

CITY OF MILPITAS

Building & Safety Department
455 E. Calaveras Blvd.
Milpitas, CA 95035
408-586-3240

www.ci.milpitas.ca.gov



RESIDENTIAL RE-ROOF

1. PERMIT INFORMATION:

- The replacement or repair of more than One Square (100 SQ. FT.) of roofing material requires a building permit.
- All changes in roofing materials (including color of material used) must be reviewed and approved by the Planning Division.
- Homeowners Association:** If the property is regulated by a Home Owners Association, any exterior work must have written approval of the Association and the written approval must be attached to the permit.
- A Building Permit may be issued only to a State of California Licensed Contractor or the Homeowner.
- If the work is performed by the Homeowner personally or by his/her workers, and an inspection indicates the work cannot be completed satisfactorily, then a licensed contractor must perform the work.
- If the Homeowner hires workers, State Law requires the Homeowner to obtain Worker's Compensation Insurance. Proof of this insurance is required prior to inspection.

2. INSTALLATION REQUIREMENTS:

- Building Codes:** All work must comply with the 2010 California Building Code (CBC), 2010 California Residential Code (CRC), 2010 California Mechanical Code (CMC), 2010 California Electrical Code (CEC), 2010 California Plumbing Code (CPC), 2010 California Energy Code based upon 2008 Building Energy Efficiency Standards (CEnc) and 2011 Milpitas Municipal Code (MMC).
- Roofing materials must be installed per the manufacturer's installation instructions and CRC Chapter 9.
- If the roof covering is not removed to the original deck, access to the attic may be required for an under roof check of the structural system, as well as the condition of the roof deck.
- At the time of the pre-roofing inspection, all damaged decking and supporting members must have been replaced.
- Class "B" or better roof covering is required for all buildings located in the "Hillside" area (east of North Park Victoria Drive, Evans Road and Piedmont Road) and installed to minimum 95 mph wind speed and exposure C standards (Section II-3-2.09, 2011 Milpitas Municipal Code).
- Class "C" or better roof covering is required for buildings located in other than "Hillside" areas as per CRC Section 902.1.3
- Structural roof components shall be capable of supporting the roof-covering system and the material and equipment loads that will be encountered during installation of the system.
- Existing slate, clay or cement tile shall be permitted for re-installation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Existing vent flashing, metal edgings, drain outlets, collars and metal counterflashings shall not be reinstalled where rusted, damaged or deteriorated. Aggregate surfacing materials shall not be reinstalled. (CRC R907.5)

- Flashings shall be reconstructed in accordance with approved manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation. (CRC R907.6)
- New roof coverings shall not be installed without first removing all existing layers of roof coverings where any of the following conditions occur: (CRC R907.3)
 - Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
 - Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.
 - Where the existing roof has two or more applications of any type of roof covering.
 - Exceptions:
 1. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building's structural system and that do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.
 2. Installation of metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs when the application is in accordance with Section R907.4.
 3. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.
- Where the application of a new roof covering over wood shingle or shake roofs creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber, glass fiber or other approved materials securely fastened in place (CRC R907.4).
- Where the application of a new roof covering creates a combustible concealed space, such as when battens or metal roofing is installed, fireblocking shall be installed in accordance with CRC R302.11.
- FLAT ROOFS:**
 - When old roof membrane is removed to original deck, it is recommended (not required) that deck be re-sloped to 1/4 inch per foot minimum (CRC R907.1 exc).
 - In order to prevent excessive accumulation of water (ponding), the roof must be sloped to provide positive roof drainage (CRC R907.1 exc).
 - If the roof is not re-sloped to minimum 1/4 inch per foot, the roof membrane installed must be approved for a flat roof installation and roof framing shall be checked for ponding instability as per ASCE7-05, Section 8.4.

3. **ENERGY REQUIREMENTS:**

- COOL ROOFS:**
 - Effective January 1, 2010, a **COOL ROOF** is required to be installed in Milpitas (Climate Zone 4) on steep sloped roofs (greater than 2:12) when the roofing material is 5 lb per sq. foot or heavier (generally concrete, clay tiles, slate), and more than 50% or more than 1,000 sf of the existing roof, whichever is less, is replaced as per CEnC Section 152(b)1Hii.
 - Exceptions:
 1. Insulation with an R value of 0.85 or at least a ¾ inch air-space is added to the roof deck over an attic; or
 2. Existing ducts in the attic are insulated with R6 insulation and sealed according to CEnC Section 151(f)10 (requires field verification and diagnostic testing as specified in Reference Residential Appendix RA3); or
 3. Buildings with at least R-30 ceiling insulation; or
 4. Buildings with a radiant barrier in the attic meeting the requirements of CEnC Section 151(f)2; or
 5. Buildings that have no ducts in the attic; or

- 6. Roof areas covered by building integrated photovoltaic panels and building integrated solar thermal panels and existing roof areas that have thermal mass over the roof membrane with a weight of at least 25 lb per sq. foot as per CEnC Section 151(f)12.
- To be considered a COOL ROOF, roofing materials must be tested and labeled by the Cool Roof Rating Council (CRRC), and be listed in the CRRC's Rated Product directory (see <http://www.coolroofs.org>). The following is a sample of an approved CRRC product label.

	<u>Initial</u> <u>Weathered</u>
	Solar Reflectance 0.70 Min Pending Thermal Emittance 0.75 Min Pending
Rated Product ID Number	XXXXX
Licensed Seller ID Number	XXXXX
Classification	Production Line
<small>Cool Roof Rating Council ratings are determined for a fixed set of conditions, and may not be appropriate for determining seasonal energy performance. The actual effect of solar reflectance and thermal emittance on building performance may vary.</small>	
<small>Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures.</small>	

- Materials must have a minimum three year Aged Solar Reflectance of 0.15 and a minimum three year or initial Thermal Emittance of 0.75, *or* have a minimum Solar Reflectance Index (SRI) of 10.

☐ ENERGY FORMS:

- **Title 24 Energy Compliance Reports:** The following forms must be filled out and submitted with the permit application, or for online permits, attached to the permit:
 - Certificate of Compliance form CF-1R ALT.
 - Installation Certificate CF-6R-ENV-01.

4. SMOKE ALARMS, CARBON MONOXIDE ALARMS & SPARK ARRESTER:

- ☐ In single family residences and multi-family (townhomes, condominiums, and apartments), installation of smoke detectors, carbon dioxide alarms and spark arrestors on all chimneys is required prior to the final inspection as follows:
 - **Smoke Alarms:** When the value of the work exceeds \$1,000, smoke alarms approved and listed by the State Fire Marshal must be installed if they do not already exist in each sleeping room, outside each separate sleeping area in the immediate vicinity of the bedrooms, and on each additional story of the dwelling. In existing buildings, alarms may be solely battery operated where alterations or repairs do not result in the removal of interior walls or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for building wiring without the removal of interior finishes. Where more than one smoke alarm is required to be installed, the alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit, except where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed. Refer to CRC Section R314 and the "Carbon Monoxide and Smoke Alarms" handout for more additional information.

- **Carbon Monoxide Alarms:** When the value of the work exceeds \$1,000, an approved and listed carbon monoxide alarm shall be installed if they do not already exist in existing dwellings or sleeping units that have attached garages or fuel-burning appliances as follows: outside each separate dwelling unit sleeping area in the immediate vicinity of bedrooms and on every level of dwelling unit. In existing dwelling units a carbon monoxide alarm is permitted to be solely battery operated where repairs or alterations do not result in the removal of wall and ceiling finishes or there is no access by means of attic, basement or crawl space. Where more than one carbon monoxide alarm is required to be installed, the alarms shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit, except where repairs do not result in the removal of wall and ceiling finishes, there is no access by means of attic, basement or crawl space, and no previous method for interconnection existed. See CRC Section R315 and the “Carbon Monoxide and Smoke Alarms” handout for additional information.
- **Spark arrester:** When the value of the work exceeds \$1,000, a spark arrester must be installed on fireplace chimneys if one does not already exist per MMC Section II-3-2.06. Spark arresters shall be constructed in conformance with CRC Section 1003.9.1.
- If access to the interior of the dwelling by the Building Inspector cannot be scheduled for inspection of the smoke detectors and carbon dioxide alarms, Smoke Alarm, Carbon Dioxide Alarm and Spark Arrester Certificate can be filled out by each property owner and provided to the inspector prior to final inspection.

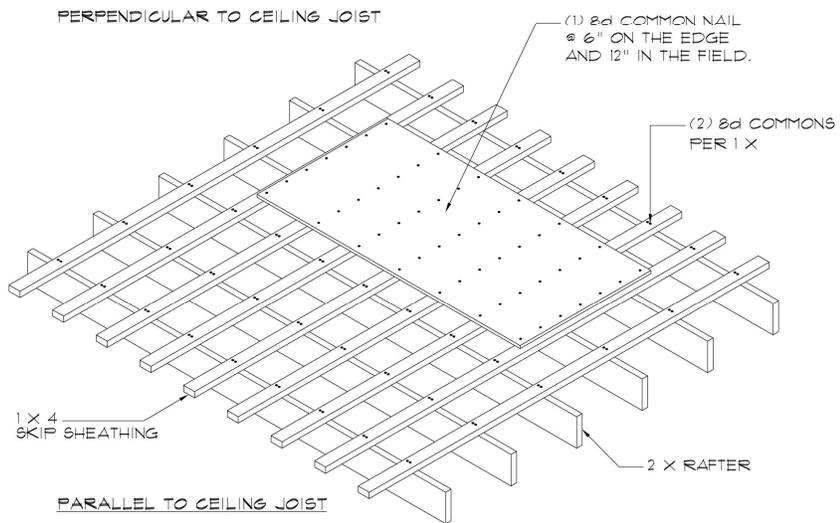
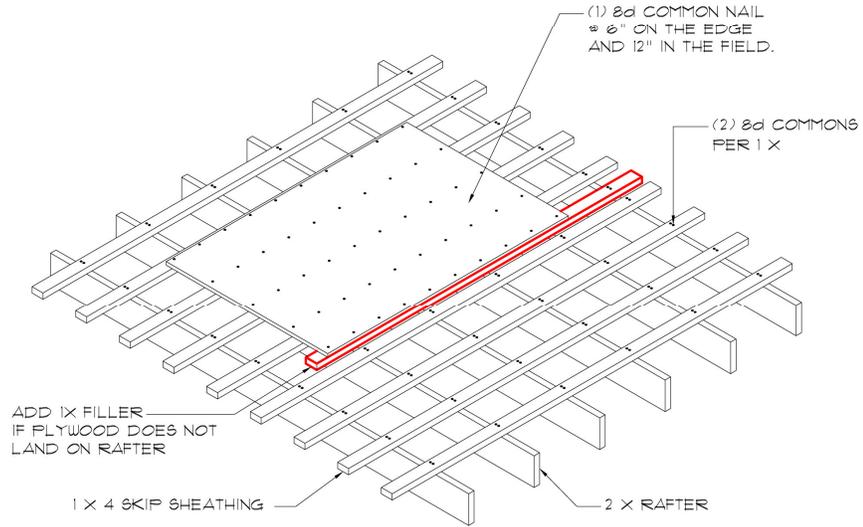
5. INSPECTIONS:

- The City of Milpitas Building inspectors are required to perform the inspections listed below on all re-roof work in the city.
 - **Pre-Roofing Inspection:** After existing roofing is removed but before any new material is installed.
 - **Roof Nail Inspection:** After plywood (or wood) to create solid deck is installed (when applicable).
 - **In-Progress Inspection:** While the roofing material is being installed.
 - **Smoke detector and spark arrester inspection:** Required to obtain a final.
 - **Final Inspection:** When all work has been completed, including:
 - Overflow drains cleaned
 - Skylights secured
 - All flues extended and secured
 - Any roof equipment and/or piping secured
 - All exposed nails protected
 - All exposed wood, roof jacks, and metal flashing or edging painted
- For each inspection, the Permit Card with the Energy Compliance Report forms completely filled out and attached, the ICC report on the roofing materials, and the Approved Job Copy of the Drawings (if any) must be presented to the inspector. Permits expire 180 days after issuance or last inspection passed, whichever is the latest.
- The contractor or owner must provide roof access (ladder to roof) for the all required inspections. Ladders must be OSHA approved, minimum Type I with a 250 lb rating, in good condition and designed for its intended use.

6. QUESTIONS:

- If you have any questions regarding your project, contact the Building & Safety Department at (408) 586-3240.

INSTALLATION OF SOLID SHEATHING OVER SKIP SHEATHING:





SMOKE ALARM, CARBON MONOXIDE ALARM and SPARK ARRESTER CERTIFICATE

SMOKE ALARMS, CARBON MONOXIDE ALARMS & SPARK ARRESTERS

When building permits are issued for additions, alterations or repairs to residential buildings and the value of the work exceeds \$1,000, the installation of smoke alarms, carbon monoxide alarms and a spark arrester on fireplace chimneys, if any, must be installed for safety of the occupants, if they do not already exist.

Smoke alarms approved and listed by the State Fire Marshal must be installed in each sleeping room, outside each separate sleeping area in the immediate vicinity of the bedrooms, and on each additional story of the dwelling. In existing buildings, alarms may be solely battery operated where alterations or repairs do not result in the removal of interior walls or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for building wiring without the removal of interior finishes. Where more than one smoke alarm is required to be installed, the alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit, except where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed. Refer to CRC Section R314 and the "Carbon Monoxide and Smoke Alarms" handout for additional information.

An approved and listed carbon monoxide alarm shall be installed in existing dwellings or sleeping units that have attached garages or fuel-burning appliances as follows: outside each separate dwelling unit sleeping area in the immediate vicinity of bedrooms and on every level of dwelling unit. In existing dwelling units a carbon monoxide alarm is permitted to be solely battery operated where repairs or alterations do not result in the removal of wall and ceiling finishes or there is no access by means of attic, basement or crawl space. Where more than one carbon monoxide alarm is required to be installed, the alarms shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit, except where repairs do not result in the removal of wall and ceiling finishes, there is no access by means of attic, basement or crawl space, and no previous method for interconnection existed. See CRC Section R315 and the "Carbon Monoxide and Smoke Alarms" handout for additional information.

A spark arrester must be installed on fireplace chimneys if one does not already exist per MMC Section II-3-2.06. Spark arresters shall be constructed in conformance with CRC Section 1003.9.1.

These safety devices must be installed by the time a final inspection is requested for your project.

* CERTIFICATION FORM *

I understand the above requirements and certify that we now have smoke alarms and carbon monoxide alarms installed that comply. If we have a fireplace, we also have installed a spark arrester on the flu outlet. We agree to comply with the CRC and MMC in regards to smoke alarms, carbon monoxide alarms and fireplace chimney spark arresters.

HOMEOWNERS NAME (please print): _____

ADDRESS: _____

SIGNATURE: _____

DATE: _____ PERMIT NO. _____

NOTE: This Certification is only used when normal access to the interior of the dwelling by the City of Milpitas Building Inspector is not achieved during the course of project construction. It is normally used for projects such as re-roofing, re-siding, patio covers, swimming pools and the like.

Residential Alterations

Project Name:	Climate Zone # 4	# of Stories
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General Information

Site Address:	Enforcement Agency: City of Milpitas	Date:
Building Type <input type="checkbox"/> Single Family <input type="checkbox"/> Multi Family	Circle the Front Orientation: N, E, S, W, or degrees _____	
Conditioned Floor Area (CFA): _____	Project Type: <input type="checkbox"/> Alterations <input type="checkbox"/> Envelope <input type="checkbox"/> Fenestration <input checked="" type="checkbox"/> Roof <input type="checkbox"/> HVAC Replacement or Change Out <input type="checkbox"/> Duct Replacement <input type="checkbox"/> Water Heater	

NOTE: This form is not to be used for Newly Constructed Buildings or Additions

ROOFING PRODUCTS (COOL ROOFS) §151(f)12

When the area of exterior roof surface to be replaced exceeds more than 50% of the existing roof area, or more than 1,000 ft², whichever is less, the new roofing area must meet the roofing product "Cool Roof" requirements of §152(b)1Hi, 152(b)1Hii, or 152(b)1Hiii.

Check applicable alternative or exception below if the roof alteration is exempt from the roofing product "Cool Roof" requirements. Note: If any one of the alternatives or exception below is checked, the Aged Solar Reflectance and Thermal Emittance requirements for roofing products in §118(i) are not applicable. Do not fill table below.

- Cool Roofs **Not** Required in Climate Zones 1-12, 14, and 16 with a Low Sloped. Less or 2:12 pitch.
- Cool Roofs **Not** Required in Climate Zones 1 through 9 and 16 with a Steep-Sloped Roofs (pitch greater than 2:12) and product unit weight less than 5lb/ft².

Alternatives to §152(b)1Hi and §152(b)Hii, Steep-slope roof (pitch > 2:12)

- Insulation with a thermal resistance of at least 0.85 hr·ft²·°F/Btu or at least a 3/4 inch air-space is added to the roof deck over an attic; or
- Existing ducts in the attic are insulated and sealed according to §151(f)10; or
- In climate zones 10, 12 and 13, with 1 ft² of free ventilation area of attic ventilation for every 150 ft² of attic floor area, and where at least 30 percent of the free ventilation area is within 2 feet vertical distance of the roof ridge; or
- Building has at least R-30 ceiling insulation; or
- Building has radiant barrier in the attic meeting the requirements of §151(f)2; or
- Building has no ducts in the attic; or
- In climate zones 10, 11, 13 and 14, R-3 or greater roof deck insulation above vented attic.

Exception to §152(b)1Hiii, Low-slope roof (pitch ≤ 2:12)

- Building has no ducts in the attic.

Other Exceptions

- Roofing area covered by building integrated; photovoltaic panels and solar thermal panels are exempt from the below Cool Roof criteria.
- Roof constructions that have thermal mass over the roof membrane with at least 25 lb/ft² is exempt from the below Cool Roof criteria.

Note: If no CRRC-1 label is available, this compliance method cannot be used, use the Performance Approach to show compliance, otherwise, Check the applicable box below if Exempt from the Roofing Products "Cool Roof" Requirement:

CRRC Product ID Number ¹	Roof Slope		Product Weight		Product Type ²	Aged Solar Reflectance ^{3,4}	Thermal Emittance	SRI ⁵
	≤ 2:12	> 2:12	< 5lb/ft ²	≥ 5lb/ft ²				
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		

1. The CRRC Product ID Number can be obtained from the Cool Roof Rating Council's Rated Product Directory at www.coolroofs.org/products/search.php
2. Indicate the type of product is being used for the roof top, i.e. single-ply roof, asphalt roof, metal roof, etc.
3. If the Aged Reflectance is not available in the Cool Roof Rating Council's Rated Product Directory then use the Initial Reflectance value from the same directory and use the equation $(0.2 + 0.7(p_{initial} - 0.2))$ to obtain a calculated aged value. Where p is the Initial Solar Reflectance.
4. Check box if the Aged Reflectance is a calculated value using the equation above.
5. Calculate the SRI value by using the SRI- Worksheet at <http://www.energy.ca.gov/title24/> and enter the resulting value in the SRI Column above and attach acopy of the SRI- Worksheet to the CF-IR.

To apply **Liquid Field Applied Coatings**, the coating must be applied across the entire roof surface and meet the dry mil thickness or coverage recommended by the coatings manufacturer and meet minimum performance requirements listed in §118(i)4. Select the applicable coating:

<input type="checkbox"/> Aluminum-Pigmented Asphalt Roof Coating	<input type="checkbox"/> Cement-Based Roof Coating	<input type="checkbox"/> Other _____
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Documentation Author's Declaration Statement

• I certify that this Certificate of Compliance documentation is accurate and complete.

Name:	Signature:
Company:	Date:
Address:	If Applicable <input type="checkbox"/> CEA or <input type="checkbox"/> CEPE (Certification #):
City/State/Zip:	Phone:

INSTALLATION CERTIFICATE

CF-6R-ENV-01

Envelope – RE-ROOF ONLY

Site Address:

Enforcement Agency:
City of Milpitas

Permit Number:

Description of Roofing Products

CRRC Product ID Number ¹	Manufacturer Information	Brand/Model	Product Type	Roof Area	Roof Slope	Product Weight ²	Initial Solar Reflectance	Aged Solar Reflectance ³	Thermal Emittance
								<input type="checkbox"/> ³	
								<input type="checkbox"/> ³	
								<input type="checkbox"/> ³	

1. The CRRC Product ID Number can be obtained from the Cool Roof Rating Council's Rated Product Directory at www.coolroofs.org/products/search.php

2. The weight in lbs per square feet of the roofing product being installed.

3. Check box if the Aged Reflectance is a calculated value using the equation below, footnote 4.

4. If the aged reflectance is not available in the Cool Roof Rating Council's Rated Product Directory then use the initial reflectance value from the directory and use the equation $(0.2 + 0.7(\rho_{initial} - 0.2))$ to obtain a calculated aged value.

CHECK APPLICABLE BOX BELOW IF EXEMPT FROM THE ROOFING PRODUCT "COOL ROOF" REQUIREMENT:

The roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels are exempt from the above Cool Roof criteria.

Roof constructions that have thermal mass over the roof membrane with a weight of at least 25 lb/ft² is exempted from the above Cool Roof criteria.

To apply Liquid Field Applied Coatings, the coating must be applied with a minimum dry mil thickness of 20 mils across the entire roof surface and meet minimum performance requirements listed in §118(i)3 and Table 118-C. Select the applicable coating

Aluminum-Pigmented Asphalt Roof Coating

Cement-Based Roof Coating

Other _____

CRRC-1 Label Attached to CF-6R

(Note if no CRRC-1 label is available, this compliance method cannot be used and another method is required to meet compliance).

DECLARATION STATEMENT

- I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for construction, or an authorized representative of the person responsible for construction (responsible person).
- I certify that the installed features, materials, components, or manufactured devices identified on this certificate (the installation) conforms to all applicable codes and regulations, and the installation is consistent with the plans and specifications approved by the enforcement agency.
- I reviewed a copy of the Certificate of Compliance (CF-1R) form approved by the enforcement agency that identifies the specific requirements for the installation. I certify that the requirements detailed on the CF-1R that apply to the installation have been met.
- I will ensure that a completed, signed copy of this Installation Certificate shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Installation Certificate is required to be included with the documentation the builder provides to the building owner at occupancy.**

Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)

Responsible Person's Name:

Responsible Person's Signature:

CSLB License:

Date Signed:

Position With Company (Title):