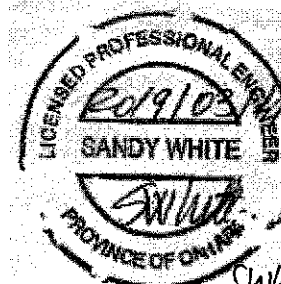


THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET C
EXCEED THE PROVINCIAL
THERMALDATE: Mar-19
LO# 81392WINTER NATURAL AIR CHANGE RATE 0.358
SUMMER NATURAL AIR CHANGE RATE 0.122HEAT LOSS AT °F. 74
HEAT GAIN AT °F. 14CSA-F280-12
ENERGYSTARSITE NAME: LAMBERT'S LANE PH.2
BUILDER: GREENPARK HOMES

TYPE: URBAN 1

GFA: 2028

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	BED-2	BED-3	BATH	MUD	STOR
			17	0	13	29	0	5	5
			9	9	9	10	9	10	10
FACTORS									
GRS.WALL AREA	LOSS	GAIN	153	0	117	280	0	50	50
GLAZING	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS
NORTH	18.6	15.9	0	0	0	0	0	0	0
EAST	18.6	41.5	0	0	26	482	0	0	0
SOUTH	18.6	24.8	30	567	0	0	0	0	0
WEST	18.6	41.5	0	0	0	0	0	0	0
SKYLT.	31.2	101.2	0	0	0	0	0	0	0
DOORS	24.7	4.7	0	0	0	0	0	20	493
NET EXPOSED WALL	3.5	0.7	123	433	91	320	0	30	105
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	299	376	177	222	51	0	0
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.5	0	0	54	134	0	0	0
BASEMENT/CRAWL HEAT LOSS			0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS			0	0	0	0	0	0	0
SUBTOTAL HT LOSS			1364	81	1159	1960	64	599	176
SUB TOTAL HT GAIN			1008	40	1272	1940	31	113	33
LEVEL FACTOR / MULTIPLIER	0.10	0.24	0.10	0.24	0.10	0.24	0.10	0.30	0.76
AIR CHANGE HEAT LOSS			328	20	278	471	15	457	134
AIR CHANGE HEAT GAIN			98	4	124	189	3	11	3
DUCT LOSS			0	0	144	0	0	0	0
DUCT GAIN			0	0	227	0	0	0	0
HEAT GAIN PEOPLE	240	2	480	0	1	240	0	0	0
HEAT GAIN APPLIANCES/LIGHTS			633	0	633	633	0	0	0
TOTAL HT LOSS BTU/H			1692	101	1581	2431	79	1055	310
TOTAL HT GAIN x 1.3 BTU/H			2886	56	3244	3902	44	181	47



Shwhite

ROOM USE	EXP. WALL	CLG. HT.	L/D/K	FAM	LAUN	W/R	FOY	DEN	BAS
			20	32	8	12	32	36	86
			10	10	9	10	9	9	9
FACTORS									
GRS.WALL AREA	LOSS	GAIN	200	320	72	120	288	324	516
GLAZING	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS
NORTH	18.6	15.9	0	0	0	0	0	0	0
EAST	18.6	41.5	38	705	1576	34	631	1410	0
SOUTH	18.6	24.8	0	0	0	7	130	174	10
WEST	18.6	41.5	0	0	0	0	0	0	186
SKYLT.	31.2	101.2	0	0	0	0	0	0	248
DOORS	24.7	4.7	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5	0.7	162	570	107	262	921	174	20
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	493
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0	93
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.5	231	575	109	0	0	0	0
BASEMENT/CRAWL HEAT LOSS			0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS			0	0	0	0	0	0	0
SUBTOTAL HT LOSS			1850	2144	358	527	1858	1380	2783
SUB TOTAL HT GAIN			1792	1695	217	249	351	601	4368
LEVEL FACTOR / MULTIPLIER	0.20	0.49	0.20	0.49	0.30	0.76	0.20	0.49	0.40
AIR CHANGE HEAT LOSS			910	1055	274	259	1418	1063	1.02
AIR CHANGE HEAT GAIN			175	165	21	24	34	59	4449
DUCT LOSS			276	0	0	0	0	0	50
DUCT GAIN			280	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	2	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS			633	633	633	633	0	633	633
TOTAL HT LOSS BTU/H			3036	3198	632	787	3277	2433	8817
TOTAL HT GAIN x 1.3 BTU/H			3718	3242	1132	355	500	1681	1554

TOTAL HEAT GAIN BTU/H: 22763

TONS: 1.90

LOSS DUE TO VENTILATION LOAD BTU/H: 1274

STRUCTURAL HEAT LOSS: 29429

TOTAL COMBINED HEAT LOSS BTU/H: 30703

Michael O'Rourke

SITE NAME: LAMBERT'S LANE PH.2

BUILDER: GREENPARK HOMES

TYPE: URBAN I

AH - 1

DATE: Apr-19

GFA: 2028

LO# 81392

BCIN# 19669

PAGE 2 of 3

UNIT OUTPUT @ 140 °F	40600	BTU/H	CFM / OUTLET =	28.571	Water Heater	BOSCH	REDZONE	OUTPUT 40600 BTUH @ 140 °F
OUTLETS for UNIT	28				Make & Model #	T9800 SE 160	DVS-800	CFM @ 0.8" E.S.P.
BTU/H per OUTLET HEATING	1450				Input	160000 Btu/H	P2 - 2 ZONE	
					Storage capacity	US/gal.		
UNIT OUTPUT COOLING	24000	BTU/H			Efficiency	99.0 %	RUNS/ZONE: 14	DESIGN CFM = 800
OUTLETS for UNIT	28							
BTU/H per OUTLET COOLING	857							
								A/C SIZE 2 TONS
								A/C SIZE 24000 BTU/H

FLOOR	3	3	3	3	3	2	2	1	2	1	1	B	1	1
ROOM NAME	MBR	ENS	BED-2	BED-3	BATH	L/D/K	FAM	LAUN	W/R	FOY	DEN	BAS	MUD	STOR
RM LOSS MBH	1.69	0.10	0.00	1.58	2.43	0.00	0.08	0.00	0.00	0.00	0.00	3.82	1.06	0.31
# of RUNS red'd HEATING	1.2	0.1	0.0	1.1	1.7	0.0	0.1	0.0	0.0	0.0	0.0	6.0	0.7	0.2
RM GAIN MBH	2.89	0.06	0.00	3.24	3.90	0.00	0.04	0.00	0.00	0.00	0.00	1.55	0.16	0.05
# of RUNS red'd COOLING	3.4	0.1	0.0	3.8	4.6	0.0	0.1	0.0	0.0	0.0	0.0	1.8	0.2	0.1
# of OUTLETS INSTALLED	2.0	1.0	2.0	2.0	1.0	3.0	2.0	1.0	1.0	3.0	2.0	6.0	1.0	1.0

Adjusted Total Runs 28
Actual Installed Flex 28

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	BR
FLOOR	3	3	2	2	1										B
AIR VOLUME	130	130	85	130	245	0	0	0	0	0	0	0	0	0	80
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
ACTUAL DUCT LGH	76	96	61	57	23	1	1	1	1	1	1	1	1	1	14
EQUIVALENT LENGTH	175	175	165	190	145	0	0	0	0	0	0	0	0	0	220
TOTAL EFFECTIVE LH	251	271	226	247	168	1	1	1	1	1	1	1	1	1	234
ADJUSTED PRESSURE	0.06	0.06	0.07	0.06	0.09	15	15	15	15	15	15	15	15	15	0.06
ROUND DUCT SIZE	7	7	5.8	7	8	0	0	0	0	0	0	0	0	0	5.9
INLET GRILL SIZE	8	8	4	8	8	0	0	0	0	0	0	0	0	0	4
INLET GRILL SIZE	14	14	10	14	24	0	0	0	0	0	0	0	0	0	10

RETURN AIR TRUNK SIZE

	TRUNK CPM	STATIC PRESS.	ROUND DUCT	RECT DUCT		
TRUNK O	0	0.06	0	0	x	8
TRUNK P	0	0.06	0	0	x	8
TRUNK Q	0	0.06	0	0	x	8
TRUNK R	0	0.06	0	0	x	8
TRUNK S	0	0.06	0	0	x	8
TRUNK T	0	0.06	0	0	x	8
TRUNK U	0	0.06	0	0	x	8
TRUNK V	0	0.06	0	0	x	8
TRUNK W	0	0.06	0	0	x	8
TRUNK X	585	0.06	12.3	17	x	8
TRUNK Y	215	0.06	8.5	8	x	8
TRUNK Z	0	0.06	0	0	x	8
DROP	800	0.06	13.9	22	x	8
				18	x	10
				15	x	12
				13	x	14
				11	x	16
				10	x	18
				19	x	9
				16	x	11

INSTALLATION OF COMBO HEATING SYSTEM
TO COMPLY WITH UNIFIED CANADIAN
GUIDELINE FOR INTEGRATED (COMBINATION)
HEATING SYSTEMS LATEST ADDITION

MAXIMUM TEMPERATURE OF HOT WATER SYSTEM
SUPPLIED TO PLUMBING FIXTURES SHALL
NOT EXCEED 120 ° F or 49 ° C

EXHAUST & COMBUSTION
AIR INTAKES SHALL
COMPLY WITH ALL LOCAL
CODES & AUTHORITIES

TOTAL COMBINED HEAT LOSS BTU/H 30755
TOTAL HEAT GAIN BTU/H 22772

+10%

33831

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE
APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE

INDIVIDUAL BCIN: 19669
Michael O'Rourke

Michael O'Rourke

THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE REQUIREMENTS OF
THE CANADIAN BUILDING CODE

TYPE: URBAN 1
SITE NAME: LAMBERT'S LANE PH.2

LO# 81392

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY
COMBUSTION APPLIANCES 9.32.3.1(1)
a) ☒ Direct vent (sealed combustion) only
b) ☐ Positive venting induced draft (except fireplaces)
c) ☐ Natural draft, B-vent or induced draft gas fireplace
d) ☐ Solid Fuel (including fireplaces)
e) ☐ No Combustion Appliances

THIS STRUCTURE MUST BE CONSTRUCTED TO MEET OR EXCEED THE PROVISIONS OF THE ONTARIO BUILDING CODE

HEATING SYSTEM
☒ Forced Air ☐ Non Forced Air
☐ Electric Space Heat

HOUSE TYPE 9.32.1(2)
☒ I Type a) or b) appliance only, no solid fuel
☐ II Type I except with solid fuel (including fireplaces)
☐ III Any Type c) appliance
☐ IV Type I, or II with electric space heat
☐ Other: Type I, II or IV no forced air

SYSTEM DESIGN OPTIONS O.N.H.W.P.
☐ 1 Exhaust only/Forced Air System
☐ 2 HRV with Ducting/Forced Air System
☒ 3 HRV Simplified/connected to forced air system
☐ 4 HRV with Ducting/non forced air system
☐ Part 6 Design

TOTAL VENTILATION CAPACITY 9.32.3.3(1)

Basement + Master Bedroom	2	@ 21.2 cfm	42.4	cfm
Other Bedrooms	2	@ 10.6 cfm	21.2	cfm
Kitchen & Bathrooms	4	@ 10.6 cfm	42.4	cfm
Other Rooms	4	@ 10.6 cfm	42.4	cfm
Table 9.32.3.A			TOTAL	148.4 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	63.6	cfm

SUPPLEMENTAL VENTILATION CAPACITY 9.32.3.5.

Total Ventilation Capacity	148.4	cfm
Less Principal Ventil. Capacity	63.6	cfm
Required Supplemental Capacity	84.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY
Model: VANE 65H Location: BSMT
63.6 cfm 3.0 sones ☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION

CFM	AT °F	FACTOR	% LOSS
63.6 CFM	74 F	1.08	0.25

SUPPLEMENTAL FANS PANASONIC

Location	Model	cfm	HVI	Sones
ENS	FV-05-11VK1	50	☒	0.3
BATH	FV-05-11VK1	50	☒	0.3
W/R	FV-05-11VK1	50	☒	0.3

HEAT RECOVERY VENTILATOR 9.32.3.11.
Model: VANE 65H
155 cfm high 64 cfm low
75 % Sensible Efficiency @ 32 deg F (0 deg C) ☒ HVI Approved

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: *Michael O'Rourke*
HRAI #: 001820
Date: April-19

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.
INDIVIDUAL BCIN: 19669 *Michael O'Rourke* MICHAEL O'ROURKE

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** URBAN 1**BUILDER:** GREENPARK HOMES**SFQT:** 2028**LO#** 81392**SITE:** LAMBERT'S LANE PH.2**DESIGN ASSUMPTIONS**

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

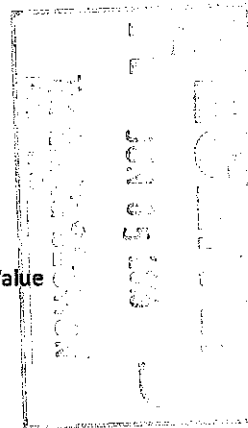
BUILDING DATA

ATTACHMENT:	ATTACHED	# OF STORIES (+BASEMENT):	4
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.00	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	TIGHT	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	23523.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR LIGHTING LOAD (Btu/h/ft²):	2.00	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 35.0 ft	WIDTH: 23.0 ft	EXPOSED PERIMETER:	86.0 ft

THIS STRUCTURE IS
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE

2012 OBC - COMPLIANCE PACKAGE**Component**

Ceiling with Attic Space Minimum RSI (R)-Value
Ceiling Without Attic Space Minimum RSI (R)-Value
Exposed Floor Minimum RSI (R)-Value
Walls Above Grade Minimum RSI (R)-Value
Basement Walls Minimum RSI (R)-Value
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
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value
Windows and Sliding Glass Doors Maximum U-Value
Skylights Maximum U-Value
Space Heating Equipment Minimum AFUE
HRV Minimum Efficiency
Domestic Hot Water Heater Minimum EF

**Compliance Package
ENERGYSTAR**

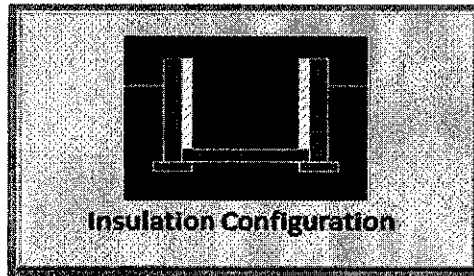
Nominal	Min. Eff.
60	59.20
31	27.70
31	29.80
22 + 5ci	21.10
20ci	21.12
-	-
10	10
10	11.13
ZONE 2	-
ZONE 2	-
COMBO	-
75%	-
TPF 0.93	-

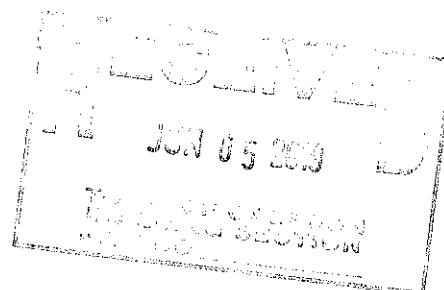
INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE

Michael O'Rourke

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

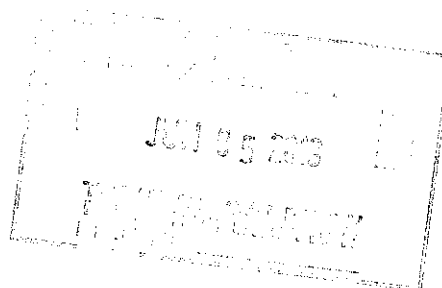
Weather Station Description		
Province:	Ontario	
Region:	Brampton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	10.7	 Insulation Configuration
Floor Width (m):	7.0	
Exposed Perimeter (m):	26.2	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	0.9	
Door Area (m ²):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):	815	

TYPE: URBAN 1
LO# 81392NOT TO BE USED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE

Air Infiltration Residential Load Calculator

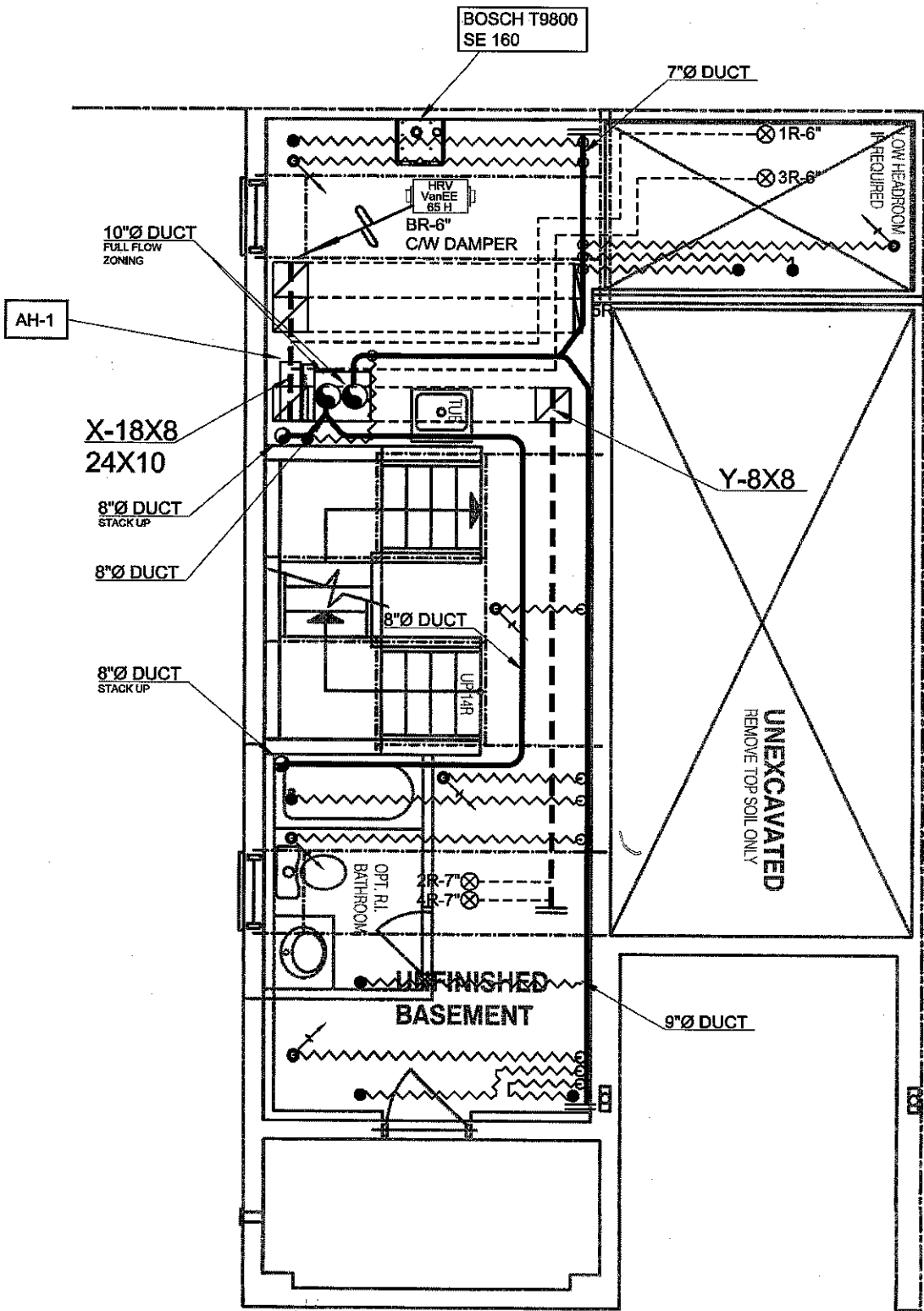
Supplemental tool for CAN/CSA-F280

Weather Station Description			
Province:	Ontario		
Region:	Brampton		
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):	9.45		
Building Configuration			
Type:	Semi		
Number of Stories:	Three		
Foundation:	Full		
House Volume (m ³):	666.1		
Air Leakage/Ventilation			
Air Tightness Type:	Energy Star Attached (3.0 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	746.2 cm ²	
	3.00	ACH @ 50 Pa	
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust	
	30.0	30.0	
Flue Size			
Flue #:	#1	#2	#3
Diameter (mm):	0	0	0
Natural Infiltration Rates			
Heating Air Leakage Rate (ACH/H):	0.356		
Cooling Air Leakage Rate (ACH/H):	0.122		

TYPE: URBAN 1
LO# 81392THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE

HVAC LEGEND	
	OUTLET
	DUCTWORK
	FLEX DUCT
	RETURN AIR GRILLE
HW	HIGH WALL
LW	LOW WALL

METHOD 'A'
FLEX DUCT MIN LENGTH 6'
MAX LENGTH 10'



CERTIFIED MODEL
PRE-APPROVED
FOR PERMIT APPLICATION AS PER THE
ONTARIO BUILDING CODE
TOWN OF CALEDON BUILDING DIVISION
REVIEWED BY *[Signature]* SA
DATE *AUG 07, 2019*
FILE # *CMOD - URBAN1*

(REV 1, 1A, 2, 2A)



MINIMUM CEILING HEIGHT SHALL BE 2100 MM
OVER AT LEAST 75% OF BASEMENT
AREA EXCEPT THAT UNDER BEAMS AND
DUCTS THE CLEARANCE IS PERMITTED TO
BE REDUCED 1950 M M

APPLICANT COPY

A COMPLETE SET OF REVIEWED DRAWINGS &
SPECIFICATIONS MUST BE KEPT ON SITE AT ALL TIME
DURING CONSTRUCTION AS PER O.B.C.

- I. INSTALLATION TO COMPLY WITH THE LATEST EDITIONS OF THE ONTARIO BUILDING CODE AND REDZONE DESIGN AND INSTALLATION MANUALS
- II. VENT HOT WATER TANK OR BOILER TO MANUFACTURERS SPECS & ALL LOCAL CODES
- III. COMBUSTION AIR INTAKE (INSTALL per ALL LOCAL CODES)
- IV. MAXIMUM TEMPERATURE OF HOT WATER SUPPLIED TO PLUMBING FIXTURES SHALL NOT EXCEED 120°F or 49°C
- V. CONTRACTOR SHALL SEAL SUPPLY DUCT JOINTS AND GORES WITH AN APPROVED SEALANT

UNIT EQUIPMENT SUMMARY

UNIT	HEAT LOSS	REQUIRED HEAT LOSS (HEAT LOSS + 10%)	AIR HANDLER MODEL (REDZONE)	HEAT OUTPUT (BTU/H @ TEMP)	HEAT SOURCE (HOT WATER TANK / BOILER)	HEAT SOURCE INPUT (BTU/H)	HEAT GAIN LOAD (BTU/H)	A/C CONDENSER SIZE (TONS)
AH-1	30,755	33,831	DVS-800 FULL FLOW ZONING	40,600 @ 140°F	BOSCH T9800 SE 160	160,000	22,772	2.0

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

Client
GREENPARK HOMES
Project Name
**LAMBERT'S LANE HOME CORP PH 2
CALEDON, ONTARIO**
URBAN 1 2028 sqft

HVACDESIGNS LTD.
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
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.

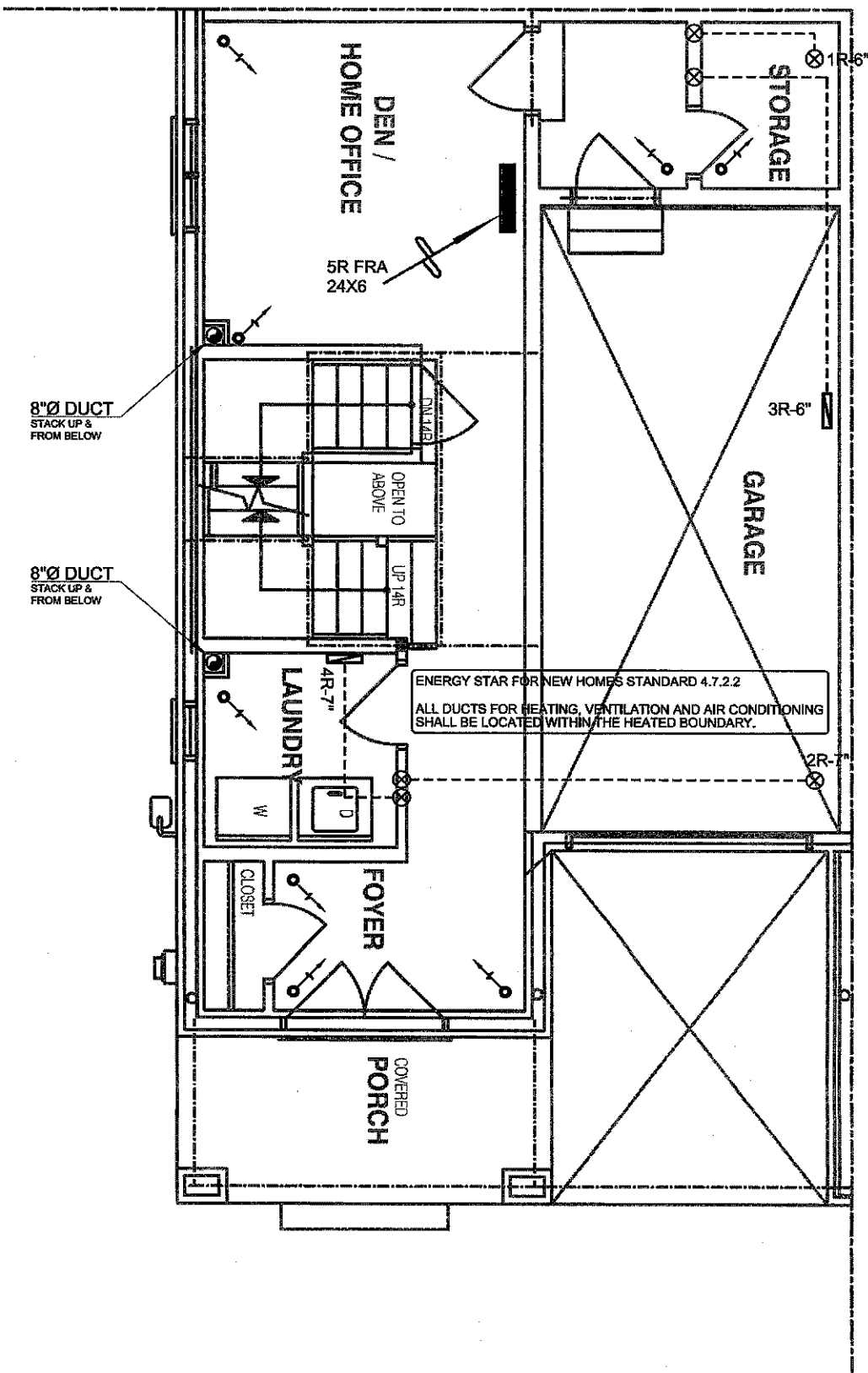
THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE

Sheet Title
**BASEMENT
HEATING
LAYOUT**
Date **MAR/2019**
Scale **3/16" = 1'-0"**
LO# **81392**

HVAC LEGEND	
	OUTLET
	DUCTWORK
	FLEX DUCT
	RETURN AIR GRILLE
HW	HIGH WALL
LW	LOW WALL

METHOD 'A'
FLEX DUCT MIN LENGTH 6'
MAX LENGTH 10'

ENERGY STAR
CSA-F280-12



DUCTS LOCATED IN UNCONDITIONED SPACES SHALL BE SEALED TO A CLASS A SEAL LEVEL IN ACCORDANCE WITH THE SMACNA MANUAL

- INSTALLATION TO COMPLY WITH THE LATEST EDITIONS OF THE ONTARIO BUILDING CODE AND REDZONE DESIGN AND INSTALLATION MANUALS
- VENT HOT WATER TANK OR BOILER TO MANUFACTURERS SPECS & ALL LOCAL CODES
- COMBUSTION AIR INTAKE (INSTALL per ALL LOCAL CODES)
- MAXIMUM TEMPERATURE OF HOT WATER SUPPLIED TO PLUMBING FIXTURES SHALL NOT EXCEED 120°F or 49°C
- CONTRACTOR SHALL SEAL SUPPLY DUCT JOINTS AND GORES WITH AN APPROVED SEALANT

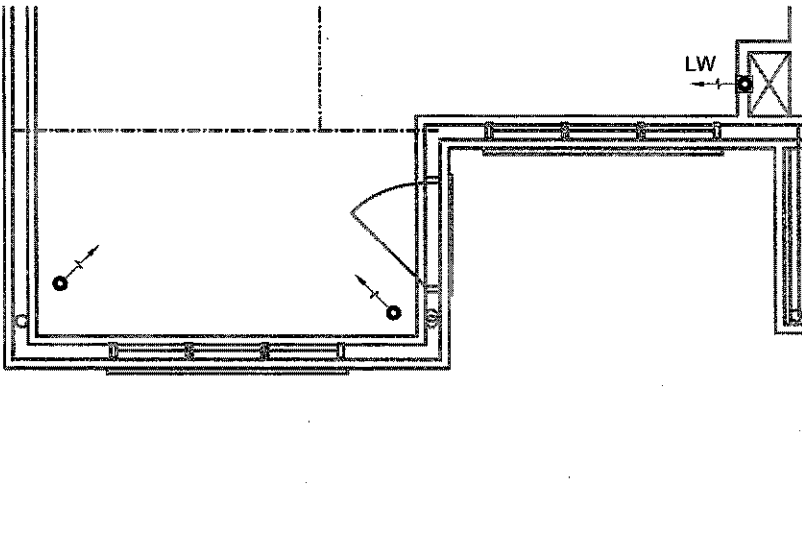
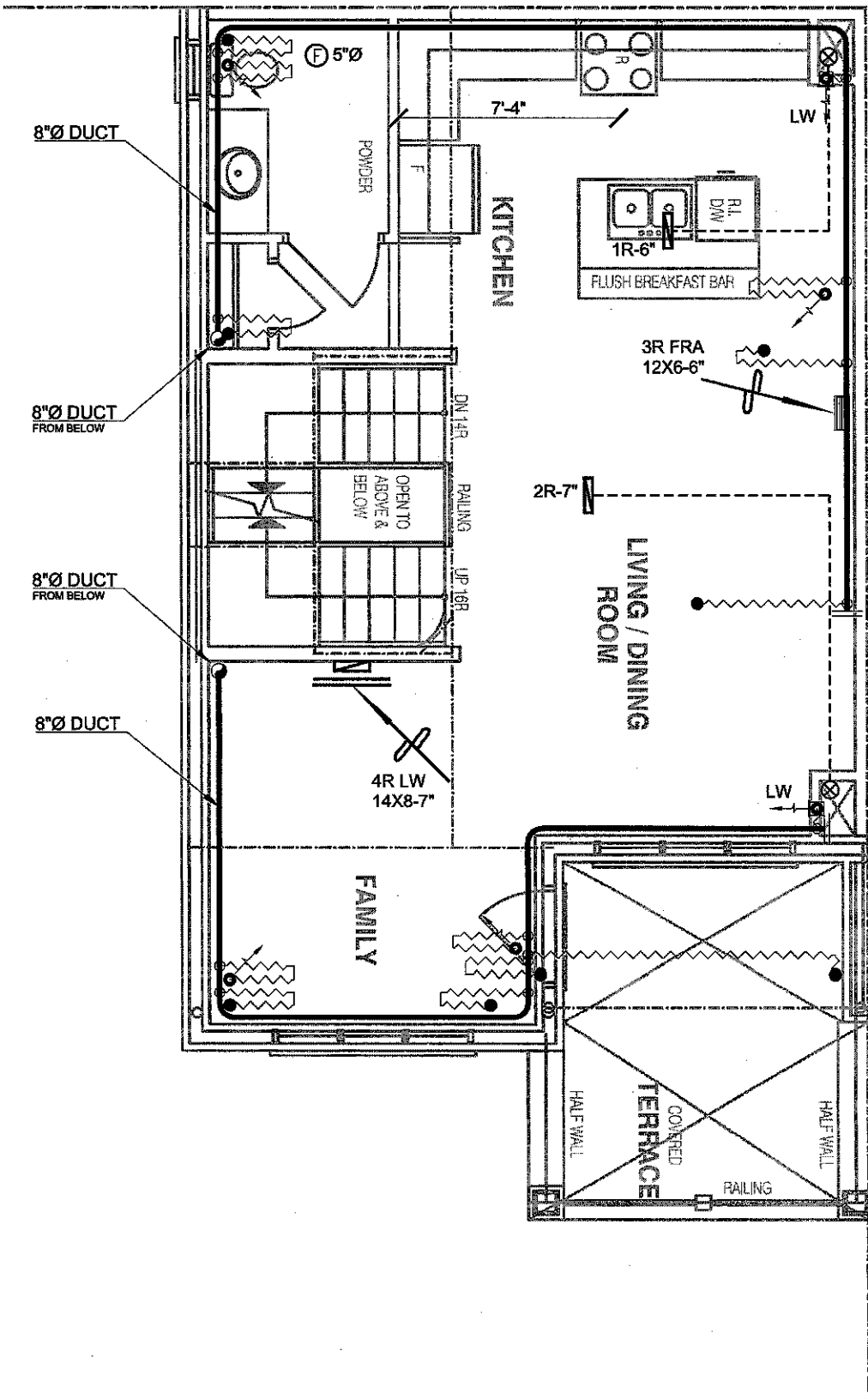
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Client GREENPARK HOMES		375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdsgns.ca Web: www.hvacdsgns.ca Specializing in Residential Mechanical Design Services	THIS STRUCTURE MUST BE CONSTRUCTED TO MEET OR EXCEED THE PROVISIONS OF THE ONTARIO BUILDING CODE	Sheet Title FIRST FLOOR HEATING LAYOUT
Project Name LAMBERT'S LANE HOME CORP PH 2 CALEDON, ONTARIO				Date MAR/2019
				Scale 3/16" = 1'-0"
URBAN 1	2028 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.		LO# 81392

HVAC LEGEND	
	OUTLET
	DUCTWORK
	FLEX DUCT
	RETURN AIR GRILLE
HW	HIGH WALL
LW	LOW WALL

METHOD 'A'
FLEX DUCT MIN LENGTH 6'
MAX LENGTH 10'

ENERGY STAR
CSA-F280-12



- INSTALLATION TO COMPLY WITH THE LATEST EDITIONS OF THE ONTARIO BUILDING CODE AND REDZONE DESIGN AND INSTALLATION MANUALS
- VENT HOT WATER TANK OR BOILER TO MANUFACTURERS SPECS & ALL LOCAL CODES
- COMBUSTION AIR INTAKE (INSTALL per ALL LOCAL CODES)
- MAXIMUM TEMPERATURE of HOT WATER SUPPLIED TO PLUMBING FIXTURES SHALL NOT EXCEED 120°F or 49°C
- CONTRACTOR SHALL SEAL SUPPLY DUCT JOINTS AND GORES WITH AN APPROVED SEALANT

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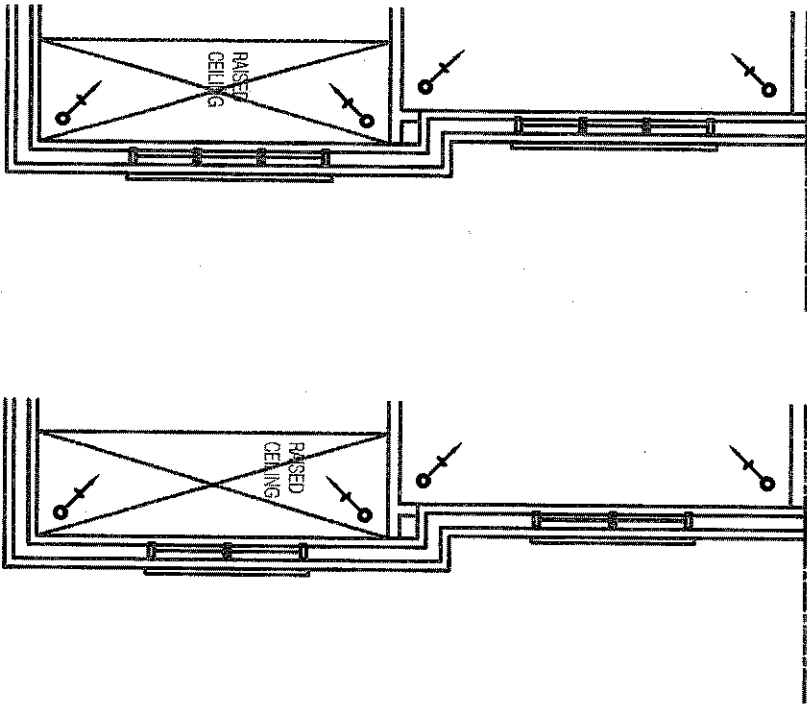
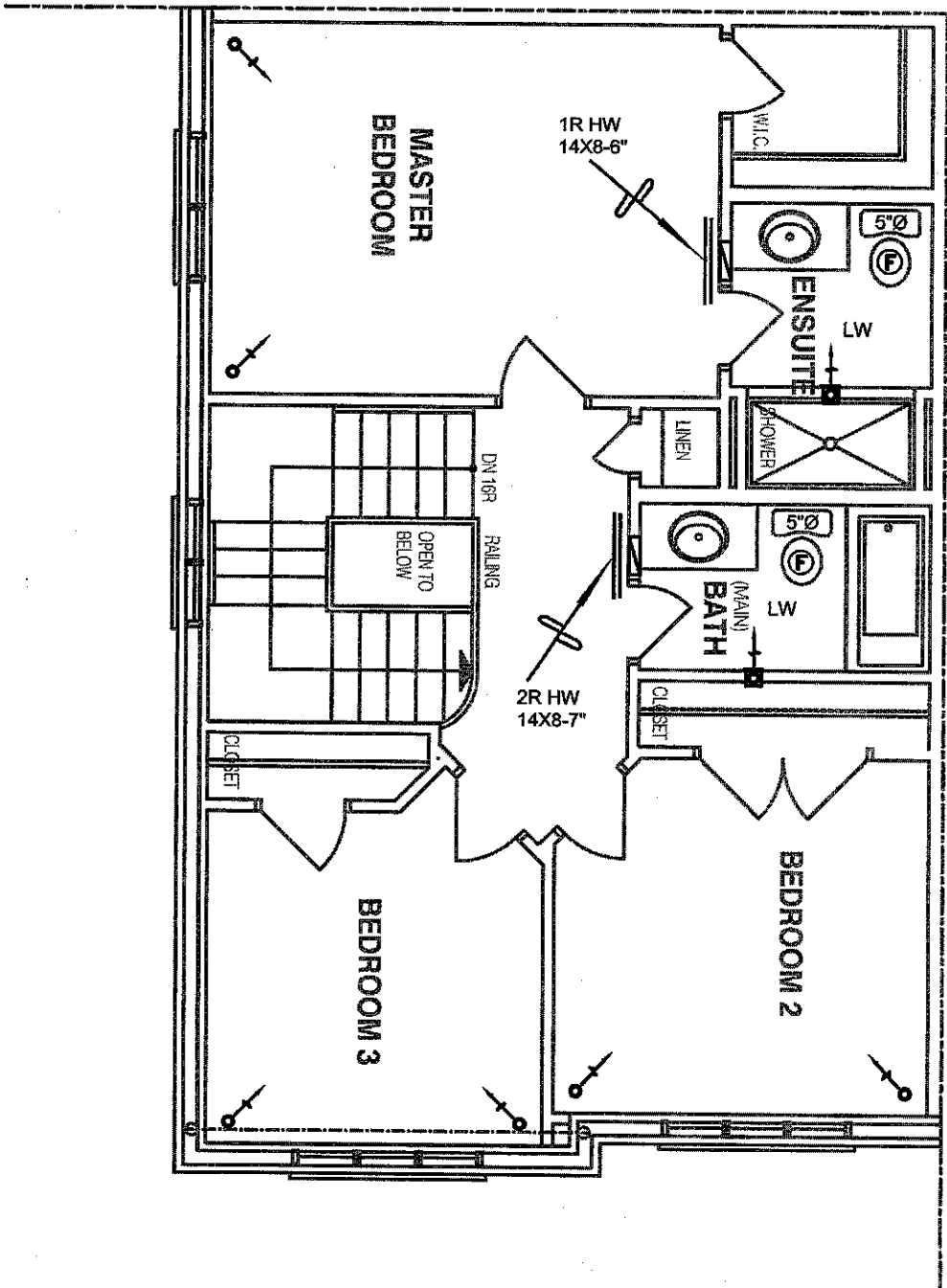
Client GREENPARK HOMES		375 Finley Ave, Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdsgns.ca Web: www.hvacdsgns.ca Specializing in Residential Mechanical Design Services	THIS STRUCTURE MUST BE CONSTRUCTED TO MEET THE REQUIREMENTS OF THE ONTARIO BUILDING CODE	Sheet Title SECOND FLOOR HEATING LAYOUT
Project Name LAMBERT'S LANE HOME CORP PH 2 CALEDON, ONTARIO				Date MAR/2019
URBAN 1	2028 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.		Scale 3/16" = 1'-0"
				LO# 81392

HVAC LEGEND	
	OUTLET
	DUCTWORK
	FLEX DUCT
	RETURN AIR GRILLE
HW	HIGH WALL
LW	LOW WALL

METHOD 'A'
FLEX DUCT MIN LENGTH 6'
MAX LENGTH 10'

ENERGY STAR

CSA-F280-12



- INSTALLATION TO COMPLY WITH THE LATEST EDITIONS OF THE ONTARIO BUILDING CODE AND REDZONE DESIGN AND INSTALLATION MANUALS
- VENT HOT WATER TANK OR BOILER TO MANUFACTURERS SPECS & ALL LOCAL CODES
- COMBUSTION AIR INTAKE (INSTALL per ALL LOCAL CODES)
- MAXIMUM TEMPERATURE of HOT WATER SUPPLIED TO PLUMBING FIXTURES SHALL NOT EXCEED 120°F or 49°C
- CONTRACTOR SHALL SEAL SUPPLY DUCT JOINTS AND GORES WITH AN APPROVED SEALANT

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Client GREENPARK HOMES		HVACDESIGNS LTD. 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	THIS STRUCTURE MUST BE CONSTRUCTED TO MEET OR EXCEED THE PROVISIONS OF THE ONTARIO BUILDING CODE	Sheet Title THIRD FLOOR HEATING LAYOUT	
Project Name LAMBERT'S LANE HOME CORP PH 2 CALEDON, ONTARIO				Date MAR/2019	Scale 3/16" = 1'-0"
URBAN 1	2028 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.		LO#	81392