



CITY OF PHILADELPHIA
DEPARTMENT OF LICENSES & INSPECTIONS

Construction Services Division
Municipal Services Building - Concourse Level
1401 John F. Kennedy Boulevard
Philadelphia, Pennsylvania 19102

EZ PERMIT STANDARDS
CHIMNEY AND VENT EXTENSION

For Residential Type Appliances for
One- and Two-Family Dwellings (three stories or less).

EZ Permit Standards: Chimney and Vent Extension

Obtain permits for existing chimney/vent extension alterations for low-heat or residential type uses without submitting plans by meeting the Conditions and Design Limitations below. Any deviations from this permit standard will result in permit revocation. (Deviations will require submission of plans to the Department.)

Limitations & Conditions

- This permit shall be obtained for the property undergoing the extension. The permit application must be authorized by the owner of that property.
- The building undergoing the extension must be a one-or two-family dwelling that is three (3) stories or less.
- This EZ Permit standard shall permit the following ventilation and appliance types:

Appliance Type:

- Listed Category I appliances
- Listed appliances equipped with draft hood
- Listed vented wall furnaces
- Appliances with integral vents
- Appliances listed for use with Type B gas vents

Vent Type:

- Factory-Built Chimneys
- Type B & BW Vent
- Single-Wall Metal Pipe
- Integral Vents
- Historically designated buildings require prior approval from the Philadelphia Historical Commission. Additional documentation and plans may be required.
- The installation or modification of appliances is excluded from this standard and shall require a separate mechanical permit.

Construction Requirements:

General

All work shall conform with the requirements of the Philadelphia Building Construction and Occupancy Code. Like materials shall be permitted for repairs of existing chimneys/vents, provided no dangerous or unsafe conditions are created.

- Vent/Chimney must meet minimum termination elevation away from the adjoining construction in accordance with Table 2 of this standard.
- Devices that retard the flow of vent gases shall not be installed in a vent connector, chimney, or vent.

Bracing

- Bracing of the chimney extension shall be provided at every floor and ceiling/roof line of the new construction. Bracing shall be accomplished through one of the following methods:
 - For framed chimney enclosure installations, see Exhibit A & B of this EZ Permit Standard. A minimum 1 ¼" x 14" gage continuous steel strap shall be securely fastened around the chimney enclosure to the adjoining new construction floor line and ceiling/roof line.
 - Extensions of Listed Factory-Built Chimneys shall be supported in accordance with the manufacturer's installation instructions.
 - If chimney or vent will be anchored to the exterior wall on the adjoining property, the permit holder shall be responsible to obtain authorization from the adjoining property owner.



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Vent Requirements:

Vent type selection shall correspond to the respective appliance type listed below in Table 1:

TABLE 1: Appliance & Venting Types

Appliance Type	Venting Type
<input type="checkbox"/> Listed Category I appliances <input type="checkbox"/> Listed Appliances equipped with draft hood <input type="checkbox"/> Appliances listed for use with Type B gas vent	<input type="checkbox"/> Type B Gas Vent (Residential Code, Section G2427.6) <input type="checkbox"/> Factory-Built Chimney (Residential Code, Section G2427.5.1) <input type="checkbox"/> Single Wall Metal Pipe (Residential Code, Section G2427.7)
<input type="checkbox"/> Listed Vented Wall Furnaces	<input type="checkbox"/> Type B-W Gas Vent (Residential Code, Section G2427.6 & G2436)
<input type="checkbox"/> Appliances with Integral Vent	<input type="checkbox"/> Mechanical Draft Venting System per Manufacturer's Instructions (Residential Code Section G2427.2.2 & G2427.8, Item 1 or 2)

Note that for the following vent types, installation must conform to the requirements of the manufacturer's specifications, and a copy of the manufacturer's specifications for the appliance and vent must be made available on-site during inspections:

- Factory Built Chimney
- Integral Vents
- Vents as specified or furnished by manufacturers of listed appliances

Specific Vent Requirements:

- **Factory-Built Chimney:** To be installed per manufacturer's installation instructions (G2427.5.1)
- **Integral Vents:** To be installed per manufacturer's installation instructions (G2427.2.2)
- **Type B & BW Vents**
 - Vents shall be listed in accordance with UL 441 (G2427.6.1)
 - To be installed per manufacturer's installation instructions (G2427.6.2)
 - Decorative shrouds shall not be installed at the termination of gas vents except where such shrouds are listed for use with the specific gas venting system and are installed in accordance with manufacturer's instructions (G2427.6.4.1)
 - Gas vents shall be supported and spaced in accordance with the manufacturer's installation instructions (G2427.6.10)
 - Screws, rivets, and other fasteners shall not penetrate the inner wall of double wall gas vents except at the transition from an appliance draft hood outlet, a flue collar or a single wall metal connector to a double-wall vent (G2427.6.12)
 - Type BW vents shall have a listed capacity not less than that of the listed vented wall furnace to which it is connected (G2427.6)
 - Chimney/Vent extension shall be provided with a constructed enclosure that maintains a minimum R-8 insulation rating. (G2428.2.9 & G2428.3.16)
 - **Size of Gas Vents (G2427.6.9)**
 - Sizing of vents shall conform to requirements for maximum vent heights, lateral lengths and appliance inputs under the Residential Code as follows:
 - Table G2428.1(1) & (2) for Single Category I appliance venting
 - Table G2428.3(1) & (2) for Vents under natural ventilation serving two or more Category I appliances
 - **Item 2:** For individual gas vents for a single draft-hood-equipped appliance, effective area of the vent connector and the gas vent shall be not less than the area of the appliance draft hood outlet, nor greater than seven times the draft hood outlet area
 - **Item 3:** Sizing gas vents connected to two appliances with draft hoods, the effective area of the vent hood shall be not less than the area of the larger draft hood outlet plus 50% of the area of the smaller draft hood outlet, nor greater than seven times the smaller draft hood outlet area



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- **Single-Wall Metal Pipe**
 - Constructed of galvanized sheet steel not less than 0.0304 inch (0.7 mm) thick or other approved, non-combustible, corrosion-resistant metal. (G2427.7.1)
 - **Insulated single wall metal pipes must be used for venting appliances outdoors, to maintain a minimum insulation rating of R-8.** (G2427.7.2)
 - Shall be used only for runs directly from the space in which the appliance is located through the roof to the outdoor atmosphere (G2427.7.4)
 - Must not originate in any unoccupied attic or concealed space, and shall not pass through any attic, inside wall, concealed space, or floor. (G2427.7.6)
 - Minimum clearance of single-wall metal pipe to combustible material shall be in accordance with Table G2427.10.5. (G2427.7.8)
 - Size of single wall metal pipe (G2427.7.9)
 - **Item 1:** For draft-hood equipped appliances, per Section G2428
 - **Item 2:** Venting for a single draft-hood-equipped appliance, the area of the connector and the single wall metal pipe each shall be not less than the area of the appliance flue collar or draft hood outlet, whichever is smaller, nor shall the vent area be greater than seven times the draft hood outlet area.

TABLE 2: Venting / Chimney Termination Elevations

Vent Type (Phila Fuel Gas Code, Table 503.4)	Vertical Distance, from Top of a Building	Highest Connected appliance draft hood outlet or flue collar	Forced Air Inlet
Type B	≥ 2 feet above, within a horizontal distance of 10 feet, <i>(where vent is < 12-inches, OR where vent is located < 8 feet from existing structures and vertical walls)</i> Otherwise, N/A	≥ 5 feet above	≥ 3 feet above, where within 10 feet
Factory Built Chimney	Manufacturer's Specs	Manufacturer's Specs	Manufacturer's Specs
Single Wall Metal Pipe	≥ 2 feet, within a horizontal distance of 10 feet	≥ 5 feet	
Listed Appliances equipped with Draft Hoods, or Listed for use with Type B Vents	Manufacturer's Specs	Manufacturer's Specs	Manufacturer's Specs
As specified or furnished by manufacturers of listed appliances	Manufacturer's Specs	Manufacturer's Specs	Manufacturer's Specs
Type L Vent	≥ 2 feet above, within a horizontal distance of 10 feet	≥ 5 feet above	
Integral Vent			≥ 3 feet above, where within 10 feet



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STEEL STUD SPECIFICATIONS

All steel studs shall be either galvanized or factory pointed "C" type stud.

Minimum 18 gage
Minimum Width 3-1/2"
Minimum Fy = 33 ksi

COVERING

Steel stud chase may be covered with stucco or adhered veneer

Note: Adhered veneer shall be a max 1" with plywood backing (3/8" min) and shall be installed per the Residential Code, Section R703.12

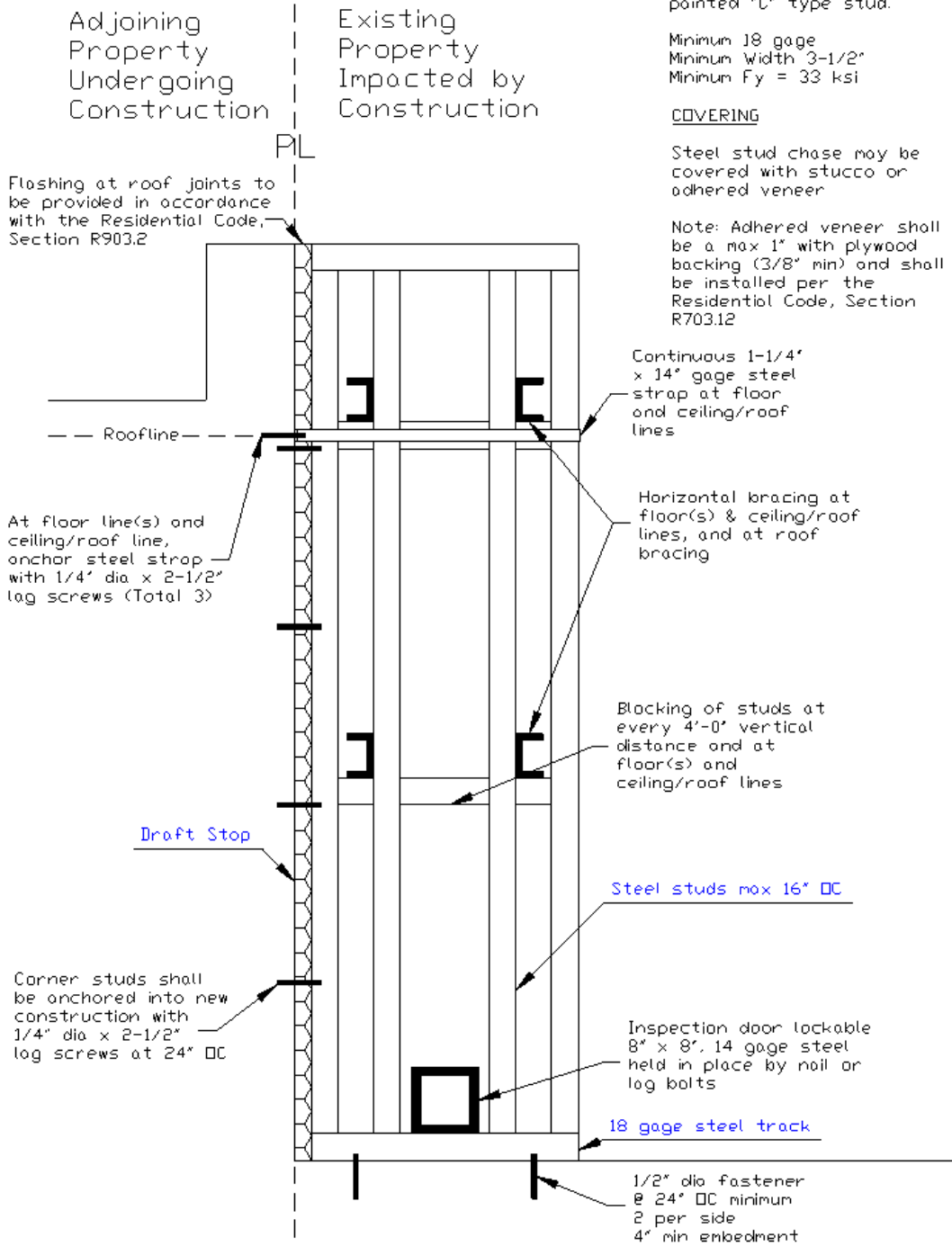


Exhibit A: Vent/Chimney Shaft Enclosure Detail



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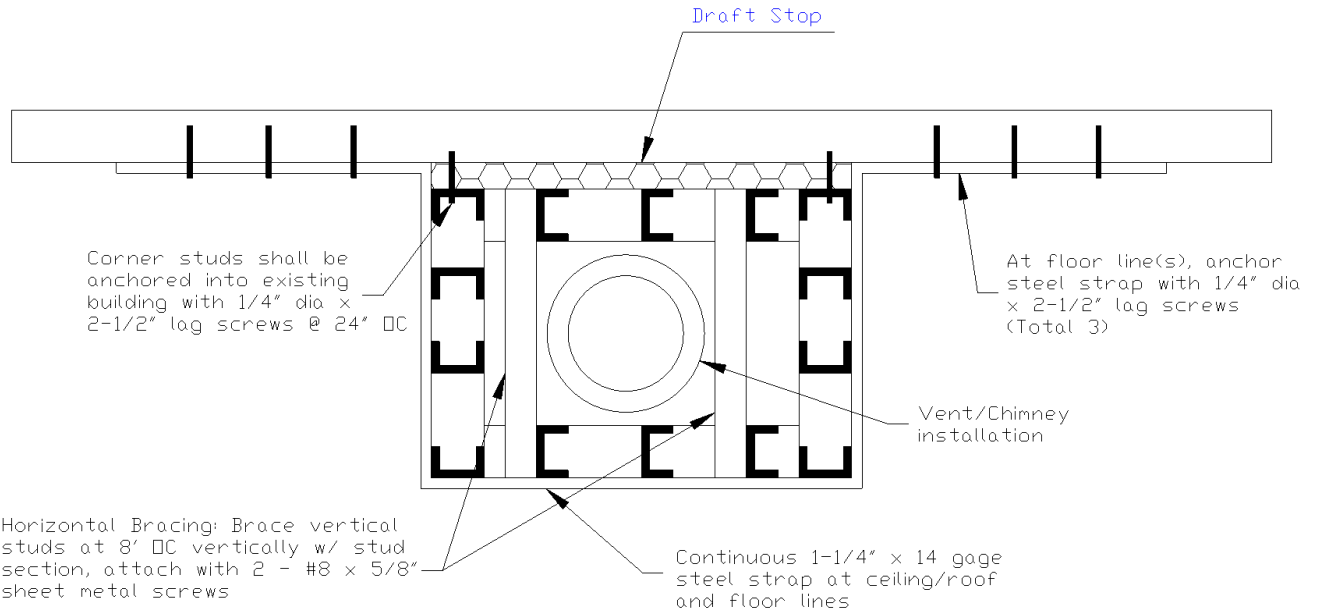


EXHIBIT B: Vent/Chimney Extension
Shaft Enclosure Section Detail

AP# _____

Applicant's Signature _____