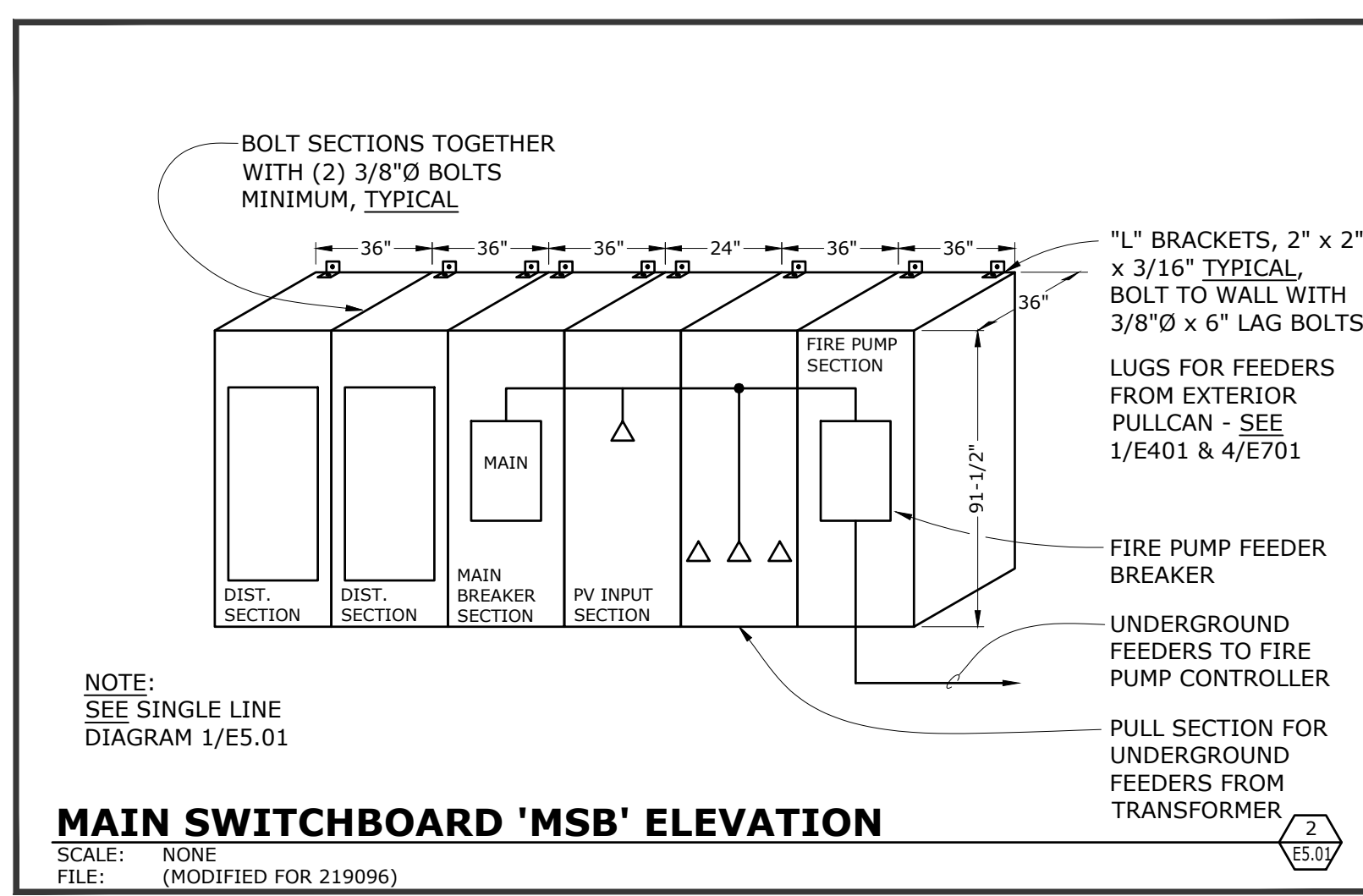


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- ### GENERAL NOTES
- PER CEC 110.06 PROVIDE AND INSTALL ELECTRIC ARC FLASH WARNING SIGNS ON ALL SWITCHBOARDS, PANELBOARDS, CONTROL PANELS, METER SOCKET ENCLOSURES, AND MOTOR CONTROLS.
  - UNDERGROUND SERVICE CONDUITS SHALL BE SEALED PER CEC 230.8.
  - BOND ALL COLD WATER PIPING SYSTEMS, GAS PIPING SYSTEMS, AND SPRINKLER PIPING SYSTEMS TO THE BUILDING GROUNDING ELECTRODE WITH (1) #4 CU. IN 3/4" CONDUIT. BOND WHEREVER THERE IS A BREAK IN THE CONTINUITY OF THESE SYSTEMS THROUGHOUT THE PROJECT.

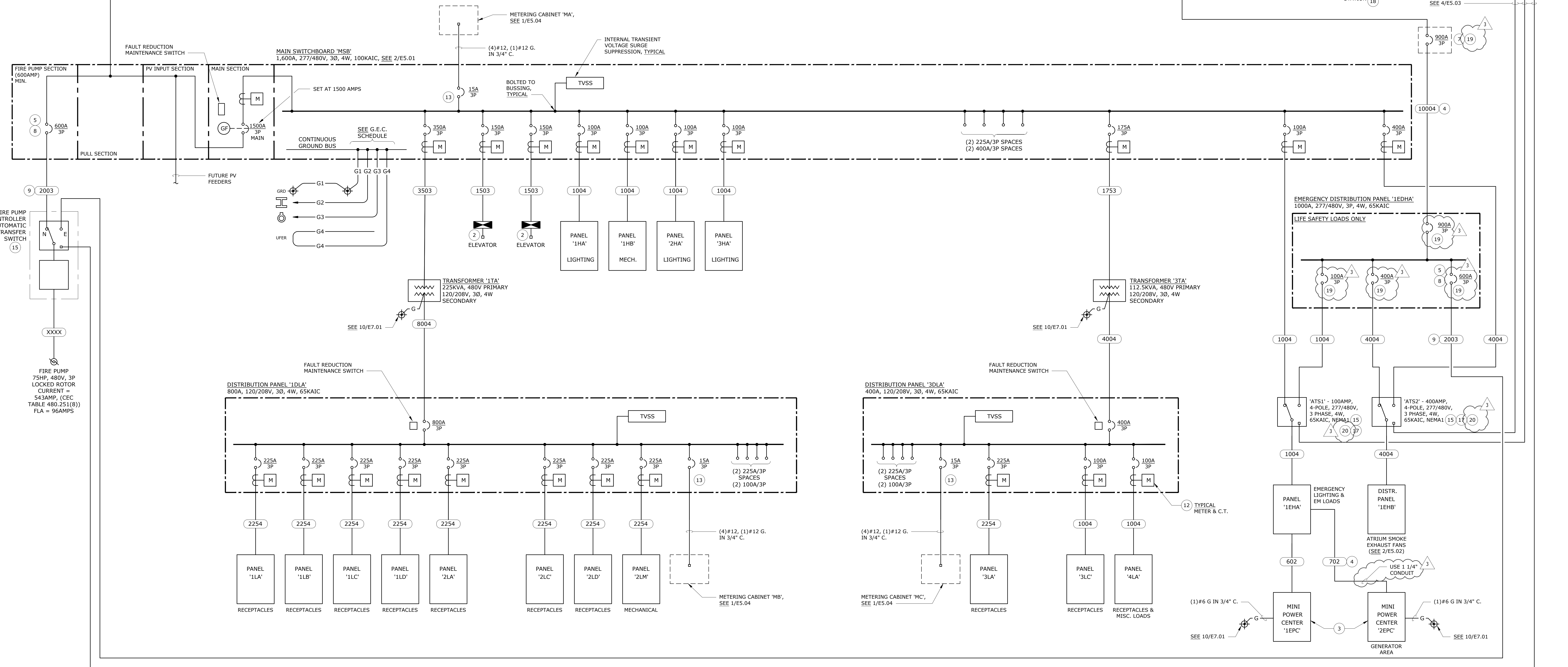
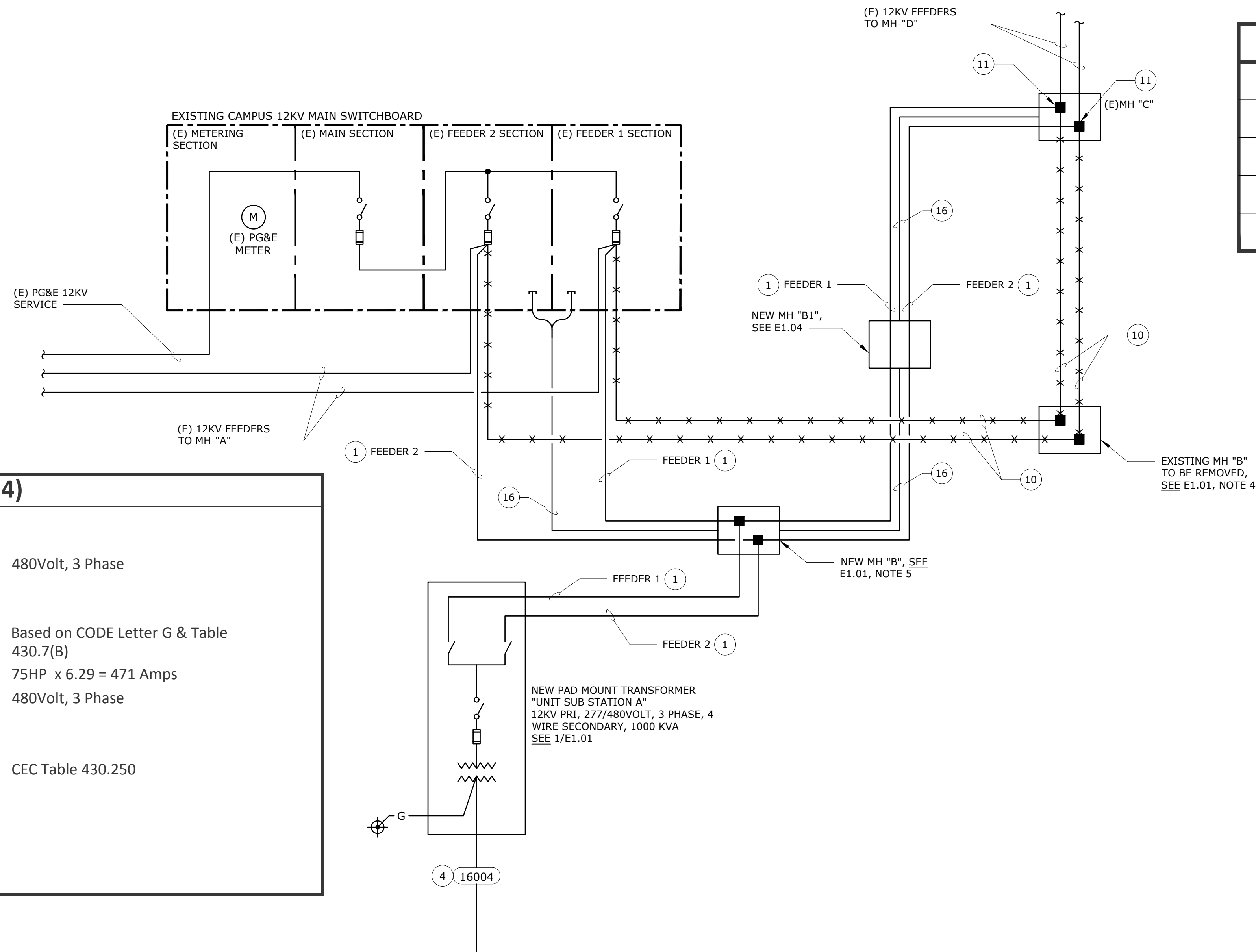
### GROUNDING ELECTRICAL CONDUCTOR (G.E.C.) SCHEDULE

G1	(1) #4/0 CU TO GROUND ROD, SEE SPECS
G2	(1) #4/0 BARE CU IN 1" C TO BLDG. STEEL, SEE SPECS.
G3	(1) #4/0 BARE CU IN 1" C TO METALLIC COLD WATER SERVICE ENTRANCE, SEE SPECIFICATIONS
G4	(1) #4/0 CU UFER GROUND, SEE SPECS

- ### NUMBERED SHEET NOTES
- PROVIDE AND INSTALL (3) #350MCM COPPER 15kV RATED FEEDERS IN 4" CONCRETE ENCASED CONDUIT. SEE SITE PLAN E1.01.
  - FUSED DISCONNECT WITH SHUNT TRIP, SEE 1/E7.02.
  - MINI POWER CENTER WITH TRANSFORMER, 480V 3PHASE PRIMARY, 120/208VOLT 3P 4W SECONDARY. SEE PANEL SCHEDULE.
  - FEEDER INCREASED FOR VOLT DROP.
  - AS REQUIRED BY CEC695.4 (B) (3) PROVIDE AND INSTALL PLACARD ON COVER OF MAIN SWITCHBOARD MARKED "FIRE PUMP DISCONNECTING MEANS". THE LETTERS SHALL BE AT LEAST 1" IN HEIGHT AND THEY SHALL BE VISIBLE WITHOUT OPENING ENCLOSURE DOORS OR COVERS. LABEL TO BE SCREWED ONTO COVER.
  - PROVIDE AND INSTALL MANUAL TRANSFER SWITCH IN NEMA 3R ENCLOSURE, ASCO 300 MTS OR EQUAL.
  - PROVIDE AND INSTALL NEMA 3R CIRCUIT BREAKER ON BUILDING EXTERIOR. SEE 1/E4.01, NOTE 3S.
  - FIRE PUMP CIRCUIT BREAKER AND FEEDER BASED ON CEC695.4.
  - FIRE PUMP FEEDER SIZE BASED ON FLA TIMES 1.25, MINIMUM.
  - REMOVE EXISTING 12KV FEEDERS, SEE E1.01 AND NOTES 6 & 7 ABOVE.
  - SPLICE NEW FEEDERS TO EXISTING FEEDERS IN EXISTING MANHOLE MH "C".
  - PROVIDE AND INSTALL SUB-METERING AND C.T.'S, SEE E5.04.
  - PROVIDE AND INSTALL CIRCUIT BREAKER FOR METERING REFERENCE VOLTAGE, SEE 1/E5.04.
  - PROVIDE AND INSTALL WIRING IN CONDUIT. VERIFY REQUIREMENTS WITH GENERATOR MANUFACTURER, SEE 4/E5.03.
  - SEE 5/E5.03 FOR GROUNDING.
  - PROVIDE AND INSTALL (2) SPARE 12KVA 4" CONDUITS, CONCRETE ENCLOSED. SEE 1/E1.01.
  - ATS SWITCHES TO START AS FOLLOWS:  
ATS #1: CLOSE WITHIN 10 SECONDS  
ATS #2: SET TO CLOSE WITHIN 30 SECONDS  
FIRE PUMP: SET TO CLOSE WITHIN 10 SECONDS
  - PROVIDE AND INSTALL 1000AMP, 277/480V, 3P, 4 WIRE PORTABLE GENERATOR DOCKING STATION WITH BREAKER IN NEMA 3R ENCLOSURE. GENERATOR DOCKING STATION SHALL BE TYP TAP AS MANUFACTURED BY PSC-POWER SYSTEMS, INC. OR APPROVED EQUAL. 100A TESTER.
  - PROVIDE AND INSTALL CIRCUIT BREAKER AUXILIARY SWITCH WITH ONE N.O. AND ONE N.C. CONTACTS. THE CIRCUIT BREAKER 'OPEN' POSITION IS TO ALLOW MONITORING BY THE FIRE ALARM SYSTEM.
  - PROVIDE AND INSTALL CONTACTS ON 'ATS' AND 'MIS' TO MONITOR NORMAL POSITION, EMERGENCY POSITION AND 'OFF' POSITION.

### FIRE PUMP CALCULATIONS (CEC 695.4)

<b>Service Size:</b>	Fire Pump Size	75 HP	480Volt, 3 Phase
	Locked Rotor Current (LRC):		Based on CODE Letter G & Table 430.7(B)
	Fire Pump (LRC)	471 Amps	75HP x 6.29 = 471 Amps
	Next Standard Service Size:	600 Amps	480Volt, 3 Phase
<b>Fire Pump Feeder Size:</b>	Fire Pump Full Load Amps	96 Amps	CEC Table 430.250
	Fire Pump Minimum Feeder size	96 Amps x 1.25 =	120 Amps



NOTE: SEE E5.04 FOR METERING, SEE E6.01 FOR FEEDER SCHEDULE.

APPROVALS

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Laney Library & Learning Resource Center  
(Building 100 Replacement)**  
900 Fallon Street, Oakland, CA 94607

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ISSUE DATE: 3/31/23  
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REVISIONS:  
DATE: 05/16/2024  
DESCRIPTION: ADDENDUM NO. 03

DRAWN BY: [Blank]  
CHECKED BY: [Blank]  
SHEET TITLE: **DIAGRAMS**

SHEET NUMBER: **E5.01**