THIS DRAWING IS 30" X 42" AT FULL SIZE, 15" X 21" AT HALF SIZE. © 2015 BY SALAS O'BRIEN ENGINEERS, INC.

1/2" = 1'-0" 1/4" = 1'-0" 1/8" = 1'-0" 1" = 10'-0" 1" = 30'-0" 1" = 80'-0" 1" = 100'-0"

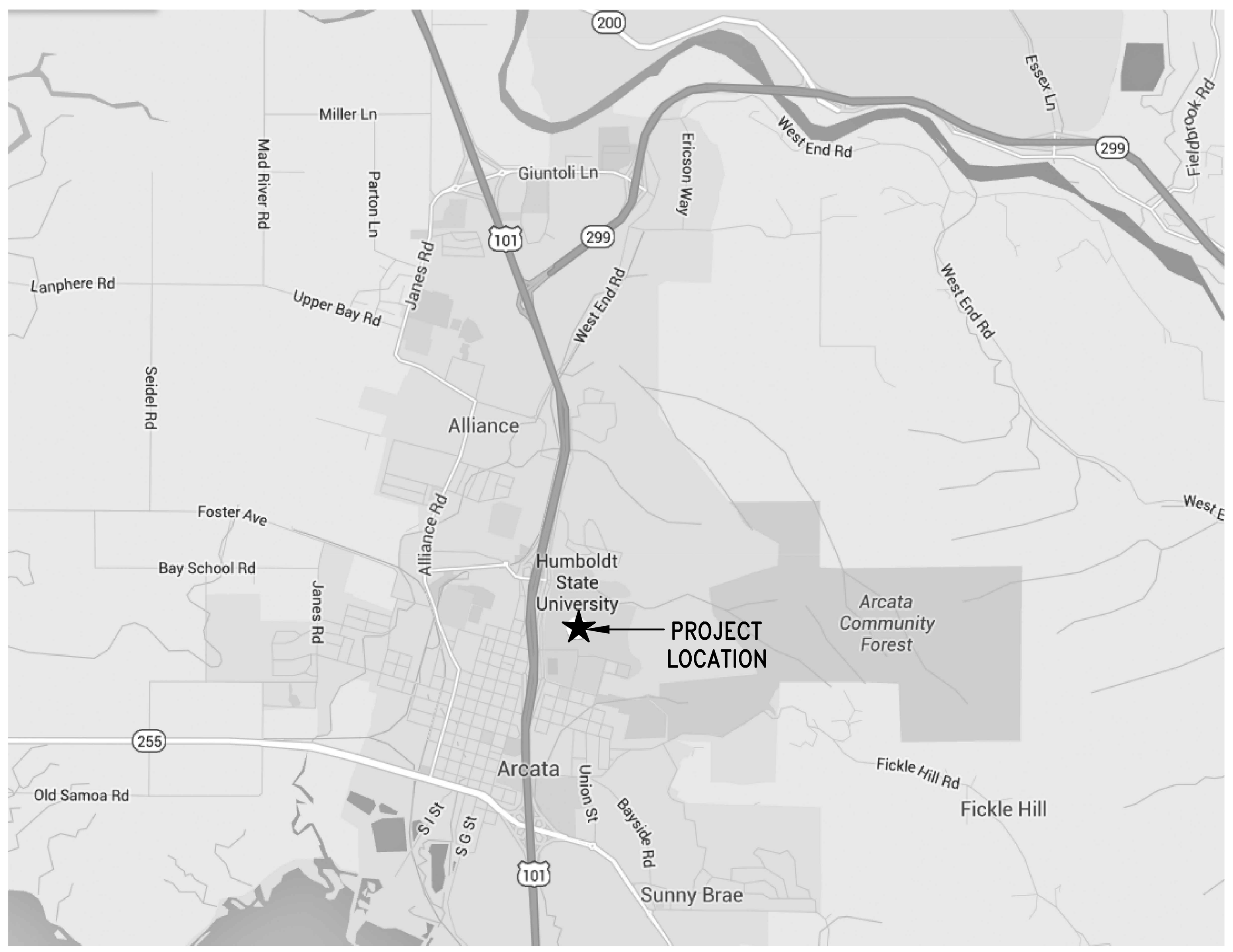
HUMBOLDT
STATE UNIVERSITY

1 HARPST STREET
ARCATA, CA 95521

UNIVERSITY CENTER SUBSTATION
(XPL 183)

VICINITY MAP

SCALE: N.T.S.



APPLICABLE CODES

UNLESS OTHERWISE INDICATED OR SPECIFIED, PERFORM THE WORK IN CONFORMANCE WITH THE LATEST EDITIONS OF ALL APPLICABLE REGULATORY REQUIREMENTS, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

1. CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24): 2016
2. CALIFORNIA BUILDING CODE (PART 2, TITLE 24): WITH 2016 CA AMENDMENTS
3. CALIFORNIA ELECTRICAL CODE (PART 3, TITLE 24): WITH 2016 CA AMENDMENTS
4. CALIFORNIA MECHANICAL CODE (PART 4, TITLE 24): WITH 2016 CA AMENDMENTS
5. CALIFORNIA PLUMBING CODE (PART 5, TITLE 24): WITH 2016 CA AMENDMENTS
6. CALIFORNIA ENERGY CODE (PART 6, TITLE 24): 2016
7. CALIFORNIA HISTORICAL BUILDING CODE, (PART 8, TITLE 24): 2016
8. CALIFORNIA FIRE CODE (PART 9, TITLE 24): WITH 2016 CA AMENDMENTS
9. CALIFORNIA EXISTING BUILDING CODE (PART 10, TITLE 24): 2015 WITH 2016 CA AMENDMENTS.
10. CALIFORNIA GREEN BUILDING STANDARDS CODE OR CAL GREEN (PART 11, TITLE 24): 2016
11. CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24): 2016
12. CALIFORNIA CODE OF REGULATIONS, TITLE 19 PUBLIC SAFETY, STATE FIRE MARSHAL REGULATION: 2016
13. NFPA 13 INSTALLATION OF SPRINKLER SYSTEMS: 2016
14. NFPA 14 INSTALLATION OF STANDPIPE, PRIVATE HYDRANT AND HOSE SYSTEMS
15. NFPA 17 DRY CHEMICAL EXTINGUISHING SYSTEM
16. NFPA 17A TO A UL 300 FOR CLASS I HOOD FIRE SUPPRESSION SYSTEM. (WET CHEMICAL EXTINGUISHING SYSTEMS)
17. NFPA 20 INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
18. NFPA 22 WATER TANKS FOR PRIVATE FIRE PROTECTION
19. NFPA 24 INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES
20. NFPA 25 INSPECTION, TESTING, MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS
21. NFPA 72 NATIONAL FIRE ALARM CODE, WITH CA AMENDMENTS: 2016
22. NFPA 80 FIRE DOORS AND OTHER OPENING PROTECTIVE
23. NFPA 110 EMERGENCY AND STANDBY POWER SYSTEMS
24. NFPA 170 STANDARD FOR FIRE SAFETY AND EMERGENCY SYMBOLS
25. NFPA 2001 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS
26. ICC 300-12 STANDARD ON BLEACHERS, FOLDING AND TELESCOPIC SEATING AND GRANDSTANDS
27. SFM 12-10-1 POWER OPERATED EXIT DOORS
28. SFM 12-10-2 SINGLE POINT LATCHING OR LOCKING DEVICES
29. SFM 12-10-3 EMERGENCY EXIT & PANIC HARDWARE
30. ASTM STANDARD CHANGES (EXAMPLE: ASTM E648-04 STANDARD TEST METHOD FOR CRITICAL RADIANT FLUX OF FLOOR)
31. UL 38 MANUAL OPERATED SIGNAL BOXES, WITH REVISIONS 2005 AS AMENDED
32. UL 268 SMOKE DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
33. UL 268A SMOKE DETECTORS DUCT APPLICATIONS
34. UL 300 FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF RESTAURANT COOKING AREAS
35. UL 305 PANIC HARDWARE
36. UL 464 AUDIBLE SIGNAL APPLIANCES
37. UL 521 HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
38. UL 864 CONTROL UNITS FOR FIRE PROTECTIVE SIGNALING SYSTEMS

AMERICANS WITH DISABILITIES ACT (A.D.A.) FEDERAL ACCESSIBILITY STANDARDS
ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AISC MANUAL OF STEEL CONSTRUCTION
ASCE 7-10, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION

AVAILABLE FAULT CURRENT

FAULT CURRENTS ARE AS FOLLOWS (AMPS):
Iasym = 6075
Isym = 4925
L-G = 4169

CUSTOMER WILL NEED A MINIMUM 0.2 SECOND COORDINATION TIME BETWEEN THEIR PROTECTIVE DEVICE AND THE ARCATA 1121 STATION BREAKER.
THE ARCATA 1121 BREAKER SETTINGS ARE AS FOLLOWS:
GE F60 STATION BREAKER
CT RATIO = 1200/5

PHASE:
TAP = 0.75 (900 AMPS)
LEVER = 0.3
CURVE = VERY INVERSE
INSTANTANEOUS = 25 (6000 AMPS)

GROUND:
TAP = 0.15 (180 AMPS)
LEVER = 0.7
CURVE = VERY INVERSE
INSTANTANEOUS = 25 (6000 AMPS)

SUMMARY OF WORK

1. SUBSTATION REPLACEMENT AT HUMBOLDT STATE UNIVERSITY, UNIVERSITY CENTER, TO INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING:

   UNIVERSITY CENTER, HSU BLDG #45, CSFM #18-12-03-001-087
   a. DEMOLISH 12.47KV INTERRUPTER SWITCH.
   b. REPLACE IN-KIND MEDIUM VOLTAGE TRANSFORMER - 500KVA
   c. REPLACE IN-KIND (2) SWITCHBOARDS, INCLUDING MAIN BREAKER AND HOUSE METER - 208Y/120V, 1800A.
   d. REPLACE MOTOR CONTROL CENTER 'MCC-A' WITH NEW - 600A.
2. PREPARE A SPECIAL METHOD OF PROCEDURE AND COORDINATE SHUTDOWNS WITH THE CAMPUS.
3. PROVIDE TEMPORARY POWER DURING SHUTDOWN. REFER TO SHUTDOWN NOTES ON SHEET E-0.2.

EQUIPMENT ANCHORAGE

M/E/P COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2016 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND HEAVIER THAN 400 POUNDS ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT.

A. COMPONENTS WEIGHING LESS THAN. 400 POUNDS AND HAVE A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.8.3, 13.6.7, 13.6.5.6, AND 2016 CBC, SECTIONS 1616A.1.24, 1616A.1.25 AND 1616A.1.26.

COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS.

THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

DRAWING INDEX

SHEET NO.	DESCRIPTION
E-0.0	COVER SHEET
E-0.1	SYMBOLS & ABBREVIATIONS
E-0.2	GENERAL NOTES
ES-1.1	OVERALL SITE PLAN
ES-4.1	PARTIAL SITE PLAN
E-1.1	UNIVERSITY CENTER 2ND FLOOR PLAN
E-4.1	UNIVERSITY CENTER PARTIAL 2ND FLOOR PLAN
E-5.1	ELECTRICAL DETAILS
E-6.1	PANEL SCHEDULES
E-7.1	CAMPUS 12KV SINGLE LINE DIAGRAM
E-7.2	UNIVERSITY CENTER SINGLE LINE DIAGRAM
S0.0	STRUCTURAL SPECIFICATIONS, GENERAL NOTES, PARTIAL PLAN & DETAILS

DEFERRED SUBMITTALS

SYSTEM AND EQUIPMENT LISTED BELOW SHALL BE DEFERRED APPROVED. CONTRACTOR SHALL PROVIDE AND SUBMIT SHOP DRAWINGS TO THE UNIVERSITY FOR OBTAINING PERMIT, AND FOR APPROVAL PRIOR START OF CONSTRUCTION. WORK INCLUDES BUT NOT LIMITED TO THE FOLLOWING:

1. TEMPORARY BACKUP GENERATORS.
2. FIRE ALARM

PROJECT DATA

PROJECT ADDRESS: 1 HARPST STREEET
ARCATA, CA 95521

PROJECT OWNER: HUMBOLDT STATE UNIVERSITY
1 HARPST STREEET
ARCATA, CA 95521

PROJECT MANAGER: MICHAEL FISHER
ASSOCIATE DIRECTOR PLANNING & DESIGN
FACILITIES MANAGEMENT /PLANNING & DESIGN
PHONE: 707-826-4444

ARCHITECT: GARRETT MCSORLEY
FACILITIES MANAGEMENT /PLANNING & DESIGN
PHONE: 707-633-9283

ELECTRICAL ENGINEER: SALAS O'BRIEN
305 S. 11TH STREET
SAN JOSE, CA 95112
PHONE: 408-282-1500
FAX: 408-297-2995

STRUCTURAL ENGINEER: MESITI-MILLER ENGR.
224 WALNUT AVE, SUITE B
SANTA CRUZ, CA 95060
PHONE: 831-426-3186
FAX: 831-426-6607

SALASO'BRIEN
|expect a difference|
305 South 11th Street
San Jose, California 95112-2218
877.725.2755 | 408.297.2995 (f)
salasobrien.com
California | Georgia | Louisiana
Montana | Texas | Washington
Licensed in 50 States

This project has demonstrated conformance with applicable codes and standards established by statute and University policy. Based on this determination these documents are
'APPROVED FOR CONSTRUCTION'

Michael Fisher
Campus Deputy Building Official
Humboldt State University
The California State University
Date:________
Permit #:________
Other approvals, as applicable:
SFM Approval:________
DSA Access Approval:________
Seismic Peer Review:________
Mech.Peer Review:________

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. Set of approved plans shall be available on the project site at all times.
Reviewed by:________
Date:

REGISTERED PROFESSIONAL ENGINEER
JEFFRY GOSAL
No. E18084
Exp. 06-30-2019
ELECTRICAL
STATE OF CALIFORNIA

HUMBOLDT
STATE UNIVERSITY

1 HARPST STREET
ARCATA, CA 95521

UNIVERSITY CENTER SUBSTATION
(XPL 183)

ISSUE		
MARK	DATE	DESCRIPTION
	11/17/17	95% CD
	02/09/18	PERMIT SUBMITTAL

SOBE PROJECT NO:	160256.3
DATE:	02/09/18
DRAWN BY:	MO, JC
CHECKED BY:	JC
APPROVED BY:	JG

SHEET TITLE
COVER SHEET

SCALE: AS NOTED
THIS DRAWING IS 30" X 42" AT FULL SIZE

E-0.0
SHEET 1 OF 12