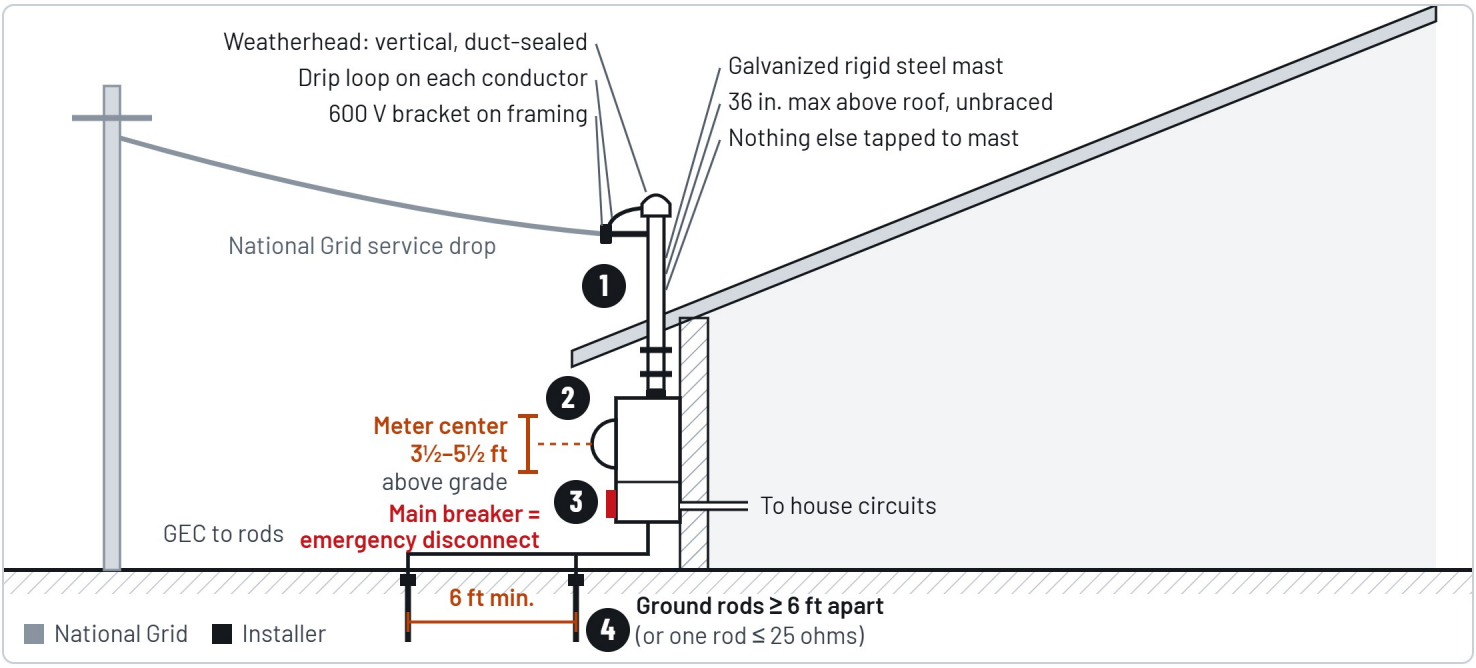
PRE-INSPECTION CHECKLIST · HANDOUT 01

Residential Service, up to 200 A

Overhead service basics from National Grid ESB 750 (2025) and the 2023 NEC.

National Grid · NY service area
ESB 750-2025 + 2023 NEC



MINIMUM CLEARANCES NG'S SERVICE DROP MUST KEEP FROM YOUR BUILDING

17.5 ft	12.5 ft	5 ft	3 ft	25 ft	5 ft*
over roads & driveways	over decks & walkable roofs	sideways to porches & decks	below or beside windows & doors	max drip-loop height	over other roofs; less at mast*

Redrawn after ESB 750 Figs. 4.2.2-1 and 4.2.4.4-1; not to scale. Clearances are for NG's multiplex drop, Table 4.2.4.1-1. *Note F: over roofs, 18 in. within 6 ft of the mast (mast ≤ 4 ft from the roof edge), 3½ ft beyond that over the same roof.

START BEFORE YOU START

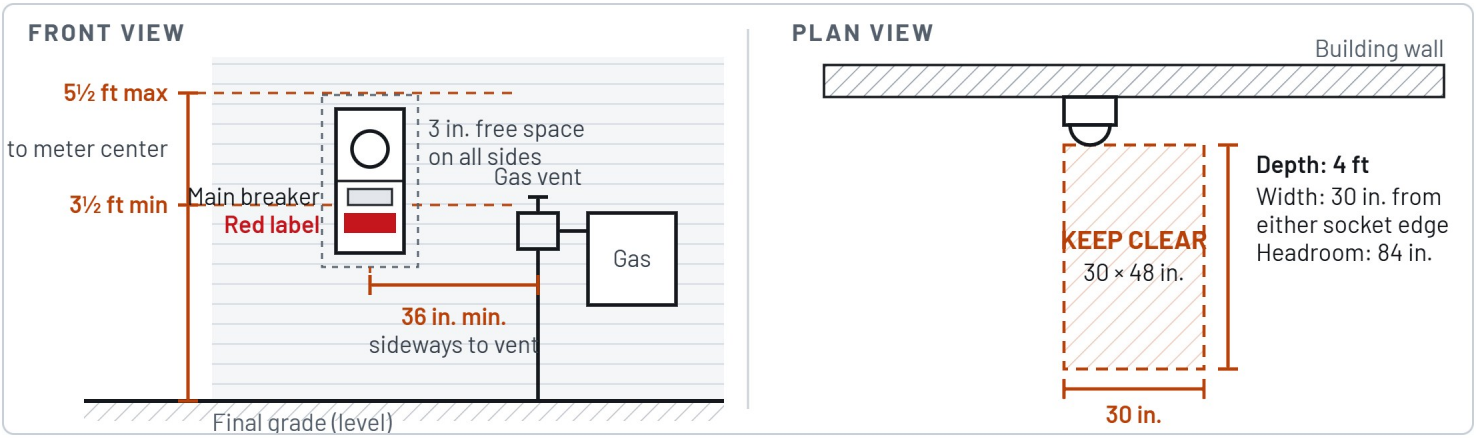
- ☐ Call National Grid before you buy equipment or run wire. They set the service type, service point and meter location. **ESB 3.6**
- ☐ If municipality requires a permit. Permits issued on or after Dec. 31, 2025 follow the 2023 NEC
- ☐ Call 811 (Dig Safely NY) before any digging, ground rods included.
- ☐ Replacing the meter socket, mast, conductors or service equipment? The whole service entrance must meet current NG spec. **ESB 3.11**

1 SERVICE POINT, MAST & WEATHERHEAD

- ☐ NG approves the attachment point. 600 V insulated bracket on framing, never a chimney. Reachable from grade by 24 ft ladder. **ESB 4.2.2, 3.4**
- ☐ Mast: galvanized rigid steel, 2½ in. min. (2 in. only with a 5/16 in. guy). Unbraced above roof: 36 in. max for 2½ in., 48 in. for 3 in. **ESB Table 4.2.4.4-1**
- ☐ No couplers above the last support; nothing else connected to the mast.
- ☐ Weatherhead vertical, duct-sealed, no goosenecks. Leave 36 in. of conductor out for NG; drip loop on each conductor. **ESB 4.2.5**
- ☐ Conductors and conduit run on the outside wall face, not in the wall cavity; weatherproof penetrations. **ESB 4.2.5**
- ☐ Raceway rain-tight and arranged to drain; metered and unmetered conductors never share a raceway. **NEC 230.54(G); ESB 4.1.7**

2 METER-MAIN COMBO

NG installs the meter; you furnish, mount and wire the socket.

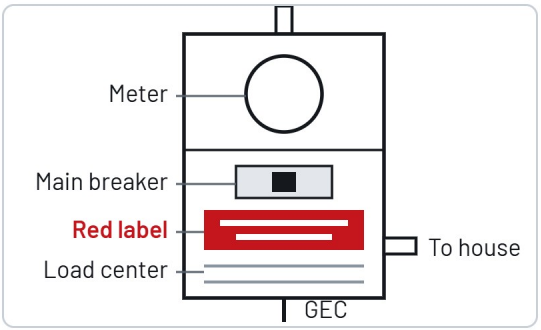


Redrawn after ESB 750 Figs. 7.1.2-1 and 7.1.2.3-1; not to scale. Heights are to the center of the meter. Basis of design: outdoor meter-main combo (meter section above main breaker and load center).

- ☐ Outdoor meter-main combo (Eaton or Milbank style): listed (UL 414), ringless meter section with hasp for NG's seal, NEMA 3R, top hub. Rated for the service, fits NG's 200 A meter. **ESB Table 7.2-2**
- ☐ No bypass lever on residential 200 A and under. Neutral bonded to the socket. Unused positions get closing plates. **ESB Table 7.2-2**
- ☐ Mount outdoors on a solid, flat, plumb surface over level grade. Trim the siding around it, never mount directly to siding. **ESB 7.7**
- ☐ Center 3½–5½ ft above grade, 3 in. free space on all sides, 4 ft deep × 30 in. wide × 84 in. headroom clear in front. **ESB 7.1.2**
- ☐ 36 in. sideways from gas regulator vents, never above or below one. Avoid window wells, exhausts, door swing, driveways and snow-pile areas unless protected. **ESB 7.1.1–7.1.3**
- ☐ Socket is not a junction box: no splices or taps, no grease on jaws, no plug-in transfer switch or disconnect adapters. Leave NG's seals intact. **ESB 7.3, 7.1.5**

3 SERVICE EQUIPMENT: EMERGENCY DISCONNECT

2023 NEC 230.85 · meter first, then disconnect (ESB 5.1.1)



Combo main breaker = emergency + service disconnect (first label).

EMERGENCY DISCONNECT, SERVICE DISCONNECT — **Service disconnect**: outdoor main, or the combo's main breaker

EMERGENCY DISCONNECT, METER DISCONNECT, NOT SERVICE EQUIPMENT — **Meter disconnect** built into the socket

EMERGENCY DISCONNECT, NOT SERVICE EQUIPMENT — **Other listed disconnect** on the supply side

- ☐ Required on one- and two-family dwellings when service equipment is installed or replaced. Not needed if only the meter socket, service conductors or raceway change. **NEC 230.85(C)**
- ☐ Readily accessible, outdoors, on or within sight of the dwelling (visible and within 50 ft). **NEC 230.85(A)(1), 110.29**
- ☐ Short-circuit rating at or above available fault current (NG: 10,000 A rms minimum on residential). Group multiple disconnects together. **NEC 230.85(A); ESB 5.1.3**
- ☐ Marking on the outside front: red background, white letters at least ½ in. high, wording that matches the type shown. **NEC 230.85(E)**
- ☐ Generator, solar or battery? If its isolation means isn't next to this disconnect, add a plaque showing where it is. **NEC 230.85(D)**

3 SERVICE EQUIPMENT, WORKSPACE, SURGE & SUBPANEL

continued from page 2

- ☐ Outdoor combo main is the service disconnect (marked as on page 2). The inside panel is a subpanel, not service equipment; keep it out of bathrooms and clothes closets. NEC 230.70, 240.24(D)
- ☐ Working space 3 ft deep × 30 in. (or panel width) wide × 6½ ft high, no storage, lit, door opens 90°. Top handle ≤ 6 ft 7 in. NEC 110.26, 240.24(A)
- ☐ Surge protective device (Type 1 or 2, 10 kA min.) in or right beside the service equipment; required with new or replaced equipment. NEC 230.67
- ☐ One conductor per terminal screw, each neutral in its own terminal. NEC 110.14, 408.41
- ☐ Neutral and ground bonded only at the service disconnect. **Special note for Service Upgrades:** With the main now outdoors, the inside panel is now a subpanel: 4-wire feeder, separate neutral and ground bars, bonding screw/strap removed. NEC 250.24(A)(5), 250.142(B)

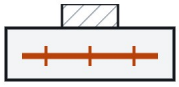
4 GROUNDING & BONDING

- ☐ Electrodes: ground rod(s), concrete-encased (UFER), 10 ft+ of buried metal water pipe, building frame or ground ring, all bonded together. NEC 250.50
- ☐ Second ground rod at least 6 ft away unless one rod tests 25 ohms or less; water pipe always needs another electrode. NEC 250.53
- ☐ GEC per Table 250.66, continuous, secured, protected from damage; clamps listed for direct burial or exothermic welds. NEC 250.64(C)
- ☐ Bond metal water and gas piping (CSST: 6 AWG copper min.); jumper around the water meter; add a UL-listed intersystem bonding termination. ESB 6.2(H), NEC 250.53(D)
- ☐ Gas piping is never an electrode, and don't ground other equipment through it. ESB 6.4
- ☐ Bond metal service raceways, enclosures and the mast. ESB 6.2(E)

BOND EVERYTHING TOGETHER



Ground rods
2nd rod 6 ft+ away unless 25 ohms or less



Concrete-encased
Rebar or copper in the footing (UFER)



Water pipe
Bond it; add a second electrode



Gas pipe
Bond only, never an electrode

FINISH FINAL WALK-THROUGH

- ☐ Panel directory complete; unused openings closed; bushings on No. 4 or larger raceways. NEC 408.4(A), 110.12(A), 300.4(G)
- ☐ Cover on, door swings 90°, working space clear and lit; back-fed plug-in breakers hold-down secured. NEC 110.26, 408.36(D)
- ☐ AFCI/GFCI breakers installed and tested; GFCI receptacles tested.
- ☐ Equipment listed, labeled and installed per its instructions. NEC 110.3(B)
- ☐ Emergency disconnect marked, SPD installed, meter socket sealable (hasp, no ring).
- ☐ Inspection certificate released to NG (Contractor Services or portal); NG then sets the meter and makes the final connection. ESB Table 7.2-5

IF YOUR SERVICE IS UNDERGROUND

- ☐ NG makes the final connection; you run conduit and conductors to the service point (pole riser, handhole or transformer).
- ☐ Frost expansion fitting where conduit meets the meter socket; seal conduit where it enters the building.
- ☐ Feed enters the sealed meter section only; no unmetered conductors behind the breaker compartment, no conduit bodies or unlocked panels. ESB 7.1.5, 4.5.3
- ☐ Bottom-entry studs: crimp-type or spring-compression connectors only, max 2 conductors per stud. ESB 4.5, 7.2

National Grid Contractor Services (NY): 1-800-260-0054 · Portal: gridforce.my.site.com/electric/s/ · Dig Safely NY: 811

Sources: National Grid ESB 750-2025, 2023 NEC.