

12KV SERVICE, SINGLE LINE DIAGRAM

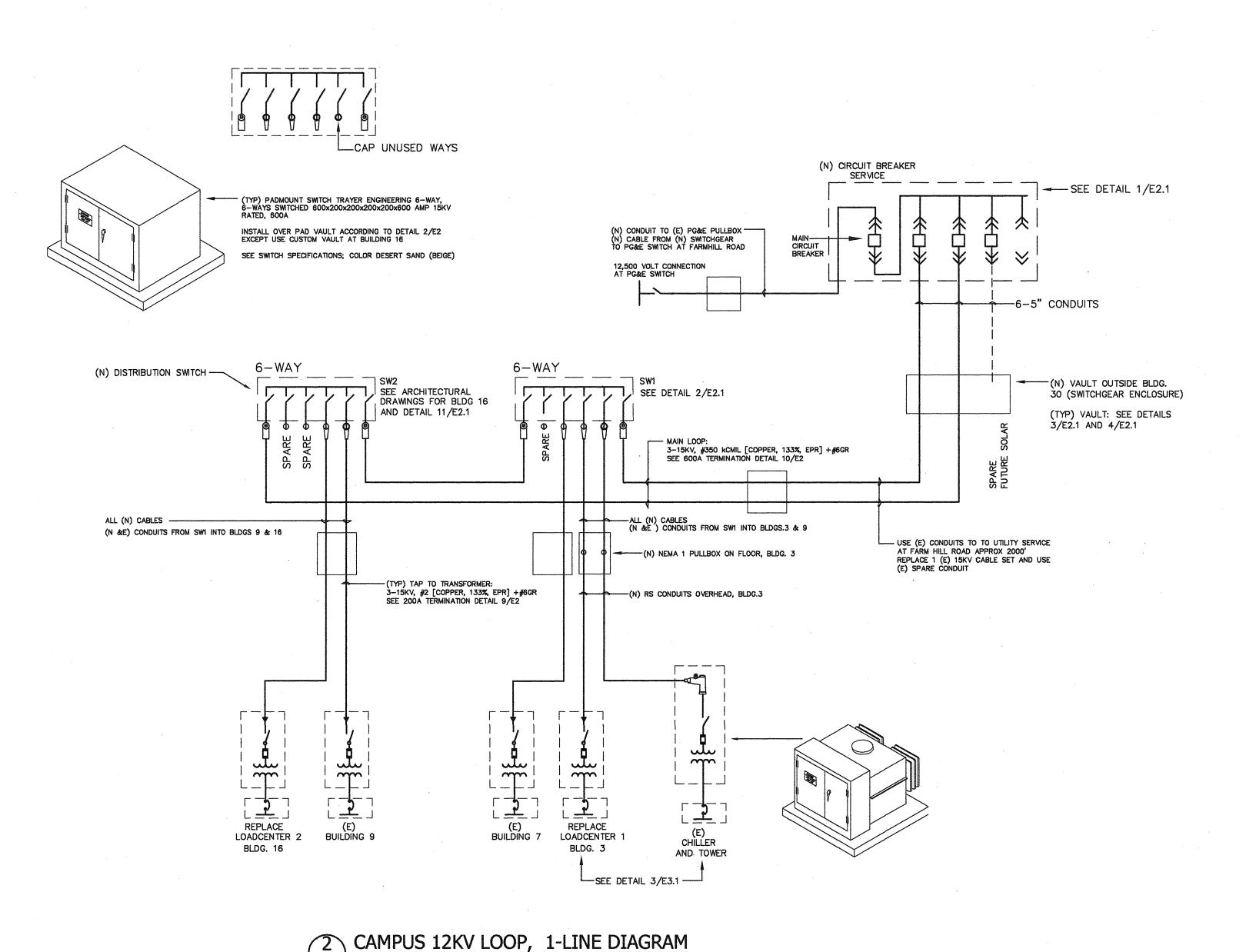
2. PROVIDE (N) CONDUIT FROM TENNIS COURT MANHOLE TO (N) 12KV SWITCHGEAR.

CONNECTION AT FARMHILL RD.

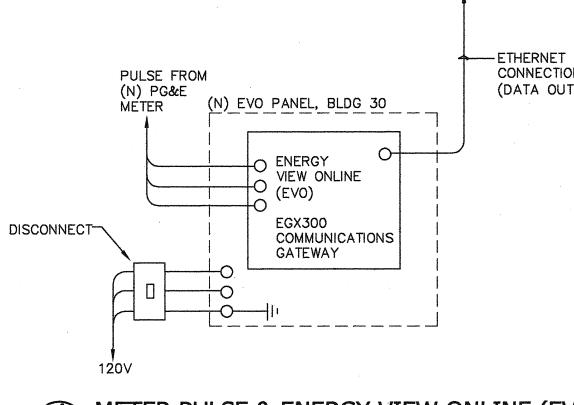
3. PROVIDE (N) SERVICE CONDUCTOR, SIZE AS SHOWN ON 1-LINE DIAGRAM, FROM (N) 12KV SWITCHGEAR TO PG&E POINT OF

4. TERMINATE (N) SERVICE CONDUCTORS AT (N) SWITCHGEAR ACCORDING TO DETAIL 6/E2.1. PG&E WILL TERMINATE THE CABLE AT

THEIR EQUIPMENT. COORDINATE TIMING AND SAFETY PROCEDURES WITH PG&E. PG&E MAY WANT A SAMPLE OF THE CABLE PROVIDED.



LUMINAIRE SCHEDULE DESCRIPTION 5"x 50" FLUORESCENT, WET LOCATION, ENCLOSED 3-LAMP. CASKETED LUMINAIRE WITH ELECTRONIC BALLAST, DMW 3 32 120 GEB10IS VAPORTIGHT GLOBE STYLE LUMINAIRE, CF LAMP, 120V COOPER ICVW OR EQUAL: EXTERIOR WALL LUMINAIRE COMPACT FLUORESCENT 26W CF 120V, BLACK FINISH, FULL CUTOFF. CONTROLLED BY BMS SYSTEM LUMINAIRE: SHAPER 682-WP "WEDGE" 682-WP 11" CFL/2 120V BK EMERGENCY LIGHTING UNIT WET LOCATION, SELF DIAGNOSTIC 120V, 90 MINUTES MINIMUM LM 34 D WITH 2-12W LAMP HEADS



4 METER PULSE & ENERGY VIEW ONLINE (EVO)

FROM BLDG 8 MDF)

UNIT. CONNECT TO LIGHTING

- ETHERNET CONNECTION (DATA OUTLET)

SHEET NOTES:

1 PROVIDE 120V POWER FROM IT RECEPTACLE TO FIRE ALARM CONTROL PANEL (FACP) AND SECURITY PANELS.

LEGEND: (E) (TYP) EVO ———— (E) EXISTING REMAINS ———— (N) NEW CONSTRUCTION

SWITCH AND FUSE CIRCUIT BREAKER, LOW VOLTAGE CIRCUIT BREAKER, 15KV

TRANSFORMER

BUILDING MANAGEMENT SYSTEM

ENERGY VIEW ONLINE SYSTEM

FIRE ALARM CONTROL PANEL

EXISTING TO BE REMOVED

TRANSFORMER

NEW

EXISTING

TYPICAL

600 A ELBOW. DETAIL 10/E2.1

200 A ELBOW, SEE DETAIL 9/E2.1

15KV STRESS CONE TERMINATIONS, SEE DETAIL 6/E2.1 PADMOUNT DISTRIBUTION

> WALL SWITCH, 3-WAY, IVORY SPECIFICATION GRADE, 277V

DUPLEX RECEPTACLE

DOUBLE DUPLEX RECEPTACLE GFI, 120V, 20A SPECIFICATION

2-PORT DATA OUTLET

FIRE ALARM MANUAL PULL STATION

THERMOSTAT ON WALL @ +48" ALL POWER VAULTS.

13. DEVICE MOUNTING HEIGHT (ABOVE FINISHED FLOOR) WALL RECEPTACLES: 15" TO BOTTOM OF RECEPTACLE

UTILITIES. VERIFY ALL LOCATIONS IN FIELD WITH CIVIL ENGINEER.

14. ANCHOR EQUIPMENT TO PAD. SEE SCHEDULE ON SHEET E2.1 15. ELECTRICAL CONDUIT RACKS AND SIMILAR SYSTEMS SHALL BE BRACED TO RESIST

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.

SWITCH LEG TO BMS GFI, 120V, 20A SPECIFICATION

ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D. (TYP) MOUNT LUMINAIRES -CENTERED ABOVE DOOR, 2" FROM TOP OF DOOR FRAME TO BOTTOM OF LUMINAIRE SWITCHED BY BMS PANEL T(TYP) TO LIGHTING CIRCUIT -ATTACH LUMINAIRES TO ROOF STRUCTURE 1"C, TELEPHONE AND STP CABLE (METER PULSE) TO PG&E METERING SECTION. STUB UP AS DIRECTED BY PG&E. (TELEPHONE LINE 1 CIRCUIT RECEPTS EVO PANEL. SEE DETAILS 1 & 4 [2] HORN/STROBE - CK FA PULL STATION - FA SEE DETAIL 1/E2.1 FOR 15KV CONDUITS AND GROUNDING WALL PHONE -----1-34"C. LIGHTING AND POWER ______ EMERGENCY LIGHT MOUNTED AT - PD 1-34"C, FUTURE DATA STUB UP AT PANELBOARD LOCATION INSIDE +8' FROM FLOOR TO BOTTOM OF SWITCHGEAR CIRCUIT AHEAD OF SWITCHING (TYP) GROUND ROD BOX, SEE DETAILS 1/E2.1 AND 8/E2.1 -2 DEDICATED CIRCUITS FOR IT EQUIPMENT 3/4"C, 4-#12 +#12GR

BOTH CIRCUITS TO EACH DOUBLE

DUPLEX

SCALE: 1/4"=1'-0"

- SECURITY (1) PANELS

☐ COMMUNICATIONS

(N) BUILDING 30 ELECTRICAL PLAN "POWERHOUSE"

RACK

BMS PANEL 24"x6"

GENERAL DESCRIPTION OF WORK:

1. (N) 15KV CLASS (12470V) CIRCUIT BREAKER SWITCH GEAR SERVICE AND ASSOCIATED DÚCTS AND SUBSTRUCTURES, INCLUDE LIGHTING AND POWER AT THE BUILDING 30 SWITCHGEAR ENCLOSURE.

2. (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 RECEPTACLES AS SHOWN. SEE DETAIL 11/E2.1

3. REPLACE TWO EXISTING UNIT SUBSTATIONS (LOADCENTERS 1 & 2) WITH (N) IN SAME LOCATION. SEE SHEET E3.1

4. REPLACE (E) 480: 208V TRANSFORMER IN BUILDING 13 WITH (N) IN ADJACENT LOCATION. PROVIDE TWO (N) SECONDARY CIRCUIT BREAKERS AND RECONNECT (E) BUILDING FEEDERS.

5. 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

6. 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 CONDUCTORS AND ALL ACCESSIBLE UNUSED CONDUITS. WHERE CONDUITS ARE ABANDONED, SEAL ENDS SO THAT WATER DOES NOT ENTER ANY BUILDING.

GENERAL NOTES:

1. 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.

2. DIMENSIONS SHOWN ARE APPROXIMATE; CONFIRM ALL DIMENSIONS IN FIELD. REFER TO CIVIL AND ARCHITECTURAL DRAWINGS FOR CONSTRUCTION, EXCAVATION, AND LOCATIONS. ELECTRICAL DRAWINGS ARE DIAGRAMMATIC

3. 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

4. SUBMIT MAIN SWITCHGEAR SHOP DRAWINGS TO ARCHITECT AND OWNER FOR PG&E

APPROVAL PRIOR TO FABRICATION. 5. ALL MATERIAL SHALL BE NEW, U.L. LISTED AND INSTALLED ACCORDING TO LISTING REQUIREMENTS.

6. USE CAUTION AND DO NOT DAMAGE (E) LANDSCAPING AND PAVEMENT. LEAVE THE AREA CLEAN

AND RESTORED TO ORIGINAL CONDITION AT COMPLETION OF WORK. 7. SEE SITE UTILITIES DRAWINGS FOR EXACT LOCATIONS AND FOR COORDINATION WITH (E) AND (N)

8. TERMINATE CONDUITS WITH BUSHINGS OR ENDBELLS AND PROVIDE CALIBRATED PULL LINE IN ALL EMPTY CONDUITS.

9. EXCAVATE CAREFULLY IN AREAS OF EXISTING CONDUITS. MARKINGS ARE APPROXIMATE, BASED ON BEST AVAILABLE INFORMATION, AND DEPTH IS NOT KNOWN.

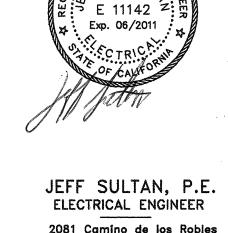
10. RACK CABLES NEATLY IN VAULTS WITH NON-METALLIC RACKS AS SHOWN ON DETAIL

11. USE "DONUT" STYLE CONDUIT SPACERS IN TRENCH AND SECURE CONDUITS TO SIDES OF TRENCH TO PREVENT FLOATING. SEE DETAIL 5/E2.1.

12. USE VAULT AND HEAVY FULL TRAFFIC LID ACCORDING TO DETAILS 3 & 4/E2.1 FOR

LIGHTING SWITCHES AND FIRE ALARM STATIONS: 48" TO CENTER

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 6, 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



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IDENTIFICATION STAMP DIVISION OF THE STATE ARCHITECT APPLICATION NUMBER 01-11-1 1618 AC PS FLS / SSE/JB DATE 2/9/11

CALIFORNIA STATE FIRE MARSHAL APPROVED

APPROVAL OF THIS PLAN DOES NOT AUTHORIZE OR APPROVE ANY OMISSION OR DEVIATION FROM APPLICABLE REGULATIONS. FINAL APPROVAL IS SUBJECT TO FIELD INSPECTION. ONE SET OF APPROVE LANS SHALL BE AVAILABLE ON THE PROJECT SITE AT ALL TIMES.

> CAÑADA **COLLEGE**

Electrical Infrastructure Replacement Project

4200 Farm Hill Blvd Redwood City, CA 94061

BID SET

ELECTRICAL GENERAL

REVISIONS NO. DATE DESCRIPTION

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

SHEET NUMBER