



THE POWER OF ACTION

Specifications for Electrical Installations and Supplements

Errata and Revisions

September 2010

for the

Electric System Bulletin 750 Series

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

NOTICE: This publication contains changes and corrections to the Company's **Specifications for Electrical Installations, the "ESB750--0410 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.

TABLE of CONTENTS

<u>SECTION</u>	<u>PAGE</u>
TABLE of CONTENTS	2
GENERAL NOTICE	3
ESB No. 750-2010 (VERSION 1.0, 04/20/2010) – SPECIFICATIONS FOR ELECTRICAL INSTALLATIONS (UPSTATE NY, MA, NH, AND RI).....	3
NEW ENGLAND GREEN BOOK (JULY 2000) – ELECTRICAL SERVICE INFORMATION AND REQUIREMENTS.....	5
ESB No. 751-2003 (NOVEMBER 2003) “APPROVED METER SOCKETS AND OVERHEAD SERVICE ATTACHMENT BRACKETS”	5
ESB No. 752-1994, 2ND PRINTING APRIL 2002 “SERVICE ABOVE 15,000 VOLTS”.....	5
ESB No. 753-1993, 2ND PRINTING APRIL 2002 “PRIMARY METER POLE”	6
ESB No. 754A-1992, 2ND PRINTING JUNE 2002 “SINGLE PHASE OUTDOOR PAD MOUNTED TRANSFORMER”	6
ESB No. 754-2007 “OUTDOOR PAD MOUNTED OR VAULT ENCLOSED THREE PHASE TRANSFORMER”	6
ESB No. 755-2003 “OPERATION & MAINTENANCE REQUIREMENTS FOR SERVICES ABOVE 600 VOLTS”	9
ESB No. 756-2007 “GENERAL REQUIREMENTS FOR PARALLEL GENERATION CONNECTED TO A NATIONAL GRID OWNED EPS”	10
ESB No. 756 APPENDIX A; 2007 “REQUIREMENTS FOR PARALLEL GENERATION CONNECTED TO NATIONAL GRID FACILITIES IN NY”	10
ESB No. 756 APPENDIX B; 2007 “REQUIREMENTS FOR DG CONNECTED TO NATIONAL GRID’S RADIAL DISTRIBUTION PER THE NYS SIR”	10
ESB No. 756 APPENDIX C; 2007 “REQUIREMENTS FOR PARALLEL GENERATION CONNECTED TO NATIONAL GRID FACILITIES IN MASSACHUSETTS”	10
ESB No. 756 APPENDIX D; 2007 “REQUIREMENTS FOR PARALLEL GENERATION CONNECTED TO NATIONAL GRID FACILITIES IN RHODE ISLAND”	10
ESB No. 756 APPENDIX E; 2007 “REQUIREMENTS FOR PARALLEL GENERATION CONNECTED TO NATIONAL GRID FACILITIES IN NEW HAMPSHIRE”	11
ESB No. 757, AUG. 1973 “NETWORK SERVICES”	11
ESB No. 758, JAN. 1985 “PRIMARY SERVICE TO METAL ENCLOSED GEAR”	11
ESB No. 759.....	17
REVISION HISTORY	17

General Notice

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 P.S.C. No. 207 in any of the Company's ESB 750 series bulletins shall be construed as references to P.S.C. No. 220 (see: http://www.nationalgridus.com/niagaramohawk/non_html/rates_psc220.pdf).

ESB No. 750-2010 (Version 1.0, 04/20/2010) – Specifications for Electrical Installations (Upstate NY, MA, NH, and RI)

PAGE	SECTION	EFFECTIVE DATE	CHANGE
11	Electric Service Areas	Sep-2010	Add the following web link below the Massachusetts map: https://www.nationalgridus.com/non_html/shared_about_svcmap_meco.pdf
27	1.10.2	Sep-2010	Add "operating" before "demands" in second sentence.
41	4.1.2	Sep-2010	In second sentence, the word "laterals" was cut off.
43	Figure 4.1.9-1	Sep-2010	Remove 48", 18", and 32" horizontal dimensions from Figure 4.1.9-1, which are not related to the intent of this section.
45	Figure 4.1.10-2	Sep-2010	Add "50 ft. maximum length" to service drop.
46	Figure 4.1.10-3	Sep-2010	Change the figure's title to read as follows "Figure 4.1.10-3 Typical Underground Service Post for Permanent or Temporary Service Below 600 volts".
50	4.2.4.1	Sep-2010	Add the following notes to the table: Notes to Table 4.2.4.1-1: <ol style="list-style-type: none"> 1 Vertical clearance values for conductors are for 100 ft. (30.0 m) spans at 60°F (15°C) final unloaded sag and phase-to-ground voltages. No allowance is made for sag for vertical clearances at a building or structure's point of attachment. Consult the Company for clearances required for longer spans. 2 Vertical clearance above roadways subject to truck traffic may have higher requirements based on the highway authority having jurisdiction. 3 A roof, balcony, or area is considered readily accessible to pedestrians if it can be casually accessed through a doorway, ramp, window, stairway, or permanently mounted ladder by a person on foot who neither exerts extraordinary physical effort nor employs tools or devices to gain entry. A permanently mounted ladder is not considered a means of access if its bottom rung is 8 ft. (2.45 m) or more from the ground or other permanently installed accessible

PAGE	SECTION	EFFECTIVE DATE	CHANGE
			<p>surface.</p> <p>4 Where the height of a residential building does not permit its service drop(s) to meet these values or where clearances are compromised, please consult the Company.</p> <p>5 Consult the Company if work may be expected in the future near lines or between the building and lines. The clearance shall be increased to ensure 10 ft. (3.0 m) minimum clear space for electrically unqualified persons, tools, machinery, and equipment or the line must be de-energized, guarded, and marked-up as required by safety codes. The clearance shall consider space required when ladders or scaffolding are to be used when maintaining the building or structure. The Customer will be responsible for any charges incurred by the Company to provide safe clearances for Customer activity.</p>
51	4.2.4.2	Sep-2010	<p>Add the following notes to the table:</p> <p>Notes to Table 4.2.4.2-1:</p> <p>1 Vertical clearance values for conductors are for 100 ft. (30.0 m) spans at 60°F (15°C) final unloaded sag and phase-to-ground voltages. No allowance is made for sag for vertical clearances at a building or structure's point of attachment. Consult the Company for clearances required for longer spans.</p> <p>2 For 750V to 22kV Open Supply Cables, 26.5 ft. (8.1 m) applies for the first row and 18.5 ft. (5.7 m) applies for the second row clearance requirements. Consult the Company for overhead line clearances to swimming pools to identify the line construction and operating voltage.</p> <p>3 When a Customer's pool installation fails to maintain the required NESC safety clearances from the Company's overhead conductors, the Customer (or the installer) shall bear the costs of correcting the NESC violations by relocating the pool or the Company's overhead lines.</p>
52	Table 4.2.4.3-1	Sep-2010	<p>Add the following note after the table "For single-phase, 200A and less service drops, a 2 inch (53) rigid galvanized steel conduit riser may be permitted providing it is braced with a 5/16" (8mm) steel guy wire. See Section 1.11.1 when considering alternative installation methods and materials."</p>
54	4.2.6	Sep-2010	<p>Add the following new last paragraph: "In Upstate NY where there are no jurisdictional requirements for licensed electricians, the Company will permit individuals with qualifications as outlined in the National Electrical Code (NEC) to disconnect and temporarily reconnect a residential overhead service on the customer side of the service point under the same conditions stated above. Refer to the Company's Web site at http://www.nationalgridus.com/niagaramohawk/construction/4_overhead.asp for details and the procedure to permit and schedule this work."</p>
56	4.5.4.1	Sep-2010	<p>Add to last sentence in first paragraph of Section 4.5.4.1 "and no more than 2 for each service connection".</p> <p>Add another sentence to the end of the first paragraph "For conductor sizes greater than 500kcmil, the Customer will be responsible to provide the Company with connectors if necessary to connect to overhead transformers."</p>

PAGE	SECTION	EFFECTIVE DATE	CHANGE														
69	7.1.3.2	Sep-2010	Add the following new last sentence to the first paragraph: "A clear working space of at least four feet (1.2 m) shall be provided and maintained in front of all meter socket covers; however, shall not be less than 3 ft. (0.9 m) to a property line."														
70	7.1.4	Sep-2010	Delete last (fourth) paragraph of Section 7.1.4.														
76	Figure 7.3-3	Sep-2010	Add "For Commercial Only" above note "By-Pass Lever in the By-Passed Position".														
80	Figure 7.3-7	Sep-2010	Add "Position" at the end of the figure's title.														
81	Figure 7.3-8	Sep-2010	Remove the word "Figure" at the end of the figure's title. Add "and refer to Section 5.1.7.2 for more information" to the end of the last sentence in Figure 7.3-8.														
86	Figure 7.4.1-2	Sep-2010	Delete the redundant title below the figure's title.														
104	11.2.1	Sep-2010	Change the third sentence in Section 11.2.1 to read as follows: "This will require the installation of a double-throw, "break-before-make" type switch or similar disconnecting device acceptable to the Company; see Section 11.2.3."														
109	11.2.3.2	Sep-2010	Move the last paragraph below the figure in Section 11.2.3.2 to be the last paragraph in Section 11.2.3.3.														
118	Figure APP1-2	Sep-2010	Correct the right side table list as follows: <table border="1"> <thead> <tr> <th>ITEM</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>I-25</td> <td>3", 600V Insulator</td> </tr> <tr> <td>B7A2</td> <td>2-1/2" (65 mm) Expansion Shield Lag Screw (Zinc Alloy)</td> </tr> <tr> <td>B11A</td> <td>3/8" (10 mm) X 3" (75 mm) Lag Screw</td> </tr> <tr> <td>B11B</td> <td>3/8" (10 mm) X 4" (100 mm) Lag Screw</td> </tr> <tr> <td>B13</td> <td>5/8" (16 mm) Machine Bolt</td> </tr> <tr> <td>W1</td> <td>2-1/4" (57 mm) Square Flat Washer</td> </tr> </tbody> </table>	ITEM	DESCRIPTION	I-25	3", 600V Insulator	B7A2	2-1/2" (65 mm) Expansion Shield Lag Screw (Zinc Alloy)	B11A	3/8" (10 mm) X 3" (75 mm) Lag Screw	B11B	3/8" (10 mm) X 4" (100 mm) Lag Screw	B13	5/8" (16 mm) Machine Bolt	W1	2-1/4" (57 mm) Square Flat Washer
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New England Green Book (July 2000) – Electrical Service Information and Requirements

Superseded in April 2010, refer to ESB750--0410.

ESB No. 751-2003 (November 2003) "Approved Meter Sockets and Overhead Service Attachment Brackets"

Superseded in April 2010, refer to ESB750--0410. New ESB 751 "General Requirements for Services Above 600 volts" is presently being developed.

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.
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

PAGE	SECTION	EFFECTIVE DATE	CHANGE
			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.”

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

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.

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

Superseded in April 2010, refer to ESB750--0410 and ESB 754. See also ESB 759 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--0410 and new ESB 759. See ESB 759 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	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: 6. Clearances from objects: A. An area measuring 10 feet from any point of the

PAGE	SECTION	EFFECTIVE DATE	CHANGE
			<p>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 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.

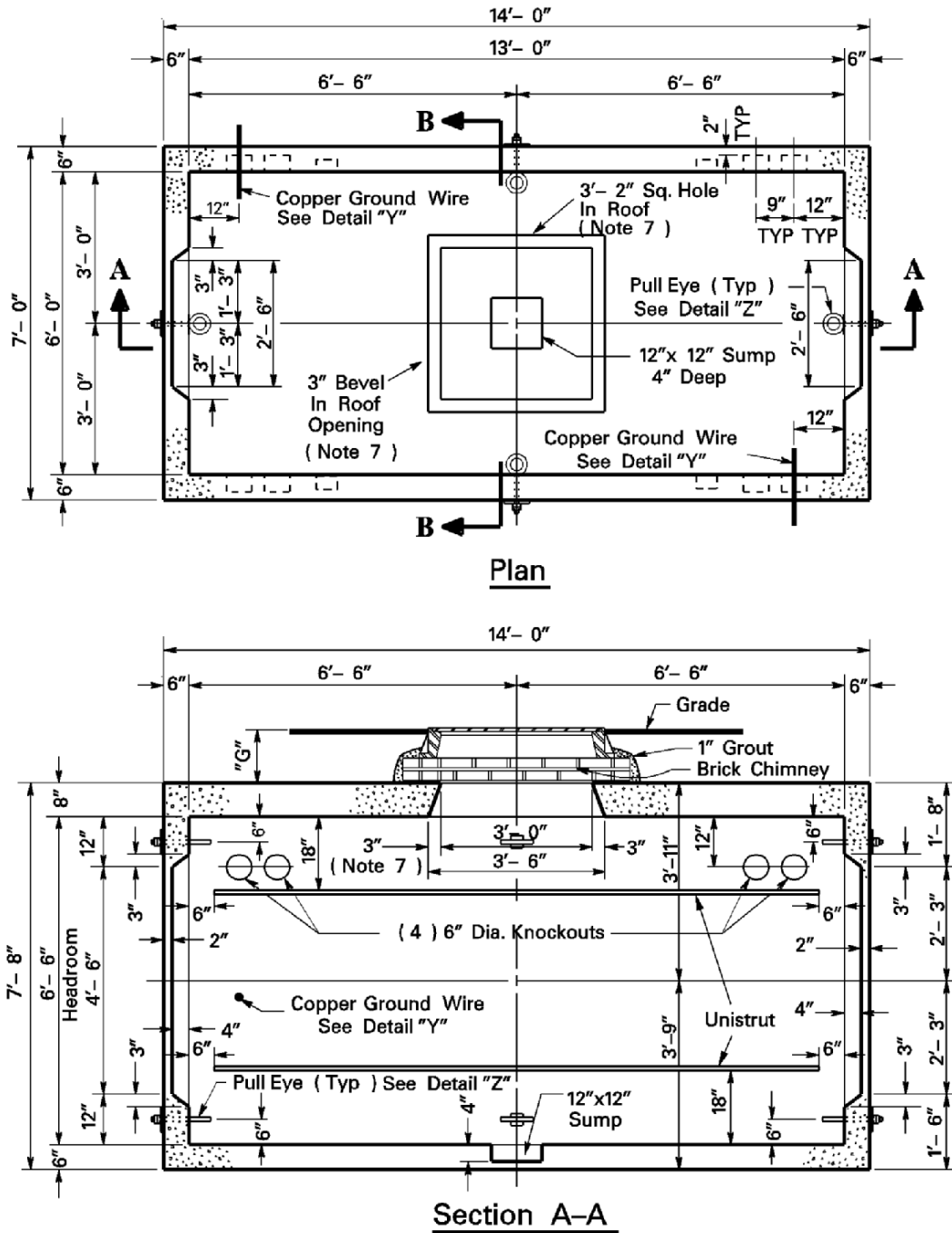


FIGURE 11: TYPICAL MANHOLE REQUIREMENTS

ESB No. 756-2007 “General Requirements for Parallel Generation Connected to a National Grid Owned EPS”

PAGE	SECTION	EFFECTIVE DATE	CHANGE
	Table of Contents	Apr-2009	Correct title of Appendix C to: “Requirements for Parallel Generation Connected to National Grid Facilities in Massachusetts”
	Table of Contents	Apr-2009	Correct last Appendix number to: “Appendix E”

ESB No. 756 Appendix A; 2007 “Requirements for Parallel Generation Connected to National Grid Facilities in NY”

No errata.

ESB No. 756 Appendix B; 2007 “Requirements for DG Connected to National Grid’s Radial Distribution per the NYS SIR”

PAGE	SECTION	EFFECTIVE DATE	CHANGE
35	3.2	Sep-2010	Delete process illustration due to revised NYS SIR, July 2010 and add “Refer to the process steps located in Section I at http://www.dps.state.ny.us/Modified_SIR-July2010-Final.pdf of the New York State Standardized Interconnection Requirements and Application Process for New Distributed Generators 2 MW or Less Connected in Parallel with Utility Distribution Systems.” The NYS SIR, July 2010 prevails where there may be a process difference from ESB 756 Appendix B.

ESB No. 756 Appendix C; 2007 “Requirements for Parallel Generation Connected to National Grid Facilities in Massachusetts”

PAGE	SECTION	EFFECTIVE DATE	CHANGE
45		Apr-2009	On page 45, change the Web site address to: “ https://www.nationalgridus.com/masselectric/non_html/rates_tariff.pdf#nameddest=interconnection ”.

ESB No. 756 Appendix D; 2007 “Requirements for Parallel Generation Connected to National Grid Facilities in Rhode Island”

PAGE	SECTION	EFFECTIVE DATE	CHANGE
136		Apr-2009	Change the Web address so the paragraph will read as follows: “Refer to Narragansett Electric Company Standards for Connecting Distributed Generation, R.I.P.U.C. No 2007 at: https://www.nationalgridus.com/narragansett/non_html/distgen_standards.pdf , Effective March 2008, which describes the process and requirements of Narragansett Electric for those instances when a Customer desires to connect a customer-owned Generating Facility to Narragansett Electric’s Distribution System.”

ESB No. 756 Appendix E; 2007 “Requirements for Parallel Generation Connected to National Grid Facilities in New Hampshire”

PAGE	SECTION	EFFECTIVE DATE	CHANGE
137		Apr-2009	Change the Web address so the paragraph will read as follows: “For net-metered generators sized less than 25 KVA, see PUC900 at: http://www.puc.state.nh.us/Regulatory/Rules/PUC900%20Net%20Metering.pdf For all other generators, refer to the Massachusetts Department of Telecommunications and Energy (MDTE) document No. 1116-A, effective April 2, 2007 contained in Appendix C of this document.”

ESB No. 757, Aug. 1973 “Network Services”

PAGE	SECTION	EFFECTIVE DATE	CHANGE
1	1.1	Nov-1999	Change “800 amperes and above at 480Y/277 volts” to “480Y/277 volts”.
10	4.2.3	Nov-1999	Delete the Local Authority Approval part in its entirety.
19	13.4.1	Nov-1999	Delete “paragraphs 94, 97 and 100”.

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”.
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.

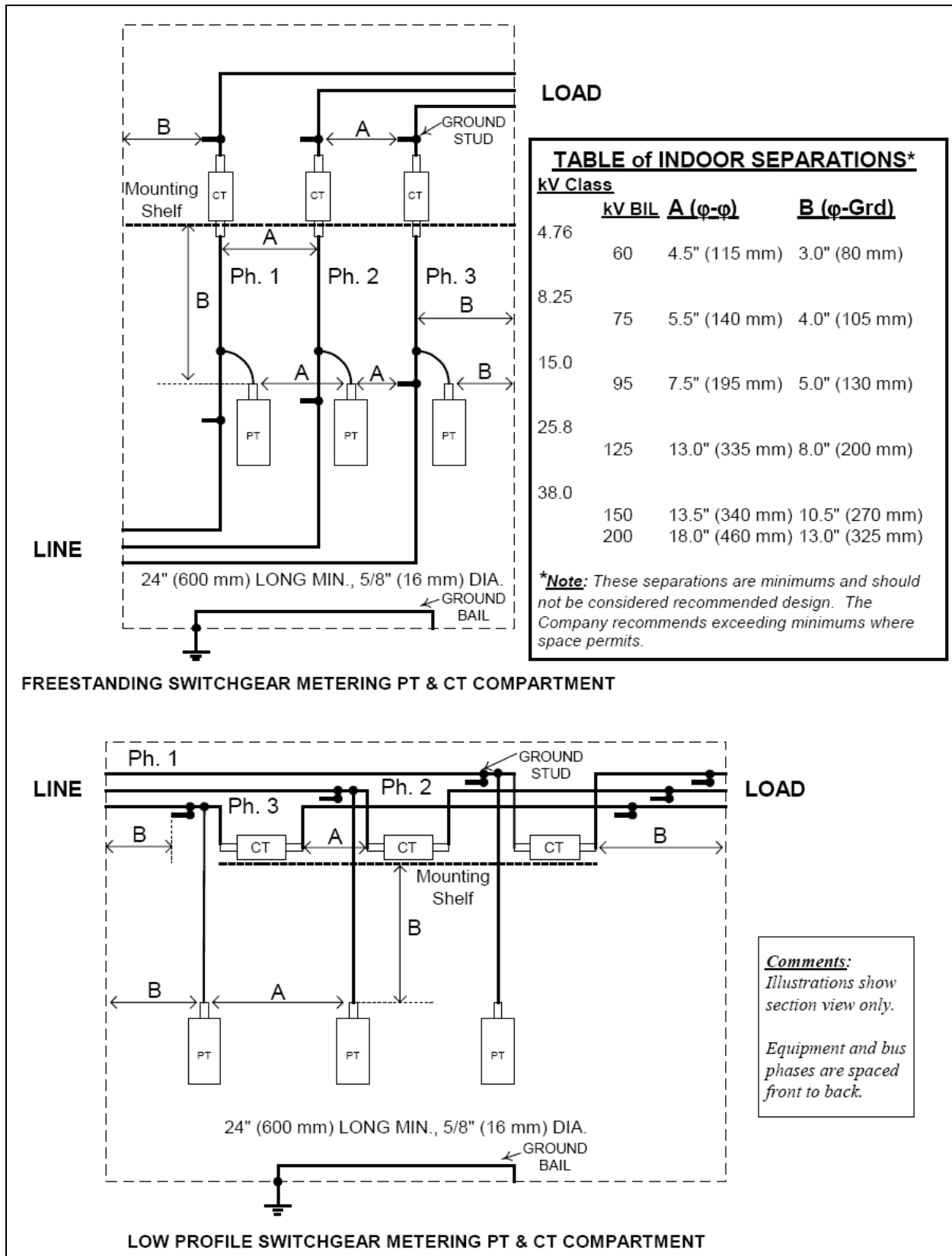


Figure M-1 – Typical Primary Switchgear Metering Transformer Compartment Clearances

For MA, NH, and RI:

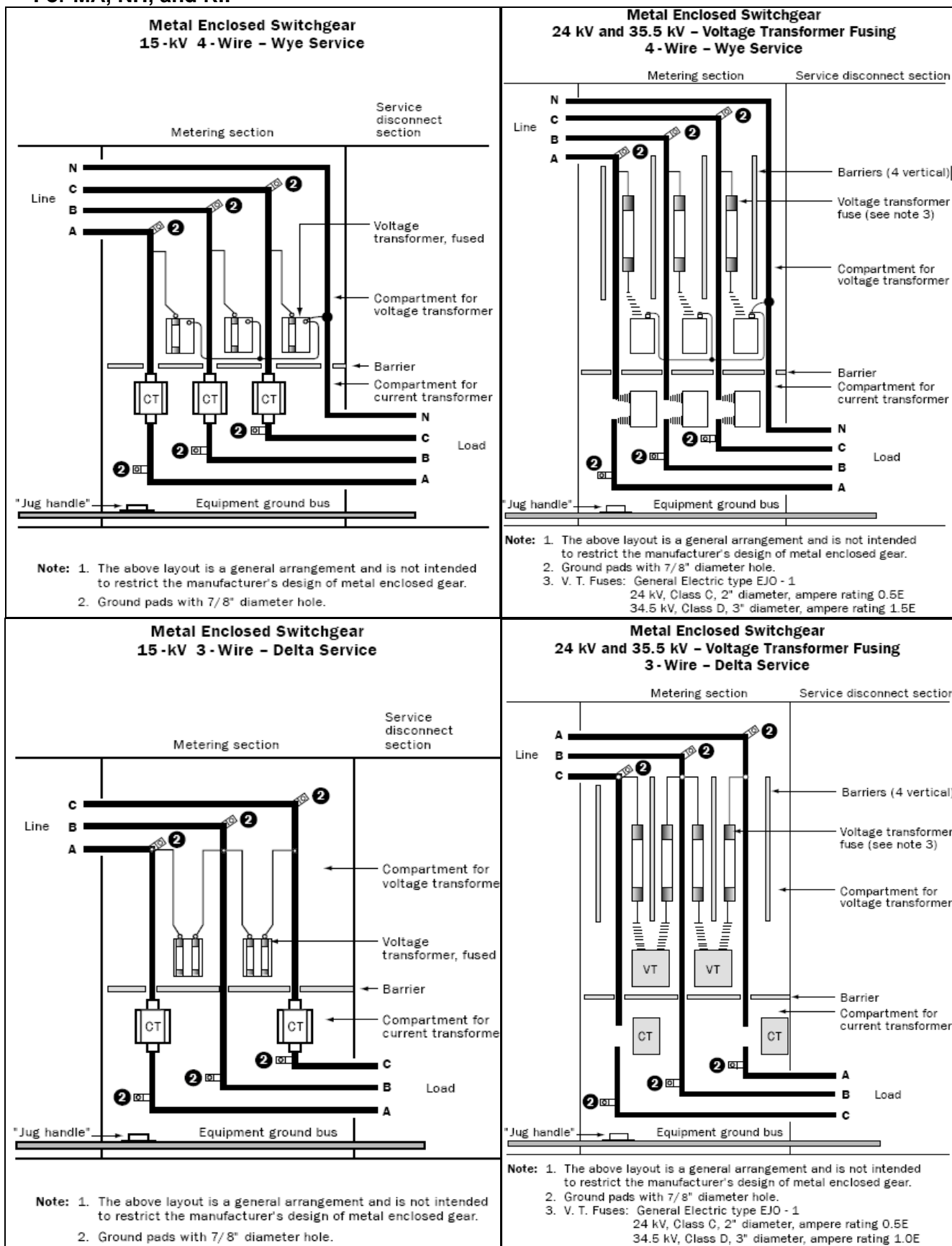


Figure M-1A – Typical Primary Switchgear Metering Transformer Compartments

For the latest authorized version please refer to the Company's website at <http://www.nationalgridus.com/electricalspecifications>.

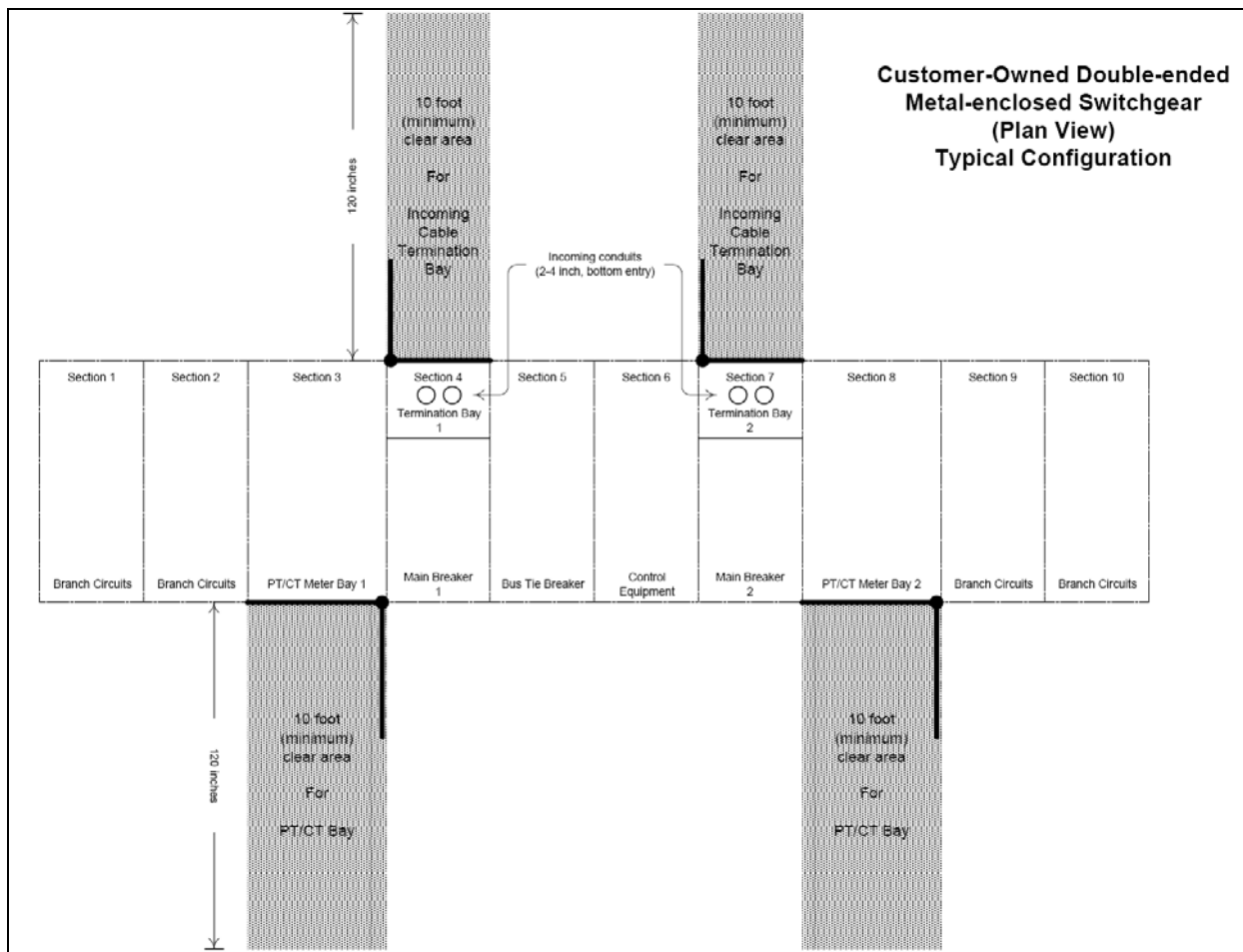


Figure 1A – Clear Area Requirements in Front of Line Termination and Metering Transformer Compartments for 15kV Class Primary Switchgear

ESB No. 759

Superseded in Oct. 2007 by ESB 754. New ESB 759 “Underground Distribution Guidelines” is presently being developed.

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.

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