



HEALTHCARE SPECIFIC ISSUES

- Key Firestop Compliance Issues
 - A large % of findings are firestop related. Of them the overwhelming % are cable penetrations
 - Infection Control, specifically related to firestopping is a significant issue.
 - Fire Barrier Management over time is a significant challenge for HC facilities.

EVEN WHEN WE HAVE MADE THE EFFORT...

Openings that once were sealed may no longer be...

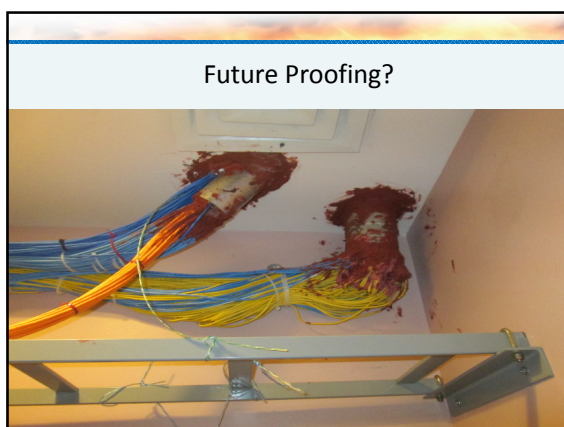


Drywall Mud Is Not Firestop!









JOINT COMMISSION QUESTIONS PRIOR TO A SURVEY

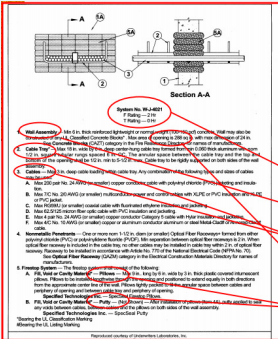
- What type of firestopping is used in the facility?
- What is the organization's policy regarding accessing interstitial spaces and ceiling panel removal?

These questions are intended to spur conversations among surveyors and facility managers about common areas for findings.

THE SYSTEM MUST MEET THE APPLICATION

- Rating Of The Barrier.
- Proper Barrier Construction.
- Proper Penetrating Item.
- Annular Space Requirements.

More Than Just Red Caulk!!!



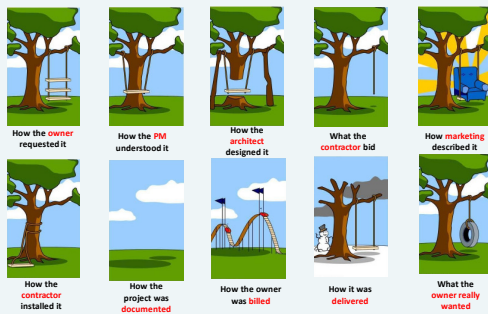
Every application has its own unique UL tested assembly which specifies:

- Hourly Fire Rating
- Type of Barrier
- Type of Penetrant
- Min/Max Hole Size
- Firestop Products

YOU KNOW THE DRILL!

- A Job Is Awarded And The Contractor Is Supposed To Perform All Work Per Code.
- The Job Is Over And The Check Is Written.
- The Infractions Are Found, But The Contractor Is Long Gone.
- The In House Maintenance Staff Is Left To Repair. The Hospital Is Paying Again.
- We Want The Staff To Be Inspectors Not Installers.

ARE WE PROVIDING EFFECTIVE COMPARTMENTATION IN HEALTHCARE FACILITIES



COST OF MAINTAINING BARRIERS

- What is the cost of sealing barriers that have been left non compliant?
 - What is the cost of generating a work order and implementing action to be taken to repair?
- These Things Don't Happen For Free!**

COST OF MAINTAINING BARRIERS

- What are true cost of your staff to perform this work **that you have already paid for?**
- What is the added cost to insure IC is being adhered to in vulnerable areas?
- What are the cost for empty beds due to remediation efforts?

COST OF MAINTAINING BARRIERS

- What cost are associated with performing a LSC risk assessment?
- What if it is determined that ILSM's will need to be implemented?

These Things Don't Happen For Free!

GET TO THE CORE OF THE PROBLEM BY IMPLEMENTING A COMBINATION OF:

- Management approach
- Knowledge base (healthcare + firestop + construction)
- Utilize products engineered for healthcare
- Specific U.L. testing base for all
- Support systems
 - **Training**
 - **Tech support**
 - **Tools (Paper-Electronic)**
 - **Specialized Support**

A BARRIER MANAGEMENT PROGRAM

- Proactive Approach to Maintaining Rated Wall Integrity.
- Stop Annual Outlay of Capital – Once The Facility is Handed Over.
- Documentation!!!!
- Provide Avenues For Planning Pathways. (Cable Issues)
- Enforce Accountability!
- Surpass Inspection/Accreditation Expectations

SEEMS EASY ENOUGH!

Competent Installations Require Understanding:

1. The Role of Barriers/Compartmentation
2. How Barriers Are Compromised
3. Following a UL System Approach
4. Understanding Basic Product Installation

THE PROBLEM MAY BE PROTOCOL

- Do you have a true Barrier Management Program?
- Does the protocol you have in place force accountability?
- Do you have an ongoing training process to insure that personnel involved have a complete understanding of what is expected?

A BMP At A Minimum Should Accomplish Three Things:

1. Insure the delivery of a compliant building
2. Adopt procedures to keep it in compliance
3. Documentation (evidence of compliance)

“STANDARDIZATION” OFFERS PRACTICAL & ECONOMIC BENEFITS:

- **Advance planning allows you to pick the right systems:**
 - Use of products and UL Systems that take into account the life-cycle requirements of your buildings
 - Even bidding
- **Standardization allows:**
 - Consistent pricing
 - Adequate training
 - Specific manufacturer support
 - Easier inspections
 - Smoother job progress
 - Maintenance becomes inspectors not installers

A BMP SHOULD HAVE A STANDARD OPERATING PRACTICE

- A full overview as to what is expected of anyone working in a rated barrier.
- This will go out with bid documents.
- Procedural requirements
- Performance requirements
- Submittal requirements
- Installation requirements

Failure of any vendor to meet your SOC will result in contract termination



BARRIER MANAGEMENT PROGRAM PENETRATION PERMIT FORM

- This permit will be given with a designated start. This will be determined by the facility.
- This permit will allow access above the ceiling.
- This permit will be displayed at all times.

**NOT CONSIDERED A
CLOSEOUT!**



BARRIER MANAGEMENT PROGRAM FIRESTOP INSTALLER WORKSHEET

- This document would be picked up and returned to the firestop office.
- List all information of the installation.
- A log of Who, What, When and How.
- Use as an inspection tool.
- Accountability!



BMP PENETRATION LABELS

- Accountability!
- Product Used
- Date Of Installation
- Contractor Information
- UL System#



GET IT RIGHT FROM THE START

CBMP

**Construction Barrier
Management Program**

WHAT IS THE CBMP?

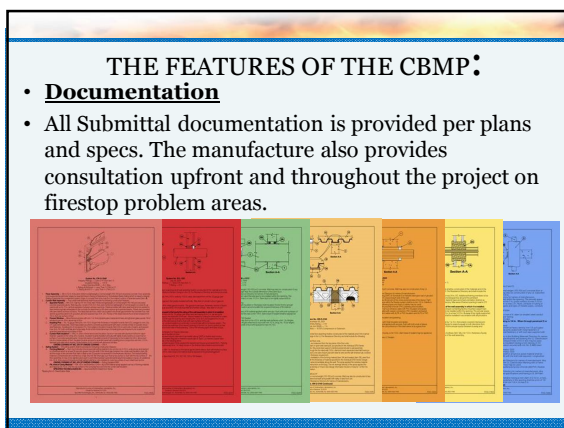
- Aligning Trades & Subs During Pre-Construction
- Provides a Proactive Barrier Mgmt. Protocol
- Takes the Guesswork Out of Firestopping
- Reduces Costly Mistakes
- Eliminates Inspection Delays
- Reduces Liability & Minimizes Design Changes
- For A Stronger Project Outcome

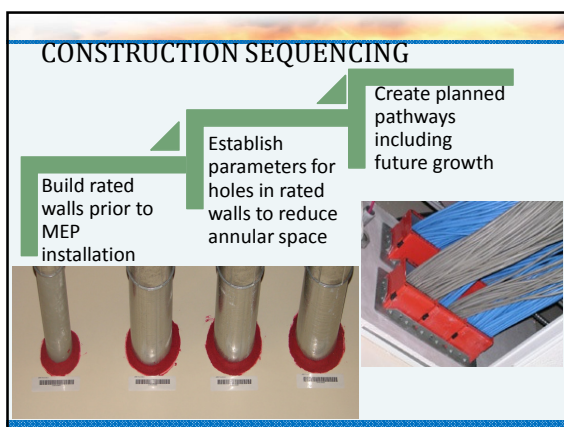


ARCHITECTURAL SPECIFICATIONS

- A Detailed Specification For Individual Trades
- Insure That The Proper UL Systems & Products Are Being Used.
- Made available to your architectural firms and STI will meet with them to outline the program requirements and answer any questions.







POWER OF CBMP

- On Site Consultation & Walk-Throughs
- Project Plan Reviews
- On Site Spec & Design Support
- Installation Recommendations
- SOP Recommendations
- Barrier Management Programs
- Pre and Post Inspection Consultations
- LEED Letters & BIM Modeling

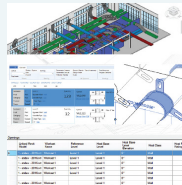


BIM & CLASH MANAGEMENT



Providing Sophisticated Digital Resources to Support Integrated Project Delivery

- Complete Library of BIM Objects & Tools
- Free Firestop Clash Management Plug In
 - Develops Clashes for Firestop Assemblies
 - Groups Clashes with Similar Properties
 - Reduces Amount of Systems for Project
 - Automatically Performs STI System Search
 - Places UL® System at Clash Location
 - Provides Openings Reports of Coordination



Training Is Critical

BUT HAVING THE BEST PRODUCTS, SYSTEMS AND PROGRAMS ARE NOT ENOUGH...IF YOU DON'T HAVE A TECHNICAL COMPREHENSIVE TRAINING PROGRAM!



FIRESTOP INSTALLER TRAINING

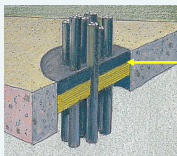
- Should be a requirement of anyone working in barriers
- Detailed training on the proper installation of standardized UL Systems & products
- Tested program requiring annual review
- Discussion Of Infection Control
- Discussion Of Patient Privacy
- Discussions Of BMP Protocol



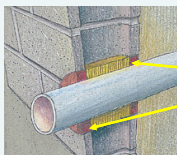
PROPER PRODUCTS FOR THE APPLICATION

- Insuring the products selected for the application are correct
- What's good for the contractor may not be what's good for the facility
- Key products for specific applications

Proper Installing Firestop



Floor penetrations generally require only a seal from one side.



Wall penetrations, by contrast, almost always require a symmetrical installation, sealing both sides of the wall.

THROUGH-PENETRATIONS

- Are There Combustibles?
- Is there need for movement?



HIGH TRAFFIC APPLICATIONS

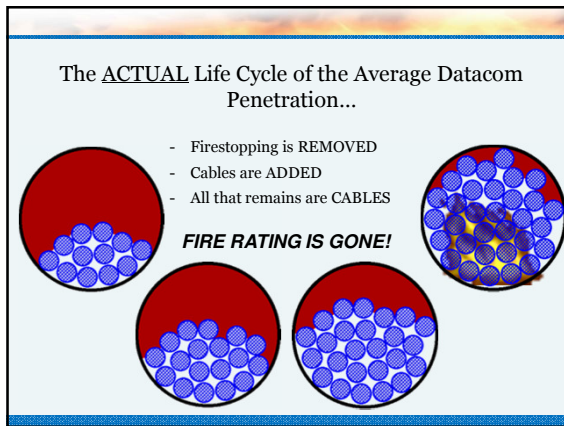
- Cable penetrations are more prevalent than any other.
- Utilizing specific designs for these type of applications are critical to barrier compliance.
- Long term sustainable designs are the key!

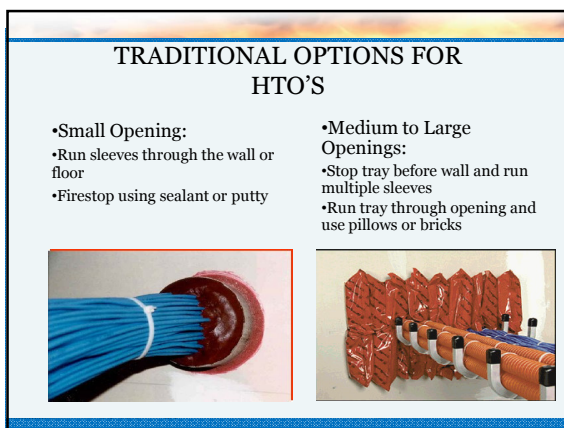
Plan For Success!

MAC's create many problems for designers, installers and owners...

- Poor planning of through-penetrations usually leads to cable gridlock.
- Poor maintenance and service practices eventually compromise fire protection.









When Sealing For Other Reasons.
CONSIDER AN ALTERNATIVE TO FIRESTOP



USING PROFESSIONAL CONTRACTORS

- There is a specific group of professionals that specialize in firestop applications.
- There are specific SFC's that specialize in the Healthcare Environment.
- Utilizing the expertise of a HC firestop contractor can insure compliance.
- Using these specialist can be an invaluable resource!

This Is How You Win!

- Proactive approach
(Barrier Management Program)
- Reduce Costs by:
(Standardization of Systems)
- UL systems that meet the requirement
- Deliver A Long Term "Sustainable" Facility.

