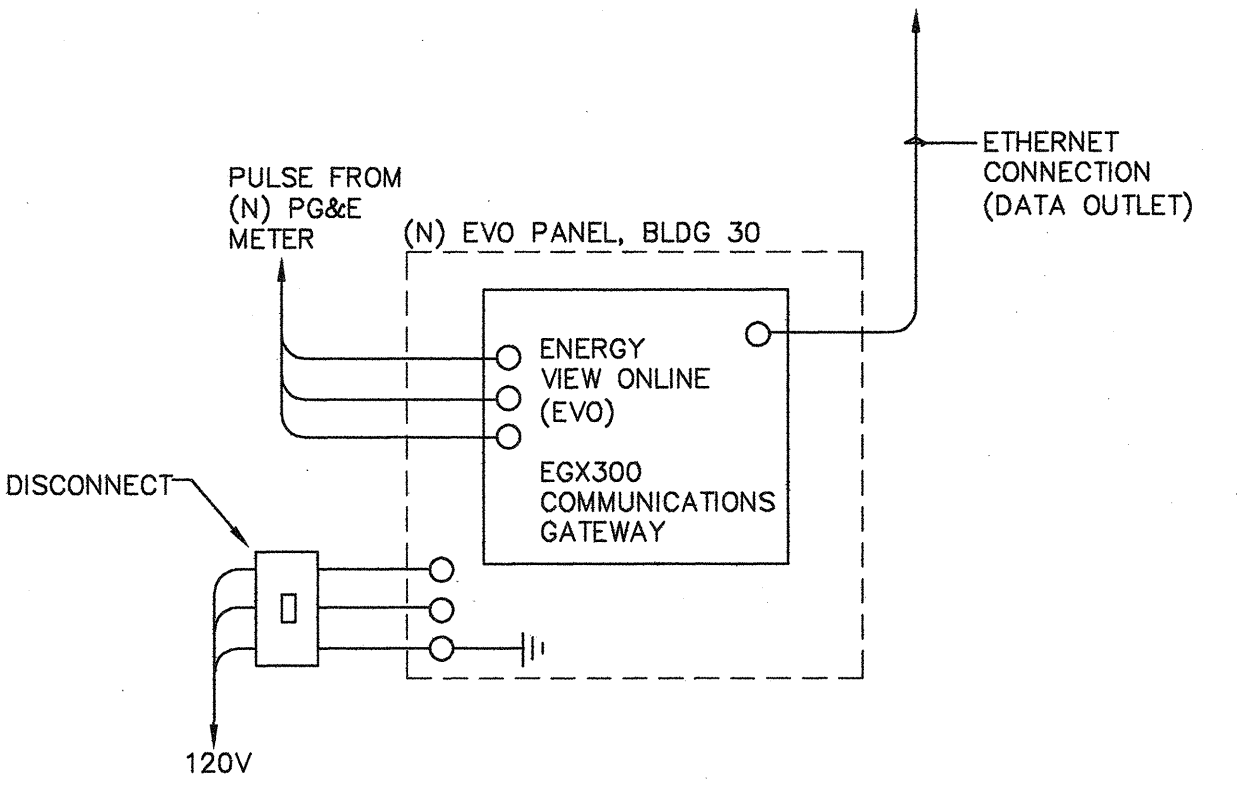


**1 12KV SERVICE, SINGLE LINE DIAGRAM**  
E1.1 N.T.S.

LUMINAIRE SCHEDULE		
TYPE	DESCRIPTION	LAMPS
A	5" x 50" FLUORESCENT, WET LOCATION, ENCLOSED 3-LAMP, CASKETS LUMINAIRE WITH ELECTRONIC BALLAST, 120V LITHONIA DMW 3 32 120 GB10IS	3-32W T8
B	VAPORTIGHT GLOBE STYLE LUMINAIRE, OF LAMP, 120V COPPER ICVW OR EQUAL	CF
C	EXTERIOR WALL LUMINAIRE COMPACT FLUORESCENT 120V, BLACK FINISH, FULL CUTOFF, CONTROLLED BY BMS SYSTEM LUMINAIRE: SHAPER 682-WP "WEDGE" 682-WP 11" CFL/2 120V BK	DUAL 26W CF
D	EMERGENCY LIGHTING UNIT WET LOCATION, SELF DIAGNOSTIC 120V, 90 MINUTES MINIMUM DUAL LITE LM 34 D WITH 2-12W LAMP HEADS	

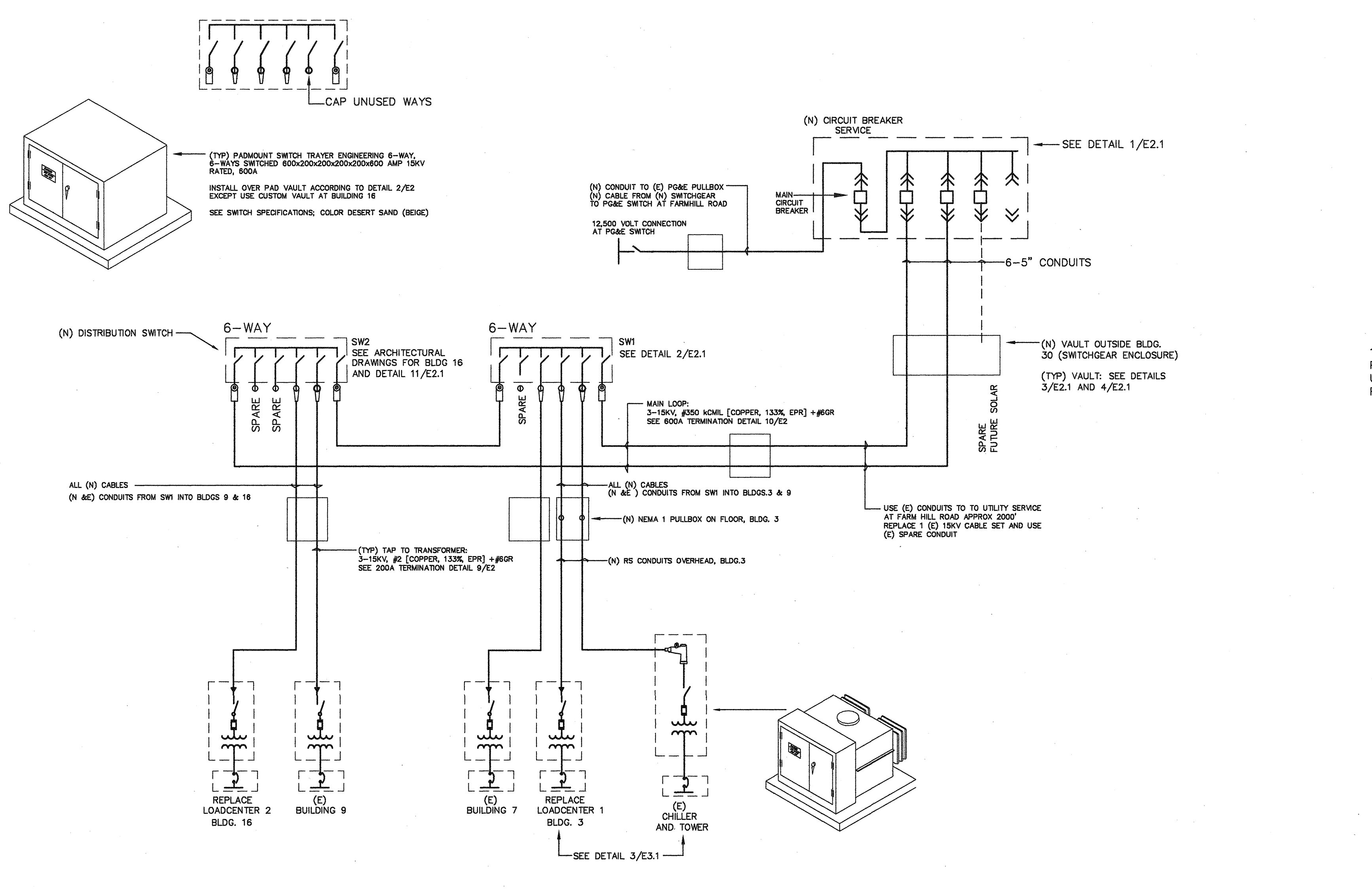


**4 METER PULSE & ENERGY VIEW ONLINE (EVO)**  
E1.1 N.T.S.

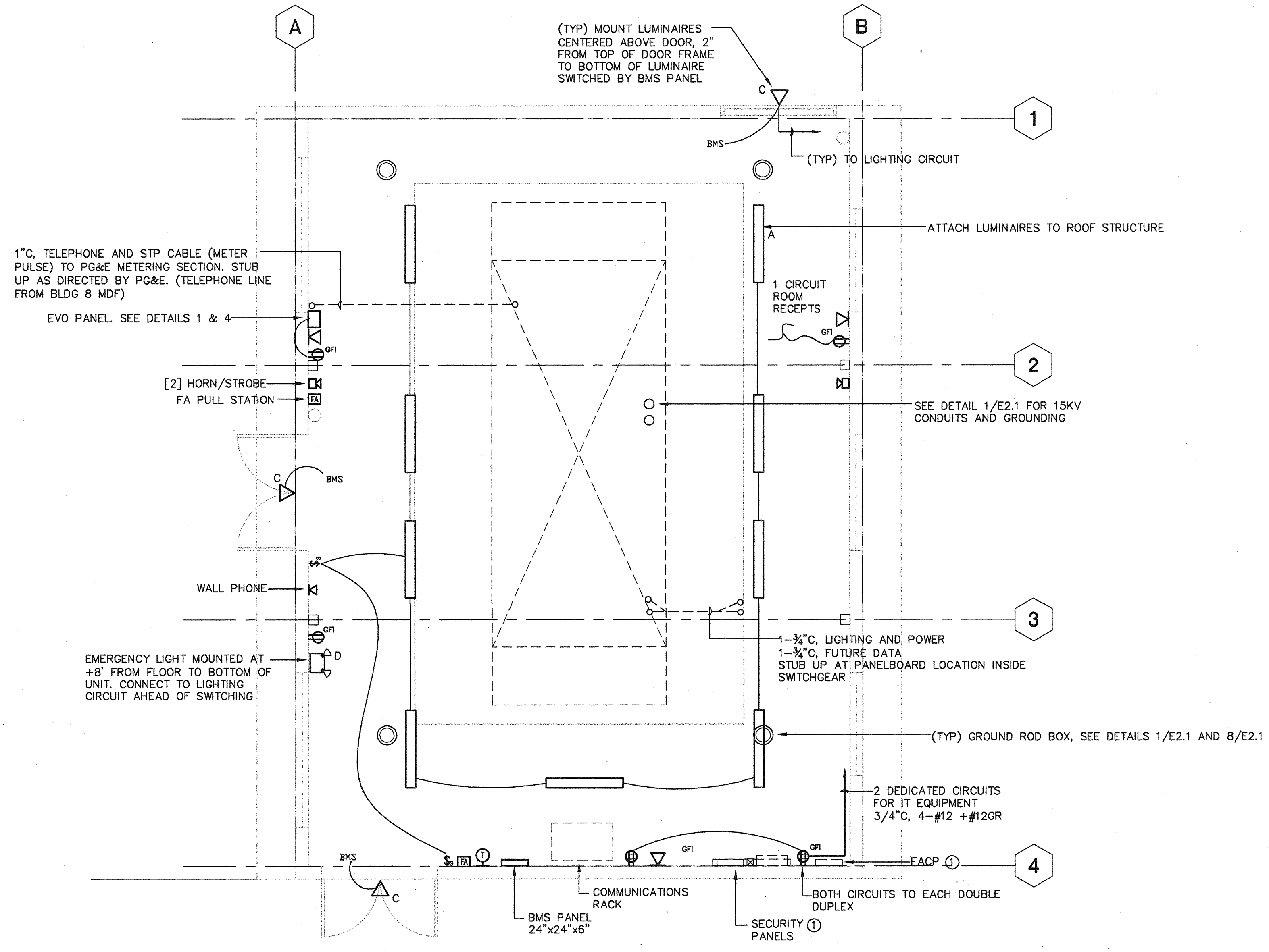
- LEGEND:**
- (N) NEW
  - (E) EXISTING
  - (TYP) TYPICAL
  - BMS BUILDING MANAGEMENT SYSTEM
  - EVO ENERGY VIEW ONLINE SYSTEM
  - FACP FIRE ALARM CONTROL PANEL
  - /// EXISTING TO BE REMOVED
  - (E) EXISTING REMAINS
  - (N) NEW CONSTRUCTION
  - Transformer symbol
  - SWITCH AND FUSE symbol
  - Circuit breaker symbol
  - 15KV STRESS CONE TERMINATIONS, SEE DETAIL 6/E2.1
  - PADMOUNT DISTRIBUTION SWITCH symbol
  - WALL SWITCH, 3-WAY, IVORY SPECIFICATION GRADE, 277V
  - BMS SWITCH LEG TO BMS symbol
  - DUPLX RECEPTACLE GFI, 120V, 20A SPECIFICATION GRADE
  - DOUBLE DUPLX RECEPTACLE GFI, 120V, 20A SPECIFICATION GRADE
  - 2-PORT DATA OUTLET symbol
  - FIRE ALARM MANUAL PULL STATION symbol
  - HORN STROBE symbol
  - THERMOSTAT ON WALL @ +48" symbol

- GENERAL DESCRIPTION OF WORK:**
- (N) 15KV CLASS (12470V) CIRCUIT BREAKER SWITCH GEAR SERVICE AND ASSOCIATED DUCTS AND SUBSTRUCTURES, INCLUDE LIGHTING AND POWER AT THE BUILDING 30 SWITCHGEAR ENCLOSURE.
  - (N) 12470V CAMPUS DISTRIBUTION LOOP WITH TWO PADMOUNT VACUUM SWITCHES, VAULTS, DUCTS, AND SUBSTRUCTURES. REPLACE (E) BUILDING FEEDER TAPS AND CONNECT EACH BUILDING TO A VACUUM SWITCH AS SHOWN. SWITCH 2 IS INSTALLED OVER A CUSTOM CABLE VAULT AT THE BUILDING 16 LOADING DOCK. INCLUDE LIGHTING AND RECEPTABLES AS SHOWN. SEE DETAIL 11/E2.1
  - REPLACE TWO EXISTING UNIT SUBSTATIONS (LOADCENTERS 1 & 2) WITH (N) IN SAME LOCATION. SEE SHEET E3.1
  - REPLACE (E) 480-208V TRANSFORMER IN BUILDING 13 WITH (N) IN ADJACENT LOCATION. PROVIDE TWO (N) SECONDARY CIRCUIT BREAKERS AND RECONNECT (E) BUILDING FEEDERS.
  - EXTEND (E) DUCT AND PROVIDE (N) CABLE FROM (N) SERVICE SWITCHGEAR TO (E) PG&E SWITCH AT FARM HILL ROAD. COORDINATE TERMINATION OF CABLE BY PG&E AT THEIR SWITCH
  - DEMOLITION IS INCLUDED. PROVIDE PROPER DISPOSAL OF EQUIPMENT THAT IS REMOVED. ADVISE THE DISTRICT IF HAZARDOUS MATERIALS ARE DISCOVERED DURING DEMOLITION AND ARRANGE DISPOSAL. BE ADVISED THAT SOME EXISTING EQUIPMENT MAY HAVE ASBESTOS ARC CHUTES. REMOVE ALL UNUSED CONDUITORS AND ALL ACCESSIBLE UNUSED CONDUITS. WHERE CONDUITS ARE ABANDONED, SEAL ENDS SO THAT WATER DOES NOT ENTER ANY BUILDING.

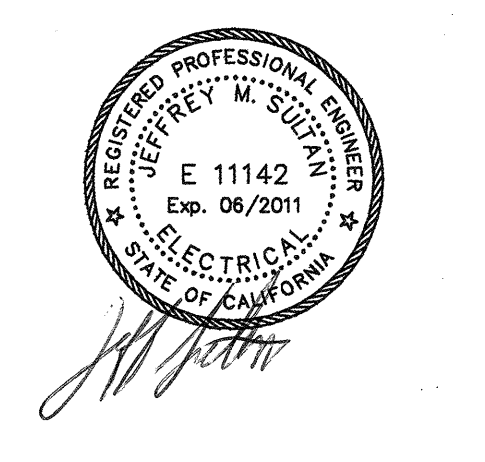
- GENERAL NOTES:**
- PERFORM ALL WORK ACCORDING TO CALIFORNIA ELECTRIC CODE (CEC). COORDINATE INSPECTIONS WITH DSA INSPECTOR. DRAWINGS ARE DIAGRAMMATIC AND WORK IS SUBJECT TO APPROVAL BY INSPECTOR IN THE FIELD.
  - DIMENSIONS SHOWN ARE APPROXIMATE; CONFIRM ALL DIMENSIONS IN FIELD. REFER TO CIVIL AND ARCHITECTURAL DRAWINGS FOR CONSTRUCTION, EXCAVATION, AND LOCATIONS. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC
  - 600V AND BELOW: USE COPPER WIRE, THWN. USE EMT CONDUIT WITH WEATHER TIGHT FITTINGS INDOORS, RSW EXPOSED OUTDOORS, AND SCHEDULE 40 PVC CONDUIT BELOW GRADE. MAKE CONDUIT CONNECTIONS TO MOTORS, CHILLER, AND FAN WITH STEEL LIQUIDTIGHT FLEX CONDUIT, AT LEAST 18" LONG.
  - MEDIUM VOLTAGE (12.5KV): USE COPPER, EPR INSULATED CABLE AND FITTINGS AS SHOWN.
  - SUBMIT MAIN SWITCHGEAR SHOP DRAWINGS TO ARCHITECT AND OWNER FOR PG&E APPROVAL PRIOR TO FABRICATION.
  - ALL MATERIAL SHALL BE NEW, U.L. LISTED AND INSTALLED ACCORDING TO LISTING REQUIREMENTS.
  - USE CAUTION AND DO NOT DAMAGE (E) LANDSCAPING AND PAVEMENT. LEAVE THE AREA CLEAN AND RESTORED TO ORIGINAL CONDITION AT COMPLETION OF WORK.
  - SEE SITE UTILITIES DRAWINGS FOR EXACT LOCATIONS AND FOR COORDINATION WITH (E) AND (N) UTILITIES. VERIFY ALL LOCATIONS IN FIELD WITH CIVIL ENGINEER.
  - TERMINATE CONDUITS WITH BUSHINGS OR ENDBELLS AND PROVIDE CALIBRATED PULL LINE IN ALL EMPTY CONDUITS.
  - EXCAVATE CAREFULLY IN AREAS OF EXISTING CONDUITS. MARKINGS ARE APPROXIMATE, BASED ON BEST AVAILABLE INFORMATION, AND DEPTH IS NOT KNOWN.
  - RACK CABLES NEATLY IN VAULTS WITH NON-METALLIC RACKS AS SHOWN ON DETAIL 7/E2.1
  - USE "DONUT" STYLE CONDUIT SPACERS IN TRENCH AND SECURE CONDUITS TO SIDES OF TRENCH TO PREVENT FLOATING. SEE DETAIL 5/E2.1.
  - USE VAULT AND HEAVY FULL TRAFFIC LID ACCORDING TO DETAILS 3 & 4/E2.1 FOR ALL POWER VAULTS.
  - DEVICE MOUNTING HEIGHT (ABOVE FINISHED FLOOR)  
WALL RECEPTABLES: 15" TO BOTTOM OF RECEPTACLE  
LIGHTING SWITCHES AND FIRE ALARM STATIONS: 48" TO CENTER
  - ANCHOR EQUIPMENT TO PAD. SEE SCHEDULE ON SHEET E2.1
  - ELECTRICAL CONDUIT RACKS AND SIMILAR SYSTEMS SHALL BE BRACED TO RESIST THE FORCES PRESCRIBED IN ASCE 7-05 13.3 AS DEFINED IN ASCE 7-05 SECTIONS 13.6.8, 13.6.7 AND 13.6.5.5 ITEM 5, RESPECTIVELY. THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS WITH AN OPA # SUCH AS MASON INDUSTRIES (OPA 349), OR ISAT (OPA 485) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.
- COPIES OF THE PRE-APPROVAL MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.



**2 CAMPUS 12KV LOOP, 1-LINE DIAGRAM**  
E1.1 N.T.S.



**3 (N) BUILDING 30 ELECTRICAL PLAN "POWERHOUSE"**  
E1.1 SCALE: 1/4"=1'-0"



**JEFF SULTAN, P.E.**  
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**IDENTIFICATION STAMP**  
DIVISION OF THE STATE ARCHITECT  
APPLICATION NUMBER: A11518  
DATE: 2/9/11

**CAÑADA COLLEGE**  
Electrical Infrastructure Replacement Project  
4200 Farm Hill Blvd  
Redwood City, CA 94061

**BID SET**

SHEET TITLE  
**ELECTRICAL GENERAL**

REVISIONS		
NO.	DATE	DESCRIPTION

DATE: January 14, 2011  
DRAWN: JS  
CHECKED: MM  
SCALE: AS NOTED  
JOB NO.: 2921.01

SHEET NUMBER  
**E1.1**