2025

PORT OF SAN FRANCISCO ELECTRICAL CODE

Based on the *2025*
California Electrical Code

PORT OF SAN FRANCISCO

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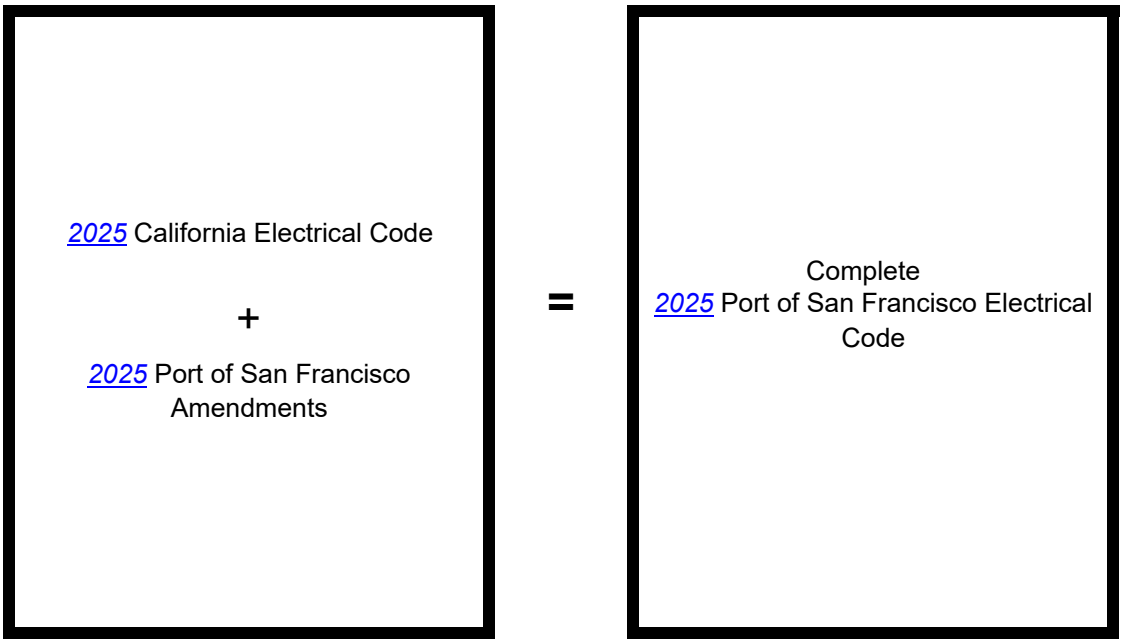
2025 Port of San Francisco Electrical Code

The complete *2025* Port of San Francisco Electrical Code adopts and amends the *2025* edition of the California Electrical Code

Effective Date: January 1, *2026*



PUBLISHER'S NOTE

To simplify the use of the Port of San Francisco amendments with corresponding sections of the *2025* California Codes, new changes to the Port of San Francisco amendments appear in *italics* to indicate a modification of a section or portion of a section in the corresponding California Code.

Should you find publication errors or inconsistencies in this code or wish to offer comments toward improving its format, please address your comments to:

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ARTICLE 89
GENERAL CODE PROVISIONS

89.101 General

89.101.1 Title

Replace the first sentence with the following:

The provisions contained in this Code shall be known as the "2025 Port of San Francisco Electrical Code" and may be cited as such and will be referred to as "this code".

Add the following new sections:

89.115 Suppression This code shall supersede all previous Electrical Codes and ordinances in the Port of San Francisco. Nothing herein shall require the revision of electrical installation plans submitted prior to the adoption date of this code. Electrical permits obtained prior to the effective date of this code shall comply with the provisions of the Electrical Code, regulations and rulings in effect when the permit was granted.

89.116 Maintenance All electrical equipment, wiring and systems and installations shall be maintained in a safe operating and code-complying condition. The owner or the owner's designated agent, or both, shall be legally responsible for the maintenance of all electrical wiring systems and installations.

Nothing contained in this code shall be construed to require any existing electrical equipment, wiring or systems regulated by this code to be altered, reconstructed, removed, or demolished, providing such existing electrical equipment, wiring or system was installed and maintained in accordance with the adopted code in effect at the time of installation or subsequent alteration.

Unused conductors and cables shall be either removed or suitably identified and terminated in an approved manner.

89.117 Alternative Materials, Design and Methods of Construction See Port of San Francisco Building Code Section 104A.2.3.

89.118 Change in Occupancy Electrical equipment, wiring and systems which are part of any building or structure, or portion thereof, undergoing a change in occupancy or use, as defined in the Port of San Francisco Building Code, shall comply with all requirements of this code which may be applicable to the new occupancy or use.

EXCEPTION: The provisions of this section shall not require the change of existing electrical equipment, wiring and systems where such electrical equipment, wiring and systems are deemed adequate for the new occupancy involved.

89.119 Modifications See Port of San Francisco Building Code Section 104A.2.7

89.120 Permits Required

(A) General. It shall be a violation of this code for any person to install, construct, alter, move, add to or replace any electrical installation regulated by this code, except as permitted in Section

89.121, without first obtaining a building permit which included fees for an electrical permit from the Port of San Francisco.

(B) Non liability of Port of San Francisco and City and County of San Francisco.

Permits issued under the provisions of this code shall contain or be construed to contain an agreement by the owner of the building, structure or premises, or the owner's authorized agent, to save Port of San Francisco and City and County of San Francisco officials and employees harmless from all costs, liability and damages resulting, whether directly or indirectly, from anything in connection with the work included in the permit, including equipment, methods of construction, inspections and approvals.

(C) Application for Permit. Permit applicants shall file with the Port of San Francisco an application form furnished by the Chief Harbor Engineer for that purpose. The permit application shall show a complete itemization of the proposed electrical installation and the correct address of the job site. Electrical permits may be issued to duly licensed contractors. A separate permit shall be obtained for each separate building or structure.

(D) See Section 110A, Table 1A-A-Building Permit Fees and Table 1A-E-Electrical Permit

(E) Illegal Use of Permit. No person, firm, corporation, or state licensed contractor shall file an application for a permit to install any electrical wiring system unless such person, firm, corporation, or state licensed contractor shall perform such work. The Chief Harbor Engineer or the Chief Harbor Engineer's authorized representative shall have the authority to cancel any permit upon finding that it is contrary to this section. The owner shall be responsible for all work performed.

(F) Emergency Work. Emergency electrical work for the protection of *people* or property shall have a permit obtained within one business day of commencing such work.

89.121 Work Exempt from Permits Electrical permits and fees shall not be required for the following:

(A) Repair or replacement of luminaire(s) where:

1. *T*he luminaire(s) are not installed to provide emergency illumination required by Port of San Francisco Building Code, and

2. *N*o change in existing wiring is involved, and

3. *The* luminaries weigh 22.68 Kg (50 pounds) or less

(B) Repair or replacement of a domestic appliance where no change in existing wiring is involved.

(C) Replacement of fuses, controls, motors of less than 2 horsepower, and switches and receptacles of not more than 20 amperes rating, where no change in existing wiring is involved.

(D) Replacement of circuit breakers, externally operated switches and fuse holders of the same type and rating as the defective unit or component, if not rated in excess of 100 amperes.

EXCEPTION: Replacement of main service disconnecting means are subject to permit and inspection regardless of rating.

(E) Wiring for temporary theater stages and platforms, motion picture and television studio sets supplied from approved electrical outlets installed for the purpose.

(F) Replacement of component parts for electric signs or gas-tube lighting systems of the same size and rating.

89.122 Permit Issuance General. An issued permit entitles the *permittee* to proceed with the installation described therein. Work performed in excess of that shown on the application will be subject to extra permit fees as set forth in Section 110A, Table 1A-F- Specialty Permit Fees -of the Port of San Francisco Building Code. The issuance of a permit does not constitute an approval or authorization of the work specified therein. Neither the issuance of a permit, nor the approval by the Chief Harbor Engineer of any document, shall constitute an approval of a violation of any provision of this code or any law or ordinance. A permit or other document purporting to give authority to violate any code, law or ordinance shall not be valid with respect thereto. Permits shall not be transferable. Proposed electrical installations delineated on a permit application shall be performed only by the owner or bona fide employee thereof in accordance with the California Code of Regulations, Title 8, Chapter 2, Part IV. The permit shall be posted on the job site where the work is to be done.

89.123 Fees

89.123.1 General Permit, inspection and investigation fees

(A) *General. A*s set forth in the building code, Chapter 1A and Tables 1A-A Building Permit Fees, 1A-B Building Application and Plan Review Fees, 1A-E Electrical Permit and Inspection Fees, 1A-G Inspections Surveys and Reports and 1A-K Investigation Fees, Hearings and Code Enforcement Fees of the Building Code shall be paid prior to permit issuance.

89.124 Powers and Duties of the Chief Harbor Engineer

(A) General. The Chief Harbor Engineer *is* hereby authorized and directed to enforce all the provisions of this code. For such purposes and subject to other provisions and limitations of law, the Chief Harbor Engineer shall have the powers of a law enforcement officer. The Chief Harbor Engineer, when necessary, may call upon other city agencies for aid or assistance in carrying out or enforcing any of the provisions of this code.

(B) Right of Entry. See 104A.2.*3* of the Port of San Francisco Building Code

(C) Stop orders. See 104A.2.4 of the *Port of San Francisco* Building Code.

(D) Temporary Use of Electrical Energy. The Chief Harbor Engineer may permit the temporary use of electrical energy by any person, firm or corporation in cases where it does not create a hazard to life or property.

(E) Chief Harbor Engineer may adopt rules and regulations. See 104A.2.1 of the Port of San Francisco Building Code.

(F) Disconnection of Electric Service due to Serious and Imminent Hazards. The Chief Harbor Engineer shall have the authority to disconnect electric service to a building, structure, property or equipment regulated by this code when it is necessary to abate a serious and imminent hazard to the life, health or safety of the occupant or other persons, or such building, structure or

property. See Section 102A of the Port of San Francisco Building Code. Persons shall not reconnect such electrical supply until authorized in writing by the Chief Harbor Engineer.

89.125 Unsafe Buildings or Structures Any buildings, structures, or parts thereof, shall be considered unsafe when any of the following conditions are present:

(A) Electrical equipment, wiring and systems deemed hazardous to human life or structural safety.

(B) Electrical equipment, wiring and systems that are in violation of the code that was in effect at the time of construction or installation, or such work was performed without permit or approval;

(C) Change in occupancy without complying with the provision of Section 089.118 of this code.

(D) Such unsafe building, structure, property, or portion shall be vacated, repaired, altered or demolished in accordance with Section 102A of the Port of San Francisco Building Code.

89.126 Inspection

(A) General. All electrical equipment, wiring and systems, regulated by this code and for which a permit is required shall be subject to inspection to ensure compliance with this code.

(B) Unlawful Use of Electrical Energy**.** It shall be unlawful to energize an electrical installation in, on or about any building, structure, or property in the Port of San Francisco unless a Certificate to Connect Current (Green Tag) has been issued. The Certificate to Connect Current authorizes the owner of the structure to energize the permitted installation.

(C) Inspection Requests. It shall be the responsibility of the permit holder, or the person doing the work, to notify the Port Building Inspector orally or in writing when the permitted installation will be ready for inspection and to cause the electrical systems to remain open and exposed for inspection purposes. Such notification shall be given at least 24 hours before any inspection is desired. Inspections may be performed outside of normal inspection hours by prior arrangement and prepayment. See Section 110A, Table 1A-G – Off hours Inspections – of the Building Code for the applicable fees.

(D) Required Inspections**.** Required inspections shall include:

1. Pre-Cover Inspection. Electrical equipment, wiring and systems authorized by permit shall be inspected for code compliance prior to covering or concealing.

2. Final Inspection. Final inspection and demonstration of satisfactory operation shall be made after the installation authorized by permit has been completed.

3. Other Inspection. As required to ensure compliance with the provisions of this code.

(E) Electrical Wiring or Installation Unlawful to Conceal. It shall be a violation of this code to conceal, cover, or put into use electrical wiring, installations, or parts thereof, until such has been inspected and accepted as prescribed in this code. Whenever such work is concealed or covered before first having been inspected and approved, or whenever electrical wiring or systems are installed and concealed or covered without a permit, the Chief Harbor Engineer may require, by written notice to the responsible person(s) that such wiring or installation be

exposed for inspection. The work of exposing and reconstructing portions of a structure for such work shall not entail expense to the Port of San Francisco and City and County of San Francisco or any of its officials or employees.

(F) Re-inspections. Re-inspections shall be required when any of the following conditions *occur*:

1. When the portion of the work for which inspection is requested is incomplete or not code complying.

2. When previously identified deficiencies in the work are not properly corrected.

3. When the approved construction documents are not available to the inspector.

4. When access is not provided on the date and time of the inspection appointment.

5. When there are deviations from the approved construction documents.

The first re-inspection for failure to comply with code requirements shall not be assessed a re-inspection fee. All subsequent re-inspections on a job for the same or subsequent errors or omissions shall be charged a re-inspection fee. A Certificate of Final Completion and Occupancy or final approval shall not be granted until the required fees are paid. See Section 110A, Table 1A-G – Inspections, Surveys and Reports – of the *Port of San Francisco* Building Code for applicable re-inspection fees.

89.127 Survey See Section 107A.9 of the Port of San Francisco Building Code.

89.128 Appeals For appeals see Port of San Francisco Building Code Section 105A – Appeals

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ARTICLE 90
Introduction

No Port of San Francisco *Electrical Code* Amendments

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CHAPTER 1 GENERAL

ARTICLE 100
Definitions

Scope

Add the following paragraph after the Informational Notes:

Where terms, phrases and words are not defined, they shall have the same meaning as provided in the Port of San Francisco Building Code or shall have their ordinary accepted meanings within the context with which they are used.

ARTICLE 110
General Requirements for Electrical Installations

110.15 High-Leg Marking

Replace this section to read as follows:

On a 4-wire, delta-connected system where the midpoint of one phase winding is grounded, only the conductor or busbar having the higher phase voltage to ground shall be *durable* and permanently marked by an outer finish that *is* orange or purple in color or by other effective means. Such identification shall be placed at each point on the system where a connection is made if the grounded conductor is also present. Identification of ungrounded feeder conductors shall comply with Section 210.5.C.

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CHAPTER 2 WIRING AND PROTECTION

ARTICLE 210
Branch Circuits *Not Over 1000 Volts ac, 1500 Volts dc, Nominal*

210.5 Identification for Branch Circuits.

Replace item (C)(1) to read as follows:

(1) **Application.** Each ungrounded conductor of a branch circuit shall be identified by phase or line and system at all termination, connection, and splice points.

Replace item (C)(2) to read as follows:

(2) **Means of Identification.** The means of identification for conductors #8 AWG or larger shall be permitted to be by separate color coding, marking tape, tagging, or other approved means. Conductors of any size in cable assemblies may be suitably identified at all termination, connection and splice points. Conductor insulation in raceways shall contain continuous color pigment for circuit wire sizes # 10 AWG and smaller.

Phase identification colors *for branch circuits* shall be *as follows*:

(1) 120/240 volt single phase systems “A” phase black, “B” phase red;

(2) 120/208 volt 4-wire 3-phase wye systems -“A” phase black, “B” phase red, “C” phase blue;

(3) 120/240 volt 3-phase delta systems -“A” phase black, “B” (high leg) phase purple, “C” phase red;

(4) 277/480 volt 4-wire 3-phase wye systems -“A” phase brown, “B” phase orange, “C” phase yellow.

(5) Ungrounded conductors for other voltages shall be identified by different color coding, marking tape, tagging, or other approved means.

(6) Conductors for switch legs may be of a different color than the ungrounded circuit conductor when suitably identified at pull, junction and outlet boxes with marking tape, tagging or other equally effective means.

Exception No 1: Extensions of existing non-color-coded wiring systems need not be color coded.

Exception No 2: In multi-family dwelling unit buildings supplied by 120/208 volt 3-phase systems, within dwelling units supplied by 120/208 volt single phase systems, ungrounded conductor phase or line identification shall be permitted to be A phase Black, B phase Red.

Informational Note: See Section 200.7 for limitations on re-identification of white or grey conductors, and 250.119 for prohibition on using green for ungrounded conductors.

ARTICLE 215
Feeders

215.2 Minimum Rating and Size

215.2(A) General

Add the following paragraphs at the end of this section:

(3) The minimum size raceway installed for feeder conductor shall be 1 ¼ inch (31.8mm).

(4) Installations consisting of not more than two 2-wire branch circuits may be supplied by No. 8 conductors in 3/4-inch (19.1 mm) conduit.

215.12(C)(1)(a) Means of Identification

Replace this section to read as follows:

The means of identification for conductor #8 AWG or larger shall be permitted to be by separate color coding, marking tape, tagging, or other approved means. Conductors of any size in cable assemblies may be suitably identified at all termination, connection and splice points.

Phase identification colors for feeders shall be as follows:

(1) 120/240 Volt 3-wire single phase systems- "A" phase black, "B" phase red.

(2) 120/208 Volt 4-wire 3-phase wye systems- "A" phase black, "B" phase red, "C" phase blue.

(3) 120/240 Volt 3-phase delta systems- "A" phase black, "B" phase (high leg) purple, "C" phase red.

(4) 277/480 Volt 4-wire 3-phase wye system- "A" phase brown, "B" phase orange, "C" phase yellow.

(5) Ungrounded conductors for other voltages shall be identified by different color coding, marking tape, tagging, or other approved means.

(6) Branch circuit conductors for switch legs may be of a different color than the ungrounded feeder circuit conductor when suitably identified at pull boxes, junction boxes, and outlet boxes with marking tape, tagging or other equally effective means.

(7) In Multi-Family Dwelling Unit Buildings supplied by 120/208 volt 4-wire 3-phase system, within dwelling units supplied by 120/208 volt, 3-wire, single phase system, within dwelling unit supplied by 120/208 volt 3-wire single phase systems, ungrounded feeders shall be the following:

a) 120/208 volt 3 wire single phase "A" phase black, "B" phase red

b) 120/208 volt 3 wire single phase "B" phase red, "C" phase blue

c) 120/208 volt 3 wire single phase "A" phase black, "C" phase blue

d) Labeling required at the Sub-Panel indicating which phases serve the unit from 120/208 volt 4-wire 3 –phase multi/meter distribution system.

Information Note: See Section 200.7 for limitations on re-identification of white or grey conductors, and 250.119 for prohibition on using green for ungrounded conductors.

ARTICLE 230
Services

230.43 Wiring Methods for 1000 Volts, Nominal, or Less

Add the following paragraphs to the end of this section:

EXCEPTION: New service entrance conductors may be re-pulled in previously approved service raceways, provided the installation complies with the requirements of Section 89.116 and Chapters 1, 2 and 3.

Informational Note: Refer to electric utility server requirements for raceway sizes.

230.56 Service Conductor with the Higher Voltage to Ground

Replace this section to read as follows:

On a four-wire delta-connected service where the midpoint of one phase winding is grounded, the service conductor having the higher phase voltage to ground shall be durably and permanently marked by an outer finish that is orange or purple in color, or by other effective means, at each termination or junction point.

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CHAPTER 3 WIRING METHODS AND MATERIALS

ARTICLE 300
Wiring Methods *and Materials*

300.4 Protection Against Physical Damage.

Add the following paragraphs to the end of this section:

(I) Under Piers, Wharves, and Docks, conduits subject to wave action shall be PVC coated *galvanized* rigid steel with a minimum 40 mil PVC.

Informational Note: Most areas under the Port's jurisdiction are in a marine environment and may be subject to physical damage by wave action and debris contact. Wiring in this type of environment should be properly secured, supported, and protected from the elements. See also Article 555.13(B)(3) Wiring Over and Under Navigable Water.

300.6 Protection Against Corrosion and Deterioration.

Add the following sentence at the end of the first paragraph:

Under pier raceways shall be supported and braced by stainless steel *316* hardware.

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CHAPTER 4 EQUIPMENT FOR GENERAL USE

ARTICLE 410
Luminaires (Lighting Fixtures), Lampholders, and Lamps

410.36 Means of Support.

410.36(B) Suspended Ceilings

Replace this section to read as follows:

(B) Suspended Ceilings. Framing members of suspended ceiling systems used to support luminaries (fixtures) shall be securely fastened to each other and shall be securely attached to the building structure at appropriate intervals. Luminaries (fixtures) shall be securely fastened to the ceiling framing member by mechanical means, such as bolts, screws, or rivets. Listed clips identified for use with the type of ceiling framing member(s) and luminaries [fixture(s)] shall also be permitted. All luminaires (fixtures) or luminaire outlets supported by suspended ceiling systems shall have supplemental support wires (minimum #12 gauge) connected from the fixture housing or fixture support bracket to the structure above. Recessed lighting fixtures measuring 610 mm (2 feet) nominal or larger in any dimension shall have two (minimum #12 gauge) support wires. See IBC Section 808.1.1 and ASTM standards C635 and C636.

EXCEPTION: Supplemental support wires shall not be required when listed clips identified to be used without supplemental ceiling wires in compliance with IBC Section 808.1.1 are installed.

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CHAPTER 6 SPECIAL EQUIPMENT

ARTICLE 600
Electric Signs and Outline Lighting

600.5 Branch Circuit

Add the following to the end of this section:

(E) Raceways for branch circuit for sign or billboard lighting shall not be smaller than 3/4-inch (19.1 mm) conduit.

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Chapter 7 Special Conditions

ARTICLE 700
Emergency Systems

700.12 General Requirements.

700.12(F) Separate Service.

Add the following paragraph to the end of this section:

(3) Unit Equipment *shall be permanently fixed (i.e. not portable) in phase and shall have all wiring to each unit installed in accordance with the requirements of any of the wiring methods in chapter 3. Flexible cord-and-plug connection shall not be permitted*.

700.16 Emergency Illumination

Replace the first paragraph with the following:

Emergency illumination shall include all required means of egress lighting, illuminated exit signs, and all other lights specified as necessary to provide required illumination. Emergency illumination shall be provided at the location of transfer switches, *switchgears,* switchboards and panelboards that supply emergency and legally required stand-by loads.

ARTICLE 760
Fire Alarm Systems

760.130 Wiring Methods and Materials on Load Side of the PLFA *Power Source*.

760.130(A) NPLFA Wiring Methods and Materials

Replace this section to read as follows:

Installation shall be in accordance with 760.46*, 760.49 or 760.53*, and conductors shall be solid or stranded copper.

EXCEPTION No. 1: The ampacity adjustment factor given in 310.15(*C)(1)* shall not apply.

EXCEPTION No. 2: Conductors and multiconductor cables described in and installed in accordance with *760.46,* 760.49 *and 760.53* shall be permitted.

EXCEPTION No. 3: Power-limited circuits shall be permitted to be reclassified and installed as nonpower-limited circuits if the power-limited fire alarm circuit markings required by 760.124 are eliminated and the entire circuit is installed using the wiring methods and materials in accordance with Part II, Non-Power-Limited Fire Alarm Circuits.

Informational Note: Power-limited circuits reclassified and installed as nonpower-limited circuits are no longer power-limited circuits, regardless of the continued connection to a power- limited source.

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CHAPTER 8

COMMUNICATIONS SYSTEMS SYSTEMS

No Port of San Francisco Plumbing Code Amendments

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CHAPTER 9

TABLES

No Port of San Francisco Plumbing Code Amendments

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