

City of Portland, Maine – Building or Use Permit Application 389 Congress Street, 04101, Tel: (207) 874-8703, FAX: 874-8716

Location of Construction: 242 State Street		Owner: Mary Grumber		Phone: 772-8772		Permit No: 981172 PERMIT ISSUED Permit Issued: OCT 13 1998 CITY OF PORTLAND Zone: CBL: Zoning Approval: Special Zone or Reviews: <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan maj <input type="checkbox"/> minor <input type="checkbox"/> mm <input type="checkbox"/>		
Owner Address: 242 State Street		Lessee/Buyer's Name:		Phone:			BusinessName:	
Contractor Name: Avery Services		Address: 7 Thomas Drive, Westbrook		Phone: 772-8687			COST OF WORK: \$ 5762.00	
Past Use: Single family		Proposed Use: same		FIRE DEPT. <input type="checkbox"/> Approved <input type="checkbox"/> Denied Signature:			PERMIT FEE: \$ 50.00 INSPECTION: Use Group: Type: Signature: <i>Helpes</i>	
Proposed Project Description: Install a condensing unit with fan coil & hot water coil Modify duct work to accept				PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.) Action: Approved <input type="checkbox"/> Approved with Conditions: <input type="checkbox"/> Denied <input type="checkbox"/> Signature: Date:				
Permit Taken By: UB		Date Applied For: 10/6/98						

1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal rules.
2. Building permits do not include plumbing, septic or electrical work.
3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..

PERMIT ISSUED WITH REQUIREMENTS

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provisions of the code(s) applicable to such permit

10/7/98

SIGNATURE OF APPLICANT	ADDRESS:	DATE:	PHONE:
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE			PHONE:

CEO DISTRICT

2


THIS IS NOT A PERMIT/CONSTRUCTION CANNOT COMMENCE UNTIL THE PERMIT IS ISSUED

**Building or Use Permit Pre-Application
Additions/Alterations/Accessory Structures
To Detached Single Family Dwelling**

In the interest of processing your application in the quickest possible manner, please complete the Information below for a Building or Use Permit

NOTEIf you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.**

Location Address of Construction	242 STATE STREET, PORTLAND
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Tax Assessor's Chart, Block & Lot Number		Owner	Telephone#:
Chart# 47	Block# B	Lot# 27	MARY GRIMMER
Owner's Address		Lessee/Buyer's Name (If Applicable)	Cost Of Work Fee
242 STATE STREET, PORTLAND 04101			\$ 5,762 ⁰⁰ \$ 50
Proposed Project Description (Please be as specific as possible)			
INSTALL A CONDENSING UNIT WITH FAN COIL & HOT WATER COIL - MODIFY OUR WORK TO ACCEPT			
Contractor's Name, Address & Telephone		Rec'd By:	
AVERY SERVICES, INC. 7 THOMAS DRIVE WESTBANK, ME 04092/772-8687			

Separate permits are required for Internal & External Plumbing, HVAC and Electrical installation.

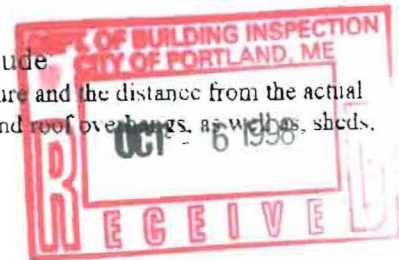
- All construction must be conducted in compliance with the 1996 B.O.C.A. Building Code as amended by Section 6-Art II.
- All plumbing must be conducted in compliance with the State of Maine Plumbing Code.
- All Electrical Installation must comply with the 1996 National Electrical Code as amended by Section 6-Art III.
- HVAC (Heating, Ventilation and Air Conditioning) Installation must comply with the 1993 BOCA Mechanical Code.

You must Include the following with you application.

- 1) A Copy of Your Deed or Purchase and Sale Agreement
- 2) A Copy of your Construction Contract, if available
- 3) A Plot Plan (Sample Attached)

If there is expansion to the structure, a complete plot plan (Site Plan) must include:

- The shape and dimension of the lot, all existing buildings (if any), the proposed structure and the distance from the actual property lines. Structures include decks, porches, a bow windows cantilever sections and roof overhangs, awnings, sheds, pools, garages and any other accessory structures
- Scale and required zoning district setbacks



4) Building Plans (Sample Attached)

A complete set of construction drawings showing all of the following elements of construction

- Cross Sections w/Framing details (including porches, decks w/ railings, and accessory structures)
- Floor Plans & Elevations
- Window and door schedules
- Foundation plans with required drainage and dampproofing
- Electrical and plumbing layout. Mechanical drawings for any specialized equipment such as furnaces, chimneys, gas equipment, HVAC equipment (air handling) or other types of work that may require special review must be included.

Certification

I hereby certify that I am the Owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature of applicant:	Date:
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Building Permit Fee: \$25.00 for the 1st \$1000.00 cost plus \$5.00 per \$1,000.00 construction cost thereafter

© INSP CORRESPONDENT APADSTD WPD

Proposal # 865361

AVERY SERVICES, INC.

7 Thomas Drive
WESTBROOK, MAINE 04092
(207) 772-8687
FAX (207) 874-0933

PROPOSAL SUBMITTED TO <i>Mary Grimmer</i>		PHONE	DATE <i>9/3/98</i>
STREET <i>242 State Street</i>		JOB NAME <i>Air Conditioning System</i>	
CITY, STATE and ZIP CODE <i>Portland, ME 04101</i>		JOB LOCATION <i>242 State St., Portland, ME</i>	
ARCHITECT	DATE OF PLANS	JOB PHONE	
		<i>Bruce V. Avery</i>	

We hereby submit specifications and estimates for:
Avery Services, Inc. is pleased to quote on the installation of an air conditioning system at your home in Portland. Scope of work as follows:

- A Carrier 1.0 EER Condensing unit.*
- A Deluxe Fan Coil capable of overcoming high static pressure.*
- Supply transitions to tie into existing duct. Replacing portions of the supply trunk, to allow for improved air flows.*
- Install a return duct from the new unit to the former low return located under the stairs. Portions of the return duct will be lined for sound attenuation.*
- Includes a hot water coil with transitions to allow tie into a boiler system.*
- Refrigerant piping from condensing unit to fan coil.*
- Condensate piping from fan coil to nearest indirect drain line.*
- Low voltage control wiring and thermostat.*
- Power wiring to condensing unit by licensed electrician is included.*
- Pricing also includes increasing the size of the supply runs to upper floors, up to the point where they enter the chimney.*

- OPTION A: Carrier Mechanical Air Cleaner, add \$225 initial.*
- B: Wrap duct work in the basement, add \$625 initial.*
- C: Add a supply from the kitchen cabinet to feed conditioned air into Breakfast area, add \$210 initial.*

NOTE: The existing ductwork to the second & third floor is extremely limited in its capacity to carry enough air flow to provide proper conditioning. We feel the high static unit will help overcome this shortcoming, but that this sizing issue in combination with the fact that there is no high return makes it impossible to quantify the results that will be seen on the upper floors.

EXCLUSIONS: Adequacy of existing systems, soffiting, structural.

We Propose hereby to furnish material and labor — complete in accordance with above specifications, for the sum of **Five Thousand Seven Hundred Sixty-Two ******* dollars (\$ *5,762.00*)

Payment to be made as follows

25% Upon acceptance - Progress billing/net 10 days - Balance on completion.

If payment is not made as outlined above, a service charge of 2% per month on the overdue balance plus all reasonable costs of collection, including attorney's fees will be paid.

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workman's Compensation Insurance.

Authorized Signature

Note. This proposal may be withdrawn by us if not accepted within *thirty* day

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Date of Acceptance

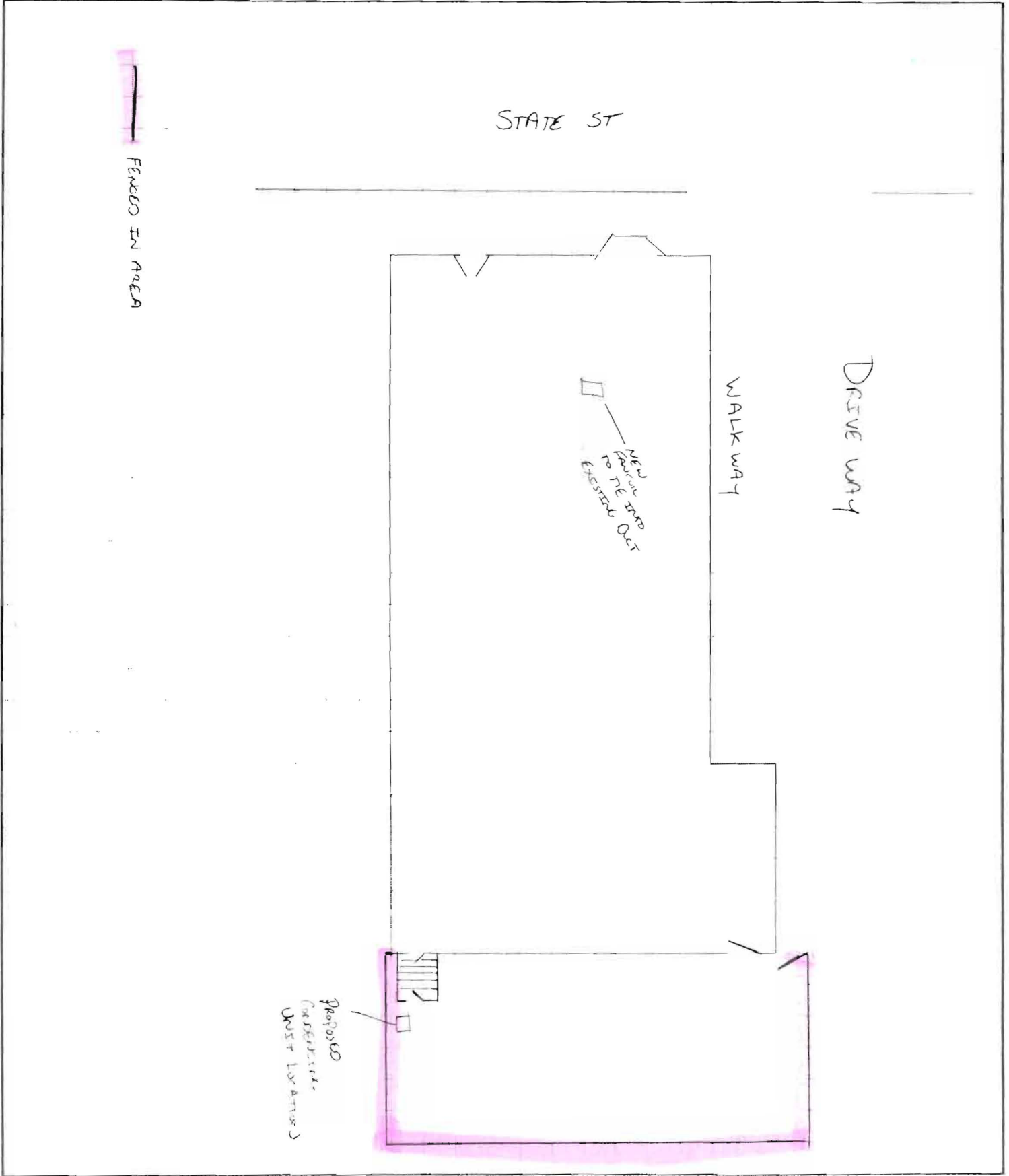
9/12/98

Signature

Signature

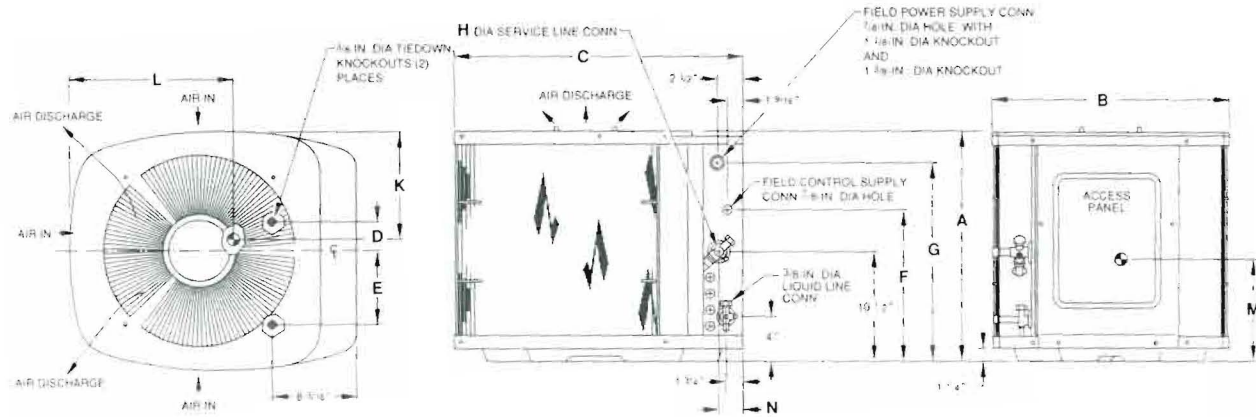
AVERY SERVICES, INC.
7 Thomas Drive
WESTBROOK, MAINE 04092
(207) 772-8687
FAX (207) 874-0933

JOB MAR, GEORGETOWN, 242 STATE STREET, F.I. # 242
SHEET NO _____ OF _____
CALCULATED BY _____ DATE 10-1-98
CHECKED BY _____ DATE _____
SCALE 1/8" = 1'



NOTES:

1. Allow 30 in. clearance to service side of unit, 48 in. above unit, 6 in. on one side, 12 in. on remaining side, and 24 in. between units for proper airflow.
2. Minimum outdoor operating ambient in cooling mode is 55°F (unless low-ambient control is used) max 125°F.
3. Series designation is the 13th position of the unit model number.
4. Center of gravity



A97000

DIMENSIONS (IN.)

UNIT SIZE	UNIT DIMENSIONS													MINIMUM MOUNTING PAD DIMENSIONS
	SERIES	A	B	C	D	E	F	G	H	K	L	M	N	
018	0	21-7/8	22-1/2	27-1/2	2-13/16	6-15/16	13-3/8	17-7/8	5/8	12-3/16	14-1/2	10-3/8	2-3/8	20 x 27
018	1	21-7/8	22-1/2	27-1/2	2-13/16	6-15/16	13-3/8	17-7/8	5/8	12	15-1/8	10-3/8	2-3/8	20 x 27
024	0	21-7/8	22-1/2	27-1/2	2-13/16	6-15/16	13-3/8	17-7/8	5/8	12-3/16	14-1/2	10-3/8	2-3/8	20 x 27
024	1	21-7/8	22-1/2	27-1/2	2-13/16	6-15/16	13-3/8	17-7/8	5/8	12	15-1/8	10-3/8	2-3/8	20 x 27
030	0	31-7/8	22-1/2	27-1/2	2-13/16	6-15/16	21-1/2	27-7/8	3/4	12-3/16	14-3/4	11-13/16	2-3/8	20 x 27
030	1	31-7/8	22-1/2	27-1/2	2-13/16	6-15/16	21-1/2	27-7/8	3/4	12-9/16	14	12-5/16	2-3/8	20 x 27
036	0	31-7/8	22-1/2	27-1/2	2-13/16	6-15/16	21-1/2	27-7/8	3/4	12-3/16	14-3/4	11-13/16	2-3/8	20 x 27
036	1	31-7/8	22-1/2	27-1/2	2-13/16	6-15/16	21-1/2	27-7/8	3/4	12-9/16	14	12-5/16	2-3/8	20 x 27
036	2	31-7/8	22-1/2	27-1/2	2-13/16	6-15/16	21-1/2	27-7/8	3/4	12-9/16	14	12-5/16	2-3/8	20 x 27
042	0	31-7/8	30	34-15/16	4	9-3/4	21-1/2	27-7/8	7/8	15-3/4	19	12-13/16	2-15/16	26 x 32
042	1	31-7/8	30	34-15/16	4	9-3/4	21-1/2	27-7/8	7/8	15-3/4	19	12-13/16	2-15/16	26 x 32
048	1	31-7/8	30	34-15/16	4	9-3/4	21-1/2	27-7/8	7/8	13-1/2	20-7/16	14-1/16	2-15/16	26 x 32
048	3	31-7/8	30	34-15/16	4	9-3/4	21-1/2	27-7/8	7/8	13-1/2	20-7/16	14-1/16	2-15/16	26 x 32
060	1	37-7/8	30	34-15/16	4	9-3/4	21-1/2	27-7/8	7/8	15-3/4	19-15/16	14-1/16	2-15/16	26 x 32
060	3	37-7/8	30	34-15/16	4	9-3/4	21-1/2	27-7/8	7/8	15-3/4	19-15/16	14-1/16	2-15/16	26 x 32

Physical data

UNIT SIZE	018-30/31	024-30/31	030-30/31	036-30/31	036-32	042-30/31	048-31/33	060-31/33
OPERATING WEIGHT (Lb)	138/143	140/153	158/163	159/168	164	230/237	241/241	258/258
REFRIGERANT	R-22							
Control	AccuRater® Piston							
Charge (Lb) @ 15 Ft	3.69	4.01	4.88	5.01	5.01	6.06/6.13	6.81/7.00	10.31/8.50
CONDENSER FAN	Vertical							
Air Discharge	1600	1600	1900	1900	1900	2900	2900	2800
Air Qty (CFM)	1.12	1.12	1.10	1.10	1.10	1.4	1.4	1.4
Motor HP	1100							
Motor RPM	1100							
CONDENSER COIL	Face Area (Sq Ft)							
Face Area (Sq Ft)	7.2	7.2	10.8	10.8	10.8	15.0	15.0	20.25
Fins per In.	25	25	25	25	25	20/18	23/20	20/23
Rows	1	1	1	1	1	1	1	2/1
Circuits	1	1	2	2	2	3	3	4
VALVE CONNECT (In. ID)	Vapor							
Vapor	5/8		3/4			7/8		
Liquid	3/8							
REFRIG TUBES* (In. OD)	Vapor (0-50 Ft Tube Length)							
Vapor (0-50 Ft Tube Length)	5/8	5/8	3/4	3/4	3/4	7/8	7/8	1-1/8
Vapor (Max Diameter for Long-Line Applications)	3/4	3/4	7/8	7/8	7/8	1-1/8	1-1/8	1-1/8
Liquid (0-50 Ft. Tube Length)†	3/8							
Liquid (For Long-Line Applications)	3/8							
COMPRESSOR	Copeland Recip/ Tecumseh Recip				Millennium Scroll	Copeland Recip/ Millennium Scroll	Millennium Scroll/ Copeland Scroll	
Manufacturer & Type	Copeland Recip/ Tecumseh Recip				Millennium Scroll	Copeland Recip/ Millennium Scroll	Millennium Scroll/ Copeland Scroll	

NOTE: See unit Installation Instructions for proper installation

* For tube sets between 50 and 175 ft. consult Long-Line Application Guideline.

† 3/8-in. liquid tube must be used on capillary type coils

METERING DEVICE

CONDENSING UNIT SIZE	PISTON* IDENTIFICATION NO.
018-30, 31	52
024-30, 31	59
030-30, 31	70
036-30, 31	73
036-32	76
042-30	82
042-31	78
048-31	82
048-33	84
060-31	98
060-33	96

* Piston listed is for any approved non-capillary tube non-TXV coil combination. Piston is shipped with outdoor unit and must be installed in an approved indoor coil.

Electrical Data

UNIT SIZE	V/PH	OPER VOLTS*		COMPR		FAN FLA	MCA	60 MIN WIRE SIZE†	75 MIN WIRE SIZE†	60 MAX LENGTH (Ft)‡	75 MAX LENGTH (Ft)‡	MAX FUSE** OR HACR TYPE CKT BKR AMPS
		Max	Min	LRA	RLA							
018-30, 31	208-230/1	253	197	49.0	8.6	0.5	11.3	14	14	99	94	15
024-30, 31				61.0	11.2	0.5	14.5	14	14	72	68	20
030-30, 31				75.0	13.7	0.8	17.9	14	14	56	75	25
036-30, 31				86.0	15.3	0.8	19.9	14	14	39	37	30
036-32				105.0	17.9	0.8	23.2	12	12	63	60	35
042-30				105.0	17.3	1.4	23.5	12	12	63	60	35
042-31				115.0	19.9	1.4	26.3	10	10	87	83	40
048-31				140.0	24.4	1.4	31.9	8	10	111	68	50
048-33				129.0	23.7	1.4	31.0	8	10	115	70	50
060-31				165.0	28.8	1.4	37.4	8	8	91	87	50
060-33				169.0	28.8	1.4	37.4	8	8	91	87	60

* Permissible limits of the voltage range at which the unit will operate satisfactorily. Operation outside these limits may result in unit failure.

† If wire is applied at ambient greater than 30°C (86°F), consult Table 310-16 of the NEC (ANSI/NFPA 70).

‡ The ampacity of nonmetallic-sheathed cable (NM), trade name ROMEX, shall be that of 60°C (140°F) conductors, per the NEC (ANSI/NFPA 70) Article 336-26.

§ If other than uncoated (non-plated), 60 or 75°C (140 or 167°F) insulation, copper wire (solid wire for 10 AWG and smaller, stranded wire for larger than 10 AWG) is used, consult applicable tables of the NEC (ANSI/NFPA 70).

¶ Length shown is as measured 1 way along wire path between unit and service panel for a voltage drop not to exceed 2%.

** Time-delay fuse

NOTES:

1. Control circuit is 24v on all units and requires external power source.
2. Copper wire must be used from service disconnect to unit.
3. All motors/compressors contain internal overload protection.

FLA — Full Load Amps

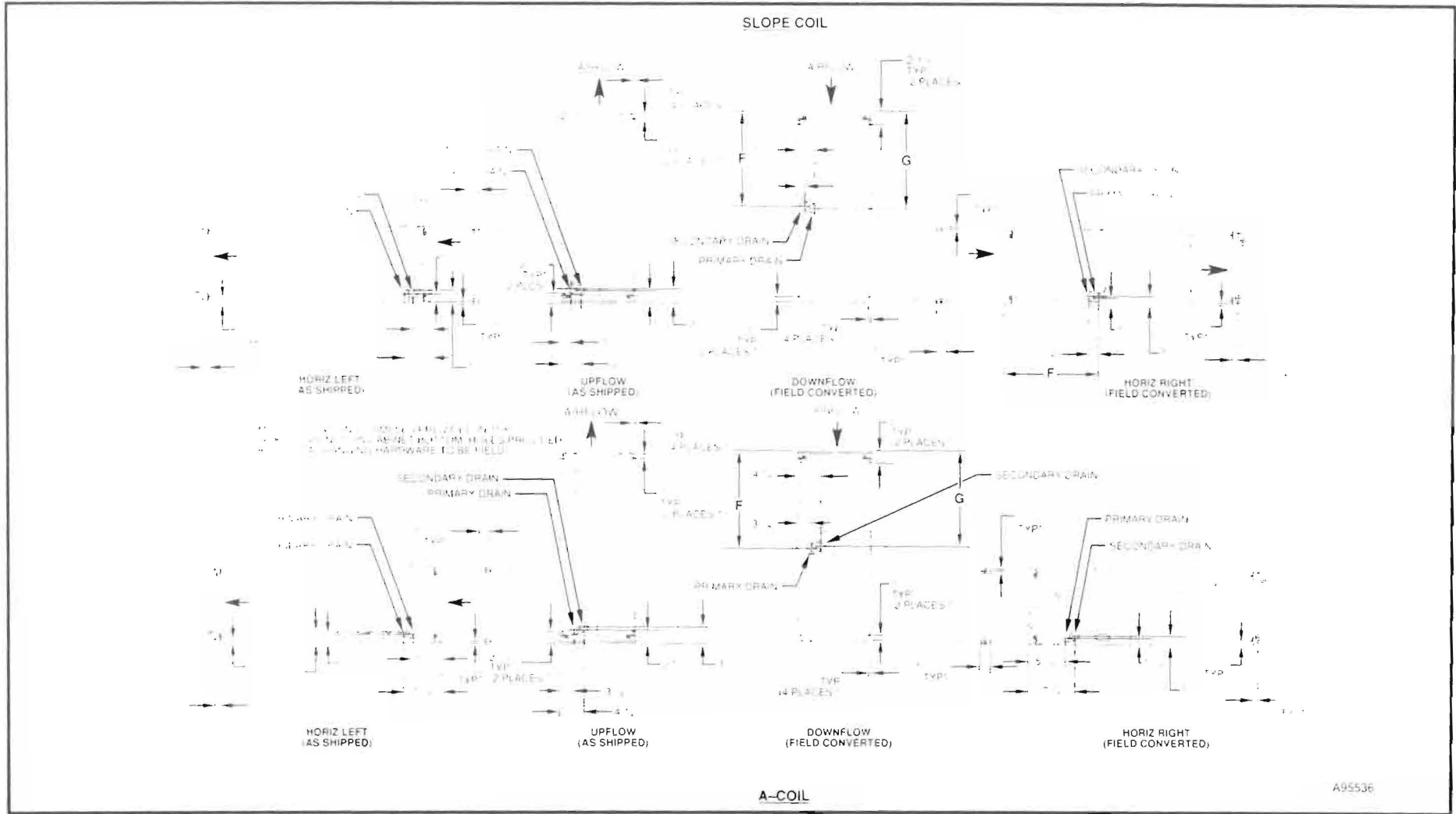
HACR — Heating, Air Conditioning, Refrigeration

LRA — Locked Rotor Amps

MCA — Minimum Circuit Amps

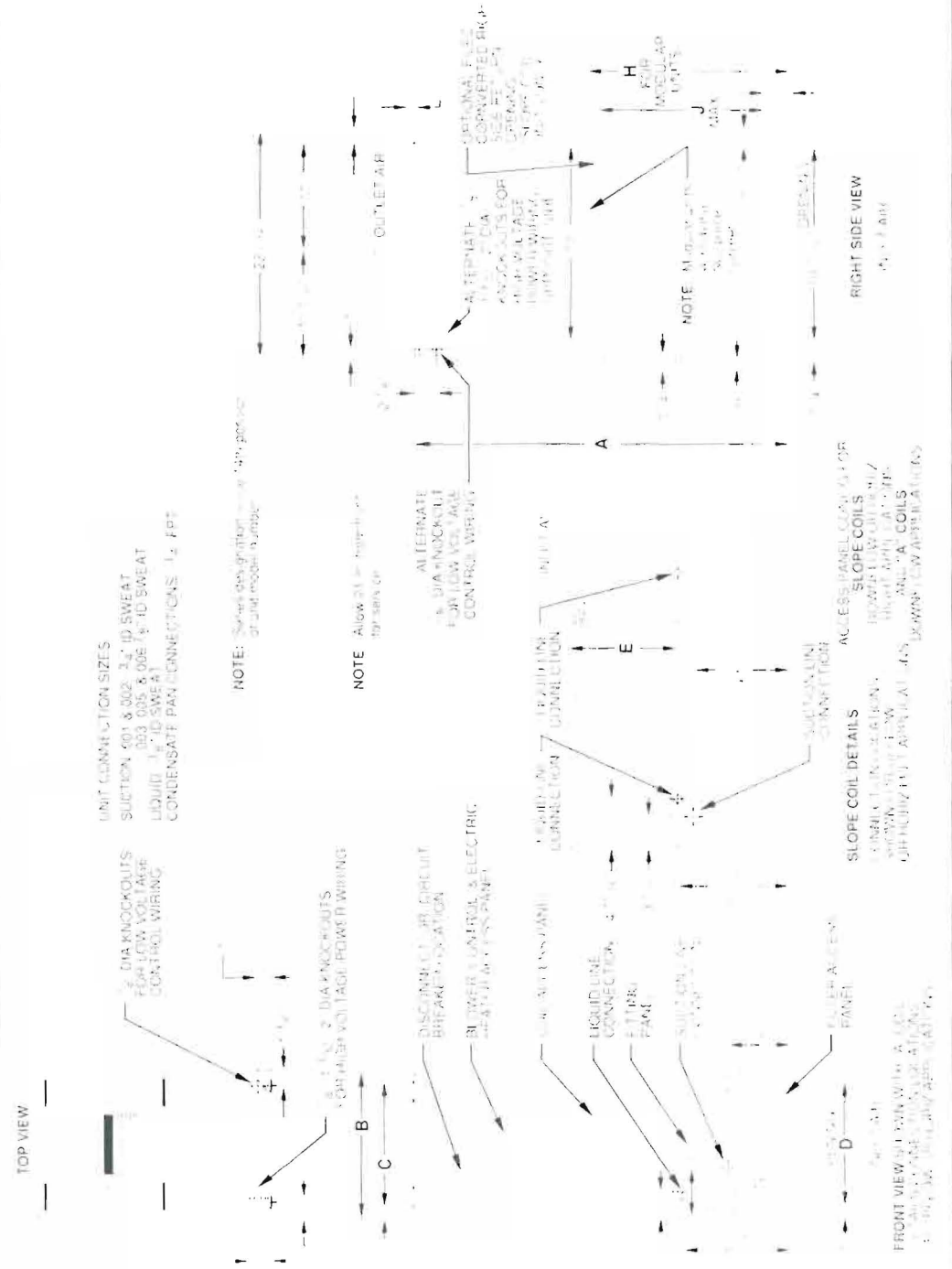
RLA — Rated Load Amps

Dimensions continued



UNIT	SIZE	F	G	H	J	COIL CONFIGURATION		OPERATING WEIGHT Lb
		In.	In.	In.	In.	SLOPE	"A"	
FK4C	001	23-1/8	23-5/8	—	17	Yes	—	112
	002	18-9/16	18-1/4	—	—	—	Yes	120
	003	26-15/16	27-1/2	—	19	Yes	—	145
	005	27-1/4	26-15/16	—	—	—	Yes	162
	006	32-15/16	32-5/8	34-1/16	—	—	Yes	195

Dimensions



UNIT	SIZE	A In.	B In.	C In.	D In.	E In.
FK4C	001	47-5.8	17-5.8	15-3.4	15-5.6	15-3.8
	002	42-11.16	17-5.8	15-3.4	15-5.8	10-3.4
	003	53-7.16	21-1.8	19-1.4	19-1.8	19-3.16
	005	53-7.16	21-1.8	19-1.4	19-1.8	19-1.2
	006	59-3.16	24-11.16	22-3.4	22-11.16	25-1.4

state-of-the-art Thermostatic Expansion Valve (TXV) refrigerant metering. All of this is packed in a rugged, prepainted metal cabinet that is lined with super-thick, high-density insulation. Obviously a unit built to last.

In addition to superior quality, the FK4C also offers the ultimate in versatility. Compact and designed for upflow, downflow, and horizontal applications, the FK4C fits right where it is needed. It is equipped with sweat connections and has multiple electric

entries for fast, simple installations. Carrier also offers the FK4C with factory- or field-installed electric resistance heat kits in sizes 5kw to 30kw. When the ultimate in efficiency, comfort, and durability is needed, the FK4C is the fan coil to use.

Features

- Programmable ICM2 blower motor
- Easy Select™ Board
- Grooved copper tube
- Lanced sine wave aluminum fin
- Discreet refrigerant circuits
- Prepainted galvanized sheet metal cabinet
- Cooling control in every unit
- Static independent airflow
- Logarithmic spiral blower housings for blower efficiency
- High impact thermoplastic condensate pans
- All units multipoise
- Provision made for suspending from roof or ceiling joists
- Modular cabinet design on 006 size
- Factory supplied, cleanable, permanent framed filter
- Easy access filter — no tools required
- Field installed heater packages 5 - 30 kw fused, circuit breaker, non-fused (10 kw and down)
- Low-voltage terminal block
- AMP plug connection provided for accessory heater packages
- Connections for humidistat/humidifier
- Connections for air cleaner relay
- Blower on/off-delay time selections
- Extra thick 1-in., R 4.2 high-density insulation
- Tested for condensate disposal at conditions much more severe than those required by ARI
- Sweat connections
- Bi-flow hard shut-off TXV
- Multiple electrical entry
- Primary and secondary drain connections with brass inserts
- Inspection plate on A-coil models
- 1-1/2 - 5 ton application
- HUD approved for manufactured housing
- Replaceable 5-amp blade-type auto fuse protects against transformer secondary short
- 40 v.a. 208/230-v transformer
- All models listed with UL, e-UL, ARI, and RADCO
- Independent fan only selections

Physical data

UNIT SIZE	001	002	003	005	006*
OPERATING WEIGHT (Lb)	112	120	145	162	195
REFRIGERANT Metering Device			R 22 TXV†		
TXV SIZE	3 Ton	3 Ton	5 Ton	5 Ton	6 Ton
COIL Type	Slope	A	Slope	A	A
Rows—Fins In			3 14		
Face Area (Sq Ft)	2.97	3.46	3.46	5.93	7.42
FAN Air Discharge	Uplow, Downflow, Horizontal				
CFM (Nominal Cfg/Htg)	525 470	525 470	700 630	875 785	1050 945
	700 630	700 630	875 785	1050 945	1225 1100
	875 785	875 785	1050 945	1225 1100	1400 1260
	1050 945	1050 945	1225 1100	1400 1260	1750 1575
MOTOR HP (ECM)	1.2	1.2	1.2	1.2	3.4
FILTER SIZE	21-1/2 x 16-3/8	21-1/2 x 16-3/8	21-1/2 x 18-7/8	21-1/2 x 18-7/8	21-1/2 x 23-5/16

* Modular Units

† Fan coil units with TXV must have a start capacitor and relay for single-phase outdoor units with reciprocating compressor. See outdoor unit presale literature.

Electrical data

UNITS WITHOUT ELECTRICAL HEAT

UNIT SIZE	VOLTS-PHASE	FLA	MIN CKT AMPS	BRANCH CIRCUIT			Fuse Amps
				Min Wire Size Awg*	Max Wire Length (ft)†		
					208v	230v	
001	208/230-1	4.3	5.4	14	158	174	15
002	208/230-1	4.3	5.4	14	158	174	15
003	208/230-1	4.3	5.4	14	158	174	15
005	208/230-1	4.3	5.4	14	158	174	15
006	208/230-1	6.8	8.5	14	100	110	15

* Use copper wire only to connect unit. If other than uncoated (nonplated) 75°F ambient, copper wire (solid wire for 10 AWG and smaller, stranded wire for larger than 10 AWG) is used consult applicable tables of the National Electric Code (ANSI/NFPA 70).

† Length shown is as measured 1 way along wire path between unit and service panel for a maximum 2% voltage drop
FLA — Full Load Amps

Accessory electric heaters

ELECTRIC HEATERS

HEATER PART NO.	KW @ 240V	VOLTS/PHASE	KW/STAGE	INTERNAL CIRCUIT PROTECTION	FAN COIL SIZE USED WITH	HEATING CAP. @ 230V‡	SMART HEAT CAPABLE††
KFAEH0201N05	5	230/1	5	None**	All	15,700	No
KFAEH0301N08	8	230/1	8	None**	All	25,100	No
KFAEH0401N10	10	230/1	10	None**	All	31,400	No
KFAEH2601F15	15	230/1	5, 10	Fuses	All	47,100	Yes
KFAEH0601F20	20	230/1	10, 10	Fuses	All	62,800	No
KFAEH2501N09	9	230/1*	3, 6	None**	All	28,300	Yes
KFAEH0801315	15	230/3	5, 10	None**	All	47,100	No
KFAEH0901318	18	230/3	6, 6, 6	None**	003, 005, 006	56,500	No
KFAEH1001F24	24	230/3†	8, 8, 8	Fuses	005, 006	78,500	Yes
KFAEH1101F30	30	230/3†	10, 10, 10	Fuses	005, 006	94,200	Yes
KFAEH1301C05	5	230/1	5	Ckt Bkr**	All	15,700	No
KFAEH1401C08	8	230/1	8	Ckt Bkr**	All	25,100	No
KFAEH1501C10	10	230/1	10	Ckt Bkr**	All	31,400	No
KFAEH2801C15	15	230/1	5, 10	Ckt Bkr**	All	47,100	Yes
KFAEH1701C20	20	230/1	10, 10	Ckt Bkr**	All	62,800	No
KFAEH2701S15	15	230/1	5, 10	Fused**	All	47,100	Yes
KFAEH1901S20	20	230/1	10, 10	Fused**	All	62,800	No

* These heaters field convertible to 3 phase.

† These heaters field convertible to single phase

‡ Blower motor heat not included.

** c-UL approved

†† Heaters designated with yes are Smart Heat capable when used with corporate 2-speed programmable thermostat (TSTATCCP2S01-A)

ELECTRIC HEATER INTERNAL PROTECTION

HEATER KW	PHASE	FUSES QTY SIZE	CKT BKR QTY SIZE
5	1	—	2 60
8	1	—	2 60
9	1 3	—	—
10	1	—	2 60
15	1	2 30, 2 60	4 60
15	3	—	—
18	3	—	—
20	1	4 60	4 60
24	3 1	6 60	—
30	3 1	6 60	—

BUILDING PERMIT REPORT

DATE: 9 OCT, 98 ADDRESS: 242 STATE ST. CBL 447-B-27
REASON FOR PERMIT: Install a condensing unit with fan coil & hot water coil
BUILDING OWNER: Mary Grimmer
CONTRACTOR: Avery Services
PERMIT APPLICANT:
USE GROUP R-3 (Mechanical) BOCA 1996 CONSTRUCTION TYPE 3B

CONDITION(S) OF APPROVAL

This Permit is being issued with the understanding that the following conditions are met:

X Approved with the following conditions: 1, 31, 32

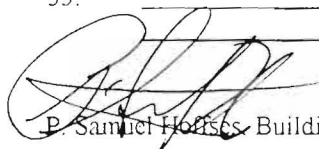
- 1. This permit does not excuse the applicant from meeting applicable State and Federal rules and laws.
2. Before concrete for foundation is placed, approvals from the Development Review Coordinator and Inspection Services must be obtained. (A 24 hour notice is required prior to inspection)
2.5 Foundation drain shall be placed around the perimeter of a foundation that consists of gravel or crushed stone containing not more than 10 percent material that passes through a No. 4 sieve. The drain shall extend a minimum of 12 inches beyond the outside edge of the footing. The thickness shall be such that the bottom of the drain is not higher than the bottom of the base under the floor, and that the top of the drain is not less than 6 inches above the top of the footing. The top of the drain shall be covered with an approved filter membrane material. Where a drain tile or perforated pipe is used, the invert of the pipe or tile shall not be higher than the floor elevation. The top of joints or top of perforations shall be protected with an approved filter membrane material. The pipe or tile shall be placed on not less than 2" of gravel or crushed stone, and shall be covered with not less than 6" of the same material. Section 1813.5.2
2.6 Foundations anchors shall be a minimum of 1/2" in diameter, 7" into the foundation wall, minimum of 12" from corners of foundation and a maximum 6' o.c. between bolts. (Section 2305.17)
3. Precaution must be taken to protect concrete from freezing. Section 1908.0
4. It is strongly recommended that a registered land surveyor check all foundation forms before concrete is placed. This is done to verify that the proper setbacks are maintained.
5. Private garages located beneath habitable rooms in occupancies in Use Group R-1, R-2, R-3 or I-1 shall be separated from adjacent interior spaces by fire partitions and floor/ceiling assembly which are constructed with not less than 1-hour fire resisting rating. Private garages attached side-by-side to rooms in the above occupancies shall be completely separated from the interior spaces and the attic area by means of 1/2 inch gypsum board or the equivalent applied to the garage means of 1/2 inch gypsum board or the equivalent applied to the garage side. (Chapter 4 Section 407.0 of the BOCA/1996)
6. All chimneys and vents shall be installed and maintained as per Chapter 12 of the City's Mechanical Code. (The BOCA National Mechanical Code/1993). Chapter 12 & NFPA 211
7. Sound transmission control in residential building shall be done in accordance with Chapter 12 section 1214.0 of the city's building code.
8. Guardrails & Handrails: A guardrail system is a system of building components located near the open sides of elevated walking surfaces for the purpose of minimizing the possibility of an accidental fall from the walking surface to the lower level. Minimum height all Use Groups 42", except Use Group R which is 36". In occupancies in Use Group A, B, H-4, I-1, I-2 M and R and public garages and open parking structures, open guards shall have balusters or be of solid material such that a sphere with a diameter of 4" cannot pass through any opening. Guards shall not have an ornamental pattern that would provide a ladder effect. (Handrails shall be a minimum of 34" but not more than 38". Use Group R-3 shall not be less than 30", but not more than 38".) Handrail grip size shall have a circular cross section with an outside diameter of at least 1 1/4" and not greater than 2" (Sections 1021 & 1022.0) - Handrails shall be on both sides of stairway. (Section 1014.7)
9. Headroom in habitable space is a minimum of 7'6". (Section 1204.0)
10. Stair construction in Use Group R-3 & R-4 is a minimum of 10" tread and 7 3/4" maximum rise. All other Use group minimum 11" tread, 7" maximum rise.(Section 1014.0)
11 The minimum headroom in all parts of a stairway shall not be less than 80 inches. (6' 8") 1014.4

12. Every sleeping room below the fourth story in buildings of use Groups R and I-1 shall have at least one operable window or exterior door approved for emergency egress or rescue. The units must be operable from the inside without the use of special knowledge or separate tools. Where windows are provided as means of egress or rescue they shall have a sill height not more than 44 inches (1118mm) above the floor. All egress or rescue windows from sleeping rooms shall have a minimum net clear opening height dimension of 24 inches (610mm). The minimum net clear opening width dimension shall be 20 inches (508mm), and a minimum net clear opening of 5.7 sq. ft. (Section 1018.6)
13. Each apartment shall have access to two (2) separate, remote and approved means of egress. A single exit is acceptable when it exits directly from the apartment to the building exterior with no communications to other apartment units. Section 1010.1
14. All vertical openings shall be enclosed with construction having a fire rating of at least one (1)hour, including fire doors with self closers. (Over 3 stories in height requirements for fire rating is two (2) hours.) Section 710.0
15. The boiler shall be protected by enclosing with (1) hour fire-rated construction including fire doors and ceiling, or by providing automatic extinguishment. Table 302.1.1
16. All single and multiple station smoke detectors shall be of an approved type and shall be installed in accordance with the provisions of the City's Building Code Chapter 9, Section 920.3.2 (BOCA National Building Code/1996). and NFPA 101 Chapter 18 & 19. (Smoke detectors shall be installed and maintained at the following locations):
 - In the immediate vicinity of bedrooms
 - In all bedrooms
 - In each story within a dwelling unit, including basements
 In addition to the required AC primary power source, required smoke detectors in occupancies in Use Groups R-2, R-3 and I-1 shall receive power from a battery when the AC primary power source is interrupted. (Interconnection is required) Section 920.3.2
17. A portable fire extinguisher shall be located as per NFPA #10. They shall bear the label of an approved agency and be of an approved type. Section 921.0
18. The Fire Alarm System shall be maintained to NFPA #72 Standard.
19. The Sprinkler System shall maintained to NFPA #13 Standard.
20. All exit signs, lights, and means of egress lighting shall be done in accordance with Chapter 10 Section & Subsections 1023. & 1024. Of the City's building code. (The BOCA National Building Code/1996)
21. Section 25-135 of the Municipal Code for the City of Portland states, "No person or utility shall be granted a permit to excavate or open any street or sidewalk from the time of November 15 of each year to April 15 of the following year".
22. The builder of a facility to which Section 4594-C of the Maine State Human Rights Act Title 5 MRSA refers, shall obtain a certification from a design professional that the plans commencing construction of the facility, the builder shall submit the certification to the Division of Inspection Services.
23. Ventilation shall meet the requirements of Chapter 12 Sections 1210. Of the City's Building Code. (crawl spaces & attics)
24. All electrical, plumbing and HVAC permits must be obtained by a Master Licensed holders of their trade.
25. All requirements must be met before a final Certificate of Occupancy is issued.
26. All building elements shall meet the fastening schedule as per Table 2305.2 of the City's Building Code. (The BOCA National Building Code/1996).
27. Ventilation of spaces within a building shall be done in accordance with the City's Mechanical Code (The BOCA National Mechanical Code/1993). (Chapter M-16)
28. Please read and implement the attached Land Use-Zoning report requirements.
29. Boring, cutting and notching shall be done in accordance with Sections 2305.4.4, 2305.5.1 and 2305.3. of the City's building code.
30. Glass and glazing shall meet the requirements of Chapter 24 of the building code.

* 31. Historic Preservation - can not be visible from Public Way.

* 32. The proposed condensing unit shall be installed as per the manufacturer's installation instruction.

33. _____


P. Samuel Hobbes, Building Inspector

cc: Lt. McDougall, PFD
Marge Schmuckal, Zoning Administrator