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Furnace/AC Replacement Requirements

All New or replacement furnaces shall have an AFUE rating of 90% or higher as per the Petaluma 2025 General Plan.

Sec 152 (b)1

C. New or replacement space-conditioning systems shall:

Be limited to natural gas, liquefied petroleum gas, or the existing fuel type unless it can be demonstrated that the TDV energy use of the new system is more efficient than the existing system.

D. When more than 40 feet of new or replacement space-conditioning ducts are installed in unconditioned space, the new ducts shall meet the requirements of Section 150(m) and the duct insulation requirements of Package D

If ducts are installed the duct system shall be sealed, as confirmed through field verification and diagnostic testing in accordance with procedures for duct sealing of existing duct systems as specified in the Reference Residential Appendix RA3, to meet one of the following requirements:

- i. If the new ducts form an entirely new duct system directly connected to the air handler, the measured duct leakage shall be less than 6 percent of fan flow and meet the airflow requirements of Reference Residential Appendix RA3; or
- ii. If the new ducts are an extension of an existing duct system, the combined new and existing duct system shall meet one of the following requirements:
 - a. The measured duct leakage shall be less than 15 percent of system fan flow; or
 - b. The measured duct leakage to outside shall be less than 10 percent of system fan flow; or
 - c. The duct leakage shall be reduced by more than 60 percent relative to the leakage prior to the installation of the new ducts and a visual inspection, including a smoke test, shall demonstrate that all accessible leaks have been sealed; or
 - d. If it is not possible to meet the duct sealing requirements of subsection a, b, or c, all accessible leaks shall be sealed and verified through a visual inspection and a smoke test by a certified HERS rater.

EXCEPTION to Section 152(b)1Dii: Existing duct systems that are extended, which are constructed, insulated or sealed with asbestos.

E. When a space-conditioning system is altered by the installation or replacement of space-conditioning equipment (including replacement of the air handler, outdoor condensing unit of a split system air conditioner or heat pump, cooling or heating coil, or the furnace heat exchanger) the duct system that is connected to the new or replacement space-conditioning equipment shall be sealed, as confirmed through field verification and diagnostic testing in accordance with procedures for duct sealing of existing duct systems as specified in the Reference Residential Appendix RA3, to one of the following requirements:

- i. The measured duct leakage shall be less than 15 percent of system fan flow; or

- ii. The measured duct leakage to outside shall be less than 10 percent of system fan flow; or
- iii. The measured duct leakage shall be reduced by more than 60 percent relative to the measured leakage prior to the installation or replacement of the space conditioning equipment and a visual inspection, including a smoke test, shall demonstrate that all accessible leaks have been sealed; or
- iv. If it is not possible to meet the duct requirements of i, ii, or iii, all accessible leaks shall be sealed and verified through a visual inspection and a smoke test by a certified HERS rater.

EXCEPTION 1 to Section 152(b)1E:

Duct systems that are documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Residential Appendix RA3.

EXCEPTION 2 to Section 152(b)1E:

Duct systems with less than 40 linear feet in unconditioned spaces.

EXCEPTION 3 to Section 152(b)1E:

Existing duct systems constructed, insulated or sealed with asbestos.

F. When a space-conditioning system is altered by the installation or replacement of the air handler, outdoor condensing unit of a split system air conditioner or heat pump, cooling or heating coil, or the furnace heat exchanger, the following requirements shall be met:

- i. Non-setback thermostats shall be replaced with setback thermostats meeting the requirements of Section 112(c); and
- ii. Meet the refrigerant charge and airflow requirements of Reference Residential Appendix RA3.

EXCEPTION to Section 152(b)1Fii:

Heating only systems need not comply with this requirement.