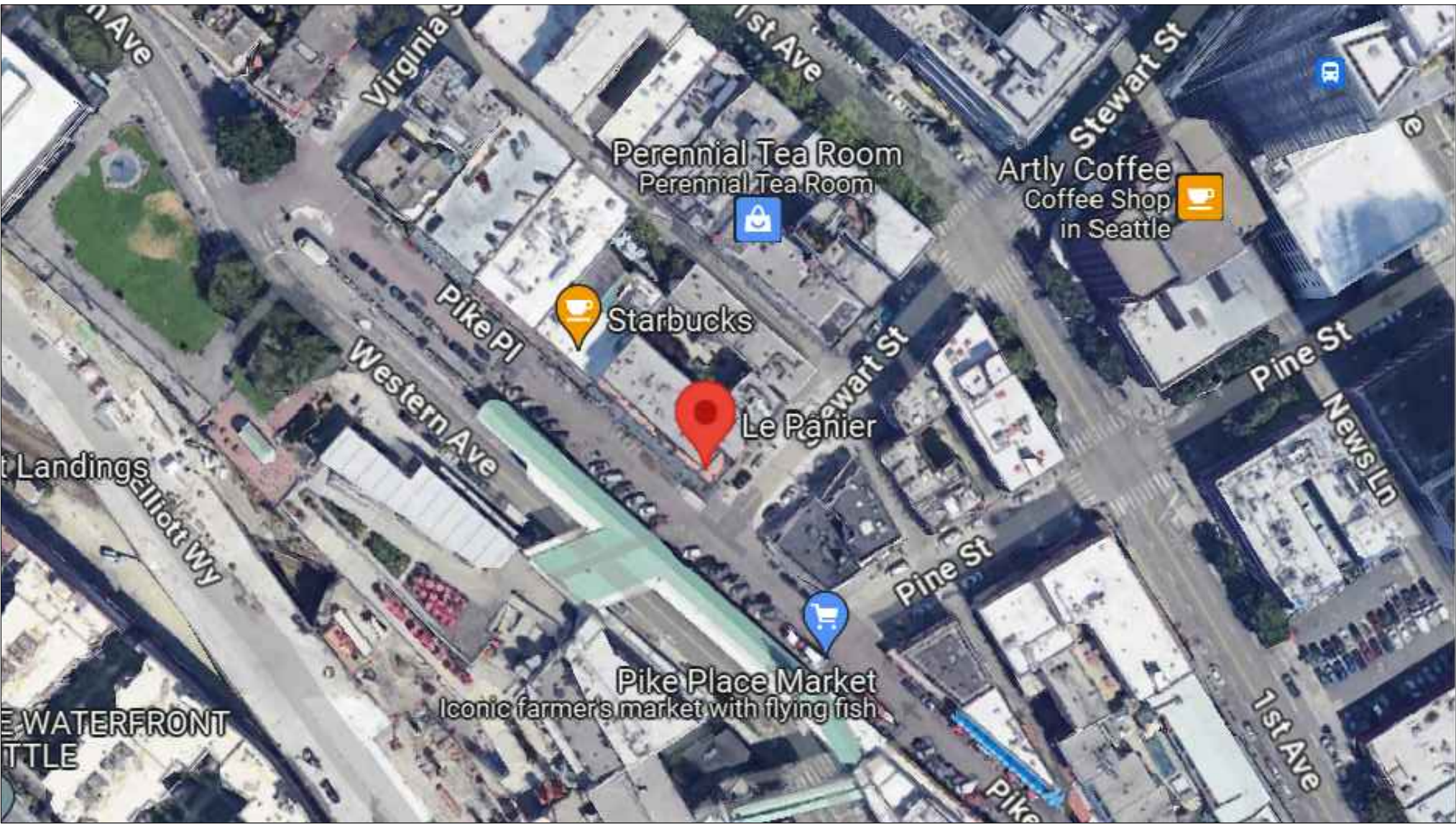
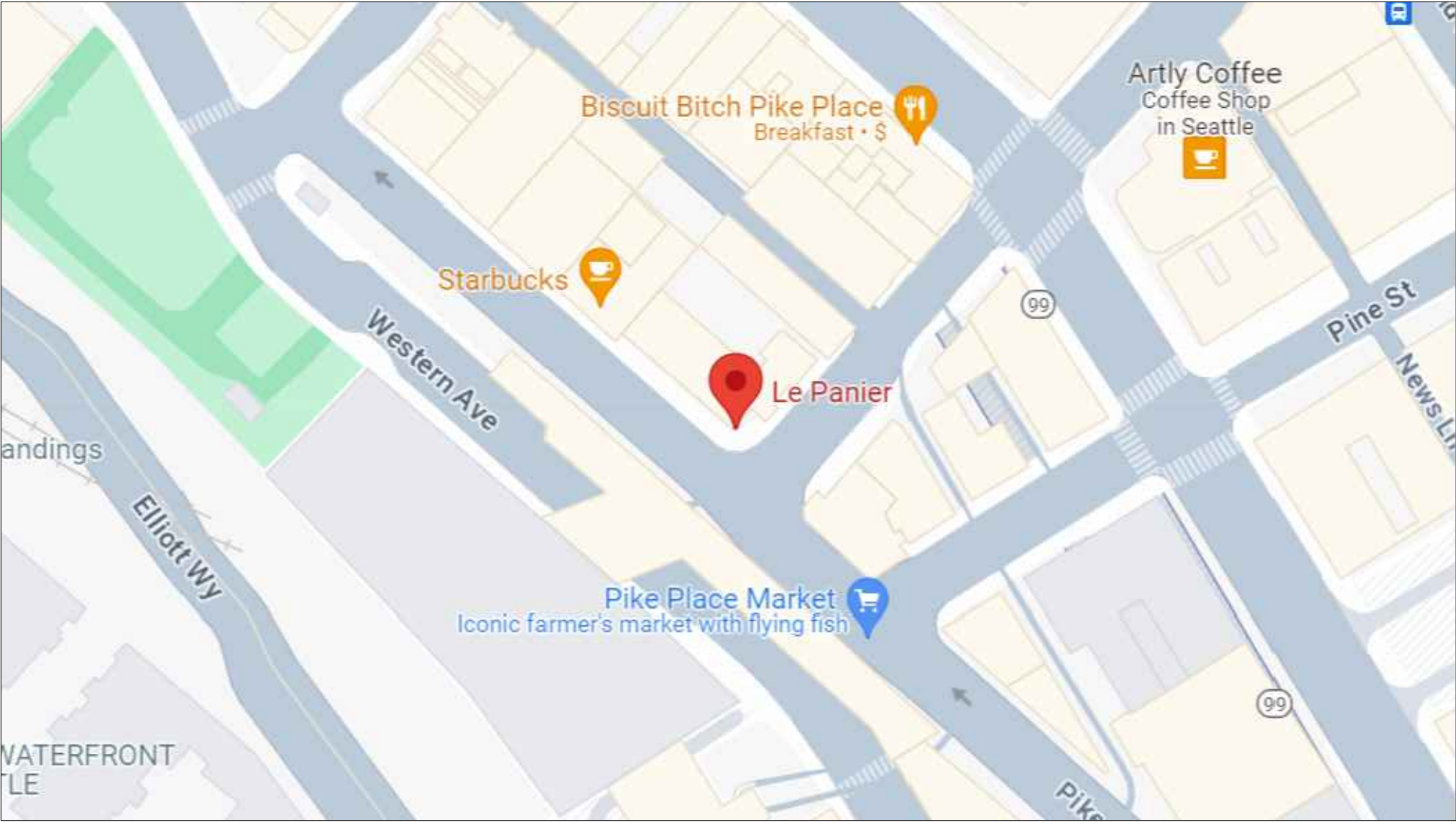


LE PANIER HVAC INSTALL

1902 PIKE PLACE
SEATTLE, WA 98101



A **SATELLITE MAP**
M0.0 NOT TO SCALE



B **VICINITY MAP**
M0.0 NOT TO SCALE

PROJECT DATA

- JURISDICTION: CITY OF SEATTLE
- PARCEL NUMBER: 800855-0000
- TENANT NAME: LE PANIER
- PRESENT USE: MIX-USE
- LEGAL DESCRIPTION: BEG ON W LN OF 1ST AVE S 1110 FT S OF S LN OF SPOKANE ST TH S ALG SD W AVE LN 1060.61 FT M/L TO TR CONVYD TO N P RY CO UNDER AUD FILE # 2953477 TH N 41-01-45 W 157.95 FT TH N 32-37-45 W 50.48 FT TH N 30-46-45 W 49.84 FT TH N 33-08-15 W 30.51 FT TH N 38-20-15 W 31.52 FT TH N 41-16-15 W 78FT TH N 40-39-15 W 50.84 FT TH N 37-11-45 W 48.61 FT TH N 26-04-30 W 48.85 FT TH N 15-36-30 W 21.87 FT TH W 4.44 FT TH NWLY 55.39 FT TO PT 355 FT W OF W LN OF 1ST AVE S TH N 550 FT TH E 355 FT TO BEG

SCOPE OF WORK

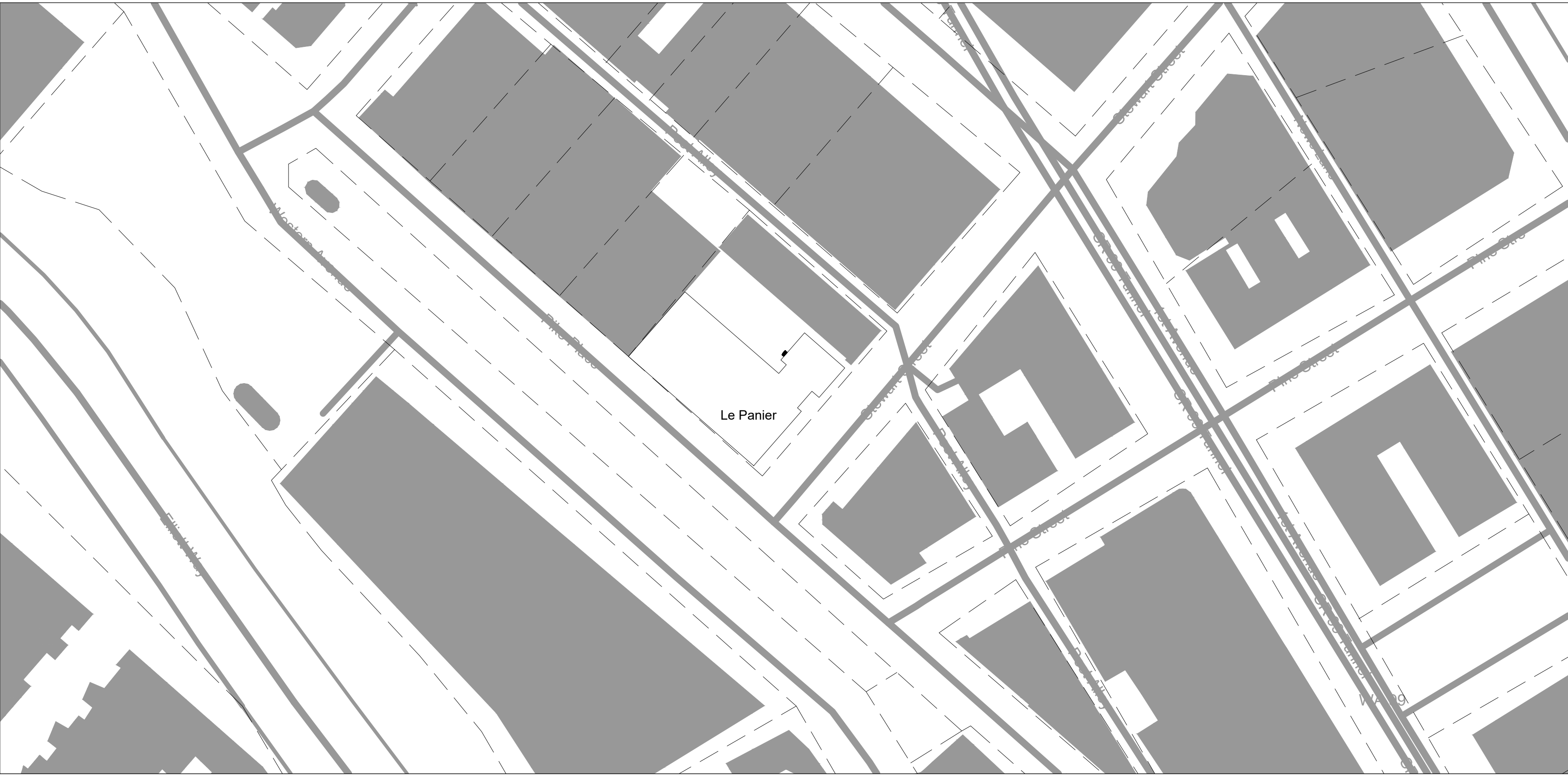
INSTALL HVAC EQUIPMENT, MITSUBISHI HEAT PUMP SYSTEM, (1) 72K BTUH OUTDOOR UNIT, AND (2) 24K BTUH INDOOR UNITS (DINING AREA)

DRAWING INDEX

- M0.0 TITLE SHEET
- M0.1 ZONING AND SOUND
- M1.0 FLOOR PLAN
- M1.1 ODU LOCATION PLAN
- M1.2 REFRIGERATION LINE PLAN
- M2.0 EQUIPMENT SCHEDULE
- M6.0 CUT SHEETS 1
- M6.1 CUT SHEETS 2
- M7.0 STRUCTURAL SHEETS 2

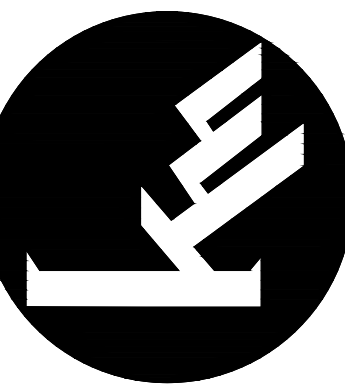
PROJECT NOTES

- ALL WORK SHALL COMPLY WITH THE 2018 SEATTLE ENERGY CODE AND THE 2018 INTERNATIONAL MECHANICAL CODE INCLUDING ALL AMENDMENTS MADE BY THE STATE OF WASHINGTON AND THE CITY OF SEATTLE



C **SITE PLAN**
M0.0 SCALE: 1/64" = 1'-0"

Key Mechanical Co.



FOR KEY MECHANICAL USE ONLY

REVISIONS	DATE	DESCRIPTION
1	01/22/25	REV 1 CORRECTIONS

LE PANIER HVAC INSTALL

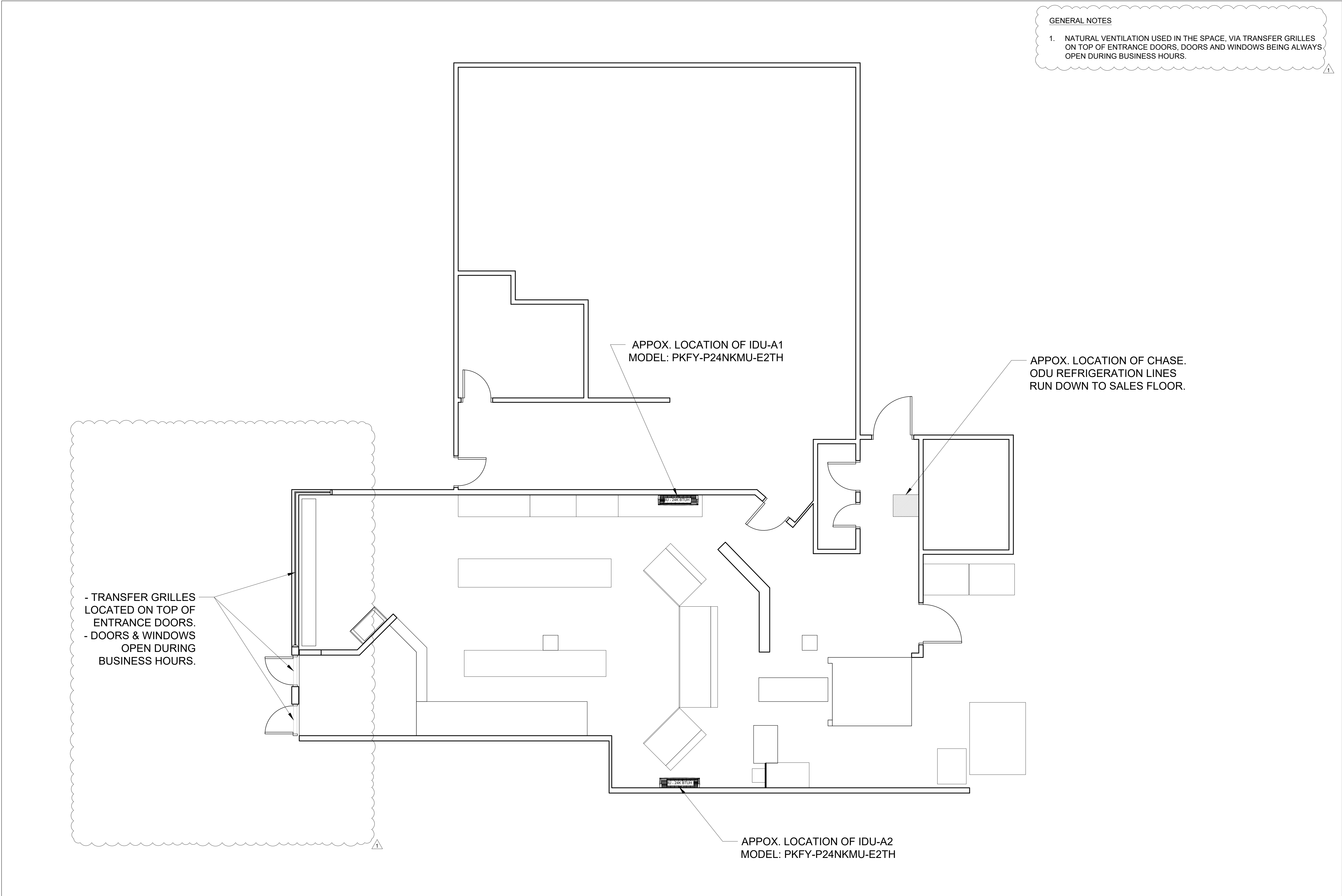
LE PANIER
1902 PIKE PLACE
SEATTLE, WA 98101

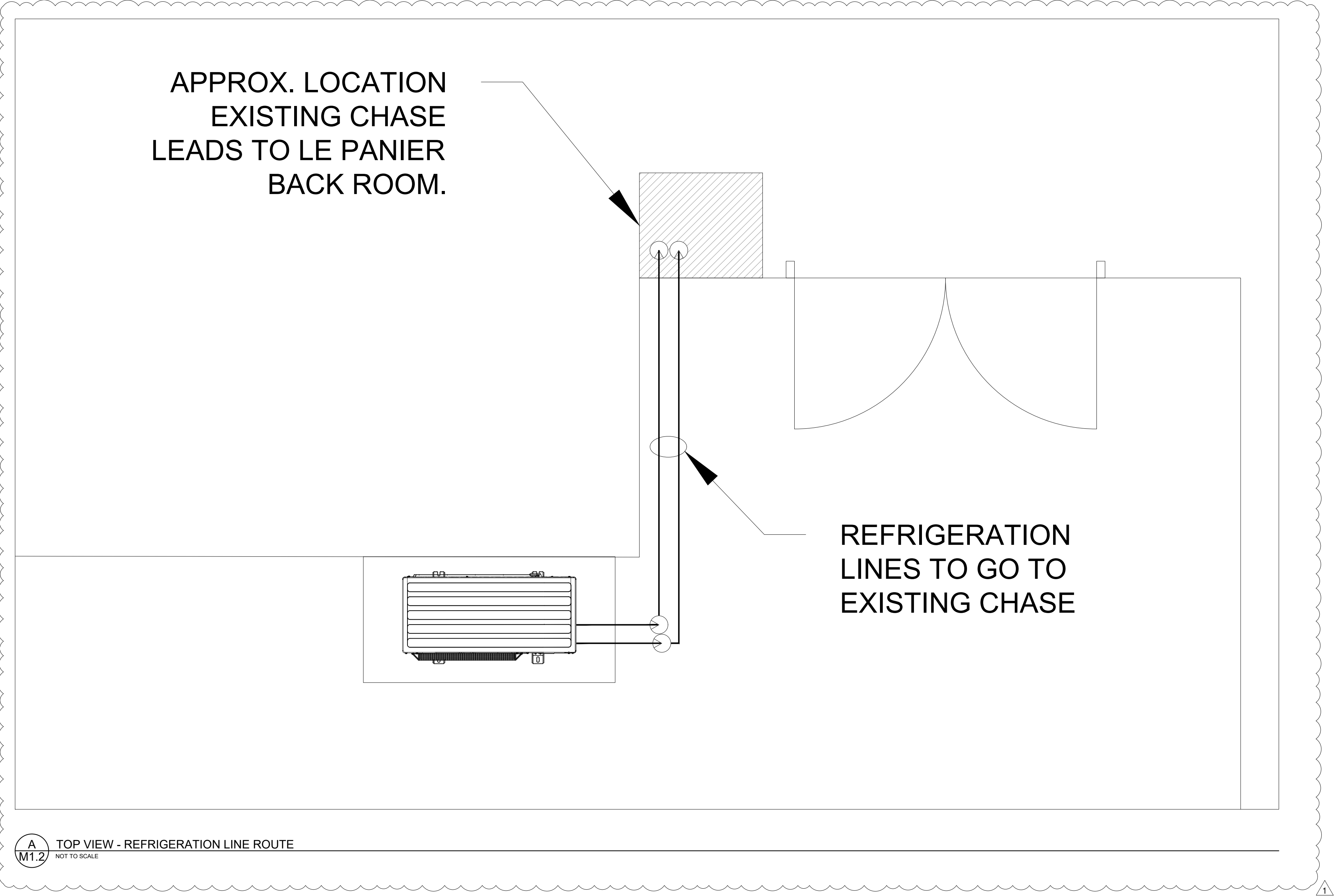
DATE: 05/28/24
PROJ# | 54138-00
DRAFTER | BFC
REVIEWED BY | ----
SHEET SIZE | Arch D
SCALE | AS SHOWN
KM PHONE | +1 (253) 872-7392

TITLE SHEET

SHEET NUMBER

M0.0





A
M1.2 TOP VIEW - REFRIGERATION LINE ROUTE
NOT TO SCALE

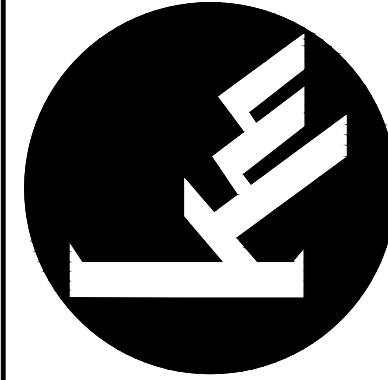
REFRIGERANT	CLASSIFICATION	AMOUNT OF REFR PER OCCUPIED SPACE			
		LBS PER 1000 CUBIC FEET	PPM	G/M^3	OEL^e
R-410A	A1	26	140,000	420	1000

VOL. OF SPACE	VOL. PER 1000 FT^3	TOTAL ALLOWABLE REFRIGERANT LBS PER 1000 FT^3 (R-410A)	LBS IN THE SYSTEM
10108.4	10.1084	262.82	29.58

B
M1.2 VOLUME CALCULATION PER 2018 & 2021 SMC TABLE 1103.1
NOT TO SCALE

GENERAL NOTES

- TYPE L ACR COPPER PIPING TO BE RUN FROM NEW UNIT TO EXISTING REFRIGERATION PIPING.



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OREGON
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503.231.0731

NORTHERN CALIFORNIA
747 ENTERPRISE COURT
LIVERMORE, CA 94550
925.294.8111

SOUTHERN CALIFORNIA
14270 ALBERS WAY
CHINO, CA 91710
714.676.2723

FOR KEY MECHANICAL USE ONLY

REVISIONS	DATE	DESCRIPTION
	1	01/22/25 REV 1 CORRECTIONS

LE PANIER HVAC INSTALL

LE PANIER
1902 PIKE PLACE
SEATTLE, WA 98101

DATE: 05/28/24
PROJ# | 54138-00
DRAFTER | BFC
REVIEWED BY | ---
SHEET SIZE | Arch D
SCALE | AS SHOWN
KM PHONE | +1 (253) 872-7392

REFRIGERATION
LINE ROUTE

SHEET NUMBER
M1.2



C'est le printemps

APPROX.
LOCATION OF
INDOOR UNIT



PLACE
ALL ORDERS
HERE

APPROX.
LOCATION OF
INDOOR UNIT

TECHNICAL & SERVICE MANUAL

CITY MULTI Series Wall Mounted R410A / R22

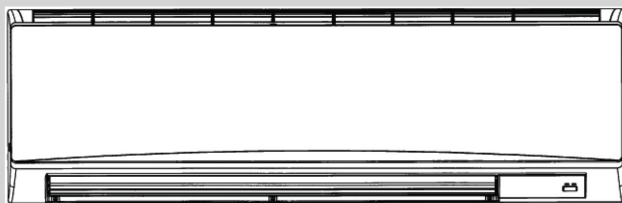
Indoor unit
[Model names]

[Service Ref.]

PKFY-P24NKMU-E2 PKFY-P24NKMU-E2.TH

PKFY-P30NKMU-E2 PKFY-P30NKMU-E2.TH

Note:
• This manual describes only service data of the indoor units.
• RoHS compliant products have <G> mark on the spec name plate.



INDOOR UNIT

CONTENTS

- PART NAMES AND FUNCTIONS 2
- SPECIFICATION 4
- OUTLINES AND DIMENSIONS 4
- WIRING DIAGRAM 7
- REFRIGERANT SYSTEM DIAGRAM 8
- MICROPROCESSOR CONTROL 9
- TROUBLESHOOTING 14
- DISASSEMBLY PROCEDURE 21

PARTS CATALOG (OCB518)



2 SPECIFICATION

2-1. Specifications

Model		PKFY-P24NKMU-E2	PKFY-P30NKMU-E2
Power source		1-phase 208-230V 60Hz	
Cooling capacity (Nominal)	*1 kW	7.0	8.8
	*1 Btu/h	24,000	30,000
Power input	kW	0.07	0.07
Current input	A	0.50	0.50
Heating capacity (Nominal)	*2 kW	7.9	10.0
	*2 Btu/h	27,000	34,000
Power input	kW	0.07	0.07
Current input	A	0.50	0.50
External finish		Plastic, MUNSELL (1.0Y 9.2D 2)	
External dimension H × W × D	mm	365 × 1170 × 295	
	in	14-3/8" × 46-1/16" × 11-5/8"	
Net weight	kg (lb)	21 (46)	
Heat exchanger		Cross fin (Aluminum fin and copper tube)	
Fan	Type × Quantity	Line flow fan × 1	
External static press.	Pa	0	
Motor type	mmHg	0	
Motor output	kW	0.056	
Driving mechanism		Direct-drive	
Airflow rate (Low-High)	m ³ /min	16 - 26	20 - 26
	L/S	267 - 433	333 - 433
	cfm	570 - 920	710 - 920
Noise level (Low-High) (measured in anechoic room)	dB <A>	39 - 49	43 - 49
Insulation material		Polyethylene sheet	
Air filter		PP honeycomb	
Protection device		FUSE	
Refrigerant control device		LEV	
Connectable outdoor unit		R410A, R22 CITY MULTI	
Diameter of refrigerant pipe	Liquid (R410A) (R22) mm (in.)	ø9.52 (ø3/8") Flare	ø9.52 (ø3/8") Flare
	Gas (R410A) (R22) mm (in.)	ø15.88 (ø5/8") Flare	ø15.88 (ø5/8") Flare
Field drain pipe size	mm (in.)	I.D. 16mm (5/8")	
Standard attachment	Document	Installation Manual, Instruction Book	
Optional parts	Accessory	PAC-YUZSH	
Remarks	Installation	Details on foundation work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.	

Note :
*1 Nominal cooling conditions
Indoor : 80°FDB/67°FWB (26.7°CDB/19.4°CWB) 70°FDB/62°FWB
Outdoor : 95°FDB (35°CDB) 47°FDB/43°FWB (8.3°CDB/6.1°CWB)
Pipe length : 25 ft (7.6 m) 25 ft (7.6 m)
Level difference : 0 ft (0 m) 0 ft (0 m)
*2 Nominal heating conditions
Indoor : 60°FDB/67°FWB (26.7°CDB/19.4°CWB) 70°FDB/62°FWB
Outdoor : 95°FDB (35°CDB) 47°FDB/43°FWB (8.3°CDB/6.1°CWB)
Pipe length : 25 ft (7.6 m) 25 ft (7.6 m)
Level difference : 0 ft (0 m) 0 ft (0 m)

Unit converter
1kcal/h = kW × 860
1Btu/h = kW × 2.412
1cfm = m³/min × 35.31
1ft = kg/4.536
*Above specification data is subject to rounding variation.

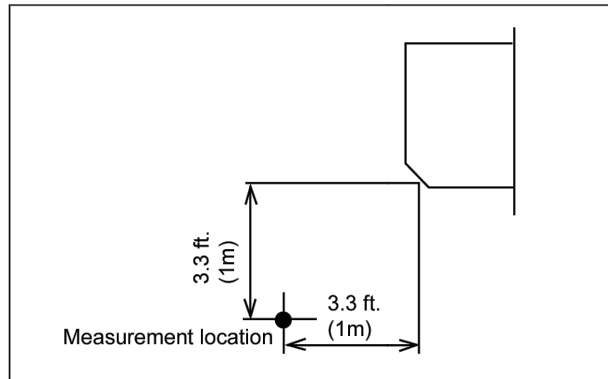
OCH518

4

2-2. Electrical parts specifications

Service Ref.	Symbol	PKFY-P24NKMU-E2.TH	PKFY-P30NKMU-E2.TH
Parts name			
Room temperature thermistor	TH21	Resistance 30°F/15.8kΩ, 50°F/9.6kΩ, 70°F/6.0kΩ, 80°F/4.8kΩ, 90°F/3.9kΩ, 100°F/3.2kΩ	
Liquid pipe thermistor	TH22	Resistance 30°F/15.8kΩ, 50°F/9.6kΩ, 70°F/6.0kΩ, 80°F/4.8kΩ, 90°F/3.9kΩ, 100°F/3.2kΩ	
Gas pipe thermistor	TH23 TH24	Resistance 30°F/15.8kΩ, 50°F/9.6kΩ, 70°F/6.0kΩ, 80°F/4.8kΩ, 90°F/3.9kΩ, 100°F/3.2kΩ	
Fuse (Indoor controller board)	FUSE	250V 3.15A	
Fan motor	MF	8-Pole Output 56W / RCOJ56-AC	
Vane motor (with limit switch)	MV	MSBPC20 DC12V	
Linear expansion valve	LEV	EFM-40YGME DC 12 V	EFM-80YGME DC 12 V
Power supply terminal block	TB2	(L1, L2, GR) 250V 20A	
Transmission terminal block	TB5	(M1, M2, S) 250V 20A	
MA remote controller terminal block	TB15	(1, 2) 250V 10A	

2-3. Sound levels

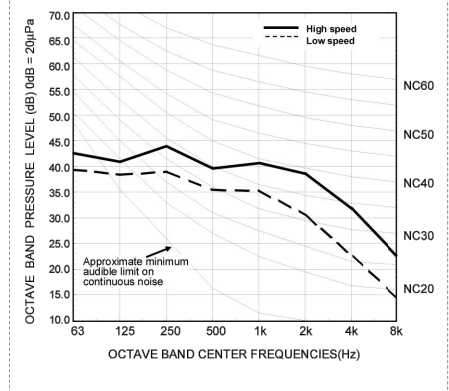


* Measured in anechoic room.

Service Ref.	Sound level at anechoic room : Low-High
PKFY-P24NKMU-E2.TH	39 - 49
PKFY-P30NKMU-E2.TH	43 - 49

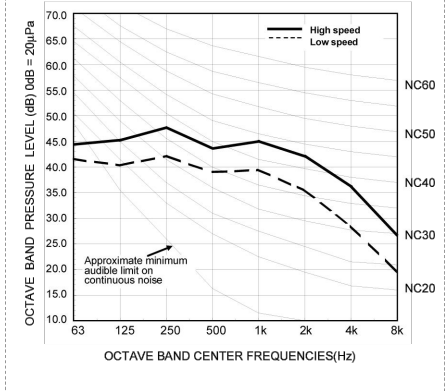
2-4. NC curves

PKFY-P24NKMU-E2
External static pressure : 0Pa
Power source : 208,230V, 60Hz



OCH518

PKFY-P30NKMU-E2
External static pressure : 0Pa
Power source : 208,230V, 60Hz

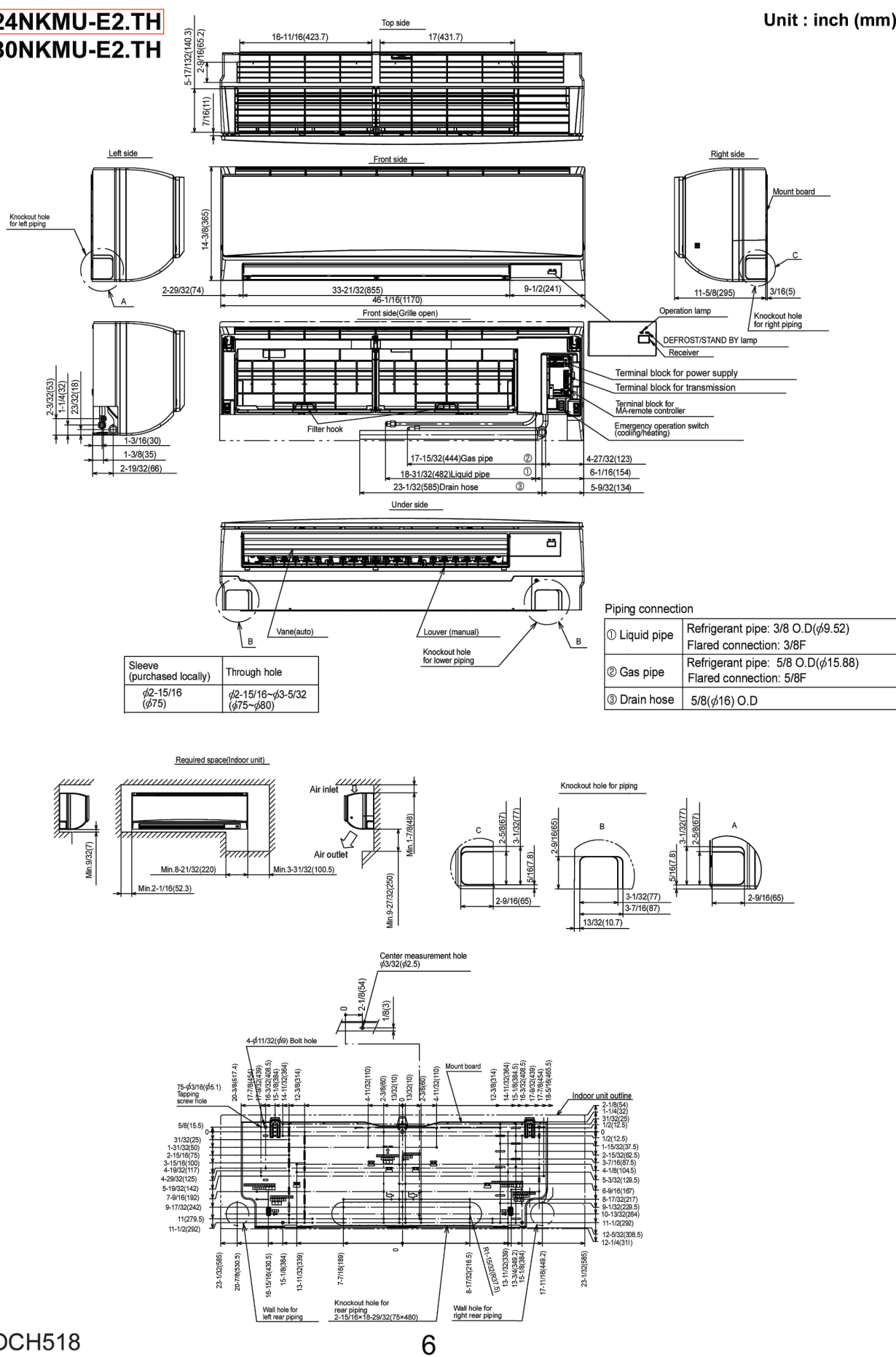


5

3 OUTLINES AND DIMENSIONS

PKFY-P24NKMU-E2.TH
PKFY-P30NKMU-E2.TH

Unit : inch (mm)



OCH518

6

REVISIONS	DESCRIPTION
DATE	

ROOFTOP EQUIPMENT											
	ID	Make	Model	Control Type	Static Pressure	Voltage	Phase	MCA	Weight (lbs)	Height	Base Size
NEW	OU-1	TRANE	MXZ-SM72TAM-U1	LEV	0 / 0.12	208/230	3	32.0	433	65-7/16	41-11/32 X 18-7/64
NEW	IDU-1	TRANE	PKFY-P24NKMU-E2.TH	LEV	0	208/230	1	0.63	46	14-3/8	46-1/16 X 11-5/8
NEW	IDU-2	TRANE	PKFY-P24NKMU-E2.TH	LEV	0	208/230	1	0.63	46	14-3/8	46-1/16 X 11-5/8

ROOFTOP EQUIPMENT CONTINUED											
	ID	TYPE	REFRIGERANT	Economizer	COOLING CAPACITY BTU/HR	IEER	HEATING CAPACITY BTU/HR			CFM	DB
							INPUT	OUTPUT	Thermal Eff		
NEW	OU-1	OUTDOOR	R410A	EXCEPTION 3 - C403.5	72,000	24.2		80,000		5,260	54
NEW	IDU-1	WALL-MOUNTED	R410A	N/A	24,000			27,000		918	39
NEW	IDU-2	WALL-MOUNTED	R410A	N/A	24,000			27,000		918	39

A

M2.0

EQUIPMENT SCHEDULE

NOT TO SCALE

SEATTLE ENERGY CODE COMPLIANCE FOR ECONOMIZER EXCEPTION:

- C403.5 ECONOMIZERS
1.

AIR ECONOMIZERS SHALL BE PROVIDED ON ALL NEW COOLING SYSTEMS INCLUDING THOSE SERVING COMPUTER SERER ROOMS, ELECTRONIC EQUIPMENT, RADIO EQUIPMENT, AND TELEPHONE SWITCHGEAR. ECONOMIZERS SHALL COMPLY WITH SECTIONS C403.5.1 THROUGH C403.5.5
2.

EXCEPTION: ECONOMIZERS ARE NOT REQUIRED FOR THE SYSTEMS LISTED BELOW:
- 2.1.

EXCEPTION 3
- 2.1.1.

UNITARY OR PACKAGED SYSTEMS SERVING ONE ZONE WHERE THE COOLING EFFICIENCY MEETS OR EXCEEDS THE EFFICIENCY REQUIRMENTS IN TABLE C403.5(3)

TABLE C403.5(3)	
CLIMATE ZONE	EFFICIENCY IMPROVEMENT
4C	64%
5B	59%

- 2.1.2.

C403.3.2 HVAC EQUIPMENT PERFORMANCE REQUIREMENTS

TABLE C403.3.2(2) MINIMUM EFFICIENCY REQUIREMENTS: ELECTRICALLY OPERATED UNITARY AND APPLIED HEAT PUMPS					
EQUIPMENT TYPE	SIZE CATEGORY	HEATING SECTION TYPE	SUBCATEGORY OR RATING CONDITION	MINIMUM EFFICIENCY	TEST PROCEDURE
AIR COOLED	≥ 65,000 BTUH AND <135,000	ALL OTHER	SINGLE PACKAGE	12.0 IEER	AHRI 340/360

- 2.1.3.

≥ 65,000 BTUH AND <135,000 REQUIRED MINIMUM BTUH FOR ALL OTHER SPLIT SYSTEMS IS 12.0 IEER
- 2.1.4.

PROPOSED EQUIPMENT EFFICIENCY: 24.2 IEER
- 2.1.5.

EFFICIENCY IMPROVEDMENT: GREATER THAN 200%

B

M2.0

SEATTLE ENERGY CODE - COMPLIANCE NOTE

NOT TO SCALE

NATURAL VENTILATION					
SURFACE AREA OF SPACE (FT^2)	MINIMUM OPENABLE AREA TO THE OUTDOORS FOR NATURAL VENTILATION PER SMC 402.2 (FT^2)	EXISTING OPENABLE AREAS			
		TRANSFER GRILLES	DOORS	WINDOWS	TOTAL
1062.8	42.51	13.32	49.95	30.5	93.77

A

M2.0

EQUIPMENT SCHEDULE

NOT TO SCALE

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WASHINGTON

19430 68TH AVE S
KENT, WA 98032
253.872.7392

OREGON

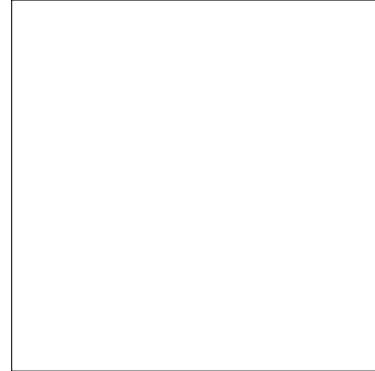
4655 NE 190TH LANE
PORTLAND, OR 97230
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14270 ALBERS WAY
CHINO, CA 91710
714.676.2723



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REVISIONS											
DATE	DESCRIPTION										
1	01/22/25 REV 1 CORRECTIONS										

LE PANIER HVAC INSTALL

LE PANIER

1902 PIKE PLACE

SEATTLE, WA 98101

DATE: 05/28/24
PROJ# | 54138-00
DRAFTER | BFC
REVIEWED BY | ----
SHEET SIZE | Arch E1
SCALE | AS NOTED
KMI PHONE | +1 (253) 872-7392

EQUIPMENT SCHEDULE

SHEET NUMBER

M2.0

**MITSUBISHI
ELECTRIC**
HEATING & AIR CONDITIONING

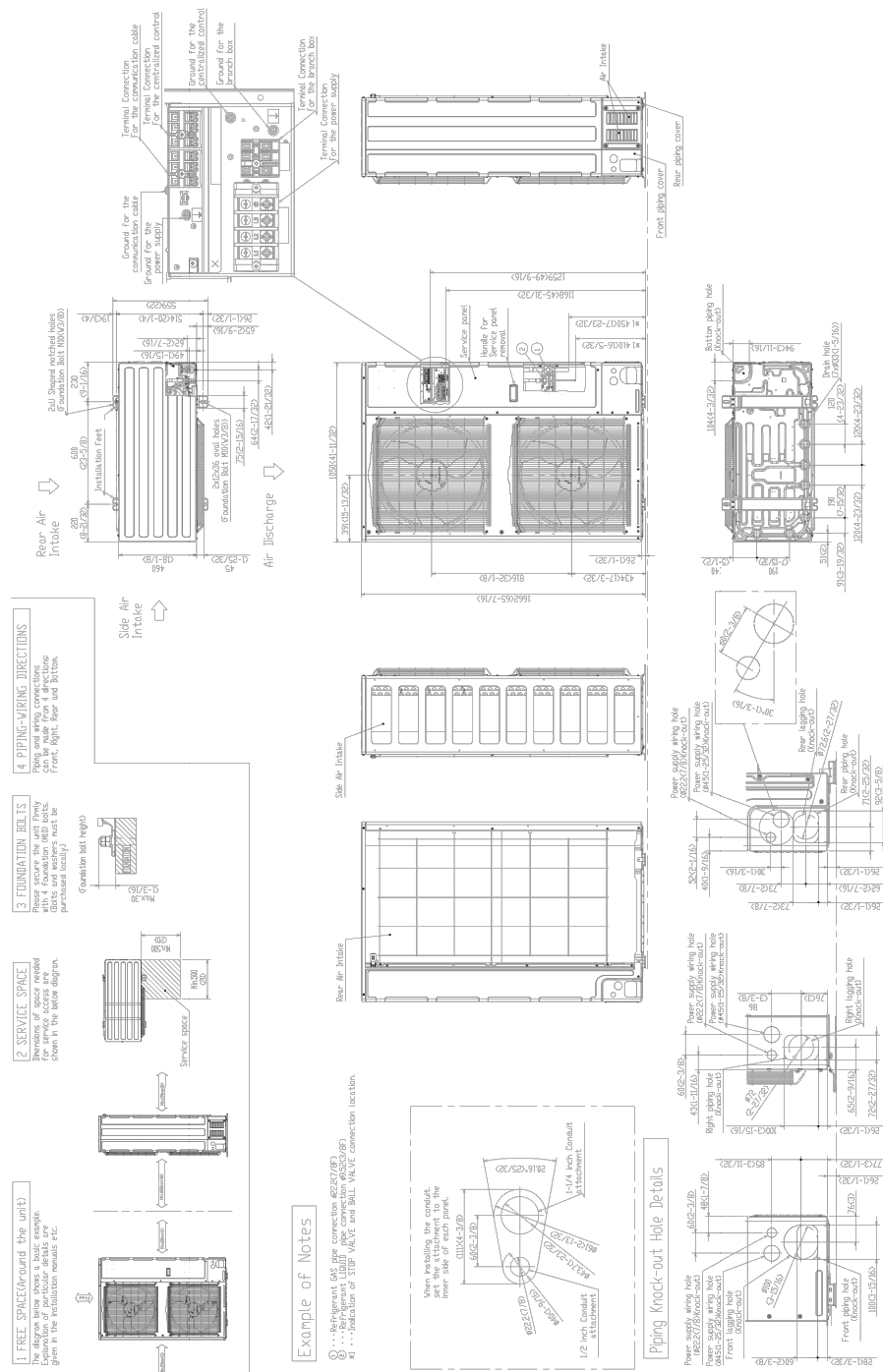
	EU		Non ducted	Mixed	Ducted
	COU		MQZ-SM77TAM-U1	MQZ-SM77TAM-U1	MQZ-SM77TAM-U1
Cooling 1"	Rated Capacity	Btu/h	72,000	72,000	72,000
	Rated Power input	W	69.000	69.000	69.000
	SEER at 100% Capacity (Rated)		5.679	5.679	5.750
	SEER at 100% Capacity *		0.85	-	0.75
	SEER at 75% Capacity (Rated)		0.85	-	0.85
Heating at 47°F	Maximum Capacity		80,000	80,000	
	Rated Capacity	Btu/h	78,000	78,000	78,000
	Rated Power input	W	5,100	5,300	4,542
	Rated Capacity	Btu/h	50,000	50,000	50,000
	Rated Power input	W	6,078	6,147	6,193
Heating at 17°F	EER		24.2	22.85	21.93
	EER		12.15	12.15	12
	COP at 47°		4.20	4.20	4.10
	COP at 17°		2.37	2.67	2.66
	Energy Star		Yes	Yes	Yes
Efficiency	Electrical Power Requirements	Voltage, Phase, Frequency	208/230, 3, 40	208/230, 3, 40	208/230, 3, 40
	Estimated Voltage Range	VAC	198-253V	198-253V	198-253V
	Short-circuit Current Rating (SCCR)	KA	5	5	5
	MAC1 Branch Box Powered by Outdoor Unit	A	50	50	50
	MAC1 without Branch Box or Branch Box Powered Separately	A	32	32	32
	MACP Branch Box Powered by Outdoor Unit	A	78	78	78
	MACP without Branch Box or Branch Box Powered Separately	A	58	58	58
	Recommended Fuel-Breaker Size if Branch Box Powered by Outdoor Unit	A	60	60	60
	Recommended Fuel-Breaker Size if Branch Box and Branch Box Powered Separately	A	40	40	40

Specifications are subject to change without notice. © 2024 Mitsubishi Electric Trane HVAC US LLC. All rights reserved.

			Non ducted	Mixed	Ducted
Outdoor	Airflow Rate (Cooling)	CFM	5,280	5,280	5,280
	Airflow Rate (Heating)	CFM	5,280	5,280	5,280
	Outdoor Fan Motor Output	W	285 ± 285	285 ± 285	285 ± 285
	Outdoor Fan Motor Drive		DC control	DC control	DC control
	External Static Pressure ¹	in. w.g.	0.10 ± 0.12	0.10 ± 0.12	0.10 ± 0.12
	Sound Pressure Level, Cooling	dBA	53	53	53
	Sound Pressure Level, Heating	dBA	54	54	54
	Refrigerant Control		LEV	LEV	LEV
	Defrost Method		Reverse Cycle	Reverse Cycle	Reverse Cycle
	Heat Exchanger Type		Plate Fin Coil	Plate Fin Coil	Plate Fin Coil
	Heat Exchanger Coating		Blue Fin Coating	Blue Fin Coating	Blue Fin Coating
	Compressor Model		ANB7SE/SEMT	ANB7SE/SEMT	ANB7SE/SEMT
	Compressor Type		Hermetic	Hermetic	Hermetic
	Compressor Motor Output	kW	4.1	4.1	4.1
	Refrigerant Oil Name		PV680	PV680	PV680
	Refrigerant Oil Charge	oz	101	101	101
	External Frost		Manual 3.0/7.7/8.1/1	Manual 3.0/7.7/8.1/1	Manual 3.0/7.7/8.1/1
	Base Pan Heater		Optional	Optional	Optional
	Package Dimensions	D, H, W	25, 25, 73	25, 25, 73	25, 25, 73
	Unit Dimensions	D, H, W	18.754, 65.716, 41.152	18.754, 65.716, 41.152	18.754, 65.716, 41.152
Indoor Unit	Package Weight	Wt.	483	483	483
	Unit Weight	Wt.	433	433	433
	Maximum Number of Branch Boxes ⁴		3	3	3
	Minimum Number of Connected DU		2	2	2
	Maximum Number of Connected DU with Branch Box		12	12	12
	Maximum Number of Connected DU without Branch Box		23	23	23
	Allowable Connected Capacity of cooling rated capacity ¹		50% - 130%	50% - 130%	50% - 130%
	Allowable Connected Capacity ²	Btuh	80,000	80,000	80,000
	Allowable Connected Capacity ³	Btuh	80,000	80,000	80,000
	Gas Pipe Size O.D. (Brass)	in.	7/8	7/8	7/8
	Lead Pipe Size O.D. (Brass)	in.	3/8	3/8	3/8
	Total Piping Length when using Branch Box	ft	262	262	262
	Farthest Piping Length from ODU to DU with Branch Box	ft	262	262	262
	Maximum Height Difference ⁵ between Branch boxes		49	49	49
	Vertical piping length between Branch box and Indoor Unit	ft	164	164	164
	Total Piping Length w/o Branch Box		1,016	1,016	1,016
	Farthest Piping Length from ODU to DU w/o Branch Box		426	426	426
	Maximum Height Difference ⁵ , ODU without DU		131	131	131
	Maximum Height Difference ⁵ , ODU with DU		131	131	131
	Maximum Height Difference between ODU and DU w/o Branch box		49	49	49
	Max # of Branch		23	23	23
	Chargeless Piping Length	ft	0	0	0
Refrigerant	Type		R410A	R410A	R410A
	Charge	oz	328	328	328
	Additional Refrigerant Charge Per Additional Piping Length	oz/ft	61.35 ± 2.0oz/ft 61.7 ± 2.0oz/ft	61.35 ± 2.0oz/ft 61.7 ± 2.0oz/ft	61.35 ± 2.0oz/ft 61.7 ± 2.0oz/ft
	Cooling Inlet Air Temp (Maximum)	°F	115	115	115
	Cooling Inlet Air Temp (Minimum) ⁶	°F	59	59	59
	Heating Inlet Air Temp (Maximum)	°F	59	59	59
	Heating Inlet Air Temp (Minimum)	°F	4	4	4
	Heating Inlet Lock-out Temperature	°F	24	24	24
	Heating Thermal Reset Temperature	°F	-14	-14	-14
	Heating Capacity at 20F	Btuh	76,000	76,000	76,000
Low ambient heating capacity (see Panel)	Heating Capacity at 41F	Btuh	76,000	76,000	76,000
	Heating Capacity at 32F	Btuh	74,480	74,480	74,480
	Heating Capacity at 23F	Btuh	63,080	63,080	63,080
	Heating Capacity at 14F	Btuh	50,680	50,680	50,680
	Heating Capacity at 5F	Btuh	45,080	45,080	45,080
	Heating Capacity at -4F	Btuh	40,280	40,280	40,280

OUTDOOR UNIT: MXZ-SM72TAM-U1 – DIMENSIONS

Unit: mm (inch)



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Ball Valve	Refrigeration Ball Valve - 1/2"	□	8V13TF92
	Refrigeration Ball Valve - 1/4"	□	8V14TF92
	Refrigeration Ball Valve - 3/8"	□	8V39TF92
	Refrigeration Ball Valve - 5/8"	□	8V59TF92
Branch Box	3 Port Branch Box	□	PAC-MAA32BC
	5 Port Branch Box	□	PAC-MAA42BC
	Branch Box Enclosure	□	88E-1
Control Wire	M-Net Control Wire, 1/200' Roll (16-AWG, Standard, Twisted Pair, Shielded, Jacketed- Plenum rated)	□	CKW625-1000
	M-Net Control Wire, 250' Roll (16-AWG, Standard, Twisted Pair, Shielded, Jacketed- Plenum rated)	□	CKW625-250
Control/Service Tool	Maintenance Tool Interface	□	PAC-USCM5-MN-1
Distribution pipe	Brazed Connection	□	MSDO-K08P-E
	Flare Connection	□	MSDO-K04P-E
	Drain Socket Drain Socket	□	PAC-850WDS-E
	Distribution Pipe Brazed Conn	□	CKW-Y9G-GA-E
	Distribution Pipe Brazed Conn	□	CKW-Y9G-GA-E
	Distribution Pipe Brazed Conn	□	CKW-Y9G-GA-E
	Joint connectors	□	PAC-S07JRL-E
Mini-Split Wire	Joint connectors	□	PAC-S07JRL-E
	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	□	S144-250
	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	□	SM144-250
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	□	S144-50
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	□	SM144-50
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	□	S164-250
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	□	SM164-250
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	□	S164-50
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	□	SM164-50
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	□	SM164-50
Mounting Pad	Condensing Unit Mounting Pad: 24" x 42" x 3"	□	ULTRITEZ
	Outdoor Unit 3-1/4 inch Mounting Base (Pad) - Plastic	□	DSO-400P
Optional Defrost Heater	Optional Defrost Heater	□	PAC-SJ02BH-E
	Adaptor (5/8 To 1/8)	□	PAC-SL03RJL-E
	Adaptor (7/8 To 1/8)	□	PAC-SL03RJL-E
	Adaptor (3/8 To 5/8)	□	PAC-S07RJL-E
	Joint Pipe (Connected 3/8 -> 1/2, A 3/8, B 1/2)	□	MAC-45AP-E
	Joint Pipe (Connected 1/2 -> 3/8, A 1/2, B 3/8)	□	MAC-45AP-E
	Joint Pipe (Connected 1/2 -> 5/8, A 1/2, B 5/8)	□	MAC-45AP-E
Port Adaptor	Joint Pipe (Connected 1/4 -> 3/8, A 1/4, B 3/8)	□	PAC-4D3P1
	18" Dual Fan Stand	□	QSM518Q2M
	24" Dual Fan Stand	□	QSM524Q2M
	Condenser Wall Bracket	□	QW0200M-1
Stand	Condenser Wall Bracket - Stainless Steel Finish	□	QW55S
	Outdoor Unit Stand — 12" High	□	QSM512Q2M
	Front Wind Baffle	□	WB-PAN (Two pieces are required)



Key Mechanical Co.

WASHINGTON	OREGON	NORTHERN CALIFORNIA	SOUTHERN CALIFORNIA
19430 88TH AVE S	4635 NE 10TH LANE	747 ENTERPRISE COURT	10270 ALBERS WAY
98049-3221	97116-2530	LIVERMORE, CA 94550	CORVALLIS, OR 97330
253.872.1992	503.231.0731	925.294.9111	714.676.2223

FOR KEY MECHANICAL USE ONLY

REVISIONS	DATE	DESCRIPTION
1	10/10/2018	Initial design
2	11/05/2019	Revised design
3	12/01/2019	Final design

LE PANIER HVAC INSTALL

LE PANIER
1902 PIKE PLACE
SEATTLE, WA 98101

DATE: 05/28/24
PROJ# | 54138-00
DRAFTER | BFC
REVIEWED BY | ---
SHEET SIZE | Arch D
SCALE | AS SHOWN
KM PHONE | +1 (253) 872-7392

CUT SHEET

SHEET NUMBER

M6.0

TECHNICAL & SERVICE MANUAL

CITY MULTI Series Wall Mounted R410A / R22

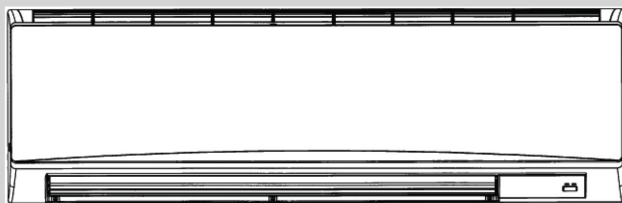
Indoor unit
[Model names]

[Service Ref.]

PKFY-P24NKMU-E2 PKFY-P24NKMU-E2.TH

PKFY-P30NKMU-E2 PKFY-P30NKMU-E2.TH

Note:
• This manual describes only service data of the indoor units.
• RoHS compliant products have <G> mark on the spec name plate.



INDOOR UNIT

CONTENTS

- PART NAMES AND FUNCTIONS 2
- SPECIFICATION 4
- OUTLINES AND DIMENSIONS 4
- WIRING DIAGRAM 7
- REFRIGERANT SYSTEM DIAGRAM 8
- MICROPROCESSOR CONTROL 9
- TROUBLESHOOTING 14
- DISASSEMBLY PROCEDURE 21

PARTS CATALOG (OCB518)



2 SPECIFICATION

2-1. Specifications

Model		PKFY-P24NKMU-E2	PKFY-P30NKMU-E2
Power source		1-phase 208-230V 60Hz	
Cooling capacity (Nominal)	*1 kW	7.0	8.8
	*1 Btu/h	24,000	30,000
Power input	kW	0.07	0.07
Current input	A	0.50	0.50
Heating capacity (Nominal)	*2 kW	7.9	10.0
	*2 Btu/h	27,000	34,000
Power input	kW	0.07	0.07
Current input	A	0.50	0.50
External finish		Plastic, MUNSELL (1.0Y 9.2D 2)	
External dimension H × W × D	mm	365 × 1170 × 295	
	in	14-3/8" × 46-1/16" × 11-5/8"	
Net weight	kg (lb)	21 (46)	
Heat exchanger		Cross fin (Aluminum fin and copper tube)	
Fan	Type × Quantity	Line flow fan × 1	
External static press.	Pa	0	
Motor type	mmHg	0	
Motor output	kW	0.056	
Driving mechanism		Direct-drive	
Airflow rate (Low-High)	m ³ /min	16 - 26	20 - 26
	L/s	267 - 433	333 - 433
	cfm	570 - 920	710 - 920
Noise level (Low-High) (measured in anechoic room)	dB <A>	39 - 49	43 - 49
Insulation material		Polyethylene sheet	
Air filter		PP honeycomb	
Protection device		FUSE	
Refrigerant control device		LEV	
Connectable outdoor unit		R410A, R22 CITY MULTI	
Diameter of refrigerant pipe	Liquid (R410A) (R22) mm (in.)	ø9.52 (ø3/8") Flare	ø9.52 (ø3/8") Flare
	Gas (R410A) (R22) mm (in.)	ø15.88 (ø5/8") Flare	ø15.88 (ø5/8") Flare
Field drain pipe size	mm (in.)	I.D. 16mm (5/8")	
Standard attachment	Document	Installation Manual, Instruction Book	
Optional parts	Accessory	PAC-YUZSH	
Remarks	Installation	Details on foundation work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.	

Note :
*1 Nominal cooling conditions
Indoor : 80°FDB/67°FWB (26.7°CDB/19.4°CWB) 70°FDB/62°FWB
Outdoor : 95°FDB (35°CDB) 47°FDB/43°FWB (8.3°CDB/6.1°CWB)
Pipe length : 25 ft (7.6 m) 25 ft (7.6 m)
Level difference : 0 ft (0 m) 0 ft (0 m)
*2 Nominal heating conditions
Indoor : 65°FDB/55°FWB (18.3°CDB/12.8°CWB) 70°FDB/62°FWB
Outdoor : 5°FDB (-15°CDB) 47°FDB/43°FWB (8.3°CDB/6.1°CWB)
Pipe length : 25 ft (7.6 m) 25 ft (7.6 m)
Level difference : 0 ft (0 m) 0 ft (0 m)

* Due to continuing improvement, above specification may be subject to change without notice.

Unit converter
1kW = kW × 3.517
1Btu/h = Btu/h × 0.293
1m³/min = m³/min × 35.31
1ft = ft × 0.305
*Above specification data is subject to rounding variation.

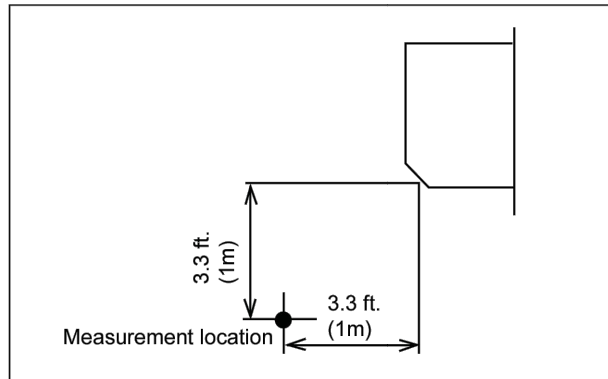
OCH518

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2-2. Electrical parts specifications

Service Ref.	Symbol	PKFY-P24NKMU-E2.TH	PKFY-P30NKMU-E2.TH
Parts name			
Room temperature thermistor	TH21	Resistance 30°F/15.8kΩ, 50°F/9.6kΩ, 70°F/6.0kΩ, 80°F/4.8kΩ, 90°F/3.9kΩ, 100°F/3.2kΩ	
Liquid pipe thermistor	TH22	Resistance 30°F/15.8kΩ, 50°F/9.6kΩ, 70°F/6.0kΩ, 80°F/4.8kΩ, 90°F/3.9kΩ, 100°F/3.2kΩ	
Gas pipe thermistor	TH23 TH24	Resistance 30°F/15.8kΩ, 50°F/9.6kΩ, 70°F/6.0kΩ, 80°F/4.8kΩ, 90°F/3.9kΩ, 100°F/3.2kΩ	
Fuse (Indoor controller board)	FUSE	250V 3.15A	
Fan motor	MF	8-Pole Output 56W / RCOJ56-AC	
Vane motor (with limit switch)	MV	MSBPC20 DC12V	
Linear expansion valve	LEV	EFM-40YGME DC 12 V	EFM-80YGME DC 12 V
Power supply terminal block	TB2	(L1, L2, GR) 250V 20A	
Transmission terminal block	TB5	(M1, M2, S) 250V 20A	
MA remote controller terminal block	TB15	(1, 2) 250V 10A	

2-3. Sound levels

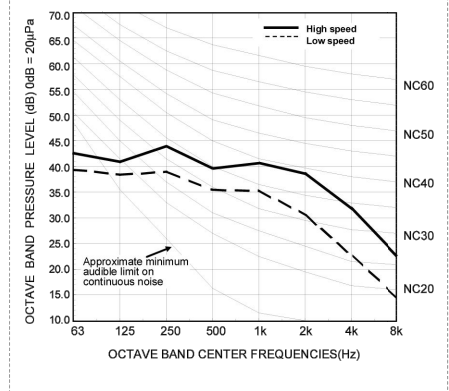


* Measured in anechoic room.

Service Ref.	Sound level at anechoic room : Low-High
PKFY-P24NKMU-E2.TH	39 - 49
PKFY-P30NKMU-E2.TH	43 - 49

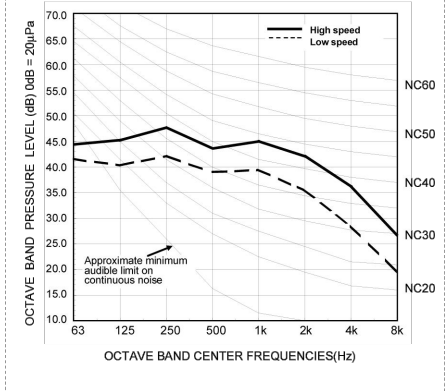
2-4. NC curves

PKFY-P24NKMU-E2
External static pressure : 0Pa
Power source : 208,230V, 60Hz



OCH518

PKFY-P30NKMU-E2
External static pressure : 0Pa
Power source : 208,230V, 60Hz

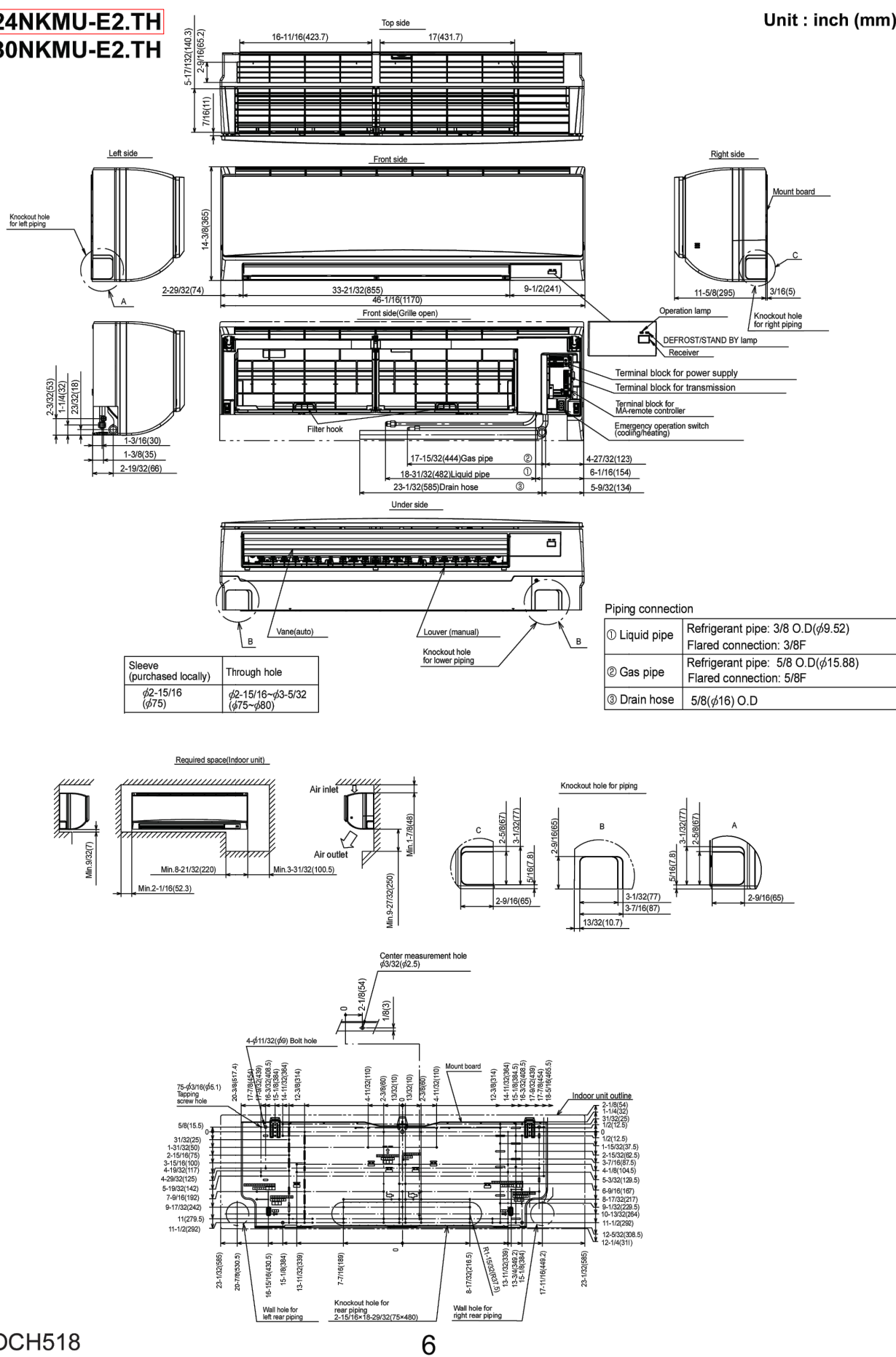


5

3 OUTLINES AND DIMENSIONS

PKFY-P24NKMU-E2.TH
PKFY-P30NKMU-E2.TH

Unit : inch (mm)



OCH518

6

FOR KEY MECHANICAL USE ONLY

REVISIONS	DESCRIPTION
DATE	

LE PANIER HVAC INSTALL

LE PANIER
1902 PIKE PLACE
SEATTLE, WA 98101

DATE: 05/28/24
PROJ# | 54138-00
DRAFTER | BFC
REVIEWED BY | ---
SHEET SIZE | Arch E1
SCALE | AS NOTED
KM PHONE | +1 (203) 872-7392

CUT SHEETS

SHEET NUMBER

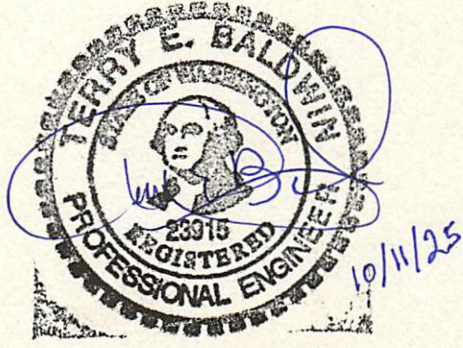
M6.1



FOR

1902 PIKE PLACE
SEATTLE, WASHINGTON 98101

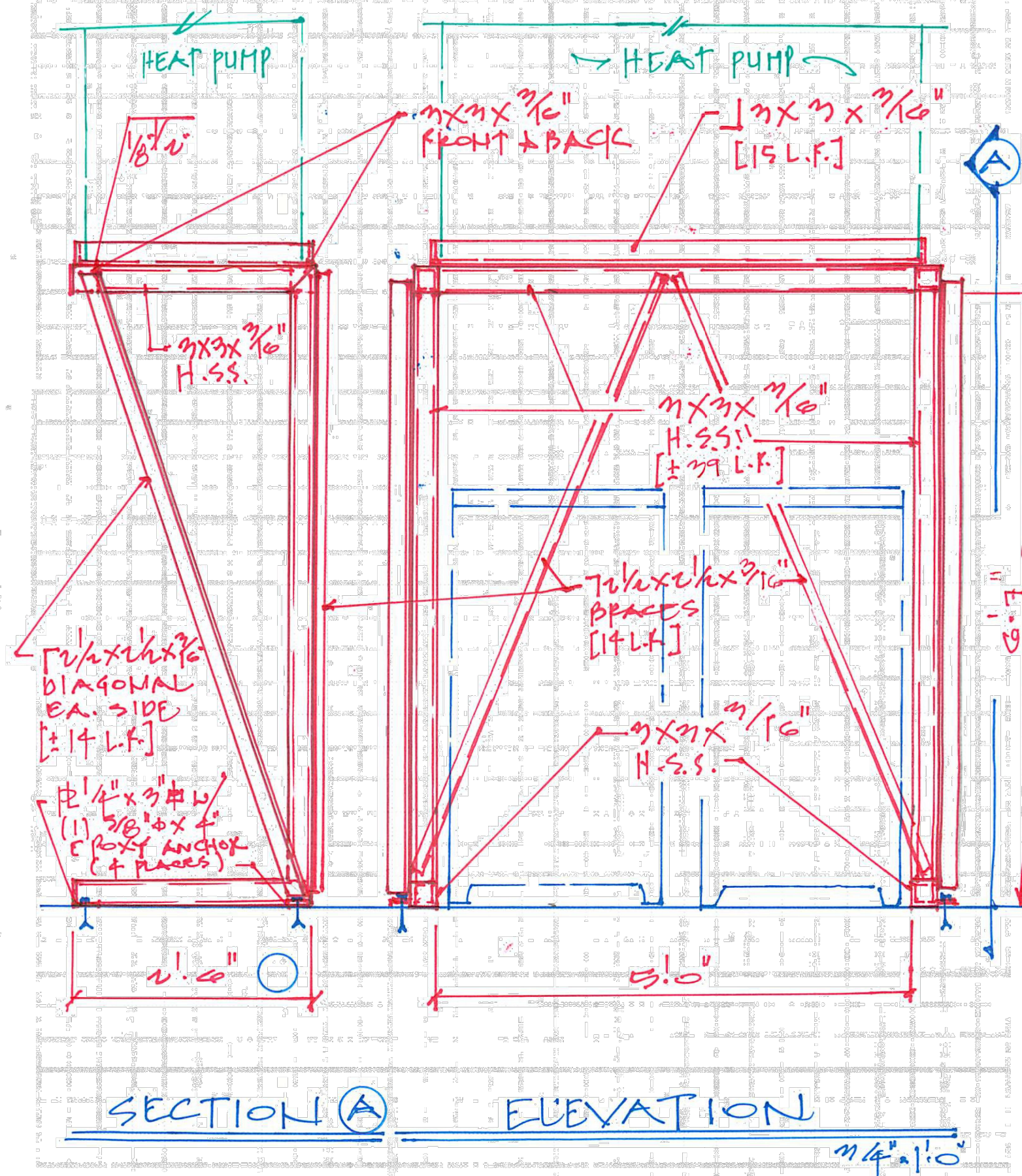
19430 68TH AVENUE SOUTH, SUITE B
KENT, WASHINGTON 98032
[(206) 383-4616 - MOBILE / (206) 872-7392 OFFICE]
[PROJECT MANAGER - JOSH WHITE]



JANUARY 20, 2025 - SUBMITTAL
[B & T PROJECT NO. #24077.0]



PROJECT LE PANIER SHEET NO. 351 OF 351
DESCRIPTION HEAT PUMP STAMP DES LT DATE 1/10/15
CHK JOB NO. 24077



PROJECT LE PANIER SHEET NO. 22 OF 22
DESCRIPTION HEAT PUMP STAND DES. DATE 1/25
CHK. JOB NO. 24077

HEAT PUMP - 467 LBS

FRAME DESIGN

$7 \times 7 \times \frac{3}{10}'' \text{ H.S.S.}$

$$A = 2.02 \text{ } ^{\circ}\text{C}$$
$$S = 1.77 \text{ } ^{\circ}\text{C}$$

CHECK BENDING

$$H = .467^k (1.25') = .579 \text{ kft}$$

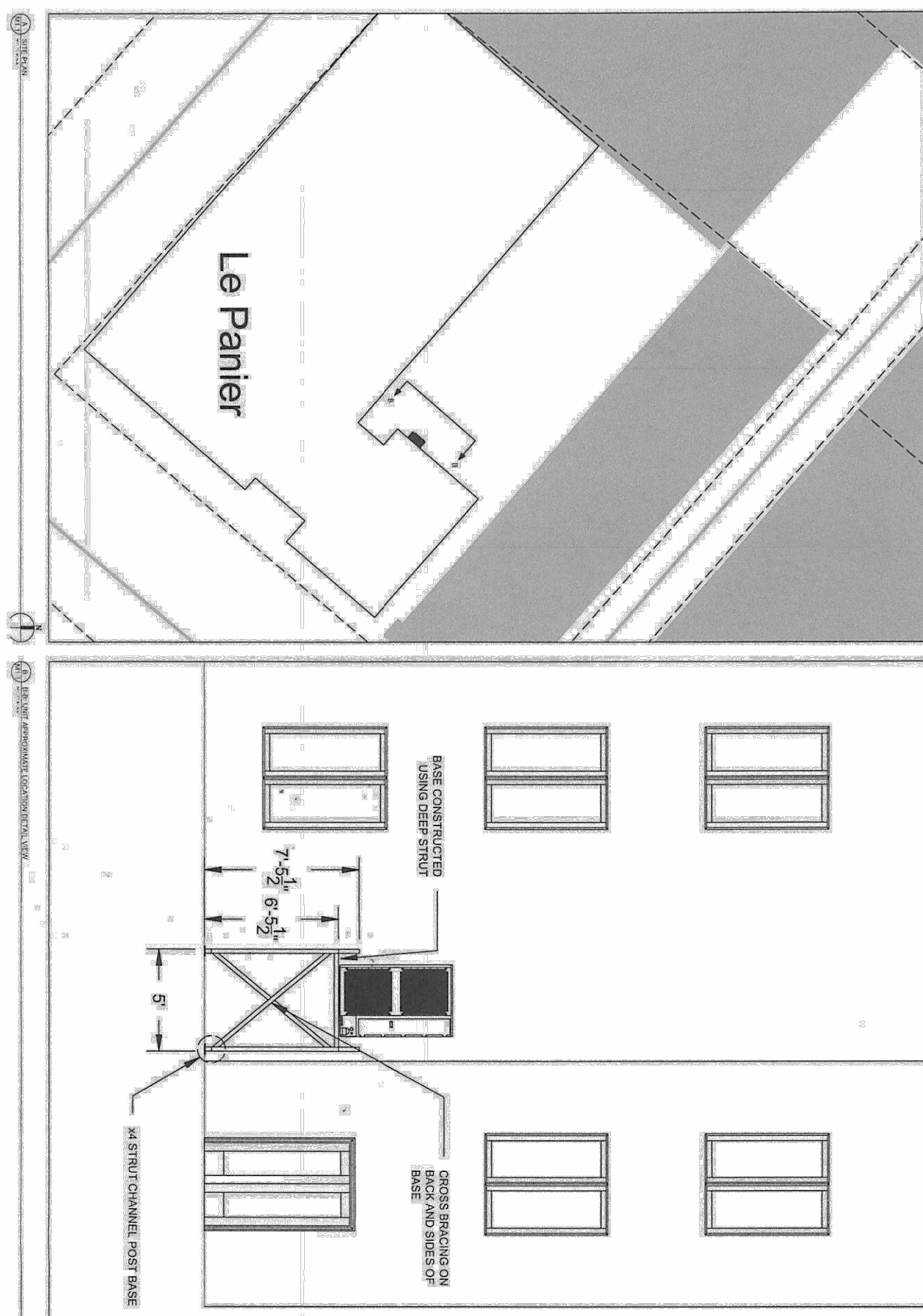
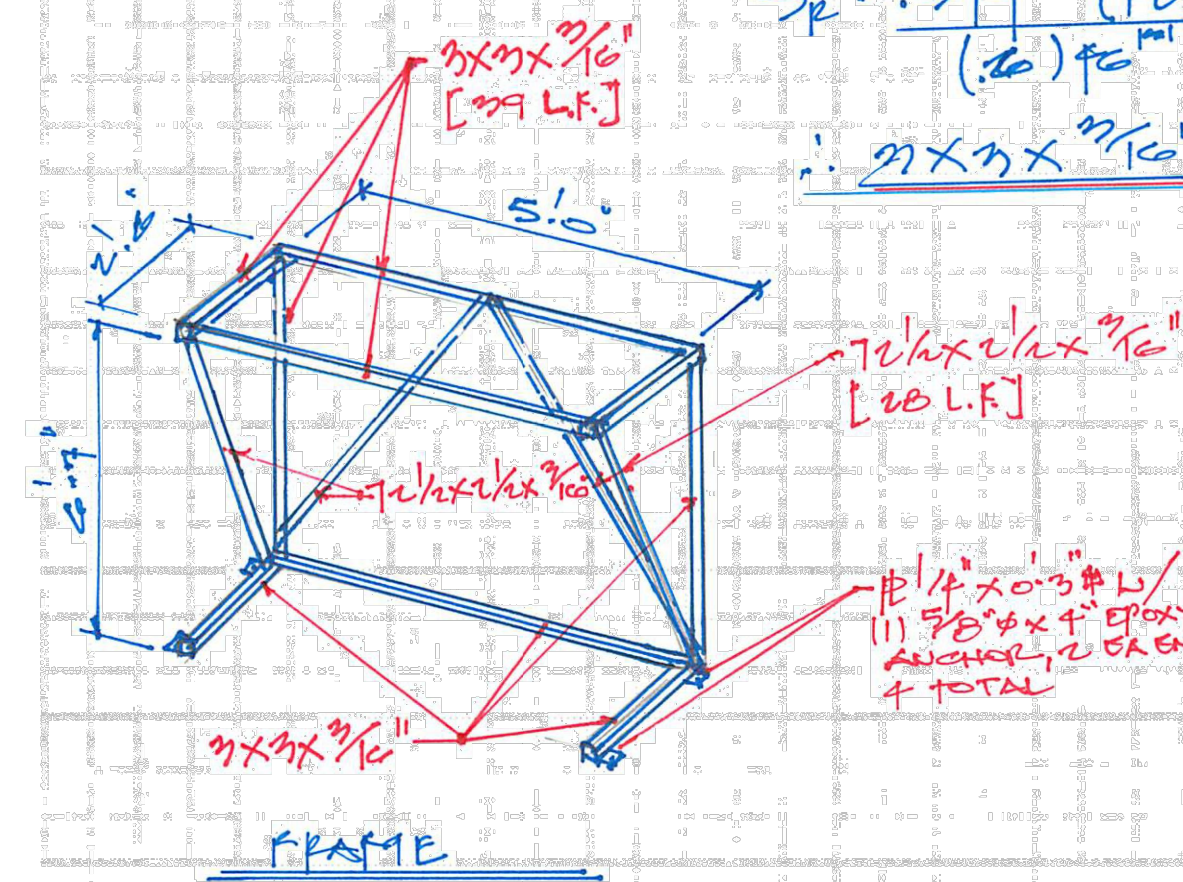
$$\zeta_p = \frac{579 \frac{\text{K}}{\text{m}} (12)}{21.6 \frac{\text{m}}{\text{m}^2}} = 322 \frac{\text{K}}{\text{m}^2} < 1.75$$

$\therefore n \times n \times n/16$ o.k.

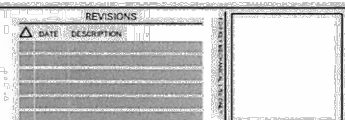
$$M = \frac{400 \text{ N} (5.0')}{4} = .379 \text{ k.ft.}$$

$$S_p = \frac{.579 \text{ kg} \cdot (12) + .152 \text{ kg} \cdot (-7)}{(.6) \text{ kg}} = 1.73 \text{ m/s}^2$$

$\therefore 2 \times 2 \times \frac{1}{16}$ H.S.S. O.K.



LE PANIER HVAC INSTALLÉ



Key Mechanical Co.



Key Mechanical Co.

WASHINGTON 19430 8TH AVE S KENT, WA 98032	OREGON 4655 NE 190TH LANE PORTLAND, OR 97230	NORTHERN CALIFORNIA 747 ENTERPRISE COURT LIVERMORE, CA. 94550	SOUTHERN CALIFORNIA 14270 ALBERS WAY CHINO, CA. 91710
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FOR KEY MECHANICAL USE ONLY

	DATE	DESCRIPTION	REVISIONS
1	01/22/25	REV 1 CORRECTIONS	

LE PANIER HVAC INSTALL

LE PANIER
1902 PIKE PLACE
SEATTLE, WA 98101

DATE: 05/28/24
PROJ# | 54138-00
DRAFTER | BFC
REVIEWED BY | ---
SHEET SIZE | Arch E1
SCALE | AS NOTED
KM PHONE | +1 (253) 872-7393

STRUCTURAL
SHEETS

SHEET NUMBER:
M7.0



Seattle Neighborhoods

I hereby affirm that I am the owner of the building/property located at:

Building/Property Street Address: 1902 Pike Pl

City, State: Seattle, WA

Zip Code: 98101

By signing below, I (the building/property owner) verify that I have reviewed the proposed project/activities and authorize the individual identified in the following section to act as my authorized agent with regard to the Certificate of Approval Application (including requests for early guidance/project briefings) made to City of Seattle's Historic Preservation Program for the project/activities described below.

Project/Activity for which Application (or early guidance/briefing request) is being made:

HVAC equipment install. Install (1) outdoor unit in courtyard of Steward House. Install (2) indoor wall mounted units in Le Panier Sales floor.

Building/Property Owner Printed Name: Juan Medina (Director of Asset)

Building/Property Owner Mailing Address: 85 Pike Street, Room #500

City, State: Seattle WA

Zip Code: 98101

Building/Property Owner Email Address: Juan.Medina@PikePlaceMarket.org

Signature of Building/Property Owner: Juan Medina

Date: 2/3/25

Permit Applicant/Owner's Authorized Agent Printed Name:

Key Mechanical

Applicant/Agent Mailing Address: 19430 68th Ave S

City, State: Kent, WA

Zip Code: 98032

Applicant/Agent Email Address: bcanedo@keymechanical.com, jwhite@keymechanical.com

Signature of Applicant/Agent: Brandon Canedo

Date: 02/03/2025

Digitally signed by Brandon Canedo
DN: cn=US, email=bcanedo@keymechanical.com, o=Key Mechanical, cn=Brandon Canedo
Date: 2025.02.03 10:53:41 -0800