

## PART 1 - GENERAL

<u>1.1 Section Includes</u>	.1	Materials and components for dry type transformers up to 600 V primary, equipment identification and transformer installation.
<u>1.2 Related Sections</u>	.1	Section 01 33 00 - Submittal Procedures.
	.2	Section 01 74 21 - Construction/Demolition Waste Management And Disposal.
	.3	Section 26 05 00 - Common Work Results - Electrical.
<u>1.3 References</u>	.1	Canadian Standards Association (CSA International)
	.1	CAN/CSA-C22.2 No.47-M90(R2001), Air-Cooled Transformers (Dry Type).
	.2	CSA C9-M1981(R2001), Dry-Type Transformers.
	.2	National Electrical Manufacturers Association (NEMA)
<u>1.4 Product Data</u>	.1	Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
<u>1.5 Waste Management and Disposal. Disposal</u>	.1	Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And
	.2	Remove from site and dispose of all packaging materials at appropriate recycling facilities.
	.3	Collect and separate for disposal paper, plastic, polystyrene and corrugated cardboard packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.
	.4	Divert unused wiring materials from landfill to metal recycling facility as approved by Engineer.
	.5	Fold up metal banding, flatten and place in designated area for recycling.

## PART 2 - PRODUCTS

- 2.1 Transformers
- .1 Use transformers of one manufacturer throughout project and in accordance with CAN/CSA-C22.2 No.47 and CSA-C9.
  - .2 Design 1.
    - .1 Type: ANN.
    - .2 1 phase, 45 kVA, 600 V input, 240 V output, 60 Hz.
    - .3 Voltage taps: standard.
    - .4 Insulation: Class 220°C.
    - .5 Basic Impulse Level (BIL): standard.
    - .6 Hipot: standard.
    - .7 Average sound level: 50 dB
    - .8 Impedance at 17 degrees C: standard
    - .9 Enclosure: NEMA 1, removable metal front panel, sprinkler drip shield.
    - .10 Mounting: floor.
    - .11 Finish: in accordance with Section 26 05 00 - Common Work Results - Electrical.
    - .12 Copper Conductors.
    - .13 Standard of Acceptance: Delta
  - .3 Meet minimum efficiency values as per CSA C802.2-00.
- 2.2 Equipment Identification
- .1 Provide equipment identification in accordance with Section 26 05 00 - Common Work Results - Electrical.
  - .2 Label Size: 7.

## PART 3 - EXECUTION

- 3.1 Installation
- .1 Mount dry type transformers up to 75 kVA as indicated.
  - .2 Ensure adequate clearance around transformer for ventilation.
  - .3 Install transformers in level upright position.
  - .4 Remove shipping supports only after transformer is installed and just before putting into service.
  - .5 Loosen isolation pad bolts until no compression is visible.
  - .6 Make primary and secondary connections in accordance with wiring diagram.
  - .7 Energize transformers after installation is complete.

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|------------------------------|----|----------------------------------------------------------------------------------|
| 3.1 Installation<br>(Cont'd) | .8 | Use flexible conduit or cable connections to transformer enclosure.              |
|                              | .9 | Ground secondary neutral to satisfaction of the Electrical Inspection Authority. |