

BUILDER:		DEL HO							OPT 2	ND.							DAT	ГЕ: Мау-2	1		W	INTER I	VATURAL	. AIR CH	IANGE I	RATE 0.3	352	HEATI	OSS A	T°F. 78		Co	A-F280-1
	GREE	NPARK	HOME	S				TYPE	: TERR	RACOTA	2			GFA: 3	3389		LO	# 90742								RATE 0.1				T°F. 13	,	SB-12 PA	
ROOM USE				MBR			ENS			WIC			BED-3		E	BED-4	T	BED-	5		ENS-4/5		BED-			WIC-3	<u> </u>	ENS-2/3	T			3D-12 FA	SKAGE A
EXP. WALL	1			38			26			7			27			38	-	12			6	ı	11	-	1	5		6	- 1		- 1		
CLG. HT.	1		1	9			9			9			9	1		9	1	9		1	9	- 1	9	- 1		9		9	- 1				
	FACTO	ORS							1					l			1					- 1	•			•	- 1	3	İ			AVH	لد
GRS.WALL AREA	Loss	GAIN		342		1	234		1	63			243			342	ı	108			54		99			45		54	1	Initials		<b>–</b>	Richmond
GLAZING	ł			LOSS	GAIN	1	LOSS	GAIN		LOSS	GAIN		LOSS	GAIN	L	OSS GAI	иl	LOSS	GAIN		LOSS G	AIN		S GAIN		LOSS GA		LOSS G		_ =:		<	- Ž
NORTH	21.8	14.9	0	0	0	14	305	209	0	0	0	16	349	239	0	0 0	0		0	0	0	- 1	13 283		0	0 0				<u>a</u> .	1	<b>&gt;</b>	3
EAST	21.8	38.4	0	0	0	0	0	0	0	0	0	53			60	1307 230	- 1	0	ō	0	0		0 0	0		196 34			105				18
SOUTH	21.8	23.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	16		370	7		- 1	0 0	0	0	0 0		0 0	0			C	上
WEST	21.8	38.4	32	697	1228	14	305	537	١.	0	0	0	0	0	0	0 0	- 1	0	0	0	0		0 0	,	0				0				_ <del> </del> =
SKYLT.	38.1	101.5	0	0	0	0	0	0	0	0	0	ŏ	0	0	0	0 0	0	0	0	0	0	- 1	-	٠ ١	-	•		0 0	0			刀	)_
DOORS	25.8	4.3	0	0	0	0	ō	0	0	0	0	ő	0	ö	0	0 0	0	0	0	0	0	·		0	0	0 0	-	0 0	0			Ш	,
NET EXPOSED WALL	4.6	0.8	310	1416	233	206	941	155	63	288	47	174	795	- 1	-	1288 21	1 -	-	69	47	-		0 0 36 393	0	0	0 0		0 0	0				City
NET EXPOSED BSMT WALL ABOVE GR	3.7	0.6	0	0	0	0	0	0	0	0	0	0	0		0	0 0	0		0	0	0			65		164 2			35		_	<	₹
EXPOSED CLG	1.3	0.6	351	461	206	169	222	99	140	184	82	236	310			256 11	- 1		115	78	-		0 0	0	0	0 0	1	0 0	0	1 1 7	ס ו		
NO ATTIC EXPOSED CLG		1.3	0	0	0	n	0	0	0	0	0	16	45			127 57	- 1			1		- 1	20 289	129	40	53 2	- 1		39	>	×	<b>M</b> §	. ≟
EXPOSED FLOOR	2.6	0.4	0	0	0	٥	0	0	0	0	0	241	45 629	104	45 0		0	0	0	0	0	- 1	0 0	0	0	0 0		0 0	0	<	ŽΙ	<	Σ Z.
BASEMENT/CRAWL HEAT LOSS		0.7	ľ	0	U	"	0	U	"	0	U	241		104	U	0 0	0	0	0	0	0	0   6	9 180	30	40	104 1	7   6	66 172	28			<	5. 공
SLAB ON GRADE HEAT LOSS				0			0			•			0	- 1		0	1	0			0		0	l		0	- 1	0				VIEWED	of Richmond
SUBTOTAL HT LOSS				2574			-			0			0			0		0			0	- 1	0	l		0		0					ס כ
SUB TOTAL HT GAIN			l	25/4	4000		1773	400-		472	400		3282			2978		1025			470		1145			517	-	626					<u>.</u> .
LEVEL FACTOR / MULTIPLIER			م م	0.07	1668			1001			130			2667		268	1		554			243		418		41			207			<u>u</u>	2. —
AIR CHANGE HEAT LOSS			0.20	0.27		0.20			0.20			0.20				0.27	0.2			0.20	0.27	0.	20 0.27		0.20		0.	.20 0.27				2	<u>.</u> ₹
AIR CHANGE HEAT LOSS			l	705			486			129		1	899			816		281			129		314			142		172					
					129			77			10			206		20	В		43			19		32		3:	2		16		- 1		
DUCT LOSS				0			0			0			418			0		0			0		146			66		80					
DUCT GAIN					0			0			0			368		0			0			0		125		4	5		22				
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	1		240	1	24	0 1		240	0		0	1	240	0	0	)	0	0				
HEAT GAIN APPLIANCES/LIGHTS	1				564	ľ		0			0			564		56	4		564			0		564		0	,		0				
TOTAL HT LOSS BTU/H	İ			3280			2259			601			4600		:	3794		1306		1	598		1605	.		725		878					
TOTAL HT GAIN x 1.3 BTU/H					3693			1402			182			5259		480	8		1821	1	;	340		1794		63	7	;	319				
ROOM USE																																	
				F			11//2011																										
1				FAM			LV/DN			KIT			LIB		L	AUN	T	W/R			FOY		MUD				Т		Т	WOD		ВА	ıs
EXP. WALL				36			30			37			19		L	12		18			18		30	'						WOD 47		BA 18	
EXP. WALL CLG. HT.															L									)									2
EXP. WALL CLG. HT.	FACTO			36 10			30 10			37 10			19 10			12 9		18 10			18 10		30 11							47		18	2
EXP. WALL CLG. HT. GRS.WALL AREA	FACTO LOSS			36 10 360			30 10 300			37 10 370			19 10 190			12 9 108		18 10 180			18		30							47		18	2
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING	LOSS	GAIN		36 10 360 LOSS	GAIN		30 10 300 LOSS	GAIN		37 10 370 LOSS	GAIN		19 10 190 LOSS	GAIN	L	12 9 108 .OSS GAI	N	18 10	GAIN		18 10 180	AIN	30 11 330	GAIN						47 8	GAIN	18	19
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH	LOSS 21.8	GAIN 14.9	0	36 10 360 LOSS 0	0	0	30 10 300 LOSS 0	GAIN 0	0	37 10 370 LOSS 0	GAIN 0	0	19 10 190			12 9 108	N 0	18 10 180	GAIN 0	0	18 10 180 LOSS G	AIN 0	30 11 330 LOSS							47 8 376	GAIN 0	18 8 111	2 19 SS GAII
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST	21.8 21.8	GAIN 14.9 38.4	0	36 10 360 LOSS 0 0	0 0	0	30 10 300 LOSS 0	GAIN 0 0	0	37 10 370 LOSS 0	0 0	0	19 10 190 LOSS 0	0	0 0	12 9 108 OSS GAI 0 0	- 1	18 10 180 LOSS 0		0 6	18 10 180 LOSS G	- 1	30 11 330 LOSS 7 152	S GAIN						47 8 376 LOSS		18 8 111 LOS	19 SS GAII 7 60
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH	21.8 21.8 21.8 21.8	GAIN 14.9 38.4 23.1	0	36 10 360 LOSS 0	0	0	30 10 300 LOSS 0	GAIN 0	ı	37 10 370 LOSS 0	0		19 10 190 LOSS 0	0	0 0	12 9 108 .OSS GAI 0 0	0 22	18 10 180 LOSS 0	0	1 -	18 10 180 LOSS G	0	30 11 330 LOSS 7 152 0 0	6 GAIN 105						47 8 376 LOSS 0 0	0	18 8 111 LOS 4 87	19 SS GAII 7 60
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST	21.8 21.8 21.8 21.8 21.8	9 38.4 23.1 38.4	0 0 28	36 10 360 LOSS 0 0	0 0 0 1075	0 0 42 0	30 10 300 LOSS 0 0 915 0	GAIN 0 0 971	0 0 51	37 10 370 LOSS 0 0 0	0 0	0	19 10 190 LOSS 0	0	0 0	12 9 108 OSS GAI 0 0	0 22	18 10 180 LOSS 0	0 845	6	18 10 180 LOSS G 0 131	0 230 (	30 11 330 LOSS 7 152 0 0	6 GAIN 105 0						47 8 376 LOSS 0 0	0	18 8 111 LOS 4 87	19 SS GAII 7 60 0 4 185
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT.	21.8 21.8 21.8 21.8 21.8 38.1	14.9 38.4 23.1 38.4 101.5	0 0 28 0	36 10 360 LOSS 0 0 0 610	0 0 0 1075 0	0 0 42 0	30 10 300 LOSS 0 0 915 0	GAIN 0 0 971 0	0 0 51 0	37 10 370 LOSS 0 0 0 1111	0 0 0 1958 0	0 14	19 10 190 LOSS 0	0 0 324 0	0 0	12 9 108 OSS GAI 0 0 0 0	0 22	18 10 180 LOSS 0	0 845 0	6	180 LOSS G 0 131 2	0 230 0 0 0	30 11 330 LOSS 7 152 0 0	6 GAIN 105 0						47 8 376 LOSS 0 0 0 0 0	0 0	18 8 111 LOS 4 87 0 0	19 SS GAII 7 60 0 4 185
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS	21.8 21.8 21.8 21.8 21.8 38.1 25.8	14.9 38.4 23.1 38.4 101.5 4.3	0 0 28 0	36 10 360 LOSS 0 0 0 610 0	0 0 0 1075 0	0 0 42 0 0	30 10 300 LOSS 0 0 915 0 0	GAIN 0 0 971 0 0	0 0 51 0	37 10 370 LOSS 0 0 0 1111 0 258	0 0 0 1958	0 14 0 0	19 10 190 LOSS 0 0 305	0 0 324 0	L 0 0 7	12 9 108 OSS GAI 0 0 0 0 152 16: 0 0	0 22 0 0	18 10 180 LOSS 0	0 845 0 0	6 0 0	18 10 180 LOSS G 0 131 3 0 0	0 230 0 0 0 0 0	30 11 330 LOSS 7 152 0 0 0 0	6 GAIN 105 0 0				P		47 8 376 LOSS 0 0 0 0 0 0	0 0 0 537 0	18 8 111 LOS 4 87 0 0	19 SS GAII 7 60 0 4 185
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL	21.8 21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6	9 38.4 23.1 38.4 101.5 4.3 0.8	0 0 28 0 0 332	36 10 360 LOSS 0 0 0 610	0 0 0 1075 0	0 0 42 0 0 0	30 10 300 LOSS 0 0 915 0	GAIN 0 0 971 0	0 0 51 0	37 10 370 LOSS 0 0 0 1111	0 0 0 1958 0	0 14 0 0	19 10 190 LOSS 0 0 305 0	0 0 324 0 0	L 0 0 7 0 0	12 9 108 OSS GAI 0 0 0 0 152 16: 0 0	0 22 0 0 0	18 10 180 LOSS 0 479 0 0	0 845 0 0	6 0 0	18 10 180 LOSS G 0 131 2 0 0 0 1034 2	0 230 0 0 0 0 0 0 0	30 11 330 LOSS 7 152 0 0 0 0	6 GAIN 105 0 0 0				Pei		47 8 376 LOSS 0 0 0 0 0 14 305 0 0	0 0 0 537 0	18 8 111 LOS 4 87 0 0 8 17 0 0 0 0 20 51	19 7 60 4 185 0 0 7 85
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BMT WALL ABOVE GR	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7	14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6	0 0 28 0 0 332	36 10 360 LOSS 0 0 0 610 0	0 0 0 1075 0	0 0 42 0 0	30 10 300 LOSS 0 0 915 0 0	GAIN 0 0 971 0 0	0 0 51 0	37 10 370 LOSS 0 0 0 1111 0 258	0 0 0 1958 0 43	0 14 0 0	19 10 190 LOSS 0 0 305 0	0 0 324 0 0 0 132	L 0 0 7 0 0	12 9 108 OSS GAI 0 0 0 0 152 16 0 0 0 0	0 22 0 0 0	18 10 180 LOSS 0 479 0 0	0 845 0 0 0	6 0 0 0 40	18 10 180 LOSS G 0 131 2 0 0 0 1034 2	0 230 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	30 11 330 LOSS 7 152 0 0 0 0 0 0	6 GAIN 105 0 0 0 0				Per:		47 8 376 LOSS 0 0 0 0 0 14 305 0 0	0 0 537 0 0	188 8 111 LOS 4 87 0 0 8 17 0 0 0 0 20 51	19 SSS GAII 7 60 0 0 4 185 0 0 7 85
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EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED TLOOR	21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3	14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6	0 0 28 0 0 332 0	36 10 360 LOSS 0 0 0 610 0	0 0 1075 0 0 250 0	0 0 42 0 0 0 258 0	30 10 300 LOSS 0 0 915 0 0 1179	GAIN 0 0 971 0 0 194 0	0 51 0 10 309 0	37 10 370 LOSS 0 0 0 1111 0 258 1412 0	0 0 1958 0 43 232 0	0 14 0 0 0 176 0	19 10 190 LOSS 0 0 305 0 0 0 804 0	0 0 324 0 0 0 132 0	0 0 7 0 0 0 101 0	12 9 108	0 22 2 0 0 0 0 158 0	18 10 180 LOSS 0 479 0 0 0	0 845 0 0 0 0 119 0	6 0 0 0 40 134	18 10 180 LOSS G 0 131 2 0 0 0 1034 612 0 0 0	0 230 0 0 0 0 0 0 0 170 0 101 32 0 0	30 11 330 LOSS 7 152 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S GAIN 105 0 0 0 0 0 0 243 0				Per:mado	品	47 8 376 LOSS 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0	0 0 537 0 0 162	1111 LOS 4 87 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 SS GAII 7 60 0 4 185 0 0 7 85 0 0 13 205 0
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EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED TLOOR	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN  14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6 0.6 1.3	0 0 28 0 0 332 0 0	36 10 360 LOSS 0 0 0 610 0	0 0 0 1075 0 0 250 0	0 0 42 0 0 0 258 0 0	30 10 300 LOSS 0 0 915 0 0 1179	GAIN 0 0 971 0 0 194 0	0 0 51 0 10 309 0 0	37 10 370 LOSS 0 0 0 1111 0 258 1412 0 0	0 0 1958 0 43 232 0 0	0 14 0 0 0 176 0	19 10 190 LOSS 0 0 305 0 0 804 0 0	0 0 324 0 0 0 132 0	0 0 7 0 0 0 101 0	12 9  108  COSS GAI 0 0 0 152 16: 0 0 0 0 0 461 76 0 0 0 252 11: 0 0 0	0 22 0 0 0 0 158 0	18 10 180 LOSS 0 479 0 0 0	0 845 0 0 0 0 119 0	6 0 0 0 40 134	18 10 180 LOSS G 0 131 2 0 0 0 1034 612 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0   7 230   6 0   6 0   6 170   6 170   6 0   6 0   6	30 11 330 LOSS 7 152 0	S GAIN 105 0 0 0 0 0 243 0				Per:maddy.t	RECT	47 8 376 LOSS 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0	0 0 537 0 0 162	1111 LOS 4 87 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 SS GAII 7 60 0 4 185 0 0 7 85 0 0 43 205 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG EXPOSED CLG EXPOSED LOOS BASEMENT/CRAWL HEAT LOSS	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN  14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6 0.6 1.3	0 0 28 0 0 332 0 0	36 10 360 LOSS 0 0 0 610 0	0 0 0 1075 0 0 250 0	0 0 42 0 0 0 258 0 0	30 10 300 LOSS 0 0 915 0 0 1179 0 0 0	GAIN 0 0 971 0 0 194 0	0 0 51 0 10 309 0 0	37 10 370 LOSS 0 0 1111 0 258 1412 0 0 0	0 0 1958 0 43 232 0 0	0 14 0 0 0 176 0	19 10 190 LOSS 0 0 305 0 0 804 0 0	0 0 324 0 0 0 132 0	L 0 7 0 0 0 101 0 192 0	12 9 108 GAI 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 22 0 0 0 0 158 0	18 10 180 LOSS 0 479 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 845 0 0 0 0 119 0	6 0 0 0 40 134	18 10 180 LOSS G 0 131 2 0 0 1034 612 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0   7 230   6 0   6 0   6 170   6 170   6 0   6 0   6	30 111 330 LOSS 7 152 0	6 GAIN 105 0 0 0 0 0 243 0 0				Per:maddy.toa	RECE	47 8 376 LOSS 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 537 0 0 162	1117 LOS 4 8 17 0 0 0 0 0 0 20 51 0 0 0 338 124 0 0 0 0 0 0	19 SS GAII 7 60 4 185 0 0 7 85 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG NO ATTIC EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN  14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6 0.6 1.3	0 0 28 0 0 332 0 0	36 10 360 LOSS 0 0 610 0 1517 0 0 0	0 0 0 1075 0 0 250 0	0 0 42 0 0 0 258 0 0	30 10 300 LOSS 0 0 915 0 0 1179 0 0 0	GAIN 0 0 971 0 0 194 0	0 0 51 0 10 309 0 0	37 10 370 LOSS 0 0 1111 0 258 1412 0 0 0	0 0 1958 0 43 232 0 0	0 14 0 0 0 176 0	19 10 190 LOSS 0 0 305 0 0 0 804 0 0 0	0 0 324 0 0 0 132 0 0 0	L 0 7 0 0 0 101 0 192 0	12 9  108  OSS GAI  0 0 0  152 16: 0 0 0  0 0 0  461 76 0 0 0  252 11: 0 0 0  0 0  0 0  8666	0 222 0 0 0 0 158 0 0	18 10 180 LOSS 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 845 0 0 0 0 119 0 0	6 0 0 0 40 134	18 10 180 LOSS G 0 131 2 0 0 0 1034 2 0 0 0 0 0 0 0 0 1777	0   7230   60   60   60   60   60   60   60	30 11 330 LOSS 7 152 0	6 GAIN 105 0 0 0 0 0 243 0 0				Per:maddy.toal	RECEN	47 8 376 LOSS 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0	0 0 0 537 0 0 0 162 0 0 0 0 0	1112 LOS 4 87 0 0 0 8 17 0 0 0 20 51 0 0 338 0 0 0 0 0 0	19 SS GAII 7 60 4 185 6 0 7 85 7 0 143 205 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED BSMT WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT LOSS	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN  14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6 0.6 1.3	0 0 28 0 0 332 0 0	36 10 360 LOSS 0 0 610 0 1517 0 0 0	0 0 0 1075 0 0 250 0 0	0 0 42 0 0 0 258 0 0	30 10 300 LOSS 0 0 915 0 0 1179 0 0 0	GAIN 0 0 971 0 0 194 0 0	0 0 51 0 10 309 0 0	37 10 370 LOSS 0 0 1111 0 258 1412 0 0 0 0	0 0 1958 0 43 232 0 0	0 14 0 0 0 176 0 0	19 10 190 LOSS 0 0 305 0 0 804 0 0 0 1109	0 0 324 0 0 0 132 0 0 0	L 0 0 0 7 0 0 0 0 1001 0 0 1192 0	12 9 108 OSS GAI 0 0 0 0 152 16: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 22 2 0 0 0 0 158 0 0 0 0	18 10 180 LOSS 0 479 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 845 0 0 0 0 119 0	0 0 40 134 0 0	18 10 180 LOSS G 0 131 2 0 0 0 1034 612 0 0 0 0 1777 5	0   1230   600   6	30 11 330 LOSS 7 152 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 GAIN 105 0 0 0 0 0 243 0 0				Per:maddy.toalaa	RECEIVE	47 8 376 LOSS 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 537 0 0 0 162 0 0 0 0 0 0 0	188 8 8 1111 LOS 4 8 17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22 119 SS GAII 7 60 4 185 0 0 7 85 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN  14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6 0.6 1.3	0 0 28 0 0 332 0 0	36 10 360 LOSS 0 0 610 0 0 1517 0 0 0 2127	0 0 0 1075 0 0 250 0 0	0 0 42 0 0 258 0 0	30 10 300 LOSS 0 915 0 0 1179 0 0 0 0	GAIN 0 0 971 0 0 194 0 0	0 0 51 0 10 309 0 0	37 10 370 LOSS 0 0 1111 0 258 1412 0 0 0	0 0 1958 0 43 232 0 0	0 14 0 0 0 176 0	19 10 190 LOSS 0 0 305 0 0 0 804 0 0 0	0 0 324 0 0 0 132 0 0 0	L 0 0 7 0 0 0 101 0 192 0	12 9  108  OSS GAI  0 0 0  152 16: 0 0 0  0 0 0  461 76 0 0 0  252 11: 0 0 0  0 0  0 0  8666	0 222 0 0 0 0 158 0 0	18 10 180 LOSS 0 1479 0 0 0 0 0 0 0 0 0 0 1201 0 0 0.51	0 845 0 0 0 0 119 0 0	6 0 0 40 134 0 0	18 10 180 LOSS G 0 131 2 0 0 0 0 1034 4 612 0 0 0 0 17777 5 5 0.51	0   1230   600   6	30 11 330 LOSS 7 152 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 GAIN 105 0 0 0 0 0 243 0 0				Per:maddy.toalaak	RECEIVE	47 8 376 LOSS 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 537 0 0 0 162 0 0 0 0 0 0 0	188 8 111: LOS 4 87 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22 19 SS GAII 7 60 0 4 185 0 0 7 85 0 0 0 0 0 0 0 0 4 185 0 0 7 85 0 0 0 0 0 0 7 85 0 0 0 0 7 85 0 0 0 0 7 85 0 0 0 0 0 0 0 0 7 85 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG EXPOSED CLG EXPOSED LGO BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN  14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6 0.6 1.3	0 0 28 0 0 332 0 0	36 10 360 LOSS 0 0 0 0 1517 0 0 0 0 2127 0.51	0 0 0 1075 0 0 250 0 0	0 0 42 0 0 258 0 0	30 10 300 LOSS 0 0 915 0 0 0 1179 0 0 0 0 2094 0.51	GAIN 0 0 971 0 0 194 0 0	0 0 51 0 10 309 0 0	37 10 370 LOSS 0 0 0 1111 0 258 1412 0 0 0 0 2781	0 0 1958 0 43 232 0 0 0	0 14 0 0 0 176 0 0	19 10 190 LOSS 0 0 305 0 0 804 0 0 0 0 1109	0 0 324 0 0 0 132 0 0 0 0	L 0 0 7 0 0 0 101 0 192 0	12 9  108  OSS GAI  0 0 0  152 16: 0 0 0  0 0 0  252 11: 0 0 0  0 0  866 35:  27  237	0 22 2 0 0 0 0 0 158 0 0 0 0	18 10 180 LOSS 0 479 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 845 0 0 0 119 0 0 0	0 0 40 134 0 0	18 10 180 LOSS G 0 131 2 0 0 0 1034 4 0 0 0 0 0 17777 5 0 0.51 903	0   1   230   6   6   6   6   6   6   6   6   6	30 11 330 LOSS 7 152 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 GAIN 105 0 0 0 0 0 243 0 0 0				Per:maddy.toalaalej	RECEIVED	47 8 376 LOSS 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 537 0 0 0 162 0 0 0 0 0 0 0	188 8 8 1111 LOS 4 8 17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22 19 SS GAIII 7 60 0 4 185 0 0 7 85 0 0 0 0 0 0 64 85 534 775
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SUBTOTAL HT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN  14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6 0.6 1.3	0 0 28 0 0 332 0 0	36 10 360 LOSS 0 0 0 0 1517 0 0 0 0 2127 0.51	0 0 1075 0 0 250 0 0 0	0 0 42 0 0 258 0 0	30 10 300 LOSS 0 0 915 0 0 0 1179 0 0 0 0 2094 0.51	GAIN 0 0 971 0 0 0 194 0 0	0 0 51 0 10 309 0 0	37 10 370 LOSS 0 0 0 1111 0 258 1412 0 0 0 0 2781	0 0 1958 0 43 232 0 0	0 14 0 0 0 176 0 0	19 10 190 LOSS 0 0 305 0 0 804 0 0 0 0 1109	0 0 324 0 0 0 132 0 0 0	L 0 0 7 0 0 0 101 0 192 0	12 9  108  OSS GAI 0 0 0 0 0 16: 0 0 0 0 0 0 0 252 11: 0 0 0 0 0 0 8666 35:	0 22 2 0 0 0 0 0 158 0 0 0 0	18 10 180 LOSS 0 479 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 845 0 0 0 0 119 0 0	0 0 40 134 0 0	18 10 180 LOSS G 0 131 2 0 0 0 1034 2 0 0 0 0 1777 5 0.51 903	0   1230   600   6	30 111 330 LOSS 7 152 0	6 GAIN 105 0 0 0 0 0 243 0 0				Per:maddy.toalaalejar	RECEIVED	47 8 376 LOSS 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 537 0 0 0 162 0 0 0 0 0 0 0	188 8 8 1111 Los 4 81	22 319 SSS GAIII 7 60 4 185 0 0 7 85 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED ELG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN  14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6 0.6 1.3	0 0 28 0 0 332 0 0	36 10 360 LOSS 0 0 0 0 1517 0 0 0 0 2127 0.51	0 0 1075 0 0 250 0 0 0	0 0 42 0 0 258 0 0	30 10 300 LOSS 0 0 915 0 0 0 1179 0 0 0 0 2094	GAIN 0 0 971 0 0 0 194 0 0 0 1165	0 0 51 0 10 309 0 0	37 10 370 LOSS 0 0 11111 0 258 1412 0 0 0 0 2781	0 0 1958 0 43 232 0 0 0	0 14 0 0 0 176 0 0	19 10 190 LOSS 0 0 305 0 0 0 804 0 0 0 0 1109	0 0 324 0 0 0 132 0 0 0 0 456	L 0 0 7 0 0 0 101 0 192 0	12 9  108  OSS GAI  0 0 0  152 16: 0 0 0  0 0  4661 76  0 0 0  2552 11: 0 0 0  0 0  0 0  8666 35: 27  27	0 22 2 0 0 0 0 0 158 0 0 0 0	18 10 180 LOSS 0 1479 0 0 0 0 0 0 0 0 0 0 1201 0 0 0.51	0 845 0 0 0 119 0 0 0	0 0 40 134 0 0	18 10 180 LOSS G 0 131 2 0 0 0 0 1034 6 612 6 0 0 0 0 17777 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0   1230   600   6	30 11 330 LOSS 7 152 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S GAIN 105 0 0 0 0 0 243 0 0 0 0 347 27				Per:maddy.toalaalejanc	RECEIVED	47 8 376 LOSS 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 537 0 0 0 162 0 0 0 0 0 0 0	188 8 111: LOS 4 87 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL ABOVE GR EXPOSED CLG NO ATTIC EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT GAIS AIR CHANGE HEAT GAIS DUCT LOSS	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8 2.6	GAIN  14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6 0.6 1.3	0 0 28 0 0 332 0 0	36 10 360 LOSS 0 0 0 0 1517 0 0 0 0 2127 0.51	0 0 0 1075 0 250 0 0 0	0 0 42 0 0 258 0 0	30 10 300 LOSS 0 0 915 0 0 0 1179 0 0 0 0 2094	GAIN 0 0 971 0 0 0 194 0 0	0 0 51 0 10 309 0 0 0	37 10 370 LOSS 0 0 11111 0 258 1412 0 0 0 0 2781	0 0 1958 0 43 232 0 0 0	0 14 0 0 0 176 0 0 0	19 10 190 LOSS 0 0 305 0 0 0 804 0 0 0 0 1109	0 0 324 0 0 0 132 0 0 0 0 456	L 0 0 7 0 0 0 0 1001 0 1992 0 0 0	12 9  108  OSS GAI  0 0 0  152 16: 0 0 0  0 0 0  252 11: 0 0 0  0 0  8666  35: 0.27  27  0 0	0 222 0 0 0 0 0 1588 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	18 10 180 LOSS 0 479 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 845 0 0 0 119 0 0 0 0	6 0 0 40 134 0 0 0	18 10 180 LOSS G 0 131 2 0 0 0 0 1034 612 0 0 0 0 17777 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0   1   2   2   2   2   2   2   2   2   2	30 111 330 LOSS 7 152 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 GAIN 105 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				Per:maddy.toalaalejandr	RECEIVED	47 8 376 LOSS 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 537 0 0 0 162 0 0 0 0 0 0 0 0 0 0 0 0	18 8 8 111. LOS 4 87 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19   SS GAINT   GAINT
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG EXPOSED CLG EXPOSED LOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUB TOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS AIR CHANGE HEAT GAIN DUCT LOSS DUCT GAIN	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8	GAIN  14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6 0.6 1.3	0 0 28 0 0 3332 0 0 0	36 10 360 LOSS 0 0 0 0 1517 0 0 0 0 2127 0.51	0 0 0 1075 0 0 250 0 0 0 0 0	0 0 42 0 0 0 258 0 0 0	30 10 300 LOSS 0 0 915 0 0 0 1179 0 0 0 0 2094	GAIN 0 0 971 0 0 0 194 0 0 0 1165 90 0 0 0	0 0 51 0 10 309 0 0	37 10 370 LOSS 0 0 11111 0 258 1412 0 0 0 0 2781	0 0 1958 0 43 232 0 0 0 0 0	0 14 0 0 0 176 0 0	19 10 190 LOSS 0 0 305 0 0 0 804 0 0 0 0 1109	0 0 0 324 0 0 0 0 132 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 7 0 0 0 101 0 192 0	12 9  108  OSS GAI  0 0 0  152 16: 0 0 0  0 0 0  461 76 0 0 0  0 0 0  0 0 0  866 35:  27  237  0 0 0  0 0  0 0	0 22 2 0 0 0 0 0 15883 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	18 10 180 LOSS 0 479 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 845 0 0 0 119 0 0 0 963	0 0 40 134 0 0	18 10 180 LOSS G 0 131 2 0 0 0 1034 4 6 0 0 0 0 1777 5 0 0 5 1 9 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0   1230   60   60   60   60   60   60   60	30 111 330 LOSS 7 152 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S GAIN 105 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				Per:maddy.toalaalejandro	RECEIVED	47 8 376 LOSS 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 537 0 0 0 162 162 0 0 0 0 0 0 0 0 0 0 0	188 8 8 1111 Los 4 81	19
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NET EXPOSED CLG EXPOSED CLG NO ATTIC EXPOSED CLOR BASEMENT/CRAWL HEAT LOSS SUBTOTAL HT LOSS SUBTOTAL HT COSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT GAIN DUCT GAIN DUCT GAIN HEAT GAIN PEOPLE	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8 2.6	GAIN  14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6 0.6 1.3	0 0 28 0 0 3332 0 0 0	36 10 360 LOSS 0 0 0 610 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 1075 0 0 250 0 0 0	0 0 42 0 0 0 258 0 0 0	30 10 300 LOSS 0 0 915 0 0 0 0 0 0 0 2094	GAIN 0 0 971 0 0 0 194 0 0 0 0 1165 90 0	0 0 51 0 10 309 0 0 0	37 10 370 LOSS 0 0 0 1111 0 258 1412 0 0 0 0 2781 0.51 1414	0 0 1958 0 43 232 0 0 0 0	0 14 0 0 0 176 0 0 0	19 10 190 LOSS 0 0 0 0 804 0 0 0 1109 0 0.51 564	0 0 324 0 0 0 132 0 0 0 0 456	L 0 0 0 7 7 0 0 0 0 101 101 0 0 192 0 0 0	12 9 108 OSS GAI 0 0 0 0 152 11: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 22 2 0 0 0 0 0 15883 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	18 10 180 LOSS 0 0 0 0 0 0 0 0 0 1201 0 0.51 611 0	0 845 0 0 0 119 0 0 0 0	6 0 0 40 134 0 0 0	18 10 180 LOSS G 0 131 2 0 0 0 1034 6 612 0 0 0 0 17777 6 0.51 903 0	0   1   2   2   2   2   2   2   2   2   2	30 111 330 LOSS 7 152 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	6 GAIN 105 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				Per:maddy.toalaalejandro	RECEIVED	47 8 376 LOSS 0 0 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 537 0 0 0 162 0 0 0 0 0 0 0 0 0 0 0 0	188 88 1111 LOS 4 83 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 SS GAINT 00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
EXP. WALL CLG. HT. GRS.WALL AREA GLAZING NORTH EAST SOUTH WEST SKYLT. DOORS NET EXPOSED WALL NET EXPOSED WALL NO ATTIC EXPOSED CLG EXPOSED CLG EXPOSED FLOOR BASEMENT/CRAWL HEAT LOSS SLAB ON GRADE HEAT LOSS SUBTOTAL HT COSS SUBTOTAL HT GAIN LEVEL FACTOR / MULTIPLIER AIR CHANGE HEAT LOSS DUCT GAIN HEAT GAIN PEOPLE HEAT GAIN PEOPLE HEAT GAIN APPLIANCESLIGHTS	21.8 21.8 21.8 21.8 21.8 38.1 25.8 4.6 3.7 1.3 2.8 2.6	GAIN  14.9 38.4 23.1 38.4 101.5 4.3 0.8 0.6 0.6 1.3	0 0 28 0 0 3332 0 0 0	36 10 360 LOSS 0 0 0 0 1517 0 0 0 0 2127 0.51	0 0 0 1075 0 0 250 0 0 0 0 0	0 0 42 0 0 0 258 0 0 0	30 10 300 LOSS 0 0 915 0 0 0 1179 0 0 0 0 2094	GAIN 0 0 971 0 0 0 194 0 0 0 1165 90 0 0 0	0 0 51 0 10 309 0 0 0	37 10 370 LOSS 0 0 11111 0 258 1412 0 0 0 0 2781	0 0 1958 0 43 232 0 0 0 0 0	0 14 0 0 0 176 0 0 0	19 10 190 LOSS 0 0 0 0 0 0 0 0 1109 0 0.51 554 0 0	0 0 0 324 0 0 0 0 132 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	L 0 0 0 7 7 0 0 0 0 101 101 0 0 192 0 0 0	12 9  108  OSS GAI  0 0 0  152 16: 0 0 0  0 0 0  461 76 0 0 0  0 0 0  0 0 0  866 35:  27  237  0 0 0  0 0  0 0	0 22 2 0 0 0 0 0 158 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	18 10 180 LOSS 0 479 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 845 0 0 0 119 0 0 0 963	6 0 0 40 134 0 0 0	18 10 180 LOSS G 0 131 2 0 0 0 0 1034 612 0 0 0 0 0 17777 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0   1230   60   60   60   60   60   60   60	30 111 330 LOSS 7 152 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S GAIN 105 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				Per:maddy.toalaalejandro	RECEIVED	47 8 376 LOSS 0 0 0 0 0 14 305 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 537 0 0 0 162 162 0 0 0 0 0 0 0 0 0 0 0	18 8 8 111. LOS 4 87 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	19 SS GAIII

TOTAL HEAT GAIN BTU/H:

36997 TONS: 3.08

LOSS DUE TO VENTILATION LOAD BTU/H: 2004

STRUCTURAL HEAT LOSS: 59884

TOTAL COMBINED HEAT LOSS BTU/H: 61888

Michael Office . INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE



		ROUND GREEN							OPT 2NE TERRAC	OTA 2			DATE:	May-21			GFA:	3389	LO#	90742				
HEATING CFM TOTAL HEAT LOSS AIR FLOW RATE CFM	59,884	, A	TOTAL H	LING CFM IEAT GAIN RATE CFM	1122 36,667 30.6		a	furr a/c coil available	pressure nace filter pressure pressure r s/a & r/a								GMEC960 FAN		SOODM 80	AN		AFUE = T (BTU/H) = T (BTU/H) =	80,000	)
RUN COUNT S/A	4th 0	3rd 0	2nd 15	1st 8	Bas 4		ple	enum pre	essure s/a	0.18		r/a	pressure	0.17				EDLOW MEDIUM	885		DES	GIGN CFM = CFM @	1122 6 " E.S.P.	_
R/A All S/A diffusers 4"x10" un				2   out.	1	j			ress. loss essure s/a	0.02 0.16			ess. Loss essure r/a	0.02 0.15			MEDIU	M HIGH HIGH	1005 1122	-	ΓEMPERAT	TURE RISE	63	°F
All S/A runs 5"Ø unless no		wise on la 2	yout. 3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19					_
ROOM NAME	MBR	ENS	WIC	BED-3	BED-4	BED-5	ENS-4/5	BED-2	WIC-3	MBR	ENS-2/3	FAM	LV/DN	KIT	KIT	LIB	LAUN	W/R	FOY	20 MUD	21 BAS	22 BAS	23 BAS	24 BAS
RM LOSS MBH. CFM PER RUN HEAT	1.64	2.26 42	0.60 11	2.30 43	1.90 36	1.31 24	0.60 11	1.60 30	0.73	1.64	0.44	3.21	3.16	2.10	2.10	1.67	1.10	1.81	2.68	2.46	4.99	4.99	4.99	4.99
RM GAIN MBH.	1.85	1.40	0.18	2.63	2.40	∠4 1.82	0.34	30 1.79	14 0.64	31 1.85	8 0.16	60 2.59	59 2.37	39 1.93	39 1.93	31 1.37	21	34	50	46	93	93	93	93
CFM PER RUN COOLING		43	6	80	74	56	10	55	19	57	5	79	72	59	59	42	1.22 37	1.35 41	0.70 21	0.49 15	0.62 19	0.62 19	0.62 19	0.62 19
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.	37	56	39	59	56	34	34	51	45	39	39	22	10	40	31	27	20	33	41	44	38	19	5	31
EQUIVALENT LENGTH	190	160	150	130	170	200	220	160	110	130	150	140	130	150	160	140	180	110	90	140	140	120	140	130
TOTAL EFFECTIVE LENGTH	227	216	189	189	226	234	254	211	155	169	189	162	140	190	191	167	200	143	131	184	178	139	145	161
ADJUSTED PRESSURE ROUND DUCT SIZE		0.08	0.09	0.09	0.08	0.07	0.07	0.08	0.11	0.1	0.09	0.11	0.12	0.09	0.09	0.1	0.09	0.12	0.13	0.09	0.09	0.12	0.11	0.1
HEATING VELOCITY (ft/min)	5 228	5 308	4 126	<b>6</b> 219	<b>6</b> 184	6 122	4 126	.6 153	4 161	5	4 92	5	5	5	5	4	4	4	4	4	6	6	6	6
COOLING VELOCITY (ft/min)	419	316	69	408	377	286	115	280	218	228 419	57	441 580	433 529	286 433	286 433	356 482	241 424	390 470	574 241	528 172	474 97	474 97	474 97	474
OUTLET GRILL SIZE		3X10	3X10	4X10	4X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	97 4X10
TRUNK	В	Α	В	D	С	С	С	Α	D	В	D	В	D	A	A	C	В	C	C	A	A	-4X10	D	C C
ROOM NAME RM LOSS MBH. CFM PER RUN HEAT RM GAIN MBH. CFM PER RUN COOLING ADJUSTED PRESSURE ACTUAL DUCT LEGH. EQUIVALENT LENGTH TOTAL EFFECTIVE LENGTH ADJUSTED PRESSURE ROUND DUCT SIZE HEATING VELOCITY (ft/min) COOLING VELOCITY (ft/min) OUTLET GRILL SIZE TRUNK	2.30 43 2.63 80 0.17 52 120 172 0.1 6 219 408	26 BED-4 1.90 36 2.40 74 0.17 48 170 218 0.08 6 184 377 4X10 C	27 ENS-2/3 0.44 8 0.16 5 0.17 36 140 176 0.1 4 92 57 3X10 D										Initials: PXV	HVAC REVIEWED	Redmond Hill City of Richmond H Building Division									
SUPPLY AIR TRUNK SIZE		***************************************													<u> </u>		RETURN A	AIR TRUNK	SIZE	U				
	TRUNK	STATIC	DOLLARD				VELOCITY			TRUNK	STATIC	ROUND	RECT											
			ROUND	RECT							1.0					VELOCITY	1	TRUNK	STATIC	ROUND	RECT		╓┦▮	VELOCIT
TOLINIC A	CFM	PRESS.	DUCT	DUCT		۰	(ft/min)		TOUNK O	CFM	PRESS.	DUCT	DUCT			(ft/min)		CFM	PRESS.	DUCT	DUCT	$\frac{2}{2}$	밀질	(ft/min)
TRUNK A TRUNK B	сғм 289	PRESS.	DUCT 8.8	DUСТ 10	X X	8	520		TRUNK G	0	0.00	DUCT 0	DUCT 0	×	8	(ft/min)	TRUNK O	CFM O	PRESS. 0.05	UCT 0	DUCT 0	Ğ		(ft/min)
TRUNK A TRUNK B TRUNK C	сғм 289 536	PRESS.	DUCT	оост 10 14	x x x	8 8 8	520 689		TRUNK H	0	0.00 0.00	0 0	0 0 0	х	8 8	(ft/min) 0 0	TRUNK P	СFM 0 0	PRESS. 0.05 0.05	0 0 0	о О О	Ğ		(ft/min) O O
TRUNK B	289 536 315	0.08 0.08	8.8 11.1	DUСТ 10	x	8	520			0	0.00	DUCT 0	DUCT 0		8	(ft/min)		0 0 0 0	PRESS. 0.05 0.05 0.05	mado 0	0 0 0	9/2	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	(ft/min) 0 0 0
TRUNK B TRUNK C TRUNK D TRUNK E	289 536 315 583 0	0.08 0.08 0.07 0.07 0.00	8.8 11.1 9.4 11.8 0	10 14 10 16 0	x x x	8 8 8	520 689 567 656 0		TRUNK H TRUNK I TRUNK J TRUNK K	0 0 0 0	0.00 0.00 0.00 0.00 0.00	0 0 0 0 0	0 0 0 0 0	x x	8 8 8 8	(ft/min) 0 0 0 0 0	TRUNK P TRUNK Q TRUNK R TRUNK S	0 0 0 0 0	0.05 0.05 0.05 0.05 0.05 0.05	maddy.	DUCT 0 0 0 0	) 9/22×	UIII DING	(ft/min) O O
TRUNK B TRUNK C TRUNK D	289 536 315 583 0	0.08 0.08 0.07 0.07	8.8 11.1 9.4 11.8	10 14 10 16	x x x	8 8 8	520 689 567 656		TRUNK H TRUNK I TRUNK J	0 0 0 0	0.00 0.00 0.00 0.00	0 0 0 0	0 0 0 0 0	x x x	8 8 8	(ft/min) 0 0 0 0	TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T	O O O O O	0.05 0.05 0.05 0.05 0.05 0.05 0.05	maddy.toa	0 0 0 0 0 0 0 0 0	) 9/22/ *	UIIL DING D	(ft/min) 0 0 0 0 0 0
TRUNK B TRUNK C TRUNK D TRUNK E	289 536 315 583 0	0.08 0.08 0.07 0.07 0.00	8.8 11.1 9.4 11.8 0	10 14 10 16 0	x x x	8 8 8	520 689 567 656 0		TRUNK H TRUNK I TRUNK J TRUNK K	0 0 0 0	0.00 0.00 0.00 0.00 0.00	0 0 0 0 0	0 0 0 0 0	x x x x	8 8 8 8	(ft/min) 0 0 0 0 0	TRUNK P TRUNK Q TRUNK R TRUNK S	0 0 0 0 0	0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05	maddy.toa	RO CO CO CO	) 9/22/ *	UIIL DING D	0 0 0 0 0
TRUNK B TRUNK C TRUNK D TRUNK E	289 536 315 583 0	0.08 0.08 0.07 0.07 0.00	8.8 11.1 9.4 11.8 0	10 14 10 16 0	x x x	8 8 8	520 689 567 656 0	8	TRUNK H TRUNK I TRUNK J TRUNK K	0 0 0 0	0.00 0.00 0.00 0.00 0.00	0 0 0 0 0	0 0 0 0 0	x x x x	8 8 8 8	(ft/min) 0 0 0 0 0	TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U	OFM O O O O O O	0.05 0.05 0.05 0.05 0.05 0.05 0.05	maddy.toalaa	ROO CO CO CO CO CO CO CO CO CO CO CO CO C	) 9/22/ *	UIIL DING D	(ft/min) 0 0 0 0 0 0
TRUNK B TRUNK C TRUNK C TRUNK E TRUNK F	289 536 315 583 0 0	0.08 0.08 0.07 0.07 0.00 0.00	8.8 11.1 9.4 11.8 0 0	10 14 10 16 0 0	x x x x x	8 8 8 8 8	520 689 567 656 0 0	Ō	TRUNK H TRUNK I TRUNK J TRUNK K TRUNK L	0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00	0 0 0 0 0 0 0	0 0 0 0 0 0 0	x x x x x	8 8 8 8 8	(ft/min) 0 0 0 0 0 0	TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U TRUNK V	O O O O O O O O	0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05	maddy.toa	ROO CO CO CO CO CO CO CO CO CO CO CO CO C	) 9/22/ *	UIIL DING D	(ft/min) 0 0 0 0 0 0 0
TRUNK B TRUNK C TRUNK C TRUNK E TRUNK F  RETURN AIR #  AIR VOLUME	289 536 315 583 0 0	0.08 0.08 0.07 0.07 0.00 0.00	8.8 11.1 9.4 11.8 0 0	10 14 10 16 0 0	x x x x x x 5 0 85	8 8 8 8 8 8 75	520 689 567 656 0 0	0 85	TRUNK H TRUNK I TRUNK J TRUNK K TRUNK L	0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	x x x x x	8 8 8 8 8 8	(ft/min) 0 0 0 0 0 0 0	TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U TRUNK V TRUNK W TRUNK X TRUNK Y	O O O O O O O O O O O O O O O O O O O	PRESS. 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0	maddy.toalaalejan	R0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	)9/22/202	UIL DING DIVISION ( )	(ft/min) 0 0 0 0 0 0 0 0
TRUNK B TRUNK D TRUNK D TRUNK E TRUNK F  RETURN AIR #  AIR VOLUME PLENUM PRESSURE	289 536 315 583 0 0	0.08 0.08 0.07 0.07 0.00 0.00 2 0 85 0.15	8.8 11.1 9.4 11.8 0 0	10 14 10 16 0 0 0	x x x x x x	8 8 8 8 8 8 6 0 75 0.15	520 689 567 656 0 0	0 85 0.15	TRUNK H TRUNK J TRUNK K TRUNK L  0 0 0.15	0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	x x x x x	8 8 8 8 8 8 0 0	(ft/min) 0 0 0 0 0 0 0 0 0	TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U TRUNK V TRUNK W TRUNK W TRUNK X TRUNK Y TRUNK Z	OFM O O O O O O O O O O O O O O O O O O	PRESS. 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0	maddy.toalaalejand	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9/22/2022	UII DING DIVISION	(ft/min) 0 0 0 0 0 0 0 0 0 0 619 569 501
TRUNK B TRUNK C TRUNK C TRUNK E TRUNK F  RETURN AIR #  AIR VOLUME PLENUM PRESSURE ACTUAL DUCT LGH.	289 536 315 583 0 0 1 0 90 0.15 41	0.08 0.08 0.07 0.07 0.00 0.00 2 0 85 0.15 52	8.8 11.1 9.4 11.8 0 0	10 14 10 16 0 0 0 4 0 90 0.15 58	x x x x x x 5 0 85 0.15 53	8 8 8 8 8 8 6 0 75 0.15 59	520 689 567 656 0 0 7 0 360 0.15 45	0 85 0.15 41	TRUNK H TRUNK J TRUNK K TRUNK L  0 0 0.15 1	0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00	DUCT 0 0 0 0 0 0 0 0 0 15 1	0 0 0 0 0 0 0 0 0	x x x x x x	8 8 8 8 8 8 0 0.15	(ff/min) 0 0 0 0 0 0 0 0 8 BR 162 0.15 15	TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U TRUNK V TRUNK W TRUNK X TRUNK Y	O O O O O O O O O O O O O O O O O O O	PRESS. 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0	maddy.toalaalejan	R0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	)9/22/2022	UIL DING DIVISION ( )	(ft/min) 0 0 0 0 0 0 0 0 0 0 0 619 569
TRUNK B TRUNK C TRUNK C TRUNK E TRUNK F  RETURN AIR #  AIR VOLUME PLENUM PRESSURE ACTUAL DUCT LGH. EQUIVALENT LENGTH	289 536 315 583 0 0 1 0 90 0.15 41 185	0.08 0.08 0.07 0.07 0.00 0.00 2 0 85 0.15 52 195	8.8 11.1 9.4 11.8 0 0 3 0 90 0.15 53 165	10 14 10 16 0 0 0 4 0 90 0.15 58 165	x x x x x x 5 0 85 0.15 53 215	8 8 8 8 8 8 0 75 0.15 59 265	520 689 567 656 0 0 7 0 360 0.15 45 165	0 85 0.15 41 190	TRUNK H TRUNK J TRUNK K TRUNK L  0 0 0.15 1 0	0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00	O O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0 0 0 0 0	x x x x x	8 8 8 8 8 8 8 0 0.15 1	(ff/min) 0 0 0 0 0 0 0 0 0 0 162 0.15 15	TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U TRUNK V TRUNK W TRUNK W TRUNK X TRUNK Y TRUNK Z	OFM O O O O O O O O O O O O O O O O O O	PRESS. 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0	maddy.toalaalejand	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9/22/2022	UII DING DIVISION	(ft/min) 0 0 0 0 0 0 0 0 0 0 0 619 569 501
TRUNK B TRUNK C TRUNK C TRUNK E TRUNK F  RETURN AIR #  AIR VOLUME PLENUM PRESSURE ACTUAL DUCT LGH. EQUIVALENT LENGTH TOTAL EFFECTIVE LH	289 536 315 583 0 0 1 0 90 0.15 41	0.08 0.08 0.07 0.07 0.00 0.00 2 0 85 0.15 52	8.8 11.1 9.4 11.8 0 0 0 3 0 90 0.15 53 165 218	10 14 10 14 10 16 0 0 0 4 0 90 0.15 58 165 223	x x x x x x 5 0 85 0.15 53 215 268	8 8 8 8 8 8 75 0.15 59 265 324	520 689 567 656 0 0 7 0 360 0.15 45 165 210	0 85 0.15 41 190 231	TRUNK H TRUNK J TRUNK K TRUNK L  0 0 0.15 1 0 1	0 0 0 0 0 0 0 0 0.15 1 0	0.00 0.00 0.00 0.00 0.00 0.00	O O O O O O O O O O O O O O O O O O O	DUCT 0 0 0 0 0 0 0 0 0 15 1 0 1	x x x x x x 0 0 0.15 1 0	8 8 8 8 8 0 0 0.15 1	(ff/min) 0 0 0 0 0 0 0 0 0 0 5 162 0.15 15 150 165	TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U TRUNK V TRUNK W TRUNK W TRUNK X TRUNK Y TRUNK Z	OFM O O O O O O O O O O O O O O O O O O	PRESS. 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0	maddy.toalaalejand	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9/22/2022	UII DING DIVISION	(ft/min) 0 0 0 0 0 0 0 0 0 0 0 619 569 501
TRUNK B TRUNK C TRUNK D TRUNK E TRUNK F  RETURN AIR #  AIR VOLUME PLENUM PRESSURE ACTUAL DUCT LGH. EQUIVALENT LENGTH TOTAL EFFECTIVE LH ADJUSTED PRESSURE	289 536 315 583 0 0 0	0.08 0.08 0.07 0.07 0.00 0.00 2 0 85 0.15 52 195 247	8.8 11.1 9.4 11.8 0 0 3 0 90 0.15 53 165	10 14 10 16 0 0 0 4 0 90 0.15 58 165	x x x x x x 5 0 85 0.15 53 215	8 8 8 8 8 8 0 75 0.15 59 265	520 689 567 656 0 0 7 0 360 0.15 45 165	0 85 0.15 41 190	TRUNK H TRUNK J TRUNK K TRUNK L  0 0 0.15 1 0	0 0 0 0 0 0 0	0.00 0.00 0.00 0.00 0.00 0.00	O O O O O O O O O O O O O O O O O O O	0 0 0 0 0 0 0 0 0 0	x x x x x x	8 8 8 8 8 8 8 0 0.15 1	(ff/min) 0 0 0 0 0 0 0 0 0 0 162 0.15 15 150 165 0.09	TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U TRUNK V TRUNK W TRUNK W TRUNK X TRUNK Y TRUNK Z	OFM O O O O O O O O O O O O O O O O O O	PRESS. 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0	maddy.toalaalejand	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9/22/2022	UII DING DIVISION	(ft/min) 0 0 0 0 0 0 0 0 0 0 0 619 569 501
TRUNK B TRUNK C TRUNK C TRUNK E TRUNK F  RETURN AIR #  AIR VOLUME PLENUM PRESSURE ACTUAL DUCT LGH.	CFM 289 536 315 583 0 0 0 0 15 41 185 226 0.07 5.9 8	2 0.08 0.08 0.07 0.07 0.00 0.00 2 0 85 0.15 52 195 247 0.06 6 8	3 0 90 0 0 3 0 90 0.15 53 165 218 0.59 8	0 0 15 58 165 223 0.07 5.9 8	x x x x x x 5 0 85 0.15 53 215 268 0.06	8 8 8 8 8 8 8 8 6 0 75 0.15 59 265 324 0.05 6 8	520 689 567 656 0 0 360 0.15 45 165 210 0.07 9.9 8	0 85 0.15 41 190 231 0.06	TRUNK H TRUNK I TRUNK J TRUNK K TRUNK L  0 0 0 15 1 0 1 14.80 0 0	0 0 0 0 0 0 0 0 0 0.15 1 0 1	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1	x x x x x 0 0 0.15 1 0 14.80	8 8 8 8 8 8 0 0 0.15 1 0 1	(ff/min) 0 0 0 0 0 0 0 0 0 0 5 162 0.15 15 150 165	TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U TRUNK V TRUNK W TRUNK W TRUNK X TRUNK Y TRUNK Z	OFM O O O O O O O O O O O O O O O O O O	PRESS. 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0	maddy.toalaalejand	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9/22/2022	UII DING DIVISION	(ft/min) 0 0 0 0 0 0 0 0 0 0 0 619 569 501
TRUNK B TRUNK C TRUNK C TRUNK E TRUNK F  RETURN AIR #  AIR VOLUME PLENUM PRESSURE ACTUAL DUCT LGH. EQUIVALENT LENGTH TOUVALENT LENGTH TOUVALENT PRESSURE ROUND DUCT SIZE	289 536 315 583 0 0 0 1 1 0 90 0.15 41 185 226 0.07 5.9	0.08 0.08 0.07 0.07 0.00 0.00 2 0 85 0.15 52 195 247 0.06 6	8.8 11.1 9.4 11.8 0 0 0 3 0 0 0.15 53 165 218 0.07 5.9	10 14 10 16 0 0 0 4 0 90 0.15 58 165 223 0.07 5.9	x x x x x x 5 0 85 0.15 53 215 268 0.06 6	8 8 8 8 8 8 8 75 0.15 59 265 324 0.05 6	520 689 567 656 0 0 7 0 360 0.15 45 165 210 0.07 9.9	0 85 0.15 41 190 231 0.06 6	TRUNK H TRUNK I TRUNK J TRUNK K TRUNK L  0 0 0.15 1 0 1 14.80 0	0 0 0 0 0 0 0 0.15 1 0 14.80	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.15 1 0 14.80	0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 14.80	0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 14.80	x x x x x 0 0 0.15 1 0 1 14.80	8 8 8 8 8 8 0 0.15 1 0 1 14.80	(ff/min) 0 0 0 0 0 0 0 0 0 162 0.15 150 165 0.09 6.9	TRUNK P TRUNK Q TRUNK R TRUNK S TRUNK T TRUNK U TRUNK V TRUNK W TRUNK W TRUNK X TRUNK Y TRUNK Z	OFM O O O O O O O O O O O O O O O O O O	PRESS. 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0	maddy.toalaalejand	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9/22/2022	UII DING DIVISION	(ft/min) 0 0 0 0 0 0 0 0 0 0 0 619 569 501

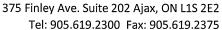


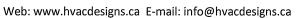
TYPE: TERRACOTA 2 LO# 90742 SITE NAME: ROUNDEL HOMES INC OPT-2ND Y OF RICHMOND HILL RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY **BUILDING DIVISION** COMBUSTION APPLIANCES 9.32.3.1(1) SUPPLEMENTAL VENTILATION CAPACITY 9.32.3.5. a) V Direct vent (sealed combustion) only cfm Total Ventilation Capacity Positive venting induced draft (except fireplaces) Less Principal Ventil. Cap<mark>a</mark>city cfm Natural draft, B-vent or induced draft gas fireplace Required Supplemental Capacity 116.6 cfm c) | Solid Fuel (including fireplaces) PRINCIPAL EXHAUST FAN CAPACITY No Combustion Appliances e) VANEE V150H Model: **BSMT** Location: HEATING SYSTEM 3.0 ✓ HVI Approved sones PRINCIPAL EXHAUST HEAT LOSS CALCULATION Forced Air Non Forced Air CFM ΔT °F % LOSS 95.4 CFM 1.08 0.25 Electric Space Heat SUPPLEMENTAL FANS PANASONIC Location Model cfm HOUSE TYPE 9.32.1(2) FV-05-11VK1 ENS 50 0.3 ENS-4/5 FV-05-11VK1 50 0.3 **1** Type a) or b) appliance only, no solid fuel ENS-2/3 FV-05-11VK1 50 0.3 W/R FV-05-11VK1 50 0.3 Type I except with solid fuel (including fireplaces) HEAT RECOVERY VENTILATOR 9.32.3.11. Ш Any Type c) appliance VANEE V150H Model: 150 cfm high 35 cfm low Type I, or II with electric space heat 75 % Sensible Efficiency ✓ HVI Approved Other: Type I, II or IV no forced air @ 32 deg F ( 0 deg C) LOCATION OF INSTALLATION SYSTEM DESIGN OPTIONS O.N.H.W.P. Lot: Concession Exhaust only/Forced Air System Township Plan: HRV with Ducting/Forced Air System Address 3 HRV Simplified/connected to forced air system Roll# Building Permit # HRV with Ducting/non forced air system BUILDER: GREENPARK HOMES Part 6 Design Name: TOTAL VENTILATION CAPACITY 9.32.3.3(1) Address: Basement + Master Bedroom 2 @ 21.2 cfm 42.4 cfm City: Ø  $\overline{S}$ Other Bedrooms @ 10.6 cfm 42.4 cfm Telephone #: Fax # INSTALLING CONTRACTOR Kitchen & Bathrooms @ 10.6 cfm 53 cfm City of Richmond Other Rooms @ 10.6 cfm 74.2 Name: cfm IEWE! 212.0 Table 9.32.3.A. TOTAL cfm Address: City: PRINCIPAL VENTILATION CAPACITY REQUIRED 9.32.3.4.(1) Telephone #: Fax #: Bedroom 31.8 cfm DESIGNER CERTIFICATION Bedroom 47.7 cfm I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code. 3 Bedroom 63.6 HVAC Designs Ltd. cfm Name: Bedroom 79.5 cfm Signature: Bedroom 95.4 cfm HRAI#

TOTAL



LO#: 907	742		Form										
	742			ula Sheet (For Air Lea	kage / Ventiliation C	alculation)							
louse Volume		Model: TERRACOTA	2	Builde	r: GREENPARK HOMES				Date	e: 2021-05-10			
louse Volume		Volume Calculation	n		Air Change & Delta T Data								
louse volume		·		1						_			
Level	Floor Area (ft²)	Floor Hoight (ft)	Volume (ft³)				ATURAL AIR CHANG		0.352	_			
Bsmt	1500	Floor Height (ft) 8	12000	-		SUMMER IN	ATURAL AIR CHAN	GE RATE	0.110				
First	1500	10	15000										
Second	1889	9	17001				Design To	emperature Di	fference				
Third	0	9	0				Tin °C	Tout °C	ΔT °C	ΔT °F			
Fourth	0	9	0			Winter DTDh	22	-21	43	78			
		Total:	44,001.0 ft <sup>3</sup>			Summer DTDc	24	31	7	13			
		Total:	1246.0 m <sup>3</sup>										
	5.2.3.1	1 Heat Loss due to Air	r Leakage			6.2.6	Sensible Gain due	to Air Leakage	)				
0.352	x <u>346.10</u>	$LR_{airh} \times \frac{V_b}{3.6} \times D$ $\times 43 ^{\circ}\text{C}$	x <u>1.2</u>	= 6316 W = 21551 Btu/h	. 1	$G_{salb} = LR_{airc}$ x 346.10	5.0	x1.2	=	324 W 1106 Btu/h			
95 CFM	$HL_{vairb} = P$ x78 °F	$PVC \times DTD_h \times 1$ $\times 1.08$		= 2004 Btu/h		$_{vairb} = PVC \times D$			=	330 Btu/h			
			5.2.3.3 Calcula	tion of Air Change Heat	oss for Each Room (Floo	or Multiplier Section	)						
		$HL_{ai}$		or $\times$ $HL_{airbv}$ $\times$ {( $H$					Per	CITY			
		Level	Level Factor (LF)	HLairve Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL <sub>clevel</sub> )	Air Leakage Heat Lo HLairbv /			RECEIVED Per:maddy.toalaalejand	TY OF RICH BUILDING			
		1	0.5		9,177	1.1	74		<b>Y</b> 0	NO REC			
		2	0.3		12,716	0.50	08		₫ <b>m</b>				
		3	0.2	21,551	15,729	0.23	74			$\mathcal{N} \bowtie \mathbb{N}$			
		4	0		0	0.00	00						
		5	0	L	0	0.00	00		<u>•</u>	DIVISION  12022			
			-	- ventilation heat loss entilation system HLairve	= 0				) and	\(\ceil \) \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\			
					****				3				







## **HEAT LOSS AND GAIN SUMMARY SHEET**

			2000 / 1112 0		7.122,				
MODEL:	TERRACOTA 2		OPT 2ND	В	BUILDER:TYGRIENPARKIHOMES HIL				
SFQT:	3389	LO#	90742		SITEBROUNDECHOMES INC				
DESIGN AS	SUMPTIONS				09/22/2022				
HEATING			°F	COOLING	RECEIVED	°F			
	DESIGN TEMP.		-6	OUTDOOR DE		88			
INDOOR DI	ESIGN TEMP.		72	INDOOR DESI	GN TEMP: (MAXX)5 fpalaalejand	ro 75			
BUILDING	DATA								
ATTACHME	ENT:		DETACHED	# OF STORIES	(+BASEMENT):	3			
FRONT FAC	CES:		EAST	ASSUMED (Y/	'N):	Υ			
AIR CHANG	SES PER HOUR:		3.57	ASSUMED (Y/	N):	Υ			
AIR TIGHTN	IESS CATEGORY:		AVERAGE	ASSUMED (Y/	N):	Υ			
WIND EXPO	OSURE:		SHELTERED	ASSUMED (Y/	N):	Υ			
HOUSE VOI	LUME (ft³):		44001.0	ASSUMED (Y/	N):	Υ			
INTERNALS	SHADING:	BLINDS	CURTAINS	ASSUMED OC	CUPANTS:	6			
INTERIOR L	IGHTING LOAD (Btu/h	n/ft²):	1.27	DC BRUSHLES	S MOTOR (Y/N):	Υ			
FOUNDATIO	ON CONFIGURATION		BCIN_1	DEPTH BELOV	V GRADE:	5.5 ft			
LENGTH:	54.0 ft	WIDTH:	37.0 ft	EXPOSED PER	IMETER:	182.0 ft			

2012 OBC - COMPLIANCE PACKAGE		
	Compliand	e Package
Component		A1
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 ci	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	0.28	-
Skylights Maximum U-Value	0.49	-
Space Heating Equipment Minimum AFUE	0.96	_
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE





HVAC Designs Ltd. 375 Finley Ave, Suite 202 Ajax ON, L1S 2E2

CITY OF RICHMOND HILL 905-619-2300 BUILDING DIVISION

## Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

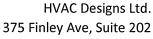
**RECEIVED** 

We	eather Statio	on Description	Per:maddy.toalaalejand
Province:	Ontario		
Region:	Richmond H	Hill	
	Site Des	cription	
Soil Conductivity:	Normal con	nductivity: dry sand	, loam, clay
Water Table:	Normal (7-1	10 m, 23-33 ft)	
	Foundation	Dimensions	
Floor Length (m):	16.5		
Floor Width (m):	11.3		
Exposed Perimeter (m):	0.0		
Wall Height (m):	2.4	L	
Depth Below Grade (m):	1.68	Insulatio	on Configuration
Window Area (m²):	2.4		e Chrys (an American Security Security Chrys (and Chrys Security Chrys Carlot Chrys Carlot Chrys Carlot Chrys Carlot Chrys Carlot Chrys (and Chrys Carlot Chrys Carlot Chrys Carlot Chrys Carlot Chrys Carlot Chrys Carlot Chrys (and Chrys Carlot Chrys Carlot Chrys Carlot Chrys Carlot Chrys Carlot Chrys Carlot Chrys (and Chrys Chrys Chrys Carlot Chrys Chrys Carlot Chrys Carlot Chrys Carlot Chrys Carlot Chrys (and Chrys Chrys Chrys Chrys Chrys Chrys Chrys Chrys Chrys Chrys Chrys Chrys Chrys Chrys Chrys Chrys (and Chrys Ch
Door Area (m²):	1.9		
	Radian	ıt Slab	
Heated Fraction of the Slab:	0		
Fluid Temperature (°C):	33		
	Design I	Months	
Heating Month	1		
	Foundation	on Loads	
Heating Load (Watts):		173	18

**TYPE:** TERRACOTA 2

**LO#** 90742

OPT 2ND



Ajax ON, L1S 2E2



CITY OF RICHMOND HILL905-619-2300 BUILDING DIVISION

09/22/2022

## Air Infiltration Residential Load Calculator

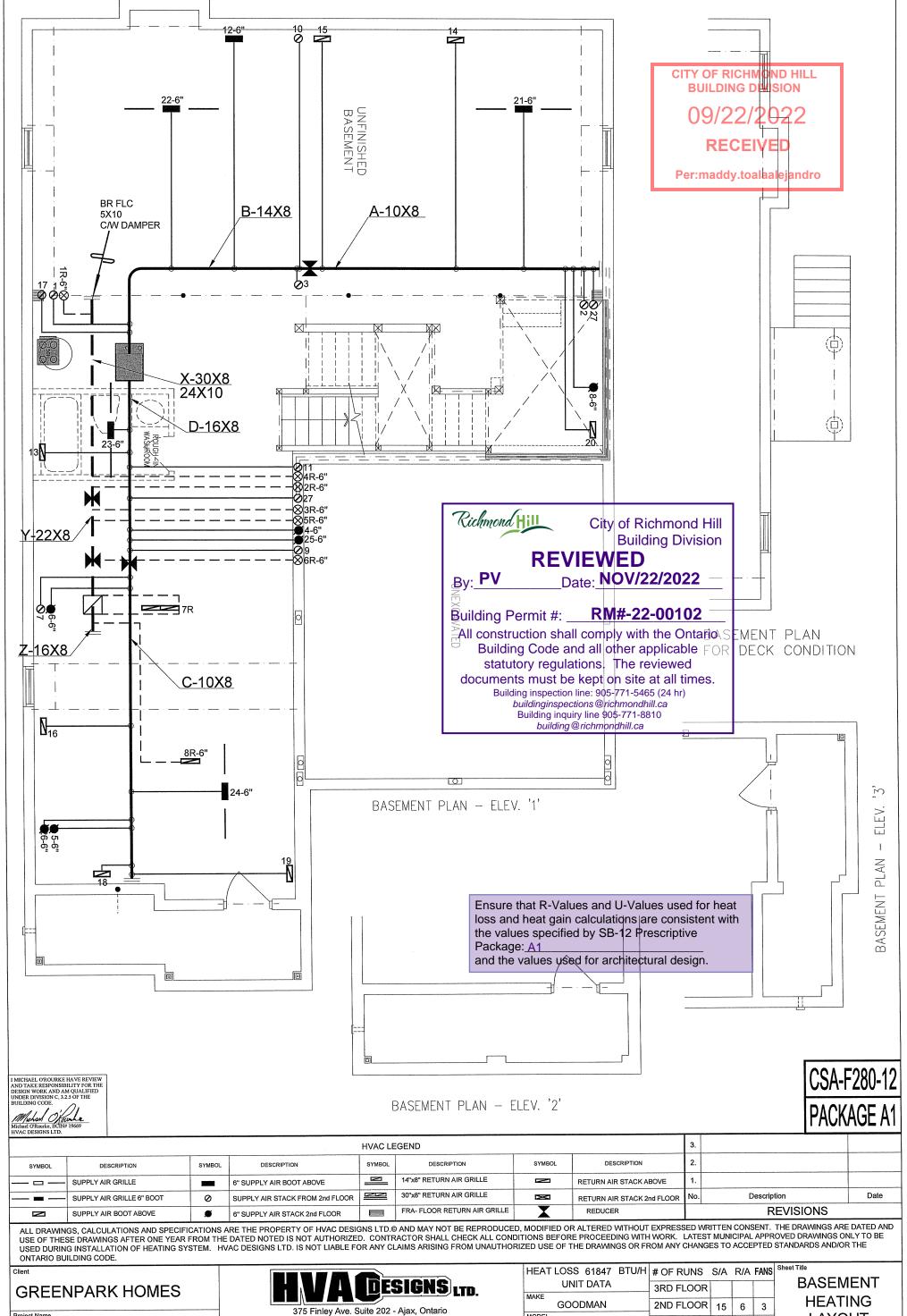
Supplemental tool for CAN/CSA-F280

Per:maddy.toalaalejandro

Weath	er Station Description	<b>T</b>
Province:	Ontario	HVAC
Region:	Richmond Hill	IVAC
Weather Station Location:	Open flat terrain, grass	
Anemometer height (m):	10	
	Local Shielding	
Building Site:	Suburban, forest	PXV
Walls:	Heavy	
Flue:	Heavy	
Highest Ceiling Height (m):	7.62	
Buil	ding Configuration	
Type:	Detached	
Number of Stories:	Two	
Foundation:	Full	
House Volume (m³):	1246.0	
Air L	eakage/Ventilation	
Air Tightness Type:	Present (1961-) (3.57 ACH)	
Custom BDT Data:	ELA @ 10 Pa.	1660.9 cm²
	3.57	ACH @ 50 Pa
Mechanical Ventilation (L/s):	Total Supply Total	Exhaust
	45.0	45.0
	Flue Size	
Flue #:	#1 #2 #3 #4	
Diameter (mm):	0 0 0 0	
Natu	ral Infiltration Rates	
Heating Air Leakage Rate (A	ACH/H): 0.352	
Cooling Air Leakage Rate (A	CH/H): 0.110	

TYPE: TERRACOTA 2
LO# 90742

OPT 2ND



Project Name

ROUNDEL HOMSE INC RICHMOND HILL, ONTARIO

OPT 2ND TERRACOTA 2

3389 sqft

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.

i	SS 61847	BTU/H	# OF RUNS	S/A	R/A	FANS	SI		
	JNIT DATA		3RD FLOOR						
MAKE G	OODMAN		2ND FLOOR	15	6	3			
MODEL GME	C960803BN	Α	1ST FLOOR	8	2	3	L		
INPUT	80	мвти/н	BASEMENT	4	1	0	D		
OUTPUT	76.8	мвти/н	ALL S/A DIFFU			s			
COOLING		TONS	UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"						

3.0

1122

UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT

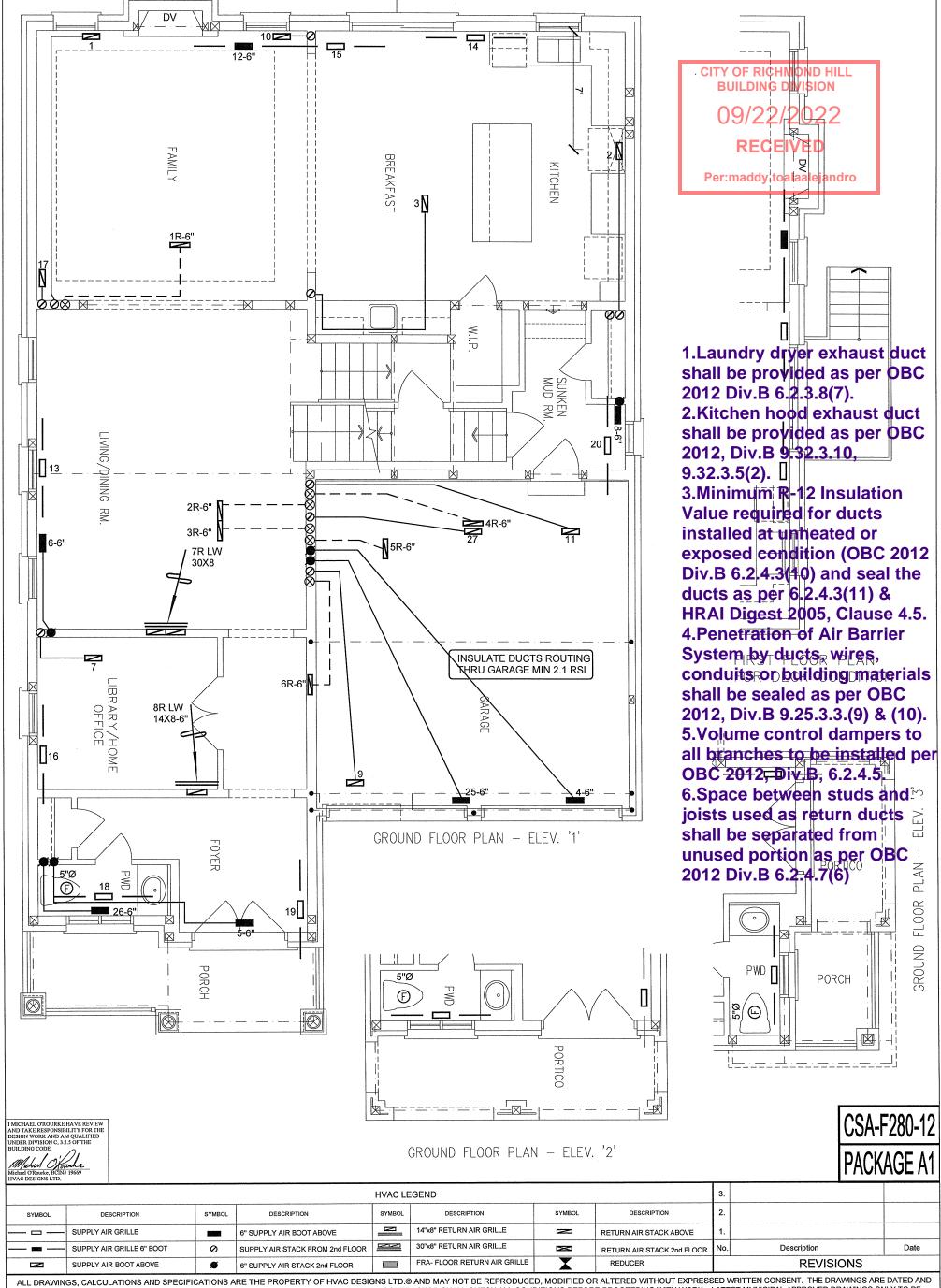
DOORS 1" min. FOR R/A

BASEMENT
HEATING
LAYOUT

Date MAY/2021
Scale 3/16" = 1'-0"

BCIN# 19669

LO# 90742



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**GREENPARK HOMES** 

Project Name

ROUNDEL HOMSE INC RICHMOND HILL, ONTARIO

OPT 2ND TERRACOTA 2

3389 sqft

## HVA DESIGNS 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

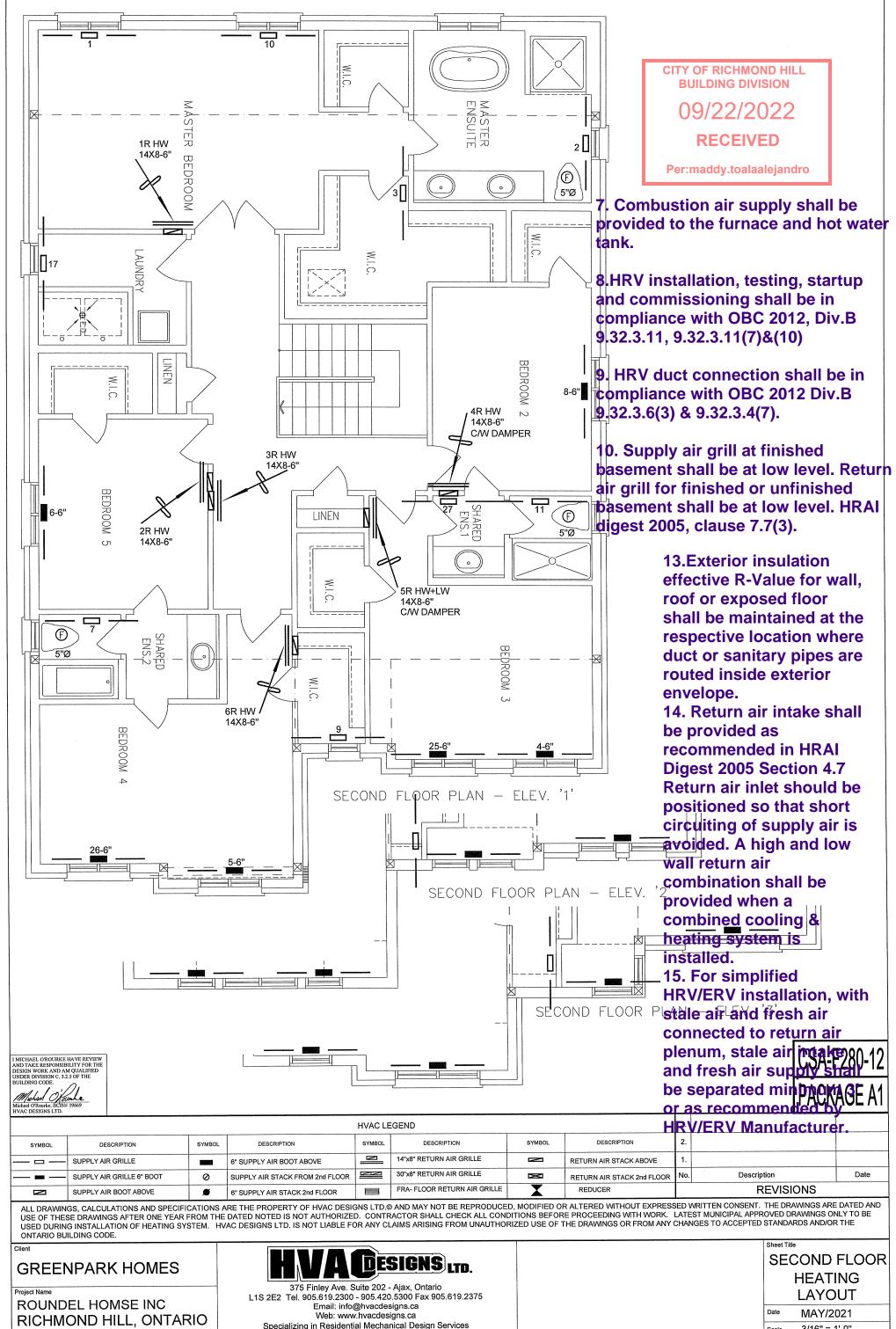
Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

FIRST FLOOR
HEATING
LAYOUT

Date MAY/2021 Scale 3/16" = 1'-0"

BCIN# 19669

LO# 90742



OPT 2ND TERRACOTA 2

3389 saft

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.

3/16" = 1'-0"

BCIN# 19669

90742 LO#