

For Your Safety

U/G TRENCH

Proper clearances between power cables and communication cables to Standard Design
CSA 22.3 No. 7 – 6.1.8.1, 6.1.8.2 & 6.2.7.2

Depth of trench and final backfill to Standard Design
CSA 22.3 No. 7 – 5 (Table 1)

Backfill does not contain large sharp rocks, ice or corrosive material

Utility ducts seen are color coded (consistently)
CSA 22.3 No. 7 – 16.4 Table 9

Road crossing ductbank structure have proper depth from final pavement-to Standard Profile
CSA 22.3 No. 7 – 5 (Table 1)

H.V. SWITCHGEAR (PAD MOUNTED)

H.V. Switchgear has proper obstruction free area
CSA 22.3 No. 7 – 10.2 (Table 5)

H.V. Switchgear has clearances to water, sewer and gas lines - to Standard Design
300mm (1') horizontal clearance maintained

H.V. Switchgear protection bollards installed where required
CSA 22.3 No. 7 – 10.5 & OESC Bulletin 36-6-*

H.V. Switchgear concrete pad's lifting holes are not exposed

There is no gap between Switchgear's concrete pad and its concrete collar above it

H.V. Switchgear has proper Ground Loop installed
CSA 22.3 No.7 – 15.5.3

Ground rods and loops installed below grade level 300mm (12") to 700mm (2'-4") in depth.

Ground loop approximately 1m from switchgear

H.V. Switchgear has padlocks and safety bolts installed

H.V. Switchgear has corresponding nomenclature stickers for each compartment

H.V. Switchgear concrete pad's gravel meets Standard Design (mud-free)

H.V. Switchgear has warning sticker 'Danger- High Voltage' installed

H.V. Switchgear has no sharp edges exposed to public

H.V. Switchgear is not mechanically damaged

3Ph. PADMOUNTED TRANSFORMER

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Padmounted Transformer has proper obstruction free area
CSA 22.3 No. 7 – 10.2 (Table 5)

Padmounted Transformer has bollards protection if curb clearance not met
CSA 22.3 No. 7 – 10.5 and OESC Bulletin 36-6-16

All protection bollards connected to Transformer's ground loop

Padmounted Transformer has mechanical protection during construction (barrier)

Transformer has clearance from combustible surface, doors, windows and vent. inlet/outlet
CSA 22.3 No. 7 – 10.1 and OESC 26-242

Padmounted Transformer has blast wall installed if clearances not met
CSA 22.3 No. 7 – 10.1 and OESC 26-242

Padmounted Transformer concrete pad's lifting holes are not exposed

There is no gap between Transformer and its concrete pad

Padmounted Transformer has proper ground loop installed
CSA 22.3 No.7 – 15.5.3

Ground rods and loops installed below grade level 300mm (12") to 700mm (2'-4") in depth.

Ground loop approximately 1m from switchgear

Bonding between all above ground metallic equipment separated by a distance of 3 m or less
CSA 22.3 No. 7 – 15.7

Are pedestals installed such that they do not appear to interfere with ground loop of transformer (1m around TX)

Padmounted Transformer has padlock and pentagonal safety bolt installed (tamperproof)

Padmounted Transformer has proper warning sticker: 'Danger-High Voltage' installed

Padmounted Transformer concrete pad's gravel is mud-free

Padmounted transformer is not mechanically damaged

PRIMARY CABLES

Primary cables are LDC approved (Manufacturer and Type)

Primary cables terminated and grounded as per Standard Design or Plan

Primary cables have bending radius greater than minimum required

OESC 36-102 and Table 15 – Note there are many other, more in-depth publications on this topic

Direct buried primary cable splices have sufficient clearance from gas-line

All U/G primary cables have minimum required clearance from any swimming pool
CSA 22.3 No. 7 – Table 4

All U/G primary cables have minimum required clearances per Standard Design or Plan

SECONDARY SERVICES

Secondary service lateral trench installed to Standard Design (c/w clean sand bedding)

Secondary duct has proper clearance to communication cables

Secondary duct has proper clearance to gas-service line
CSA 22.3 No. 7 – 6.1.11

Secondary duct has proper clearance to swimming pools
CSA 22.3 No. 7 – Table 4

Secondary splices at property line installed as per Plan

Meter-base rigid PVC down-pipe ends below final grade

Current limiter fuse installed as per Standard Design

POWER CABLES ON RISER POLE

Power Cables are installed with cable guards for mechanical protection

Power Cables guards are extended to level 1m above communication cables and public access (2.5m)
CSA 22.3 No. 1 – 4.2.4.2

Power Cables guards are bonded to system ground and protect cable at least 0.3 m below the surface of the earth and above public access (2.5m)
CSA 22.3 No. 1 – 4.2.4.2

Power Cables are installed on pole's side not facing street traffic
CSA 22.3 No. 1 – 4.2.4.1

H.V. TRANSFORMER VAULT

H.V. Vault ground loop installed to Standard Design or Plan

All electrical equipment in H.V. Vault is effectively grounded via ground loop

All non-current carrying parts (doors, windows, plates) connected to ground loop

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All duct-ends in H.V. Vault are sealed to prevent gases entering into building

Concrete step-barrier installed around TX to prevent TX oil entering into drain system

H.V. Vault has ventilation system to prevent overheating of Transformers (Extreme Vault Temperatures)

H.V. Vault's air-vents are mechanically protected (birds) and tamperproof

H.V. Vault doors have a heavy duty locking device

H.V. Vault doors have electrical hazard warning sticker

H.V. U/G MANHOLE

H.V. Manhole ground loop installed as per Standard Design or Plan

Cable Supports are mechanically damaged

Sump Pumps are in good working condition

All manhole primary cables' concentric neutrals are properly grounded

All non-current carrying parts (lids, ladders, brackets) connected to ground loop

Manhole has a proper drain system to keep primary cables' junctions dry