**Best practices for HVAC conversions.**

All HVAC unit conversions are to be done through CMS. When a unit goes down on site and it is deemed “un-repairable” A CMS work order is to be issued by the Maintenance Supervisor and directed to the CMS Division Manager who will send it to the correct CMS Project Manager. The CMS Project Manager will issue a PO and send it to the preferred HVAC Contractor and schedule the conversion. All conversions must meet Title 24 regulations. All new installations must be permitted and pass HERS testing as required for all R410A conversions.

**Considerations.**

If the property has Hydronic Heat that is problematic, you should consider using a Heat Pump (heating and cooling) and cap off the hydronic heat. This will require running a 6-wire control wire from the existing condenser location to the indoor fan coil. This is easy to do when the line sets are to be replaced.

Replacement of 1-ton to 5-ton A/C and heat pump units.

**Essex Protocol**

Removal of existing HVAC systems;

* Reclaim all existing R-22 refrigerant in accordance with all local and federal laws and regulations.
* All R-22 refrigerant deemed re-usable shall be stored onsite in our approved containers. This refrigerant is the property of Essex Property Trust and is not to leave the property.
* Any refrigerant deemed contaminated shall be removed from site and disposed of in accordance with all local and federal laws and regulations.
* Disconnect existing condenser and indoor fan coil, remove and haul away from site for disposal according to local and federal mandates. Old condensing units must be removed from the roof.
* Existing exposed ends of the line sets are to be removed and capped off behind the exterior wall/roof, making sure water proofing is maintained.

Installation of new HVAC Systems;

* If existing line sets do not match the fittings on the condenser, New line sets will need to be run from the existing condenser location to the indoor fan coil.
* New line sets are to match the new condenser fittings usually 3/8” liquid line and 3/4” suction line. Run new 6-wire control wire the entire length.
* All new line set penetrations through a wall or roof, shall be made water tight.
* Suction line is to be insulated from the condenser connection to the indoor coil connection.
* All seams and joints are to be sealed with quality duct tape.
* Exposed line sets from the wall/roof to the condenser shall be completely wrapped with exterior grade foil tape to prevent deterioration.
* Install new 15 seer rated matching HVAC condenser and indoor air handler using existing main line voltage and new control wire.
* Contractor to ensure that the A/C disconnect (interior and exterior) meets all current codes and manufacture specifications.
* Vacuum system down to a minimum of 350 microns and hold for one hour.
* Charge the system with the recommended amount of R-410A refrigerant.
* Run system and verity operation and cooling to manufacture specifications.

Do not deviate from the approved scope of work. This scope of work will ensure proper function of the HVAC equipment and maintain the warranty from the manufacture.

**What qualifies as an HVAC conversion.**

A complete change out of an R-22 system to a R410A system.

* This is a complete change out of the R-22 system to a R410A system. This includes the condenser, line sets and air handler unit, with the replacement to the R410A unit. If the compressor goes bad, you should change out the unit to a R410A system.

**What does not qualify as a HVAC conversion.**

* Parts. The replacement of fan motors, run caps, hard starts etc. If the unit itself is still good, and parts are needed to bring the unit back on line. The parts should be ordered and installed on the unit to bring it back to working condition.
* The replacement of one R410A system with another R410A system.
* R407A condensers should not be used under any circumstance.
* M099 is a drop-in replacement for R-22 and should only be used in emergency situations.