

**Aboveground Equipment**

# Aesthetics Improvement Manual

**May 2011**





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## Introduction

Welcome to the Aesthetics Improvement Manual (AIM), a new publication illustrating typical installations of Edison's aboveground pad-mounted equipment, space requirements for this equipment and approved aesthetic improvement options. It serves only as a quick reference guide, highlighting existing information found elsewhere in SCE publications. This manual is not intended to replace or supersede existing SCE construction or design manuals.

## Purpose

The purpose of this manual is to provide Edison's customers including civil and architectural engineers, city planners, developers, utility consultants, and general customers with information on the requirements and options available for designing and installing pad-mounted equipment to achieve best results on new projects. Edison's own planners, project managers, Local Governmental Affairs representatives, and others will also benefit from this manual.

The primary intent of AIM is as follows:

1. Aid in the understanding of the Edison distribution system structure requirements.
2. Plan appropriately for operating and clearance space requirements.
3. Illustrate various approved options for aesthetic improvement of equipment.

In creating AIM, SCE's objective is to facilitate a proactive discussion during the entire design and planning review process throughout our service territory. The manual is a living document and feedback is both welcomed and encouraged.

The manual includes references to applicable Electrical Service Requirements (ESR) and Underground Structures (UGS) standards. For access to current editions of the ESR Manual or UGS Manual contact your SCE representative.

External customers who need more information on the Aboveground Equipment structure can go to the following web address: <http://www.sce.com/AboutSCE/Regulatory/distributionmanuals/>.

**Note:** AIM does not contain all SCE Aboveground Equipment, nor does it address unique field circumstances which can and should be considered on a case-by-case basis.

## Getting Help

If you have any comments, questions, or suggestions concerning this manual, please contact one of the following individuals:

Alaira Bilek at (714) 895-0156 or [Alaira.Bilek@sce.com](mailto:Alaira.Bilek@sce.com)

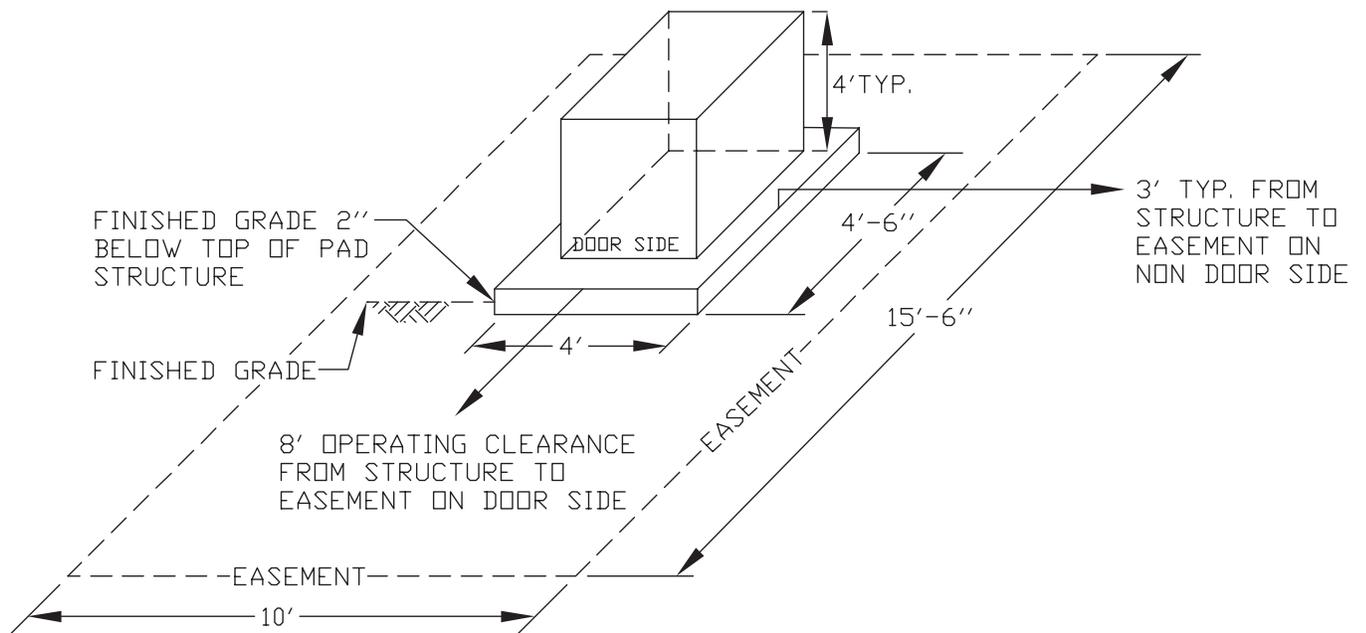
Ruben V. Rodriguez at (714) 895-0733 or [Ruben.V.Rodriguez@sce.com](mailto:Ruben.V.Rodriguez@sce.com)



## Examples of Single-Phase (Residential) Pad-Mounted Transformer Installations



## Clearances for Single-Phase (Residential) Pad-Mounted Transformer, PME-1 Cabinet or PME-2 Switch



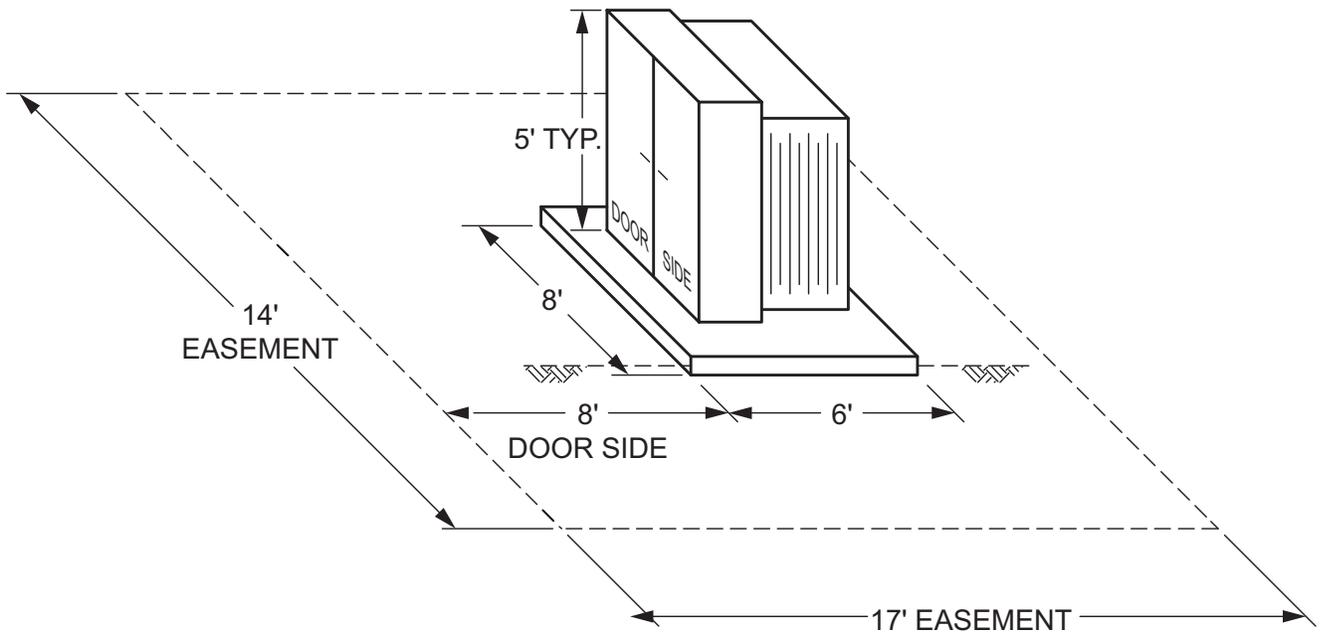
<DRAWING NOT TO SCALE>

Distribution Standard References:  
ESR-4, UGS SS 504 & UGS SS 506

## Example of Three-Phase (Commercial Building or Service) Pad-Mounted Transformer Installation on a Pad



## Clearances for Three-Phase (Commercial Building or Service) Pad-Mounted Transformer on Concrete Pad

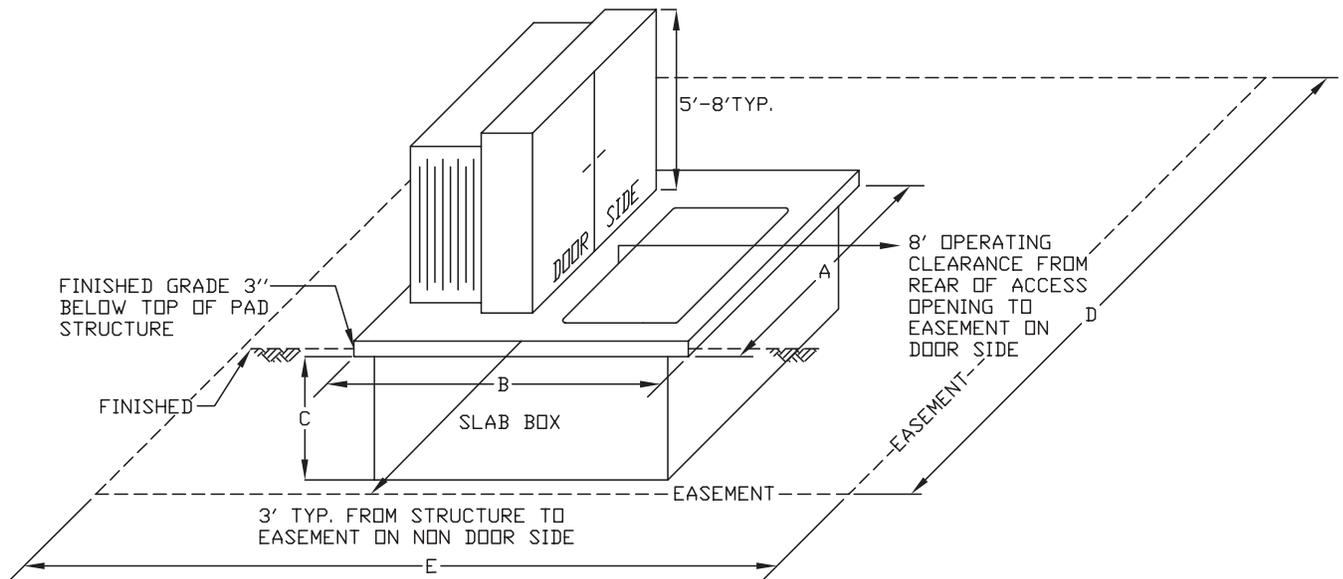


Distribution Standard References:  
ESR-4, UGS SS 504, UGS SS 530 & UGS SS 535

## Example of Three-Phase (Commercial Building or Service) Pad-Mounted Transformer Installation on a Slab Box



## Clearances for Three-Phase (Commercial Building or Service) Pad-Mounted Transformer on Slab Box



(DRAWING NOT TO SCALE)

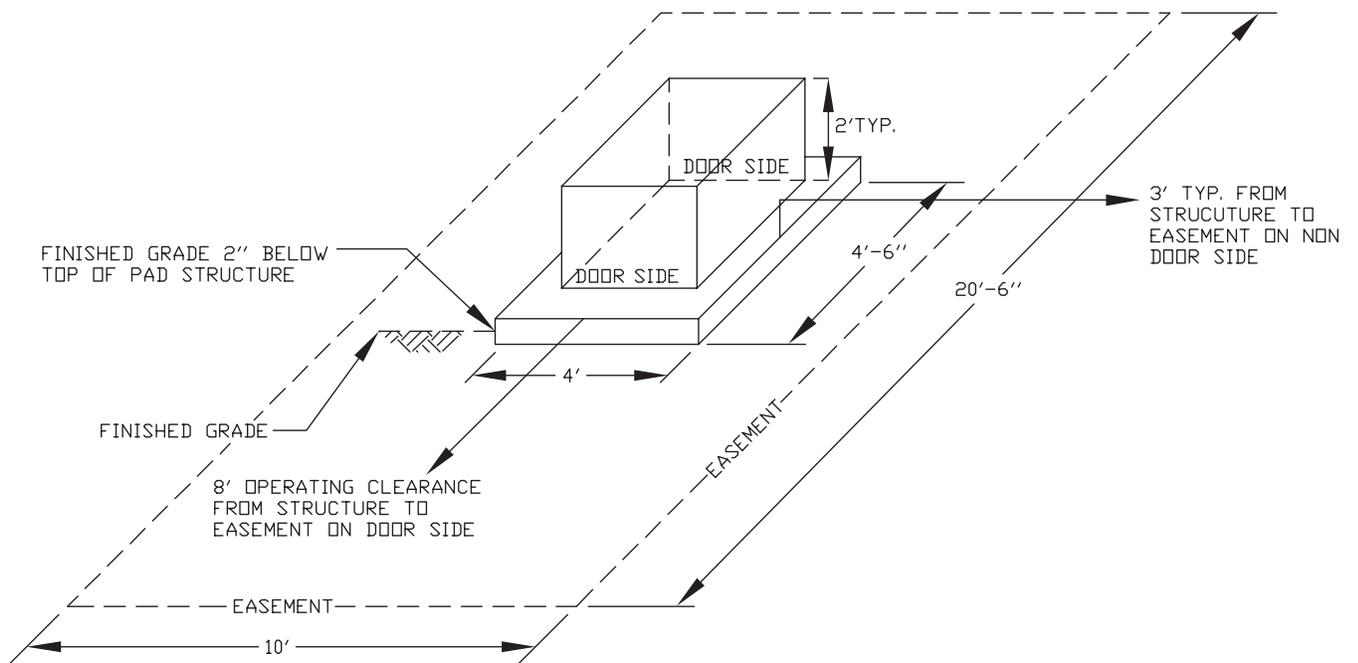
3 Ø TRANSFORMER (kVA)	SLAB BOX DIMENSIONS		SLAB BOX DEPTH	EASEMENT DIMENSIONS	
	A	B	C	D	E
45 - 500	6'	8'-6"	4'	12'	16'-6"
750 - 1000	8'	10'	4'	14'	18'-0"
1500 - 3750	10'	12'	5'-7"	16'	20'-0"

Distribution Standard References:  
ESR-4, UGS SS 504, UGS SS 530 & UGS SS 535

## Example of Load Break Fuse Cabinet (LBFC) Installation



## Clearances for LBFC



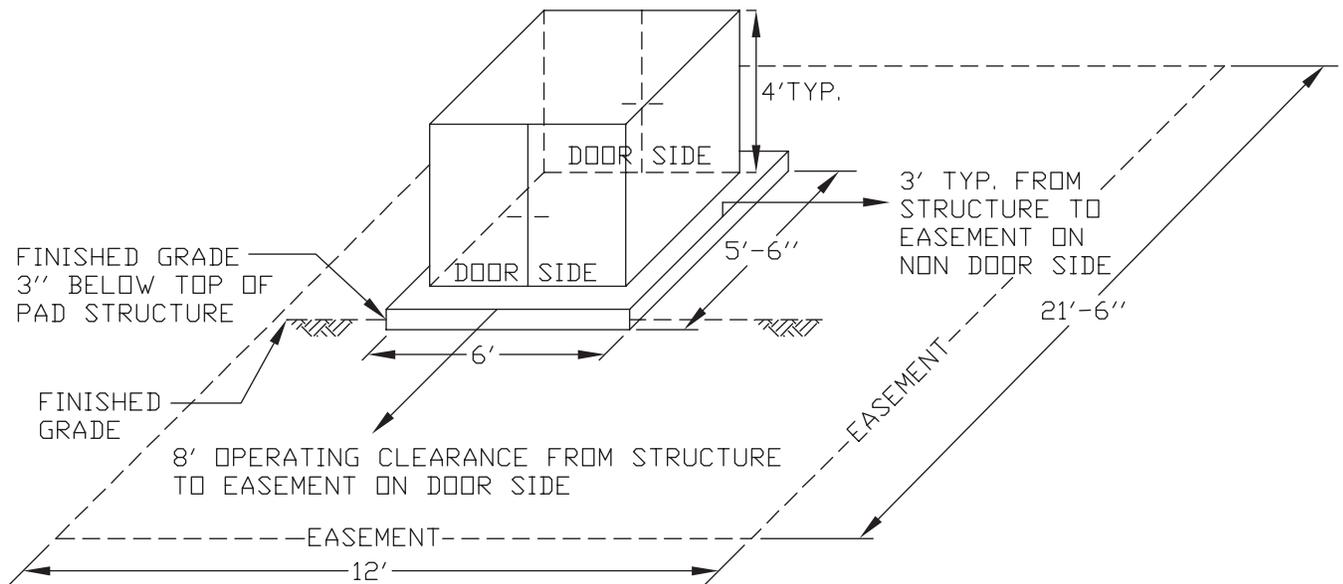
(DRAWING NOT TO SCALE)

Distribution Standard References:  
UGS SS 506

## Example of Capacitor Cabinet Installation



## Clearances for Capacitor Cabinet



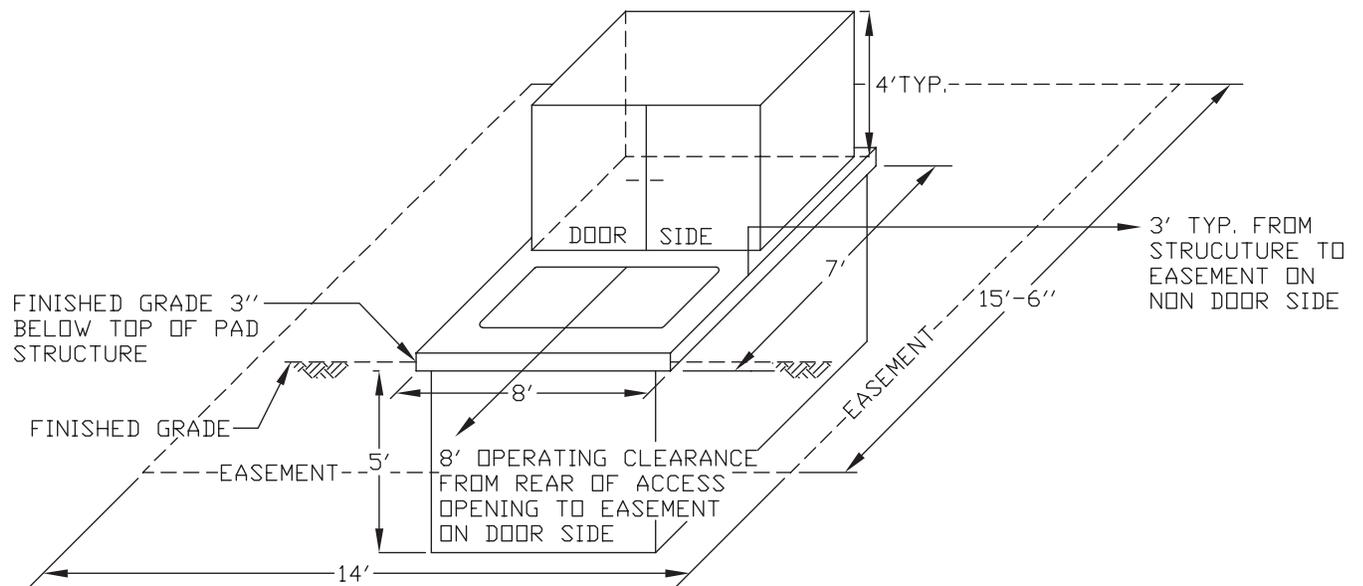
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Distribution Standard References:  
UGS SS 520

## Example of Pad-Mounted Gas Switch Installation



## Clearances for Pad-Mounted Gas Switch

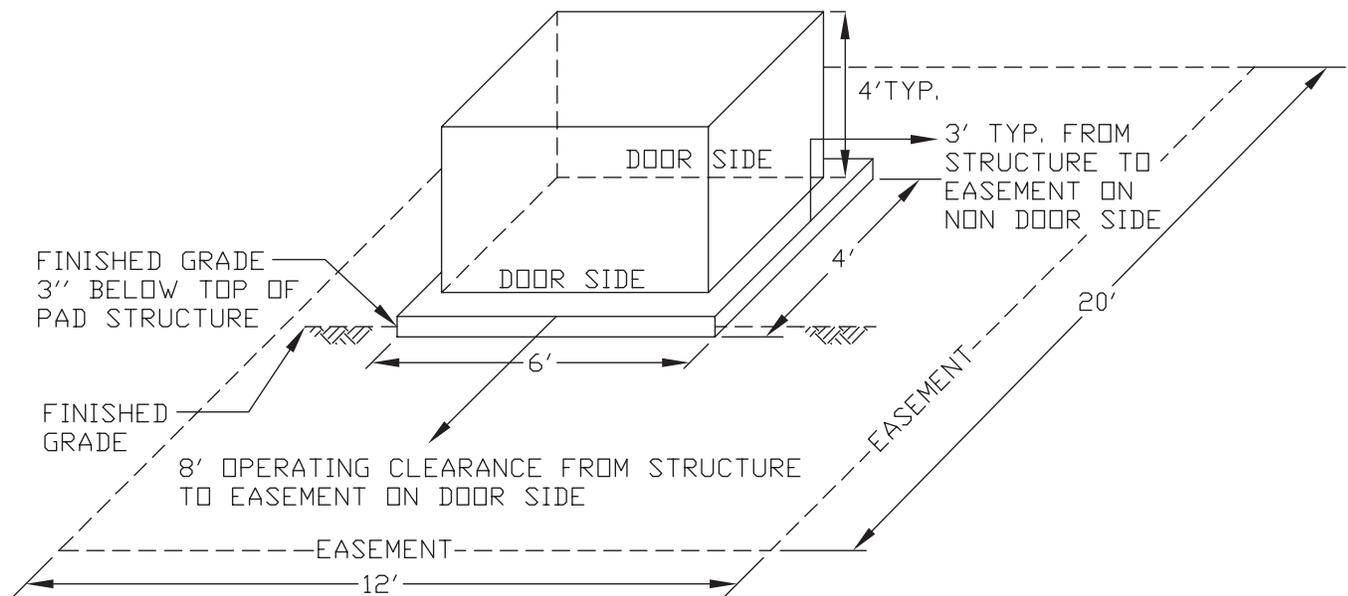


Distribution Standard References:  
UGS SS 536 & UGS SS 537

## Examples of PME-3, PME-4 or PME-5 Installations



## Clearances for PME-3 (See Note), PME-4 or PME-5



(DRAWING NOT TO SCALE)

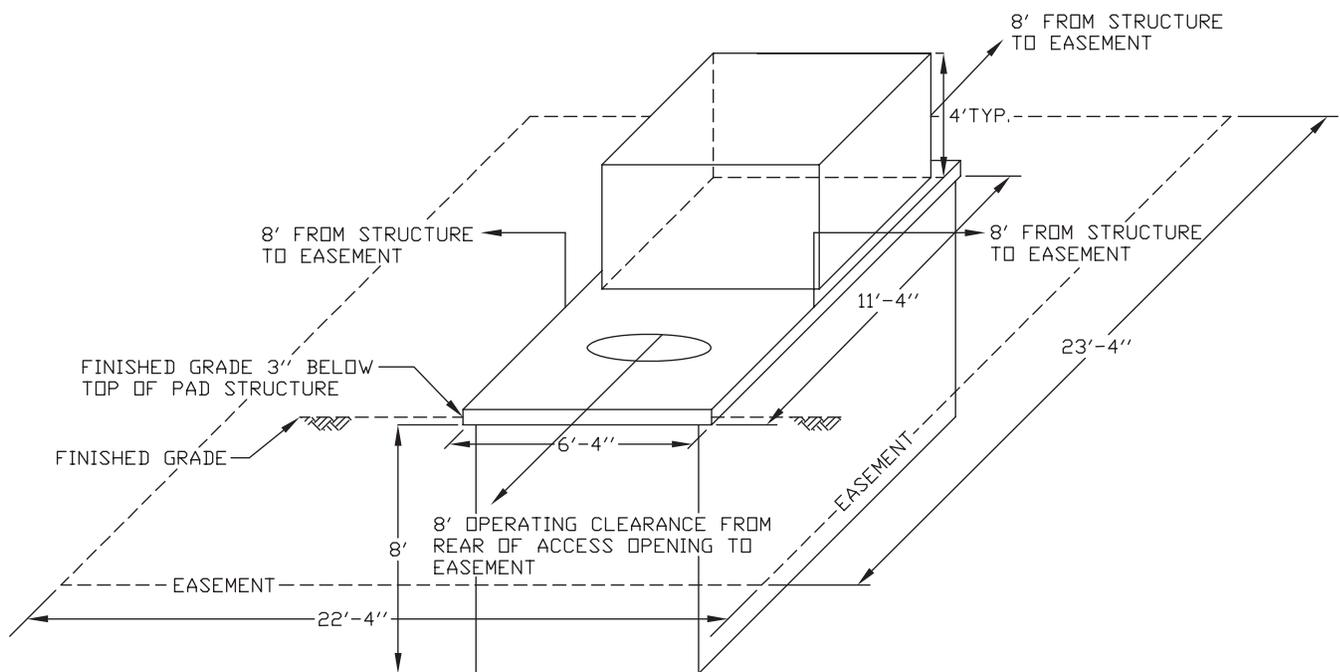
Note: 4-Foot clearance is required from edge of pad for automation.

Distribution Standard References:  
UGS SS 540 & UGS SS 591

## Examples of PME-6 through PME-12 Installations



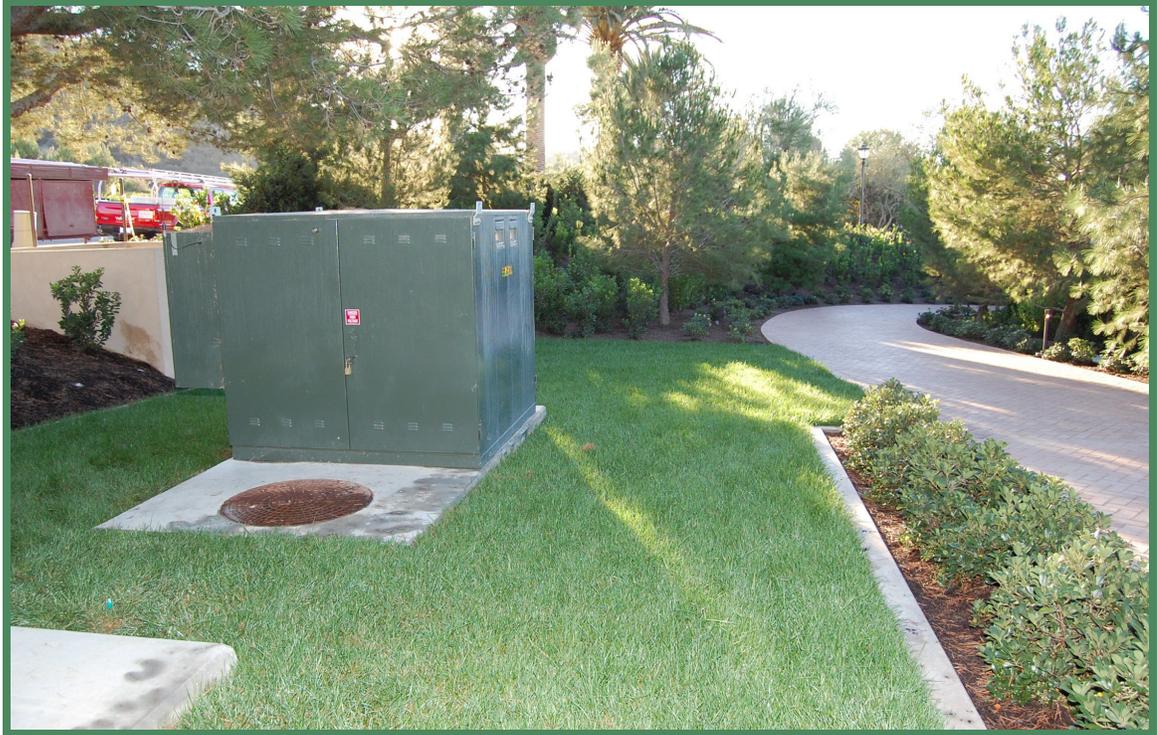
## Clearances for PME-6 through PME-12 Style Cabinets



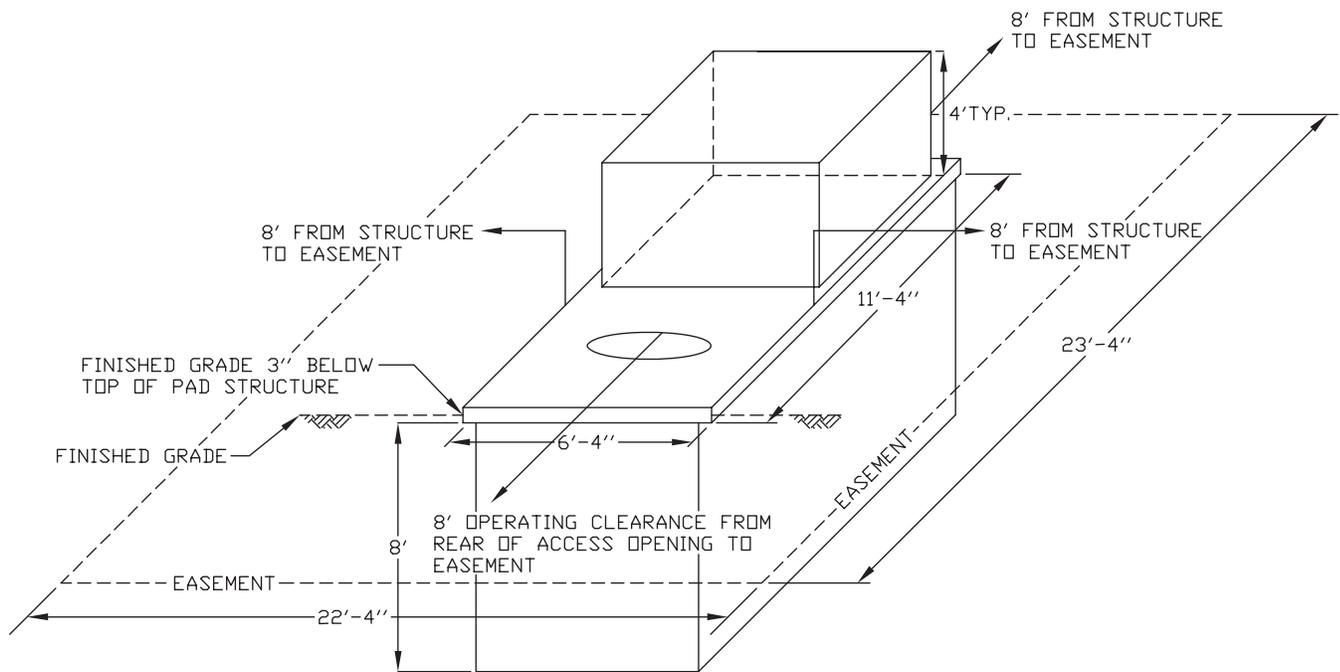
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Distribution Standard References:  
UGS SS 587 & UGS SS 590

## Examples of Primary Metering Cabinet Installations



## Clearances for Primary Metering Cabinet



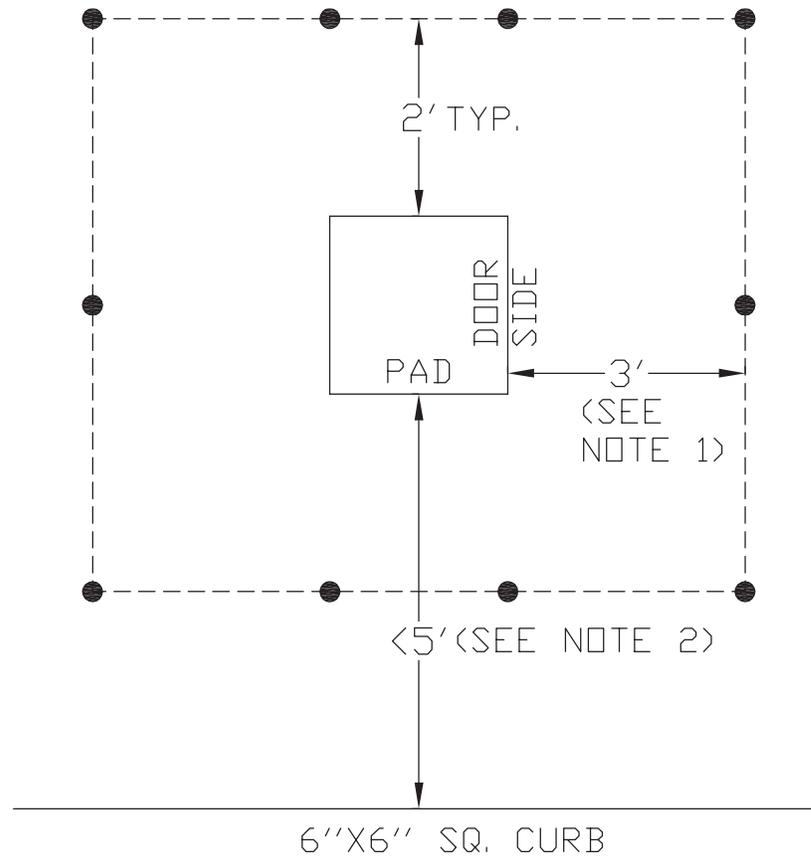
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Distribution Standard References:  
UGS SS 590

## Examples of Pad-Mounted Equipment with Protective Barriers



## Clearances for Pad-Mounted Equipment with Protective Barriers



**Notes:**

1. On door side of equipment, 3-foot clearance is required between the protective barriers and edge of pad.
2. Protective barriers are required when clearance between the equipment pad and curb is less than 5 feet.

Distribution Standard References:  
UGS MS 830

## Examples of Re-Painted Pad-Mounted Equipment



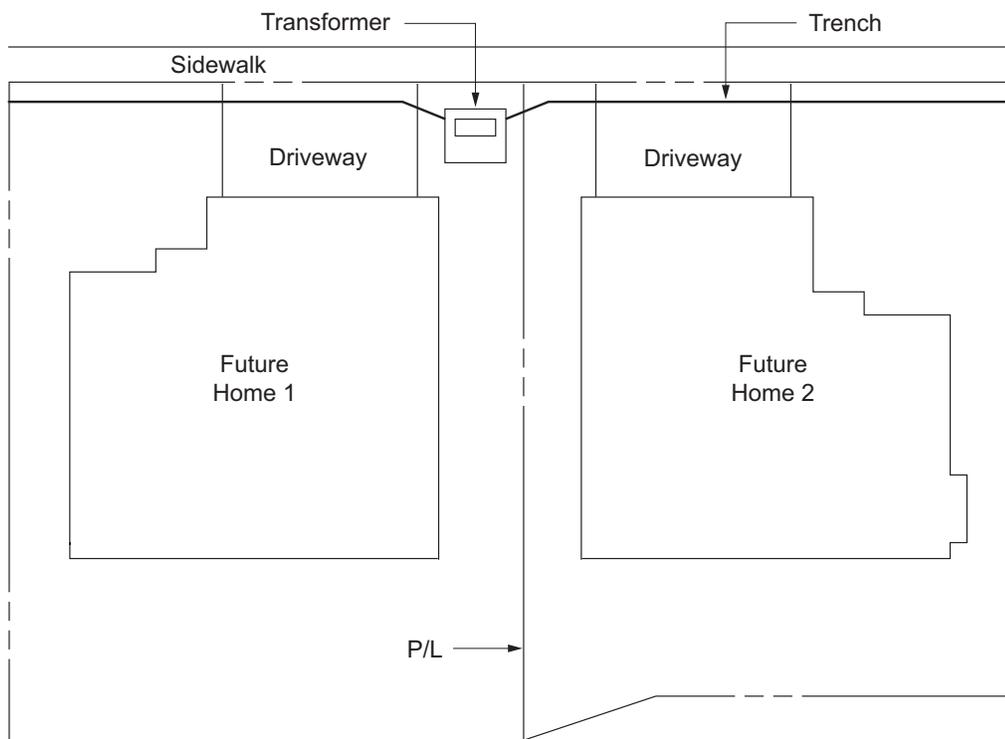
## Examples of Re-Painted Pad-Mounted Equipment



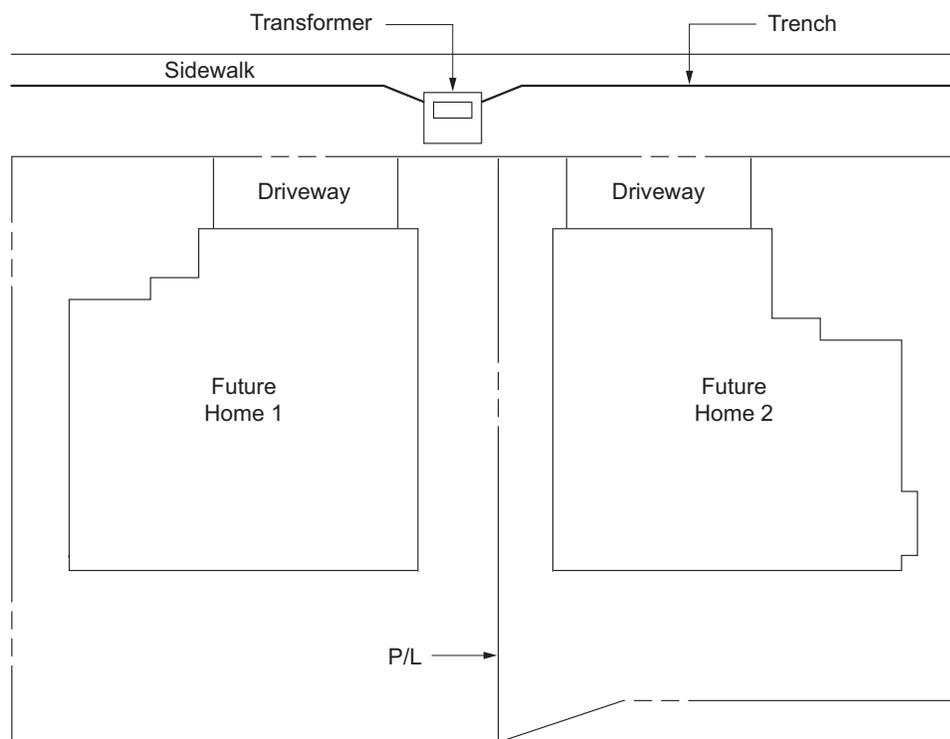
## Examples of Re-Painted Pad-Mounted Equipment



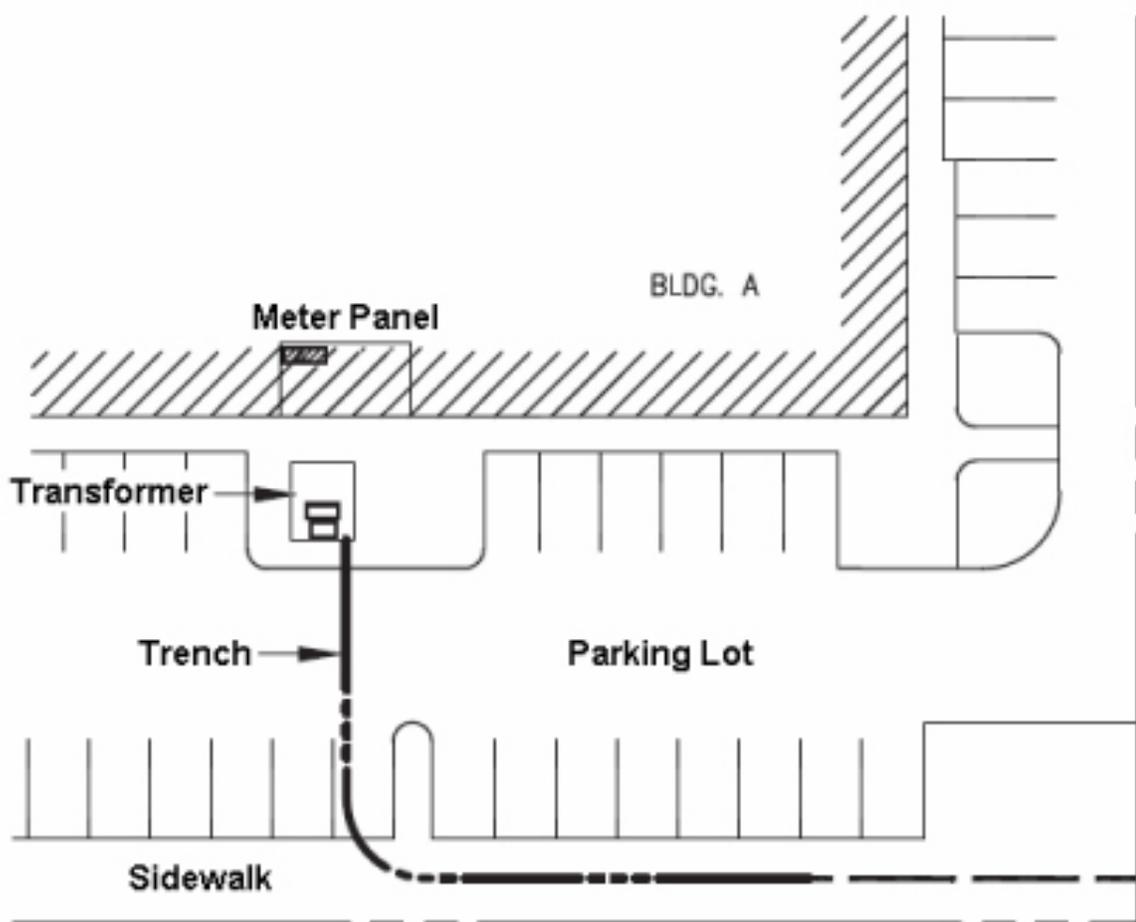
## Typical Pad-Mounted Equipment Location on Private Property



## Typical Pad-Mounted Equipment Location in Franchise Areas



## Typical Pad-Mounted Equipment Location in Commercial Areas



## Policy for Graffiti Abatement and Re-Painting of Edison TDBU Equipment By Third Parties

Edison has recently secured the services of a contractor to remove graffiti from pad-mounted transformers, capacitor enclosures and switch cabinets. This service may be performed on equipment franchise areas or on private property.

Edison may also grant authorization to change the color of pad-mounted transformers, capacitor enclosures and switch cabinets to third parties, such as government agencies, customers, service clubs and similar organizations. The re-painting may be performed on equipment in franchise areas or on private property.

The re-painting activity shall conform to the “Conditions for Painting Edison TDBU Equipment by Third Parties,” (form available in your local SCE Planning Office).

To ensure compliance with this policy and the “Conditions for Painting Edison TDBU Equipment by Third Parties,” the responsible design AOR representative shall conduct an orientation meeting with each requesting party, consisting of a review of SCE’s policy and conditions.

Third parties granted authorization to change the color of Edison TDBU equipment shall perform all the work, and absorb all costs for such activity.

For details and specific requirements regarding the graffiti abatement policy and re-painting of pad-mounted equipment policy, please contact the local SCE Planning Office in your area.

## Policy for Digital Wrap of SCE Equipment By Third Parties

Edison has provided commercial/residential developers and individual Edison customers with an opportunity to enhance the looks of Edison's pad-mounted equipment without compromising operational integrity. Digital Wrap can be installed around pad-mount equipment to closely match the surrounding landscape.

Digital Wrap activity shall conform to the "Conditions for Digital Wrap of SCE Equipment by Third Parties," (form available in your local SCE Planning Office).

To ensure compliance with this policy and the "Conditions for Digital Wrap of SCE Equipment by Third Parties", the responsible design AOR representative shall conduct an orientation meeting with requesting party, consisting of a review of SCE's policy and conditions.

Third parties authorized to install Digital Wrap materials on SCE equipment shall perform all the work and absorb all costs for such activity.

For details and specific requirements regarding the Digital Wrap Policy, please contact the local SCE Planning Office in your area.

## Landscaping Around Edison Pad-Mounted Equipment

Below are guidelines for landscaping around Edison pad-mounted equipment using shrubs, trees, low vegetation grass or fences.

- Landscape material shall be customer-owned and maintained
- Shrubs, trees or fences too close to equipment will be trimmed or removed in order to operate, inspect and perform maintenance to the equipment
- Landscape material and irrigation system shall meet required clearances per the AIM and UGS Manual, SS 602
- Contact local nursery or arborist for guidance on:
  - Popular shrubs or trees grown in the area
  - Size and spread of shrub or tree at maturity
- Refer to UGS Manual, SS 602 for details and specific requirements regarding landscaping around pad-mounted equipment