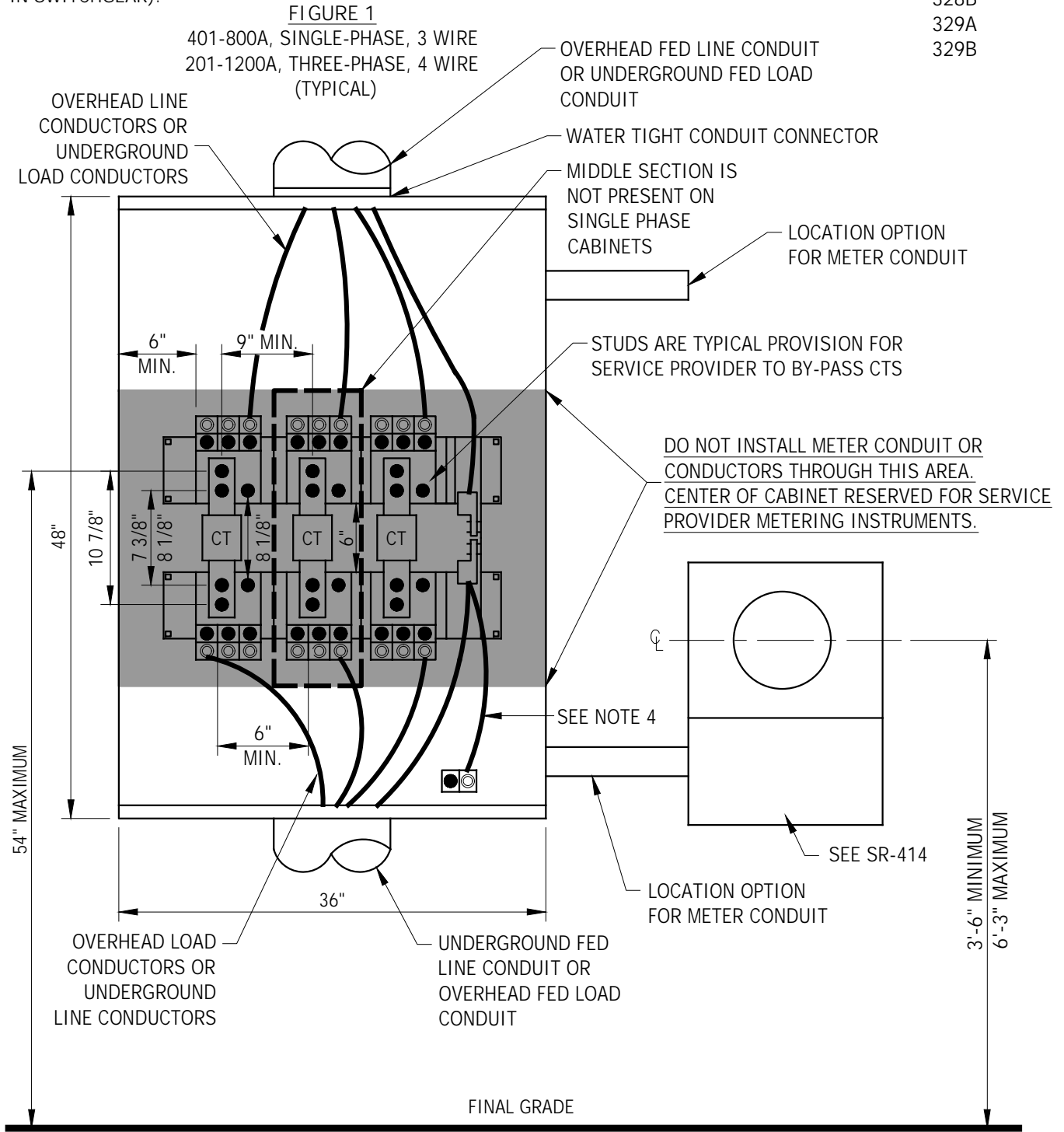


USE: CURRENT TRANSFORMER
INSTALLATIONS, 0-600V,
SINGLE CUSTOMER (NOT
IN SWITCHGEAR).

CURRENT TRANSFORMER INSTALLATIONS IN CABINETS

EUSERC DWG. NO. 317
*(SEE NOTE 1) 318
328A
328B
329A
329B



NOTES:

- *ERICKSON CABINET DIMENSIONS ARE DIFFERENT THAN EUSERC, BUT ARE APPROVED. SEE PAGE 5, ITEM 7 FOR APPROVED MANUFACTURERS.
- ALL SERVICE CONDUIT SHALL BE IMC OR RMC FROM CT CABINET TO A MINIMUM OF 18" BELOW FINAL GRADE.
- CONDUIT AT COMPANY PAD-MOUNT TRANSFORMER OR SECONDARY JUNCTION BOX SHALL BE GREY PVC ELECTRICAL GRADE, SCHEDULE 40.

		INITIATED BY	SC	REVISION NO.	10	SR-422
		ESR COMM.	2-80	ESR COMM.	8-20	
				EFFECTIVE DATE	8-20	

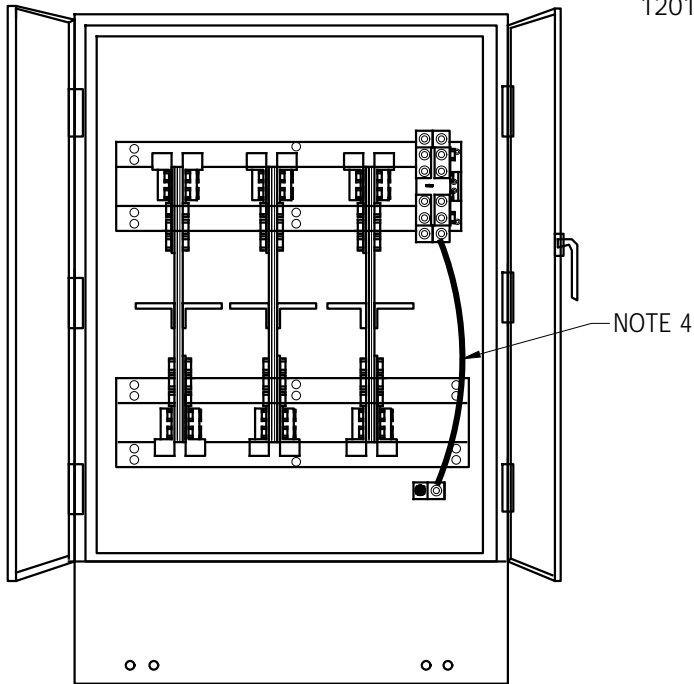
USE: CURRENT TRANSFORMER
INSTALLATIONS, 0-600V,
SINGLE CUSTOMER (NOT
IN SWITCHGEAR).

CURRENT TRANSFORMER INSTALLATIONS IN CABINETS

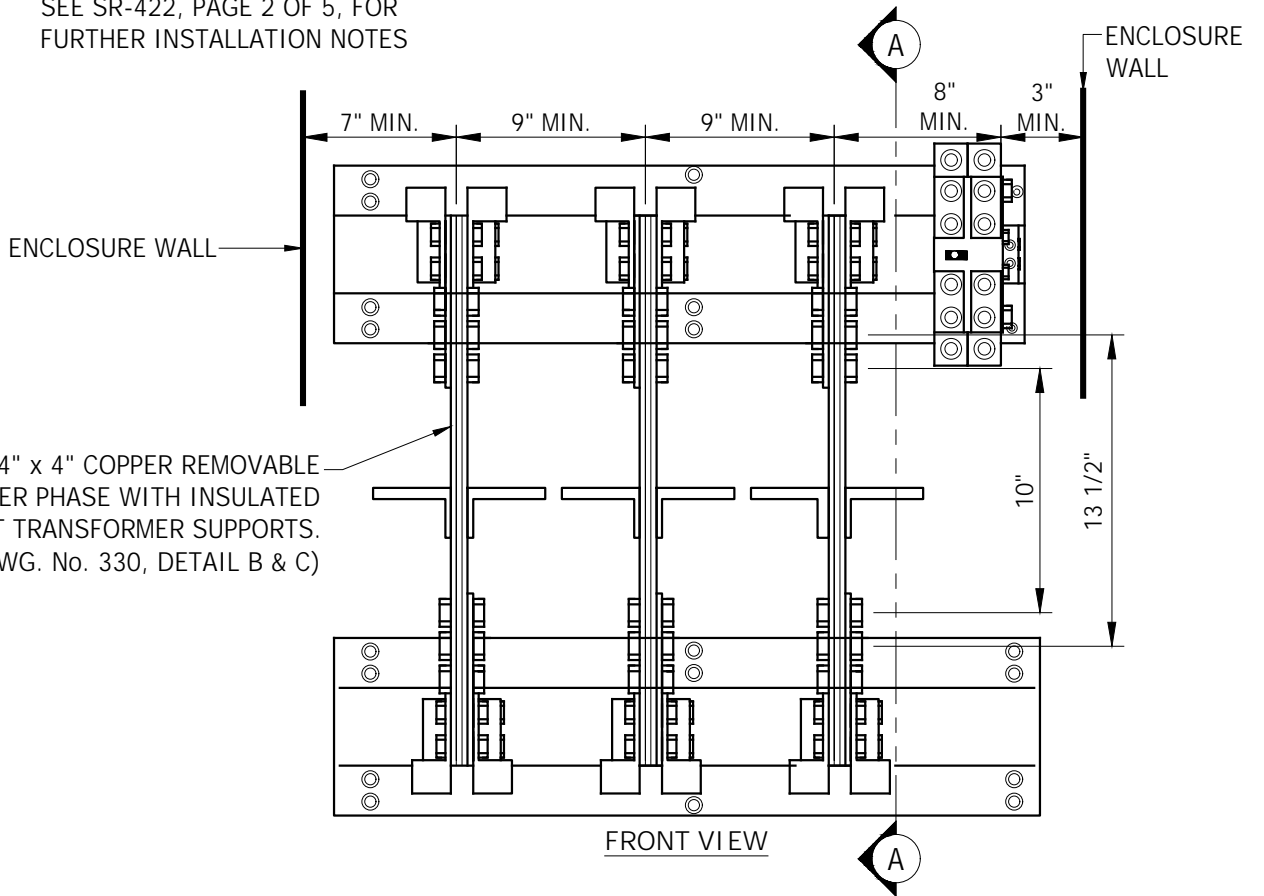
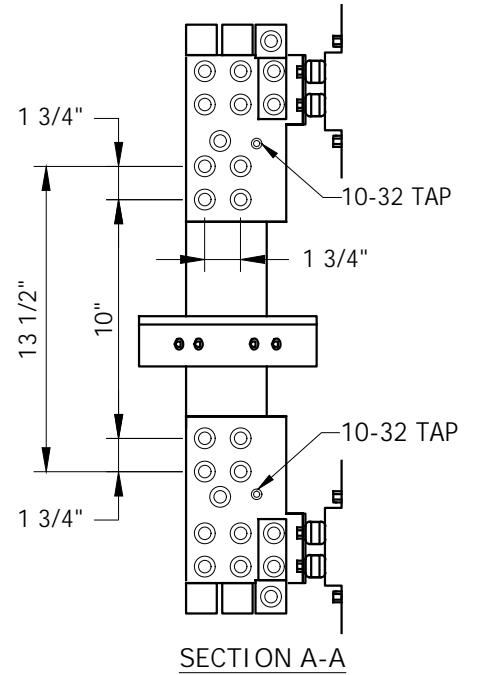
EUSERC DWG. NO. 322
330



FIGURE 2
1201-2000A



SEE SR-422, PAGE 2 OF 5, FOR
FURTHER INSTALLATION NOTES



PROVIDE 2 1/4" x 4" COPPER REMOVABLE
LINKS PER PHASE WITH INSULATED
CURRENT TRANSFORMER SUPPORTS.
(EUSERC DWG. No. 330, DETAIL B & C)

USE: CURRENT TRANSFORMER
INSTALLATIONS, 0-600V,
SINGLE CUSTOMER (NOT
IN SWITCHGEAR).

CURRENT TRANSFORMER INSTALLATIONS IN CABINETS



1. APPLICABLE LOADS AND VOLTAGES

Cabinets with Current Transformer (CT or CTs) mounting bases may be used with service entrance sizes and voltages as follows:

- a. 120/240V, Single-Phase, 3 wire, 401-800 Amp, Two CTs
- b. 240/120V, Three-Phase, 4 wire, Delta, 201-1200 Amp, Three CTs, NOT for new installation
- c. 208Y/120V, Three-Phase, 4 wire, Wye, 201-2000 Amp, Three CTs
- d. 480Y/277V, Three-Phase, 4 wire, Wye, 201-2000 Amp, Three CTs

Consult Design Services regarding proposed installations for any other load and voltage. See SR-104 for service limitations.

2. GENERAL PROCEDURE

The customer provides and installs a CT cabinet containing a mounting base for the required number of CTs, line and/or load conductors required for the type service entrance utilized, the meter socket(s) and a conduit between the CT cabinet and the meter socket(s).

The CT cabinet is for terminating line and load conductors, and installation of metering CTs. This is for the specific customer that requires transformer rated metering only and can not be utilized as a termination cabinet, or tapping point for other customers line conductors.

Following the Service Provider's inspection and approval of the customer's installation, the Service Provider furnishes and installs the CTs, necessary metering conductors from the CTs to the meter socket(s), sets the meter(s) and connects the customer's service entrance equipment to the distribution system.

3. CABINET REQUIREMENTS

A metallic cabinet complete with the required CT mounting base as described herein shall be furnished and installed by the customer. The cabinet shall be raintight and protected against corrosion on inside and outside surfaces. Only CT cabinets approved by and meeting Service Provider's specifications may be installed.

The CT mounting base shall be rated by the manufacturer for the maximum continuous load rating of the main switch(s) or breaker(s) in the service entrance. If the line side conductors enter the bottom of the cabinet, the load side conductors shall exit in the top or upper sides. If the line side conductors enter the top of the cabinet, the load side shall exit the bottom or lower sides. No conductors shall be allowed to pass through the center of the CT cabinet. Meter conduit shall not be installed in the area of the CT cabinet reserved for use by the Service Provider for installation of CTs.

 TEP Tucson Electric Power	 UniSourceEnergy SERVICES SANTA CRUZ COUNTY	INITIATED BY	GS	REVISION NO.	5	SR-422 Pg. 3 of 5
		ESR COMM.	3-90	ESR COMM.	8-20	
				EFFECTIVE DATE	8-20	

USE: CURRENT TRANSFORMER
INSTALLATIONS, 0-600V,
SINGLE CUSTOMER (NOT
IN SWITCHGEAR).

CURRENT TRANSFORMER INSTALLATION IN CABINET



CABINET REQUIREMENTS (CONT'D)

FIGURE 1

CTs are supported by their bars on four (4) mounting studs which are positioned in the bus on the mounting base with spacing exactly as shown. The CT mounting studs shall be a maximum of 1/2 inch diameter and a minimum of 3/8 inch diameter. Flat washers, pressure-maintaining spring washers and nuts as required shall be furnished by the customer.

CT mounting studs shall be firmly affixed to the bus on the mounting base so that they will not turn, back out or loosen when subjected to torques approved by UL for tightening or loosening of nuts on bolts of that size (including cross-threaded situations). The studs shall be fully threaded, except for the portion within 3/8 inch of the bus on the mounting base, and they shall be long enough to be threaded completely through the nut when a CT with a bar 1/2 inch thick is mounted with washers.

A provision to connect a bypass capable of carrying the full rated load of the service entrance shall be provided for each CT position on the mounting base.

FIGURE 2

Bus anchorage shall be such that busses will remain in position when removable copper links are out. Bus corners should be rounded as necessary to prevent damage to insulation. Bus insulation is to be adequate for the voltage involved. The maximum permissible bus unit shall consist of four 1/4" x 4" bars spaced 1/4 inch.

FIGURES 1 AND 2

Cabinet covers shall be provided with a means of sealing consisting of two drilled studs and wing nut assemblies on opposite sides. All securing screws shall be captive. If the cabinet cover is not hinged, two lifting handles shall be provided on any cover having a surface area of four or more square feet. Hinged doors may be provided with a latching device that will accommodate a Company padlock.

4. CABINET INSTALLATION

The location of the cabinet shall conform to the requirements of SR-405. The neutral connector shall be bonded to the CT cabinet.

4a. OVERHEAD SINGLE OR THREE-PHASE SERVICE

The point of delivery shall be at the point of attachment for the overhead service. Connectors are furnished and installed by the Service Provider. The customer's conductors between the point of delivery of the service and the CT cabinet shall pass through no other equipment. The "neutral" (and the "power leg", if delta-connected 240/120V service is furnished) shall be identified per the National Electrical Code. If conductors are parallel, they shall be grouped and identified at the point of delivery. If more than one raceway of magnetic metal conduit is used for parallel conductors, one conductor from each phase, plus one neutral conductor, must pass through each conduit.

		INITIATED BY	SC	REVISION NO.	7	SR-422
		ESR COMM.	2-80	ESR COMM.	8-20	
				EFFECTIVE DATE	8-20	Pg. 4 of 5

USE: CURRENT TRANSFORMER
INSTALLATIONS, 0-600V,
SINGLE CUSTOMER (NOT
IN SWITCHGEAR).

CURRENT TRANSFORMER INSTALLATIONS IN CABINETS



4b. UNDERGROUND SINGLE-PHASE SERVICE

The point of delivery shall be at the junction of the Company's service conductors and the customer's connectors at the bottom of the current transformer mounting base. These connectors shall accommodate 750kcmil concentric stranded conductor and shall be suitable for terminating copper or aluminum. They shall have two 1/2 inch holes per tang, or be of a design that will prevent them from turning on the bus. Double barrel connectors and two service ducts required if paralleled service cables are specified by Design Services.

Four (4)inch Intermediate Metal Conduit (IMC) or Rigid Metal Conduit (RMC) shall be furnished and installed by the customer from the riser pole, or from the pad-mount transformer to the current transformer cabinet. The distance from the bottom of the cabinet to the bottom of the connectors on the lower portion of the CT mounting base shall be at least 16 inches. The space between the CT mounting base and the riser pipe entering the bottom of the cabinet is required by the Service Provider for installation and termination of service conductors. It shall be kept clear of customer's conductors or other obstructions.

4c. UNDERGROUND THREE-PHASE SERVICE

The point of delivery shall be at a secondary junction box or at a pad-mount transformer or at some other point as may be designated by Design Services. The customer's conductors between the point of delivery of the service and the CT cabinet shall pass through no other equipment. The "neutral" (and the "power leg" if delta-connected 240/120V service is furnished) shall be identified per the National Electrical Code. All service conductors shall be marked (taped) in accordance with SR-405 Note 16. If conductors are parallel, they shall be grouped and identified at the point of delivery. If more than one raceway of magnetic metal conduit is used for parallel conductors, one conductor from each phase plus one neutral conductor must pass through each conduit. The neutral of each set of service conductors must be identified with an address tag at the transformer or junction box location. Example; Dymo Aluminum embossing tape or other approved methods. Customer conductors that connect to Service Provider equipment shall be no greater than 600kcmil.

5. METERING CONDUIT AND METER SOCKET INSTALLATION

The metering conduit shall be installed by the customer between the CT cabinet and the kWh meter socket in accordance with SR-414. It shall be constructed of intermediate metal or rigid metal conduit and fittings. The meter socket(s) shall be installed by the customer in accordance with the requirements of SR-400 Service Requirements, and located as close to the CT cabinet as is reasonable. The customer must furnish and install a meter enclosure cabinet per SR-420 if the meters are located in a park, schoolyard, or other area subject to vandalism or for meter totalizing.



Unused hubs shall be capped off with a rainproof access plate(s) that is secured internally utilizing a carriage bolt and a wingnut bar that spans beyond the opening. See SR-405.

6. LINE AND LOAD CONDUCTOR CONDUIT

Conduit entering and exiting the CT cabinet for line and load conductors shall be IMC or RMC.

7. APPROVED MANUFACTURERS OF CT CABINETS

Erickson Electrical Equipment Co. 1-800-952-7225

475 Bonnie Lane

Elk Grove Village, Illinois 60630

Figure 1 Single-Phase 800A - Catalog No. 1076-1

Three-Phase 1200A - Catalog No. 1076-2

Figure 2 Three-Phase 1200A - Catalog No. CT124-TEP

Three-Phase 1600A - Catalog No. CT164-TEP

Three-Phase 2000A - Catalog No. CT204-TEP

		INITIATED BY	SC	REVISION NO.	10	SR-422
		ESR COMM.	2-80	ESR COMM.	9-20	
				EFFECTIVE DATE	9-20	
						Pg. 5 of 5