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Project: 3206 BASECAMP
1901 Curve Plaza
Steamboat Springs, Colorado 80487

RFI #42: Gas Main Location

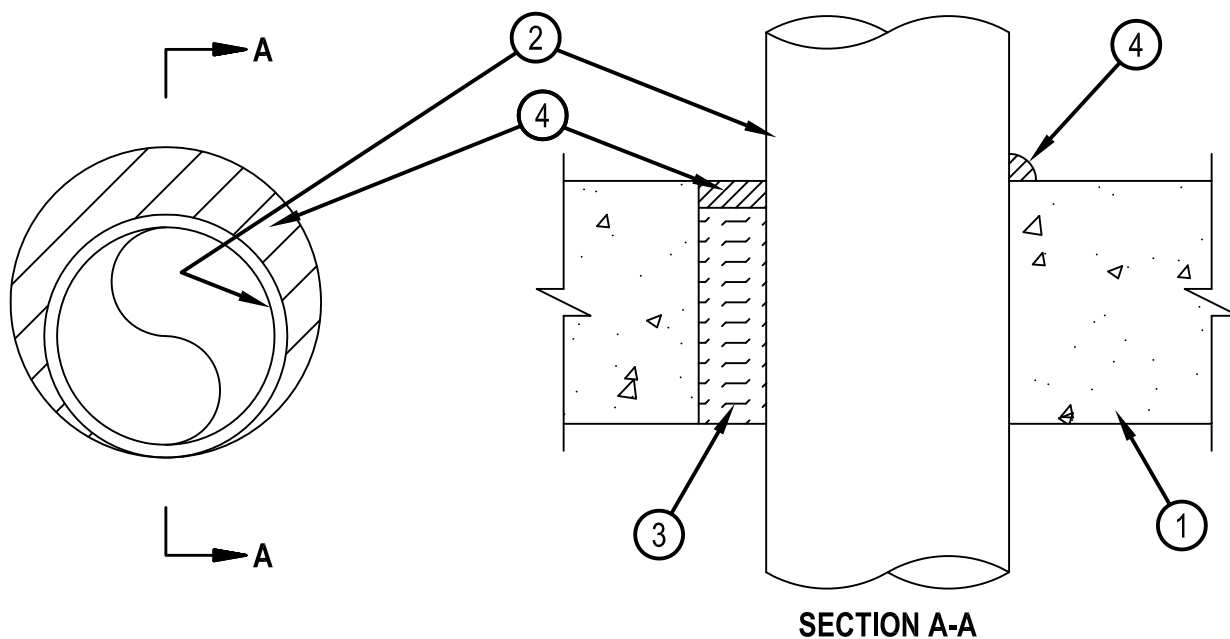
Status	Closed on 09/30/22		
To	Michael Vair (Boulder Engineering) Frank Gualchi (Boulder Engineering) Asako Sperry (KASA) Taylor Burchard (Boulder Engineering) Kevin Sperry (KASA) (<i>Response Required</i>)	From	Jason Bizzigotti (DENEUE CONSTRUCTION SERVICES)
Date Initiated	Sep 14, 2022	Due Date	Sep 21, 2022
Location		Project Stage	Course of Construction
Cost Impact	TBD	Schedule Impact	TBD
Spec Section		Cost Code	
Drawing Number	P4.11	Reference	P4.11/5
Linked Drawings	A1009 , C.100		
Received From			
Copies To	Taylor Burchard (Boulder Engineering), Emmett LaCombe (FV Basecamp, LLC), Vaclav Malek (KASA), Eric Rehnberg (DENEUE CONSTRUCTION SERVICES), Asako Sperry (KASA), Tate Tellier (DENEUE CONSTRUCTION SERVICES), Michael Vair (Boulder Engineering)		

Activity

Question	<p>Question from Jason Bizzigotti DENEUE CONSTRUCTION SERVICES on Tuesday, Sep 13, 2022 at 07:03 AM MDT</p> <p>Please indicate gas main, size and how equipment will be regulated. Please make sure to note how fire-resistive structures are protected (if applicable) ex. Penetrating a 3 hour wall.</p> <p>Attachments Gas Main detail P4.11.pdf, Gas Main RFI.pdf</p>
Official Response	<p>Response from Kevin Sperry KASA on Thursday, Sep 29, 2022 at 08:55 PM MDT</p> <p>Please see gas meter location diagram with dimension to regulator, as well as (3) Hilti details which illustrate penetrations of metal conduits through 3-hour CMU walls.</p> <p>Attachments Approval-document-ASSET-DOC-LOC-77 (1).pdf, Approval-document-ASSET-DOC-LOC-75.pdf, 22-0929 - RFI42 - Gas Main Location.pdf, Approval-document-ASSET-DOC-LOC-85.pdf</p>
Official Response	<p>Response from Taylor Burchard Boulder Engineering on Wednesday, Sep 21, 2022 at 02:35 PM MDT</p> <p>Utility Company is providing 7"w.c. delivery pressure. Gas piping is shown from meters on sheet P2.12 and routes up exterior wall and then routes through ceiling cavity of the water room. House meter has a 4" manifold that has (2) 2" pipes to feed the boilers and (1) 2" pipe to feed the residential lobby rooftop unit, residential corridor makeup air units and the clubroom fire pit. Gas piping from gym meter and restaurant meter are being redesigned and are not known at this time.</p>

System No. C-AJ-1150

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 3 Hr	F Rating — 3 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 3 Hr
L Rating At 400 F — 4 CFM/sq ft	FTH Rating — 0 Hr
W Rating — Class 1 (See Item 4)	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — 4 CFM/sq ft



1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks *. Max diam of opening is 8 in. (203 mm). See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
 2. Through Penetrants — One metallic pipe or conduit to be installed within the firestop system. Pipe or conduit to be rigidly supported on both sides of floor or wall assembly. The annular space shall be min 0 in. (point contact) to max 1-3/8 in. (35 mm). The following types and sizes of metallic pipes or conduits may be used:
 - A. Steel Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe.
 - B. Iron Pipe — Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.
 - C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or nom 6 in. diam (or smaller) steel conduit.
 3. Packing Material — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall to accommodate the required thickness of fill material.
 4. Fill, Void or Cavity Material* — Sealant — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with top surface of floor and with both surfaces of wall. At the point contact location between pipe and concrete, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the concrete/pipe interface on the top surface of floor and on both surfaces of wall. W Rating applies only when CFS-S SIL GG, CFS-S SIL SL (floors only), CP601S or CP604 sealant is used.
- HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP601S, CP604, CFS-S SIL GG, CFS-S SIL SL (floors only), CP606 or FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



Hilti Firestop Systems

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 January 06, 2015



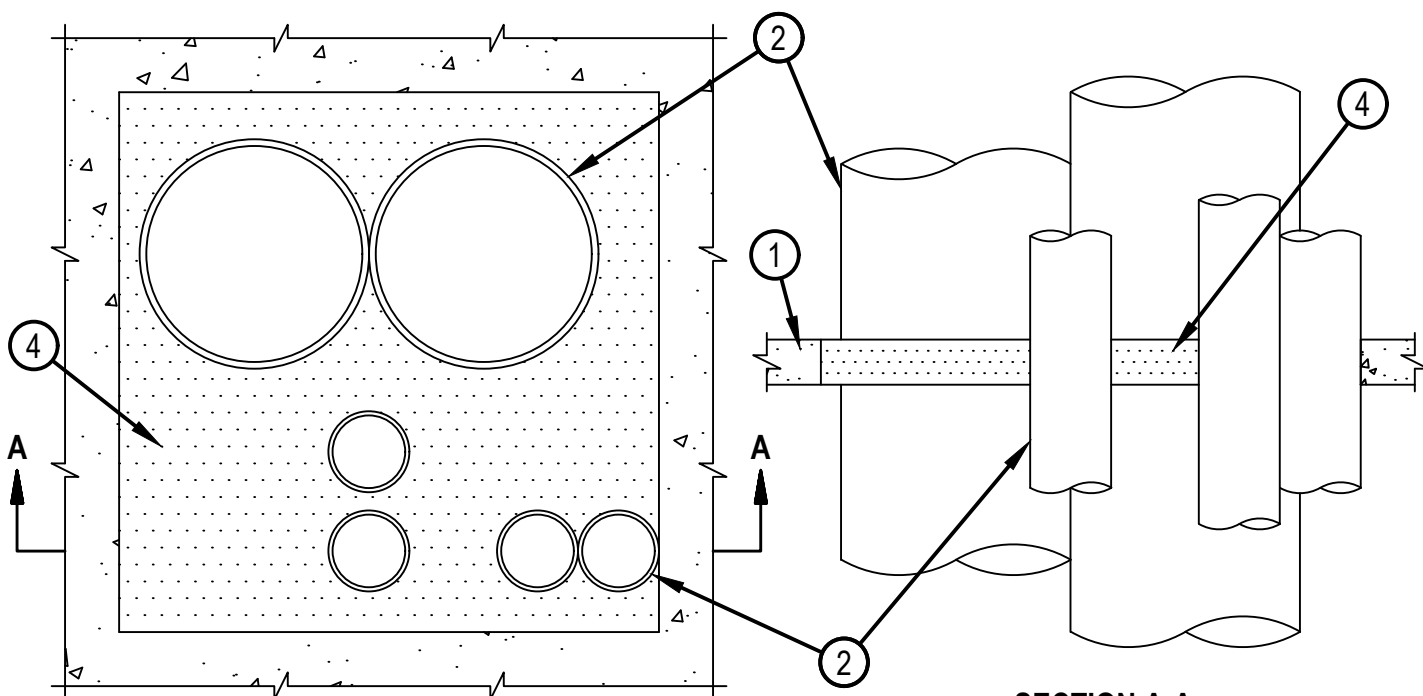
Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. C-AJ-1140

F Rating -- 3 Hr

T Rating -- 0 Hr

CAJ 1140



SECTION A-A

1. Floor or Wall Assembly — Min 2-1/2 in. (63 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks *. Max area of opening is 1024 sq in. (.66 sq m) with max dimension of 32 in. (81.3 cm).

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. Through Penetrants — One or more penetrants to be installed in opening. Min clearance between pipes, conduits or tubing is 0 in. (0 mm). (point contact). Min clearance between pipes, conduit or tubing and periphery of through opening is 1 in. (25 mm). Min clearance between pipes, conduit or tubing and periphery of any single surface of through opening is 0 in. (point contact). Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

- A. Steel Pipe — Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or steel conduit.
- C. Copper Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
- D. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. Forms — (Not Shown) — Used as a form to prevent leakage of fill material during installation. Forms to be a rigid sheet material, cut to fit the contour of the penetrating item and positioned as required to accommodate the required thickness of fill material. Forms may be removed after fill material has cured.

4. Firestop System — The details of the firestop system shall be as follows:

A. Packing Material — (Optional, Not Shown) - For floors greater than 2-1/2 in. (63 mm) thick, mineral wool batt insulation firmly packed into opening as a permanent or temporary form and recessed from the top surface of floor to accommodate the required thickness of the fill material.

B. Fill, Void or Cavity Material* — Mortar — Min 2-1/2 in. (63 mm) thickness of fill material applied within the annulus. Fill material is mixed at a rate of 2.5 parts dry mix to one part water by weight in accordance with the installation instructions supplied with fill material.

HILTI CONSTRUCTION CHEMICALS, DIV OF

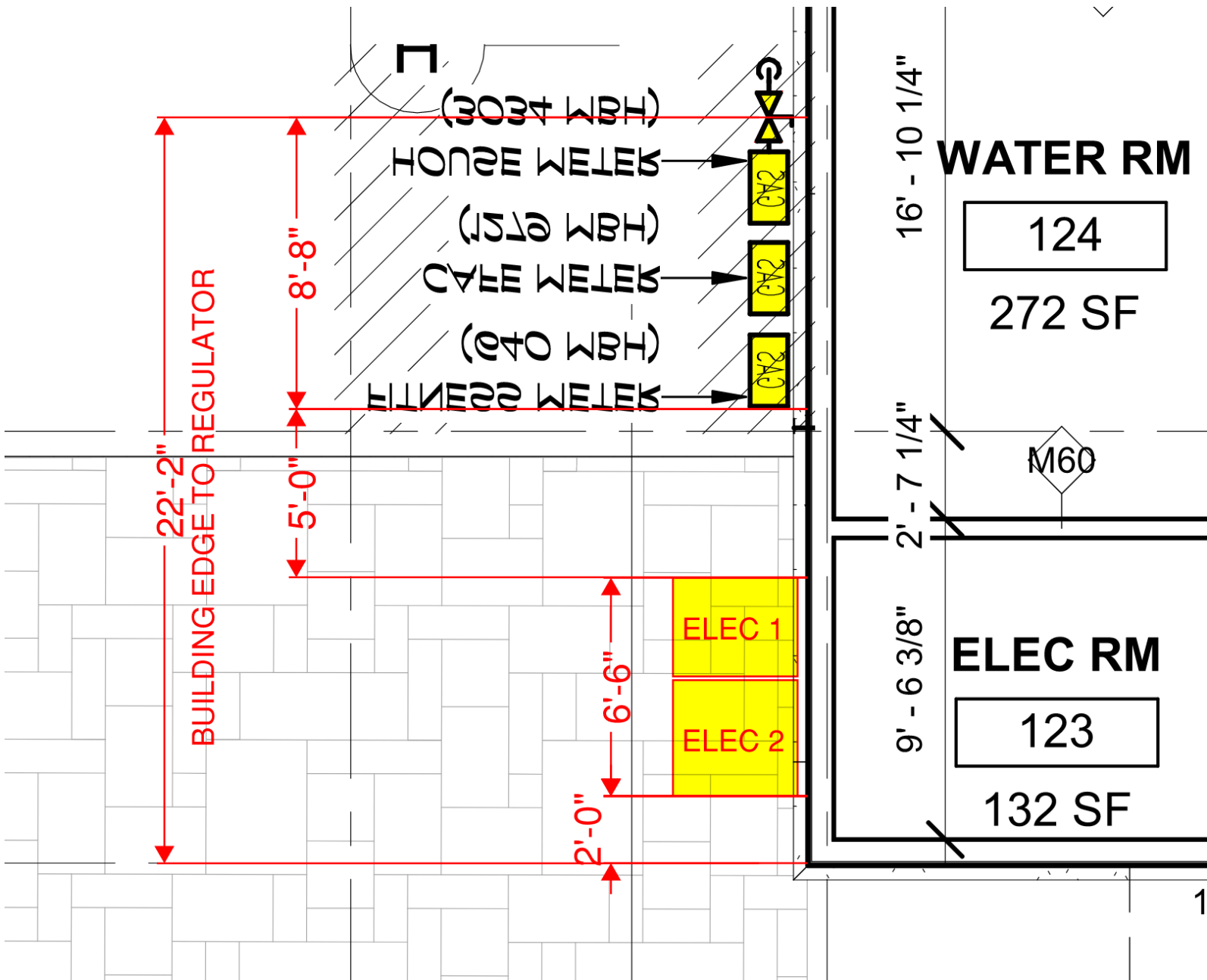
HILTI INC — Type CP636 or CP637

*Bearing the UL Classification Mark



Hilti Firestop Systems

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March 19, 2012



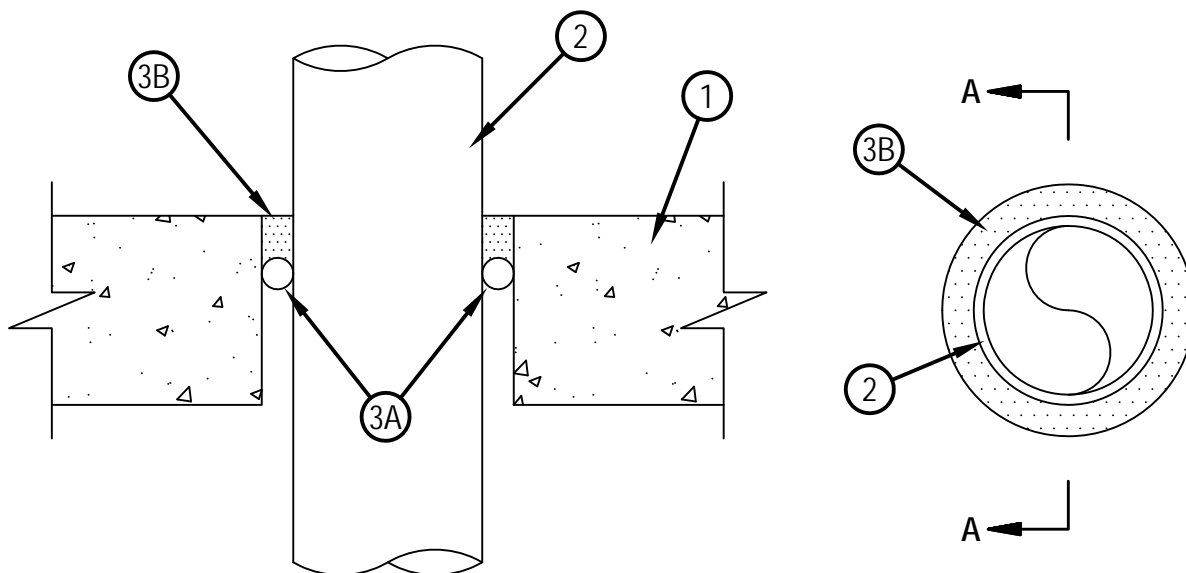


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. C-AJ-1276

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 3 Hr	F Rating — 3 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
	FH Rating — 3 Hr
	FTH Rating — 0 Hr

CAJ 1276



SECTION A-A

1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 6 in. (152 mm).
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Through Penetrants — One metallic pipe, conduit or tubing to be centered within the firestop system. A nom annular space of 3/4 in. (19 mm) is required within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or steel conduit.
3. Firestop System — The firestop system shall consist of the following:
 - A. Packing or Forming Materials — Optional — One of the following packing or forming materials may be used:
 - A1. Foam Backer Rod — Foam backer rod tightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
 - A2. Mineral Wool Batt Insulation — Min 4 pcf (64 kg/m³), tightly packed into the opening as a permanent form. Packing material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
 - A3. Forming Material* — Forming material to be foamed into the opening as a permanent form. Forming material to be recessed from the top surface of floor or both surfaces of wall as required to accommodate the required thickness of putty.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CF812 or CF-AS CJP Foam Sealant
 - B. Fill, Void or Cavity Material* — Putty — Min 1 in. (25 mm) thickness of putty applied within the annulus, flush with top surface of floor or with both surfaces of wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 618 Firestop Putty Stick

*Bearing the UL Classification Mark



Hilti Firestop Systems

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April 20, 2012

From: Gaby Riegler <gaby@mayriegler.com>
Sent: Wednesday, September 7, 2022 2:08 PM
To: Matt Disney; Jason Bizzigotti
Cc: Emmett LaCombe
Subject: Gas Main RFI

Follow Up Flag: Follow up
Flag Status: Completed

6. A question came up in the field regarding the gas main location and RCRBD was only able to find typical details on Sheet P4.11 experiencing difficulty finding location on plans. Please help by way of sheet numbers and details of how to find the gas main location and how the main is regulated, enters the building and certain fire-resistive structures are protected as we don't find any penetration details through the masonry or isolation joint between buildings and wonder how this flexibility is maintained

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