MCCALLUM HVAC DESIGN INC

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Project Information			
Building number, street name: Unit 3802- Elve A,B and C		Lot: 3802	Lot/con.
Municipality: Brampton	Postal code	Plan number/ other description	

B. Individual who reviews and takes responsibility for design activities			
Name: **Doug McCallum**		Firm: **McCallum HVAC Design Inc.**	
Street address: **2 Dewside Drive Unit 208**		Unit no.	Lot/con.
Municipality: **Brampton**	Postal code: **L6R 3Y5**	Province: **Ontario**	E-mail: info@mccallumhvac.com
Telephone number: **(905) 840-8166**	Fax number		Cell number: **(647) 229-0380**

C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 of Division C]

House	☒ HVAC – House	Building Structural
Small Buildings	Building Services	Plumbing – House
Large Buildings	Detection, Lighting and Power	Plumbing – All Buildings
Complex Buildings	Fire Protection	On-site Sewage Systems

Description of designer's work	**Model Certification**		**Project #:** RP23047
Heating and Cooling Load Calculations Air System Design Residential mechanical ventilation Design Summary Residential System Design per CAN/CSA-F280-12 Residential New Construction - Forced Air		Builder	Roval Pine Homes
		Project	Forestside Estates
		Model	Unit 3802- Elve A,B and C
		SB-12	SB 12 Performance 28

D. Declaration of Designer

I Doug McCallum declare that (choose one as appropriate):

(print name)

☒ I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4 Division C of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories.

Individual BCIN: **25896**

Firm BCIN: **102614**

I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5 of Division C, of the Building Code.

Individual BCIN:

Basis for exemption from registration:

The design work is exempt from the registration and qualification requirements of the Building Code.

Basis for exemption from registration and qualification:

I certify that:

1. The information contained in this schedule is true to the best of my knowledge.
2. I have submitted this application with the knowledge and consent of the firm.

2022-06-21

Date

Signature of Designer

NOTE:

1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d), of Division C, Article 3.2.5.1. of Division C and all other persons who are exempt from qualifications under Subsections 3.2.4 . and 3.2.5.of Division C.
2. Schedule 1 does not require to be completed a holder of a license, temporay license, or a certificate of authorization, issed by the Ontario Associstion of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited licence to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

MCCALLUM HVAC DESIGN INC

2 Dewside Drive Unit 208, Brampton, Ontario L6R 3Y5 Tel: 905-840-8166
e-mail - info@mccallumhvac.com

Heat loss and gain calculation summary sheet

CSA-F280-M12 Standard Form No. 1

These documents issued for the use of Royal Pine Homes and may not be used by any other persons without authorization. Documents for permit and/or construction are signed in red.

Project No. RP23047

Building Location

Address (Model):	Unit 3802- Elve A.B and C	Site:	Forestside Estates
Model:		Lot:	3802
City and Province:	Brampton	Postal code:	

Calculations based on

Dimensional information based on:			
Attachment:	Detached	Front facing:	East — Assumed? **Yes**
No. of Levels:	3 — Ventilated? **Included**	Air tightness:	-1 — Assumed? **Yes**
Weather location:	Brampton	Wind exposure:	**Shelterd**
HRV?	VanEE 65H	Internal shading:	**Light-translucent** — Occupants: 5
Sensible Eff. at -25C	60.0 % — Apparent Effect. at -0C 75.0 %	Units:	**Imperial**

Heating design conditions

Outdoor temp: -2.2°F Indoor temp: 72.0°F Mean soil temp: 48.2°F

Cooling design conditions

Outdoor temp: 86.0°F Indoor temp: 72.0°F Latitude: 43.68

Above grade walls

Style A:	**As per Selected OBC SB12** SB 1	**R**	22+1.
Style B:	**Existing Walls (When Applicable)**	**R**	12
Style C:			
Style D:			

Below grade walls

Style A:	**As per Selected OBC SB12** SB 1	**R**	20ci
Style B:			
Style C:			
Style D:			

Floors on soil

Style A:	**As per Selected OBC SB12** SB 12 F		
Style B:			

Exposed floors

Style A:	**As per Selected OBC SB12** SB 12	**R**	31
Style B:			

Windows

Style A:	**As per Selected OBC SB12** SB 12 I	**R**	3.57
Style B:	**Existing Windows (When Applicable)**	**R**	
Style C:			
Style D:			

Ceilings

Style A:	**As per Selected OBC SB12** SB 12 P	**R**	60.0
Style B:	**As per Selected OBC SB12** SB 12 P	**R**	31.0
Style C:			

Doors

Style A:	**As per Selected OBC SB12** SB 12	**R**	3.01
Style B:			
Style C:			

Skylights

Style A:	**As per Selected OBC SB12** SB 12	**R**	2.04
Style B:			

Attached documents: **As per Shedule 1**

Notes: **Residential New Construction - Forced Air**

Calculations performed by

Name:	**Doug McCallum**	Postal code:	**L6R 3Y5**
Company:	**McCallum HVAC Design Inc.**	Telephone:	**(905) 840-8166**
Address:	**2 Dewside Drive Unit 208**	Mobile:	**(647) 229-0380**
City:	**Brampton**	E-mail	**info@mccallumhvac.com**

MCCALLUM HVAC DESIGN INC

2 Dewside Drive Unit 208, Brampton, Ontario L6R 3Y5 Tel: 905-840-8166
e-mail - info@mccallumhvac.com

Project # RP2304

I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4 Division C of the Building Code.
I am qualified, and the firm is registered, in the appropriate classes/categories. Individual BCIN: 25896 Firm BCIN: 102614 Doug McCallum

Project: Forestside Estates **Model:** Unit 3802- Elve A,B and C

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

For systems serving one dwelling unit & conforming to the Ontario Building Code, O.geg 159/93

Location of Installation

Lot #	Plan #
Township	Brampton
Roll #	Permit #
Address	

Builder

Name	Roval Pine Homes
Address	
City	
Tel	Fax

Installing Contractor

Name	
Address	
City	
Tel	Fax

Combustion Appliances 9.32.3.1(1)

a)	X	Direct vent (sealed combustion) only
b)		Positive venting induced draft (except fireplaces)
c)		Natural draft, B-vent or induced draft fireplaces
d)		Solid fuel (including fireplaces)
e)		No combustion Appliances

Heating System

X	Forced air
	Non forced air
	Electric space heat (if over 10% of heat load)

House Type 9.32.3.1(2)

I	X	Type a) or b) appliances only, no solid fuel
II		Type I except with solid fuel (including fireplace)
III		Any type c) appliance
IV		Type I or II either electric space heat
Other		Type I, II or IV no forced air

System Design Option

1		Exhaust only / forced air system
2		HRV WITH DUCTING / forced air system
3	X	HRV simplified connection to forced air system
4		HRV full ducting/not coupled to forced air system
		Part 6 design

Total Ventilation Capacity 9.32.3.3(1)

Bsmt & Master Bdrm	2	@ 21.2	cfm	42.4	cfm
Other Bedrooms	3	@ 10.6	cfm	31.8	cfm
Bathrooms & Kitchen	5	@ 10.6	cfm	53.0	cfm
Other rooms	5	@ 10.6	cfm	53.0	cfm
		Total		180.2	

Principal Ventilation Capacity 9.32.3.4(1)

Master bedroom	1	@ 31.8	cfm	31.8	cfm
Other bedrooms	3	@ 15.9	cfm	47.7	cfm
		Total		79.5	

Principal Exhaust Fan Capacity

Make	Model	Location
VanEE	65H	Base

129 cfm 64 Sones

Heat Recovery Ventilator

Make	VanEE		
Model	65H		
	129 cfm high	64	cfm low
Sensible efficiency @ -25 deg C		60	%
Sensible efficiency @ 0 deg C		75	%

Supplemental Ventilation Capacity

Total ventilation capacity	180.2
Less principal exhaust capacity	79.5
REQUIRED supplemental vent. Capacity	100.7 cfm

Supplemental Fans 9.32.3.5.

Location	cfm	Model	Sones
ENSUITE	50	770	2.5
POWDER	50	770	2.5
		None	
		None	

all fans HVI listed Make Broan or Equiv.

Designer Certification

I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.

Name	Doug McCallum
Signature	
HRAI #	BCIN # 25896
Date	2022-06-21

MCCALLUM HVAC DESIGN INC
2 Dewside Drive Unit 208, Brampton, Ontario L6R 3Y5 Tel: 905-840-8166
e-mail - info@mccallumhvac.com

Project # RP23047

Project: Forestside Estates **Model:** Unit 3802- Elve A,B and C

Air Leakage Calculations

Air Leakage Calculations

Building Air Leakage Heat Loss				
B	LRairh	Vb	HL^T	HLleak
0.018	0.330	38292.0	74.2	16871.91

Building Air Leakage Heat Gain				
B	LRairh	Vb	HG^T	HG Leak
0.018	0.1149682	38292	14.00	1109.40

Air Leakage Heat Loss/Gain Multiplier Table (Section 11)				
Level	Level Factor (LF)	Building Air Leakage	Level Conductive Heat Loss (HLclevel)	Air Leakage Heat Loss Multiplier
1	0.5	16872	5696	1.48103
2	0.3		11491	0.44048
3	0.2		12743	0.26480
4	0		0	0.00000

Levels			
1	2	3	4
(LF)	(LF)	(LF)	(LF)
1.0	0.6	0.5	0.4
	0.4	0.3	0.3
		0.2	0.2
			0.1

		Air Leakage Heat Gain Multiplier
HG LEAK	1109.40	0.07339
BUILDING CONDUCTIVE HEAT GAIN	15117.00	

Levels this Dwelling
3

Ventilation Calculations

Vent

Ventilation Heat Loss

Ventilation Heat Loss				
C	PVC	HL^T	(1-E) HRV	HLbvent
1.08	79.5	74.20	0.250	1592.70

Ventilation Heat Gain

Ventilation Heat Gain			
C	PVC	HG^T	HGbvent
1.08	79.5	14.00	1202.040

Case 1

Ventilation Heat Loss (Exhaust only Systems)

Case 1 - Exhaust Only				
Level	LF	HLbvent	LVL Cond. HL	Multiplier
1	0.5	1593	5696	0.14
2	0.3		11491	0.04
3	0.2		12743	0.02
4	0		0	0

Ventilation Heat Gain (Exhaust Only Systems)

Case 1 - Exhaust Only		Multiplier
HGbvent	1202.040	0.08
Building Cond. HG	15117.00	

Case 2

Ventilation Heat Loss (Direct Ducted Systems)

			Multiplier
C	HL^T	(1-E) HRV	20.03
1.08	74.20	0.25	

Ventilation Heat Gain (Direct Ducted Systems)

		Multiplier
C	HG^T	15.12
1.08	14.00	

Case 3

Ventilation Heat Loss (Forced Air Systems)

	HLbvent	Multiplier
Total Ventilation Load	1593	0.05

Ventilation Heat Gain (Forced Air Systems)

		Vent Heat Gain	Multiplier
HGbvent	HG*1.3	1202	0.08
1202.040	1		

Envelope Air Leakage Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description

Province:	Brampton
Region:	ON
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):	6.40

Building Configuration

Type:	Detached
Number of Stories:	Two
Foundation:	Full
House Volume (m^3):	1084

Air Leakage/Ventilation

Air Tightness Type:	Custom - DBT values	
Custom BDT Data:	ELA @ 10 Pa.	1371.908
	3	ACH @ 50 Pa
Mechanical Ventilation (L/s):	Total Supply:	Total Exhaust:
	0	0

Flue Size

Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0

Envelope Air Leakage Rate

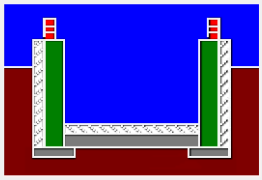
Heating Air Leakage Rate (ACH/H): 0.330

Cooling Air Leakage Rate (ACH/H): 0.115

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description	
Province:	Brampton
Region:	ON
Site Description	
Soil Conductivity:	Normal conductivity: dry sand, loam, clay
Water Table:	Deep (>10 m, >33 Ft)
Foundation Dimensions	
Floor Length (m):	21.9
Floor Width (m):	5.21
Exposed Perimeter (m):	54.2
Wall Height (m):	3.05
Depth Below Grade (m):	2.44
Window Area (m^2):	1.58
Door Area (m^2):	2
Radiant Slab	
Heated Fraction of the Slab:	**0**
Fluid Temperature (°C):	**23**
Design Months	
Heating Month	**1**
Foundation Loads	
Heating Load (Watts):	**1414**



Insulation Configuration

BCIN_1

SYSTEM A

DESIGN LOAD SPECIFICATIONS		AIR DISTRIBUTION AND PRESSURE	
LEVEL 1 NET LOAD	14435 btu/h	**EQUIPMENT EXTERNAL STATIC PRESSURE**	0.500"W.C.
LEVEL 2 NET LOAD	17165 btu/h	**ADDITIONAL EQUIPMENT PRESSURE DROP**	0.250"W.C.
LEVEL 3 NET LOAD	17261 btu/h	**AVAILABLE DESIGN PRESSURE**	0.250"W.C.
LEVEL 4 NET LOAD	0 btu/h	**RETURN BRANCH LONGEST EFFECTIVE LENGTH**	300ft
SYSTEM HEATLOSS	48861 btu/h	**R/A PLENUM PRESSURE**	0.120"W.C.
SYSTEM HEATGAIN	31153 btu/h	**S/A PLENUM PRESSURE**	0.130"W.C.
BUILDING VOLUME Vb	38292.00 ft3	**HEATING AIR FLOW PROPORTIONING FACTOR**	0.0234 cfm/btuh
VENTILATION LOAD	1594.00 btu/h	**COOLING AIR FLOW PROPORTIONING FACTOR**	0.0368 cfm/btuh
VENTILATION PVC	79.50 cfm	**R/A TEMP. 70°F**	S/A TEMP. 121.75°F DIFFUSER LOSS 0.01°"w.c.

FURNACE/AIR HANDLER DATA				BLOWER DATA	
MAKE	LENNOX			HEATING CHECK	1145.00 CFM
MODEL	EL296UH070XE36B			SELECTED CFM	1145.00 CFM
HIGH INPUT btu/h	66000	LOW INPUT btu/h	0	COOLING CHECK	1147.00 CFM
HIGH OUTPUT btu/h	64000	LOW OUTPUT btu/h	0	COOLING AIR FLOW RATE	1145.00 CFM
E.S.P.	0.50			BLOWER TYPE ECM (BRUSHLESS DC OBC 12.3.1.5.(2))	
WATER TEMP.				A/C UNIT DATA	
AFUE	96.97%			MAKER	3.0 TON
AUX. HEAT	0			CONDENSER	3.0 TON
SB-12 PACKAGE	SB 12 Performance 28			COIL	3.0 TON
TEMP. RISE	51.75°F				

SUPPLY BRANCH AND GRILL SIZING

OUTLET #	ROOM USE	BTU/H OUTLET	HEATING AIR FLOW RATE CFM	COOLING AIR FLOW RATE CFM	DUCT DESIGN PRESSURE	ACTUAL DUCT LENGTH	EQUIVALENT LENGTH	TOTAL EFFECTIVE LENGTH	ADJUSTED PRESSURE	DUCT SIZE ROUND	OUTLET SIZE	TRUNK
1	PRI. BED	1406	33	52	0.13	48	155	203	0.06	6.0	4x10	B1
2	PRI. BED	1406	33	52	0.13	36	145	181	0.07	6.0	4x10	A1
3	MB. ENS	1657	39	49	0.13	53	155	208	0.06	5.0	4x10	B1
4	MB.ENS .WC	494	12	8	0.13	28	150	178	0.07	5	4x10	E1
5	BED 2 WIC	352	8	4	0.13	23	140	163	0.07	5	4x10	E1
7	SHRD. BATH	924	22	12	0.13	52	165	217	0.06	5	4x10	D1
10	COMP NOOK	1722	40	55	0.13	54	165	219	0.05	6.0	4x10	C1
11	COMP NOOK	1722	40	55	0.13	58	165	223	0.05	6.0	4x10	C1
13	ENS 2	588	14	14	0.13	22	120	142	0.08	5	4x10	E1
14	FAM ROOM	1921	45	65	0.13	32	155	187	0.06	6.0	4x10	B1
15	FAM ROOM	1921	45	65	0.13	38	155	193	0.06	6.0	4x10	A1
19	MUD/ WIC	1844	43	13	0.13	16	140	156	0.08	5.0	4x10	E1
16	KIT/ BREAK	2004	47	76	0.13	37	135	172	0.07	6.0	4x10	A1
17	KIT/ BREAK	2004	47	76	0.13	48	165	213	0.06	6.0	4x10	A1
18	LAUD/ PWD	478	11	40	0.13	12	130	142	0.08	5.0	4x10	E1
20	FOYER	2318	54	23	0.13	48	165	213	0.06	5.0	4x10	C1
21	FOYER	2318	54	23	0.13	58	155	213	0.06	5.0	4x10	C1
22	DINING	2357	55	72	0.13	33	175	208	0.06	6.0	4x10	D1
23	UNF BSMT	3609	85	40	0.13	37	135	172	0.07	6.0	4x10	B1
24	UNF BSMT	3609	85	40	0.13	38	145	183	0.07	6.0	4x10	B1
25	UNF BSMT	3609	85	40	0.13	33	155	188	0.06	6.0	4x10	D1
26	UNF BSMT	3609	85	40	0.13	45	175	220	0.05	6.0	4x10	C1
12	BED 4	1440	34	47	0.13	40	185	225	0.05	6.0	4x10	D1

8	BED 3	2193	51	77	0.13	56	155	211	0.06	6.0	4x10	D1
9	BED 3	2193	51	77	0.13	50	145	195	0.06	6.0	4x10	D1
6	BED 2	1166	27	32	0.13	10	120	130	0.09	6.0	4x10	PL

RETURN BRANCH AND GRILL SIZING

R/A INLET #	INLET AIR VOLUME CFM	DUCT DESIGN PRESSURE	ACTUAL DUCT LENGTH	EQUIVALENT LENGTH	TOTAL EFFECTIVE LENGTH	ADJUSTED PRESSURE	DUCT SIZE ROUND	INLET SIZE	TRUNK
1R	120	0.12	41	130	171	0.06	7	14x8	Z1
2R	140	0.12	24	160	184	0.05	8	14x8	Z1
3R	110	0.12	50	170	220	0.05	7	14x8	X1
4R	150	0.12	33	180	213	0.05	8	14x8	Y1
5R	360	0.12	18	130	148	0.07	10.5	30x8	Y1
6R	120	0.12	23	140	163	0.06	7	FLC	X1
7R	145	0.12	31	170	201	0.05	8	14x8	Y1

RETURN TRUNK DUCT SIZING

TRUNK	CFM	PRESSURE	ROUND	RECT. SIZE	SIZE ALTERNATE
DROP	1145	0.05		0	
Z1	1145	0.05	17	26x10	26x10
Y1	885	0.05	15.5	28x8	22x10
X1	230	0.05	9.5	10x8	14x6

SUPPLY TRUNK DUCT SIZING

TRUNK	CFM	PRESSURE	ROUND	RECT. SIZE	SIZE ALTERNATE
A1	172	0.06	8	8x8	10x6
B1	459	0.06	11.5	14x8	20x6
C1	273	0.05	10	12x8	16x6
D1	571	0.05	13	18x8	14x10
E1	1118	0.05	17	26x10	26x10
PL	27	0.09	4		

HEATLOSS/GAIN CALCULATIONS CSA-F280-12

ADDRESS/MODEL: Unit 3802- Elve A,B and C
PROJECT #: RP23047
COMPLIANCE PACKAGE: SB 12

CLIENT: Royal Pine Homes
GTA: 3072
LOT: 3802
SITE: Forestside Estates

MCCALLUM HVAC DESIGN INC

WEATHER DATA [Brampton] [43.68] [-2.20] [86.00] [51.80] [48.20] [74.20] [14.00]

LEVEL 1

UNF BSMT	TOTALS H.L.: 14435 btuh	H.G.: 4326 btuh	AREA: 1229 ft2	Above Grade: 2	GROSS EXP. WALL	NEW 356 ft	EXIST 0 ft

	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT			
	NEW: 178 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	21.12		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	3.5	0 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh
GAIN	0.7	211 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 21.0 ft2		EXIST: 0.0 ft2		NEW: 7.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 7.0 ft2		EXIST: 0.0 ft2		NEW: 3 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	518 btuh	24.7	0 btuh	20.8	145 btuh	37.3	0 btuh	0	0	0	0	20.8	145 btuh	37.3	0 btuh	20.8	62 btuh	37.3	0 btuh
GAIN	4.7	98 btuh	4.7	0 btuh	28.2	197 btuh	14.9	0 btuh	0	0	0	0	21.7	152 btuh	14.9	0 btuh	11.7	35 btuh	14.9	0 btuh

FUND. CONDUCTIVE HEATLOSS		4825 btuh	AIR LEAKAGE NEW		AIR LEAKAGE EXIST		VENTILATION CASE 3		H.G. PEOPLE		APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE	LOSS	5696 btuh	LOSS	1.4810	8436 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	303.1 btuh	239	5057	LOSS	0%	0 btuh
TOTAL CONDUCTIVE	GAIN	693 btuh	GAIN	0.0734	51 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	55 btuh	0	0 btuh	50%	2529 btuh	GAIN	0%	0 btuh

LEVEL 2

FAM ROOM	TOTALS H.L.: 3842 btuh	H.G.: 3536 btuh	AREA: 287 ft2	C.Height: 10	GROSS EXP. WALL	NEW 370 ft	EXIST 0 ft

	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT			
	NEW: 37 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	1221 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh
GAIN	0.8	230 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 43.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 22.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	894 btuh	37.3	0 btuh	0	0	0	0	20.8	457 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	1212 btuh	14.9	0 btuh	0	0	0	0	21.7	478 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh

FUND. CONDUCTIVE HEATLOSS		0 btuh	AIR LEAKAGE NEW		AIR LEAKAGE EXIST		VENTILATION CASE 3		H.G. PEOPLE		APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE	LOSS	2572 btuh	LOSS	0.4405	1133 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	136.9 btuh	239	5057	LOSS	0%	0 btuh
TOTAL CONDUCTIVE	GAIN	1920 btuh	GAIN	0.0734	141 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	153 btuh	0	0 btuh	10%	506 btuh	GAIN	0%	0 btuh

MUD/WIC	TOTALS H.L.: 1844 btuh	H.G.: 350 btuh	AREA: 73 ft2	C.Height: 10	GROSS EXP. WALL	NEW 200 ft	EXIST 0 ft

	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT			
	NEW: 20 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	717 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh
GAIN	0.8	135 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 21.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	518 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh
GAIN	4.7	98 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh

FUND. CONDUCTIVE HEATLOSS		0 btuh	AIR LEAKAGE NEW		AIR LEAKAGE EXIST		VENTILATION CASE 3		H.G. PEOPLE		APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE	LOSS	1234 btuh	LOSS	0.4405	544 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	65.7 btuh	239	5057	LOSS	0%	0 btuh
TOTAL CONDUCTIVE	GAIN	233 btuh	GAIN	0.0734	17 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	19 btuh	0	0 btuh	0%	0 btuh	GAIN	0%	0 btuh

KIT/BREAK	TOTALS H.L.: 4008 btuh	H.G.: 4139 btuh	AREA: 308 ft2	C.Height: 10	GROSS EXP. WALL	NEW 360 ft	EXIST 0 ft

	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT			
	NEW: 36 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	1145 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh
GAIN	0.8	216 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 62.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 12 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	1289 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	249 btuh	37.3	0 btuh
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	1747 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	141 btuh	14.9	0 btuh

FUND. CONDUCTIVE HEATLOSS		0 btuh	AIR LEAKAGE NEW		AIR LEAKAGE EXIST		VENTILATION CASE 3		H.G. PEOPLE		APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE	LOSS	2683 btuh	LOSS	0.4405	1182 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	142.8 btuh	239	5057	LOSS	0%	0 btuh
TOTAL CONDUCTIVE	GAIN	2104 btuh	GAIN	0.0734	154 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	167 btuh	0	0 btuh	15%	759 btuh	GAIN	0%	0 btuh

LAUD/PWD	TOTALS H.L.: 478 btuh	H.G.: 1076 btuh	AREA: 102 ft2	C.Height: 10	GROSS EXP. WALL	NEW 80 ft	EXIST 0 ft

	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT			
	NEW: 8 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	

LOSS	4.0	320 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh
GAIN	0.8	60 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh
FUND. CONDUCTIVE HEATLOSS				0 btuh	AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3			H.G. PEOPLE		APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE			LOSS	320 btuh	LOSS	0.4405	141 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	17.0 btuh	239		5057		LOSS	0%	0 btuh
TOTAL CONDUCTIVE			GAIN	60 btuh	GAIN	0.0734	4 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	5 btuh	0	0 btuh	15%	759 btuh	GAIN	0%	0 btuh

FOYER	TOTALS H.L.: 4636 btuh			H.G.: 1240 btuh					AREA: 207 ft2		C.Height: 10		GROSS EXP. WALL		NEW 500 ft		EXIST 0 ft			
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT			
	NEW: 50 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	1778 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh
GAIN	0.8	335 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 42.0 ft2		EXIST: 0.0 ft2		NEW: 8.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 6 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	1035 btuh	24.7	0 btuh	20.8	166 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	125 btuh	37.3	0 btuh
GAIN	4.7	195 btuh	4.7	0 btuh	28.2	225 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	70 btuh	14.9	0 btuh
FUND. CONDUCTIVE HEATLOSS				0 btuh	AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3			H.G. PEOPLE		APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE			LOSS	3104 btuh	LOSS	0.4405	1367 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	165.2 btuh	239		5057		LOSS	0%	0 btuh
TOTAL CONDUCTIVE			GAIN	827 btuh	GAIN	0.0734	61 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	66 btuh	0	0 btuh	0%	0 btuh	GAIN	0%	0 btuh

DINING	TOTALS H.L.: 2357 btuh			H.G.: 1958 btuh					AREA: 248 ft2		C.Height: 10		GROSS EXP. WALL		NEW 260 ft		EXIST 0 ft			
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT			
	NEW: 26 ft		EXIST: 0 ft		NEW: 0		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	913 btuh	8.7	0 btuh	1.3	0 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh
GAIN	0.8	172 btuh	1.6	0 btuh	0.7	0 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 32.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	0 btuh	37.3	0 btuh	0	0	0	0	20.8	665 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	0 btuh	14.9	0 btuh	0	0	0	0	21.7	695 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh
FUND. CONDUCTIVE HEATLOSS				0 btuh	AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3			H.G. PEOPLE		APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE			LOSS	1578 btuh	LOSS	0.4405	695 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	84.0 btuh	239		5057		LOSS	0%	0 btuh
TOTAL CONDUCTIVE			GAIN	867 btuh	GAIN	0.0734	64 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	69 btuh	0	0 btuh	10%	506 btuh	GAIN	0%	0 btuh

LEVEL 3

PRI. BED	TOTALS H.L.: 2812 btuh			H.G.: 2846 btuh					AREA: 350 ft2		C.Height: 8		GROSS EXP. WALL		NEW 264 ft		EXIST 0 ft			
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT			
	NEW: 33 ft		EXIST: 0 ft		NEW: 350 ft2		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	905 btuh	8.7	0 btuh	1.3	439 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh
GAIN	0.8	171 btuh	1.6	0 btuh	0.7	242 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 38.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	790 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	0 btuh	37.3	0 btuh
GAIN	4.7	0 btuh	4.7	0 btuh	28.2	1071 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	0 btuh	14.9	0 btuh
FUND. CONDUCTIVE HEATLOSS				0 btuh	AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3			H.G. PEOPLE		APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE			LOSS	2133 btuh	LOSS	0.2648	565 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	113.5 btuh	239		5057		LOSS	0%	0 btuh
TOTAL CONDUCTIVE			GAIN	1484 btuh	GAIN	0.0734	109 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	118 btuh	2	478 btuh	0%	0 btuh	GAIN	0%	0 btuh

MB. ENS	TOTALS H.L.: 1657 btuh			H.G.: 1331 btuh					AREA: 102 ft2		C.Height: 8		GROSS EXP. WALL		NEW 152 ft		EXIST 0 ft			
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT			
	NEW: 19 ft		EXIST: 0 ft		NEW: 102 ft2		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	485 btuh	8.7	0 btuh	1.3	128 btuh	3.2	0 btuh	2.7	0 btuh	3.4	0 btuh	2.5	0 btuh	3.4	0 btuh	36.4	0 btuh	37	0 btuh
GAIN	0.8	91 btuh	1.6	0 btuh	0.7	71 btuh	1.8	0 btuh	1.5	0 btuh	1.9	0 btuh	0.3	0 btuh	0.4	0 btuh	89.7	0 btuh	14.7	0 btuh
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 22.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 9 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	0 btuh	24.7	0 btuh	20.8	457 btuh	37.3	0 btuh	0	0	0	0	20.8	0 btuh	37.3	0 btuh	20.8	187 btuh	37.3	0 btuh

HEATLOSS/GAIN CALCULATIONS CSA-F280-12

ADDRESS/MODEL: Unit 3802- Elve A,B and C
PROJECT #: RP23047
COMPLIANCE PACKAGE: SB 12

CLIENT: Royal Pine Homes
GTA: 3072
LOT: 3802
SITE: Forestside Estates

MCCALLUM HVAC DESIGN INC

GAIN	4.7	0 btuh	4.7	0 btuh	28.2	620 btuh	14.9	0 btuh	0	0	0	0	21.7	0 btuh	14.9	0 btuh	11.7	106 btuh	14.9	0 btuh
FUND. CONDUCTIVE HEATLOSS				0 btuh	AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3		H.G. PEOPLE			APP. LOAD		DUCT PIPE L.		
TOTAL CONDUCTIVE			LOSS	1257 btuh	LOSS	0.2648	333 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	66.9 btuh	239		5057		LOSS	0%	0 btuh
TOTAL CONDUCTIVE			GAIN	888 btuh	GAIN	0.0734	65 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	71 btuh	0	0 btuh	0%	0 btuh	GAIN	0%	0 btuh

MB.ENS.WC	TOTALS H.L.: 494 btuh			H.G.: 228 btuh	AREA: 25 ft2		C.Height: 8		GROSS EXP. WALL		NEW 48 ft		EXIST 0 ft	
	EXPOSED WALLS		EXPOSED CEILING W/ATTIC		EXPOSED CEILING NO ATTIC		EXPOSED FLOORS		SKYLIGHT					
	NEW: 6 ft	EXIST: 0 ft	NEW: 25 ft2	EXIST: 0	NEW: 0	EXIST: 0	NEW: 0 ft2	EXIST: 0 ft2	NEW: 0.0 ft2	EXIST: 0.0 ft2				
Eff. R-V	18.53	8.50	59.22	22.86	27.65	22.05	29.80	22.05	2.04	2.03				
LOSS	4.0 156 btuh	8.7 0 btuh	1.3 31 btuh	3.2 0 btuh	2.7 0 btuh	3.4 0 btuh	2.5 0 btuh	3.4 0 btuh	36.4 0 btuh	37 0 btuh				
GAIN	0.8 29 btuh	1.6 0 btuh	0.7 17 btuh	1.8 0 btuh	1.5 0 btuh	1.9 0 btuh	0.3 0 btuh	0.4 0 btuh	89.7 0 btuh	14.7 0 btuh				
	DOORS		EAST/WEST WINDOWS		SE/SW WINDOWS		SOUTH WINDOWS		NORTH WINDOWS					
	NEW: 0.0 ft2	EXIST: 0.0 ft2	NEW: 0.0 ft2	EXIST: 0.0 ft2	NEW:	EXIST:	NEW: 0.0 ft2	EXIST: 0.0 ft2	NEW: 9 ft2	EXIST: 0 ft2				
Eff. R-V	3.01	3.01	3.57	1.99	0	0	3.57	1.99	3.57	1.99				
LOSS	24.7 0 btuh	24.7 0 btuh	20.8 0 btuh	37.3 0 btuh	0 0	0 0	20.8 0 btuh	37.3 0 btuh	20.8 187 btuh	37.3 0 btuh				
GAIN	4.7 0 btuh	4.7 0 btuh	28.2 0 btuh	14.9 0 btuh	0 0	0 0	21.7 0 btuh	14.9 0 btuh	11.7 106 btuh	14.9 0 btuh				
FUND. CONDUCTIVE HEATLOSS		0 btuh	AIR LEAKAGE NEW		AIR LEAKAGE EXIST		VENTILATION CASE 3		H.G. PEOPLE		APP. LOAD		DUCT PIPE L.	
TOTAL CONDUCTIVE		LOSS 375 btuh	LOSS 0.2648	99 btuh	LOSS 0.0000	0 btuh	LOSS 0.1	20.0 btuh	239		5057		LOSS 0%	0 btuh
TOTAL CONDUCTIVE		GAIN 152 btuh	GAIN 0.0734	11 btuh	GAIN 0.0000	0 btuh	GAIN 0.08	12 btuh	0	0 btuh	0%	0 btuh	GAIN 0%	0 btuh

BED 2 WIC	TOTALS H.L.: 352 btuh			H.G.: 99 btuh	AREA: 34 ft2		C.Height: 8		GROSS EXP. WALL		NEW 56 ft		EXIST 0 ft	
	EXPOSED WALLS		EXPOSED CEILING W/ATTIC		EXPOSED CEILING NO ATTIC		EXPOSED FLOORS		SKYLIGHT					
	NEW: 7 ft	EXIST: 0 ft	NEW: 34 ft2	EXIST: 0	NEW: 0	EXIST: 0	NEW: 0 ft2	EXIST: 0 ft2	NEW: 0.0 ft2	EXIST: 0.0 ft2				
Eff. R-V	18.53	8.50	59.22	22.86	27.65	22.05	29.80	22.05	2.04	2.03				
LOSS	4.0 224 btuh	8.7 0 btuh	1.3 43 btuh	3.2 0 btuh	2.7 0 btuh	3.4 0 btuh	2.5 0 btuh	3.4 0 btuh	36.4 0 btuh	37 0 btuh				
GAIN	0.8 42 btuh	1.6 0 btuh	0.7 24 btuh	1.8 0 btuh	1.5 0 btuh	1.9 0 btuh	0.3 0 btuh	0.4 0 btuh	89.7 0 btuh	14.7 0 btuh				
	DOORS		EAST/WEST WINDOWS		SE/SW WINDOWS		SOUTH WINDOWS		NORTH WINDOWS					
	NEW: 0.0 ft2	EXIST: 0.0 ft2	NEW: 0.0 ft2	EXIST: 0.0 ft2	NEW:	EXIST:	NEW: 0.0 ft2	EXIST: 0.0 ft2	NEW: 0 ft2	EXIST: 0 ft2				
Eff. R-V	3.01	3.01	3.57	1.99	0	0	3.57	1.99	3.57	1.99				
LOSS	24.7 0 btuh	24.7 0 btuh	20.8 0 btuh	37.3 0 btuh	0 0	0 0	20.8 0 btuh	37.3 0 btuh	20.8 0 btuh	37.3 0 btuh				
GAIN	4.7 0 btuh	4.7 0 btuh	28.2 0 btuh	14.9 0 btuh	0 0	0 0	21.7 0 btuh	14.9 0 btuh	11.7 0 btuh	14.9 0 btuh				
FUND. CONDUCTIVE HEATLOSS		0 btuh	AIR LEAKAGE NEW		AIR LEAKAGE EXIST		VENTILATION CASE 3		H.G. PEOPLE		APP. LOAD		DUCT PIPE L.	
TOTAL CONDUCTIVE		LOSS 267 btuh	LOSS 0.2648	71 btuh	LOSS 0.0000	0 btuh	LOSS 0.1	14.2 btuh	239		5057		LOSS 0%	0 btuh
TOTAL CONDUCTIVE		GAIN 66 btuh	GAIN 0.0734	5 btuh	GAIN 0.0000	0 btuh	GAIN 0.08	5 btuh	0	0 btuh	0%	0 btuh	GAIN 0%	0 btuh

SHRD. BATH	TOTALS H.L.: 924 btuh			H.G.: 335 btuh	AREA: 82 ft2		C.Height: 8		GROSS EXP. WALL		NEW 56 ft		EXIST 0 ft	
	EXPOSED WALLS		EXPOSED CEILING W/ATTIC		EXPOSED CEILING NO ATTIC		EXPOSED FLOORS		SKYLIGHT					
	NEW: 7 ft	EXIST: 0 ft	NEW: 82 ft2	EXIST: 0	NEW: 0	EXIST: 0	NEW: 72 ft2	EXIST: 0 ft2	NEW: 0.0 ft2	EXIST: 0.0 ft2				
Eff. R-V	18.53	8.50	59.22	22.86	27.65	22.05	29.80	22.05	2.04	2.03				
LOSS	4.0 192 btuh	8.7 0 btuh	1.3 103 btuh	3.2 0 btuh	2.7 0 btuh	3.4 0 btuh	2.5 179 btuh	3.4 0 btuh	36.4 0 btuh	37 0 btuh				
GAIN	0.8 36 btuh	1.6 0 btuh	0.7 57 btuh	1.8 0 btuh	1.5 0 btuh	1.9 0 btuh	0.3 19 btuh	0.4 0 btuh	89.7 0 btuh	14.7 0 btuh				
	DOORS		EAST/WEST WINDOWS		SE/SW WINDOWS		SOUTH WINDOWS		NORTH WINDOWS					
	NEW: 0.0 ft2	EXIST: 0.0 ft2	NEW: 0.0 ft2	EXIST: 0.0 ft2	NEW:	EXIST:	NEW: 0.0 ft2	EXIST: 0.0 ft2	NEW: 8 ft2	EXIST: 0 ft2				
Eff. R-V	3.01	3.01	3.57	1.99	0	0	3.57	1.99	3.57	1.99				
LOSS	24.7 0 btuh	24.7 0 btuh	20.8 0 btuh	37.3 0 btuh	0 0	0 0	20.8 0 btuh	37.3 0 btuh	20.8 166 btuh	37.3 0 btuh				
GAIN	4.7 0 btuh	4.7 0 btuh	28.2 0 btuh	14.9 0 btuh	0 0	0 0	21.7 0 btuh	14.9 0 btuh	11.7 94 btuh	14.9 0 btuh				
FUND. CONDUCTIVE HEATLOSS		0 btuh	AIR LEAKAGE NEW		AIR LEAKAGE EXIST		VENTILATION CASE 3		H.G. PEOPLE		APP. LOAD		DUCT PIPE L.	
TOTAL CONDUCTIVE		LOSS 640 btuh	LOSS 0.2648	169 btuh	LOSS 0.0000	0 btuh	LOSS 0.1	34.1 btuh	239		5057		LOSS 10%	81 btuh
TOTAL CONDUCTIVE		GAIN 206 btuh	GAIN 0.0734	15 btuh	GAIN 0.0000	0 btuh	GAIN 0.08	16 btuh	0	0 btuh	0%	0 btuh	GAIN 10%	21 btuh

COMP NOOK	TOTALS H.L.: 3443 btuh			H.G.: 2999 btuh	AREA: 249 ft2		C.Height: 8		GROSS EXP. WALL		NEW 280 ft		EXIST 0 ft	
	EXPOSED WALLS		EXPOSED CEILING W/ATTIC		EXPOSED CEILING NO ATTIC		EXPOSED FLOORS		SKYLIGHT					
	NEW: 35 ft	EXIST: 0 ft	NEW: 249 ft2	EXIST: 0	NEW: 0	EXIST: 0	NEW: 42 ft2	EXIST: 0 ft2	NEW: 0.0 ft2	EXIST: 0.0 ft2				
Eff. R-V	18.53	8.50	59.22	22.86	27.65	22.05	29.80	22.05	2.04	2.03				
LOSS	4.0 865 btuh	8.7 0 btuh	1.3 312 btuh	3.2 0 btuh	2.7 0 btuh	3.4 0 btuh	2.5 105 btuh	3.4 0 btuh	36.4 0 btuh	37 0 btuh				
GAIN	0.8 163 btuh	1.6 0 btuh	0.7 172 btuh	1.8 0 btuh	1.5 0 btuh	1.9 0 btuh	0.3 11 btuh	0.4 0 btuh	89.7 0 btuh	14.7 0 btuh				
	DOORS		EAST/WEST WINDOWS		SE/SW WINDOWS		SOUTH WINDOWS		NORTH WINDOWS					
	NEW: 0.0 ft2	EXIST: 0.0 ft2	NEW: 41.0 ft2	EXIST: 0.0 ft2	NEW:	EXIST:	NEW: 23.0 ft2	EXIST: 0.0 ft2	NEW: 0 ft2	EXIST: 0 ft2				
Eff. R-V	3.01	3.01	3.57	1.99	0	0	3.57	1.99	3.57	1.99				
LOSS	24.7 0 btuh	24.7 0 btuh	20.8 852 btuh	37.3 0 btuh	0 0	0 0	20.8 478 btuh	37.3 0 btuh	20.8 0 btuh	37.3 0 btuh				
GAIN	4.7 0 btuh	4.7 0 btuh	28.2 1155 btuh	14.9 0 btuh	0 0	0 0	21.7 499 btuh	14.9 0 btuh	11.7 0 btuh	14.9 0 btuh				
FUND. CONDUCTIVE HEATLOSS		0 btuh	AIR LEAKAGE NEW		AIR LEAKAGE EXIST		VENTILATION CASE 3		H.G. PEOPLE		APP. LOAD		DUCT PIPE L.	
TOTAL CONDUCTIVE		LOSS 2612 btuh	LOSS 0.2648	692 btuh	LOSS 0.0000	0 btuh	LOSS 0.1	139.0 btuh	239		5057		LOSS 0%	0 btuh
TOTAL CONDUCTIVE		GAIN 2001 btuh	GAIN 0.0734	147 btuh	GAIN 0.0000	0 btuh	GAIN 0.08	159 btuh	0	0 btuh	0%	0 btuh	GAIN 0%	0 btuh

ENS 2	TOTALS H.L.: 588 btuh			H.G.: 369 btuh	AREA: 44 ft2		C.Height: 8		GROSS EXP. WALL		NEW 64 ft		EXIST 0 ft	
	EXPOSED WALLS		EXPOSED CEILING W/ATTIC		EXPOSED CEILING NO ATTIC		EXPOSED FLOORS		SKYLIGHT					
	NEW: 8 ft	EXIST: 0 ft	NEW: 44 ft2	EXIST: 0	NEW: 0	EXIST: 0	NEW: 0 ft2	EXIST: 0 ft2	NEW: 0.0 ft2	EXIST: 0.0 ft2				

HEATLOSS/GAIN CALCULATIONS CSA-F280-12

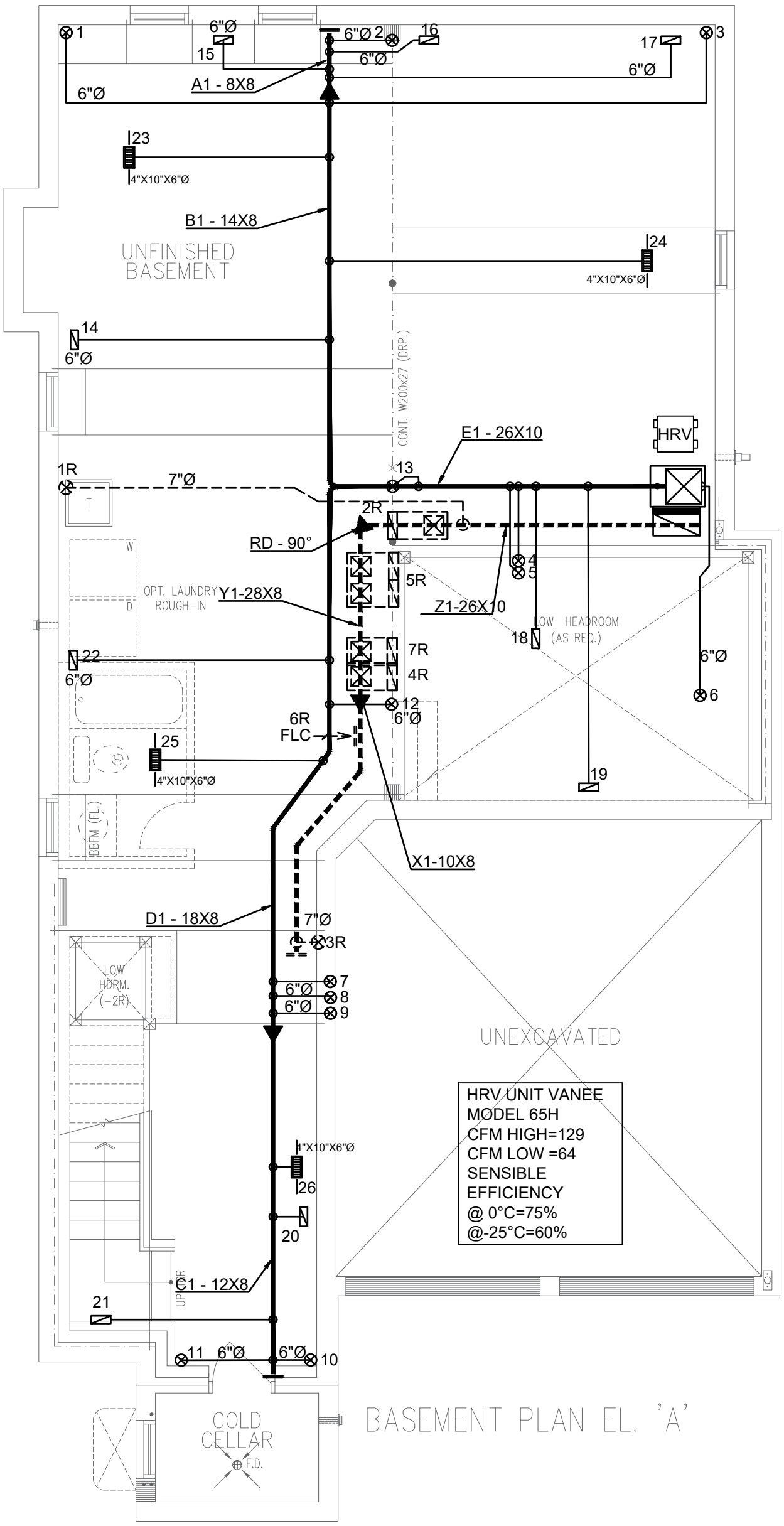
ADDRESS/MODEL: Unit 3802- Elve A,B and C
PROJECT #: RP23047
COMPLIANCE PACKAGE: SB 12

CLIENT: Royal Pine Homes
GTA: 3072
LOT: 3802
SITE: Forestside Estates

MCCALLUM HVAC DESIGN INC

Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	*224 btuh*	8.7	*0 btuh*	1.3	*55 btuh*	3.2	*0 btuh*	2.7	*0 btuh*	3.4	*0 btuh*	2.5	*0 btuh*	3.4	*0 btuh*	36.4	*0 btuh*	37	*0 btuh*
GAIN	0.8	*42 btuh*	1.6	*0 btuh*	0.7	*30 btuh*	1.8	*0 btuh*	1.5	*0 btuh*	1.9	*0 btuh*	0.3	*0 btuh*	0.4	*0 btuh*	89.7	*0 btuh*	14.7	*0 btuh*
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 8.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	*0 btuh*	24.7	*0 btuh*	20.8	*0 btuh*	37.3	*0 btuh*	0	0	0	0	20.8	*166 btuh*	37.3	*0 btuh*	20.8	*0 btuh*	37.3	*0 btuh*
GAIN	4.7	*0 btuh*	4.7	*0 btuh*	28.2	*0 btuh*	14.9	*0 btuh*	0	0	0	0	21.7	*174 btuh*	14.9	*0 btuh*	11.7	*0 btuh*	14.9	*0 btuh*
FUND. CONDUCTIVE HEATLOSS				0 btuh	AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3		H.G. PEOPLE		APP. LOAD		DUCT PIPE L.			
TOTAL CONDUCTIVE			LOSS	446 btuh	LOSS	0.2648	118 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	23.7 btuh	239		5057		LOSS	0%	0 btuh
TOTAL CONDUCTIVE			GAIN	246 btuh	GAIN	0.0734	18 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	20 btuh	0	0 btuh	0%	0 btuh	GAIN	0%	0 btuh
BED 4			***TOTALS H.L.: 1440 btuh***				***H.G.: 1270 btuh***		AREA: 248 ft2		C.Height: 8		GROSS EXP. WALL		*NEW 120 ft*		*EXIST 0 ft*			
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT			
	NEW: 15 ft		EXIST: 0 ft		NEW: 248 ft2		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	*408 btuh*	8.7	*0 btuh*	1.3	*311 btuh*	3.2	*0 btuh*	2.7	*0 btuh*	3.4	*0 btuh*	2.5	*0 btuh*	3.4	*0 btuh*	36.4	*0 btuh*	37	*0 btuh*
GAIN	0.8	*77 btuh*	1.6	*0 btuh*	0.7	*172 btuh*	1.8	*0 btuh*	1.5	*0 btuh*	1.9	*0 btuh*	0.3	*0 btuh*	0.4	*0 btuh*	89.7	*0 btuh*	14.7	*0 btuh*
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 18.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	*0 btuh*	24.7	*0 btuh*	20.8	*0 btuh*	37.3	*0 btuh*	0	0	0	0	20.8	*374 btuh*	37.3	*0 btuh*	20.8	*0 btuh*	37.3	*0 btuh*
GAIN	4.7	*0 btuh*	4.7	*0 btuh*	28.2	*0 btuh*	14.9	*0 btuh*	0	0	0	0	21.7	*391 btuh*	14.9	*0 btuh*	11.7	*0 btuh*	14.9	*0 btuh*
FUND. CONDUCTIVE HEATLOSS				0 btuh	AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3		H.G. PEOPLE		APP. LOAD		DUCT PIPE L.			
TOTAL CONDUCTIVE			LOSS	1093 btuh	LOSS	0.2648	289 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	58.2 btuh	239		5057		LOSS	0%	0 btuh
TOTAL CONDUCTIVE			GAIN	640 btuh	GAIN	0.0734	47 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	51 btuh	1	239 btuh	0%	0 btuh	GAIN	0%	0 btuh
BED 3			***TOTALS H.L.: 4385 btuh***				***H.G.: 4173 btuh***		AREA: 222 ft2		C.Height: 8		GROSS EXP. WALL		*NEW 256 ft*		*EXIST 0 ft*			
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT			
	NEW: 32 ft		EXIST: 0 ft		NEW: 222 ft2		EXIST: 0		NEW: 0		EXIST: 0		NEW: 217 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	*741 btuh*	8.7	*0 btuh*	1.3	*278 btuh*	3.2	*0 btuh*	2.7	*0 btuh*	3.4	*0 btuh*	2.5	*540 btuh*	3.4	*0 btuh*	36.4	*0 btuh*	37	*0 btuh*
GAIN	0.8	*140 btuh*	1.6	*0 btuh*	0.7	*154 btuh*	1.8	*0 btuh*	1.5	*0 btuh*	1.9	*0 btuh*	0.3	*58 btuh*	0.4	*0 btuh*	89.7	*0 btuh*	14.7	*0 btuh*
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 71.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	*0 btuh*	24.7	*0 btuh*	20.8	*1476 btuh*	37.3	*0 btuh*	0	0	0	0	20.8	*0 btuh*	37.3	*0 btuh*	20.8	*0 btuh*	37.3	*0 btuh*
GAIN	4.7	*0 btuh*	4.7	*0 btuh*	28.2	*2001 btuh*	14.9	*0 btuh*	0	0	0	0	21.7	*0 btuh*	14.9	*0 btuh*	11.7	*0 btuh*	14.9	*0 btuh*
FUND. CONDUCTIVE HEATLOSS				0 btuh	AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3		H.G. PEOPLE		APP. LOAD		DUCT PIPE L.			
TOTAL CONDUCTIVE			LOSS	3035 btuh	LOSS	0.2648	804 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	161.5 btuh	239		5057		LOSS	10%	384 btuh
TOTAL CONDUCTIVE			GAIN	2352 btuh	GAIN	0.0734	173 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	187 btuh	1	239 btuh	0%	0 btuh	GAIN	10%	259 btuh
BED 2			***TOTALS H.L.: 1166 btuh***				***H.G.: 878 btuh***		AREA: 172 ft2		C.Height: 8		GROSS EXP. WALL		*NEW 96 ft*		*EXIST 0 ft*			
	EXPOSED WALLS				EXPOSED CEILING W/ATTIC				EXPOSED CEILING NO ATTIC				EXPOSED FLOORS				SKYLIGHT			
	NEW: 12 ft		EXIST: 0 ft		NEW: 172 ft2		EXIST: 0		NEW: 0		EXIST: 0		NEW: 0 ft2		EXIST: 0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2	
Eff. R-V	18.53		8.50		59.22		22.86		27.65		22.05		29.80		22.05		2.04		2.03	
LOSS	4.0	*316 btuh*	8.7	*0 btuh*	1.3	*216 btuh*	3.2	*0 btuh*	2.7	*0 btuh*	3.4	*0 btuh*	2.5	*0 btuh*	3.4	*0 btuh*	36.4	*0 btuh*	37	*0 btuh*
GAIN	0.8	*60 btuh*	1.6	*0 btuh*	0.7	*119 btuh*	1.8	*0 btuh*	1.5	*0 btuh*	1.9	*0 btuh*	0.3	*0 btuh*	0.4	*0 btuh*	89.7	*0 btuh*	14.7	*0 btuh*
	DOORS				EAST/WEST WINDOWS				SE/SW WINDOWS				SOUTH WINDOWS				NORTH WINDOWS			
	NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW:		EXIST:		NEW: 0.0 ft2		EXIST: 0.0 ft2		NEW: 17 ft2		EXIST: 0 ft2	
Eff. R-V	3.01		3.01		3.57		1.99		0		0		3.57		1.99		3.57		1.99	
LOSS	24.7	*0 btuh*	24.7	*0 btuh*	20.8	*0 btuh*	37.3	*0 btuh*	0	0	0	0	20.8	*0 btuh*	37.3	*0 btuh*	20.8	*353 btuh*	37.3	*0 btuh*
GAIN	4.7	*0 btuh*	4.7	*0 btuh*	28.2	*0 btuh*	14.9	*0 btuh*	0	0	0	0	21.7	*0 btuh*	14.9	*0 btuh*	11.7	*200 btuh*	14.9	*0 btuh*
FUND. CONDUCTIVE HEATLOSS				0 btuh	AIR LEAKAGE NEW			AIR LEAKAGE EXIST			VENTILATION CASE 3		H.G. PEOPLE		APP. LOAD		DUCT PIPE L.			
TOTAL CONDUCTIVE			LOSS	885 btuh	LOSS	0.2648	234 btuh	LOSS	0.0000	0 btuh	LOSS	0.1	47.1 btuh	239		5057		LOSS	0%	0 btuh
TOTAL CONDUCTIVE			GAIN	378 btuh	GAIN	0.0734	28 btuh	GAIN	0.0000	0 btuh	GAIN	0.08	30 btuh	1	239 btuh	0%	0 btuh	GAIN	0%	0 btuh

LEVEL 4



BASEMENT PLAN EL. 'A'

3RD	# S/A -	# R/A -	# FANS -
2ND	13	4	3
1ST	9	1	2
B	4	1	-
TOTAL	26	6	5

- DESIGNER TO BE NOTIFIED OF ALL & ANY CHANGES TO THE STRUCTURE AND/OR SYSTEM DESIGN BEFORE INSTALLATION BEGINS. INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.
- COORDINATE EXACT LOCATION OF GRILLES AND REGISTERS WITH OTHER TRADES, SITE CONDITIONS, OWNER BUILDER, AND/OR ARCHITECT BEFORE INSTALLATION.
- PROVIDE MANUAL BALANCING DAMPERS AS REQUIRED TO S/A BRANCH OUTLETS, MAIN TAKE OFF'S & "Y" FITTINGS.
- ALL S/A RUNS TO BE 4"X10"X5" ROUND UNLESS OTHERWISE NOTED
- INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL DUCTS
- ALL DUCTWORK LOCATED IN UNHEATED SPACES SHALL BE MIN R-12. UNDERCUT ALL DOORS IN ROOMS WITHOUT RETURN AIR, KEEP JOINTS TIGHT AND AIR LEAKAGE TO A MINIMUM.

PROPOSED BASEMENT

DATE: JUN/2023 | SCALE: 3/16"=1'-0" | DRAWN BY: MMA/MP

SB-12 PERFORMANCE
CSA F280-12

CONTRACTOR TO WORK FROM MUNICIPAL APPROVED DRAWINGS ONLY

The undersigned has reviewed and takes responsibility for this design and has the qualifications and meets the requirements set out in the Ontario Building Code to be a designer.

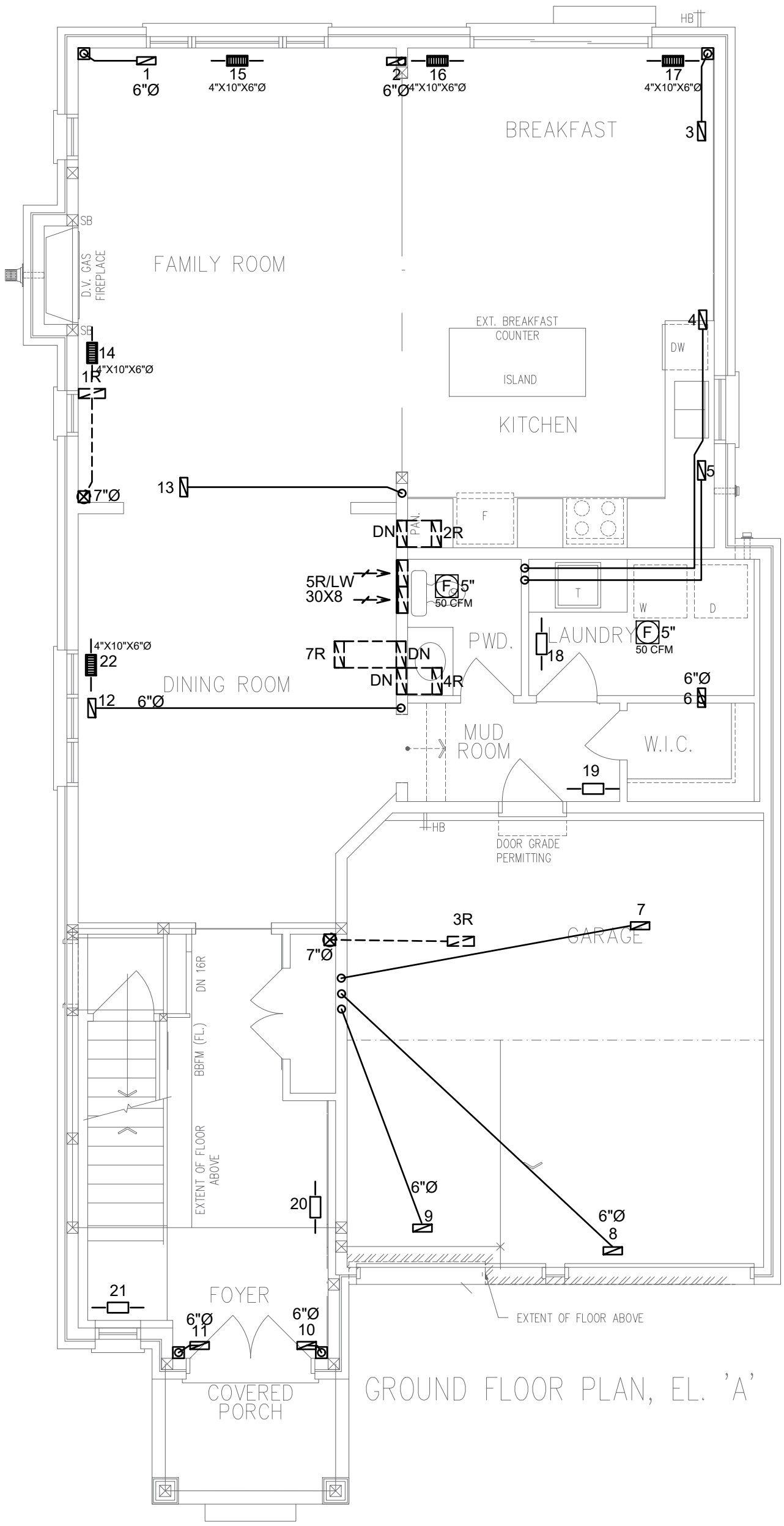
NAME	SIGNATURE	BCIN / BCDN
Doug McCallum		102614

TOTAL LOSS	48,861 BTUH	
TOTAL GAIN	31,153 BTUH	
HEATING UNIT	LENNOX	
MODEL #	EL296UH070XE36B	3.0 TONS
OUTPUT	64,000 BTUH	1145 CFM

MODEL:	Unit 3802 - Elev A,B and C		
PROJECT #:	RP23047	SQFT: 3072	W%: 12.49
SITE:	Forestside Estates, Brampton		
FOR:	Royal Pine Homes		
BUILDER:	Royal Pine Homes		

MCCALLUM HVAC DESIGN INC
Brampton, Ontario, 905-840-8166, info@mccallumhvac.com

M1



GROUND FLOOR PLAN, EL. 'A'

3RD	# S/A -	# R/A -	# FANS -
2ND	13	4	3
1ST	9	1	2
B	4	1	-
TOTAL	26	6	5

- DESIGNER TO BE NOTIFIED OF ALL & ANY CHANGES TO THE STRUCTURE AND/OR SYSTEM DESIGN BEFORE INSTALLATION BEGINS. INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE.
- COORDINATE EXACT LOCATION OF GRILLES AND REGISTERS WITH OTHER TRADES, SITE CONDITIONS, OWNER BUILDER, AND/OR ARCHITECT BEFORE INSTALLATION.
- PROVIDE MANUAL BALANCING DAMPERS AS REQUIRED TO S/A BRANCH OUTLETS, MAIN TAKE OFF'S & "Y" FITTINGS.
- ALL S/A RUNS TO BE 4"X10"X5" ROUND UNLESS OTHERWISE NOTED
- INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL DUCTS
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PROPOSED 1ST FLOOR

DATE: JUN/2023 | SCALE: 3/16"=1'-0" | DRAWN BY: MMA/MP

SB-12 PERFORMANCE
CSA F280-12

CONTRACTOR TO WORK FROM MUNICIPAL APPROVED DRAWINGS ONLY

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirements set out in the Ontario Building Code to be a designer.

NAME	SIGNATURE	BCIN / BCDN
Doug McCallum		102614

TOTAL LOSS	48,861 BTUH	
TOTAL GAIN	31,153 BTUH	
HEATING UNIT	LENNOX	
MODEL #	EL296UH070XE36B	3.0 TONS
OUTPUT	64,000 BTUH	1145 CFM

MODEL:	Unit 3802 - Elev A,B and C		
PROJECT #:	RP23047	SQFT: 3072	W%: 12.49
SITE:	Forestside Estates, Brampton		
FOR:	Royal Pine Homes		
BUILDER:	Royal Pine Homes		

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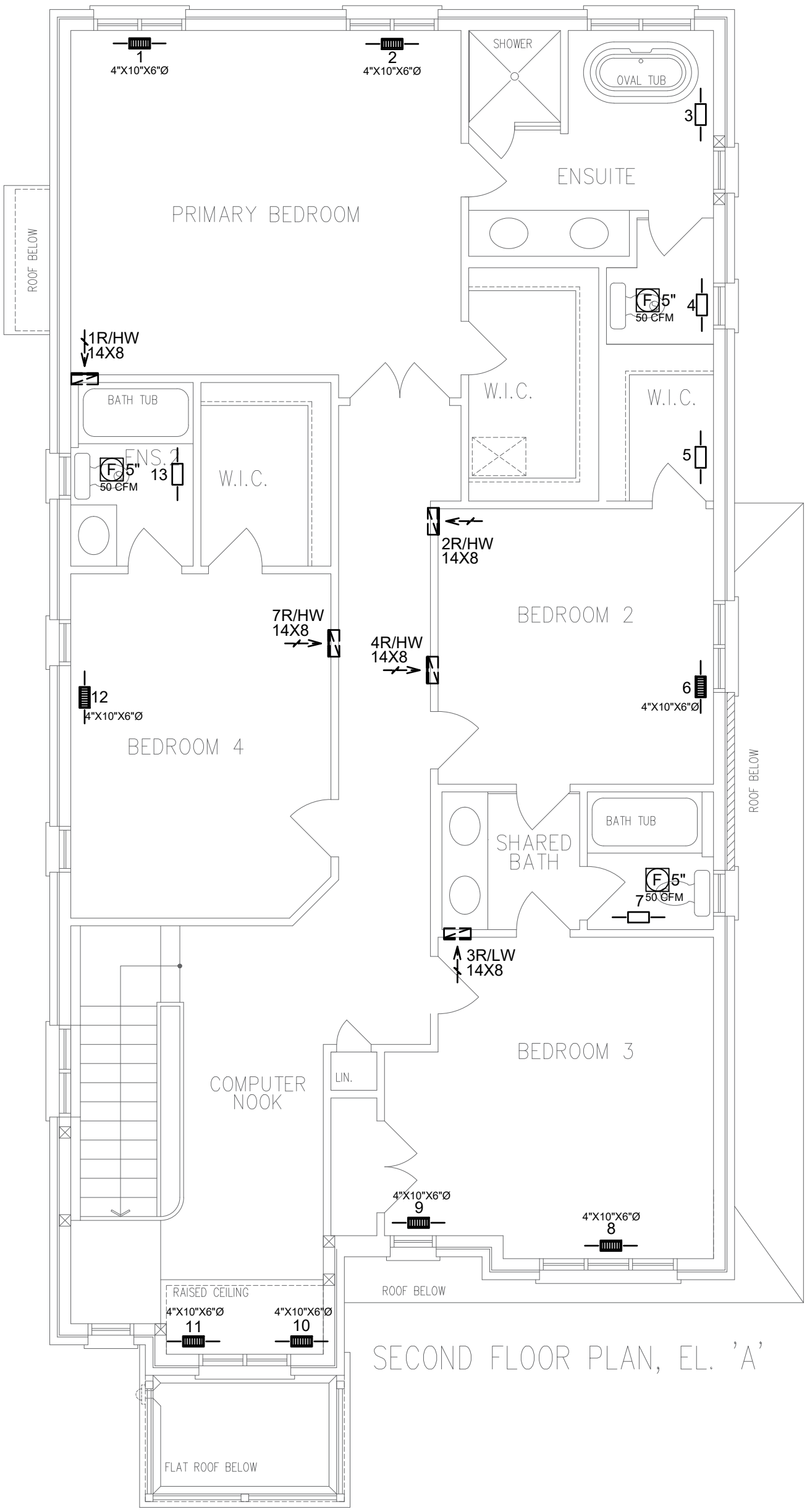
Brampton, Ontario, 905-840-8166, info@mccallumhvac.com

M2



SECOND FLOOR PLAN, EL. 'A'

3RD	# S/A -	# R/A -	# FANS -
2ND	13	4	3
1ST	9	1	2
B	4	1	-
TOTAL	26	6	5

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PROPOSED 2ND FLOOR

DATE: JUN/2023 | SCALE: 3/16"=1'-0" | DRAWN BY: MMA/MP

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CSA F280-12

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OUTPUT	64,000 BTUH	1145 CFM

MODEL:	Unit 3802 - Elev A,B and C		
PROJECT #:	RP23047	SQFT: 3072	W%: 12.49
SITE:	Forestside Estates, Brampton		
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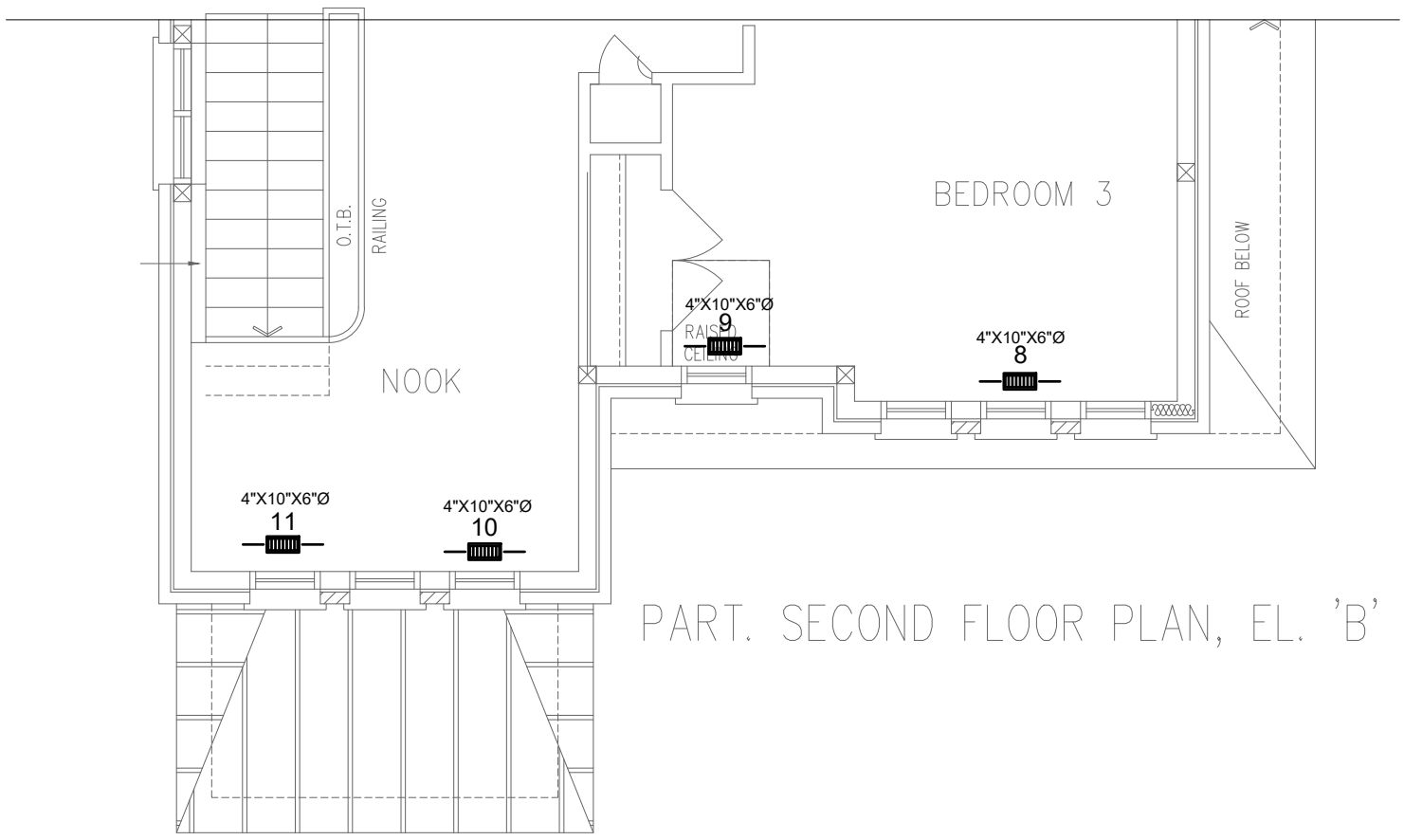
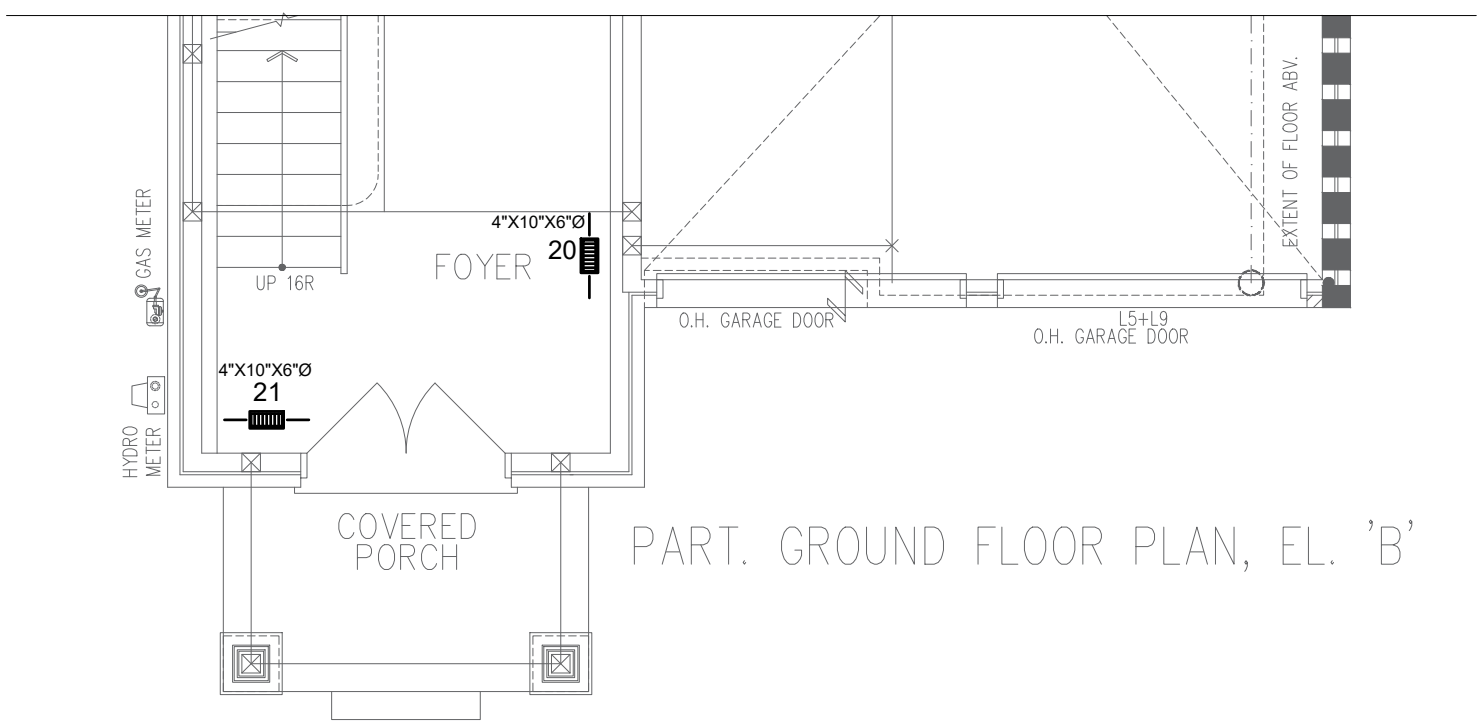
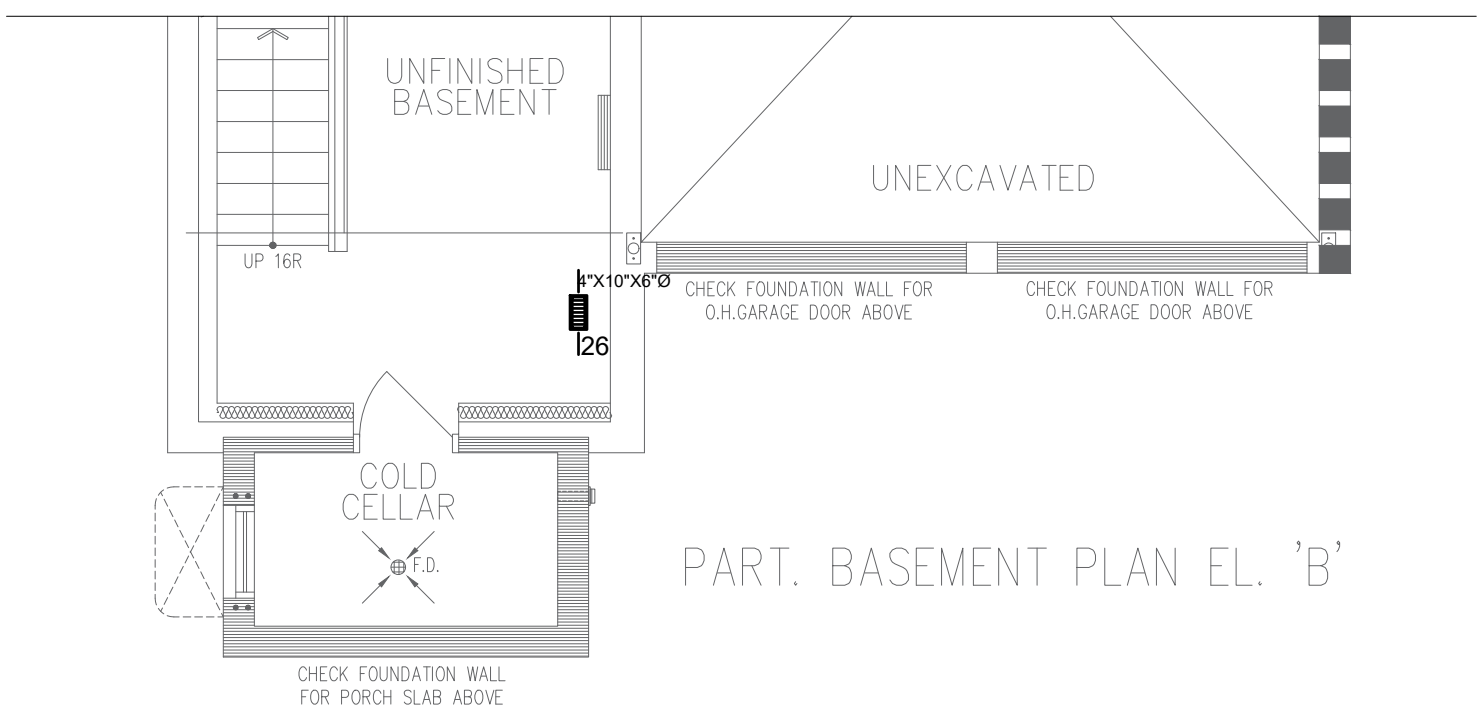
M3



PART. SECOND FLOOR PLAN, EL. 'B'



PART. GROUND FLOOR PLAN, EL. 'B'



PART. BASEMENT PLAN EL. 'B'

3RD	# S/A -	# R/A -	# FANS -
2ND	13	4	3
1ST	9	1	2
B	4	1	-
TOTAL	26	6	5

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PARTIAL PLANS

DATE: JUN/2023 | SCALE: 3/16"=1'-0" | DRAWN BY: MMA/MP

SB-12 PERFORMANCE
CSA F280-12

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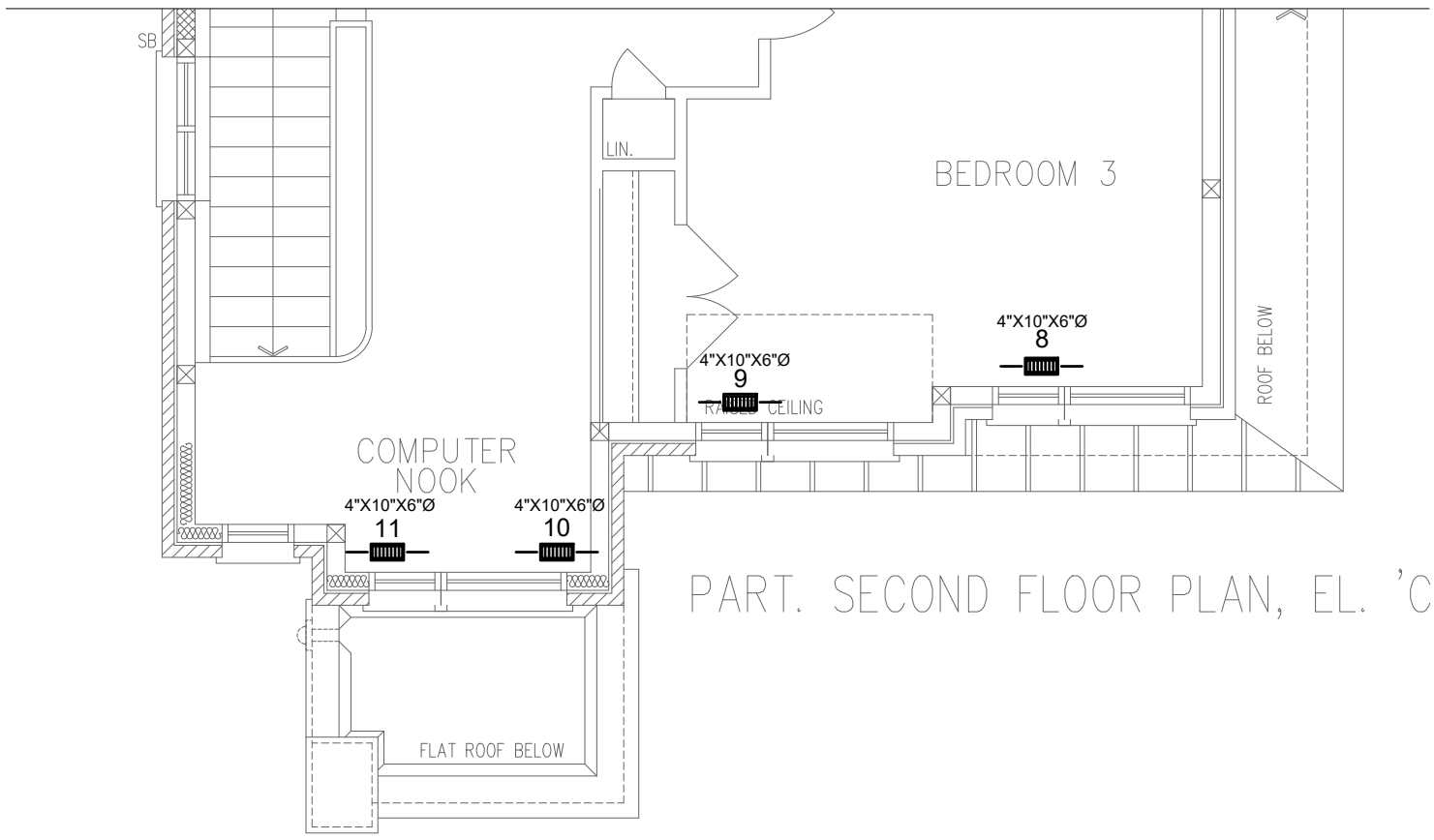
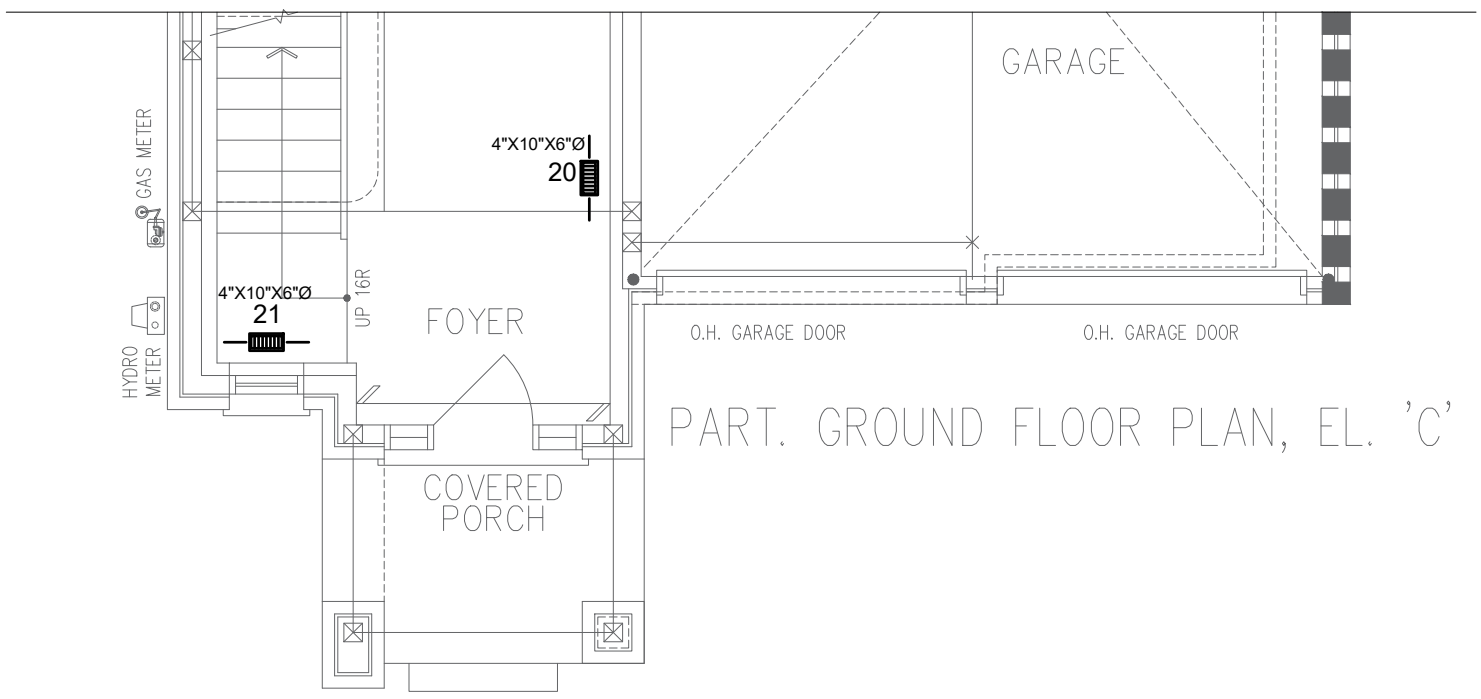
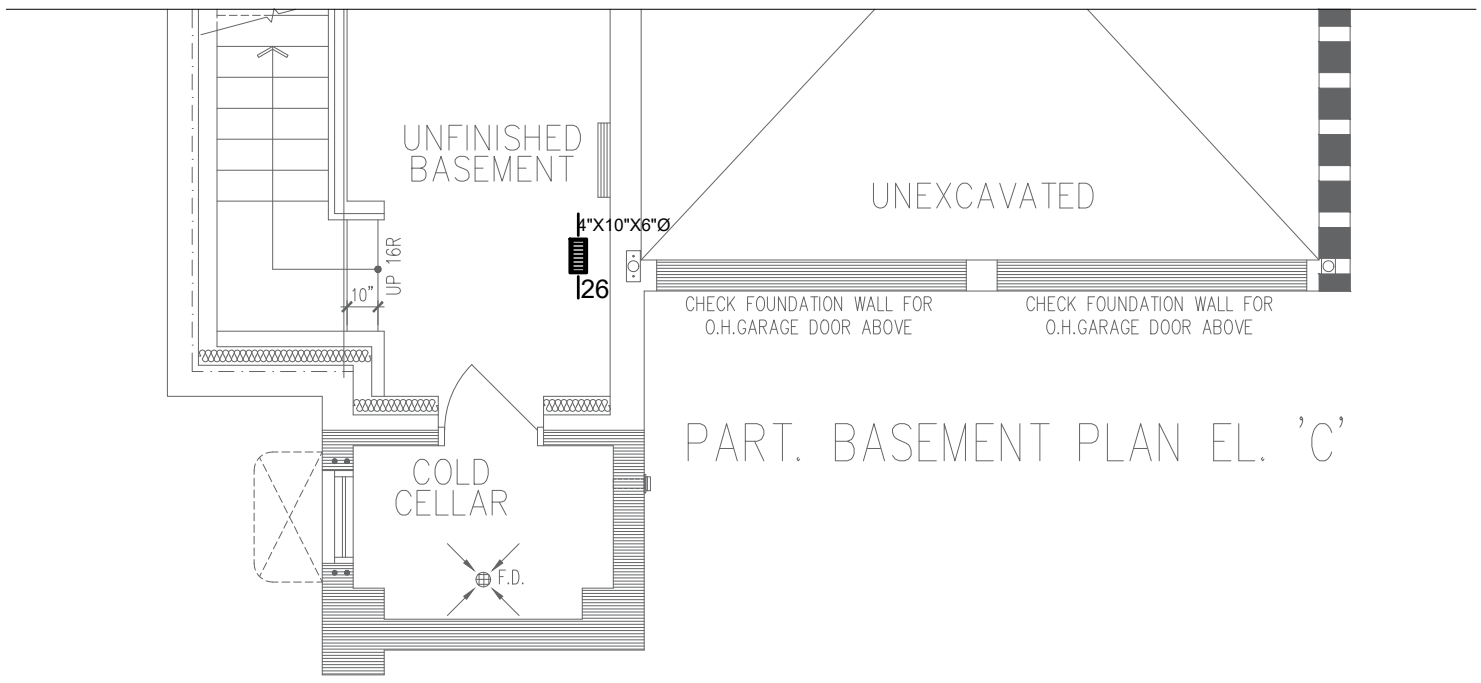
M4



PART. SECOND FLOOR PLAN, EL. 'C'



PART. GROUND FLOOR PLAN, EL. 'C'



PART. BASEMENT PLAN EL. 'C'

3RD	# S/A -	# R/A -	# FANS -
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1ST	9	1	2
B	4	1	-
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PARTIAL PLANS

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M5