall where part of a rated assembly (UL U419).
  - ◆ Provide water resistant (Green board or Type-M) drywall at locations exposed to moisture (bathrooms, showers, kitchens, dishwashing, pools).
  - ◆ Provide 3-1/2" fiberglass batt insulation where required for acoustical separation.
  - ◆ Provide fire treated wood blocking where required for anchoring items to wall.
  - ◆ Designer to specify height of wall (to above ceiling or underside of deck) based on code requirement, security, structure, and ceiling type.
- OMH Wall Assembly 2: 1 layer 5/8" very high impact drywall (floor to 4'-0" a.f.f.) and 5/8" drywall (4'-0" a.f.f. to above ceiling) plus one layer 5/8" very high impact drywall (full wall height). See OMH Gypsum Board Assemblies Specification Guideline Section 09 21 16. Refer to other wall assemblies for opposite side wall materials
  - ◆ Provide Type-X or Type-C drywall where part of a rated assembly (UL U419).
  - ◆ Provide 3-1/2" fiberglass batt insulation where required for acoustical separation.
  - ◆ Provide fire treated wood blocking where required for anchoring items to wall.
  - ◆ Designer to specify height of wall (to above ceiling or underside of deck) based on code requirement, security, structure, and ceiling type
  - ◆ Refer to OMH Gypsum Board Assemblies Specification Guideline (Section 09 21 16) for Level 5 finishing of VHI Drywall.
- OMH Wall Assembly 3: Protection padding system (see OMH Specification Guideline Section 13 99 99). 3-5/8" 16 ga. steel studs @ 16" oc with 3-1/2" fiberglass batt insulation. Refer to other wall assemblies for opposite side wall materials.
  - ◆ Provide additional layer(s) of Type-X or Type-C drywall between padding system and studs where part of a rated assembly.
- OMH Wall Assembly 4: 1 layer 5/8" DensShield tile guard glass mat water-resistant backing board (see OMH Specification Guideline Section 09 30 13) 3-5/8" 20 ga. steel studs @ 16" oc. Refer to other wall assemblies for opposite side wall materials.
  - ◆ Provide additional layer(s) of Type-X or Type-C drywall between backer board and studs where part of a rated assembly (UL U419).
  - ◆ Provide 3-1/2" fiberglass batt insulation where required for acoustical separation.
  - ◆ Provide fire treated wood blocking where required for anchoring items to wall.
  - ◆ Designer to specify height of wall (to above ceiling or underside of deck) based on code requirement, security, structure, and ceiling type.
- OMH Wall Assembly 5: Concrete masonry
  - ◆ CMU type, thickness, and reinforcing selected by designer.
  - ◆ Refer to UL U-Series designs where fire resistance ratings are required.

# Division 09 | Finishes

## Ceiling Assemblies, General



### Ceiling Assemblies

The Designer should determine ceilings that are required to have an STC rating or Special Acoustic properties. Ceiling heights should be evaluated based on patient population and risk levels. Frequent accessibility to MEP items above the ceiling and vulnerability to access door should be considered when selecting a ceiling system.

- OMH Ceiling Assembly 1: 1 layer 1/2" or 5/8" drywall with metal framing/suspension system.
  - ♦ Provide Type-X or Type-C drywall where part of a rated assembly.
  - ♦ Provide water resistant drywall at locations exposed to moisture.
  - ♦ Provide perforated acoustical drywall at locations requiring additional acoustical control.
  
- OMH Ceiling Assembly 2: 1 layer 5/8" abuse resistant drywall with metal framing/suspension system.
  - ♦ Provide additional layers of Type-X or Type-C drywall between VH1 drywall and metal support system where part of a rated assembly.
  
- OMH Ceiling Assembly 3: 3/4" suspended acoustic tile on intermediate duty suspension system.
  - ♦ Hold down clips are not recommended for use with this ceiling assembly. They can become dislodged over time and used as weapons.
  
- OMH Ceiling Assembly 4: Class A FRP (Kemlite) Ceiling Panel with FRP suspension system and 12 gauge stainless steel wire.
  - ♦ Hold down clips are not recommended for use with this ceiling assembly.
  
- OMH Ceiling Assembly 5a: Metal Panel Ceiling System
  - ♦ 22 gauge steel minimum thickness perforated metal tiles secured to suspension grid with integral clips.
  
- OMH Ceiling Assembly 5b: Secure Metal Panel Ceiling System
  - ♦ 18 gauge steel minimum thickness perforated metal tiles held in place with secure suspension grid. Compatible access doors are required for access.
  
- OMH Ceiling Assembly 6: Metal Plank Ceiling System
  - ♦ 12-20 gauge steel perforated metal planks captured in wall channels.
  - ♦ Various methods for locking planks and for acoustical control are provided by different manufacturers.

# Division 09 | Finishes

## Wall Base

### General Notes

Use only heat welded integral cove base, solid wood or prefinished rubber/PVC base.

### Installation Notes

Integral Cove Base: Adhere base to wall. Provide tamper resistant sealant along the top edge of base.

Wood and rubber Wall Base: Adhere and mechanically fasten base to wall. Fasteners shall be screwed into wood blocking, countersunk and filled.

**Caution: Do not specify conventional commercial vinyl or rubber wall base in patient areas. These products are easily removable, presenting risk of weaponization.**



### Custom Wood Base

#### Custom Designed Wood Base

Solid 3/4" hardwood with eased or bullnose top and corners. Provide tamper resistant sealant at joint between floor and base, base and wall surface. Finish six sides of all wood base prior to installation.



### Johnsonite

[www.johnsonite.com](http://www.johnsonite.com)

#### Millwork Contoured Wall Base

Thermoplastic solid rubber base. Various profiles range in height from 2 1/2" to 6" high, 1/4" to 3/8" thick.



# Division 09 | Finishes

## Wall Base

### General Notes

Use only heat welded integral cove base, solid wood or prefinished rubber/PVC base.

### Installation Notes

Integral Cove Base: Adhere base to wall. Provide tamper resistant sealant along the top edge of base.

Wood and rubber Wall Base: Adhere and mechanically fasten base to wall. Fasteners shall be screwed into wood blocking, countersunk and filled.

**Caution: Do not specify conventional commercial vinyl or rubber wall base in patient areas. These products are easily removable, presenting risk of weaponization.**



### Flexco

[www.flexcofloors.com](http://www.flexcofloors.com)

### Health Design Wall Base

Thermoplastic rubber base tapers from 1/8" thick to adjacent floor thickness. All seams are heat welded.



### Johnsonite

[www.johnsonite.com](http://www.johnsonite.com)

### SCC-XX-A Cove Cap Moulding

Vinyl cove cap moulding accessory for 1/8" cove base material.

**Note: Material can be pulled out of place in installation and weaponized.**



# Division 09 | Finishes

## Ceilings

### General Notes

Ceiling panels are not removable and access doors need to be installed to provide access above the ceiling.



### Installation Notes

All ceiling panels are to be mechanically fastened with tamper resistant fasteners, even interlocking panels.



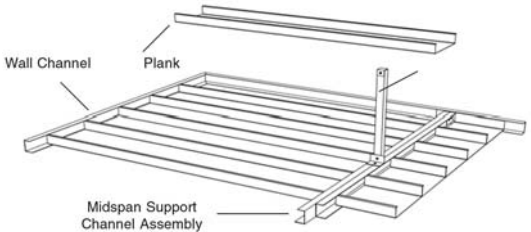
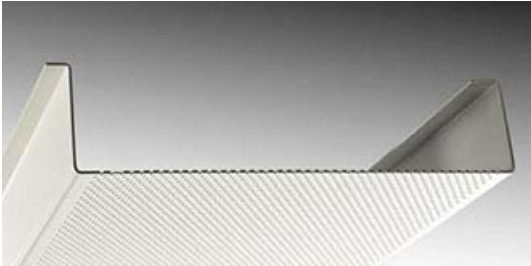
Specifier shall select steel gauge based on finished ceiling heights and risk levels of installation areas.

### Rockfon

[www.rockfon.com](http://www.rockfon.com)

### Securline Metal Plank Security Ceiling System

Solid or perforated galvanized steel, 12 to 18 gauge, Class A per ASTM E84. Overlapping planks with heavy duty channels, standard size 1'-10". Washable baked on enamel finish. Optional acoustical pads available. Access doors can be cut into the assembly.





# Division 09 | Finishes

## Ceilings

**General Notes**

Ceiling panels are not removable and access doors need to be installed to provide access above the ceiling.



**Installation Notes**

All ceiling panels are to be mechanically fastened with tamper resistant fasteners, even interlocking panels.

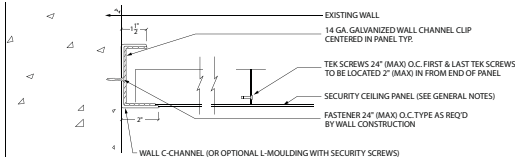
Specifier shall select steel gauge based on finished ceiling heights and risk levels of installation areas.

**Accurate Ceiling Systems**

[www.accurateperforating.com](http://www.accurateperforating.com)

**Sentry Plank Ceiling System**

Solid or perforated 1' x 10', 1'-6" x 10', or 2' x 10' overlapping metal planks with an exposed heavy duty perimeter wall channel. Available in 12, 14, 16, 18, and 20 gauge steel or .040 aluminum. Planks are washable with baked-on enamel finish.



# Division 10 | Specialties



# Division 10 | Specialties

## Shower & Privacy Curtains

### General Notes

Users shall perform a risk assessment to determine their options for shower and privacy curtains.

### Performance Criteria

Material tests should include verifying fabrics in both wet and dry conditions, which can affect asphyxiation.

### Installation Notes

Specify breathable fabric material for shower and privacy curtains.

Recessed ceiling track shall run continuously between walls. Surface mounted ceiling track shall run continuously between walls, or be installed with secure end caps. Fill all joints between sections of track with tamper resistant sealant to reduce opportunities for ligation.

### Cautions:

- ◆ End caps can create opportunity for a wedge ligation.
- ◆ A looping point can be created in curtain tracks when an object, such as a penny, is inserted into the track.
- ◆ The breakaway weight for curtain carriers may exceed the limits at which self-harm can be induced. Carriers can be ganged together to increase the release weight.



### InPro Corporation

[www.inprocorp.com](http://www.inprocorp.com)

#### Clickeze Ultra Cubicle Track

Extruded aluminum track provides heavy duty strength. For use with Clickeze accessories.

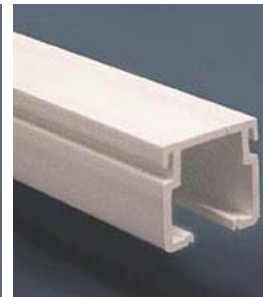
#### Clickeze Whisper Cubicle Track

Extruded PVC track allows for noise reduction during curtain movement. For use with Clickeze accessories.

Ultra Track



Whisper Track



**Caution: Potential looping point at curtain tracks.**



### Construction Specialties, Inc.

[www.c-sgroup.com](http://www.c-sgroup.com)

#### Breakaway Carrier #975P

Hook on carrier is designed to pop out of the axle when approximately 22 lbs. of pressure is applied to the hook, and can be reused.



### InPro Corporation

[www.inprocorp.com](http://www.inprocorp.com)

#### Clickeze Pop Out Carrier

Hook on carrier releases, allowing the curtain to fall, and disengages at approximately 10 lbs. of pressure. For use with both Clickeze Ultra and Whisper Curtain Tracks.



# Division 10 | Specialties

## Shower & Privacy Curtains

### General Notes

Users shall perform a risk assessment to determine their options for shower and privacy curtains.

### Performance Criteria

Material tests should include verifying fabrics in both wet and dry conditions, which can affect asphyxiation.

### Installation Notes

Specify breathable fabric material for shower and privacy curtains.

Recessed ceiling track shall run continuously between walls. Surface mounted ceiling track shall run continuously between walls, or be installed with secure end caps. Fill all joints between sections of track with tamper resistant sealant to reduce opportunities for ligature.

### Cautions:

- ◆ End caps can create opportunity for a wedge ligature.
- ◆ A looping point can be created in curtain tracks when an object, such as a penny, is inserted into the track.
- ◆ The breakaway weight for curtain carriers may exceed the limits at which self-harm can be induced. Carriers can be ganged together to increase the release weight.



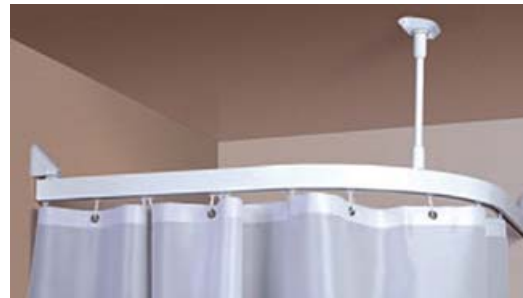
### AFS Security

[www.afs-securitysystems.com](http://www.afs-securitysystems.com)

### Kestrel Movatrack

Movatrack curtain suspension system utilizes magnetic wall brackets where the track meets the wall, and ceilings brackets with suspension hangers at ceilings. Under excess loads, the suspension hangers separate from the ceiling brackets.

**Note: Loose parts can be ingested and ease of disassembly is likely to be a nuisance to staff.**



### Imperial Fastener Company

[www.imperialfastener.com](http://www.imperialfastener.com)

### IFC-69 Break-A-Way Track & IFC-79 Break-A-Way Track

The IFC-69 ceiling mounted and IFC-79 wall mounted tracks are used with “Safety Tabs” that attach to box pleated window draperies or shower curtains.

### Notes:

- ◆ Velcro on “Safety Tabs” creates a tie off ligature point.
- ◆ IFC-79 wall mounted curtain track can be continuously looped end to end.

IFC-69 Break-A-Way Track



IFC-79 Break-A-Way Track



# Division 10 | Specialties

## Shower & Privacy Curtains

### General Notes

Users shall perform a risk assessment to determine their options for shower and privacy curtains.

### Performance Criteria

Material tests should include verifying fabrics in both wet and dry conditions, which can affect asphyxiation.

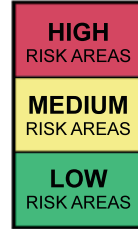
### Installation Notes

Specify breathable fabric material for shower and privacy curtains.

Recessed ceiling track shall run continuously between walls. Surface mounted ceiling track shall run continuously between walls, or be installed with secure end caps. Fill all joints between sections of track with tamper resistant sealant to reduce opportunities for ligature.

### Cautions:

- ◆ **End caps can create opportunity for a wedge ligature.**
- ◆ **A looping point can be created in curtain tracks when an object, such as a penny, is inserted into the track.**
- ◆ **The breakaway weight for curtain carriers may exceed the limits at which self-harm can be induced. Carriers can be ganged together to increase the release weight.**

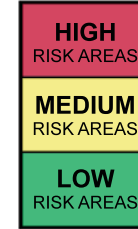


### Architex

[www.architex-ljh.com](http://www.architex-ljh.com)

### Rx Privacy Curtain

Made with 100% Avora polyester, Style #5/2019717-1000.



### Arc|Com

[www.arc-com.com](http://www.arc-com.com)

### Options Curtain

Customizable textiles to increase durability and fire resistance. Stain repellent.

# Division 10 | Specialties

## Shower & Privacy Curtains

### General Notes

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### Performance Criteria

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- ◆ **A looping point can be created in curtain tracks when an object, such as a penny, is inserted into the track.**
- ◆ **The breakaway weight for curtain carriers may exceed the limits at which self-harm can be induced. Carriers can be ganged together to increase the release weight.**

### Standard Textile

[www.standardtextile.com](http://www.standardtextile.com)

### Perfect Panel Curtains

**Note: Ganging of multiple snaps along the curtain track can create a ligature point.**



# Division 10 | Specialties

## Closet Rods, Clothes & Towel Hooks

### Code Notes

2010 FGI “Guidelines for the Construction of Hospitals and Outpatient Facilities” requires that; “Shelves for folded garments shall be used instead of arrangements for hanging garments.”



### Kingsway Group

[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

#### KG180 Coat Hook

Stainless steel surround. Rubber hook releases under downward applied load.



### Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

#### WH1830A-SLPT Single Hook

Adjustable, auto release clothes hook.

**Note: Adjust tension in ball joint to ensure release of hook.**



### Norva Plastics, Inc.

[www.norvaplastics.com](http://www.norvaplastics.com)

#### Polyethylene Hook

**Caution: Hook can be tied off to form a side ligature point. Installation location should be considered to prevent a second point of ligature.**



# Division 10 | Specialties

## Closet Rods, Clothes & Towel Hooks

### Code Notes

2010 FGI “Guidelines for the Construction of Hospitals and Outpatient Facilities” requires that; “Shelves for folded garments shall be used instead of arrangements for hanging garments.”



### AFS Security

[www.afs-securitysystems.com](http://www.afs-securitysystems.com)

#### K507 Coat Hook

**Note:** Loose parts can be ingested and ease of disassembly is likely to be a nuisance to staff.



### Bradley Corporation

[www.bradleycorp.com](http://www.bradleycorp.com)

#### Model SA36 Tension Towel Hook

**Note:** Hook can be tied off to form a ligature point.



### American Specialties, Inc.

[www.americanspecialties.com](http://www.americanspecialties.com)

#### 123 Square Clothes Hook

### Oddball Industries

[www.oddballindustries.com](http://www.oddballindustries.com)

#### SP-6 Clothes/Towel Hook SP-6A Clothes/Towel Hook with adjustable tension release

**Note:** Hook can be tied off to form a ligature point.



### HenkelHook

[www.henkelhook.com](http://www.henkelhook.com)

#### HenkelHook

**Note:** Hook can be wedged to create a ligature point.





# Division 10 | Specialties

## Closet Rods, Clothes & Towel Hooks

**Code Notes**  
 2010 FGI “Guidelines for the Construction of Hospitals and Outpatient Facilities” requires that; “Shelves for folded garments shall be used instead of arrangements for hanging garments.”



**Laidlaw**  
[www.laidlawdirect.com](http://www.laidlawdirect.com)

**Orbis Coat Hook 81.AL8.03**  
 Anti-ligature spherical casing. Hook can support the weight of a small coat but releases under downward applied load.

**Note:** Hook can be tied off to form a ligature point.



**Norix**  
[www.norix.com](http://www.norix.com)

**Towel Hook**

**Note:** Hook can be tied off with a loop to form a ligature point.



**Oddball Industries**  
[www.oddballindustries.com](http://www.oddballindustries.com)

**SP-1 Closet “Bar”**

**Note:** Hangers may be ganged together to increase breakaway weight.



**Whitehall Manufacturing**  
[www.whitehallmfg.com](http://www.whitehallmfg.com)

**BestCare Clothing & Towel Holder WH1830**

**Note:** Hook can be tied off to form a ligature point.



# Division 10 | Specialties

## Closet Rods, Clothes & Towel Hooks

### Code Notes

2010 FGI "Guidelines for the Construction of Hospitals and Outpatient Facilities" requires that; "Shelves for folded garments shall be used instead of arrangements for hanging garments."



### Willoughby Industries, Inc.

[www.willoughby-ind.com](http://www.willoughby-ind.com)

### CTH-4 Clasp Type Towel Hook

#### Notes:

- ◆ Hooks can be tied off of to form a ganged ligature point
- ◆ Clasp style hook allow for wedging opportunities



# Division 10 | Specialties

## Handrails & Grab Bars, General

### General Notes

Nearly all handrails and grab bars are subject to possible wedge ligature with a shoe or other object.

Grab bars should only be installed where required by code.

### Installation Notes

Verify that all handrails and grab bars are installed per the manufacturer's installation instructions. Proper installation is critical in order for tight tolerances between the multiple product pieces.

Sealant may be required to fill voids around the perimeter of handrails and grab bars depending on installation substrate.

**Caution: Traditional code compliant handrails and grab bars create obvious ligature opportunities.**



# Division 10 | Specialties

## Handrails

### General Notes

All handrails are subject to possible wedge ligature with a shoe or other object.

### Installation Notes

Verify that all handrails are installed per the manufacturer's installation instructions. Proper installation is critical in order for tight tolerances between the multiple product pieces.

Sealant may be required to fill voids around the perimeter of handrails and grab bars depending on installation substrate.

### Additional Notes

The inside of handrails with continuous mounting brackets are susceptible to the collection of debris.

**Caution: Traditional code compliant handrails create obvious ligature opportunities.**



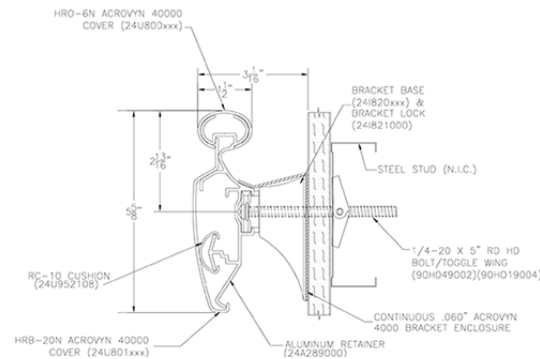
### Construction Specialties, Inc.

[www.c-sgroup.com](http://www.c-sgroup.com)

#### HRB-20CMHLN Acrovyn 4000 Handrail

Handrail/bumper guard with psychiatric continuous bracket enclosure, to address safety issues for patients eliminating the gap between the wall and handrail. Meets safety codes with ADA and ANSI compliance.

**Caution: Cover is easily removable and can be broken or weaponized.**



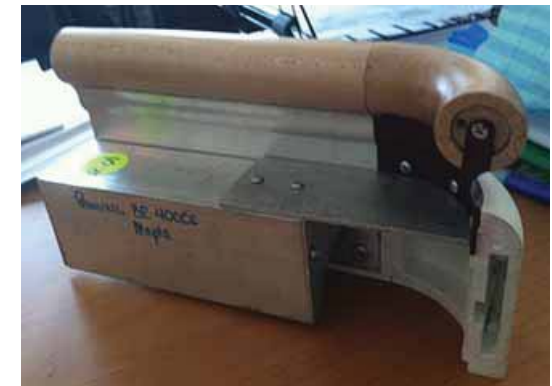
### Pawling Corporation

[www.pawling.com](http://www.pawling.com)

#### BR-400CS Series Handrail

6-1/4" high vinyl handrail. Suicide resistant design to minimize leverage and looping with radius corners. Aluminum tube with laser cut 1/8" aluminum closure plates. Continuous secure bracket.

**Caution: Cover is easily removable and can be broken or weaponized.**



# Division 10 | Specialties

## Handrails

### General Notes

All handrails are subject to possible wedge ligature with a shoe or other object.

### Installation Notes

Verify that all handrails are installed per the manufacturer's installation instructions. Proper installation is critical in order for tight tolerances between the multiple product pieces.

Sealant may be required to fill voids around the perimeter of handrails and grab bars depending on installation substrate.

### Additional Notes

The inside of handrails with continuous mounting brackets are susceptible to the collection of debris

**Caution: Traditional code compliant handrails create obvious ligature opportunities.**



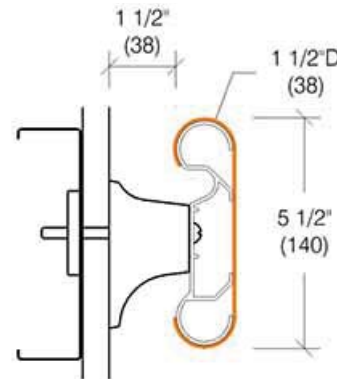
### Pawling Corporation

[www.pawling.com](http://www.pawling.com)

#### BR-500 Series Handrail

5-1/2" high vinyl handrail. Suicidal resistant design to minimize leverage and looping with radius corners. Aluminum tube with laser cut 1/8" aluminum closure plates. Continuous secure bracket.

**Caution: Cover is easily removable and can be broken or weaponized.**



### Wallguard

[www.wallguard.com](http://www.wallguard.com)

#### 2021S Handrail

5-1/2" high, 12'-0" continuous security bracket and mounting system. Class A fire rating and ADA compliant. Provide manufacturer's continuous aluminum tube with laser cut 1/8" thick aluminum closure plates at corners and mechanically fastened. Colored cover shall be installed with 3M Fastbond 30 water based contact adhesive to prevent removal.

**Caution: Cover is easily removable and can be broken or weaponized.**



# Division 10 | Specialties

## Toilet Accessories, Grab Bars

### General Notes

All grab bars are subject to possible wedge ligature with a shoe or other object. Grab bars should only be installed where required by code.

### Performance Criteria

Specify SS Type 316 stainless steel for wet locations when available.

### Installation Notes

Verify that all grab bars are installed per the manufacturer's installation instructions. Proper installation is critical in order for tight tolerances between the multiple product pieces.

Provide continuous blocking. Be attentive to potential moment arm issues on existing installations without continuous blocking.

Sealant may be required to fill voids around the perimeter of grab bars depending on the installation substrate.

### Additional Notes

Specialty grab bars may be handed in only one direction when installed vertically.

### Cautions:

- ♦ Traditional code compliant grab bars create obvious ligature opportunities.
- ♦ ICRA notes potential infection control problem at end closure plates.
- ♦ Drainage holes at end caps create potential ligature opportunities with paper clips.



### Kingsway Group

[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

#### Grab Rail 270 Series

Horizontal and vertical mounting. Painted extruded aluminum, 600 mm long. Provide sealant at the full perimeter to prevent end to end looping.

#### Notes:

- ♦ Graspable surface on this grab bar is shorter in length than overall unit length.
- ♦ Careful specification is required. Water drains off one end and will result in water on the bathroom floor if configured incorrectly.



### Northwest Specialty Hardware

[www.northwestsh.com](http://www.northwestsh.com)

#### NW Security Bar

### Cascade Specialty Hardware

[www.cascadesh.com](http://www.cascadesh.com)

#### Safebar Grab Bar

### Securing Cosmos

[www.securingcosmos.com](http://www.securingcosmos.com)

### 811-S03 SafeSupport SR Safe-T Grab Bar

Specialty self-draining end caps are available from manufacturers and should be specified. Provide sealant at the full perimeter to prevent end to end looping.

**Caution: Horizontal and vertical mounting are acceptable but may permit wedge ligature with a shoe or other object.**



# Division 10 | Specialties

## Toilet Accessories, Grab Bars

### General Notes

All grab bars are subject to possible wedge ligature with a shoe or other object. Grab bars should only be installed where required by code.

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### Installation Notes

Verify that all grab bars are installed per the manufacturer's installation instructions. Proper installation is critical in order for tight tolerances between the multiple product pieces.

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### Cautions:

- ♦ Traditional code compliant grab bars create obvious ligature opportunities.
- ♦ ICRA notes potential infection control problem at end closure plates.
- ♦ Drainage holes at end caps create potential ligature opportunities with paper clips.



### Willoughby Industries, Inc.

[www.willoughby-ind.com](http://www.willoughby-ind.com)

#### AntiSuicide Grab Bar Modified with End Caps ASGB-X-ODD-MOD

Specialty self-draining end caps are available from manufacturers and should be specified. Provide sealant at the full perimeter to prevent end to end looping.

**Caution: Horizontal and vertical mounting are acceptable but may permit wedge ligature with a shoe or other object.**



# Division 10 | Specialties

## Toilet Accessories, Grab Bars

### General Notes

All grab bars are subject to possible wedge ligature with a shoe or other object. Grab bars should only be installed where required by code.

### Performance Criteria

Specify SS Type 316 stainless steel for wet locations when available.

### Installation Notes

Verify that all grab bars are installed per the manufacturer's installation instructions. Proper installation is critical in order for tight tolerances between the multiple product pieces.

Provide continuous blocking. Be attentive to potential moment arm issues on existing installations without continuous blocking.

Sealant may be required to fill voids around the perimeter of grab bars depending on the installation substrate.

### Additional Notes

Specialty grab bars may be handed in only one direction when installed vertically.

### Cautions:

- ♦ Traditional code compliant grab bars create obvious ligature opportunities.
- ♦ ICRA notes potential infection control problem at end closure plates.
- ♦ Drainage holes at end caps create potential ligature opportunities with paper clips.



### Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

#### 1109-1 24" Ligature Resistant Grab Bar

**Note:** This product may allow end to end looping ligature.



### Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

#### 1110-2 24" Ligature Resistant Grab Bar

**Note:** This product may allow end to end looping ligature.



### Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

#### Best-Care WH1140 Ligature Resistant ADA Compliant Grab Bar with V-Closure Strip

**Note:** Drainage holes permit ligatures.





# Division 10 | Specialties

## Toilet Accessories, Grab Bars

### General Notes

All grab bars are subject to possible wedge ligature with a shoe or other object. Grab bars should only be installed where required by code.

### Performance Criteria

Specify SS Type 316 stainless steel for wet locations when available.

### Installation Notes

Verify that all grab bars are installed per the manufacturer's installation instructions. Proper installation is critical in order for tight tolerances between the multiple product pieces.

Provide continuous blocking. Be attentive to potential moment arm issues on existing installations without continuous blocking.

Sealant may be required to fill voids around the perimeter of grab bars depending on the installation substrate.

### Additional Notes

Specialty grab bars may be handed in only one direction when installed vertically.

### Cautions:

- ♦ Traditional code compliant grab bars create obvious ligature opportunities.
- ♦ ICRA notes potential infection control problem at end closure plates.
- ♦ Drainage holes at end caps create potential ligature opportunities with paper clips.



### American Specialties, Inc.

[www.americanspecialties.com](http://www.americanspecialties.com)

#### 0165 Grab Bar with Drain Holes

**Note:** This product may allow end to end looping ligature.



### Securing Cosmos

[www.securingscosmos.com](http://www.securingscosmos.com)

#### 811-S38 SafeSupport SR Draining Grab Bar

Horizontal mounting.

**Note:** Drainage slot permits ligature.



### Willoughby Industries, Inc.

[www.willoughby-ind.com](http://www.willoughby-ind.com)

#### Anti Suicide Grab Bar Modified for OGS ASGB-X-OGS-MOD

**Note:** This product may allow end to end looping ligature.



# Division 10 | Specialties

## Toilet Accessories, General



### General Notes

Some product categories offer few patient safe solutions that have been approved for use in NYS-OMH facilities. One such category is toilet accessories. Many manufacturers of soap dispensers, paper towel dispensers, hand dryers, and toilet tissue dispensers/holders market their products as appropriate for use in high risk environments. Upon testing many products, NYS-OMH has determined that they often present opportunities for self-harm.

### Failure Modes

Because these product types dispense disposable products, many of them make use of slots or holes. This allows for wedging and tying, providing opportunities for downward ligature. Hand dryers inherently present risk, as they rely on unobstructed airflow to function. Hand dryers that have been accepted by OMH dispense and exhaust air as inconspicuously as possible, and resist looping over the top of the device.

### Infection Control

There exist some inherent problems with options that present a patient safe solution, one of which is risk of infection. Paper towel and toilet tissue shelves and holders which do not secure the disposable products allow it to fall on the floor, rendering it contaminated. Users cannot be prevented from using the contaminated products; this leads many facilities to disallow the use of shelves and holders.

### Best In Class

It is the responsibility of each facility to determine, based on their own risk assessment, how best to address these needs. Some options in this Standard will appeal more than others based on past experience and knowledge of a particular patient population. The decision to utilize a product noted as “Rejected” or “Use with Caution” may in fact be the best solution for a facility, provided that it understands the risks involved and has a plan to manage those risks as best as possible.

# Division 10 | Specialties

## Toilet Accessories, Soap Dispensers

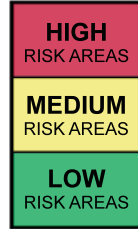
### General Notes

Best practice advocates the use of recessed toilet accessories.

### Performance Criteria

Quality control of toilet accessories is important and often difficult to control. Samples should be requested as part of the submittal process.

**Caution: Soap dispensers with flat tops or push levers provide a loopable ligature.**



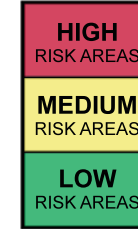
### Behavioral Safety Products

[www.besafeprod.com](http://www.besafeprod.com)

#### SD750 Ligature Resistant Soap Dispenser

Powder coated all metal construction with a rounded, smooth-edged design. Accepts Gojo FMX-12 1250ms cartridge.

**Caution: Dispenser area allows for wedging opportunities.**



### Gojo Industries

[www.gojo.com](http://www.gojo.com)

#### LTX Behavioral Health Dispensing System

Stainless steel Soap dispensing unit specifically designed for behavioral health environments with delayed time output, inhibited access interior, and sloped and rounded exterior.

**Caution: Dispenser area allows for wedging opportunities.**



# Division 10 | Specialties

## Toilet Accessories, Soap Dispensers



### General Notes

Best practice advocates the use of recessed toilet accessories.

### Performance Criteria

Quality control of toilet accessories is important and often difficult to control. Samples should be requested as part of the submittal process.

**Caution: Soap dispensers with flat tops or push levers provide a loopable ligature.**



### Kingsway Group

[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

### KG06 Liquid Soap Dispenser

Stainless steel surface mounted liquid soap dispenser. Soap automatically dispenses from this battery operated unit.

**Installation Note: Dispenser swings open in a downward motion.**  
**Caution: Dispenser area allows for wedging opportunities.**



# Division 10 | Specialties

## Toilet Accessories, Soap Dispensers

### General Notes

Best practice advocates the use of recessed toilet accessories.

### Performance Criteria

Quality control of toilet accessories is important and often difficult to control. Samples should be requested as part of the submittal process.

**Caution: Soap dispensers with flat tops or push levers provide a loopable ligature.**



### Gojo Industries

[www.gojo.com](http://www.gojo.com)

#### ADX-12 Security Enclosure

**Note: This product provides wedging opportunities.**



### American Specialties, Inc.

[www.americanspecialties.com](http://www.americanspecialties.com)

#### 5002 Soap Dispenser

**Notes:**

- ◆ Product has sharp components.
- ◆ Provides multiple ligature points.
- ◆ Projects 1/2" from face of wall.



### American Specialties, Inc.

[www.americanspecialties.com](http://www.americanspecialties.com)

#### 9326 Soap Dispenser

**Note: This product provides a loopable ligature.**



### Bobrick

[www.bobrick.com](http://www.bobrick.com)

#### B-26607 Soap Dispenser

**Note: This product provides a loopable ligature.**



# Division 10 | Specialties

## Toilet Accessories, Soap Dispensers

### General Notes

Best practice advocates the use of recessed toilet accessories.

### Performance Criteria

Quality control of toilet accessories is important and often difficult to control. Samples should be requested as part of the submittal process.

**Caution: Soap dispensers with flat tops or push levers provide a loopable ligature.**



### Opsbox/Archer Manufacturing

[www.vandalproof.org](http://www.vandalproof.org)

### Ops 1-Touch Dispenser Vandal Proof Foaming Dispenser

#### Notes:

- ♦ Activator allows for wedging opportunities.
- ♦ Provides ligature points.



# Division 10 | Specialties

## Toilet Accessories, Paper Towel Holders & Dispensers

### General Notes

Best practice advocates the use of recessed toilet accessories.

### Performance Criteria

Quality control of toilet accessories is important and often difficult to control. Samples should be requested as part of the submittal process.

### Installation Notes

Recessed paper towel shelves require blocking on sides of shelf at wall studs and shall be mechanically through to blocking.

Specify wall thickness as required.



### Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

#### Best-Care WH1820FA Recessed Shelf

16 gauge type 304 stainless steel with a satin finish or powder coated white finish. Install with tamper resistant fasteners. Provide tamper resistant sealant at flange perimeter.



### American Specialties, Inc.

[www.americanspecialties.com](http://www.americanspecialties.com)

#### 0412 Recessed Shelf



# Division 10 | Specialties

## Toilet Accessories, Paper Towel Holders & Dispensers

### General Notes

Best practice advocates the use of recessed toilet accessories.

### Performance Criteria

Quality control of toilet accessories is important and often difficult to control. Samples should be requested as part of the submittal process.



### Georgia-Pacific

[www.gppro.com](http://www.gppro.com)

#### 59466A enMotion Semi-Recessed Paper Towel Dispenser

Semi-recessed automated touchless paper towel dispenser.

#### Notes:

- ◆ Loopable flat top allows ligature.
- ◆ Serrated metal strip allows wedging opportunity for downward ligature and potential for weaponization.



### Georgia-Pacific

[www.gppro.com](http://www.gppro.com)

#### 56620 Combination Folded Paper Towel Dispenser

Combination C-fold/multifold paper towel dispenser.

#### Notes:

- ◆ Loopable flat top allows ligature.
- ◆ Slotted dispenser allows wedging opportunity for downward ligature.





# Division 10 | Specialties

## Toilet Accessories, Paper Towel Holders & Dispensers

### General Notes

Best practice advocates the use of recessed toilet accessories.

### Performance Criteria

Quality control of toilet accessories is important and often difficult to control. Samples should be requested as part of the submittal process.



### American Specialties, Inc.

[www.americanspecialties.com](http://www.americanspecialties.com)

#### 0457 Recessed Paper Towel Dispenser

22 gauge type 304 stainless steel with a satin finish.

**Note:** Slotted dispenser allows wedging opportunity for downward ligature.



### Opsbox/Archer Manufacturing

[www.vandalproof.org](http://www.vandalproof.org)

#### Supreme Multi-Purpose Paper Towel Dispenser

### Notes:

- ♦ Slot allow for wedging opportunities.
- ♦ Provides ligature points.



# Division 10 | Specialties

## Toilet Accessories, Hand Dryers

### General Notes

Best practice advocates the use of recessed toilet accessories.

### Performance Criteria

Quality control of toilet accessories is important and often difficult to control. Samples should be requested as part of the submittal process.



### World Dryer

[www.worlddryer.com](http://www.worlddryer.com)

### SLIMdri Hand Dryer

Surface-mounted ADA compliant hand dryer.

**Caution: Vent area allows for looping opportunities.**



### American Specialties, Inc.

[www.americanspecialties.com](http://www.americanspecialties.com)

### 0198MH SafeDri Recessed Mounted Sensor Hand Dryer

18 gauge type 304 stainless steel cover and hand dryer chamber over automatic hand dryer with infrared sensor. Air intake pulls from stud space or plenum.



# Division 10 | Specialties

## Toilet Accessories, Toilet Tissue Holders & Dispensers

### General Notes

Best practice advocates the use of recessed toilet accessories.

### Performance Criteria

Quality control of toilet accessories is important and often difficult to control. Samples should be requested as part of the submittal process.

### Installation Notes

Front mounted models should be installed with tamper resistant fasteners. Back mounted models can only be installed on accessible chase walls.

### Cautions:

- ◆ Potential hazard with loose toilet tissue rolls which can be lodged in toilets.
- ◆ Potential infection control issue with loose toilet tissue rolls which can be easily dropped on the floor.
- ◆ Toilet tissue holders with spindles may allow a downward ligature by tying off to the spindles if they don't release when more than the acceptable amount of force is applied (greater than 11 lbs.).



### American Specialties, Inc.

[www.americanspecialties.com](http://www.americanspecialties.com)

#### 110-13 Recessed Toilet Paper Roll Holder (Front Mounted)

14 gauge type 304 stainless steel with a satin finish.



### Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

#### 1840-FA Recessed Toilet Paper Roll Holder (Front Mounted)

14 gauge type 304 stainless steel with a satin finish or white enamel finish.



# Division 10 | Specialties

## Toilet Accessories, Toilet Tissue Holders & Dispensers

### General Notes

Best practice advocates the use of recessed toilet accessories.

### Performance Criteria

Quality control of toilet accessories is important and often difficult to control. Samples should be requested as part of the submittal process.

### Installation Notes

Front mounted models should be installed with tamper resistant fasteners. Back mounted models can only be installed on accessible chase walls.

### Cautions:

- ◆ Potential hazard with loose toilet tissue rolls which can be lodged in toilets.
- ◆ Potential infection control issue with loose toilet tissue rolls which can be easily dropped on the floor.
- ◆ Toilet tissue holders with spindles may allow a downward ligature by tying off to the spindles if they don't release when more than the acceptable amount of force is applied (greater than 11 lbs.).



### Cascade Specialty Hardware

[www.cascadesh.com](http://www.cascadesh.com)

#### C-400 Safety Toilet Paper Holder

Caution: Break away weight is 18 lbs and exceeds recommended.



### Kingsway Group

[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

#### Recessed Toilet Roll Holder KG13

Caution: Break away weight is 16 lbs and exceeds recommended.



### Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

#### Best-Care WH1845B Ligature-Resistant Spindle Button Recessed Toilet Paper Holder



# Division 10 | Specialties

## Toilet Accessories, Toilet Tissue Holders & Dispensers

### General Notes

Best practice advocates the use of recessed toilet accessories.

### Performance Criteria

Quality control of toilet accessories is important and often difficult to control. Samples should be requested as part of the submittal process.

### Installation Notes

Front mounted models should be installed with tamper resistant fasteners. Back mounted models can only be installed on accessible chase walls.

### Cautions:

- ◆ Potential hazard with loose toilet tissue rolls which can be lodged in toilets.
- ◆ Potential infection control issue with loose toilet tissue rolls which can be easily dropped on the floor.
- ◆ Toilet tissue holders with spindles may allow a downward ligature by tying off to the spindles if they don't release when more than the acceptable amount of force is applied (greater than 11 lbs.).



### American Specialties, Inc.

[www.americanspecialties.com](http://www.americanspecialties.com)

#### 0262 Surface Mounted Folded Toilet Tissue Cabinet

**Note:** Slotted dispenser allows wedging opportunity for downward ligature.



### Bobrick

[www.bobrick.com](http://www.bobrick.com)

#### B-5288 Surface Mounted Multi-Roll Toilet Tissue Dispenser

**Note:** Plastic spindle can create a downward ligature and can be broken into small shards and weaponized.



### Bradley Corporation

[www.bradleycorp.com](http://www.bradleycorp.com)

#### SA12 Recessed Toilet Tissue Roll Holder (Front Mounted)

16 gauge type 304 stainless steel with a satin finish.

**Note:** Joint between rim and faceplate permits looping.

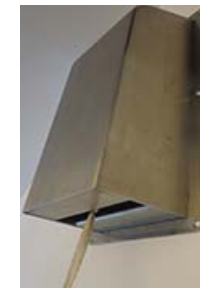


### Kingsway Group

[www.kingswaygroupglobal.com](http://www.kingswaygroupglobal.com)

#### Surface Mounted Toilet Tissue Dispenser KG04

**Note:** Slotted dispenser allows wedging opportunity for downward ligature.



# Division 10 | Specialties

## Toilet Accessories, Toilet Tissue Holders & Dispensers

### General Notes

Best practice advocates the use of recessed toilet accessories.

### Performance Criteria

Quality control of toilet accessories is important and often difficult to control. Samples should be requested as part of the submittal process.

### Installation Notes

Front mounted models should be installed with tamper resistant fasteners. Back mounted models can only be installed on accessible chase walls.

### Cautions:

- ◆ Potential hazard with loose toilet tissue rolls which can be lodged in toilets.
- ◆ Potential infection control issue with loose toilet tissue rolls which can be easily dropped on the floor.
- ◆ Toilet tissue holders with spindles may allow a downward ligature by tying off to the spindles if they don't release when more than the acceptable amount of force is applied (greater than 11 lbs.).



### Morcon, Inc.

#### MO-M1007 Morcon Surface Mounted Metal Dispenser

Note: Frame and spindles create an opportunity for downward ligature.



### Northwest Specialty Hardware

[www.northwestsh.com](http://www.northwestsh.com)

#### NW 611 Toilet Paper Holder

Note: Spindle can be tied off to form a ligature point.



### Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

#### Best-Care WH1845 & WH1845FA Recessed Auto-Release Toilet Paper Holder

Note: Spindles can be tied off to form a ligature point.



# Division 10 | Specialties

## Toilet Accessories, Mirrors

### General Notes

Only polycarbonate glazing is recommended for use in patient bathrooms.



### Sabic Innovative Plastics

[www.sabic-ip.com](http://www.sabic-ip.com)

### Royal Adhesives & Sealants

[www.royaladhesives.com](http://www.royaladhesives.com)

### Frameless Polycarbonate Wall to Wall Mirror

Lexan Dura-Mir, 0.25" (6 mm) polycarbonate. Install with Gunther Premier Mirror Mastic from wall to wall and from top of sink backsplash to ceiling.



**Note:** Architectural detailing of mirror perimeter is required.



### American Specialties, Inc.

[www.americanspecialties.com](http://www.americanspecialties.com)

### 0600 Angle Frame Mirror

18 gauge type 304 stainless steel with satin finish. Concealed hanging bracket that locks onto top and bottom of frame by tamper resistant screws.

**Note:** Ligature point can be established across the top of mirror due to squared edge and finish of stainless steel frame.



### Behavioral Safety Products

[www.besafeprod.com](http://www.besafeprod.com)

### Ligature Resistant Stainless Steel Wood Framed Mirror FM160 | Ligature Resistant Stainless Steel Powder Coated Framed Mirror FM760

Polished stainless steel mirror with #8 finish.

**Caution:** Provide tamper resistant sealant at full perimeter of frame.



### Oddball Industries

[www.oddballindustries.com](http://www.oddballindustries.com)

### SP-8 Mirror Guard

**Note:** Mirror guard has sharp edges and does not sit flush to profile of mirror.



# Division 10 | Specialties

## Window Treatments

### General Notes

Users shall perform a risk assessment to determine their options for shower and privacy curtains.

### Performance Criteria

Material tests should include verifying fabrics in both wet and dry conditions, which can affect asphyxiation.

### Installation Notes

Specify breathable fabric material for shower and privacy curtains.

Recessed ceiling track shall run continuously between walls. Surface mounted ceiling track shall run continuously between walls, or be installed with secure end caps, jamps. Fill all joints between sections of track with tamper resistant sealant to reduce opportunities for ligation.

### Cautions:

- ◆ End caps can create opportunity for a wedge ligation.
- ◆ A looping point can be created in curtain tracks when an object, such as a penny, is inserted into the track.
- ◆ The breakaway weight for curtain carriers may exceed the limits at which self-harm can be induced. Carriers can be ganged together to increase the release weight.



### InPro Corporation

[www.inprocorp.com](http://www.inprocorp.com)

#### Clickeze Ultra Cubicle Track

Extruded aluminum track provides heavy duty strength. For use with Clickeze accessories.

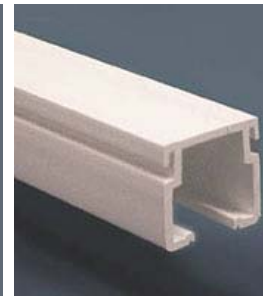
#### Clickeze Whisper Cubicle Track

Extruded PVC track allows for noise reduction during curtain movement. For use with Clickeze accessories.

Ultra Track



Whisper Track



**Caution: Potential looping point at curtain tracks.**



### Construction Specialties, Inc.

[www.c-sgroup.com](http://www.c-sgroup.com)

#### Breakaway Carrier #975P

Hook on carrier is designed to pop out of the axle when approximately 22 lbs. of pressure is applied to the hook, and can be reused.



### InPro Corporation

[www.inprocorp.com](http://www.inprocorp.com)

#### Clickeze Pop Out Carrier

Hook on carrier releases, allowing the curtain to fall, and disengages at approximately 10 lbs. of pressure. For use with both Clickeze Ultra and Whisper Curtain Tracks.





# Division 10 | Specialties

## Window Treatments

### General Notes

Users shall perform a risk assessment to determine their options for shower and privacy curtains.

### Performance Criteria

Material tests should include verifying fabrics in both wet and dry conditions, which can affect asphyxiation.

### Installation Notes

Specify breathable fabric material for shower and privacy curtains.

Recessed ceiling track shall run continuously between walls. Surface mounted ceiling track shall run continuously between walls, or be installed with secure end caps, jamba. Fill all joints between sections of track with tamper resistant sealant to reduce opportunities for ligature.

### Cautions:

- ◆ End caps can create opportunity for a wedge ligature.
- ◆ A looping point can be created in curtain tracks when an object, such as a penny, is inserted into the track.
- ◆ The breakaway weight for curtain carriers may exceed the limits at which self-harm can be induced. Carriers can be ganged together to increase the release weight.



### Imperial Fastener Company

[www.imperialfastener.com](http://www.imperialfastener.com)

#### IFC-69 Break-A-Way Track & IFC-79 Break-A-Way Track

The IFC-69 ceiling mounted and IFC-79 wall mounted tracks are used with “Safety Tabs” that attach to box pleated window draperies or shower curtains.

#### Notes:

- ◆ Velcro on “Safety Tabs” creates a tie off ligature point.
- ◆ IFC-79 wall mounted curtain track can be continuously looped end to end.

IFC-69 Break-A-Way Track



IFC-79 Break-A-Way Track



### WebbShade

[www.webbshade.com](http://www.webbshade.com)

#### WebbLok Shades

The IFC-69 ceiling mounted and IFC-79 wall mounted tracks are used with “Safety Tabs” that attach to box pleated window draperies or shower curtains.

**Note: This product provides many potential ligature points.**



# Division 10 | Specialties

## Window Treatments

### General Notes

Users shall perform a risk assessment to determine their options for shower and privacy curtains.

### Performance Criteria

Material tests should include verifying fabrics in both wet and dry conditions, which can affect asphyxiation.

### Installation Notes

Specify breathable fabric material for shower and privacy curtains.

Recessed ceiling track shall run continuously between walls. Surface mounted ceiling track shall run continuously between walls, or be installed with secure end caps, jamba. Fill all joints between sections of track with tamper resistant sealant to reduce opportunities for ligature.

### Cautions:

- ◆ **End caps can create opportunity for a wedge ligature.**
- ◆ **A looping point can be created in curtain tracks when an object, such as a penny, is inserted into the track.**
- ◆ **The breakaway weight for curtain carriers may exceed the limits at which self-harm can be induced. Carriers can be ganged together to increase the release weight.**



### Securing Hospitals

[www.securingshospitals.com](http://www.securingshospitals.com)

### 845-S86 SafeSupport SR Window Shades

The 845-S86 wall mounted tracks are used with "Safety Tabs" that attach to box pleated window draperies or shower curtains.

**Note: This product provides many potential ligature points.**





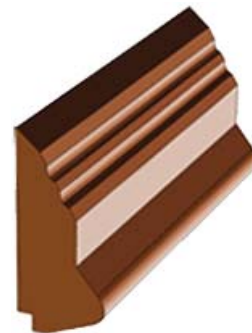
### Behavioral Safety Products

[www.besafeprod.com](http://www.besafeprod.com)

#### Ligature Resistant Art Frame #AF550

Multiple frame sizes available. Select prints from online library of 60 prints, to be matted like a typical picture frame, but positioned behind 1/8" polycarbonate glazing. Follow manufacturer's installation instructions.

**Caution: Provide tamper resistant sealant at full perimeter of frame.**



### Custom Design Frameworks

[www.customdesignframeworks.com](http://www.customdesignframeworks.com)

#### 8 1/2 x 11 Custom Wood Frames with Ligature Resistant Profile

Multiple wood types and finishes available. Specify with standard 3/16" polycarbonate glazing.

**Caution: Provide tamper resistant sealant at full perimeter of frame.**



# Division 10 | Specialties

## Cabinet Hardware

### Performance Criteria

For cabinet and dresser doors and drawers, provide either ligature resistant pulls or integral recessed flush pulls.

### Installation Notes

Provide non-loopable ligature resistant, tamper resistant security grade hardware. Ensure cabinet hinge pin is not removable (tack weld or cap).

**Caution: Single point fasteners pose twist off hazard. Specify set screw or embed fastener in pick proof sealant.**



### Accurate Lock & Hardware

[www.accuratelockandhardware.com](http://www.accuratelockandhardware.com)

#### CP-CAB Crescent Cabinet Pull



### Doug Mockett & Company, Inc.

[www.mockett.com](http://www.mockett.com)

#### DP74C Radiused Finger Grip Pull



# Division 10 | Specialties

## Cabinet Hardware

### Performance Criteria

For cabinet and dresser doors and drawers, provide either ligature resistant pulls or integral recessed flush pulls.

### Installation Notes

Provide non-loopable ligature resistant, tamper resistant security grade hardware. Ensure cabinet hinge pin is not removable (tack weld or cap).

**Caution: Single point fasteners pose twist off hazard. Specify set screw or embed fastener in pick proof sealant.**



### Hafele

[www.hafeleamericas.com](http://www.hafeleamericas.com)

#### 158.80 Flush Pull

High quality polyamide. Multiple sizes and colors available.

**Note: Recess creates an opportunity for wedging.**



### Top Knobs Decor

[www.topknobsdecor.com](http://www.topknobsdecor.com)

#### M495 Somerset Cup Pull

Zinc alloy with German Bronze finish.

**Note: Recess creates an opportunity for wedging.**



### Sugatsune America, Inc.

[www.sugatsune.com](http://www.sugatsune.com)

#### UT-105/S Cabinet Pull

### Notes:

- ♦ The cabinet pull is installed by pressure fit. Therefore it can be forcibly removed and parts ingested.
- ♦ There are also looping ligature opportunities between the pull and the substrate.



# Division 10 | Specialties

## Signage

### Installation Notes

Signage systems should be mechanically fastened to substrate with tamper resistant fasteners. Double stick tape and Velcro are not acceptable.



### 2/90 Sign Systems

[www.290signs.com](http://www.290signs.com)

#### Custom Patient Safe Signage

Thermoplastic frame, fully adhered to thermoplastic backpanel. Clear polycarbonate insert lens. Mechanically fasten to blocking with tamper resistant screws.



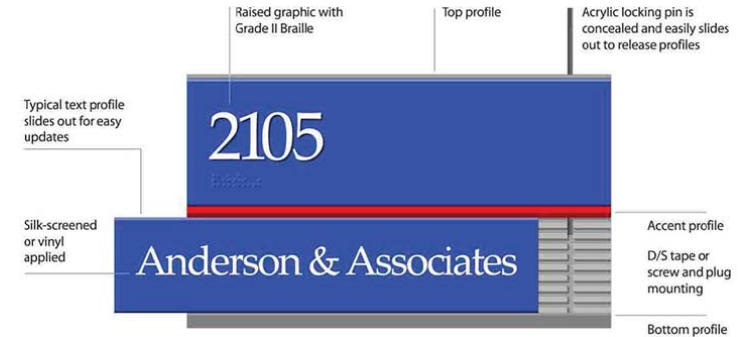
### King Architectural Products

[www.king-ap.com](http://www.king-ap.com)

#### KMS Series Signage\*

Tamper resistant locking; Top, bottom, panel profiles and copy covers are held in place by manufacturer's standard concealed locking pin. Specify two locking pins per sign.

**Caution: Edges of metal profile pieces can be sharp.**



# Division 10 | Specialties Signage

## Installation Notes

Signage systems should be mechanically fastened to substrate with tamper resistant fasteners. Double stick tape and Velcro are not acceptable.

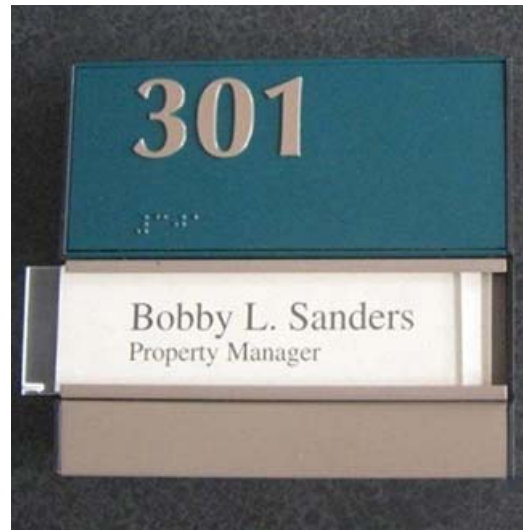


## ASI Sign Systems, Inc.

[www.asisignage.com](http://www.asisignage.com)

### Interior 20 Modular Signage

**Note:** Signage stands slightly off face of substrate and presents a finger pull opportunity.



## 2/90 Sign Systems

[www.290signs.com](http://www.290signs.com)

### Flxsigns

**Note:** The Flxsign is highly susceptible to vandalism and can potentially be used as a weapon.



# Division 10 | Specialties

## Fire Extinguisher Cabinets

### General Notes

Locate only in supervised areas.

### Installation Notes

See NYS-OMH Guidelines for strategies to maintain wall assembly fire ratings at recessed cabinets.

### Code Notes

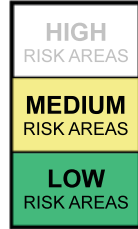
NFPA 10 requires locking fire extinguisher cabinets to include a “means of emergency access”. Manufacturers interpret this in various ways, including:

- Full lock with staff assigned keys.
- Break-away latch/lock with resettable tongue.
- Break-away latch/lock with non-resettable tongue.

Carefully review non-resettable products before specifying, as actual damage may be caused to the latch/lock mechanism during emergency access. Repair may be simple or complex depending on the specific product.

### Caution:

**Fire extinguisher cabinets are tested primarily for abuse-resistance and may be loopable at cabinet/door joint.**



### Larsen’s Manufacturing Company

[www.larsensmfg.com](http://www.larsensmfg.com)

#### Architectural Series 2712 Fire Extinguisher Cabinet

Stainless steel tub with a continuous hinge. Specify fully recessed cabinet with flat trim, or semi-recessed cabinet with rolled edge trim & door w/o handle. Specify mortise lock with keyed cylinder.



### Larsen’s Manufacturing Company

[www.larsensmfg.com](http://www.larsensmfg.com)

#### DECS 2409-R4 Fire Extinguisher Cabinet



### Activar Construction Products Group, Inc.

[www.activarcpg.com](http://www.activarcpg.com)

#### JL Industries Cosmopolitan Series Fire Extinguisher Cabinet

**Note: Cabinet quality is not abuse or tamper resistant and presents many sharp edges.**





# Division 12 | Furnishings



# Division 12 | Furnishings

## Furniture, General



### General Notes

Furniture with doors and drawers, such as wardrobes and dressers, will pose a potential ligature risk. Since there are no viable ligature resistant solutions, it is highly recommended that doors and drawers are not provided for wardrobes, dressers, closet units, etc. unless their use is regulated by staff controlled locks. When considering if the use of wardrobes, dressers or closet units is desired or appropriate, best practice requires each new facility to complete a risk assessment for all spaces and furnishings. Patient privacy rights may also inform decisions about the need for specific furnishings.

### Doors & Drawers Guidelines

- ◆ Provide locks for all doors and drawers, allowing staff to control access by at-risk patients when necessary.
- ◆ Provide doors with continuous hinges and hospital tips.
- ◆ Provide doors with recessed ligature resistant finger pulls. If available, continuous integral finger pulls can also be provided.
- ◆ Provide drawers with recessed ligature resistant finger pulls, stops, and locks.
- ◆ For high risk patients, consider the use of built-in closets with door top ligature sensors.

### Wardrobe & Closet Unit Guidelines

- ◆ Recess wardrobes and closet units, or make continuous to underside of ceilings or soffits above.
- ◆ When it's not possible to make recessed units or make them continuous to underside of ceilings or soffits above, provide sloped tops.
- ◆ Provide collapsible coat hooks. Closet rods and j-bars are not acceptable.
- ◆ Requirements of the 2010 FGI Guidelines state: "Shelves for folded garments shall be used instead of arrangements for hanging garments."

### Platform Bed Guidelines

NYS-OMH has the following platform bed requirements:

- ◆ Beds must be platform type with flush side panels, headboards and footboards, with no overlapping lips between members.
- ◆ Platform beds shall be six-sided and have an enclosed bottom, or be five-sided and bolted to the floor.
- ◆ Provide solid wood or 3/4" plywood panels with veneer. Particleboard and plastic laminate are not acceptable.
- ◆ All members, both exposed and internal, shall be sealed with three layers of polyurethane.
- ◆ Internal construction shall consist of at least two intermediate supports. Acceptable support materials are wood and metal.
- ◆ All top and edge joints shall be sealed with tamper resistant sealant.
- ◆ Provide no exposed fasteners, except when fastening bed to the floor.
- ◆ Glides and adjustable feet are not acceptable. Felt pads only.
- ◆ Exercise caution with platform beds that have restraints. These should be removed in all patient rooms unless one-on-one supervision is provided.
- ◆ Each facility must perform their own risk assessment to evaluate all products.

Manufacturers must be able to customize their bed construction to comply with all NYS-OMH platform bed requirements. Beds that do not comply will be rejected by NYS-OMH.

# Division 12 | Furnishings

## Furniture

**General Notes**

Wood platform beds shall be 6-sided and all joints shall be sealed with tamper-resistant sealant.

**Caution: Furniture with doors and drawers, such as wardrobes and dressers, will pose a potential ligature risk.**



**Moduform**  
[www.moduform.com](http://www.moduform.com)

**Passages and Fortress Case-goods**

Solid oak planked panels with chamfered edges. Durable finish with replaceable parts. Exposed surfaces are coated with catalyzed finish resistant to impact. Finish is impervious to harsh chemical solutions such as wax strippers, paint and nail polish removers, and most commonly used anti-bacterial cleaning agents.



**Agati Furniture**  
[www.agati.com](http://www.agati.com)

**Altra Forma Collection**  
 Children’s furniture manufactured with vinyl and fabric covered molded foam.



# Division 12 | Furnishings

## Furniture

### General Notes

Wood platform beds shall be 6-sided and all joints shall be sealed with tamper-resistant sealant.

**Caution: Furniture with doors and drawers, such as wardrobes and dressers, will pose a potential ligature risk.**



### Blockhouse Company, Inc.

[www.blockhouse.com](http://www.blockhouse.com)

#### CS Casegoods

Solid oak planked panels with chamfered edges. Durable finish with replaceable parts. Exposed surfaces are coated with catalyzed finish resistant to impact. Finish is impervious to harsh chemical solutions such as wax strippers, paint and nail polish removers, and most commonly used anti-bacterial cleaning agents.



### Flaghouse, Inc.

[www.flaghouse.com](http://www.flaghouse.com)

#### Soft Rocker



# Division 12 | Furnishings

## Furniture

**General Notes**

Wood platform beds shall be 6-sided and all joints shall be sealed with tamper-resistant sealant.

**Caution: Furniture with doors and drawers, such as wardrobes and dressers, will pose a potential ligature risk.**



**Hill-Rom**

[www.hill-rom.com](http://www.hill-rom.com)

**Harbor Glen Specialty Furniture Series**

Solid oak construction. Durable finish with replaceable parts.

Chest Desk



Bedside Cabinet



**Nemschoff**

[www.nemschoff.com](http://www.nemschoff.com)

**Behavioral Health Casegoods**

Solid wood construction with chamfered edges and continuous hinges. Non-removable drawers on roller guides. Finish is resistant to heavy use and harsh cleaning.



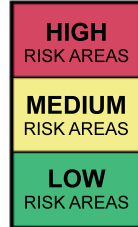
# Division 12 | Furnishings

## Furniture

### General Notes

Wood platform beds shall be 6-sided and all joints shall be sealed with tamper-resistant sealant.

**Caution: Furniture with doors and drawers, such as wardrobes and dressers, will pose a potential ligature risk.**



### Norix Group, Inc.

[www.norix.com](http://www.norix.com)

#### Attenda Bed

Cast molded polyethylene, weighted continuously, with a minimal number of seams. Durable finish with replaceable parts. If bed is not bolted down, plug mounting holes with tamper resistant fasteners.

#### Cautions:

- ◆ Safe for use, though not appropriate for all applications.
- ◆ Use with caution at Article 28 and Article 31 Hospitals.
- ◆ Do not provide restraint rings. They provide a looping ligature.



### Savoy Contract Furniture

[www.savoyfurniture.com](http://www.savoyfurniture.com)

#### Homestead Collection

Solid wood mortise and tenon construction. All critical joints are supported with cleats and corner blocks added for strength. All drawers are full English dovetail with an inset bottom and replaceable fronts.



# Division 21 | Fire Suppression



# Division 21 | Fire Suppression Sprinklers

## General Notes

Minimize removable parts.

## Installation Notes

Specify no accessible parts that activate the sprinkler system when vandalized.



## Tyco Fire Protection Products

[www.tyco-fire.com](http://www.tyco-fire.com)

### Raven Institutional Sprinklers

Pendant and horizontal sidewall heads. Standard, Quick Response & Extended Coverage. Stainless steel escutcheons available for installation in wet or damp areas.



## Tyco Fire Protection Products

[www.tyco-fire.com](http://www.tyco-fire.com)

### Model TFP PH2 Sprinklers

## Reliable Automatic Sprinkler Co., Inc.

[www.reliablesprinkler.com](http://www.reliablesprinkler.com)

### Model XL Quick Response Institutional Sprinkler



#### Cautions:

- ◆ A portion of the sprinkler head projects below the sprinkler head enclosure and is accessible to patients; tampering may activate sprinkler.
- ◆ Removable parts create a potential safety hazard for ingestion and weaponization.
- ◆ Break away weight is 50 lbs. and exceeds recommended.





# Division 21 | Fire Suppression Sprinklers

## General Notes

Minimize removable parts.

## Installation Notes

Specify no accessible parts that activate the sprinkler system when vandalized.



## Viking Group Inc.

[www.vikinggroupinc.com](http://www.vikinggroupinc.com)

### VK410 Pendant & VK412 Sidewall Institutional Flush Sprinklers

**Note:** The heat sensor projects below the sprinkler head enclosure and is accessible to patients. Damage to the heat sensor activates the system.



# Division 22 | Plumbing



# Division 22 | Plumbing

## Lavatory Assemblies, General

### General Notes

Lavatories in the following section are specified as systems. Individual components, used either independently of the system they are specified with, or combined with other systems, may not be ligature resistant. Specifiers should take care to utilize products in concert to create systems that are safe for installation condition (e.g. in a niche as opposed to freestanding) and combinations of components that make a functional and safe system. These components include:

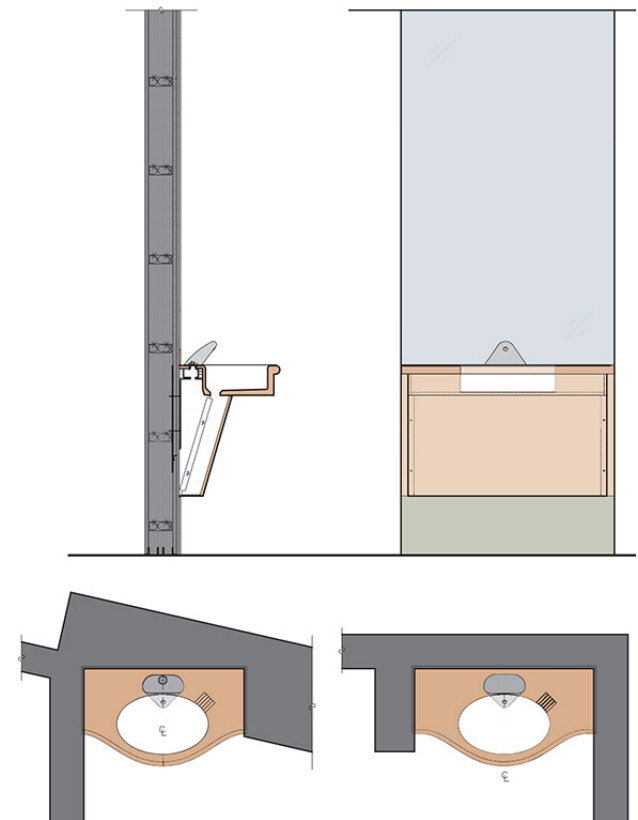
- ◆ Activators & Actuators
- ◆ Basins
- ◆ Countertops
- ◆ Faucets
- ◆ Fixtures
- ◆ Mirrors
- ◆ Niche Lavatories
- ◆ Pipe Enclosures

### Ligature

Only fixed strainers should be used. Do not use pop-up drains. Care should be taken to specify ligature resistant strainers.

### Appearance

Facilities are encouraged to utilize lavatories and toilets made of materials other than stainless steel that support a therapeutic environment. If stainless steel fixtures are preferred by a facility, they should be specified with a powder coated finish.



# Division 22 | Plumbing

## Lavatory Assemblies

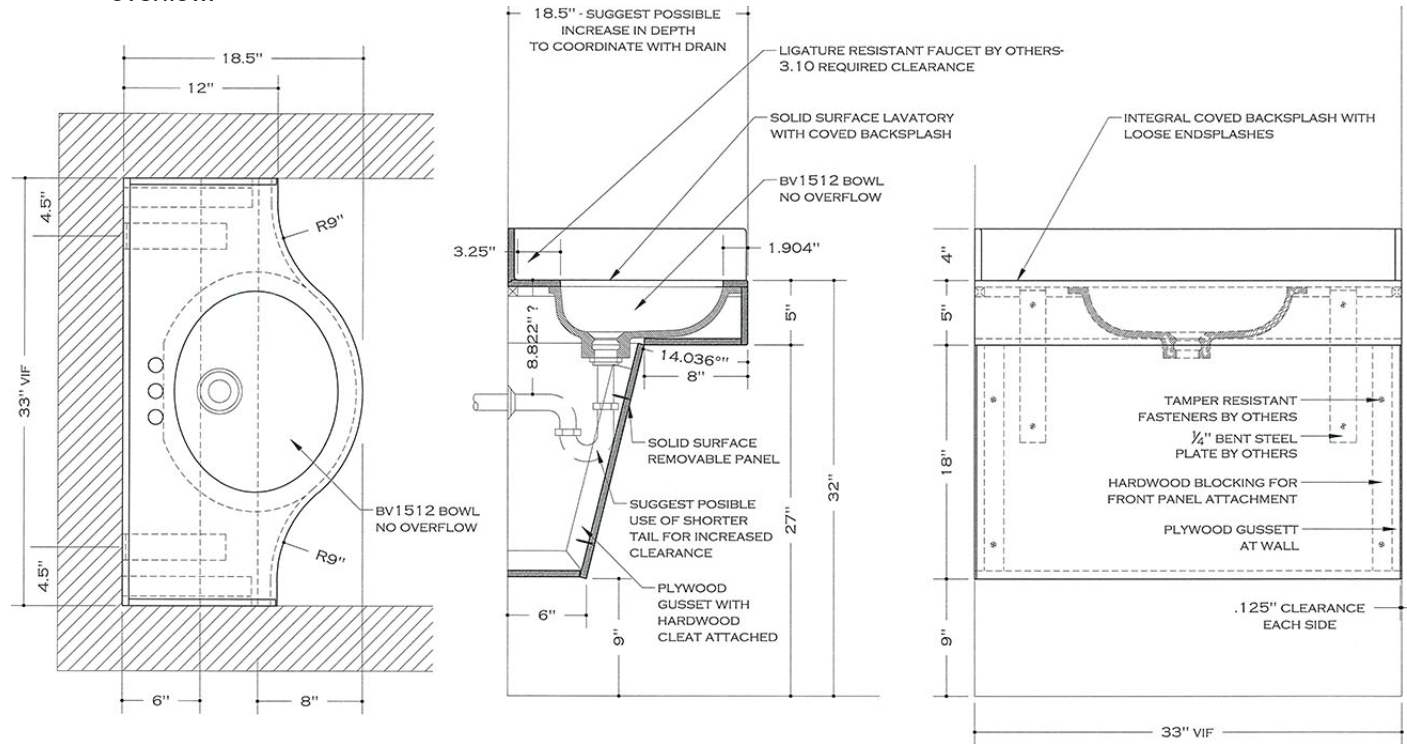
**Code Notes**  
Provide ADA compliant handicapped accessible lavatory assembly configurations where required.



### NYS-OMH Standard Lavatory Assembly

#### Custom Solid Surface Lavatory with Integral Sink Bowl & Pipe Enclosure

Niche mounted solid surface vanity counter with integral solid surface sink bowl and deck mounted Behavioral Safety Products Ligature Resistant Sensor Faucet #SF370. Removable integral solid surface pipe enclosure below mounted with tamper resistant fasteners. Provide lavatory basin without overflow.



1 TYPICAL PATIENT LAV PLAN  
03 SCALE: 1-1/2"=12"

2 TYPICAL PATIENT LAV SECTION  
03 SCALE: 1-1/2"=12"

3 TYPICAL PATIENT LAV ELEVATION  
03 SCALE: 1-1/2"=12"

# Division 22 | Plumbing

## Lavatory Assemblies

**Code Notes**  
Provide ADA compliant handicapped accessible lavatory assembly configurations where required.



**American Standard**  
[www.americanstandard-us.com](http://www.americanstandard-us.com)

**Lucerne 0355.012**

Wall hung, vitreous china sink.



**Behavioral Safety Products**  
[www.besafeprod.com](http://www.besafeprod.com)

**Ligature Resistant Solid Surface Lavatory #ET720**

Shown with trap cover, which comes standard, and deck-mounted dual-temp push-button faucet, sold separately.

**Caution: Provide tamper resistant sealant at joint between underside of lavatory and top edge of pipe enclosure.**



# Division 22 | Plumbing

## Lavatory Assemblies

### Code Notes

Provide ADA compliant handicapped accessible lavatory assembly configurations where required.



### Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

### WH3775 Solid Surface Wall-Hung Lavatory

Shown with fully accessible powder-coated stainless steel pipe enclosure, deck-mounted dual-temp push-button conical faucet.

Available without overflow hole.

**Caution: Provide tamper resistant sealant at joint between underside of lavatory and top edge of pipe enclosure.**



# Division 22 | Plumbing

## Lavatory Basins

### General Notes

Solid surface integral, countertop mounted and undermount lavatories are all acceptable when part of an assembly that is itself designed to be non-loopable.

### Code Notes

Provide ADA compliant handicapped accessible lavatory assembly configurations where required.



### American Standard

[www.americanstandard-us.com](http://www.americanstandard-us.com)

### Rondalyn Countertop Sink

High gloss stain resistant vitreous china sink. Specify without overflow.



### American Standard

[www.americanstandard-us.com](http://www.americanstandard-us.com)

### Mezzo Semi-Countertop Sink

Self rimming fine fire clay semi-countertop sink. Specify without overflow.



# Division 22 | Plumbing

## Lavatory Pipe Enclosures

### General Notes

Custom fabrications can be viable alternatives and, when properly detailed, may be preferable to pre-manufactured enclosures.



### Installation Notes

Specify tamper resistant fasteners.



### IPS Corporation

[www.ipscorp.com](http://www.ipscorp.com)

### Truebro Lav Shield Model #2018

#### Cautions:

- ◆ Pipe enclosure will conceal exposed plumbing piping, but is used with wall mounted lavatory that poses looping opportunity.
- ◆ Careful scribing to underside of lavatory is required for a proper fit and sealant joint.
- ◆ Coordinate model of enclosure with model of wall mounted lavatory.





# Division 22 | Plumbing

## Lavatory Faucets

### General Notes

Faucets must be considered as part of the entire assembly.

### Installation Notes

Specify projecting spouts only when the lavatory is positioned so that the lateral ligature hang is not possible (i.e. recessed in a niche).

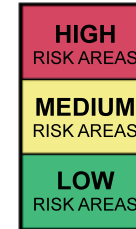


### Behavioral Safety Products

[www.besafeprod.com](http://www.besafeprod.com)

#### Ligature Resistant Sensor Faucet #SF370

Deck mounted faucet is a single temperature faucet without controls. It may be specified as hard-wired or with a 4-year battery.



### Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

#### Best Care Ligature Resistant Sensor Activated Faucet #WH3375-SO

Deck mounted faucet is a single temperature faucet without controls. Designed to retrofit onto existing 4" center-set lavatory decks.



### Behavioral Safety Products

[www.besafeprod.com](http://www.besafeprod.com)

#### Ligature Resistant Metering Faucet #SF380

Deck mounted faucet is a dual temperature faucet with push button controls.



# Division 22 | Plumbing

## Lavatory Faucets

### General Notes

Faucets must be considered as part of the entire assembly.

### Installation Notes

Specify projecting spouts only when the lavatory is positioned so that the lateral ligature hang is not possible (i.e. recessed in a niche).



### Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

### Best Care Conical Ligature Resistant Faucets

Deck mounted conical faucet may be specified with or without deck plate. Specify one of the following, with appropriate control valve assembly.

3373 - Single temperature with Hemispheric air-controlled button

3374 - Dual temperature with Hemispheric air-controlled buttons

3373-PPZ - Single temp with Piezo button

3374-PPZ - Dual temp with Piezo buttons.



# Division 22 | Plumbing

## Lavatory Faucets

### General Notes

Faucets must be considered as part of the entire assembly.

### Installation Notes

Specify projecting spouts only when the lavatory is positioned so that the lateral ligature hang is not possible (i.e. recessed in a niche).



### Kohler Co.

[www.kohler.com](http://www.kohler.com)

### K-922 Laminar Faucet

**Note:** This product's recess presents opportunity for wedge ligature.



# Division 22 | Plumbing

## Lavatory Grid Strainers



### Oddball Industries

[www.oddballindustries.com](http://www.oddballindustries.com)

#### SP-11-GDK Grid Drain Kit

Effective drainage is achieved with the included air vent. Air introduction valve may not meet all local codes.

**Caution:** Although drainage holes are half the diameter as typical grid strainers, making threading of a thin ligature difficult, a paper clip can be woven through the perforations creating a tie off opportunity.



### Typical Grid Strainer & Drain

**Note:** Typical grid strainers are rejected because ligature can be created by threading a ligature item through the perforations and be hung over the lavatory or vanity edge.



# Division 22 | Plumbing

## Toilets, General

### General Notes

Toilets located in inpatient areas shall be specified as either 3.5 gallons per flush (gpf) blowout or 1.6 gpf siphon jet. They are equally effective in forcing matter through the trap and clearing the bowl.

### Blowout Toilets

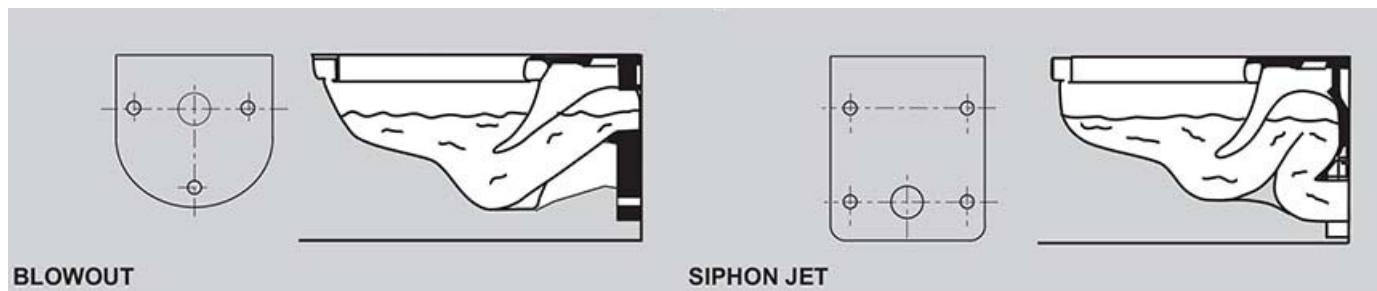
Blowout toilets are designed to clear the bowl with a high volume of water discharged from the bowl rim. Although these toilets are louder than siphon jet toilets, it has been noted that the higher volume of water allows matter to be forced further down the waste piping system. Wall mounted 3.5 gpf blowout toilets should not be installed back to back due to possible blow back. Please note that 3.5 gpf blowout toilets may not be permissible by code in all jurisdictions, and should be evaluated before selecting this option.

- ◆ Provides high velocity and jet action
- ◆ Noisy

### Siphon Jet Toilets

Siphon jet toilets are designed with an incorporated water jet in the trapway that forces matter through the trap by creating suction in the bowl to pull the contents through as well. Siphon jets are manufactured with 1.1, 1.28 and 1.6 gpf and must be paired with the appropriate flush valve. Currently the 1.6 gpf models are recommended due to evaluation and acceptance of performance.

- ◆ Economical water usage
- ◆ More commonly used due to quiet actions



# Division 22 | Plumbing Toilets

## General Notes

Due to the possibility of inappropriate behavior, 3.5 gpf blowout toilets and 1.6 gpf siphon jet toilets are recommended.

## Installation Notes

The wall surface must be flush with the toilet to avoid gaps that can become ligature points.

Specify standard toilets with heavy duty carriers. Specify bariatric toilets with bariatric carriers. Coordinate with manufacturers for specific carrier model specifications.

## Code Notes

3.5 gpf blowout toilets may not be permissible by code in all jurisdictions, and should be evaluated before selecting this option.

## Cautions:

- ◆ **Both wall and floor mounted toilets must be provided with complete closure between the toilet and wall to reduce ligature opportunities.**
- ◆ **Toilet seats that are not integral with the bowl create ligature opportunities.**



## American Standard

[www.americanstandard-us.com](http://www.americanstandard-us.com)

### Afwall Toilet

Wall mounted, back spud, 1.6 gpf siphon jet.



## Behavioral Safety Products

[www.besafeprod.com](http://www.besafeprod.com)

### Ligature Resistant Toilet #TN691

## American Standard

[www.americanstandard-us.com](http://www.americanstandard-us.com)

### Huron Toilet

Floor mounted, back spud, 1.6 gpf siphon jet with integral seat or prepped for conventional toilet seat.



# Division 22 | Plumbing Toilets

## General Notes

Due to the possibility of inappropriate behavior, 3.5 gpf blowout toilets and 1.6 gpf siphon jet toilets are recommended.

## Installation Notes

The wall surface must be flush with the toilet to avoid gaps that can become ligature points.

Specify standard toilets with heavy duty carriers. Specify bariatric toilets with bariatric carriers. Coordinate with manufacturers for specific carrier model specifications.

## Code Notes

3.5 gpf blowout toilets may not be permissible by code in all jurisdictions, and should be evaluated before selecting this option.

## Cautions:

- ◆ **Both wall and floor mounted toilets must be provided with complete closure between the toilet and wall to reduce ligature opportunities.**
- ◆ **Toilet seats that are not integral with the bowl create ligature opportunities.**



## Kohler Co.

[www.kohler.com](http://www.kohler.com)

### Kingston K-4323 Toilet

Wall mounted, back spud, 1.6 gpf siphon jet with detachable seat.



## Kohler Co.

[www.kohler.com](http://www.kohler.com)

### Sifton K-4460-C Toilet

Wall mounted, back spud, 3.5 gpf blowout with detachable seat.



# Division 22 | Plumbing Toilets

## General Notes

Due to the possibility of inappropriate behavior, 3.5 gpf blowout toilets and 1.6 gpf siphon jet toilets are recommended.

## Installation Notes

The wall surface must be flush with the toilet to avoid gaps that can become ligature points.

Specify standard toilets with heavy duty carriers. Specify bariatric toilets with bariatric carriers. Coordinate with manufacturers for specific carrier model specifications.

## Code Notes

3.5 gpf blowout toilets may not be permissible by code in all jurisdictions, and should be evaluated before selecting this option.

## Cautions:

- ◆ **Both wall and floor mounted toilets must be provided with complete closure between the toilet and wall to reduce ligature opportunities.**
- ◆ **Toilet seats that are not integral with the bowl create ligature opportunities.**



## Kohler Co.

[www.kohler.com](http://www.kohler.com)

### Anglesey K-4396 Toilet

Floor mounted, back spud, 1.6 gpf siphon jet with detachable seat.



## Intersan

[www.intersan.us](http://www.intersan.us)

### CWC150-AST Toilet

### CWC156-AST Toilet

Solid surface back-to-wall toilet with non-moving integral seat.





# Division 22 | Plumbing Toilets

## General Notes

Due to the possibility of inappropriate behavior, 3.5 gpf blowout toilets and 1.6 gpf siphon jet toilets are recommended.

## Installation Notes

The wall surface must be flush with the toilet to avoid gaps that can become ligature points.

Specify standard toilets with heavy duty carriers. Specify bariatric toilets with bariatric carriers. Coordinate with manufacturers for specific carrier model specifications.

## Code Notes

3.5 gpf blowout toilets may not be permissible by code in all jurisdictions, and should be evaluated before selecting this option.

## Cautions:

- ◆ **Both wall and floor mounted toilets must be provided with complete closure between the toilet and wall to reduce ligature opportunities.**
- ◆ **Toilet seats that are not integral with the bowl create ligature opportunities.**



## Whitehall Manufacturing

[www.kohler.com](http://www.kohler.com)

### WH2142 Toilet

Floor mounted, powder coated stainless steel toilet with ligature resistant ABS toilet seat.

**Note: Interior of toilet should be powder coated white for use at NYS-OMH Facilities.**



## Zurn

[www.zurn.com](http://www.zurn.com)

### Z5647-BWL Toilet

Floor mounted, back spud, 1.6 gpf siphon jet with hinged seat.

**Note: Toilet fails and breaks under heavy use.**



# Division 22 | Plumbing

## Toilet Flushometers

### General Notes

Concealed flush valves with remote infrared sensor controls reduce looping ligature opportunities.

Access doors and infrared sensor cover plates are to be fully recessed so that faces are flush with the adjacent finish materials. This is in order to avoid exposed sharp corners, potential picking at edges and possible ligature points.

When conflicts with ADA required grab bars occur, provide offset concealed flush valves.



### Installation Notes

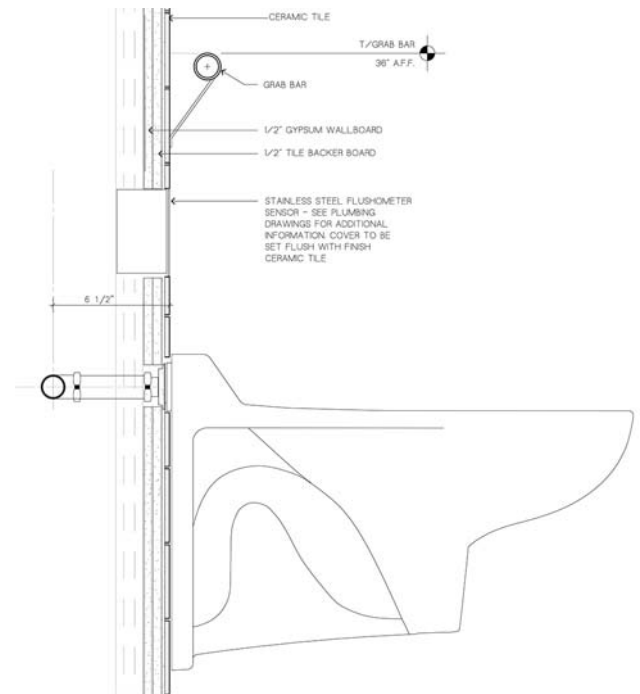
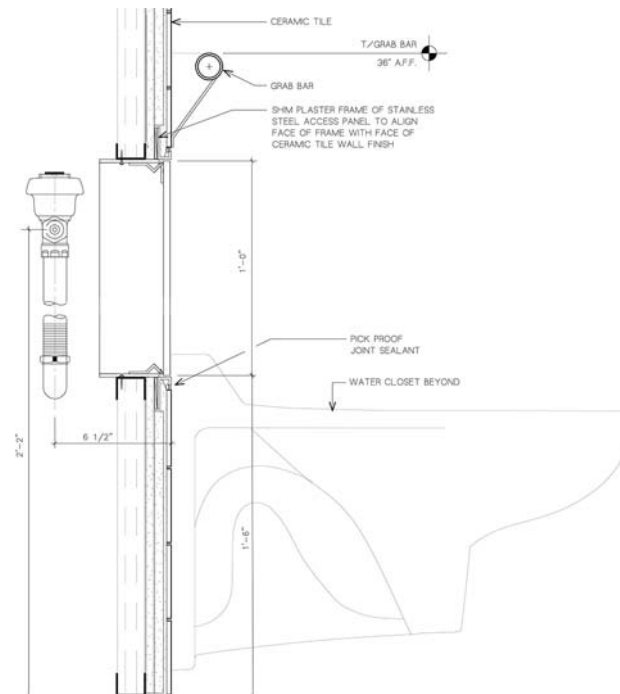
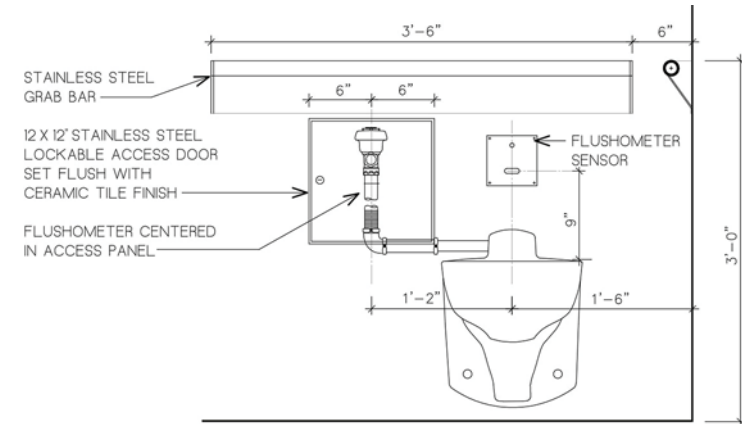
If wall finish is ceramic tile, provide an access door with plaster frame to allow the door installation to be flush with the ceramic tile surface.

Manufacturer supplied infrared cover plates may be designed for surface mounting and may require customization to provide a flush installation.

Acceptable flush valve manufacturers indicate an ability to assemble offset installations to avoid conflicts with grab bars. Verify with each manufacturer the specific requirements for offset plumbing extensions, access door size and positioning, and remote infrared sensor connections and cover plate dimensions.

## NYS-OMH Standard Concealed Flush Valve Assembly

Concealed Flush Valve Assembly with Remote Infrared Sensor  
Illustration shows and American Standard Aftwall Toilet with an offset Sloan Flush Valve.



# Division 22 | Plumbing

## Toilet Flushometers

### General Notes

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When conflicts with ADA required grab bars occur, provide offset concealed flush valves.

### Installation Notes

This product category in particular warrants considerable coordination.

If wall finish is ceramic tile, provide an access door with plaster frame to allow the door installation to be flush with the ceramic tile surface.

Manufacturer supplied infrared cover plates may be designed for surface mounting and may require customization to provide a flush installation.

Acceptable flush valve manufacturers indicate an ability to assemble offset installations to avoid conflicts with grab bars. Verify with each manufacturer the specific requirements for offset plumbing extensions, access door size and positioning, and remote infrared sensor connections and cover plate dimensions.



### Zurn

[www.zurn.com](http://www.zurn.com)

#### ZER6152AV Flush Valve

AquaSense AV concealed sensor operated, battery powered flush valve.

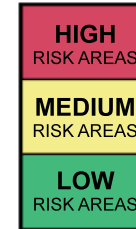


### Sloan Valve Company

[www.sloanvalve.com](http://www.sloanvalve.com)

#### Regal Model 154 Flushometer

Concealed push button activated, back spud, floor mounted flushometer.

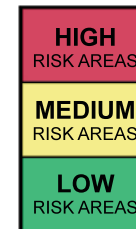


### Sloan Valve Company

[www.sloanvalve.com](http://www.sloanvalve.com)

#### Royal Optima 143 ES-S Flushometer

Concealed sensor operated, back spud, wall mounted flushometer.



### Sloan Valve Company

[www.sloanvalve.com](http://www.sloanvalve.com)

#### Royal Optima Sensor Activated Flushometer 152-3.5 ESS WB

Concealed sensor operated, back spud, wall mounted flushometer with accessible wall box.



# Division 22 | Plumbing

## Toilet Flush Valve Covers

### General Notes

Flush valve covers are only recommended for retrofitting existing fixtures.

**Caution: Confirm that the flush valve covers fit the existing flush valve assemblies well enough to allow for free operation of the equipment, without providing a potential ligature point through the opening for the flushing mechanism.**



### Behavioral Safety Products

[www.besafeprod.com](http://www.besafeprod.com)

#### Ligature Resistant Flush Valve Cover #FV600



### Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

#### WH2802 Sloped Top Ligature Resistant Flush Valve Cover

16 gauge type 304 stainless steel with powder coated finish. Can be custom sized and prepped. Provide powder coated tamper resistant fasteners.



# Division 22 | Plumbing

## Toilet Flush Valve Covers

### General Notes

Flush valve covers are only recommended for retrofitting existing fixtures.

**Caution: Confirm that the flush valve covers fit the existing flush valve assemblies well enough to allow for free operation of the equipment, without providing a potential ligature point through the opening for the flushing mechanism.**



### Norva Plastics

[www.norvaplastics.com](http://www.norvaplastics.com)

### ABS High-Impact Toilet Plumbing Cover

High-impact solid surface, customized to specifications.

**Caution: Careful scribing to fixture is required for a proper fit and sealant joint**



# Division 22 | Plumbing Hydration Stations

## General Notes

A remote cooler is required for chill-ed water dispensing and a drainage system is required for waste water.

The top of the hydration station access door must be sloped.

## Installation Notes

Drain grilles must be securely fastened with tamper resistant fasteners. Integral cup dispensers must be securely fastened to the filling station housing.



## Whitehall Manufacturing

[www.whitehallmfg.com](http://www.whitehallmfg.com)

### WHBF3 Pushbutton Ligature Resistant Cup Filler | WHBF4 Sensor Activated Ligature Resistant Cup Filler

Semi- Recessed, stainless steel, white powder coated finish with a key latch and hinged access door with a sloped top.



## Filtrine Manufacturing Company

[www.filtrine.com](http://www.filtrine.com)

### B103-C2-HR

16 gauge type 304 stainless steel with a satin finish. Hinged access door with a sloped top and keyed lock. Fits in 4" cavity wall.

**Note: Sharp corners and raw metal edges present opportunity for self-harm.**



# Division 22 | Plumbing

## Shower Heads



### Chicago Faucets

[www.chicagofaucets.com](http://www.chicagofaucets.com)

621-CP Institutional Shower Head



### Oddball Industries

[www.oddballindustries.com](http://www.oddballindustries.com)

SP-7 Shower Head



### Intersan

[www.intersan.us](http://www.intersan.us)

Ceiling Mounted Shower Head  
SNC01



### Galvin Engineering

[www.galvinengineering.com](http://www.galvinengineering.com)

#40691 Shower Rose 65

Chrome plated Safe-Cell vandal resistant shower head.



### Moen

<http://pro.moen.com>

M-Dura 8292



# Division 22 | Plumbing

## Shower Heads



**Oddball Industries**  
[www.oddballindustries.com](http://www.oddballindustries.com)

**SP-7TF Tub Filler**



**Willoughby Industries, Inc.**  
[www.willoughby-ind.com](http://www.willoughby-ind.com)

**CSH Ligature Resistant Head Assembly**



**Speakman Company**  
[www.speakmancompany.com](http://www.speakmancompany.com)

**S-2460-AF Shower Head**



**Behavioral Safety Products**  
[www.besafeprod.com](http://www.besafeprod.com)

**SH330 Shower Head**



**Whitehall Manufacturing**  
[www.whitehall-mfg.com](http://www.whitehall-mfg.com)

**CSH Conical Ligature Resistant Shower Head**





# Division 22 | Plumbing

## Shower Heads



### Symmons Industries, Inc.

[www.symmons.com](http://www.symmons.com)

#### 4-150 Shower Head (Institutional Type)

Note: Plastic Nozzle is easily removable and product does not fasten tightly to the wall, allowing ligature.



### Powers

[www.powerscontrols.com](http://www.powerscontrols.com)

#### 141 381 Institutional Shower Head

Note: Tie off ligature opportunity at end of shower head.

### Delta

[www.deltafaucet.com](http://www.deltafaucet.com)

#### 060793A Vandal Resistant Wall Mounting Shower Head

Note: Tie off ligature opportunity at end of shower head.



# Division 22 | Plumbing

## Hand Showers

### General Notes

Hand showers must be installed in addition to a primary ligature resistant shower head.

When a fixed shower head and hand shower are both used, provide either a ligature resistant diverter valve or separate ligature resistant control systems for each fixture.

### Code Notes

Only provide hand showers where required by code. Review and understand ANSI A117.1-2003, Section 608.6 exception, which allows a second fixed shower head in lieu of hand shower in specific situations.



### Intersan

[www.intersan.us](http://www.intersan.us)

#### 40707 Quick Release Handheld Shower

Hand held shower with anti-ligature quick connect wall connection.



### Oddball Industries

[www.oddballindustries.com](http://www.oddballindustries.com)

#### SP-7WC Quick Connect Hand Shower

Hand held shower with quick disconnect adapter.

#### Caution:

Tie-off ligature opportunity exists at hose bib. Install on wall as low as permissible by regulations to minimize risk.



# Division 22 | Plumbing

## Shower Controls & Activators

### General Notes

Best practice recommends flow control by resident, but with controlled (limited) flow time. Various mechanisms and controllers can provide this option; some are factory set and some can be adjusted by staff. Review and select products accordingly.

Best practice also recommends temperature control by resident. Several of the acceptable mechanisms don't provide this option. Review and select products accordingly.

### Installation Notes

When both shower heads and hand showers are provided, specify either a diverter valve or separate shower controls for both.



### Armstrong International, Inc.

[www.armstronginternational.com](http://www.armstronginternational.com)

#### Sense DMV2 Water Temperature Control

Stainless steel face plate is to be specified for all NYS-OMH facilities. Provide tamper resistant sealant at perimeter of plate. Touchless on/off flow control. Touchless temperature adjustment

#### Cautions:

- Control buttons are plastic and have the potential to be damaged.
- Product can be specified with a plastic cover by facilities other than NYS-OMH, but should be used with caution due to the increased potential to be damage.



### Behavioral Safety Products

[www.besafeprod.com](http://www.besafeprod.com)

#### Ligature Resistant Shower Valve, Handle & Escutcheon Plate #SV230



### Intersan

[www.intersan.us](http://www.intersan.us)

#### 50140 Ligature Resistant Shower Diverter



# Division 22 | Plumbing

## Shower Controls & Activators

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Best practice also recommends temperature control by resident. Several of the acceptable mechanisms don't provide this option. Review and select products accordingly.

### Installation Notes

When both shower heads and hand showers are provided, specify either a diverter valve or separate shower controls for both.



### Leonard Valve Company

[www.leonardvalve.com](http://www.leonardvalve.com)

#### 4500 LR Series Aquatrol Pressure actuated mixing valve.

**Caution: This product does not meet ADA requirements for graspability.**



### Niekamp Tool Company

[www.niekampinc.com](http://www.niekampinc.com)

#### SSK-1022E Suicide Prevention Shower Handle

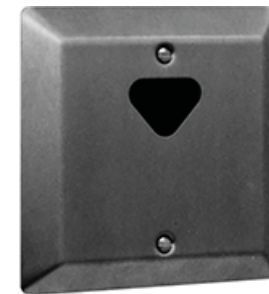


### Powers

[www.powerscontrols.com](http://www.powerscontrols.com)

#### 447 Infrared

HydroGuard ESP infrared sensor shower control.



### Powers

[www.powerscontrols.com](http://www.powerscontrols.com)

#### 447 Piezo

HydroGuard ESP pushbutton sensor shower control.



# Division 22 | Plumbing

## Shower Controls & Activators

### General Notes

Best practice recommends flow control by resident, but with controlled (limited) flow time. Various mechanisms and controllers can provide this option; some are factory set and some can be adjusted by staff. Review and select products accordingly.

Best practice also recommends temperature control by resident. Several of the acceptable mechanisms don't provide this option. Review and select products accordingly.

### Installation Notes

When both shower heads and hand showers are provided, specify either a diverter valve or separate shower controls for both.



### Symmons Industries, Inc.

[www.symmons.com](http://www.symmons.com)

#### 420 Series Showeroff Metering Showering System



### Whitehall Manufacturing

[www.whitehall-mfg.com](http://www.whitehall-mfg.com)

#### SV16 Tri-Lever Shower Control

Tri-lever handle, temperature/pressure balancing mixing valve.



### Whitehall Manufacturing

[www.whitehall-mfg.com](http://www.whitehall-mfg.com)

#### Ligature Resistant Shower Diverter

Tri-lever handle diverter.



### Whitehall Manufacturing

[www.whitehall-mfg.com](http://www.whitehall-mfg.com)

#### PBH Hemispherical Pushbutton

Specify with appropriate control valve assembly, one or two button options.

Two buttons allows three preset temperatures (cold, warm & lukewarm).



# Division 22 | Plumbing

## Shower Controls & Activators

**General Notes**

Best practice recommends flow control by resident, but with controlled (limited) flow time. Various mechanisms and controllers can provide this option; some are factory set and some can be adjusted by staff. Review and select products accordingly.

Best practice also recommends temperature control by resident. Several of the acceptable mechanisms don't provide this option. Review and select products accordingly.

**Installation Notes**

When both shower heads and hand showers are provided, specify either a diverter valve or separate shower controls for both.



**Willoughby**  
[www.willoughby-ind.com](http://www.willoughby-ind.com)

**TPLR Ligature Resistant Shower Mixing Valve**



**Willoughby**  
[www.willoughby-ind.com](http://www.willoughby-ind.com)

**Electronic Piezo Switch**



**Willoughby**  
[www.willoughby-ind.com](http://www.willoughby-ind.com)

**DVLR Ligature Resistant Shower Diverter Valve**



# Division 22 | Plumbing

## Shower Controls & Activators

### General Notes

Best practice recommends flow control by resident, but with controlled (limited) flow time. Various mechanisms and controllers can provide this option; some are factory set and some can be adjusted by staff. Review and select products accordingly.

Best practice also recommends temperature control by resident. Several of the acceptable mechanisms don't provide this option. Review and select products accordingly.

### Installation Notes

When both shower heads and hand showers are provided, specify either a diverter valve or separate shower controls for both.



### Oddball Industries

[www.oddballindustries.com](http://www.oddballindustries.com)

#### SP-10A Shower Mixing Valve

##### Cautions:

- ◆ This product does not meet ADA requirements for graspability.
- ◆ Difficult to operate when wet.



### Oddball Industries

[www.oddballindustries.com](http://www.oddballindustries.com)

#### SP-12B Diverter Valve

**Caution:** A tamper resistant fastener is not included and may be available for this product. A conventional fastener may be installed and filled with tamper resistant sealant if tamper resistant fastener is unavailable.



### Bradley Corporation

[www.bradleycorp.com](http://www.bradleycorp.com)

#### HSC95 Ligature Resistant Front-Mounted Panel Shower

**Note:** Looping ligature opportunity at the shower control knob.



# Division 22 | Plumbing

## Shower Controls & Activators

### General Notes

Best practice recommends flow control by resident, but with controlled (limited) flow time. Various mechanisms and controllers can provide this option; some are factory set and some can be adjusted by staff. Review and select products accordingly.

Best practice also recommends temperature control by resident. Several of the acceptable mechanisms don't provide this option. Review and select products accordingly.

### Installation Notes

When both shower heads and hand showers are provided, specify either a diverter valve or separate shower controls for both.

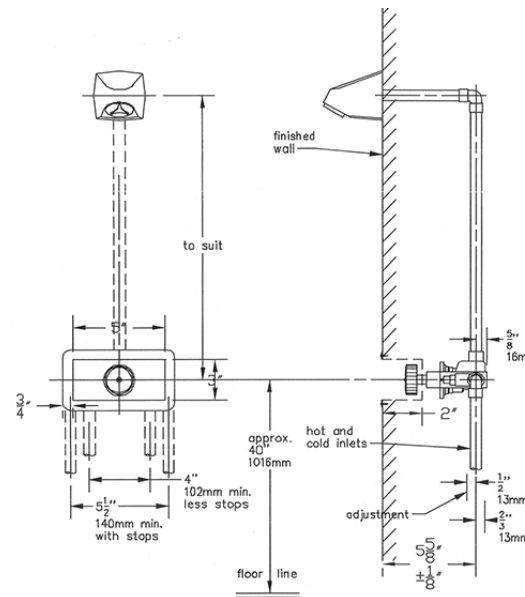


### Symmons Industries, Inc.

[www.symmons.com](http://www.symmons.com)

### B-40904-1 Recessed Shower Activator

**Note: Recessed shower activator is loopable and does not meet the ADA requirements for graspability.**





# Division 23 | HVAC



# Division 23 | HVAC

## HVAC, General



### General Notes

CO2 sensors are not currently available in any ligature resistant form and should only be used where accessible to patients in low or medium risk areas. CO2 sensors may be installed within ducts in high risk areas, but this will not qualify for the USGBC's LEED credits for high occupancy mechanically ventilated spaces.

Generally, ceiling mounted diffusers and grilles are more resistant to tampering, while wall mounted elements provide more structural support for heavy and deep correction-grade assemblies.

### Diffusers & Grilles

The selection of diffusers and grilles must be carefully considered in light of all relevant patient risk criteria, mechanical performance requirements, and the installed substrate. Louver and grille opening size and spacing is a critical consideration for structural performance, air flow and ligature resistance. The most secure and ligature resistant assemblies are typically very heavy, requiring careful consideration for structural support and the sequence of construction.

The selection of radiator covers must be carefully considered with respect to all relevant patient risk criteria, mechanical performance requirements, and the installed substrate. Perforated radiator covers pose a particular risk as they can be looped by a thin shoelace or similar object. Because these enclosures are typically surface mounted, careful consideration must be given to the installation conditions at these covers to prevent wedging/looping opportunities at the installed substrate. Tamper resistant sealant should be utilized to close all gaps at perimeter of enclosure.

Diffusers and grilles should be securely mounted in place using tamper resistant fasteners. Diffusers and grilles, and all accessible elements of the housing should be attached to permanently affixed concealed back angles that are part of the assembly, or to wall or ceiling framing elements. Because of the inherent variations in the manufacturing process, specifiers should procure samples of diffusers prior to specifying. Variations in finish along with manufacturing tolerances have caused unsafe installations in some products where other instances of the same line have achieved safe installations.

It should be noted that all ligature-resistant diffusers and grilles reduce air flow. Evaluation of this reduction shall be performed prior to incorporation/replacement of these diffusers and grilles.

### Escape

Where escape is a primary risk criterion, diffusers and grilles should be reduced in size to the greatest extent possible. If diffusers and grilles are required to be large enough to allow passage, they should be securely mounted in place using welded joints and/or tamper resistant fasteners. Diffusers and grilles, and all accessible elements of the housing should be attached to wall or ceiling framing elements and to the ductwork. Face plate construction should be thick enough to resist impact assaults and should not be removable, except with special tamper resistant fastener tools. Passage restrictors should be permanently welded in the sleeve housing within the assemblies.

### Ligature Resistance

Where ligature resistance is a primary risk criterion, diffusers and grilles should be specifically designed with closely spaced welded deep "S" and "Z" shaped vanes that prevent looping, or they should be protected by heavy gauge metal face plates with small, tightly spaced, perforated holes. Perforated grilles with 11 ga. (1/8" thick) face plates with holes no larger than 1/8" in diameter on 3/16" staggered centers have been tested and have resisted looping.

Perforated diffusers, grilles and radiator covers utilizing the industry standard of 3/16" hole on 9/32" spacing pose a particular risk as they can be easily looped by a thin shoelace or similar object. Because these devices are prevalent in existing inpatient environments, they are identified in this document as ACCEPTED in medium risk environments and noted with specific USE WITH CAUTION language. It should be noted that smaller holes and tighter spacing of holes, and heavier gauge metal plate are also available from several manufacturers as standard options. OMH will continue to perform additional testing on perforated grilles and diffusers and is researching alternative solutions. The risk of utilizing these devices shall be noted and evaluated by each facility.

### Concealing Contraband

Where concealing contraband is a primary risk criterion, diffusers and grilles should be reduced in size to the greatest extent possible and securely mounted in place using tamper resistant fasteners. Diffusers and grilles, and all accessible elements of the housing should be attached to wall or ceiling framing elements. Face plate construction should be thick enough to resist impact assaults and should not be removable, except with special tamper resistant fastener tools.

# Division 23 | HVAC

## Thermostats

### General Notes

Use covers and/or flat plate digital thermostats in high risk areas.



### Automated Logic Corporation

[www.automatedlogic.com](http://www.automatedlogic.com)

Sensor Thermistor, Plate ALC/10K-2-SP with Logo



### Kele

[www.kele.com](http://www.kele.com)

KTP Series Stainless Steel Flush-Mount Thermistor and RTD Sensors



# Division 23 | HVAC

## Diffusers & Grilles

### General Notes

NYS-OMH standard hole size for perforated grilles is 3/16" diameter maximum to reduce loopability.

### Installation Notes

Careful detailing of diffusers and grilles with substrate is required.

### Performance Criteria

Engineer back of systems to accommodate free area requirements.

### Finish

Specify powder coated.



### Anemostat

[www.anemostat.com](http://www.anemostat.com)

#### Maximum Security Diffuser SSV22

Extra Heavy Duty Grille with 3/16" x 3/16" Openings

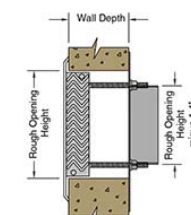
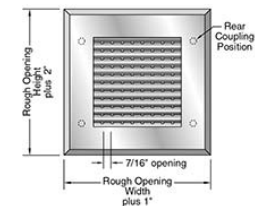
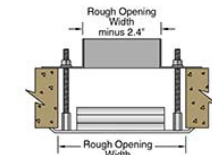
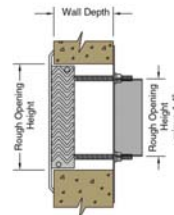
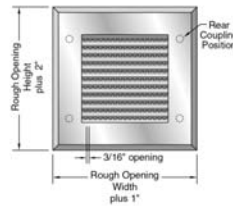
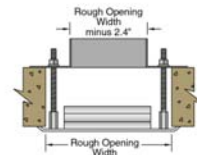


### Anemostat

[www.anemostat.com](http://www.anemostat.com)

#### Maximum Security Diffuser SSV23

Extra Heavy Duty Grille with 7/16" x 3/16" Openings



# Division 23 | HVAC

## Diffusers & Grilles

**General Notes**

NYS-OMH standard hole size for perforated grilles is 3/16" diameter maximum to reduce loopability.

**Installation Notes**

Careful detailing of diffusers and grilles with substrate is required.

**Performance Criteria**

Engineer back of systems to accommodate free area requirements.

**Finish**

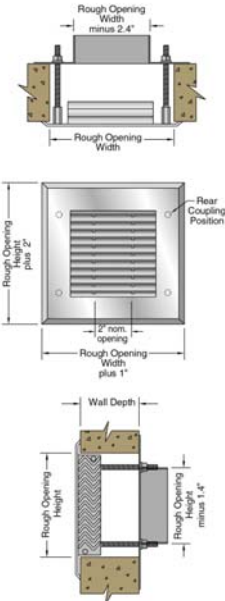
Specify powder coated.



**Anemostat**

[www.anemostat.com](http://www.anemostat.com)

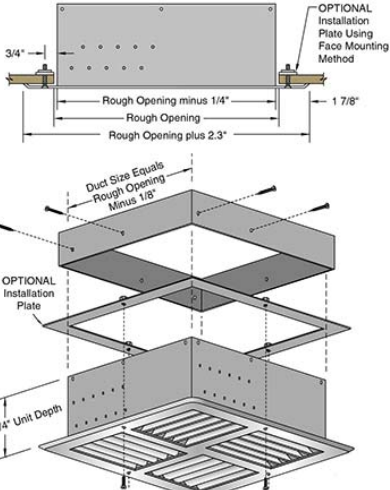
**Maximum Security Diffuser SSV26**  
Extra Heavy Duty Grille with 2" (nom.) x 3/16" Openings



**Anemostat**

[www.anemostat.com](http://www.anemostat.com)

**Maximum Security Diffuser SV432**  
Ceiling Diffuser without Faceplate Deflection



# Division 23 | HVAC

## Diffusers & Grilles

### General Notes

NYS-OMH standard hole size for perforated grilles is 3/16" diameter maximum to reduce loopability.

### Installation Notes

Careful detailing of diffusers and grilles with substrate is required.

### Performance Criteria

Engineer back of systems to accommodate free area requirements.

### Finish

Specify powder coated.

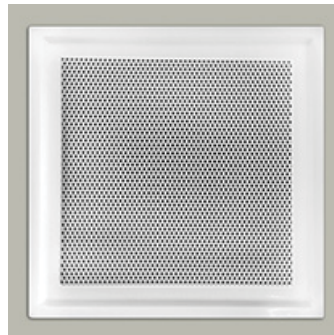


### Behavioral Safety Products

[www.besafeprod.com](http://www.besafeprod.com)

### Ligature Resistant Exhaust/Supply Grille #EG450

Designed to replace existing grilles that are not ligature resistant. 11 gauge aluminum with 1/8" round holes.



# Division 23 | HVAC

## Diffusers & Grilles

**General Notes**

NYS-OMH standard hole size for perforated grilles is 3/16" diameter maximum to reduce loopability.

**Installation Notes**

Careful detailing of diffusers and grilles with substrate is required.

**Performance Criteria**

Engineer back of systems to accommodate free area requirements.

**Finish**

Specify powder coated.

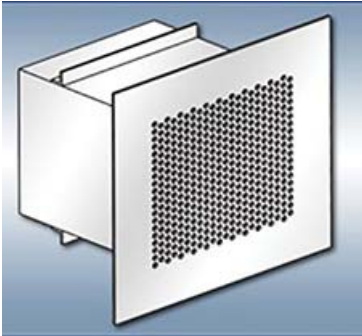


**Anemostat**

[www.anemostat.com](http://www.anemostat.com)

**Models ASSG & ASSG-RR  
Extra Heavy Duty Grilles**

**Caution: Perforated diffusers, grilles and radiator covers pose a particular risk as they can be easily looped by a thin shoelace or similar object.**



**Carnes Company**

[www.carnes.com](http://www.carnes.com)

**Model RSPA41 Sleeved Security  
Ceiling Diffuser**

Face and sleeve are 12 gauge hot rolled steel. Core has 12 gauge hot rolled steel louvers. 1-1/2 x 1-1/2 x 1/8" steel angles are provided as standard in four loose pieces for field welding. Mounting sleeve is for installation in CMU walls only. Specify with 1" flange and only as ceiling mounted. Do not mount in walls. Louver blades are sharp and also create a wedging opportunity.



# Division 23 | HVAC

## Diffusers & Grilles

**General Notes**

NYS-OMH standard hole size for perforated grilles is 3/16" diameter maximum to reduce loopability.

**Installation Notes**

Careful detailing of diffusers and grilles with substrate is required.

**Performance Criteria**

Engineer back of systems to accommodate free area requirements.

**Finish**

Specify powder coated.



**Carnes Company**

[www.carnes.com](http://www.carnes.com)

**Model RSPA51 Suicide Deterrent Security R&G**

Face and sleeve are 3/16" hot rolled steel. Hole pattern is 3/16" round holes on staggered 9/32" centers. 2 x 2 x 3/16" steel angles are provided as standard in four loose pieces for field welding. Mounting sleeve is for installation in CMU walls only. Specify with 1" flange.

**Caution: Perforated diffusers, grilles and radiator covers pose a particular risk as they can be easily looped by a thin shoelace or similar object.**



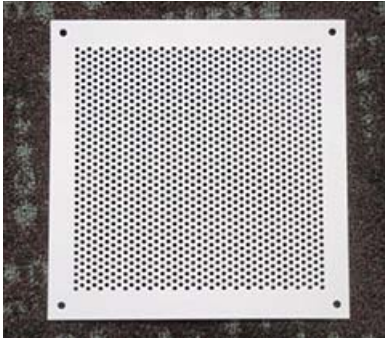
**Kees, Inc.**

[www.kees.com](http://www.kees.com)

**SEG-9SP3 Security Grille**

Face is 3/16" steel stitch welded to sleeve with 1" face flange. Hole pattern is 3/16" round holes on staggered 9/32" centers. Two part polyurethane finish inside and out. 1 x 1 x 3/16" steel angles are provided as standard in two loose pieces for field welding. Available in aluminum and stainless steel.

**Caution: Perforated diffusers, grilles and radiator covers pose a particular risk as they can be easily looped by a thin shoelace or similar object.**





# Division 23 | HVAC

## Diffusers & Grilles

**General Notes**

NYS-OMH standard hole size for perforated grilles is 3/16" diameter maximum to reduce loopability.

**Installation Notes**

Careful detailing of diffusers and grilles with substrate is required.

**Performance Criteria**

Engineer back of systems to accommodate free area requirements.

**Finish**

Specify powder coated.



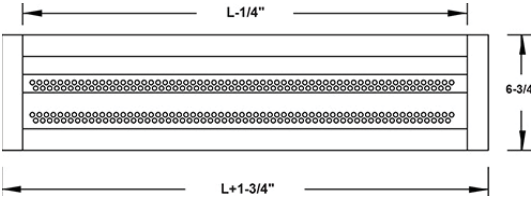
**Kees, Inc.**

[www.kees.com](http://www.kees.com)

**SEG-9LS3VH Security Diffuser**

Face is 10 gauge steel stitch welded to sleeve with 1" face flange. Hole pattern is 3/16" round holes on staggered 9/32" centers. Two part polyurethane finish inside and out. Maximum single piece section is 48" in length. Available in aluminum and stainless steel.

**Caution: Perforated diffusers, grilles and radiator covers pose a particular risk as they can be easily looped by a thin shoelace or similar object.**

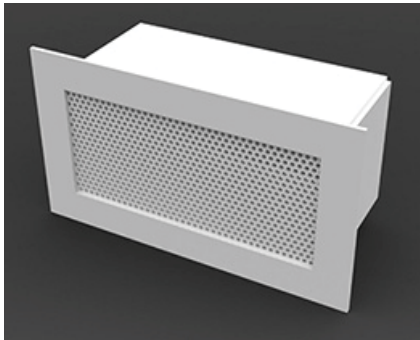


**Titus**

[www.titus-hvac.com](http://www.titus-hvac.com)

**SG-SD Maximum Security Suicide Deterrent Grille**

**Caution: Perforated diffusers, grilles and radiator covers pose a particular risk as they can be easily looped by a thin shoelace or similar object.**



# Division 26 | Electrical



# Division 26 | Electrical

## Receptacles & Switches, General



### General Notes

In new construction or substantial renovations, where arc fault and ground fault interruption are both provided, provide electrical cover plates that are either thermoplastic nylon or metal. In minor renovation projects, where providing arc fault and ground fault interruption are beyond the scope of the project, provide only metal electrical cover plates. In all cases fasten cover plates to receptacle with tamper resistant fasteners that are accepted in the NYS-OMH Patient Safety Standards. Two fasteners are recommended, though not required, for all cover plates.

### Accidental or Deliberate Self-Harm

Provide tamper resistant receptacles with arc fault and ground fault interruption in all patient accessible areas of all psychiatric hospitals and wards.

### Tamper Resistant Receptacles

Tamper resistant receptacles do not provide an adequate level of protection against self-harm alone. Tamper resistant electrical receptacles are designed to prevent accidental electrical self-harm to toddlers and small children. They are not designed to protect against intentional self-harm due to deliberate attack by adults. The protective measures of a tamper resistant receptacle can be easily defeated by older children and adults. Once defeated, electrical self-harm can be induced by either arc or ground fault. Arc fault self-harm can be induced by holding two insulated conductors (e.g. paper clips while holding them in flexible plastic or rubber as an insulator) and bending them close enough together to get an electrical current to arc between them, perhaps in an effort to create a cigarette lighter or start a fire. Ground fault self-harm can be induced by grounding oneself (e.g. to the floor) while holding one conductor (i.e., paper clips) in the hot side of the receptacle, causing the electrical current to flow through oneself to the ground.

### AFCI (Arc Fault Circuit Interrupter) & GFCI (Ground Fault Circuit Interrupter) Protection

Dual function circuit interrupters utilize both GFCI and AFCI detection technology. GFCI protection guards against ground faults, and are an effective means of preventing electrical shocks. AFCI protection guards against damage or fires which can result from arcing and sparking that can arise from deteriorated wires, poor connections and breaches in wire insulation.

# Division 26 | Electrical

## Receptacles & GFCI/AFCI Circuit Breakers

### General Notes

See comments on previous general notes page.

Provide dual function circuit breakers for all circuits with devices in patient accessible areas.

Circuit breakers are located within secure electrical panels beyond the patient environment. They are included in this document because they enhance the patient safety of the built environment.

**Caution: Provide tamper resistant receptacles with arc fault and ground fault interruption in all patient accessible areas of all psychiatric hospitals.**



### Eaton

[www.cooperindustries.com](http://www.cooperindustries.com)

#### TR8200 Series Hospital Grade Receptacles

Tamper resistant.

### Hubbell

[www.hubbell-wiring.com](http://www.hubbell-wiring.com)

#### 8200 & 8300 Series Extra Heavy Duty Hospital Grade Receptacles

Tamper resistant.

### Legrand

[www.legrand.us](http://www.legrand.us)

#### PTTR62HW Series Extra Heavy Duty

#### Hospital Grade Receptacles

Tamper resistant.

### Leviton

[www.leviton.com](http://www.leviton.com)

#### 8200-SG Series Tamper Resistant Receptacles



### Eaton

[www.cooperindustries.com](http://www.cooperindustries.com)

#### CHF Circuit Breaker

### General Electric

[www.geindustrial.com](http://www.geindustrial.com)

#### Dual Function Circuit Breaker

### Schneider Electric

[www.schneider-electric.com](http://www.schneider-electric.com)

#### QO Dual Function Circuit Breakers

### Siemens

[www.usa.siemens.com](http://www.usa.siemens.com)

#### Dual Function Circuit Breaker



# Division 26 | Electrical Wall Plates

## General Notes

Thermoplastic nylon wall plates are recommended. They are more flexible than thermoset (urea) products and have a shinier, glossy finish. Molded thermoplastic nylon wall plates also perform for maximum resistance to impact, abrasion, fading and discoloration. Nylon is resistant to stresses associated with high abuse applications.

Polycarbonate is a thermoset plastic, so doesn't perform as well in this application.

## Installation Notes

Nylon is pliable so it should be installed in a bed of tamper proof sealant.



## Hubbell

[www.hubbell-wiring.com](http://www.hubbell-wiring.com)

### Nylon Wall Plates

## Legrand

[www.legrand.us](http://www.legrand.us)

### Unbreakable Nylon Wall Plates

## Leviton

[www.leviton.com](http://www.leviton.com)

### Unbreakable Nylon Wall Plates



## Hubbell

[www.hubbell-wiring.com](http://www.hubbell-wiring.com)

### Metal Wall Plates



# Division 26 | Electrical Wall Plates

## General Notes

Thermoplastic nylon wall plates are recommended. They are more flexible than thermoset (urea) products and have a shinier, glossy finish. Molded thermoplastic nylon wall plates also perform for maximum resistance to impact, abrasion, fading and discoloration. Nylon is resistant to stresses associated with high abuse applications.

Polycarbonate is a thermoset plastic, so doesn't perform as well in this application.

## Installation Notes

Nylon is pliable so it should be installed in a bed of tamper proof sealant.

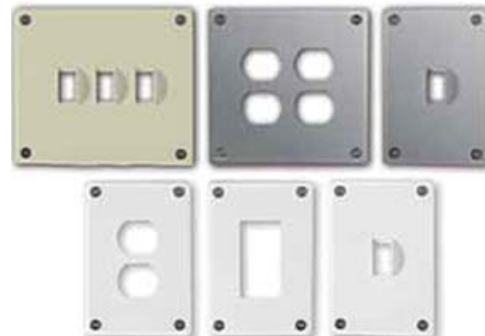


## Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

### Mighty Mac WSP/WPP Series Wall Plates

**Caution: Intended for use in OMH facilities only when other alternatives are considered unsuitable due to excessive tampering by patients.**



# Division 26 | Electrical Sensors

## General Notes

Infrared detection is not suitable for bathrooms with partitions and rooms with cubicles. Ultrasonic detection is more suitable for these locations.

Ceiling mounted sensors are preferable to wall mounted sensors.



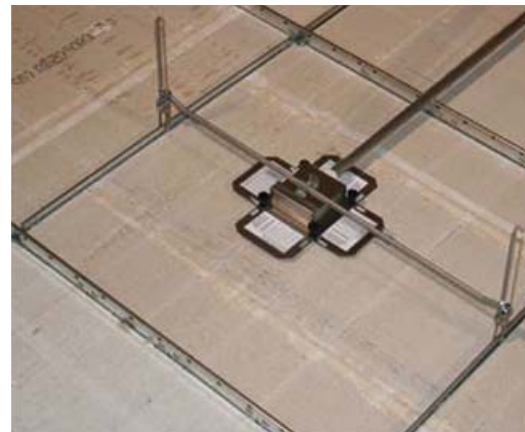
## Concealite Architectural Products

[www.concealite.com](http://www.concealite.com)

### SpaceStation Series 2000 Occupancy Lighting Control System

SpaceStation operates at 120 or 277 VAC and utilizes super high frequency technology to control lighting based on occupancy. It sends out electromagnetic waves that bounce off nearby surfaces, and uses the Doppler principle to analyze changes in the return waves to detect motion in the area.

Detects movement within a room when installed above suspended ceilings, gypsum board and decorative wood ceilings. Occupancy sensor is completely concealed from view, and installation requires no visible ceiling penetration.



## Watt Stopper

[www.wattstopper.com](http://www.wattstopper.com)

### CI-200 Series Passive Infrared Ceiling Sensor

Note: Plastic dome covering sensor is not tamper resistant and a wedge point can be established. Mounting escutcheon is not mechanically fastened and a wedge point can be established behind it if it is not installed flush to substrate.



# Division 26 | Electrical

## Light Fixtures, General



### Performance Criteria

Provide lighting that meets the following criteria:

- ◆ Lighting; High efficiency, maintaining visual performance where applicable. Provide dimmable ballasts as required.
- ◆ Lamps; NYS-OMH standard is F32T8 lamps due to their high efficiency, performance, reliability, and cost effectiveness.
- ◆ Diffuser|Lens; Provide 1/8" thick minimum polycarbonate prismatic or translucent lens. Lens frame requires enough edge bite in order to retain the lens during maximum deflection. Fasten lens or lens frame with two tamper resistant fasteners minimum. Do not pass fasteners through polycarbonate lens material.
- ◆ Housing; To be unbreakable.
- ◆ Exposed fasteners; To be tamper resistant with finish to match housing.
- ◆ Switching; All Seclusion Room lighting, both for children and adults, is to be dimmable. Dimmable ballasts can be installed in retrofit situations.
- ◆ Maintenance; Specify fixtures with standard replacement parts, lamps and ballasts. Consider the minimum number of security fasteners required for patient safety without creating unnecessary labor for relamping.
- ◆ Approvals; Underwriters Laboratories (UL) and others as applicable.

### Installation Notes

Install light fixtures flush with substrate. It is critical to ensure there are no gaps for graspability or ligature tie-off. Any remaining gaps shall be filled with tamper resistant sealant.

Coordinate shower light fixture installation with wall or ceiling finish. Escutcheon plates do not sit flat on ceramic wall tiles or acoustic ceiling tiles. The recommended installation method for ceramic wall tile is to install square or rectangular escutcheon plates directly to the substrate surface, then to trim ceramic wall tile up to the escutcheon plates.

### Additional Notes

Verify photometrics of light fixtures with polycarbonate lenses during the project design.

The Office of Mental Health Lighting Standards Handbook is intended for use by Plant Supervisors at facilities as a reference guide when replacing light fixtures. The Handbook details which energy saving options may be best for each application. It is important to also reference the Office of Mental Health Patient Safety Standard Guidelines when replacing or specifying light fixtures in patient areas. OMH reinforces the importance of patient safety before energy efficiency in their facilities in all patient areas.



# Division 26 | Electrical

## Light Fixtures, Interior, General, Surface Mounted

### General Notes

See comments on previous general notes page.

### Specification Note

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



### Eaton

[www.cooperindustries.com](http://www.cooperindustries.com)

#### Fail-Safe FUSL LED Sloped Sided Confinement

Lighting: Up & down light configurations.

Lamps: LED

Diffuser|Lens: Two lens. Prismatic polycarbonate on fixture side. Clear polycarbonate on environmental side. Secured with thru-studs.

Housing: Clamshell design combines die formed 14 gauge cold rolled steel body with continuous welded and ground ends to form a one piece, doorless housing. Continuous concealed piano hinge with welded pin end to prevent removal.

Switching; On/off integral switches.

Approvals: ETL damp label.

Options: Fluorescent night light, tamper resistant fasteners.

Finish: Standard white high reflectance polyester powder coat finish.



### Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

#### Enviroseal ES5 Linear Wraparound

Lighting: Linear fluorescent.

Lamps: T5 & T8. 4' fixtures also available with T5HO & LED.

Diffuser|Lens: 0.125" pearlescent or clear polycarbonate, smooth exterior, linear prismatic interior.

Housing: One piece, seam welded 20 gauge cold rolled steel.

Approvals: UL, cUL & optional IP65 certification.

Options: LED night light with night level control. IP65 option provided with linear silicone gasket to seal lens frame to housing. Must specify tamper resistant fasteners to secure lens in housing.

Finish: Brushed stainless steel or white powder coat.



# Division 26 | Electrical

## Light Fixtures, Interior, General, Surface Mounted

### General Notes

See comments on previous general notes page.

### Specification Notes

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



### Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

### MedMaster Behavioral Health MMAC14, MMAC22, MMAC24

Lighting: Linear fluorescent & LED.  
Lamps: T5, T5HO & T8.  
Diffuser|Lens: Specify 1/8"-3/8" polycarbonate with tamper resistant fasteners.  
Housing: 14, 16 & 18 gauge cold rolled steel, spot welded. Door is one piece die formed with corners continuously seam welded and smooth, no post grinding, and tamper resistant fasteners.  
Approvals: UL, cUL & IP65.  
Options: LED night light with night level control.



MMAC22 - 2 x 2'



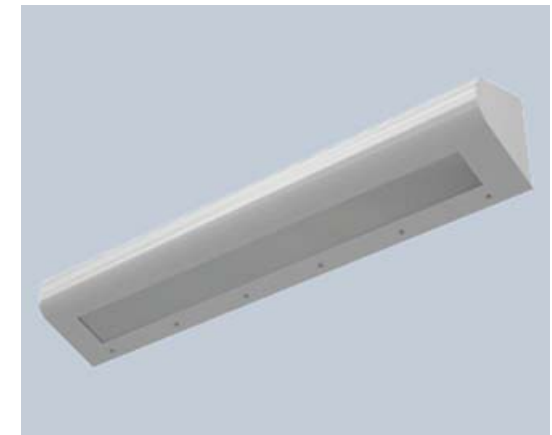
### Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

### WCBU Mighty Mac

Lighting: Linear fluorescent, CFL & LED.  
Up & down light configurations.  
Lamps: Two aperture.  
Diffuser|Lens: Two lens. Prismatic polycarbonate on fixture side. Clear polycarbonate on environmental side. Secured with tamper resistant fasteners. Need to specify with polycarbonate.  
Housing: 14 gauge cold rolled steel.  
Approvals: UL & cUL.  
Options: LED night light with night level control.

**Caution: Fixture shall not be installed in a vertical orientation.**



# Division 26 | Electrical

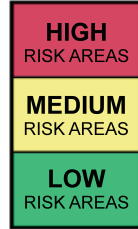
## Light Fixtures, Interior, General, Surface Mounted

### General Notes

See comments on previous general notes page.

### Specification Notes

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



### Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

#### Millenium Round MR13FL & MR17FL Series, Ceiling Mount

Lighting: LED, 3500K, 4000K, 5000K; 80 CRI; 120-277 VAC; dimming w 1-100% range

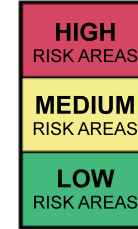
Diffuser | Lens: full reflector wire cover @ 92% reflectivity; UV stabilized. Specify anti-ligature pearlescent polycarbonate lens (\*only available with full face model & damp location).

Housing: high impact resistant, injection molded matte white polycarbonate lens base/grille.

Approvals: Peace of Mind Guarantee, cUL, UL, wet label, IP64, ADA.

Options: emergency battery backup, photo control, retrofit mounting plate

Finish: Available in matte white, light gray, forest green, dark bronze, matte black, silver, custom.



### Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

#### MightyMac SSA, SSB, SSC, SSD Series

Lighting: CFL or LED.

Diffuser|Lens: Prismatic polycarbonate inner lens and clear polycarbonate outer lens.

Housing: One piece die formed prime grade material 14 gauge steel continuously seam welded. Clamshell housing with completely concealed internal droplet piano hinge.

Approvals: UL, cUL listed for damp locations.

Options: Wet location listing, night light, dimming.



# Division 26 | Electrical

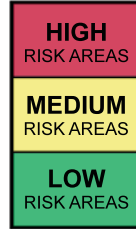
## Light Fixtures, Interior, General, Surface Mounted

### General Notes

See comments on previous general notes page.

### Specification Notes

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



### Luminaire LED, Inc.

[www.luminairelighting.com](http://www.luminairelighting.com)

#### VPF-4 Series, VPF-8 Series, VPF-12 Series

Lighting: Fluorescent & LED.  
 Diffuser|Lens: UV stabilized opal polycarbonate with infrared prisms.  
 Housing: Marine grade heat treated extruded aluminum, chemically primed and finished with polyester powder coat.  
 Approvals: UL & cUL, damp label, wet optional.  
 Options: Photoelectric switch, tamper resistant fasteners, and battery backup system.  
 Finish: Available in black, white, gray, bronze or custom color.



### Luminaire LED, Inc.

[www.luminairelighting.com](http://www.luminairelighting.com)

#### Supermax Wall Mount WM11, WM12, WM13

Lighting: LED.  
 Diffuser|Lens: Two lens. Prismatic polycarbonate inner lens. Clear polycarbonate outer lens. Secured to housing with vertically adjustable Z-brackets with internally welded stainless steels studs and heavy duty hardware.  
 Housing: One piece die formed 14 gauge cold rolled steel with continuously welded smooth corners and seams, and fully recessed tamper resistant security screws with cage nuts.  
 Approvals: UL & cUL.  
 Options; Fuse and fuse holder, amber LED night light with field adjustable levels, full length hinge, downlight only, uplight only, TORX® head bit for Confinement Series.  
 Finish: Available in black, white, bronze, gray, or silver.



# Division 26 | Electrical

## Light Fixtures, Interior, General, Surface Mounted

### General Notes

See comments on previous general notes page.

### Specification Notes

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



### Luminaire LED, Inc.

[www.luminairelighting.com](http://www.luminairelighting.com)

#### Supermax Corner Mount CM12, CM13, CM14

Lighting: LED  
 Diffuser | Lens: Two lens. Prismatic polycarbonate inner lens. Clear polycarbonate outer lens. Secured to housing with vertically adjustable Z-brackets with internally welded stainless steels studs and heavy duty hardware.  
 Housing: One piece die formed 14 gauge cold rolled steel with continuously welded smooth corners and seams, and fully recessed tamper resistant security screws with cage nuts.  
 Approvals: UL, cUL  
 Options: Fuse and fuse holder, amber LED night light with field adjustable levels, full length hinge, TORX® head bit for Confinement Series.  
 Finish: Available in black, white, bronze, gray, or silver.



### Luminaire LED, Inc.

[www.luminairelighting.com](http://www.luminairelighting.com)

#### Supermax Surface Mount SM12, SM13, SM22, SM23

Lighting: LED  
 Diffuser | Lens: Dual lens. Need to specify 1/8" - 1/2" polycarbonate lens.  
 Housing: 16 gauge cold rolled steel.  
 Approvals: UL, cUL  
 Options: Dimming, amber LED night light, wet location listing, full length hinge.  
 Finish: brushed stainless steel or white polyester powder coating.

**Caution: Sealant at perimeter of gypsum installation required.**



# Division 26 | Electrical

## Light Fixtures, Interior, General, Surface Mounted

**General Notes**

See comments on previous general notes page.

**Specification Notes**

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



**Kenall Manufacturing**

[www.kenall.com](http://www.kenall.com)

**Millenium Stretch MLHA8, MLHA12**

Lighting: CFL or LED.  
 Diffuser|Lens: UV stabilized high impact extruded clear or pearlescent polycarbonate. Smooth exterior, linear prismatic interior with 0.156" nominal thickness. Lens securely positioned in body channels and end caps, and locked in place with tamper resistant fasteners.  
 Housing: Marine grade aluminum extruded body with die cast end caps with polyester powder coat finish.  
 Approvals: UL, cUL, & IP64.  
 Options: Continuous row joiner band, tamper resistant fasteners, and dimming.  
 Select rounded end caps.

Note: The lens has a 1/8" graspable edge and is pin connected in two points which are exposed. The edge could allow a person to hang off the fixture, but it will not support the weight.



**Kenall Manufacturing**

[www.kenall.com](http://www.kenall.com)

**Millenium Round MR13FL & MR17L Series, Wall Mount**

Lighting: LED, 3500K, 4000K, 5000K; 80 CRI; 120-277 VAC; dimming w 1-100% range  
 Diffuser | Lens: full reflector wire cover @ 92% reflectivity; UV stabilized. Specify anti-ligature pearlescent polycarbonate lens (\*only available with full face model & damp location).  
 Housing: high impact resistant, injection molded matte white polycarbonate lens base/grille.  
 Approvals: Peace of Mind Guarantee, cUL, UL, wet label, IP64, ADA.  
 Options: emergency battery backup, photo control, retrofit mounting plate  
 Finish: Available in matte white, light gray, forest green, dark bronze, matte black, silver, custom.

**Caution: Sealant at perimeter of gypsum installation required.**



# Division 26 | Electrical

## Light Fixtures, Interior, General, Surface Mounted

### General Notes

See comments on previous general notes page.



### Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

#### Ranger Striplight

Lighting: Fluorescent.

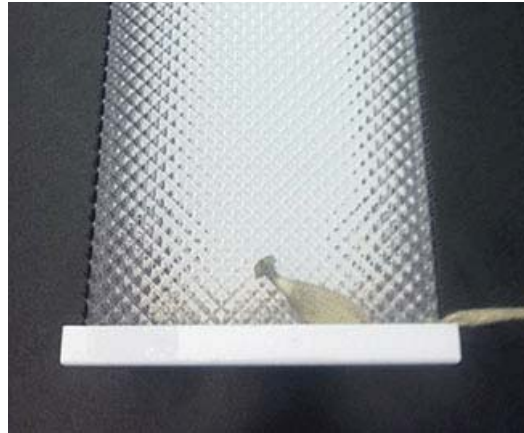
Lamps: T8.

Diffuser|Lens: One piece extruded clear prismatic impact blend acrylic. Two white nylon fasteners secure lens in baseplate channel.

Housing: One piece 20 gauge cold rolled steel baseplate and end caps. Baseplate provided with six point mounting holes.

Approvals: UL, cUL, wet label.

**Note: Wedging ligature opportunity at lens and housing.**



### Legion Lighting Co., Inc.

[www.legionlighting.com](http://www.legionlighting.com)

#### Vandalex Series 19

Lighting: Fluorescent.

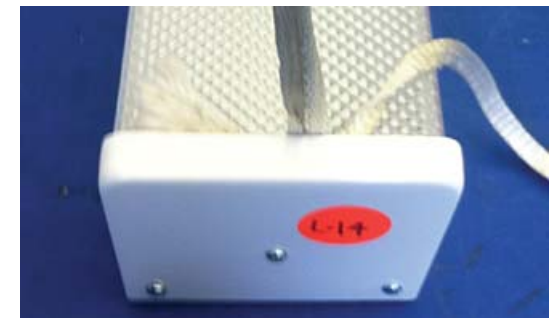
Lamps: T8.

Diffuser|Lens: Polycarbonate.

Housing: Die formed 16 gauge cold rolled steel.

Approvals: UL, cUL, wet label.

**Note: Wedging ligature opportunity at lens and housing.**



# Division 26 | Electrical

## Light Fixtures, Interior, General, Surface Mounted

### General Notes

See comments on previous general notes page.



### Luminaire LED, Inc.

[www.luminairelighting.com](http://www.luminairelighting.com)

### Swoop 610 Series

**Note:** Presents opportunity for downward ligature in both vertical and horizontal orientation.





# Division 26 | Electrical

## Light Fixtures, Interior, General, Recessed

### General Notes

See comments on previous general notes page.

### Specification Notes

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



### Eaton

[www.cooperindustries.com](http://www.cooperindustries.com)

#### Fail-Safe FMR HS LED Recessed Flange Confinement

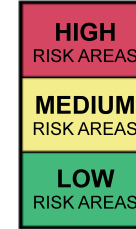
Lighting: LED

Diffuser | Lens: Two lens. Prismatic polycarbonate inner lens. Clear polycarbonate outer lens. Lens secured by thru-studs and vertically adjustable internal cold rolled steel hold-downs.

Housing: High Security. 16 gauge die-formed cold rolled steel body with welded corners. Contains 2 stainless steel aircraft cables to attach door to housing. Concealed piano hinge. Stainless steel tamper resistant T20 Torx screws with center pin reject standard. Allen-head screws with center pin reject optional.

Approvals: Damp label, wet optional.

Options: Emergency battery pack, linear LED night light dimmable, fuse and holder, continuous piano hinge, wet location, anti-microbial matte white finish; swing-out brackets, yoke mounting frame; natural brushed finish; polyester powder coat finish.



### Hubbell Lighting

[www.hubbellhealthcare.com](http://www.hubbellhealthcare.com)

#### MediMode Behavioral

Lighting: LED, 3500K, universal voltage, 80-90 CRI

Diffuser | Lens: 1/4" clear polycarbonate lens secured from behind with full-length brackets.

Housing: 20 ga seam welded cold rolled steel housing with 18 ga cold Rolled Steel flange. 18 ga cold rolled steel door frame. Switching: Wired for independent control of each function.

Approvals: UL1598, cCSUus wet label in covered ceilings, 5 year warranty.

Options: Night light amber, night light white, emergency battery pack, radio interference filter

finish; Polyester white powder coat with antimicrobial additive.



# Division 26 | Electrical

## Light Fixtures, Interior, General, Recessed

**General Notes**  
See comments on previous general notes page.

**Specification Notes**  
Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



**Kenall Manufacturing**  
[www.kenall.com](http://www.kenall.com)

**MedMaster Behavioral Health  
MMAC14, MMAC22 & MMAC24**

Lighting: Linear fluorescent & LED.  
Lamps: T5, T5HO & T8.  
Diffuser|Lens: Specify 1/8"-3/8" polycarbonate with tamper resistant fasteners.  
Housing: 14, 16 & 18 gauge cold rolled steel, spot welded. Door is one piece die formed with corners continuously seam welded and smooth, no post grinding, and tamper resistant fasteners.  
Approvals: UL, cUL, wet label.  
Options: LED night light with night level control.



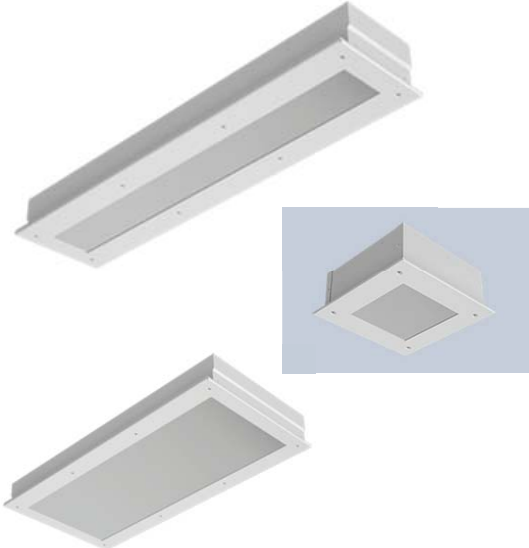
MMAC22 - 2 x 2'



**Kenall Manufacturing**  
[www.kenall.com](http://www.kenall.com)

**Mighty Mac RMCA, RMCD, RQCA Series**

Lighting: LED, linear fluorescent (RQCA - LED only), polyurethane foam preventing light leaks.  
Diffuser|Lens: Dual lens. Specify inner 1/8" prismatic polycarbonate lens on fixture side & 1/8" or thicker clear polycarbonate lens on outer, patient side.  
Housing: Die formed 14, 16, 18 ga cold rolled steel or stainless steel housing & door. Full Length, completely concealed internal piano hinge welded to door. Specify white fasteners.  
Approvals: UL, cUL, damp locations, 5 year warranty.  
Options: 2'x2', 2'x4', 1'x2', 1'x4'  
Finish: TGIC polyester powder coat.



# Division 26 | Electrical

## Light Fixtures, Interior, General, Recessed

### General Notes

See comments on previous general notes page.

### Specification Notes

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



### Kurtzon

[www.kurtzon.com](http://www.kurtzon.com)

#### VLR-ZCD 2x2 LED

Lighting: LED, 3500k CCT, 2/LEDR  
Diffuser | Lens: 1/8" clear flat polycarbonate  
Housing: 20 ga white stainless steel housing with white cold rolled steel door. Specify white screws.

Approvals: IP65, 1700 PSI high pressure hosedowns, ETL UL\_1598 wet, Chicago Plenum rated, 5 year warranty on driver & LED, 10 year warranty on fixture.

Options: 2 drivers, 10KC parallel surge protection.

Finish: Gloss white high reflectance 1000 hr. salt spray, polyester powder coat standard.



### Luminaire LED, Inc.

[www.luminairelighting.com](http://www.luminairelighting.com)

#### Supermax Recessed Mount RM12, RM22

Lighting: LED  
Diffuser|Lens: dual lens with 0.156" prismatic polycarbonate interior and 0.25" clear polycarbonate patient side  
Housing: 16 ga cold rolled steel housing and 14 ga cold rolled steel door  
Hinge: internal welded piano-type hinge  
Approvals: UL, cUL, wet optional  
Finish: white polyester powder coat



# Division 26 | Electrical

## Light Fixtures, Interior, General, Recessed

**General Notes**

See comments on previous general notes page.

**Specification Notes**

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



**New Star Lighting**

[www.newstarlighting.com](http://www.newstarlighting.com)

**Confinement Series  
37M and 57M Models**

Lighting: Fluorescent & LED.  
 Diffuser|Lens: Clear polycarbonate outer lens & prismatic polycarbonate inner lens. Lens secured by “Z” retainers with weld studs spaced 6” apart for maximum strength. Provide tamper resistant fasteners in white powder coated finish.  
 Housing: Die formed, seam welded and ground smooth.  
 Approvals: UL.  
 Options: LED night light, & cUL wet label.  
 Finish: Available in white.



**New Star Lighting**

[www.newstarlighting.com](http://www.newstarlighting.com)

**StarTile LED MAX (AGM11, AGM14)**

Lighting: LED  
 Diffuser|Lens: dual lens with white polycarbonate interior and 0.25” clear polycarbonate patient side  
 Housing: extruded aluminum frame in 14 ga cold rolled steel frame with beveled edges  
 Approvals: cUL standards, wet location  
 Finish: white polyester powder coat

**Caution: Installation of flat substrate will be important with sealant around entire perimeter. Wall mount is rejected. For ceiling mount only.**



# Division 26 | Electrical

## Light Fixtures, Interior, General, Recessed

### General Notes

See comments on previous general notes page.

### Specification Notes

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



### Selux Corporation

[www.selux.com](http://www.selux.com)

#### M125 Series

Lighting: LED.  
 Lamps: Single or double, standard driver.  
 Dali dimming.  
 Diffuser|Lens: Sateen polycarbonate.  
 Housing: Continuous extruded aluminum, up to 4' long. Die cast aluminum end caps made from low copper marine grade aluminum alloy. Install with suspension brackets, rotating cross bars, or perimeter mount.  
 Specify with tamper resistant fasteners.  
 Approvals: IP65 & IK10.  
 Finish: Available in white, black, silver and custom colors.



### Visa Lighting Group

[www.visalighting.com/](http://www.visalighting.com/)

#### Serenity Ceiling 2x2 High Abuse CM1922

Lighting: LED  
 Diffuser|Lens: 0.118" Satin Ice acrylic with vinyl laminate pattern diffuser; 0.118" clear polycarbonate lens on patient side  
 Housing: steel housing and aluminum mud flange  
 Approvals: ETL, LED  
 Finish: white antimicrobial powder coat paint



# Division 26 | Electrical

## Light Fixtures, Interior, General, Recessed

### General Notes

See comments on previous general notes page.

### Specification Notes

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



### Eaton

[www.cooperindustries.com](http://www.cooperindustries.com)

### Fail-Safe ENW/C/V HS Encounter Series

Lighting: LED

Diffuser | Lens: Two lens. Optical grade acrylic inner lens. Clear polycarbonate protective outer lens attached with continuously applied adhesive around perimeter. Lens gasket with viscoelastic acrylic polymer and double sided adhesive. Electronic driver, single circuit, 0-10V 10% dimmable.

Housing: High Security. Vandal resistant with closed cell polyvinyl chloride gasket on back-side.

Approvals: UL, cULus, CSA, wet label, RoHOS compliant, IESNA LM-79 compliant, LM-80 standard compliance, IP66 rated, Class 100 ISO5-8, NSF2 listed

Options: Emergency driver, CCEA compliant, gasket around perimeter of bottom edge of lens to seal fixture to T-Grid, gasket on back side of housing, 1% dimmable.



# Division 26 | Electrical

## Light Fixtures, Interior, General, Recessed

### General Notes

See comments on previous general notes page.



### Eaton

[www.cooperindustries.com](http://www.cooperindustries.com)

#### Failsafe SGI LED

Lighting: LED  
Diffuser|Lens: 0.375" thick polycarbonate.  
Housing: Die-formed aluminum. Door can be steel or aluminum. Fully gasketed.  
Approvals: UL and CUL listed for damp locations.  
Options: Wet location listing under covered ceiling optional. Dimmable.

**Note: Light fixture housing construction at flange corners can be manipulated overtime. Gasket at lens and door comes out after repeated wedging and tampering.**



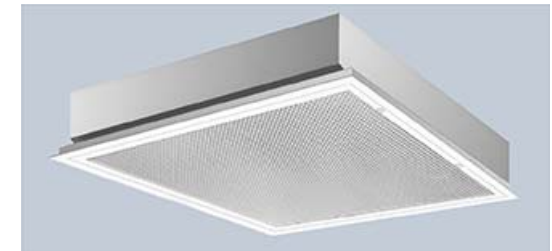
### Legion Lighting Co., Inc.

[www.legionlighting.com](http://www.legionlighting.com)

#### Securlume Series 672

Lighting: Fluorescent.  
Lamps: T5, T5HO & T8.  
Diffuser|Lens: (RFL) Prismatic polycarbonate.  
Housing: 20 gauge cold rolled steel with captive tamper resistant fasteners.  
Approvals: UL, cUL, damp and wet label, & IP55.  
Options: Dimming T12 & slimline lamps available. Consult with manufacturer.

**Note: Fixture provides multiple ligature points and is not tamper resistant.**



# Division 26 | Electrical

## Light Fixtures, Interior, General, Recessed

### General Notes

See comments on previous general notes page.



### Philips Day-Brite

[www.daybritelighting.com](http://www.daybritelighting.com)

#### Attune Series

Lighting: Fluorescent.  
Lamps: T5, T5HO & T8.  
Diffuser|Lens: Acrylic.  
Housing: One piece die formed embossed steel.  
Approvals: UL, cUL, wet label.  
Options: Dimmable.

**Note: A polycarbonate lens is no longer available as an option.**



### Pixi Lighting

[www.pixilighting.com](http://www.pixilighting.com)

#### Flatlight Luminaire

Lighting: LED.  
Diffuser|Lens: Acrylic.  
Housing: not confirmed.  
Approvals: Type IC rated, RoHS compliant.  
Options: none.

#### Notes:

- ◆ Edges of housing allow for ligature.
- ◆ Gasketing material can be picked and removed.





# Division 26 | Electrical

## Light Fixtures, Interior, Task Lighting

### General Notes

See comments on previous general notes page.

### Specification Notes

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.

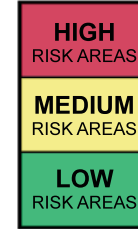


### Eaton

[www.cooperindustries.com](http://www.cooperindustries.com)

#### Fail-Safe FFLD6A 6" Vandal Resistant LED Downlight

Lighting: LED.  
 Diffuser|Lens: Two stage reflector system with inner and outer clear or prismatic flush polycarbonate lenses.  
 Housing: Die cast aluminum. 1-1/2" deep collar accommodates ceiling materials up to 2". Extruded aluminum heat sink conducts heat away from the LED module.  
 Approvals: IP66  
 Options: Anti-microbial paint, dimming, natorium finish.  
 Finish: Powder coated matte white.



### Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

#### Millenium Downlight HADL & BHDL LED

Lighting: 6" aperture LED.  
 Diffuser|Lens: Regressed diffused tempered-glass lens. 1/8" clear polycarbonate flush lens trim secured with 4 tamper resistant fasteners.  
 Housing: 18 ga corrosion-resistant steel.  
 Trim in cold-rolled steel (stainless steel for wet applications).  
 Approvals: Peace of Mind Guarantee (5 years), UL wet label, IP65.  
 Options: Emergency battery backup with remote test switch, CCEA approved, dimming.  
 Finish: Flat white powder coat.



# Division 26 | Electrical

## Light Fixtures, Interior, Task Lighting

### General Notes

See comments on previous general notes page.

### Specification Notes

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



### Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

#### Stratalume UC Series, UCSL

Lighting: CFL

Diffuser|Lens: Shock resistant borosilicate glass is standard. Specify 0.125" prismatic polycarbonate lens held in place by two stainless steel tamper resistant fasteners. Housing: 1.1" profile, 20 gauge cold rolled steel. White TGIC polyester powder coat finish.

Approvals: UL, cUL, wet label.

Options: Integral OC Sensor

**Note: Ballast must be modified to fit.**



### Kurtzon

[www.kurtzon.com](http://www.kurtzon.com)

#### VL LED Downlight

Lighting: LED, 6" aperture

Diffuser | Lens: Clear non-prismatic 0.125" virgin polycarbonate silicone sealed to IP-65. White elliptical grooved baffle controls stray light.

Housing: Stainless steel body and spun aluminum housing and plaster frame. 16 gauge stainless steel formed door frame with continuous lens hold down and whiteTorx tamper-proof fasteners (TPWHT).

Approvals: IP65 rated for dust and water ingress, wet label, Chicago Plenum rated.

Options: Remote mount battery pack, radio frequency interference filter, allen head tamper resistant screws.

Finish: Antimicrobial white polyester powder coat on doorframe. Satin polished on stainless steel trims.



# Division 26 | Electrical

## Light Fixtures, Interior, Task Lighting

### General Notes

See comments on previous general notes page.

### Specification Notes

Coordinate lighting fixture specifications with new/existing ceiling substrate prior to ordering.



### The Kirlin Company

[www.kirlinlighting.com](http://www.kirlinlighting.com)

### Vandal Resistant Downlight, 7” & 8”

Lighting: LED, 3500K  
Diffuser|Lens: Dual Lens. Clear prismatic acrylic on interior fixture side. 1/8” clear flat polycarbonate on patient side.  
Housing: Vandal resistant smooth white seamless tapered aluminum self-flanged flare trim; built-in plaster flange; fully sustainable. Shallow depth fits restricted plenums. Acrylic enameled aluminum housing.  
Approvals: UL, cUL, wet/damp/dry, Type IC, LM-80 qualified, LM-79 certified photometry, meets IEC/EN 60601-1-2, FCC Part 15 certified for EMI/RFI emissions, 5 year warranty  
Options: Frosted micro-prismatic lens for fixture side, 2 or 3 wire, dimming, CCT/CRI, optics, CCEA approved.

**Note: Specify models “LRV-07469-1500L” for 7” & “LRV-08470-2500L” for 8”**



### Visa Lighting Group

[www.visalighting.com/](http://www.visalighting.com/)

### Gig Task Light

Lighting: LED

Diffuser|Lens: 0.25” polycarbonate lens with gel gasket  
Housing: cast aluminum  
Approvals: ETL, ADA, IP65, IK10+, LED  
Finish: (traffic white) powder coat paint

**Note: Specify with BH1 behavioral health high abuse mounting bracket**



# Division 26 | Electrical

## Light Fixtures, Interior, Task Lighting

### General Notes

See comments on previous general notes page.



### Designplan Lighting, Inc.

[www.designplan.com](http://www.designplan.com)

#### RDL/RHL Downlight

Lighting: RDL- CFL; RHL- H1D  
Diffuser|Lens: 3/16" UV stabilized polycarbonate lens. Trim ring is mechanically attached to body. Specify polycarbonate diffuser and tamper resistant fasteners.  
Housing: 18 gauge zinc coated steel body with polyester powder coat.  
Approvals: ETL listed IP55 wet label.  
Options: Concrete pour housing available.  
Finish: Available in 18 colors and custom colors.

**Note: Installation may allow gasketing to be compromised.**



### Designplan Lighting, Inc.

[www.designplan.com](http://www.designplan.com)

#### Resistant Downlights RDD, RDO, RDP, & RDW Vandal

Lighting: LED.  
Diffuser|Lens: 3/16" polycarbonate upper lens with cone.  
Housing: 18 gauge zinc coated steel body and low copper alloy die cast trim ring.  
Approvals: ETL listed IP65 wet label.  
Options: Concrete pour housing available.  
Finish: Cone available in white, black and specular finishes. Trim ring available in white and black. Provide tamper resistant fasteners.

**Note: Installation may allow gasketing to be compromised.**



# Division 26 | Electrical

## Light Fixtures, Interior, Task Lighting

### General Notes

See comments on previous general notes page.



### Eaton

[www.cooperindustries.com](http://www.cooperindustries.com)

### Fail-Safe FLD6A LED Downlight

Lighting: LED.

Diffuser|Lens: Clear or opal polycarbonate.

Housing: Die-cast aluminum.

Approvals: CSA, Non-IC rated.

Options: Dimming, range of color temperatures available.

Finish: Face plates available in specular clear, gloss white or matte white.

**Note: A wedge ligature can be created with a thin shoelace at the lens and trim ring.**



# Division 26 | Electrical

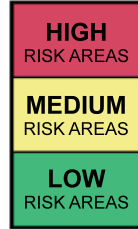
## Light Fixtures, Interior, Night Lighting

### General Notes

See comments on previous general notes page.

Amber colored LEDs are recommended at patient bedrooms.

Night lights are recommended to be recessed at approximately 12" -18" above finish floor for proper use and to minimize potential ligature risk.



### Eaton

[www.cooperindustries.com](http://www.cooperindustries.com)

#### Fail-Safe MSN Night Light

Lighting: LED.

Lamps: 120/277V. MSN provides 30 lumens.

Diffuser|Lens: Specify tamper resistant fasteners.

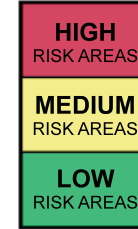
Housing: Fits into a standard junction box, die cast aluminum face plates.

Approvals: ETL & UL.

Options: LED available in clear, red, blue, & amber.

Finish: Face plates available in white, black or brushed nickel.

**Caution: MSN has an acrylic lens.**



### Hubbell Lighting

[www.hubbellhealthcare.com](http://www.hubbellhealthcare.com)

#### NiteWay Night Light - Vertical

Lighting: LED, white or amber

Diffuser|Lens: polycarbonate optical lens with neoprene gasket

Housing: die cast aluminum faceplate; 0.05 aluminum backplate

Approvals: UL 1598, cCSAus (wet)

Finish: antimicrobial (white) polyester powder coat



# Division 26 | Electrical

## Light Fixtures, Interior, Night Lighting

**General Notes**  
See comments on previous general notes page.

Amber colored LEDs are recommended at patient bedrooms.

Night lights are recommended to be recessed at approximately 12" -18" above finish floor for proper use and to minimize potential ligature risk.



**Kenall Manufacturing**  
[www.kenall.com](http://www.kenall.com)

### MedMaster SoftStep Contour Steplight, MCSL

Lighting: LED.  
Diffuser|Lens: Pearlescent polycarbonate.  
Housing; Die cast aluminum. Reflector is die cast aluminum with integral heat sink.  
Approvals: UL, cUL, & NSF.  
Options: LED available in white, red, blue, & amber. IP64 label.



**Kenall Manufacturing**  
[www.kenall.com](http://www.kenall.com)

### MedMaster SoftStep Steplight

Lighting: LED. Dimmable.  
Diffuser|Lens: Polycarbonate, clear or pearlescent. Specify internal or full face faceplate.  
Housing: 18 gauge cold rolled steel or stainless steel.  
Approvals: UL & cUL.  
Options: LED available in white, red, blue, & amber.



# Division 26 | Electrical

## Light Fixtures, Interior, Night Lighting

### General Notes

See comments on previous general notes page.

Amber colored LEDs are recommended at patient bedrooms.

Night lights are recommended to be recessed at approximately 12" -18" above finish floor for proper use and to minimize potential ligature risk.



### The Kirlin Company

[www.kirlinlighting.com](http://www.kirlinlighting.com)

### MNS-05924 Square StepLight LED

Lighting: LED

Lamps: 120-277V standard. 3500 K standard. 13V DC max. and 4 watt fixed output. Electronically stabilized.

Diffuser|Lens: 2" diameter translucent white 1/8" polycarbonate lens, gasketed.

Housing: 4" x 2-1/4" standard octagon galvanized steel outlet box with gasketed rustproof aluminum trim faceplate. Specify with tamper resistant screws.

Approvals: UL, C-UL, damp or dry, Type IC approved for direct contact with insulation

Options: other voltage input, remote emergency inverter for 100% of rated lumens, LED blue/ green/ orange/ amber/ yellow/ custom filters

Finish: White finish standard. Optional colors.





# Division 26 | Electrical

## Light Fixtures, Interior, Night Lighting

### General Notes

See comments on previous general notes page.

Amber colored LEDs are recommended at patient bedrooms.

Night lights are recommended to be recessed at approximately 12" -18" above finish floor for proper use and to minimize potential ligature risk.



### Philips Alkco

[www.lightingproducts.philips.com](http://www.lightingproducts.philips.com)

### WayGlo WG2H

Lighting: LED.

Diffuser|Lens: Acrylic.

Housing: 18 gauge galvanized steel.

Approvals: ETL & CETL, wet label.

Options: LED available in white & amber.

Finish: Face plate is available in white, black or aluminum.

**Note: Acrylic lens can be easily broken into small shards.**



# Division 26 | Electrical Light Fixtures, Exit Signage

## General Notes

See comments on previous general lighting fixtures page.

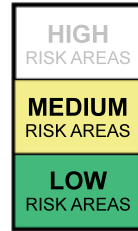
Must be positively and mechanically attached, not friction fit. Specify fully recessed housing when available.

Suspended and side mounted exit lights present inherent ligature risks.

Suspended exit lights shall be mounted such that the mounting bracket is fully aligned with light box. Side mounted lights shall be mounted such that the mounting bracket is fully aligned with the light box, and that both are mounted tight to ceiling.

## Specification Notes

Coordinate exit signage specifications with new/existing ceiling substrate prior to ordering.



## Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

### Millenium Metrex METSR Series Exit Light (Recessed)

Lighting: LED.  
Diffuser|Lens: .188" thick clear polycarbonate.  
Housing: 20 gauge Cold rolled steel one piece welded construction.  
Approvals: UL, cUL, wet location, NFPA.  
Options: LED available in red or green.  
Housing available in painted white, black or brushed stainless steel.



## Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

### Millenium Metrex METSW Series Exit Light (Wall Mount)

Lighting: LED.  
Diffuser|Lens: UV stabilized, high impact, .120" thick injection molded clear polycarbonate.  
Housing: High impact injection molded polycarbonate.  
Approvals: UL, cUL, wet listed, NFPA.  
Options: LED available in red or green.  
Black or white housing.



# Division 26 | Electrical Light Fixtures, Exit Signage

## General Notes

See comments on previous general lighting fixtures page.

Must be positively and mechanically attached, not friction fit. Specify fully recessed housing when available.

Suspended and side mounted exit lights present inherent ligature risks.

Suspended exit lights shall be mounted such that the mounting bracket is fully aligned with light box. Side mounted lights shall be mounted such that the mounting bracket is fully aligned with the light box, and that both are mounted tight to ceiling.

## Specification Notes

Coordinate exit signage specifications with new/existing ceiling substrate prior to ordering.



## Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

### Mighty Mac MMEX Series Exit Light (Wall and Ceiling Mount)

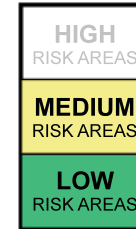
Lighting: LED.

Diffuser|Lens: .188" thick clear polycarbonate.

Housing: One piece die formed 14 gauge steel continuously seam welded.

Approvals: UL, cUL, wet listed, NFPA.

Options: Single or double faced, LED available in red or green.



## Philips Chloride

[www.lightingproducts.philips.com](http://www.lightingproducts.philips.com)

### 60 Series Max All Purpose Exit

Lighting: LED.

Diffuser|Lens: Injection molded polycarbonate.

Housing: Premium die cast aluminum with recessed mounting.

Approvals: UL 924, UL, wet label, NFPA, IBC, BOCA, & OSHA illumination standards.

Options; LED available in red or green.



# Division 26 | Electrical Light Fixtures, Exit Signage

## General Notes

See comments on previous general lighting fixtures page.

Must be positively and mechanically attached, not friction fit. Specify fully recessed housing when available.

Suspended and side mounted exit lights present inherent ligature risks.

Suspended exit lights shall be mounted such that the mounting bracket is fully aligned with light box. Side mounted lights shall be mounted such that the mounting bracket is fully aligned with the light box, and that both are mounted tight to ceiling.

## Specification Notes

Coordinate exit signage specifications with new/existing ceiling substrate prior to ordering.



## Kenall Manufacturing

[www.kenall.com](http://www.kenall.com)

### Millenium Metrex METDU Series Exit Light (Wall and Ceiling Mount)

Lighting: LED.

Diffuser|Lens: Injection molded clear polycarbonate captive with center pin fasteners.  
Housing: High impact injection molded polycarbonate.

Approvals: UL, cUL, wet listed, NFPA.

Options: LED available in red or green.



# Division 26 | Electrical Light Fixtures, Exit Signage

## General Notes

See comments on previous general lighting fixtures page.

Must be positively and mechanically attached, not friction fit. Specify fully recessed housing when available.

Suspended and side mounted exit lights present inherent ligature risks.

Suspended exit lights shall be mounted such that the mounting bracket is fully aligned with light box. Side mounted lights shall be mounted such that the mounting bracket is fully aligned with the light box, and that both are mounted tight to ceiling.



## Barron Lighting Group

[www.barronltg.com](http://www.barronltg.com)

### S900 Series Edge-Lit Exit

Lighting: LED.

Diffuser|Lens: Clear acrylic with leveled lettering for maximum light output. Exit letters are 6" high with 3/4" stroke.

Housing: Extruded aluminum supplied with galvanized steel adjustable bar hanger assembly.

Approvals: ETL.

Options: Self Test/Self Diagnostics (G2) available. LED available in red or green.

**Note: Pivoting feature creates looping ligature opportunity.**



## Philips Chloride

[www.lightingproducts.philips.com](http://www.lightingproducts.philips.com)

### Caliber Series Edge Lit Exit

Lighting: LED.

Diffuser|Lens: High impact acrylic, silk screened.

Housing: Premium die cast aluminum with recessed mounting.

Approvals: UL 924, UL, wet label, NFPA, IBC, BOCA, & OSHA illumination standards.

Options: LED available in red or green.

**Note: Lens is not mechanically fastened into housing. Fixture installation has inherent ligature risks.**



# Division 26 | Electrical Light Fixtures, Exit Signage

## General Notes

See comments on previous general lighting fixtures page.

Must be positively and mechanically attached, not friction fit. Specify fully recessed housing when available.

Suspended and side mounted exit lights present inherent ligature risks.

Suspended exit lights shall be mounted such that the mounting bracket is fully aligned with light box. Side mounted lights shall be mounted such that the mounting bracket is fully aligned with the light box, and that both are mounted tight to ceiling.



## Philips Chloride

[www.lightingproducts.philips.com](http://www.lightingproducts.philips.com)

### CE-11500 SC Series Exit Light

Lighting: LED

Diffuser|Lens: No lens provided.

Housing: Two piece diecast aluminum with chevron cutouts.

Approvals: UL listed, NFPA 70, NFPA 101, NEMA.

Options: Red or green letters.

Finish: Epoxy based powder coat paint or brushed aluminum.

**Note: Cutout letters/chevrons allow access to interior of fixture.**



## Philips Chloride

[www.lightingproducts.philips.com](http://www.lightingproducts.philips.com)

### CE-11500 SC Series Recessed Exit Light

Lighting: LED.

Diffuser|Lens: Polycarbonate/Lens.

Housing: Two-piece die cast aluminum with 18 gauge recessed back box and vandal resistant lens.

Approvals: UL listed, NFPA 70, NFPA 101, NEMA.

Options: Red or green letters.

Finish: Epoxy based powder coat paint or brushed aluminum.

**Note: Lens does not sit flush inside recessed back box for tight and secure fit.**





# Division 27 | Communications

## Wireless Routers



### Installation Notes

Wireless routers shall be mounted above the ceiling systems in medium and high risk areas.

Wireless routers can be mounted below the ceiling systems in low risk areas.



# Division 27 | Communications

## Clocks

### Installation Notes

It is recommended to specify recessed wall clocks with polycarbonate lenses.



### Primex Wireless

[www.primexwireless.com](http://www.primexwireless.com)

### XR Series Transmitters

Transmitters wirelessly synchronize time for analog and digital clocks, timers, and other time receivers throughout the facility. Specify GPS.





# Division 28 | Electronic Safety & Security

## Fire Alarm Components, General



### General Notes

Fire alarm notification devices are required to be ceiling mounted in high risk areas.

It is recommended that fire alarm notification devices be ceiling mounted in medium risk areas.

# Division 28 | Electronic Safety & Security

## Fire Alarm Components, Notification Devices

**General Notes**

Fire alarm notification devices are required to be ceiling mounted in high risk areas.

It is recommended that fire alarm notification devices be ceiling mounted in medium risk areas.

**Caution:** Device covers are susceptible to abuse and can be looped/weaponized.



**Tyco SimplexGrinnell**

[www.tycosimplexgrinnell.com](http://www.tycosimplexgrinnell.com)

**TrueAlert Addressable Notification Appliances, Series 49AV**

Wall and ceiling mounted. Multi-electronic horn & strobe combinations.



**Tyco SimplexGrinnell**

[www.tycosimplexgrinnell.com](http://www.tycosimplexgrinnell.com)

**2099 Series Manual Fire Alarm Station**

Single action with institutional cover, key operated only.



**Edwards Signaling**

[www.edwards-signals.com](http://www.edwards-signals.com)

**EGC-SVM Series Notification Appliances**

**Caution:** The curved return against the ceiling presents a potential ligature opportunity.

