



# CONSTRUCTION PERMIT APPLICATION

Applicant Completes: Sections I, II, III (optional), IV, VI, and VII

015-000096

## I. IDENTIFICATION

1. Proposed Work Site at: 56 Chambers Bridge Rd.  
2. Name of Owner in Fee: Federal Realty Investment Trust  
Tel. 484-419-1200 e-mail \_\_\_\_\_  
Address 1626 E. Jefferson St. Rockville, Md. 20852  
3. Ownership in Fee: Public \_\_\_\_\_ Private \_\_\_\_\_  
4. Principal Contractor: Biles Electrical & Mechanical LLC Tel. (732) 251-7070  
Address 100 Summerhill Rd e-mail service@bileselectric.co  
Spotswood, NJ 08884  
License No. OR, If new home, Builder Reg. No. 6854 Exp. Date 03/15/2015  
Home Improvement Contractor Registration No. or Exemption Reason (if applicable): 13VH616800  
Federal Emp. ID No. 46-209168 FAX: (732) 251-6588  
5. Architect or Engineer \_\_\_\_\_ Contact \_\_\_\_\_  
Address \_\_\_\_\_ e-mail \_\_\_\_\_  
Tel. \_\_\_\_\_ FAX: \_\_\_\_\_  
6. Responsible Person in Charge once Work has Begun S Biles ✓  
Tel. (732) 251-7070 FAX: \_\_\_\_\_

## V. FEE SUMMARY (for office use only)

|                                   |               | Update | Update |
|-----------------------------------|---------------|--------|--------|
| 1. Building                       | \$            |        |        |
| 2. Electrical                     | <u>150</u>    |        |        |
| 3. Plumbing                       |               |        |        |
| 4. Fire Protection                |               |        |        |
| 5. Elevator Devices               |               |        |        |
| 6. Subtotal                       |               |        |        |
| 7. Less 20% for State Plan Review | \$            |        |        |
| 8. Subtotal                       | \$            |        |        |
| 9. State Permit Surcharge Fee     | <u>9</u>      |        |        |
| 10. Subtotal                      | \$            |        |        |
| 11. Cert. of Occupancy            |               |        |        |
| 12. Other                         |               |        |        |
| 13. TOTAL                         | \$ <u>159</u> |        |        |

## VI. BUILDING/SITE CHARACTERISTICS

|                                                               | (office use only) |
|---------------------------------------------------------------|-------------------|
| 1. Number of Stories                                          |                   |
| 2. Height of Structure                                        | ft.               |
| 3. Area — Largest Floor                                       | sq. ft.           |
| 4. New Building Area                                          | sq. ft.           |
| 5. Volume of New Structure                                    | cu. ft.           |
| 6. Max. Live Load                                             |                   |
| 7. Max. Occupancy Load                                        |                   |
| 8. If Industrialized Building: State Approved _____ HUD _____ |                   |
| 9. Total Land Area Disturbed                                  | sq. ft.           |
| 10. Flood Hazard Zone                                         |                   |
| 11. Base Flood Elevation                                      | ft.               |
| 12. Wetlands yes _____ no _____                               |                   |

## IIa. PROPOSED WORK

- ☐ Minor Work chipolte ☐ New Building ☐ Addition ☐ Demolition  
☐ Repair ☐ Alteration ☐ Renovation ☐ Reconstruction  
☐ Asbestos Abat. -Subch. 8 ☐ Lead Hazard Abatement ☐ Radon Remediation ☐ Annual Permit

## IIb. SUBCODES

(Check all that apply)

- ☐ Building  
☒ Electrical  
☐ Plumbing  
☐ Fire Protection  
☐ Elevator

## FOR OFFICE USE ONLY (Optional)

| Est. Cost   | Plans Rec'd by | Date Rec'd    | Rejection Date | Approval Date  | Re-viewer | Resubmission Dates Approval | Rejection | Re-viewer |
|-------------|----------------|---------------|----------------|----------------|-----------|-----------------------------|-----------|-----------|
| <u>4500</u> | <u>JB</u>      | <u>1/9/15</u> |                | <u>1/19/15</u> | <u>ED</u> |                             |           |           |
|             |                |               |                |                |           |                             |           |           |
|             |                |               |                |                |           |                             |           |           |
|             |                |               |                |                |           |                             |           |           |
|             |                |               |                |                |           |                             |           |           |

TOTAL COST 4500 \$0

## III. PLAN REVIEW (optional)

- DO YOU WANT:  
1. ☐ Partial Releases  
2. ☐ Prototype Processing

## IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

1. ☐ Elevators/Escalators/Lifts/Dumbwaiters/Moving Walks  
2. ☐ High Pressure Boilers  
3. ☐ Pressure Vessels  
4. ☐ Refrigeration Systems  
5. ☐ Cross-Connections/Backflow Preventers  
6. ☐ Hazardous Uses/Places of Assembly  
7. ☐ Sprinklers/Standpipes  
8. ☐ Smoke Control Systems in Open Wells  
9. ☐ Underground Storage Tanks  
10. ☐ Swimming Pools, Spas and Hot Tubs  
11. ☐ LPGas Tanks  
12. ☐ Fire Alarm

## VII. DESCRIPTION OF BUILDING USE

### A. RESIDENTIAL (primary use)

1. State Specific Use: \_\_\_\_\_  
2. Use Group, Proposed: \_\_\_\_\_  
3. Change in Use Group, Indicate Present: \_\_\_\_\_  
4. No. of dwelling units: Total Units Income-restricted  
Gained, Sale \_\_\_\_\_  
Gained, Rental \_\_\_\_\_  
Lost, Sale \_\_\_\_\_  
Lost, Rental \_\_\_\_\_

### B. NON-RESIDENTIAL (primary use)

1. State Specific Use: \_\_\_\_\_  
2. Use Group, Proposed: \_\_\_\_\_  
3. Change in Use Group, Indicate Present: \_\_\_\_\_

### C. MIXED USE -List secondary use(s): \_\_\_\_\_

- D. Construct. Classification: Present \_\_\_\_\_  
Proposed \_\_\_\_\_

## CERTIFICATION IN LIEU OF OATH

### I. OWNER SECTION (to be completed if the applicant is the owner in fee)

I hereby certify that I am the owner in fee of the property listed on Page 1.

Mark the following applicable boxes:

- A. ☐ I further certify that a new home (private residence) will be constructed on this property for my own use and occupancy. This dwelling is to be occupied by myself and is not to be used for any purpose other than single family residential use. I attest that all construction, plumbing, or electrical work will be done, in whole or in part, by me or by subcontractors under my supervision, in accordance with all applicable laws; and, I further acknowledge that said new home is not covered under the New Home Warranty and Builders Registration Act (N.J.S.A. 46:3B-1 et seq.) and that such fact shall be disclosed to any person purchasing this property within ten years of the date of issuance of a certificate of occupancy.

I UNDERSTAND THAT IN MARKING BOX A, I ACKNOWLEDGE THAT I AM ASSUMING RESPONSIBILITY FOR THE WORK DONE ON SAID PROPERTY, THE CONDITION OF THE PROPERTY PRIOR TO, DURING, AND AFTER ANY WORK PERFORMED, AND FOR THE PERFORMANCE OF THE SUBCONTRACTORS I HIRE, EMPLOY, OR OTHERWISE CONTRACT OR WITH WHOM I MAKE AGREEMENTS TO PERFORM WORK. I AM VOLUNTARILY AND KNOWINGLY ASSUMING THIS RESPONSIBILITY.

- B. ☐ I further certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-2.15(f)1.ix:

I personally prepared the plans submitted for: 1) the new home referred to in A.; or, 2) an addition, alteration, renovation, or repair to an existing single family residence owned and occupied by myself and located on the property listed on Page 1; or, 3) a new structure that will be physically separate from, but that will be deemed part of, an existing single family residence that is owned and occupied by myself and located on the property listed on Page 1.

- C. ☐ I further certify that I will perform or supervise the following work:

C.1. ☐ Building C.2. ☐ Fire Protection

I further certify that I will perform the following work:

C.3. ☐ Electrical C.4. ☐ Plumbing

- D. ☐ I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I understand that if any of the above statements are willfully false, I am subject to punishment.

Signature \_\_\_\_\_ Date \_\_\_\_\_

### II. AGENT SECTION (to be completed if the applicant is not the owner in fee)

I hereby certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(d): the proposed work is authorized by the owner in fee; and I have been authorized by the owner in fee to make this application as his agent.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I understand that if any of the above statements are willfully false, I am subject to punishment.

☒ Check if contractor.

Agent Name Stephanie Biles

Address 100 Summerhill Rd  
Spotswood, NJ 08884

Telephone (732) 251-7070

Signature Stephanie Biles

### III. ☐ LEAD HAZARD ABATEMENT: Include Homeowner or Building Owner Affidavit as per N.J.A.C. 5:17.



# Emergency ELECTRICAL SUBCODE TECHNICAL SECTION



NATIONAL ELECTRICAL CODE  
Date Received  
1-21-15  
Date Issued  
2011  
Permit #  
15-0154

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 671 Lot 181 Qualification Code \_\_\_\_\_

Work Site Location 74 Buick Plaza - Chipotle + Varsity

Owner in Fee Federal Apartment Realty Trust

Tel. (924) 419-1200 e-mail \_\_\_\_\_

Address 1626 E. Jefferson St. Rockville, Md 20852 zip code \_\_\_\_\_

Contractor Bider Electric + Mech. Tel. 732 257-7070 e-mail \_\_\_\_\_

Address 100 Summerhill Rd. Spotswood, NJ 08854 e-mail \_\_\_\_\_

Contractor License No. \_\_\_\_\_ Exp. Date 3-15

Home Improvement Contractor Registration No. or Exemption Reason (if applicable): \_\_\_\_\_

Federal Emp. ID No. 0462091689 FAX: (\_\_\_\_) \_\_\_\_\_

B. ELECTRICAL CHARACTERISTICS

Use Group \_\_\_\_\_ Present \_\_\_\_\_ Proposed \_\_\_\_\_

[ ] Pole/Pad # \_\_\_\_\_ [ ] Temporary [ ] Other \_\_\_\_\_

Building Occupied as \_\_\_\_\_ Utility Co. \_\_\_\_\_

Est. Cost of Elec. Work \$ 4500

JOB SUMMARY (Office Use Only)

PLAN REVIEW

[ ] No Plans Required

[ ] Partial - Underslab Utilities Approved

Date: 1/14/15 Approved by: [Signature]

[ ] Electric Plans Approved

Date: \_\_\_\_\_ Approved by: \_\_\_\_\_

Joint Plan Review Required:

[ ] Bldg. [ ] Plumb. [ ] Fire. [ ] Elev.

SUBCODE APPROVAL FOR PERMIT

Date: 1/14/15

Approved by: [Signature]

SUBCODE APPROVAL FOR CERTIFICATE

[ ] CO [ ] CCO [ ]

Date: \_\_\_\_\_

Approved by: \_\_\_\_\_

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the agent of owner of property and authorize to execute this application and perform the work listed on this application.

Applicant's Signature/Seal and Signature

U.C.C. F-120 (rev. 12/07) 1 White = Inspector Copy 2 Canary = Office Copy 3 Pink = Office Copy 4 Gold = Applicant Copy

## D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

3 - Electric unit heaters

QTY. SIZE ITEMS

Lighting Fixtures

Receptacles

Switches

Detectors

Light Poles

Motors—Fract. HP

Emergency & Exit Lights

Communications Points

Alarm Devices/F.A.C. Panel

TOTAL NUMBERS

Pool Permit/with UW Lights

Storable Pool/Spa/Hot Tub

KW Elec. Range/Receptacle

KW Oven/Surface Unit

KW Elec. Water Heater

KW Elec. Dryer/Receptacle

KW Dishwasher

HP Garbage Disposal

KW Central A/C Unit

HP KW Space Heater/Air Handler

KW Baseboard Heat

HP Motors 1/4 HP

KW Transformer/Generator

AMP Service

AMP Subpanels

AMP Motor Control Center

KW Elec. Sign/Outline Light

Administrative Surcharge \$

Minimum Fee \$

State Permit Surcharge Fee \$

TOTAL FEE \$



# CONSTRUCTION PERMIT

Date Issued 1-21-15  
Control # C-15-000096  
Permit # 15-0154

IDENTIFICATION Block: 671 Lot: 1.01 Qualifier  
Work Site Location: 56 CHAMBERS BRIDGE RD. ...CHIPOLTE... Brick Contractor BILES ELECTRIC & Mechanical  
Township, NJ Address 100 Summerhill Rd. SPOTSWOOD NJ 08884  
Owner in Fee FEDERAL REALTY INVESTMENT TRUST Telephone: (732) 251-7070  
1626 EAST JEFFERSON ST. ROCKVILLE NJ Lic. No. or Bldrs. Reg. No. 6854  
20852 Federal Employee No. 22-2416122  
Telephone:

Is hereby granted permission to perform the following work:

- ☐ BUILDING ☐ PLUMBING ☐ LEAD HAZARD ABATEMENT  
☒ ELECTRICAL ☐ FIRE PROTECTION ☐ DEMOLITION  
☐ ELEVATOR DEVICES ☐ ASBESTOS ABATEMENT ☐ OTHER  
(Subchapter 8 only)

DESCRIPTION OF WORK:

(3) ELECTRIC HEATERS...

Note: If construction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work \$4,500

Daniel Newman Jr.  
Construction Official

Date 1/14/15

U.C.C. F170  
equiv (rev 1/04)

1 WHITE - INSPECTOR

2 CANARY - OFFICE

3 PINK - TAX ASSESSOR

4 GOLD - APPLICANT

## PAYMENTS (Office Use Only)

|                       |        |
|-----------------------|--------|
| Building              | \$0    |
| Electrical            | \$150  |
| Plumbing              | \$0    |
| Fire Protection       | \$0    |
| Elevator Devices      | \$0    |
| Other                 | \$0.00 |
| DCA Training Fee      | \$9    |
| CO Fee                |        |
| Other                 | \$0    |
| Total                 | \$159  |
| Check No. <u>1615</u> |        |
| Cash                  | \$0    |
| Credit                | \$0    |
| Collected By          |        |

## REQUIRED INSPECTIONS

Construction work must be inspected in accordance with the State Uniform Construction Code Regulations N.J.A.C. 5:23-2.18. This agency will carry out such periodic inspections during the progress of work as are necessary to insure that the work installed conforms with the requirements of the Uniform Construction Code.

The owner or other responsible person in charge of work must notify this agency when work is ready for any required inspections specified below. Requests for inspections must be made at least 24 hours prior to the time the inspection is desired. Inspections will be performed within three business days of the time for which they are requested. The work must not proceed in a manner which will preclude the inspection until it has been made and approval granted.

☒ Required inspections for all subcodes for one- and two-family dwellings are as follows:

- The bottom of footing trenches before placement of footings, except that in cases of pile foundations, inspections shall be made in accordance with the requirements of the building subcode.
- Foundations and all walls up to grade level prior to back filling.
- All structural framing, connections, wall and roof sheathing and insulation; electrical rough wiring, panel and service installation; rough plumbing. The framing inspection shall take place after the rough electrical and plumbing inspections and after the installation of the heating, ventilation and /or air conditioning duct system. The insulation inspection shall be performed after all other subcode rough inspections and prior to the installation of any interior finish material.
- Installation of all finished materials, sealings of exterior joints, plumbing piping, trim and fixtures; electrical wiring devices and fixtures; mechanical systems equipment.

01/21/15 11:03AM 0015584834  
X006 SERV.006  
DCA  
\$150.00  
\$9.00  
\$159.00

Additional required inspections for all subcodes of construction, for other than one- and two-family dwellings, are fire suppression systems, heat producing devices and Barrier Free subcode accessibility, if applicable.

☐ Required special inspections. The applicant by accepting the permit will be deemed to have consented to these requirements:

☒ A final inspection is required for each applicable subcode area before a final Certificate of Occupancy or Approval may be issued. The final inspections include the installation of all interior and exterior finish materials, sealing of exterior joints, mechanical system and other required equipment; electrical wiring, devices and fixtures; plumbing pipes, trim and fixtures; tests required by any provision of the adopted subcodes, Barrier Free accessibility, if applicable; and verification of compliance with NJAC 5:23-3.5, "Posting structures".

☐ A complete copy of released plans must be kept on the job site.

If you do not understand any of this information, please ask.

1-15-15 - Spoke to Stephanie @ Biko & advised parent sorry for the Q

1-15-15

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

# Dayton® Heavy-Duty Electric Unit Heaters

## Description

Dayton Heavy-Duty Electric Heaters are designed for continuous or intermittent use in factories, warehouses, public buildings, stock rooms, service stations, any large or exposed areas, or additions. Can be installed for use in downflow or horizontal applications.

## FEATURES:

- Units 5 thru 15 kW are field convertible from single to three phase
- 24 volt low voltage control circuit is standard except on 3 and 5 kW 208, 240/208, and 277V units which have line voltage control
- Heavy-duty totally enclosed motors
- Aluminum finned, copper clad steel sheath heating element
- Advanced inlet louver design draws cool air across heating element for more efficient operation
- Automatic reset linear thermal protector
- Venturi outlet with large dynamically balanced fan blade
- Heavy gauge die-formed steel housing
- Optional vertical and horizontal brackets available

## Specifications

| Model  | kW Rating | BTU/HR (1,000's) | Heater/Motor Voltage | Phase | Control Voltage | Amps Per Phase | -Fan Motor- HP | RPM       | CFM at Outlet | FPM at Outlet | Air Temp. Rise (°F) | Air Throw (Horiz) |
|--------|-----------|------------------|----------------------|-------|-----------------|----------------|----------------|-----------|---------------|---------------|---------------------|-------------------|
| 2YU58* | 3.0/2.2   | 10.2/7.5         | 240/208              | 1     | 240/208         | 12.5/11.0      | 1/100          | 1600      | 350           | 800           | 27                  | 12'               |
| 2YU59  | 3.0       | 10.2             | 480                  | 3     | 24              | 3.6            | 1/100          | 1600      | 350           | 800           | 27                  | 12                |
| 2YU60* | 3.0       | 10.2             | 277                  | 1     | 277             | 11.0           | 1/100          | 1600      | 350           | 800           | 27                  | 12                |
| 2YU61* | 3.0       | 10.2             | 208                  | 1     | 208             | 14.5           | 1/100          | 1600      | 350           | 800           | 27                  | 12                |
| 2YU62* | 5.0/3.7   | 17.0/12.6        | 240/208              | 1-3   | 240/208         | 21.0/18.0      | 1/100          | 1600      | 350           | 800           | 45                  | 12                |
| 2YU63  | 5.0       | 17.0             | 480                  | 3     | 24              | 6.0            | 1/100          | 1600      | 350           | 800           | 45                  | 12                |
| 2YU64* | 5.0       | 17.0             | 277                  | 1     | 277             | 18.0           | 1/100          | 1600      | 350           | 800           | 45                  | 12                |
| 2YU65* | 5.0       | 17.0             | 208                  | 1-3   | 208             | 24.0           | 1/100          | 1600      | 350           | 800           | 45                  | 12                |
| 2YU66  | 7.5/5.6   | 25.6/19.1        | 240/208              | 1-3   | 24              | 31.3/27.0      | 1/30           | 1600      | 650           | 970           | 37                  | 18                |
| 2YU67  | 7.5       | 25.6             | 480                  | 3     | 24              | 9.0            | 1/30           | 1600      | 650           | 970           | 37                  | 18                |
| 2YU68  | 7.5       | 25.6             | 208                  | 1-3   | 24              | 36.0           | 1/30           | 1600      | 650           | 970           | 37                  | 18                |
| 2YU69  | 10.0/7.5  | 34.1/25.6        | 240/208              | 1-3   | 24              | 42.0/36.0      | 1/30           | 1600      | 650           | 970           | 49                  | 18                |
| 2YU70  | 10.0      | 34.1             | 480                  | 3     | 24              | 12.0           | 1/30           | 1600      | 650           | 970           | 49                  | 18                |
| 2YU71  | 10.0      | 34.1             | 208                  | 1-3   | 24              | 48.0           | 1/30           | 1600      | 650           | 970           | 49                  | 18                |
| 2YU72  | 15.0/11.2 | 51.2/38.2        | 240/208              | 3     | 24              | 36.1/33.3      | 1/20           | 1530      | 910           | 1640          | 52                  | 35                |
| 2YU73  | 15.0      | 51.2             | 480                  | 3     | 24              | 18.0           | 1/20           | 1530      | 910           | 1640          | 52                  | 35                |
| 2YU74  | 15.0      | 51.2             | 208                  | 1-3   | 24              | 72.0           | 1/20           | 1530      | 910           | 1640          | 52                  | 35                |
| 2YU75  | 20.0/15.0 | 68.2/51.2        | 240/208              | 3     | 24              | 48.0/41.2      | 1/10           | 1500      | 1320          | 2060          | 48                  | 41                |
| 2YU76  | 20.0      | 68.2             | 480                  | 3     | 24              | 24.0           | 1/10           | 1500      | 1320          | 2060          | 48                  | 41                |
| 3END3  | 25        | 85.2             | 480                  | 3     | 24              | 30             | 1/4            | 1600/1375 | 2100/1800     | 2100/2030     | 45/53               | 50                |
| 2YU77  | 30.0/22.5 | 102/77           | 240/208              | 3     | 24              | 72.0/63.0      | 1/4            | 1600/1375 | 2100/1800     | 2100/2030     | 45/53               | 50                |
| 2YU78  | 30.0      | 102.3            | 480                  | 3     | 24              | 36.0           | 1/4            | 1600/1375 | 2100/1800     | 2100/2030     | 45/53               | 50                |
| 2YU79  | 30.0      | 102.3            | 208                  | 3     | 24              | 84.0           | 1/4            | 1600/1375 | 2100/1800     | 2100/2030     | 45/53               | 50                |
| 3END4  | 40        | 136.4            | 480                  | 3     | 24              | 48             | 1/2            | 1524/1420 | 3000/2600     | 3260/2900     | 49/42               | 60                |
| 2YU80  | 50.0/37.5 | 170/127          | 240/208              | 3     | 24              | 120.4/104.2    | 1/2            | 1525/1420 | 3000/2600     | 3260/2900     | 53/61               | 60                |
| 2YU81  | 50.0      | 170.5            | 480                  | 3     | 24              | 60.2           | 1/2            | 1525/1420 | 3000/2600     | 3260/2900     | 53/61               | 60                |

(\*) These models are wired for direct line voltage control.

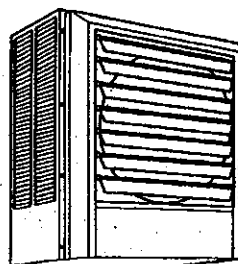


Figure 1

## Unpacking

Remove the heater from the box and inspect it for any damage. If it appears to be damaged, immediately return.

Check the contents of the box to make sure it contains one heating unit.



ENGLISH

ESPAÑOL

FRANÇAIS

74 Brick Plaza

Chipotle + vacant space

# Dayton® Heavy-Duty Electric Unit Heaters

E  
N  
G  
L  
I  
S  
H

## General Safety Information

**⚠ WARNING** *To prevent electrical shock, disconnect all power coming to heater at main service panel before wiring or servicing.*

1. All wiring must be in accordance with the National and Local Electrical Codes in the United States and the heater must be grounded as a precaution against possible electric shock.
2. Verify the power supply voltage coming to heater matches the ratings printed on the heater nameplate before energizing.
3. This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces.
4. Do not insert or allow foreign objects to enter any ventilation or exhaust opening, as this may cause an electric shock, fire, or damage to the heater.
5. To prevent a possible fire, do not block air intakes or exhaust in any manner. Keep combustible materials, such as crates, drapes, etc., away from heater. Do not install behind door, furniture, towels, or boxes.
6. A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint or flammable liquids are used or stored, or where volatile gases are present.
7. Use this heater only as described in the manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
8. This heater is not approved for use in corrosive atmospheres such as marine, green house or chemical storage areas.

**⚠ CAUTION** *All built-in thermostats: If the heater is used to prevent piping or liquids from freezing, and if the thermostat is set below 45°F (7°C), the fan must run continuously.*

## Installation LOCATION

**⚠ CAUTION** *Heater must be mounted at least 7 feet above the floor to prevent accidental contact with the fan blade which could cause injury.*

**⚠ CAUTION** *To prevent possible overheating or damage due to overheating, keep at least a 5 foot clearance in front of the heater. Refer to Table 1 for side, top and back clearance requirements.*

1. Arrange units so their discharge air streams are subjected to a minimum of interference from columns and partitions.
2. Direct air stream away from room occupants in comfort heating.
3. Air streams should wipe exposed wall without blowing directly at them.
4. Direct air stream along the windward side of a room when installed in a building exposed to a prevailing wind.
5. If using a remote thermostat, locate thermostat approximately 5 feet above the floor on the interior

partition walls or posts away from cold drafts, internal heat sources, and away from heater discharge air streams.

6. Large rooms require multi-unit installations. Arrange units to provide perimeter air circulation where each unit supports the air stream from another.

## MOUNTING

GENERAL (See Table 3, page 5, for Mounting Accessories)

1. Position the heater so access door can be opened to provide access to the wiring and control compartment. If the heater is to be mounted with the access door facing a wall, the heater must be mounted far enough from that wall to allow full opening of the access door. (Approximately equal to the depth of the heater.) Refer to Table 1 below.
2. Heater may be mounted for vertical or horizontal discharge by the use of threaded rods. Refer to Table 2.
3. Optional mounting brackets permit horizontal pivoting of heater.
4. Louvers may be positioned to direct heated air in desired direction. For horizontal discharge, louvers should direct air either straight ahead or downward.

**Table 1 – Wall and Ceiling Clearance, inches (mm) / Mounting Brackets**

| Unit         | Discharge | Ceiling    | Side Wall  | Back Wall   | Optional Mounting Brackets |
|--------------|-----------|------------|------------|-------------|----------------------------|
| 3 & 5 kW     | Horiz.    | 2 (50.8)   | 6 (152.4)  | 9 (228.6)   | 2YV16                      |
|              | Vert.     | 6 (152.4)  | 18 (457.2) | 18 (457.2)  | 2YU84                      |
| 7.5 to 10 kW | Horiz.    | 6 (152.4)  | 6 (152.4)  | 13 (330.2)  | 2YV16                      |
|              | Vert.     | 6 (152.4)  | 24 (609.6) | 24 (609.6)  | 2YU84                      |
| 15 to 20 kW  | Horiz.    | 6 (152.4)  | 9 (228.6)  | 12½ (317.5) | 2YV17                      |
|              | Vert.     | 6 (152.4)  | 24 (609.6) | 24 (609.6)  | 2YU84                      |
| 25 to 50 kW  | Horiz.    | 16 (406.4) | 12 (304.8) | 18½ (470.0) | 2YU91 & 2YU92              |
|              | Vert.     | 12 (304.8) | 36 (914.4) | 36 (914.4)  | 2YU85                      |



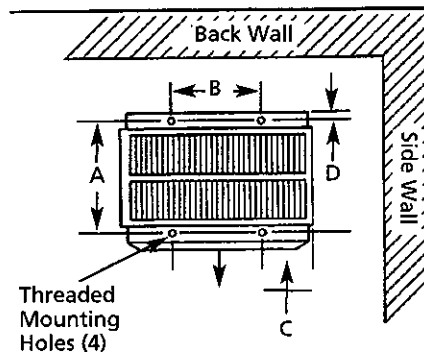
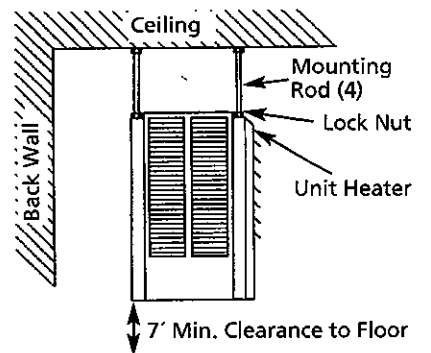
# Models 2YU58 thru 2YU81, 3END3 and 3END4

## Installation (Continued)

### ROD MOUNTING

#### HORIZONTAL DISCHARGE

1. Install four threaded mounting rods in the threaded holes and secure in place using lock nuts. (See Table 2).
2. Securely attach the four mounting rods to the ceiling. (Refer to Table 1 for wall and ceiling clearances, and Table 2 for mounting rod spacing).



**Figure 2 - Horizontal Discharge Mounting and Spacing**

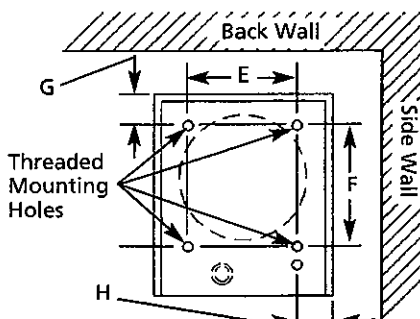
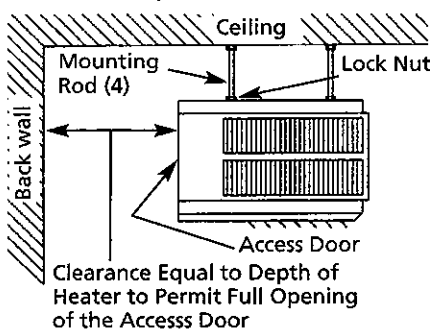
#### VERTICAL DISCHARGE

1. Remove bolts from the threaded holes in the back of the heaters.
2. Install four threaded mounting rods in the threaded holes and secure in place using lock nuts.

**Table 2 - Mounting Rod Spacing**

| Unit     | Rod Thread Type | (Figure 2) Horizontal            |                                |                                  |      | (Figure 3) Vertical            |                                 |                                |                                  |
|----------|-----------------|----------------------------------|--------------------------------|----------------------------------|------|--------------------------------|---------------------------------|--------------------------------|----------------------------------|
|          |                 | A                                | B                              | C                                | D    | E                              | F                               | G                              | H                                |
| 3 - 5kW  | 5/16-18         | 6 <sup>1</sup> / <sub>16</sub> " | 6"                             | 4 <sup>1</sup> / <sub>16</sub> " | 3/4" | 6"                             | 9 <sup>3</sup> / <sub>4</sub> " | 2"                             | 4 <sup>3</sup> / <sub>16</sub> " |
| 7.5 - 10 | 5/16-18         | 6 <sup>1</sup> / <sub>16</sub>   | 8 <sup>7</sup> / <sub>8</sub>  | 5 <sup>1</sup> / <sub>8</sub>    | 3/4  | 8 <sup>7</sup> / <sub>8</sub>  | 14 <sup>5</sup> / <sub>8</sub>  | 2                              | 5 <sup>1</sup> / <sub>8</sub>    |
| 15 - 20  | 5/16-18         | 11 <sup>3</sup> / <sub>8</sub>   | 8 <sup>7</sup> / <sub>8</sub>  | 5 <sup>1</sup> / <sub>8</sub>    | 3/4  | 8 <sup>7</sup> / <sub>8</sub>  | 14 <sup>7</sup> / <sub>8</sub>  | 2                              | 5 <sup>1</sup> / <sub>8</sub>    |
| 25 - 30  | 3/8-16          | 10 <sup>9</sup> / <sub>16</sub>  | 14 <sup>1</sup> / <sub>2</sub> | 6 <sup>3</sup> / <sub>16</sub>   | 5/8  | 14 <sup>1</sup> / <sub>2</sub> | 21 <sup>1</sup> / <sub>4</sub>  | 2 <sup>3</sup> / <sub>16</sub> | 6 <sup>3</sup> / <sub>16</sub>   |
| 40 - 50  | 3/8-16          | 15 <sup>15</sup> / <sub>16</sub> | 14 <sup>1</sup> / <sub>2</sub> | 6 <sup>3</sup> / <sub>16</sub>   | 5/8  | —                              | —                               | —                              | —                                |

3. Securely attach the four mounting rods to the ceiling. (Refer to Table 1 for wall and ceiling clearances, and Table 2 for mounting rod spacing dimensions.)



**Figure 3 - Vertical Discharge Mounting and Rod Spacing**

### WIRING

#### BRANCH CIRCUIT (POWER)

1. Connect heater only to the voltage, amperage and frequency specified on the nameplate.

2. Field wiring must be properly sized to carry the amperage in accordance with the NEC.
3. The access door is hinged. There are either one or two screws accessible from the bottom that must be removed to gain access.
4. A knockout is provided in the back of the heater close to the power terminal board. The control terminal board knockout is 1/2 inch conduit size. The power terminal block knockout is multiple diameter. Use the diameter that fits the required conduit size.
5. A ground terminal is provided near the power terminal board. The ground wire should be connected before other connections are made.
6. The power terminal board is equipped with box terminals sized to accept the correct size power supply wire. Wire rated at 600V and 60°C is satisfactory for the heater branch circuit. Either aluminum or copper wire is satisfactory for connection to the heater power terminal board box terminal. Copper wire is recommended.
7. Each heater has a wiring diagram affixed to the inside of the access door. Consult this diagram before making any field connections.