

VALECRAFT HOMES (2019) LIMITED

SCHEDULE 'B'

A-5 HEATING

April 1, 2023

Contractor is to supply all labour and material to do all "HVAC" work, to include but not necessarily be limited to the following items. All work to be carried out in accordance with the General Conditions (Schedule "A") of the contract, the site specifications (Schedule B of Agreement of Purchase and Sale), drawings, and product schedule, to the satisfaction of the Builder and/or his representative, and to all codes and authorities having jurisdiction.

HEATING AND VENTILATION:

1. This Contractor shall comply to package "A1" of Table 3.1.1.2.A SB12 of the OBC 2012 for compliance
2. This Contractor shall submit Mechanical Layouts to the Builder's Architectural Department for all models showing duct work main trunks and runs to outlets for Builder approval. These layouts must be based on the furnace location shown on the Working Drawings.
3. This Contractor shall supply and install a 96% AFUE High Efficiency Natural Gas furnace with two-speed fan and relay for continuous operation in all single family and town homes. The furnace shall be of size and specification capable of providing the heating requirements of the structure as per heat loss calculations provided by this Contractor based on the specifications provided by the Builder and based on local area climatic data.
4. This Contractor shall supply a 75% SRE HRV sized accordingly for all units as per the prescribed SB12 package.
5. This Contractor shall supply and install all necessary duct work, cold air return grilles and floor registers and shall ensure that each heat supply run contains a damper with key located at each boot and **shall ensure that each bedroom has a cold air return**. All second-floor cold air returns are to be located at ceiling height. All Ducts to be sealed
 - a. This Contract shall supply and install a heat run to all bedroom walk-in closets.
6. **Mechanical distribution diagrams are the responsibility of this Contractor and shall be provided to the Builder for approval prior to installation and shall contain the following information;**
 - a. **Refer to Construction Drawings for Exact Location**
 - b. Size of furnace/AC unit & HRV
 - c. Furnace dimensionally located.
 - d. **If the location of the Furnace & HRV on the Construction Drawings is not feasible. New proposed location must be approved in writing by Builder.**
7. This Contractor shall supply a 100mm fresh air supply from the exterior to within 2 feet of the furnace combustion chamber as per code. Dryer vent pipe, cap and screen is to be installed by this Contractor from the exterior to directly above the location of the Dryer as per drawings provided by the Builder. Any exterior screws must be Stainless Steel. This duct is to be insulated from the exterior wall to a distance of no less than 1800mm inside of foundation wall.

Note: The dryer vent on townhomes to be located as far from the front entrance door as possible when vented on the porch to prevent ice build-up in the vicinity of the front door.
8. All dropped ceilings in garage with a living space above shall have one (1) heat run per single garage and two (2) per oversize and double garages to run to the front extreme of the upper room with one return air duct located below the underside of the second-floor joist.
9. This Contractor shall guarantee the complete heating installation for a period of two years after occupancy or through two complete heating seasons after occupancy and will further guarantee that the installation will heat the entire dwelling to an even temperature of 22 degrees Celsius, and at an exterior temperature of -24 degrees Celsius.
10. This Contractor shall replace any broken bridging or strapping damaged during his installation.
11. a) This Contractor shall balance the entire system in each dwelling unit where requested to do so by the Builder, to ensure proper heat distribution. A copy of the balancing report must be submitted directly to the Site Superintendent for the Builder lot file.

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12. This Contractor shall supply a programmable thermostat with furnace fan switch approved by the Builder. Electrical wiring for thermostat and HRV shall be the responsibility of the Builder's Electrical Contractor.
13. This Contractor shall provide furnace Pre-Inspections including adding the MERV 11 Filter and temporary thermostat in preparation for Enbridge Gas light up and all required commissioning as per Enbridge & TSSA to be included.
- a. If furnace is to be used for Construction Heat. Purchase Order to be provided by Builder, per confirmation of price by the Contractor.
14. This Contractor shall be responsible for any permits which may be required relating to this agreement along with any balancing reports for ventilation requirements.
15. This Contractor shall install a high efficiency direct vented gas fired water heater supplied by Direct Energy. This Contractor shall supply and install all gas piping and venting as required to properly install the Water heater as per the respective manufacturer's specifications. This contractor is responsible to inform the Builder's Site Superintendent that water heater is ready for inspection. Any failed inspections due to installation will be back charged to this Contractor.
16. This Contractor shall supply and install a one tee connection with cap off gas line above the hot water tank or other approved location as designated by the Builder for future gas appliances such as a fireplace or other gas fired appliance where indicated on the working drawings.
17. This Contractor shall install heavy duty screening over all warm air registers and cold air returns at rough-in stage to prevent objects from falling into duct system. These screens are to be removed prior to installation of carpet and replaced with registers.
18. This Contractor shall install ductwork of size large enough to accommodate future air conditioning requirements.
19. This Contractor is responsible for following the hole charts for engineered wood joists as provided by the Builder. Any errors made in the location or distance from end bearing made by this Contractor must be reported to the Job Superintendent immediately before proceeding as they may require Structural Engineering approval.
20. This Contractor shall reinstate all insulation and vapour barriers which are removed during his operations. Any problems must be reported to the site superintendent.
21. This Contractor shall supply only all required temporary thermostats at the request of the Site Superintendent.
22. This Contractor shall provide a sufficient number of cold air returns to the furnace at floor level in all basements having a finished area and a minimum of one in all unfinished area(s) to ensure proper heating/cooling temperature can be maintained.
23. This Contractor shall provide ventilation rough-ins at the basement bathroom rough-in as per plan.
24. This Contractor shall supply and install Air Conditioning in all house types.
25. This Contractor shall ensure that all range hood boots are located accurately and at the exact height (83") for connection of the range exhaust fans on single-family homes. Townhome 6" stove vents placed in bulkheads. Locations and heights are to be coordinated with the Kitchen Drawings layout, and adjustments can only be approved by the Site Superintendent.
- Note: Upper cabinets are 12" deep in all units.
26. This Contractor shall supply and install a "Maximum" exhaust or equivalent style of kitchen range exhaust termination on the exterior of all singles and townhomes in lieu of standard style. Boots on the range exhaust to be all metal as per Code.
27. This Contractor shall ensure that all gas piping required to pass through garages in townhomes from the meter are kept no more than 19.1mm from the concrete foundation wall and are properly secured to the wall as per the Ontario Gas Code.

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28. Furnace & HWT is to be commissioned by this Contractors. HWT rental (Evercare) to pay Commissioning to this Contractor.
- a. Replacement of the furnace filter at heating final just prior to pre-move inspection.
 - b. Cleaning out and vacuuming all boots, full ductwork cleaning, cold air returns and plenums. This shall include the interior and exterior of the furnace.
29. This Contractor shall supply and install General Air Power Flow-through Humidifiers sized accordingly to the house type in all Town Homes and Single-Family Homes. This includes connection to waterline supplied by plumber.
30. This Contractor shall remove any excess material immediately upon completion of each stage of installation and remove all waste generated by his operations daily into a construction waste container supplied by the Builder.
31. This Contractor shall ensure that on the installation of hardwood flooring or Cabinetry that all heat grills to be chocolate brown or beige.
32. This Contractor shall verify installation at rough-in stage and completion and provide confirmation to Site Superintendent that work is correct and completed.
33. This Contractor shall supply the upgrade soffit exhaust fan vent with low profile flush mount design.

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