

Jeanie Bourke - RE: 4 Canal Plaza

From: Jeanie Bourke
To: Benjamin Murray; Benjamin Wallace
Date: 9/21/2012 9:06 AM
Subject: RE: 4 Canal Plaza
CC: 'SteveHiggins'; Dan Catlin (dan.catlin@comprop-1.com)

Thanks all, it appears these areas of discussion will satisfy code compliant installations, please schedule inspections with this office, 874-8703 or buildinginspections@portlandmaine.gov
Jeanie

>>> Benjamin Murray <BMurray@coffineng.com> 9/20/2012 4:01 PM >>>
Jeanie,

We fall under Section 716.6.3 (3) in that:

- the ducts connect no more than three stories;
- the duct is protected with noncombustible material;
- and fire dampers are being installed on each floor level.

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I will confirm that the penetrations are sealed at each level. In addition, see the response from the mechanical subcontractor below.

HVAC Services installed horizontal fire dampers in the duct drops at both floors for all ducts. We are currently in the process of sealing the penetrations around and between the ducts with fire stopping material.

The original design still would require rated fire dampers where the duct work exited the rated chase. When the contractor made the chase too small to fire rate the inside of the chase the fire dampers were ordered for horizontal application fire rating floor to floor. We will provide pictures for the work done in these chases.

Let me know if you need anything further. Thanks.

Ben

From: Jeanie Bourke [mailto:JMB@portlandmaine.gov]
Sent: Thursday, September 20, 2012 1:41 PM
To: Benjamin Murray; Benjamin Wallace
Cc: Dan Catlin (dan.catlin@comprop-1.com)
Subject: RE: 4 Canal Plaza

This is the first I have heard of this, however I will weigh in from an IBC perspective based on the new HVAC shaft penetrating 2 floors(?), and I'm not clear on whether these are rated assemblies or not.

In either case, if it is a rated horizontal assembly, the IBC Sec. 708.2(4) does not require ducts to be in a shaft enclosure if it complies with Sec. 716.6.1, such that a duct of approved materials does not penetrate more than 2 stories and a listed damper is installed. If it is not a rated horizontal assembly, Sec.716.6.3 allows 2 stories to have the annular space sealed to prohibit the passage of flame or smoke. Three stories is allowed to be the same, however fire dampers are required at each floor.

Please confirm the specifications of the design or this HVAC shaft.

Thanks,
Jeanie

>>> Benjamin Murray <BMurray@coffineng.com> 9/19/2012 4:35 PM >>>
Jeanie,

Thanks for your review. Dan will go forward with the enclosing of the penetrations and will contact me for inspection at milestones.

When I was on site yesterday, the HVAC contractor was in the process of opening up the ductwork to install fire dampers at each floor level. Like with the chase opening, the penetration at the floor levels will need to be fire caulked. With us now being fully sprinkled, I would think that we fall under the same criteria as the penetrations in the chase way. The HVAC subcontractor I am told verified this with codes. Am I correct?

Thanks again.

Ben

From: Jeanie Bourke [<mailto:JMB@portlandmaine.gov>]
Sent: Wednesday, September 19, 2012 3:56 PM
To: Benjamin Murray; Benjamin Wallace
Cc: Dan Catlin (dan.catlin@comprop-1.com)
Subject: RE: 4 Canal Plaza

Thank you Ben, this clarifies considerably the scope of work and treatment of the penetrations at each floor level. I will file this information with the existing permit and we expect inspections of this area and any other areas prior to close in.

What came of the shaft enclosure that housed the new ductwork that we identified as not being built to your plan specifications for gypsum on the inside of the stud wall surrounding the shaft?

Thanks,
Jeanie

>>> Benjamin Murray <BMurray@coffineng.com> 9/19/2012 12:27 PM >>>
Jeanie,

I went to the site yesterday after receiving your email to take another look at the chase and take some measurements. Since our first site meeting, Dan's contractors have cleaned out the chase of all of the unused conduits, ductwork and piping and it is substantially cleaner. I have also revised and added additional details to my drawings. I am showing new floor construction to maintain the horizontal assembly throughout the space. The floor sheathing will be scribed around the existing conduits and pipes and then sealed with fire caulking. We will bunch the electrical wires together and provide a metal sleeve that will attach to the floor sheathing. This will get fire caulked as well. We are proposing to use the packing material and smoke seal in locations where we cannot fit in floor sheathing. These locations are small in width and can be packed easily with the

material. I did find some literature that the packing material can go up to 8" in width. I believe our greatest void width is approximately 3" to be filled behind the steel column. Please review the attached updated sketches and pictures taken of the chase yesterday. Thanks.

Benjamin E. Murray, P.E.

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From: Jeanie Bourke [<mailto:JMB@portlandmaine.gov>]
Sent: Tuesday, September 18, 2012 11:58 AM
To: Benjamin Murray; Benjamin Wallace
Cc: Dan Catlin (dan.catlin@comprop-1.com)
Subject: RE: 4 Canal Plaza

Thanks Ben,

Ok, I do understand that you are not treating this as a shaft, but help me understand how this area will be treated as a horizontal assembly when there is no floor. This is a tight situation, but the insulation/compound has to be supported in place as well as the sleeve, I don't see how this can be achieved if there is no floor or deck.

Can you confirm how large the areas are without any floor (horizontal assembly)? The cross section should specify how the various areas will be framed in and decked and what the largest void space is to be filled. The product installation specs should provide the restrictions on the annular space to be filled.. Also, the space in the sleeve needs to be treated as well as around the sleeve. There are UL design listings for these fire/smoke systems

Thanks,
Jeanie.

>>> Benjamin Murray <BMurray@coffineng.com> 9/18/2012 9:08 AM >>>
Jeanie,

Thanks for getting back to us. Where the Owner is going to be sprinkling the entire building now, we are treating it as a horizontal assembly (Section 708.2 (3) & 713.4). With multiple penetrations, we would like to span between the conduits with this firestop system (Section 713.4.1.1.2). The installation of an actual floor in this space would be nearly impossible due to the configuration. I agree that at any locations where a floor can be installed, it should be and Dan has had his contractor do that. They are looking to remove some more of

the old ductwork that isn't being used and that section will be infilled with flooring. The sleeves will be installed around any non-metal conduits and then the insulation will be installed in between the conduits. The insulation or packing material as it is called is cut slightly larger than the opening and is rigid to fit tightly in the space. Once installed, the smoke seal compound is installed on top. When complete, the enclosure provides a rated smoke tight enclosure. As discussed, I will be on hand to observe the install of the packing material prior to the install of the topping compound. Let me know if this did not answer your questions. Thanks.

Benjamin E. Murray, P.E.

Project Engineer

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From: Jeanie Bourke [<mailto:JMB@portlandmaine.gov>]

Sent: Tuesday, September 18, 2012 8:41 AM

To: Benjamin Murray; Benjamin Wallace

Cc: Dan Catlin (dan.catlin@comprop-1.com)

Subject: Re: 4 Canal Plaza

Hi all,

I may be missing something, but while these products meet the standards and testing, I'm not sure the application is correct. If I recall, the area this is proposed to be installed is a shaft, there is no floor/deck surface that the pipes, wires, conduits are penetrating. This material can only fill in the annular space or void around the penetrations of non-combustible items and perimeter voids. These products cannot fill the whole area where there is no floor or slab.

This is either a shaft or a floor with through penetrations, from what I can see on the cross section, there is no floor in the area of the penetration. What is going to hold the material in place or the sleeves in the case of combustible pipes?

Let me know if I am misunderstanding the application.

Thanks,

Jeanie

Jeanie Bourke

CEO/LPI/Plan Reviewer

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>>> Benjamin Wallace 9/17/2012 1:47 PM >>>

Hi Ben,

I do not have a problem with this method but would call to you attention that it is for use around steel and metal piping. It does not indicate its suitability for use around PVC pipes. I suspect you'd need listed collars for those. I've CC'd Jeanie for her consideration too.

Thanks,

Lt. Benjamin Wallace Jr.
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>>> Benjamin Murray <BMurray@coffineng.com> 9/10/2012 5:15 PM >>>

Ben,

I have attached a proposed detail and support material for the closing of the area around the existing conduits and piping in the chaseway at 4 Canal Plaza. As you know, Dan is going to be sprinkling the entire building including the concealed spaces. I am therefore looking at smoke proofing around the openings with a combination of Thermafiber Safing Insulation and a Thermafiber Smoke Seal Compound on top. This will also provide a fire resistance with the Safing. I believe this detail will provide the seal that we are looking for and will be easier to install rather than a gypsum enclosure around the openings. Let me know your comments. I don't have the contact information for the people in codes that we met with so if you could copy them that would be great. Thanks.

Benjamin E. Murray, P.E.

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