

MARCH 18, 2022



## CONSTRUCTION SECTION UPDATE

**NCHEA 2022 Pinehurst Conference**



# PRESENTERS

TAMMY SYLVESTER  
ENGINEERING SUPERVISOR  
(919) 855-3917

DON SCHLAGLE  
ENGINEERING SUPERVISOR  
(919) 218-7704

JEFF DULANEY  
ENGINEERING PLAN REVIEWER  
(919) 855-3864

PLEASE HOLD QUESTIONS UNTIL THE END  
OF THE SESSION



<http://www.ncdhhs.gov/dhsr>  
(919) 855-3893



Call 919- 855-3893 to ask a general question.

- or -

Use the initials on the review letter to ask for the architect or engineer assigned to the project. HL-00000-DLJ/SRB

Please - Send general FGI questions in writing so Supervisors can work with the reviewers to get uniform answers.



## Who can call the help desk?

Help Desk was created to provide help and answers to questions. Therefore, anyone is welcome to call with general questions.

However, as noted project specific questions should be addressed to the architect or engineer assigned to the project.



## Who can call the help desk? (cont)

It is best practice for the project designer's who are making the decisions regarding the project documents to contact the DHSR architect or engineer assigned to the project. The main reason for project specific questions to be routed through the design team is that no changes should be made for a project without going through the design team approval process.

# CODE UPDATE

**2022 FACILITY GUIDELINES INSTITUTE  
(FGI)**

*FGI Expects both the paperback  
and MADCAD versions of the 2022  
edition to be available in late April.*



**FACILITY GUIDELINES INSTITUTE**  
The keystone to health care planning,  
design, and construction



# UPDATE

DHSR Construction Section will be implementing a **6-month** grace period for transition to the 2022 edition of FGI Guidelines. Hospital or Outpatient project SD's, DD's, or CD's submitted to DHSR Construction Section **(with the paid review fee)** from 1/1/22 through 6/30/22 may be designed per the **existing** 2018 FGI Guidelines. All Hospital and Outpatient projects submitted **beginning 7/1/2022** will be reviewed per the 2022 editions of FGI Guidelines.

# CODE UPDATE

2021 ASHRAE 170 is available and applicable to all projects

Please also be reminded that ASHRAE 170 is an active document and Addenda are applicable when released



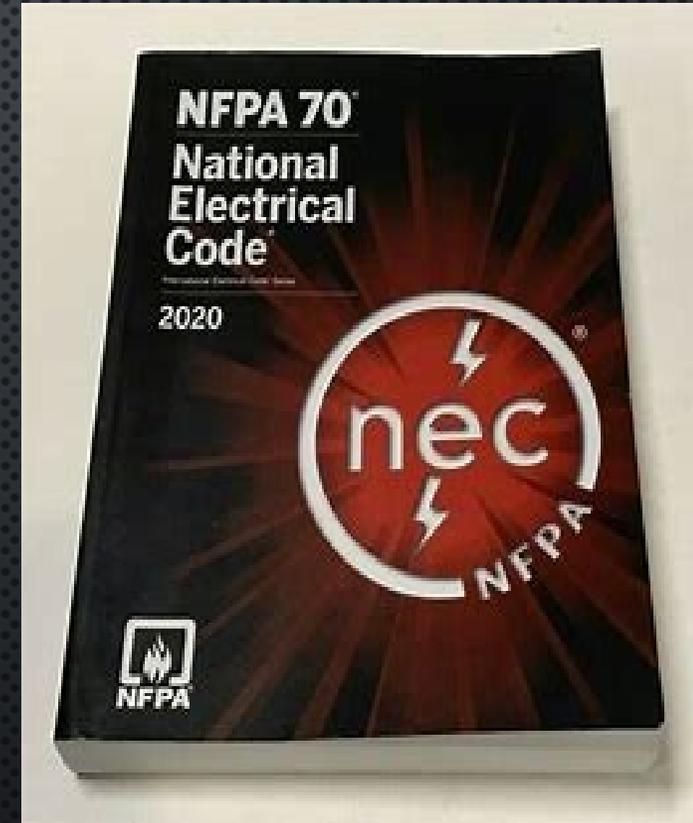
# CODE UPDATE

**2020 NEC – Effective Date October 1, 2021**

The 2020 State Electrical Code [2020 NEC (NFPA 70) with State Amendments] was accepted by the Building Code Council on June 8, 2021.

The State Amendments for the 2020 NEC can be found on NC DOI's website at

<https://www.ncbeec.org/wp-content/uploads/2021/06/2020-State-Electrical-Code-Amendments-Compact-Version.pdf>



# FUNCTIONAL PROGRAM

What makes a good functional program?

1. Clearly gives a quick scope of what the project is about.
2. How many rooms and the kind of rooms that will be affected by the project.
3. Construction type and the type of facility the renovation will take place in.

NC Division of Health Services Regulation Licensure Rule Plan Review Submittal Elements	
<b>FUNCTIONAL PROGRAM DOCUMENT</b> per 2.1-1.2 of the FGI Design Guidelines	
FGI 1.2-2.2.1	<b>Functional Program Executive Summary</b> [An executive summary of the key elements of the functional program shall be provided] Renovation of existing Pediatric Observation Unit to create a Pediatric Med Surg Unit.
FGI 1.2-2.2.2	<b>Purpose of the Project</b> [Services to be provided, expanded, or eliminated by the proposed project shall be described] Goal is to provide an pediatric med surg unit with rooms that meet current FGI requirements. Current observation patients in the space will be moved to a different area of the hospital under a separate project. Existing unit will be completely demolished and rebuilt to provide 15 new rooms sized to FGI Guidelines for pediatric med surg rooms along with required support spaces. (6) Existing ON-Call rooms will be eliminated from the space. These rooms will either be absorbed within existing On-Call room counts through reallocation or relocated to an alternate location after Owner evaluation
FGI 1.2-2.2.3.1	<b>Project Type</b> [The type of service(s) proposed for the project shall be identified as defined by the Guidelines] Pediatric Medical/Surgical Patient Care Unit
FGI 1.2-2.2.3.2	<b>Project size</b> [size in square feet (new construction and/or renovation and number of stories shall be provided)] Renovation of approximately 10,500sf of space
FGI 1.2-2.2.4	<b>Construction Type/Occupancy and Building Systems</b> (see below under FGI 1.2-2.2.4.2)
FGI 1.2-2.2.4.1	<b>New Construction</b> <ul style="list-style-type: none"><li>▪ [Description of the construction type(s) for the proposed project] Existing construction Type 1A</li><li>▪ [Description of the proposed occupancy(ies) and, if applicable, existing occupancy(ies)] Existing hospital</li></ul>
FGI 1.2-2.2.4.2	<b>Renovation</b> <ul style="list-style-type: none"><li>▪ [Description of the existing construction type and construction type of any proposed renovations or additions] Existing construction Type 1A</li><li>▪ [Description of the existing engineering systems serving the area of the building affected by the proposed project]</li></ul>

# FUNCTIONAL PROGRAM

What makes a good functional program? (continue...)

4. The area of FGI is the project being designed under.

5. Shows that the requirements of FGI are being met.

FGI Space Type 2.7.2.2 Medical/Surgical Pediatric Patient Care Unit														
FGI Code Requirement	Description	Required		Provided		Square Footage		Minimum Clear Dimension		Station Outlets for O <sub>2</sub> , Vac, Medical Air & Instrument Air				Remarks
		Yes	No	Yes	No	Required	Provided	Required	Shown	Oxygen	Vacuum	Med Air	Instrument Air	
2.7.2.2.2	Patient Room (Patient Area)	X		X		(a) min. clear floor area of 120 SF for single-patient rooms and multiple-patient rooms	at least 180	Min. clearance of 4' between the sides and floor of the bed and any wall or fixed obstruction in single and multiple patient rooms	Required 4'-0" min dimension provided		1 (2)	1 (2)	0 (1)	15 patient rooms provided
2.7.2.2.2	Patient Room (Family Zone)	X		X		A family zone that includes the following items shall be provided at each bedside without limiting or encroaching on the minimum clearance requirements for staff and medical equipment around the patient's bed. (i) Space to sit (ii) Facilities for family and visitor hygiene (iii) Storage for family and visitor personal belongings		(i) Provided by sleeper sofa in room (ii) Provided by Patient Toilet (iii) Provided with milkwork						
2.2.2.2.1.1 (1)	Capacity. The maximum number of beds per room in a medical/surgical patient care unit shall be one unless the necessity of a two-bed arrangement has been demonstrated. Two beds per room shall be permitted when approved by the authority having jurisdiction.													Patient rooms designed for 1 bed
2.2.2.2.1.1 (2)	Capacity. Where renovation work is undertaken and the present capacity is more than one patient in each room, maximum room capacity shall be no more than the present capacity, with a maximum of two patients in each room.													Patient rooms designed for 1 bed
2.2.2.2.3	Windows. (1) Each patient room shall be provided with natural light by means of a window to the outside	X		X		(a) The minimum net glazed area shall be no less than 8 percent of the required minimum clear floor area of the room served. (b) In new construction, window sill height in a patient room shall be a maximum of 36 inches above the finished floor. (c) Where renovation work is undertaken and it is not possible to meet the above minimum standards, the authority having jurisdiction shall be permitted to grant approval to deviate from these requirements								Existing windows will be utilized

Questions

?

?

Answers

?

# QUESTIONS AND ANSWERS

For Level 1 generators in an I-2 occupancy, how do you calculate generator fuel supply? Is it based on the rated load of the generator, or the actual load connected to the generator?

The generator fuel capacity requirement is based on the building load connected to the generator, not the listed capacity of the gen set. It should be noted that the low fuel alarm is to be set at the required run time for the connected loads. The tank is to be sized at 133% of this low fuel alarm value.

Also, for consideration, future expansion! The future could be painful if a fuel tank is sized only for the current connected load. If you add small loads that now bump this fuel tank size requirement above the current tank capacity, what are your options? This should be taken into consideration when designing or replacing these systems.

# QUESTIONS AND ANSWERS

Under Section 517.31(B) and 517.42(B) of the 2020 NEC, the number of ATS to be used can be one (1) provided if the load is 150 kVa (120 kW) or less. I've had some DHSR engineers state this requirement is based on the size of the generator. How is DHSR looking at this?

Both 517.31(B) and 517.42(B) state: *“One transfer switch shall be permitted to serve one or more branches or systems in a facility with a **continuous load on the switch** of 150 kVA (120 kW) or less.”*

DHSR - The connected load is what determines if one ATS can be used. Because drawings generally shows the size of the generator, the DHSR Plan Review should be asking a question as to the connected load on the generator for clarity as to whether one ATS is permitted.

## QUESTIONS AND ANSWERS

**Why do Ambulatory Surgery Centers emergency generators require 24 hrs. worth of fuel? And what is 24 hours worth of fuel? (How is that calculated?)**

The 24 hrs. worth of fuel for 24 hrs. of continuous operation was an old 13C Licensure Rules requirement. Since Ambulatory Surgery Center must now meet the requirements of 2018 FGI Outpatient, FGI does not have a specific fuel requirement for Ambulatory Surgery Centers. Therefore, the specific requirements in 2010 NFPA 110 must be considered (required per 2012 NFPA 101, *Life Safety Code - CMS*).

Fuel supply requirements of NFPA 110 are based on seismic design categories. While DHSR and CMS recognize most Ambulatory Surgery Centers do not operate on a 24 hrs. basis, DHSR plan reviewers will ask the question as to whether or not the Ambulatory Surgery Center will operate for 24 hrs. under emergency conditions. If the answer to this review comment is yes, then seismic design category fuel requirements will be applied to that particular facility. Otherwise, per 2010 NFPA 110 for a Class X EPSS, would be based on the operational needs of the facility under loss of normal power.

# QUESTIONS AND ANSWERS

Why do Ambulatory Surgery Centers emergency generators require 24 hrs. worth of fuel? And what is 24 hours worth of fuel? (How is that calculated?)

(continue...)

Examples of operational needs under loss of normal power:

- The successful completion of an operation or procedure.
- The necessary recovery of a patient before being discharged.
- The completion of the daily work schedule.

See other slides in this presentation for calculating fuel.

# QUESTIONS AND ANSWERS

What does on-site fuel supply mean – is natural gas acceptable?

On-site fuel supply means exactly that – stored on-site.

NFPA 110, Section 5.1.1 permits natural gas as an acceptable energy source permitted to be used for the emergency power supply (EPS). However, per the exception: “For Level 1 installations in locations where the probability of interruption of off-site fuel supplies is high, on-site storage of an alternate energy source sufficient to allow full output of the EPSS to be delivered for the class specified shall be required, with the provision for automatic transfer from the primary energy source to the alternate energy source.”

# QUESTIONS AND ANSWERS

**What does on-site fuel supply mean – is natural gas acceptable?**

(continue...)

DHSR Licensure Rules require on-site fuel storage. Therefore, natural gas cannot be the primary fuel source for those facilities in which DHSR Licensure Rules require on-site fuel storage.

DHSR does not see natural gas as a reliable fuel source due to natural gas piping being maintained by the City or Town in which the facility is located. These gas lines can be cut by mistake or be out of service for other reasons, thus cutting-off the fuel supply to the facility when needed.

## QUESTIONS AND ANSWERS

On a recent inspection I was sighted for not having a derangement signal when the permanent generator is not ready for use. What is required ?

Under Section 700.3(F) of the 2020 NEC, where the alternate source of power is a single generator set a permanent means must be provided with a connection for a portable temporary generator.

The permanent switching means must be provided in compliance with items 1 thru 5 under this section.

700.3(F)(5) The switching means shall include a contact point that SHALL annunciate at a location remote from the generator or at another facility monitoring system to indicate that the permanent emergency source is disconnected from the emergency system.

# QUESTIONS AND ANSWERS

**Do we still have to ground door frames to comply with NFPA 99 ?**

This one goes way back to the old days. Yes, some of us can remember having to connect a ground wire with screws into a metal door frame that was located in a concrete block wall.

The simple answer is

“NO”

# QUESTIONS AND ANSWERS

## Do we still have to ground door frames to comply with NFPA 99 ?

(continue...)

2012 NFPA 99

6.3.3.1.1.2 Small wall-mounted conductive surfaces not likely to become energized, such as surface-mounted towel and soap dispensers, mirrors, and so forth, shall not be required to be intentionally grounded or tested.

6.3.3.1.1.3 Large metal conductive surfaces not likely to become energized, such as windows, door frames, and drains, shall not be required to be intentionally grounded or periodically tested.

# QUESTIONS AND ANSWERS

Can you confirm that 30'-0" is the required clearance between a plumbing vent through the roof and the fresh air intake of a roof top unit. Someone mentioned 20' is the now required clearance.

YES - NO – YES - DEPENDS

ASHRAE 170 Is a Living Breathing Document

2021 is the Current Edition

However, addendums are effective when published

There has been many changes over the past 3 years as to the various clearances and the differences between plumbing vents, regular exhaust, infectious room exhausts and hazardous exhausts etc.

# QUESTIONS AND ANSWERS

Can you confirm that 30'-0" is the required clearance between a plumbing vent through the roof and the fresh air intake of a roof top unit. Someone mentioned 20' is the now required clearance.

(continue...)

This all depends on the type of facility and what the source of the air that could potentially be introduced or mixed with the outside air intake.

The old Hospital Licensure Rules required 30 feet from air intakes

ASHRAE 170 use to require 25 feet for all exhausts and vents

In a nutshell - verify with the current ASHRAE 170 tables as most values have changed recently

# QUESTIONS AND ANSWERS

## Do diesel fire pump (maintenance free) batteries require conductance testing?

(2011) NFPA 25 8.2.2(4)(k) and Table 8.1.2 – Batteries Serving Diesel powered fire pumps require weekly & monthly battery charging system inspection and documentation.

2017 NFPA 25 now recognizes maintenance free batteries. We know the 2011 code as recognized by CMS is more stringent and did not address maintenance free batteries.

Conductive testing for these maintenance free batteries would be acceptable as also allowed for maintenance free batteries supporting generator systems.

# QUESTIONS AND ANSWERS

What is an Isolated Ground Receptacle? Why can it not be used in a patient room?

Isolated Ground Receptacle is a device which is used to reduce electrical noise and typically found in spaces such as labs, computer equipment etc. This special receptacle may have an orange face with a small green triangle or a white face with a small orange triangle. The triangle is the official indication that the receptacle has an isolated ground.

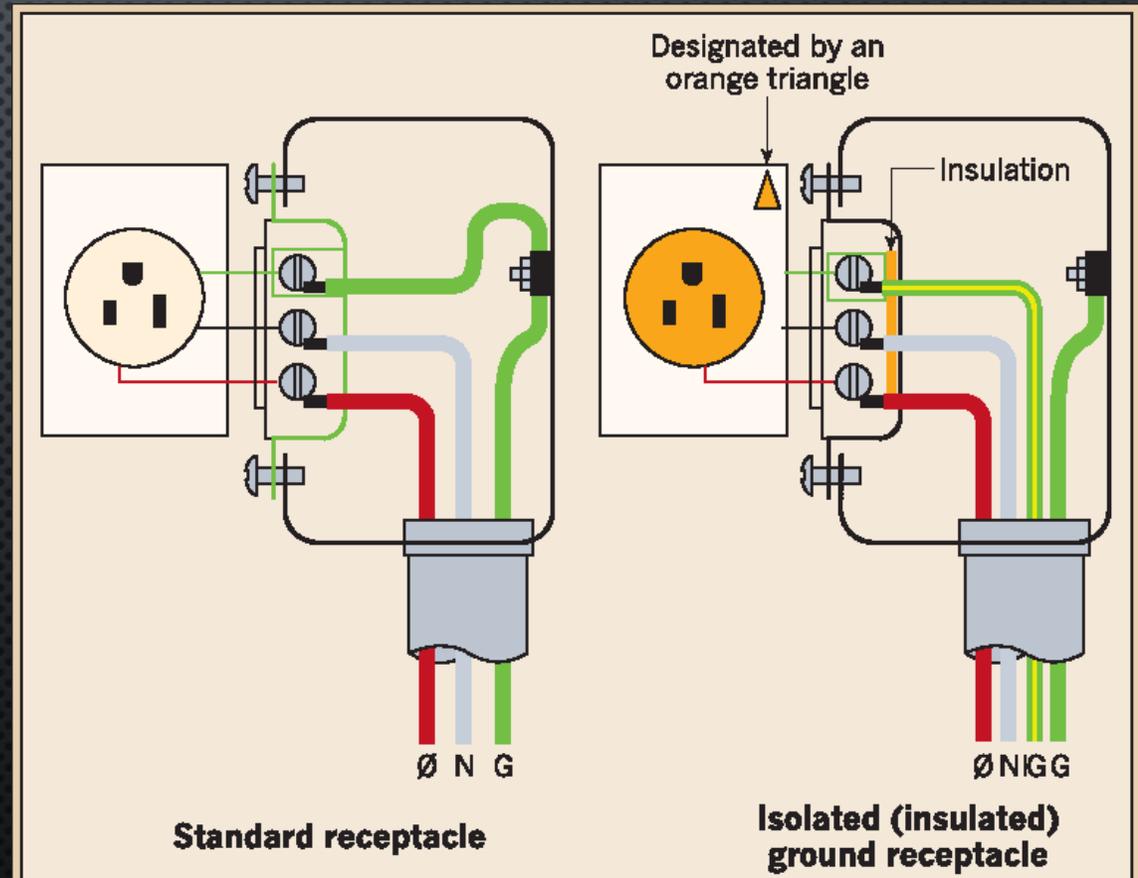


# QUESTIONS AND ANSWERS

What is an Isolated Ground Receptacle? Why can it not be used in a patient room?

Continue...

The grounding terminal is isolated (insulated) from the metal mounting yoke. If not installed correctly this type receptacle can be dangerous as you must connect the grounding terminal to an effective fault path.



# QUESTIONS AND ANSWERS

**What is an Isolated Ground Receptacle? Why can it not be used in a patient room?**

Continue....

NFPA 99 6.3.2.2.5 (B) states: *An isolated ground receptacle shall not be installed within a patient care vicinity.*

NCEC 517 13A & 13B requires specific grounding requirements for receptacles in Patient Care Spaces

# QUESTIONS AND ANSWERS

During an inspection I was told I had to remove a security camera from the stairwell. Are cameras allowed to be installed in stairwells for security reasons?

The codes prohibit anything from being located in or passing through a stairwell that is not serving the stairwell.

Technically the camera is serving a need in the stairwell. However, that has come under much debate.

In North Carolina, fire code section 1023.5 permits a 16 square inch box to be located in the stairwell which could serve as the base for the camera. It is also noted that there is limited combustibility from a single camera in the stairwell. However, electrical fires and a smoldering camera could produce a significant amount of smoke.

**CMS still does not permit the installation in a stairwell**

## QUESTIONS AND ANSWERS

Is it ok the utilize an unused (non-rated)OR for the storage of equipment and supplies?

2012 NFPA 101, Table 18.3.2.1 requires storage rooms larger than 100 sf. to be one-hour rated rooms with a minimum 45-minute door with a closer.

Most existing non-rated ORs are greater than 100 sf. Therefore, the OR cannot be used for the storage of equipment and supplies unless the room is upfitted to meet these requirements.

The NCSBC also requires storage rooms over 100 sf. to be 1 hour rated.

# QUESTIONS AND ANSWERS

In NC does the code require an X-RAY system to be automatically shut off when the door to the room opens while an X-RAY is being taken?

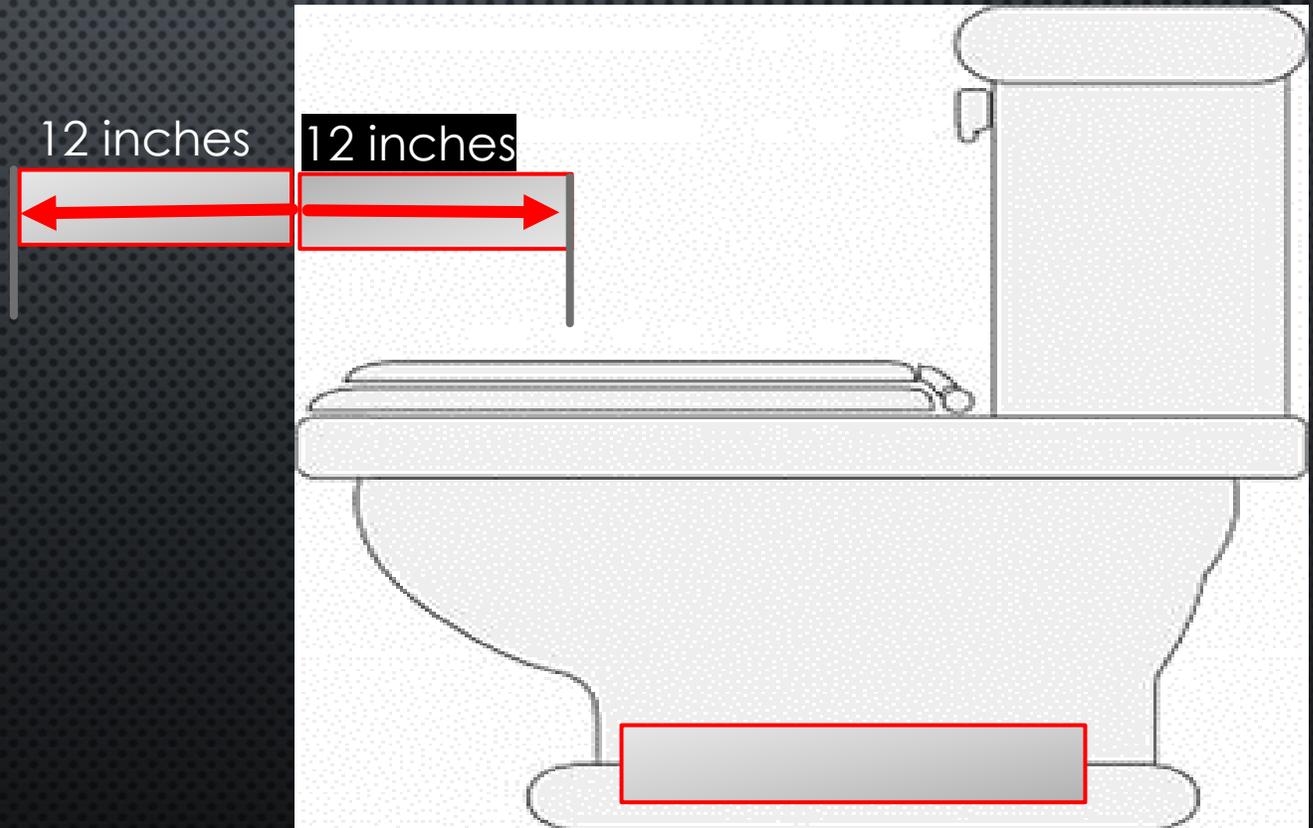
X-Ray Locations - light must come on when in use – no requirement to shut down equipment

MRI Locations - light must stay lit when magnet is energized and say magnet is always on

# QUESTIONS AND ANSWERS

2018 FGI 2.1-8.5.1.3(3) requires bath stations be located to the side of toilets, within 12 inches of the front of the bowl. Based on this, where is the nurse call device to be located?

DHSR interprets the requirement within 12 in of the front of the toilet bowl to mean start at the front of the toilet and go forward or backward 12 in. The nurse call devices can be anywhere in the area at the appropriate height of 3 – 4 feet above the floor



# Nurse Call Location Mishaps



**Not within  
sight of user**

**Emergency pull cords at shower stalls and tubs must be installed 3-4 feet above the floor within normal view of the user and must be within reach of staff without the need to step into the shower or tub [2018 FGI 2.1-8.5.1.3(2)]**

# QUESTIONS AND ANSWERS

## Common Nurse Call Clarifications and Mishaps:

### Clarifications Continue:

3. Per Table 2.1-2, most patient care spaces require staff assist AND code blue.
4. For psychiatric/behavioral health toilets, *pull cords are limited to 6 inches or less.*

# Nurse Call Location

**NOT COMPLIANT**



**This works if your standing  
Right?**



**A little bit closer now**

## QUESTIONS AND ANSWERS

Can the MRI resuscitation area be the same space as the patient care station?

**“NO”**

These are two separate requirements

# QUESTIONS AND ANSWERS

Can the MRI resuscitation area be the same space as the patient care station?

(continue...)

FGI 2.2-3.4.5.6 An area adjacent to the MRI room must be provided for patient code treatment/resuscitation. Adjacent is defined as “Located next to but not necessarily connected to the identified area or room”.

FGI A2.2-3.4.5.6 Should be located in the MRI suite as specified in ACR guidance MR Safe Practices.

FGI 2.2-3.4.8.15 A minimum of one patient care station must be provide for every three Class 1 imaging rooms or fraction thereof where patients receive lab work or injection preparation.

The patient care station is a separate requirement from the treatment/ resuscitation requirement above. Therefore, you would have to provide a separate space for each of these requirements.

# **PROJECT SPECIFIC QUESTIONS / CHANGES TO APPROVED PLANS**

**What is the main Concern / Question here?  
Is it related to an active project?**

**Who is in charge of the process, making decisions for the specific project, related to the question to be asked?**

# PROJECT SPECIFIC QUESTIONS "CONT"

Often The Question ?

Simple

Often The Answer.

Simple

## **PROJECT SPECIFIC QUESTIONS "CONT"**

**Receives an answer - YES - The Code / Licensure  
Rule minimum is as you stated**

**Seems simple to the requestor as they got an answer  
to the basic question.**

**Can they now go out and implement based on the  
answer received?**

# PROJECT SPECIFIC QUESTIONS "CONT"

**NO**

## What Do You Mean?

**DHSR reviews and inspects for minimum compliance with the Rules / Codes and Project Requirements that are included in the project submission packet**

**DHSR will not provide design solutions or recommendations on how construction should be completed.**

**Projects must be completed in accordance with the designer / manufacturer / and construction document requirements**

## **PROJECT SPECIFIC QUESTIONS "CONT"**

### **What affects decisions to change the project requirements?**

**The project design team must be the one to make changes to the construction plans – this would also require resubmission to the LAHJ for their review and approval**

**At project completion the design team provides verification to DHSR that the project was constructed in accordance with the submitted documents. Changes must be approved by the design team.**

## PROJECT SPECIFIC QUESTIONS "CONT"

A factor that can affect decisions to change the project requirements? "cont"

**Did you say this is a BOND project?**

Substantial changes in the products used which could decrease the quality of the end product, or a change which has a major impact on cost increase or reduction could require a review by the Medical Care Commission for approval of the project changes.

## PROJECT SPECIFIC QUESTIONS "CONT"

Can we use the allowance in the 2020 code for this particular item?

Seems like a simple question up front

**SURE CAN - BUT**

**BUT – I hate the “But” part**

## PROJECT SPECIFIC QUESTIONS "CONT"

Can we use the allowance in the 2020 code for this particular item? "cont"

What's Required?

Approval from the local code official

A resubmission of the project documents to indicate the project is to now comply with all the requirements of that particular code being requested for use

# MOBILE UNITS

**Will use of a mobile MRI during an in-hospital renovation project need to meet as many of the 2018 FGI Chapter 2.8 requirements as possible?**

# MOBILE UNITS

YES

The mobile unit might have been manufactured 10 years ago but, during the renovation in the building, patients will use the mobile unit so as many of the applicable 2018 FGI requirements that have a direct patient care impact are to be provided. A review comment response from a vendor stating *“The mobile unit is a state approved mobile MRI normally servicing a certain county”* **is not** acceptable in lieu of meeting the physical plant requirements.

# MOBILE UNITS

## The Temporary Mobile Unit

### CONSIDERATIONS:

Does placement of this unit affect current building exits?

Does it affect egress lighting?

Does it impede emergency vehicle traffic?

Does it comply with FGI section 2.8?

# MOBILE UNITS

## The Story

I really did say (jokingly) please help us find a route back to our vehicle that will not take us past any deficient items. Yes, everyone had a good laugh, and we were on our way. We traversed to the back of the facility and exited through the Emergency entrance. I'm like, we are parked on the other side of the facility and again we laughed as this was the quickest way out and no deficiencies. I go on to say Mission Accomplished you did what I asked.

## Or So It Seemed

## You Can't Make This Up

# MOBILE UNITS

## You Can't Make This Up

Great Barriers



Not sure if the cones will stop a moving vehicle



Cords in walk path



No protection by these free standing fences

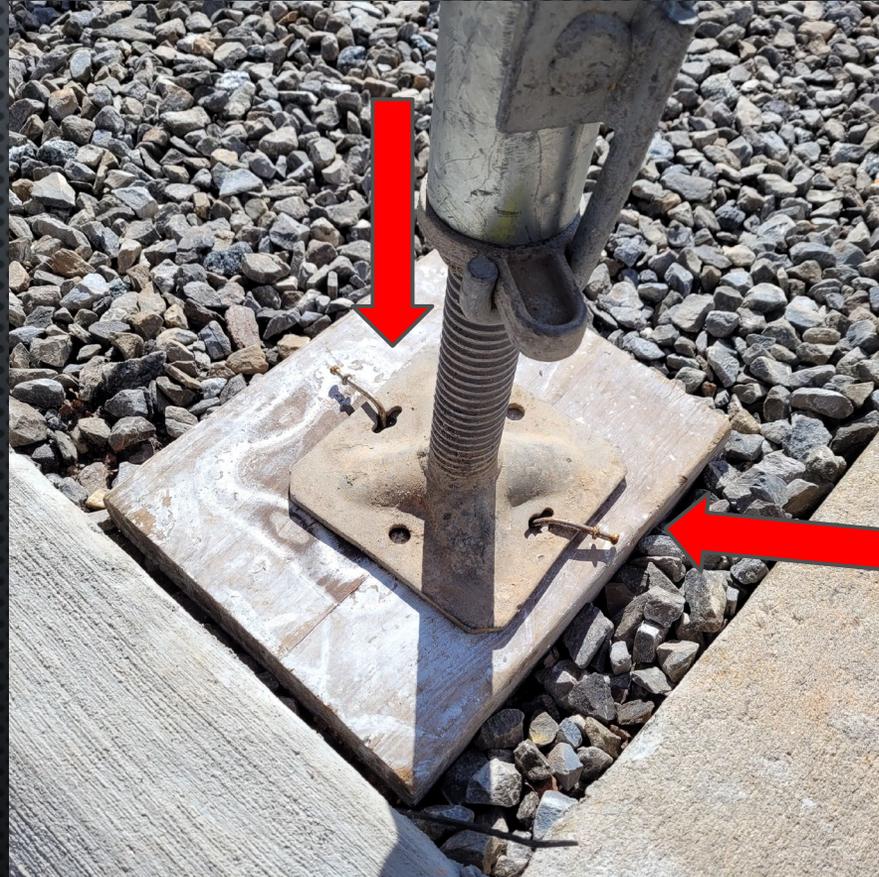
# MOBILE UNITS

## You Can't Make This Up

Fire treated plywood is not allowed



OK – Regular exterior CDX won't work either



Ran out of anchors

Found a couple

# MOBILE UNITS

The exit is accessible LOL



Sink Does not meet FGI

This Item has been covered in 3 DHSR presentations in the past three years

# MOBILE UNITS

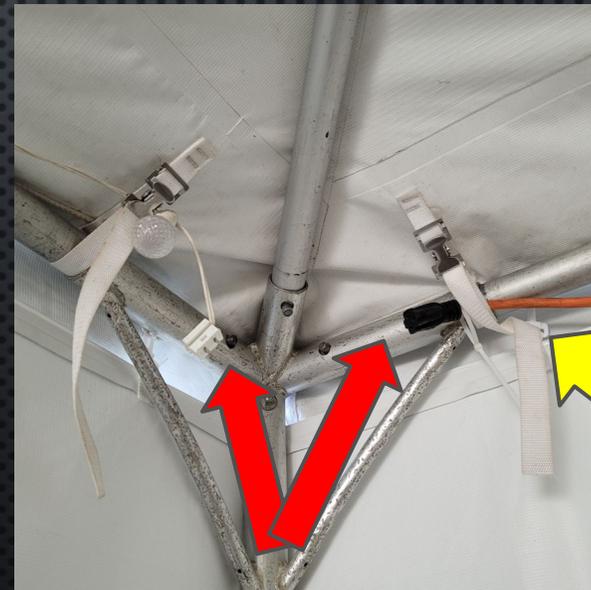
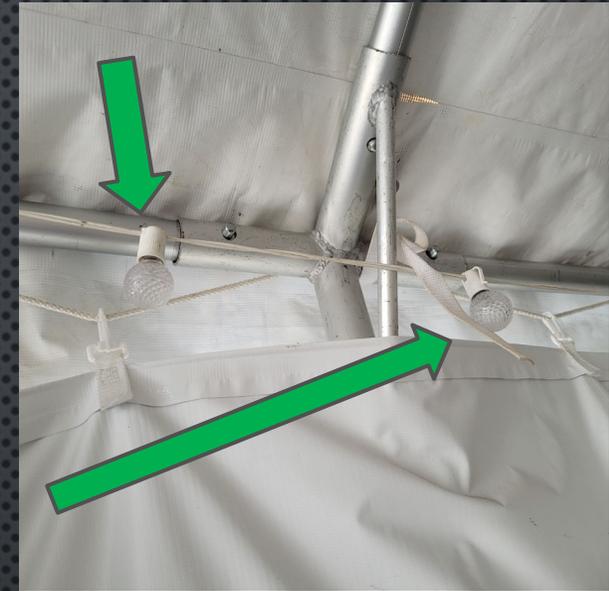
## You Can't Make This Up

I believe the Canopy is Blocking the emergency egress lights



Yes Confirmed  
No Lights

Where's Your  
Christmas Spirit



Life Safety  
Cords  
Should Be  
Yellow LOL

Not Plugged in

# MOBILE UNITS

## You Can't Make This Up



Where is the exit



Tell me again  
Where is the exit  
from the Building



A little  
better

# MOBILE UNITS

## You Can't Make This Up



Cords and More Cords

## MOBILE UNITS

~~You Just Can't  
Make This Up~~

SHIFT HAPPENS

# MOBILE UNITS

## SHIFT AT ITS BEST



# INSPECTION PROCESS

## ACTUAL EVENTS

- The duct detector is not installed yet and the fire alarm vendor was not available for the inspection today. I also asked about the electrician as they were not included in the introductions at the inspection.
  - RESPONSE – They informed us two days ago they would not be available.

## THIS PROJECT IS NOT READY FOR INSPECTION

- The design team is not available – we can write down your questions and respond next week

## NOT A PRODUCTIVE INSPECTION

# INSPECTION PROCESS

## ACTUAL EVENTS “cont”

- We can't test that right now it may affect operations -  
Then why did we come in at 3:00 a.m. to test this system?

**You just can't make this up –**

**THIS PROJECT IS NOT READY FOR INSPECTION**

# INSPECTION PROCESS

## What is best practice for scheduling inspections?

- **2 Week advance notice is required**
- **Provide notice ASAP if need to reschedule**  
(this can provide opportunities for others who are on target with their projects)
- **Requests received more than 3 weeks in advance**  
(The requested information will be used for our planning purposes to group inspections etc. No confirmation will be provided until a confirmation inspection request is requested 2 weeks out.)

# INSPECTION PROCESS

## DHSR INSPECTION EXPECTATIONS

- All components and systems should be at final stages with all required testing completed and all testing documents verified for compliance with plans and specifications
- Building and fire inspections should Be completed
- A Certificate of Occupancy or Compliance must be in hand prior to our arrival on site

# INSPECTION PROCESS

## COMMON INSPECTION ISSUES

- **Air balance report not compliant with design/code requirements**
- **Air balance not reviewed and approved by engineer of record**
- **Electrical testing not compliant or completed**
- **Electrical testing docs not reviewed by engineer of record**

# Show & Tell

All identity has been removed to protect

# The GUILTY

# Show & Tell



Quick and  
Standard response  
in same room



# Show & Tell



**It was fine until you made  
me remove the angle**



**Exit signs are  
overrated**

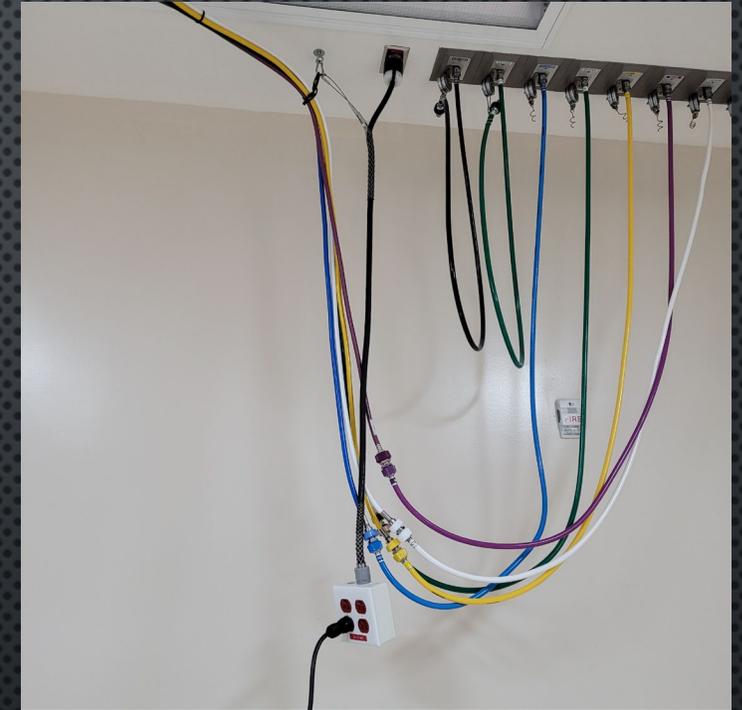
# Show & Tell



Orange isolated from ground outlet connected to an isolated power system. This one was made up LOL



Duplicate and repeat WOW



But you didn't allow this either

# Show & Tell



I Can See The  
Access Door



It's Not Patient Care

# Show & Tell



Should have used a bigger angle. LOL

Guess the missing screws gave it away



That Explains It  
Wonder how that works

# Show & Tell



Is this a spare  
sprinkler  
head



Sprinkler Bends



Do they not work  
with the caps on



# Show & Tell



Already  
Broke In

# Show & Tell



OK for return  
but not Exhaust

NOW  
HERES A  
STORY

Exhaust fans were  
shown on the approved  
drawing set

**“OH” is this a  
change that was  
never submitted for  
approval?**

**SHIFT Strikes again**

This is a shaft wall ?



Okay the 3 layers are behind this

# Show & Tell

## Story Time Continues



3 layers on all sides or just the bottom



Okay I dropped my pen in the wall.

But this wire goes in 1 foot and hits nothing.

Oh you just hit the bad spot



The bottom on the right is missing

Oh Yeah its pulling loose because the screws are too short ???

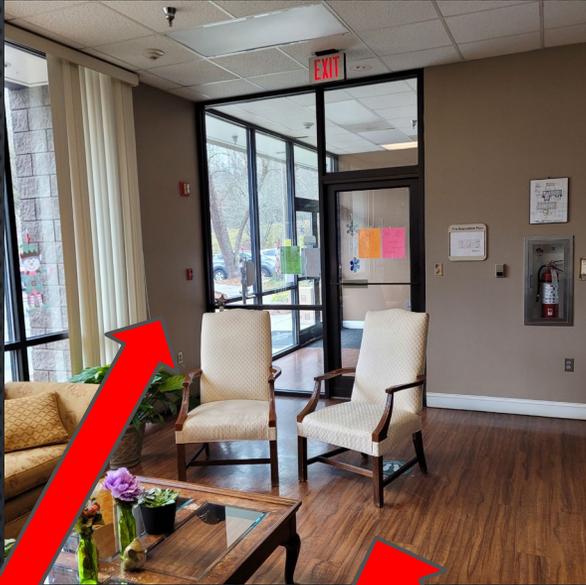
# Show & Tell



A little bit  
closer now

# Show & Tell

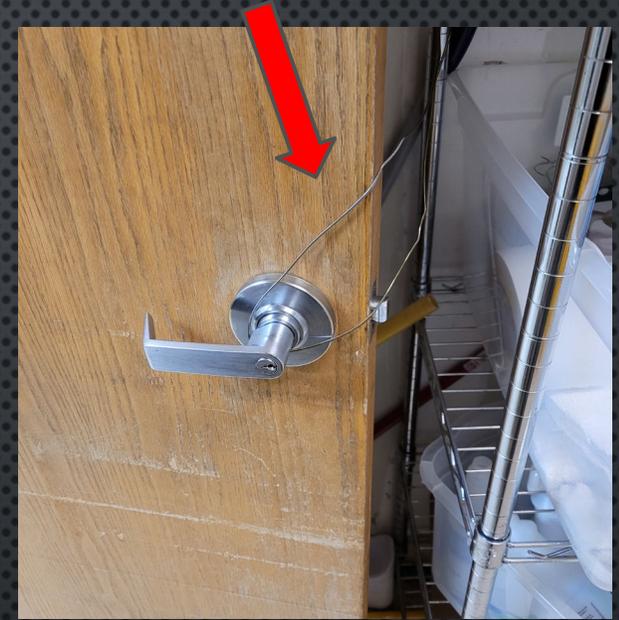
Which is worse ?



Can't get to the exit  
or the pull station



Plastic Bag



When a plastic  
bag is not strong  
enough



Not Latching

# Show & Tell



New  
concept  
offset walls

# Show & Tell



NOT DYNAMIC

## FINAL INSPECTION



I know there is a wall somewhere around here

# Show & Tell



How does the angle cover 1 inch when the pipe is in the plane of the wall



We ran out of screws



I found the missing screws



Oh Now I understand

# Show & Tell



The Life Safety Group Loves This



"A" For Effort

# Show & Tell



**Where's Life  
Safety When  
you need  
them. LOL**

# Show & Tell

## WHY DO AN AIR BALANCE REPORT?

OAU 1 – air report indicates dampers are 100 percent open V/D not installed. Area AA-02 47% of design, AA32 30 % of design, AA-06 66% of design and AA-33 60% of design.

SHP – 1A report indicates outside air to be 23 CFM which is 28.75% of design with total unit CFM's to be 688 which is 86% of design.

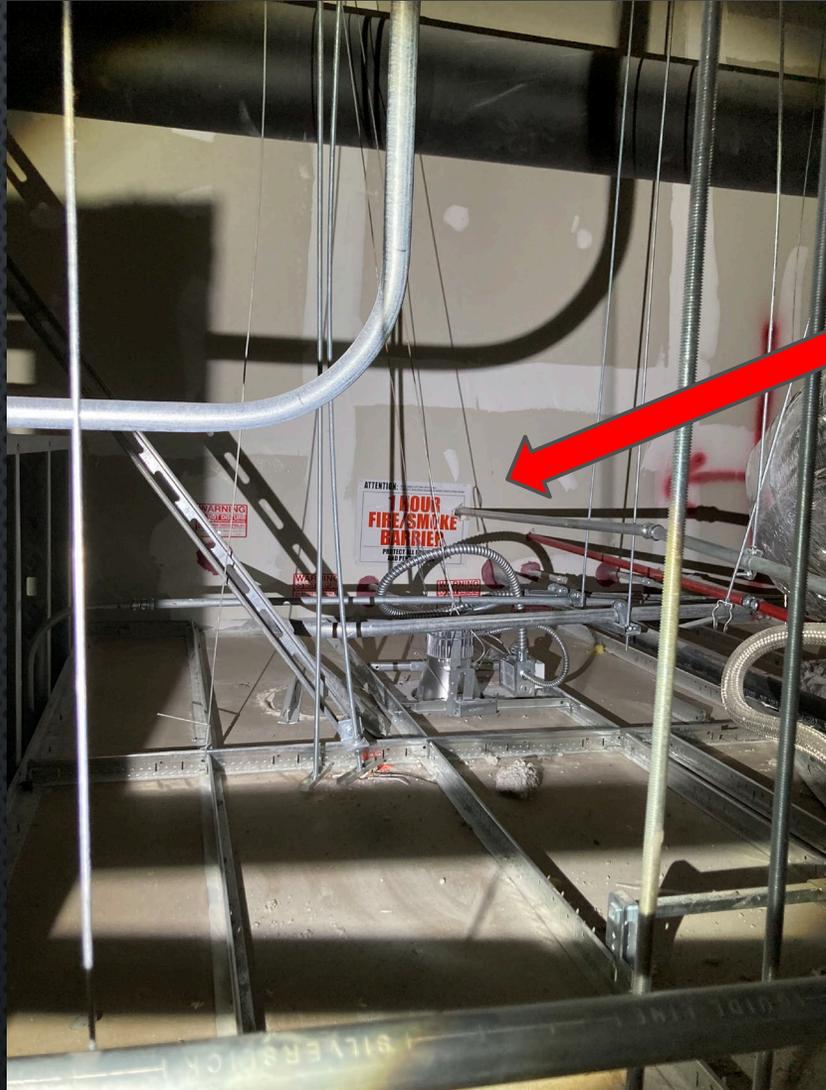
Outside air damper not installed and fan set to max speed.

HP-11 is only operating at 88% of design airflows and the fan is maxed out on speed.

RTU 3 – relief exhaust report indicates actual CFM's 2230 which is 83% of design. Notes indicate fan is almost at max amp capacity and volume damper is at 100% open.

RT 6 – relief and exhaust report indicates area HE-02 to be 62 % of design with the volume damper 100% open.

# Show & Tell



Love This -  
BULLSEYE



Above a patient room –  
Oh Love that smell

# SEPARATION OF CIRCUITS



**Box Divider**

## **LIFE SAFETY REFRESHER**

Am I supposed to show temporary partitions on the drawings when they reduce the corridors below the 8 foot minimum width?

**Entire width must be maintained**

In an 8' wide hospital corridor can the flooring be replaced in one 4' x 100' section at a time so half the corridor width will remain clear?

**Entire width must be maintained**

## **LIFE SAFETY REFRESHER**

In CMS Certified facilities in NC, the means of egress must be continuously maintained free of all obstructions or impediments for full instant use in case of fire or other emergency.

**Entire width must be maintained**

## LIFE SAFETY REFRESHER

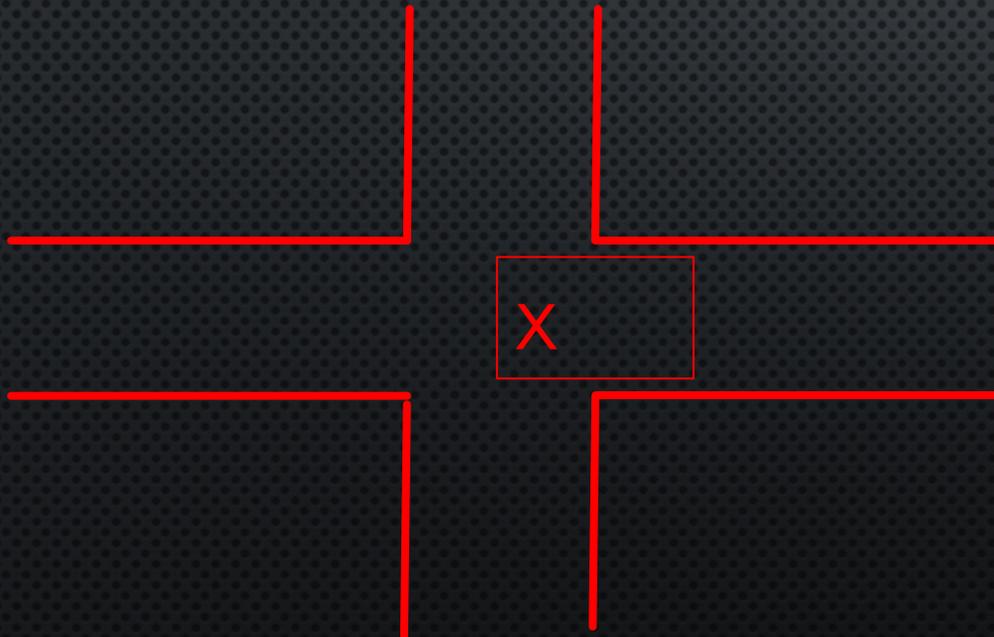
If I change or reroute an exit is a project required?

**YES**

*These projects must be submitted that show ILSM's (interim life safety measures) and state the amount of time needed for the project. These interim life safety measures are for redirecting exits. As noted the full corridor width must be maintained for corridors in use.*

# LIFE SAFETY REFRESHER

If you run into an impossible situation that can't be resolved without a temporary means of egress obstruction, you may have a prayer but it will be a very small one.



## RARE BUT CASE-BY-CASE

- Submit to DHSR the scope, details and duration of the necessary work.
- Describe any staff and contractor training and monitoring of the area that will be done
- Explain special precautions taken.
- Must receive approval.

# WE NEED YOUR HELP!

- Relevant:
  - Are the presentations meeting your needs?
- Future topics to address
  - What questions do you have?
- Transparency
  - We want to have a clear understanding as well as provide, clear, consistent information
- Updating our website
  - Frequently asked questions
  - Various user friendly presentations



**THANK  
YOU!**