

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 04-0416	Issue Date: PERMIT ISSUED APR 27 2004 CITY OF PORTLAND	BL: 268 A011001
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Location of Construction: 155 Riverside St	Owner Name: H J Associates Ltd	Owner Address: 155 Riverside St	Phone:
Business Name:	Contractor Name: Avery Services, Inc.	Contractor Address: 7 Thomas Drive Westbrook	Phone: 2077728687
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	Zone: B4

Past Use: Hotel	Proposed Use: Hotel / Install Direct vent natural gas / Carrier rooftop unit within same footprint.	Permit Fee: \$138.00	Cost of Work: \$12,621.00	CEO District: 5
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FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: HVAC Signature: <i>[Signature]</i>
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Proposed Project Description:
Install Direct vent natural gas / Carrier rooftop unit within same footprint

Signature: *[Signature]*

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.):
Action: Approved Approved w/Conditions Denied
Signature: _____ Date: _____

Permit Taken By: Idobson	Date Applied For: 04/13/2004	Zoning Approval	
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<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building permits do not include plumbing, septic or electrical work.</p> <p>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..</p>	<p>Special Zone or Reviews</p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Wetland</p> <p><input type="checkbox"/> Flood Zone</p> <p><input type="checkbox"/> Subdivision</p> <p><input type="checkbox"/> Site Plan</p> <p>Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/></p> <p>Date: <i>4/14/04</i></p>	<p>Zoning Appeal</p> <p><input type="checkbox"/> Variance</p> <p><input type="checkbox"/> Miscellaneous</p> <p><input type="checkbox"/> Conditional Use</p> <p><input type="checkbox"/> Interpretation</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Denied</p> <p>Date: _____</p>	<p>Historic Preservation</p> <p><input checked="" type="checkbox"/> Not in District or Landmark</p> <p><input type="checkbox"/> Does Not Require Review</p> <p><input type="checkbox"/> Requires Review</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Approved w/Conditions</p> <p><input type="checkbox"/> Denied</p> <p>Date: <i>[Signature]</i></p>
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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 provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
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RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE	DATE	PHONE
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City of Portland, Maine - Building or Use Permit

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 04-0416	Date Applied For: 04/13/2004	CBL: 268 A011001
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Location of Construction: 155 Riverside St	Owner Name: H J Associates Ltd	Owner Address: 155 Riverside St	Phone:
Business Name:	Contractor Name: Avery Services, Inc.	Contractor Address: 7 Thomas Drive Westbrook	Phone (207) 772-8687
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	

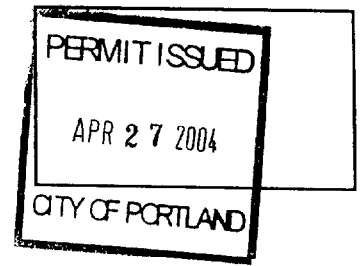
Proposed Use: Hotel / Install Direct vent natural gas / Carrier rooftop unit within same footprint.	Proposed Project Description: Install Direct vent natural gas / Carrier rooftop unit within same footprint
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Dept: Zoning	Status: Approved	Reviewer: Marge Schmuckal	Approval Date: 04/14/2004
Note:	Ok to Issue: <input checked="" type="checkbox"/>		
Dept: Building	Status: Approved with Conditions	Reviewer: Mike Nugent	Approval Date: 04/26/2004
Note:	Ok to Issue: <input checked="" type="checkbox"/>		
1) This unit is in the same location as the previous unit. It's weight is less and there is a reduction in duct weight as well.			
Dept: Fire	Status: Approved	Reviewer: Lt. MacDougal	Approval Date: 04/15/2004
Note:	Ok to Issue: <input checked="" type="checkbox"/>		



FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



APR 12 2004
RECEIVED

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location / CBL 268 A 11 Use of Building Hotel Date 4/12/04
 Name and address of owner of appliance Howard Johnsons 155 Riverside St
Portland, Me 04103
 Installer's name and address Avery Services Inc 7 Thomas Drive
Westport, Me 04092 Telephone (207) 772-8687
Ext (207) 874-0933

Location of appliance:

- Basement
- Floor
- Attic
- Roof

Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name: Carrier Rooftop Unit

U.L. Approved Yes No

Will appliance be installed in accordance with the manufacture's installation instructions? Yes No

IF NO Explain: _____

The Type of License of Installer:

- Master Plumber # _____
- Solid Fuel # _____
- Oil # _____
- Gas # PNT 1431
- Other _____

Type of Chimney:

Masonry Lined
 Factory built _____

Metal
Factory Built U.L. Listing # _____

Direct Vent
Type _____ UL# _____

Type of Fuel Tank

- Oil
- Gas NATURAL GAS

Size of Tank N/A

Number of Tanks N/A

Distance from Tank to Center of Flame N/A feet.

Cost of Work: \$ 12621

Permit Fee: \$ 138.00

Approved

Fire: _____
 Ele.: _____
 Bldg.: _____

Approved with Conditions

- See attached letter or requirement

Signature of Installer Douglas C. Carey

Inspector's Signature

Date Approved

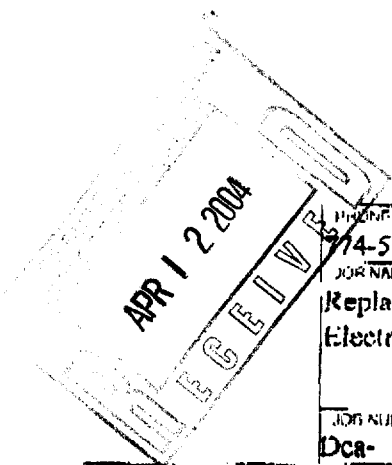
268 A11

PROPOSAL

AVERY SERVICES, INC.
2 Thompson Ave.
WESTBROOK, MAINE 04091
(207) 772-8537

FAX (207) 874-0933

TO: Howard Johnson
Attention: Mark Kinne
155 Riverside Street
Portland ME 04103



PHONE	774-5861 (fax is same#)	DATE	3/19/04
JOB NAME / LOCATION	Replacement of your existing (1987) York Gas/Electric Rooftop Lobby Unit		
JOB NUMBER	Dca- 440265	QUANTITY	

We hereby submit specifications and estimate for:

Avery Services, Inc. is pleased to quote as requested on the replacement of your existing (17 yr old) Gas/Electric Rooftop Unit supplying heat/cool to Offices/Lobby areas. Scope of work to include:

- Removal & disposal of the existing Roof top Unit as per EPA Laws.
- Supply & spot a new Manufacturer's Roof Curb or sleepers (roofing by others) set in same area as old unit as per site visit.
- Supply & install a Carrier 48TFL (7.5 ton) Gas/Electric Rooftop Unit set on the new Curb or sleepers and reconnected to your existing sidewall duct system on the roof as per our site visit discussion
- Supply & install a Carrier Thermostat and low voltage wiring.
- Supply & install a PVC Condensate Trap on the new Unit.
- Reconnect Gas Piping from the existing Gas Supply System to the new Rooftop Unit.
- Start up and test.

OPTIONS: 1) Add an Economizer to the new Rooftop Unit at same time as new unit. **ADDITIONAL \$1,088.00 Int**

EXCLUSIONS: Structural, Power Wiring, Roof work, drop ceiling work, fire dampers, fire systems, Exterior Duct sealing, soffiting, carpentry, painting, over time labor, and adequacy of existing systems.

We Propose hereby to furnish material and labor -- complete in accordance with the above specifications, for the sum of: Eleven Thousand Five Hundred Fifty Three and 00/100 Dollars dollars (\$) 11,553.00

Payment to be made as follows: **25% upon acceptance - progress billing/net 10 days - Full balance due on completion OR Financing w/Dolphin Finance** 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 professional 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 Workers Compensation insurance.

Authorized Signature: [Signature]
Note: This proposal may be withdrawn by us if not accepted within 30 days.

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.

Signature: [Signature]
Signature: Mark A. Kinne / General Manager

Date of Acceptance: March 19, 2004

Physical data — 48TM008-014

NEW Unit

268A11



48TM004-014

UNIT SIZE 48TM		D/E/F008	D/E/F009	D/E/F012	D/E/O14
NOMINAL CAPACITY (tons)		7 1/2	8 1/2	10	12 1/2
OPERATING WEIGHT (lb)					
Unit					
A/AI*		870	880	1035	1050
A/Cu*		881	896	1057	1077
Cu/Cu*		893	907	1080	1100
Economizer					
EconoMiSer2		75	75	75	75
Roof Curb†		143	143	143	143
COMPRESSOR					
Quantity		Reciprocating	Scroll	Scroll	Scroll
No. Cylinders (per Circuit)		2	2	2	2
Oil (oz) (each compressor)		42	53	50	60
REFRIGERANT TYPE		R-22			
Expansion Device		Acutrol™ Metering Device			
Operating Charge (lb-oz)					
Circuit 1		7-10	7-14	8-10	9-8
Circuit 2		8-2	8-5	8-8	9-5
CONDENSER COIL		Enhanced Copper Tubes, Aluminum Lanced Fins			
Rows...Fins/in.		2...17	2...17	2...17	2...17
Total Face Area (sq ft)		20.50	20.50	25.00	25.00
CONDENSER FAN		Propeller Type			
Nominal Cfm		6500	6500	7000	7000
Quantity...Diameter (in.)		2...22	2...22	2...22	2...22
Motor Hp...Rpm		1/4...1100	1/4...1100	1/4...1100	1/4...1100
Watts Input (Total)		650	650	650	650
EVAPORATOR COIL		Enhanced Copper Tubes, Aluminum Double-Wavy Fins, Face Split			
Rows...Fins/in.		3...15	3...15	3...15	4...15
Total Face Area (sq ft)		8.9	8.9	10.0	11.1
EVAPORATOR FAN		Centrifugal Type			
Quantity...Size (in.)		1...15 x 15	1...15 x 15	1...15 x 15	1...15 x 15
Std		1...15 x 15	—	1...15 x 15	1...15 x 15
Alt		1...15 x 15	—	1...15 x 15	—
High-Static		1...15 x 15	1...15 x 15	1...15 x 15	—
Type Drive					
Std		Belt	Belt	Belt	Belt
Alt		Belt	—	Belt	Belt
High-Static		Belt	Belt	Belt	—
Nominal Cfm		2900	3000	3200	5000
Maximum Continuous Bhp		2.40	2.40	2.40	3.70
Std		2.40	—	2.90	5.25
Alt		3.70	3.70	5.25	—
High-Static		56	56	56	56
Std		56	—	56	56
Alt		56	56	56	—
High-Static		590-840	685-935	685-935	860-1080
Std		685-935	—	835-1085	900-1260
Alt		860-1080	860-1080	830-1130	—
High-Static		Ball	Ball	Ball	Ball
Motor Bearing Type		2100	2100	2100	2100
Maximum Allowable Rpm		2.4/3.4	2.8/3.8	2.8/3.8	4.0/5.0
Std		2.8/3.8	—	3.4/4.4	3.1/4.1
Alt		4.0/5.0	4.0/5.0	2.8/3.8	—
High-Static		5/8	5/8	5/8	7/8
Std		5/8	—	7/8	7/8
Alt		7/8	7/8	7/8	—
High-Static		7.0	7.0	7.0	8.0
Std		7.0	—	7.0	5.9
Alt		8.0	8.0	5.8	—
High-Static		1...A...49	1...A...49	1...A...49	1...A...52
Std		1...A...49	—	1...A...49	1...BX...46
Alt		1...A...55	1...A...55	1...BX...46	—
High-Static		16.75-19.25	16.75-19.25	15.85-17.50	15.85-17.50
Std		16.75-19.25	—	15.85-17.50	15.85-17.50
Alt		16.75-19.25	16.75-19.25	15.85-17.50	—
High-Static		50	50	50	44
Std		50	—	50	50
Alt		60	60	60	—
High-Static		5	5	5	5
Std		5	—	5	6
Alt		5	5	5	—
High-Static		5	5	5	5
Std		590	685	685	860
Alt		685	—	835	960
High-Static		860	860	887	—
Std		1	1	1	1
Alt		—	—	—	—
High-Static		—	—	—	—



UNIT SIZE 48TM		D/E/F008	D/E/F009	D/E/F012	D/E014
FURNACE SECTION					
Rollout Switch Cutout Temp (F)††		195	195	195	195
Burner Orifice Diameter (in. ...drill size)					
Natural Gas	Std	TMD .120...31 TME .120...31 TMF .120...31	.120...31 .120...31 .120...31	.120...31 .120...31 .129...30	.120...31 .129...30 —
Liquid Propane	Alt	TMD .096...41 TME .096...41 TMF .096...41	.096...41 .096...41 .096...41	.096...41 .096...41 .102...38	.096...41 .102...38 —
Thermostat Heat Anticipator Setting (amps)					
208/230 v and 575	Stage 1	.14	.14	.14	.14
	Stage 2	.20	.20	.20	.20
460 v	Stage 1	.14	.14	.14	.14
	Stage 2	.20	.20	.20	.20
Gas Input (Btuh) Stage 1		TMD 125,000 TME 120,000 TMF 180,000	125,000 120,000 180,000	120,000 180,000 200,000	180,000 200,000 —
Stage 2		TMD — TME 180,000 TMF 220,000	— 180,000 220,000	180,000 220,000 250,000	220,000 250,000 —
Efficiency (Steady State) (%)		80	80	80	80
Temperature Rise Range		TMD 20-50 TME 35-65 TMF 45-75	20-50 35-65 45-75	35-65 35-65 40-70	35-65 40-70 —
Manifold Pressure (in. wg)					
Natural Gas	Std	3.5	3.5	3.5	3.5
Liquid Propane	Alt	3.5	3.5	3.5	3.5
Gas Valve Quantity		1	1	1	1
Gas Valve Pressure Range Psig		0.180-0.487	0.180-0.487	0.180-0.487	0.180-0.487
in. wg		5.0-13.5	5.0-13.5	5.0-13.5	5.0-13.5
Field Gas Connection Size (in.)		TMD 1/2 TME 3/4 TMF 3/4	1/2 3/4 3/4	3/4 3/4 3/4	3/4 3/4 —
HIGH-PRESSURE SWITCH (psig)			450 ± 50		500 ± 50
Standard Compressor Internal Relief (Differential) Cutout			428		428
Reset (Auto.)			320		320
LOW-PRESSURE SWITCH (psig)			7 ± 3		
Cutout			22 ± 7		
Reset (Auto.)					
FREEZE PROTECTION THERMOSTAT (F)			30 ± 5		
Opens			45 ± 5		
Closes					
OUTDOOR-AIR INLET SCREENS			Cleanable		
Quantity...Size (in.)			1...20 x 24 x 1 1...16 x 25 x 1		
RETURN-AIR FILTERS			Throwaway		
Quantity...Size (in.)		4...16 x 20 x 2	4...16 x 20 x 2	4...20 x 20 x 2	4...20 x 20 x 2

LEGEND

- Al — Aluminum
- Bhp — Brake Horsepower
- Cu — Copper

*Evaporator coil fin material/condenser coil fin material. Contact your local representative for details about coated fins.

†Weight of 14-in. roof curb.

**Single phase/three-phase.

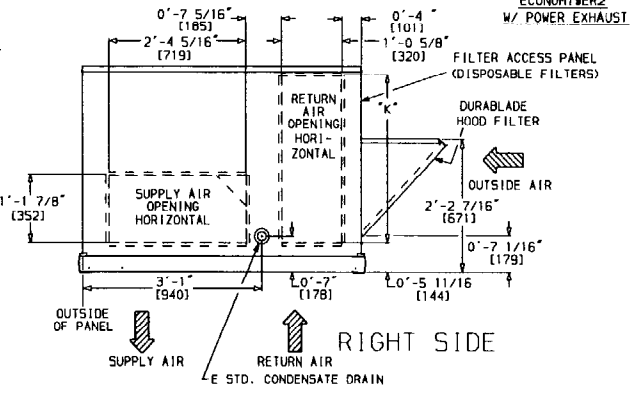
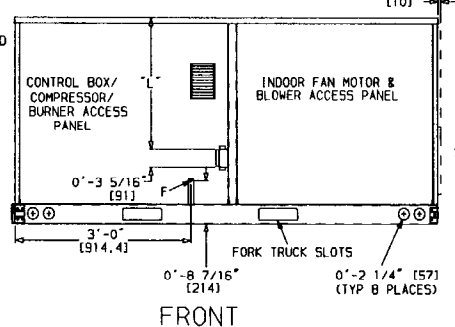
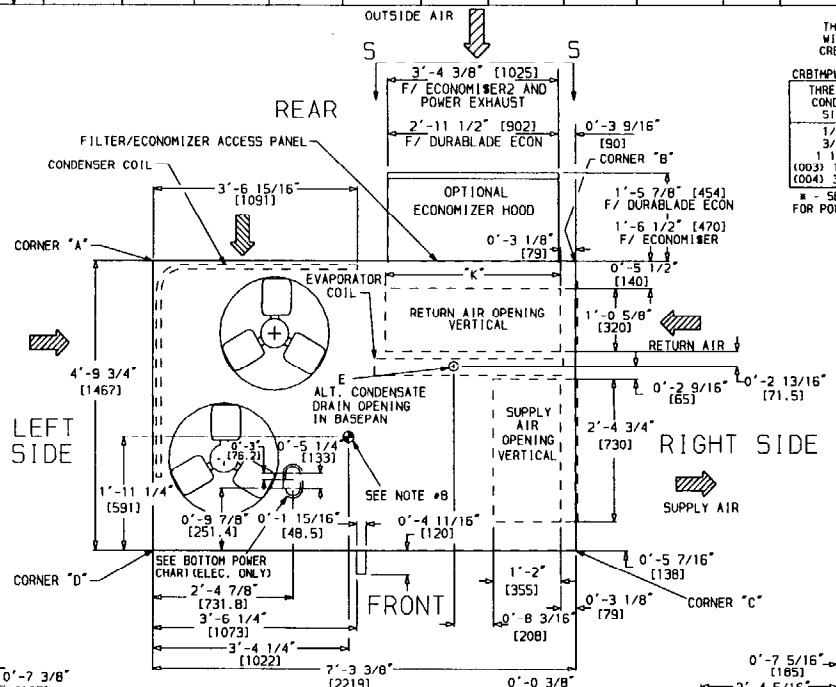
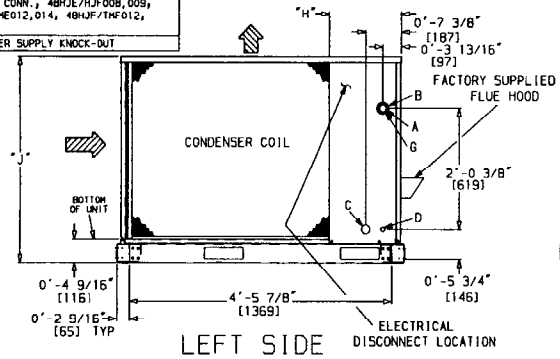
††Rollout switch lockout is manually reset by interrupting power to unit or resetting thermostat.

UNIT	STD. UNIT WEIGHT		DURABLADE ECON WEIGHT		ECONOMIZER2 WEIGHT		ECONOMIZER2 W/ P. E. WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		"H"		"J"		"K"		"L"	
	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	FT.-IN.	MM	FT.-IN.	MM	FT.-IN.	MM	FT.-IN.	MM
48TM008	870	395	44	20	75	34.1	145	65.9	189	86	161	73	239	109	280	127	2'-0 7/8"	632	3'-5 5/16"	1050	2'-9 11/16"	856	2'-2 7/16"	672
48TM009	880	399							191	87	163	74	242	110	284	129	1'-2 7/8"	378	3'-5 5/16"	1050	2'-9 11/16"	856	2'-2 7/16"	672
48TM012	1035	469							225	102	192	87	285	129	333	151	1'-2 7/8"	378	4'-1 5/16"	1253	3'-0 3/8"	924	2'-10 7/16"	875
48TM014	1050	476							228	103	195	88	289	131	338	153	1'-2 7/8"	378	4'-1 5/16"	1253	3'-0 3/8"	924	2'-10 7/16"	875

- NOTES:
- DIMENSIONS IN () ARE IN MILLIMETERS.
 - CENTER OF GRAVITY.
 - DIRECTION OF AIR FLOW.
 - ON VERTICAL DISCHARGE UNITS, DUCTWORK TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY. FOR HORIZONTAL DISCHARGE UNITS FIELD SUPPLIED FLANGES SHOULD BE ATTACHED TO HORIZONTAL DISCHARGE OPENINGS, AND ALL DUCTWORK SHOULD BE ATTACHED TO THE FLANGES.
 - MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL)
 - BETWEEN UNIT, FLUE SIDE AND COMBUSTIBLE SURFACES, 48 INCHES, 18 INCHES WHEN USING ACCESSORY FLUE DISCHARGE DEFLECTOR.
 - BOTTOM OF UNIT TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB) 11 INCH.
 - BOTTOM OF BASE RAIL TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB) 0 INCHES.
 - CONDENSER COIL, FOR PROPER AIR FLOW, 36 INCHES ONE SIDE, 12 INCHES THE OTHER, THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
 - OVERHEAD, 60 INCHES TO ASSURE PROPER CONDENSER FAN OPERATION.
 - BETWEEN UNITS, CONTROL BOX SIDE, 42 IN. PER NEC.
 - BETWEEN UNIT AND UNGROUNDED SURFACES, CONTROL BOX SIDE, 36 IN. PER NEC.
 - BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES, CONTROL BOX SIDE, 42 IN. PER NEC.
 - HORIZONTAL SUPPLY AND RETURN END, 0 INCHES WHEN THE ALTERNATE CONDENSATE DRAIN IS USED.
 - WITH THE EXCEPTION OF THE CLEARANCE FOR THE CONDENSER COIL AND COMBUSTION SIDE AS STATED IN NOTE #5a, b, AND c, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
 - UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B, OR C ROOF COVERING MATERIAL IF SET ON BASE RAIL.
 - THE VERTICAL CENTER OF GRAVITY IS 1'-7" [483] FOR 008 AND 009, 1'-11" [584] FOR 012 AND 014 UP FROM THE BOTTOM OF THE BASE RAIL.

CONNECTION SIZES

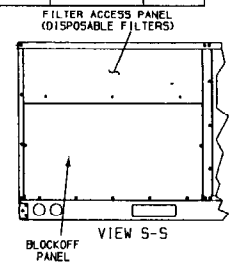
A	1 3/8" DIA. [35]	FIELD POWER SUPPLY HOLE
B	1/2" DIA [64]	POWER SUPPLY KNOCK-OUT
C	3/4" DIA [44]	CHARGING PORT HOLE
D	7/8" DIA. [22]	FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT	CONDENSATE DRAIN
F	1/2"-14 NPT GAS CONN., 48HJ008,009, 48TM008	
	3/4"-14 NPT GAS CONN., 48HJE/HJF008,009, 48HJD/HJE/THD/THE012,014, 48HJF/THF012, 48THE/THF008	
G	1/2" DIA [51]	POWER SUPPLY KNOCK-OUT



BOTTOM POWER CHART: THESE HOLES REQ'D FOR USE WITH ACCESSORY PACKAGES - CRBIMPWR003A00 (1/2", 3/4") OR CRBIMPWR002A00, 4400 (1/2", 1-1/4")

THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
1/2"	24V POWER	7/8" [22.2]
3/4"	POWER	1 1/8" [28.4]
1 1/4"	POWER	1 3/4" [44.4]
(003) 1/2" FPT	GAS	1 1/4" [31.8]
(004) 3/4" FPT	GAS	1 5/8" [41.3]

* SELECT EITHER 3/4" OR 1 1/4" FOR POWER, DEPENDING ON WIRE SIZE.

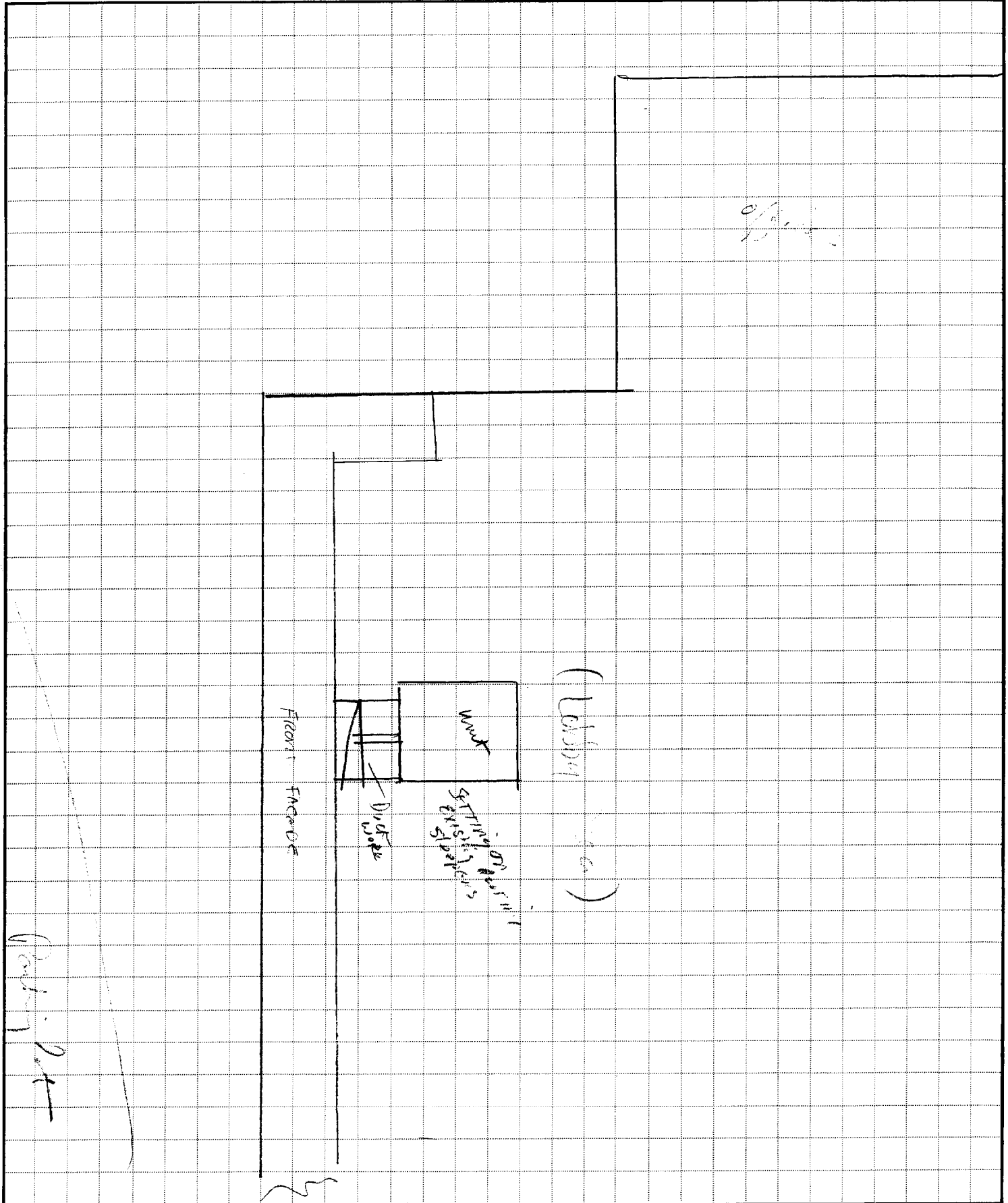


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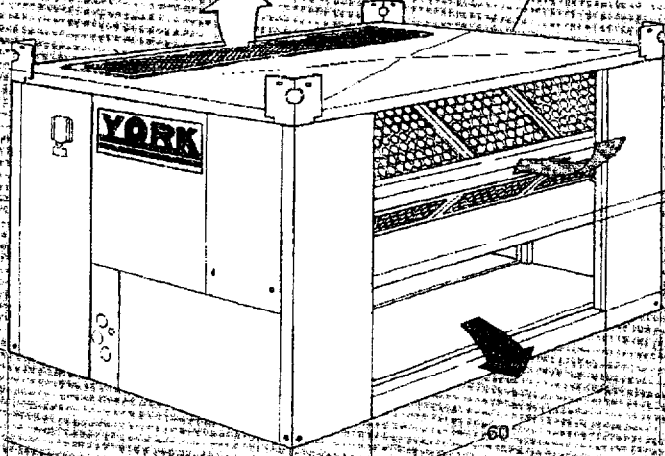
268A11
AVERY SERVICES, INC.
7 Thomas Drive
WESTBROOK, MAINE 04092
(207) 772-8687
FAX (207) 874-0933

JOB Howard Johnsons
SHEET NO. 155 RIVERSIDE ST - Portland
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____
SCALE NONE (Basic Drawing)



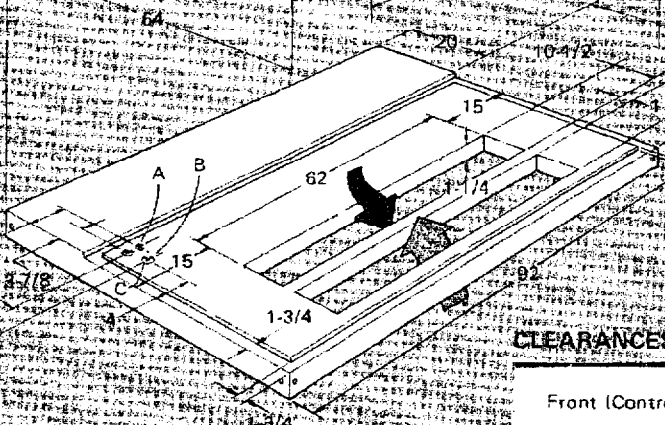
OLD UNIT BEING REMOVED

UNIT DIMENSIONS —
D1SS090 & D1SS120



NOTE: Condensate drain or-
nection is located on rear of unit
3/8" from right side edge
bottom end and 20 3/8" from
top edge.

The unit base is shown
by itself to illustrate the
bottom supply and return air
openings more clearly.



CLEARANCES

Front (Control Box Side)	90" Units with Gas Heat Option. 36" Units with Electric Heat. 36" Cooling only units.
Left Side (Condenser Coil)	36" For proper condenser air flow.
Rear	36"
Right Side	36" From unit or economizer rain hood.
Above Unit	120" For condenser air discharge.

HOLE*	DIAMETER, INCHES	USED FOR
A	1-13/16	Thermostat & Status Panel Wiring
B	1-13/16	Power Wiring For Units Without Electric Heat
C	4-1/16	Gas Piping or Power Wiring For Units With Electric Heat

These units can be installed under an outside overhang providing the
overhang is at least 10 feet above the top of the unit and 12 feet
less no more than 3 feet beyond the end of the unit.

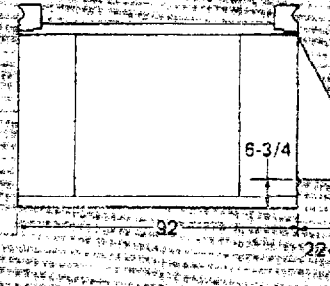
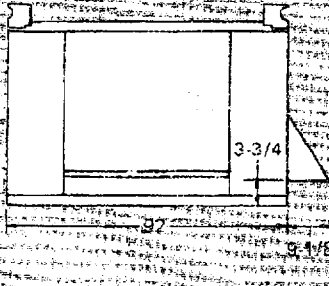
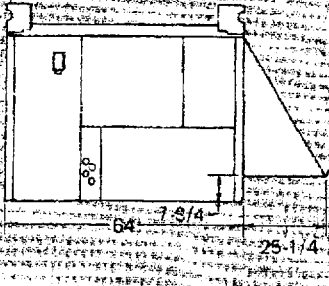
NOTE: A 6" clearance must be provided between any combustible
material and the supply air ductwork of units with gas di-
electric heat.

All dimensions are in inches. They are subject to
change without notice. Certified dimensions will
be provided upon request.

UNITS WITH ECONOMIZER
RAIN HOOD

UNITS WITH EXHAUST
AIR RAIN HOOD

UNITS WITH FIXED
OUTDOOR RAIN HOOD



268 All

OLD UNIT BEING REMOVED

ELECTRIC HEAT OPTIONS

ELECTRIC HEATER	NOMINAL VOLTAGE	NOMINAL KW	NOMINAL MBH	HEATING CAPACITY PER STAGE															
				STAGE 1A				STAGE 1B				STAGE 2A				STAGE 2B			
				KW		MBH		KW		MBH		KW		MBH		KW		MBH	

MODELS D1SS090, D1SS120

Model	240V	480V	Nominal KW	Nominal MBH	Stage 1A KW	Stage 1A MBH	Stage 1B KW	Stage 1B MBH	Stage 2A KW	Stage 2A MBH	Stage 2B KW	Stage 2B MBH
E010	240	480	10	34	10	34	-	-	-	-	-	-
E020	240	480	20	68	10	34	10	34	-	-	-	-
E030	240	480	30	112	20	68	10	34	-	-	-	-
E040	240	480	40	137	20	68	20	68	-	-	-	-

MODELS D1SS180, D1SS240

Model	240V	480V	Nominal KW	Nominal MBH	Stage 1A KW	Stage 1A MBH	Stage 1B KW	Stage 1B MBH	Stage 2A KW	Stage 2A MBH	Stage 2B KW	Stage 2B MBH
E040	240	480	40	137	20	68	20	68	-	-	-	-
E060	240	480	60	205	20	68	40	137	20	68	20	68
E080	240	480	80	273	40	137	40	137	20	68	20	68

¹ Capacities do not include the heat of the supply air blower motor. MBH = 3.415 X KW.

² One or two outdoor thermostats can be added to the control circuit for additional stages (stages 1A and 2A) of heating capacity.

COMPONENT WEIGHTS

COMPONENT	MODEL			
	D1SS090	D1SS120	D1SS180	D1SS240
Basic Unit	1100	1150	2100	2220
Outdoor Air Option				
No Outdoor Air	20	20	20	20
Economizer (Spring Return)	160	160	200	210
Supply Air Motor and Drive				
1 1/2 HP	45	-	-	-
2 HP	50	50	-	-
3 HP	-	60	60	-
5 HP	-	-	80	80
7 1/2 HP	-	-	-	100
Heating Option				
Cooling Only	15	15	15	15
Natural Gas Heat				
G200	125	-	-	-
G265	-	150	-	-
G280	-	-	160	160
G400	-	-	205	205
Electric Heat				
E010, E020	120	120	-	-
E030, E040	125	125	135	135
E060	-	-	140	140
E080	-	-	145	145
Supply/Return Duct Connections				
Bottom Side-By-Side	60	60	70	70
End	90	80	105	105
Accessories				
Roof Mounting Curb	210	210	195	220
Concentric Transition	70	70	100	100
Concentric Duct	55	55	70	70
Concentric Diffuser	50	50	65	65
Fixed Outdoor Air	30	30	50	50
Bottom To End Discharge Conversion Kit	40	40	-	-
Exhaust Air Relief Damper	30	30	45	45

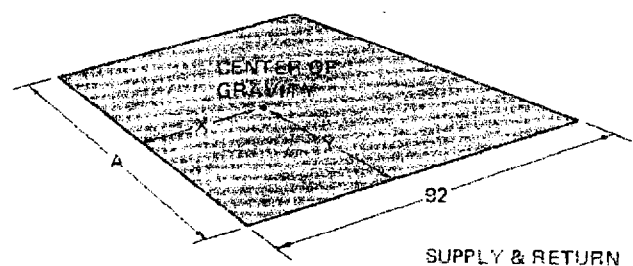
All weights are given in pounds.

ELECTRIC HEAT CORRECTION FACTORS

Nominal Voltage	Voltage	KW Capacity Multiplier
240	208	0.75
	230	0.92
	240	1.00
480	440	0.84
	460	0.92
	480	1.00

CENTERS OF GRAVITY

CONDENSER END OF UNIT



SUPPLY & RETURN AIR END OF UNIT

MODEL	DIMENSIONS INCHES		
	A	X	Y
D1SS090	64	48	38
D1SS120	64	48	38
D1SS180	88	45	48
D1SS240	110	42	61

*Deduct 4" for economizer option.