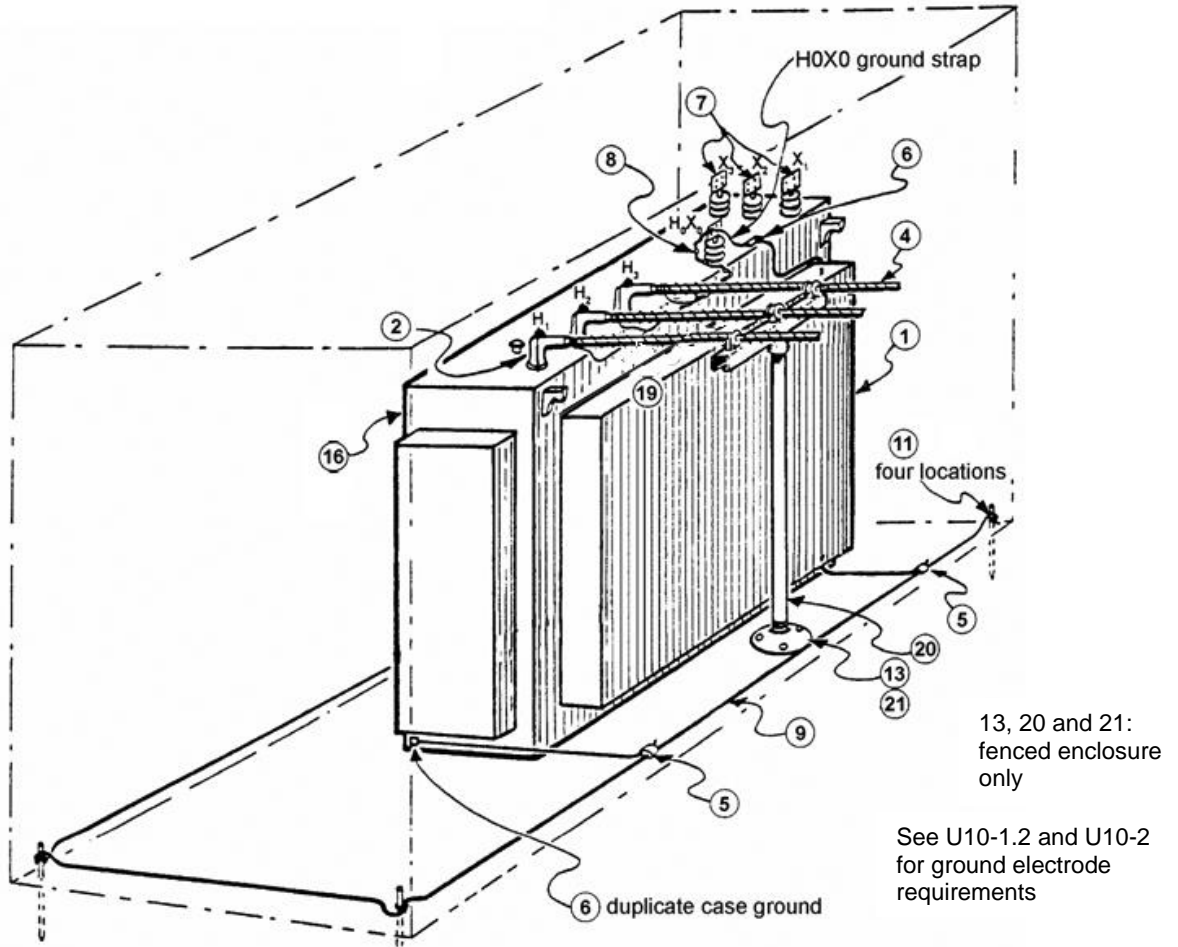


**Commercial Subway Transformer 750 through 2500 kVA,
 Standard Installation**

Figure 1 - Transformer Neutral and Ground Connection



13, 20 and 21:
 fenced enclosure
 only

See U10-1.2 and U10-2
 for ground electrode
 requirements

Table 1 - Copper Cable Sizes

208Y/120		
KVA	Phase	Neutrals
750	3/750	2/750
1000	4/750	3/500
1500	-	-
2000	-	-
2500	-	-

480Y/277		
KVA	Phase	Neutrals
750	2/500	500
1000	2/750	750
1500	3/500	2/500
2000	3/750	2/750
2500	4/750	3/750

Reference: U1-4.51, Transformer Secondary Lead Sizes for Underground Installations.

Standards Coordinator
 Brett Hanson

Standards Supervisor
 John Shipek

Unit Director
 Darnell Cola

Figure 2 – Plan View, Transformer, Typical

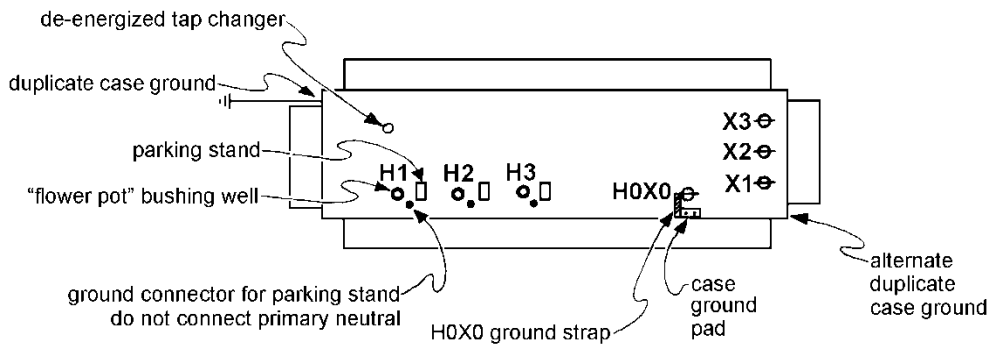
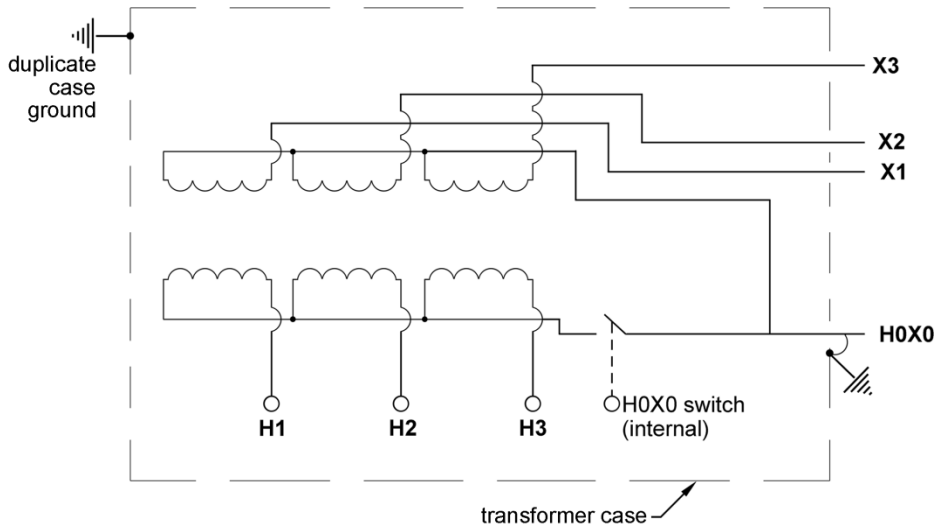


Figure 3 – Transformer Schematic, 480Y/277 or 208Y/120 Volts, Primary Taps Not Shown



25,700 volts is a normal tap unless stated on Work Order

Notes:

1. Install transformer on pad or in vault.
2. Connect grounds including duplicate case ground.
3. Install cable support bracket when required. Primary cables are to be supported in a manner such that at least 12" of cable will remain in the same plane as the cable barrel of the Deadbreak Elbow. Twist together the primary neutrals, leaving sufficient slack to remove elbows, and connect to H₀X₀ bushing with 4/0 compression terminal (677081E)
4. Connect secondaries; see Table 1.
5. Install primary elbow connectors.
6. See Construction Guideline U10-2 for customer's responsibility.
7. See Construction Standard NTP-60 for vault lighting and receptacle when required.
8. See Construction Guideline U10-2.1 for in-building vault requirements.
9. See Construction Guideline U10-1.2 for fenced enclosure requirements.

Notes, continued:

10. See Construction Guideline U10-5.3/NTP-40 for seismic anchoring.
11. See Construction Guideline U12-3 for allowable service connections.
12. Apply "Danger High Voltage" and "Call Before You Dig" labels at eye level on transformer if above grade.
13. City Light will:
 - Install a fiberglass "Danger High Voltage" sign on the pad fence.
 - Apply the appropriate PCB labels on the transformer (See Item 16 in Table 2, below.)
 - Install "Call Before You Dig" labels to two SCL Stock No. 765181 fiberglass "Danger High Voltage" signs. These two overlaid signs on the fence will be installed so as to be seen by approaching fire fighters.
 - Tie wraps shall be used to attach hanging signs.
14. To facilitate temporary metering, on transformer secondary spades:
 - Extend #12 wire, Stock No. 612220, from spade a minimum of 24 inches.
 - Strip wire end and insulate with a wire nut.
 - Wrap each wire with colored tape to match the secondary conductor phase tape.

Table 2 - Material List

Item	Quantity	Description	Stock Number
1	1	TRANSFORMER, commercial subway, kVA size as required	as required
2	3	ELBOW, deadbreak, 15.2 kV L-G	686416
4	as required	CABLE, 1/0 Solid, Al, concentric neutral, 28 kV	602025
5	2	CONNECTOR, crimpet, 2/0-4/0 to 2/0-1/0	677331E
6	2	CONNECTOR, cable to flat, 2/0 solid to 250	676675
7	as required	CONNECTOR, cable to flat	
		500 kcmil Cu	677091E
		600 kcmil Cu	677096
		750 kcmil Cu	677100
		1000 kcmil Cu	677110
8	2	TERMINAL, compression lug, 4/0	677081E
9	50 ft	WIRE, 2/0, bare Cu, soft drawn	610425
11	4	CLAMP, cable to Rod, 5/8" to #4 Sol. - 2/0	676254
13	4	ANCHOR, masonry, 3/8"-16 x 2-1/4"	780103E
14	1	SIGN, "Danger High Voltage"	765182
15	3	SIGN, "Danger High Voltage", fiberglass	765181
16	2	PCB LABEL, for energized transformers. Choose the label that indicates the PCB level of the transformer coolant:	
		PCB content 500 ppm or greater, black on yellow	765201
		PCB content 50 to 499 ppm, black on white	765208
		PCB content 1 to 49 ppm, white on blue	765206
		PCB content less than 1 ppm, white on light green	765211
17	2	LABEL, "Call Before You Dig"	765255E
18	12	TIE, cable, black, 7"	735805E
19	3	CABLE, support, thermoplastic, 28 kV, 1/0 solid, 2/C, bare	011961
20	as required	PIPE, galvanized, steel, 2"	710369
21	1	FLANGE, floor, for galvanized steel pipe, 2"	712109