

# 3-PHASE ELECTRICAL SYSTEMS

## VISUAL INSPECTION CHECKLIST

Commercial Buildings — Inspector Field Guide

NEC 2023 Referenced | OSHA 29 CFR 1910 Compliant | Three-Phase 208V / 480V Systems

This checklist is structured across three inspection phases: Phase 1 — Service Entrance & Main Panel, Phase 2 — Distribution Panels, Wiring & Conduits, and Phase 3 — Loads, Fixtures & Safety Systems. Each phase includes pass/fail criteria, NEC code references, common defect descriptions, and a digital recording template.

PREPARED FOR  
Home Inspectors / Commercial  
Inspection Teams

CODE EDITION  
NEC 2023 | OSHA 29 CFR 1910  
| NFPA 101

SYSTEM VOLTAGE  
208V / 240V / 480V  
Three-Phase

### PHASE 1

Service Entrance & Main Panel  
Conductors · Grounding · Metering ·  
Clearances · Overheating

### PHASE 2

Distribution Panels, Wiring &  
Conduits  
Breakers · Conduit Fill · Raceways ·  
Labeling · Exposed Wiring

### PHASE 3

Loads, Fixtures & Safety Systems  
GFCI · AFCI · Emergency Lighting · Exit  
Signs · Load Labeling

**IMPORTANT SAFETY DISCLAIMER**

- This checklist is a visual inspection guide for qualified home inspectors and is NOT a substitute for evaluation by a licensed master electrician.
- Inspectors must not operate, energize, or manipulate electrical equipment during visual inspection.
- Always maintain NEC 110.26 working clearances (min. 3 ft depth) before approaching panels.
- Wear appropriate PPE including arc-flash rated safety glasses when in proximity to open panels.
- This document does not constitute an electrical permit, engineering report, or code compliance certification.

**INSPECTION RECORD**

INSPECTOR NAME:	_____	LICENSE #:	_____
PROPERTY ADDRESS:	_____	INSPECTION DATE:	_____
CLIENT NAME:	_____	REPORT NUMBER:	_____
UTILITY PROVIDER:	_____	WEATHER CONDITIONS:	_____
BUILDING OCCUPANCY:	_____	SYSTEM VOLTAGE:	_____
SYSTEM CONFIGURATION:	_____	SERVICE AMPERAGE:	_____

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### HOW TO USE THIS CHECKLIST

- Complete sections in order — Phase 1 must be inspected before energized downstream equipment is approached.
- Record PASS, FAIL, or N/A in the Result column for every checklist item.
- Photograph all FAIL conditions. Reference photo number in the Notes column.
- Any FAIL item that represents an immediate safety hazard should be noted in the Summary and communicated verbally to the client.
- NEC references shown are for the 2023 NEC. Verify with the AHJ for the applicable adopted edition.
- Use the Digital Template on the final pages to transfer findings to Spectora, Hive, or Home Inspector Pro.

# PHASE 1 — SERVICE ENTRANCE & MAIN PANEL

Sections 1.1 – 1.6 | NEC Articles 110, 230, 250

The service entrance is the point of utility demarcation and the highest-risk area of any commercial electrical system. Three-phase services deliver power across three ungrounded conductors (L1, L2, L3) plus a grounded neutral and a grounding electrode system. Inspectors must assess conductor integrity, metering equipment, main disconnect capacity, and all NEC 110.26 working space requirements before proceeding deeper into the distribution system.

TYPICAL VOLTAGES 208V / 480V 3Ø	COMMON SERVICES 200A – 4,000A	KEY NEC ARTICLES 110, 230, 250
CONDUCTOR COUNT 3 Ungrounded + Neutral + EGC	METER BASE TYPE CT Cabinet or Socket	MAIN DISCONNECT 3-Pole OCPD or Fusible Switch

## 1.1 — Service Entrance Conductors & Metering Equipment

Service entrance conductors extend from the utility point of attachment to the main service disconnect. For 3-phase systems, inspect for three ungrounded conductors entering the meter base or CT cabinet. Conductors must be properly rated for the service amperage (NEC 230.42) and must not be spliced within the service entrance raceway (NEC 230.46 Exception).

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Three Ungrounded Conductors (L1, L2, L3) Present</b> Verify three phase conductors enter meter base or CT cabinet. Delta systems: no neutral. Wye systems: neutral present.	NEC 230.21 230.42	PASS: All three phase conductors intact, properly insulated, no visible damage	FAIL: Fewer than 3 conductors, damaged insulation, exposed bare conductor outside approved locations	[ ] Pass [ ] Fail [ ] N/A
<b>Service Entrance Conductor Insulation Condition</b> Check for cracking, brittle insulation, heat damage, or rodent damage along entire accessible run.	NEC 230.22 338.10	PASS: Insulation flexible, intact, no cracks, abrasions, or heat discoloration	FAIL: Cracked, brittle, charred, or abraded insulation; exposed copper outside approved grounding locations	[ ] Pass [ ] Fail [ ] N/A
<b>Service Entrance Conductor Ampacity — Adequate for Service Rating</b> Match conductor AWG to service rating per Table 310.16 (copper) or 310.17 (aluminum). 75°C column for terminations.	NEC 230.42 Table 310.16	PASS: Conductor ampacity ≥ service rating at 75°C termination temp. rating	FAIL: Undersized conductors relative to main OCPD rating	[ ] Pass [ ] Fail [ ] N/A

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Meter Base / CT Cabinet — Proper Type &amp; Condition</b> CT cabinets required for services $\geq$ 200A where socket meters are not used. Inspect for corrosion, water intrusion, and secure mounting.	NEC 230.66 230.82	PASS: Listed meter base for voltage/amperage, no corrosion, sealed conduit entries, secure mounting	FAIL: Improper meter type for service rating, active corrosion, water staining, open conduit entries	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Utility Seal Intact on Meter</b> A broken or missing utility seal indicates possible tampering. Document and notify utility if seal absent.	NEC 230.82 (Utility Policy)	PASS: Utility seal present and unbroken	FAIL: Seal missing, broken, or evidence of meter tampering	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Service Entrance Raceway — Proper Type, Seal, &amp; Weatherproofing</b> Rigid Metal Conduit (RMC) or Intermediate Metal Conduit (IMC) required for SE conductors in most commercial applications. Weatherhead or conduit seal fitting required.	NEC 230.43 230.52 230.54	PASS: Approved raceway type, weatherhead properly oriented (down-facing), conduit sealed at building entry	FAIL: Non-listed raceway, missing weatherhead, open conduit entry allowing water/pest intrusion	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Service Drop Clearances (Overhead Service)</b> Check clearance above grade, above roof, and from windows/doors. Measured at lowest point of conductor.	NEC 230.9 230.24	PASS: $\geq$ 10 ft above grade (pedestrian only), $\geq$ 12 ft driveways, $\geq$ 18 ft above public streets, $\geq$ 8 ft above roof (with exceptions)	FAIL: Insufficient clearance creating contact or arc-flash hazard	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Service Lateral — Underground Entry &amp; Sealing</b> Underground service laterals must enter building through listed conduit. Inspect for proper seal to prevent water/gas intrusion.	NEC 230.49 300.5	PASS: Listed conduit system, properly sealed at building entry, adequate burial depth	FAIL: Missing conduit, inadequate sealing, conduit damage at grade entry point	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A

**COMMON DEFECT — Service Entrance: Aluminum SE Cable on Older Services**

- Aluminum service entrance (SE) cable type SEU or SER is still found on older commercial services. Inspect for proper aluminum-rated connectors (AL/CU listed) and absence of corrosion at all terminations.
- Aluminum oxidation significantly increases resistance — look for discoloration, pitting, or white powder at connections.
- NEC 230.41 does not prohibit aluminum SE cable, but all terminations must be listed for aluminum conductors.

## 1.2 — Main Disconnect & Service Rating

The main service disconnect must be a 3-pole overcurrent protective device (OCPD) capable of simultaneously disconnecting all ungrounded conductors. NEC 230.70 requires the disconnect to be installed at a readily accessible location either outside or inside nearest the point of entry. For 3-phase systems, a single 3-pole breaker or 3-pole fusible disconnect switch is required — individual single-pole breakers are NOT acceptable as the main disconnect.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>3-Pole Main Disconnect Present</b> Must simultaneously disconnect all three ungrounded conductors. Verify 3-pole design — not three linked single-pole breakers unless listed as 3-pole device.	NEC 230.70 230.71	PASS: Listed 3-pole main disconnect, rated for service voltage and amperage	FAIL: Missing 3-pole device, single-pole breakers used as substitute, unlisted disconnect	[ ] Pass [ ] Fail [ ] N/A
<b>Main Disconnect Ampacity Matches Service Rating</b> OCPD rating must not exceed conductor ampacity per NEC 230.90. Common ratings: 200A, 400A, 800A, 1200A, 2000A.	NEC 230.90 Table 310.16	PASS: Main OCPD rating = conductor ampacity or next standard size up per 230.90 exception	FAIL: OCPD exceeds allowable conductor ampacity without applicable exception	[ ] Pass [ ] Fail [ ] N/A
<b>Disconnect Accessible &amp; Readily Operable</b> Must be operable without reaching across live parts. Verify no stored materials blocking access.	NEC 230.70(A) 110.26	PASS: Clear access, no obstructions, handle operable without removing covers or materials	FAIL: Inaccessible location, blocked by stored materials, handle inoperable or damaged	[ ] Pass [ ] Fail [ ] N/A
<b>Disconnect Labeled with Rating &amp; Voltage</b> Main disconnect must be legibly marked with voltage rating, amperage, and interrupting capacity (AIC).	NEC 110.22 230.70(B)	PASS: Label intact, legible, voltage rating matches system, AIC rating visible	FAIL: Missing or illegible label, voltage rating not matching system, AIC not marked	[ ] Pass [ ] Fail [ ] N/A
<b>AIC (Interrupting Capacity) Rating Adequate</b> AIC must exceed available fault current at service point. Commercial services near utility transformers can exceed 65,000A fault current.	NEC 110.9 230.82	PASS: AIC rating marked and $\geq$ available fault current from utility (obtain from utility if unknown)	FAIL: AIC rating clearly insufficient for location, or no AIC marking on device	[ ] Pass [ ] Fail [ ] N/A
<b>Service Overcurrent Device — No Signs of Overload or Replacement</b> Inspect for arc marks, discoloration, pitting on blade contacts (fusible switch), or handle discoloration on circuit breaker.	NEC 230.90 110.3(B)	PASS: Clean contacts, no arc marks, no heat discoloration, handle free-moving	FAIL: Arc pitting on fuse clips, heat discoloration on breaker housing, replaced fuse with wrong rating	[ ] Pass [ ] Fail [ ] N/A

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<p><b>Fusible Disconnect — Correct Fuse Type &amp; Rating</b>                      If fusible disconnect: verify Class R, J, or T fuses as appropriate for motor loads. Reject-type fuse holders prevent wrong class substitution.</p>	<p>NEC                      230.91                      240.60</p>	<p>PASS: Listed fuses of correct class and ampere rating installed, reject-type holders present</p>	<p>FAIL: Wrong fuse class, over-rated fuses, modified reject clips, missing fuses with jumper wire</p>	<p>[ ] Pass [ ]                      Fail [ ] N/A</p>

### 1.3 — Grounding Electrode System (GES)

The grounding electrode system (GES) establishes a reference to earth potential and limits voltage imposed by lightning, utility surges, or accidental contact with higher-voltage lines. NEC Article 250 requires specific electrodes be bonded together into a single GES. For 3-phase commercial systems, the grounding electrode conductor (GEC) must be properly sized per NEC Table 250.66.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Grounding Electrode Conductor (GEC) Visible &amp; Connected</b> GEC runs from neutral bus (or separately derived system) to grounding electrode. Must be continuous — splices only at listed irreversible fittings.	NEC 250.64 Table 250.66	PASS: GEC present, protected in conduit where exposed to physical damage, proper AWG for service size	FAIL: Missing GEC, unprotected GEC in area subject to damage, improperly spliced	[ ] Pass [ ] Fail [ ] N/A
<b>GEC Properly Sized per Service Rating</b> Per Table 250.66: 3/0 AWG copper GEC for services up to 1,100 kcmil copper SEC. Aluminum GEC must be one size larger.	NEC Table 250.66	PASS: GEC AWG matches or exceeds Table 250.66 requirements for installed SEC size	FAIL: Undersized GEC for service entrance conductor size	[ ] Pass [ ] Fail [ ] N/A
<b>Grounding Electrode — Type &amp; Condition</b> Verify required electrodes present: metal underground water pipe $\geq 10$ ft, building steel, concrete-encased electrode (Ufer), ground ring, or driven rod.	NEC 250.50 250.52	PASS: At least one NEC 250.52 listed electrode present and accessible for inspection	FAIL: No accessible electrode, non-listed electrode used as sole electrode	[ ] Pass [ ] Fail [ ] N/A
<b>Ground Rod(s) — If Used, Minimum 8-ft Depth</b> Ground rods must be minimum 8 feet driven vertically, or permitted to be driven at 45° angle. Two rods required if single rod resistance exceeds 25 ohms.	NEC 250.5 3(A)(2) 250.56	PASS: Rod driven to full depth or approved angle, connection accessible, rod at least 5/8-inch diameter	FAIL: Rod not at full depth, less than 5/8-inch diameter steel, or evidence of pulled-up rod	[ ] Pass [ ] Fail [ ] N/A
<b>Grounding Electrode Connection — Listed Clamp or Connector</b> Inspect GEC-to-electrode connection: must be listed and accessible (except concrete-encased). Common defect: pipe clamp used on concrete-encased electrode — not acceptable.	NEC 250.70 250.68	PASS: Listed GEC connector/clamp, clean metallic contact, mechanically tight	FAIL: Pipe clamp on rod (not listed for rod), corrosion preventing conductivity, loose connection, tape over connection	[ ] Pass [ ] Fail [ ] N/A

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Bonding of All Electrodes to Single GES</b> All electrodes at a structure must be bonded together per NEC 250.50. Verify bonding jumpers interconnect all present electrodes.	NEC 250.50 250.53(C)	PASS: All electrodes bonded with properly sized bonding jumpers	FAIL: Separate isolated electrodes with no bonding between them	[ ] Pass [ ] Fail [ ] N/A
<b>Neutral-to-Ground Bond at Service Equipment Only</b> The main bonding jumper must exist at the service equipment (main panel). Downstream panels (sub-panels) must have neutral and ground SEPARATED — no N-G bond.	NEC 250.24(A) 250.28	PASS: Main bonding jumper present at service equipment, neutral isolated from ground in all sub-panels	FAIL: Missing main bonding jumper at service, OR N-G bond present in sub-panel (creates parallel neutral path)	[ ] Pass [ ] Fail [ ] N/A

**CRITICAL DEFECT — Reversed Neutral/Ground Bond in Sub-Panels**

- A neutral-to-ground bond in a sub-panel creates a parallel current return path through the equipment grounding conductors (EGC). This energizes conduit, panel enclosures, and equipment frames with current — creating an electrocution hazard.
- Always verify that sub-panel neutral bars are isolated from the panel enclosure (isolated neutral bar with insulating bushings). This is the most common and dangerous grounding error found in commercial buildings.
- Visual indicator: In the sub-panel, the neutral bar should be mounted on insulating standoffs and should NOT be connected to the panel chassis by a bonding screw or strap.

## 1.4 — Main Panel Interior: Bussing, Breakers & Connections

A visual inspection of the main panel interior focuses on bus bar condition, breaker seating and sizing, conductor terminations, and overall panel hygiene. Inspectors should document panel manufacturer, model, and series to identify recalled equipment. Do NOT operate breakers — visual observation only.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Panel Make, Model &amp; Series — Check Recall Status</b> Federal Pacific (Stab-Lok), Zinsco/Sylvania, and certain Murray panels have known defects. Note manufacturer on report.	NEC 110.3(B) CPSC Data	PASS: Listed manufacturer with no active recall affecting safety, panel in good condition	FAIL: Federal Pacific Stab-Lok, Zinsco/Sylvania panel — recommend licensed electrician evaluation	[ ] Pass [ ] Fail [ ] N/A
<b>Bus Bars — Three-Phase Present, No Corrosion or Overheating</b> A 3-phase panel must have three distinct bus bars (L1, L2, L3). Inspect for discoloration, pitting, or burn marks.	NEC 408.3 408.55	PASS: Three clearly defined bus phases visible, copper/aluminum in clean condition, no arc marks	FAIL: Corrosion on bus bars, arc pitting, blackened bus material, insulation damage on bus	[ ] Pass [ ] Fail [ ] N/A
<b>Circuit Breakers — Properly Seated on Bus</b> Each breaker must fully snap onto the bus stab. Inspect for breakers listing to one side, partially ejected, or not making firm contact.	NEC 408.36 110.3(B)	PASS: All breakers fully seated, no movement when lightly checked visually	FAIL: Loose or partially ejected breakers, cross-bussed breakers in tandem slots not rated for it	[ ] Pass [ ] Fail [ ] N/A
<b>Breakers Listed for Panel Manufacturer (Correct Type)</b> Only breakers listed for the specific panel may be used. 'Classified' breakers may be acceptable — check for SQ D, CH, or listed designation.	NEC 110.3(B) 408.36	PASS: All breakers are panel-listed (same manufacturer or listed classified breaker)	FAIL: Mismatched breakers from incompatible manufacturers installed — creates risk of failure to trip	[ ] Pass [ ] Fail [ ] N/A
<b>Conductor Terminations — Tight, Undamaged, No Overheating</b> Visually check terminations for discoloration indicating loose connections or overloading. Copper conductors should be bright; aluminum should be clean with no white corrosion.	NEC 110.14 408.3	PASS: Conductors seated fully in lug, no discoloration, wire not nicked or damaged at insulation cutback	FAIL: Discolored conductors at terminations, arced or pitted lugs, nick marks on conductor	[ ] Pass [ ] Fail [ ] N/A
<b>Wiring Neat &amp; Contained — No Scorching or Melting</b> Interior wiring should be organized and not obstructing breaker operation. Any melted insulation or carbon tracking requires immediate disclosure.	NEC 408.7 110.12	PASS: Neat installation, no crossing of bus bars, no evidence of arcing or burning	FAIL: Melted insulation, carbon tracking on bus or panel interior, scorched panel enclosure	[ ] Pass [ ] Fail [ ] N/A

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<p><b>Panel Enclosure — No Unauthorized Holes or Openings</b>                      Open knockouts allow pest intrusion and increase arc-flash exposure. All unused knockouts must be sealed with listed fillers.</p>	<p>NEC 408.7 110.12(A)</p>	<p>PASS: All unused knockouts sealed, no holes in enclosure beyond listed entries</p>	<p>FAIL: Open knockouts, holes in panel enclosure not serving a conduit or fitting</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>Spare Breaker Spaces Covered</b>                      Unused breaker positions must be covered with listed filler plates — open slots expose live bus bars.</p>	<p>NEC 408.7</p>	<p>PASS: All unused positions covered with listed filler plates</p>	<p>FAIL: Exposed open bus bar slots with no filler plates</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>

## 1.5 — Working Clearances — NEC 110.26 Compliance

NEC Section 110.26 establishes mandatory working space around electrical equipment to allow safe operation and maintenance. These are among the most commonly violated requirements in commercial buildings, particularly when tenant improvements reduce panel room dimensions. All measurements are taken from the front surface of the equipment or opened door.

CONDITION	VOLTAGE RANGE	MIN. DEPTH	MIN. WIDTH	MIN. HEIGHT
Condition 1 — Exposed live parts on one side, grounded surfaces opposite	0–150V L-G	3 ft (900 mm)	30 in. or equip. width	6.5 ft (2.0 m)
Condition 2 — Exposed live parts on one side, grounded parts on opposite side	151–600V L-G	3.5 ft (1.07 m)	30 in. or equip. width	6.5 ft (2.0 m)
Condition 3 — Exposed live parts on both sides of workspace	151–600V L-G	4 ft (1.2 m)	30 in. or equip. width	6.5 ft (2.0 m)

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Minimum Working Depth — 3 ft Measured from Panel Front</b> Measure from front of panel (or open door face) to nearest obstruction. 480V systems may require 3.5 ft or 4 ft per condition.	NEC 110.2 6(A)(1)	PASS: $\geq 3$ ft clear depth (Condition 1); verify condition applies, increase if Condition 2 or 3	FAIL: Any obstruction within 3 ft of panel face, including pipes, shelving, or stored items	[ ] Pass [ ] Fail [ ] N/A
<b>Minimum Working Width — 30 in. or Equipment Width (Greater)</b> Width measured left to right. Must be centered on the equipment. Partial obstructions on either side must not reduce the 30-inch minimum.	NEC 110.2 6(A)(2)	PASS: Clear width $\geq 30$ inches or equipment width, whichever is greater, no obstructions	FAIL: Width reduced below minimum by structural elements, conduit banks, or equipment	[ ] Pass [ ] Fail [ ] N/A
<b>Minimum Working Height — 6.5 ft from Floor</b> Height of working space must extend from floor to ceiling or 6.5 ft minimum.	NEC 110.2 6(A)(3)	PASS: $\geq 6.5$ ft clear height in the entire working space zone in front of panel	FAIL: Low ceiling, ductwork, or piping reducing height below 6.5 ft in working space	[ ] Pass [ ] Fail [ ] N/A
<b>Dedicated Equipment Space — Above Panel to Structural Ceiling</b> An area equal to the panel footprint must be kept clear from the top of the panel to structural ceiling for switchboards and panelboards.	NEC 110.26(F)	PASS: Space above panel to structural ceiling free of piping, ductwork, and non-electrical equipment	FAIL: Plumbing, HVAC, or other systems installed in dedicated electrical equipment space	[ ] Pass [ ] Fail [ ] N/A

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<p><b>Illumination in Electrical Equipment Space</b>                      Adequate illumination must be provided. Cannot rely solely on illumination from adjacent areas.</p>	<p>NEC 110.26(D)</p>	<p>PASS: Functional lighting present in electrical room, adequate for inspection without flashlight</p>	<p>FAIL: No lighting in electrical room, burned-out light with no backup, switch outside room only</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>Entrance/Egress — Two Exits for Large Equipment Rooms</b>                      For rooms with equipment rated 1,200A or more at over 6 ft wide: two entrances/exits required unless equipment can be reached without passing exposed live parts.</p>	<p>NEC 110.26(C)</p>	<p>PASS: Single entrance acceptable for small rooms; two exits present for qualifying large rooms</p>	<p>FAIL: Single entrance on large room where two exits required per NEC criteria</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>

## 1.6 — Thermal & Overheating Indicators

Overheating is the most critical safety indicator visible during a non-invasive inspection. Thermal imaging (if available) can reveal hotspots invisible to the naked eye. Visual indicators include discoloration, melting, charring, and odors. Any overheating indicator must be disclosed as a high-priority defect.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Heat Discoloration — Breakers or Conductors</b> Yellow, brown, or black discoloration on breaker housings, wire insulation, or at terminations indicates overheating from loose connections or overload.	NEC 110.14 110.3(B)	PASS: No discoloration, all components original manufacturer color	FAIL: Any heat discoloration at breakers, conductors, bus bars, or lugs — classify as HIGH PRIORITY	[ ] Pass [ ] Fail [ ] N/A
<b>Melted or Deformed Plastic Components</b> Melted breaker handles, deformed insulation sleeves, or sagging wire jacketing indicates extreme overheating event.	NEC 110.12 110.3(B)	PASS: No deformed or melted plastic components	FAIL: Any melted or deformed components — requires immediate licensed electrician evaluation	[ ] Pass [ ] Fail [ ] N/A
<b>Carbon Tracking or Arcing Evidence</b> Carbon deposits (black streaks) on panel interior, bus bars, or conductor insulation indicate arcing — a fire precursor requiring immediate attention.	NEC 110.12	PASS: No carbon deposits, no arc pitting visible on bus or contacts	FAIL: Carbon tracking on any surface inside panel — classify as IMMEDIATE SAFETY CONCERN	[ ] Pass [ ] Fail [ ] N/A
<b>Burning Odor</b> A burning plastic, ozone, or electrical odor near a panel warrants immediate documentation and notification. Do not enter enclosed spaces with strong electrical odors.	NEC 110.12 (Safety Protocol)	PASS: No electrical odor present near panel or service equipment	FAIL: Burning, plastic, or ozone odor present — evacuate if strong, notify client immediately	[ ] Pass [ ] Fail [ ] N/A
<b>Corrosion — Interior Panel Components</b> Interior corrosion (rust on bus bars, green patina on copper, white deposits on aluminum) indicates moisture intrusion and compromised conductivity.	NEC 110.11 230.54	PASS: No interior corrosion, panel interior dry and clean	FAIL: Rust, green corrosion on bus, or moisture staining — investigate source of intrusion	[ ] Pass [ ] Fail [ ] N/A
<b>Thermal Imaging Scan — If Available</b> Thermal camera reveals hotspots invisible to the naked eye. Document any area with temperature differential exceeding 10°C above ambient as requiring follow-up.	NEC 110.14 (Best Practice)	PASS: No thermal anomalies. All connections within 10°C of ambient	FAIL: Hotspots detected at breakers, terminations, or bus bars exceeding 10°C above ambient	[ ] Pass [ ] Fail [ ] N/A

## PHASE 2 — DISTRIBUTION PANELS, WIRING & CONDUITS

Sections 2.1–2.6 | NEC Articles  
210, 240, 300, 310, 358–394, 408

Distribution panels receive power from the main service and distribute it to branch circuits throughout the building. In 3-phase commercial buildings, distribution panels (sub-panels) are typically located near the loads they serve — mechanical rooms, tenant spaces, or floors. Each sub-panel must receive a properly sized feeder, maintain isolated neutral bus, and contain properly rated breakers for all connected loads. Conduit systems route conductors and protect them from physical damage, environmental exposure, and thermal degradation.

FEEDER ARTICLES NEC 215, 220	CONDUIT ARTICLES NEC 358–394	CONDUCTOR SIZING NEC 310.15, Table 310.16
BREAKER RULES NEC 240.4, 240.6	FILL LIMIT 40% (3+ conductors)	PANEL LABELING NEC 408.4

### 2.1 — Sub-Panel Feeders & Grounding

Sub-panel feeders must include a properly sized equipment grounding conductor (EGC) in addition to the three phase conductors and neutral (where required). The EGC must terminate on the grounding bus in the sub-panel, which must be separate from (and NOT bonded to) the neutral bus.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Feeder Conductors — Proper Size for Panel Rating</b> Feeder conductors must have ampacity $\geq$ sub-panel main breaker rating. Verify AWG in panel schedule or at feeder conduit.	NEC 215.2 Table 310.16	PASS: Feeder conductors sized to match or exceed sub-panel main OCPD rating at 75°C column	FAIL: Feeder conductors smaller than required for sub-panel rating	[ ] Pass [ ] Fail [ ] N/A
<b>Equipment Grounding Conductor (EGC) in Feeder</b> EGC must be present in feeder conduit to sub-panel. Size per Table 250.122 based on feeder OCPD rating.	NEC 250.122 Table 250.122	PASS: EGC present, connected to grounding bus in sub-panel, correct size for feeder OCPD	FAIL: Missing EGC, EGC connected to neutral bus in sub-panel (creates N-G bond)	[ ] Pass [ ] Fail [ ] N/A
<b>Sub-Panel Neutral Bus — Isolated from Panel Chassis</b> Verify neutral bar has insulating standoffs and is NOT connected to panel enclosure by bonding screw or strap.	NEC 250.2 4(A)(5) 408.40	PASS: Neutral bus on insulated standoffs, bonding screw removed or not installed	FAIL: Neutral bus bonded to panel chassis (gray or green bonding screw installed)	[ ] Pass [ ] Fail [ ] N/A

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Feeder OCPD at Main Panel — Sized for Feeder Conductor</b> The feeder breaker at the main panel must not exceed the ampacity of the feeder conductors.	NEC 215.3 240.4	PASS: Feeder breaker ≤ conductor ampacity (or next standard size if exact match not available per 240.4(B))	FAIL: Feeder breaker exceeds conductor ampacity — overprotection deficiency	[ ] Pass [ ] Fail [ ] N/A
<b>Sub-Panel Mounting — Secure, Level, Accessible</b> Panels must be mounted securely, accessible without climbing, and level for proper breaker operation.	NEC 408.18 110.26	PASS: Securely mounted, level, all mounting screws present, location accessible	FAIL: Loose mounting, tipped panel, inaccessible location requiring climbing or moving stored items	[ ] Pass [ ] Fail [ ] N/A

## 2.2 — Circuit Breaker Inspection — Double-Tapping & Sizing

Double-tapped breakers — two conductors on a single breaker terminal — are one of the most common commercial electrical defects. Unless the breaker is explicitly listed for two conductors (this is rare and must appear in the breaker's labeling), only one conductor is permitted per terminal. This creates an overheating hazard as the conductor with less contact area may not trip the breaker at its rated load.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Double-Tapped Breakers — Each Terminal One Conductor Only</b> Inspect every breaker terminal. Two conductors = double tap unless breaker label explicitly states '2 conductors' or 'suitable for 2-wire termination.'	NEC 110.14(A) 408.41	PASS: Single conductor per breaker terminal, or breaker is explicitly labeled for 2-conductor termination	FAIL: Two or more conductors under single breaker terminal on non-listed 2-wire breaker	[ ] Pass [ ] Fail [ ] N/A
<b>Tandem (Piggyback) Breakers — Only in Listed Positions</b> Tandem breakers provide two circuits in one slot space. Permitted only in panel positions labeled 'CTL' (circuit total limitation) slots — verify per panel schedule on door.	NEC 408.54 110.3(B)	PASS: Tandem breakers installed only in panel positions approved by manufacturer for tandem use	FAIL: Tandem breakers in non-approved positions, CTL panel with more circuits than rating allows	[ ] Pass [ ] Fail [ ] N/A
<b>3-Pole Breakers for 3-Phase Loads — Simultaneous Trip</b> All 3-phase loads must use 3-pole breakers that simultaneously disconnect all three ungrounded conductors. Two-pole breakers on 3-phase loads are not acceptable.	NEC 240.15(B) 430.52	PASS: Three-phase loads protected by listed 3-pole breakers with common trip mechanism	FAIL: Single or two-pole breakers used for 3-phase loads — creates potential single-phasing of motors	[ ] Pass [ ] Fail [ ] N/A

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<p><b>Breaker Ampacity — Correct for Connected Load &amp; Conductor</b> Branch circuit breaker must not exceed conductor ampacity. For motor circuits, 240.4(G) and 430.52 allow specific exceptions.</p>	<p>NEC 240.4 210.19 310.15</p>	<p>PASS: Breaker rating <math>\leq</math> conductor ampacity per Table 310.16 at 75°C termination column</p>	<p>FAIL: Oversized breaker for conductor — e.g., 30A breaker on #14 AWG copper conductor</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>Breaker Handle — Operable, No Damage or Obstruction</b> All breaker handles must operate smoothly through ON/OFF/TRIP positions. Handles should not be tied or taped in ON position.</p>	<p>NEC 240.81 408.36</p>	<p>PASS: Handles move freely, no tape or wire preventing operation, no damaged handles</p>	<p>FAIL: Handles taped ON, breakers jammed, handle broken off or missing</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>OCPD Interrupting Capacity — Adequate for Fault Current</b> Each breaker must have AIC <math>\geq</math> available fault current at that point in the system. Sub-panels typically see reduced fault current but must still be verified.</p>	<p>NEC 110.9 240.83(C)</p>	<p>PASS: AIC rating marked on breaker, adequate for system location (consult electrical engineer if in doubt)</p>	<p>FAIL: No AIC marking, or known fault current exceeds breaker AIC rating</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>

## 2.3 — Conduit & Raceway Systems

Conduit fill percentage determines whether conductors can dissipate heat properly and whether additional conductors can be safely pulled. NEC Chapter 9, Table 1 limits fill to 40% of conduit interior cross-sectional area when 3 or more conductors are present. Conduit type must be appropriate for the installation environment — EMT in wet/corrosive locations requires listed fittings and coatings.

CONDUCTOR COUNT	MAX. FILL %	RATIONALE
1 conductor	53%	Single conductor — ample heat dissipation
2 conductors	31%	Two conductors — reduced fill allows proper pulling
3 or more conductors	40%	Standard commercial rule — NEC Chapter 9, Table 1

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Conduit Fill — ≤40% for 3+ Conductors (NEC Ch. 9, Table 1)</b> Visually assess conduit for tight bundling of conductors. Compute fill using NEC Annex C for same-size conductors, or Chapter 9 for mixed sizes.	NEC 300.17 Chapter 9, Table 1 Annex C	PASS: Conductors fill ≤40% of conduit cross-section. Conductors move freely within conduit.	FAIL: Conductors packed tightly with no slack — visible indication of fill violation. Refer to licensed electrician for verification.	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Conduit Type Appropriate for Environment</b> EMT: Dry interior only (unless raintight fittings). RMC/IMC: Wet, outdoor, underground. PVC: Underground or wet per listing. Flexible conduit: Max 6 ft at equipment connections.	NEC 358.10 344.10 352.10	PASS: Conduit type matches environment per NEC article requirements and listing	FAIL: EMT in wet/outdoor locations without listed raintight fittings, PVC indoors in non-listed applications	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Conduit Supports — Proper Spacing per NEC Article</b> EMT: Max 10 ft between supports, 3 ft from boxes. RMC: Max 10 ft between supports. Verify conduit not sagging or unsupported at long runs.	NEC 358.30 344.30	PASS: Conduit supported at required intervals, no sagging, secured within 3 ft of boxes/fittings	FAIL: Conduit spans exceeding support requirements, sagging runs, conduit hanging on other conduit	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Conduit Fittings — Listed, Appropriate Type</b> Set-screw fittings in dry locations only. Compression fittings required in wet or outdoor locations. No makeshift connections.	NEC 358.42 300.15	PASS: Listed fittings appropriate for location, secure connection to conduit and boxes	FAIL: Set-screw fittings in wet locations, duct tape connections, broken or missing locknuts	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<p><b>Conduit Ends — Protected, No Sharp Edges</b>                      All conduit ends must have bushings or be reamed smooth to prevent cutting conductor insulation. Listed plastic or metal bushings required.</p>	<p>NEC 300.4 358.28</p>	<p>PASS: Listed bushings on all conduit ends entering boxes or equipment, no bare cut conduit ends at conductors</p>	<p>FAIL: Missing bushings, sharp unprotected conduit ends that can abrade conductor insulation</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>Conduit Penetrations — Sealed Against Fire &amp; Pest Intrusion</b>                      Where conduit penetrates fire-rated assemblies, fire-stopping material must be present. All floor/wall penetrations sealed against water and pest intrusion.</p>	<p>NEC 300.21 IBC 713</p>	<p>PASS: Fire-rated penetrations properly fire-stopped with listed material, all other penetrations sealed</p>	<p>FAIL: Open conduit penetrations through fire-rated walls/floors, unsealed floor penetrations</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>

## 2.4 — Wiring Methods & Exposed Conductors

In commercial construction, wiring methods must be suitable for the occupancy, environment, and voltage class. Type MC (Metal Clad) cable, THWN/THHN conductors in conduit, and MI (Mineral Insulated) cable are common commercial wiring methods. Exposed conductors — those visible outside of raceway or approved cable assemblies — require immediate attention.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Wiring Method — Appropriate for Commercial Occupancy</b> NEC 300.3 and occupancy-specific articles govern allowed wiring methods. Romex (NM cable) is NOT permitted in commercial buildings over 3 stories per NEC 334.10.	NEC 300.3 334.10 330.10	PASS: Listed wiring method appropriate for occupancy: THWN in conduit, MC cable, MI cable, or other listed method	FAIL: Type NM (Romex) cable in prohibited commercial locations, unlisted wiring methods	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Exposed Conductors — None Outside Approved Enclosures</b> Conductors must be within conduit, cable assembly, or equipment enclosures. Temporary exposed wiring left in place is a code violation and fire hazard.	NEC 300.3 300.4	PASS: All conductors within listed wiring methods. No bare or exposed conductors outside approved locations.	FAIL: Conductors running exposed outside conduit or boxes in non-approved locations	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Conductor Colors — Phase Identification Consistent</b> 3-phase systems should maintain consistent phase color coding. NEC requires grounded conductor be white/gray, EGC be green/bare. Phase colors vary by jurisdiction — verify consistency throughout system.	NEC 200.6 250.119 210.5(C)	PASS: White/gray neutral, green/bare EGC, phase conductors consistently identified throughout building	FAIL: Unmarked conductors at panels, neutral color non-compliant, inconsistent phase identification creating confusion	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Junction Boxes — Accessible, Covered, Proper Size</b> All junction boxes must be accessible (no buried boxes), covered with listed covers, and sized for conductor fill per NEC 314.	NEC 314.16 314.29 300.15	PASS: Accessible, covered with listed box cover, proper fill compliance, securely mounted	FAIL: Buried or inaccessible junction boxes, missing covers, overcrowded boxes with conductors forced in	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>MC Cable — Properly Secured, Anti-Short Bushings Present</b> Type MC cable must have anti-short (red) bushings at terminations to prevent armor from cutting conductor insulation. Cable must be supported every 6 ft and within 12 inches of boxes.	NEC 330.30 330.40	PASS: Anti-short bushings at all MC terminations, cable secured per NEC intervals, armor not damaged	FAIL: Missing anti-short bushings, MC cable unsupported, kinked or damaged armor exposing conductors	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<p><b>Flexible Conduit — Maximum 6 ft at Equipment</b> Flexible conduit (FMC) and liquid-tight flexible conduit (LFMC) are limited to 6 ft for equipment connections. Must contain EGC unless permitted exceptions apply.</p>	<p>NEC 348.20 350.30 250.118</p>	<p>PASS: FMC/LFMC connections ≤6 ft, includes listed EGC, not used for permanent fixed wiring runs</p>	<p>FAIL: Flexible conduit run exceeding 6 ft as fixed wiring, missing EGC in FMC run</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>

## 2.5 — Panel Labeling & Directory

Every circuit in a distribution panel must be legibly identified in the panel directory. NEC 408.4 requires that each circuit be legibly identified as to its clear, evident, and specific purpose or use. Vague labels such as 'spare,' 'misc,' or 'panel' are code violations.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Panel Directory — All Circuits Labeled</b> Every occupied circuit position must have a legible description of the circuit's purpose. Verify directory card is present, completed, and readable.	NEC 408.4(A)	PASS: All circuits labeled with specific descriptions, directory legible, installed in panel door	FAIL: Missing labels, vague labels ('misc', 'spare' for energized circuits), illegible handwriting, no directory card	[ ] Pass [ ] Fail [ ] N/A
<b>Panel Voltage &amp; Ampacity Rating Labeled on Enclosure</b> Panel must be marked with voltage, phase, wire configuration, ampacity, and interrupting rating.	NEC 408.4(B) 110.22	PASS: Voltage (e.g., 208Y/120V, 3Ø, 4W), ampacity, and AIC rating clearly marked on panel or inside door	FAIL: Missing voltage/phase markings, incorrect voltage marked on panel	[ ] Pass [ ] Fail [ ] N/A
<b>Circuit Numbers — Consistent with NEC Odd-Left, Even-Right</b> Standard panel bussing assigns odd numbers to left column, even to right. Verify panel directory matches physical breaker positions.	NEC 408.4 (Industry Standard)	PASS: Circuit numbers align with physical positions, directory matches installed breaker positions	FAIL: Directory does not match physical positions, circuits re-numbered without updating directory	[ ] Pass [ ] Fail [ ] N/A

## 2.6 — Conductor Sizing & Ampacity (NEC 210.19 & 310.15)

Branch circuit conductors must be sized per NEC 210.19 — the larger of 125% of continuous load or 100% of maximum load after adjustment factors. Ampacity correction factors from NEC 310.15 apply when conductors are grouped in conduit, exposed to elevated ambient temperatures, or buried in earth. These are calculation-based evaluations — visual inspection identifies obvious violations.

NEC Table 310.16 Quick Reference — Copper & Aluminum Ampacity (75°C Terminations, Not More Than 3 CCC in Raceway)

AWG/kcmil	60°C Copper	75°C Copper	90°C Copper	75°C Aluminum	Common Use
#14 AWG	15A	20A	25A	—	15A branch circuits
#12 AWG	20A	25A	30A	20A	20A branch circuits
#10 AWG	30A	35A	40A	30A	30A branch circuits
#8 AWG	40A	50A	55A	40A	Small feeders
#6 AWG	55A	65A	75A	50A	Sub-panel feeders
#4 AWG	70A	85A	95A	65A	Sub-panel feeders

#2 AWG	95A	115A	130A	90A	Large feeders
#1/0 AWG	125A	150A	170A	120A	Service & feeders
#3/0 AWG	165A	200A	225A	155A	Large service SECs
350 kcmil	260A	310A	350A	250A	Service entrance

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<p><b>Branch Circuit Conductor — #14 AWG Minimum for 15A, #12 for 20A</b></p> <p>Smallest permitted copper conductor for branch circuits: #14 AWG at 60°C. No conductor smaller than #14 for 15A circuits, #12 for 20A.</p>	<p>NEC 210.19(A) 240.4(D)</p>	<p>PASS: #14 AWG or larger on 15A circuits; #12 AWG or larger on 20A circuits</p>	<p>FAIL: #14 AWG conductor protected by 20A breaker; #12 AWG protected by 30A breaker</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>Conductor Ampacity — 125% Rule for Continuous Loads</b></p> <p>Conductors feeding continuous loads (energized 3+ hours) must be rated at 125% of the continuous load current.</p>	<p>NEC 210.19(A)(1)</p>	<p>PASS: Conductor ampacity ≥ noncontinuous load + 125% of continuous load</p>	<p>FAIL: Conductors sized for 100% of load where 125% rule applies to continuous loads</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>Correction Factors — Ambient Temperature Adjustments Applied</b></p> <p>Conductors in attics or mechanical rooms may exceed 86°F (30°C) ambient — correction factors reduce allowable ampacity. Visually verify insulation not heat-damaged in hot locations.</p>	<p>NEC 310.15(B)(1) 310.15(B)(2)</p>	<p>PASS: Conductors in hot environments appear undamaged, installation appears properly calculated</p>	<p>FAIL: Heat-damaged insulation in high-temperature areas, overloaded circuits evidenced by discoloration</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>Bundling Derating — More Than 3 Current-Carrying Conductors</b></p> <p>More than 3 CCC in a conduit requires ampacity derating. 4-6 conductors: 80%; 7-9: 70%; 10-20: 50%. Visual bundles of many conductors in small conduit are a red flag.</p>	<p>NEC 310.15(C)(1) Table 310.15(C)(1)</p>	<p>PASS: Conduit fill and conductor count appear consistent with appropriate derating for load</p>	<p>FAIL: Many conductors visible in conduit with evidence of overheating — refer to licensed electrician</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>

# PHASE 3 — LOADS, FIXTURES & SAFETY SYSTEMS

Sections 3.1 – 3.8 | NEC Articles 210.8, 210.12, 700–701 | OSHA 29 CFR 1910 | NFPA 101

Phase 3 covers the end-use side of the electrical system — the loads, lighting fixtures, receptacles, motors, and safety systems that building occupants interact with daily. GFCI and AFCI protection, emergency egress lighting, and equipment labeling are critical life-safety elements that must be assessed during every commercial electrical inspection. OSHA 29 CFR 1910.303 governs general electrical safety in commercial workplaces.

GFCI ARTICLE NEC 210.8	AFCI ARTICLE NEC 210.12	EMERGENCY LIGHTING NEC Art. 700 / NFPA 101
EXIT SIGNS NFPA 101 § 7.10	OSHA STANDARD 29 CFR 1910.303–305	MIN. EXIT ILLUMINATION 1.0 fc avg / 0.1 fc min

## 3.1 — GFCI Protection — Locations & Compliance (NEC 210.8)

Ground Fault Circuit Interrupter (GFCI) protection prevents electrocution by detecting current leakage as small as 5 milliamps and tripping within 1/40th of a second. The 2023 NEC significantly expanded GFCI requirements for commercial buildings. GFCI protection can be provided at the receptacle, breaker, or panel level.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Bathrooms — All Receptacles GFCI Protected</b> All 125V, 15A and 20A receptacles in commercial bathrooms require GFCI protection regardless of distance from water source.	NEC 210.8(B)(1)	PASS: All bathroom receptacles are GFCI-protected devices or on GFCI circuit breaker	FAIL: Standard non-GFCI receptacles in bathroom locations	[ ] Pass [ ] Fail [ ] N/A
<b>Kitchen/Break Room — GFCI for Countertop Receptacles</b> Receptacles serving countertop surfaces in commercial break rooms and kitchens require GFCI protection. 2023 NEC also covers areas with sinks and food/beverage prep.	NEC 210.8(B)(2) 210.8(B)(6)	PASS: Countertop and sink-adjacent receptacles are GFCI-protected	FAIL: Non-GFCI receptacles at countertops or near sinks in kitchen/break room areas	[ ] Pass [ ] Fail [ ] N/A
<b>Rooftops — GFCI Required</b> All 125V through 250V, 15A through 50A receptacles on rooftops require GFCI protection.	NEC 210.8(B)(3)	PASS: Rooftop receptacles are GFCI-protected	FAIL: Non-GFCI receptacles found on rooftop in areas served by commercial electrical system	[ ] Pass [ ] Fail [ ] N/A

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<p><b>Outdoors — GFCI Required for All Receptacles</b></p> <p>All outdoor receptacles in commercial settings require GFCI protection. Weatherproof covers required in addition.</p>	<p>NEC 210.8 (B)(4)</p>	<p>PASS: Outdoor receptacles GFCI-protected and in listed weatherproof enclosures/covers</p>	<p>FAIL: Non-GFCI outdoor receptacles, missing weatherproof covers</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>Garages &amp; Service Areas — GFCI Required</b></p> <p>Commercial garages, service bays, and storage areas accessible to vehicles require GFCI protection.</p>	<p>NEC 210.8 (B)(8)</p>	<p>PASS: GFCI receptacles in vehicle-accessible areas of commercial garages</p>	<p>FAIL: Non-GFCI receptacles in commercial garage or service bay</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>GFCI Devices — Test &amp; Reset Function Operational</b></p> <p>Test each accessible GFCI receptacle using the TEST button. Device should trip and de-energize outlet. Reset should restore power.</p>	<p>NEC 210.8 (NEMA WD-6)</p>	<p>PASS: GFCI trips on TEST, receptacle de-energizes, RESET restores power, pilot indicator functions</p>	<p>FAIL: GFCI does not trip on TEST, device has failed — requires replacement immediately</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>GFCI Breakers — Labeled &amp; Downstream Receptacles Protected</b></p> <p>If GFCI protection is provided at the panel breaker level, verify all downstream receptacles are protected and the breaker is labeled GFCI.</p>	<p>NEC 210.8 408.4</p>	<p>PASS: GFCI breaker labeled, downstream receptacles de-energize on breaker TEST</p>	<p>FAIL: GFCI breaker not labeled, or downstream receptacles not responding to GFCI trip test</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>

### 3.2 — AFCI Protection — Commercial Requirements (NEC 210.12)

Arc Fault Circuit Interrupter (AFCI) protection detects the high-frequency current signatures of arcing faults — those caused by damaged, deteriorated, or improperly installed wiring — before they cause fires. While primarily a residential requirement, the 2023 NEC has expanded AFCI to dormitories, hotel rooms, and guest suites. Inspectors must verify scope of requirement in the AHJ-adopted edition.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Dormitories &amp; Hotel/Motel Guest Rooms — AFCI Required</b> The 2020/2023 NEC extended AFCI requirements to dormitory units and hotel/motel guest rooms and suites for 15A and 20A, 120V circuits.	NEC 210.12(C) 210.12(D)	PASS: AFCI breakers installed on 120V circuits serving sleeping areas in applicable occupancies	FAIL: Standard breakers (non-AFCI) on 120V circuits in dormitory or hotel guest room applications	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>AFCI Breakers — Labeled &amp; Trip-Test Functional</b> Test the AFCI breaker TEST button. Device should trip when the test button is pressed. Document serial numbers of non-functional AFCI devices.	NEC 210.12 (UL 1699)	PASS: AFCI breaker trips when TEST button is pressed, resets normally, labeled AFCI on breaker handle	FAIL: AFCI breaker fails to trip on TEST or will not reset — device failure requiring replacement	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Combination AFCI Where Required (Arc Both Parallel &amp; Series)</b> 2014+ NEC requires Combination-type AFCI breakers that detect both parallel arc faults (between conductors) and series arc faults (in a single conductor). Branch/feeder type only is not sufficient.	NEC 210.12(A) (UL 1699)	PASS: Combination-type AFCI breakers installed in required locations (labeled 'Combination AFCI')	FAIL: Branch/feeder-only AFCI where combination type is required	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A

### 3.3 — Emergency Exit Lighting — OSHA & NFPA 101 Compliance

Emergency lighting must automatically illuminate upon loss of normal power and maintain minimum illumination levels along egress paths for at least 1.5 hours (90 minutes). OSHA 29 CFR 1910.37 requires exit routes to be adequately lighted. NFPA 101 Life Safety Code Section 7.9 provides specific illumination performance requirements. NEC Article 700 covers emergency systems for required egress lighting.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Emergency Lighting Present — All Required Exit Routes</b> Emergency luminaires required in: corridors, stairwells, egress paths, areas of refuge, and exit discharge areas. Verify coverage along all paths to exits.	NEC 700.16 NFPA 101 § 7.9 OSHA 1910.37(b)	PASS: Emergency lighting units present along all required egress paths, no gaps in coverage	FAIL: Missing emergency lighting in exit corridors, stairwells, or egress paths	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Emergency Lighting — Automatic Operation on Power Loss</b> Emergency lighting must activate automatically within 10 seconds of normal power loss. Test by interrupting normal power circuit to the unit.	NEC 700.12 NFPA 101 § 7.9.2	PASS: Unit automatically illuminates within 10 seconds of power interruption	FAIL: Unit fails to activate on power loss, or requires manual operation to illuminate	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Emergency Lighting — 90-Minute Battery Duration</b> Battery-powered units must maintain rated illumination for minimum 90 minutes. Units over 5 years old should be evaluated for battery replacement.	NFPA 101 § 7.9.2.1 NEC 700.12(A)	PASS: Units pass 90-minute duration test (or are connected to generator with transfer switch), batteries appear serviceable	FAIL: Units with visibly swollen/leaking batteries, units more than 6 years old without documented battery replacement	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Illumination Level — Minimum 1.0 fc Average / 0.1 fc at Any Point</b> NFPA 101 § 7.9.2.1.2 requires minimum 1.0 foot-candle average, 0.1 fc at any single point along egress path (measured at floor level).	NFPA 101 § 7.9.2.1 OSHA 191 0.303(h)	PASS: Lighting levels at floor appear adequate for safe egress. Photometric measurement $\geq 1.0$ fc average if tested.	FAIL: Obvious dark zones in egress paths, units directed away from egress path, light output visibly inadequate	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Emergency Lighting Power Source — Listed Transfer Equipment</b> Emergency lighting may be battery-backup units (self-contained), or connected to automatic transfer switch (ATS) feeding generator or UPS.	NEC 700.12 700.5	PASS: Listed battery units or listed ATS/generator transfer equipment providing emergency power	FAIL: Unverified power source, non-listed transfer equipment, generator transfer switch bypassed	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Emergency Lighting Fixtures — Condition &amp; Aiming</b> Luminaire heads must be aimed along egress paths — not at walls. Lamps must be functional. Protective lenses intact.	NEC 700.16 NFPA 101 § 7.9	PASS: Luminaire heads aimed at egress path/floor, lamps illuminated in test mode, lenses intact	FAIL: Lamps failed (dark units), heads aimed at ceiling or wall providing no egress illumination	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Emergency Lighting TEST Button — Annual &amp; Monthly Tests</b> NFPA 101 requires 30-second monthly test and 90-minute annual test with documentation. Press TEST button to verify operation during inspection.	NFPA 101 § 7.9.3	PASS: TEST button functional, unit illuminates during test, test records available if requested	FAIL: TEST button non-functional, no response on test, unit fails to maintain illumination	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A

### 3.4 — Exit Sign Compliance

Exit signs must be continuously illuminated and legible in both normal and emergency lighting modes. NFPA 101 § 7.10 requires exit signs at every required exit and at path-of-travel decision points. The minimum illumination requirement is 5 foot-candles on the sign face. Self-luminous (tritium-based) or photoluminescent signs do not require electrical connections.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Exit Signs Present at All Required Exit Doors</b> Every door or passageway designated as a required exit must be marked with an illuminated exit sign. Verify no required exits are unmarked.	NFPA 101 § 7.10.1 OSHA 191 0.37(b)(2)	PASS: Illuminated exit sign at every required exit door, visible from direction of travel	FAIL: Missing exit sign at required exit doors, exit signs facing wrong direction	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Exit Signs at Decision Points Along Exit Routes</b> Where a path of travel intersects corridors or where direction to the exit may be unclear, additional exit signs with directional arrows are required.	NFPA 101 § 7.10.1.5 NFPA 101 § 7.10.1.6	PASS: Exit signs with directional arrows at all egress path intersections and decision points	FAIL: Missing intermediate exit signs creating ambiguity about exit direction	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Exit Sign Illumination — Minimum 5 fc on Sign Face</b> Externally illuminated signs must achieve 5 fc on the sign surface. Internally illuminated signs must be listed per UL 924.	NFPA 101 § 7.10.6.3 OSHA 191 0.37(b)(6)	PASS: Externally illuminated signs show ≥5 fc, internally illuminated signs are listed UL 924 and fully illuminated	FAIL: Dim or non-illuminated exit signs, burned-out internal lamps, signs not legible from 100 ft	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Exit Sign Battery Backup — Illuminated on Normal Power Loss</b> Exit signs must remain illuminated during power failure. Battery backup or connection to emergency power required.	NEC 700.16 NFPA 101 § 7.10.1.3	PASS: Exit signs remain illuminated when normal power is removed (battery backup functional)	FAIL: Exit signs extinguish when normal power is removed — no backup illumination	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Exit Signs — Distinctive Color, No Obstructions</b> Exit signs must be distinctive in color (typically red or green). No decorations, posters, or signage that could obstruct visibility.	NFPA 101 § 7.10.1.8 OSHA 191 0.37(b)(7)	PASS: Distinctive color, unobstructed view, no competing signage within immediate vicinity	FAIL: Signs painted over, blocked by decorations, non-distinctive color or design	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A

### 3.5 — Equipment & Load Labeling

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<p><b>Disconnect Switches — Labeled with Equipment Served</b></p> <p>Every disconnect must identify the equipment it controls per NEC 110.22. HVAC, elevator, motor, and process equipment disconnects must be clearly labeled.</p>	<p>NEC 110.22</p>	<p>PASS: All disconnects labeled with equipment served, location, and voltage/amperage if applicable</p>	<p>FAIL: Unlabeled disconnects, generic labels ('motor', 'equipment'), or labels removed/faded</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>Receptacles — Voltage &amp; Ampacity Labeled Where Non-Standard</b></p> <p>Non-standard receptacle configurations (30A, 50A, 240V, 480V) must be marked to prevent equipment mismatch. NEMA configuration should match circuit.</p>	<p>NEC 210.5(A) 406.6</p>	<p>PASS: Non-standard receptacles clearly marked with voltage and ampacity, NEMA configuration matches circuit</p>	<p>FAIL: Unlabeled non-standard receptacles, NEMA configuration mismatch between receptacle and circuit</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>
<p><b>Electrical Rooms — Signage Posted</b></p> <p>Electrical rooms must be marked to prevent unauthorized access and to identify electrical hazards. NEC 110.27 requires guarding of live parts.</p>	<p>NEC 110.27 (ANSI Z535)</p>	<p>PASS: Electrical room door labeled, 'AUTHORIZED PERSONNEL ONLY' or equivalent signage posted</p>	<p>FAIL: No signage on electrical room, room unlocked and accessible to building occupants</p>	<p>[ ] Pass [ ] Fail [ ] N/A</p>

### 3.6 — Motor & HVAC Load Inspection

Three-phase motor loads are the primary beneficiaries of 3-phase power in commercial buildings. HVAC equipment, elevators, compressors, pumps, and fans are commonly 3-phase loads. Visual inspection of motor circuits focuses on disconnect location, overload protection, and wiring condition at connections.

[ ] INSPECTION ITEM	NEC REF.	PASS CRITERIA	FAIL CRITERIA	RESULT
<b>Motor Disconnect — Within Sight, Within 50 ft of Motor</b> 'Within sight' means visible and not more than 50 ft from the motor or driven machinery. Locked-open switches satisfy the intent in some applications.	NEC 430.102 430.109	PASS: Listed disconnect visible from motor location, within 50 ft, operable without reaching over live parts	FAIL: No disconnect, disconnect not within sight of motor, disconnect more than 50 ft from motor	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Motor Overload Protection — Integral or Separate Overloads</b> Motors must have overload protection (separate from the branch circuit OCPD) unless the motor is impedance-protected or is supervised. Look for overload relay in motor starter or thermal protector in motor.	NEC 430.31 430.32	PASS: Overload protection device present (integral motor protector, overload relay in starter, or motor circuit protector)	FAIL: No overload protection — motor protected only by branch circuit OCPD (which is sized too large for overload protection)	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Motor Wiring — No Heat Damage at Connection Points</b> Inspect motor terminal box for overheating evidence: discolored conductors, burnt insulation, or arc marks at motor terminals.	NEC 430.9 110.14	PASS: Motor terminal connections clean, no heat damage, conductors properly terminated	FAIL: Heat discoloration at motor terminals, burnt wire insulation, arc marks on terminal lugs	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>HVAC Equipment Disconnects — Properly Labeled &amp; Accessible</b> HVAC disconnects must identify the equipment served (unit number, floor, zone) and be accessible without climbing or removing equipment.	NEC 440.14 110.22	PASS: HVAC disconnect labeled with unit ID, accessible, handle operable, rating visible	FAIL: Missing or illegible label, inaccessible disconnect, disconnects with fuses of wrong rating	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>Phase Loss Protection for Large 3-Phase Motors</b> Motors over 1 horsepower in critical applications should have phase loss / phase imbalance protection. Single-phasing destroys motors rapidly. Note absence as advisory item.	NEC 430.35 (Best Practice)	PASS: Phase loss relay or monitor present on critical motors, or motors are small enough to not require it	FAIL: No phase loss protection on large (>10HP) critical 3-phase motor — note as advisory deficiency	<input type="checkbox"/> Pass <input type="checkbox"/> <input type="checkbox"/> Fail <input type="checkbox"/> N/A

### 3.7 — Common Defect Photo Reference Guide

The following reference guide describes the most frequently photographed defects in 3-phase commercial electrical inspections. Use these descriptions to guide your photo documentation during field inspections and to verify your findings against known defect patterns. Placeholder frames indicate locations where field photographs should be attached in your inspection report.

<p>[ PHOTO PLACEHOLDER ] Attach field photograph here</p> <p>Photo #: _____</p>	<p><b>DEFECT 1 — Double-Tapped Circuit Breaker</b></p> <p>Two conductors terminated under a single breaker lug not listed for two conductors. The conductor with less clamping force may carry current without tripping the breaker. Correct by adding a breaker space, installing a tandem breaker in a CTL-approved slot, or using a breaker explicitly listed for 2-wire termination.</p> <p><b>NEC Reference:</b> NEC 408.41   110.14(A)</p> <p><input type="checkbox"/> Observed <input type="checkbox"/> Not Observed <input type="checkbox"/> N/A</p> <p>Notes: _Notes: _Notes: _Notes: _Notes: __</p>
<p>[ PHOTO PLACEHOLDER ] Attach field photograph here</p> <p>Photo #: _____</p>	<p><b>DEFECT 2 — Missing Arc-Flash Labels on 480V Equipment</b></p> <p>NFPA 70E and NEC 110.16 require arc-flash hazard warning labels on equipment where an employee may work in an energized state. 480V 3-phase systems can produce arc-flash incident energies exceeding 40 cal/cm<sup>2</sup> — a potentially fatal exposure. Labels must identify hazard level and required PPE.</p> <p><b>NEC Reference:</b> NEC 110.16   NFPA 70E § 130.5</p> <p><input type="checkbox"/> Observed <input type="checkbox"/> Not Observed <input type="checkbox"/> N/A</p> <p>Notes: _Notes: _Notes: _Notes: _Notes: __</p>
<p>[ PHOTO PLACEHOLDER ] Attach field photograph here</p> <p>Photo #: _____</p>	<p><b>DEFECT 3 — Neutral-Ground Bond in Sub-Panel</b></p> <p>A bonding screw or wire connecting the neutral bus to the panel chassis in a sub-panel creates parallel current return paths through the EGC. Grounding conductors and conduit will carry current under normal load conditions, energizing metal components throughout the building. Look for a green or gray screw on the neutral bar.</p> <p><b>NEC Reference:</b> NEC 250.24(A)   408.40</p> <p><input type="checkbox"/> Observed <input type="checkbox"/> Not Observed <input type="checkbox"/> N/A</p> <p>Notes: _Notes: _Notes: _Notes: _Notes: __</p>

<p>[ PHOTO PLACEHOLDER ] Attach field photograph here</p> <p>Photo #: _____</p>	<p><b>DEFECT 4 — Improper Conduit Fill — Overfilled Raceway</b></p> <p>Conduit packed beyond 40% fill (3+ conductors) generates excess heat from conductor bundling, reduces conductor ampacity, and can damage insulation during installation pull. Visually, conductors will be visible under pressure at conduit ends with no slack. Requires new conduit or conductor re-routing.</p> <p>NEC Reference: NEC 300.17   Chapter 9, Table 1</p> <p><input type="checkbox"/> Observed <input type="checkbox"/> Not Observed <input type="checkbox"/> N/A</p> <p>Notes: _Notes: _Notes: _Notes: _Notes: __</p>
<p>[ PHOTO PLACEHOLDER ] Attach field photograph here</p> <p>Photo #: _____</p>	<p><b>DEFECT 5 — Open Knockout — Exposed Live Bus Bar</b></p> <p>Unused knockouts in panel enclosures allow pest intrusion and expose personnel to live bus bars. Rodent nesting in panel enclosures is a documented fire cause. All open knockouts must be sealed with listed filler plates (NEC 408.7). This is a simple inexpensive repair with high safety impact.</p> <p>NEC Reference: NEC 408.7   110.12(A)</p> <p><input type="checkbox"/> Observed <input type="checkbox"/> Not Observed <input type="checkbox"/> N/A</p> <p>Notes: _Notes: _Notes: _Notes: _Notes: __</p>
<p>[ PHOTO PLACEHOLDER ] Attach field photograph here</p> <p>Photo #: _____</p>	<p><b>DEFECT 6 — Heat Discoloration at Breaker Terminal</b></p> <p>Yellowish-brown or black discoloration on breaker housings adjacent to terminal lugs indicates loose connection arcing or sustained overload. This is a leading indicator of impending fire. Thermal imaging at panels can identify these conditions before visible damage occurs. Requires licensed electrician inspection before re-energizing.</p> <p>NEC Reference: NEC 110.14   110.3(B)</p> <p><input type="checkbox"/> Observed <input type="checkbox"/> Not Observed <input type="checkbox"/> N/A</p> <p>Notes: _Notes: _Notes: _Notes: _Notes: __</p>
<p>[ PHOTO PLACEHOLDER ] Attach field photograph here</p> <p>Photo #: _____</p>	<p><b>DEFECT 7 — Emergency Lighting Unit — Failed Battery</b></p> <p>Emergency lighting units with discharged or failed batteries will not illuminate during power outages. Units over 5 years without battery replacement should be flagged. Visible indicators of failed batteries include swelling of battery case, leaking electrolyte, or no response on TEST button. Replace with UL 924 listed batteries.</p> <p>NEC Reference: NFPA 101 § 7.9.3   NEC 700.12</p> <p><input type="checkbox"/> Observed <input type="checkbox"/> Not Observed <input type="checkbox"/> N/A</p> <p>Notes: _Notes: _Notes: _Notes: _Notes: __</p>

[ PHOTO PLACEHOLDER ]  
Attach field photograph here

Photo #: \_\_\_\_\_

**DEFECT 8 — Non-Listed Breaker in Panel (Wrong Manufacturer)**

Installing a breaker from a different manufacturer in a panel without a specific 'classified' listing for that combination violates NEC 110.3(B) and manufacturer instructions. Mismatched breakers may not trip at the rated current, fail to snap fully onto the bus stab, or arc internally. Common example: Cutler-Hammer breaker in Square D QO panel.

NEC Reference: [NEC 110.3\(B\)](#) | [408.36](#)

Observed  Not Observed  N/A

Notes: \_Notes: \_Notes: \_Notes: \_Notes: \_\_

### 3.8 — Digital Checklist Summary Template

Use this summary page to compile all inspection findings before transferring to your digital report platform (Spectora, Hive Inspect, Home Inspector Pro, or similar). Record the total count of PASS, FAIL, and N/A items per phase. All FAIL items require narrative description and photo documentation in the final report.

INSPECTION PHASE	# ITEMS	# PASS	# FAIL	# N/A	PRIORITY FAILS
Phase 1 — Service Entrance & Main Panel	35	—	—	—	_____
Phase 2 — Distribution Panels, Wiring & Conduits	28	—	—	—	_____
Phase 3 — Loads, Fixtures & Safety Systems	27	—	—	—	_____
<b>TOTALS</b>	<b>90</b>	—	—	—	Total Priority Items: ____

### PRIORITY DEFECT LOG — High-Safety Items Requiring Disclosure

Record all FAIL items in the table below. High-priority items (marked with ▲ in checklist) must be communicated verbally to client during inspection and documented in the report Summary section. Any item involving immediate safety hazard should include a recommendation for emergency licensed electrician evaluation.

#	CHECKLIST ITEM / LOCATION	DEFECT DESCRIPTION	PHOTO #	PRIORITY
1	_____	_____	_____	[ ] High [ ] Med [ ] Low
2	_____	_____	_____	[ ] High [ ] Med [ ] Low
3	_____	_____	_____	[ ] High [ ] Med [ ] Low
4	_____	_____	_____	[ ] High [ ] Med [ ] Low
5	_____	_____	_____	[ ] High [ ] Med [ ] Low
6	_____	_____	_____	[ ] High [ ] Med [ ] Low
7	_____	_____	_____	[ ] High [ ] Med [ ] Low
8	_____	_____	_____	[ ] High [ ] Med [ ] Low

9	_____	_____	_____	[ ] High [ ] Med [ ] Low
10	_____	_____	_____	[ ] High [ ] Med [ ] Low
11	_____	_____	_____	[ ] High [ ] Med [ ] Low
12	_____	_____	_____	[ ] High [ ] Med [ ] Low

### DIGITAL REPORT TRANSFER — Spectora / Hive / HIP Template Fields

FIELD NAME	SPECTORA SECTION	HIVE SECTION	HIP SECTION	VALUE / ENTRY
Service Voltage	Electrical > Service	Electrical System	Electrical	e.g., 480Y/277V, 3Ø, 4W
Service Amperage	Electrical > Service	Electrical System	Electrical	e.g., 800A
Main OCPD Type	Electrical > Main Panel	Main Panel	Service Panel	e.g., 3-Pole CB, 800A, 65kAIC
Grounding Type	Electrical > Grounding	Grounding	Electrical	e.g., Ground Rod + Ufer
Panel Manufacturer	Electrical > Panels	Distribution Panels	Panel Info	e.g., Square D QO Series
GFCI Present	Electrical > GFCI	GFCI	GFCI/AFCI	Yes / No / Partial
AFCI Present	Electrical > AFCI	AFCI	GFCI/AFCI	Yes / No / N/A
Emergency Lighting	Safety > Emergency	Safety Systems	Life Safety	Functional / Deficient / N/A
Exit Signs	Safety > Exit Signs	Safety Systems	Life Safety	Functional / Deficient / N/A
Priority Defects	Summary > Defects	Defects List	Summary	Reference defect log above

#### INSPECTOR CERTIFICATION

I certify that this visual inspection was conducted in accordance with generally accepted home inspection standards of practice and the inspection methods described in this checklist. This report documents visible conditions at the time of inspection only. Concealed conditions, components not accessible for visual inspection, and conditions that develop after the date of inspection are excluded. This checklist is not a guarantee, warranty, or certification of any electrical system or component.

Inspector Signature: \_\_\_\_\_ Date: \_\_\_\_\_

License Number: \_\_\_\_\_ State: \_\_\_\_\_ InterNACHI Member #: \_\_\_\_\_

## NEC & REGULATORY REFERENCE INDEX

NEC SECTION	DESCRIPTION	PHASE
NEC 110.9	Interrupting Rating — OCPDs must have AIC $\geq$ available fault current	1
NEC 110.11	Deteriorating Agents — Equipment must be suitable for environment	1
NEC 110.12	Mechanical Execution — Electrical installations must be neat and workmanlike	1
NEC 110.14	Electrical Connections — Connectors and terminals must be properly rated	1,2
NEC 110.16	Arc-Flash Hazard Warning — Labels required on equipment	1
NEC 110.22	Identification of Disconnecting Means — Must be legibly marked	1,2,3
NEC 110.26	Working Clearances — Depth, width, height requirements at electrical equipment	1
NEC 110.27	Guarding of Live Parts — Enclosures and guarding requirements	3
NEC 200.6	Identification of Grounded Conductors — White/gray color requirement	2
NEC 210.5(C)	Identification of Branch Circuits — Color coding for ungrounded conductors	2
NEC 210.8(B)	GFCI Protection for Other Than Dwelling Units — Commercial locations	3
NEC 210.12	Arc-Fault Circuit-Interrupter Protection — Required locations	3
NEC 210.19(A)	Conductors — Minimum Ampacity and Size for branch circuits	2
NEC 215.2	Feeder Conductors — Minimum Ampacity and Size	2
NEC 215.3	Feeder OCPD — Sized for feeder conductor	2
NEC 230.21	Service Conductors Over Buildings	1
NEC 230.24	Clearances — Service drop clearances above grade and roof	1
NEC 230.42	Minimum Size and Rating of Service Entrance Conductors	1
NEC 230.54	Overhead Service Entrance Conductors — Weatherhead requirement	1
NEC 230.66	Equipment for Services	1
NEC 230.70	Main Service Disconnecting Means — Location and Rating	1
NEC 230.71	Maximum Number of Disconnects — Six disconnect rule	1
NEC 230.90	Service Overcurrent Protection	1
NEC 240.4	Protection of Conductors — Standard overcurrent device sizes	2
NEC 240.15	3-Phase Circuit Protection — 3-pole breakers required	2
NEC 250.24	Grounding Service-Supplied Alternating-Current Systems	1
NEC 250.28	Main Bonding Jumper and System Bonding Jumper	1
NEC 250.50	Grounding Electrode System — All electrodes bonded	1
NEC 250.52	Grounding Electrodes — Types of acceptable electrodes	1
NEC 250.53	Grounding Electrode Installation Requirements	1
NEC 250.56	Resistance of Rod, Pipe, and Plate Electrodes	1
NEC 250.64	Grounding Electrode Conductor Installation	1
NEC 250.66	Size of Grounding Electrode Conductor (Table 250.66)	1
NEC 250.70	Methods of Grounding and Bonding at Electrode	1
NEC 250.119	Identification of Equipment Grounding Conductors	2

NEC 250.122	Size of Equipment Grounding Conductors (Table 250.122)	2
NEC 300.4	Protection Against Physical Damage — Conductors in conduit	2
NEC 300.15	Boxes, Handhole Enclosures, or Fittings — Where required	2
NEC 300.17	Number and Size of Conductors in Raceway — Conduit fill	2
NEC 300.21	Spread of Fire or Products of Combustion — Fire stopping	2
NEC 310.15	Ampacities for Conductors Rated 0–2000 Volts	2
NEC 314.16	Number of Conductors in Outlet, Device, and Junction Boxes	2
NEC 314.29	Boxes, Conduit Bodies, and Handhole Enclosures — Accessible	2
NEC 330.30	Securing and Supporting Type MC Cable	2
NEC 344.10	Rigid Metal Conduit — Permitted Uses	2
NEC 348.20	Flexible Metal Conduit — Minimum Size	2
NEC 358.10	EMT — Uses Permitted	2
NEC 358.30	EMT — Securing and Supporting	2
NEC 408.3	Switchboards, Switchgear, and Panelboards — Support and Arrangement	1,2
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NEC 408.7	Unused Openings — Must be closed	1,2
NEC 408.36	Overcurrent Protection of Panelboards	2
NEC 408.40	Grounding of Panelboards — Isolated neutral in sub-panels	2
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NEC 430.9	Motor Controllers — Terminals and Conductors	3
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OSHA 29 CFR 1910.303	General Electrical — Wiring design and protection	3
OSHA 29 CFR 1910.37(b)	Exit Routes — Lighting and marking requirements	3
NFPA 70E § 130.5	Arc Flash Risk Assessment and PPE labeling	1

NEC references cite the 2023 National Electrical Code (NFPA 70). Full text available at [nfpa.org/codes-and-standards/nfpa-70](https://nfpa.org/codes-and-standards/nfpa-70). OSHA standards available at [osha.gov/laws-regs/regulations/standardnumber/1910/1910.303](https://osha.gov/laws-regs/regulations/standardnumber/1910/1910.303). NFPA 101 available at [nfpa.org/codes-and-standards/101](https://nfpa.org/codes-and-standards/101).