RETROFIT Improvements

Elevate & Secure Outdoor HVAC Equipment

Making Homes Safer in Disasters

Retrofit Opportunity

- Elevating the HVAC compressor can be accomplished at anytime, however, there is a significant expense in extending and recharging the refrigerant line that may warrant accomplishing the retrofit in tandem with an equipment replacement

Purpose

- To protect outdoor HVAC equipment from water damage during a flood
- To prevent outdoor HVAC equipment from being damaged or becoming a projectile in high winds

Benefits

- Protects the equipment from damage during a hurricane
- Protects the equipment from theft

Hazards

Wind | Rain | **Flood** | Seismic | Fire | Snow

Summary

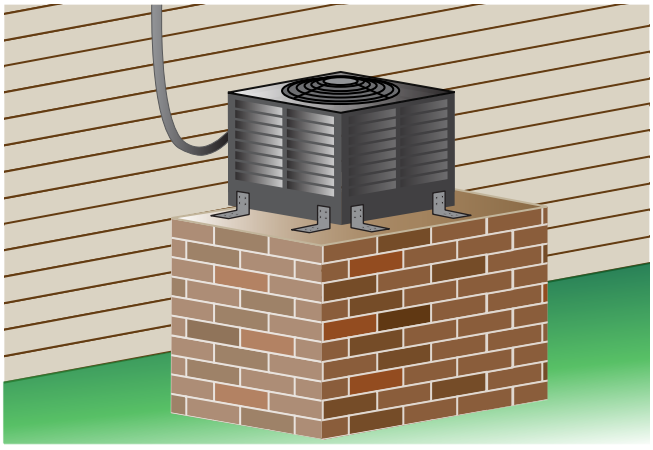
HVAC equipment installed outside the house should be elevated to 1' above the base flood elevation (BFE), just as the living areas of newly-constructed homes are required to be. Equipment normally placed on a pad at grade level (e.g., HVAC compressor) should be secured and raised to a level safely above flood waters.

Cost estimates to have a wooden elevated platform (6') professionally built run about $500. Relocating the compressor itself, as well as, the emergency disconnect box, extending the refrigerant line, recapturing the old refrigerant and recharging costs about $1,300. Because of the costs, elevating the outside HVAC unit during equipment upgrades should be considered.

Illustrations

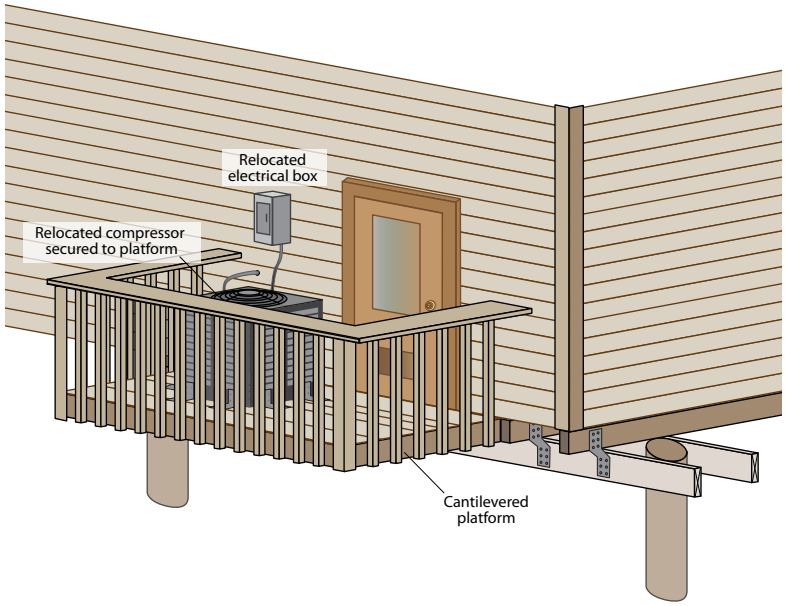
Retrofit

Option 1:



Relocated compressor secured to platform

Option 2:



Potential Damage

Photo: www.fema.gov

Key Steps

- Outside HVAC compressors can be elevated on a base of masonry, concrete, pressure-treated lumber deck, or existing balcony or porch landing; wherever the equipment will be 1' or more above the base flood elevation (BFE).
- When elevating compressor, consider installing energy efficient HVAC equipment to receive both energy and disaster preparedness benefits.
- A big part of the cost of relocating HVAC equipment lies with extending and recharging the refrigerant line, so the retrofit will be cheapest when new equipment is installed.
- Several trades will be involved in elevating HVAC equipment (i.e., carpenter, electrician, and HVAC technician).
- Your contractor may have additional ideas on how to improve the safety of your home.
- For more details about this retrofit improvement, please refer to the list of Resources in the section below.

Resources

Federal Alliance for Safe Homes, *Floods: Major Appliances – Elevating*
http://www.flash.org/peril_inside.php?id=62

FEMA, *Home Builder's Guide to Coastal Construction*
http://www.fema.gov/library/viewRecord.do;jsessionid=E34B1F94FFFA4B12C81995C6DC000644.Worker2Library?fromSearch=fromsearch&id=2138

FEMA, *Homeowner's Guide to Retrofitting Second Edition*
http://www.fema.gov/library/viewRecord.do?fromSearch=fromsearch&id=1420