

QC Electrical Raceways and Boxes Checklist

Section 26.05.33

<p>Specified raceway material and trade size installed for each location and environment (e.g., PVC-coated RMC in corrosive areas, EMT in dry interiors) with no unapproved substitutions observed.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> ✓ QC OPN NA </div>
<p>Underground raceways maintain minimum burial depth and mechanical protection per NEC Table 300.5; measure and record depths at representative locations.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> FTQ ✓ OPN NA </div>
<p>Raceway runs incorporate no more than 360° total bend between pull points; additional junction or pull boxes provided where limit would be exceeded.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> ✓ QC OPN NA </div>
<p>Minimum inside bending radius achieved for each conduit size and type, preventing conductor damage during pull; verify radius against NEC 358.24/344.24 tables.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> FTQ ✓ OPN NA </div>
<p>Metallic raceways are bonded with listed grounding bushings or grounding locknuts at service equipment and where required by NEC 250; continuity verified with meter reading $\leq 1 \Omega$.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> FTQ ✓ OPN NA </div>
<p>Conductor fill within each conduit does not exceed 40% (over two conductors) or 53% (single conductor) of cross-sectional area; document calculated and actual fills.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> ✓ QC OPN NA </div>
<p>Junction and device box volumes meet or exceed NEC 314.16 for conductor count and device allowances; record box size, conductor count, and calculated cubic inch requirement.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> FTQ QC ✓ NA </div>
<p>Pull and splice boxes on conductors larger than 4 AWG are sized per NEC 314.28 for straight, angle, and U-pulls; measure internal dimensions and compare to largest conduit size.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> FTQ QC ✓ NA </div>
<p>Raceway supports and hangers installed with spacing and support method compliant with NEC 300.11 and manufacturer instructions (e.g., EMT ≤ 10 ft spacing, within 3 ft of boxes); verify spacing on-site.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> ✓ QC OPN NA </div>
<p>Expansion/deflection fittings or listed expansion couplings provided where raceways cross building expansion joints or outdoor runs exceed 100 ft; confirm fitting type and installed gap.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> ✓ QC OPN NA </div>
<p>Raceway terminations are reamed; plastic bushings and metallic locknuts tight and seated to prevent conductor insulation damage.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> ✓ QC OPN NA </div>
<p>Exterior and wet-location boxes rated NEMA 3R/4 as specified, with intact gaskets and threaded hubs; verify box label and weatherproof integrity.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> FTQ ✓ OPN NA </div>
<p>Conduit entries from underground are sealed with duct seal or approved water-tight sealing fittings to prevent moisture migration into interior raceway system.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> FTQ ✓ OPN NA </div>
<p>Fire-resistive penetrations through rated assemblies are sleeved and sealed with tested firestop system matching listed assembly documentation; record UL system number used.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> ✓ QC OPN NA </div>
<p>Stub-up conduits and open raceway ends are capped or plugged during construction to keep debris and moisture out until cabling is pulled.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> ✓ QC OPN NA </div>
<p>Surface-mounted raceways and boxes installed plumb, level, and tight to surface with no gaps exceeding 1/16 in.; verify alignment visually and with level.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> ✓ QC OPN NA </div>
<p>Accessible boxes are not concealed behind finished surfaces and have cover plates installed flush (+/-1/32 in.) with surrounding finish.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> FTQ QC ✓ NA </div>
<p>Raceway and box identification applied with color-coded tape or labels per project scheme at 30 ft intervals and at each enclosure; sample tags inspected for accuracy and durability.</p> <p>Observations</p>	<div style="display: flex; justify-content: space-between; align-items: center;"> ✓ QC OPN NA </div>