1 References
1.1 NFPA 70 National Electric Code
1.2 IEEE C2 National Electric Safety Code
1.3 ANSI C57.12.28 American National Standard for Switchgear and Transformers – Pad-Mounted Equipment – Enclosure Integrity
1.4 ANSI C57.12.70 American National Standard Terminal Markings and Connections for Distribution and Power Transformers
1.5 IEEE C57.12.00 General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers
1.6 IEEE C57.12.26 Pad-Mounted, Compartmental-Type, Self-Cooled, Three-Phase Distribution Transformers for Use with Separable Insulated High-Voltage Connectors

2 General Requirements
2.1 Voltage
   - 12.47 KV Primary system voltage
   - 2400 V Primary system voltage
2.2 Building transformers located within a building vault are to be substation type. Transformers are to be flange connected or cable connected to the primary disconnecting means and throat / busway connected to the secondary switchgear.
2.3 Pad mounted transformers may be used where there is no building electrical vault with owner approval.
2.4 Sample Specifications can be provided for Liquid Filled Unit Sub-Station Transformers and Pad Mount Liquid Filled Transformers

3 Grounding
3.1 The transformer shall have a 4/0 copper 600 v insulated green colored grounding conductor installed between the Xo bushing and a grounding pad or equivalent ground strap.
3.2 The transformer shall have the two diagonally opposing ground pads connected by separate 4/0 bare copper conductors through PVC conduit sleeves inserted through the foundation pads to the grounding grid.
3.3 The transformer shall include a separate grounding electrode conductor (GEC). The GEC shall be 4/0 bare copper conductors through PVC conduit sleeves inserted through the foundation of pads to the grounding grid and to the Xo bushing.
3.4 All grounding connections shall be copper, 2-hole, compression lugs.
3.5 The low voltage termination spades shall have an adequate number of holes to accept an additional number of ANSI two-hole lugs to accommodate the additional grounding and bonding conductors. Additional cable supports shall be provided when applicable to relieve pressure from the transformer phase and neutral bushings. The engineer of record shall determine the number of ANSI two-hole lugs required and increase the size of the termination spade accordingly.

4 Testing
4.1 All specified testing reports shall be submitted and review by the Energy and Utilities electrical engineer prior to transformer energization.