

nationalgrid

Specifications for Electrical Installations and Supplements

Errata and Revisions

JULY 2020

for the Electric System Bulletin 750 Series

Covering National Grid's Service Areas
in MA, RI and NY

NOTICE: This publication contains changes and corrections to the Company's Specifications for Electrical Installations, the "ESB750—2020 Book", and its supplements. This is periodically issued when the need arises. The most current information on a topic will therefore be a combination of the base document listed in this table of contents and the current version of this list. Upon periodic revision of a base document herein referenced, all list items associated with that base document will be removed.



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General Notice

N.Y.P.S.C. No. 220: P.S.C. No. 220 *Schedule for Electric Service* ("P.S.C. No. 220 Electricity Tariff") supersedes and replaces former P.S.C. No. 207 *Schedule for Electric Service* ("P.S.C. No. 207 Electricity Tariff") effective April 27, 2009 ("Effective Date"). As of the Effective Date, all references to P.S.C. No. 207 Electricity Tariff in agreements existing as of the Effective Date shall be construed as references to P.S.C. No. 220 Electricity Tariff.

The Rule Numbers, Forms, and Service Classifications in P.S.C. No. 220 Electricity Tariff as of the Effective Date are identical to those of P.S.C. No. 207 Electricity Tariff as of the day immediately prior to the Effective Date, but Leaf Numbers may differ. To avoid any possible ambiguity resulting from this change, references to Leaf Numbers in P.S.C. No. 207 Electricity Tariff in agreements existing as of the Effective Date shall be construed as references to the equivalent Leaf Numbers for the same Rule Numbers, Forms, and Service Classifications in P.S.C. No. 220 Electricity Tariff.

Therefore, all references to N.Y.P.S.C. No. 207 in any of the Company's ESB 750 series bulletins shall be construed as references to N.Y.P.S.C. No. 220 (see: <http://www.nationalgridus.com/Upstate-NY-Business/Rates/Tariff-Provisions>).

In Massachusetts (<https://www.nationalgridus.com/MA-Business/Rates/Tariff-Provisions>).

In Rhode Island (<https://www.nationalgridus.com/RI-Business/Rates/Tariff-Provisions>).

ESB No. 750-2020 (January 2020) – Specifications for Electrical Installations (Upstate NY, MA, and RI)

PAGE	SECTION	EFFECTIVE DATE	CHANGE
24	3.3.4	Jan-2020	The very end of the 2 nd paragraph mentions five (5) business days; this shall be corrected to ten (10) business days.
40	4.5.7.1 Underground Secondary Service to Meter Pedestals and Meter Posts	Jan-2020	In the last sentence of the first paragraph, replace "circuit breakers," with "service equipment,"
40	4.5.7.1 Underground Secondary Service to Meter Pedestals and Meter Posts	Jan-2020	Replace the last sentence of the second paragraph with the following two sentences "Service equipment shall be mounted on the meter post or meter pedestal. Additional disconnecting and overcurrent devices may be required at the building, as necessary."
47	7.1.2.1 Indoor Installations	Jan-2020	In third paragraph, change the distance reference "four ft" to "4 feet".
50	Notes to Table 7.2-1: Note 1.	Jan-2020	Correct reference to Table 7.2-5 instead to Table 7.2-6.
51	Table 7.2-2: Self-Contained Meter Socket Enclosure Requirements: Req. 15	Jan-2020	Correct reference to Table 7.2-3 instead to Table 7.2-4

PAGE	SECTION	EFFECTIVE DATE	CHANGE
52	Table 7.2-3	Jan-2020	Table 7.2-3 was broken up to save pages. The bottom half of the table was located to the right of the top half. A visual break was not included and that creates confusion when reading the table. In the next revision, this table will be 3-columns and 10-rows (incl. heading).
78	Figure 4.1.9.1-1	Jan-2020	Correct the Figure title to "Typical Service to Manufactured and Mobile Homes and Mobile Home Parks"
81	Figure 4.2.4.4-1	Jan-2020	Please insert "Anchor brace required where height exceeds limits listed in Table 4.2.4.4-1" where missing text at arrow pointing to pipe-riser guy.
81	Figure 4.2.4.4-1	Jan-2020	Please insert "Vent pipe roof flange" where missing text at arrow pointing to base of pipe-riser.
81	Figure 4.2.4.4-1	Jan-2020	Please add two additional notes "Steel riser conduit must be electrically continuous and shall not be interrupted by non-conductive section(s)." and "Steel riser conduit must be mechanically continuous, single section, without couplers above the last attachment point on the building." Below the the existing four (4) notes.
85	Figure 4.5.6-1	Jan-2020	Correction to Notes to Figure 4.5.6-1B: Note 8 shall be 1' of handhole and 2' of trench open. Additionally, Handle shall be corrected to Handhole.
87	Figure 7.1.2-1	Jan-2020	Correct the Figure number and title to "Figure 7.1.2.3-1 Electric Meter to Gas Meter Clearance"
88	Figure 7.1.2.3-1	Jan-2020	Correct the Figure number and title to "Figure 7.1.2-1 Electric Meter Working Clearances"
99	Notes to Figure 7.4.1-1	Jan-2020	Correct the CT Cabinet minimum size requirement of depth from 36" to 10" Add the following reference after the bulleted items: See Table 7.2-1 and Section 7.4 for further details.
106	Figure App1-1: Illustrated Details of Overhead Service Attachment Methods	Jan-2020	Add a note below the figure that reads..."Note 1: Leave a minimum of 36" of SE conductor beyond the weatherhead for service connection by the Company."

ESB No. 751-2014 (June 2014) "General Requirements for Services Above 600 Volts"

New Issue, No Errata.

ESB No. 752-1994, 2nd Printing April 2002 "Service above 15,000 volts"

PAGE	SECTION	EFFECTIVE DATE	CHANGE
6	I.G.4.b	Jul-2002	Move first sentence of second bullet to Section I.G.4.c.
7	I.G.4.c	Jul-2002	After the second sentence, insert first sentence of I.G.4.b's second bullet.

For the latest authorized version please refer to the Company's website at <http://www.nationalgridus.com/ProNet/Technical-Resources/Electrical-Specifications>

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PAGE	SECTION	EFFECTIVE DATE	CHANGE
15	V.F.1	Nov-2002	Add the following before the first sentence in V.F.1: “The Company shall review and accept the protective relay devices provided by the Customer for protection schemes required by the Company to protect its system. The use of utility grade relays and relay redundancy is a normal Company requirement.”
15	V.F.3	Nov-2002	Change V.F.3 to read as follows: “3. <u>Company-designated protective devices</u> The Company will review for acceptance the Customer’s proposed settings of those relays that the Company’s System Protection Engineering Dept. designates as being required to satisfy the Company’s protection practices. Any relay setting accepted by the Company shall not be changed or modified at any time without the prior written consent of the Company.”
16	V.F.5	Nov-2002	Change V.F.5 to read as: “The Customer is responsible for specifying the relay settings and performing the calibration, testing, maintenance and trouble-shooting of their entire protective system. The Customer shall provide written notice to the Company prior to energization that these items have been verified.”
22	VII.A.1	Jan-2018	Change VII.A.1 to read as: “The Company will furnish all meters, metering instrument transformers, and test devices required for billing purposes at the delivery voltage. The Customer shall supply the fuses and fuse mounting equipment for the metering potential transformer protection. Four spare fuses shall also be provided. Provisions shall be provided for spare fuse storage in a location that is protected from the outdoor environment.”
24	New section “VIII. RTU”	July-2020	RTU installations will be required under the following conditions: <ul style="list-style-type: none"> - New customer-owned substations receiving power at 69kV or above. - Existing 69kV or above customer-owned substations undergoing an upgrade in accordance with the criteria outlined in the Electric System Bulletins. RTU’s will be designed, furnished and owned by National Grid and installed by the customer at a mutually agreeable location. The customer is responsible to bear the costs associated with this installation. Additionally, all telecommunications per National Grid’s specification required for the installation is the responsibility of the customer, along with any associated recurring costs.

ESB No. 753-1993, 2nd Printing April 2002 “Primary Meter Pole”

PAGE	SECTION	EFFECTIVE DATE	CHANGE
10	V.B.1.a	Dec-2014	Modify to read: The Pole shall be a Minimum Class 3, full length penta treatment, conforming to the standards of EEI TD-103 and ANSI O5.1

PAGE	SECTION	EFFECTIVE DATE	CHANGE
Figures 3 through 4	Note 4	Apr-2009	The “johnny ball” guy insulator is no longer acceptable as they do not meet present insulation requirements for this type of installation. Fiberglass guy strain insulators are now specified. Ensure the guy insulators are placed to prevent the transfer of energy from the Company’s wires to (i) the Customer wires, (ii) any communication wires on the pole or (iii) the public on the ground. Depending on spacings on the pole, multiple guy insulators may be needed to meet the multiple requirements. Consult the Company for inquiries regarding the design, equipment, and installation of the pole guy.
Figures 3a, 4	Figures	Feb-2019	Change the minimum clearance spacing between the Company incoming phase and neutral wires to 72 inches from 20 inches.
Figures 3a, 4	Figures	Jan-2020	The Company and Customer neutral wires shall attach to the meter pole a minimum of 20 inches below the PT/CT mounting bracket. In doing so, all other required ESB 753 and NESC clearances shall be met.

ESB No. 754A-1992, 2nd Printing June 2002 “Single Phase Outdoor Pad Mounted Transformer”

Superseded in April 2010, refer to ESB750 - 2020 and ESB 754. See also ESB 759A and ESB 759B for the Company’s primary cable installation requirements in the Customer’s trench or underground conduit system.

ESB No. 754-2007 “Outdoor Pad Mounted or Vault Enclosed Three Phase Transformer”

Remove all references to ESB 759 effective in April 2010, refer to ESB750 - 2020 and new ESB 759A and ESB 759B. See ESB 759A & B for the Company’s primary cable installation requirements in the Customer’s trench or underground conduit system. In addition,

PAGE	SECTION	EFFECTIVE DATE	CHANGE
19	Figure 2 Note 6	Sep-2010	<p>Add Note to A , add to bullet 4 in B “propane / LP or LNG gas”, and add bullet 5 in B “chemical storage silos / tanks” to read as follows:</p> <p>6. Clearances from objects:</p> <p>A. An area measuring 10 feet from any point of the transformer pad shall be kept free of all:</p> <ul style="list-style-type: none"> • buried water lines, storm drainage lines, gas lines, other electric lines; • underground fuel storage tanks; and • above grade fire hydrants, cell towers, self contained diesel or diesel byproduct fueled generators, and outdoor enclosed generators. <p>NOTE: The 10 ft. clearance may be reduced with a noncombustible barrier (see Note 3) and shall not be less than five (5) feet from the edge of the transformer pad. The Customer or their authorized representative shall obtain this</p>

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PAGE	SECTION	EFFECTIVE DATE	CHANGE
			<p>clearance reduction approval from the Company and the local AHJ(Authority Having Jurisdiction), as necessary, prior to the noncombustible barrier installation.</p> <p>B. An area measuring 25 feet from any point of the transformer pad shall be kept free of all:</p> <ul style="list-style-type: none"> • exposed water lines, gas piping, sewer lines; • open conductor electric lines; • above grade gas meters or regulator vents, fuel storage tanks or dispensing units, and non-enclosed gasoline/ propane / LP or LNG gas fueled generators; and • chemical storage silos / tanks. <p>NOTE: The 25 ft. clearance may be reduced to 10 ft. with a noncombustible barrier (see Note 3) and shall not be less than five (5) feet from the edge of the transformer pad. The Customer or their authorized representative shall obtain this clearance reduction approval from the Company and the local AHJ (Authority Having Jurisdiction), as necessary, prior to the noncombustible barrier installation.</p>
31	Figure 11	Sep-2010	Replace typical manhole requirements drawing with updated ground wire; see * below.
32	Figure 11 (cont'd)	Sep-2010	Replace typical manhole requirements continuation drawing with updated proper ground wire and detail Y; see * below.

* See below.

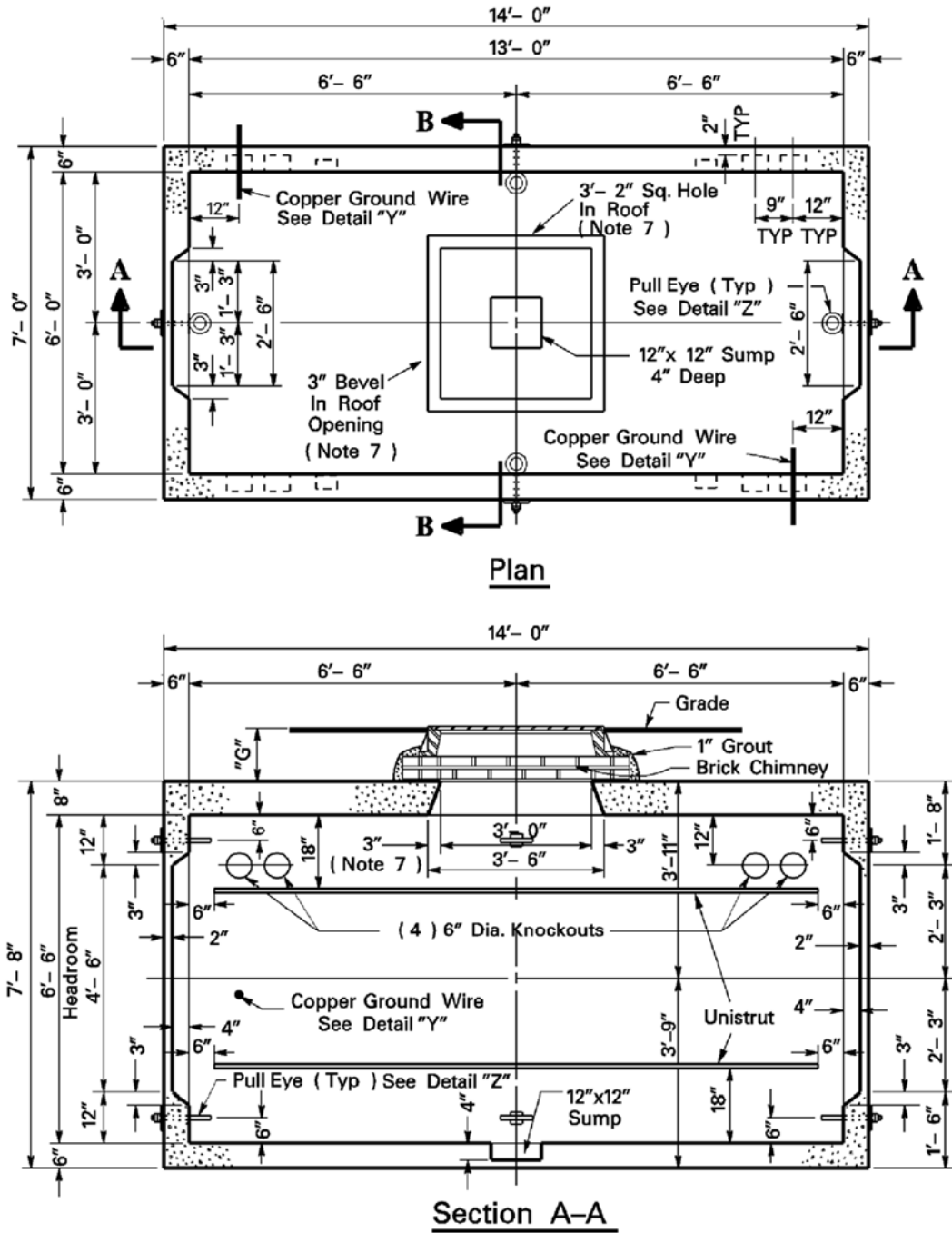
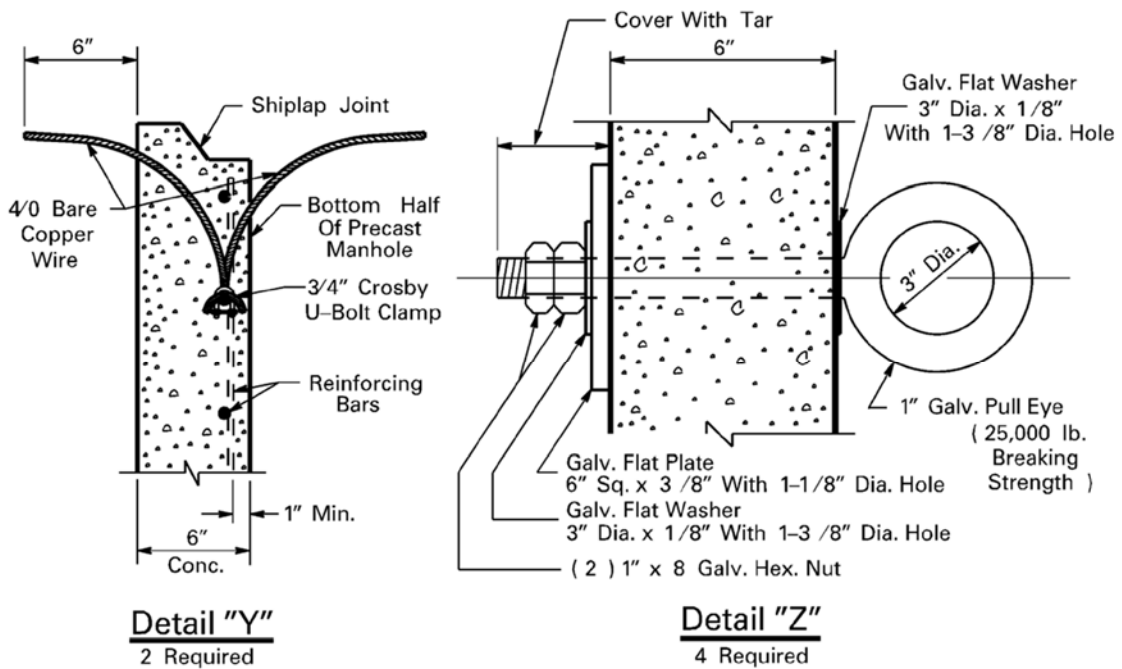
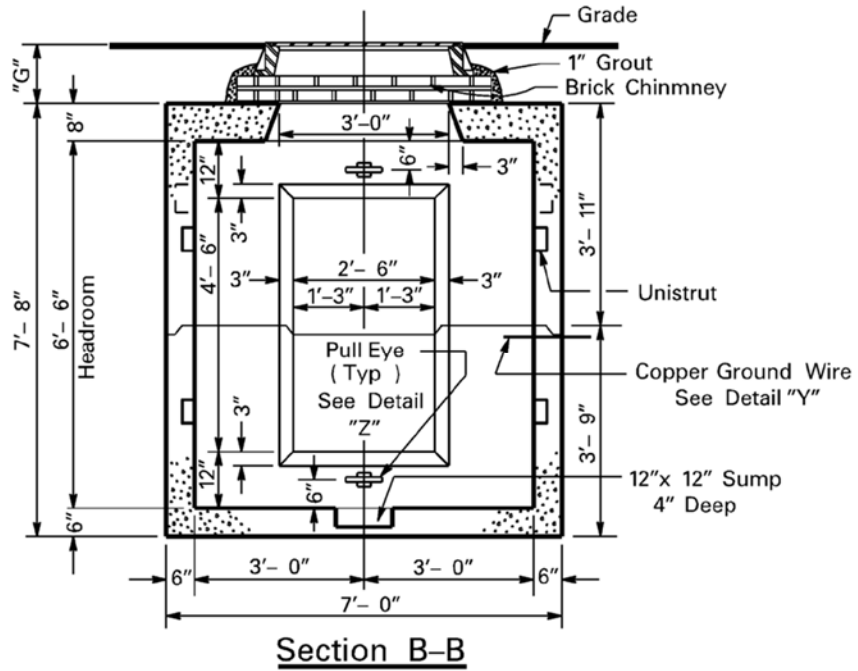


FIGURE 11: TYPICAL MANHOLE REQUIREMENTS

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Note: Construction joint to be sealed with asphalt or equivalent.

FIGURE 11 (CONTINUED)

ESB No. 755-2003 "Operation & Maintenance Requirements for Services Above 600 volts"

No errata.

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ESB No. 756-2017 “General Requirements for Parallel Generation Connected to a National Grid Owned EPS”, version 3.0

No errata.

ESB No. 756 Appendix A; “Requirements for Parallel Generation Connected to National Grid Facilities in New York”, version 2.0

No errata.

ESB No. 756 Appendix B; “Distributed Generation Connected to National Grid Distribution Facilities Per The New York Standardized Interconnection Requirements”, version 4.0

No errata.

ESB No. 756 Appendix C; “Distributed Generation Connected to National Grid Distribution Facilities Per The Massachusetts Standards for Interconnecting Distributed Generation”, version 4.0”

No errata.

ESB No. 756 Appendix D; “Distributed Generation Connected to National Grid Distribution Facilities Per The Rhode Island Standards for Interconnecting Distributed Generation”, version 3.0

No errata.

ESB No. 756 Appendix E; “Requirements for Parallel Generation Connected to National Grid Facilities in New Hampshire”, version 1.1

Appendix E has been discontinued.

ESB No. 757, April 2018 “Requirements for Services Supplied from National Grid’s Secondary Networks”

New Issue, No Errata.

ESB No. 758, Jan. 1985 “Primary Service to Metal Enclosed Gear”

PAGE	SECTION	EFFECTIVE DATE	CHANGE
2	C Paragraph 11	Nov-1999	Delete the Inspection part in its entirety.
3	H	Nov-1999	Delete Paragraphs 18 through 20 and Paragraph 22.
4 and 5	I	Nov-1999	Delete Paragraphs 23 through 26.
5	J Paragraph 28	Nov-1999	In the first sentence, change “outdoor” to “indoor”.
6	L.33	July-2020	A draw-out circuit breaker is no longer accepted as the isolating means from the Company’s System. Paragraph L.33 now reads: 33. <u>Isolating Means</u> - All equipment in the Customer’s switchgear shall be so arranged that it can be isolated from the

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PAGE	SECTION	EFFECTIVE DATE	CHANGE
			Company's system by a main disconnecting switch. The switch shall be group operated causing separation by a clearly visible air gap. Where the Customer utilizes fuses as the overcurrent protection, the disconnecting switch shall be of loadbreak design. The switch or breaker compartment shall have provisions for dual locking of the door to allow access by either the Customer or the Company.
8 - 10	M	Sep-2010	Change this metering section in its entirety and replace it with the new information ** below.
Fig. 1	Note #3	Apr-2002	In Note 3, change "see Paragraph 18" to "see ESB 750 Section 4".
Fig. 1	Note #4 (new)	Sep-2010	Add new note: "Note #4: The clearances shown from the front of the service equipment to a building wall and from the rear of the service equipment to a building wall shall be both 10 foot (minimum) if the switchgear is designed with the Company required access to the incoming termination compartment on one side while the metering PT/CT compartment is on the other side; see Figure 1A. Otherwise, if the Company's access to both compartments is on the same side, then the other side's clearance can be reduced to the clearances presently shown." Add new Figure 1A ** below.

** See below.

M. PRIMARY SWITCHGEAR METERING COMPARTMENTS SPECIFICATIONS

M.1 Equipment Furnished by the Company

1. The Company will furnish all meters, metering instrument transformers, potential transformer primary fuses and test devices required for billing purposes at the delivery voltage.
2. The Company will specify the quantity and type, of all current and potential transformers for billing purposes.
3. The current and potential transformers for the Company's billing meters shall normally not be used to operate any other Customer devices, see ESB 750, Section 7.

M.2 Customer's Responsibility

1. Codes, Standards, and Wiring Adequacy:

- a. Components of the primary switchgear metering transformer compartment shall conform to the latest editions of the following national standards and codes:

<u>Component</u>	<u>Applicable National Standard</u>
• Cable	ICEA
• Power Switchgear	ANSI C37.20.2
• Power and Instrument Transformers	ANSI C57
• Surge Arrestors	ANSI C62
• Insulators	ANSI C29
• Apparatus Bushings	ANSI C76

- b. The Company recommends approval certification by a laboratory testing organization acceptable to the authority having jurisdiction according to the National Electrical Code, e.g. UL, ETL, CSA, etc.

2. Metering Transformer Equipment Compartment:

- a. A separate enclosing compartment shall be provided solely for the billing metering transformers. The metering transformer compartment shall be solely accessible by the Company. The Customer shall have provisions for the Company's locking the access door with a 3/8" (10 mm) shank padlock.
- b. The connection of the Customer's auxiliary transformer for heat, light and receptacle(s) installed at the meter panel location and elsewhere within their switchgear, shall be on the load side of the Company's billing metering transformers.
- c. Where the metering transformer compartment is located in an unheated area or building, provisions shall be made for heating the compartment to prevent condensation.
- d. The entire metering compartment shall be designed and constructed with adequate ventilation.
- e. The minimum width of the metering transformer compartment must be based on the electrical clearances of Figure M-1. The Customer shall maintain a minimum 10 ft. (3.0 m) unobstructed clearance in front of the metering transformer compartment access door.
- f. The Customer shall provide space and supports for the Company's current and potential transformers as part of the service entrance equipment. Provisions for mounting shall be designed in a manner that is easily accessible for work. The supports shall be drilled for fixed-in-place mounting hardware (i.e. nuts, bolts, washers) in accordance with dimension information concerning this equipment furnished to the Customer for the design of their installation. Suspending instrument transformers from the roof area of the switchgear shall not be permitted.
In MA, NH, and RI, the current transformers shall be in a completely barriered and isolated compartment from the potential transformer compartment; see Figure M-1A. This compartment shall be so designed that, after proper electrical isolation, each of the current transformers can be readily removed or changed without disturbing the others. Company personnel must have access for inspection without interruption of service.
- g. The Company's potential transformers (PTs or VTs) for metering healthcare facilities shall be mounted on drawout carriages to ensure that the equipment will be readily accessible for safe inspection and replacement without causing an outage. Where potential transformers are mounted on a drawout carriage, the front of the carriage shall extend up, to close the section when transformers are in the operating position. Primary contacts for the drawout feature shall be of a design that ensures continued maintenance of the contact pressure. Visible grounding devices shall be provided to make certain that the drawout carriage mounted potential transformer primary terminals are grounded when the carriage is withdrawn. The drawout carriage frame must be grounded to the switchgear ground throughout its travel.
- h. Primary fuses for the Company's potential transformers will be supplied by the Company. The Company will specify if primary fuses shall be separately mounted, in holders supplied by the switchgear manufacturer,

and installed in a properly barriered compartment completely isolated from adjoining equipment. Sufficient working space shall be provided to permit fuses to be readily and safely checked or replaced without removing the transformer from its mount. Fuse replacement must be accomplished without interruption of service to the customer.

- i. No instrument transformers shall be installed closer than 6 inches (150 mm) to the ground or floor upon which the switchgear is installed.
- j. Instrument transformers shall be installed in such positions that the rating and polarity marks are readily and safely readable.
- k. The metering transformer compartment shall be solely accessible by the Company. This requires section-to-section openings for through bus to be maintained as small as phase to ground clearances in Figure M-1 will allow.
- l. Where the clearances in Figure M-1 cannot be provided, Glastic (NEMA Type GPO 3 material) barriers are required between potential transformers and between potential transformers and the enclosure walls.
- m. Connections for the Company's potential transformers shall be made on the supply side of the current transformers except for generator producing facilities. A connection shall be made available by the Customer from each phase bus with a #6 AWG copper solid wire including crimped connectors and hardware to connect the Company's metering potential transformers.
- n. The phase bus shall be mechanically independent of the instrument transformers. Company metering transformers are not to be used as part of the bus support system. Removable bus bars shall be furnished by the Customer to permit installation and removal of current transformers. If aluminum bus is used, tin-plated or silver-plated terminals shall be provided by the Customer including silicon-bronze bolts and stainless steel nuts and washers for connection of the Company's metering current transformers.
- o. A grounding stud shall be provided for grounding each phase of the bus on the line side and load side of the metering transformers and mounted such that removal of instrument transformers does not affect the ground provisions. The Company will specify the ground stud to be used.
- p. A 5/8" (16 mm) dia. by 24" (600 mm) long copper ground bail shall be connected to the ground bus at both ends and located 7" (175 mm) behind the door and 5" (125 mm) above the door sill. In MA, NH, and RI, ground pads and "jug handles" shall be installed on the equipment ground bus as shown in Figure M-1A.

3. Metering Conduit:

The Customer shall furnish, install and maintain rigid conduit for the wiring from metering transformers to the billing meter panel. The maximum distance between meter and potential transformers shall be 50 feet (15 meters).

a. Internal:

Where the billing meter panel is part of the switchgear and the conduit is internal between sections, this conduit shall be 1-1/2" (41), PVC Sched. 80 with bushings on each end.

b. External:

The rigid conduit shall be at least 1-1/2" (41) galvanized steel. The conduit run is permitted a maximum of two 90 degree conduit bends (condulets shall not be used).

- c. A pull line shall be installed in the conduit.

4. Billing Metering Panel:

- a. Outdoor Billing Compartment: (where switchgear is located greater than 50 feet (15 meters) from the Customer's building)

Note: *These requirements apply to a compartment of the Customer's primary switchgear or to a separate free-standing outdoor cabinet.*

- (1) The compartment's minimum dimensions shall be 48" (1.2 m) wide x 90" (2.3 m) high x 24" (600 mm) deep. For a separate free-standing outdoor cabinet the minimum dimensions shall be 48" (1.2 m) wide x 60" (1.5 m) high x 24" (600 mm) deep.
- (2) The internal panel shall be 3/4" (19 mm) thick x 44" (1.1 m) wide x 60" (1.5 m) high minimum painted exterior grade plywood.
- (3) The Customer shall install a 1-1/2 inch (41) rigid galvanized steel conduit from the Company's metering transformer compartment to the Company billing meter cabinet.
- (4) The billing metering compartment shall be lighted (75 watt minimum), contain a 20A GFI protected 120/240VAC duplex receptacle, be heated (250 watt minimum, thermostatically controlled), and be ventilated.
- (5) The compartment door shall include a three point latch and provisions for a 3/8" (10 mm) shank padlock by the Company.
- (6) The Customer's switchgear heater control circuitry equipment shall be located in this compartment.

- b. If Utility Meters are being installed inside:

- (1) The Customer shall install a 1-1/2 inch (41) rigid galvanized steel conduit from the Company's metering transformer compartment to the Company approved meter location.
- (2) The Customer shall provide and mount a meter board for each indoor installation as illustrated in Section 7 of ESB 750.

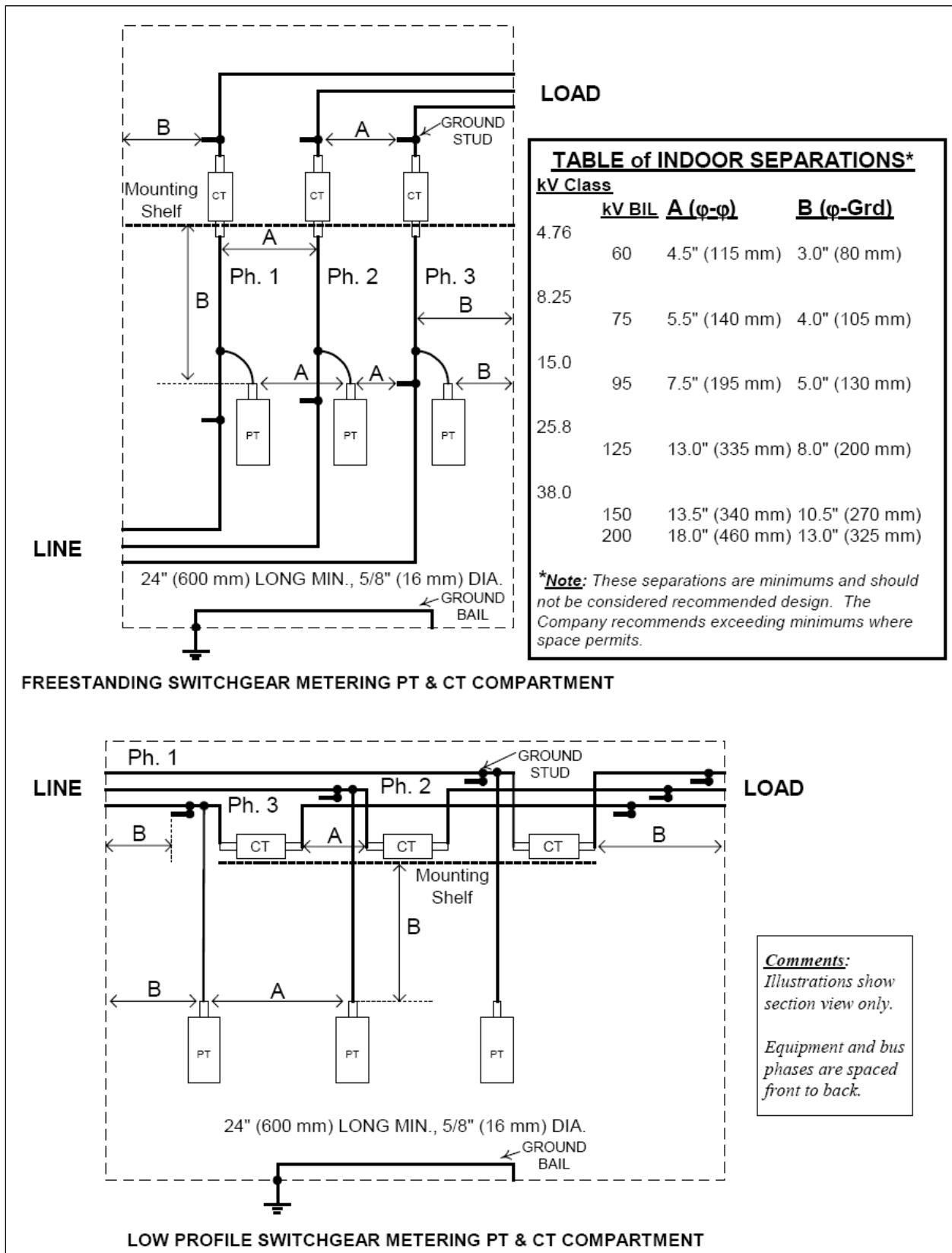
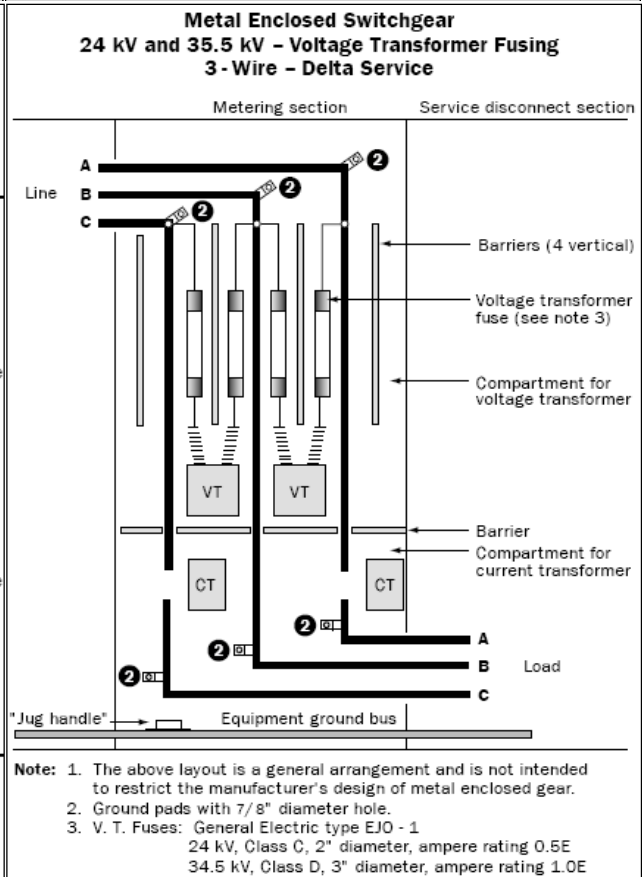
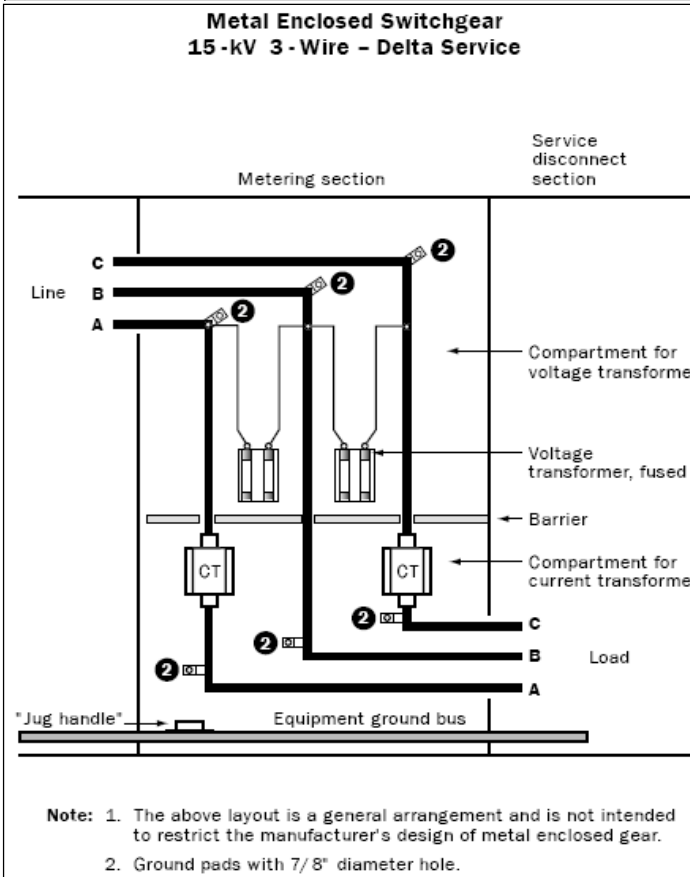
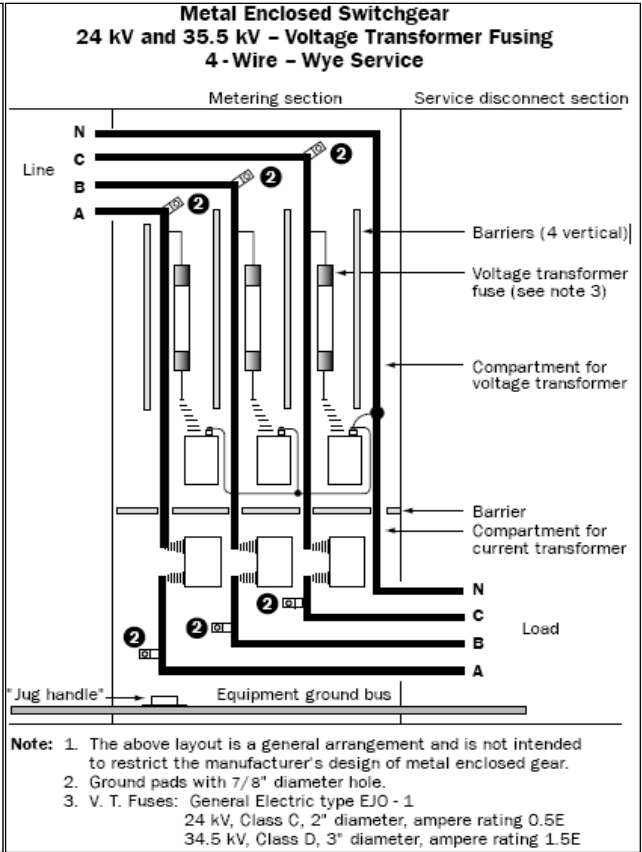
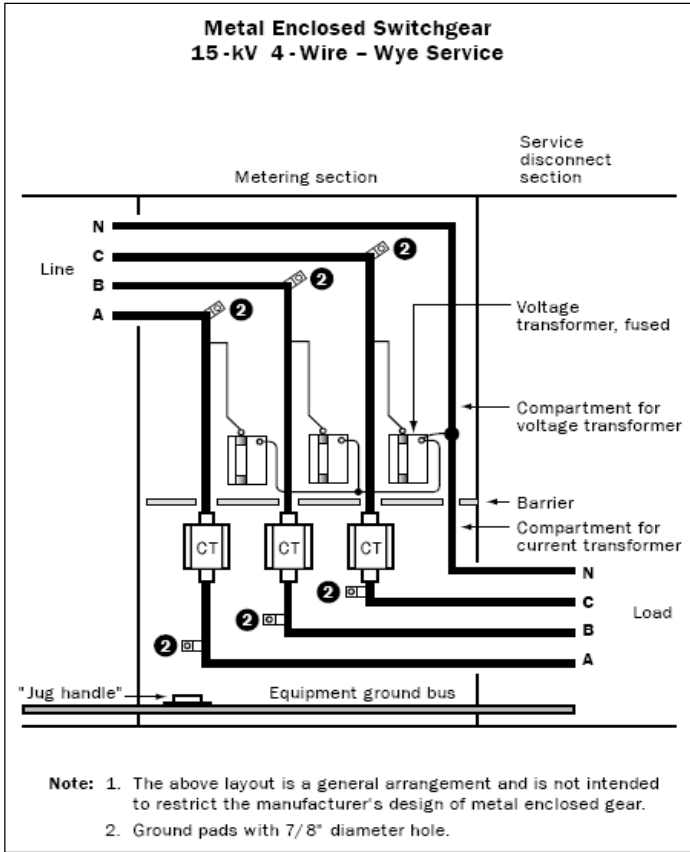


Figure M-1 – Typical Primary Switchgear Metering Transformer Compartment Clearances

For the latest authorized version please refer to the Company's website at <http://www.nationalgridus.com/ProNet/Technical-Resources/Electrical-Specifications>

For MA, NH, and RI:



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Figure M-1A – Typical Primary Switchgear Metering Transformer Compartments

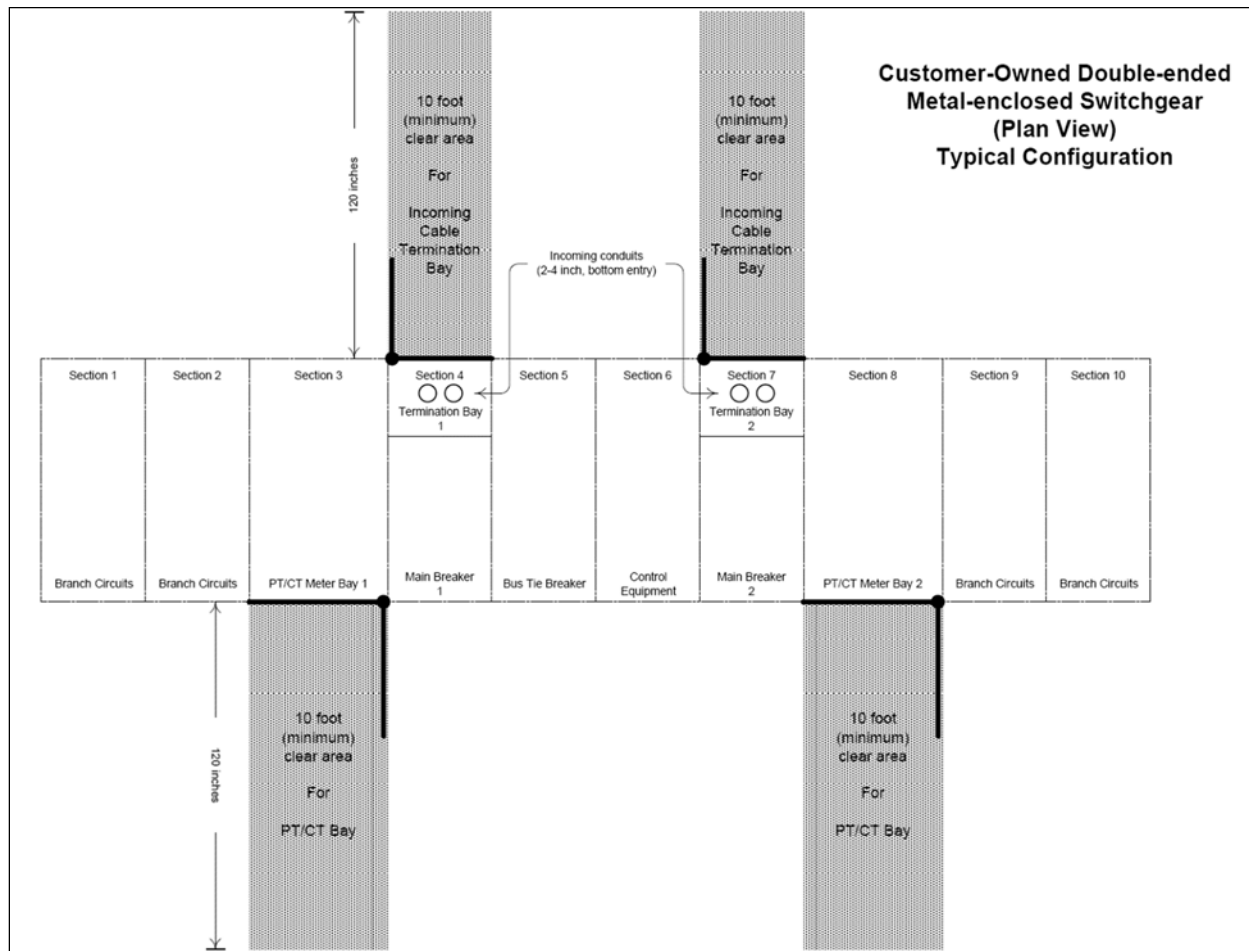


Figure 1A – Clear Area Requirements in Front of Line Termination and Metering Transformer Compartments for 15kV Class Primary Switchgear

ESB No. 759A

PAGE	SECTION	EFFECTIVE DATE	CHANGE
10	8.0 (a)	Jan-2018	Add (ii)

Add to Section 8.0 (a) Trench Construction Requirements, Layout and Grading,

- ii. In the limited instances in New York State when the Company agrees to waive the requirement to install binder coat prior to construction, the Company will require the Developer to execute an Indemnification and Release Agreement. This document shall be furnished by the appropriate Company representative as necessary. This Indemnification and Release Agreement shall confirm the adequacy of the sub-base road construction complies with previously approved

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designs (per approval from municipality) and is adequate for truck traffic and heavy equipment.

The Developer/Owner shall submit a letter to the Company confirming that (1) the site is completely and accurately staked and (2) existing grades are within six (6) inches of final grade throughout the site. Additionally, all roads within the Subdivision shall be suitable for general and construction traffic, including trucks, heavy equipment and other large machinery, prior to any Company Work. This letter shall be furnished on the letterhead that bears the seal of a New York State Licensed Design Professional or Licensed Land Surveyor. Developer shall install all roads within the Subdivision in accordance with the approved plans for the Subdivision.

ESB No. 759B

PAGE	SECTION	EFFECTIVE DATE	CHANGE
11	9.0 (A)	Feb-2019	The Note in 9.0(A) refers only to the third bullet.
13	12.0	Feb-2019	The transformer pad and oil containment structure is installed, owned and maintained by the Customer. The stability of this structure is critical to the reliability of the Customer's service. Therefore, the Customer shall be responsible for meeting the minimum requirements as outlined by Section 12 and Figure 27.0 of this Bulletin for the installation of these structures. Where existing or sub-surface soils are unstable or non-compressive, they shall be replaced with suitable compressive soils. A soils compression test may be obtained by the Customer to ensure appropriate soil compaction (95%). Where existing soils are replaced, ground rods may require deeper placement for low-resistance earth contact. Deterioration, movement, or damage to the transformer pad and/or oil containment structure shall be repaired by the Customer at the Customer's cost, including any costs incurred by the Company for interruptions, lifting of transformer, adjustment of cables, etc. Electric service may require temporary disconnection where repairs are warranted.

REVISION HISTORY

<u>Version</u>	<u>Date</u>	<u>Description of Revision</u>
1.0	09/27/10	First version of new document superseding all previous issues of the ESB 750 series Errata and Revisions.
2.0	12/31/14	Various Revisions.
2.1	01/01/18	Added ESB 752, Section VII.A.1 and ESB 759A, Section 8.0.
2.2	02/01/19	ESB 759B, Sections 9.0, 12.0. ESB753, Figures 3a & 4.
3.0	01/10/2020	All ESB 750 changes removed as they've been incorporated into new ESB 750-2020 issue. ESB 753 neutral connection location change. ESB 757 changes removed and latest revision referenced. Website revised in Document footer. Added MA and RI tariff website links. Revised all ESB 750—0410 references to ESB 750 – 2020.
3.1	July 2020	Added corrections and revisions to new ESB 750-2020 section. Added RTU language to ESB 752 section. Revised ESB 758 Section L.33.

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