

HVAC Design & Support LLC is available to fill a void in the Standard of Care that should be provided to the end user, particularly for residential projects. More often than not “guesstimates” are the norm along with ‘design/build’ which more accurately might read ‘design on the fly’! The result is that the Homeowner does not receive the return on investment of a quality designed air distribution system and correctly sized Heating, Ventilation and Air Conditioning System that provides comfort and energy savings in line with the specified Thermal Envelope R-values. In many States it is code to submit HVAC Load Calculations in conjunction with ResCheck Compliance Certification. Building Inspectors in Massachusetts require Load Calculations, which are in adherence to the IECC 2009 and Energy Stretch Codes. HVAC installations in newly constructed residences are inspected, and tested, to meet the requirements of the Home Energy Rating System or HERS Index standards. Indoor air is also an area that needs consideration, tighter building construction means recirculated stale air containing vapors from cleaners and solvents which are the prime suspects for contributing to the rise in respiratory conditions such as asthma and other allergies, the likelihood of the mandatory installation of air exchange units such as Heat Recovery Ventilators as a component of the heating and air conditioning system or as “stand-alone” is on the near horizon.

Common problems encountered on completed HVAC project installations are: improperly sized, poorly sealed and inadequately insulated and noisy ductwork, inefficient placement of supply outlets and inadequately sized return inlets, excessive use of flexible duct which reduces the required airflow substantially. Undersized or oversized equipment capacities negate the energy efficiency ratings of the Energy Star and DOE approved equipment and the overall poor distribution of air results in the discomfort of the occupants and costly energy bills from poorly designed and installed systems. The cause of any problem is usually placed, unfairly, upon the equipment “brand of the day” used in the installation, rather than quality of workmanship and due diligence.

Why set both yourself and your client up for failure and the resulting poor rapport, when it’s easier to make the effort to get it right the first time? That’s where we come in!

HVAC Design & Support LLC will transfer all of the relevant construction data, room by room, and corresponding U-values of today’s building materials, people and appliances heat gains, from the plans into a Manual J computer program with the local design temperature conditions set for Summer and Winter. This way the project begins with the critical factor of accurately sized equipment capacities on which the design is based! Our expertise may also be utilized to provide systems duct design layout with airflow balancing dampers, zoning, placement of inlets/outlets and equipment locations which assist greatly in guiding the installers toward an accurate and speedier installation which can be monitored by the Architect, Builder and Homeowner.

Load Calculations and design layout plans can be packaged with written specifications and installation guidelines and design drawings for tight, competitive ‘apples to apples’ bidding. Having no set pre-design standards encourages large discrepancies in installation costs due to inferior concepts and diversity of equipment, all of which blur the process until the end results are evident. Provide us with a complete set of plans and we will provide professionally produced Load Calculations and design layout assistance for your project. The prevention and elimination of possible installation delays due to clashes of ductwork and framing designs is avoidable with pre-designed route layouts at the design development stage and is of immeasurable benefit to any project. Involving us early in your project will assist in the project operating smoothly and will further enhance the end result for yourself and for your client.

We look forward to being of assistance to you in maintaining the standards and values associated with your company. Please contact Des Crowley to discuss your current on the board project.