


SITE NAME: TRINAR HALL HOMES										LOT 34					DATE: Dec-20					WINTER NATURAL AIR CHANGE RATE 0.234					HEAT LOSS AT °F. 81					CSA-F280-12											
BUILDER: GREENPARK HOMES										TYPE: GLENWAY 7A					GFA: 3314					LO# 88663					SUMMER NATURAL AIR CHANGE RATE 0.065					HEAT GAIN AT °F. 11					ENERGYSTAR						
ROOM USE			MBR			ENS			WIC			BED-2			BED-3			BED-4			ENS-2			BED-5			S-ENS			ENS-3											
EXP. WALL			42			22			8			14			16			30			11			11			6			17											
CLG. HT.			9			9			9			9			9			9			9			9			9			9											
FACTORS																																									
GRS.WALL AREA			LOSS			GAIN			378			198			72			126			144			270			99			99			54			153					
GLAZING						LOSS			GAIN			LOSS			GAIN			LOSS			GAIN			LOSS			GAIN			LOSS			GAIN			LOSS			GAIN		
NORTH			20.4	15.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
EAST			20.4	40.7	0	0	0	0	0	0	0	0	0	0	0	0	33	672	1344	35	712	1425	0	0	0	0	0	0	0	0	0	18	366	733							
SOUTH			20.4	24.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	346	409	9	183	217	0	0	0							
WEST			20.4	40.7	34	692	1384	15	305	611	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
SKYLT.			34.2	99.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
DOORS			27.0	3.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
NET EXPOSED WALL			3.9	0.5	344	1327	179	183	706	95	72	278	38	109	421	57	111	428	58	235	907	123	90	347	47	82	316	43	45	174	23	135	521	70							
NET EXPOSED BSMT WALL ABOVE GR			3.9	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
EXPOSED CLG			1.4	0.6	372	512	207	123	169	69	115	158	64	229	315	128	215	296	120	275	378	153	68	94	38	230	316	128	73	100	41	72	99	40							
NO ATTIC EXPOSED CLG			2.9	1.2	0	0	0	0	0	0	0	0	0	0	0	0	20	59	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
EXPOSED FLOOR			2.7	0.4	0	0	0	0	0	0	0	0	0	0	0	0	235	642	87	0	0	0	68	186	25	0	0	0	0	0	0	35	96	13							
BASEMENT/CRAWL HEAT LOSS																																									
SLAB ON GRADE HEAT LOSS																																									
SUBTOTAL HT LOSS						2530			1180			436			1081			2096			1997			810			979			457			1082								
SUB TOTAL HT GAIN						1771			775			102			442			1632			1701			246			580			281			856								
LEVEL FACTOR / MULTIPLIER			0.20			0.25			0.20			0.25			0.20			0.25			0.20			0.25			0.20			0.25			0.20			0.25					
AIR CHANGE HEAT LOSS						633			295			109			270			524			499			202			245			114			270								
AIR CHANGE HEAT GAIN						105			46			6			26			96			100			15			34			17			51								
DUCT LOSS						0			0			0			0			262			0			101			0			0			135								
DUCT GAIN						0			0			0			0			258			0			26			0			0			91								
HEAT GAIN PEOPLE			240	2	480	0	0	0	0	0	0	0	1	240	1	240	1	240	1	240	0	0	1	240	0	1	240	0	0	0	0	0	0	0							
HEAT GAIN APPLIANCES/LIGHTS						613			0			0			613			613			613			0			613			0			0			0					
TOTAL HT LOSS BTU/H						3163			1475			545			1352			2882			2496			1113			1223			571			1487								
TOTAL HT GAIN x 1.3 BTU/H						3859			1067			140			1717			3691			3451			373			1907			387			1297								

ROOM USE			LV/DN		K/D/F		OFF		LAUN		PWD		FOY		BAS		
EXP. WALL			26		77		10		25		13		19		178		
CLG. HT.			11		11		11		12		12		12		9		
FACTORS																	
GRS.WALL AREA			286		847		110		300		156		228		1068		
LOSS GAIN			LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		
GLAZING																	
NORTH			20.4	15.1	0	0	0	20	407	303	9	183	136	0	0	0	3
EAST			20.4	40.7	0	0	0	0	0	0	0	0	0	16	326	651	0
SOUTH			20.4	24.1	26	529	626	13	265	313	0	0	0	0	0	0	0
WEST			20.4	40.7	0	0	0	63	1282	2565	0	0	0	0	0	0	6
SKYLT.			34.2	99.9	0	0	0	0	0	0	0	0	0	0	0	0	3
DOORS			27.0	3.7	0	0	0	30	811	110	0	0	0	20	541	73	0
NET EXPOSED WALL			3.9	0.5	260	1003	136	741	2859	386	90	347	47	271	1045	141	20
NET EXPOSED BSMT WALL ABOVE GR			3.9	0.5	0	0	0	0	0	0	0	0	0	140	540	73	0
EXPOSED CLG			1.4	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG			2.9	1.2	0	0	0	10	29	12	0	0	0	0	0	0	0
EXPOSED FLOOR			2.7	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS																	
SLAB ON GRADE HEAT LOSS																	
SUBTOTAL HT LOSS					1532				5246				754				
SUB TOTAL HT GAIN					761				3386				350				
LEVEL FACTOR / MULTIPLIER			0.30	0.40	0.30	0.40	0.30	0.40	0.30	0.40	0.30	0.40	0.30	0.40	0.30	0.40	0.50
AIR CHANGE HEAT LOSS			607				2078		299		701		343		716		7906
AIR CHANGE HEAT GAIN			45		200		21		21		43		14				39
DUCT LOSS			0		0		0		0		0		0		0		0
DUCT GAIN			0		0		0		0		0		0		0		0
HEAT GAIN PEOPLE			240		0	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS			613		613		613		613		613		613		613		613
TOTAL HT LOSS BTU/H			2139		7324		1053		2470		1209		2523				17149
TOTAL HT GAIN x 1.3 BTU/H			1845		5458		1278		1279		997		336				1710



Town of

East Gwillimbury

Building Standards Branch BCIN #16487

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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

TOTAL HEAT GAIN BTU/H:

31076

TONS: 2.59

LOSS DUE TO VENTILATION LOAD BTU/H: 2097

STRUCTURAL HEAT LOSS: 50176

**TOTAL COMBINED HEAT LOSS BTU/H: 52273**

SITE NAME: TRINAR HALL HOMES  
BUILDER: GREENPARK HOMES

LOT 34  
TYPE: GLENWAY 7A

DATE: Dec-20

GFA: 3314 LO# 88663

HEATING CFM 1131 COOLING CFM 1131  
TOTAL HEAT LOSS 50,176 TOTAL HEAT GAIN 30,792  
AIR FLOW RATE CFM 22.54 AIR FLOW RATE CFM 36.73

furnace pressure 0.6  
furnace filter 0.05  
a/c coil pressure 0.2  
available pressure for s/a & r/a 0.35

plenum pressure s/a 0.18  
max s/a dif press. loss 0.02  
min adjusted pressure s/a 0.16  
r/a pressure 0.17  
r/a grille press. Loss 0.02  
adjusted pressure r/a 0.15

#GOODMAN  
GMEC960603BNA 60  
FAN SPEED LOW  
MEDLOW  
MEDIUM  
MEDIUM HIGH  
HIGH 1131

AFUE = 96 %  
INPUT (BTU/H) = 60,000  
OUTPUT (BTU/H) = 57,600  
DESIGN CFM = 1131  
CFM @ .6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	13	8	4
R/A	0	0	5	3	1

All S/A diffusers 4"x10" unless noted otherwise on layout.

All S/A runs 5"Ø unless noted otherwise on layout.

RUN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	WIC	BED-2	BED-3	BED-4	ENS-2	BED-5	S-ENS	MBR	ENS-3	BED-3	LV/DN	K/D/F	K/D/F	OFF	LAUN	PWD	FOY	K/D/F	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.58	1.48	0.54	1.35	1.44	1.25	1.11	1.22	0.57	1.58	1.49	1.44	2.14	2.44	2.44	1.05	2.47	1.21	2.52	2.44	4.29	4.29	4.29	4.29
CFM PER RUN HEAT	36	33	12	30	32	28	25	28	13	36	34	32	48	55	55	24	56	27	57	55	97	97	97	97
RM GAIN MBH.	1.93	1.07	0.14	1.72	1.85	1.73	0.37	1.91	0.39	1.93	1.30	1.85	1.84	1.82	1.82	1.28	1.28	1.00	0.34	1.82	0.43	0.43	0.43	0.43
CFM PER RUN COOLING	71	39	5	63	68	63	14	70	14	71	48	68	68	67	67	47	47	37	12	67	16	16	16	16
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	62	54	42	42	54	50	51	20	46	51	51	54	7	47	42	30	28	27	38	48	46	45	24	18
EQUIVALENT LENGTH	170	160	160	140	120	170	140	190	160	150	130	110	150	130	140	130	170	100	100	150	150	100	140	110
TOTAL EFFECTIVE LENGTH	232	214	202	182	174	220	191	210	206	201	181	164	157	177	182	160	198	127	138	198	196	145	164	128
ADJUSTED PRESSURE	0.07	0.08	0.09	0.09	0.1	0.08	0.09	0.08	0.08	0.09	0.1	0.1	0.11	0.1	0.09	0.11	0.09	0.14	0.12	0.09	0.08	0.11	0.1	0.13
ROUND DUCT SIZE	6	5	4	6	5	5	4	6	4	6	5	5	6	5	5	5	5	4	6	5	6	6	6	6
HEATING VELOCITY (ft/min)	184	242	138	153	235	206	287	143	149	184	250	235	245	404	404	176	411	310	291	404	495	495	495	495
COOLING VELOCITY (ft/min)	362	286	57	321	499	463	161	357	161	362	352	499	347	492	492	345	345	424	61	492	82	82	82	82
OUTLET GRILL SIZE	4X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	3X10	4X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	4X10	4X10	4X10
TRUNK	A	B	B	B	D	C	D	B	D	A	D	D	D	A	A	B	D	C	C	A	A	B	B	D

RUN #	25
ROOM NAME	BED-4
RM LOSS MBH.	1.25
CFM PER RUN HEAT	28
RM GAIN MBH.	1.73
CFM PER RUN COOLING	63
ADJUSTED PRESSURE	0.17
ACTUAL DUCT LGH.	44
EQUIVALENT LENGTH	180
TOTAL EFFECTIVE LENGTH	224
ADJUSTED PRESSURE	0.08
ROUND DUCT SIZE	5
HEATING VELOCITY (ft/min)	206
COOLING VELOCITY (ft/min)	463
OUTLET GRILL SIZE	3X10
TRUNK	C



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

SUPPLY AIR TRUNK SIZE										RETURN AIR TRUNK SIZE									
	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT		VELOCITY (ft/min)		TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT		VELOCITY (ft/min)		TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	334	0.07	9.6	12	x	8	501	TRUNK G	0	0.00	0	0	x	8	0	0	0.05	0	0
TRUNK B	655	0.07	12.4	18	x	8	655	TRUNK H	0	0.00	0	0	x	8	0	0	0.05	0	0
TRUNK C	140	0.08	6.7	8	x	8	315	TRUNK I	0	0.00	0	0	x	8	0	0	0.05	0	0
TRUNK D	477	0.08	10.6	14	x	8	613	TRUNK J	0	0.00	0	0	x	8	0	0	0.05	0	0
TRUNK E	0	0.00	0	0	x	8	0	TRUNK K	0	0.00	0	0	x	8	0	0	0.05	0	0
TRUNK F	0	0.00	0	0	x	8	0	TRUNK L	0	0.00	0	0	x	8	0	0	0.05	0	0
TRUNK V	0	0.05	0	0	x	8	0	TRUNK W	425	0.05	11.5	16	x	8	478	0	0.05	0	0
TRUNK X	1131	0.05	16.5	32	x	8	636	TRUNK Y	440	0.05	11.6	16	x	8	495	0	0.05	0	0
TRUNK Z	270	0.05	9.7	12	x	8	405	TRUNK Z	270	0.05	9.7	12	x	8	405	0	0.05	0	0
DROP	1131	0.05	16.5	24	x	10	679												

RETURN AIR #	1	2	3	4	5	6	7	8	0	0	0	0	0	0	0	0	0	0	0
AIR VOLUME	115	85	115	85	85	155	155	155	0	0	0	0	0	0	0	0	0	0	181
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	61	48	56	51	54	36	35	33	1	1	1	1	1	1	1	1	1	1	14
EQUIVALENT LENGTH	205	185	225	205	185	210	205	210	0	0	0	0	0	0	0	0	0	0	135
TOTAL EFFECTIVE LH	266	233	281	256	239	246	240	243	1	1	1	1	1	1	1	1	1	1	149
ADJUSTED PRESSURE	0.06	0.06	0.05	0.06	0.06	0.06	0.06	0.06	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.10
ROUND DUCT SIZE	6.7	6	7	6	6	7.5	7.5	7.5	0	0	0	0	0	0	0	0	0	0	7
INLET GRILL SIZE	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	8
INLET GRILL SIZE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	14	14	14	14	0	0	0	0	0	0	0	0	0	0	14

TYPE: GLENWAY 7A  
SITE NAME: TRINAR HALL HOMES

LO # 88663  
LOT 34

**RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY**

COMBUSTION APPLIANCES		9.32.3.1(1)
a)	<input checked="" type="checkbox"/> Direct vent (sealed combustion) only	
b)	<input type="checkbox"/> Positive venting induced draft (except fireplaces)	
c)	<input type="checkbox"/> Natural draft, B-vent or induced draft gas fireplace	
d)	<input type="checkbox"/> Solid Fuel (including fireplaces)	
e)	<input type="checkbox"/> No Combustion Appliances	

HEATING SYSTEM	
<input checked="" type="checkbox"/> Forced Air	<input type="checkbox"/> Non Forced Air
<input type="checkbox"/> Electric Space Heat	

HOUSE TYPE		9.32.1(2)
<input checked="" type="checkbox"/> I	Type a) or b) appliance only, no solid fuel	
<input type="checkbox"/> II	Type I except with solid fuel (including fireplaces)	
<input type="checkbox"/> III	Any Type c) appliance	
<input type="checkbox"/> IV	Type I, or II with electric space heat	
<input type="checkbox"/>	Other: Type I, II or IV no forced air	

SYSTEM DESIGN OPTIONS		O.N.H.W.P.
<input type="checkbox"/>	1 Exhaust only/Forced Air System	
<input type="checkbox"/>	2 HRV with Ducting/Forced Air System	
<input checked="" type="checkbox"/>	3 HRV Simplified/connected to forced air system	
<input type="checkbox"/>	4 HRV with Ducting/non forced air system	
<input type="checkbox"/>	Part 6 Design	

TOTAL VENTILATION CAPACITY		9.32.3.3(1)
Basement + Master Bedroom	2 @ 21.2 cfm	42.4 cfm
Other Bedrooms	4 @ 10.6 cfm	42.4 cfm
Kitchen & Bathrooms	6 @ 10.6 cfm	63.6 cfm
Other Rooms	6 @ 10.6 cfm	63.6 cfm
Table 9.32.3.A.	TOTAL	212.0 cfm

PRINCIPAL VENTILATION CAPACITY REQUIRED		9.32.3.4.(1)
1 Bedroom	31.8	cfm
2 Bedroom	47.7	cfm
3 Bedroom	63.6	cfm
4 Bedroom	79.5	cfm
5 Bedroom	95.4	cfm
TOTAL	95.4	cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	212	cfm
Less Principal Ventil. Capacity	95.4	cfm
Required Supplemental Capacity	116.6	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 65H	Location: BSMT
95.4 cfm	3.0 sones
<input checked="" type="checkbox"/>	HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
95.4 CFM	X 81 F	X 1.08	X 0.25

SUPPLEMENTAL FANS		PANASONIC	
Location	Model	cfm	Sones
ENS	FV-05-11VK1	50	0.3
ENS-2	FV-05-11VK1	50	0.3
ENS-3	FV-05-11VK1	50	0.3
PWD	FV-05-11VK1	50	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 65H		
155 cfm high	64 cfm low	
75 % Sensible Efficiency	<input checked="" type="checkbox"/>	HVI Approved
@ 32 deg F ( 0 deg C)		

LOCATION OF INSTALLATION	
Lot:	Concession
Township	Plan:
Address	
Roll #	Building Permit #

BUILDER: GREENPARK HOMES	
Name:	
Address:	
City:	
Telephone #:	Fax #:

INSTALLING CONTRACTOR	
Name:	
Address:	
City:	
Telephone #:	Fax #:

DESIGNER CERTIFICATION	
I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.	
Name:	HVAC Designs Ltd.
Signature:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	December-20



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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																																					
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																																					
LO#: 88663		Model: GLENWAY 7A		Builder: GREENPARK HOMES			Date: 14/12/2020																																																														
<b>Volume Calculation</b>					<b>Air Change &amp; Delta T Data</b>																																																																
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$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ <p>0.234 x 365.27 x 45 °C x 1.2 = 4634 W</p> <p>= 15813 Btu/h</p>					$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ <p>= 0.065 x 365.27 x 6 °C x 1.2 = 174 W</p> <p>= 594 Btu/h</p>																																																																
<b>5.2.3.2 Heat Loss due to Mechanical Ventilation</b>					<b>6.2.7 Sensible heat Gain due to Ventilation</b>																																																																
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ <p>95 CFM x 81 °F x 1.08 x 0.25 = 2097 Btu/h</p>					$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ <p>95 CFM x 11 °F x 1.08 x 0.25 = 283 Btu/h</p>																																																																
<b>5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)</b>																																																																					
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Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

## HEAT LOSS AND GAIN SUMMARY SHEET

<b>MODEL:</b> GLENWAY 7A	<b>LOT 34</b>	<b>BUILDER:</b> GREENPARK HOMES
<b>SFQT:</b> 3314	<b>LO#</b> 88663	<b>SITE:</b> TRINAR HALL HOMES

### DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-9	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75

### BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	2.50	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	TIGHT	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	46438.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 54.0 ft	WIDTH: 35.0 ft	EXPOSED PERIMETER:	178.0 ft

### 2012 OBC - COMPLIANCE PACKAGE

#### Component

#### Compliance Package ENERGYSTAR

Nominal	Min. Eff.
---------	-----------

Ceiling with Attic Space Minimum RSI (R)-Value	60	59.20
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.70
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	R22+R5	21.10
Basement Walls Minimum RSI (R)-Value	20	21.12
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value	-	-
Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value	10	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10	11.13
Windows and Sliding Glass Doors Maximum U-Value	ZONE 2	-
Skylights Maximum U-Value	ZONE 2	-
Space Heating Equipment Minimum AFUE	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.9	-



Town of  
**East Gwillimbury**  
Building Standards Branch BCIN #16487

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*Michael O'Rourke*

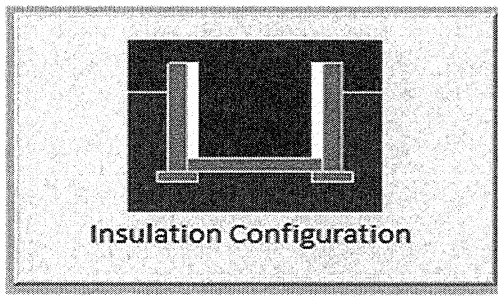
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

Discipline	Reviewer	BCIN	Date
Building Code	H. Authier	43236	2021-02-03
Sewage System			
Zoning			

# Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Bradford	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	16.5	 Insulation Configuration
Floor Width (m):	10.7	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m <sup>2</sup> ):	1.1	
Door Area (m <sup>2</sup> ):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1875

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Sewage System			
Zoning			

TYPE: GLENWAY 7A  
LO# 88663

LOT 34



# Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Bradford			
Weather Station Location:	Open flat terrain, grass			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest			
Walls:	Heavy			
Flue:	Heavy			
Highest Ceiling Height (m):	7.01			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m <sup>3</sup> ):	1315.0			
Air Leakage/Ventilation				
Air Tightness Type:	Energy Star Detached (2.5 ACH)			
Custom BDT Data:	ELA @ 10 Pa.		1227.5 cm <sup>2</sup>	
	2.50		ACH	
Mechanical Ventilation (L/s):	Total Supply		Total Exh	
	45.0		45.0	
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.234			
Cooling Air Leakage Rate (ACH/H):	0.065			

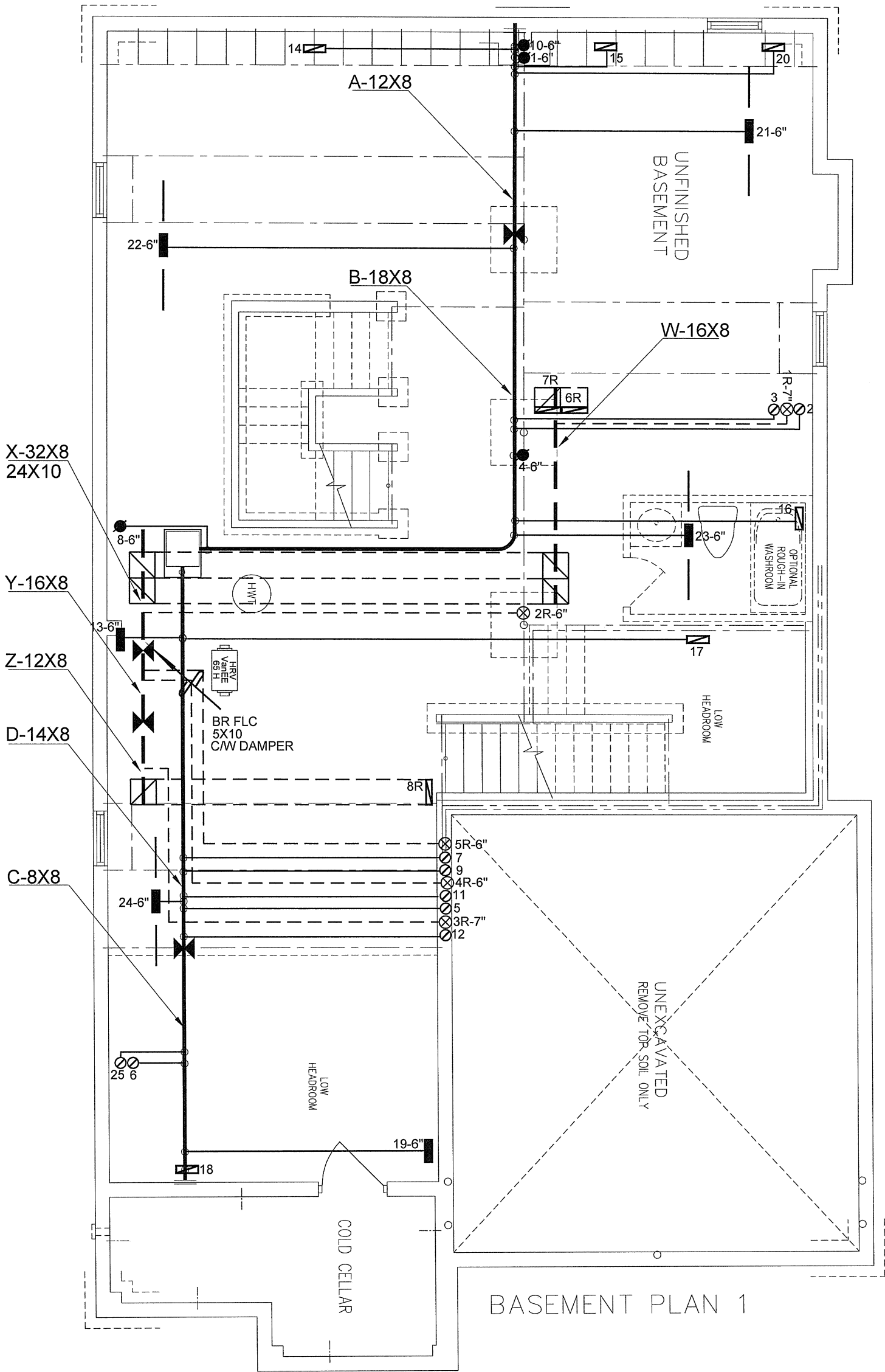


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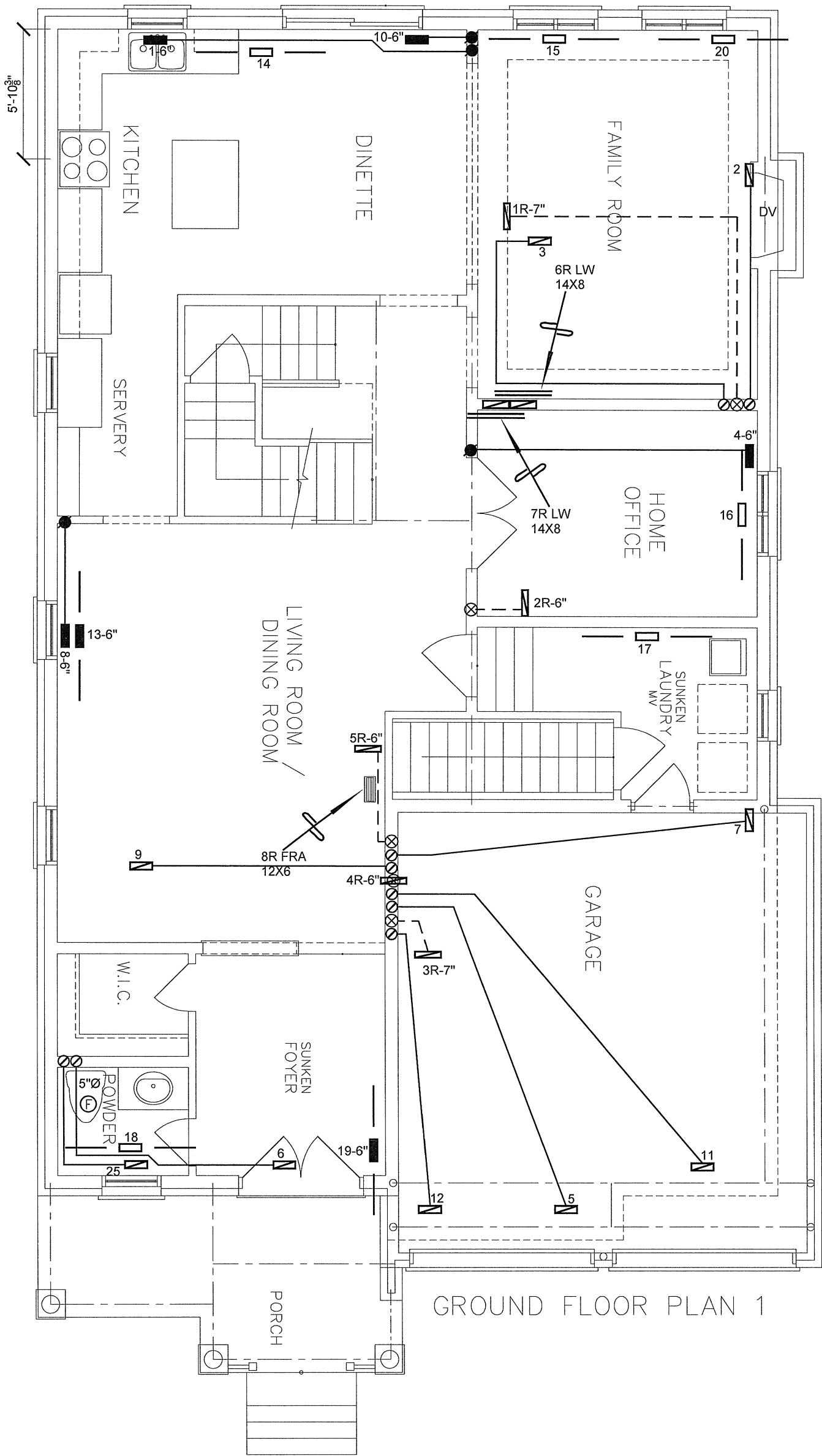
*Michael O'Rourke*  
Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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Client		<div><div>HVACDESIGNSLTD.</div><div>375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</div></div>		HEAT LOSS 52273 BTU/H		# OF RUNS		S/A		R/A		FANS		BASEMENT HEATING LAYOUT	
GREENPARK HOMES				UNIT DATA		3RD FLOOR									
Project Name TRINAR HALL HOMES EAST GWILLIMBURY, ONT.		MAKE GOODMAN		2ND FLOOR		13		5		4					
		MODEL GMEC960603BNA		1ST FLOOR		8		3		2					
LOT 34 GLENWAY 7A 3314 sqft		INPUT 60 MBTU/H		BASEMENT		4		1		0		Date DEC/2020			
		OUTPUT 57.6 MBTU/H		ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A											
		COOLING 3.0 TONS												Scale 3/16" = 1'-0"	
														BCIN# 19669	
														LO# 88663	
		FAN SPEED 1131 cfm @ 0.6" w.c.													
		Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.													





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ENERGY STAR FOR NEW HOMES STANDARD 4.7.2.2  
ALL DUCTS FOR HEATING, VENTILATION AND AIR CONDITIONING  
SHALL BE LOCATED WITHIN THE HEATED BOUNDARY.

GROUND FLOOR PLAN 1

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.  
*Michael O'Rourke*  
Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.

LOT 34

CSA-F280-12

ENERGY STAR

HVAC LEGEND								3.	
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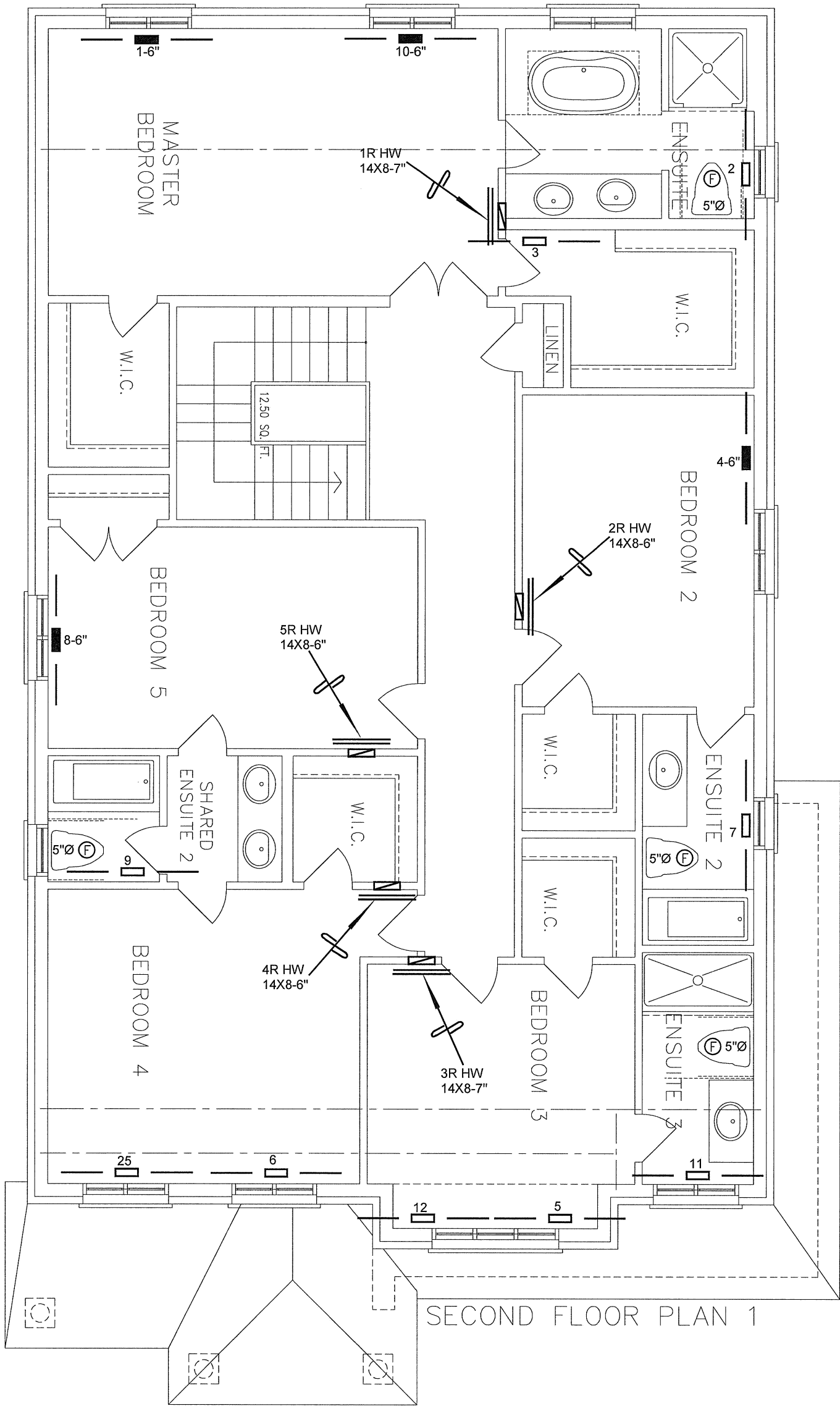
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Client <b>GREENPARK HOMES</b>		 375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services	Sheet Title <b>FIRST FLOOR HEATING LAYOUT</b>
Project Name <b>TRINAR HALL HOMES EAST GWILLIMBURY, ONT.</b>			
LOT 34 GLENWAY 7A	3314 sqft	Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.	Date DEC/2020
			Scale 3/16" = 1'-0"
			BCIN# 19669
			LO# 88663



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SECOND FLOOR PLAN 1

LOT 34

CSA-F280-12

ENERGY STAR

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TRINAR HALL HOMES EAST GWILLIMBURY, ONT.			DEC/2020	
LOT 34 GLENWAY 7A      3314 sqft			Scale	
			BCIN# 19669	
			LO#	88663