Deferred Submittals, Site Fire Access & School Security Reviews

UFOMA Fall Conference

Shane Cook | September 30th, 2026

Please reach out with any questions. sdcook@utah.gov Phone: 801-702-7749

**These slides are for educational and instructional purposes and may not contain all necessary details or specifications to cover all school security review items.

Department of Public Safety

Deferred Submittals

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Required technical documentation and plan reviews prior to installation. **This does not cover all potential deferred submittal possibilities**. Items could be part of a separate submittal or system upgrade.

01

Fire Alarm

Detection & notification system shop drawings, matrix, and battery calculations.

Status: Deferred Review

02

Fire Sprinkler

Hydraulic calculations, piping layout, and riser detail submittals.

Status: Deferred Review

03

School Security

Access control systems, emergency locking hardware, and security plans. Site security gates and fencing if proposed.

Status: Deferred Review

04

Type I Hood Suppression

Commercial kitchen hood automatic fire extinguishing systems.

Status: Deferred Review

05

Fuel & Propane Tanks

Storage tank placement, piping diagrams, and safety compliance submittals.

Status: Deferred Review

06

Dust Collectors & Special Exhaust Systems

Air filtration, explosion venting, and ductwork layout specifications.

Status: Deferred Review

07

Paint Booths

Flammable vapor ventilation, spray application, and fire protection systems.

Status: Deferred Review

08

ESS & Solar & Generators

Energy storage systems, photovoltaic solar arrays, and emergency generators.

Status: Deferred Review

Deferred Submittal vs Separate Submittal

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Depending on your plan details and project scope, your review could be a deferred submittal or come later as a separate submittal.

Deferred Submittal

- Submitted **after** primary building and general fire and life safety review but before trade installation.
- Integrates specialized technical reviews (e.g., Fire Sprinkler, Fire Alarm, Fuel Tanks) directly into the main project plan. Deferred details shown in primary submittal should be noted **for reference only**.
- Requires separate deferred approval from the fire plan reviewer before work commences on site.





Separate Submittal

- Submitted as an **independent** standalone application and review process.
- Applies to distinct project scopes, accessory structures, site security gates perimeter fencing, or future phases.
- Evaluated on its own timeline independently of the primary building permit scope.





Fire Lanes

Key requirements for site access, vehicle clearance, and turnaround provisions

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Minimum Width: 20 Feet

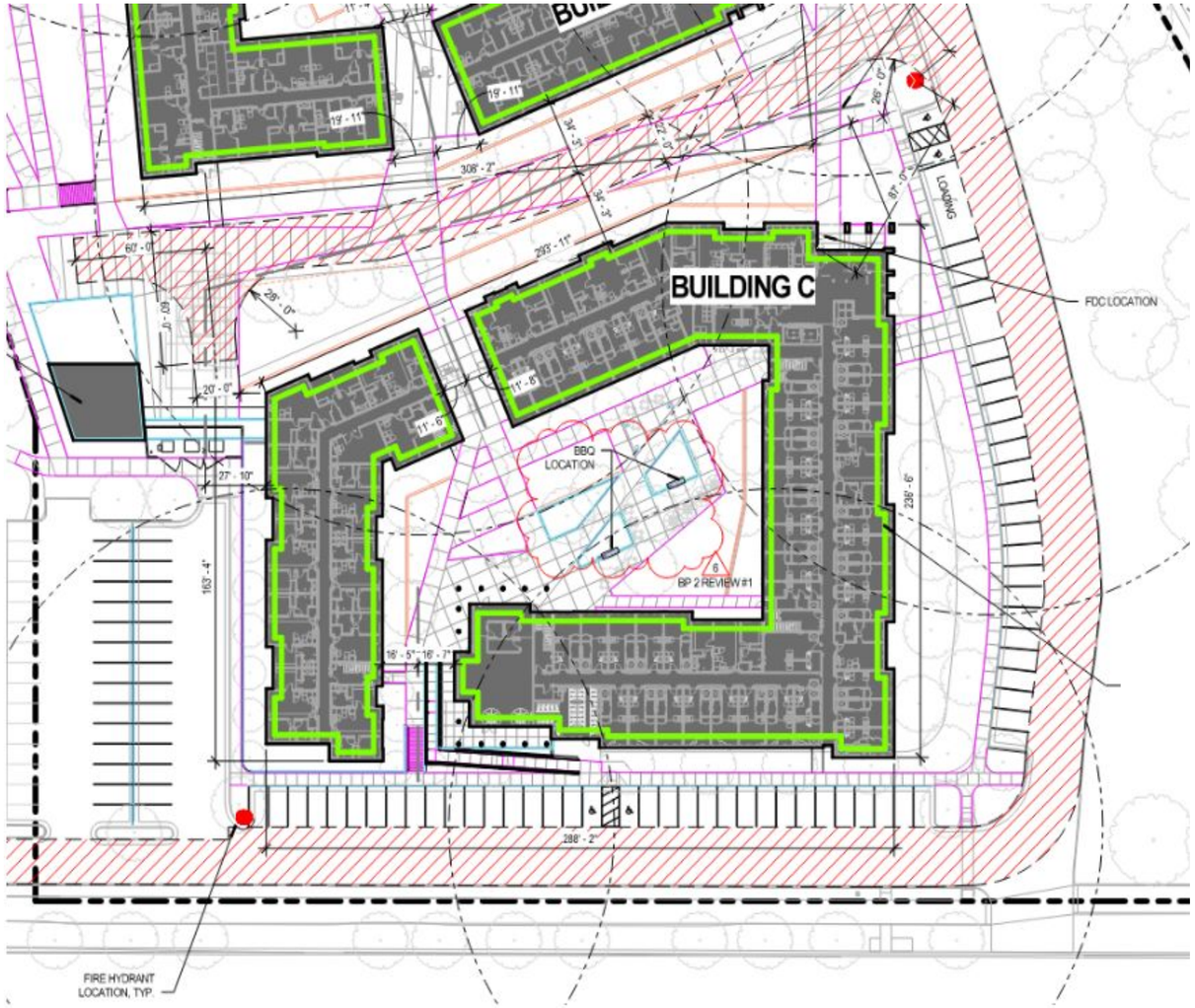
Fire lanes are required to maintain an unobstructed minimum width of **20 feet** to ensure safe and rapid access for emergency response apparatus.

150 Ft Access & Turnarounds

Access must extend to within **150 feet** of all main-level exterior walls. Dead-end fire lanes exceeding 150 feet require an approved hammerhead or turnaround.

13' 6" Vertical Clearance

Requires a clear vertical clearance of **13’ 6”**. Large fire apparatus can exceed 8.5 feet wide by 45 feet long and must be able to travel through all fire lanes.



Fire Lanes - New Buildings & Additions

Local Fire Department site approval and large vehicle size verification

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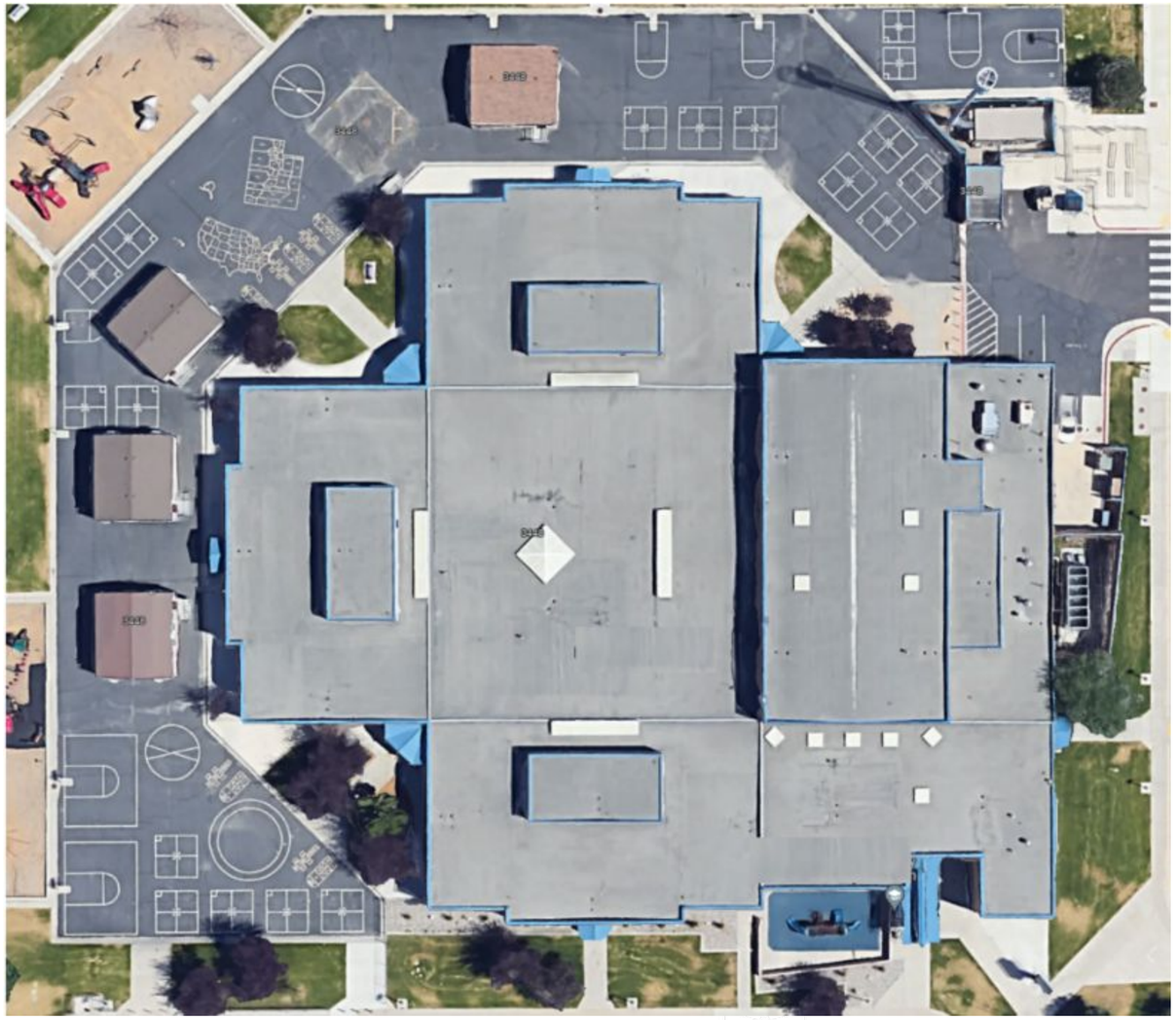
LFA Vehicle Spec Verification

During plan review, the architect must show they have contacted the **LFA** to request their input and approval for site fire related considerations. Hydrant, FDC, Knox locations and any local fire related ordinances.

Site Vehicle Modeling

Modeling is preferred to show how these large apparatus vehicles can successfully travel through the site.





Fire Lanes - Signage

Marking, posting, and obstruction prevention guidelines

IFC 503.3 Marking Requirement

IFC 503.3 requires fire lanes to be clearly marked to identify designated roadways and prohibit unauthorized obstruction.

Shared Roadways & No Parking

Fire lanes often share roadways with drop-off and pick-up areas, but are strictly **not places to park**.

Approved Signage Posting

Explicit signage and curb markings need to be present to maintain compliance and clear emergency access.



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Fire Hydrant Locations

Distance requirements, building clearance, and physical protection guidelines

400 - 600 Ft Distance & Within 100 Ft of FDC

Fire hydrants should be no further than **400 feet** from all portions of main level exterior walls, increasable to **600 feet** for sprinklered buildings. Fire hydrant within **100 feet** of FDC.

40 Ft Minimum Setback

Hydrants should be located no closer than **40 feet** to the buildings they serve to ensure safe access during incidents.

Protection & Maintenance

Hydrants must be protected from physical damage and kept clear of all debris and vegetation at all times.



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Fire Department Connection (FDC) Locations

Location, visibility and placement requirements for emergency access

Public Way orientation

Fire Department Connections usually face the **public way** or and approved **Fire Lane** for rapid identification.

Line of Sight & Signage

Must be easily identifiable with direct **line of sight from the fire hydrant**, or marked with additional signage when obscured.

Avoid Obstructed Placement

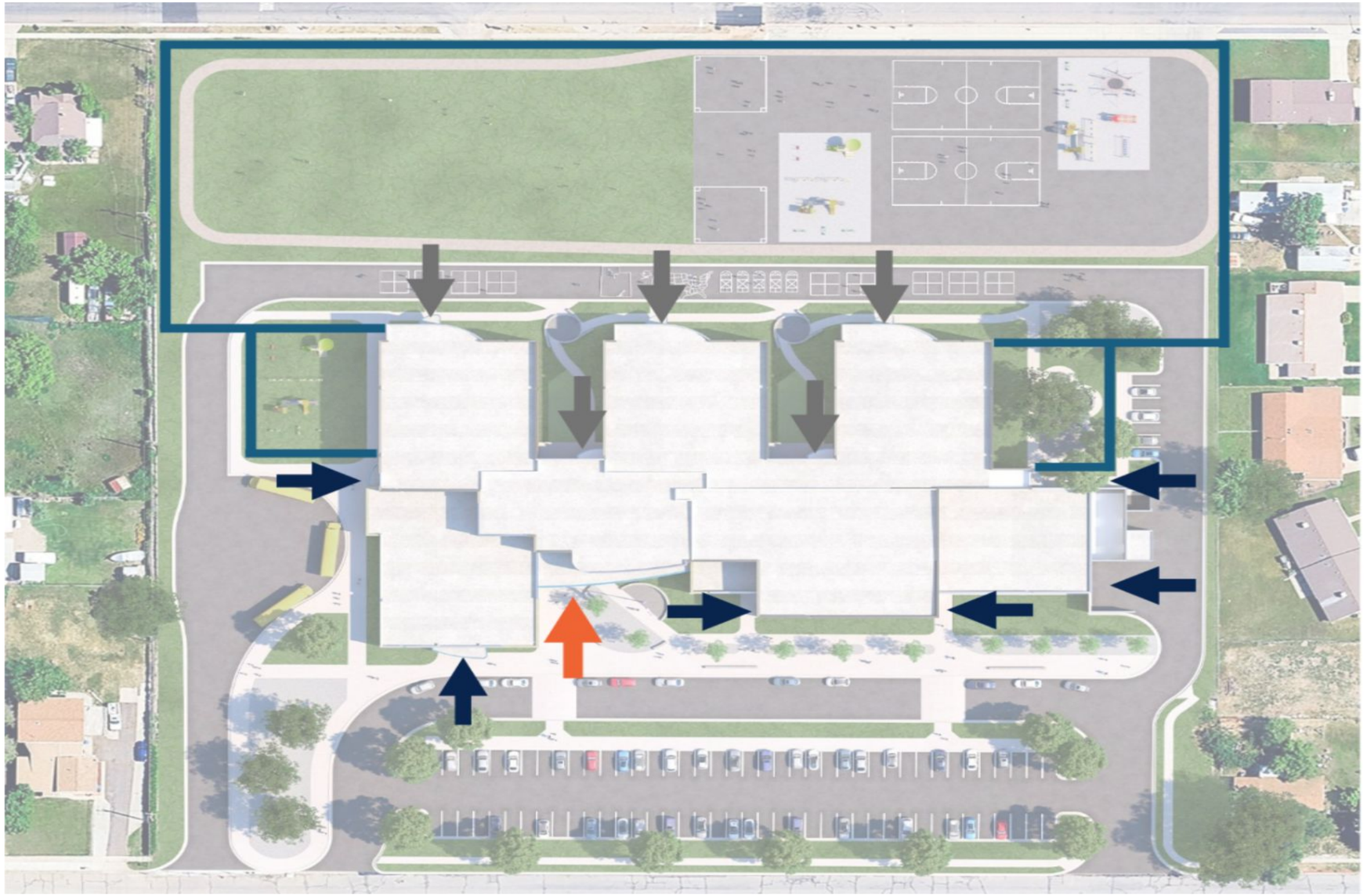
Avoid placement near **corner jogs** of exterior building walls or directly **behind door swings**. 3 feet clear space on each side for operational clearance.



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Site Diagram and Security Items

***Exit doors to the secure fenced portion may require security film depending on the exact layout. Windows accessible to classrooms along the public way do not require security protection but are frequently included as school preference and "best practices."**



Site Diagram

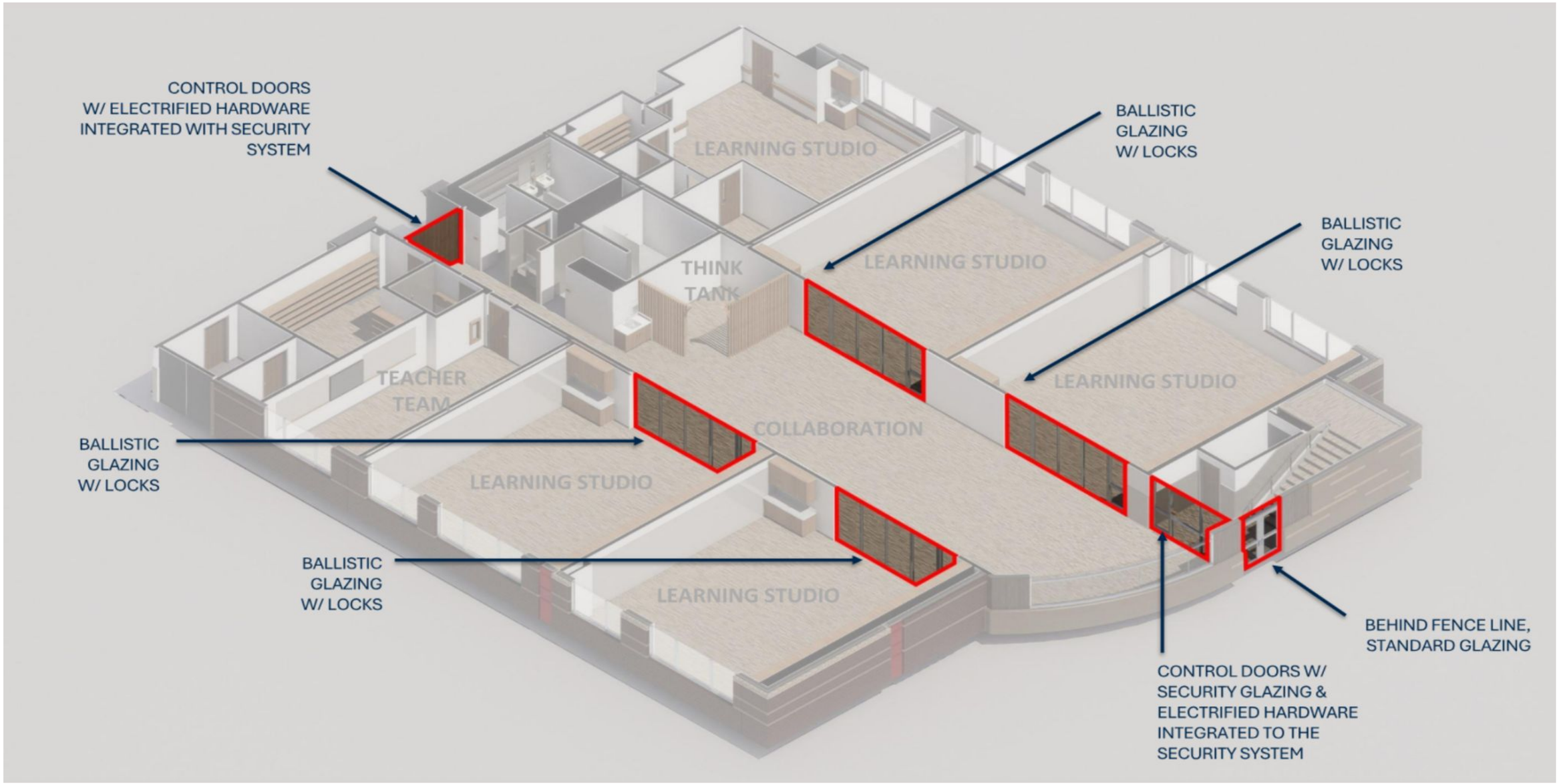
Legend:

- 6' Tall Fencing and Gates
- Entrance with Security Glazing & Visitor Management System & Universal Access Box
- Entrance with Security Glazing
- Entrance with Standard Glazing

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Site Diagram and Security Items

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Fire Lanes with Gates & Perimeter Fencing

Gates and fences are not requirements of the fire code but when installed create additional code items that must be addressed.

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Approved Emergency Access & Locking

Gates securing fire apparatus access roads must be equipped with approved emergency operation key switches, Knox lock boxes, or rapid-entry systems.

Minimum Width & Clearances

Gates must maintain a minimum clear opening width of **20 feet** and adequate vertical clearance to accommodate full emergency vehicle apparatus response without delay.

Power Failures & Manual Overrides

Electrically operated gates must include fail-safe mechanisms to automatically unlock or open upon loss of power, fire alarm activation, or manual emergency disconnect. Electric gates have specific code, design and listing requirements that require review.

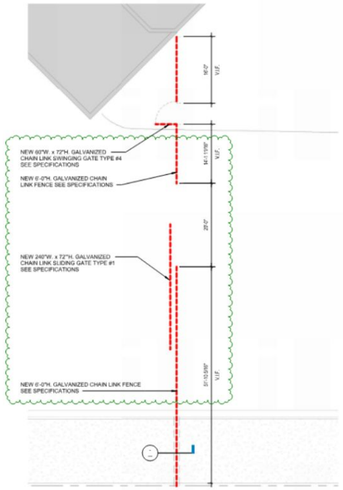


Security Perimeter Gate & Fencing Upgrades

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Plan details showing demolition of existing gates, bollards, openings in fences to be closed, new gates with access control card readers, and panic hardware gate kits.

Existing & Proposed Details with Spec Sheets



1 SITE #1



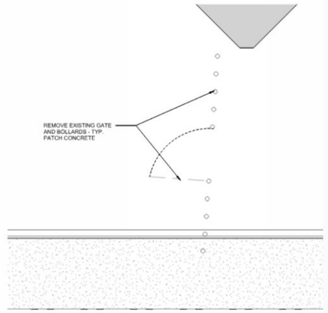
A ARCHITECTURAL SITE PLAN



ING SITE #1

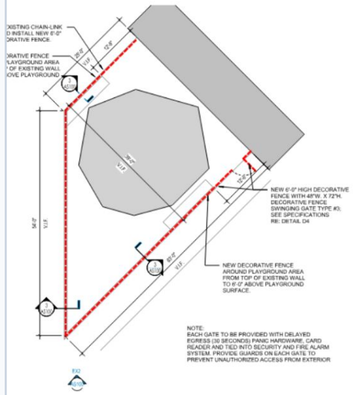


EX2 EXISTING SITE #1

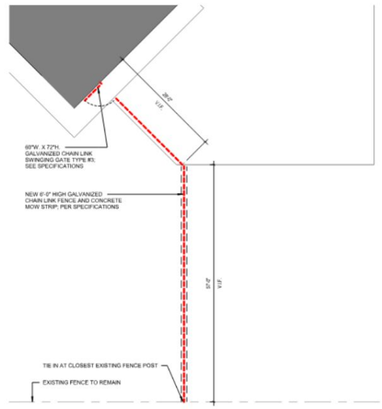


D1 DEMOLITION PLAN

Panic Hardware Gate Kits & Security Mesh



#2



1 SITE #1



A ARCHITECTURAL SITE PLAN

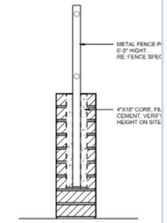




ING SITE #2



4 SECURITY GATE SYSTEM



3 FENCE ATTACHMENT DETAI

Security Perimeter Gates & Fencing Upgrades Continued

Technical specifications, hardware standards, and engineering plan schematics.

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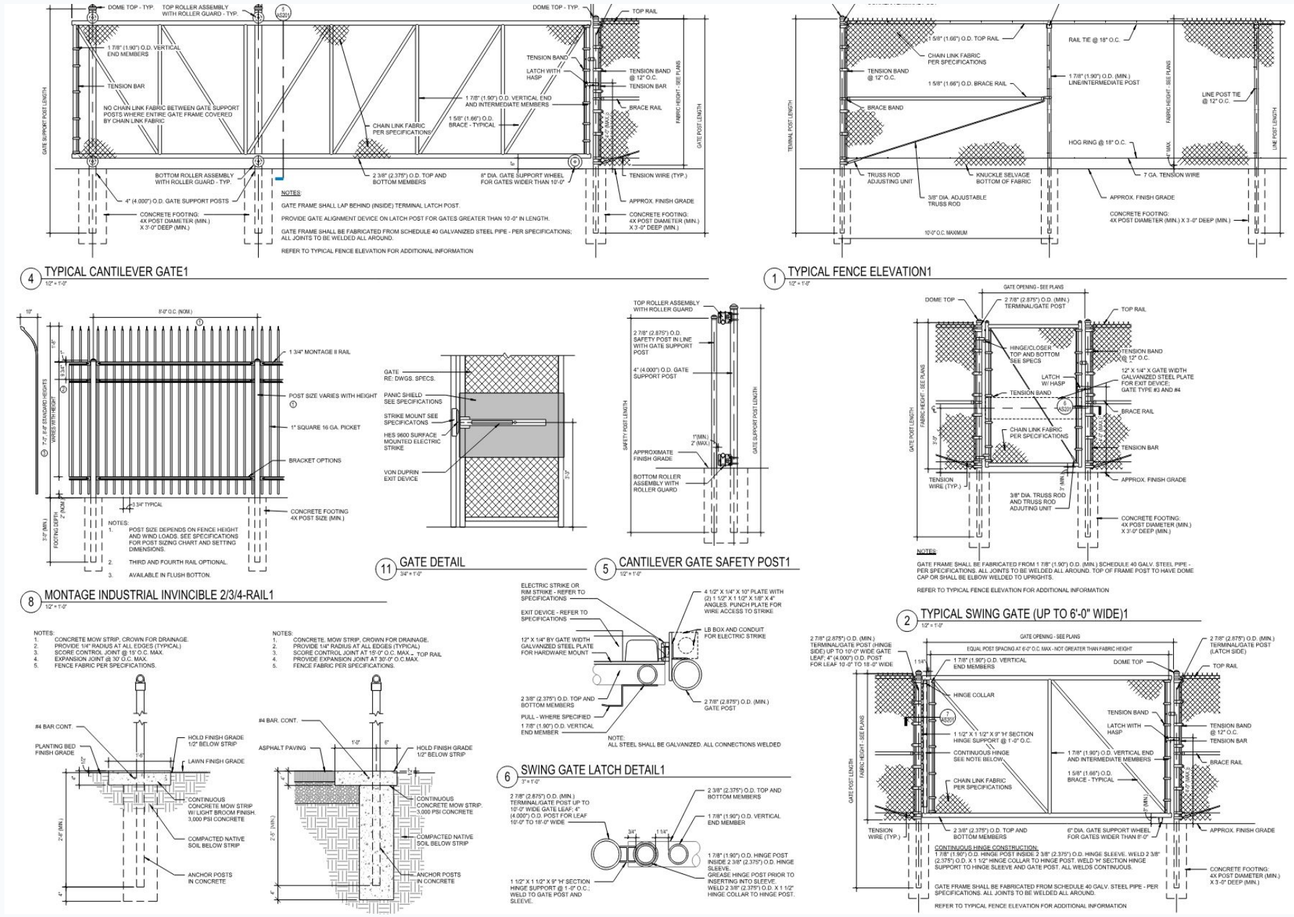
Key Specifications

- Cantilever and swing gate configurations tailored to site perimeters.
- Integrated gate latch mechanisms, hinges, and safety posts.
- Reinforced concrete footings and continuous mow strip details.
- Full compliance with department physical security standards.
- Code required listings and designs.

Hardware & Elevation Standards

- Galvanized steel framing and heavy-duty chain link fabric.
- Provisions for panic hardware kits, card readers, and electric strikes.
- Standardized ground clearance and mown edge protection.
- Elevation profiles for high-security installation.

Design Details & Plan Schematics



Security Perimeter Gates & Fencing Upgrades Continued

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Site plan showing safe dispersal area compliance per IBC/IFC 1028.5 code requirements. Fencing shows jogs around hydrants to remain accessible from interior to serve building.

Safe Dispersal Area Requirements

IBC / IFC 1028.5 CODE STANDARDS

Occupant Capacity

Minimum 5 sq. ft. per occupant within designated dispersal zone.

Identification & Maintenance

Clearly identified and maintained as a safe dispersal area.

Usage Restrictions

Must not be used for other structures or vehicle parking.

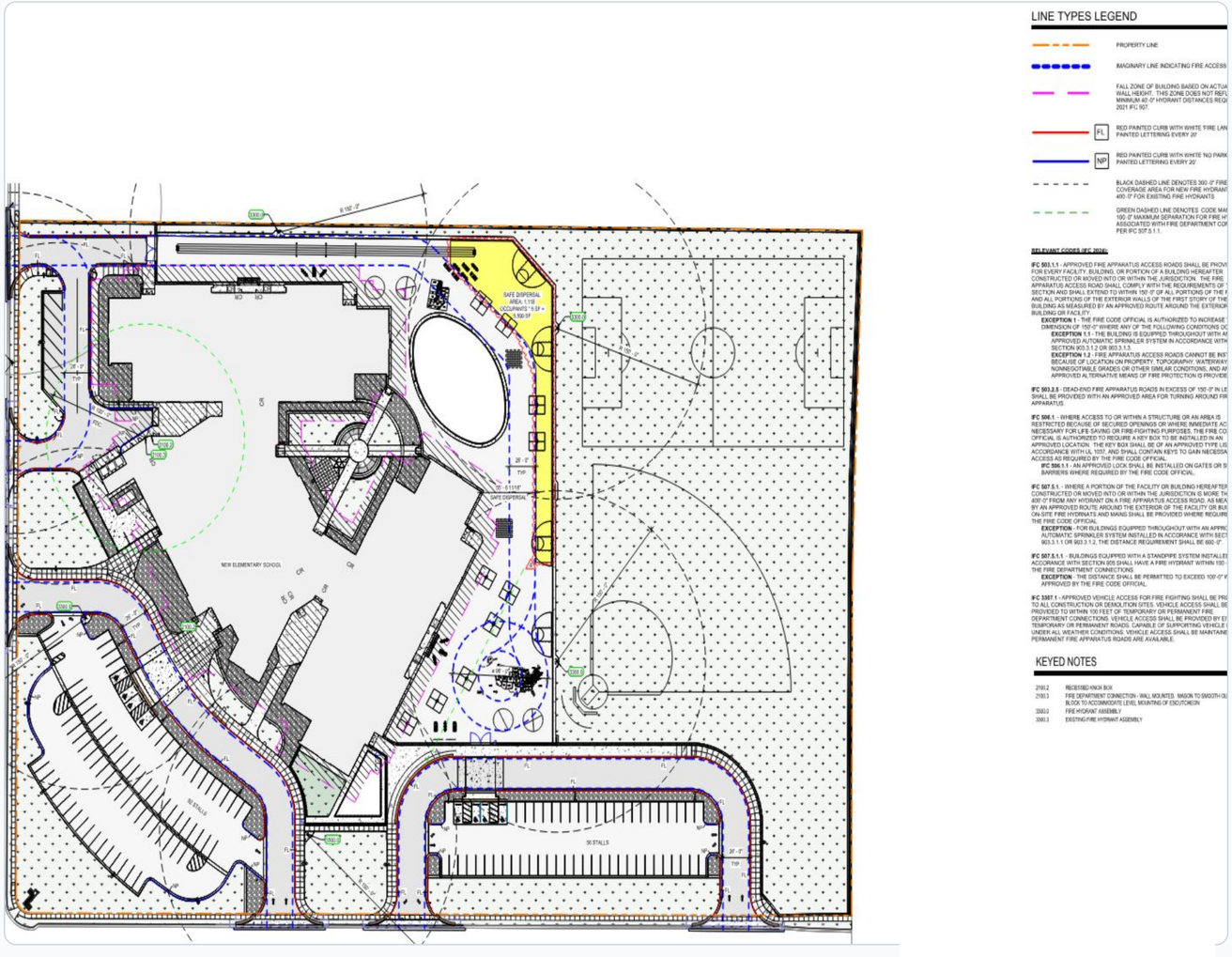
Path of Travel

Safe and unobstructed path surface of travel from the building.

Building Distance

Located not less than 50 feet away from the building.

Safe Dispersal Site Plan & Layout



Instructional Areas vs Non-Instructional Areas

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LEARNING STUDIO (INSTRUCTIONAL AREA)



LEARNING LAB (INSTRUCTIONAL AREA)



MUSIC ROOM (INSTRUCTIONAL AREA)



SHOP (INSTRUCTIONAL AREA)

Instructional Areas vs Non-Instructional Areas

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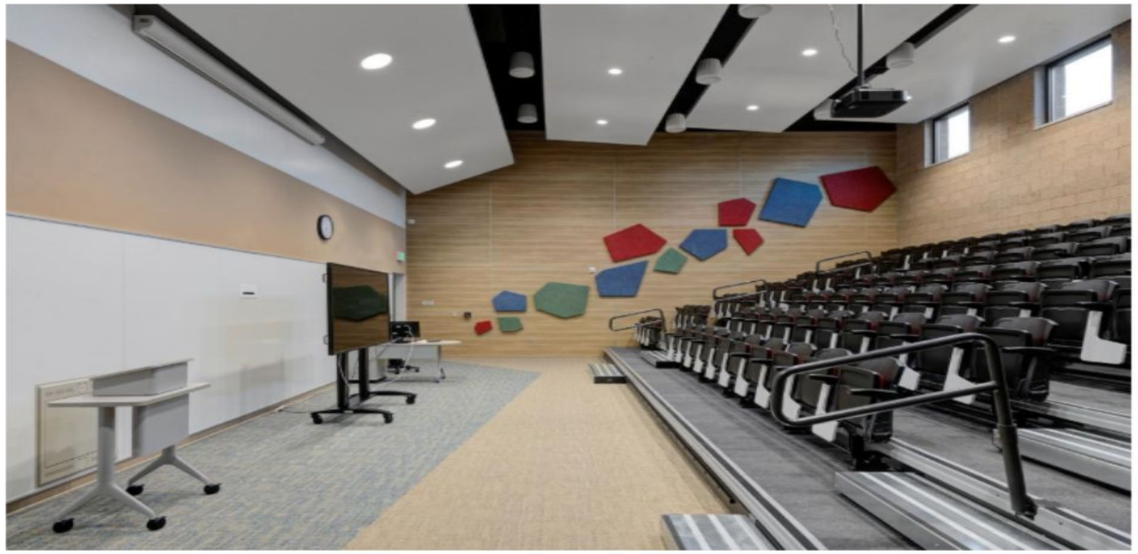
AUDITORIUM (INSTRUCTIONAL AREA)



GYMNASIUM (INSTRUCTIONAL AREA)



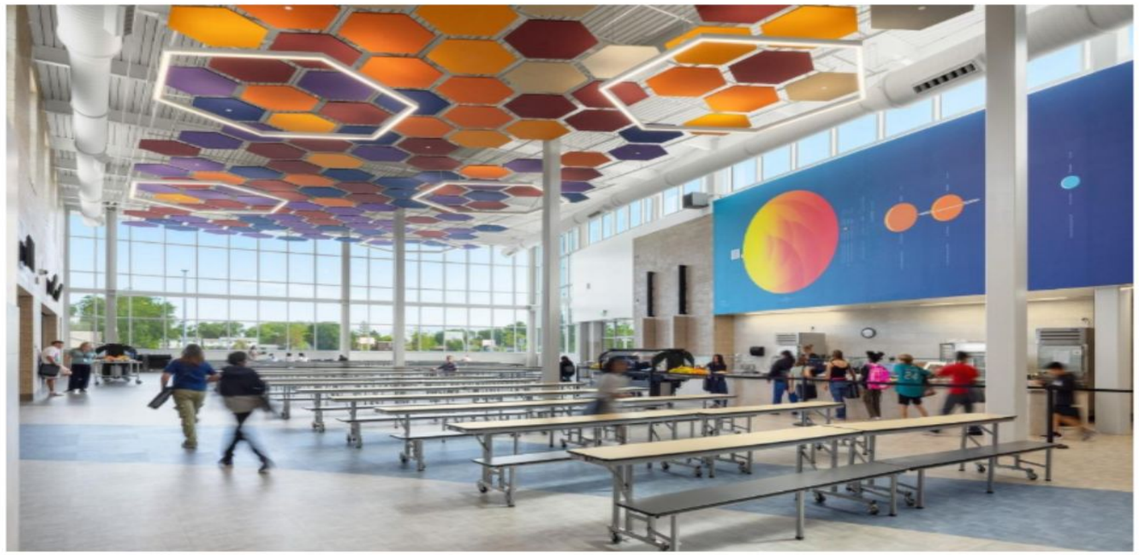
MEDIA CENTER (INSTRUCTIONAL AREA)



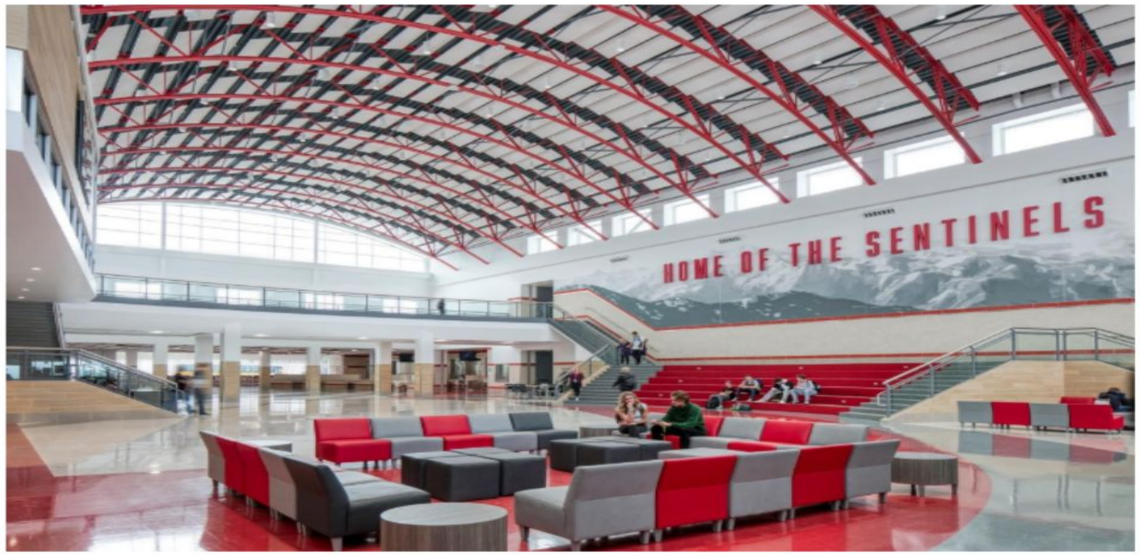
MULTIPRUPOSE ROOM (INSTRUCTIONAL AREA)

Instructional Areas vs Non-Instructional Areas

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CAFETERIA (NON-INSTRUCTIONAL AREA)



STUDENT COMMONS (NON-INSTRUCTIONAL AREA)



LEARNING STAIRS (NON- INSTRUCTIONAL AREA)



THINK TANKS (NON-INSTRUCTIONAL AREA)

Security Design Diagrams

Ballistic Glazing vs. Security Film Specifications & Standards (R698-13)

Department of Public Safety

Security Glazing / Security Film

"Security Glazing" means a clear or tinted durable material applied to glass doors and windows that enhances the structural integrity of the glass by preventing it from shattering and falling to the ground when impacted.

Minimum Standards Required:

ASTM F3561 Standard Test Method for Forced-Entry-Resistance of Fenestration Systems After Simulated Active Shooter Attack (Minimum Level 3 of Table 2, 2023).

ANSI Z97.1-15(R2020) American National Standard for safety glazing materials used in buildings (Durability requirements of Sections 5.3 & 5.4).



Ballistic Glazing / Ballistic Glass

"Ballistic Glass" means glass certified to withstand ballistic impacts and bullet penetration at specified threat levels.

Minimum Standard Certification (Meets either):

UL752-23 Underwriters Laboratories Standard for Bullet-Resisting Equipment, Threat Level UL-RF-E from Table C1 (Legacy Level 7, 2023).

ASTM F3279-24 Standard Test Method for Ballistic Resistant Security Glazing Materials, Threat & Performance Level 4 (BTI R1-T1-C5-2L, Table 1, 2021).





Security Design Diagrams

Ballistic Glazing vs. Security Film Specifications & Standards (R698-13)

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KURARAY AMERICA INC.

BALLISTICS / FORCED-ENTRY RESISTANCE TEST REPORT

SCOPE OF WORK
ASTM F3561 TESTING ON VARIOUS SECURITY GLAZING COMPOSITIONS

REPORT NUMBER
P3116.01-119-12 R0

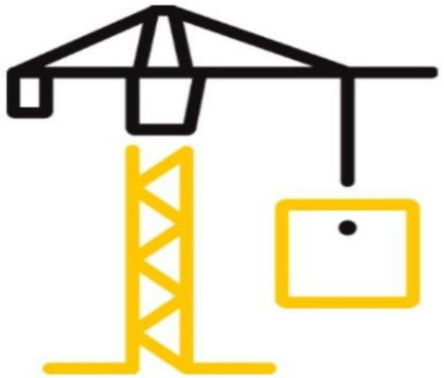
TEST DATES
12/19/22 - 12/22/22

ISSUE DATE
02/14/23

PAGES
59

DOCUMENT CONTROL NUMBER
RT-R-AMER-TEST-7999

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TEST REPORT FOR KURARAY AMERICA INC.
Report No.: P3116.01-119-12 R0
Date: 02/14/23

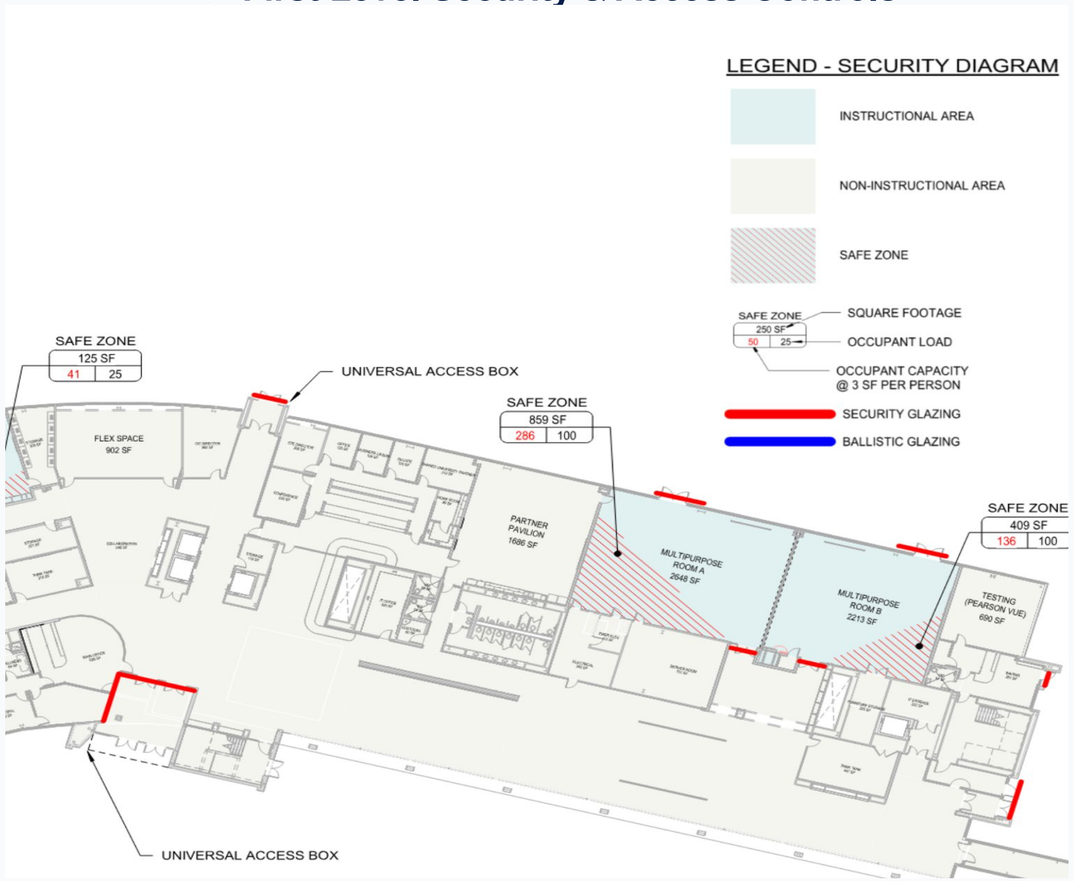
Forced Entry

LEVEL	NUMBER OF IMPACTS	SPECIMEN TEMP. (°F)	DROP HEIGHT (in.)	PASS/FAIL	RESULTS
1	2	64	6	Pass	1st Impact- No opening 2nd Impact - No opening
2	2	64	12	Pass	1st Impact- No opening 2nd Impact - 2-3/4 in tear observed
3	2	64	18	Pass	1st Impact - Tear enlarged to 3/4 in x 5 in 2nd Impact - Tear expanded to 6 in x 6-1/4 in. Impactor head was lodged in the glazing with the impact head to ram (point of connection), penetrating past the protected side of the glazing; Sphere passed through with 30lbs of force
4	2	64	24	Pass	1st Impact - Tear expanded to 6 in x 10 in. Impactor head was lodged in glazing. Sphere passed through with 15 lbs of force 2nd Impact - Tear expanded to 6 in x 11 in. Impactor became lodged in glazing; Sphere passed through with 10 lbs of force
5	2	64	30	**Fail**	1st Impact - Tear expanded to 9-1/4 in x 11 in. Impactor head was lodged in glazing. Sphere passed through with 5 lbs of force **2nd Impact- 6 in sphere passed through with 4 lbs of force; Final hole measured 10-1/4 in x 12 in**

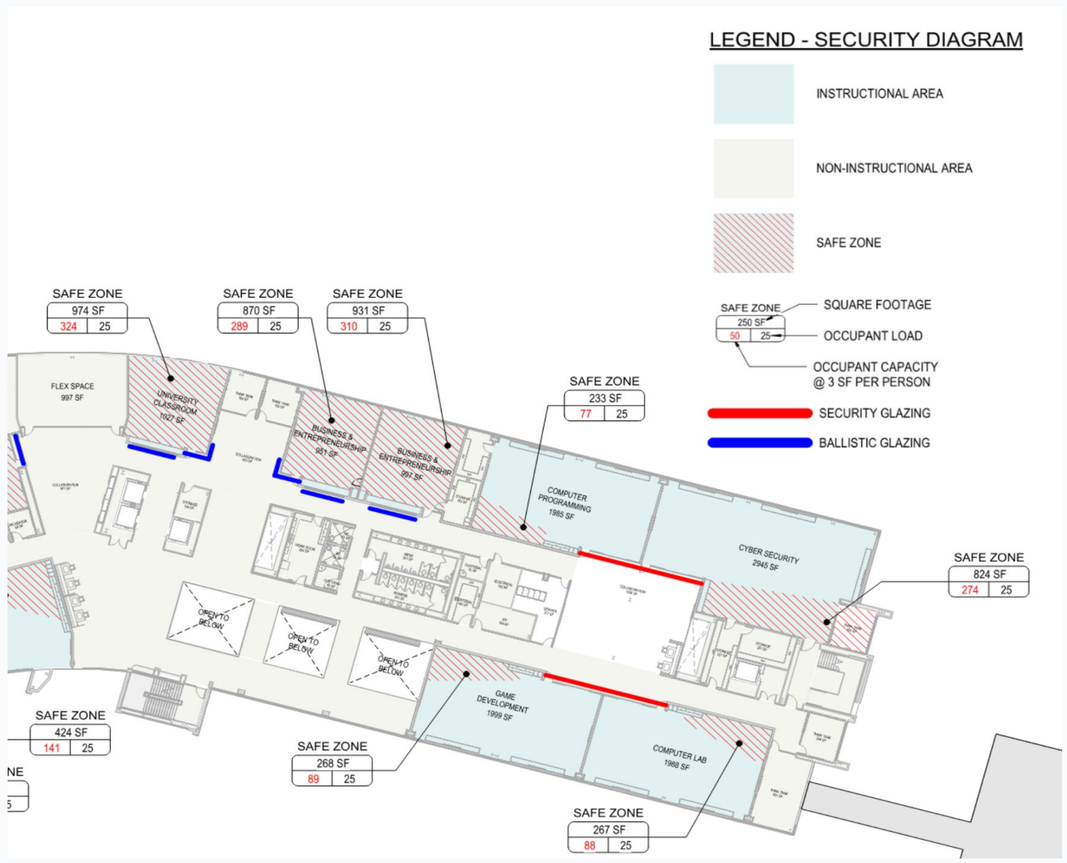
Security Design Diagrams

Identify different locations for ballistic/security glazing, safe zones, instructional vs. non-instructional areas, and universal access boxes.

First Level Security & Access Controls



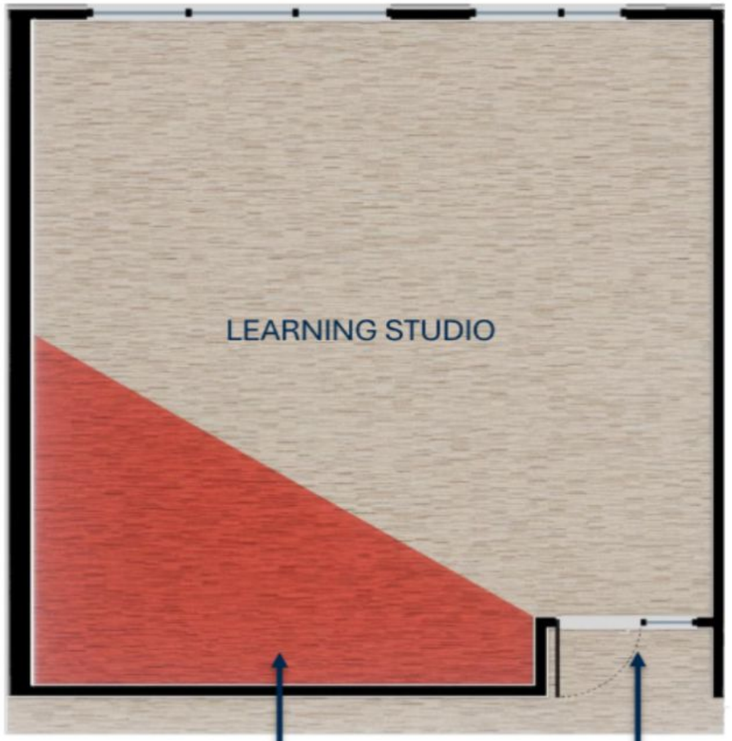
Second Level Instructional & Safe Zones



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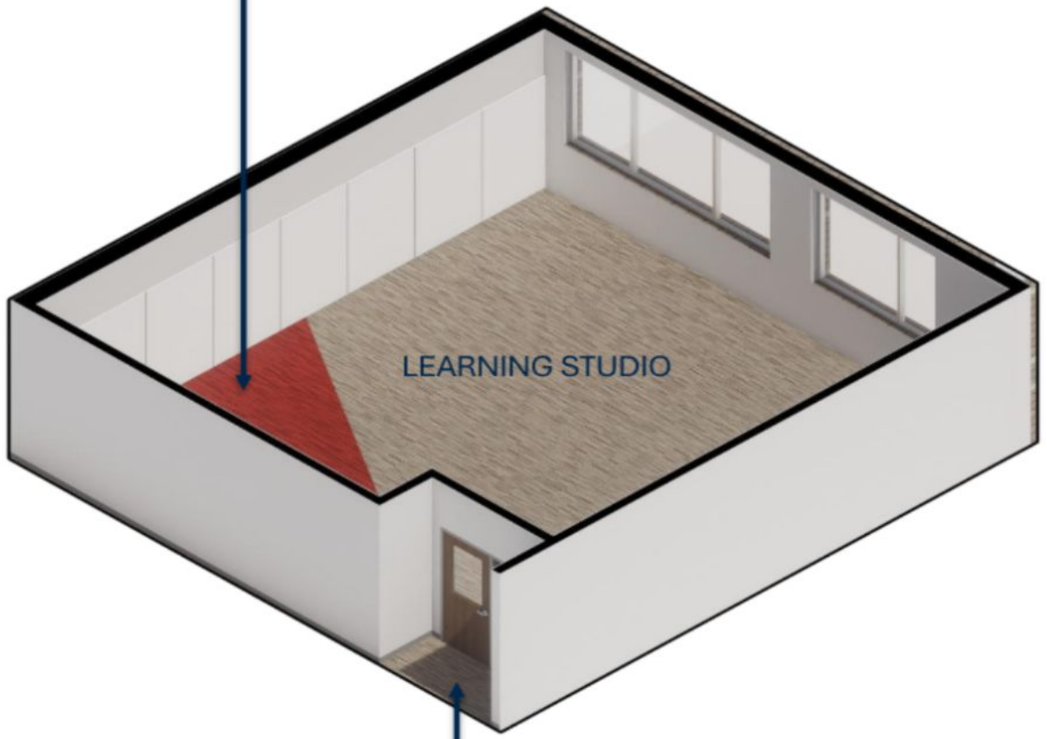
Security Design Diagrams Cont.

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SAFE ZONE: 236 SF
LOAD: 33 OCCUPANTS
CAPACITY: 75 OCCUPANTS @ 3 SF
PER PERSON

DOOR PROTECTED W/
SECURITY GLAZING



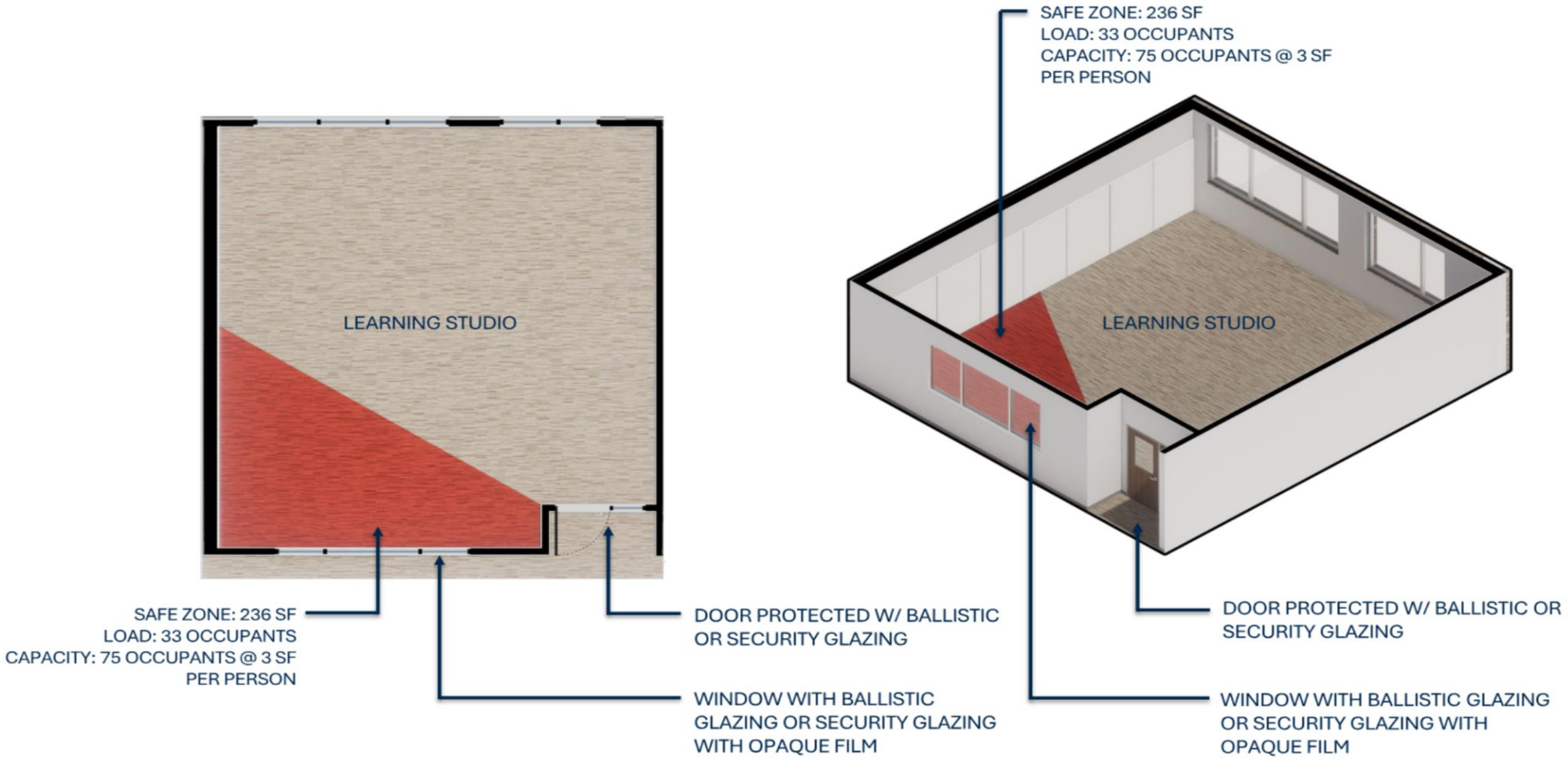
SAFE ZONE: 236 SF
LOAD: 33 OCCUPANTS
CAPACITY: 75 OCCUPANTS @ 3 SF
PER PERSON

DOOR PROTECTED W/
SECURITY GLAZING

Security Design Diagrams Cont.

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Opaque film or privacy film must be of the type where shadows or movement cannot be tracked targeted or identified on the other side. No different from a wall.
Curtains, drapes, blinds or roller shades are not a reasonable option to offset the requirements for privacy film, and do not negate the need for a designated safe space.



Security Design Diagrams Cont.

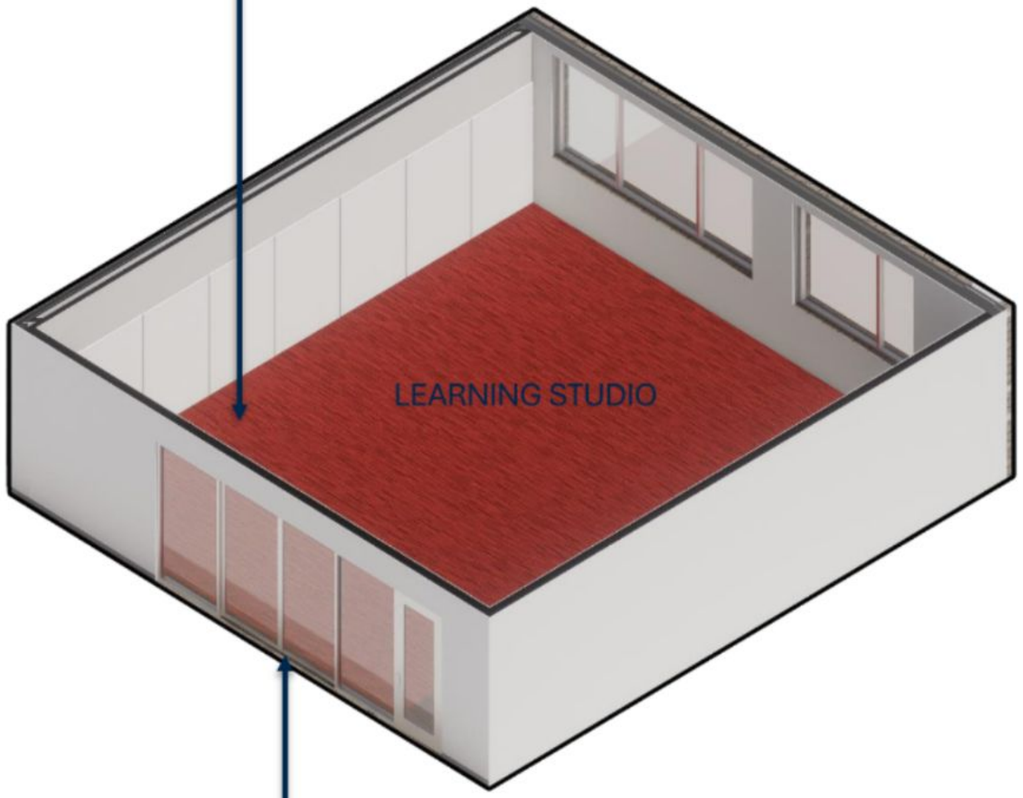
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SAFE ZONE: 966 SF
LOAD: 33 OCCUPANTS
CAPACITY: 322 OCCUPANTS @ 3 SF
PER PERSON

WINDOW SYSTEM WITH BALLISTIC GLAZING

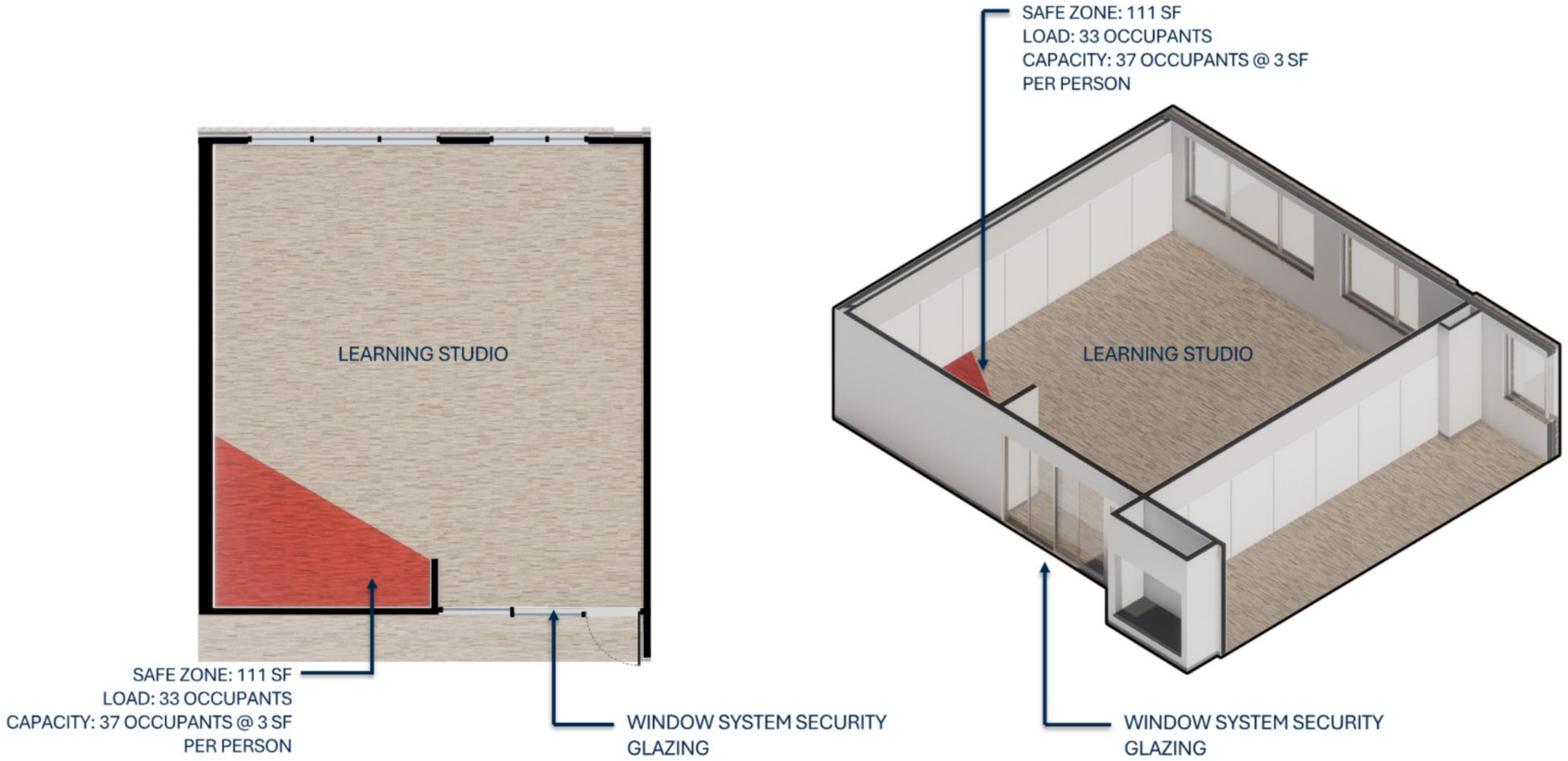
SAFE ZONE: 966 SF
LOAD: 33 OCCUPANTS
CAPACITY: 322 OCCUPANTS @ 3 SF
PER PERSON



WINDOW SYSTEM WITH BALLISTIC GLAZING

Security Design Diagrams Cont.

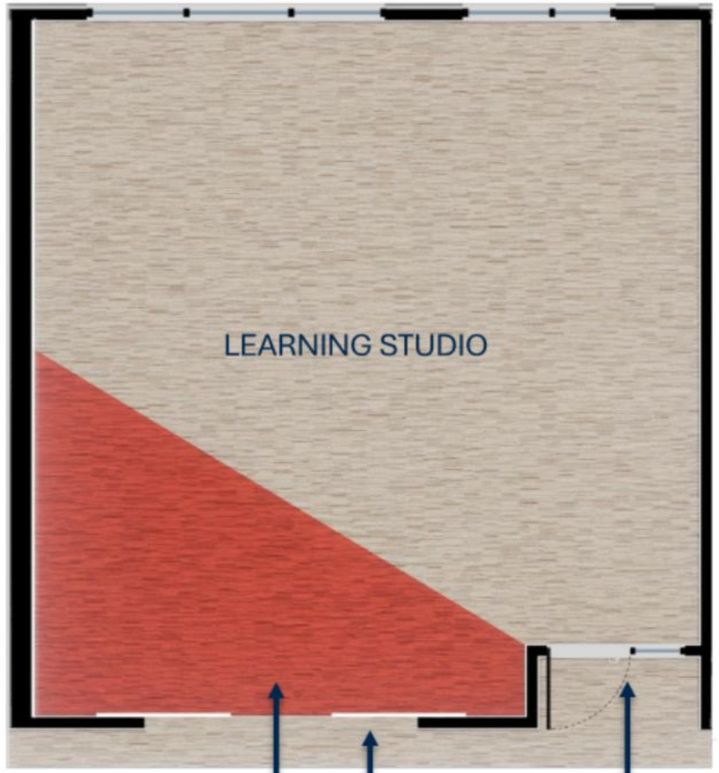
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Security Design Diagrams Cont.

Opacity film density where an interior shadow cannot be identified to track or target.

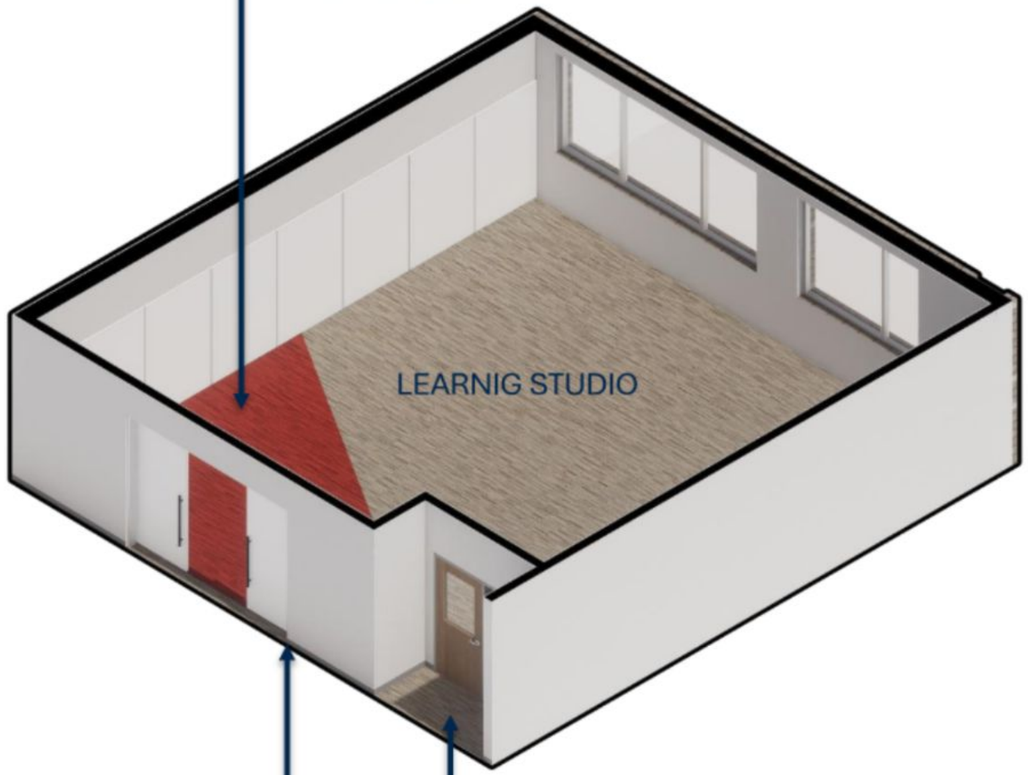
Department of Public Safety



SAFE ZONE: 236 SF
LOAD: 33 OCCUPANTS
CAPACITY: 75 OCCUPANTS @ 3 SF
PER PERSON

DOOR PROTECTED W/
SECURITY GLAZING

OPAQUE SLIDERS



DOOR PROTECTED W/
SECURITY GLAZING

OPAQUE SLIDERS

Security Design Diagrams Cont.

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A secondary door like this now without security film and privacy film or ballistic glazing would not be compliant. Additionally, these special Collaboration type or non-primary classroom entry doors must show they are secure in the frame, cannot be moved off the tracks and lockable etc.

Interior Non-Egress Sliding Partition Assemblies: All non-emergency-egress sliding glass doors and associated partition wall assemblies facing corridors or collaborative spaces shall be designed and constructed to resist manual forced entry. The complete assembly—including glass, framing, hardware, and anchoring—must provide forced–entry deterrence sufficient to prevent physical compromise from the exterior during a threat scenario or emergency lockdown.



Security Design Diagrams Cont.

Department of Public Safety

A secondary door like this now without security film and privacy film or ballistic glazing would not be compliant. Additionally, these special Collaboration type or non-primary classroom entry doors must show they are secure in the frame, cannot be moved off the tracks and lockable etc.

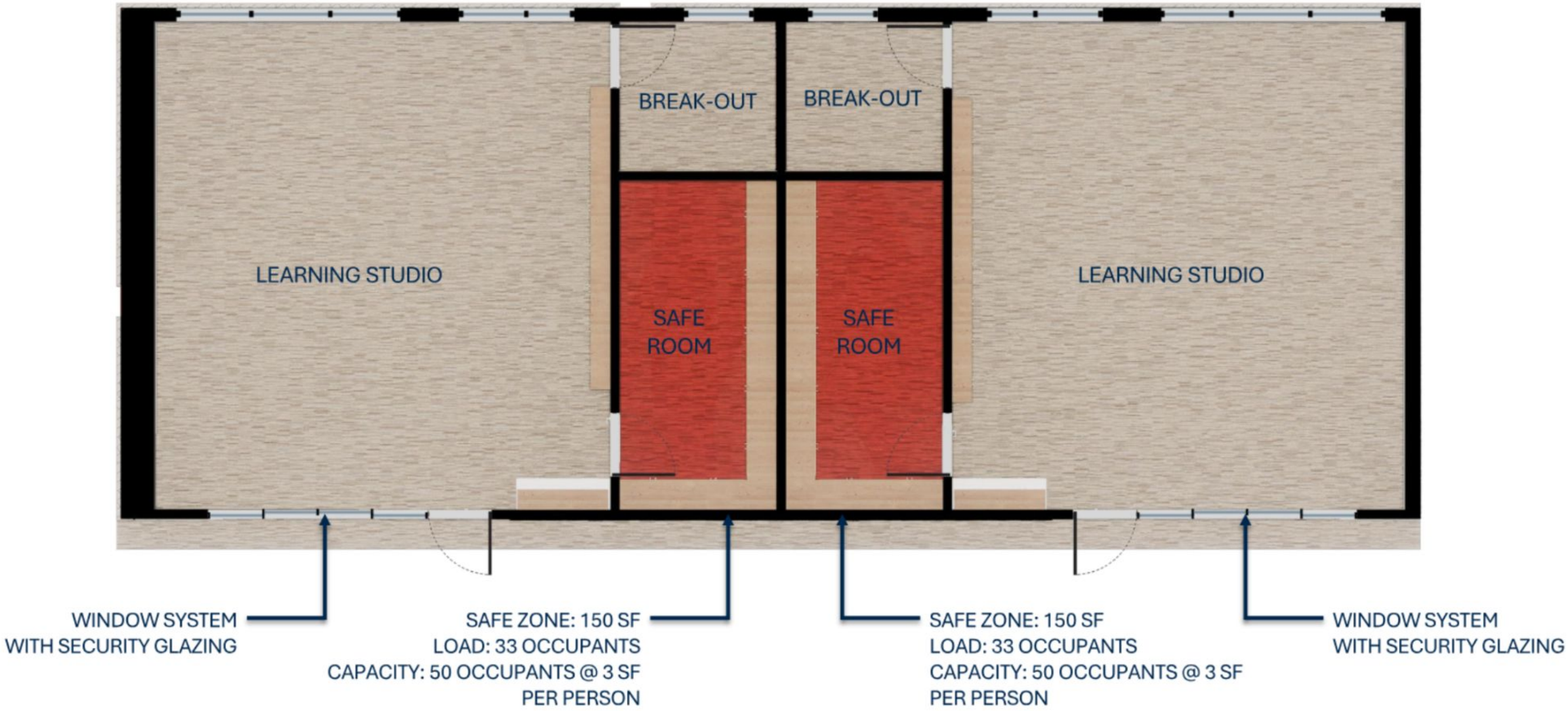
Interior Non-Egress Sliding Partition Assemblies: All non-emergency-egress sliding glass doors and associated partition wall assemblies facing corridors or collaborative spaces shall be designed and constructed to resist manual forced entry. The complete assembly—including glass, framing, hardware, and anchoring—must provide forced–entry deterrence sufficient to prevent physical compromise from the exterior during a threat scenario or emergency lockdown.





Security Design Diagrams Cont.

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Security Design Diagrams

Shared Instructional & Vocational Spaces Guidance

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NO SECURITY PROTECTION REQUIRED

Intervening Shared Rooms

Doors and windows of intervening spaces **do not require** security protection if the adjacent instructional or vocational areas are used by the same class.

SECURITY PROTECTION REQUIRED

Adjacent Non-Intervening Rooms

If an adjacent room is not intervening, and has a separate, unshared use, security protection **is required** at the interior perimeter of the classroom.



Classroom Door Lockset Functions

Interior locking mechanism options for classroom safety & compliance

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OPTION 1

Push-Button Locking

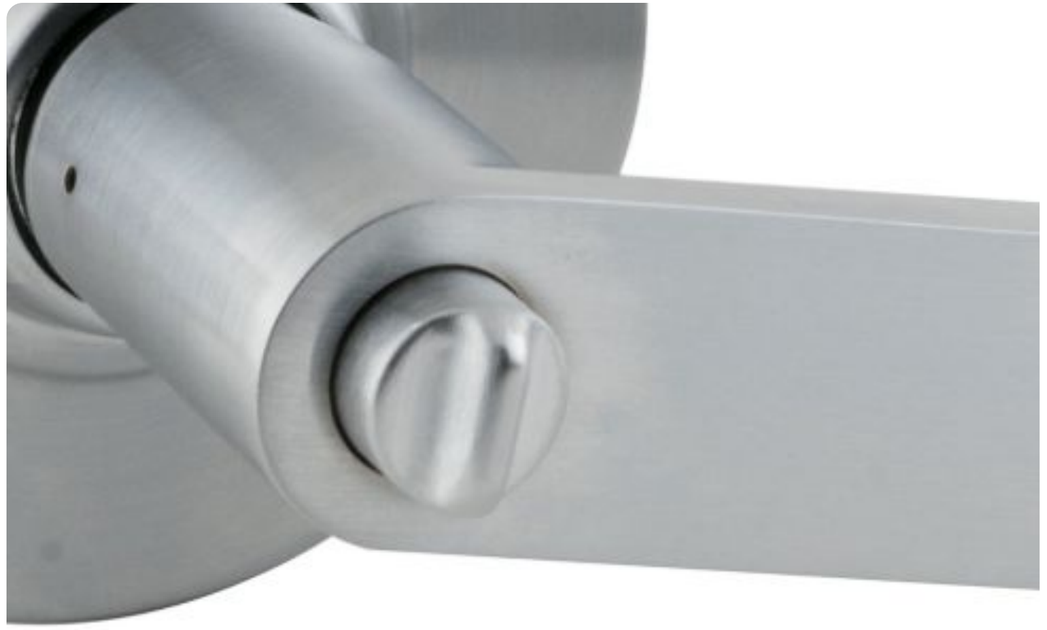
Push button on interior lever to lock from inside the classroom.



OPTION 2

Turn-Button (Twist) Locking

Twist mechanism on interior lever to lock from inside the classroom (This model is a push or twist function).



Classroom Door Lockset Functions

Interior locking mechanism options for classroom safety & compliance

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KEYED BOTH SIDES

Keyed Both Sides Lockset

Allowed in existing buildings, additional requirements to be always locked, then closed or fully open. (I need to verify new construction compliance.)



STATUS INDICATOR

Visual Status Indicators

Status indicators are not currently required by code, but are frequently included in plan submittal as best practices.



School Security Submittal & Review Items

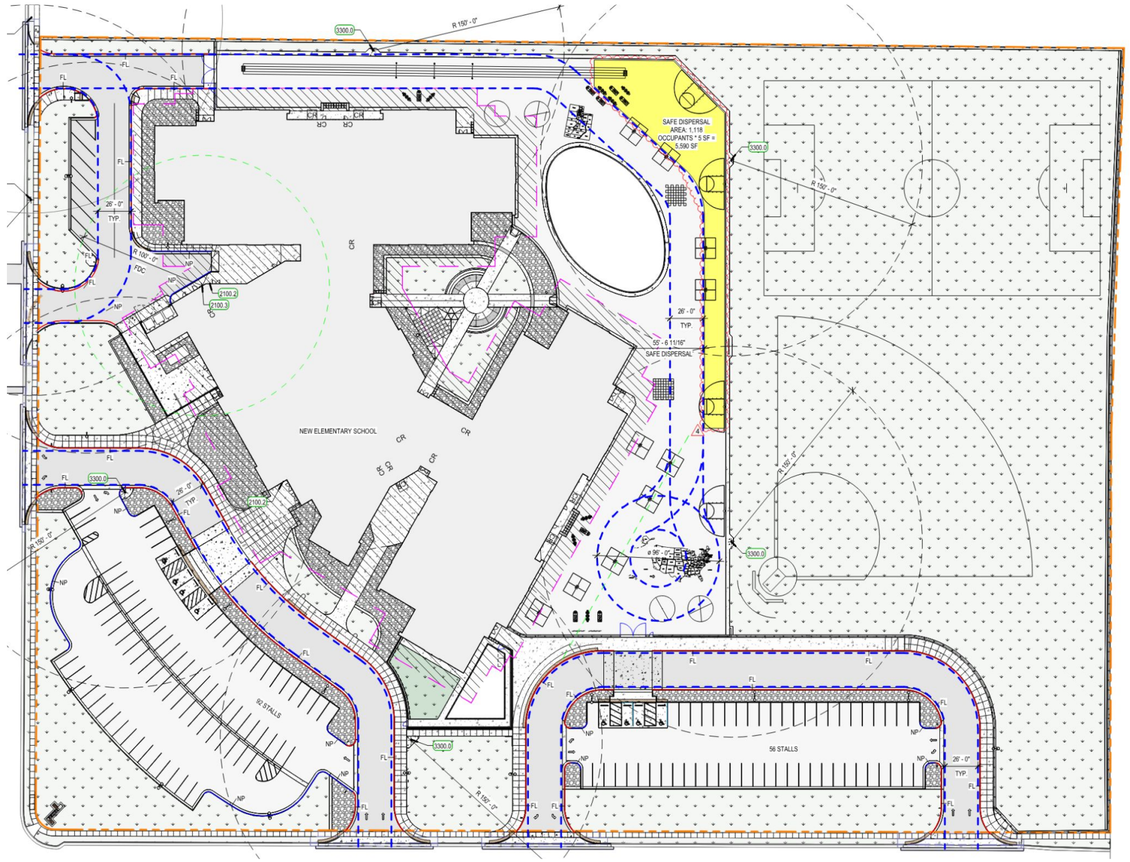
Required plans and documentation for security compliance review

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ITEM 01

Site Plan

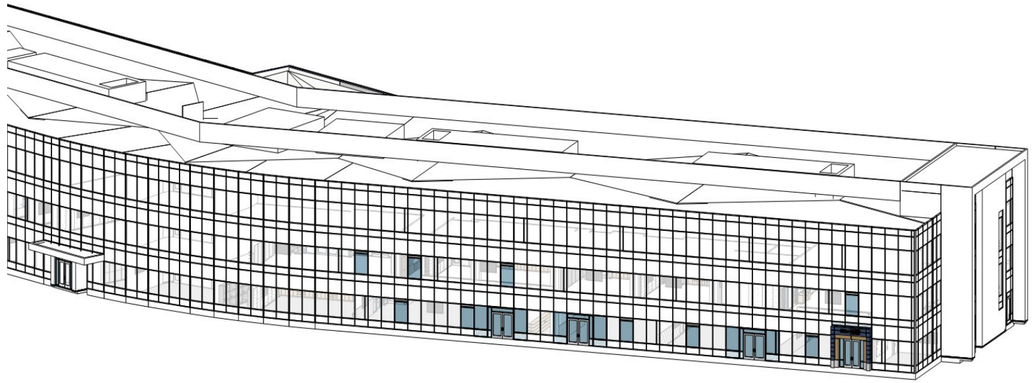
New buildings, additions, perimeter gates, and fencing layouts.

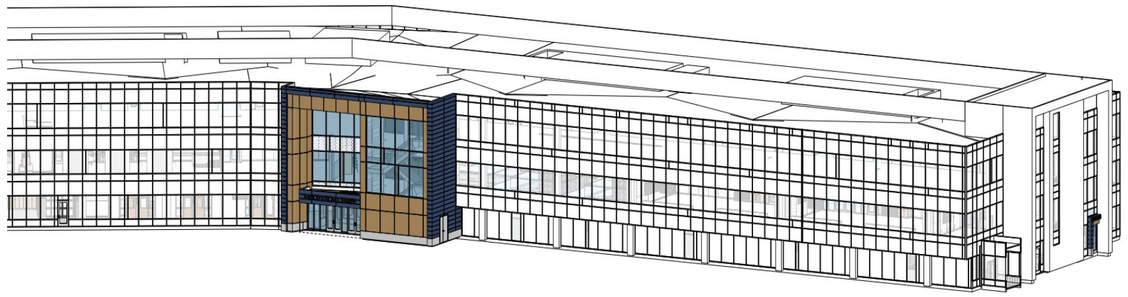


ITEM 02

Elevations

Building exterior drawings and elevation details.





School Security Submittal & Review Items

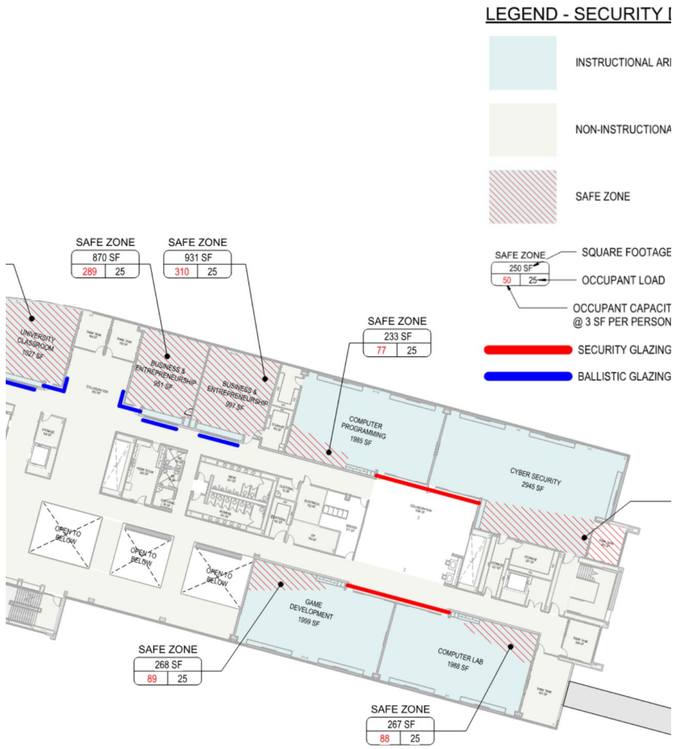
Required plans and documentation for security compliance review

Department of Public Safety

ITEM 03

Security Floor Plans

Detailed architectural security plan sheets & zones.



ITEM 04

Surveillance

Video surveillance & exterior cameras general notes.

A school shall install interior and exterior cameras for video surveillance of each entrance established under Section R698-13-4 in accordance with Section 53-22-102.

Video recordings shall be:

- (a) maintained by the school for a period of 14 days; and
- (b) made available to the division upon request.



ITEM 05

Quadrant Map

Facility sectoring & emergency quadrant grid layout compliant to details presented by Chief Pennington & Orem City Lieutenant Travis Anderson on 9-28-2026.

