May 25, 2021

Variance Application for: 82 Cass St. Portsmouth NH
Contact/Owner: Chris Breen (Property Representative)
Kevin Breen and Catherine Stehman-Breen (Owners)
805 390 1903
chrisbreen@mac.com

We are renovating 82 Cass St. Alterations include remodeling the kitchen, adding 2.5 additional bathrooms, insulating, and adding HVAC.

We are adding an HVAC system to heat and cool all three floors of the house. This requires us to install a condenser on the outside of the house, preferably on the back side of the house, to the right of the deck, when facing the house from the street. However, the fence on the right side of the house is approximately 10 feet from our property line, and we are requesting a variance to allow this placement.

The unit we have specified is a Trane XR 13 4TTR3030H1000N, which measures 29”Wx29”Hx26”D. See full specification included in this packet. The unit will protrude approximately 38” from the back of the house, including the foot of space required from the rear of the unit. The existing setback on the boundary from my neighbors at 74 Cass St will be reduced from a current value of approximately 10’ to approximately 7’4”. The fence borders their driveway and obstructs the view of the condenser unit.

With this application we are seeking relief from the following Portsmouth zoning ordinance:

> **10.515.14 A mechanical system (i.e. HVAC, power generator, etc.) that is less than 36 inches above the ground level with a mounting pad not exceeding 10 square feet shall be exempt from yard requirements, but shall be set back at least 10 feet from a property line; and shall not be located closer to the street than the front of the principal structure.**

In this instance we seek to install an HVAC condenser for an energy-efficient HVAC system on the back side of the house. We have chosen the proposed location for several reasons.

1. It is the most inconspicuous location on the property. It is not visible to the neighbors to the left of the house and is obscured by a 6-foot privacy fence from the neighbors to the right of the house.
2. The location satisfies the regulation that the condenser not be located nearer the street than the structure.
3. The proposed location is most effective for locating the condenser close to the internal head of the unit to minimize coolant piping and maximize building envelope efficiency.

4. The only location that would not require a variance would place the HVAC condenser in front of the porch (in the lawn) behind the house, in view of both neighbors, with reduced efficiency, and would reduce the property value.

Below we provide commentary to the variance requirements:

10.233.20 In order to authorize a variance, the Board must find that the variance meets all of the following criteria:

10.233.21 The variance will not be contrary to the public interest;
The proposed location of the HVAC condenser was carefully chosen for minimal visual and aural impact; hence it does not present any detriment to the public interest. Many other similar condensers have been successfully installed in the city without public complaint.

10.233.22 The spirit of the Ordinance will be observed;
The setback requirement is important so that mechanical systems do not adversely impact neighboring properties. This condenser will be placed on the back of house and shielded by a fence to hide the condenser. The only alternative location is in front of the porch, where it is in view of neighbors at both 74 Cass St and 92 Cass St. The proposed location will not adversely impact the neighboring buildings.

10.233.23 Substantial justice will be done;
Installation of a modest HVAC condenser in this location and application is reasonable for the building's intended use and consistent with other similar applications within the city, thus granting the variance represents substantial justice.

10.233.24 The values of surrounding properties will not be diminished;
The property value of the subject property will be increased by this project. Locating the HVAC condenser in a hidden and unobtrusive place will prevent negative effects on the subject and neighboring properties, hence the value of surrounding properties will not be diminished.

10.233.25 Literal enforcement of the provisions of the Ordinance would result in an unnecessary hardship.

To meet the literal provisions of the Ordinance would represent a hardship as detailed below on both counts of section 10.233.31:

10.233.30 For purposes of section 10.233.25, "unnecessary hardship" means that one of the following conditions exists:
10.233.31 Owing to special conditions of the property that distinguish it from other properties in the area,

(a) no fair and substantial relationship exists between the general public purposes of the Ordinance provision and the specific application of that provision to the property; and

The main house of the subject property dates from 1880. The small downtown parcel has small setbacks on all sides, with the right side of the house (when facing from street) serving as the property line to the neighboring property. The existing conditions have driven us toward the proposed location. To not install an HVAC condenser at all would represent a hardship as we would not be able to efficiently cool the house. The alternative would be room air conditioners which are noisy, inefficient and publicly visible. To locate the HVAC condenser in the rear of the house in front of the porch would negatively impact the appearance of the backyard, require extensive piping (>10 feet) to be run outside under the deck, creating inefficiency in the system, and reduce the quality of the deck due to any noise generated by the condenser. The proposed location is the only other location available, aside from the previously discussed location >10 feet from the house. These potential negative impacts would represent a hardship to the property owners.

(b) the proposed use is a reasonable one. (Under this provision, an unnecessary hardship shall be deemed to exist only if both elements of the condition are based on the special conditions of the property.)

The proposed variance is reasonable as there are many other similar HVAC condensers in use within the city. The homeowner and builder have worked to evaluate all reasonable alternatives and seek the variance only as a last resort to efficiently meet the energy needs of the structure.

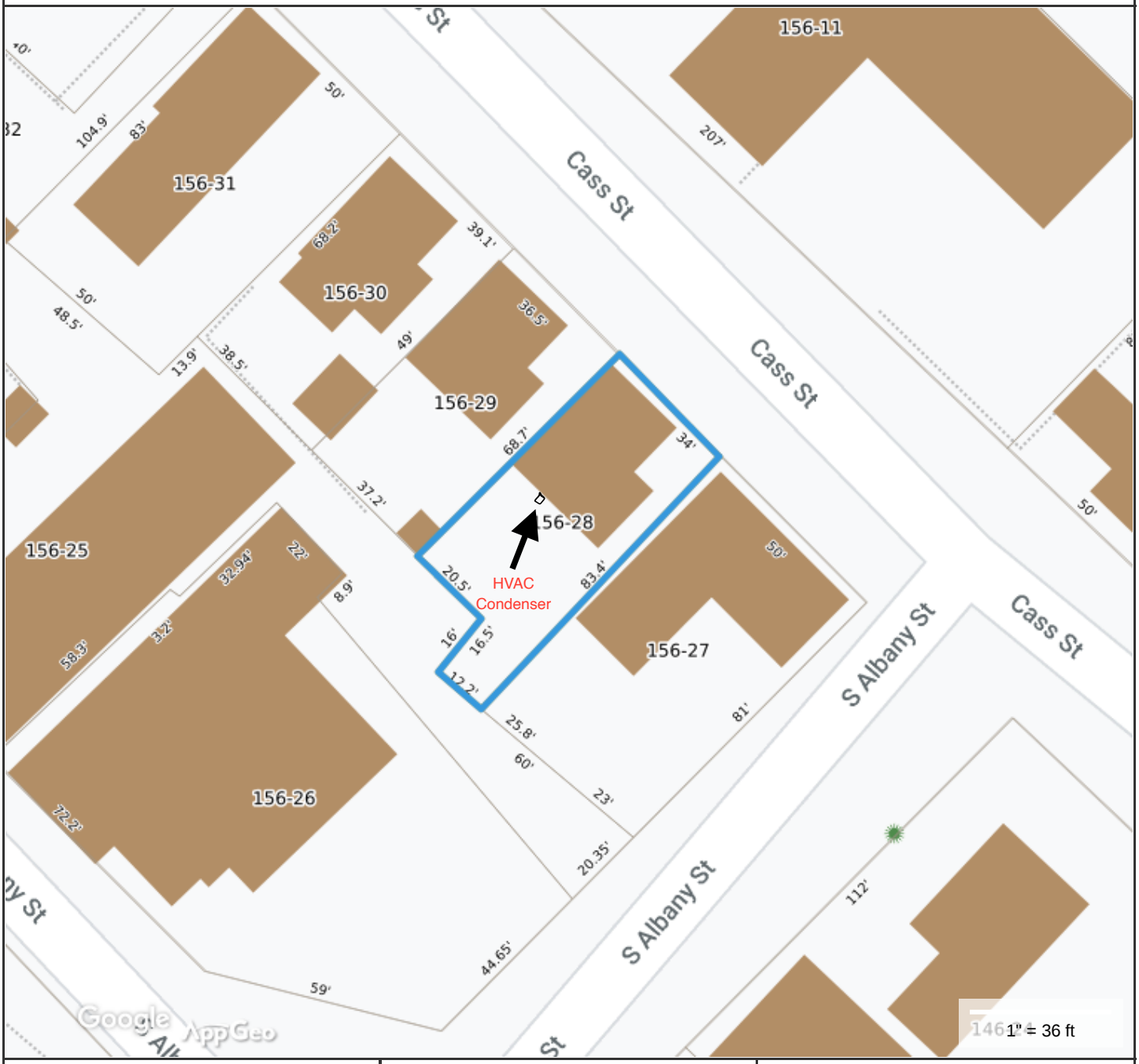
10.233.32 Owing to special conditions of the property that distinguish it from other properties in the area, the property cannot be reasonably used in strict conformance with the Ordinance, Article 2 Administration and Enforcement As Amended Through December 16, 2019 2-5 and a variance is therefore necessary to enable a reasonable use of it. (Under this provision, an unnecessary hardship shall not be deemed to exist if any reasonable use, including an existing use, is permitted under the Ordinance.)

Strict conformance with the ordinance would require either moving the existing porch - obviously a very expensive proposal – or locating the condenser >10 feet from the house in front of the deck, which for reasons given above would be a detriment to the property, thus we feel that a variance is appropriate to enable a reasonable use of the property.

Thank you for your time and consideration in evaluating this proposal.

Sincerely,
Christopher Breen

82 Cass



Property Information

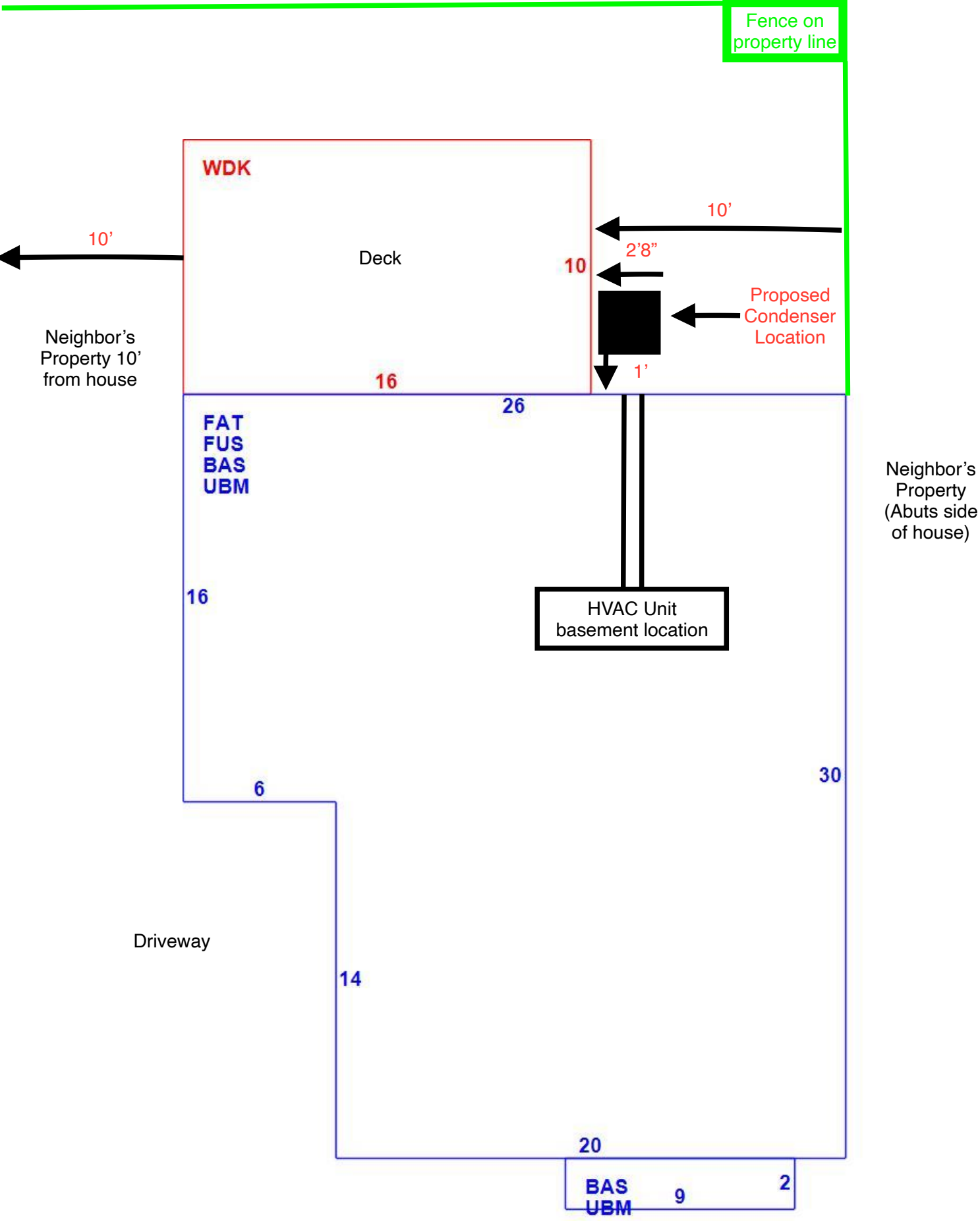
Property ID	0156-0028-0000
Location	82 CASS ST
Owner	BREEN KEVIN M

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

City of Portsmouth, NH makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 4/1/2019
Data updated 7/17/2019

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.


Fence on property line
WDK
10'
Deck
10'
2'8"
10
Proposed Condenser Location
Neighbor's Property 10' from house
1'
16
26
FAT
FUS
BAS
UBM
Neighbor's Property (Abuts side of house)
16
HVAC Unit basement location
30
6
Driveway
14
20
BAS
UBM
9
2

18-AC79D1-8-EN

Installer's Guide

Condensing Units

4TTR3

ALL phases of this installation must comply with NATIONAL, STATE AND LOCAL CODES

IMPORTANT — This Document is customer property and is to remain with this unit. Please return to service information pack upon completion of work.

These instructions do not cover all variations in systems or provide for every possible contingency to be met in connection with the installation. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to your installing dealer or local distributor.

Note: The manufacturer recommends installing only approved matched indoor and outdoor systems. All of the manufacture's split systems are AHRI rated only with TXV/EEV indoor systems. Some of the benefits of installing approved matched indoor and outdoor split systems are maximum efficiency, optimum performance and the best overall system reliability.

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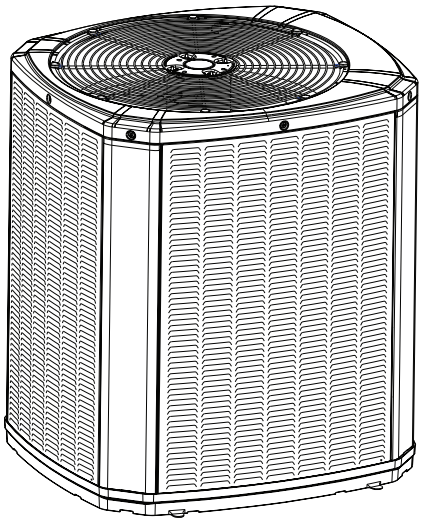


Section 1. Safety

⚠ WARNING

This information is intended for use by individuals possessing adequate backgrounds of electrical and mechanical experience. Any attempt to repair a central air conditioning product may result in personal injury and/or property damage. The manufacture or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

⚠ WARNING

These units use R-410A refrigerant which operates at 50 to 70% higher pressures than R-22. Use only R-410A approved service equipment. Refrigerant cylinders are painted a “Rose” color to indicate the type of refrigerant and may contain a “dip” tube to allow for charging of liquid refrigerant into the system. All R-410A systems use a POE oil that readily absorbs moisture from the atmosphere. To limit this “hygroscopic” action, the system should remain sealed whenever possible. If a system has been open to the atmosphere for more than 4 hours, the compressor oil must be replaced. Never break a vacuum with air and always change the driers when opening the system for component replacement. For specific handling concerns with R-410A and POE oil reference Retrofit Bulletins SS-APG006-EN and APP-APG011-EN or APP-APG012-EN.

⚠ WARNING

UNIT CONTAINS R-410A REFRIGERANT!
R-410A operating pressures exceed the limit of R-22. Proper service equipment is required. Failure to use proper service tools may result in equipment damage or personal injury.

SERVICE

USE ONLY R-410A REFRIGERANT AND APPROVED POE COMPRESSOR OIL.

⚠ WARNING

Extreme caution should be exercised when opening the Liquid Line Service Valve. Turn counterclockwise until the valve stem just touches the rolled edge. No torque is required. Failure to follow this warning will result in abrupt release of system charge and may result in personal injury and /or property damage.

⚠ WARNING

LIVE ELECTRICAL COMPONENTS!
During installation, testing, servicing, and troubleshooting of this product, it may be necessary to work with live electrical components. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

⚠ CAUTION

If using existing refrigerant lines make certain that all joints are brazed, not soldered.

⚠ CAUTION

Scroll compressor dome temperatures may be hot. Do not touch the top of compressor; it may cause minor to severe burning.

Section 2. Unit Location Considerations

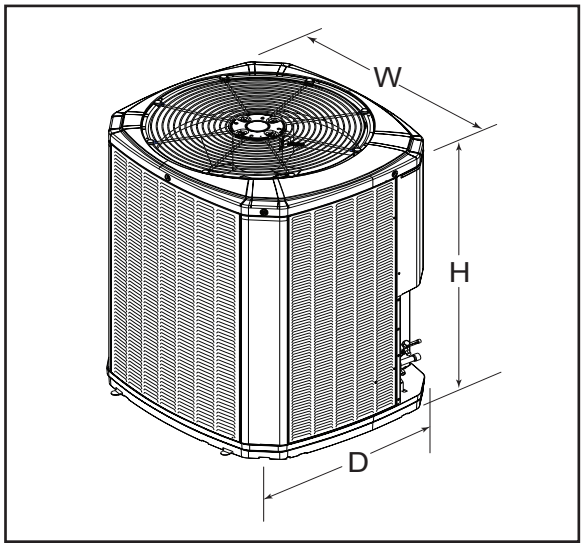
2.1 Unit Dimensions and Weight

Table 2.1

Unit Dimensions and Weight		
Models	H x D x W (in)	Weight* (lb)
4TTR3018H	29 x 26 x 29	133
4TTR3024H	29 x 26 x 29	130
4TTR3030H	29 x 26 x 29	137
4TTR3036H	29 x 30 x 33	147
4TTR3042E	29 x 30 x 33	172
4TTR3048E	37 x 30 x 33	184
4TTR3060D	37 x 34 x 37	226
* Weight values are estimated.		

When mounting the outdoor unit on a roof, be sure the roof will support the unit's weight.

Properly selected isolation is recommended to alleviate sound or vibration transmission to the building structure.



2.2 Refrigerant Piping Limits

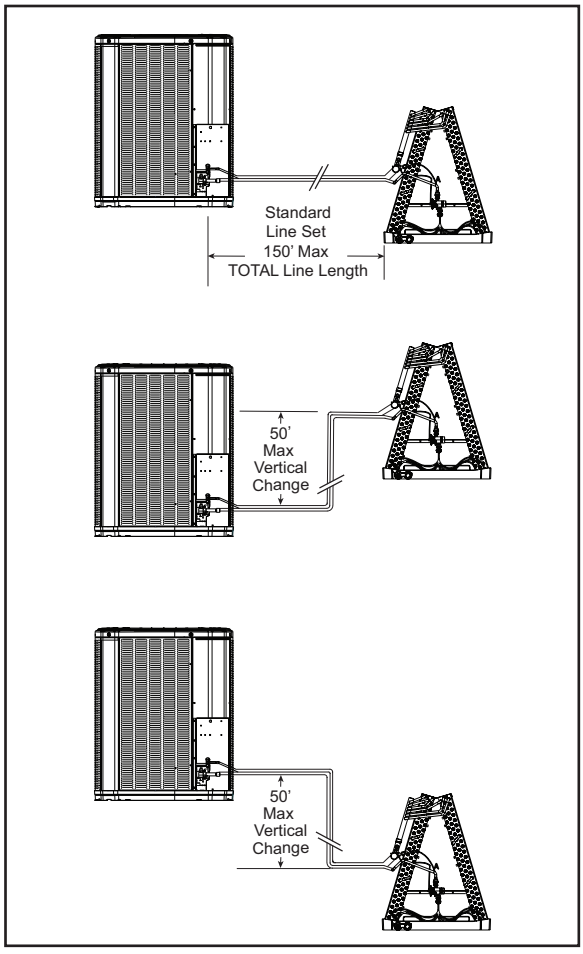
1. The maximum TOTAL length of refrigerant lines from outdoor to indoor unit should NOT exceed 150 feet* (including lift).

2. The maximum vertical change should not exceed 50 feet*.

3. Standard and alternate line sizes and service valve connection sizes are shown in Table 5.1.

* See Table 5.1 for exceptions for certain tonnages.

Note: For other line lengths, Refer to Refrigerant Piping Application Guide, SS-APG006-EN or Refrigerant Piping Software Program, 32-3312-xx (latest revision).

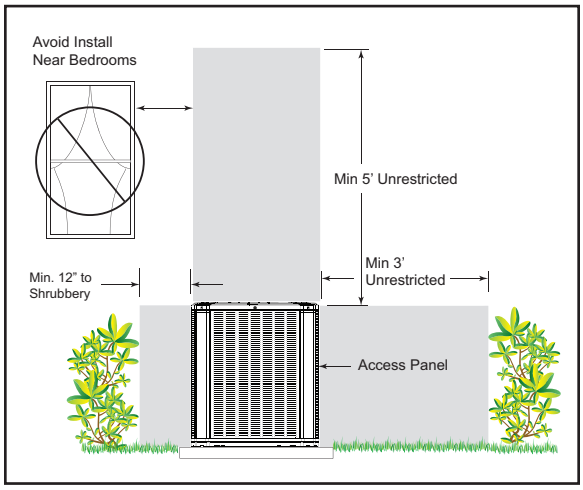


2.3 Suggested Locations for Best Reliability

Ensure the top discharge area is unrestricted for at least five (5) feet above the unit.

Three (3) feet clearance must be provided in front of the control box (access panels) and any other side requiring service.

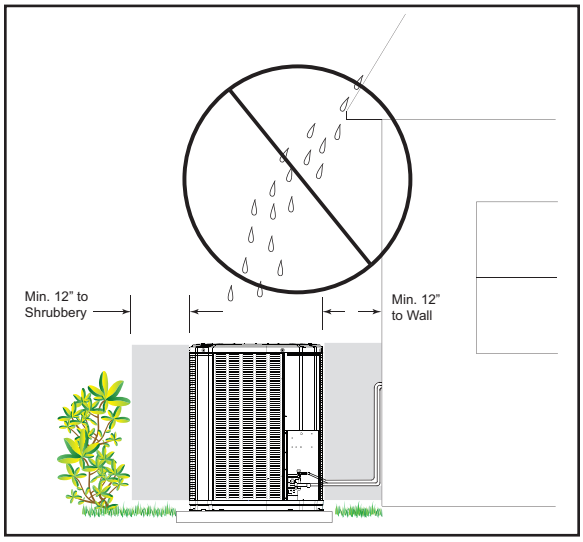
It is not recommended to install in a location where noise may distract the building occupants. Some examples of these types of locations are sleeping quarters and by windows of a living area. Please discuss location with the building owner prior to installation.



Avoid locations such as near windows where condensation and freezing defrost vapor can annoy a customer.

Position the outdoor unit a minimum of 12” from any wall or surrounding shrubbery to ensure adequate airflow.

Outdoor unit location must be far enough away from any structure to prevent excess roof runoff water or icicles from falling directly on the unit.



2.4 Cold Climate Considerations

NOTE: It is recommended that these precautions be taken for units being installed in areas where snow accumulation and prolonged below freezing temperatures occur.

- Units should be elevated 3-12 inches above the pad or rooftop, depending on local weather. This additional height will allow drainage of snow and ice melted during defrost cycle prior to its refreezing. Ensure that drain holes in unit base pan are not obstructed preventing draining of defrost water.
- If possible, avoid locations that are likely to accumulate snow drifts. If not possible, a snow drift barrier should be installed around the unit to prevent a build-up of snow on the sides of the unit.