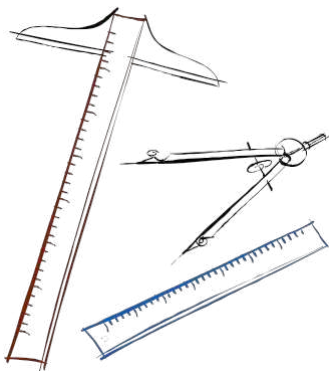


## Large Commercial Services & Developments

### Electric and Gas Service Package





## **Contents:**

- **The 15-Week Large Commercial Electric Service Process**
- **Documents Required for Electrical Service**
- **Large Commercial Electric and Gas Service Application**
- **Electric and Gas Equipment and Load Templates**
- **Specification Drawings for:**
  - **Utility Site Requirements (Example)**
  - **3-Phase Ductbank (Riser To Pad)**
  - **3-Phase Transformer Pad**
  - **3-Phase Transformer Pad W/Tap Box**
  - **3-Phase Riser Pole And Conduit Encasement**
  - **4 Ft Removable Bollard**
  - **Easement Requirements**
  - **Temporary Meter Loop (Example)**



## The 15-Week Large Commercial Electric Service Process

**(For All Pad-Mounted Transformer Services)**

<b>Customer's Steps</b> To get your service in the minimum time, please keep these steps on schedule.	<b>Step</b>	<b>Typical Elapsed Time <sup>[c]</sup></b>	<b>CPS Energy (CPSE) Steps</b>
<b>Deliver essential documents to CPS Energy<sup>[b]</sup></b> <ul style="list-style-type: none"> <li>Application</li> <li>Sealed site plan drawings, sealed loads, and sealed one line</li> </ul>	<b>A</b>	Clock is not started	<ul style="list-style-type: none"> <li>Collect information from customer.</li> </ul>
<b>Attend a pre-design meeting<sup>[b]</sup></b>	<b>B</b>	Clock is not started	<ul style="list-style-type: none"> <li>Engineer discusses needs with customer and review drawings.</li> </ul>
For new construction, please view the CPSE Web Portal to monitor the project schedule and the transactions between CPSE and you. (The Portal is not available for remodeling jobs.)	<b>0</b>	Clock Starts	<ul style="list-style-type: none"> <li>Pre-design meeting has been completed.</li> <li>A complete customer package has been received: Application, sealed site drawings, sealed electric loads, sealed one-line.</li> </ul>
<b>Host a site visit<sup>[b]</sup></b>	<b>1</b>	Week #1	<ul style="list-style-type: none"> <li>Evaluate site layout, utility coordination, customer construction coordination, construction access.</li> </ul>
<b>Receive and comply with CPSE construction drawings<sup>[b]</sup></b>	<b>2</b>	Week #2-5	<ul style="list-style-type: none"> <li>Design electric service; coordinate with the electric system (circuit capacity, fuses).</li> <li>Create a cost estimate and bill the customer.</li> </ul>
<b>Expedite payment to CPSE <sup>[a][b]</sup></b> <b>Provide third party easements <sup>[b][d]</sup></b>	<b>3</b>	Week #6-7	<ul style="list-style-type: none"> <li>Receive customer payment.</li> </ul>
<b>Form up ductbanks and pads and schedule CPSE inspection.</b> <ul style="list-style-type: none"> <li>Call 353-3373. A 24-hr notice is required</li> </ul> <b>Pour concrete and schedule CPSE inspection.</b> <ul style="list-style-type: none"> <li>This might be delayed until early in the next step to coordinate with CPSE construction</li> <li>A 3-day cure is required to set pad mounted transformers on slabs</li> </ul>	<b>4</b>	Week #8	<ul style="list-style-type: none"> <li>Prep for CPSE construction</li> <li>Check materials.</li> <li>Receive dig permits.</li> <li>Schedule crews.</li> <li>Inspect the forms for slabs and ductbank.</li> <li>Inspect concrete.</li> </ul>
<b>CPSE crews will leave the site if the following conditions are not satisfactory.</b> <ul style="list-style-type: none"> <li>Maintain stakes and visible street address.</li> <li>Remove debris and maintain construction access to site for CPSE crews.</li> </ul> <b>Notify CPSE<sup>[b]</sup> that site is ready to install meter</b> <ul style="list-style-type: none"> <li>"Site ready" includes completed installation of meter loop, transformers, conduits, and power cables on the CPSE side of the meter.</li> </ul>	<b>5</b>	Week #9-13	<ul style="list-style-type: none"> <li>Construct CPSE facilities.</li> <li>Install transformer.</li> </ul>
	<b>6</b>	Week #14-15	<ul style="list-style-type: none"> <li>Set meter, initiate electric service.</li> </ul>

- If a Customer Step is late, the Clock stops. Please stay on top of payments and meter loop completion.
- Please view the web portal to determine your CPS Energy representative. You may also call Commercial Services with your **Work Request #** to identify your CPS Energy representative. (210.353.4050)
- Elapsed times are not a guarantee. More than fifteen weeks will probably be needed for long ductbanks or upgrades to CPS Energy's infrastructure.
- Customer is required to provide CPS Energy with the required easements prior to being energized.



## Documents Required for CPS Energy Pad-Mounted Transformer Service

**\*\*\*Documents must be SEALED ENGINEERED DRAWINGS\*\*\***

### Utility Site Plan – **Hard Copy/PDF and in AutoCAD 2000 format**

- Desired Route of Overhead Primary
- Riser Pole Location (inline risers typically not allowed)
- Desired Route of Underground Primary ductbank & manholes
- Detailed transformer location
  - Show Perimeter Clearance
  - Dimension from building/structures
  - Show side the transformer doors will open
- Meter Location (dimension if other than side of transformer)
- Location of main distribution switch and/or tap-box and secondary routes from transformer

### Electrical One-line Diagram – **Hard Copy/PDF and in AutoCAD 2000 format**

- Secondary Cable
  - Size, Number per phase, Total Number of Secondary Cables, Type (Cu or Al), Neutral Size

Secondary exiting transformer by:

- Conduit (number & size), number of spares
- Wireway Size
- Cable Tap-Box (Customer to provide cut sheet)
- Auto Throwover Switch for Generator Installation (Customer to provide cut sheet)
- Meter Location (If meter modules are used customer to provide cut sheet and voltage drop calculations from transformer to meter modules)

### Electrical Load Summary – **Hard Copy/PDF and in AutoCAD 2000 format**

- Building Square Footage
- Hours and days of operation
- Customer's Service Voltage
- Connected Load in kVA (Reference Load Information Sheet for Break Down)
  - Existing Load if applicable, A/C & Heat, Lighting, Motor Load, Receptacles, Other, Total
  - Unusual loads require discussion

### Electrical Load Panels – **Hard Copy/PDF and in AutoCAD 2000 format**

**\*\*\*Documents must be SEALED ENGINEERED DRAWINGS\*\*\***



# Commercial Electric/Gas Service Application

"Please e-mail completed Application form to [ce@cpsenergy.com](mailto:ce@cpsenergy.com) or call (210) 353-4050 for mailing instructions."

**Application must be completed and accompanied by the following:**  
Site Plan, Electric and Gas Load Information, Building Square Footage, Service Voltage, Meter Loop Diagram, Gas Pressure, Environmental Survey  
(Please print or type)

## \* REQUIRED TO INITIATE WORK REQUEST

\* Date

\* Project Name:

\* Project Address:

\* Electrical Contractor  \* Phone #

\* Email

\* Developer Contact  \* Phone #

\* Email

\* General Contractor Contact  \* Phone #

\* Email

\* Engineer Contact  \* Phone #

\* E-mail

<b>Business Type</b>	Bank <input type="checkbox"/>	Hospital <input type="checkbox"/>	Retail Center <input type="checkbox"/>
	Church <input type="checkbox"/>	Hotel <input type="checkbox"/> # of rooms <input type="text"/>	Retirement Center <input type="checkbox"/>
	Comm Office <input type="checkbox"/>	Industrial/Manufacturing <input type="checkbox"/>	School <input type="checkbox"/>
	Department Store <input type="checkbox"/>	(Specify Type) <input type="text"/>	Warehouse <input type="checkbox"/>
	Grocery Store <input type="checkbox"/>	Restaurant <input type="checkbox"/>	Other <input type="checkbox"/> (Specify Type) <input type="text"/>

**Service Type**

Overhead Service  Gas  \* Service Required Date

Underground Service  Meter Only  \* Building Square Footage

3ph Pad Mount Service  Remodel/Upgrade

(NOTE: 300kva demand load required to qualify for 3ph padmount transformer)

\*Remodel/Upgrade Meter Number

## \* REQUIRED TO INITIATE WORK REQUEST

**Customer Information**

\* Customer of Record  Open Charge Yes  No

\* Billing Address  \* Phone #

\* Fax #

\* Tax ID#

<b>Associated WR #'s (CPS Energy Use Only)</b>		Engineer <input type="text"/>	Phone <input type="text"/>
IDS <input type="text"/>		Designer <input type="text"/>	Phone <input type="text"/>
UG <input type="text"/>	Gas <input type="text"/>	Other <input type="text"/>	
OH <input type="text"/>		Other <input type="text"/>	

### Comments:

Developer/Representative Signature

CPS Energy Representative Signature

Print Name



## LOAD INFORMATION

**\*\*\*LOAD INFORMATION MUST BE SIGNED/SEALED BY A PROFESSIONAL ENGINEER\*\*\***

Project\Business: \_\_\_\_\_

Address: \_\_\_\_\_

Power Requirements:

Voltage:     120/240 1-Phase                       120/208Y 3-Phase  
                   277/480Y 3-Phase                       Other: \_\_\_\_\_

**ELECTRICAL EQUIPMENT**

	kVA
A/C	
LIGHTING	
RECEPTACLES	
HEATING	
WATER HEATER	
COMPUTERS	
REFRIGERATION	
ELEVATORS	
MOTORS	
OTHER	
<b>TOTAL</b>	

**GAS EQUIPMENT**

<i>Pressure Required</i> _____	BTU
FURNACE	
BOILER	
COOKING	
WATER HEATER	
POOL\SPA HEATER	
GAS LIGHTING	
OTHER EQUIPMENT	
<b>TOTAL</b>	



# CUSTOMER ENVIRONMENTAL REQUIREMENTS CHECKLIST

PROJECT NAME and ADDRESS: \_\_\_\_\_

All construction work performed by CPS Energy in providing service to our customers must comply with all applicable environmental regulations. CPS Energy encourages customers to include CPS Energy's work in any required permits/plans that are obtained by the customer for their projects to expedite environmental compliance review and to keep the project on schedule.

This Checklist must be filled out completely and submitted with the appropriate Application for service in order to be processed. CPS Energy recommends that customers submit all required documentation as soon as possible in order to avoid any potential delays.

Please refer to the CPS Energy Environmental Compliance Review document for additional information or contact your CPS Energy representative.

Instructions: For each Environmental Category below, please check the one box that applies and specify whether CPS Energy's offsite work will be covered in customer's permits/plans.

Environmental Category	Environmental Form	Copy of form provided <u>with</u> Application	Copy of form to be provided <u>after</u> Application	Form Not Applicable	CPS offsite work covered? Y/N/TBD
Storm Water Pollution Prevention	Storm Water Pollution Prevention Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___
Endangered Species Act (Karst Zones 1 & 2)	Habitat Compliance Form	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___
Endangered Species Act (Songbirds)	Habitat Compliance Form, and	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___
	Tree Permit or Tree Affidavit Waters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___
of the US	Individual or Nationwide Permit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___
Cultural and Historic Resources	Cultural and Historic Resources Letter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___
Edwards Aquifer	Water Pollution Abatement Plan or Contributing Zone Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___
Other (Specify): _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	___

Federal Project Yes  No

Comments:

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

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



# CPS ENERGY

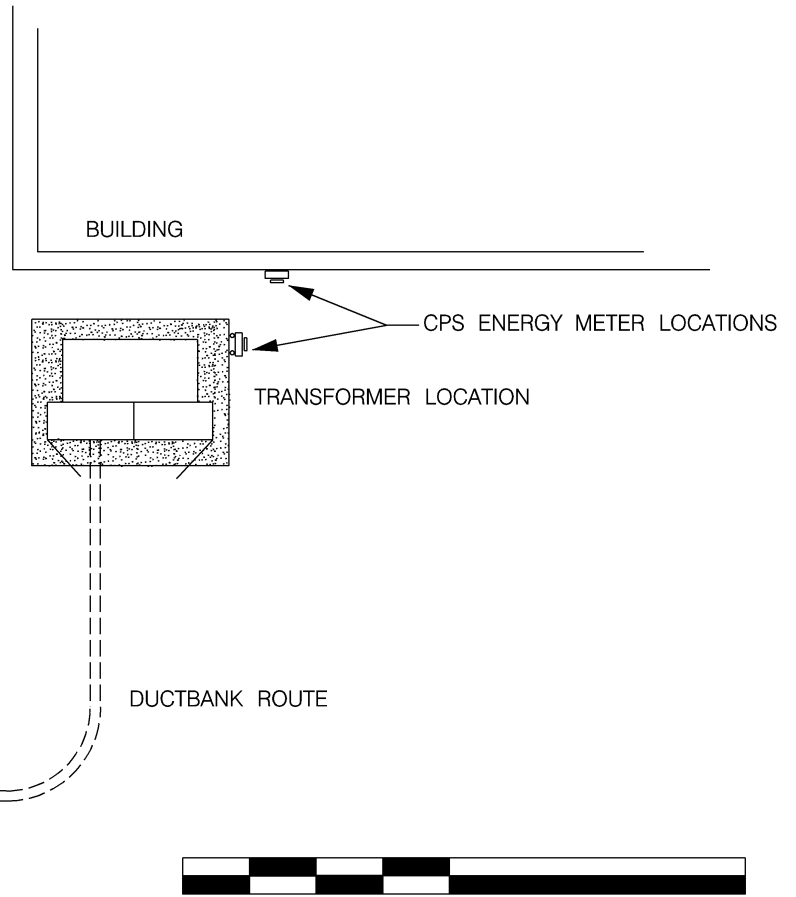
NOTE: FOR INFORMATION ONLY NOT FOR CONSTRUCTION

## PADMOUNT TRANSFORMER INSTALLATION, UNDERGROUND SERVICE

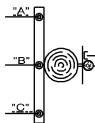


### ITEMS NEEDED ON UTILITY SITE PLAN:

- \* RISER POLE LOCATION
- \* TRANSFORMER LOCATION
- \* CPS ENERGY METER LOCATION
- \* DUCTBANK ROUTE
- \* EXISTING UTILITIES

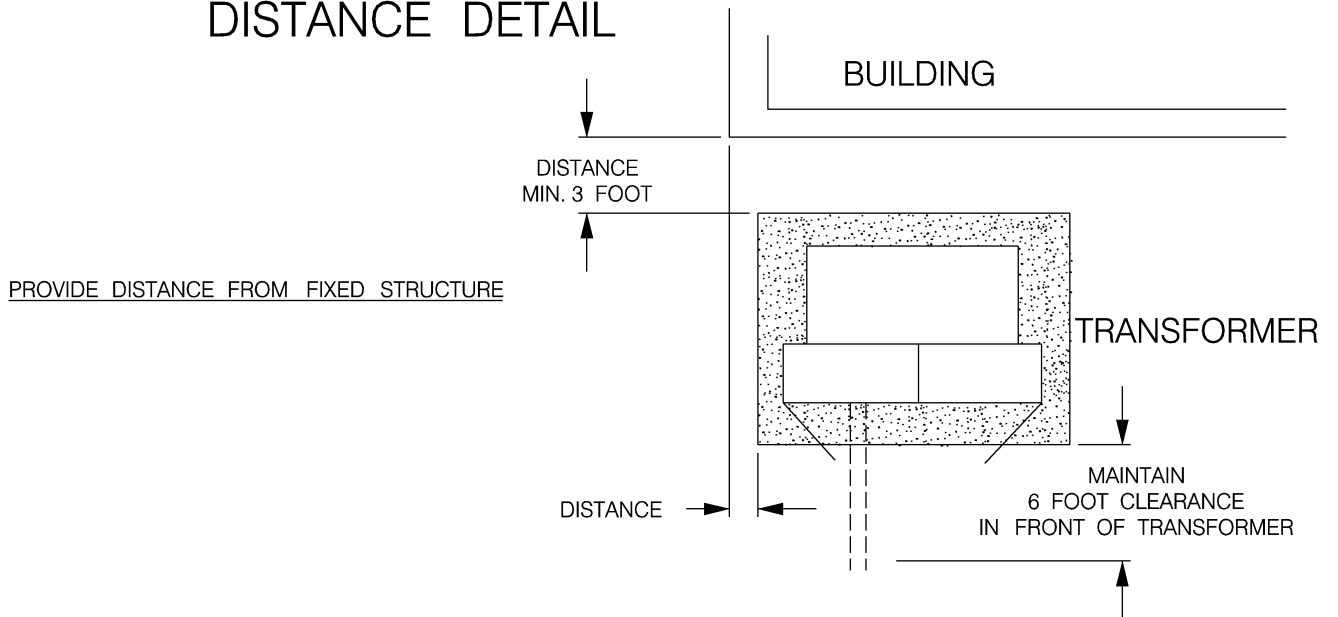


RISER POLE LOCATION



SCALE (Customer to provide documents to engineer scale)

## PADMOUNT TRANSFORMER INSTALLATION, DISTANCE DETAIL

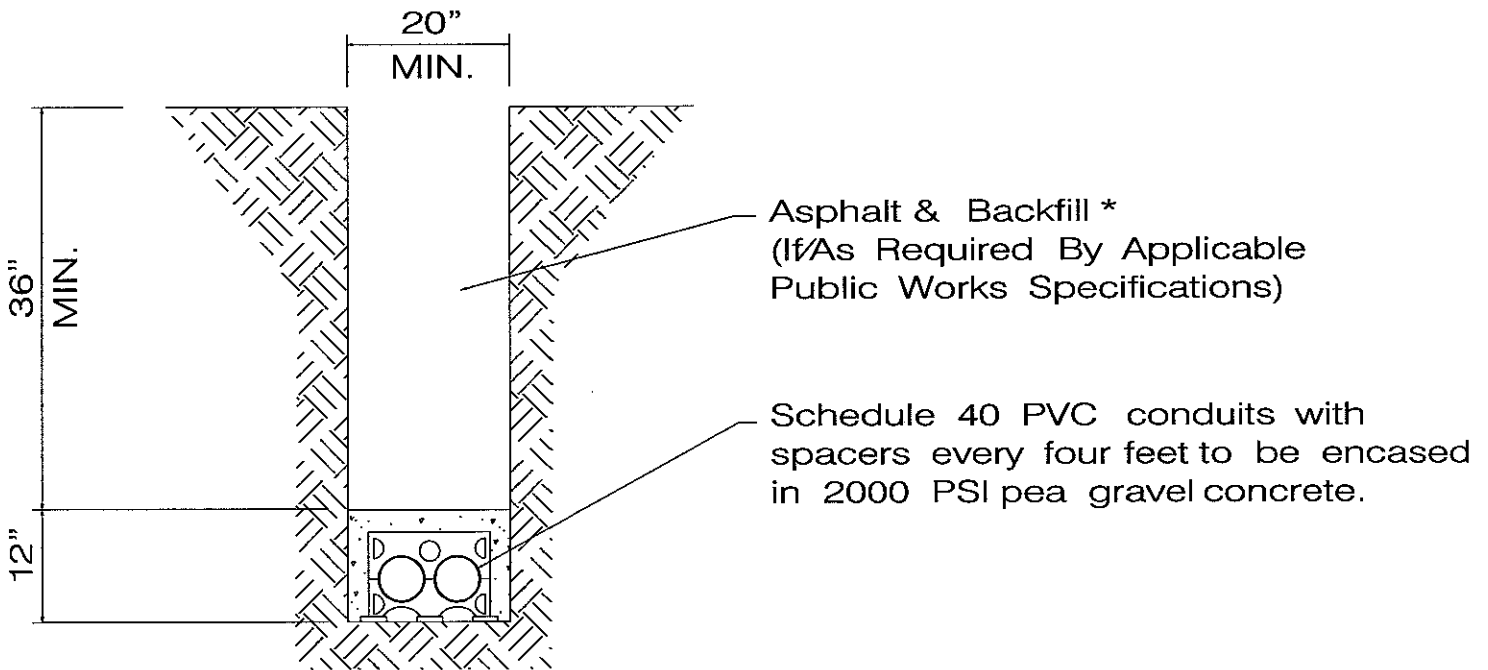






NOTE:

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NOT FOR CONSTRUCTION



Asphalt & Backfill \*  
(If/As Required By Applicable  
Public Works Specifications)

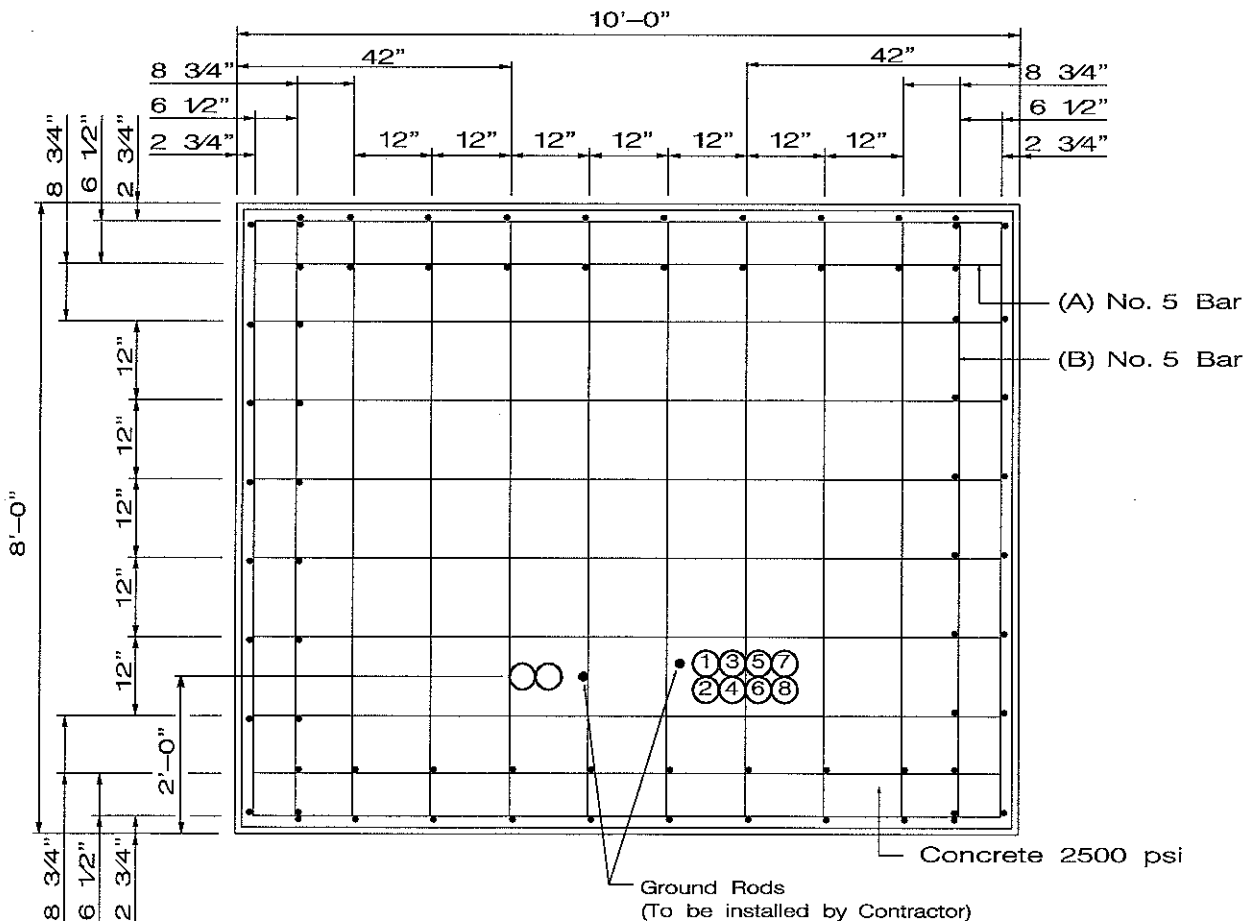
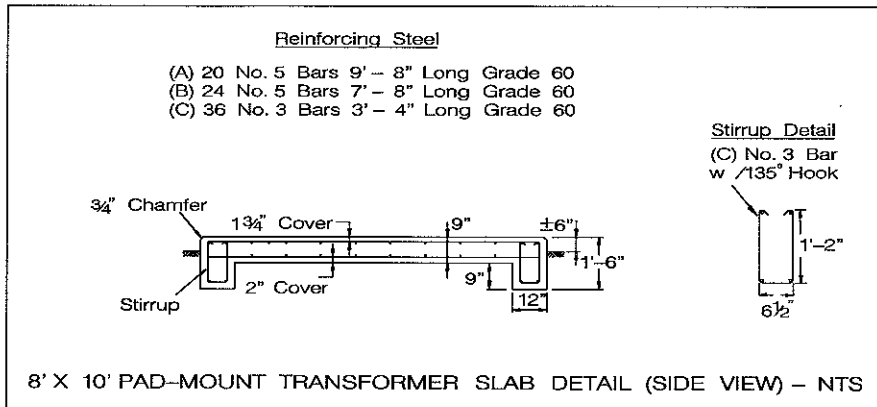
Schedule 40 PVC conduits with  
spacers every four feet to be encased  
in 2000 PSI pea gravel concrete.

2-4" DUCTLINE DETAIL



NOTE:

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NOT FOR CONSTRUCTION



THERE SHALL BE NO PIPES, CONDUIT, ETC. UNDER THE SLAB EXCEPT THOSE NECESSARY TO SUPPLY PRIMARY TO THE TRANSFORMER AND THOSE TO SUPPLY THE ELECTRIC LOAD



NOTE:

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**TRANSFORMER SLAB REQUIREMENTS FOR WIREWAY APPLICATIONS:**

CUSTOMER'S EQUIPMENT SLAB SHALL INTERFACE WITH THE CPS ENERGY TRANSFORMER SLAB UTILIZING ONE OF THE FOLLOWING OPTIONS TO PREVENT DIFFERENTIAL MOVEMENT:

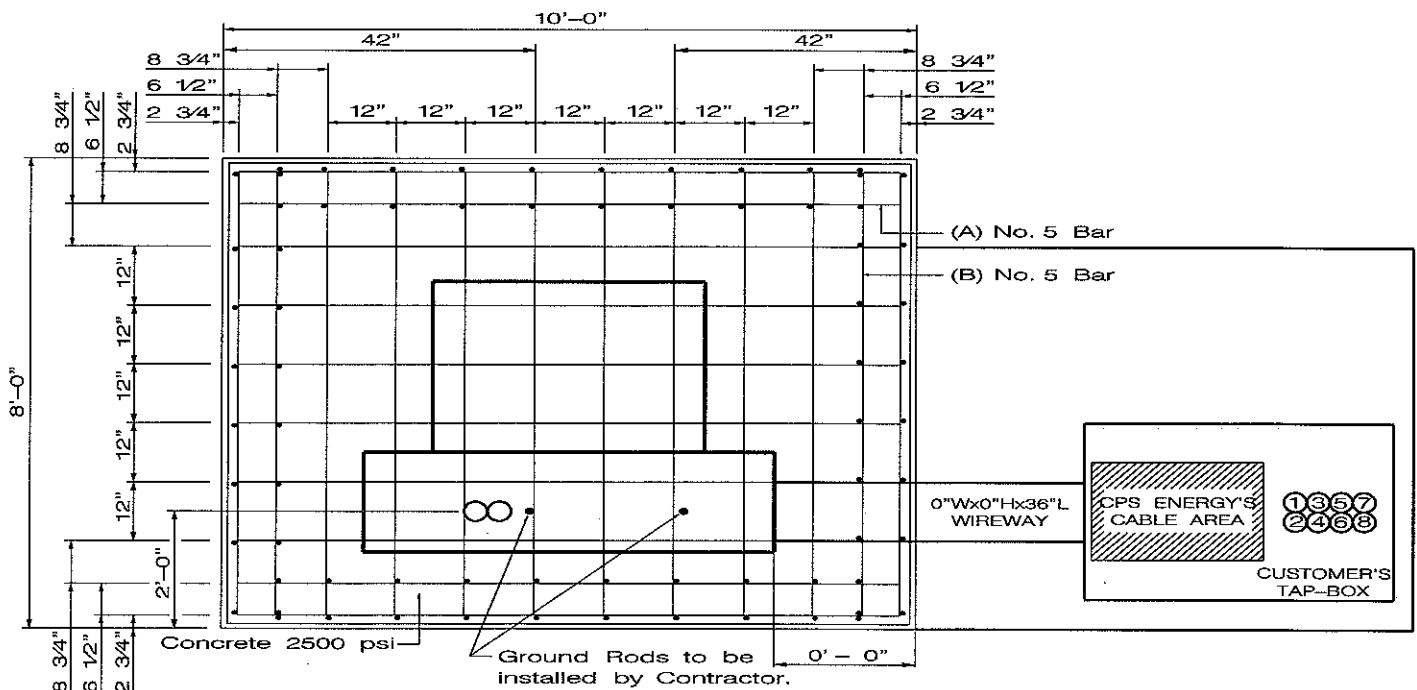
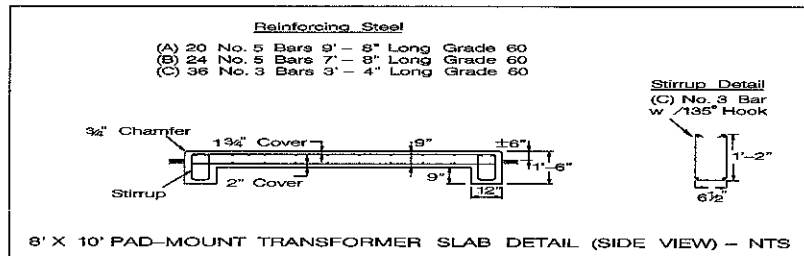
1. TOP AND BOTTOM SLAB REINFORCEMENT INSTALLED BY CUSTOMER MUST BE LAP SPLICED TO THE No.5 STEEL REINFORCING BARS OF THE CPS ENERGY TRANSFORMER SLAB. THE LAP SPLICES SHALL BE A MINIMUM OF 31 INCHES IN LENGTH.

OR

2. TOP AND BOTTOM No.5 STEEL REINFORCING BARS OF THE CPS ENERGY TRANSFORMER SLAB MAY BE INSTALLED OF SUCH LENGTH TO PROVIDE CONTINUOUS REINFORCEMENT ACROSS BOTH SLABS.

CPS ENERGY RECOMMENDS THAT THE CUSTOMER EQUIPMENT SLAB BE SUPPORTED BY A PERIMETER BEAM THAT MATCHES THE DEPTH AND WIDTH OF THE CPS ENERGY TRANSFORMER SLAB BEAM. IF PROVIDED, ALL CUSTOMER PERIMETER BEAM REINFORCING STEEL SHALL BE LAP SPLICED TO THE CPS ENERGY TRANSFORMER SLAB PERIMETER BEAM REINFORCING STEEL A MINIMUM OF 31 INCHES IN LENGTH.

THE CPS ENERGY TRANSFORMER SLAB AND CUSTOMER EQUIPMENT SLAB SHALL BE POURED MONOLITHICALLY.

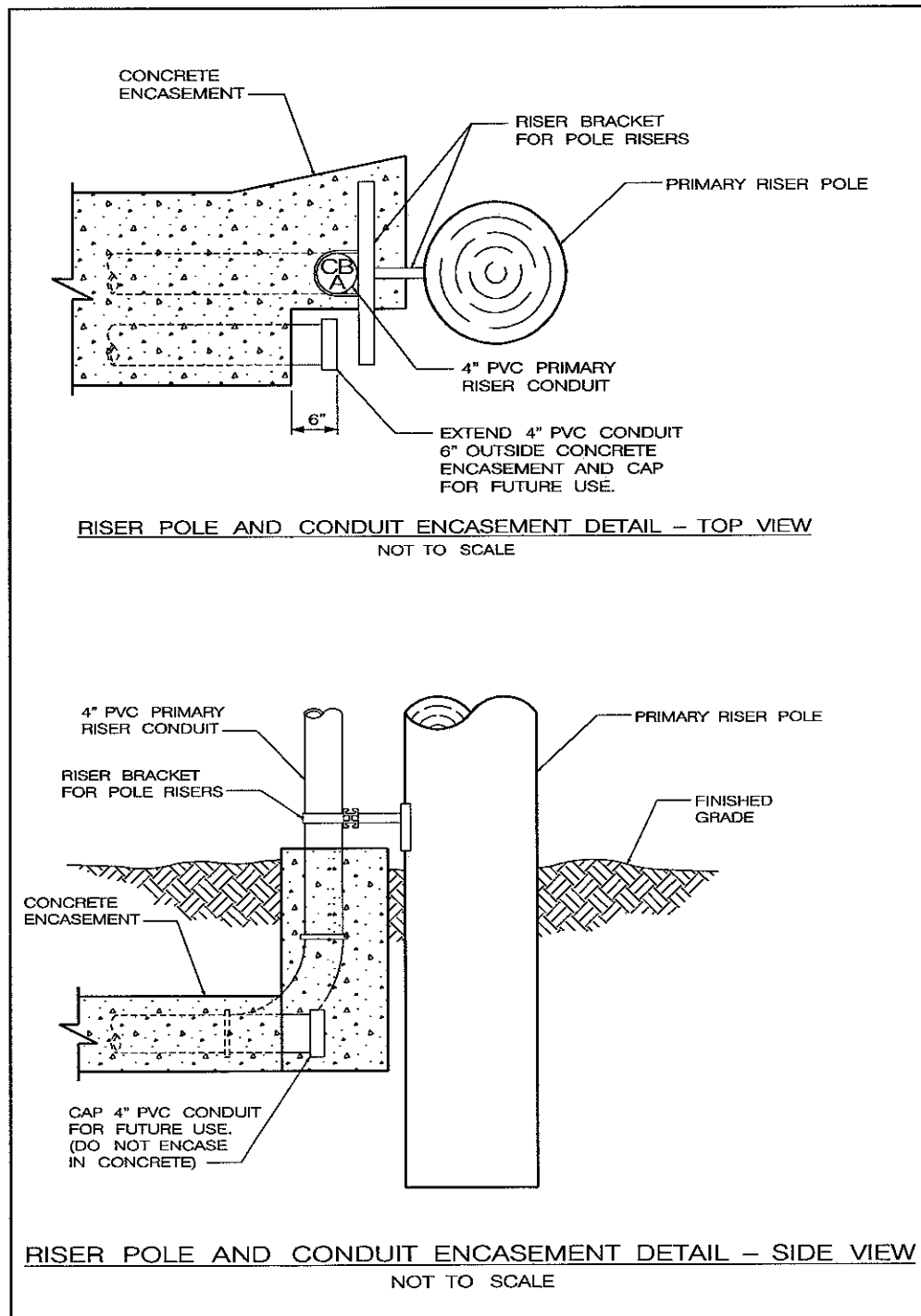


THERE SHALL BE NO PIPES, CONDUIT, ETC. UNDER THE SLAB EXCEPT THOSE NECESSARY TO SUPPLY PRIMARY TO THE TRANSFORMER AND THOSE TO SUPPLY THE ELECTRIC LOAD



NOTE:

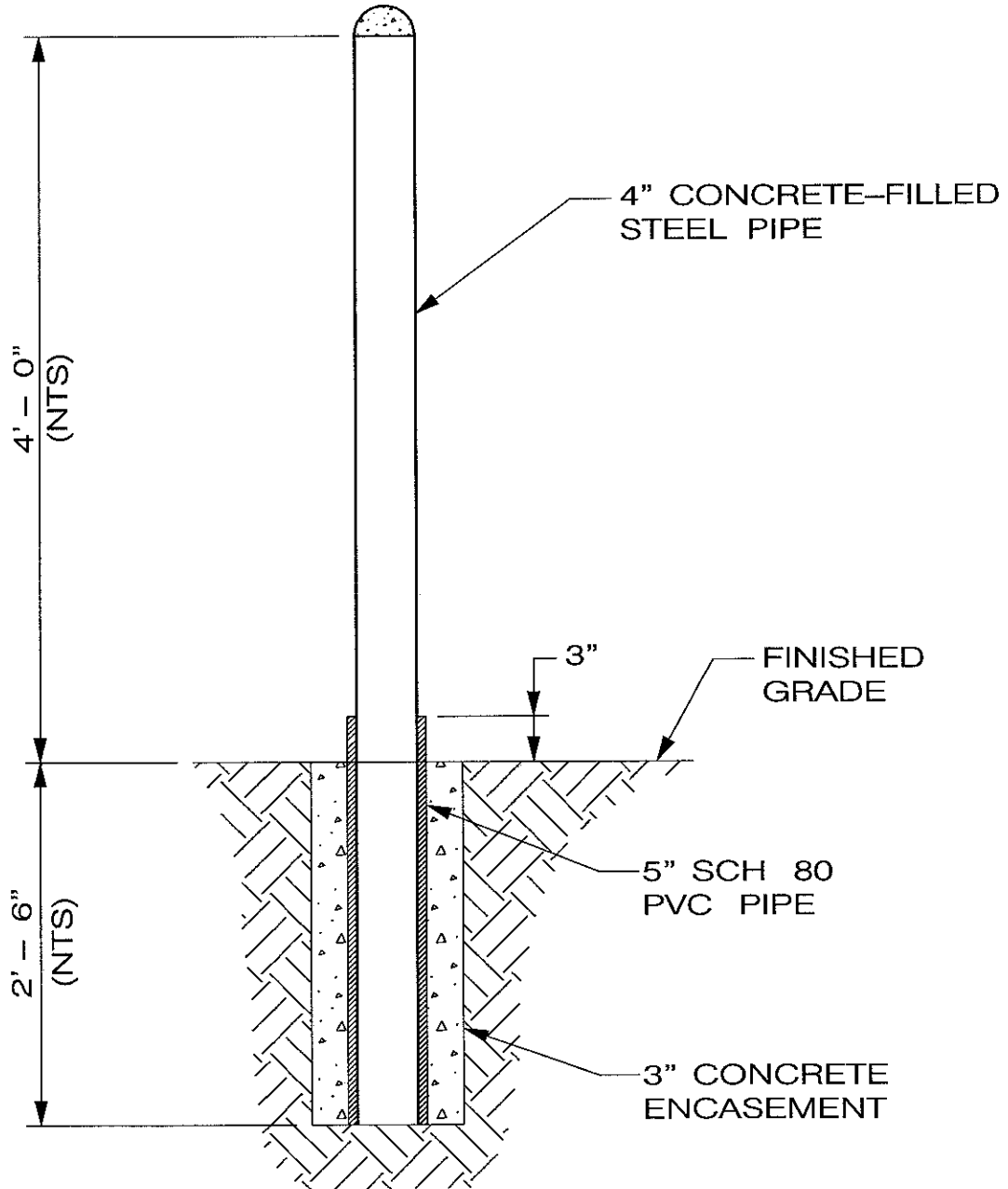
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NOTE:

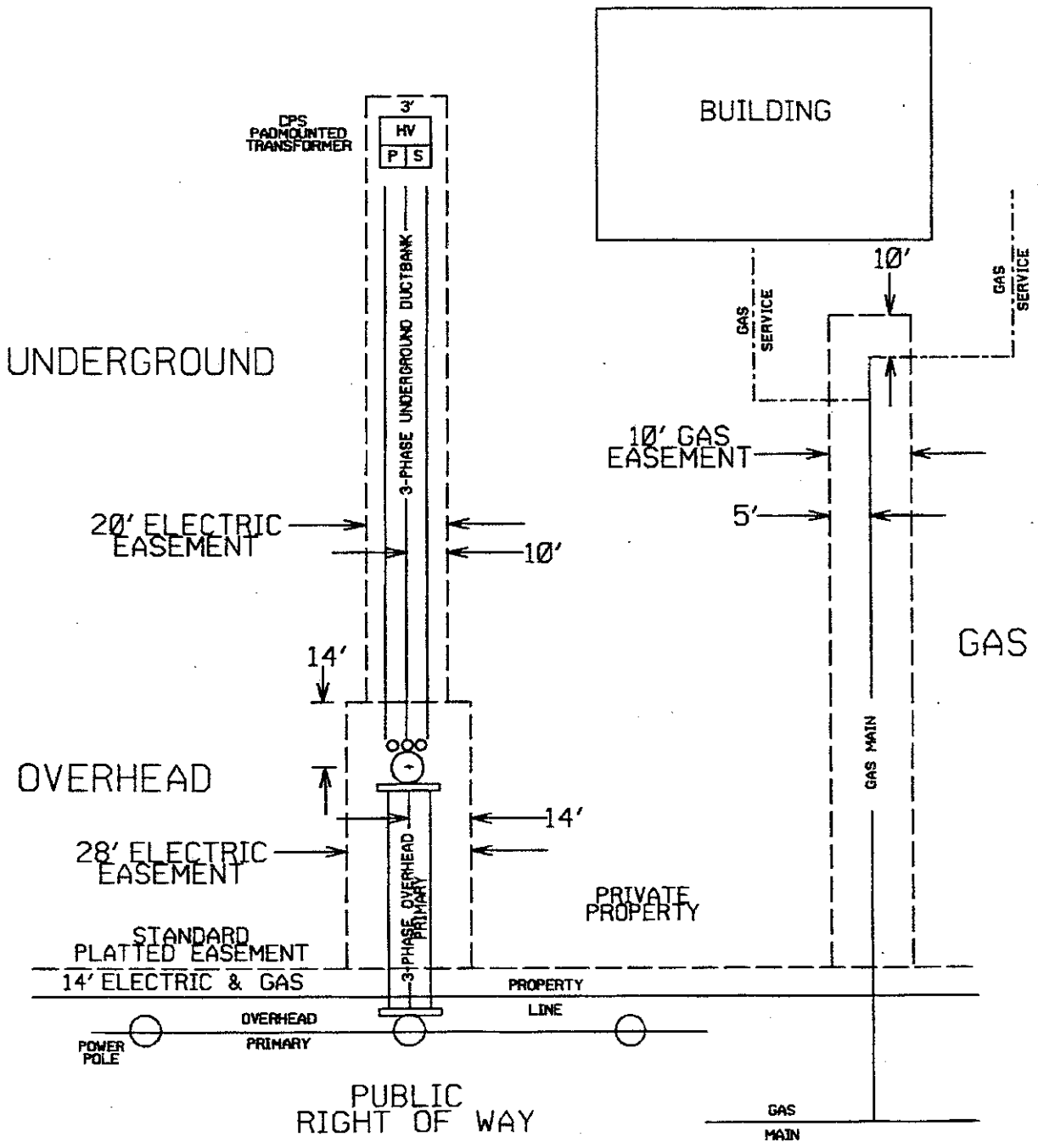
FOR INFORMATION ONLY  
NOT FOR CONSTRUCTION



### 4" REMOVABLE BOLLARD SPECIFICATION

PROFILE VIEW - NOT TO SCALE

# CITY PUBLIC SERVICE REQUIRED EASEMENTS (NOT TO SCALE)

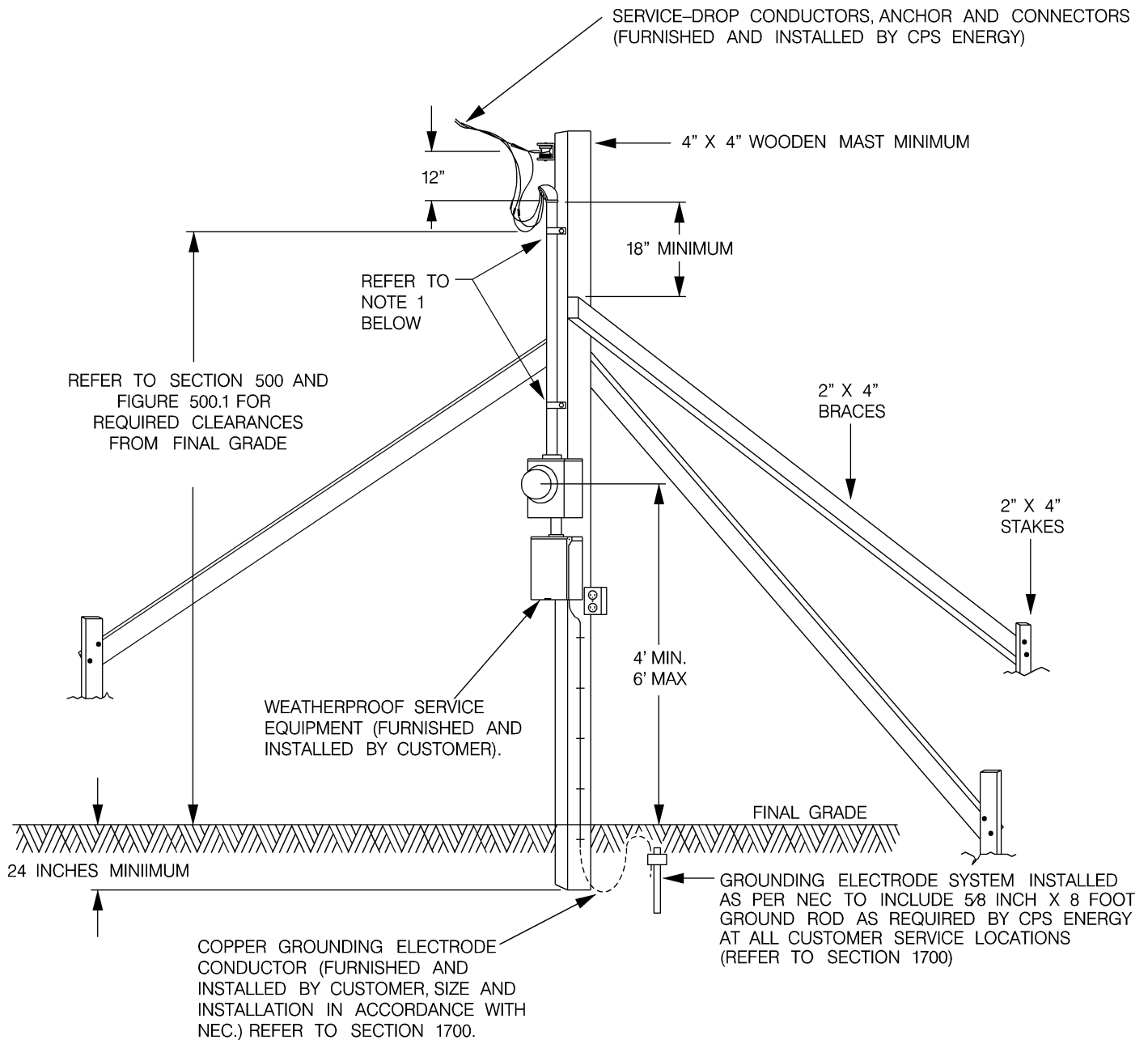




# CPS ENERGY

NOTE: FOR INFORMATION ONLY NOT FOR CONSTRUCTION

## TEMPORARY METER INSTALLATION, OVERHEAD SERVICE



### NOTES: (SEE CPS ENERGY ELECTRIC SERVICE STANDARDS BOOK)

1. SERVICE RACEWAY SHALL BE SUPPORTED WITH 2- HOLE STRAPS ATTACHED WITH SCREWS AND INSTALLED WITHIN 6 - 12 INCHES OF SERVICE HEAD AND OF METER ENCLOSURE.
2. 125- AMPERE METER SOCKET WITH 1 1/4 INCH HUB FURNISHED, INSTALLED AND WIRED BY CUSTOMER. REFER TO FIGURE 1800.1.
3. SERVICE OUTLET SHALL BE FURNISHED AND INSTALLED BY CUSTOMER. RACEWAY SHALL BE EMT, RMC OR IMC. MINIMUM SIZE OF SERVICE RACEWAY IS 1 1/4 INCH.
4. CUSTOMER SHALL CONSTRUCT THE TEMPORARY SERVICE INSTALLATION AS SHOWN ABOVE AND MAINTAIN IT IN A SAFE CONDITION THROUGHOUT ITS PERIOD OF USE. CPS ENERGY RESERVES THE RIGHT TO DISCONNECT DAMAGED OR UNSAFE TML'S.
5. THE TEMPORARY SERVICE INSTALLATION MUST BE IDENTIFIED WITH A PROPER SERVICE ADDRESS BEFORE CPS WILL CONNECT AND INSTALL A METER.

