Final

115 Lusk Street
Nepean, Ontario
Acoustical Study

Prepared for DCR/Phoenix Group of Companies
by IBI Group
September 8, 2020

Document Control Page

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ORIGINATOR:	
REVIEWER:	
AUTHORIZATION:	
CIRCULATION LIST:	
HISTORY:	

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1 Introduction

IBI Group was retained to conduct an acoustical study to examine the impacts of stationary noise created by a proposed commercial development on existing sensitive residential receivers.

The subject property is located at 115 Lusk Street in Nepean, Ontario, and is approximately 0.405 ha in area, and is presently vacant. The property is bounded by future commercial development Blocks to the north, south, and west, and existing residential development to the east. The proposed commercial development is to consist of a restaurant building, a medical offices building, parking areas, and landscaped areas.

Refer to Figure 1 – Noise Information Plan (Appendix A), for the development location and layout.

2 Background and Noise Criteria

The proposed site's primary noise sources that may impact the existing off-site sensitive residential receivers includes rooftop mechanical equipment on the restaurant proposed building.

The Ontario Ministry of Environment, Conservation & Parks (MECP) noise guideline NPC-300 "Stationary and Transportation Sources – Approval and Planning" governs the environmental noise criteria for this project and has been utilized in this study.

2.1 Area Classification

It will be assumed that the development is located in a "Class 1" area (urban) as defined by the MECP in NPC-300, due to the acoustical environment of the subject sensitive receivers being typical of a major population center, where the background sound level is dominated by the urban hum.

2.2 Stationary Noise Level Criteria

The MECP has established stationary noise level criteria for new residential development and this is documented in NPC-300 Sections B6 and B7. Table 1 summarizes the noise criteria for all the MECP area classifications and time periods. This table documents the minimum criteria or exclusionary limits. If the worst case (i.e., quietest) ambient noise level is above the limits of Table 1, this ambient noise level becomes the noise level criteria.

For the purposes of this study it will be assumed the Table 1 criteria for Class 1 will apply as the noise level criteria that must be achieved. It is noted that while the "minimum" criteria is being used, it is likely the ambient noise level are higher given the nearby roads, especially Highway 416. Using the Table 1 criteria is a conservative approach.

Table 1 – Stationary Noise Level Criteria

TIME PERIOD	LOCATION	CLASS 1 (DBA)	CLASS 2 (DBA)	CLASS 3 (DBA)	CLASS 4 (DBA)
0700 – 1900	Outdoor Living Area	**50**	50	45	55
1900 – 2300	Outdoor Living Area	**50**	45	40	55
0700 – 1900	Plane of Window	**50**	50	45	60
1900 – 2300	Plane of Window	**50**	50	40	60
2300 – 0700	Plane of Window	**45**	45	40	55

** bolded noise levels are the criteria used in this study.*

2.3 Off-Site Noise Receiver Locations

To assist in noise modelling, existing off-site noise sensitive receiver locations were identified. These receiver locations are located at worst case locations (most exposed) for both day and night time noise.

Table 2 identifies the various receivers within the existing residential lots to the east. Receiver locations are as indicated on Figure 1 in Appendix A. The receivers are located flush with bedroom windows (second or third floor) to represent the nighttime receivers. The living room window (also assumed second or third floor) will be used to represent the worst-case daytime receiver.

A representative outdoor living area (OLA) has been located at ground level at the rear yard of 721 Yellowstone Court (closest and most exposed location).

Table 2 – Receiver Locations

RECEIVER LOCATION	LOCATION	HEIGHT OF RECEIVER	FINISHED FLOOR ELEVATION *
Receiver R1- 3-Storey Townhomes	4310 Fallowfield Road – Block 4	Floor 3: 7.5m	100.95m
Receiver R2 – 2-Storey Townhomes	4310 Fallowfield Road – Block 3	Floor 2: 4.5m	100.75m
Receiver R3 – 2-Storey Single Detached	721 Yellowstone Court	Floor 2: 4.5m	101.00m
Receiver R4- 2-Storey Single Detached	723 Yellowstone Court	Floor 2: 4.5m	101.00m
Receiver OLA1 – Outdoor Living Area	721 Yellowstone Court	Ground: 1.5m	100.50m

** Based on Grading Plan, 4310 Fallowfield (IBI Group, February 2013).*

3 Noise Prediction Methods

3.1 On-Site Stationary Noise Sources

The on-site stationary noise sources include mechanical equipment on the rooftop of the restaurant building. The medical offices building has been designed with a pitched roof that is proposed no to contain mechanical equipment.

For the restaurant building, the following operational data and assumptions were used in the noise modelling based on the information provided on the Mechanical Drawings (Goodkey Weedmark Associates Limited, March 19, 2020, included in Appendix B):

a) Restaurant building height of 24 feet (7.3m), with a finished floor elevation of 104.05m (based on Grading Plan, 115 Lusk Street, IBI Group, November 2019);

b) One (1) rooftop air-handling unit (AHU). The rooftop AHU is assumed to be operating 45 minutes per hour during the daytime and 30 minutes per hour during the nighttime. Operates with a sound power level of 87.9 dBA;

c) One (1) rooftop electric fan (EF) unit. The rooftop EF is assumed to be operating in steady-state during the daytime and nighttime. Operates with a sound power level of 92.3 dBA; and

d) One (1) rooftop makeup air unit (MAU). The rooftop MAU is assumed to be operating in steady-state during the daytime and nighttime. Operates with a sound power level of 87.1 dBA.

In addition, two (2) idling trucks, one at the medical office building and one at the restaurant building have been included in the model. The trucks are assumed to be operating 30 minutes per hour during the daytime and have a sound power level of 90 dBA.

4 Results

4.1 On-Site Stationary Noise

The industry-recognized noise modeling software “Cadna A v2020” by DataKustik that utilizes ISO 9613-2 was used to analyze the stationary noise sources and determine impact on the identified sensitive receivers. The results are summarized in Table 3 and the Cadna A results are provided in Appendix C.

Table 3 –Stationary Noise Levels (Daytime)

RECEIVER LOCATION	HEIGHT OF RECEIVERS	NOISE LEVEL (DBA)	
		DAYTIME	NIGHTTIME
Receiver R1- Townhomes	Floor 3: 7.5m	41.4	40.8
Receiver R2 - Townhomes	Floor 2: 4.5m	45.1	44.4
Receiver R3 – Single Detached	Floor 2: 4.5m	43.3	42.6
Receiver R4- Single Detached	Floor 2: 4.5m	43.8	42.4
Receiver OLA1 – Outdoor Living Area	Ground: 1.5m	43.7	-

Since daytime and nighttime stationary noise levels do not exceed the exclusionary limit criteria of 50 dBA and 45 dBA, respectively, noise mitigation is not required to attenuate the proposed stationary noise levels o9n the subject site.

5 Summary

Based on the assumptions and proposed development plans, it was found that noise mitigation is not required to attenuate noise from the subject site to protect the identified sensitive receivers.

If the proposed rooftop mechanical equipment or the site plan changes, the impact to environmental noise should be reviewed to ensure the findings of this study remain valid.

* * * * * * * * * * * * * * *

Yours truly

IBI GROUP

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Appendix A – Noise Information Plans

N

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SCALE	NTS
DATE	SEPTEMBER 2020
PROJECT No.	122508

CITY OF OTTAWA
ONTARIO

115 LUSK ROAD

NOISE INFORMATION PLAN - STATIONARY

FIGURE 1

FILE: \\caneast.ibigroup.com\J\07\122508_115LuskSt\7.0_Production\7.3_Design\04_Civil\Noise\Figures\122508N LAYOUT:FIG1 CTB: Rowpens-v2.ctb SAVED BY: Tiffany.chan, 2020-Sep-08 3:55 PM

Appendix B – Equipment Noise Profiles

ROOFTOP UNIT SCHEDULE WITH HEAT RECOVERY

TAG	LOCATION	AREA SERVED	SUPPLY FAN DATA (VSD)					EXHAUST/RETURN FAN DATA (VSD)					GAS HEATING SECTION					DX COOLING COIL DATA						HOT GAS BYPASS		
			FAN TYPE	AIR FLOW (CFM)	EXTERNAL STATIC PRESSURE (INWC)	TOTAL STATIC PRESSURE (INWC)	MOTOR SIZE (HP)	FAN TYPE	AIR FLOW (CFM)	EXTERNAL STATIC PRESSURE (INWC)	TOTAL STATIC PRESSURE (INWC)	MOTOR SIZE (HP)	INPUT (BTU)	OUTPUT (BTU)	E.A.T. (°F)	L.A.T. (°F)	TOTAL TURNDOWN	TOTAL CAPACITY (BTU)	SENSIBLE CAPACITY (BTU)	LATENT CAPACITY (BTU)	E.A.T. (DB/WB) (°F)	L.A.T. (DB/WB) (°F)	STAGES	L.A.T. (DB/WB) (°F)	RH (%)	CAPACITY (BTU)
RTU01	ROOF	OPEN AREA	BACKWARD CURVED PLENUM	4,000	0.5	2.91	5	BACKWARD CURVED PLENUM	600	0.50	0.97	1.0	210,000	168,000	58.8	97.8	11:1	123330	102910	20,430	77/63	54.8/53.3	2	70/59.27	53	74,000

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS. 2. MANUFACTURER NAME & MODEL NUMBER REPRESENTS ACCEPTABLE QUALITY STANDARD ONLY. ALTERNATIVE MATERIALS MAY BE APPROVED AFTER REVIEW OF TECHNICAL INFORMATION BY ENGINEER.
3. TYPICAL ENERGY WHEEL CONDITIONS: SUMMER – E.A.T. (°F) SHALL BE 90/72°F
WINTER – E.A.T. (°F) SHALL BE –17/17°F
4. PROVIDE ALL FINAL NG GAS CONNECTIONS AS REQUIRED FOR MULTIPLE BURNERS TO SUIT COMPLETE INSTALLATION.

---- CONTINUED BELOW ----

---- CONTINUED ABOVE ----

ROOFTOP UNIT SCHEDULE WITH HEAT RECOVERY - CONTINUED

ENERGY WHEEL DATA											ELECTRICAL DATA		SOUND POWER LEVEL (dB)								
OUTDOOR AIR FLOW TO WHEEL (CFM)	SUMMER					WINTER					FLA/MCA/MOC	V/PH/Hz	OCTAVE BAND	63	125	250	500	1000	2000	BASIS OF DESIGN	REMARKS
	TOTAL CAPACITY (BTU)	SENSIBLE CAPACITY (BTU)	E.A.T. (DB/WB) (°F)	L.A.T. (DB/WB) (°F)	SENSIBLE EFFICIENCY (%)	TOTAL CAPACITY (BTU)	E.A.T. (DB/WB) (°F)	L.A.T. (DB/WB) (°F)	SENSIBLE EFFICIENCY (%)												
1100	18,530	8,750	90/72	82/67	50.6	59,030	–17/–17	24.1/20.19	46.0	21/25	208/1/60	DISCHARGE LW(dB)/RETURN LW(dB)	89/60	88/79	90/78	88/72	80/68	77/64	AAON MODEL: RN–010–40–GB02–3LB:GNJC–D00–NCF–0BA 00F0HBE–00–0000H00YX	C/W INTEGRAL VFD. PROVIDE INSULATED ROOF CURB C/W SUPPLY AIR PLENUM TO DIVERT SUPPLY AIR TO DUCT PENETRATIONS BETWEEN TIMBER JOISTS AS REQUIRED.

DIRECT FIRED GAS MAKE UP AIR UNIT SCHEDULE

TAG	LOCATION	AREA SERVED	SUPPLY FAN DATA				GAS HEATING SECTION				ELECTRICAL DATA		BASIS OF DESIGN	REMARKS
			FAN TYPE	AIR FLOW (CFM)	EXTERNAL STATIC PRESSURE (inWC)	MOTOR SIZE (HP)	INPUT (BTU)	OUTPUT (BTU)	TEMP. RISE (°F)	STAGES	FLA/MCA/MOC	V/PH/Hz		
MAU1	ROOF	KITCHEN HOOD	– PROVIDE AS PER DRAWINGS M4, M5, M6, AND M7 –											

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.
2. MANUFACTURER NAME & MODEL NUMBER REPRESENTS ACCEPTABLE QUALITY STANDARD ONLY. ALTERNATIVE MATERIALS MAY BE APPROVED AFTER REVIEW OF TECHNICAL INFORMATION BY ENGINEER.
3. DESIGN BASED ON 40% PROPYLENE GLYCOL.
4. PROVIDE ALL FINAL NG GAS CONNECTIONS AS REQUIRED FOR MULTIPLE BURNERS TO SUIT COMPLETE INSTALLATION.

FAN SCHEDULE

TAG	LOCATION	FUNCTION	FAN DATA						ELECTRICAL DATA		BASIS OF DESIGN	REMARKS
			TYPE	DRIVE (BELT/DIRECT)	AIR FLOW (CFM)	ESP (inWG)	FAN SPEED (RPM)	SONES	MOTOR SIZE (HP)	V/PH/Hz		
EF1	ROOF	KITCHEN HOOD EXHAUST	– PROVIDE AS PER DRAWINGS M4, M5, M6, AND M7 –									

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.
2. DISCONNECT SWITCH BY DIV. 26.
3. SPEED SWITCHES SHALL BE SUPPLIED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR.

EXHAUST HOOD SCHEDULE

TAG	LOCATION	DIMENSIONS LxWxH (in)	MATERIAL	EXHAUST DATA			SUPPLY INFORMATION			BASIS OF DESIGN	REMARKS
				TOTAL EXHAUST CFM	ESP (inWC)	COLLAR (in)	TOTAL SUPPLY CFM	ESP (inWC)	COLLAR (in)		
HOOD 1 & HOOD 2	KITCHEN	– PROVIDE AS PER DRAWINGS M4, M5, M6, AND M7 –									

NOTES:

SPLIT AC SCHEDULE

TAG	INDOOR UNIT						CONDENSEUR						SEE/EER	REMARKS
	TAG	LOCATION	COOLING CAPACITY (BTU)	ELECTRICAL MCA/MOP	ELECTRICAL V/PH/Hz	BASIS OF DESIGN	TAG	LOCATION	COOLING CAPACITY (BTU)	ELECTRICAL MCA/MOP	ELECTRICAL V/PH/Hz	BASIS OF DESIGN		
AC/CU1	ACDX1	KITCHEN	16,000–36,000	1/15	208/1/60	MITSUBISHI MR SLIM PKA–A36KA7 (COOLING ONLY)	CUDX1	ROOF	16,000–36,000	25/31	208/1/60	MITSUBISHI MR SLIM PUY–A36NKA7	18.8/10.8	C/W –40F ULTRA LOW AMBIENT AND PAR–CT01MAU–SB TOUCHSCREEN CONTROLLER

NOTES: 1. DISCONNECT SWITCH BY DIV. 26. 2. PROVIDE REFRIGERANT PIPING, CONTROLS CONNECTIONS, AND ACCESSORIES TO SUIT COMPLETE INSTALLATION.

CONDENSING UNIT SCHEDULE

TAG	LOCATION	FUNCTION	AMBIENT TEMP. (°C)	CAPACITY (kW)	STAGES H.G.B.P.	ELECTRICAL DATA		BASIS OF DESIGN	REMARKS
						FLA/MCA/MOC	V/PH/Hz		
CU1	ROOF	WALK IN COOLER (CLIENT SUPPLIED)							
CU2	ROOF	WALK IN COOLER (CLIENT SUPPLIED)							

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.

GRILLE AND DIFFUSER SCHEDULE

UNIT NO.	TYPE	MODULE (mm)	INLET (mm)	MOUNT	FINISH	ACCEPTABLE MATERIAL	REMARKS/SPECIFICATIONS
SG1	HIGH CAPACITY DRUM LOUVRE	AS INDICATED	AS INDICATED	SPIRAL DUCT	TBD	EH PRICE HCD1–SDF	HIGH CAPACITY DRUM LOUVER. OUTLETS SHALL HAVE STEEL HCD1 FRAME CONSTRUCTION, AND EXTRUDED ALUMINUM VANES. INDIVIDUALLY ADJUSTABLE, SINGLE BLADE SPREAD CONTROL VANES, HOUSED WITHIN A POSITIVE POSITIONING ROTATABLE DRUM UP TO 30 DEGREES. OUTLET MOUNTING FRAME SHALL BE FORMED STEEL WITH WELDED 18 GAUGE OPPOSED BLADE BALANCING DAMPER. DAMPER SHALL BE COMPLETE WITH A FACE ACCESSIBLE SCREW–TYPE BLADE LOCKING MECHANISM. GALVANIZED STEEL DUCT MOUNTING FRAME SHALL BE SUITABLE FOR SPIRAL DUCT.
SG2	SUPPLY AIR GRILLE	AS INDICATED	AS INDICATED	WALL	OFF–WHITE	EH PRICE 520 OR EQUAL	STEEL CONSTRUCTION, FIXED LOUVRE 45° DEFLECTION, OFF–WHITE BAKED ENAMEL FINISH. COMPLETE WITH INTEGRAL BALANCING DAMPER SIZE AS INDICATED.
FG1	LINEAR FLOOR GRILLE SUPPLY AIR	AS INDICATED	AS INDICATED	FLOOR	ALUMINUM POWDER COAT	EH PRICE LFG–25C–XX–B17 (MANDREL CORE)	GRILLE FACE AND BORDER SUITABLE FOR DROP–IN INSTALLATION. GRILLES SHALL HAVE FIXED 0 DEGREE BLADES RUNNING PARALLEL TO THE LONG DIMENSION OF THE GRILLE. GRILLE BORDER SHALL BE HEAVY–DUTY EXTRUDED ALUMINUM CONSTRUCTION. THE CORE SHALL BE HELD INTO THE BORDER WITH REMOVABLE CORE CLIPS, ALLOWING THE REMOVAL OF THE CORE WITHOUT SPECIAL TOOLS. THE FRAME SHALL BE ATTACHED TO THE FLOOR WITH COUNTERSUNK SCREWS. SHALL BE COMPLETE WITH RADIAL BLADE DAMPER WITH REMOTE OPERATOR.
EG1	EXHAUST AIR GRILLE	AS INDICATED	AS INDICATED	WALL	OFF–WHITE	EH PRICE 530D OR EQUAL	STEEL CONSTRUCTION, 45° DEFLECTION, FIXED LOUVRES, 20 MM (3/4") SPACING, OFF–WHITE BAKED ENAMEL FINISH. COMPLETE WITH BALANCING DAMPER. SIZE AS INDICATED.
DG1	DOOR GRILLE	–	–	DOOR	ALUMINUM	PRICE MODEL ATG	16" x 16" UNLESS OTHERWISE SPECIFIED.

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.

PROPELLER FAN SCHEDULE

TAG	LOCATION	FAN DIA. (in)	AIR FLOW (CFM)	FAN SPEED (RPM)	ELECTRICAL DATA			BASIS OF DESIGN	REMARKS
					FAN MOTOR (W)	FLA	V/PH/Hz		
PF1	OPEN AREA HIGH LEVEL	36	12,000	400	35	0.36	120/1/60		STEM LENGTH SUCH THAT FAN BLADES ARE 20" BELOW U/S OF TIMBER JOISTS

NOTES: 1. FOR DETAILS REFER TO SPECIFICATIONS.
2. WIRED BY DIV. 26.

VINCENT P. COLIZZA ARCHITECT INCORPORATED

Client

2020–03–19	ISSUED FOR COORDINATION	–
DATE	REVISION	REF

Goodkey Weedmark
Consulting Engineers

GOODKEY WEEDMARK & ASSOCIATES LIMITED
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Project north / Nord du projet

Seal/Sceau

Project/Projet

FRATELLI RESTAURANT
115 LUSK ST.
OTTAWA ONTARIO

Drawing title/Titre du dessin

MECHANICAL
HVAC SCHEDULES

Scale / Échelle	AS INDICATED	Drawing/Dessin	M5
Design by / Conçu par	M.P/R.L.		OF 16
Drawn by / Dessiné par	M. PAVELICH		
Reviewed by / Examiné par	R. LEONARD	Date	FEB 2020
		GWAL No.	2019–705

EXHAUST FAN INFORMATION – Job#4145807

FAN UNIT NO.	TAG	FAN UNIT MODEL #	CFM	ESP.	RPM	H.P.	B.H.P.	ø	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS.)	SONES
1	EF1	DU240HFA	3225	1.500	853	3.000	1.6960	3	575	3.5	733 FPM	354	16.1

MUA FAN INFORMATION – Job#4145807

FAN UNIT NO.	TAG	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP.	RPM	H.P.	B.H.P.	ø	VOLT	FLA	MCA	MOCP	WEIGHT (LBS.)	SONES
2	MAU1	A2–D.500–20D	20MF–2–MOD	A2–D.500	2000	2975	0.500	1232	2.000	1.0030	3	575	2.1	2.7A	15A	689	10.6

GAS FIRED MAKE–UP AIR UNIT(S)

FAN UNIT NO.	TAG	INPUT BTUs	OUTPUT BTUs	TEMP. RISE	REQUIRED INPUT GAS PRESSURE	GAS TYPE	BURNER EFFICIENCY(%)
2	MAU1	291820	268474	90 deg F	7 in. w.c. – 14 in. w.c.	Natural	92

FAN OPTIONS

FAN UNIT NO.	TAG	OPTION (Qty. – Descr.)
1	EF1	1 – Grease Box
		1 – Unit Mounted VFD For Use with ECPM03
		1 – Load Reactor Mounted in Fan
		1 – VFD Mounting Bracket for DU/DR 240.
		1 – Exhaust Fan Heat Baffle
2	MAU1	1 – Motorized Backdraft Damper for A2–D Housing
		1 – Low Fire Start
		1 – Inlet Pressure Gauge, 0–35"
		1 – Manifold Pressure Gauge, –5 to 15" wc
		1 – Single Electrical Cabinet LED Lights Used on Modular MUA Units
		1 – Freezestat (10)
		1 – Separate 120V Wiring Package (Required and used only for DCV or Prewire with VFD) – Three Phase Only
		1 – Size 2 Direct Fired Heater Low CFM Profile Package. Used on Heaters under 2500 cfm.
		1 – Unit Mounted VFD For Use with ECPM03
		1 – Load Reactor Mounted in Fan

FAN ACCESSORIES

FAN UNIT NO.	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	EF1	YES						
2	MAU1						YES	

CURB ASSEMBLIES

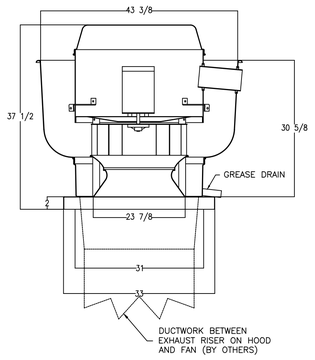
NO.	ON FAN	TAG	WEIGHT	ITEM	SIZE	
1	# 1	EF1	43 LBS	Curb	31.500"W x 31.500"L x 24.000"H	Vented
2	# 2	MAU1	88 LBS	Curb	31.000"W x 79.000"L x 24.000"H	Insulated

FAN SOUND DATA

FAN UNIT NO.	TAG	MOTOR	RPM	SOUND DATA			OCTAVE BAND SOUND DATA								
				LWA	SONES @ 5 ft	DBA @ 5 ft	DISTANCE (ft)	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
1	EF1	Exhaust	853	78.3	16.1	66.8	5	76.2	87.6	81.6	72.6	69.6	66.5	61.8	57.4
2	MAU1	Supply	1232	72.8	10.6	61.3	5	69.2	76.9	71.8	70.2	66.6	64	61.1	57.5

Sound Power Level									
EF	90.7	102.1	96.1	87.1	84.1	81.0	76.3	71.9	92.3 dBA
MAU1	83.7	91.4	86.3	84.7	81.1	78.5	75.6	72.0	87.1 dBA

FAN #1 DU240HFA – EXHAUST FAN (EF1)



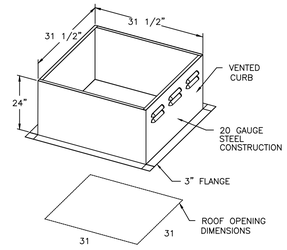
FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS)
- ROOF MOUNTED FANS
- RESTAURANT MODEL
- UL705 AND UL762 AND ULC–S645
- VARIABLE SPEED CONTROL
- INTERNAL WIRING
- WEATHERPROOF DISCONNECT
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
- HIGH HEAT OPERATION 300°F (149°C)
- GREASE CLASSIFICATION TESTING

NORMAL TEMPERATURE TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

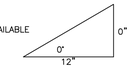
ABNORMAL FLARE–UP TEST
EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

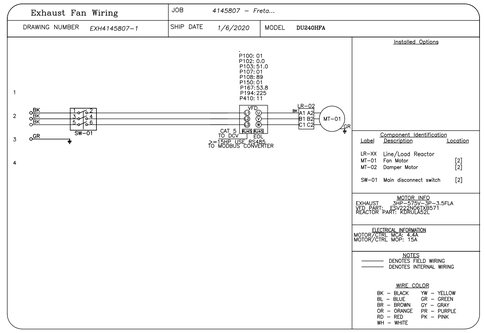
OPTIONS
GREASE BOX.
UNIT MOUNTED VFD FOR USE WITH ECPM03.
LOAD REACTOR MOUNTED IN FAN.
VFD MOUNTING BRACKET FOR DU/DR 240.
EXHAUST FAN HEAT BAFFLE.



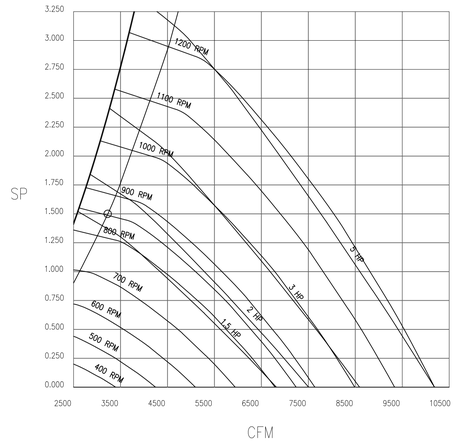
PITCHED CURBS ARE AVAILABLE FOR PITCHED ROOFS.

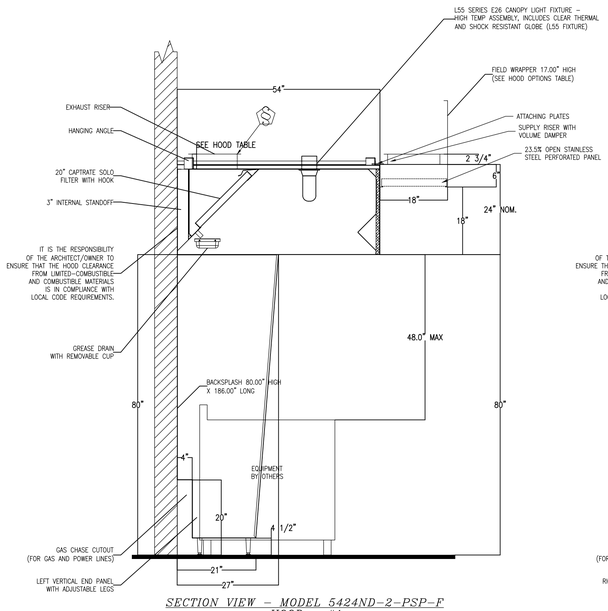
SPECIFY PITCH:
EXAMPLE: 7/12 PITCH = 30° SLOPE



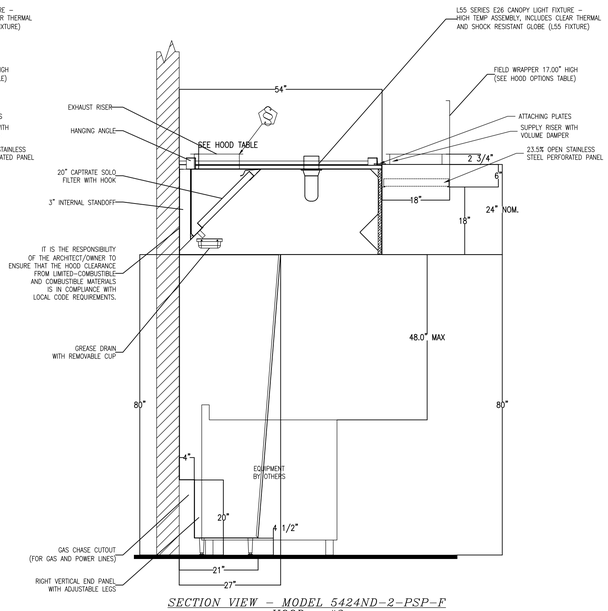


3225 CFM, 1.5 SP @ 853 RPM AND 1.696 BHP AT 0 FEET AND 120 DEG F * PLEASE NOTE THAT THESE CURVES WERE ADJUSTED FOR JOB SPECIFIC TEMPERATURE AND ALTITUDE.

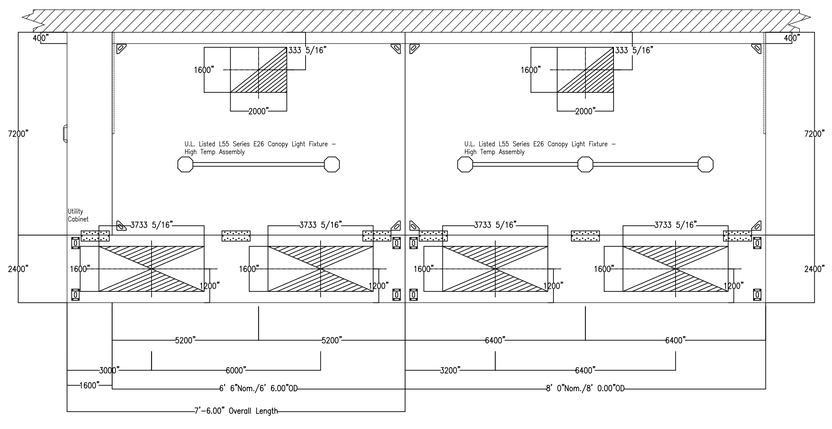




SECTION VIEW – MODEL 5424ND–2–PSP–F
HOOD – #1



SECTION VIEW – MODEL 5424ND–2–PSP–F
HOOD – #2



PLAN VIEW – Hood #1
6' 6.00" LONG 5424ND–2–PSP–F

PLAN VIEW – Hood #2
8' 0.00" LONG 5424ND–2–PSP–F

VINCENT P. COLIZZA ARCHITECT INCORPORATED
Client

2020–03–19	ISSUED FOR COORDINATION	–
DATE	REVISION	REF

Goodkey Weedmark
Consulting Engineers
GOODKEY WEEDMARK & ASSOCIATES LIMITED
1688 Woodward Dr. 613 727–5111 Voice
Ottawa Ontario 613 727–5115 Fax
Canada K2C 3R8 www.gwal.com Web

Project north
Nord du projet

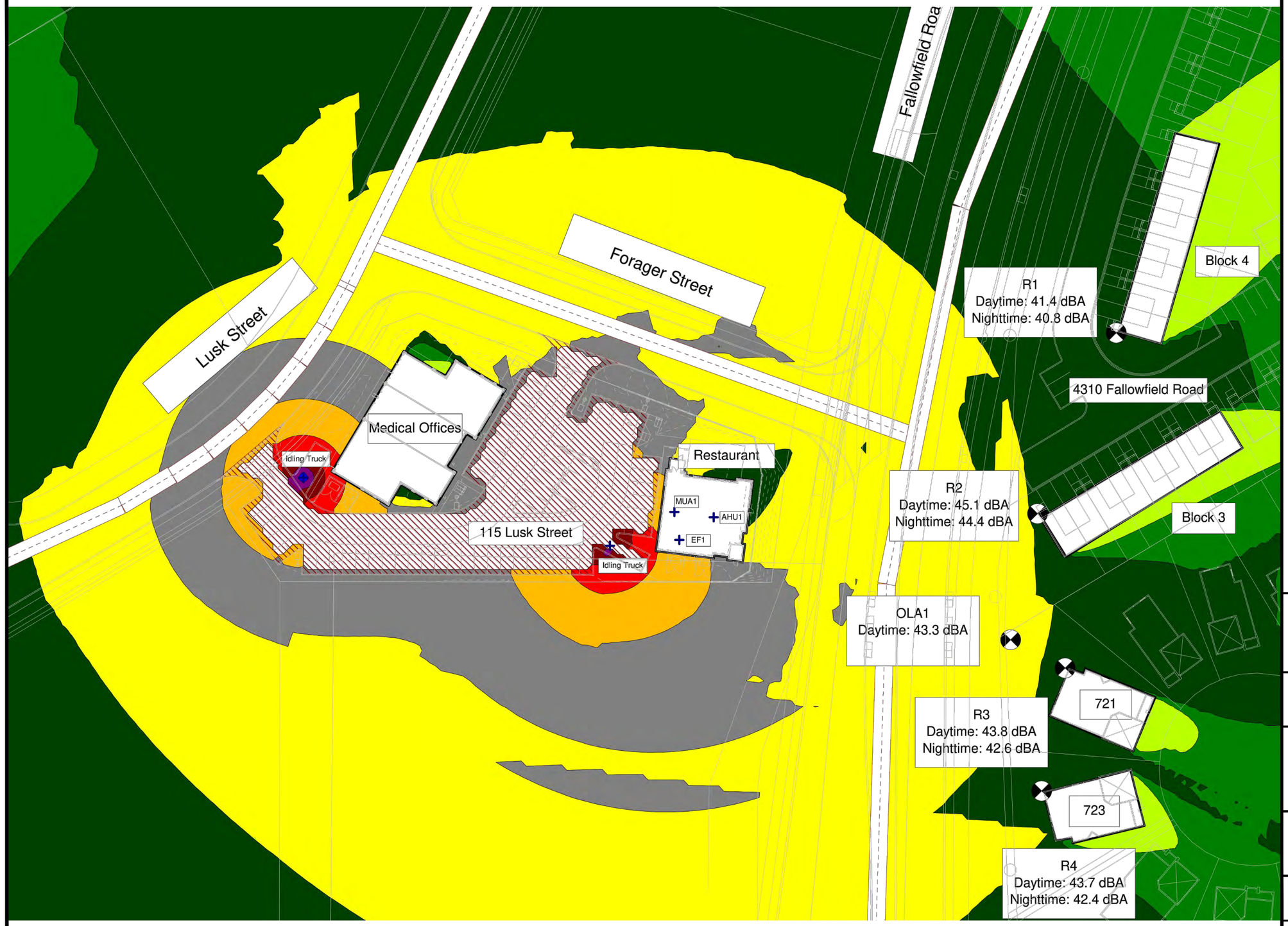
Seal/Sceau

Project/Projet
FRATELLI RESTAURANT
115 LUSK ST.
OTTAWA ONTARIO

Drawing Title/Titre du dessin
MECHANICAL
KITCHEN EQUIPMENT

Scale / Echelle	AS INDICATED	Drawing/Dessin	M8
Design by / Conçu par	M.P/R.L.		
Drawn by / Dessiné par	M. PAVELICH		OF 16
Reviewed by / Examiné par	R. LEONARD	Date	FEB 2020
		GWAL No.	2019–705

Appendix C – Cadna A Output



N

IBI GROUP
101 - 410 Albert Street
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SCALE	NTS
DATE	SEPTEMBER 2020
PROJECT No.	122508

CITY OF OTTAWA
ONTARIO

115 LUSK ROAD

ON-SITE STATIONARY NOISE

FIGURE 2