



Code Modification or Alternate Request

Date Requested: _____

Contact Information:

Name: _____

Mailing Address: _____

Phone Number: _____

E-mail Address _____

Relationship to Project:

Owner

Design Professional

Contractor

Project Information:

Record #: _____

Address: _____

Code Edition: _____

Structure Information:

Project Description:

Occupancy Group(s)/ Character:

Type of Construction: _____

Number of Stories: _____

Basements/ Mezzanines: _____

Sprinkler Location: _____

Code Modification Request:

Ref. SBC 104.4. A code modification is a waiver of a code requirement and is intended to provide flexibility to the building official where there are practical difficulties meeting specific code requirements so long as the intent of the code is accomplished.

The requestor is expected to demonstrate:

1. *There are practical difficulties involved in strictly conforming to the provisions of the code; and*
2. *The modification conforms with the intent and purpose of the code; and*
3. *Together with other safety features of the building or other relevant circumstances, the modification will provide a reasonable level of strength, effectiveness, fire resistance, durability, safety, accessibility, and sanitation.*

When engaged for the project, the registered design professional in responsible charge shall submit the request for a code modification under their seal and signature, including a statement that in their professional opinion, the proposal is in conformance with the intent and purpose of the code and the modification will provide a reasonable level of strength, effectiveness, fire resistance, durability, safety, accessibility, and sanitation.

Please attach plans showing your proposal.

Code Alternate Request:

Ref. SBC 104.5. A code alternate is intended to provide for introduction of alternate materials, systems, and methods for which the code did not anticipate, provisional upon the alternate complying with the code and providing an equivalent solution. Essentially, a code alternate is intended to meet a performance standard rather than a prescriptive standard.

The requestor is expected to demonstrate that the alternate does not conflict with the code and together with other safety features of the building or other relevant circumstances, will provide an equivalent level of strength, effectiveness, fire resistance, durability, safety, accessibility, and sanitation.

When engaged for the project, the registered design professional in responsible charge shall submit the request for a code alternate under their seal and signature, including a statement that in their professional opinion, the alternate is equivalent to the code provisions.

Please attach plans showing your proposal.



SDCI Use Only

Approved	Approved with Amendment	Denied
Reasons:	Signature:	

Description of Alternate/ Modification (include reason for request):

Description of Code Requirement (include section):

Justification (attach copies of any reference, test reports, expert opinions, etc.):



Construction Review & Inspection Quality
Ardel Jala, Building Official



RUNBERG
ARCHITECTURE
GROUP

MEMORANDUM

TO: Seattle Department of Construction & Inspections
FROM: Mathew Lipps
DISTRIBUTION: file
DATE: March 23, 2022
PROJECT: 6771347-CN: 101 W. Roy St.
SUBJECT: Code Alternate Request 713.13.4

Code: 2015 Seattle Building Code

Runberg Architecture Group is seeking a Code Alternate Request regarding the crossing of conduits and piping through a Waste Chute Termination Room.

Description of Alternate:

The applicant proposes to allow through penetrations of electrical conduits and plumbing piping not directly related to the Trash Chute Termination Room to be allowed to pass through this room as long as they are protected by approved firestopping systems where they cross the 2-hour rated fire barrier and also as long as they do not impact the operation of the trash collection system.

This is allowed in the 2018 building code:

[W] 713.13.4 Chute discharge room. Waste or linen chutes shall discharge into an enclosed room separated by *fire barriers* with a *fire-resistance rating* not less than the required fire rating of the shaft enclosure and constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both. Openings into the discharge room from the remainder of the building shall be protected by opening protectives having a *fire protection rating* equal to the protection required for the shaft enclosure. **Through penetrations of piping and conduit not necessary for the purpose of the of the chute discharge room are permitted as long as they are protected per 714 and do not impact the operation of the trash collection system.** Doors shall be self- or automatic-closing upon the detection of smoke in accordance with Section 716.2.6.6. Waste chutes shall not terminate in an incinerator room. Waste and linen rooms that are not provided with chutes need only comply with Table 509.

Description of Code Requirement:

In the 2015 code, Section 713.13.4 addresses Chute Termination Rooms and requires enclosure by a fire barrier having a rating equivalent to the rating of shaft containing the trash chute:

(continued next page)



MEMORANDUM

6771347-CN: 101 W. Roy St.

Seattle Department of Construction & Inspections - March 23, 2022

713.13.4 Chute discharge room. Waste or linen chutes shall discharge into an enclosed room separated by *fire barriers* with a *fire-resistance rating* not less than the required fire rating of the shaft enclosure and constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both. Openings into the discharge room from the remainder of the building shall be protected by opening protectives having a *fire protection rating* equal to the protection required for the shaft enclosure. Doors shall be self- or automatic-

closing upon the detection of smoke in accordance with Section 716.5.9.3. Waste chutes shall not terminate in an incinerator room. Waste and linen rooms that are not provided with chutes need only comply with Table 509.

Section 713.7.1 and 713.8.1 prohibit openings or penetrations in a **shaft** that are not necessary for the purpose of the shaft. It is not clear from 713.13.4 that these restrictions also apply to a Chute Termination Room.

713.7.1 Prohibited openings. Openings other than those necessary for the purpose of the shaft shall not be permitted in shaft enclosures.

713.8.1 Prohibited penetrations. Penetrations other than those necessary for the purpose of the shaft shall not be permitted in *shaft enclosures*.

Justification:

To maintain an equivalent level of lifesafety, penetrating items are appropriately fire-stopped per SBC Section 714, please see attached fire stopping systems (System No. C-AJ-5185 for ceiling and System No. W-L-1054 for walls.)

In the professional opinion of this design professional, this code modification if allowed will provide a reasonable level of safety, accessibility, and sanitation, fire-resistance, strength, and durability.

P:\20-104\DOCS\3-AGENCY\BP\CODE ALTERNATE - TRASH ROOM CEILING\CODE ALT REQUEST - TRASH ROOM MEMO.DOCX

SDCI Comment: Rated penetrations to be verified by SDCI inspections. djw 04/13/2022

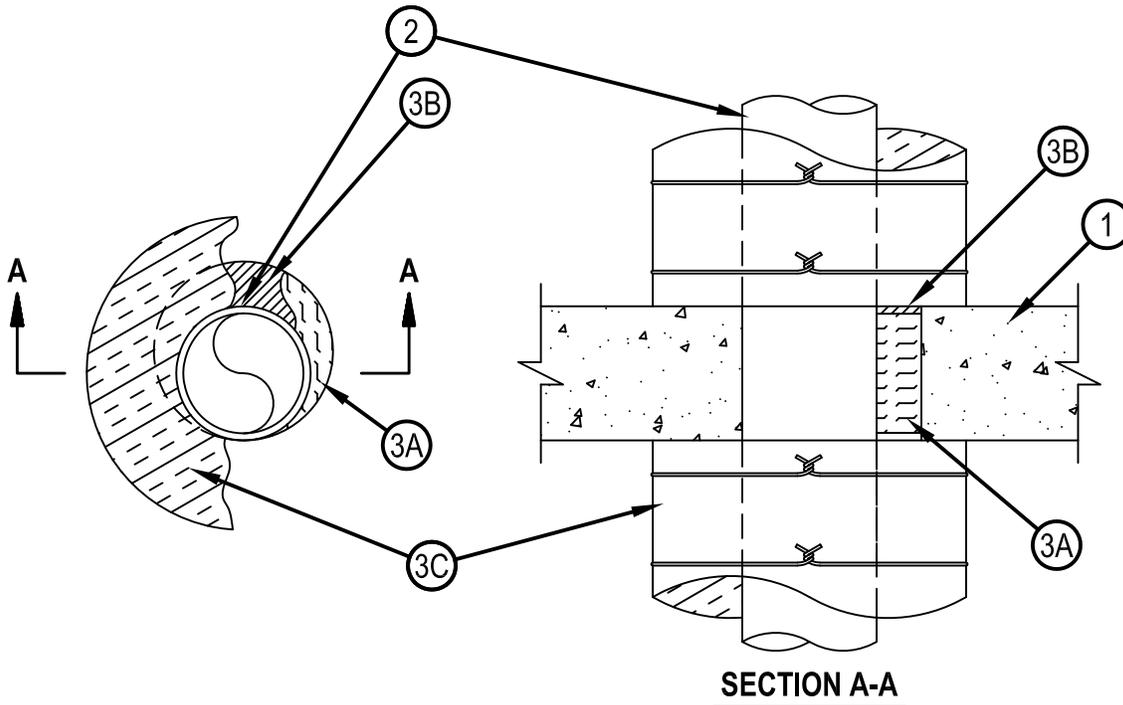


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. C-AJ-5185

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 3 Hr	F Rating — 3 Hr
T Rating — 1 and 2 Hr (See Item 3C)	FT Rating — 1 and 2 Hr (See Item 3C)
	FH Rating — 3 Hr
	FTH Rating — 1 and 2 Hr (See Item 3C)

CAJ 5185



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 25-7/8 in. (657 mm).
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Through Penetrants — One metallic pipe or tubing to be installed concentrically or eccentrically within the firestop system. The annular space between the pipe or tube and the opening shall be min 0 in. (point contact to max 1-7/8 in. (48 mm)) Pipe or tubing to be rigidly supported on both sides of the wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
 - A. Steel Pipe — Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. Iron Pipe — Nom 24 in. (610 mm) diam (or smaller) cast or ductile iron pipe.
 - 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.



Hilti Firestop Systems

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January 13, 2015

System No. C-AJ-5185

CAJ 5185

3. Firestop System — The firestop system shall consist of the following:

A. 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 both surfaces of wall to accommodate the required thickness of fill material.

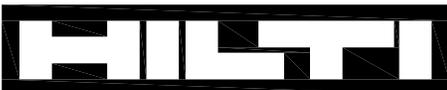
B. Fill Void or Cavity Materials* - Sealant — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with top surface of floor or both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

C. Pipe Covering Materials* — Nom 3 in. (76 mm) thick unfaced mineral fiber pipe insulation sized to the outside diam of pipe or tube. When pipe insulation extends the entire length of the pipe or tube, pipe insulation secured with nom 16 AWG steel wire spaced max 12 in. (305 mm) OC. When pipe insulation extends only 12 in. (305 mm) beyond each side of floor or wall, pipe insulation secured with nom 16 AWG steel wire spaced 3 in. (76 mm) and 9 in. (229 mm) beyond each side of floor or wall. When the pipe insulation extends the entire length of the pipe or tube, on each side of floor or wall, the T, FT and FTH Rating is 2 Hr. When the pipe insulation extends only 12 in. (305 mm) beyond each side of floor or wall, the T, FT and FTH Rating is 1 Hr.

IIG MINWOOL L L C — High Temperature Pipe Insulation 1200, High Temperature Pipe Insulation BWT or High Temperature Pipe Insulation Thermaloc

* 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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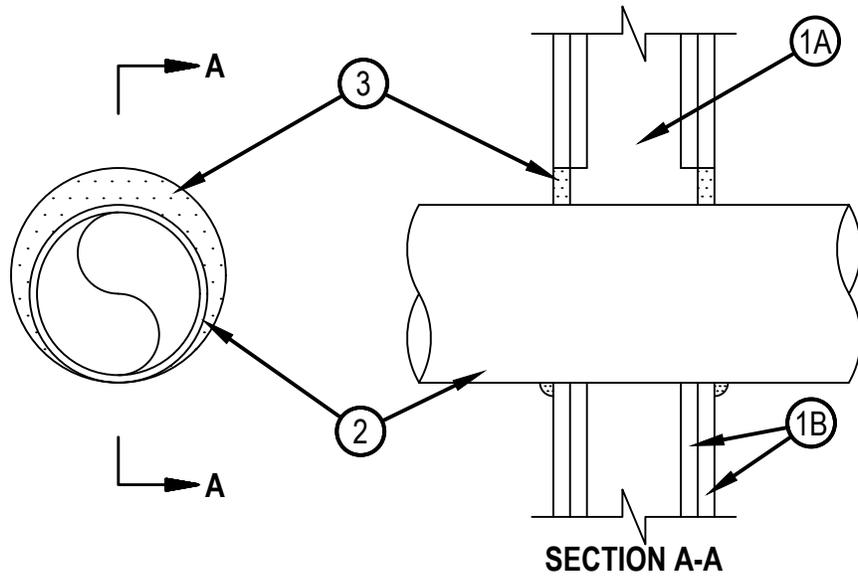


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. W-L-1054

WL 1054

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 and 2 Hr (See Items 1 and 3)	F Ratings — 1 and 2 Hr (See Items 1 and 3)
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating (Without Movement) at Ambient — Less Than 1 CFM/sq ft	FH Ratings — 1 and 2 Hr (See Items 1 and 3)
L Rating (Without Movement) at 400°F — Less Than 1 CFM/sq ft	FTH Rating — 0 Hr
M Rating (Movement) — See Table 1	FTH Rating — 0 Hr
	L Rating at Ambient — Less Than 5.1 L/s/m ²
	L Rating at 204°C — Less Than 5.1 L/s/m ²



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

- A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. For M Rating, steel studs to be min 3-5/8 in. (92 mm) wide. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. (102 to 152 mm) wider and 4 to 6 in. (102 to 152 mm) higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. (51 to 76 mm) clearance is present between the penetrating item and the framing on all four sides.
- B. Gypsum Board* — 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in. (819 mm) for steel stud walls. Max diam of opening is 14-1/2 in. (368 mm) for wood stud walls. The F and FH Ratings of the firestop system are equal to the fire rating of the wall assembly. The M Rating is applicable only to 1 hr rated walls.



Hilti Firestop Systems

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January 21, 2020

System No. W-L-1054

WL 1054

2. Through-Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2-1/4 in. (57 mm). Pipe may be installed with continuous point contact. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

- A. Steel Pipe — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. Iron Pipe — Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
- C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or 6 in. (152 mm) . diam steel conduit.
- D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
- E. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) regular (or heavier) copper pipe.

3. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE MAX Intumescent Sealant

Movement Direction	Penetrant Item	Nominal Penetrant Diameter	Annular Space	Movement	Sealant Depth	F-Rating	L Rating with Movement
Y	2A, 2C*	2 in.	Max 2-1/4 in.	5%	5/8 in.	1 hr	N/A
Z	2A, 2C*	2 in.	2-1/4 in.	0.25 in.	5/8 in.	1 hr	N/A

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