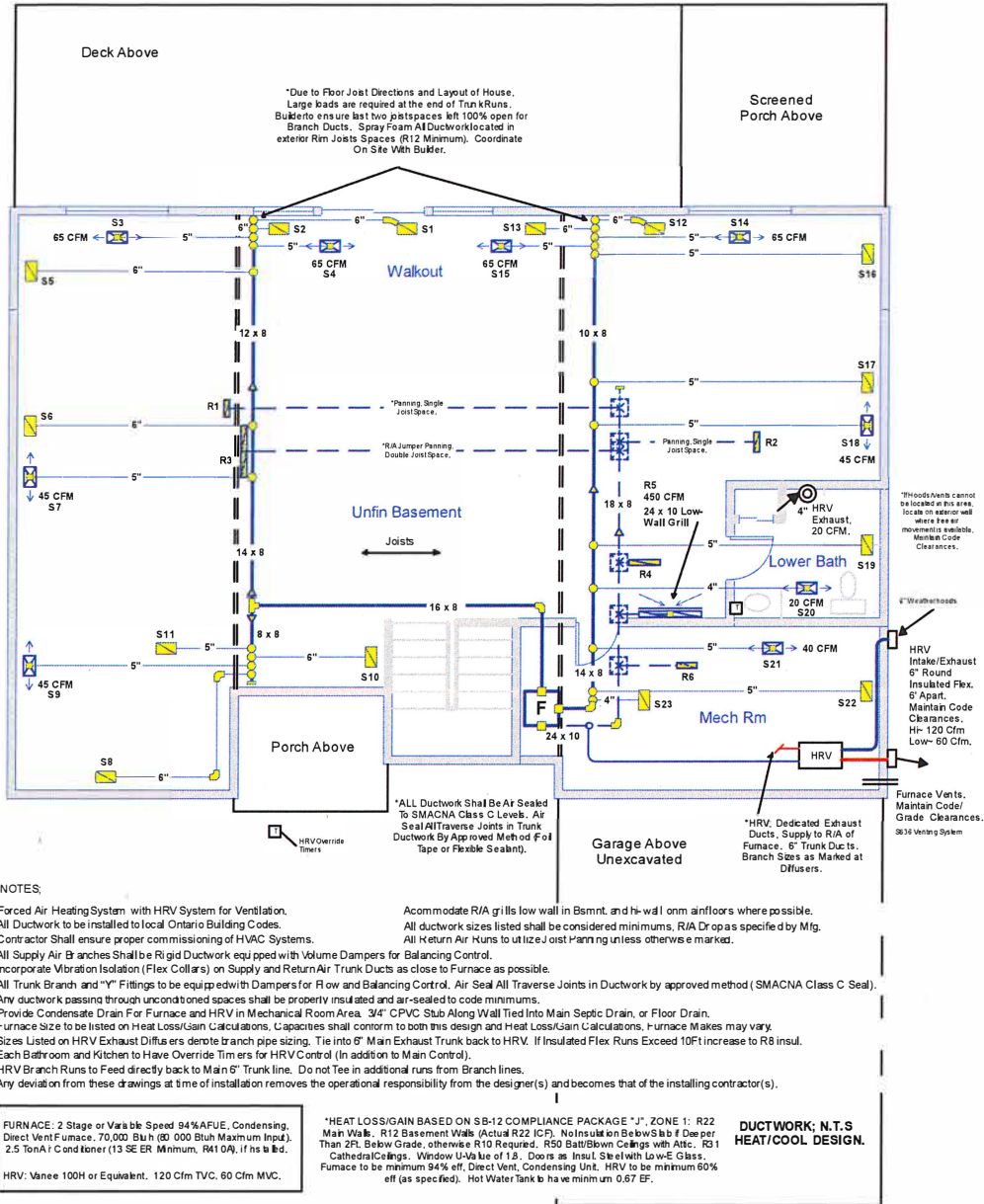




Basement



NOTES:

- Forced Air Heating System with HRV System for Ventilation.
- All Ductwork to be installed to local Ontario Building Codes.
- Contractor Shall ensure proper commissioning of HVAC Systems.
- All Supply Air Branches Shall be Rigid Ductwork equipped with Volume Dampers for Balancing Control.
- Incorporate Vibration Isolation (Flex Collars) on Supply and Return Air Trunk Ducts as close to Furnace as possible.
- All Trunk Branch and "Y" Fittings to be equipped with Dampers for Flow and Balancing Control. Air Seal All Traverse Joints in Ductwork by approved method (SMACNA Class C Seal).
- Any ductwork passing through unconditioned spaces shall be properly insulated and air-sealed to code minimums.
- Provide Condensate Drain For Furnace and HRV in Mechanical Room Area. 3/4" CPVC Sub Along Wall Tied Into Main Septic Drain, or Floor Drain.
- Furnace size to be listed on Heat Loss/Gain Calculations. Capacities shall conform to both this design and Heat Loss/Gain Calculations. Furnace Makes may vary.
- Sizes Listed on HRV Exhaust Diffusers denote branch pipe sizing. Tie into 6" Main Exhaust Trunk back to HRV. If Insulated Flex Runs Exceed 10ft increase to R8 Insul.
- Each Bathroom and Kitchen to Have Override Timers for HRV Control. (In addition to Main Control).
- HRV Branch Runs to Feed directly back to Main 6" Trunk line. Do not Tee in additional runs from Branch lines.
- Any deviation from these drawings at time of installation removes the operational responsibility from the designer(s) and becomes that of the installing contractor(s).

FURNACE: 2 Stage or Variable Speed 94% AFUE, Condensing, Direct Vent Furnace, 70,000 Btu/h (80,000 Btu/h Maximum Input), 2.5 Ton A/C Condenser (13 SEER Minimum, R410A), if installed.
 HRV: Vanee 100H or Equivalent, 120 Cfm TVC, 60 Cfm MVC.

*HEAT LOSS/GAIN BASED ON SB-12 COMPLIANCE PACKAGE "J". ZONE 1: R22 Main Walls, R12 Basement Walls (Actual R22 ICF). No Insulation Below Sub Floor Deeper Than 2ft. Below Grade, otherwise R10 Required, R50 Batt/Blown Ceilings with Attic, R3 Cathedral Ceilings. Window U/A of 1.8. Doors as Insul. Steel with Low-E Glass. Furnace to be minimum 94% eff. Direct Vent, Condensing Unit. HRV to be minimum 60% eff (as specified). Hot Water Tank to have minimum 0.67 EF.

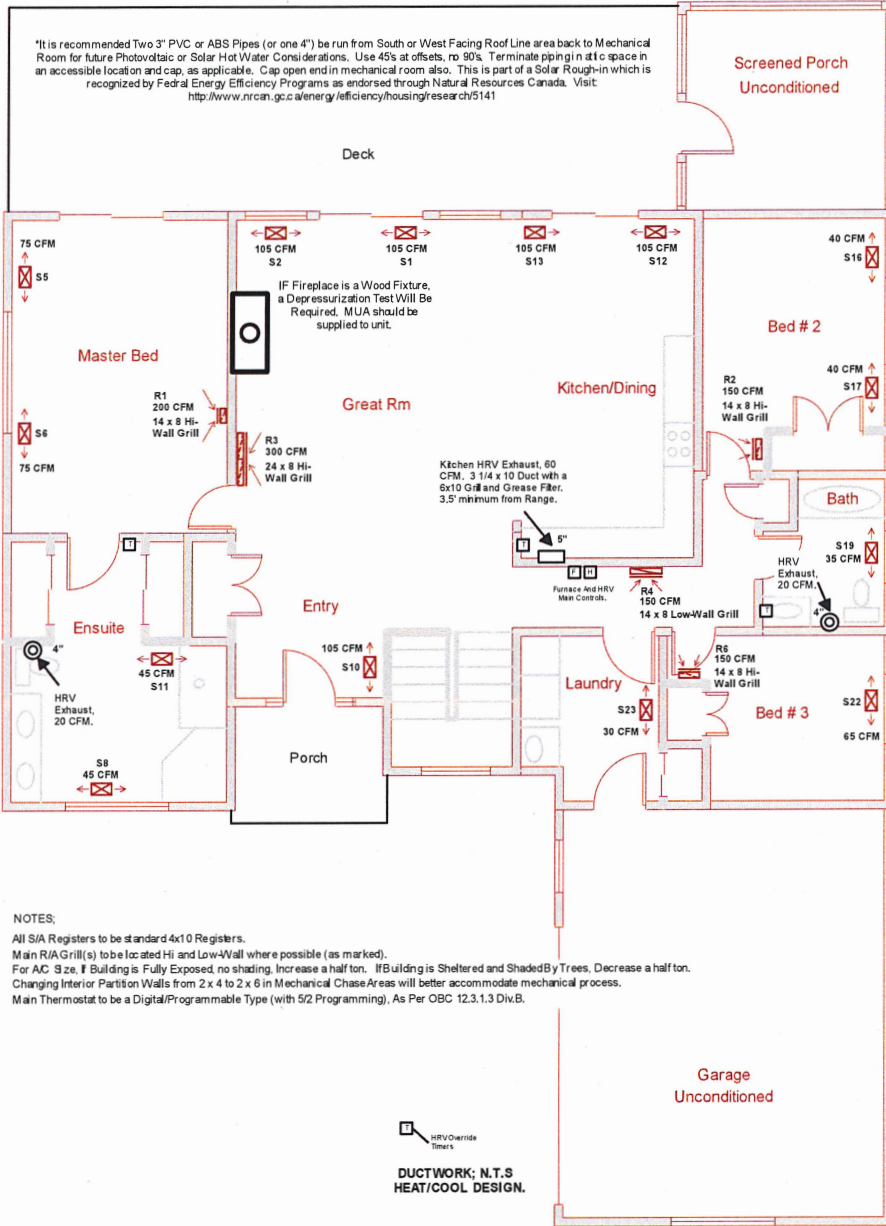
DUCTWORK: N.T.S HEAT/COOL DESIGN.

Job #: SAMPLE
Performed for:
 SAMPLE

Scale: 3/32" = 1'0"
 Page 1
 Right-Suite@ Universal 2017
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Main Floor



Job #: SAMPLE
Performed for:
 SAMPLE

Scale: 3/32" = 1'0"
 Page 2
 Right-Suite® Universal 2017
 17.0.16 RSU01887
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Load Short Form Entire House

Job: **SAMPLE**
 Date: **Pre 2017**
 By:

Cert. #:

Project Information

For: **SAMPLE**

Design Information

	Htg	Clg		Infiltration
Outside db (°F)	-15	84	Method	F280
Inside db (°F)	72	75	Exposure category	Exposed
Design TD (°F)	87	9	Construction category	Present (1961-) (ACH=3.57)
Daily range	-	M	Number of stories	1.0
Inside humidity (%)	35	50		
Moisture difference (gr/lb)	39	29		

HEATING EQUIPMENT

Make	Generic, 2-Stage.
Trade	Minimum 94% AFUE, D.V., Gas.
Model	70 000 to 80 000 Btuh Input.
AHRI ref	n/a
Efficiency	94 AFUE
Heating input	70000 Btuh
Heating output	65800 Btuh
Temperature rise	51 °F
Actual air flow	1200 cfm
Air flow factor	0.021 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	

COOLING EQUIPMENT

Make	Generic, Central Air Conditioner, if installed.
Trade	Minimum 13 SEER, R410A.
Cond	2.5 Ton
Coil	2.5 Ton
AHRI ref	n/a
Efficiency	11.5 EER, 13 SEER
Sensible cooling	21000 Btuh
Latent cooling	9000 Btuh
Total cooling	30000 Btuh
Actual air flow	1000 cfm
Air flow factor	0.040 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.77

ROOM NAME	Area (ft ²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Mech Rm	210	1830	16	39	1
Lower Bath	72	854	83	18	3
Walkout	306	12242	3717	260	148
Unfin Basement	1072	6089	187	129	7
Bed # 3	121	2883	711	61	28
Laundry	89	1286	110	27	4
Bed # 2	165	3552	581	75	23
Bath	62	1544	378	33	15
Kitchen/Dining	210	3592	4422	76	176
Master Bed	241	5994	3557	127	142
Ensuite	187	4250	1879	90	75
Great Rm	305	7507	7251	159	289
Entry	281	4871	2189	103	87

Bold/italic values have been manually overridden

Entire House	d	3320	56494	25079	1200	1000
Other equip loads			0	0		
Equip. @ 1.00 RSM				25079		
Latent cooling				7524		
TOTALS		3320	56494	32603	1200	1000

Bold/italic values have been manually overridden