SOLANO COMMUNITY COLLEGE DISTRICT

4000 Suisun Valley Road, Fairfield, California 94534 (T) 707.864.7000, www.solano.edu

HORTICULTURE & PLANT SCIENCE INSTITUTE

PHASE II: HORTICULTURE MODULAR BUILDING FOUNDATION AND SITE WORK PROJECT

SCCD FAIRFIELD CAMPUS

4000 Suisun Valley Road, Fairfield, California 94534 (T) 707.864.7000, www.solano.edu

CODE SUMMARY & REGULATIONS

AS A FACILITY WHICH COMES UNDER THE APPROVAL AND AUTHORITY OF THE DIVISION OF THE STATE ARCHITECT OFFICE OF REGULATION SERVICES (DSA), THIS PROJECT IS SUBJECT TO DRAWING AND JOB SITE REVIEW BY A REPRESENTATIVE OF DSA.

ADMINISTRATIVE REQUIREMENTS (PARTIAL LISTING ONLY FROM CHAPTER 4, PART 1, TITLE 24, C.C.R)

1. A COPY OF PARTS 1 AND 2, TITLE 24, C.C.R. AND ALL SECTIONS OF THE CALIFORNIA BUILDING CODE (9 VOLUMES) SHALL BE KEPT ON SITES AT ALL TIMES.
2. ALL CHANGE ORDERS AND ADDENDA TO BE SIGNED BY THE ARCHITECT OF RECORD AND THE OWNER AND APPROVED BY DSA. ALL SUBSTITUTIONS TREATED AS CHANGE ORDERS ARE NOT VALID UNTIL APPROVED BY DSA PER SECTION 4-338, PART 1, TITLE 24
3. DSA SHALL BE NOTIFIED AT THE START OF CONSTRUCTION AND PRIOR TO THE PLACEMENT OF CONCRETE PER SECTION 4-331, PART 1, TITLE 24
4. INSPECTOR SHALL BE APPROVED BY DSA AND EMPLOYED DIRECTLY BY OWNER. INSPECTION SHALL BE IN ACCORDANCE WITH SECTION 4-331(B), PART 1, TITLE 24
5. SUPERVISION OF CONSTRUCTION BY DSA SHALL BE IN ACCORDANCE WITH SECTION 4-334, PART 1, TITLE 24
6. CONTRACTOR, INSPECTOR, ARCHITECT OF RECORD AND ENGINEERS SHALL SUBMIT VERIFIED REPORTS (DSA 6AE) IN ACCORDANCE WITH SECTION 4-336 AND 4-343, PART 1, TITLE 24
7. THE ARCHITECT OF RECORD AND STRUCTURAL ENGINEER SHALL PERFORM THEIR DUTIES IN ACCORDANCE WITH SECTION 4-333(A) AND 40341, PART 1, TITLE 24
8. THE CONTRACTOR SHALL PERFORM HIS DUTIES IN ACCORDANCE WITH SECTION 4-343, PART 1, TITLE 24

NON-COMPLYING CONSTRUCTION FOR ALTERATION PROJECTS, STATEMENTS SIMILAR TO THE ONE NOTED IN SECTION 4-317 (C), PART 1, TITLE 24, C.C.R. IS TO BE INCLUDED ON THE COVER DRAWINGS.

THE INTENT OF THE DRAWINGS AND PROJECT MANUAL IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. UPON DISCOVERY OF NON-COMPLYING EXISTING CONDITIONS NOT ADDRESSED BY THE CONTRACT DOCUMENTS AND AFFECTING COMPLIANCE OF FINISHED WORK, A CHANGE ORDER OR SEPARATE SET OF CONSTRUCTION DOCUMENTS ADDRESSING THE NECESSARY REMEDIAL SLOPE OF WORK SHALL BE SUBMITTED TO AND APPROVED BY THE OWNER, CLIENT, ARCHITECT AND DSA BEFORE PROCEEDING WITH THE WORK.

GOVERNING CODES

*2013 CALIFORNIA BUILDING STANDARD, TITLE 24, PART 1
*2013 CALIFORNIA BUILDING CODE, TITLE 24, PART 2
*2013 CALIFORNIA ELECTRICAL CODE, TITLE 24, PART 3
*2013 CALIFORNIA MECHANICAL CODE, TITLE 24, PART 4
*2013 CALIFORNIA PLUMBING CODE, TITLE 24, PART 5
*2013 CALIFORNIA ENERGY CODE, TITLE 24, PART 6
*2013 CALIFORNIA FIRE CODE, TITLE 24, PART 9
*2013 CALIFORNIA EXISTING BUILDING CODE, TITLE 24, PART 10
*2013 CALIFORNIA GREEN BUILDING STANDARD, TITLE 24, PART 11
*2013 CALIFORNIA BUILDING STANDARDS, TITLE 24, PART 12
*2013 NFPA 13-13 AUTOMATIC SPRINKLER SYSTEMS, WITH 2013 CBC AMENDMENTS
*2013 NFPA 14-13 INSTALLATION OF STANDPIPE, PRIVATE HYDRANT AND HOSE SYSTEMS, WITH 2013 CBC AMENDMENTS
*2013 NFPA 72-13 NATIONAL FIRE ALARM CODE, WITH 2013 CBC AMENDMENTS
*2013 NFPA 20-13 INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
*2013 NFPA 22-13 WATER TANKS FOR PRIVATE FIRE PROTECTION
*2013 NFPA 24-13 INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES, WITH 2013 CBC AMENDMENTS
*2008 NFPA 25 INSPECTION, TESTING, MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS
*2013 NFPA 110-13 EMERGENCY AND STANDBY POWER SYSTEMS
*2007 ICC 300-12 STANDARDS ON BLEACHERS, FOLDING TELESCOPIC SEATING & GRANDSTANDS
*2013 NFPA 17-13 DRY CHEMICAL EXTINGUISHING SYSTEMS
*2013 NFPA 17A-13 WET CHEMICAL EXTINGUISHING SYSTEMS
*2008 NFPA 2001-12 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS
*ASTM STANDARDS CHANGES (EXAMPLE: ASTM E648-04 STANDARD TEST METHOD FOR CRITICAL RADIANT FLUX OF FLOOR)
*UL STANDARD CHANGES (EXAMPLE: 2005 UL 38 MANUAL OPERATING SIGNAL BOXES)
*TITLE 24-12 CCR STATE FIRE MARSHAL REGULATIONS
*2003 UL 464-03 AUDIBLE SIGNAL APPLIANCES
*1999 UL 521-99 HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS
*2002 UL 1971 SIGNALING DEVICES FOR HEARING IMPAIRED
*ADA STANDARDS FOR ACCESSIBLE DESIGN: 2010 ADA ACCESSIBILITY GUIDELINES (ADAAG) 28, PART 36 APPENDIX A
*ADA STANDARDS FOR ACCESSIBLE DESIGN-CODE OF FEDERAL REGULATIONS (INCLUDING AMENDMENTS)
* AISC MANUAL OF STEEL CONSTRUCTION, 14TH EDITION
*2005 REVISED NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION
*ACI 318-11 CODE AND COMMENTARY

CONSULTANTS

STRUCTURAL ENGINEER:

CIVIL ENGINEER:

ELECTRICAL & FIRE ALARM ENGINEER:
HARRY A. YEE & ASSOCIATES
4920 FREEPORT BLVD. SUITE D
SACRAMENTO, CA 95822
(T) 916.454.5319
WWW.HYAENGINEERS.COM

LOW VOLTAGE:

MECHANICAL ENGINEER:

PLUMBING ENGINEER:

FIRE SUPPRESSION ENGINEER:

LANDSCAPE ENGINEER:

WATER INTRUSION CONSULTANT:

ENERGY CONSULTANT:

ACOUSTICAL ENGINEER:

CONSTRUCTION MANAGEMENT:
KITCHELL
360 CAMPUS DRIVE
FAIRFIELD, CA 94534
(T) 707.864.7000
WWW.KITCHELL.COM

SCOPE OF WORK

SCOPE OF WORK INCLUDES AND IS NOT LIMITED TO THE FOLLOWING:

ALL PREPARATORY AND SUPPLEMENTARY CONSTRUCTION ASSOCIATED WITH THE INSTALLATION OF A DISTRICT FURNISHED AND INSTALLED PREMANUFACTURED MODULAR BUILDING. SCOPE SHALL INCLUDE AND NOT BE LIMITED TO CONSTRUCTION OF CONCRETE STEM WALL FOUNDATION, UTILITY CONNECTIONS FOR BUILDING INCLUDING EXTENDING EXISTING STUBS FOR POWER, SEWER, GAS AND WATER TO BUILDING AND FINAL CONNECTION TO BUILDING, FIRE ALARM SCOPE INCLUDING THE INSTALLATION OF NEW DEVICES AND PROGRAMMING INTO CAMPUS WIDE MONITORING SYSTEM, LOW VOLTAGE/ DATA SCOPE INCLUDING PULLING OF FIBER FROM MAIN BUILDING TO MODULAR BUILDING, INSTALLATION OF NEW RACK, PULLING OF NEW CAT6 CABLING WITHIN MODULAR BUILDING TO LOCATIONS IDENTIFIED. CONSTRUCTION AND INSTALLATION OF PRE-MANUFACTURED BUILDING, BY OTHERS, N.I.C.

ALL SITEWORK HAS BEEN APPROVED SEPARATELY AS DSA APPLICATION #02-114750 AND IS NOT PART OF THIS SCOPE OF THIS APPLICATION. REFER TO GENERAL NOTE #1 ON SHEET A1.2

EQUIPMENT ANCHORAGE NOTES

ALL MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER DETAILS ON DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN 2013 CBC, SECTIONS 1615A.1.12 THROUGH 1615A.1.22 AND ASCE7-05 CHAPTER 6 AND 13:

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

1. 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.
2. 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 AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR SHALL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING, DUCTWORK AND ELECTRICAL SYSTEM DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE7-05, SECTION 13.3 AS DEFINED IN ASCE7-05 SECTION 13.6.8, 13.6.7 AND 2013 CBC SECTIONS 1615A.1.20, 1615A.1.21 AND 1615A.1.22. BRACING AND ATTACHMENT TO THE STRUCTURE SHALL BE DETAILED ON APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS (OPA#) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

COPIES OF THE 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 ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

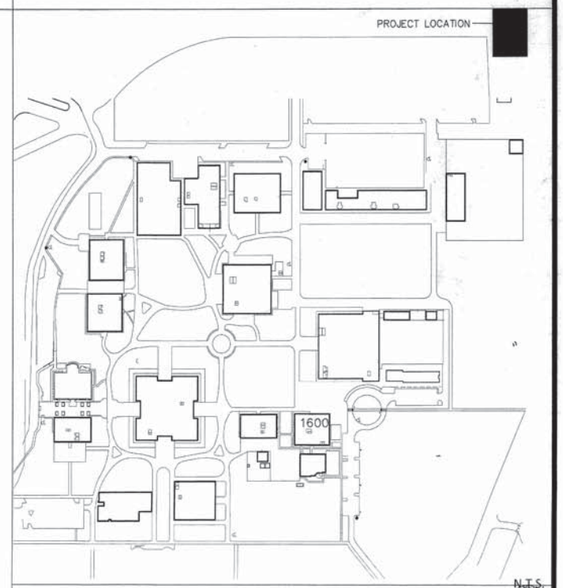
SYMBOLS

- COLUMN GRID LINE — Numbers horizontal, Letters vertical
- ROOM ID — Room name & number (e.g. STUDIO 117)
- DOOR SYMBOL — Door number (e.g. C.13 A)
- WINDOW SYMBOL — Window number (e.g. C.13 W)
- FINISH SYMBOL — Finish mat'l identification (e.g. CT-1)
- SECTION CUT — Section identification, Sheet number (e.g. 10 / A5.02)
- DETAIL REFERENCE — Detail information, Sheet number (e.g. 10 / A9.03)
- INTERIOR ELEVATIONS — Detail information, Sheet number / elevation (e.g. A, B, C, D / 30 / A6.01)
- REVISION — Addendum letter, Supplemental instruction, revision cloud (e.g. A / 1)
- WORK POINT — Target
- MATCH LINE — Target
- ARCHITECTURAL WALL PANEL TYPE SYMBOL (e.g. 1)
- SHEET NOTE SYMBOL (e.g. 1)
- ELEVATION TAG

ABBREVIATIONS

@	AT	F.F.	FINISHED FLOOR	RM.	ROOM
A.B.	ANCHOR BOLT	F.G.	FUEL GAS	R.W./RWD	REDWOOD
A.D.	AREA DRAIN	F.J./ FLR.JST.	FLOOR JOIST	SAF	SELF ADHESIVE FLASHING
ADD'L	ADDITIONAL	FLASH'G	FLASHING	S.C.	SOLID CORE
ADJ. HT.	ADJUSTED HEIGHT	FLR.	FLOOR	S.C.D.	SEE CIVIL DRAWINGS
A.F.F	ABOVE FINISH FLOOR	FLUOR.	FLUORESCENT	SCHED.	SCHEDULE
AC	ASPHALT CONCRETE	F.O.S.	FACE OF STUD	SD	SMOKE DETECTOR
AGG.	AGGREGATE	FR.	FRENCH	S.E.D.	SEE ELECTRICAL DRAWINGS
ALT.	ALTERNATE	FTG.	FOOTING	S.F./ SQ.FT.	SQUARE FOOT
ALUM.	ALUMINUM	GA.	GAUGE	SHR.	SHEAR
AMP	AMPERAGE	GALV.	GALVANIZED	SIM..	SIMILAR
APA	AMERICAN PLYWOOD ASSOCIATION	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	S.M.D.	SEE MECHANICAL DRAWINGS
APPROX.	APPROXIMATE	GIR	GIRDER	SQ.IN.	SQUARE INCH
A.S.L.	ABOVE SEA LEVEL	GLU-LAM	GLUE LAMINATED	S.S.D.	SEE STRUCTURAL DRAWINGS
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	G.S.M.	GALVANIZED SHEET METAL	ST	STRAP
B.F.F.	BELOW FINISH FLOOR	GYP.BD.	GYPSUM BOARD	STOR.	STORAGE
BLK'G/BLKNG	BLOCKING	H.B.	HOSE BIBB	STR1	STRUCTURAL 1
BM	BEAM	HD	HOLD DOWN	S.W.	SHEAR WALL
BTM./BOTT.	BOTTOM	H.H.	HEAD HEIGHT	SQ.	SWITCH
BTWN	BETWEEN	HMF	HOLLOW METAL FRAME	SYM.	SYMBOL
B.U.R	BUILT-UP ROOFING	HORIZ.	HORIZONTAL	5S/5S	SMOOTH 3 OR 4 SIDES
CALCS.	CALCULATIONS	HR.	HOUR	TEMP./T.	TEMPERED
CEM. PLAST.	CEMENT PLASTER	INFO.	INFORMATION	T.H.	THRESHOLD
C.I.	CAST IRON	INSUL	INSULATION OR INSULATED	T./ THERM	THERMOSTAT
C.J.	CONSTRUCTION JOINT	JST.	JOIST	T.O.C.	TOP OF CURB
C.L.	CENTER LINE	LB. OR #	POUND OR NUMBER	T.O.F.	TOP OF FLOOR
CLG.	CEILING	LEV./ LVL	LEVEL	T.O.G.B.	TOP OF GRADE BEAM
C.M.U.	CONCRETE MASONRY UNIT	LT.	LIGHT	T.O.P.	TOP OF PLATE
COL.	COLUMN	LTWT.	LIGHTWEIGHT	T.O.S	TOP OF SLAB
CONC.	CONCRETE	MAX.	MAXIMUM	T.O.W.	TOP OF WALL
CONTR.	CONTRACTOR	MBRS	MEMBERS	T/P /T.OF PL	TOP OF PLATE
CSMT	CASEMENT	M.D.F.	MEDIUM DENSITY FIBERBOARD	T.P.O.	THERMOPLASTIC POLYOLEFIN
DBL	DOUBLE	MFR.	MANUFACTURER	TRNSM.	TRANSOM
DBL. PL.	DOUBLE PLATE	(N)	NEW	T&G	TONGUE & GROOVE
DET.	DETAIL	NAT.	NATIONAL	TYP.	TYPICAL
DEG.	DEGREE	M.SUITE/ M.S.	MASTER SUITE	U.N.O.	UNLESS NOTED OTHERWISE
D.F.	DOUGLAS FIR OR DRINKING FOUNTAIN	MIN.	MINIMUM	UTL./ UTIL.	UTILITY
DIA.	DIAPHRAGM	N.I.C.	NOT IN CONTRACT	V	VOLTAGE
DN	DOWN	N.T.S.	NOT TO SCALE	VERT.	VERTICAL
DS	DOWNSPOUT	O.C.	ON CENTER	V.I.F.	VERIFY IN FIELD
DW	DISHWASHER	O.H./ OPP.	OPPOSITE HAND	WD.	WOOD
(E)	EXISTING	P.B.	PUSH BUTTON	W.A.	WROUGHT IRON
EA.	EACH	PERF.	PERFORATED	WL	WALL
ELECT.	ELECTRICAL	PL.	PLATE	W.P.	WEATHERPROOF
ELEV.	ELEVATION	PL.HT.	PLATE HEIGHT	WP.SCRD.	WEEP SCREED
E.J.	ELEVATION JOINT	PLYWD.	PLYWOOD	W.W.F.	WELDED WIRE FABRIC
EMBED.	EMBEDMENT	PR.	PAIR	W.W.M.	WELDED WIRE MESH
E.P.S.	EXTRUDED POLYSTYRENE FOAM	PSI	POUNDS PER SQUARE INCH	W/D	WASHER/ DRYER
EXT.	EXTERIOR	P.T.	PRESSURE TREATED		
F.D.	FLOOR DRAIN	PWDR.	POWDER		
FDN./FOUND.	FOUNDATION	R.	RISER		
		RECOM.	RECOMMENDATION		
		REINF.	REINFORCING		
		RFTR.	RAFTER		

PROJECT LOCATION



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SOLANO COMMUNITY COLLEGE

CONSULTANT

PROFESSIONAL STAMP:
LICENSED ARCHITECT — FRANCIS R. CHAN — STATE OF CALIFORNIA

PROJECT:
HORTICULTURE & PLANT SCIENCE INSTITUTE PHASE II:
MODULAR BUILDING FOUNDATION AND SITEWORK PROJECT
4000 Suisun Valley Rd, Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	DSA SUBMITTAL	3/7/16
1	ADDENDUM 1	8/18/17

PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: -
CHECKED BY: -

SHEET NAME:
COVER SHEET

DSA APPROVAL STAMP: File No 02-C
IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT 02 114923
AC: TM DATE: 8-11-2016

SHEET NUMBER:
G0.1

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE ⊕ SOLANO COMMUNITY COLLEGE DISTRICT

SHEET LIST

GENERAL
G0.1 COVER SHEET
G0.2 SHEET LIST

CIVIL DRAWINGS
C2 GRADING & DRAINAGE PLAN
C3 UTILITY PLAN

ARCHITECTURAL DRAWINGS
A1.1 SITE PLAN - FIRE ACCESS DSA APPL. 02-114750 FOR REFERENCE ONLY
A1.1A SITE PLAN
A1.2 SITE PLAN - ACCESSIBILITY PLAN
A1.4 ENLARGED SITE PLAN
A10.5A ELECTRICAL SPECIFICATIONS
A10.6A ELECTRICAL SPECIFICATIONS

ELECTRICAL DRAWINGS
E0.1A ELECTRICAL SYMBOLS LIST, SCHEDULE, & NOTES
E1.1A POWER SITE PLAN
E1.2A SIGNAL SITE PLAN
E1.3A FIRE ALARM SITE PLAN
E4.1A SIGNAL FLOOR PLANS
E5.1A FIRE ALARM FLOOR PLANS
E5.2A FIRE ALARM DIAGRAMS, NOTES, 7 DETAILS

MANUFACTURER'S MODULAR BUILDING FOUNDATION DRAWINGS (PC 02-114488)
A0.0 TITLE SHEET
A0.1 SPECIFICATIONS AND NOTES
A0.2 CONSTRUCTION MATERIALS AND SPECIFICATIONS
F0.0 GENERAL DETAILS
F3.0 FLUSH TO GRADE CONCRETE FOUNDATION DETAILS
F3.1 FLUSH TO GRADE FOUNDATION PLAN
S0.0 STRUCTURAL NOTES AND SPECIFICATIONS

STATEMENT OF GENERAL CONFORMANCE

THESE DRAWINGS AND/OR SPECIFICATIONS AND/OR CALCULATIONS FOR ITEMS LISTED IN THE "SHEET LIST" HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. THESE DOCUMENTS HAVE BEEN EXAMINED BY ME FOR DESIGN INTENT OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME.

THE ITEMS LISTED IN THE "SHEET LIST" ARE ACCEPTABLE FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT FOR WHICH I AM THE INDIVIDUAL DESIGNATED TO BE IN GENERAL RESPONSIBLE CHARGE (OR FOR WHICH I HAVE BEEN DELEGATED RESPONSIBILITY FOR THIS PORTION OF THE WORK).

LIST OF ITEMS REVIEWED AND ACCEPTED: ALL ITEMS IN THE SHEET INDEX, EXCEPT ARCHITECTURAL DRAWINGS.

SIGNATURE OF ARCHITECT 3/1 DATE C7519 LIC. NUMBER 11/17 EXP.

ARCHITECT

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OWNER

SOLANO COMMUNITY COLLEGE

CONSULTANT

PROFESSIONAL STAMP:

LICENSED ARCHITECT
FRANCIS F. CHAN
No. C-7519
11/17
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT:

HORTICULTURE & PLANT SCIENCE INSTITUTE PHASE II:
MODULAR BUILDING FOUNDATION AND SITEWORK PROJECT
4000 Suisun Valley Rd,
Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	DSA SUBMITTAL	3/7/16
1	ADDENDUM 1	8/18/17

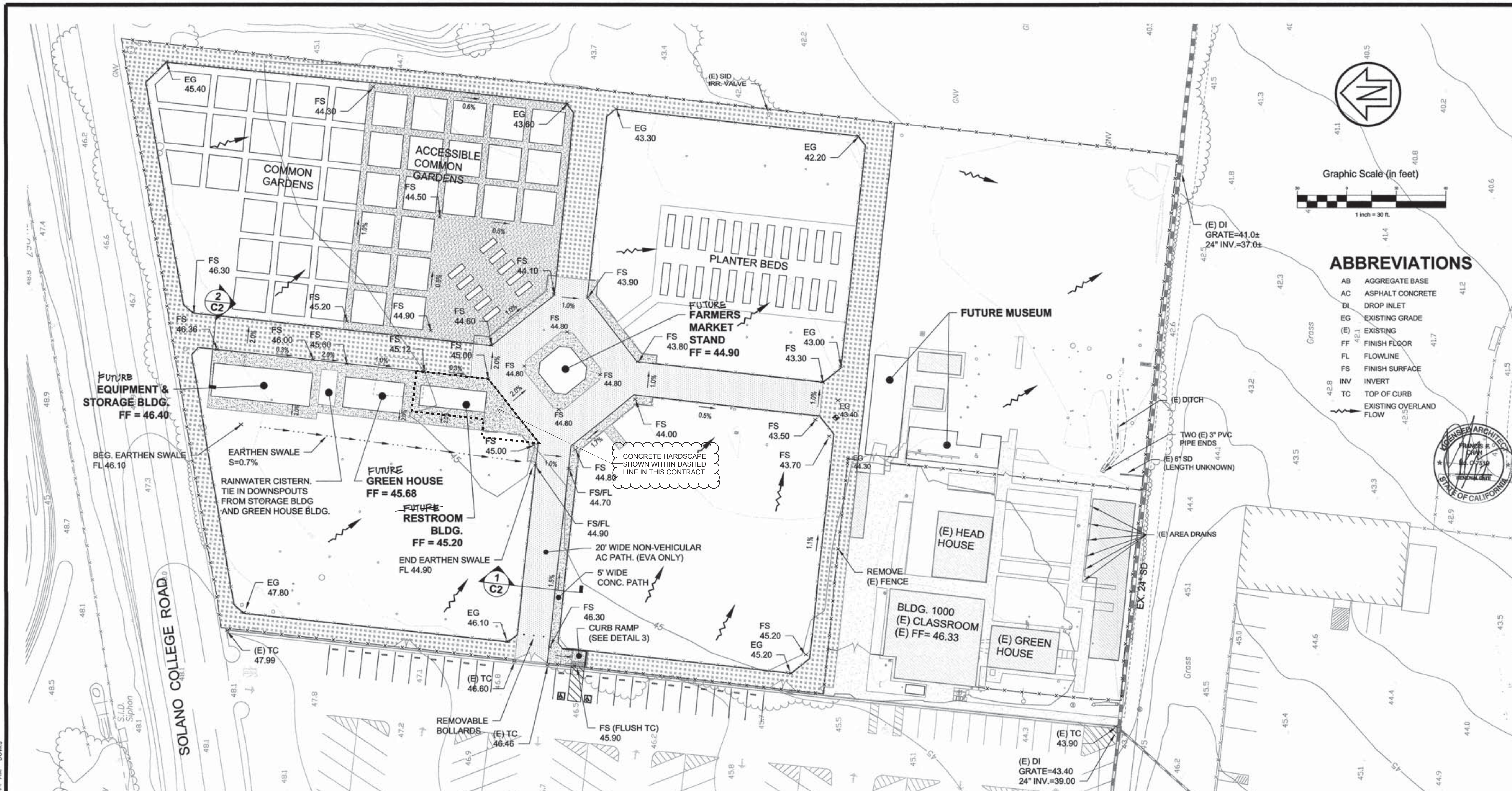
PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: -
CHECKED BY: -

SHEET NAME:
SHEET LIST

DSA APPROVAL STAMP:
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 114923
AC TM FL
DATE 8/17/17

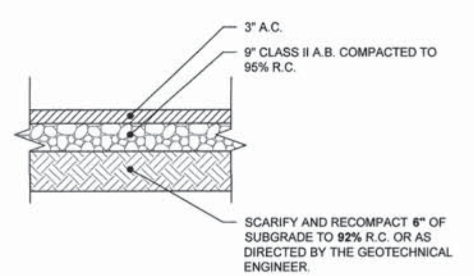
SHEET NUMBER:
G0.2

SOLANO COMMUNITY COLLEGE DISTRICT
LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE



ABBREVIATIONS

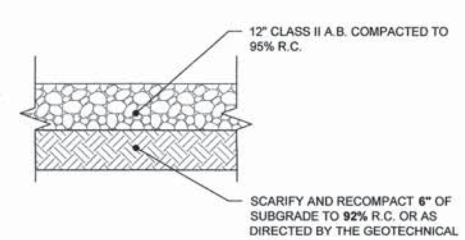
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
DI	DROP INLET
EG	EXISTING GRADE
(E)	EXISTING
FF	FINISH FLOOR
FL	FLOWLINE
FS	FINISH SURFACE
INV	INVERT
TC	TOP OF CURB
	EXISTING OVERLAND FLOW



NOTES:

1. PAVEMENT SECTIONS IS BASED ON A TI OF 4 AND A "R" VALUE OF 5. ADJUST DIMENSIONS PER FIELD CONDITIONS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
2. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION.
3. PAVEMENT SECTION IS FOR EVA ONLY.

1 AC FIRE LANE PAVEMENT SECTION
SCALE: 1" = 1'



NOTES:

1. PAVEMENT SECTIONS IS BASED ON A TI OF 4 AND A "R" VALUE OF 5. ADJUST DIMENSIONS PER FIELD CONDITIONS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
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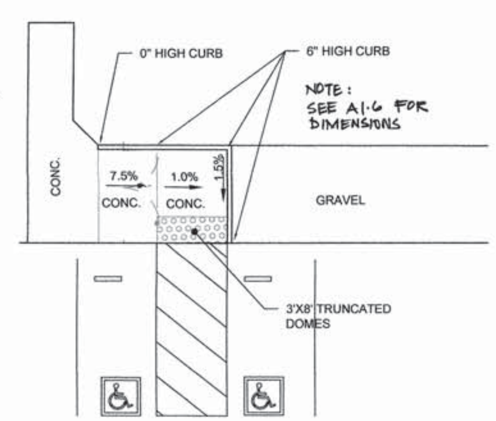
2 AB FIRE LANE PAVEMENT SECTION
SCALE: 1" = 1'



3 CURB RAMP DETAIL
SCALE: N.T.S.

P:\04\4116406\DWG\Sheet_Drawings\C2-Grading and Drainage Plan.dwg 3-03-16 10:33:44 AM bovks

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CSW | ST2
CSW/Stuber-Stroeh Engineering Group, Inc.
45 Leveroni Court, Novato, CA 94949 tel: 415.883.9850 fax: 415.883.9835
Civil & Structural Engineers
Surveying & Mapping
Environmental Planning
Land Planning
Construction Management

PROFESSIONAL STAMP:

REGISTERED PROFESSIONAL ENGINEER KIRK S. BOVITZ No. 74531 3/3/16 CIVIL STATE OF CALIFORNIA

PROJECT:

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE
4000 Suisun Valley Rd, Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
B	DSA BACKCHECK	03/07/16
A	CLIENT SUBMITTAL	12/01/15

PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: -
CHECKED BY: -
SHEET NAME:

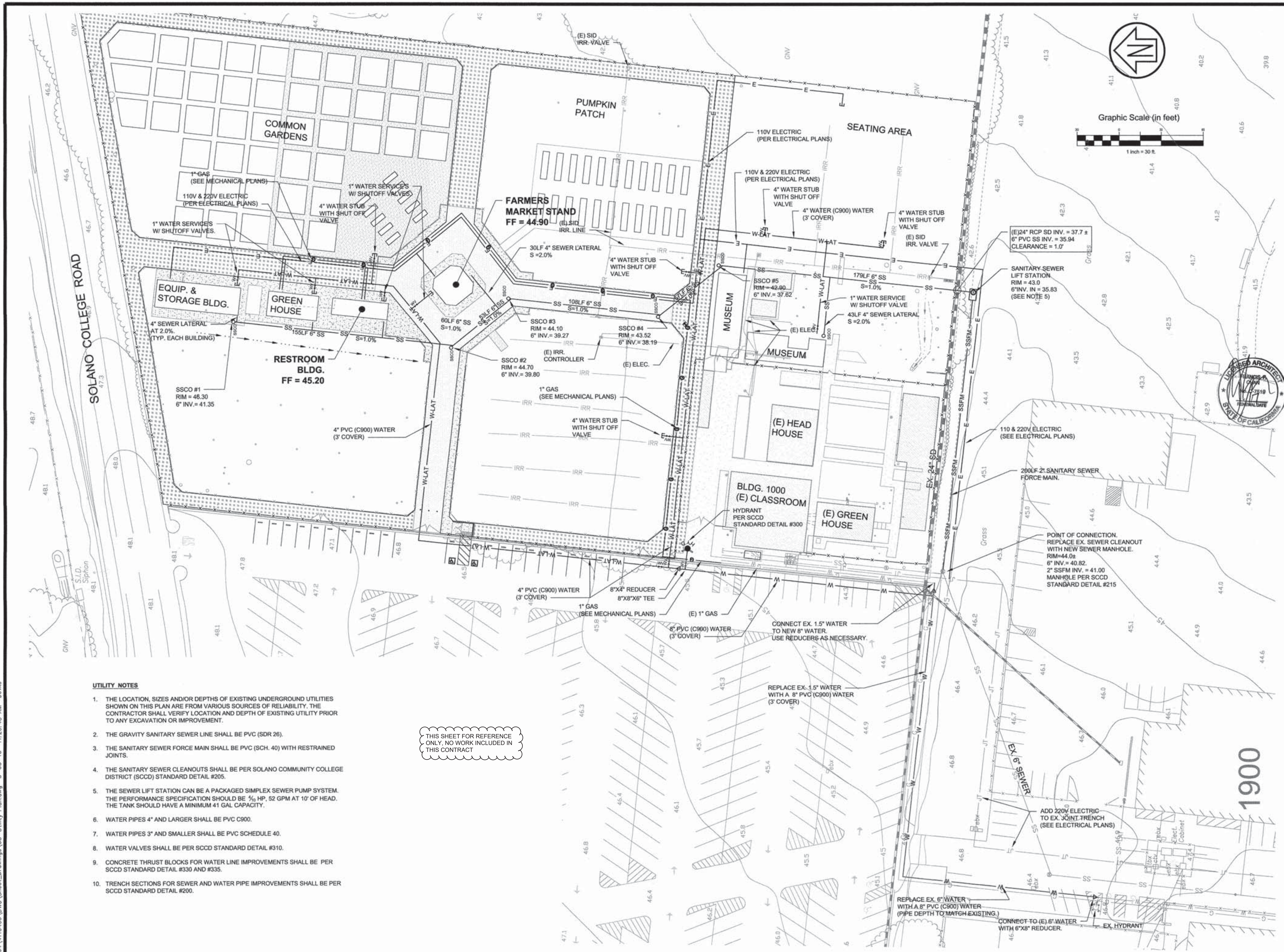
GRADING & DRAINAGE PLAN

DSA APPROVAL STAMP:
IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 114750

SHEET NUMBER:

C 2

SOLANO COMMUNITY COLLEGE DISTRICT + LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE



THIS SHEET FOR REFERENCE ONLY, NO WORK INCLUDED IN THIS CONTRACT

UTILITY NOTES

1. THE LOCATION, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE FROM VARIOUS SOURCES OF RELIABILITY. THE CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF EXISTING UTILITY PRIOR TO ANY EXCAVATION OR IMPROVEMENT.
2. THE GRAVITY SANITARY SEWER LINE SHALL BE PVC (SDR 26).
3. THE SANITARY SEWER FORCE MAIN SHALL BE PVC (SCH. 40) WITH RESTRAINED JOINTS.
4. THE SANITARY SEWER CLEANOUTS SHALL BE PER SOLANO COMMUNITY COLLEGE DISTRICT (SCCD) STANDARD DETAIL #205.
5. THE SEWER LIFT STATION CAN BE A PACKAGED SIMPLEX SEWER PUMP SYSTEM. THE PERFORMANCE SPECIFICATION SHOULD BE 5/10 HP, 52 GPM AT 10' OF HEAD. THE TANK SHOULD HAVE A MINIMUM 41 GAL CAPACITY.
6. WATER PIPES 4" AND LARGER SHALL BE PVC C900.
7. WATER PIPES 3" AND SMALLER SHALL BE PVC SCHEDULE 40.
8. WATER VALVES SHALL BE PER SCCD STANDARD DETAIL #310.
9. CONCRETE THRUST BLOCKS FOR WATER LINE IMPROVEMENTS SHALL BE PER SCCD STANDARD DETAIL #330 AND #335.
10. TRENCH SECTIONS FOR SEWER AND WATER PIPE IMPROVEMENTS SHALL BE PER SCCD STANDARD DETAIL #200.

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ARCHITECT

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SANTA CRUZ, CA 95060
TEL: 800.725.0571

OWNER

SOLANO COMMUNITY COLLEGE

CONSULTANT

CSW | ST2
CSW/Stuber-Stroeh Engineering Group, Inc.
45 Leveroni Court, Novato, CA 94949 tel: 415.883.9850 fax: 415.883.9835
Civil & Structural Engineers
Surveying & Mapping
Environmental Planning
Land Planning
Construction Management

PROFESSIONAL STAMP:

REGISTERED PROFESSIONAL ENGINEER — No. 74531 — 3/3/16 — CIVIL — STATE OF CALIFORNIA

LICENSED ARCHITECT — STATE OF CALIFORNIA

PROJECT:

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE

4000 Suisun Valley Rd, Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	-	-
C	DSA BACKCHECK	03/07/16
B	DSA SUBMITTAL	03/01/16
A	CLIENT SUBMITTAL	12/01/15

PROJECT CODE: SCCD-04

START DATE: -

DRAWN BY: -

CHECKED BY: -

SHEET NAME:

UTILITY PLAN

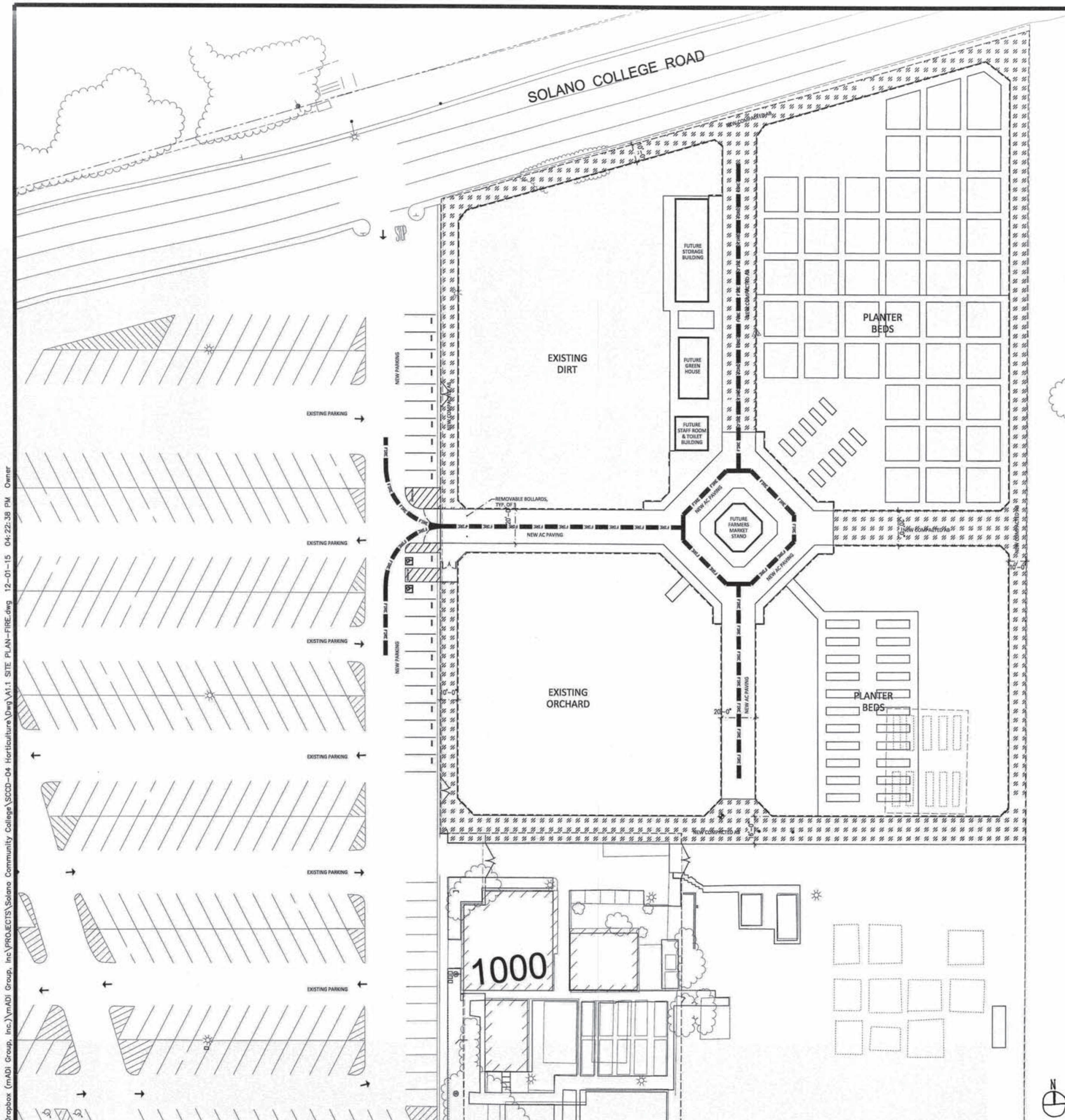
DSA APPROVAL STAMP:

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 114750
AC MT FLS — SS —
DATE 3/8/16

SHEET NUMBER:

C 3

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE ⊕ SOLANO COMMUNITY COLLEGE DISTRICT



1 SITE PLAN

SCALE : 1" = 30'-0"

DSA 810

LOCAL FIRE AUTHORITY REVIEW

To facilitate the Division of the State Architect's (DSA) approval of the Fire/Life Safety portion of a project, DSA requires Local Fire Authority (LFA) review of certain elements as identified in this form. Use of this form is mandatory for projects that add square footage to a campus or if any item on this form is relevant to the project. For additional information, see DSA 810 Instructions and DSA Policy 09-01.

PROJECT INFORMATION

School District/Owner:

Project Name/School:

Project Address:

LOCAL FIRE AUTHORITY (LFA)

LFA Agency Name: Cordelia Fire Protection District

LFA Reviewer Name: Keith Martin — Title: Fire Chief

Email: [illegible] — Telephone Number: 707-864-0468

I have reviewed and responded to the applicable items for this project as listed below.

Note: Only sign this form when it is imaged onto the site plan. A loose form is not acceptable to DSA.

LFA Reviewer's Signature: [signature] — Date: 12/14/15

Review Key: "Y" = Complies with LFA requirements; "N" = Not approved (complete Section 8); "NA" = Not applicable to the project; "NR" = LFA elects not to review

	Description	Y	N	NA	NR
1	Where an elevator does not meet medical emergency service cab size, per the California Building Code (CBC), use of stairways for emergency rescue and patient transport is acceptable.			X	
2	Access roads, fire lane markings, pavers and gate entrances are in accordance with Title 19, California Code of Regulations and the California Fire Code, Chapter 5.	X			
3	Fire hydrant location and distribution complies with the California Fire Code (or see # 4).	X			
4	Fire hydrant location and distribution complies with NFPA 1142, "Alternate Means." If "NR" is checked, DSA can only approve on-site water storage as an alternate. The signature of the school district official is required to acknowledge the use of alternate means.	X			
	Signature of School District Official: ____ Date: ____ Print the School District Official's Name:				
5	The location(s) of the proposed post indicator valve and fire department connection meet the requirements of this jurisdiction.			X	
6	The location(s) of the detector check valve assembly meet the requirements of this jurisdiction.			X	
7	Is the project located in a hazard severity zone area? (CBC, Chapter 7A, Section 701A.) ☐ Yes ☒ No. Check type if "Yes": ☐ Moderate ☐ High ☐ Very High ☐ WIFA (If one of these boxes is checked, the project design must meet the requirements of Chapter 7A.)				
8	COMMENTS (note deficiencies):				

DSA 810 (rev 05-12-14) DIVISION OF THE STATE ARCHITECT — DEPARTMENT OF GENERAL SERVICES — STATE OF CALIFORNIA — Page 1 of 1

FIRE TRUCK ACCESS

THE DESIGNATION OF THE FIRE LANE(S) SHALL BE INDICATED PER THE CALIFORNIA VEHICLE CODE SECTION 22500.1(3) BY OUTLINING OR PAINTING THE LANES IN RED, AND IN CONTRASTING COLOR, MARKING THE LANES WITH THE WORDS 'FIRE LANE', WHICH ARE CLEARLY VISIBLE FROM A VEHICLE. MARKED FIRE LANES SHALL BE A MINIMUM OF 20'-0" WIDE.

LEGEND:
- FIRE TRUCK ACCESS (FIRE LANE)
- (E)FHR — EXISTING FIRE HYDRANT

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303 POTRERO STREET, SUITE 7B, SANTA CRUZ, CA 95060
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OWNER

SOLANO COMMUNITY COLLEGE

CONSULTANT

LICENSED ARCHITECT FRANCIS F. CHAN STATE OF CALIFORNIA

PROFESSIONAL STAMP:

FOR REFERENCE ONLY

PROJECT:

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE
4000 Suisun Valley Rd, Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	-	-

PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: -
CHECKED BY: -

SHEET NAME:

SITE PLAN FIRE MARSHAL REVIEW

DSA APPROVAL STAMP: IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT 02 114923

SHEET NUMBER: A1.1

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C:\Users\Owner\Dropbox\Dropbox (mADI Group, Inc)\mADI Group, Inc\PROJECTS\Solano Community College\SCCD-04 Horticulture\Dwg\A1.1 SITE PLAN-FIRE.dwg 12-01-15 04:22:38 PM Owner

PINE

12"OAK

SEE APPL. 02-114750 FOR BUILDING LOCATIONS & SITE FEATURES, TYP.

(E) ~~NEW~~ FARMSTAND
~~THIS APPLICATION~~
~~FROM PC DESIGN 02-113840~~
~~SEE SHEET A2.1A & MFR'S DRAWINGS~~
N.I.C.

(E) ~~NEW~~ CONCRETE
2% MAX. SLOPE
IN ANY DIRECTION

FLUSH, TYP.

30"PINE CLUSTER

FUTURE ~~NEW~~ STORAGE SHED
NON-FIELD ACT
NOT FOR DSA REVIEW
N.I.C.

FUTURE ~~NEW~~ GREENHOUSE
NON-FIELD ACT
NOT FOR DSA REVIEW
N.I.C.

(E) GAS STUB
(E) WATER STUB
(E) SEWER STUB

FINISHED GRADE 0'-0"

MODULAR BUILDING FOUNDATION, UTILITY EXTENSIONS AND CONNECTIONS TO BUILDING, AND CONCRETE HARDSCAPE (WITHIN DASHED LINE) INCLUDED IN THIS SCOPE. BUILDING FABRICATION AND INSTALLATION BY OTHERS, N.I.C.

42"PINE

1 SITE PLAN

SCALE : 1" = 10'-0"

N

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SOLANO COMMUNITY COLLEGE

CONSULTANT

PROFESSIONAL STAMP:

LICENSED ARCHITECT
FRANCIS F. CHAN
No. C-7519
11/17
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT:

HORTICULTURE & PLANT SCIENCE INSTITUTE PHASE II:
MODULAR BUILDING FOUNDATION AND SITEWORK PROJECT
4000 Suisun Valley Rd,
Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	DSA SUBMITTAL	3/7/16
1	ADDENDUM 1	8/2/17

PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: -
CHECKED BY: -

SHEET NAME:
SITE PLAN

DSA APPROVAL STAMP:

SHEET NUMBER:
ADDENDUM 1
A1.1A

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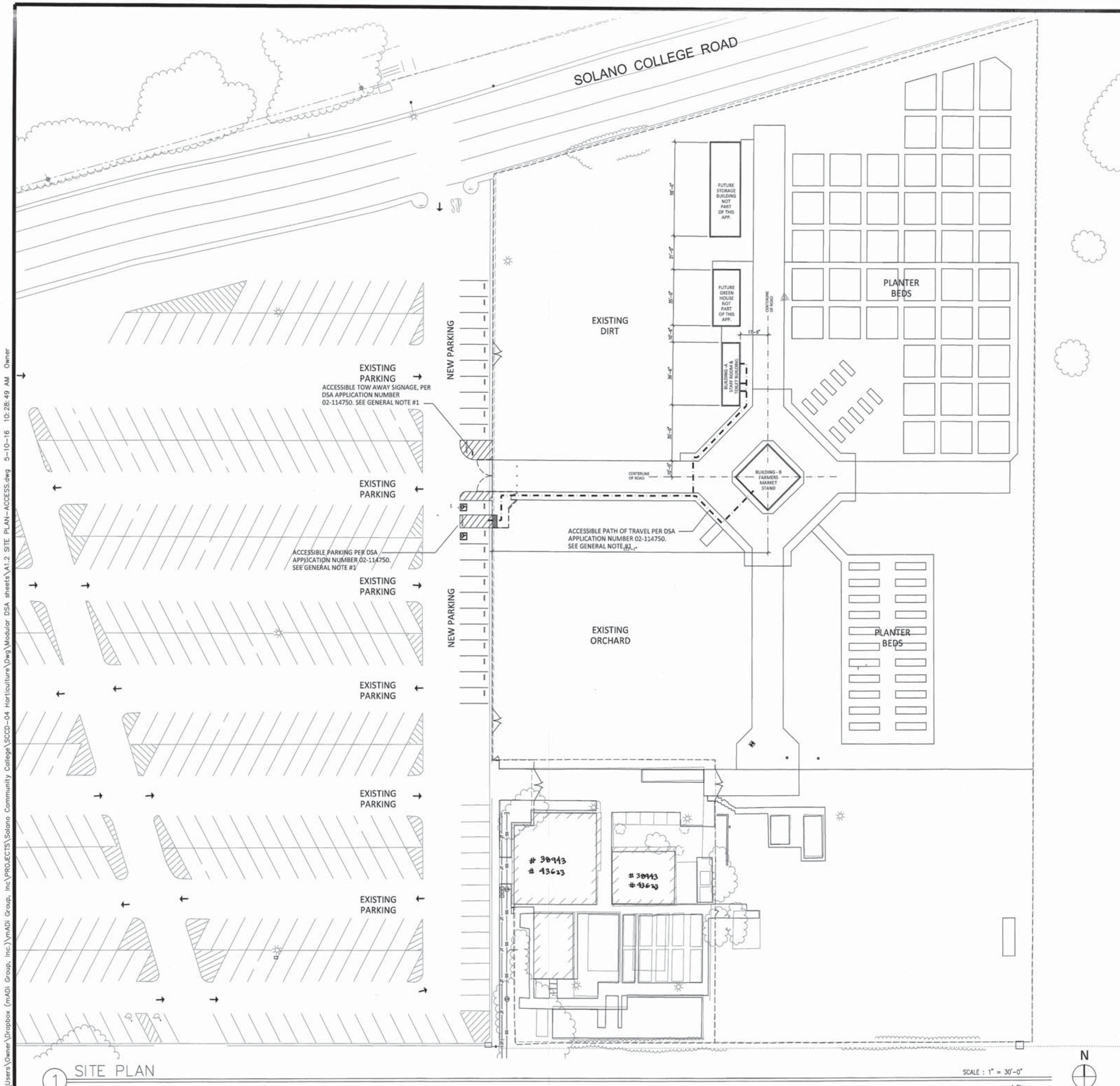
SOLANO COMMUNITY COLLEGE DISTRICT
LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE



1 SITE PLAN

PARKING LOT DATA

PARKING LOT	NON-ACCESSIBLE STALLS	ACCESSIBLE STALLS REQUIRED	ACCESSIBLE STALLS PROVIDED
1 (EXISTING)	30	1 VAN, 1 REG.	1 VAN, 1 REG.

ACCESSIBLE PATH OF TRAVEL

ACCESSIBLE PATH OF TRAVEL (P.O.T.) AS INDICATED, IS A COMMON, BARRIER-FREE, FIRM AND SMOOTH ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAXIMUM SLOPE. PASSING SPACES AT LEAST 60" X 60" ARE LOCATED NOT MORE THAN 200' APART. PARTS OF P.O.T.WITH CONTINUOUS GRADIENTS HAVE 60" LEVEL AREAS NOT MORE THAN 400' APART. THE CROSS-SLOPE DOES NOT EXCEED 2% AND SLOPE INTHE DIRECTION OT TRAVEL AND IS LESS THAN 5% UNLESS OTHERWISE INDICATED. (POT) SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80".

—— - - —— ACCESSIBLE PATH OF TRAVEL (P.O.T.)

NOTE:
"DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT: THIS POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THE THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF CONSTRUCTION CHANGE DOCUMENT."

GENERAL NOTE:

1. PATH OF TRAVEL WORK UNDER DSA APPLICATION 02-114750 SHALL BE COMPLETE FOR USE UNDER THIS APPLICATION. THIS APPLICATION CANNOT BE CERTIFIED WITHOUT THE COMPLETION OF DSA APPLICATION 02-114750

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OWNER
SOLANO COMMUNITY COLLEGE

CONSULTANT

PROFESSIONAL STAMP:
LICENSED ARCHITECT FRANCIS F. CHAN STATE OF CALIFORNIA

PROJECT:
LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE
4000 Suisun Valley Rd, Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	-	-

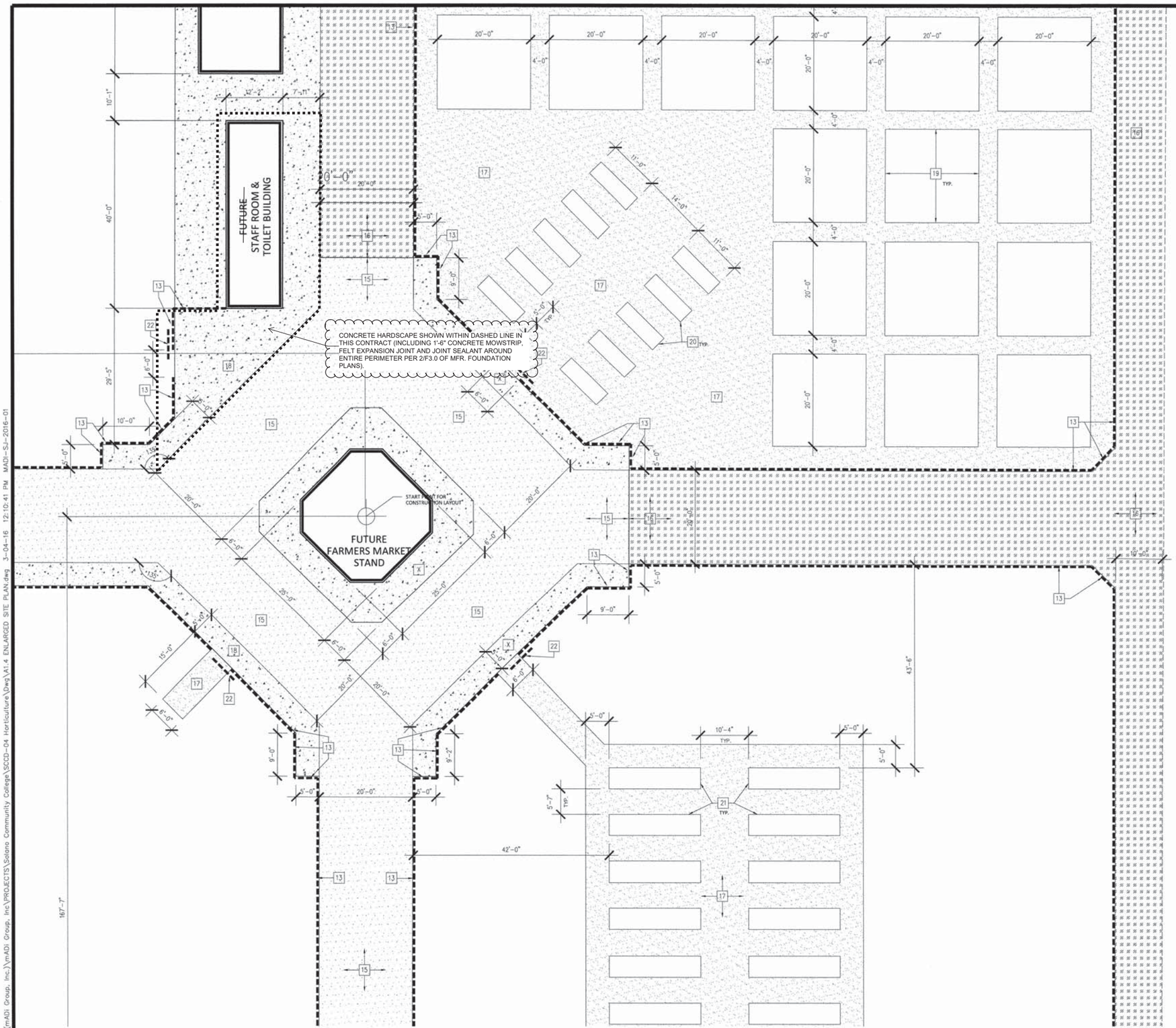
PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: -
CHECKED BY: -
SHEET NAME:
SITE PLAN
ACCESSIBILITY PLAN

DSA APPROVAL STAMP:
IDENTIFICATION STAMP DIV OF THE STATE ARCHITECT
02 114923

SHEET NUMBER:
A1.2

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE ⊕ SOLANO COMMUNITY COLLEGE DISTRICT

C:\Users\Owner\Dropbox (mADI Group, Inc.)\mADI Group, Inc\PROJECTS\Solano Community College\SCCD-04 Horticulture\Dwg\Modular DSA sheets\A1.2 SITE PLAN-ACCESS.dwg 5-10-16 10:28:49 AM Owner



1 ENLARGED SITE PLAN

SCALE : 1" = 10'-0"

LEGEND

1. DEMOLISH EXISTING FENCE AND/OR GATE
2. EXISTING FENCE TO REMAIN
3. (N) 20'-0" WIDE X 6'-0" HIGH SWING GATE; SEE 6B/A1.9
4. (N) DETECTABLE WARNING STRIPS; SEE 7&8/A1.8
5. (N) 3'-0" WIDE X 6'-0" HIGH SWING GATE; SEE 6A/A1.9
6. (N) ACCESSIBLE PARKING; SEE 1/A1.8
7. (N) PARKING STRIPING
8. (N) WHEELSTOP; SEE 9/A1.8
9. (N) REMOVABLE BOLLARDS; SEE 4/A1.8
10. (N) SIGNAGE; SEE 10/A1.8
11. (N) SIGNAGE; SEE 11/A1.8
12. (N) SIGNAGE; SEE 12/A1.8
13. (N) 4'-0" HIGH CHAINLINK FENCE
14. (N) 6'-0" HIGH CHAINLINK FENCE
15. (N) AC PAVING
16. (N) AB PAVING
17. (N) DG PAVING. PROVIDE REDWOOD HEADER EDGING PER DETAIL 5/A1.8
18. (N) CONCRETE PAVING
19. (N) 20'X20' PLANTERS FLUSH WITH ADJACENT GRADE WITH REDWOOD HEADER EDGING PER DETAIL 5/A1.8
20. (N) 3'-6"X11'-0" PLANTERS
21. (N) 4'-6"X20'-0" PLANTERS
22. (N) 4'-0" HIGH X 5'-0" SLIDING GATE; SEE 1/A1.9. PROVIDE SIGN STATING "ENTRY CONTROLLED AND RESTRICTED BY SECURITY PERSONNEL" PER CBC 11B-404.1 EXCEPTION 1.
23. (E) DIRT
24. (N) SIGNAGE; SEE 3/A1.8

ARCHITECT

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OWNER

SOLANO COMMUNITY COLLEGE

CONSULTANT

PROFESSIONAL STAMP:

LICENSED ARCHITECT
FRANCIS F. CHAN
No. C-7519
11-12
RENEWAL DATE
STATE OF CALIFORNIA

PROJECT:

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE

4000 Suisun Valley Rd,
Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	-	-

PROJECT CODE:	SCCD-04
START DATE:	-
DRAWN BY:	-
CHECKED BY:	-

SHEET NAME:

ENLARGED SITE PLAN

DSA APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 114750
AC MT PLS BS
DATE 3/8/16

SHEET NUMBER:

A1.4

SOLANO COMMUNITY COLLEGE DISTRICT
LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE

SECTION 26 00 00
ELECTRICAL GENERAL REQUIREMENTS

PART 1 GENERAL

1.1 WORK INCLUDED

A. Furnish and install all necessary labor, materials, tools and equipment to perform and completely finish the work according to the intent of this specification, and the accompanying drawings.

B. Furnish and install any incidental work which can reasonably be inferred as required and necessary to provide complete and workable systems.

C. The requirements of the General and Supplemental Conditions, and Division 01 apply to Divisions 26, 27 and 28, and these specifications. All sections in Divisions 26, 27, and 28 are interrelated. Work specified in other sections, as applicable, shall apply to all work hereunder.

1.2 LOCAL CONDITIONS

A. Examine site; verify dimensions and locations against drawings and become informed of all conditions under which work is to be done before submitting proposal. No allowance will be made for extra expenses because of omission on Contractor's part to include cost of work under prevailing conditions.

B. Information shown relative to services is based upon available records and data shall be regarded as approximate only. Minor deviations found necessary to conform with actual locations and conditions shall be made without extra cost.

C. Extreme care shall be exercised in excavating near existing utilities to avoid any damage thereto. It shall be the contractor's responsibility to verify existing underground utilities prior to digging anywhere. Information provided on these plans indicating existing conditions shall only be used as reference, and shall not be deemed considered accurate. Any damage to existing utilities done by the contractor shall be repaired and/or replaced by the contractor at their expense to its pre-damage condition.

1.3 PERMITS AND INSPECTIONS

A. Obtain and pay for all permits and service charges required in installation of the work. Arrange for required inspections and secure approvals from authorities having jurisdiction.

B. During its progress, work shall be subject to inspection by Project Inspector.

1.4 CODES AND STANDARDS

A. Work and materials shall be in full accordance with California Occupational Safety Health Act (CAL-OSHA), California Electrical Code (CEC), State Fire Marshal, Electrical Safety Orders (Title 8, Subchapter 5), the National Fire Protection Association, California Building Code (CBC); California Code of Regulations - Title 24 and other applicable State or local laws or regulations. Nothing in the Drawings or Specifications shall be construed to permit work not conforming to these codes.

B. Electrical materials shall bear the label of, or be listed by, the Underwriter's Laboratories (UL) unless of a type for which label or listing service is not provided.

C. Materials and components shall conform to Industry Standards, including:
NEMA - National Electrical Manufacturer's Association
ANSI - American National Standards Institute
ASTM - American Society For Testing Material Association
IPCEA - Insulated Power Cable Engineer's Association

D. When Contract Documents differ from governing codes, furnish and install larger size or higher standards called for without extra charge.

1.5 REVIEW OF MATERIALS

A. Prior to commencement of Work and within 35 days after award of contract, submit for approval in accordance with General Conditions all equipment and materials to be furnished.

1. Equipment/Product submittals shall be bound and indexed and shall include a table of contents listing all equipment submitted. The table of contents shall include: Project designation, submittal number, submittal name including specification section, date, and include manufacturer, model number, reference specification paragraph or sheet detail number, description, and page location. Where a group or series of products are submitted, each item do not have to be listed, only the series need to be identified.
Example:
Project:
Submittal No.
Submittal Name:
Date:

Page(s)	Manufacturer	Model No.	Spec para., Detail No.	Description
1-12	XYZ Corp	123ABC	2.5	Control panel
13,14	XYZ Corp	456DEF	2.6-A	Power supply
15	ABC Corp	789GHK	A/E9.5	Rack
16,17	Cantex	PVC-40	2.1	PVC conduit
18	Steel City	XYZ series	2.2	Steel fittings

2. Shop drawings submittals shall be neat and professionally done using CAD (computer aided drafting), hand-drawn submittals will not be accepted. Shop drawings shall have sufficient information to clearly indicate work to be performed and be complete including device/equipment locations, wire sizes, wire types and number of wires, symbol list or legend, point-to-point connections, wiring diagrams, and equipment anchorage detail where needed. Shop drawings shall utilize the same size paper as the Bid set of plans.

B. Substitutions:
1. Only one request for substitution will be considered on each item of material or equipment. No substitutions will be considered thereafter. Substitutions will be interpreted to be all manufacturers other than those specifically listed by model or catalog number. Should the original submittal of a proposed substitution be rejected, the specified item shall be furnished.
2. Submit complete information or catalog data to show equality of equipment or material offered to that specified. Identify which product is being substituted in the specifications and/or the plans and provide analysis as indicating either it "Complies" or that it "Does Not Comply" and providing a reason. Each Specification paragraph shall be provided with this analysis. No substitutions will be allowed unless requested and approved in writing. Materials of equal merit and appearance, in the opinion of the Engineer, will be approved for use. Engineer reserves the right to require originally specified item.
3. Acceptance of a substitute is not to be considered a release from the Specifications. Any deficiencies in an item, even though approved, shall be corrected by the Contractor at his expense.
4. Responsibility for installation of approved substitution is included herein. Any changes required for installation of approved substituted equipment shall be made without additional cost to Owner.

C. Where it is in the best interest of the Owner, Engineer may give written consent to a submittal received after expiration of designated time limits, or for an additional resubmittal.

D. Submit for approval in ample time to avoid delay of construction, shop drawings or submittals on all items of equipment and materials covered in list mentioned above. Submit in accordance with General Conditions in a complete package; partial submittals will not be considered.

E. Failure to comply with any of the preceding requirements will necessitate that the specified materials be submitted and supplied.

1.6 RECORD DRAWINGS

A. Upon completion of Work, furnish Engineer with AutoCAD file, PDF file, and one printed full size hardcopy upon which shall be shown all Work installed under contract including any Work which are not in accordance with Original Contract Drawings. AutoCAD files shall be 2004 or later version, with external references bound to its parent drawing. Provide a separate PDF file for each sheet, do not combine all sheets into a single file. Furnish digital files on a USB flash drive or CD.
1. The above shall also include shop drawings.

B. All symbols and designations used in preparing Record Drawing shall match those used in Contract Drawings.

C. Show all buried and concealed conduit, stub-outs, etc. Locate all buried conduit and stub-outs by dimensions from permanent, easily located and identifiable portion of structure; also, dimension ends of stub-outs, etc. Note depth of buried items below grade.

1.7 ADDENDA AND CHANGE ORDERS

A. Changes in the plans and specifications shall be made by Addenda or Change Orders signed by the Engineer.

PART 2 PRODUCTS

2.1 MATERIALS

A. Materials mentioned herein or on drawings require that each item listed be provided and of quality noted, or an approved equal. All material shall be new, full weight and standard in all respects and in first-class conditions. Where possible, all materials used shall be of the same brand or manufacturer throughout for each class of material or equipment.

B. Grade or quality of materials desired is indicated by trade names or catalog numbers stated herein. Dimensions, sizes and capacities shown are a minimum and shall not be changed without permission of Engineer.

PART 3 EXECUTION

3.1 DRAWINGS AND COORDINATION

A. Examine Drawings and Site; be familiar with types of construction where electrical installation is involved. Work shall be neatly installed in a workmanlike manner in accordance with NECA Standard of Installation. Work shall be coordinated with other trades to avoid conflicts. Clarifications will be made by Engineer and minor adjustments shall be made without additional cost to Owner. Obtain ruling from Engineer concerning any obvious discrepancies or omissions in work before bidding. All work involved in correcting obvious errors or omissions after award of Contract shall be performed as directed by Engineer without additional cost to Owner.

B. Layouts of equipment, accessories and wiring systems are diagrammatic (not pictorial), but shall be followed as closely as possible. Drawings and Specifications are for assistance and guidance, and exact locations, distances, levels, etc., will be governed by Site.

C. All equipment (devices, conduits, boxes, etc.) shall be flush or semi-flush mounted unless otherwise noted. Where conditions do not allow flush mounting and where acceptable to the Architect, equipment may be surface mounted.

3.2 WORKING SPACE

A. Provide adequate working space around electrical equipment in compliance with Article 4 of Electrical Safety Orders. In general, provide 36 inches minimum clear work space in front of panelboards and controls of 120/208 volt systems.

3.3 CARE AND CLEANING

A. All broken, damaged or otherwise defective parts shall be repaired or replaced without additional cost to Owner. Work shall be left in a condition satisfactory to Engineer. At completion, carefully clean and adjust all equipment, fixtures and trim installed as part of this work. Systems and equipment shall be left in a satisfactory operating condition.

B. All surplus materials and debris resulting from this work shall be cleaned out and removed from site; this includes surplus excavated material.

3.4 EXCAVATING AND BACKFILLING

A. Excavate and backfill as required for installation of electrical work. Restore all surfaces, roadways, sod, walks, curbs, walls, existing underground installation, etc., cut by installations to original condition in an acceptable manner. Maintain all warning signs, barricades, flares and lanterns as required by the Safety Orders and local ordinances.

B. Excavation: Dig trenches straight and true to line and grade, with bottom clear of any rock points. Minimum conduit depth of pipe crown shall be 24 inches below finished grade.

C. Backfill: Support conduits with 2" sand bedding at bottom of trench. Provide sand backfill from bottom to 12" below finished grade. The top 12" to be local fine earth material free of rubble, rubbish or vegetation. Trenches shall be backfilled and compacted to 90% (per ASTM D1557) of maximum dry density at optimum moisture content in layers not to exceed 6" when compacted.

3.5 PROTECTION

A. In performance of work, protect work from damage. Protect electrical equipment, stored and installed, from dust, water or other damage.

3.6 EQUIPMENT IDENTIFICATION

A. Panelboards, remote control switches, terminal boxes, etc., shall be properly identified with a descriptive nameplate. Nameplate shall be made of 3/32 inch laminated plastic with black background and white letters. Size of letters shall be 1/4 inch high for equipment in device box or boxes 12" or smaller, and 1/2 inch high for panelboard, terminal can, or larger items. Letters shall be machine engraved. Punched strip type nameplates and cardholders in any form are not acceptable. Nameplates shall be attached with oval head machine screws tapped into front panel.

B. Indicate type of equipment and equipment designation, ex. "PANEL-XXX", "MAIN SWITCHBOARD-XXX", "TRANSFORMER-XXX", "SIGNAL-XXX", "TV-XXX", "EF-1", "AC-1", etc.

3.7 RUST INHIBITOR

A. Channels, joiners, hangers, straps, clamps, brackets, caps, nuts and bolts and associated parts shall be plated electrolytically with zinc followed immediately thereafter by treating freshly deposited zinc surfaces with chromic acid to obtain a surface which will not form a white deposit on surface for an average of one hundred twenty (120) hours when subjected to a standard salt spray cabinet test, or shall be hot dipped galvanized.

3.8 EQUIPMENT PADS

A. Concrete reinforced pads for mounting of equipment (i.e. switchboard, transformers, freestanding panels, etc.) shall be minimum 3000psi, 6" thick with #4 rebars at 12" on center each way. Rebars shall be centered in pad. Pad shall extend 2" beyond equipment and 1.5" above surrounding area. Backfill and compact to 95% maximum dry density at optimum moisture content in layers not to exceed 6" when compacted.

3.9 EQUIPMENT ANCHORAGE

A. Seismic Anchorage of Electrical equipment shall conform to the regulations of 2010 CBC (California Building Code) and ASCE 7-05, sections 13.3, 13.4, and 13.6. All equipment shall be braced or anchored to resist a horizontal force acting in any direction using the following criteria:
1. The total design lateral seismic force shall be determined from section 1614A of 2010 CBC and 13.3 ASCE 7-05. Forces shall be applied in the horizontal directions which results in the most critical loading for design.
2. The value if Ap (component Amplification factor) and Rp (component response modification factor) of section 13.3.1 ASCE 7-05 shall be selected from section 13.6-1 ASCE 7-05. The value of Ip (seismic importance factor) shall be selected from 13.1.3 ASCE 7-05.

Where anchorage details are not shown on the drawings, the Field installation shall be subject to the approval of the structural engineer and the field representative of the Office Of The State Architect.

3.10 ARC FLASH

A. Electrical equipment such as switchboards, panelboards, load centers, motor control centers, industrial control panels, meter centers shall be field marked to warn persons of potential electric arc flash hazards per CEC 110.16 and NFPA 70E Standard for Electrical Safety in the Workplace. Minimum label wording shall be as follows:

DANGER
Arc Flash and Shock Hazard.
Appropriate PPE Required.
Do not operate controls or open doors without appropriate
personal protection equipment.
Failure to comply may result in injury or death.

3.11 TEST

A. Test all wiring and connections for continuity and grounds; where such test indicate faulty insulation or other defects, locate, repair and retest. Balance loads at panelboards. Furnish all testing equipment.

3.12 CLOSING OF AN UNINSPECTED WORK

A. Do not allow or cause any of work installed hereunder to be covered up or enclosed before it has been inspected and approved.

B. Should any work be enclosed or covered up before it has been approved, uncover such work and after it has been inspected and approved, make all repairs necessary to restore work of others to conditions in which it was found at time of cutting, all without additional cost to Owner.

3.13 WARRANTY

A. All materials and installation shall be provided with a one (1) year warranty which shall include replacement parts, labor, retesting, and travel to and from the job site. The warranty period shall begin after final acceptance of the project. The warranty shall cover but is not limited to the following:
1. Defective workmanship and installation.
2. All System components, devices, conduit, wires, etc.
3. Manufactured items such as receptacles, panelboard, etc.
4. Basic materials such as conduit, wires, boxes, cabinets, etc.

B. Certain manufactured items will have longer warranty periods. Refer to specific item and specification section for warranty information and terms.

END OF SECTION

SECTION 26 05 00
BASIC MATERIALS AND METHODS

PART 1 GENERAL

1.1 SCOPE

A. The work of this Section consists of basic materials and methods for all work included under Divisions 26, 27, and 28. Additional specifications requirements for electrical work are specified under other sections of Divisions 26, 27 and 28 and where those requirements differ from the requirements of this Section, they shall govern.

1.2 SUBMITTALS

A. Submit product data per Section 26 00 00.

PART 2 PRODUCTS

2.1 CONDUIT

A. Rigid Steel Conduit: Standard weight, mild steel pipe, zinc coated on both inside and outside by a hot dipping or sherardizing process. Inside and outside of conduit shall be finished with a protective coating. All threads galvanized after cutting. Meets UL 6, UL Card #DYIX, and ANSI C80.1.

B. Intermediate Metallic Conduit (IMC): Intermediate weight, mild steel pipe, meeting same requirements for finish and material as rigid steel conduit. Meets UL 1242, UL Card #DYIX, and ANSI C80.6.

C. Electrical Metallic Tubing (EMT): Cold rolled steel tubing, hot-dipped galvanized, with zinc coating on outside and protective lubricating coating on inside. Fittings shall meet same requirements for finish and material as EMT. Meets UL 797 and ANSI C80.3.

D. Flexible Conduit: UL Listed. Flexible steel, zinc coated on both inside and outside by hot dipping or sherardizing process. Liquid-tight conduit shall be galvanized with extruded polyvinyl covering and with watertight connectors, sunlight resistant, direct burial rated. Flexible steel conduit less than 1/2" shall not be used except that 3/8" shall be permitted in lengths not in excess of 6 feet as part of a listed assembly or for tap connections to lighting fixtures as required in CEC Section 410-67(c). Flexible conduit to be one continuous length, no couplings. AFC Liquid-Tuff Type-LFMC and AFC Reduced Wall Flexible Steel Conduit, or equal.

E. PVC Conduit:
1. Type 40, 90C, UL listed, composed of polyvinyl chloride, conforming to NEMA TC-2, Fed Spec WC1094A, UL651 Standards. Material shall have minimum tensile strength of 6,500 psi at 73.4F, flexural strength of 12,500 psi and compressive strength of 9,000 psi per ASTM testing. PVC conduit shall be suitable for direct burial without concrete encasement. Fittings shall be of same manufacture. All joints shall be solvent welded.
2. Type 80, similar to type 40 except with extra heavy wall.
3. Only manufactured elbows/bends shall be used. Where field bends have to be made, obtain prior approval by the engineer.

F. Raceway Fittings:
1. Rigid Steel Conduit: Fittings, such as couplings, connectors, condulets, elbows, bends, etc., shall be subject to same requirements as for rigid steel conduit. Couplings and unions shall be threaded type, assembled with anti-corrosion, conductive anti-seize compound at joints made absolutely tight to exclude water. Connectors shall be threaded hubs with bonding insulated metallic bushings. Unions shall be equal to Crouse Hinds UNY or UNF.
2. IMC: Fittings shall be as specified for rigid steel conduit.
3. EMT: Fittings shall be steel, box connectors shall have insulated throat. Connectors and couplings to be compression type.
4. Flexible Metallic Conduit: Connectors to be insulated. Metallic connectors (except for liquid-tight) shall be steel "squeeze" type via a screw, Steel City XC-90X and XC-49X series. Liquid-tight metallic connectors shall be watertight approved for such use.
5. Bushings: Metallic insulated type. Weatherproof or dust-tight installations; liquid-tight with sealing ring and insulated throat, OZ/Gedney type "KR".
6. Expansion and Deflection Fittings: OZ/Gedney, Type "DX" or accepted equal.
7. All box connectors to be insulated throat type.
8. Conduit Straps: Galvanized steel, 2-hole straps. 1-hole straps may be used for conduit sizes 1" and smaller concealed in wall or above ceiling.
9. PVC Conduit: Fittings shall be same grade of material as conduit, solvent welded to conduit.

G. Metallic conduits, raceways, and fittings shall be listed and approved as a grounding means.

2.2 BOXES

A. Galvanized one-piece or welded pressed steel type. Boxes shall be at least 1-1/2" deep, 4" square for 1 or 2 gang devices, with plaster rings and gang box with gang cover. Boxes mounted in wall or ceiling finished with gypsum board shall be furnished with 3/4" deep plaster rings. Use screws and not nails to support/secure outlet boxes. Provide blank cover plates for all boxes without devices.
1. 1-gang and 2-gang outlet and junction boxes installed exposed outdoors shall be weatherproof type FS, FD, WS, WD die cast metal or aluminum boxes, Appleton or equal. Plug all unused hubs.
2. Provide 1#12 equipment grounding pigtail at all outlet boxes.
3. Outlet boxes for data, telecommunications, video, and TV outlets shall be 4 11/16" square x 2.125" deep.
4. Outlet boxes containing #8, #6, or #4 AWG wires shall be a minimum 2.125" deep per CEC.

B. Junction boxes located outdoors, or in wet or damp locations shall be rated NEMA-3R, with hinged door and pad-locking tabs.

C. Equipment furnished by other trade but require electrical connection shall be provided with appropriate backbox.

2.3 WIRES

A. Wire shall be copper only, manufactured by General Cable Co., Rome, General Electric Co., or Anaconda. Wire shall be rated 90 degrees C for both dry and wet locations, THWN-2, XHHW-2, or RHW-2 insulation. 90 degrees C THHN may be used in dry and damp locations. Wire installed in high temperature areas, including branch circuits in or above roof insulation or in fluorescent ballast channel, shall have type RHW_2 or XHHW-2 90 insulation.
1. Feeders sized #2 and larger routed below grade, extending beyond or outside the building foundation line shall use types XHHW-2, THW-2, or RHW-2 insulation, 90 degrees C dry and wet rated.

B. Wire shall be Code type copper wire of not less than 98% conductivity. Wires #8 gauge and larger, shall be stranded. Wires shall bear the Underwriters' label, be color coded and be marked with gauge, type and manufacturer's name on 24" centers. Wires smaller than #8 may be solid or stranded. Where stranded wire is used, provide solid pigtail for connection to screw terminals of receptacles, switches, etc.

C. Color coding to be as follows:

	208/120 Volts
Phase A	Black
Phase B	Red
Phase C	Blue
Neutral	White
Ground	Green

D. Bring wire to job in original unbroken packages. Obtain approval of inspector or Engineer before installation of wires.

2.4 CONVENIENCE OUTLETS

A. Shall be "Specification" grade rated 20 amperes at 125 volts, duplex, composition base with slots to accommodate parallel plug caps with grounding peg. Contact shall grip both sides of plug prongs. Outlet shall be UL listed. Receptacles to be Hubbell or equal.

B. Provide devices with matching plates.

2.5 PANELBOARDS

A. Panelboards shall meet NEMA AB-1, PB-1, PB1.1, PB1.2. Panelboards shall be type NQOD, NEHB, I-Line, Power-R-Line, A-Series, and CCB as specified for secondary utilization voltage and phase. As manufactured by Square-D, Cutler-Hammer/Eaton, General Electric, or approved equal. Square-D has been used for design purposes. Busses shall be copper. Provide with neutral buss and copper ground buss. Series rated equipment are not acceptable. Panels shall have full height fully rated bussing.

B. Circuit breakers shall be bolt-on type thermal magnetic, single-pole and multi-pole for branch circuit control with trip-rating permanently marked on the handle. Where trip-rating is not marked on the handle, provide engraved label adjacent to the breaker indicating amperage rating. Multi-pole breakers shall be common trip type with single handle. Factory assembled and listed multi-pole breakers with handle ties shall be acceptable. Bails will not be accepted except where used with multi-wire branch circuits through fluorescent lighting fixtures. All circuit breaker handles shall be equipped with padlocking tabs, "lock-off" device. All circuit breakers shall be fully rated to withstand the available short circuit current as designated on the drawings. Series rated equipment will not be acceptable.

C. Enclosures shall be code gauge, galvanized metal with front trim and hinged door with lock masterkeyed. Front trim shall be equipped with concealed trim clamps and concealed door hinges. Enclosures shall be rated NEMA-1 at dry indoor locations, and NEMA-3R where located outdoors in damp or wet locations. Lighting and appliance branch circuit Panelboards shall be maximum 20" wide and 6" deep. Panel trim and cabinet shall be finished ANSI-49 or ANSI-61 gray, except panel cabinets to be recessed are not required to be painted. Surface cabinets shall be without knockouts. Inside door shall have frame for circuit identification card. Fill out card, typewritten, with list of circuits corresponding with the circuit number. Identification shall be specific with room designation, type of load, etc, (i.e., "Classroom 214 receptacles"). For distribution panels, provide engraved laminated labels for load served where identification card is not provided.

D. Panelboard submissions shall include a ladder diagram, physical and electrical data, numbering and trip rating of each circuit breaker. Panelboard shall bear the UL label of approval.

E. Panelboard types as indicated on the drawings shall be the minimum size and type. Provide a larger size and type of panelboard as necessary for the breakers and features/accessories as indicated.

F. Circuit breaker arrangement shall be per the panel schedule.

G. Panel nameplate label shall identify panel, minimum AIC rating, and equipment it is fed from, example as follows, "PANEL-XXX, MAX. 22,000 AIC, FED FROM YYY". Where fed via a transformer, it shall read, "PANEL-XXX, MAX. 14,000 AIC, FED FROM YYY THRU TRANSF-ZZZ". Label shall be engraved plastic per section 26 00 00. 1/2 inch letters for panel identification.

2.6 INDIVIDUAL CIRCUIT BREAKERS

A. Circuit breakers shall be molded case thermal magnetic type with trip rating as scheduled on drawings.

B. Circuit breakers shall be quick-make, quick-break, trip free operation. The trip-free mechanism shall be independent of manual handle control. All circuit breakers shall be fully rated to withstand the available short circuit current as designated on the drawings. Series rated equipment will not be acceptable.

C. Breakers to be in NEMA-1 (indoor) or NEMA-3R (damp, wet, and outdoor) enclosures. NEMA-3R enclosures shall have the handle concealed behind the cover, and the hinged cover shall be provided with padlocking tabs. Each circuit breaker shall be identified with an engraved, laminated phenolic plate showing the load served or the function of the circuit breaker and trip rating. The nameplate shall be attached with oval head machine screws tapped into the front of the board. Equip breaker handles with padlocking "lock-off" devices.

2.7 PULL LINE

A. Furnish and install pull line in all unused (empty) raceways. Pull lines shall not rot or mildew.
1. Conduits up to 1.5": 1/8" diameter braided line of polypropylene with 200 lbs. tensile strength, IDEAL, Jet-Line #232, or equal.
2. Conduits 2" or larger: 3/16" polypropolene pull rope with 800 lbs. tensile strength, IDEAL Pro-Pull or equal.

2.8 PRECAST CONCRETE PULLBOXES/HANDHOLES

A. Boxes shall be size as indicated on the drawings. Design loads shall consist of live, dead, impact, hydrostatic, and other loads. Live loads shall be for H-20 and/or H-20-S16-44, or as required, per A.A.S.H.O. standard specifications for highway bridges with revisions. Design loads shall be sixteen KIPS. Concrete shall be per ASTM-C-33-64. Lightweight concrete shall conform to ASTM-C-33-64T. Cement shall be Portland Cement meeting ASTM-C-150 Type II standards. Compressive strength shall be minimum 4,000 psi at 28 days.

B. Boxes: Precast high-density reinforced concrete with end and side knockouts, and extension as required. Minimum 1.5" wall thickness. Acceptable manufacturers shall be Forni, Christy or equal.

A. Covers: Covers shall be reinforce concrete with hold down bolts. Where susceptible to vehicular traffic, use H_20 rated traffic cover. All covers shall be factory marked, see drawings for marking/label required. If not noted, use the following markings:

SYSTEM	MARKING
Power	Electrical
Telephone	Telephone
Clock, Unified Signal, etc.	Signal
Fire Alarm	Fire Alarm
Television	T.V.
Lighting	Lighting
Grounding	Ground

B. Installation:
1. Excavate around area to accept box, a minimum of 4" around all sides for ease of installation. Provide 12" of compacted pea gravel for bedding and/or to facilitate drainage.
2. Backfill shall consist sand or fine earth, compacted. Saturated soil or large rocks shall not be used. No voids shall remain between walls and native soil.
3. Grout and seal conduits at box entry with cement. Provide with conduit end bells.

E. The metal covers of lighting and power pull boxes shall be ground bonded to the circuit grounding conductor(s) in the pull box. The size of the bonding conductor shall be the same size as the associated circuit ground conductors.

2.9 BACKBOARDS

A. Backboards shall be 3/4" plywood, type A-C grade fire treated for interior use, and type Exterior Grade for outdoor use. Backboards located outdoors shall be provided with one coat primer and two coats of exterior paint. Backboards in terminal cabinets shall be same as for interior use.

2.10 TERMINAL CABINETS

A. Terminal, relay, and contactor cabinets shall be code gauge, size as indicated with appropriate trim for mounting as indicated, with hinged door and cylinder type locks. NEMA-1 for indoor use in dry areas and NEMA-3R for outdoor use or in wet locations. Surface mounted cabinets shall not have knockouts. Provide backing plate/board for mounting equipment. Circle A_W or equal.

B. Provide engraved plastic label per section 26 00 00. Label shall identify the type of cabinet and designation, example "FIRE ALARM - FCA" and "EXTERIOR LIGHTING - RA".

2.11 GROUND RODS

A. Ground rods shall be 3/4 in dia. x 10 ft. copper clad steel.

2.12 SURFACE METALLIC AND NONMETALLIC RACEWAYS

A. The surface raceway system for branch circuit wiring and/or data network, voice, video and other low-voltage wiring shall be manufactured by the Wiremold Company, or equal. Raceway series as indicated on the plans. The raceway and all system components must be UL listed and exhibit non-flammable self-extinguishing characteristics. The raceway shall be a two-piece design with a base and a snap-on cover.
1. The nonmetallic raceway base and cover shall be manufactured of rigid PVC compound, available in ivory color. Exposed cuts shall be covered with cover clips.
2. The metal raceway base and cover shall be manufactured of galvanized steel, ivory finish and suitable for field painting.

B. A full compliment of fittings must be available including, but not limited to flat, internal and external elbows, tees, entrance fittings, boxes, covers, adapters, cover clips, and end caps. The fittings shall match the base and cover, and be of matching colors. All fittings shall be supplied with a base where applicable to eliminate mitering. A transition fitting shall be available to adapt to other Wiremold series raceways. Field cuts shall be clean, straight, and true with no rough edges.

C. For multicompartment raceways, device brackets shall be available for mounting standard devices in-line or offset from the raceway. A device bracket shall be available for mounting up to four devices at one location. Faceplates shall match and fit flush in the device plate and shall overlay the cover and base to hide uneven cuts. They shall match the raceway base and cover. The raceway manufacturer will provide a complete line of connectivity outlets and modular inserts for UTP (i.e. data jacks), STP (150 ohm), Fiber Optic, Coaxial and other cabling types with face plates and bezels to facilitate mounting.

D. Work shall include furnishing all raceway and appropriate fittings and device plates to install a nonmetallic surface raceway system. Installer shall comply with detailed manufacturer's instruction sheets, which accompany system components as well as system instruction sheets.

2.13 COVER PLATES

A. Switch and receptacle cover plates shall be smooth nylon type. Cover plates for other devices/outlets such as data, telephone, television, etc. shall be nylon. Cover plate color shall be ivory, matching all systems.

PART 3 EXECUTION

3.1 CONDUITS

A. All conduits shall be rigid steel or IMC except EMT may be used at following locations:
1. In dry locations in concealed furred spaces.
2. In partitions.
3. For exposed work indoors except:
a. In special locations prohibited by Code, such as hazardous locations, rigid steel shall be used.
b. Conduits exposed on/above the roof shall be rigid steel up to 10 ft above roof surface.
4. Concealed above suspended ceilings or ceilings directly attached to structure above.

B. Provide a separate bonding conductor in all flexible connections/conduit. Flexible conduit shall be one continuous length without couplings.

C. Run conduit concealed in areas having finished ceilings and in walls. Run all cross conduits and vertical risers or drops concealed in wall and/or partitions. Should it be necessary to notch any framing members, make such notching only at locations and in a manner as approved by the Architects. Where concealing conduit is not possible or practical, conduit may be run exposed in areas only where so permitted by the Architect. Install exposed conduit run neatly, parallel to or at right angles to structural members.

D. Support conduit with straps and secure to wood structure by means of bolts or lag screws, to concrete by means of insert or expansion bolts, to brickwork by means of expansion bolts, and to hollow masonry by means of toggle bolts. Expanders and shields shall be steel or malleable iron.

E. Conduits installed in contact with ground shall be PVC_40 conduit.
1. Provide a minimum 2" of sand bedding at the bottom of the trench before laying conduits. Maintain 2" separation between conduits. Maintain 12" separation between power conduits (120 Volts and greater) and low voltage signal conduits.
2. Backfill shall be sand, from bottom to 12" below finished grade. Fine earth native backfill to be used for the last 12".
3. Risers, including elbows, shall be double-wrapped rigid steel or PVC coated rigid steel conduit; except that risers, including elbows and bends, at in-ground pull box locations shall be PVC-40 terminated with endbells.
4. When installing underground conduits to specified depth, depth shall be taken from the top of the conduit to the finished grade level. Unless otherwise specified, underground conduits outside of foundation line shall be installed with top side not less than 24" below finished grade.
5. The minimum size of conduits outside the foundation line shall be 1".
6. Bends shall be wide sweeping type with minimum 24 inch radius bends.
7. Manufactured elbows are required to be used for all 22.5 and 45 degree bends, and 90 degree elbows, and combinations thereof. Field bends may be used for other bends with approved field benders specifically for such purpose and such bends shall not compromise the integrity and nominal thickness of the conduit wall.
8. For all trenches, provide a 6" wide non-biodegradable metal-detectable polyethylene tape at 12" below grade, 5-mil thick, labeled " CAUTION ELECTRIC LINE BURIED BELOW". Fluorescent red for electric power conduits and fluorescent orange "TELECOMMUNICATIONS" for telephone and signal conduits. Use Fluorescent red for common trenches. Tape shall be continuous for full length of trench.

F. Support individual conduits with 2-hole steel straps. 1-hole steel straps may be used for conduits 1" and smaller concealed in wall or above ceilings.

G. Galvanized iron hanger rods sizes 1/4" diameter and larger with spring steel fasteners, clips or clamps specifically designed for purpose for conduits up to 1" size may be used.

H. Individual conduits 3/4" and smaller run above wire suspended ceilings may be supported from independent hanger wires with approved spring steel clips. Wire ties will not be acceptable. Wire shall be taut and secured to ceiling and structure above.

I. Support multi-parallel horizontal conduit runs with trapeze type hangers consisting of two or more steel hanger rods, cross channels, J-bolts, clamps, etc.

J. Sizes of rods and cross channels shall be designed to support four times actual load. Hanger rods shall have safety factor of 5 based on ultimate strength of material used.

K. Conduits for data, telecommunications, signal, video, TV, and/or containing fiber optic, coaxial, or OSP (outside plant) multi-pair cables shall have a minimum inside bend radius per CEC Table 346-10 (do not use exception); except that conduits 2" to 4" shall be minimum 24" radius bends.

L. After installation of conductors, all conduits routed below grade shall be sealed at each opening, including risers and in pull boxes, to prevent the entrance of water and debris.

M. Relocatable (Portable) Buildings:
1. Where building is not secured to a permanent foundation, conduits connecting to Portable Buildings, shall be installed so as to allow 12 inches of building movement in all directions. Conduit riser shall extend to approximately 4 inches above ground 12 inches from the building, continuing with a flexible conduit connection to the panel, cabinet, junction box, etc.
2. For ease of disconnection for interior conduits, provide flexible conduit connection through junction box between building modules.

N. Conduits not terminated into a box or cabinet, such as stubbed to a backboard, shall be terminated with an insulated bushing. Bushings for metallic conduits shall be metallic type secured by set screw, compression, or threaded type. Bushings for PVC conduits shall be glued in place.

O. Although circuiting is shown as diagrammatic, their point-to-point destinations and their indication of above/below ground route shall be followed as much as possible. Where site conditions dictate that an alternate means of routing will alleviate conflicts, the alternate means will be considered with prior approval by the Engineer.

P. Horizontal runs of conduit above suspended wire lay-in ceilings shall not be less than 12" above the ceiling.

Q. Maintain 12 inch separation between power circuits (>120V) and all signal circuits (data, telephone, speaker, clock, etc.) to prevent interference.

R. Feeder conduits connected to panels/switchboard shall have ground lug bushing connected to equipment ground buss with ground wire same size as largest ground wire in the panel/switchboard.

S. Conduits penetrating through the roof shall be secured within 12" below roof and supported within 12" of the penetration on the roof.

T. Where conduits cross building expansion/seismic joints provide a short length of flexible conduit (do not exceed 6 ft.) and fittings listed as a grounding means, or in locations where flex conduit cannot be used provide UL listed expansion/seismic fittings.

U. Where conduit passes through finished walls or ceilings, provide steel escutcheon plates, chrome or painted as directed. Conduit which penetrate floor slabs, concrete or masonry walls shall be grouted and sealed watertight at penetrations.

3.2 CAPPING

A. Cap conduits during construction with manufactured seals. Swab out conduits before wires are pulled in.

B. Cap all empty conduits below grade and in pull boxes with manufacturer's caps to prevent entrance of water and debris, attach pull string to cap.

3.3 PENETRATIONS OF FIRE RESISTIVE WALLS AND PARTITIONS

A. Penetrations of protected openings (fire rated walls, ceilings, floor-ceilings, roofs, etc.) shall be protected in accordance with the California Building Code, Part 2, Chapter 7, Title 24. Penetrations shall apply to conduits (raceways), cable trays, boxes, cabinets, panels, cables, etc.

B. Fire stopping shall be provided at penetrations of fire resistive walls, floors, ceilings, floor-ceiling assemblies, and roofs. Fire-stopping shall have a "F" and/or "T" rating as determined by tests conducted in accordance with ASTM E 814 or UL-1479. Fire stopping system/materials shall be UL Listed.

3.4 ACCESS DOORS

A. Furnish and install access doors wherever required whether shown or not for easy maintenance of electrical systems; for example, inaccessible areas and attics containing heat detectors, junction boxes, etc. Access doors shall provide for complete removal and replacement of equipment. Provide fire rated access doors where located in fire rated partitions.

3.5 BOXES

A. Nails shall not be used to support outlet boxes. Boxes must be accurately placed for finish, independently and securely supported by adequate wood backing or by manufactured adjustable channel type heavy-duty box hangers. For metal stud construction, use metal box hangers only. Box hangers shall be securely tied or welded (where permitted) or screwed to metal studs. Paint weld with rust inhibitor.
1. Outlet boxes with receptacles: Provide a solid pigtail (green) ground wire grounded to the metallic outlet box. Pigtail shall also ground device and separate ground conductor if available. Size of ground wire to match overcurrent protection.

B. Install pull boxes or junction boxes as required in accessible spaces but do not install in finished areas unless approved by Architect.

C. Where fire rated construction is required (refer to Architectural Drawings), do not locate electrical outlet boxes back-to-back. Provide a minimum of 24" horizontal separation between outlet boxes on opposite side of the same wall. Where such restrictions cannot be met, provide fire-stopping around box such as 3M Moldable Putty Pads or equal.

D. Boxes up to 100 cubic inches located in suspended wire ceilings may be supported through an independent hanger wire with approved tension clips. Wire shall be taut. Secure wire to the structure above and the ceiling below.

3.6 CONDUCTORS

A. Splices and joints for #10 AWG or smaller wiring shall be twisted together electrically and mechanically strong and insulated with approved type insulated electrical spring connectors, Scotchlok or Ideal. Joints and connections for #8 AWG or larger shall be made with Burndy, T & B, or approved equal, solderless tool applied pressure lugs and connectors. Uninsulated lugs and wire ends shall be insulated with layers of plastic tape equal to insulation of wire and with all irregular surfaces properly padded with "Scotchfil" putty prior to application of tape. Tape shall be equal to Scotch #33, General Electric #AW-1, or approved equal. Feeder splicing is not permitted.
1. In special instances where feeder splicing is allowed by the Engineer, it shall be made with high compression sleeve type connector followed by manufactured splicing kit utilizing as insulators, resins poured into a ready-to-use plastic mold to provide a uniform, moisture-proof tough, impact-resistant insulation.
2. Conductor splices below grade shall meet ANSI C119.1-1986 and UL 486D Standards. Raychem WCSM or FCSM heavy wall heat shrink tubing; or RVS or RVC series if use of flame heat is prohibited. Conductors to be joined with compression sleeve connectors.

B. Use only UL approved wire pulling compound as lubricant.

C. Lace conductors together with waxed linen lacing cord, T & B "Ty-Rap", Holub "Quik-Wrap" or equal, in a neat and workmanlike manner in panelboards, wireways, raceways, pull boxes and similar locations.

D. #12 AWG wire shall be minimum size wire used for power circuits.

E. All conductors shall be in conduit unless otherwise indicated.

F. Conduit sizes shall be based on code fill table for THW insulated wires to accommodate the number, size, and type of wires shown or specified.

G. Wiring installed in pull boxes or junction boxes, where wire is pulled through without terminations (except splices), shall have a service loop around the interior of the box for 360 degrees utilizing the largest circumference.

3.7 GROUNDING

A. Grounding and ground bonding of the electrical installation shall be in accordance with CEC Article 250, and any applicable codes. Ground fittings shall be approved manufactured type, installed and connected to conform with Code requirements.

B. Neutral conductors and noncurrent-carrying parts of equipment at each installation shall be grounded in accordance with applicable code. Ground conductor shall be copper having a current capacity sized in accordance with CEC.

C. All equipment cases, etc., shall be completely grounded to satisfy requirements of CEC. Install bond wire in flexible conduit. Install copper bond wire, sized in accordance with CEC, in all nonmetallic raceways and bond to all metallic parts using approved fittings.

D. Each building shall be provided with a grounding electrode connected to the metallic enclosure of the building disconnecting means. Grounding electrode conductor shall be sized per CEC table 250_66.

E. Total ground resistance shall not exceed 25 ohms.

F. All connections shall be made with solderless connectors or molded fusion-welding process.

G. Equipment grounding conductors shall be insulated with a continuous green outer finish along its entire length. Conductors size #4 AWG and larger may be identified (with green electrical tape applied half-lapped) at each end and at every point where the conductor is accessible. Tape shall be applied from its point of entry to point of exit or termination.

H. Insulated grounded (neutral) conductors shall be identified with a continuous white outer finish along its entire length. Neutral conductors #4 AWG or larger can be identified by a distinctive white marking (applied half-lapped with white electrical tape) for the last 12 inches at each end.

3.8 FIELD TESTS

A. General: Perform field test in the presence of the Owner's Representative except as otherwise specified. Provide required labor, materials, equipment and connections to perform tests. Document results and submit them to the Owner's Representative. Repair or replace all defective work.

B. Perform Insulation Resistance (IR) "Megger" Testing per NETA Standards. Submit test results. Provide testing for all feeders 100 Amps and higher.

C. Verify operation of starters and install overload protection devices sized in accordance with the motor full load current.

D. Each ground rod shall be tested. A ground rod which does not have a resistance to ground of 25 ohms or less shall be augmented by one additional ground rod at no less than 8 feet from each other.

3.9 CLEANING

A. Brush and clean work prior to concealing, painting and acceptance. Performed in stages if directed.

B. Clean and repair soiled or damaged painted exposed work and match adjoining work before final acceptance.

C. Remove debris from inside and outside of material, equipment and structures.

3.10 WARRANTY

A. All materials and installation shall be provided with a one (1) year warranty which shall include replacement parts, labor, retesting, and travel to and from the job site. The warranty period shall begin after final acceptance of the project.

END OF SECTION

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STATE OF CALIFORNIA

PROJECT:

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE

4000 Suisun Valley Rd,
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REF	DESCRIPTION	DATE
-	-	-

PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: -
CHECKED BY: -

SHEET NAME:

SPECIFICATIONS

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IDENTIFICATION STAMP
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02 114923
AC TM FLS DCSS
DATE 3.11.16

SHEET NUMBER:

A10.5A

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE + SOLANO COMMUNITY COLLEGE DISTRICT

SECTION 27 05 50
INSTALLATION AND IDENTIFICATION OF SIGNAL CABLES

SEE DISTRICT STANDARD SPECIFICATION 27 00 00 TELECOMMUNICATIONS CABLING SYSTEM,

SECTION 27 13 20
DATA COMMUNICATIONS SYSTEM

SEE DISTRICT STANDARD SPECIFICATION 27 00 00 TELECOMMUNICATIONS CABLING SYSTEM,

SECTION 28 31 00
FIRE DETECTION AND ALARM SYSTEM

PART 1 GENERAL

The requirements of Section 26 00 00 and 26 05 00 apply to all work hereunder.

1.1 SCOPE

A. Furnish and install a low voltage programmable, networked fire alarm system as specified herein.

B. The fire alarm system shall conform to the California Electrical Code and NFPA 72 National Fire Code.

C. Installation of the fire alarm system shall not be started until detailed specifications and battery calculations for each component of the system have been approved by the Engineer and the Base Fire Marshal.

D. Upon completion of the installation of the fire alarm system, a satisfactory test of the entire system shall be made in the presence of the Base Fire Marshal.

1.2 RELATED SECTIONS

A. Comply with Division 1, General Requirements and documents referred to therein.

B. Provide all labor, equipment, and materials to complete the Fire Alarm System work in accordance with local and state regulations.

1.3 REFERENCES/APPROVALS

A. The entire installation, including materials and equipment shall meet or exceed the minimum standards and requirements of the following:
2. Underwriters' Laboratory Inc. listing service.
3. NFPA National fire codes.
4. State of California Title 24.

1.4 SYSTEM DESCRIPTION

A. The Fire Alarm System shall be a zoned, non-coded, electronically supervised, microprocessor based hardwired/analog system as manufactured by Edwards Systems Technology (EST).
1. It shall be complete with all necessary hardware, software and memory specifically tailored for this installation. It shall be possible to permanently modify the software on site by using an integral service console or plug in programmer. The burning of EPROM to store changes permanently is unacceptable. The main panel shall monitor and control every point and zone in the entire system. Programming of all system points shall be from the main panel.

B. Provide contacts for central station monitoring for alarm and trouble, as well as sprinkler flow and sprinkler tamper contracts. The central station monitoring agreement will be a function of the owner, and will not be included in this contract.

1.5 SUBMITTALS

A. Descriptive data for all products and materials. If any substitutions are rejected the specified product shall be provided.

B. Recommended application and installation methods, including area coverage for smoke detectors and fire alarm load for signaling appliances.

C. Information and data, such as drawings showing device locations and types, riser diagrams, wiring diagrams, approvals, test data, etc. required. Provide worst case voltage drop and battery calculations in the drawing package.

D. Complete shop drawings of all assembled products, including wiring diagrams.

E. Drawings identifying all terminals and illustrating all device wiring connections.

F. All equipment and materials used shall be standard components, regularly manufactured and of the same manufacture.

G. All systems and components shall have been thoroughly tested and proven in actual use.

1.6 PROJECT RECORD DOCUMENTS

A. Submit under provisions of General Conditions.

B. Record actual locations of initiating and signaling appliances. Include initiating device and control relay addresses on these documents.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the products specified in this section with minimum of ten years experience, and with service facilities within 100 miles of this project.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. The material specified is as manufactured by Edwards Systems Technology (EST) or equal. All products shall be from a single manufacturer.

2.2 FIRE ALARM CONTROL PANEL

A. The existing Control Panel is an Edwards Systems Technology EST3.

2.3 BOOSTER POWER SUPPLY

A. Booster Poser Supply: Self contained 24 VDC power supply with all necessary circuits to monitor and charge batteries, control and supervise four Class B and Class A NAC circuits and monitor two controlling inputs from external sources. Use: EST BPS6A.

2.4 INITIATION DEVICES

A. Smoke Detectors: Provide microprocessor based addressable photoelectric smoke detectors with separate base. Detectors shall store history log of alarms and troubles. Detectors shall have 32 different trouble codes and shall be able to alarm panel even when addressable data is not present. Use: EST SIGA-PS, SIGA-SB.

B. Heat Detectors: Provide microprocessor based addressable rate of rise detectors with separate base. Detectors shall store history log of alarms and troubles. Detectors shall have 32 different trouble codes and shall be able to alarm panel even when addressable data is not present. Use: EST SIGA-HRS, SIGA-SB.

C. Attic Heat Detectors: Provide 194 degrees F fixed temperature and rate of rise heat detectors with mounting plate. Use: EST 282B-PL.

2.5 ADDRESSABLE MODULES

A. Input Modules: Provide addressable input modules for all for all normally open zones such as waterflow and tamper switches. Modules shall store and report alarms and troubles and shall alarm system even upon loss of addressable data. Use: EST SIGA-CT1.

B. Control Relay Module: Provide addressable relay module where required for remote control. Use: EST SIGA-CR.

2.6 SIGNALING APPLIANCES

A. Visual Devices: Use wedge shaped strobes clearly labeled Fire in English. Polarize the strobes for supervised operation. Strobes shall provide a high intensity flashing light (candela to meet ADA) and shall be synchronized for visual signaling.

PART 3 EXECUTION

3.1 INSTALLATION

A. Installation shall be accomplished in a professional manner by manufacturer certified personnel regularly engaged in and experienced in this type of work.

B. All underground wiring shall meet CEC wet location listing requirements.

C. Use 18 AWG minimum size conductors for fire alarm addressable, hardwire and signal circuit conductors. Use 2 pairs of 16 gauge twisted pair for all network wiring. Install wiring in conduit.

D. All terminations shall be consistent as to the color of conductors throughout the system at like stations. Cables shall not be spliced in such a manner as to change the color code from one termination point to another.

E. No splices (joints) in wiring will be permitted except in terminal cabinets, junction boxes or equipment housing.

F. The entire system shall be checked by the contractor and shall test free of opens, grounds and shorts and shall be made to operate to the satisfaction of the Architect and Owner.

G. Conduct performance tests in presence of Fire Marshal after systems have been places into operation. Contractor shall furnish competent personnel for these tests. Contractor shall submit written certification stating that system and its component parts are as listed and approved by Base Fire Marshal, that installation conforms in all respects to requirements of National Electrical Code, NFPA 72 National Fire Code, that components used (and approved circuits) have not been modified or changed in any way to cause aforementioned approvals or guarantees to be void.

3.2 DEVICE MOUNTING

A. Locate outlets as noted on Drawings.

B. Install pull boxes and terminal cabinets as required in accessible spaces but do not install in finished areas unless approved by Architect.

3.3 MANUAL AND SUPPORTING DOCUMENTS

A. Furnish two copies of the following manuals:
1. Installation Service Manual.
2. Circuit Description.
3. Schematic Drawings.

END OF SECTION

A

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A	ADDENDUM 1	9/22/17

PROJECT CODE: SCCD-04
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SPECIFICATIONS

DSA APPROVAL STAMP:

SHEET NUMBER:

A10.6A

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE
SOLANO COMMUNITY COLLEGE DISTRICT

GENERAL NOTES:

1. MOUNTING HEIGHT IS TO THE CENTER OF EQUIPMENT, U.O.N. MOUNTING HEIGHTS OF SUSPENDED LIGHT FIXTURES ARE TO THE BOTTOM OF THE FIXTURE. U.O.N.
2. RECEPTACLES AND DEVICES INSTALLED ABOVE COUNTER SHALL HAVE THE BOTTOM OF COVER PLATE AT APPROX 2-INCHES ABOVE COUNTER OR BACKSPLASH.
3. CAP ALL EMPTY CONDUITS FOR FUTURE USE WATERTIGHT WITH MANUFACTURERS END CAP, WITH PULL STRING ATTACHED.
4. SEAL ALL EXTERIOR WALL PENETRATIONS WATERTIGHT WITH SILICONE GROUT.
5. SEAL ALL WALL AND CEILING PENETRATIONS WITH GROUT. WHERE CONDUITS PENETRATE FIRE RATED BARRIERS, SEAL PENETRATIONS WITH FIRE RATED COMPOUND TO MATCH OR EXCEED BARRIER RATING.
6. PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE SEALED AS REQUIRED BY CBC.
7. ALL CONDUITS AND BOXES ON THE EXTERIOR SHALL BE PAINTED TO MATCH THE ADJACENT FINISH.
8. WHERE FIRE RATED CONSTRUCTION IS REQUIRED (REFER TO ARCHITECTURAL DRAWINGS), DO NOT LOCATE ELECTRICAL OUTLET BOXES BACK-TO-BACK. PROVIDE MINIMUM 24" HORIZONTAL SEPARATION BETWEEN OUTLET BOXES PER CBC.
9. FIRE STOPPING SHALL BE PROVIDED WHERE PENETRATING ITEMS PASS ENTIRELY THROUGH BOTH PENETRATIVE MEMBRANES OF BEARING WALLS REQUIRED TO HAVE A FIRE-RESISTIVE RATING AND WALLS REQUIRING PROTECTED OPENINGS. FIRE STOPPING SHALL ALSO BE PROVIDED AT PENETRATIONS OF FIRE RESISTIVE FLOORS AND FLOORS WHICH ARE PART OF A CEILING-FLOOR ASSEMBLY. FIRE-STOPPING SHALL HAVE AN 'F' AND/OR 'T' RATING AS DETERMINED BY TESTS CONDUCTED IN ACCORDANCE WITH CBC STD. 43-6.
10. JUNCTION BOXES, CABINETS, EQUIPMENT ENCLOSURES, SWITCHES, PANELS, ETC. INSTALLED OUTDOORS, OR IN WET OR DAMP LOCATIONS, SHALL BE RATED NEMA-3R FOR OUTDOOR ENVIRONMENTS. PROVIDE MINIMUM 1/4" AIR GAP BETWEEN ENCLOSURE AND WALL SURFACE. PROVIDE GALVANIZED METAL CHANNELS FOR MOUNTING ENCLOSURE ONTO WALL AS REQUIRED.
11. ALL BOXES FOR LIGHT SWITCHES SHALL HAVE CIRCUIT ID HANDWRITTEN (WITH PERMANENT FELT PEN) ON THE BACK INSIDE OF THE BOX.
12. ALL RECEPTACLES SHALL HAVE CIRCUIT ID ON THE COVERPLATE. USE TYPEWRITTEN "CLEAR TAPE". CLEAN SURFACE BEFORE ADHESIVE TAPE IS APPLIED. EXAMPLE, "HA-11".
13. ALL WIRING SHALL BE IN CONDUIT, ALL CIRCUITS SHALL BE CONCEALED EXCEPT THAT ON EXISTING SURFACE AND IN DRY LOCATIONS WHERE NECESSARY AND ACCEPTABLE TO THE ARCHITECT, SURFACE METAL RACEWAY (SMR) CAN BE USED, WIREMOLD OR EQUAL. 1/2" CONDUIT WITH LESS THAN #12 WIRES SHALL CORRESPOND TO A V200 RACEWAY, OTHERWISE USE V500; 3/4" CONDUIT SHALL CORRESPOND TO A V700; 1" CONDUIT SHALL CORRESPOND TO A V2000; 1-1/4" CONDUIT SHALL CORRESPOND TO A V2400BC. SMR SHALL BE IVORY COLOR AND SHALL BE SECURED TO SURFACES WITH 2 HOLE STRAPS. PROVIDE ALL FITTINGS, ADAPTERS, COUPLINGS, BOXES, ETC. AS REQUIRED FOR A COMPLETE SYSTEM. PROVIDE MATCHING SURFACE OUTLET BOX. PAINT TO MATCH ADJACENT FINISH.
14. DEVICE AND EQUIPMENT HEIGHTS SHALL BE COORDINATED WITH ARCHITECTURAL PLANS AND ELEVATIONS. CONFLICTS SHALL BE ADDRESSED TO THE ARCHITECT PRIOR TO ROUGH-IN.
15. COORDINATE EXACT LOCATION OF EXTERIOR WALL LIGHT FIXTURES, SPEAKERS, ETC. WITH ARCHITECTURAL ELEVATIONS.
16. ELECTRICAL CIRCUITS TO AC UNITS SHALL COME UP INSIDE OF AC CURBS, UNLESS THE AC UNIT DOES NOT ALLOW THIS.
17. IN CERTAIN ROOMS, CIRCUITING AND DEVICES/EQUIPMENT IN ONE ROOM ARE INDICATED TO BE SIMILAR TO ANOTHER ROOMS. PROVIDE ALL SUCH CONDUIT, WIRING DEVICES, AND EQUIPMENT TO BE THE SAME AS THE OTHER ROOM INDICATED. MAKE NECESSARY MINOR ADJUSTMENTS FOR SIMILAR ROOMS THAT ARE OPPOSITE HAND, FLIP-FLOPPED, MIRRORED, OR MINOR WALL DIFFERENCES. THE FOLLOWING ITEMS ARE NOT INCLUDED IN THIS SIMILAR LAYOUT AND ARE SPECIFIC TO EACH ROOM, UNLESS SPECIFICALLY NOTED OTHERWISE.
    A. AIR CONDITIONING AND MECHANICAL EQUIPMENT CONNECTIONS.
    B. EQUIPMENT THAT IS N.I.E.S. BUT REQUIRE ELECTRICAL CONNECTIONS.
    C. LAYOUT OF THE CABLE SUPPORT SYSTEM (CABLE HOOKS OR CABLE TRAY.).
18. NOT USED
19. FOR CONDUITS ROUTED BELOW FOOTING AT ELECTRICAL ROOMS, COORDINATE WITH STRUCTURAL DRAWINGS.

EXISTING CONDITIONS:

1. DEVICES / EQUIPMENT AND CIRCUITING SHOWN AS EXISTING AND/OR EXISTING TO BE REMOVED ARE BASED ON REVIEW OF EXISTING AVAILABLE DOCUMENTS AND VISUAL FIELD VERIFICATION. SUCH INFORMATION MAY NOT BE ACCURATE. PRIOR TO DEMOLITION AND CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS TO DETERMINE ACCURACY. WHERE EXISTING CONDITIONS DO NOT REFLECT THE INFORMATION SHOWN ON THE PLANS, AND WHERE CONTRACTOR'S INVESTIGATION CANNOT DETERMINE THE PROPER ADJUSTMENTS NEEDED TO MEET THE INTENT OF THE DESIGN, CONTRACTOR SHALL INFORM ARCHITECT.
2. EXISTING CIRCUITS AND HOMERUNS WERE BASED ON EXISTING DOCUMENTS.
3. REMOVED EQUIPMENT SHALL MAINTAIN CIRCUIT CONTINUITY FOR DEVICES / EQUIPMENT CONNECTED TO THE SAME CIRCUIT. EXTEND AND/OR REROUTE THE EXISTING CIRCUITS AS NEEDED.
4. REVISE EXISTING PANEL SCHEDULES TO REFLECT THE NEWLY CONNECTED LOADS AND SPARE CIRCUITS.
5. DO NOT REUSE ANY REMOVED MATERIALS SUCH AS CONDUIT, WIRING, AND BOXES.
6. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL VERIFY AND DOCUMENT WITH THE OWNER THE PROPER FUNCTION AND PHYSICAL APPEARANCE OF EXISTING ELECTRICAL EQUIPMENT (DEVICES, LIGHTING, RECEPTACLES, ETC.) IN THE ROOM AND THE AREA OF WORK UNDER THIS CONTRACTOR. IF AFTER CONSTRUCTION ANY EXISTING EQUIPMENT IS DAMAGED OR DOES NOT FUNCTION PROPERLY, THE CONTRACTOR SHALL REPAIR OR REPLACE THE EQUIPMENT IN-KIND FOR PROPER FUNCTION AND APPEARANCE.

ELECTRICAL COMPONENT ANCHORAGE NOTE:

ALL ELECTRICAL COMPONENTS SHALL BE ANCHORED & INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAILS IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2013 CBC, SECTIONS 1616A1.1.18 THROUGH 1616A1.26 AND ASCE 7-10 CHAPTER 6 AND 13.

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 ATTACHMENT OF THE FOLLOWING ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED 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 REQUIRED DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS & EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

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, 13.6.7, 13.6.5.6, AND 2013 CBC, SECTIONS 1616A1.23, 1616A1.24, 1616A1.25 AND 1616A1.26.

THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS (OPM #) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE ELECTRICAL DISTRIBUTION SYSTEMS.

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

TERMINAL CABINET SCHEDULE

DESIGNATION	SIZE			MOUNTING		NEMA-1	NEMA-3R
	W	H	D	SURFACE	FLUSH		
FATC-H	14"	24"	6"	■			■
STC-H	14"	24"	6"	■			■

NOTES:

1. ALL TERMINAL CABINETS SHALL BE NEMA-1 WITH HINGED DOORS, CYLINDER TYPE LOCKS, & 3/4" PLYWOOD BACKBOARD, U.O.N.
2. PROVIDE TERMINAL BLOCKS, TYPE AS REQUIRED.
    A. SIEMENS #66M1-50 WITH #8B STAND-OFF. MAKE FULL USE OF BRIDGE CLIPS.
    B. BUCHANAN #0525 SERIES. PROVIDE CHANNEL CLAMPS, CHANNEL AND END SECTIONS.

ABBREVIATIONS & DESIGNATIONS

(E)	EXISTING
FA	FIRE ALARM
FABP	FIRE ALARM SIGNAL BOOSTER PANEL
FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINAL CABINET
GND	GROUND
MT	EMPTY CONDIT WITH PULL CORD
MTC	CONDUIT WITH WIRING AS INDICATED OR AS REQUIRED
(N)	NEW
NIES	NOT IN ELECTRICAL SECTION OF THESE PLANS AND SPECIFICATIONS
STC	SIGNAL TERMINAL CABINET
UON	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
15,30,15,110	FIRE ALARM VISUAL DEVICE SUBSCRIPTS- NUMBER INDICATES LIGHT INTENSITY

POWER AND SIGNAL SYSTEMS DURING CONSTRUCTION

1. POWER AND SIGNAL SYSTEMS: SYSTEMS SHUT-DOWNS SHALL BE COORDINATED WITH THE OWNER. SYSTEMS DOWN TIME SHALL OCCUR ONLY ON THE WEEKENDS AND DURING "OFF" HOURS. THE WEEKEND SHALL BE DEFINED AS FROM 5:00 PM FRIDAY TO THE NEXT 6:00 AM MONDAY. "OFF" HOURS SHALL BE DEFINED AS FROM 5:00 PM EVENING TO 6:00 AM THE NEXT MORNING. NORMAL BUSINESS HOURS SHALL BE DEFINED AS 6:00 AM MONDAY TO 5:00 PM FRIDAY WITHIN THE SAME WEEK. DURING BUSINESS HOURS, POWER SHALL BE PROVIDED AND SIGNAL SYSTEMS SHALL BE OPERATIONAL TO THE CAMPUS.
2. SIGNAL SYSTEMS SHALL INCLUDE TELECOR INTERCOM, PAGING, CLOCK SYSTEM, ADEMCO INTRUSION, DATA, VOIP TELEPHONE, TELEVISION, AND HARRINGTO FIRE ALARM.
3. THROUGHOUT CONSTRUCTION, THE ELECTRICAL AND SIGNAL SYSTEMS SHALL REMAIN IN OPERATION.
4. SIGNAL SYSTEMS: PROVIDE DEVICES AS SHOWN ON THE DRAWINGS AND ALL NECESSARY EQUIPMENT INCLUDING HARDWARE, WIRING AND PROGRAMMING FOR A COMPLETE AND OPERATIONAL SYSTEM PER SCHOOL DISTRICT REQUIREMENTS. COORDINATE WITH SCHOOL DISTRICT FOR SYSTEM OPERATIONS PRIOR TO BID. TEST SYSTEM TO COMPLY WITH MANUFACTURER'S OPERATION REQUIREMENTS. DEVICES AND EQUIPMENT ADDITIONS SHALL NOT VOID THE EXISTING EQUIPMENT WARRANTY.
5. LOCAL FIRE AUTHORITY SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF FIRE ALARM SHUT DOWN.

ELECTRICAL SYMBOLS LIST

- CONDUIT CONCEALED BELOW FLOOR OR GRADE.
- CONDUIT CONCEALED IN CEILING OR WALL.
- HOMERUN TO RESPECTIVE PANEL OR TERMINAL.
- INDICATES #12 (GREEN) GROUND WIRE; OTHER SIZES AS INDICATED.
- NOTE: BRANCH CIRCUIT WITHOUT FURTHER DESIGNATION IS A 2#12 WIRE CIRCUIT. FOR MORE THAN 2#12 WIRES AS FOLLOWS: —///— 3#12, —////— 4#12, ETC. FOR OTHER SIZES AS FOLLOWS: —///— 3#10, —////— 4#6, ETC. (10 / 6)
- FULL-BOX WITH GROUND ROD, SEE DETAIL-B/E4.1A.
- PANELBOARD, SEE SCHEDULE.
- TERMINAL CABINET BACKBOARD.
- 15 AMP DOUBLE DUPLEX RECEPTACLE MOUNT IN IDF.
- FIRE ALARM END OF LINE DEVICE.
- FIRE ALARM EXTERIOR HORN.
- FIRE ALARM HORN/STROBE, 48", 15cd, 75cd U.O.N.
- ADDRESSABLE 135° F CEILING HEAT DETECTOR, FIXED TEMPERATURE WITH R-O-R.
- FIRE ALARM ADDRESSABLE 190° F ATTIC HEAT DETECTOR.
- ADDRESSABLE PHOTO-ELECTRIC CEILING SMOKE DETECTOR.
- FACP — FIRE ALARM CONTROL PANEL.
- FABP — FIRE ALARM BOOSTER PANEL.
- FATC — FIRE ALARM TERMINAL CABINET.
- MM — MONITOR MODULE.
- CM — CONTROL MODULE.
- T — TRANSFORMER
- H1 NAP — SINGLE DATA OUTLET WITH WIRELESS ACCESS PANEL, WALL MOUNTED, 49"-0".
- H2 — DATA OUTLET WITH 2 PORTS, 18". To CENTER LINE To TOP OF Box
- TELEPHONE HANDSET, WALL MOUNTED, 48". MATCH EXISTING SYSTEM.
- IDF — INTERMEDIATE DISTRIBUTION FRAME.

OPEN WIRED LOW VOLTAGE CABLE WIRING NOTES:

(APPLICABLE TO LV SIGNAL SYSTEM WITHIN BUILDINGS.)

1. CABLE HOOKS SHALL ONLY BE USED WHERE SHOWN ON THE PLANS FOR OPEN WIRED LOW VOLTAGE CABLING IN DRY LOCATIONS INSTALLED ABOVE ACCESSIBLE T-BAR CEILINGS. ONLY LOW VOLTAGE LIMITED ENERGY CLASS-2 AND CLASS-3 SYSTEMS SHALL BE OPEN WIRED. ALL OTHER SYSTEM CLASSES SHALL BE ROUTED IN CONDUIT. OPEN WIRED CABLING SHALL BE RATED FOR THE ENVIRONMENT THEY ARE INSTALLED. A GENERAL PURPOSE RATING, SUCH AS "CM" CAN BE USED ABOVE CEILINGS. IN PLENUM SPACES USED PLENUM RATED CABLES, & FOR RISER LOCATIONS USE RISER RATED CABLES.
2. SYSTEM SEPARATION:
    A. DATA AND TELEPHONE CABLES SHALL SHARE ONE SET OF CABLE HOOKS.
    B. ALL OTHER SIGNAL CABLING SHALL SHARE THE OTHER SET OF CABLE HOOKS.
3. CABLE HOOKS USED TO SUPPORT OPEN WIRED CABLES SHALL BE AS FOLLOWS:
    A. B-LINE #BCH32 (2", MAX 10 4-PR UTP CABLES)
    B. B-LINE #BCH64 (4", MAX 280 4-PR UTP CABLES).
    C. B-LINE #BCH21 (1 5/16", MAX. 30 4-PR UTP CABLES).

    DO NOT FILL TO MORE THAN 75% CAPACITY, CABLE HOOKS TO BE PRE-GALVANIZED STEEL, 1.5" WIDE WITH ROUNDED EDGES, STATIC CAPACITY OF 30 lbs. CABLE HOOKS SHALL BE EASILY ACCESSIBLE AND BE APPROXIMATELY 12 TO 24 INCHES ABOVE CEILING.
4. STUB 3/4" CONDUIT FROM DEVICE BOX TO WITHIN 24" OF CABLE HOOKS. FOR DATA AND TELEPHONE OUTLETS STUB 1" CONDUIT. CABLE HOOKS MAY BE USED INSTEAD OF CONDUIT ABOVE ACCESSIBLE CEILINGS.
5. SUPPORT CABLE HOOKS AT 48" ON CENTER. SECURE TO WALL STUDS ABOVE CEILING OR SUSPEND WITH MINIMUM 1/2" STEEL RODS. PROVIDE ALL NECESSARY FASTENERS, RODS, HANGERS, BLACKETS, ETC., AS NEEDED.
6. WHERE CABLES MUST PASS ABOVE CEILINGS THAT ARE NOT ACCESSIBLE OR ARE NOT T-BAR CEILINGS, THE CABLING SHALL BE ROUTED IN CONDUIT(S). PROVIDE CONDUIT TO SPAN THE SPACE THAT IS NOT ACCESSIBLE AND BETWEEN CABLE HOOK SYSTEMS.
7. CABLES THAT PASS THROUGH FIRE RATED WALLS, SEISMIC JOINTS, SOUND WALLS, COVERED (SHEETROCK, PLYWOOD) WALLS, ETC. SHALL PASS THRU IN CONDUIT SLEEVES. PROVIDE FIRE SEALANT FOR FIRE RATED WALLS TO MAINTAIN RATING.
8. CONDUIT EQUIVALENTS:
    (1) 2" J-HOOK = (1) 4" CONDUIT.
    (1) 4" J-HOOK = (2) 4" CONDUITS.
    (1) 1 5/16" J-HOOK = (1) 2" CONDUIT.
9. LENGTH OF EACH J-HOOK SHALL NOT EXCEED 12" IN LENGTH.

PLOT DATE: 03-28-16

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OWNER

SOLANO COMMUNITY COLLEGE
SOLANO COMMUNITY COLLEGE DISTRICT
4000 Suisun Valley Rd, Fairfield, CA 94534

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER DAVID K. YU No. E14982 Exp. 6/30/17 ELECTRICAL STATE OF CALIFORNIA

HARRY A. YEE & ASSOCIATES, INC. ELECTRICAL ENGINEERS 4920 FREEPORT BOULEVARD SUITE D SACRAMENTO CALIFORNIA 95822 TEL: 916.454.5310 FAX: 916.454.4117 HYA Job #1612A

PROFESSIONAL STAMP:

PROJECT:

HORTICULTURE & PLANT SCIENCE INSTITUTE PHASE II: MODULAR BUILDINGS
4000 Suisun Valley Rd, Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	DSA SUBMITTAL	3/7/16

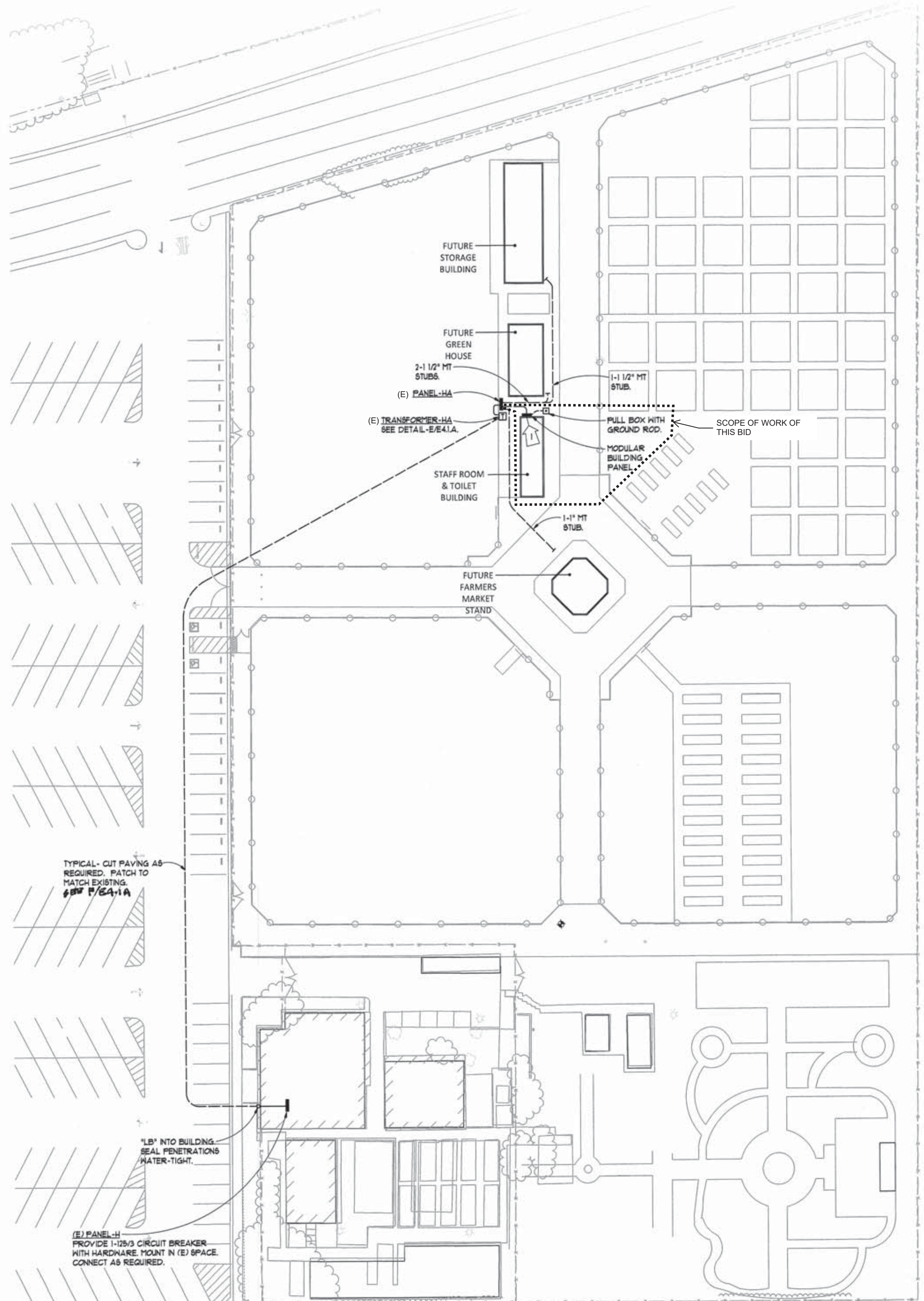
PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: HW-DB
CHECKED BY: DY

SHEET NAME:
ELECTRICAL SYMBOLS LIST, SCHEDULE, & NOTES

DSA APPROVAL STAMP:
IDENTIFICATION STAMP DIV OF THE STATE ARCHITECT 02 114923 AC TM FLS CS DATE 8/16/16

SHEET NUMBER:
E0.1A

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE ⊕ SOLANO COMMUNITY COLLEGE DISTRICT

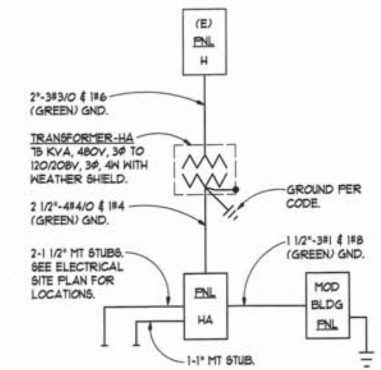


A / E1.1A **POWER SITE PLAN**

SCALE: 1" = 30'-0"

CONSTRUCTION NOTE:

1. PANELBOARD N.I.E.S. FURNISHED WITH TOILET BUILDING, CONNECT AS REQUIRED.



B / E1.1A **PARTIAL ONE LINE DIAGRAM**

NO SCALE

PANEL-HA

GND NEUT

MINIMUM AIC: 10,000
TYPE: NQOD-24-4AB-225
MOUNTING: ☐ FLUSH ☐ SURFACE ☒ FREESTANDING
MISC: NEMA-3R

VOLTAGE: ☒ 120/208 ☐ 480/277 ☐ 120/240
PHASE: ☐ 1-PHASE ☒ 3-PHASE
BUSS AMPS: 225 ☒ CU ☐ AL
MAIN AMPS: 225 ☐ MLO ☒ BKR
FED FROM: PANEL-H

KVA	USE	BKR	No.	Phase	No.	BKR	USE	KVA
.	TOILET	125/2	1	A	2	20/1	FARM STAND	.
			3	B	4	50/2	GREEN HOUSE	.
.	STORAGE BLDG.	100/3	5	C	6			
			7	A	8	1P	SPACE	.
			9	B	10			
.	FARMERS MARKET	20/1	11	C	12			
	SPARE		13	A	14			
			15	B	16			
			17	C	18			
			19	A	20			
			21	B	22			
			23	C	24			

LOAD KVA: .

ARCHITECT

MADI
ARCHITECTURE + PLANNING

333 1ST STREET, SUITE C
SAN FRANCISCO, CA 94105
303 POTRERO STREET, SUITE 7B
SANTA CRUZ, CA 95060
TEL: 800.725.0571

OWNER

SOLANO COMMUNITY COLLEGE

SOLANO COMMUNITY COLLEGE DISTRICT
4000 Suisun Valley Rd, Fairfield, CA 94534

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER DAVID K. YU No. E14987 Exp. 6/30/17 ELECTRICAL STATE OF CALIFORNIA

HARRY A. YEE & ASSOCIATES, INC.
ELECTRICAL ENGINEERS
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SACRAMENTO CALIFORNIA 95822
TEL: 916.454.5319
FAX: 916.454.4117
HYA Job #1612A

PROFESSIONAL STAMP:

PROJECT:

HORTICULTURE & PLANT SCIENCE INSTITUTE PHASE II: MODULAR BUILDINGS

4000 Suisun Valley Rd, Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	DSA SUBMITTAL	3/7/16

PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: HW-DB
CHECKED BY: DY

SHEET NAME:

POWER SITE PLAN

DSA APPROVAL STAMP:

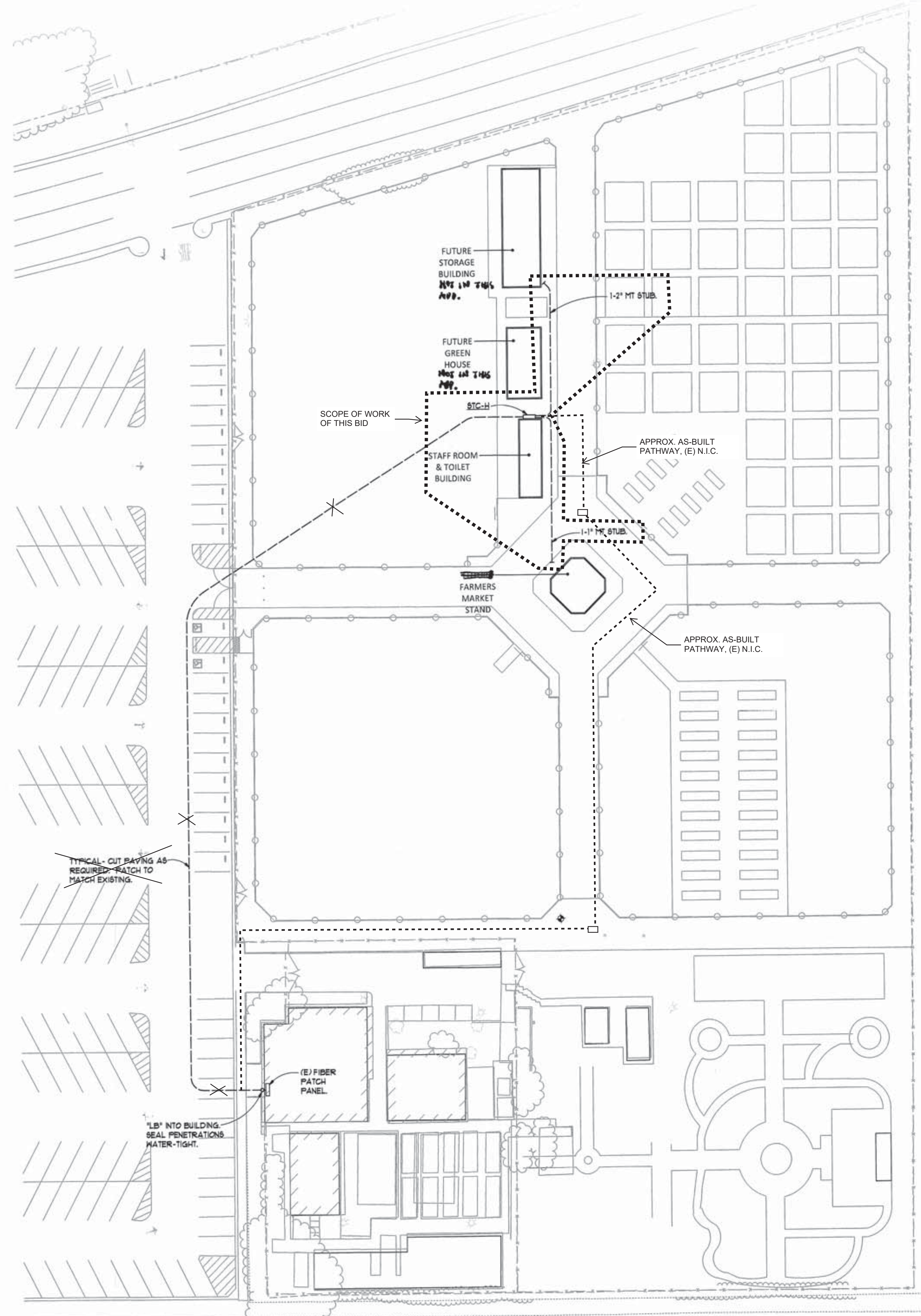
IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 114923
AC TM FLS SS
DATE 5/11/16

SHEET NUMBER:

E1.1A

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE ⊕ SOLANO COMMUNITY COLLEGE DISTRICT

PLOT DATE: 03-28-16



A E1.2A SIGNAL SITE PLAN

SCALE: 1" = 30'-0"

PLOT DATE: 03-28-16

ARCHITECT

MADI ARCHITECTURE + PLANNING
333 1ST STREET, SUITE C
SAN FRANCISCO, CA 94105
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OWNER

SOLANO COMMUNITY COLLEGE

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4000 Suisun Valley Rd, Fairfield, CA 94534

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TEL: 916.454.5319
FAX: 916.454.4117
HYA Job #1612A

PROFESSIONAL STAMP:

PROJECT:

HORTICULTURE & PLANT SCIENCE INSTITUTE PHASE II: MODULAR BUILDINGS

4000 Suisun Valley Rd,
Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	DSA SUBMITTAL	3/7/16

PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: HW-DB
CHECKED BY: DY

SHEET NAME:

SIGNAL SITE PLAN

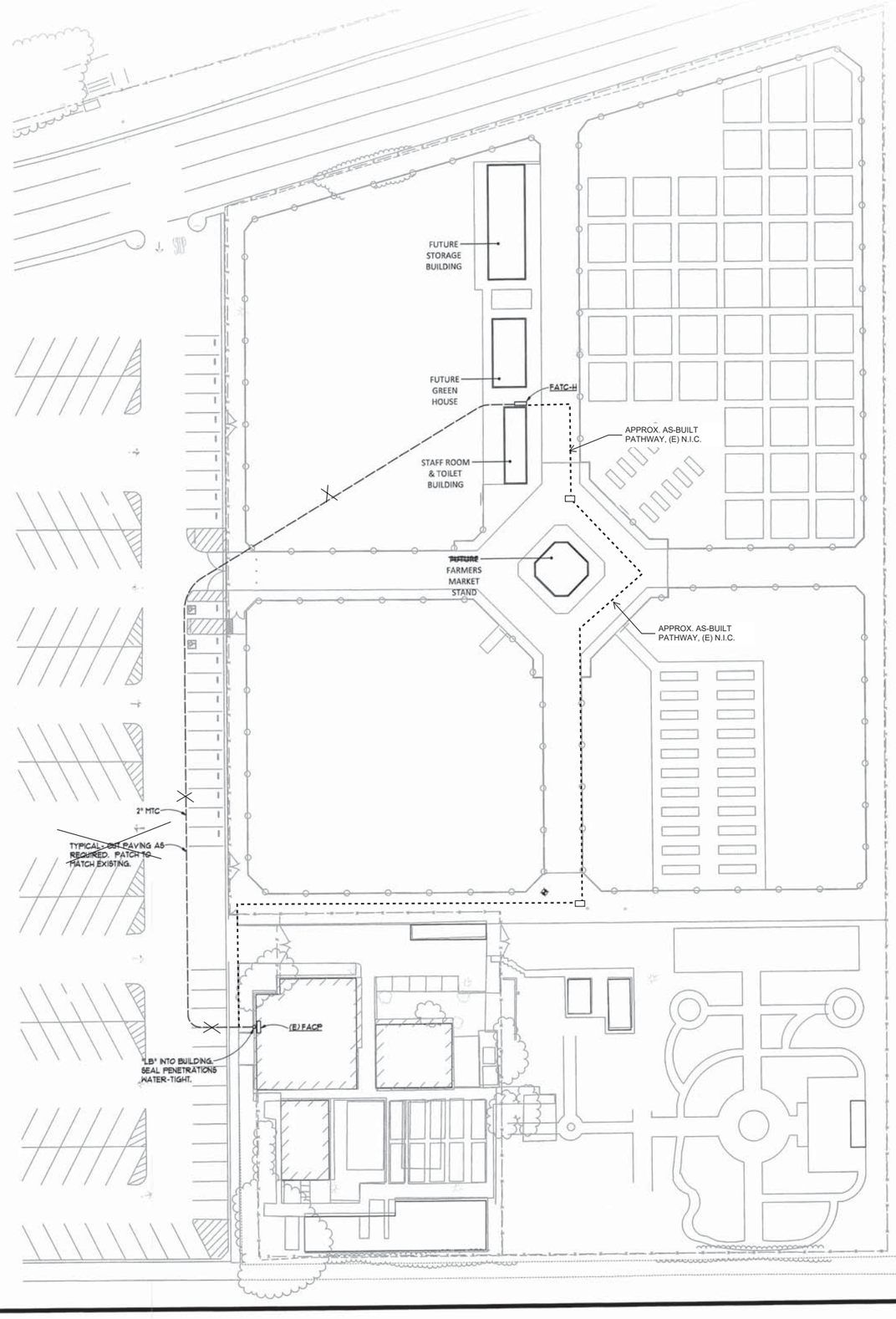
DSA APPROVAL STAMP:

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT
02 114923
AC TM FLS SS
DATE 5 11 16

SHEET NUMBER:

E1.2A

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE + SOLANO COMMUNITY COLLEGE DISTRICT



A E1.3A FIRE ALARM SITE PLAN
SCALE: 1" = 30'-0"

PLOT DATE: 03-28-16

ARCHITECT

MADI
ARCHITECTURE + PLANNING
333 1ST STREET, SUITE C
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PROFESSIONAL STAMP:

PROJECT:

HORTICULTURE & PLANT SCIENCE INSTITUTE PHASE II: MODULAR BUILDINGS

4000 Suisun Valley Rd,
Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	DSA SUBMITTAL	3/7/16

PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: HW-DB
CHECKED BY: DY

SHEET NAME:
FIRE ALARM SITE PLAN

DSA APPROVAL STAMP:
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 114923
AC. DATE 8/11/16

SHEET NUMBER:
E1.3A

SOLANO COMMUNITY COLLEGE DISTRICT
LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE

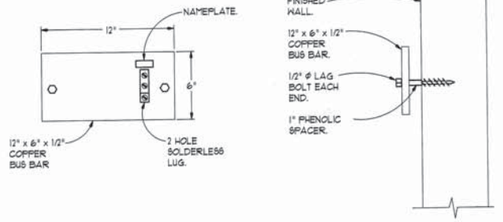
POST-INSTALLED ANCHORS:

1. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATIONS GIVEN IN THE ICC REPORTS:
   HILTI KWIK BOLT TZ - ESR-1917
2. SPECIAL INSPECTION IS REQUIRED FOR ALL POST INSTALLED ANCHORS.
3. TEST EACH ANCHOR OF DIFFERENT DIAMETER AND EMBEDMENT DEPTH FOR EACH TYPE AND STRENGTH OF CONCRETE PER 2013 CBC 1913A.1.3:
   A. ANCHORS USED FOR SILL PLATE BOLTING SHALL HAVE 10 PERCENT OF THE ANCHORS TESTED.
   B. ANCHORS USED FOR OTHER STRUCTURAL APLLICATIONS SHALL HAVE 100% OF THE ANCHORS TESTED.
   C. ANCHORS USED FOR NONSTRUCTURAL APPLICATIONS SUCH AS EQUIPMENT ANCHORAGE SHALL HAVE 50 PERCENT OR ALTERNATE BOLTS IN A GROUP, INCLUDING AT LEAST ONE-HALF THE ANCHORS IN EACH GROUP, TESTED.
4. THE FOLLOWING CRITERIA APPLY FOR THE ACCEPTANCE OF INSTALLED ANCHORS:
   A. HYDRAULIC RAM METHOD: THE ANCHOR MUST NOT EXHIBIT OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD MAINTAINED FOR A MINIMUM OF 15 SECONDS. FOR WEDGE AND SLEEVE TYPE ANCHORS, A PRACTICAL WAY TO DETERMINE OBSERVABLE MOVEMENT IS THAT THE WASHER UNDER THE NUT BECOMES LOOSE. DROP-IN ANCHORS ARE ONLY TO BE TESTED WITH THIS METHOD. SCREW ANCHORS MAY BE LOOSENED A MAXIMUM OF ONE FULL TURN TO FACILITATE THE POSITIONING OF A TENSION TEST COLLAR. FOLLOWING THE TENSION TEST, THE ANCHOR SHALL BE RE-TORQUED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
   B. TORQUE WRENCH METHOD: ANCHORS TESTED WITH A CALIBRATED TORQUE WRENCH MUST ATTAIN THE SPECIFIED TORQUE WITHIN ⅓ TURN OF THE NUT. (EXCEPTION: ¼ TURN OF THE NUT FOR ⅜"ø ANCHORS). THE TORQUE VALUES SHALL BE PER THE SCHEDULE BELOW OR THE SPECIFIC ANCHORAGE DETAILS.
   C. IF ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME CATEGORY, NOT PREVIOUSLY TESTED, SHALL BE TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS THE TEST REQUIREMENTS. THE INITIAL TESTING FREQUENCY SHALL THEN BE RESUMED.
5. WHEN INSTALLING DRILLED IN ANCHORS AND/OR POWDER DRIVEN PINS IN EXISTING CONCRETE OR MASONRY, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING EXISTING REINFORCING BARS.
6. THE TESTING OF THE ANCHORS SHALL BE DONE BY THE TESTING LABORATORY IN THE PRESENCE OF THE PROJECT INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE GOVERNING AGENCY AND ARCHITECT/ STRUCTURAL ENGINEER. TESTING SHALL OCCUR AT MINIMUM OF 24 HOURS AFTER THE INSTALLATION OF THE ANCHORS.
7. TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.
8. NEW BARS DOWELLED AND EPOXIED INTO AN EXISTING SLAB-ON-GRADE DO NOT NEED TO BE TENSION TESTED.
9. TEST VALUES SHALL BE PER THE SCHEDULE BELOW OR THE SPECIFIC ANCHORAGE DETAILS.
10. ALL TESTS SHALL BE PERFORMED IN THE PRESSENCE OF THE INSPECTOR OF RECORD.

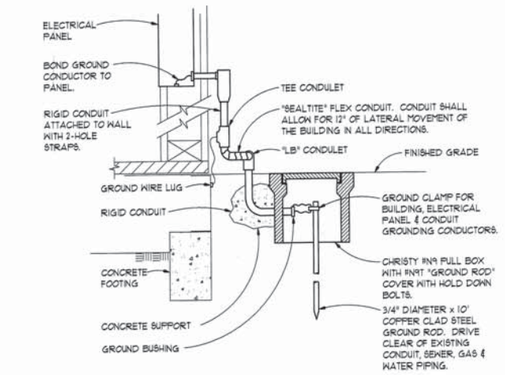
POST-INSTALLED ANCHOR TEST SCHEDULE

ANCHOR TYPE	ANCHOR DIAMETER	EFFECTIVE EMBEDMENT DEPTH	TENSION TEST	TORQUE TEST	BASE MATERIAL
HILTI KWIK BOLT TZ	3/8"	2"	-	25 FT-LBS	CONCRETE
		-	-	-	-
HILTI KWIK BOLT TZ	1/2"	2"	-	40 FT-LBS	CONCRETE
		3 1/4"	-	40 FT-LBS	CONCRETE
HILTI KWIK BOLT TZ	5/8"	3 1/8"	-	60 FT-LBS	CONCRETE
		4"	-	60 FT-LBS	CONCRETE

NOTE:
CONNECT TO BUILDING GROUNDING SYSTEM WITH #6 (GREEN) GND.

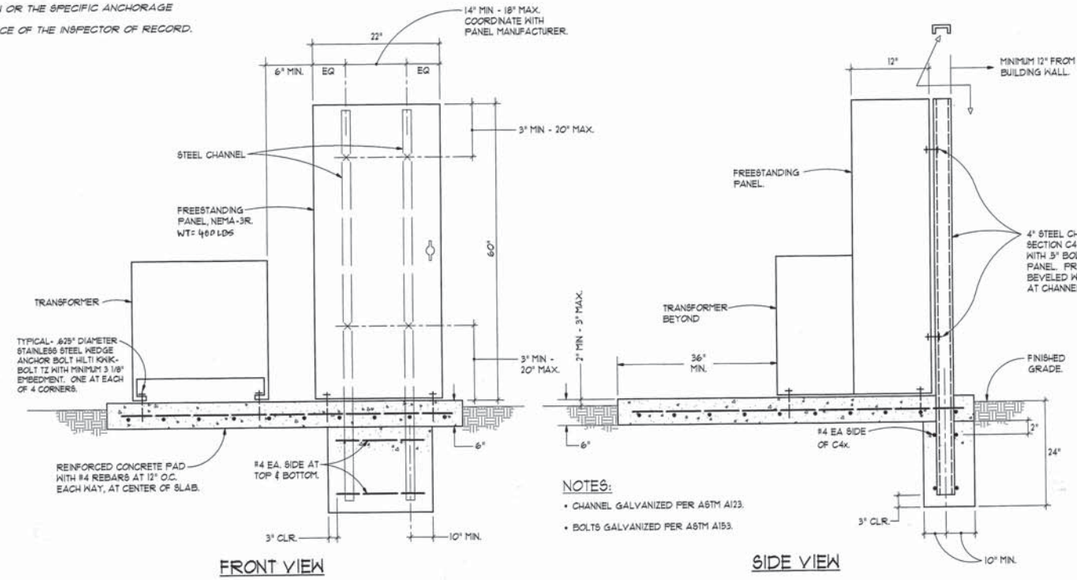


C E4.1A **GROUND BUS DETAIL**
NO SCALE



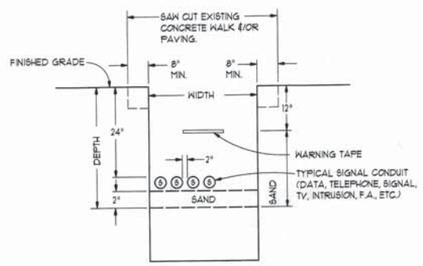
NOTES:
1. SIZE OF CONDUCTORS SHALL COMPLY WITH CEC TABLE 250-94.
2. BOND THE GROUND ROD TO METAL WATER PIPE, IF AVAILABLE.
3. BOND SEPARATE CONDUCTORS FROM GROUND ROD TO ELECTRICAL PANEL AND TO METAL BUILDING FRAME (CEC 250-81) IN ADDITION TO THE DETAIL SHOWN ABOVE. BOND THE ELECTRICAL GROUND TO METAL WATER PIPE EMBEDDED AT LEAST 10 FEET INTO THE SOIL IF AVAILABLE (CEC 250-81 AND 250-83).
4. CHECK RESISTANCE TO GROUND. IF RESISTANCE EXCEEDS 25 OHMS, INSTALL ADDITIONAL GROUND RODS WITH CONDUCTORS AS SHOWN, SEPARATED AT LEAST 6'-0", UNTIL RESISTANCE IS REDUCED TO 25 OHMS OR LESS. FORWARD TEST RESULTS TO ENGINEER.

B E4.1A **GROUNDING DETAIL**
NO SCALE



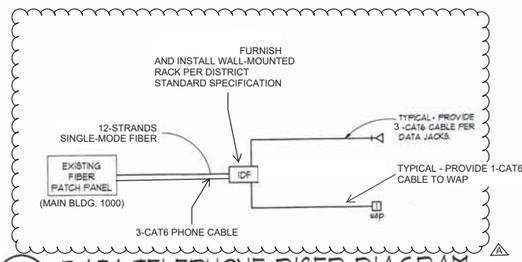
NOTES:
- CHANNEL GALVANIZED PER ASTM A123.
- BOLTS GALVANIZED PER ASTM A153.

E E4.1A **PANEL AND TRANSFORMER MOUNTING DETAILS**
NO SCALE

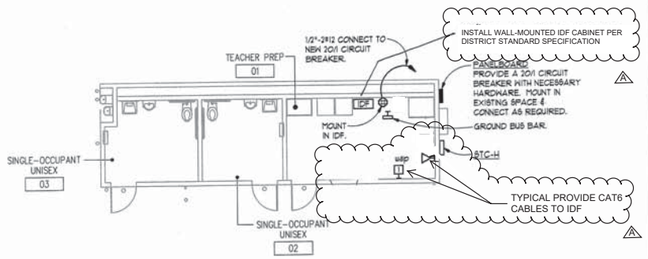


NOTES:
1. MAINTAIN MINIMUM SEPARATION OF CONDUITS OF DIFFERENT SYSTEMS AS SHOWN.
2. MAINTAIN A MINIMUM OF 2" SEPARATION BETWEEN ALL CONDUITS AND BETWEEN CONDUITS AND SIDE WALL TO ALLOW SAND TO FILL ALL GAPS.
3. BACKFILL SHALL BE AS FOLLOWS:
   A. SAND FROM BOTTOM TO LAST 12".
   B. REMAINDER OF BACKFILL TO BE FINE NATIVE EARTH.
4. TOTAL WIDTH AND DEPTH OF TRENCH SHALL BE VERIFIED AND COORDINATED ON JOB SITE.

F E4.1A **TYPICAL- TRENCH DETAIL**
NO SCALE



D E4.1A **DATA/TELEPHONE RISER DIAGRAM**
NO SCALE



A E4.1A **RESTROOM SIGNAL FLOOR PLAN**
SCALE: 1/8" = 1'-0"

PLOT DATE: 05-10-16

ARCHITECT

MADI ARCHITECTURE + PLANNING
333 1ST STREET, SUITE C
SAN FRANCISCO, CA 94105
303 POTRERO STREET, SUITE 7B
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OWNER

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SOLANO COMMUNITY COLLEGE DISTRICT
4000 Suisun Valley Rd, Fairfield, CA 94534

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER DAVID K. YU No. E14087 Exp. 6/30/17 ELECTRICAL STATE OF CALIFORNIA

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TEL: 916.454.5319
FAX: 916.454.4117
HYA Job: #16124

PROFESSIONAL STAMP:

PROJECT:

HORTICULTURE & PLANT SCIENCE INSTITUTE PHASE II: MODULAR BUILDINGS

4000 Suisun Valley Rd,
Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	DSA SUBMITTAL	3/7/16
A	ADDENDUM 1	9/22/17

PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: HW-DB
CHECKED BY: DY

SHEET NAME:
SIGNAL FLOOR PLANS

DSA APPROVAL STAMP:

IDENTIFICATION STAMP
DIV OF THE STATE ARCHITECT
02 114923
ACTING
DATE 5/11/17

SHEET NUMBER:
E4.1A

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE ⊕ SOLANO COMMUNITY COLLEGE DISTRICT

FIRE ALARM EQUIPMENT SCHEDULE

SYMBOL	EQUIPMENT / DEVICE	MANUFACTURER AND MODEL NUMBER	CSFM LISTING NO.	STANDBY AMPS	ALARM AMPS
(E) FACP	(E) FIRE ALARM CONTROL PANEL	EDWARDS #EST-3	7165-1657:186	(E)	(E)
FABP	FIRE ALARM BOOSTER PANEL	EST-BPS6A	7300-1657-229	.070	.190
CM	CONTROL RELAY MODULE	EST# SIGA-CR	7300-1657-121	.0001	.0001
MM	MONITOR MODULE	EST# SIGA-CT1	7300-1657-121	.00025	.0004
	ADDRESSABLE SMOKE DETECTOR	EST# SIGA-PS	7272-1657:126	.000045	.000045
	ADDRESSABLE HEAT DETECTOR (135°F)	EST# SIGA-HRS	7270-1657:125	.000045	.000045
A	CONVENTIONAL ATTIC HEAT DETECTOR (190°F)	EST# 284B-PL	7270-1657:109	0	0
WP	EXTERIOR HORN	WHEELOCK #AH-24	7125-0785:131	0	.062
15	HORN/STROBE (15cd)	WHEELOCK #AS-24MCW-FR	7125-0785:131	0	.08

NOTES:

1. WALL MOUNTED DEVICES SHALL BE "RED".
2. CEILING MOUNTED DEVICES SHALL BE "WHITE".

FIRE ALARM WIRE SCHEDULE

DESIG.	DESCRIPTION	USE	SYSTEM	O.D. (inches)	AREA (sq. inches)
F1	1 PR.#16, STP, ADDRESSABLE LOOP, FPL LOW CAP, WPW #D991	BLDG., INITIATING	FIRE ALARM	0.226	0.0401
F2	1 PR.#14, STP, ADDRESSABLE LOOP, FPL, WET LOC., LOW CAP, WPW #AQ295	SITE, INITIATING		0.35	0.0962
F3	2#12, THWN	BLDG. SIGNAL		0.13 EA.	0.0265
F4	2#10, THWN	SITE, SIGNAL		0.164 EA.	0.0422
F5	2#14 FPL	HARDWIRED INT.			

VOLTAGE DROP CALCULATIONS

FABP

SIG CKT#	N1			
DEVICE	1st	2nd	3rd	4th
GAUGE	12.00	12.00	12.00	12.00
DISTANCE (FT)	33	21	16	18
AMPS @ DEVICE	.08	.08	.062	.08
AMPS DEVELOPED	.302	.222	.142	.08
VOLT DROP	.04	.0185	.09	.006

SIGNAL CIRCUIT#	N1
AMPS DEVELOPED	.302
TOTAL CKT. V.D.	.155
CKT. VOLTAGE	24.0
ESTIMATED VOLTAGE AT LAST DEVICE ON CIRCUIT	23.845
% VOLTAGE DROP	0.65

VOLTAGE DROP FORMULAS

VD = VOLTAGE DROP

L = ONE WAY LENGTH OF CIRCUIT (IN FEET)

R = CONDUCTOR RESISTANCE (IN OHMS/FEET)

I = LOAD CURRENT (IN AMPS)

$$VD = \frac{2 \times L \times R \times I}{1000} \qquad \%VD = \frac{VD}{24} \times 100$$

(DEVICE VOLTAGE)

FIRE ALARM MONITORING NOTE

AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 AS AMENDED BY ARTICLE 91. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUJS BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011.

BATTERY CALCULATION WORKSHEET

EQUIPMENT / DEVICE	QUANTITY	DEVICE STANDBY CURRENT (AMPS)	TOTAL STANDBY CURRENT (AMPS)	DEVICE ALARM CURRENT (AMPS)	TOTAL ALARM CURRENT (AMP)
(E) FIRE ALARM CONTROL PANEL - (E) FACP	1	(E)	(E)	(E)	(E)
ADDRESSABLE SMOKE DETECTOR	1	.000045	.000045	.000045	.000045
ADDRESSABLE HEAT DETECTOR (135°F)	3	.000045	.000135	.000045	.000135
CONVENTIONAL ATTIC HEAT DETECTOR (190°F)	1	0	0	0	0
MONITOR MODULE	2	.00025	.00050	.0004	.0008
CONTROL MODULE	1	.0001	.0001	.0001	.0001
		TOTALS:	.00078		.00108 AMPS

NOTES:

BATTERY CALCULATIONS FOR 24 HOURS (STANDBY) PLUS 15 MINUTES (ALARM).

(TOTAL STANDBY CURRENT) (24 HRS) + (TOTAL ALARM CURRENT) ($\frac{15}{60}$ h) x (25%) = MIN. BATTERY AMP HRS. REQ'D.

(.00078) (24 HRS) + (.00108) ($\frac{15}{60}$ h) x (25%) = .0241 AMP HOUR (MINIMUM BATTERY)

ADDED LOAD = .0241

(E) BATTERY PROVIDED = 7.0 Ahr.

(N) BATTERY PROVIDED = 12.0 Ahr.

BATTERY CALCULATION WORKSHEET

EQUIPMENT / DEVICE	QUANTITY	DEVICE STANDBY CURRENT (AMPS)	TOTAL STANDBY CURRENT (AMPS)	DEVICE ALARM CURRENT (AMPS)	TOTAL ALARM CURRENT (AMP)
FIRE ALARM BOOSTER PANEL - FABP	1	.07	.07	.190	.190
FIRE ALARM EXTERIOR HORN	1	0	0	.062	.062
FIRE ALARM WALL HORN/STROBE (15cd)	3	0	0	.080	.240
		TOTALS:	.07 AMPS		.492 AMPS

NOTES:

BATTERY CALCULATIONS FOR 24 HOURS (STANDBY) PLUS 15 MINUTES (ALARM).

(TOTAL STANDBY CURRENT) (24 HRS) + (TOTAL ALARM CURRENT) ($\frac{15}{60}$ h) x (25%) = MIN. BATTERY AMP HRS. REQ'D.

(.07) (24 HRS) + (.492) ($\frac{15}{60}$ h) x (25%) = 2.254 AMP HOUR (MINIMUM BATTERY)

BATTERY PROVIDED = 7.0 Ahr.

FIRE ALARM DEVICE SEQUENCE OF OPERATION MATRIX

RESPONSE \ INITIATION	MANUAL PULL STATION	AREA SMOKE DETECTORS	HEAT DETECTOR	DUCT DETECTOR	ELEVATOR RECALL	TROUBLE CONDITION (SHORT, OPEN, POWER FAILURE)
ANNUNCIATE AT FACP	YES	YES	YES	YES	YES	YES
ACTIVATE AUDIBLE & VISIBLE ALARMS THROUGH OUT CAMPUS	YES	YES	YES	YES	YES	NO
ACTIVATE EVAC SYSTEM THROUGH OUT CAMPUS	YES	YES	YES	YES	YES	NO

FIRE ALARM PROJECT NOTES:

A. BEFORE REQUESTING FINAL APPROVAL OF THE INSTALLATION THE INSTALLING CONTRACTOR SHALL FURNISH A WRITTEN STATEMENT TO THE PROJECT INSPECTOR TO THE EFFECT THAT THE SYSTEM HAS BEEN INSTALLED AND TESTED IN ACCORDANCE WITH THE (2013) NFPA 72 SECTION 14.4.1.

B. AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY NFPA 72 AND CBC 907.6.5.2 THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUIS BY UL OR SHALL MEET THE REQUIREMENTS OF FM STANDARD 8013.

C. THE FIRE ALARM CONTRACTOR SHALL PROVIDE A SUFFICIENT NUMBER OF HORNS AND QUANTITY OF STROBES AND LOCATIONS TO MEET THE AUDIBILITY AND VISUAL REQUIREMENTS OF 2013 NFPA 72. HORNS AND STROBES SHOWN ON THE DRAWINGS ARE A MINIMUM AND SHALL NOT BE REDUCED FROM THE FINAL INSTALLATION.

D. AFTER INSTALLATION AND TESTING OF THE FIRE ALARM SYSTEM, AN INDEPENDENT AUDIBILITY TEST SHALL BE PERFORMED BY A QUALIFIED THIRD PARTY TESTING AGENCY, PROVIDED BY THE CONTRACTOR PRIOR TO ACCEPTANCE OF THE SYSTEM. ANY CHANGES REQUIRED DUE TO THE RESULTS OF THE AUDIBILITY TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CORRECT AS NECESSARY TO BRING THE SYSTEM INTO 2013 NFPA 72, ANNEX D COMPLIANCE.

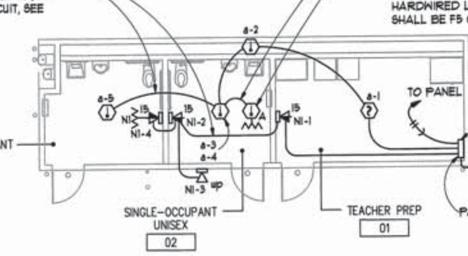
E. ALL FIRE ALARM CABLE SHALL BE INSTALLED IN CONDUIT. ALL CONDUIT SHALL BE INSTALLED WITH COMPRESSION FITTINGS FOR COUPLERS AND BOX CONNECTORS.

F. THE FIRE ALARM SYSTEM IS AN ADDRESSIBLE SYSTEM.

FIRE ALARM SYSTEM NOTES:

1. THE FIRE ALARM SYSTEM IS A COMPLETE PLAN SUBMITTAL.
2. THE FIRE ALARM SYSTEM SHALL CONFORM TO THE CALIFORNIA BUILDING CODE (CBC) SECTION 907; THE CALIFORNIA ELECTRICAL CODE (CEC) ARTICLE 760 AND THE CALIFORNIA FIRE CODE (CFC) SECTION 907.

   UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE DIVISION OF THE STATE ARCHITECT (DSA) INSPECTOR OF RECORD.
3. INSTALLATION OF THE FIRE ALARM SYSTEM SHALL NOT BE STARTED UNTIL DETAILED PLANS AND SPECIFICATIONS, INCLUDING CALIFORNIA STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM, VOLTAGE DROP CALCULATIONS, AND BATTERY CALCULATIONS HAVE BEEN SUBMITTED AND APPROVED. IF THE INFORMATION ON THE BID DRAWINGS ARE REUSED AS THE SUBMITTAL DRAWINGS, CLOUD ALL CHANGES.
4. ALL CEILING HEAT AND SMOKE DETECTORS SHALL BE LOCATED AWAY FROM THE SUPPLY AIR REGISTER, DISTANCE AS RECOMMENDED BY EQUIPMENT MANUFACTURER.
5. BASIC SOUND AND PATTERN OF THE NEW FIRE ALARM AUDIBLE DEVICES SHALL SOUND THE CALIFORNIA FIRE ALARM SIGNAL IN TEMPORAL MODE.
6. PROVIDE COMPLETE SYSTEM WIRING. ALL WIRING SHALL BE IN MINIMUM 3/4" CONDUIT. NO OTHER SYSTEMS WIRING SHALL BE ROUTED IN THE FIRE ALARM CIRCUITS. HARDWIRED INITIATING CIRCUITS SHALL BE MINIMUM #14 THHN/THWN. SYSTEMS WIRING SHALL BE PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS AND THEIR REQUIREMENTS.
7. THE FIRE ALARM SYSTEM SHALL COMPLY WITH A TOTAL COVERAGE FULLY AUTOMATIC SYSTEM. DETECTORS SHALL BE INSTALLED IN ALL AREAS WHERE REQUIRED BY THE APPROPRIATE NFPA STANDARD OR THE AUTHORITY HAVING JURISDICTION. EACH INSTALLED DETECTOR SHALL BE ACCESSIBLE FOR PERIODIC MAINTENANCE AND TESTING. PROVIDE ACCESS DOORS AS REQUIRED. TOTAL COVERAGE SHALL INCLUDE ALL ROOMS, STORAGE AREAS, ATTICS, SPACES ABOVE SUSPENDED CEILINGS, AND OTHER SUBDIVISIONS AND ACCESSIBLE SPACES. INACCESSIBLE AREAS SHALL NOT BE REQUIRED TO BE PROTECTED BY DETECTORS UNLESS THEY CONTAIN COMBUSTIBLE MATERIAL, IN WHICH CASE THEY SHALL BE MADE ACCESSIBLE AND BE PROTECTED BY DETECTOR(S).
8. ALARM-INDICATING DEVICES OF A FIRE ALARM SYSTEM INTENDED TO ALERT ALL OCCUPANTS SHALL CAUSE A LEVEL OF AUDIBILITY OF NOT LESS THAN 15 dBA ABOVE THE AVERAGE AMBIENT NOISE LEVELS OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF 60 SECONDS WHICH-EVER IS GREATER, MEASURED 5'-0" ABOVE THE FLOOR. AMBIENT NOISE LEVELS MEANS THE LEVEL WHICH CAN NORMALLY BE EXPECTED WHEN THE FACILITY, BUILDING, ROOM OR AREA IS FUNCTIONING UNDER NORMAL OPERATING OR WORKING CONDITIONS (NFPA 72, SEC. 18.4.3.1).
9. THE AUTOMATIC FIRE ALARM SYSTEM SHALL COMPLY WITH SENATE BILL NO. 575 (SB575) & CBC 907.2.3.7. FOR NEW CONSTRUCTION PROJECTS.
10. THE LOCATION OF AUTOMATIC DETECTORS, MANUAL STATIONS AND OTHER FIRE ALARM EQUIPMENT AND DEVICES, AS SHOWN ON PLAN, ARE FOR REFERENCE ONLY AND DO NOT CONSTITUTE SHOP DRAWINGS WHICH ARE REQUIRED FOR REVIEW AND APPROVAL.
11. THE ALARM SYSTEM SHALL ACTIVATE A MEANS OF WARNING THE HEARING IMPAIRED. FLASHING VISUAL WARNINGS SHALL HAVE A FLASH RATE NOT EXCEEDING TWO FLASHES PER SECOND (2 HZ) NOR BE LESS THAN ONE FLASH EVERY SECOND (1 HZ). STROBE SIGNALING DEVICES FOR THE HEARING IMPAIRED SHALL BE STATE FIRE MARSHAL APPROVED AND LISTED (NFPA 72, SEC. 18.5.2.1).
12. POWER SERVICE SHALL BE ON A DEDICATED BRANCH CIRCUIT WITH A RED MARKING AND IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL".
13. AUDIBLE FIRE ALARM SOUND LEVEL SHALL BE AT LEAST 15 dBA ABOVE AVERAGE AMBIENT SOUND LEVEL IN ALL OCCUPIABLE AREAS. (ie. CLASSROOM AVERAGE AMBIENT ROOM NOISE IS 45 dBA PLUS 15 dBA EQUALS = 60 dBA MINIMUM ALARM TONE REQUIRED). SYNCHRONIZE AUDIBLE SIGNAL PER NFPA 72: 18.4.2.5.
14. STROBES SHALL FLASH AT A RATE NOT EXCEEDING TWO FLASHES PER SECOND NOR BE LESS THAN ONE FLASH EVERY SECOND. SYCNCHRONIZE STROBE FLASH PER NFPA 72: 18.5.4.3.2.
15. CBC Sec. 907.5.2: AUDIBLE SIGNALS INTENDED FOR OPERATION IN THE PUBLIC MODE SHOULD HAVE A SOUND LEVEL OF NOT LESS THAN 75 dBA AT 10 FEET OR MORE THAN 110 dBA AT THE MINIMUM HEARING DISTANCE FROM THE AUDIBLE APPLIANCE.
16. FINAL FIRE ALARM TEST SHALL BE MADE WITH THE DSA INSPECTOR OF RECORD (IOR). LOCAL FIRE AUTHORITY SHALL BE NOTIFIED OF DATE AND TIME OF FINAL FIRE ALARM TESTING AND SHALL ASSIST/WITNESS SUCH TESTING WHEN ABLE.
17. THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION PER NFPA 72. SECTION 14.6, FIGURE 14.6.2.4 & CBC 907.7.2 TO THE INSPECTOR OF RECORD (IOR) / DSA AFTER COMPLETION OF OPERATIONAL ACCEPTANCE TESTS.
18. WHEN THE SPECIFIED EQUIPMENT IS SUBSTITUTED OR ANY CHANGES ARE MADE THE CONTRACTOR SHALL OBTAIN DSA APPROVAL VIA THE DSA CHANGE ORDER PROCESS PER DSA IR A-21.



RESTROOM FIRE ALARM FLOOR PLAN

A / E5.1A SCALE: 1/8" = 1'-0"

PLOT DATE: 03-28-16

ARCHITECT

MADI ARCHITECTURE + PLANNING

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SAN FRANCISCO, CA 94105
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SOLANO COMMUNITY COLLEGE

SOLANO COMMUNITY COLLEGE DISTRICT
4000 Suisun Valley Rd, Fairfield, CA 94534

CONSULTANT

REGISTERED PROFESSIONAL ENGINEER DAVID K. YU No. E14987 Exp. 6/30/17 ELECTRICAL STATE OF CALIFORNIA

HARRY A. YEE & ASSOCIATES, INC. ELECTRICAL ENGINEERS 4920 FREEPORT BOULEVARD SUITE D SACRAMENTO CALIFORNIA 95822 TEL: 916.454.5319 FAX: 916.454.4117 HYA Job #1612A

PROFESSIONAL STAMP:

PROJECT:

HORTICULTURE & PLANT SCIENCE INSTITUTE PHASE II: MODULAR BUILDINGS

4000 Suisun Valley Rd, Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	DSA SUBMITTAL	3/7/16

PROJECT CODE: SCCD-04

START DATE: -

DRAWN BY: HW-DB

CHECKED BY: DY

SHEET NAME: FIRE ALARM FLOOR PLANS

DSA APPROVAL STAMP:

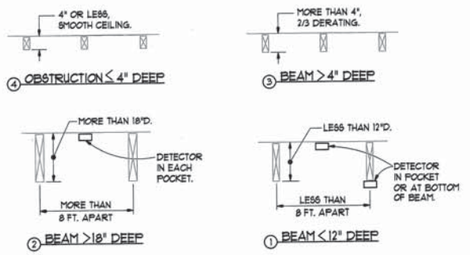
IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT 02 114923 AC TM FLS DATE

SHEET NUMBER: **E5.1A**

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE ⊕ SOLANO COMMUNITY COLLEGE DISTRICT

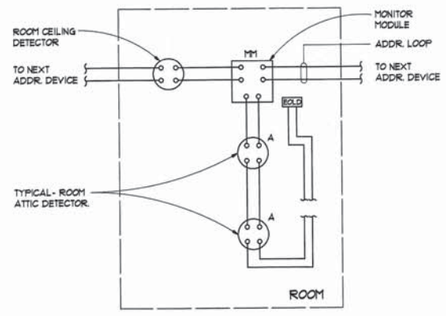
NOTES:

1. SOLID JOIST CONSTRUCTION.
   A. SPACING: THE DESIGN SPACING OF HEAT DETECTORS, WHERE MEASURED AT RIGHT ANGLES TO THE SOLID JOISTS, SHALL NOT EXCEED 50 PERCENT OF THE LISTED SPACING.
   B. LOCATION: DETECTORS SHALL BE MOUNTED AT THE BOTTOM OF THE JOISTS.
2. BEAM CONSTRUCTION.
   A. SPACING:
      1. A CEILING SHALL BE TREATED AS A SMOOTH CEILING IF THE BEAMS PROJECT NO MORE THAN 4 IN. BELOW THE CEILING.
      2. WHERE THE BEAMS PROJECT MORE THAN 4 IN. BELOW THE CEILING, THE SPACING OF SPOT-TYPE HEAT DETECTORS AT RIGHT ANGLES TO THE DIRECTION OF BEAM TRAVEL SHALL BE NOT MORE THAN TWO-THIRDS OF THE LISTED SPACING.
      3. WHERE THE BEAMS PROJECT MORE THAN 18 IN. BELOW THE CEILING AND ARE MORE THAN 8 FT. ON CENTER, EACH BAY FORMED BY THE BEAMS SHALL BE TREATED AS A SEPARATE AREA.
   B. LOCATION: WHERE BEAMS ARE LESS THAN 12 IN. IN DEPTH AND LESS THAN 8 FT. ON CENTER, DETECTORS SHALL BE PERMITTED TO BE INSTALLED ON THE BOTTOM OF BEAMS.
3. BEAM CONSTRUCTION CONSISTS OF SOLID MEMBERS PROJECTING DOWN FROM THE CEILING SURFACE MORE THAN 4" AND SPACED MORE THAN 36" O.C.
4. JOIST CONSTRUCTION CONSISTS OF SOLID MEMBERS PROJECTING DOWN FROM THE CEILING SURFACE MORE THAN 4" AND SPACED AT 36" OR LESS O.C.



HEAT DETECTORS IN SOLID JOIST & BEAM CONSTRUCTION

F / E5.2A — NO SCALE



ATTIC DETECTOR MONITORING WIRING DIAGRAM

E / E5.2A — NO SCALE

FIRE ALARM RECORD DOCUMENTS CABINET
NFPA 72, 7.7.2

- Every new Fire Alarm System shall provide a documentation cabinet, installed at the system control panel or other approved location.
- The documentation cabinet shall be prominently labeled, "SYSTEM RECORD DOCUMENTS".
- All record and testing documentation shall be stored in the cabinet.
- Contents shall be accessible by authorized personnel only.
- Where cabinet is installed in a location other than the system control unit, its location shall be identified at the system control unit.

SYSTEM DOCUMENTS AS APPLICABLE:

- Record Drawings/As-Builts
- Equipment Cut Sheets & CA SFM Listings
- Alternative Means and Methods
- Performance Based Design Documentation (NFPA 72, 7.3.7)
- System Record of Completion & any Supplemental Inspection and Testing Documentation (NFPA 72, 7.8.2)
- Emergency Response Plan (NFPA 72, 7.3.8)
- Evaluation Documentation (NFPA 72, 7.3.9)
- Risk Analysis Documentation (NFPA 72, 7.3.6)
- Software & Firmware Control Documentation (NFPA 72, 23.2.2)

SPECIFY ON FIRE ALARM DRAWINGS

A FIRE ALARM ACCEPTANCE TEST of all devices and appliances, including the backup battery(ies), shall be performed. All Manufacturer operating ranges shall be met. Testing of the Supervising Station signals, as well as relay to the appropriate responding agency, shall be included in the Acceptance Testing. The Project Inspector shall witness the Acceptance Inspection and shall sign as the AHJ Representative on the "SYSTEM RECORD OF COMPLETION" at Section 12.3 [NFPA 72, Figure 7.8.2(a)], and the "SYSTEM RECORD OF INSPECTION AND TESTING" at Section 10.1 [NFPA 72, Figure 7.8.2 (g)]. ALL Supplementary Records shall be attached as applicable. The Project Inspector shall verify that the FIRE ALARM SYSTEM is in service PRIOR to completion of the "SYSTEM RECORD OF COMPLETION" form. All original documentation shall be retained in the required DOCUMENTATION CABNIET (NFPA 72, 7.7.2).

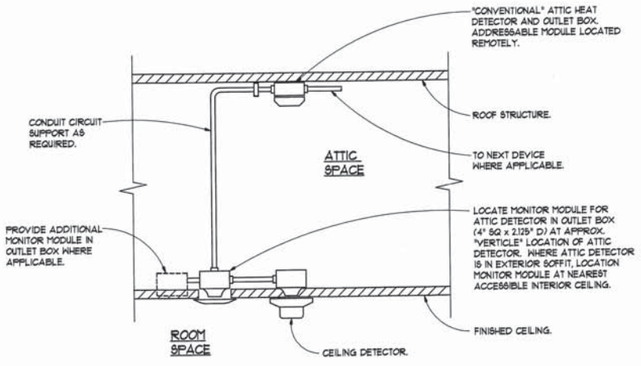
NOTES:

1. APPLICABLE STANDARD 2013 NFPA 72.
2. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
3. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
4. DSA ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
5. ALL PENETRATIONS THROUGHT RATED ASSEMBLIES, REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER LAB TESTING CRITIERIA, APPROVED TYPE OF MATERIALS SHALL BE IDENTIFIED WITHIN THE SPECIFICATION WITHIN THE FIRE ALARM SECTION.
6. WALL MOUNTED VISUAL NOTIFICATION DEVICES SHALL HAVE THEIR ENTIRE LENS MOUNTED WITHIN 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
7. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THEN 6" TO A HORIZONTAL STRUCTURE.
8. AUDIBLE DEVICES TO BE AT LEAST 15 DBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL BUT NOT LESS THAN 15 DBA AT 10 FEET OR MORE THAN 110 DBA AT THE MINIMUM HEARING DISTANCE SOUND LEVEL SHALL BE MAINTAINED FOR DURATION OF AT LEAST 60 SECONDS 5 DBA MUST BE MAINTAINED.
9. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
10. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRE TO BE APPROVAL FOR WET LOCATIONS.
11. ALL FIRE ALARM WIRING SHALL BE FLP OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
12. PER CEC STANDARDS. ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. THERE MUST BE AT LEAST 6' OF LEAD WIRE FROM THE BOX TO THE DEVICE. ALL BOXES TO BE SIZED PER CEC.
13. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
14. FIRE ALARM PANEL. REMOVES AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURER'S SPECIFICATION. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
15. A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL BE RED WITH LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED 'FIRE ALARM CIRCUIT CONTROL". CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDER.
16. CONTROL PANELS, REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48".
17. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 907.6.2.
18. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
19. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACTOR PROVISIONS.
20. WIRING AND MATERIALS PER CEC 760.

2013 NFPA 72, Section 10.6.7

The secondary power supply shall have sufficient capacity to operate the system under quiescent load (system operating in a non-alarm condition) for a minimum of 24 hours and, at the end of that period, shall be capable of operating all alarm notification appliances used for evacuation or to direct aid to the location of an emergency for 5 minutes, unless otherwise permitted or required by the following:

(1) Battery calculations shall include a 20 percent safety margin to the calculated amp-hour rating.
(2) The secondary power supply for In-Building Emergency Voice/Alarm Communications service shall be capable of operating the system under quiescent load for a minimum of 24 hours and then shall be capable of operating the system during a fire or other emergency condition for a period of 15 minutes at maximum connected load.

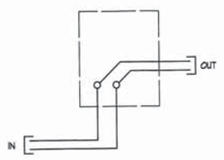


ATTIC HEAT DETECTOR ADDRESSABLE MODULE LOCATION DETAIL

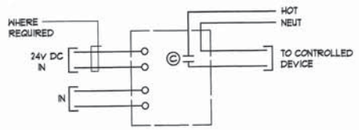
C / E5.2A — NO SCALE

FIRE ALARM SYSTEM DESCRIPTION

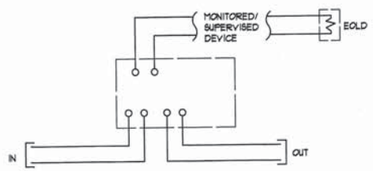
THE SYSTEM IS POWER LIMITED, AUTOMATIC, MANUAL, LOCAL, AUXILIARY, REMOTE STATION (PROTECTED PREMISES), PROPRIETARY (PROTECTED PREMISES), WATERFLOW, AND SPRINKLER SUPERVISORY SERVICE. SUITABLE FOR RELEASING DEVICE SERVICE, REFER TO LISTEE'S DATA SHEET FOR DETAILED PRODUCT DESCRIPTION AND OPERATIONAL CONSIDERATIONS.



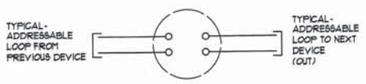
HORN OR STROBE OR HORN/STROBE ON SAME CIRCUIT



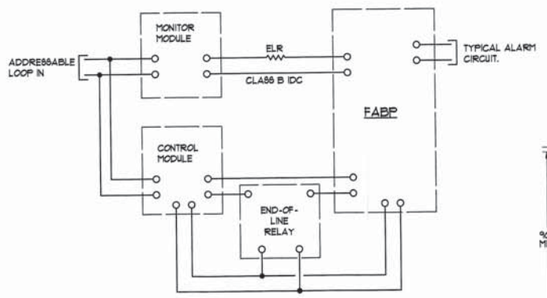
CONTROL MODULE



MONITOR MODULE



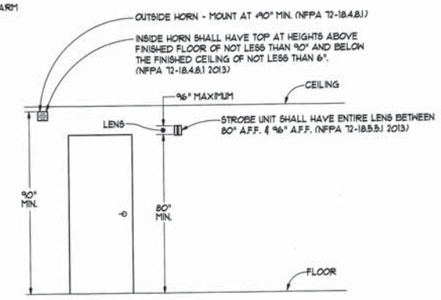
SMOKE OR HEAT DETECTORS



FIRE SIGNAL BOOSTER PANEL

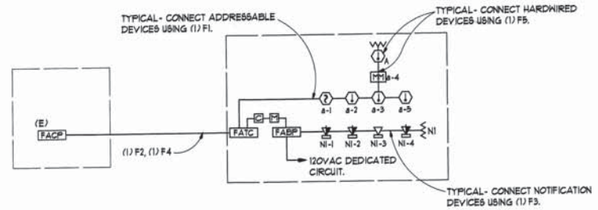
TYPICAL- FIRE ALARM DEVICES WIRING DIAGRAMS

D / E5.2A — NO SCALE



HORN & STROBE UNIT ELEVATION DETAIL

B / E5.2A — NO SCALE



FIRE ALARM RISER DIAGRAM

A / E5.2A — NO SCALE

PLOT DATE: 03-28-16

ARCHITECT

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CONSULTANT

REGISTERED PROFESSIONAL ENGINEER — DAVID K. YU — No. E14982 Exp. 6/30/17 — ELECTRICAL — STATE OF CALIFORNIA

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HYA Job #1612A

PROFESSIONAL STAMP:

PROJECT:

HORTICULTURE & PLANT SCIENCE INSTITUTE PHASE II: MODULAR BUILDINGS
4000 Suisun Valley Rd, Fairfield, CA 94534

SOLANO COMMUNITY COLLEGE DISTRICT ⊕ LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE

REVISIONS

REF	DESCRIPTION	DATE
-	DSA SUBMITTAL	3/7/16

PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: HW-DB
CHECKED BY: DY

SHEET NAME:
FIRE ALARM DIAGRAMS, NOTES, & DETAILS

DSA APPROVAL STAMP:
IDENTIFICATION STAMP DIV. OF THE STATE ARCHITECT 02 114923 AC TM DATE 6/16/16

SHEET NUMBER:
E5.2A

BUILDING CODES AND STANDARDS

* 2013 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24, CCR
2013 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1 AND 2, PART 2, TITLE 24, CCR
(2012 EDITION INTERNATIONAL BUILDING CODE WITH 2013 CALIF. AMENDMENTS)
2013 CALIFORNIA ELECTRICAL CODE, PART 3, TITLE 24, CCR
(2011 EDITION NATIONAL ELECTRICAL CODE WITH 2013 CALIF. AMENDMENTS)
2013 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, CCR
(2012 EDITION UNIFORM MECHANICAL CODE WITH 2013 CALIF. AMENDMENTS)
2013 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, CCR)
(2012 EDITION UNIFORM PLUMBING CODE WITH 2013 CALIF. AMENDMENTS)
* 2013 CALIFORNIA ENERGY CODE, PART 6, TITLE 24, CCR
2013 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, CCR
(2012 EDITION INTERNATIONAL FIRE CODE WITH 2013 CALIFORNIA AMENDMENTS)
* 2013 CALIFORNIA GREEN CODE, PART 11, TITLE 24, CCR
2013 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24, CCR

* EFFECTIVE JULY 1, 2014

2013 NFPA 13, INSTALLATION OF SPRINKLER SYSTEMS (CALIFORNIA AMENDMENTS)
2013 NFPA 14, INSTALLATION OF STANDPIPE AND HOSE SYSTEMS
2013 NFPA 17, DRY CHEMICAL EXTINGUISHING SYSTEMS
2013 NFPA 17A, WET CHEMICAL EXTINGUISHING SYSTEMS
2013 NFPA 20, INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION
2013 NFPA 22, WATER TANKS FOR PRIVATE FIRE PROTECTION
2013 NFPA 24, INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES
2013 NFPA 25, INSPECTION, TESTING, MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS (CALIFORNIA AMENDMENTS)
2013 NFPA 72, NATIONAL FIRE ALARM CODE (CALIFORNIA AMENDMENTS)
SEE UL STANDARD 1971 FOR "VISUAL DEVICES"
NFPA 2001 CLEAN AGENT FIRE EXTINGUISHING SYSTEMS 2012 EDITION
NFPA 253 CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS 2006 EDITION
REFERENCE CODE SECTION FOR NFPA STANDARDS 2013 CBC (SFM) CHAPTER 35

WHEN THE PRE-CHECK BUILDING IS SITE ADAPTED, THE BUILDING SHALL BE ORIENTED PER SOLAR READY DIAGRAM OR THE SITED PC SHALL HAVE A SOLAR ZONE ON ANOTHER BUILDING OR ON COVER PARKING INSTALLED WITHIN 250 FEET OF THE SITED PC WITH A SOLAR ZONE TOTAL AREA NO LESS THAN 15 PERCENT OF THE PC'S TOTAL ROOF AREA. REFER TO ENERGY CODE SECTION 110.10 (b) 1B

IMPACT
CONSTRUCTION SERVICES INC.
CONTRACTORS LICENSE #945691

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FAX: (951) 943-9430

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MANUFACTURED RELOCATABLE MODULAR BUILDINGS
PC 02-114488 (FORMERLY 02-112506)
12'X40' TOILET BLDG MODELS
MODELS: A, A-1, B, B-1, C, C-1, D, & D-1

DESIGN PARAMETERS

FLOOR LIVE LOAD: 50 PSF, 50+20 PSF, 100 PSF & 125 PSF

ROOF LIVE LOAD: 20 PSF
GROUND SNOW LOAD MAXIMUM: 31 PFS FULLY EXPOSED, 28 PARTIALLY EXPOSED, 26 PSF SHELTERED

ROOF SNOW LOAD: 20 PSF MAX
Ce=0.9 FULLY EXPOSED, 1.0 PARTIALLY EXPOSED, 1.1 SHELTERED
Is=1.0
Ct=1.0

RAMP LIVE LOAD: 100 PSF

FLOOD HAZARD AREA: NO

WIND DESIGN:
VuH=WIND SPEED =120MPH
RISK CATEGORY = II
EXPOSURE = C
INTERNAL PRESSURE COEFFICIENT = ±0.18
Kzt = 1.0
COMPONENTS & CLADDING DESIGN BY PC ENGINEER OF RECORD

DESIGN ROOF DEAD LOAD: 16 PSF (BEAMS AND TRUSSES)

DESIGN FLOOR DEAD LOAD:
PLYWOOD FLOOR - 8 PSF (+15 W/ PARTITIONS),
CONCRETE DECK - 31 PSF (+15 W/ PARTITIONS)

EARTHQUAKE DESIGN DATA:
1. RISK CATEGORY = II
2. Ie = 1.0
3. Ss = 3.0
4. S1 = 1.389
5. SITE CLASS = D
6. SDS = 1.6
7. SD1 = 1.389
8. SEISMIC DESIGN CATEGORY = E
9. BASIC "SEISMIC" FORCE RESISTING SYSTEM - LIGHT FRAME WALLS SHEATHED WITH WOOD STRUCTURAL PANELS
10. BASE SHEAR = 3157#
11. Cs = 0.246
12. R = 6.5
13. ANALYSIS PROCEDURE USED = EQUIVALENT LATERAL FORCE PROCEDURE
14. NO VERTICAL; OR HORIZONTAL IRREGULARITIES
15. RHO = 1.3

CLIMATE ZONE: THIS PC IS APPROVED FOR THE 2013 CALIFORNIA ENERGY CODE IN ALL CALIFORNIA CLIMATE ZONES

ABBREVIATIONS

AB: Anchor Bolt
ABV: Above
AC: Air Conditioning, Alternating Current
ADA: Americans with Disabilities Act of 1992
ADD: Addendum; Addition
ADDL: Additional
ADJ: Adjust, Adjustable, Adjacent
AFF: Above Finished Floor
AFG: Above Finish Grade
AIA: American Institute of Architects
ALT: Alternate, Alteration; Altitude
ALUM: Aluminum
AMP: Ampere, Ampacity
AMT: Amount
ANCH: Anchor, Anchorage
ANOD: Anodized
APPROX: Approximate
APRVD: Approved
ARCH: Architect, Architectural
ASC: Above Suspended Ceiling
ASCE: American Society of Civil Engineers
ASME: American Society of Mechanical Engineers
ASSOC: Association; Associate
ASTM: American Society for Testing and Materials
AUTO: Automatic
AVG: Average

BD: Board
BEL: Below
BETW: Between
BKR: Breaker
BLDG: Building
BLK: Block
BLKG: Blocking
BM: Beam
BOT: Bottom
BP: Base Plate
BRKR: Breaker
BS: Both Sides
BTU: British Thermal Units
BTUH: British Thermal Units per Hour

C/C: Center to Center
CAB: Cabinet
CHAN: Channel
CI: Cast Iron
CIR: Circle, Circular, Circuit
CJ: Control Joint
CL: Centerline
CLR: Clear
CNTR: Center, Counter
CO: Cleanout, Conduit
COL: Column
CONC: Concrete
CONN: Connection
CONST: Construction
CONT: Continuous, Continue, Control
CRS: Cold Rolled Steel

D: Deep, Depth
DBL: Double
DET: Detail
DF: Douglas Fir
DIA: Diameter
DIM: Dimension
DISL: Disposal
DISP: Dispenser
DIV: Division
DL: Dead Load
DN: Down
DWG: Drawing
DWGS: Drawings

E: East
(E): Existing
EA: Each
EJ: Expansion Joint
EL: Elevation, Elevator
ELEC: Electrical
ELEV: Elevator, Elevation
EN: End Nail
EPDM: Ethylene Propylene Diene Monomer
EQ: Equal
EXT: Exterior

FE: Fire Extinguisher
FF: Finished Floor
FG: Finished Grade
FIN: Finish, finished
FLR: Floor
FND: Foundation
FOC: Face of Concrete
FOF: Face of Finish
FOS: Face of Studs, Face of Sill Plate
FT: Foot, Feet, Fully Tempered
FTG: Footing, Fitting

GA: Gauge, Gage
GAL: Gallon
GALV: Galvanized
GFCI: Ground Fault Circuit Interrupted
GFI: Ground Fault Interrupted
GI: Galvanized Iron
GND: Ground

H: High
HDR: Header
HF: Hem Fir
HR: Hour
HT: Height
HVAC: Heating, Ventilating & Air Conditioning

ID: Inside Diameter
IN: Inch
INFO: Information
INT: Interior
INV: Invert

J-BOX: Junction Box
JST: Joist
JT: Joint

KW: Kilowatt

L: Length
LB: Pound (weight), Lag Bolt
LH: Left Hand
LL: Live Load
LT: Light
LWC: Light Weight Concrete

MAX: Maximum
MECH: Mechanical
MFD: Manufactured
MFG: Manufacturer, Manufacturing
MFR: Manufacture, Manufacturer
MIL: One Thousandth of and Inch
MIN: Minimum
MIR: Mirror
MISC: Miscellaneous
MOD: Module
MT: Mount, Mounted
MTL: Material, Metal

(N): New
NEC: National Electrical Code
NIC: Not In Contract
NTS: Not To Scale

O/O: Outside to Outside
OC: On Center
OD: Outside Diameter
OH: Overhang
OPNG: Opening
OPP: Opposite

PC: Piece, Pre-Checked
PH: Phase
PL: Plate
PLYWD: Plywood
PLUMB: Plumbing
PREFAB: Prefabricated
PSF: Pounds per square foot
PSI: Pounds per square inch
PT: Pressure Treaded
PVC: Polyvinyl Chloride

QTY: Quantity

RCP: Reflected Ceiling Plan
REBAR: Reinforcing Bar
RECEP: Receptacle
REF: Refer, Reference, Refrigerator
REQ: Require, Required
REV: Reverse, Revise, Revision
RF: Roof
RGH: Rough
RH: Right Hand
RO: Rough Opening
RT: Right

S: South
S/S: Side By Side
SF: Square Foot, Square Feet
SHT: Sheet
SHTHG: Sheathing
SIM: Similar
SLV: Sleeve
SPEC: Specification, Specifications
SQ: Square
SS: Stainless Steel
ST: Steel Tube
STD: Standard
STIFF: Stiffener
STL: Steel
STRUCT: Structural

T&B: Top and Bottom
T&G: Tongue & Groove
TEMP: Temporary, Tempered, Temperature
THK: Thick, Thickness
THRU: Through
TN: Toe Nail
TPO: Thermo Plastic Olefin
TST: Top of Steel
TSTAT: Thermostat
TYP: Typical

UL: Underwriters' Laboratories
UNO: Unless Noted Otherwise
UON: Unless Otherwise Noted
USG: United States Gypsum Company

V: Volt
VERT: Vertical
VTR: Vent Through Roof

W: West, Width, Wide, Watt
W/: With
W/O: Without
WD: Wood
WP: Waterproof, Weatherproof
WR: Water Resistant, Water Repellent
WT: Weight

DRAWING SYMBOLS

2"x4" WOOD STUD OR 3.5" STEEL STUD
2"x6" WOOD STUD OR 5.5" STEEL STUD
2"x8" WOOD STUD OR 7.5" STEEL STUD
1 HR RATED (DARK LINE THROUGH SYMBOL)
INDICATES DOOR TYPE
INDICATES WINDOW TYPE
KEY NOTE SYMBOL
INDICATES INTERIOR ELEVATION ORIENTATION
INDICATES DETAIL #
INDICATES SHEET #
INDICATES DETAIL #
INDICATES SHEET #
INDICATES EXTERIOR ELEVATION #
INDICATES SHEET #
5'-0" CLEAR FLOOR SPACE FOR WHEELCHAIR ACCESSIBLE MANEUVERING WITH 12" MIN. ENCROACHMENT
48"x30" CLEAR FLOOR SPACE FOR WHEELCHAIR ACCESS TO FIXTURE
INDICATES ROOM NAME
INDICATES ROOM NUMBER
60"x60" CLEAR FLOOR SPACE FOR WHEELCHAIR ENTRY ACCESS.
WHEELCHAIR ACCESSIBLE CLEAR FLOOR SPACE AT ACCESSIBLE WATER CLOSET
60"x59" AT FLOOR MOUNTED WATER CLOSET
60"x56" AT WALL MOUNTED WATER CLOSET
GRID LINE NUMBER OR LETTER

DRAWING INDEX

SHEET NO.	ARCHITECTURAL	SHEET NO.	STRUCTURAL
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A0.1	SPECIFICATIONS AND NOTES	~~S0.1~~	~~BUILDING SECTIONS PLYWOOD FLOOR~~
A0.2	CONSTRUCTION MATERIALS AND SPECIFICATIONS	~~S0.2~~	~~BUILDING SECTIONS CONCRETE FLOOR~~
~~A0.3~~	~~FINISH, DOOR & WINDOW SCHEDULES~~	~~S0.3~~	~~TYPICAL STRUCTURAL DETAILS~~
~~A0.4~~	~~SIGNAGE SPECIFICATIONS AND ACCESSIBILITY~~	~~S1.0~~	~~FLOOR FRAMING DETAILS-PLYWOOD & CONCRETE~~
		~~S1.1~~	~~FLOOR FRAMING PLAN-PLYWOOD~~
A1.A	FLOOR PLAN OPTIONS "A" & "A-1"	~~S1.2~~	~~FLOOR FRAMING PLAN-CONCRETE~~
A1.B	FLOOR PLAN OPTIONS "B" & "B-1"		
A1.C	FLOOR PLAN OPTIONS "C" & "C-1"	~~S2.0~~	~~ROOF FRAMING DETAILS~~
A1.D	FLOOR PLAN OPTIONS "D" & "D-1"		
		~~S2.2~~	~~ROOF FRAMING PLAN-PLYWOOD SHEATHING~~
		~~S2.3~~	~~ROOF FRAMING PLAN-22 GA~~
A2.0	REFLECTED CEILING DETAILS		
A2.A	REFLECTED CEILING PLAN OPTIONS "A" & "A-1"	~~S3.0~~	~~WALL FRAMING DETAILS-WOOD STUD~~
A2.B	REFLECTED CEILING PLAN OPTIONS "B" & "B-1"	~~S3.1~~	~~WALL FRAMING DETAILS-STEEL STUD~~
A2.C	REFLECTED CEILING PLAN OPTIONS "C" & "C-1"	~~S3.2~~	~~SHEAR WALL FRAMING ELEVATIONS~~
A2.D	REFLECTED CEILING PLAN OPTIONS "D" & "D-1"	~~S3.3~~	~~SHEAR WALL PLANS~~
		~~S4.0~~	~~ALLOWABLE BEAM AND HEADER PENETRATION~~
A3.1	ROOF DETAILS-22 GA METAL		
A3.2	ROOF PLAN MONO & DUAL SLOPE-22 GA METAL		
A3.3	ROOF DETAILS-26 GA METAL		
A3.4	ROOF PLAN MONO & DUAL SLOPE-26 GA METAL		
A3.5	ROOF DETAILS-TPO		
A3.6	ROOF PLAN MONO & DUAL SLOPE-TPO		
A3.7SR	SOLAR READY ROOF PLAN		
A4.A	INTERIOR ELEVATIONS OPTIONS "A" & "A-1"		
A4.B	INTERIOR ELEVATIONS OPTIONS "B" & "B-1"		ELECTRICAL
A4.C	INTERIOR ELEVATIONS OPTIONS "C" & "C-1"	E0.0	ELECTRICAL DETAILS & LEGENDS
A4.D	INTERIOR ELEVATIONS OPTIONS "D" & "D-1"	E1.A	ELECTRICAL PLAN OPTIONS "A" & "A-1"
		E1.ASR	SOLAR READY ELECTRICAL PLAN OPTIONS "A" & "A-1"
		E1.B	ELECTRICAL PLAN OPTIONS "B" & "B-1"
A5.A	EXTERIOR ELEVATIONS OPTIONS "A" & "A-1"-WOOD SIDING	E1.BSR	SOLAR READY ELECTRICAL PLAN OPTIONS "B" & "B-1"
A5.B	EXTERIOR ELEVATIONS OPTIONS "B" & "B-1"-WOOD SIDING	E1.C	ELECTRICAL PLAN OPTIONS "C" & "C-1"
A5.C	EXTERIOR ELEVATIONS OPTIONS "C" & "C-1"-WOOD SIDING	E1.CSR	SOLAR READY ELECTRICAL PLAN OPTIONS "C" & "C-1"
A5.D	EXTERIOR ELEVATIONS OPTIONS "D" & "D-1"-WOOD SIDING	E1.D	ELECTRICAL PLAN OPTIONS "D" & "D-1"
		E1.DSR	SOLAR READY ELECTRICAL PLAN OPTIONS "D" & "D-1"
		E5.0	ELECTRICAL TITLE 24 REPORTS
A6.A	EXTERIOR ELEVATIONS OPTIONS "A" & "A-1"-STUCCO	E5.1	ELECTRICAL TITLE 24 REPORTS
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A8.1	ARCHITECTURAL DETAILS		
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~~F2.0~~	~~ABOVE GRADE CONCRETE FOUNDATION DETAILS~~		
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F3.0	FLUSH TO GRADE FOUNDATION DETAILS		
F3.1	FLUSH TO GRADE FOUNDATION PLAN		

BUILDING DATA

TYPE OF CONSTRUCTION: V-B

OCCUPANCY: E

NO. OF STORIES: 1

BUILDING AREA: 12'x40' = 480 SF (600 SF MAX WITH OPTIONAL OVERHANGS)

ALLOWABLE AREA: 9,500 SF

MODULES: 12'x40'

STRUCTURAL DATA

STRUCTURAL DESIGN: SHEAR WALL

FOUNDATION: WOOD PAD: 50, 50+20, 100 & 125 PSF
ABOVE GRADE CONCRETE: 50, 50+20, 100 & 125 PSF
FLUSH TO GRADE CONCRETE: 50, 50+20, 100 & 125 PSF

SEISMIC SEPARATION: 4 1/2" MIN FROM OTHER EXISTING OR FUTURE BUILDINGS MEASURED FROM ITS FARTHEST PROJECTION

THIS PC (OR BLDG) IS DESIGNED STRUCTURALLY TO SUPPORT THE WEIGHT OF A FIRE SPRINKLER SYSTEM

ALLOWABLE SOIL BEARING: WOOD FOUNDATION: SEE SHEET S0.0
CONCRETE FOUNDATION: SEE SHEET S0.0

FIRE LIFE SAFETY

ALLOWABLE USES: THIS PC (OR BLDG) IS NOT APPROVED FOR 'A' OCCUPANCY

AUTOMATIC FIRE SPRINKLER SYSTEM: NOT REQUIRED ☐ / REQUIRED ☐

(WHEN APPLICABLE) AUTOMATIC FIRE SPRINKLER SYSTEMS ARE PERMITTED TO BE HYDRAULICALLY CALCULATED, PER NFPA 13, TO MEET THE WATER SUPPLY AVAILABLE AT EACH SITE. PLANS FOR SUCH SYSTEMS MAY BE SUBMITTED AS A PLAN REVIEW SUBMITTAL, AND MAY NOT BE REVIEWED UTILIZING THE "OVER THE COUNTER" PROCESS. A COMPLETE AUTOMATIC FIRE SPRINKLER SYSTEM SUBMITTAL PACKAGE MUST BE PROVIDED AT THE TIME OF THE PLAN REVIEW SUBMITTAL.

THE ARCHITECT OF RECORD (DESIGNER) OR THE DIVISION OF THE STATE ARCHITECT WILL DETERMINE THE USE OF A FIRE SUPPRESSION SYSTEM UNLESS REQUIRED OTHERWISE BY THE TYPE OF CONSTRUCTION LISTED ON THE BUILDING DATA.

ALL GROUP 'E' OCCUPANCY BUILDING GREATER THAN 12,000 SF SHALL BE FIRE SPRINKLED PER SECTION 903.2.3.1

EXTERIOR PROJECTIONS ARE TO BE FIRE PROTECTED UNLESS PROJECTIONS COMPLY WITH SECTION 705 AND 1406

EXTERIOR WALL OPENINGS TO COMPLY WITH SECTION 705.8

IN ROOMS OR AREAS WITH SPECIAL HAZARDS SUCH AS LABORATORIES, VOCATIONAL SHOPS AND OTHER SUCH AREAS WHERE HAZARDOUS MATERIALS IN EXEMPT AMOUNTS ARE USED OR STORED SHALL BE FIRE SPRINKLED PER SECTION 903.2.3.3.

PERMANENT PORTABLE BUILDINGS: A PORTABLE BUILDING THAT IS USED TO SERVE OR HOUSE STUDENTS AND IS CERTIFIED, AS A PERMANENT PORTABLE BUILDING ON A NEW PUBLIC SCHOOL CAMPUS BY THE PUBLIC SCHOOL ADMINISTRATION SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 903.2.3

NOTES

A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER), AND APPROVED BY THE THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-333 AND 4-342, PART 1, TITLE 24, CCR. CLASS R.B.I.P. FOR IN-PLANT INSPECTIONS.

SITE SPECIFIC:
COMPLY WITH CFC CHAPTERS 5 & 14, CBC CHAPTERS 3, 5, 7, 7A, 11B & 14

NOTE: "THIS PC IS NOT APPROVED FOR CHAPTER 7A WILDLAND URBAN AREAS"

IMPACT
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CONTRACTORS LICENSE #945691

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WEBSITE: WWW.IMPACTCONSTRUCTION.COM

PROJECT NAME:

SHEET TITLE: TITLE SHEET

MFR. STRUCTURAL ENGINEER OF RECORD ON PC

REGISTERED PROFESSIONAL ENGINEER — JAMES T. SIMONS — STRUCTURAL — STATE OF CALIFORNIA

MAY 06 2016

MFR. PROJECT SPECIFIC PROFESSIONAL OF RECORD

ARCHITECT OF RECORD

PROJECT SPECIFIC STATE AGENCY APPROVAL

PRE-CHECK (PC) DOCUMENT
CODE: 2013 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
PC 02-114488
FILE #: PC-80
AC ___ FLS ___ Trevor/SAC
DATE: 5·24·2016

REVISIONS

1 -
2 -
3 -
4 -
5 -
6 -
7 -
8 -

PROJECT NO.:	00-0000
DRAWN BY:	00
SCALE:	AS NOTED
DATE:	00-00-00

SHEET NUMBER

A0.0

GENERAL SPECIFICATIONS

A. THE REQUIREMENTS OF THE GENERAL CONDITIONS APPLY TO THE SEVERAL TRADE SECTIONS WITH THE SAME FORCE AS THOUGH FULLY REPEATED IN EACH SECTION.
B. NAME BRANDS ARE INDICATED TO ESTABLISH A STANDARD OF QUALITY. ITEMS OF EQUAL OR BETTER QUALITY MAY BE SUBSTITUTED FOR THE LISTED BRAND NAMED PRODUCTS.
C. ALL WORK TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF CALIFORNIA BUILDING CODE 2013, TITLE 24 PART 2,3,4,5,9 AND TITLE 24, PART 1, GROUP 1. A COPY OF THESE REGULATIONS SHALL BE KEPT ON THE JOB SITE AT ALL TIMES. ALSO REFER TO THE DIVISION OF THE STATE ARCHITECT – STRUCTURAL SAFETY SECTION "INTERPRETATIONS OF REGULATIONS". SEE ESPECIALLY IR 16-1. THESE STRUCTURES ARE DESIGNED PER THE MODIFIED REQUIREMENTS TEMPORARY FOUNDATIONS (UNO).
D. CHANGES IN PLANS AND SPECIFICATIONS SHALL BE MADE BY THE ADDENDUM OR CONSTRUCTION CHANGES PER T24 , SIGNED BY THE ARCHITECT AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT BEFORE ANY RELATED WORK CAN BEGIN. CONSTRUCTION CHANGES PER T24 SHALL ALSO BE SIGNED BY THE OWNER PRIOR TO APPROVAL BY DSA.

1. MATERIALS AND WORKMANSHIP:
A. ALL WORK SHALL BE SKILLED AND QUALIFIED FOR THE WORK WHICH THEY PERFORM. ALL MATERIALS USED, UNLESS OTHERWISE SPECIFIED, SHALL BE NEW AND OF THE TYPES AND GRADES SPECIFIED.
B. WORKMANSHIP SHALL BE EQUAL OR BETTER IN QUALITY TO THAT REQUIRED BY THE CONSTRUCTION TRADES FOR A FINISHED PRODUCT.
C. THE CONTRACTOR SHALL CERTIFY THAT NO ASBESTOS CONTAINING BUILDING MATERIALS WHICH EXCEED STATE AND FEDERAL MANDATED SAFE ASBESTOS LEVELS HAVE BEEN USED IN THE CONSTRUCTION OF RELOCATABLE FACILITIES.
D. TESTING: TESTS OF MATERIALS SHALL BE BY A PERSON OR TESTING LABORATORY SELECTED BY THE OWNER WITH THE APPROVAL OF DSA AND ARCHITECT. THE OWNER SHALL BE RESPONSIBLE FOR THE COST OF ALL REQUIRED TESTING AND INSPECTIONS, EXCEPT FOR THE RETESTING REQUIRED BY THE FAILURE OF ANY MATERIAL TO PASS.
E. ERECTION AT THE SITE: THE BUILDING SHALL BE TRANSPORTED, ERECTED AND SET ON FOUNDATION AS REQUIRED BY A LICENSED TRANSPORT. ALL REQUIRED FINISH WORK SHALL BE COMPLETED BY SKILLED LABOR OF THE MANUFACTURER/CONTRACTOR, BUT WILL NOT INCLUDE UTILITIES SERVICE CONNECTION.
F. SITE WORK: THE SCHOOL DISTRICT SHALL PROVIDE ACCESS TO THE SITE FOR THE INSTALLATION OF THE BUILDING. REMOVAL OF TREES, SHRUBS, FENCING, SPRINKLERS, ETC. NECESSARY FOR THE MOVE-IN OF BUILDINGS SHALL BE THE RESPONSIBILITY OF THE SCHOOL DISTRICT. THE OWNER, UNLESS OTHERWISE SHOWN ON THE APPROVED PLANS, WILL PROVIDE SITE(S) SATISFACTORY TO THE ARCHITECT OR ENGINEER FOR THE INSTALLATION OF THE RELOCATABLE BUILDING(S) THAT ARE LEVEL AND HAVE STABLE SOIL CONDITIONS WITH ADEQUATE SITE DRAINAGE, EXCEPT IF DESIGNATED IN THE CONTRACT DOCUMENTS AS THE RESPONSIBILITY OF THE MANUFACTURER/CONTRACTOR. IF ADDITIONAL GRADING AND/OR LEVELING IS NECESSARY FOR PROPER INSTALLATION OF MODULAR UNITS, THE ADDITIONAL CHARGE WILL BE THE RESPONSIBILITY OF THE OWNER.
G. UTILITIES: THE OWNER WILL BE RESPONSIBLE FOR ANY AND ALL UTILITY, FIRE ALARM OR SPECIAL ELECTRICAL SIGNAL SYSTEM CONNECTIONS EXCEPT IF DESIGNATED IN THE CONTRACT DOCUMENTS AS THE RESPONSIBILITY OF THE MANUFACTURER/CONTRACTOR.

2. SCOPE OF WORK:
A. THE WORK CONSISTS OF MANUFACTURING OFF-SITE IN A PLANT, AND INSTALLING ON-SITE, MODULAR RELOCATABLE BUILDING AS DEFINED HEREIN AND SHOWN AND DETAILED ON DRAWINGS.
B. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO PREPARE THE BUILDING ELEMENTS, TRANSPORT THEM FROM THE PLANT TO THE SITE AND TO COMPLETE THE ASSEMBLY AT THE SITE.
C. THE CONDITION OF THE SITE SHALL BE THE RESPONSIBILITY OF THE SCHOOL DISTRICT.
D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE BUILDING DURING CONSTRUCTION AND SHALL PROVIDE ADEQUATE SHORING AND BRACING DURING CONSTRUCTION. CONTRACTOR SHALL COMPLY WITH APPLICABLE SAFETY REGULATIONS

ASSEMBLY
A. IN A LOCATION AS DETERMINED BY THE SCHOOL DISTRICT, THE CONTRACTOR SHALL PLACE CONCRETE LEVELING STRIPS OR OTHER SUITABLE SUPPORTS AS DETAILED ON THE DRAWINGS.
B. THE ELEMENTS SHALL BE BROUGHT TO THE SITE ON WHEEL ASSEMBLY AND TRANSFERRED TO THE PREPARED SITE. GREAT CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ELEMENTS BY RACKING OR BUMPING.
C. CONNECTION OF THE ELEMENTS TOGETHER SHALL BE DONE ACCORDING TO INSTRUCTIONS ON THE DRAWINGS. FLASHING, TRIM AND OTHER LOOSE ITEMS SHALL BE INSTALLED PER DETAILS ON THE DRAWINGS.

INSPECTION
ALL REQUIREMENTS OF TITLE 19 AND 24 OF THE STATE OF CALIFORNIA CODE OF REGULATIONS (CCR) RELATING TO INSPECTIONS AND VERIFIED REPORTS SHALL BE COMPLIED WITH AND SHALL INCLUDE:
A. GENERAL RESPONSIBLE IN CHARGE OF FIELD ADMINISTRATION IS BY THE ARCHITECT OF RECORD.
B. INSPECTION OF IN-PLANT WORK DURING THE COURSE OF CONSTRUCTION BY AN INSPECTOR APPROVED BY THE DIVISION OF THE STATE ARCHITECT AND THE DISTRICT'S ARCHITECT OR OWNER. THE INSPECTOR SHALL BE RESPONSIBLE TO INSPECT THE GENERAL CONSTRUCTION, WELDING, MECHANICAL AND ELECTRICAL WORK. COST OF THESE INSPECTIONS SHALL BE BY THE SCHOOL DISTRICT OR OWNER.
C. ON SITE INSPECTION OF THE BUILDING SHALL BE PERFORMED BY AN INSPECTOR APPROVED BY THE DIVISION OF THE STATE ARCHITECT AND RETAINED BY THE SCHOOL DISTRICT OR OWNER.
D. OTHER SPECIAL TESTS OR INSPECTIONS, SUCH AS CONCRETE AND CONCRETE REINFORCEMENT PLACEMENT, MAY BE REQUIRED BY THE DIVISION OF THE STATE ARCHITECT.

3. WORK NOT INCLUDED:
A. ALL ON-SITE OR OFF-SITE UTILITIES AND THE CONNECTION OF THEM TO THE BUILDING UNLESS INDICATED ON THE DRAWINGS.
B. ALL LEVELING, GRADING OR OTHER SITE PREPARATION EXCEPT CONCRETE OR WOOD LEVELING STRIPS, WHERE REQUIRED, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
C. FIRE ALARM COMPONENTS ONLY, PROGRAM BELL, CLOCK, PUBLIC ADDRESS SYSTEM, INTERCOM SYSTEM, TV SYSTEM UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

GENERAL DESIGN REQUIREMENTS:

THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE OWNER AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.

REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND OTHER INFORMATION NOT SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS.

DIMENSIONS AND ELEVATIONS SHOWN ARE APPROXIMATE AND ARE PROVIDED AS AN AID IN INTERPRETING THE DRAWINGS ONLY. DIMENSIONS AND ELEVATIONS MUST BE VERIFIED WITH ARCHITECTURAL DRAWINGS. IN THE EVENT OF CONFLICT, DIMENSIONS AND ELEVATIONS SHOWN ON ARCHITECTURAL DRAWINGS SHALL GOVERN. DRAWING SCALES GIVEN ARE APPROXIMATE – DO NOT SCALE PLANS OR DETAILS.

WHERE THESE GENERAL NOTES AND TYPICAL DETAILS ARE IN CONFLICT WITH THE SPECIFICATIONS, THESE GENERAL NOTES AND TYPICAL DETAILS SHALL GOVERN.

TYPICAL DETAILS SHALL APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

DETAILS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO DETAILS FOR SIMILAR CONSTRUCTION SHOWN ON THESE DRAWINGS.

NO STRUCTURAL MEMBERS SHALL BE CUT, NOTCHED OR OTHERWISE PENETRATED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER IN ADVANCE OR SHOWN ON THESE DRAWINGS.

EACH MODULE SHALL BE PERMANENTLY IDENTIFIED WITH (2) METAL IDENTIFICATION TAGS 3"x1 1/2" MINIMUM SIZE. MECHANICALLY FASTEN ONE TAG VISIBLE FROM THE EXTERIOR AND THE OTHER TO THE INTERIOR FRAME ABOVE THE CEILING AT THE END OF THE MODULE. THE TAG SHALL HAVE THE FOLLOWING INFORMATION:

A. DSA APPLICATION NUMBER
B. BASIC WIND SPEED, EXPOSURE.
C. DESIGN ROOF LIVE LOAD
D. DESIGN FLOOR LIVE LOAD
E. BUILDER'S NAME
F. PLANT INSPECTOR/ID MARK
G. SERIAL NUMBER

STRUCTURAL FRAME – EACH MODULE SHALL BE DESIGNED AS A SHEAR WALL STRUCTURE TO WITHSTAND VERTICAL AND HORIZONTAL LOADS AND COMPLY WITH REQUIREMENTS OF THE DIVISION OF THE STATE ARCHITECT. THE NECESSARY PROVISIONS ARE INCORPORATED IN THE STRUCTURE TO PERMIT THE RELOCATION OF THE STRUCTURAL FRAME IN SECTIONS NOT EXCEEDING 12 FEET IN WIDTH.

EACH MODULE SHALL BE CAPABLE OF RESISTING ALL VERTICAL AND LATERAL LOADS DURING TRANSPORTATION AND RELOCATION. (NORMAL INDUSTRY PRACTICE FOR BRACING MODULES DURING TRANSPORTATION IS ACCEPTABLE). WHEN MODULES ARE ASSEMBLED, JOINTS SHALL BE SEALED WITH REMOVABLE CLOSING STRIPS OR OTHER METHOD TO PRESENT A FINISHED APPEARANCE AND BE PERMANENTLY WATERPROOF.

EACH MODULE SHALL BE SUFFICIENTLY RIGID TO BE JACKED UP AT THE FRONT AND BACK CORNERS FOR RELOCATION WITHOUT DAMAGE OR THE MODULE SHALL HAVE LIFT LUGS AT FRONT AND BACK LOCATED AS REQUIRED SO THAT THE MODULE MAY BE JACKED UP FOR RELOCATION IN ONE PIECE WITHOUT ADDITIONAL SUPPORTS OF ANY TYPE. EVIDENCE OF EXCESSIVE BOWING DURING THE INSTALLATION OF THE MODULES WHICH, IN THE OPINION OF THE AGENCY ARCHITECT OR STRUCTURAL ENGINEER, CAUSES EXCESSIVE WORKING AT ANY JOINT OR COMPROMISES THE STRUCTURAL INTEGRITY OF THE MODULE, SHALL BE SUFFICIENT REASON FOR REJECTION OF THE MODULE.

PROVIDE OPENINGS, CURBS, FRAMING AND/OR SUPPORTS FOR ITEMS INDICATED ON ARCHITECTURAL, MECHANICAL, ELECTRICAL OR OTHER DRAWINGS INCLUDED IN CONSTRUCTION DOCUMENTS.

FRAMING – ROOF, WALLS AND FLOOR: FRAMING MEMBERS SHALL BE OF THE GRADE AND SIZE CALLED FOR ON THE STRUCTURAL PLANS.

ROOF OVERHANG – ALL OVERHANGS SHALL PRESENT A PLEASING AND FINISHED APPEARANCE. SOFFIT MATERIAL, WHEN USED, SHALL BE 3/8" MIN EXTERIOR SIDING. PLYWOOD SOFFIT MATERIAL SHALL BE APPLIED WITH EXPOSED GRAIN RUNNING PARALLEL TO THE LENGTH OF THE BUILDING. SOFFIT SHALL BE NEATLY AND CLOSELY FITTED AND TRIMMED TO COVER GAPS. ALL ENCLOSED SOFFIT AREAS SHALL BE VENTILATED PER THE CBC

FLOOR – THE FLOOR SHALL BE STEEL FRAMED WITH A DESIGN LIVE LOAD OF 50 LBS PER SQUARE FOOT UNLESS OTHERWISE NOTED ON THE DRAWINGS. THIS DOES NOT APPLY TO A SLAB ON GRADE CONDITION.

FIRE EXTINGUISHER – UL 2A:10BC, PRESSURE TYPE, +48" TO EXTINGUISHER HANDLE. +48" TO FIRE EXTINGUISHER HANDLE WHEN PROVIDED.

BUILDING INSULATION – SHALL COMPLY WITH CALIFORNIA QUALITY STANDARDS FOR INSULATING MATERIAL. FLAME SPREAD – MAX 25, SMOKE DEVELOP – MAX 450

BUILDING VENTILATION – PER SECTION 1203.3.1.: OPENINGS FOR UNDER-FLOOR VENTILATION SHALL NOT BE LESS THAN 1 1/2 SQUARE FEET (0.135 m^2) FOR EACH 25 LINEAR FEET (7620 LINEAR RUN) OF EXTERIOR WALL. THEY SHALL BE COVERED WITH CORROSION-RESISTANT WIRE MESH WITH MESH OPENINGS NOT LESS THAN 1/4 INCH (6.4 mm) NOR MORE THAN 1/2 INCH IN ANY DIRECTION.

WHEN MODULE IS RELOCATED – DO NOT REINSTALL NAILS OR SCREWS IN EXISTING HOLES.

ELECTRICAL

1. SCOPE OF WORK:
CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES FOR ELECTRICAL INSTALLATION COMPLETE WITH ASSOCIATED EQUIPMENT AND FIXTURES IN OPERATING CONDITION READY FOR USE. THE WORK INCLUDES: LIGHT AND POWER SYSTEMS, LIGHTING FIXTURES COMPLETE WITH LAMPS, CONNECTIONS AND DISCONNECTS TO A/C EQUIPMENT.

2. MATERIALS:
ALL NEW COMPLYING WITH REQUIREMENTS OF CBC AND NFPA
A. ELECTRIC METALLIC TUBING: COUPLINGS AND FLEX CONDUIT GALVANIZED OR SHERARDIZED.
B. PANEL BOARDS: FLUSH MOUNTED WITH HINGED DOORS AND INDEXED CARD HOLDERS.
C. CONDUCTORS: COPPER, INSULATED FOR 600 VOLTS, TYPE THHN FOR SIZES #12 TO #6, TYPE THW FOR LARGER SIZES. MINIMUM SIZE- #12.
D. RECEPTACLE: GENERAL ELECTRIC 5242-2 OR EQUAL, +15" AFF MIN TO BTM OF BOX.
E. CLOCK RECEPTACLE: EAGLE OR EQUAL.
F. SWITCHES: GENERAL ELECTRIC 5901-2 OR EQUAL, +48" AFF MAX TO TOP OF BOX.
G. 2'x4' FLUORESCENT DROP IN LIGHT FIXTURE ACRYLIC PRISMATIC LENS, DBL. BALLAST, MAGNETIC ENERGY EFFICIENT (3) 34 WATT T-8 TUBES WEIGHT 27 LBS (UNO)
H. ALL ELECTRICAL WIRING 110V AND GREATER SHALL BE IN CONDUIT SYSTEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF CEC MINIMUM SIZE CONDUIT IS 1/2" MIN
I. ACCEPTABLE CONDUIT: RIGID ELECTRICAL METALLIC TUBING (EMT); GALVANIZED THIN WALL FLEXIBLE (INTERIOR); GALVANIZED STEEL FLEXIBLE (EXTERIOR); GALVANIZED STEEL WITH FACTORY APPLIED PVC
J. ALL CONDUITS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND SHALL BE SECURED IN CONFORMANCE WITH CEC FIELD BENDS SHALL BE AVOIDED WHEREVER POSSIBLE. WHERE BENDS MUST BE MADE, USE AN APPROPRIATE "HICKEY" OR BENDING MACHINE. REAM AND DEBUR ALL CONDUIT PRIOR TO INSTALLATION AND TERMINATE IN APPROPRIATE BUSHINGS OR CONNECTORS, JACKET. WIRING SHALL BE #14 MIN COPPER TYPE TW, THW, THWN AS APPLICABLE. CONDUIT FILL SHALL NOT EXCEED REQUIREMENTS OF CEC A SEPARATE GROUNDING CONDUCTOR SHALL BE PULLED THROUGHOUT THE ENTIRE SYSTEM. CARE SHALL BE TAKEN TO AVOID DAMAGE TO WIRE OR INSULATION DURING PULLING. POWDERED SOAPSTONE OR A PULLING COMPOUND SUCH AS "YELLOW 77" LUBRICANT MAY BE USED IF NECESSARY.

3. WORKMANSHIP
MATERIAL AND EQUIPMENT INSTALLED IN A SECURE, NEAT, WORKMANLIKE MANNER IN ACCORDANCE WITH CODE REQUIREMENTS, PANEL BOARD CARDS FILLED OUT. CONDUIT AND CABLE INSTALLED IN WALL AND CEILING SPACES. WORK PIERCING WATERPROOFED AREAS FLASHED AND SEALED TO A WATERTIGHT CONDITION.

GROUNDING OF BUILDING COMPONENTS

1. THE OWNER, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS, SHALL BE THE RESPONSIBLE FOR PROVIDING THE NECESSARY GROUNDING OF THE BUILDING ELECTRICAL SYSTEM PER CEC TABLE 250 AND DSA IR E-1.
2. THE PROJECT INSPECTOR SHALL WITNESS AND VERIFY THE GROUNDING TESTS.

PAINTING

1. SCOPE OF WORK
CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO PAINT BUILDINGS. ALL EXPOSED SURFACES OF BUILDING AND RAMP SHALL BE PAINTED EXCEPT ALUMINUM WINDOW FRAMES AND THRESHOLDS, CFC CHAPTER 15, REFERENCE TO VOC LIMITS PER TABLE 5.504.3 OF TITLE 24. PART 11

2. MATERIALS
A. EXTERIOR WOOD- VISTA BRAND 4100 PRIMER, 6000 FINISH (OR EQUAL)
B. INTERIOR TRIM- VISTA BRAND 7000 FINISH (OR EQUAL)
C. METAL- VISTA BRAND 7000 FINISH (OR EQUAL)

3. WORKMANSHIP
A. EXTERIOR- WOOD SIDING, TRIM AND SKIRTING- APPLY TWO COATS OF EXTERIOR FLAT ACRYLIC PAINT SPRAYED ON.
B. INTERIOR TRIM- TRIM NOT PRE COATED SHALL BE PAINTED WITH TWO COATS OF SEMI GLOSS LATEX OVER PRIMER.
C. METAL- ALL METAL SURFACES SHALL BE PAINTED WITH TWO COATS OF ALKYD FINISH COAT OVER SHOP COAT.
D. RAMP- ONE COAT OF NONSKID SURFACING.

MECHANICAL SECTION

1. SCOPE OF WORK:
CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO INSTALL THE AIR CONDITION SYSTEM AS SHOWN ON THE DRAWINGS INCLUDING A/C UNITS AND ACCESSORIES, REMOTE THERMOSTAT, GRILLS AND POWER WIRING COMPLETE TO LOAD CENTER. CONTRACTOR SHALL INSTRUCT OWNER'S OPERATORS ON OPERATION AND MAINTENANCE OF A/C SYSTEM.

2. WORKMANSHIP:
UNITS SHALL BE INSTALLED COMPLETE AND OPERATING WITH ALL ACCESSORIES IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS.

3. EQUIPMENT: SEE A/C INFORMATION SCHEDULE FOR SIZE AND TYPE
A. FACTORY MADE AIR DUCTS. FACTORY MADE AIR DUCTS SHALL BE APPROVED FOR THE USE INTENDED OR SHALL CONFORM TO THE REQUIREMENTS OF CMC. EACH PORTION OF A FACTORY MADE AIR DUCT SYSTEM SHALL BE IDENTIFIED BY THE MANUFACTURER WITH A LABEL OR OTHER SUITABLE IDENTIFICATION INDICATING COMPLIANCE WITH CMC AND SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF THEIR LISTING.
B. INSULATION APPLIED TO THE EXTERIOR SURFACE OF DUCTS LOCATED IN BUILDINGS SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND A SMOKE DENSITY OF NOT MORE THAN 50 WHEN TESTED AS A COMPOSITE INSTALLATION INCLUDING INSULATION, FACING MATERIALS, TAPES AND ADHESIVES AS NORMALLY APPLIED, SECTION 720, 2013 CBC
C. MATERIAL EXPOSED WITHIN DUCTS OR PLENUMS SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE DEVELOPMENT RATING OF NOT MORE THAN 50.
D. AIR FILTERS. AIR FILTERS SHALL COMPLY WITH THE STANDARD FILTER UNITS & TEST PERFORMANCE THAT IS REFERENCED IN CHAPTER 17, AS CLASS I OR II, CMC
E. PIPE AND TUBING. INSULATION AND COVERING ON PIPE AND TUBING SHALL HAVE A FLAME SPREAD-RATING NOT TO EXCEED 25 AND A SMOKE DENSITY NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH CBC SECTION 720.7

CARPENTRY

1. SCOPE OF WORK
CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO INSTALL CARPENTRY

2. MATERIALS
LUMBER GRADE MARKED IN ACCORDANCE WITH "STANDARD GRADING AND DRESSING RULES NO. 17" OF WEST COAST LUMBER INSPECTION BUREAU OR "WESTERN LUMBING FOR GRADING RULES 2011 EDITION" OF WESTERN WOOD PRODUCTS ASSOCIATION. PLYWOOD GRADE MARKED IN ACCORDANCE WITH "PRODUCT STANDARD PS 1-07 FOR STRUCTURAL PLYWOOD" OF AMERICAN PLYWOOD ASSOCIATION, COMPLYING WITH CURRENT CBC REFERENCE STANDARDS
A. HEADERS: HEM FIR STUD GRADE OR BETTER
B. PLATES: HEM FIR STUD GRADE OR BETTER.
C. BLOCKING: HEM FIR STUD GRADE OR BETTER
D. TREATED LUMBER: SILLS AND LUMBER IN CONTACT WITH CONCRETE, MASONRY, ASPHALT OR EARTH-HEMLOCK FIR PRESSURE TREATED WITH PRESERVATIVE AS SPECIFIED IN 2303.1.8 OF CBC AWPA STANDARD U1 AND M4; 2X GRADE MEMBERS CUT ENDS DIPPED IN PRESERVATIVE (CUPONAL).
E. PLYWOOD ROOF DECKING: APA C-D GRADE, GROUP 1, EXPOSURE 1 WITH EXTERIOR GLUE. ON OVERHANGS, C-C PLUGGED AND TOUCH SANDED
F. PLYWOOD FLOOR DECKING: APA STURD-I-FLOOR 48" OC 1-1/8" TONGUE AND GROOVE FLOOR SHEATHING.
G. EXTERIOR SIDING/SHEATHING: APA TYPE 303, EXTERIOR, MDO 8" OC, SIDING. SHEATHING 1/2" CDX.
H. STUDS AND POSTS: HEM FIR STUD GRADE
I. FASTENERS: ALL NAILS SHALL BE CORROSION RESISTANT PER CBC SECTION 2304.9.1.1 & 2304.9.5
J. BUILDING TRIM: 1x RESAWN SELECT HF OR MASONITE
K. DOOR/WINDOW TRIM: 1x4 RESAWN HF

3. WORKMANSHIP
A. FRAMING: SECURELY NAILED, BRIDGED AND BLOCKED TO FORM RIGID STRUCTURE. WORK CUT, FITTED AND ASSEMBLED LEVEL, PLUMB AND TRUE TO LINE. TRIM IN AS LONG LENGTHS AS POSSIBLE WITH ALL STANDING TRIM IN ONE PIECE. TRIM SEALED AT ALL EDGES.
B. NAILING: IN ACCORDANCE WITH CBC TABLE 2304.9.1, NAILS SHALL BE CORROSION RESISTANT BOX NAILS PER 2304.9.1.1 AND 2304.9.5.
C. EXTERIOR WALLS: FACTORY FABRICATED. CAULKING PROVIDED BETWEEN PERIMETER OF WALLS AND STRUCTURAL MEMBERS PROVIDING WEATHERPROOF AND WATERTIGHT SEAL. NECESSARY CLOSURES, SEALS, FLASHING PLACED AT TOP AND BASE SUPPORT OF PANELS AND AROUND OPENINGS
D. MACHINE APPLIED NAILING: SHALL HAVE PRIOR DEMONSTRATION AND APPROVAL BY DSA FIELD INSPECTOR AND THE ARCHITECT. THE APPROVAL IS SUBJECT TO CONTINUES SATISFACTORY PERFORMANCE. PLYWOOD SHALL HAVE A MINIMUM THICKNESS OF 3/8". IF NAIL HEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY
E. TRIM SEALED AT ALL EDGES. SEALANT PAINTED TO MATCH TRIM OR SIDING
F. RETIGHTEN ALL BOLTS BEFORE CLOSING IN
G. THE DESIGN MOISTURE CONTENT OF LUMBER IS 19% OR LESS BEFORE FABRICATION, OTHER REVISION THRU CHANGE ORDER WILL BE REQUIRED

SEALANT & WEATHER RESISTANT

1. SCOPE OF WORK:
CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SERVICES TO SEAL THE BUILDINGS.

2. MATERIALS:
A. "VULKEM" SEALANT, POLYURETHANE, MANUFACTURED BY MAMECO INTERNATIONAL OR APPROVED EQUAL, TO BE USED AT ALL STANDING SEAM ROOFING DETAILS.
B. SEALANT APPLIED TO DRY CLEAN SURFACES, WHEREVER INDICATED ON DETAILS AND AS NEEDED TO MAKE BUILDING WATERTIGHT, IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS, REFER TO TABLE 5.504.4.1 AND TABLE 5.04.4.2 AND SCAQMD RULE 1168 VOC LIMITS

MOISTURE BARRIER:
ALL WEATHER-EXPOSED SURFACES SHALL HAVE A WEATHER-RESISTIVE BARRIER TO PROTECT THE INTERIOR WALL COVERING. SUCH BARRIER SHALL BE EQUAL TO THAT PROVIDED FOR IN THE CBC 1404.2 & 2510.6. BARRIER SHALL BE FREE FROM HOLES AND BREAKS OTHER THAN THOSE CREATED BY FASTENERS AND CONSTRUCTION SYSTEM DUE TO ATTACHING OF THE BUILDING PAPER.

ZBAR:
ALL HORIZONTAL JOINTS IN SIDING SHALL BE PROTECTED BY GALVANIZED "Z BAR- 3/4 x 5/8 x 3/4" FLASHING.
FLASHING NEED NOT BE USED WHERE SKIRTING MEETS THE UNDERSIDE OF AN EXPOSED METAL FRAME AND THE SKIRTING IS RECESSED SUFFICIENTLY TO PROTECT THE TOP EDGE OF PLYWOOD. APPLY SEALANT TO SEAM FOR WEATHER-RESISTANCE.

EQUIPMENT ANCHORAGE NOTES

ALL MECHANICAL, PLUMBING. AND ELECTRICAL EQUIPMENT SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED 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 2013 CBC. SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10 CHAPTER 13, 26, 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 ATTACHMENTS OF THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED TO 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 NO REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

STRUCTURAL AND MISC STEEL

1. SCOPE OF WORK:
CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND AS SPECIFIED AND INDICATED ON THE DRAWINGS, AND SERVICES REQUIRED FOR STRUCTURAL AND MISCELLANEOUS STEEL

2. MATERIALS:
REFER TO SHEET S0.0 FOR STRUCTURAL STEEL AND COLD FORMED STRUCTURAL STEEL INFORMATION

3. WORKMANSHIP
A. NAILS, BOLTS, SCREWS, NUTS, ETC. EXTERIOR WORK SHALL BE CADIUM PLATED OR GALVANIZED.
B. HANDRAILS FOR STAIRS AND RAMPS: SEE RAMP OR STAIR SHEETS
C. SHOP PAINT:
   1. EXPOSED STEEL COATED WITH ONE COAT SHOP COAT
   2. NON-EXPOSED STEEL COATED WITH ONE COAT SHOP COAT
   3. ALL SURFACES THOROUGHLY CLEANED BY EFFECTIVE MEANS PRIOR TO APPLICATION OF SHOPS COAT
D. TESTS: PROVIDE MILL CERTIFICATES OR TEST ALL MEMBERS. WELDS SHALL BE INSPECTED AND/OR TESTED PER SECTION 1705A.2.2.5
E. PERFORM SPECIAL INSPECTION FOR INTUMESCENT FIRE RETARDANT COATINGS PER SECTION 1705A.13

ACOUSTICAL CONTROL

WHEN THE PRE-CHECK BUILDING IS SITE ADAPTED, THE BUILDING AND SITE FEATURES NEED TO COMPLY WITH THE CALGREEN CODE SECTION 5.507.4 FOR THE SPECIFIC SITE LOCATION, AND WHEN THE NEW PC BUILDING IS PLACE ADJACENT TO ANOTHER EXISTING PC BUILDING (WITH ZERO SEPARATION), THE ADJOINING WALL SECTION FOR INTERIOR SOUND TRANSMISSION MUST MEET THE MINIMUM REQUIREMENT OF A STC RATING OF 40 PER SECTION 5.507.4.3

SHEET METAL

1. SCOPE OF WORK:
CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND SERVICES TO INSTALL INDICATED SHEET METAL.

2. MATERIALS:
A. SHEET METAL- STEEL SHEETS HOT DIP GALVANIZED WITH 1.25 OZ PER SQUARE FOOT ZINC COATING CONFORMING TO ASTM A123. MINIMUM 26 GA
B. SOLDER- OF STANDARD BRAND, GRADE A OF EQUAL PARTS LEAD AND TIN ASTM B32.
C. FLUX- ZINC SATURATED MURATIC ACID.

3. WORKMANSHIP:
SHEET METAL ACCURATELY FORMED TO DIMENSIONS AND SHAPES DETAILED WITH TRUE STRAIGHT LINES, CORNERS AND ANGLES. FLASHING INSTALLED IN LONGEST LENGTHS POSSIBLE. EXTERIOR WORK FORMED, FABRICATED AND INSTALLED SO THAT IT ADEQUATELY PROVIDES FOR EXPANSION AND CONTRACTION IN THE COMPLETED WORK AND FINISHES WATER AND WEATHER TIGHT.

PIPING, DUCTWORK AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTES

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, 13.6.7, 13.6.5.6, AND 2013 CBC, SECTIONS 1616A.1.23, 1616A.1.24, 1616A.1.25 AND 1616A.1.26

THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS (OPM #) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D.

COPIES OF THE 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.

IMPACT
CONSTRUCTION SERVICES INC.
CONTRACTORS LICENSE #945691

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PROJECT NAME:

SHEET TITLE:
SPECIFICATIONS AND NOTES

MFR. STRUCTURAL ENGINEER OF RECORD ON PC

REGISTERED PROFESSIONAL ENGINEER
JAMES T. SIMPSON
No. 3602
EXP. 06/30/
STRUCTURAL
STATE OF CALIFORNIA

MAY 05 2016

MFR. PROJECT SPECIFIC PROFESSIONAL OF RECORD

ARCHITECT OF RECORD

PROJECT SPECIFIC STATE AGENCY APPROVAL

PRE-CHECK (PC) DOCUMENT
CODE: 2013 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
PC 02-114488
FILE #: PC-80
AC FLS SS
DATE: 5 24 16

REVISIONS

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PROJECT NO.:	00-0000
DRAWN BY:	00
SCALE:	AS NOTED
DATE:	00-00-00

SHEET NUMBER
A0.1

ROOFING:

FIRESTONE ULTRAPLY TPO:
PER CBC SECTION 1505 CLASS 'A' BASE SHEET FINISHED GRADE.
FIRESTONE ULTRAPLY TPO MEMBRANE ROOFING SYSTEM (THERMOPLASTIC POLYFIN BASED MEMBRANE) ADHESIVELY OR MECHANICALLY ATTACHED OVER INSULATED, COMBUSTIBLE OR NON-COMBUSTIBLE DECKS. CLASS 'A'. THE TPO MEMBRANES ARE PRODUCED WITH A POLYESTER WEFT INSERTED REINFORCEMENT. SYNTHETIC RUBBER SINGLE-PLY SHEETS HAVING A MIN NOMINAL THICKNESS OF 45 MILS (1.1 MM). INSTALL PER MANUFACTURER INSTALLATION INSTRUCTIONS.

STEVENS EP TPO:
PER CBC SECTION 1505 CLASS 'A' BASE SHEET FINISHED GRADE. STEVENS EP TPO MEMBRANE ROOFING SYSTEM (SCRIM REINFORCED ETHYLENE-PROPYLENE BASED MEMBRANE) ADHESIVELY OR MECHANICALLY ATTACHED OVER INSULATED, COMBUSTIBLE OR NON-COMBUSTIBLE DECKS. CLASS 'A'. THE TPO MEMBRANES ARE SCRIM REINFORCED SYNTHETIC RUBBER SINGLE-PLY SHEETS HAVING A MIN NOMINAL THICKNESS OF 45 MILS (1.1 MM). INSTALL PER MANUFACTURER INSTALLATION INSTRUCTIONS.

1/4" DENS-DECK ROOF BOARD:
USED AS A UNDERLAYMENT FOR THE TPO MEMBRANE ROOFING SYSTEM. FLAME SPREAD: 0, SMOKE DEVELOPED: 0 PER, ASTM E-84. INSTALL PER ROOFING MANUFACTURER INSTALLATION INSTRUCTIONS.

22 & 26 GAUGE METAL ROOFING:
UNPENETRATED INTERLOCKING ROOF PANELS MECHANICALLY CRIMPED AT TOP TO INSURE AGAINST WATER INFILTRATION, STANDING SEAM OR RIBBED TYPE. THE ROOFING SYSTEM SHALL BE FIRE RETARDANT PER CBC STANDARDS. TEST RESULTS TO SUPPORT CLASS 'A' RATING, SHOWING THE ROOF SYSTEM WILL WITHSTAND THE UPLIFT OF A 110 MPH WIND.

EXTERIOR:

PLYWOOD SIDING:
DURATEMP GROOVED 8" OC APA PRODUCT REPORT #PR-C302 OR
LP SMARTSIDE PRECISION PANE; SIDING GROOVED 8" OC ICC REPORT #ESR-1301

PAPER (WATER-RESISTIVE BARRIER) PER SECTION 1404.2 & 2510.6: A MINIMUM OF TWO LAYER OF NO.15 ASPHALT FELT, COMPLYING WITH ASTM D 226 FOR TYPE 1 FELT OR OTHER APPROVED MATERIAL, SHALL BE ATTACHED TO STUDS OR SHEATING, WITH FLASHING AS DESCRIBED IN SECTION 1405.3, IN SUCH A MANNER AS TO PROVIDE A CONTINUOUS WATER-RESISTIVE BARRIER BEHIND THE EXTERIOR WALL VENEER.

LATH/FURRING AND PLASTER (STUCCO):
CBC SECTION 2507 & 2510:

PAPER (WATER-RESISTIVE BARRIER) PER SECTION 1404.2 & 2510.6: A MINIMUM OF TWO LAYER OF NO.15 ASPHALT FELT, COMPLYING WITH ASTM D 226 FOR TYPE 1 FELT OR OTHER APPROVED MATERIAL, SHALL BE ATTACHED TO STUDS OR SHEATING, WITH FLASHING AS DESCRIBED IN SECTION 1405.3, IN SUCH A MANNER AS TO PROVIDE A CONTINUOUS WATER-RESISTIVE BARRIER BEHIND THE EXTERIOR WALL VENEER.

SELF-FURRING LATH (VERTICAL APPLICATION): USE SELF-FURRING LATH CONFORMING TO 1/4" OFFSET REQUIREMENTS OF ASTM C 933 SECTION 5.12. INSTALL SELF-FURRING LATH PER DSA IR 25-4 AND ASTM C 1063.

RIB LATH (HORIZONTAL APPLICATION): USE 3/8" RIB LATH PER ASTM C 847. PROVIDE MIN. 1/2" SIDE LAP WITH WIRE TIES AT 6" O.C. PROVIDE 1" END LAPS OVER SUPPORTS WITH MAJOR RIBS NESTED.

CEMENT: INSTALL AND COMPLY WITH SECTIONS 2510, 2512, AND ASTM C 926.

WINDOWS:
HORIZONTAL SLIDING, 50% VENTING, ANODIZED ALUMINUM FRAME, PERFORMANCE RATED PER AAMA GS1D1-88 FOR COMMERCIAL USE AND MEDIUM EXPOSURE, NAIL-ON FIN FASTENED DIRECTLY TO FRAMING AND BEHIND SIDING MATERIAL, REMOVABLE SCREEN AT VENT SASHES. LAMINATED OR TEMPERED GLAZING TO BE NOTED ON FLOOR PLAN. DUAL GLAZED WINDOWS TO HAVE MINIMUM 1/4" AIR SPACE AND 1/8" GLASS (SEE WINDOW SCHEDULE FOR SIZES)

INTERIOR:

INTERIOR WALL COVERINGS:
APPLIED OVER MINIMUM 1/2" GYPSUM BOARD, OR MINIMUM 3/8" ORIENTED STRAND BOARD. EXPOSED SURFACES FIRE RATED PER ASTM E-84, FLAME SPREAD MAXIMUM 200, SMOKE DEVELOPED MAXIMUM 450. (PROVIDE FIRE BLOCKING WHEN 3/8" OSB IS USED AS BACKING MATERIAL)

VINYL TACKBOARD:
VINYL WALL COVERING TO BE CLASS III DOMTAR GYPSUM OR EQUAL, LAMINATED ONTO 1/2" INDUSTRIAL INSULATION BOARD, 4'-0"x9'-0", LONG EDGES BEVELED. FLAME SPREAD = 65 SMOKE DENSITY = 175

FRP:
FIBERGLASS REINFORCED PLASTIC PANELS, 4'-0"x8'-0", WITH COLOR MATCHED PVC MOLDINGS OVER 1/2 GYPSUM. FLAME SPREAD = 25 AND SMOKE DEVELOPMENT = 450, CLASS A PER ASTM E-84

MARKER BOARDS:
1/2" PARTICLE BOARD SUBSTRATE, FULL WIDTH MAP RAIL W/ CORK INSERT AND SIX MAP HOOKS, EXTRUDED ALUMINUM MOLDING WITH FLAG HOLDER. CHALK TRAY MAY NOT PROJECT MORE THAN 4".

CEILING:

SUSPENDED T-BAR SYSTEM:
PERFORMANCE RATED ASTM C-635 HEAVY DUTY FLAME SPREAD MAX 0-25, SMOKE DEVELOP MAX 450.

ACOUSTIC LAY-IN CEILING PANELS:
LIGHT REFLECTIVE LR-1, FIRE RATED CLASS-A PER ASTM E-84. VINYL FACED FIBERGLASS, 5/8" THICK, ARMSTRONG OR EQUIV. CLASS A: FLAME SPREAD 25 (UL LABELED) PER ASTM E-1264. SMOKE DEVELOP MAX 450

FLOORING:

CARPET:
PROVIDE GLUE-DOWN OR FIRM CUSHION, PAD OR BACKING OR NO CUSHION PAD; AND HAVE A LEVEL LOOP, TEXTURED LOOP, LEVEL-CUT PILE OR LEVEL-CUT/UNCUT PILE TEXTURE. THE MAXIMUM PILE HEIGHT SHALL BE 1/2" PER SECTION 11B-302.2. EXPOSED EDGES OR CARPET SHALL BE FASTENED TO FLOOR SURFACES AND HAVE TRIM ALONG THE ENTIRE LENGTH OF THE EXPOSED EDGE. CARPET EDGE TRIM SHALL COMPLY WITH SECTION 1124B.2. MINIMUM CRITICAL RADIANT FLUX SHALL NOT EXCEED 0.45 WATTS PER SQUARE CENTIMETER.
PER SECTION 5.504.4.4 ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE TESTING AND PRODUCT REQUIREMENTS OF ONE OF THE FOLLOWING:

1. CARPET AND RUG INSTITUTE'S GREEN LABEL PLUS PROGRAM.
2. CALIFORNIA DEPARTMENT OF PUBLIC HEALTH STANDARD PRACTICE FOR THE TESTING OF VOCS (SPECIFICATION 01350).
3. NSF/ANSI 140 AT THE GOLD LEVEL.
4. SCIENTIFIC CERTIFICATIONS SYSTEMS SUSTAINABLE CHOICE.

VINYL SHEET FLOORING:
MINIMUM WEAR LAYER .050" THICK, PERFORMANCE RATED PER ASTM F1303-90 TYPE-II, GRADE-1, CLASS-A, AND ASTM F97D 125 PSI, FIRE RATED PER ASTM E648 FLAMMABILITY CLASS-I, AND ASTM E662 SMOKE DENSITY MAX 450. MIN COEFFICIENT OF FRICTION TO BE D.6 PER ASTM D-2047 & CBC SECTION 11B-302

VINYL COMPOSITION TILE:
12" SQUARE, MINIMUM 1/8" THICK, PERFORMANCE RATED PER ASTM F1066, COMP-1, CLASS-2, AND ASTM F970 75 PSI, FIRE RATED PER ASTM E648 FLAMMABILITY CLASS-1, AND ASTM E662 SMOKE DENSITY MAX 450. MIN COEFFICIENT OF FRICTION TO BE D.6 PER ASTM D2047

TOP SET BASE:
BURKE MOLDED RUBBER 1/8" THICK, 4" HEIGHT, COVE STYLE #502-P, OR EQ

CERAMIC TILE FLOORING:
CERAMIC TILE FLOORING SHALL HAVE A COEFFICIENT OF FRICTION OF AT LEAST D.6 PER ASTM C-1028, AND CBC 11B-302.1

QUARRY TILE FLOORING:
QUARRY TILE FLOORING SHALL HAVE A COEFFICENT OF FRICTION OF AT LEAST D.6 PER ASTM C-1028, AND CBC 11B-302.1

RESILIENT FLOORING:
RESILIENT FLOORING DEMONSTRATING A COEFFICIENT OF FRICTION OF AT LEAST 0.6 PER ASTM D2047 WILL BE ACCEPTED AS MEETING THE INTENT OF SLIP RESISTANCE. CBC 1248.1/ADA STANDARDS 4.5.1, AT LEAST 80% OF THE FLOOR AREA RECEIVING RESILIENT FLOORING AND SHOWN THAT AT LEAST ONE OF THE FOUR TESTING OR PRODUCTS MEET THE REQUIREMENTS SHOWN ON SECTION 5.504.4.6

DOORS:

FINISH HARDWARE:
HAND-ACTIVATED DOOR OPENING HARDWARE, HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. HARDWARE SHALL BE CENTERED BETWEEN 30 INCHES AND 44 INCHES ABOVE THE FLOOR. LATCHING AND LOCKING DOORS THAT ARE HAND-ACTIVATED AND WHICH ARE IN A PATH OF TRAVEL SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER-TYPE HARDWARE, PANIC BARS, PUSH-PULL ACTIVATING BARS OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE. LOCKED EXIT DOORS SHALL OPERATE AS ABOVE IN EGRESS DIRECTION.

HARDWARE:
MOUNTING HEIGHT OF LATCHING HARDWARE SHALL BE 34" TO 44" AFF PER CBC SECTION 11B-404.2.7. PRESSURE TO OPERATE THE DOOR SHALL NOT EXCEED: 5 LBS (22.2 N) FOR EXTERIOR DOORS, 5 LBS (22.2 N) FOR INTERIOR DOORS & WHEN FIRE DOORS ARE REQUIRED 5 LBS (22.2 N) MAX OR THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED TO THE MAXIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 LBS (66.72 N). 11B-404.2.7. ALL HARDWARE SHALL MEET THE REQUIREMENTS OF CBC SECTIONS 1008.1.9.2 & 11B-404.2.7

CLOSER:
DOOR CLOSER, WHEN PROVIDED, THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED TO SO THAT FROM AN OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH, MEASURED TO THE LANDING SIDE OF THE DOOR. REFER TO SECTION 11B-404.2.8, 11B-404.2.8.1, 11B-404.2.8.2 & 11B-404.2.9

THRESHOLD:
THRESHOLD SHALL COMPLY WITH CBC SECTION 11B-404.2.5 & 1008.1.7.

FLOOR STOPS:
FLOOR STOPS SHALL NOT BE LOCATED IN THE PATH OF TRAVEL AND 4" MAXIMUM FROM WALLS. POLICY 99-08.

EXIT DEVICES:
PANIC HARDWARE SHALL COMPLY WITH CBC STANDARDS AND SHALL BE MOUNTED 36" TO 44" ABOVE FINISHED FLOOR SURFACE. THE UNLATCHING FORCE SHALL NOT EXCEED 15# APPLIED IN THE DIRECTION OF TRAVEL. PANIC HARDWARE SHALL COMPLY WITH CBC SECTION 1008.1.9.2 PANIC HARDWARE IS REQUIRED TO BE INSTALLED WHEN THE CONFIGURATION OF ANY ROOM PROVIDES AN OCCUPANT LOAD OF 50 OR GREATER, CBC 1008.1.10

HOLLOW METAL DOORS AND FRAMES:
DOORS-TYPE L FULL FLUSH INSULATED, MANUFACTURED BY "STEELCRAFT" OR APPROVED EQUAL (UNO)
FRAMES-16 GA COLD ROLLED 2" FACES (UNO)
SEE SHEET A0.3 FOR DOOR AND FRAME INFORMATION. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS & SERVICES TO INSTALL HOLLOW METAL DOORS AND FRAMES (UNO)

GENERAL FINISHES:

FINISHES:
ALL FINISHES SHALL COMPLY WITH CBC CHAPTERS 7 & 8, CFC AND TITLE 19 CCR.

FIRE PROTECTION:

FIRE EXTINGUISHER CABINETS:
FIRE EXTINGUISHER CABINETS MUST COMPLY WITH CBC SECTIONS 906 AND 3309

CASEWORK:

HANDLES:
PROVIDE U SHAPED WIRE PULLS OR EQUALLY ACCESSIBLE PULL HARDWARE AT ALL ACCESSIBLE CASEWORK Per 11B-404.2.7

SHEET INDEX:

NOTE: THE SHEET INDEX APPLIES TO ALL PROJECTS THAT ARE PC ONLY. THE SHEET INDEX IS INVALID WHEN NEW SHEETS ARE IMPLEMENTED. THE PURPOSE OF THE SHEET INDEX IS TO EXPEDITE PLAN REVIEWS DURING AN OVER-THE-COUNTER APPOINTMENT. THE REQUIRED CORRESPONDING SHEETS BELOW HAVE BEEN REVIEWED BY DSA DURING THE APPROVAL PROCESS OF THIS PC. CROSS OUT AND OR LINE OUT THE SUBJECTS THAT DON'T APPLY.

TEST AND INSPECTIONS FORM DSA 103

THE EXAMPLE FORM DSA 103s SHOWN ON THIS SHEET ARE FOR ILLUSTRATION PURPOSES ONLY. A FORM DSA 103 IS TO BE COMPLETED FOR EACH APPLICATION THAT THIS PC IS BEING INCORPORATED INTO AND ALL EXAMPLE FORM DSA-103s ARE TO BE CROSSED OUT ON THIS DRAWING.

DSA — DIVISION OF THE STATE ARCHITECT — STRUCTURAL SAFETY

DSA-103 rev 12/2013
Statement of Structural Tests & Special Inspections - 2013 CBC

INCREMENT #: | DSA File No.: | Application No.: | Date Submitted: | Revised: | Revised:

School Name | District

IMPORTANT: This form is only a summary list of structural tests and special inspections required for the project. The actual tests and inspections must be performed as detailed on the DSA approved documents. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A.
NOTE: This form is also available for projects submitted for review under the 2007 and 2010 CBC.

INSTRUCTIONS: Click a plus sign (+) before any category or subcategory to reveal additional tests and special inspections. An "X" before a listed test or inspection indicates it is a mandatory requirement. A shaded box indicates a test or special inspection that may be required, depending on the scope of the construction and other issues. A shaded box can be clicked indicating your selection of that test. **Note:** A minus (-) on a category or subcategory heading indicates that it can be collapsed. However, any selections you may have made will be cleared. Click on the "COMPILE" button to show only the tests finally selected. **For more information on use of this form, see DSA-103 INSTR.**

Note: References are to the 2013 edition of the California Building Code (CBC) unless otherwise noted.

	REQUIRED	TEST OR SPECIAL INSPECTION	TYPE	PERFORMED BY	CODE REFERENCE AND NOTES
-		**SOILS**			
		1. GENERAL:	Table 1705A.6		
	X	a. Verify that: • site has been prepared properly prior to placement of controlled fill and/or excavations for foundations, • foundation excavations are extended to proper depth and have reached proper material, and • materials below footings are adequate to achieve the design bearing capacity.	Periodic	GE*	* By geotechnical engineer or his or her qualified representative.
-		**2. COMPACTED FILLS:**	Table 1705A.6		
X	X	a. Perform qualification testing of fill materials.	Test	Lab*	* Under the supervision of the geotechnical engineer.
X	X	b. Verify use of proper materials and inspect lift thicknesses, placement, and compaction during placement of fill.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative.
X	X	c. Test compaction of fill.	Test	Lab*	* Under the supervision of the geotechnical engineer.
-		**CONCRETE**	Table 1705A.3		
-		**7. CAST IN PLACE CONCRETE**			
		Material Verification and Testing:			
X	X	a. Verify use of required design mix.	Periodic	SI & PI*	* To be performed by batch-plant special inspector and project inspector.
X	X	b. Test reinforcing steel.	Test	Lab	1910A.2 (1910.2.6*), ASTM A370, DSA IR 17-10
X	X	c. Perform slump, temperature, and (where required) air content tests.	Test	Lab	ASTM C172, ASTM C31.
X	X	d. Test concrete (compression).	Test	Lab	ACI 318 Section 5.6 and 1905A.1,2 (1913.3.1*), ASTM C39.
		Inspection:			
X	X	f. Batch plant inspection - design complies with 1705A.3.3 item 2	Periodic	SI	1705A.3.3, Item 2. Requires first batch inspection, weighmaster, and batch tickets.
X	X	g. Inspect placement of form work, reinforcing steel, embedded items and concrete. Inspect curing and form removal.	Continuous	PI*	* May be performed by a special inspector when specifically approved by DSA.
+		**MASONRY**	TMS 402-13/ACI 530-13/ASCE 5-13 Table 1.19.3		
-		**STEEL**	Table 1705A.2.1		
-		**17. STRUCTURAL STEEL AND COLD-FORMED STEEL USED FOR STRUCTURAL PURPOSES**			
		Material Verification:			
X	X	a. Verify that all materials are appropriately marked and that: • Mill certificates indicate material properties that comply with requirements, • Material sizes, types and grades comply with requirements.	Periodic	*	* By special inspector when performed off-site; by project inspector for steel shipped directly to project site without welding or fabrication.
X	X	b. Test unidentified materials	Test	Lab	2705A.1 (2203.1*), ASTM A370.
X	X	c. Examine seam welds of structural tubes and pipes	Periodic	SI*	* DSA IR 17-3.
		Inspection:			
X	X	d. Verify member locations, bracing and all details constructed in the field.	Continuous	PI	
X	X	e. Verify stiffener locations, connection tab locations and all construction details fabricated in the shop.	Periodic	SI	
-		**19. WELDING:**			DSA IR 17-3. AWS D1.1 and AWS D1.8 (AWS D1.3 for cold formed steel).
		Verification of Materials, Equipment, Welders, etc:			
X	X	a. Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS	Periodic	SI	
X	X	b. Verify weld filler material manufacturer's certificate of compliance	Periodic	SI	
X	X	c. Verify WPS, welder qualifications and equipment	Periodic	SI	DSA IR 17-3
-		**19.1 SHOP WELDING:**			
X	X	a. Inspect groove, multi-pass, and fillet welds > 5/16"	Continuous	SI	Per AISC 360 (and AISC 341 as applicable). DSA IR 17-3
X	X	b. Inspect single-pass fillet welds ≤ 5/16"	Periodic	SI	Per AISC 360 (and AISC 341 as applicable). DSA IR 17-3.
X	X	c. Inspect welding of stairs and railing systems.	Periodic	SI	1705A.2.2.1 Per AISC 360 (and AISC 341 as applicable). DSA IR 17-3.
-		**19.2 FIELD WELDING:**			
X	X	a. Inspect groove, multi-pass, and fillet welds > 5/16"	Continuous	SI	Per AISC 360 (and AISC 341 as applicable). DSA IR 17-3.
X	X	b. Inspect single-pass fillet welds ≤ 5/16"	Periodic	SI	Per AISC 360 (and AISC 341 as applicable). DSA IR 17-3.
-		**21. STEEL JOISTS AND TRUSSES:**			
	X	a. Verify size, type and grade for all chord and web members as well as connectors and weld filler material; verify joist profile, dimensions and camber (if applicable); verify all weld locations, lengths and profiles; mark or tag each joist.	Continuous	SI	1705A.2.2.3 and DSA IR 22-3 for steel joists only. 1705A.2.2.4 for steel trusses.
-		**WOOD**			
+		**OTHER**			

1 Soils testing and inspection: Geotechnical Verified Report - Form DSA-293
2 As Structural Testing: Laboratory Verified Report - Form DSA-291
3 Concrete Batch Plant Inspection: Special Inspection Verified Report - Form DSA-292
4 Shop Welding Inspection: Special Inspection Verified Report - Form DSA-292
5 Field Welding Inspection: Special Inspection Verified Report - Form DSA-292
6 Steel Joist Fabrication Inspection: Special Inspection Verified Report - Form DSA-292

KEY to Columns	
1 Type -	2 Performed By -
Continuous – Indicates that a continuous special inspection is required	GE – Indicates that the special inspection is to be performed by a registered geotechnical engineer or his or her authorized representative
Periodic – Indicates that a periodic special inspection is required	Lab – Indicates that the test or inspection is to be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See section 4-335, 2013 CCR Title 24, Part 1.
Test – Indicates that a test is required	PI - Indicates that the special inspection is to be performed by the project inspector
	SI – Indicates that the special inspection is to be performed by a special inspector

COMPILE | PRINT

Name of Architect or Engineer in general responsible charge

Name of Structural Engineer (When structural design has been delegated)

Signature of Architect or Structural Engineer | date

IDENTIFICATION STAMP
DIV OF THE STATE ARCHITECT
APP #
AC N/A F/LS N/A SS
DATE

* = REQUIRED ONLY BY SOILS REPORT

FLOOR FRAMING: (CHECK ONE)

FLOOR LIVE LOAD: SEE COVER SHEET
FLOOR BEAM SIZE: SEE STRUCTURAL
JOIST TYPE: SEE STRUCTURAL SHEETS
JOIST SPACING: SEE STRUCTURAL SHEETS
INSULATION: NONE ☐ R-11 UNFACED ☐ R-19 UNFACED ☐
BOTTOM ENCLOSURE: CANVEX CW-600 ☐ NONE ☐
FLOOR DECK: PLYWOOD DECKING ☐ LIGHTWEIGHT CONCRETE ☐
REFERENCE: FLOOR FRAMING SHEETS
MISC: PLYWOOD FLOORS TO HAVE MIN R-11 INSULATION
CONCRETE FLOORS TO HAVE NO INSULATION UNO

ROOF FRAMING: (CHECK ONE)

ROOF LIVE LOAD: SEE COVER SHEET
ROOF SLOPE: DUAL SLOPE ☐ MONO SLOPE ☐
JOIST SIZE & GRADE: SEE STRUCTURAL SHEETS
INSULATION: R-30 UNFACED ☐
FINISH ROOFING: 22 GA GALV STANDING SEAM ROOF ☐
26 GA GALV STANDING SEAM ROOF ☐
45 MIL TPO W/ 1/4" DENSDECK ☐ 60 MIL TPO W/ 1/4" DENSDECK ☐
ROOF SHEATHING: 3/4" C-D PLYWOOD @ NON 22 GA ROOFING
FRONT OVERHANG: NO ☐ YES ☐
REAR OVERHANG: NO ☐ YES ☐
OVERHANG MEMBER: ANGLE ☐ C-CHANNEL ☐
SOFFITS: OPEN SOFFITS ☐ CLOSED SOFFITS ☐
DRAINAGE SYSTEM: 26 GA GUTTERS & DOWNSPOUTS
REFERENCE: ROOF FRAMING SHEETS
NOTE: SOFFIT FINISH TO MATCH WALL FINISH

EXTERIOR WALLS WOOD STUD OPTION: ☐

WIND LOAD: SEE COVER SHEET
STUD SIZE: 2"x4" UNO BY WALL LEGEND ON COVER SHEET/FLR PLAN
SPACING: SEE CHART ON WALL FRAMING ELEVATIONS
GRADE: SEE CHART ON WALL FRAMING ELEVATIONS
INSULATION: R-13 UNFACED ☐ R-19 UNFACED ☐ R-29 UNFACED ☐
FIRE RESISTIVE CONSTRUCTION: NO ☐ YES ☐ (SEE FIRE RATED DETAIL SHEETS)
REFERENCE: WALL FRAMING ELEVATIONS
MISC:

EXTERIOR WALLS STEEL STUD OPTION: ☐

WIND LOAD: SEE COVER SHEET
STUD SIZE: 3 5/8" UNO BY WALL LEGEND ON COVER SHEET/FLR PLAN
SPACING: SEE CHART ON WALL FRAMING ELEVATIONS
GRADE: SEE CHART ON WALL FRAMING ELEVATIONS
INSULATION: R-19 UNFACED W/4" RIGID MODEL 'E' BLDG ONLY ☐
INSULATION: R-13 UNFACED ☐
FIRE RESISTIVE CONSTRUCTION: NO ☐ YES ☐ (SEE FIRE RATED DETAIL SHEETS)
REFERENCE: WALL FRAMING ELEVATIONS
MISC:

NON-BEARING INTERIOR WALLS: (CHECK ONE)

STUD SIZE ☐ 2"x4" UNO BY WALL LEGEND ON COVER SHEET/FLR PLAN
STUD SIZE ☐ 3 5/8" UNO BY WALL LEGEND ON COVER SHEET/FLR PLAN
SPACING: 24" OC MAX (PER SECT 2308.9.2.3)
GRADE: ☐ HEMLOCK FIR MIN ☐ 20 GA MIN
PARTITION HEIGHT: TO RAFTERS ☐ BELOW RAFTERS ☐
INSULATION: R-11 UNFACED ☐ R-13 UNFACED ☐ R-19 UNFACED ☐
FIRE RESISTIVE CONSTRUCTION: NO ☐ YES ☐ (SEE FIRE RATED DETAIL SHEETS)
REFERENCE: WALL FRAMING DETAILS
NOTES:

PLUMBING: (CHECK ONE)

ABS SCHEDULE 40 WASTE ☐
CAST IRON WASTE ☐
REFERENCE: PLUMBING SHEETS
NOTES: ALL PLAUMBING WASTE VENTS SHALL BE 10'-0" MINIMUM AWAY FROM ANY FRESH INTAKE EQUIPMENT.

SITE CONDITIONS: (CHECK ONE)

FOUNDATION TYPE: WOOD PAD (UP TO 48'x60') ☐
CONCRETE FLUSH TO GRADE ☐ CONCRETE ABOVE GRADE ☐
REFERENCE: FOUNDATION SHEETS
RAMP & LANDING: NO ☐ YES ☐ (SEE RAMP/LANDING SHEETS)
RAMP & LANDING SURFACE FINISH: SEE RAMP AND LANDING SHEETS

EXTERIOR WALL FINISH: (CHECK ONE)

5/8" DURATEMP APA RATED GROOVED AT 8" OC ☐
STUCCO ON-SITE ☐
REFERENCE: ARCHITECTURAL DETAIL SHEETS
MISC:

IMPACT
CONSTRUCTION SERVICES INC.
CONTRACTORS LICENSE #945691

NORTHERN CALIFORNIA DIVISION
450 COMMERCE AVE.
ATWATER, CA 95301
PHONE: (209) 580-6506
FAX: (209) 580-6503

SOUTHERN CALIFORNIA DIVISION
1090 W. HARLEY KNOX BLVD.
PERRIS, CA 92571
PHONE: (951) 943-9999
FAX: (951) 943-9430

WEBSITE: WWW.IMPACTCONSTRUCTION.COM

PROJECT NAME:

SHEET TITLE:
CONSTRUCTION MATERIALS AND SPECIFICATIONS

MFR. STRUCTURAL ENGINEER OF RECORD ON PC

REGISTERED PROFESSIONAL ENGINEER — JAMES T. SIMPSON — No. 36021 — EXP. 06/30/16 — STRUCTURAL — STATE OF CALIFORNIA

MAY 05 2016

MFR. PROJECT SPECIFIC PROFESSIONAL OF RECORD

ARCHITECT OF RECORD

PROJECT SPECIFIC STATE AGENCY APPROVAL

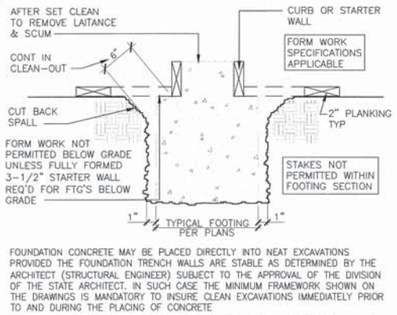
PRE-CHECK (PC) DOCUMENT
CODE: 2013 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
PC 02-114488
FILE #: PC-8D
AC FLS SS
DATE: 12 24 16

REVISIONS
1 –
2 –
3 –
4 –
5 –
6 –
7 –
8 –

PROJECT NO.:	00-0000
DRAWN BY:	00
SCALE:	AS NOTED
DATE:	00-00-00

SHEET NUMBER
A0.2

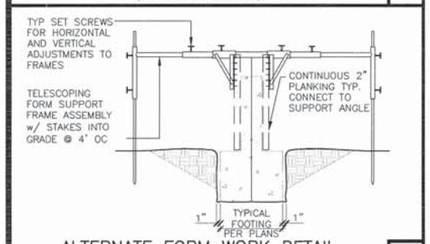


FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATIONS PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE AS DETERMINED BY THE ARCHITECT (STRUCTURAL ENGINEER) SUBJECT TO THE APPROVAL OF THE DIVISION OF THE STATE ARCHITECT. IN SUCH CASE THE MINIMUM FRAMEWORK SHOWN ON THE DRAWINGS IS MANDATORY TO INSURE CLEAN EXCAVATIONS IMMEDIATELY PRIOR TO AND DURING THE PLACING OF CONCRETE

MANDATORY MINIMUM FORM WORK

(UNLESS FULLY FORMED)

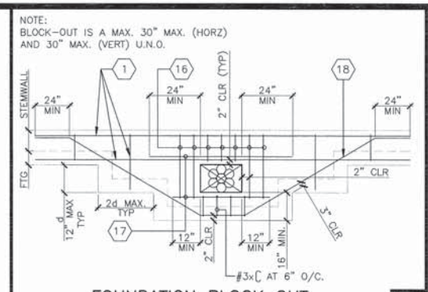
15



ALTERNATE FORM WORK DETAIL

SCALE: NTS

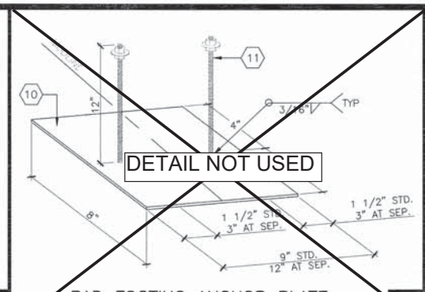
16



FOUNDATION BLOCK OUT

SCALE: NTS

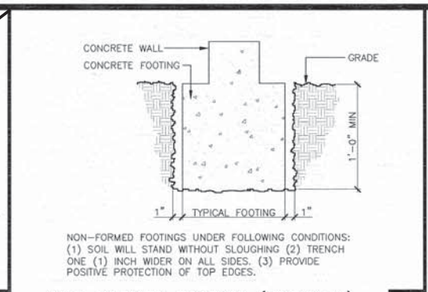
10



PAD FOOTING ANCHOR PLATE

SCALE: 1"=1'-0"

6



NON-FORMED FOOTINGS UNDER FOLLOWING CONDITIONS: (1) SOIL WILL STAND WITHOUT SLOUGHING (2) TRENCH ONE (1) INCH WIDER ON ALL SIDES. (3) PROVIDE POSITIVE PROTECTION OF TOP EDGES.

NON-FORMED FOOTING (OPTIONAL)

SCALE: NTS

1

KEY NOTES

1. REBARS PER SHEET F2.0 OR F3.0.
2. ONE ADDITIONAL REBAR AT OPENING. REBAR SIZE TO MATCH TOP AND BOTTOM REBARS ACCORDINGLY.
3. GRATE – STD WELDED STEEL 3/4" X 3/16" BEARING BARS, BAR SPACING @ 1/2" OC PERPENDICULAR TO ROUTE OF TRAVEL, ALL WALKWAYS. (BY CONCRETE CONTRACTOR); SEE GENERAL NOTE #8 BELOW
4. FOUNDATION WALL AND FTG PER SHEET F2.0 OR F3.0.
5. REBAR – #5 CONTINUOUS @ MID HEIGHT
6. ANGLE FRAME: L-1 1/2" X 1 1/2" X 1/4"
7. #10 X 1 1/2" GALV. TEK SCREW AT 16" O.C. MAX.
8. 1/4"ø x 3" IN ANCHOR BOLT
9. STEEL PERIMETER CHANNEL (BY OTHERS, NOT IN CONTRACT)
10. 1/4" STEEL EMBEDMENT PLATE.
11. 5/8" MIN ALL THREAD WELDED TO STEEL PLATE AT ONE END AND DOUBLE NUT WITH 1/4" THICK WASHER AT THE OTHER END.
12. 3/16" MIN SHIM PLATE, MAY BE A SINGLE PLATE OR COMBO OF MULTIPLE PLATES WITH MAX SHIM HEIGHT OF 1". GAPS UP TO 1/4" DO NOT REQUIRE A SHIM. USE AS REQUIRED
13. REBAR – (1) #3 AT 24" O.C. AT CENTER LINE OF WALL.
14. REBAR – #3 "L" AT 24" O.C. MAX. AT STEP DOWN LOCATION.
15. REBAR – #5 " ⌐ " AT STEP DOWN LOCATION.
16. REBAR – #3 AT 6" O.C. AROUND BLOCK-OUT.
17. REBAR – (1) #5 TOP AND BOTTOM OF BLOCK-OUT.
18. REBAR – #5 " ⌐ " AT STEP DOWN LOCATION
19. REBAR – (1) #3 TOP OR BOTTOM
20. REBAR – (1) #3 AT CENTER OF WALL

IMPACT
CONSTRUCTION SERVICES INC.
CONTRACTORS LICENSE #945691

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WEBSITE: WWW.IMPACTCONSTRUCTION.COM

PROJECT NAME:

SHEET TITLE:

GENERAL DETAILS

MFR. STRUCTURAL ENGINEER OF RECORD ON PC

MFR. PROJECT SPECIFIC PROFESSIONAL OF RECORD

ARCHITECT OF RECORD

PROJECT SPECIFIC STATE AGENCY APPROVAL

PRE-CHECK (PC) DOCUMENT
CODE: 2013 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
PC 02-114488
FILE #: PC-80
DATE: 5/4/16

REVISIONS

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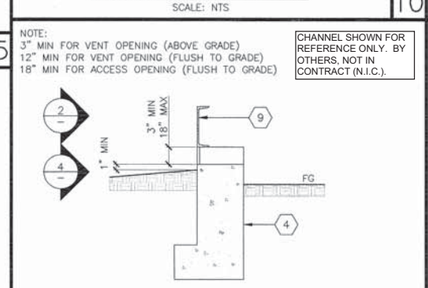
8	–

PROJECT NO.:	00-0000
DRAWN BY:	00
SCALE:	AS NOTED
DATE:	00-00-00

SHEET NUMBER

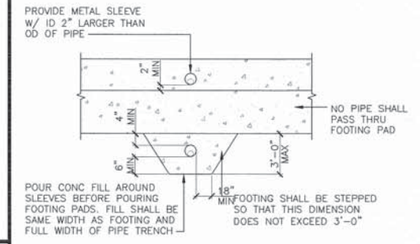
F0.0

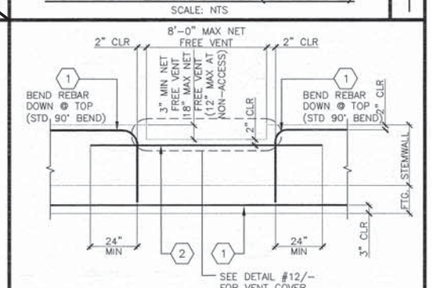


VENT OPENING AT FOUNDATION

SCALE: 1"=1'-0"

11

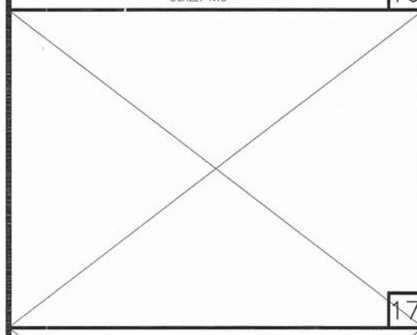




OPENING IN STEM WALL (ABOVE GRADE)

SCALE: NTS

2



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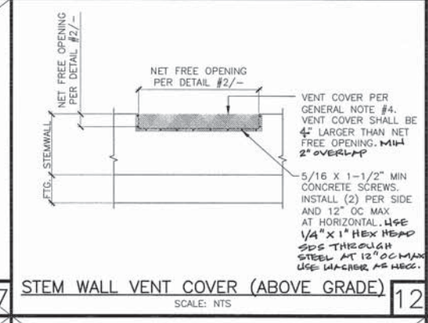
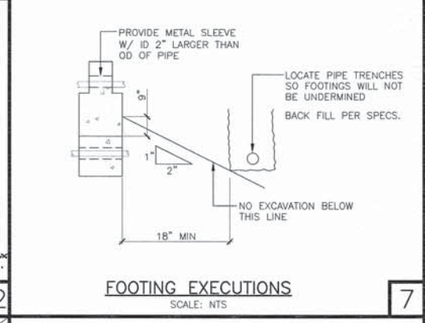


STEM WALL VENT COVER (ABOVE GRADE)

SCALE: NTS

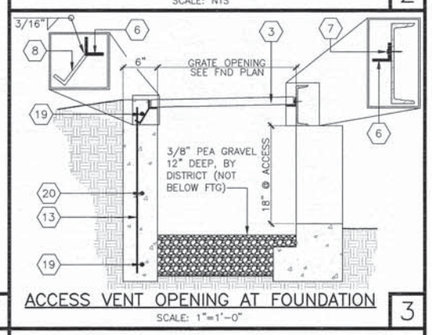
12



FOOTING EXECUTIONS

SCALE: NTS

7

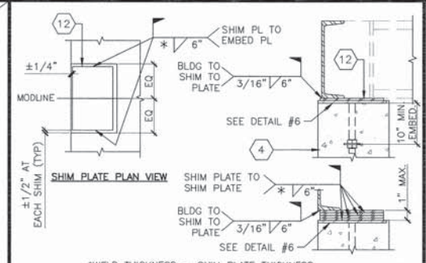


ACCESS VENT OPENING AT FOUNDATION

SCALE: 1"=1'-0"

3

18

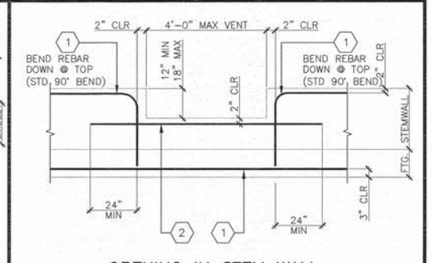


*WELD THICKNESS = SHIM PLATE THICKNESS

SHIM PLATE

SCALE: 1"=1'-0"

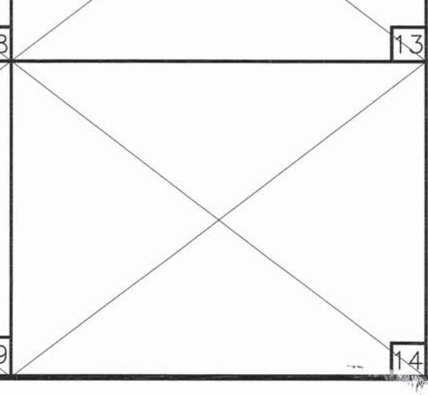
8



OPENING IN STEM WALL (FLUSH TO GRADE)

SCALE: NTS

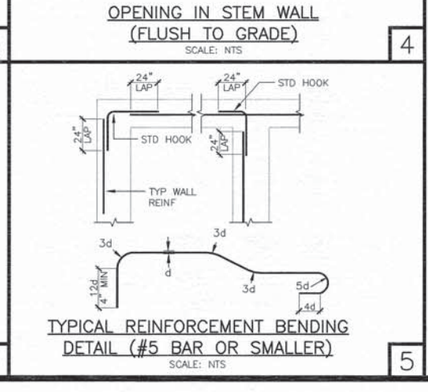
4



ALTERNATE STEP FOOTING DETAIL

SCALE: NTS

9



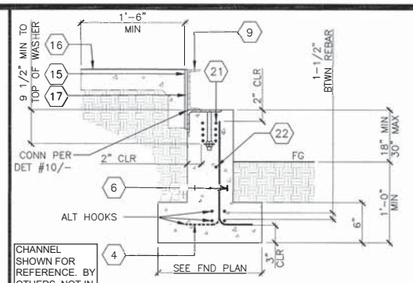
TYPICAL REINFORCEMENT BENDING DETAIL (#5 BAR OR SMALLER)

SCALE: NTS

5

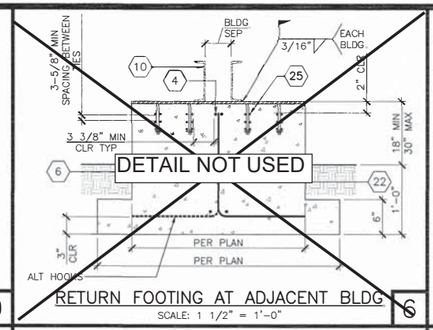
GENERAL NOTES:

1. DESIGN SOIL BEARING PRESSURE VALUE FOR NON EXPANSIVE SOIL IS 1500 PSF FOR DEAD LOAD PLUS LIVE LOAD. FOUNDATION DETAILS SHOWN ARE BASED ON MINIMUM CODE REQUIREMENTS. FOUNDATION IS SUBJECT TO APPROVAL BY LOCAL ENFORCEMENT AGENCY DUE TO SPECIAL SOIL AND/OR SITE CONDITIONS PRESENT.
2. ALL FOOTINGS SHALL REST 12" IN BELOW NATURAL GRADE AND FINISHED GRADE OF THE FROST LINE. ALL FOOTINGS SHALL REST ON FIRM, UNDISTURBED SOIL. WHERE FROST LINE DEPTH MAY PRESENT A PROBLEM, CONTRACTOR SHALL CONSULT DSA FOR RECOMMENDATIONS AS TO REQUIRED DEPTH OF FOOTING. THE RESULTS OF SUCH INVESTIGATION SHALL BE INCLUDED IN THE APPROVED SET OF DRAWINGS.
3. WHERE TERMITE HAZARD EXISTS TREAT SOIL AT GROUND CONTACT POINTS, INSIDE AND OUTSIDE FOUNDATION.
4. UNDER FLOOR AREAS SHALL BE VENTILATED 1 SF FOR EACH 150 SF OF UNDER FLOOR AREA. OPENINGS SHALL BE COVERED WITH CORROSION RESISTANT WIRE MESH NO MORE THAN 0.070 THICK WITH MESH OPENINGS OF 1/4" (REST OF REQUIREMENTS TO COMPLY WITH CBC, SECTION 1203.3)
5. CONTRACTOR SHALL VERIFY ALL REQUIREMENTS, MATERIAL SPECIFICATIONS, CONDITIONS AND DIMENSIONS SHOWN ON PLANS AGAINST ACTUAL JOB SITE, FLOOR PLAN AND MANUFACTURER'S REQUIREMENTS TO CHECK FOR ANY REQUIRED TOLERANCES FOR FOUNDATION LAYOUTS, SUCH AS, GAP AT MODLINES. NOTIFY ENGINEER OF THE FOLLOWING: ABNORMAL CONDITIONS, DEFICIENCIES, DISCREPANCIES, CLARIFICATION, MISUNDERSTANDINGS, TYPOS, MISTAKES, ITEMS MISSING FROM DRAWINGS, MISSING REFERENCE, DETAILS OR NOTES BEFORE PROCEEDING.
6. PROVIDE CRAWL SPACE DRAINAGE, FOR AND AROUND BUILDING AS NEEDED. (BY OWNER)
7. REQUIRED DIMENSIONS FOR FOUNDATION LAYOUT TO BE BASED ON SPECIFIC FLOOR PLAN.
8. GRATE: 1 3/16" BAR SPACING NET OPENING AT VENT TO BE 12"x48". NET OPENING AT ACCESS TO BE 24"x36"
9. DETAIL #11 VERTICAL REINFORCEMENTS NOT SHOWN FOR CLARITY
10. DO NOT LOCATE BLOCK OUT WITHIN 4'-0" OF SIDE WALL HOLD DOWN, FRAME COLUMN & COLUMN PAD FOOTING



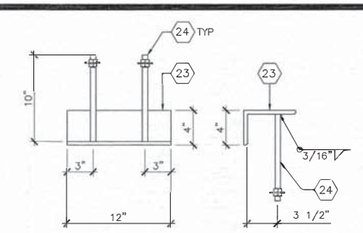
14 END WALL FOUND

SCALE: 1" = 1'-0"



9 RETURN FOOTING AT ADJACENT BLDG

SCALE: 1 1/2" = 1'-0"



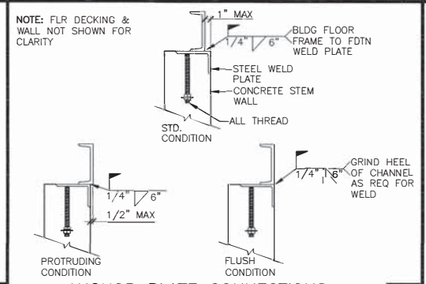
ANCHOR PLATE AT CORNERS

SCALE: 1 1/2" = 1'-0"

1

KEY NOTES

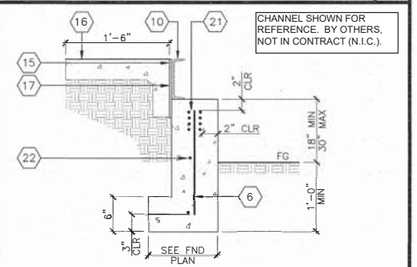
1. NOT USED
2. NOT USED
3. NOT USED
4. REBAR – (2) #5 CONTINUOUS TOP AND BOTTOM, MIN. 1 1/2" APART
5. REBAR – (1) #5 CONTINUOUS TOP AND BOTTOM
6. REBAR – (1) #3 VERT @ 24" OC (CENTERED IN STEM WALL)
7. NOT USED
8. NOT USED
9. STEEL PERIMETER FRAME – END CHANNEL (BY OTHERS, NOT IN CONTRACT)
10. STEEL PERIMETER FRAME – SIDE CHANNEL (BY OTHERS, NOT IN CONTRACT)
11. REBAR – #4 TIES @ 8" OC
12. REBAR – (2) #4 ☐ TIES AT TOP 5", MIN. 1 1/2" APART.
13. REBAR – #5 EA WAY (SEE SCHEDULE ON FOUNDATION PLAN FOR AMOUNT)
14. REBAR – (4) #5 VERT
15. FELT EXPANSION JOINT
16. MOW STRIP/CONCRETE SIDEWALK
17. 22 GA GALVANIZED SHEET METAL FLASHING EXTEND 6" BELOW PERIMETER FRAME (BY OTHERS, NOT IN CONTRACT)
18. ANCHOR PLATE PER DETAIL #6, F.O.O.
19. 22 GA. GALV. SHEET METAL FLASHING EXTEND 6" BELOW PERIMETER FRAME (BY OTHERS, NOT IN CONTRACT)
20. 22 GA. GALV. SHEET METAL FLASHING EXTENDED 6" ABOVE FLOOR, BEHIND SIDING AND DOWN PERIMETER FRAME 5" MIN. APPLY SEALANT AS SHOWN. (BY OTHERS, NOT IN CONTRACT)
21. REBAR – (4) #4 AT TOP STEMWALL AT EACH SIDE OF BOLT SPACED 1-1/2" CLR OF EACH REBARS
22. WHEN STEM WALL HEIGHT ABOVE FOOTING EXCEEDS 24", PROVIDE (1) ADDITIONAL #5 REBAR AT MID-HEIGHT OF STEM WALL
23. L-4" X 6" X 3/8" THICK STEEL EMBEDMENT PLATE
24. 5/8" MIN ALL THREAD WELDED TO STEEL PLATE AT ONE END AND DOUBLE NUT WITH 1/4" THICK WASHER AT THE OTHER END
25. (3) #3 HAIR PIN TIES GRADE 60 ANCHOR REINFORCING, MIN 24" LAP AT EACH HAIR PIN



15 ANCHOR PLATE CONNECTIONS

SCALE: NTS

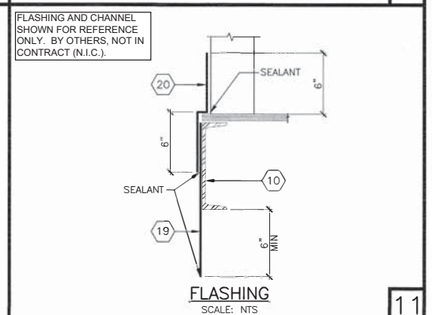
10



SIDE WALL FOUNDATION

SCALE: 1" = 1'-0"

2

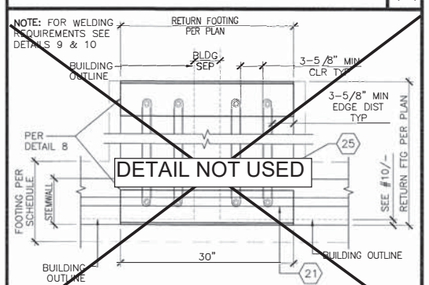


FLASHING

SCALE: NTS

11

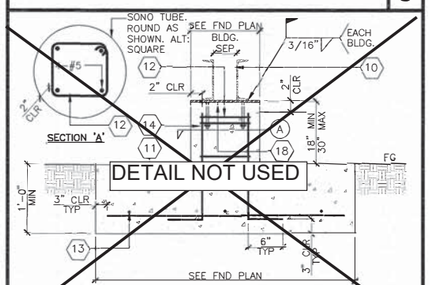
3



16 ANCHOR PLATE AT ADJ BLDG

SCALE: 1" = 1'-0"

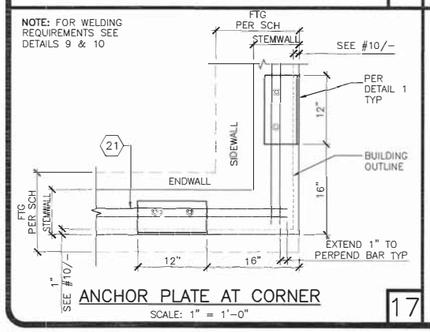
12



7 INTERIOR PAD AT ADJACENT BLDG

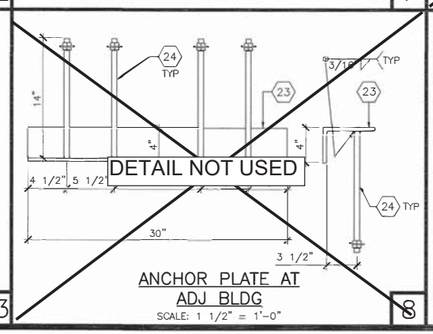
SCALE: 1" = 1'-0"

4



17 ANCHOR PLATE AT CORNER

SCALE: 1" = 1'-0"



ANCHOR PLATE AT ADJ BLDG

SCALE: 1 1/2" = 1'-0"

13 8

5

IMPACT
CONSTRUCTION SERVICES INC.
CONTRACTORS LICENSE #945691

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PROJECT NAME:

SHEET TITLE:

FLUSH TO GRADE CONCRETE FOUNDATION DETAILS

MFR. STRUCTURAL ENGINEER OF RECORD ON PC

REGISTERED PROFESSIONAL ENGINEER JAMES T. SIMPSON No. 38021 EXP. 06/30/16 STRUCTURAL STATE OF CALIFORNIA

DATE SIGNED MAY 05 2016

MFR. PROJECT SPECIFIC PROFESSIONAL OF RECORD

ARCHITECT OF RECORD

PROJECT SPECIFIC STATE AGENCY APPROVAL

PRE-CHECK (PC) DOCUMENT
CODE: 2013 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
PC 02-114488
FILE #: PC-80
AC FLS SS
DATE: 5/20/16

REVISIONS

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DRAWN BY:	00
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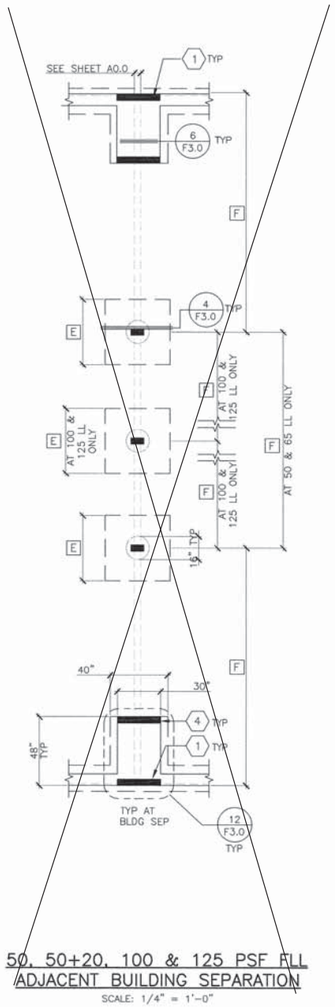
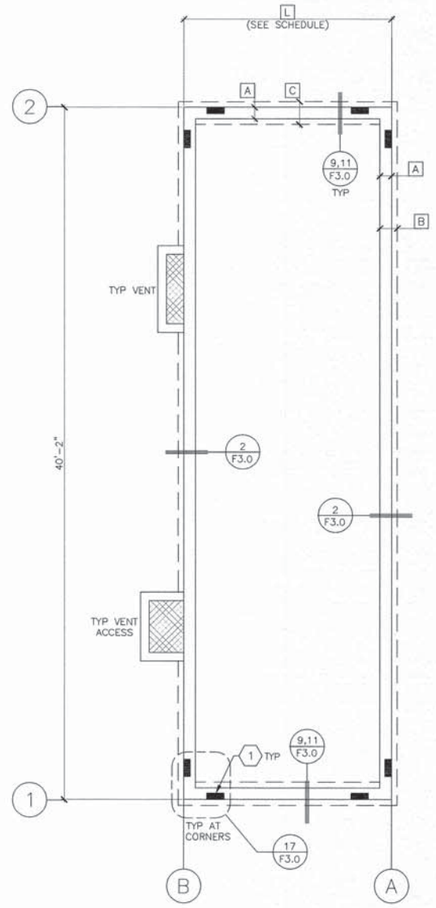


50, 50+20, 100 & 125 PSF FLL
ADJACENT BUILDING SEPARATION
SCALE: 1/4" = 1'-0"



50, 50+20, 100 & 125 PSF FLL
FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

KEY NOTES

1. ANCHOR PLATE AT CORNERS AND MODLINES
2. ANCHOR PLATE AT PIERS – SEE #6/F0.0
3. NOT USED
4. ANCHOR PLATES REQUIRED AT RETURN STEMWALL FOOTING AND/OR BLDG SEP STEMWALL FOOTING TYP

SCHEDULES

REBAR SCHEDULE		
FLOOR LOAD	PLYWOOD FLOOR	CONCRETE FLOOR
50	3	4
50+20		
100	3	5
125	4	6
FOR INTERIOR PADS @ MODLINE AND ADJACENT BUILDINGS (#5 REBAR EACH WAY)		

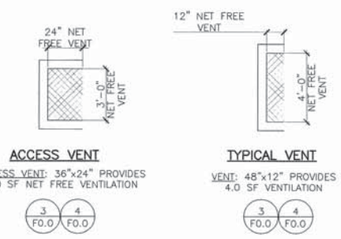
REQUIRED VENTILATION		
BUILDING SIZE	VENTILATION REQUIRED	MIN # VENTS
12'x40'	3.2 SF	1
ACCESS VENT CAN BE USED IN PLACE OF A TYPICAL VENT AS NECESSARY		

NOTE: USE #6 REBAR FOR CONCRETE FLOOR WITH 125 PSF LIVE LOAD.

FLUSH TO GRADE FOUNDATION								
	FLOOR LIVE LOAD PSF	PLYWOOD FLOOR 50	PLYWOOD FLOOR 50+20	PLYWOOD FLOOR 100	PLYWOOD FLOOR 125	CONCRETE FLOOR 50	CONCRETE FLOOR 50+20	CONCRETE FLOOR 100	CONCRETE FLOOR 125
A	STEM WALL	8"(W)	8"(W)	8"(W)	8"(W)	8"(W)	8"(W)	8"(W)	8"(W)
B	SIDE WALL FOOTING	12"(W)	12"(W)	12"(W)	14"(W)	12"(W)	12"(W)	14"(W)	16"(W)
C	END WALL FOOTING	20"(W)	21"(W)	22"(W)	24"(W)	25"(W)	27"(W)	27"(W)	29"(W)
E	ADJACENT PAD FOOTING x12" DEEP	3'-9" SQ	4'-3" SQ	4'-3" SQ	4'-8" SQ	4'-3" SQ	4'-9" SQ	5'-3" SQ	5'-9" SQ
F	ADJACENT PAD FOOTING SPACING	13'-4"	13'-4"	10'-0"	10'-0"	13'-4"	13'-4"	10'-0"	10'-0"

TOTAL FOUNDATION FOS TO FOS		
L	12'x40'	12'-0 1/2"

NOTE: STEM WALL FOUNDATION TO BE CONSTRUCTED FOR A CONCRETE FLOOR WITH A 125 PSF FLOOR LIVE LOAD.



ACCESS VENT
ACCESS VENT: 36"x24" PROVIDES 6.0 SF NET FREE VENTILATION

TYPICAL VENT
VENT: 48"x12" PROVIDES 4.0 SF VENTILATION

TYPICAL VENT & ACCESS VENT DETAILS

GENERAL NOTES

1. THE LOCATION OF VENTS SHOWN HERE IS FOR REFERENCE ONLY AS THE LOCATIONS OF VENTS WILL VARY FROM JOB TO JOB. THE OPENINGS SHALL BE LOCATED AS CLOSE TO THE CORNER AS PRACTICAL AND SHALL PROVIDE CROSS VENTILATION. THE OPENINGS SHALL BE EQUALLY DISTRIBUTED ALONG THE LENGTH OF AT LEAST (2) OPPOSITE ENDS.
2. UNDER FLOOR VENTILATION SHALL BE PROVIDED AT A NET AREA OF NOT LESS THAN 1 SQUARE FOOT FOR EACH 150 SQUARE FEET OF UNDER FLOOR AREA.

IMPACT
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CONTRACTORS LICENSE #945691

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WEBSITE: WWW.IMPACTCONSTRUCTION.COM

PROJECT NAME:

SHEET TITLE:
FLUSH TO GRADE FOUNDATION PLAN

MFR. STRUCTURAL ENGINEER OF RECORD ON PC

REGISTERED PROFESSIONAL ENGINEER JAMES T. SIMPSON No. 36024 EXP. 06/30/16 STRUCTURAL STATE OF CALIFORNIA

DATE SIGNED
MAY 05 2016

MFR. PROJECT-SPECIFIC PROFESSIONAL OF RECORD

ARCHITECT OF RECORD

PROJECT SPECIFIC STATE AGENCY APPROVAL

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PROJECT NO.:	00-0000
DRAWN BY:	00
SCALE:	AS NOTED
DATE:	00-00-00

SHEET NUMBER
F3.1

GENERAL NOTES

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL COMPLY WITH THE 2013 EDITION OF THE CALIFORNIA BUILDING CODE, CCR TITLE 24, PART 2 (CBC) AND CCR TITLE 24, PART 1, CHAPTER 4, GROUP 1, LATEST REVISIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE BUILDING DURING CONSTRUCTION AND SHALL PROVIDE ADEQUATE SHORING AND BRACING DURING CONSTRUCTION. CONTRACTOR SHALL COMPLY WITH APPLICABLE SAFETY REGULATIONS
3. DETAILS NOT SPECIFICALLY SHOWN SHALL BE CALLED TO THE ATTENTION OF THE MANUFACTURER OR DESIGN PROFESSIONAL AND DSA.
4. THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE OWNER AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
5. NO STRUCTURAL MEMBERS SHALL BE CUT, NOTCHED OR OTHERWISE PENETRATED UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER IN ADVANCE OR SHOWN ON THESE DRAWINGS
6. TYPICAL DETAILS SHALL APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
7. WHERE THESE GENERAL NOTES AND TYPICAL DETAILS ARE IN CONFLICT WITH THE SPECIFICATIONS, THESE GENERAL NOTES AND TYPICAL DETAILS SHALL GOVERN.
8. PROVIDE OPENINGS, CURBS, FRAMING AND/OR SUPPORTS FOR ITEMS INDICATED ON ARCHITECTURAL, MECHANICAL, ELECTRICAL OR OTHER DRAWINGS INCLUDED IN CONSTRUCTION DOCUMENTS
9. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND OTHER INFORMATION NOT SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS
10. ALL ELEVATIONS ARE REFERENCED FROM TOP OF FINISHED FIRST FLOOR ELEVATION = 0'-0"
11. PROVIDE INSPECTIONS, TESTS AND REPORTS IN ACCORDANCE WITH CCR TITLE 24, PART 2 AND CCR TITLE 24, PART 1, CHAPTER 4, GROUP 1.
12. IN ADDITION TO CONTINUOUS PROJECT INSPECTION, THE FOLLOWING SPECIAL INSPECTIONS SHALL BE REQUIRED, AS A MINIMUM:
    A. INSPECTION OF ALL WELDING FOR STRUCTURAL STEEL, PER TITLE 24, PART 2, SECTION 1705A.2.2.5
    B. INSPECTION FOR CONCRETE AND CONCRETE REINFORCEMENT PLACEMENT, PER TITLE 24, PART 2, SECTION 1705A.3
13. ALL REQUIRED INSPECTIONS AND TESTS ARE THE RESPONSIBILITY OF THE OWNER. ALL INSPECTORS SHALL PROVIDE REPORTS AS REQUIRED BY TITLE 24, PART 1, CHAPTER 4, GROUP 1
14. DIMENSIONS AND ELEVATIONS SHOWN ARE APPROXIMATE AND ARE PROVIDED AS AN AID IN INTERPRETING THE DRAWINGS ONLY. DIMENSIONS AND ELEVATIONS MUST BE VERIFIED WITH ARCHITECTURAL DRAWINGS. IN THE EVENT OF CONFLICT, DIMENSIONS AND ELEVATIONS SHOWN ON ARCHITECTURAL DRAWINGS SHALL GOVERN. DRAWING SCALES GIVEN ARE APPROXIMATE – DO NOT SCALE PLANS OR DETAILS
15. WHEN MODULE IS RELOCATED – DO NOT REINSTALL NAILS OR SCREWS IN EXISTING HOLES

WOOD:

1. STRUCTURAL FRAMING SHALL BE HEM FIR – LARCH GRADED IN ACCORDANCE WITH THE STANDARD GRADING RULES OF THE WESTERN WOOD PRODUCTS ASSOCIATION OR STANDARD GRADING RULES #17 OF THE WEST COAST LUMBER INSPECTION BUREAU, LATEST EDITIONS. GRADES SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE ON THE DRAWINGS. (HEM FIR SOUTH IS NOT ALLOWED.) EACH PIECE SHALL BE GRADE MARKED AND NO PIECE MAY FALL BELOW GRADES INDICATED.
   ALL FRAMING EXCEPT AS NOTED HEM FIR #2
2. PLYWOOD SHALL BE AS SHOWN ON THESE DRAWINGS WITH EXTERIOR GLUE IN ACCORDANCE WITH U.S. PRODUCT STANDARD PS 1-07. ALL PANELS SHALL BE MARKED WITH AN APA GRADE MARK WITH AN IDENTIFICATION INDEX AS SHOWN ON DRAWINGS. USE 4'x8' PANELS, MINIMUM, EXCEPT AT BOUNDARIES AND FRAMING CHANGES WHERE MINIMUM PANEL DIMENSION SHALL BE 24" AT ROOFS AND FLOORS AND 12" AT WALLS.
3. BOLTS FOR TIMBER CONNECTIONS SHALL CONFORM TO ANSI/ASME STANDARD AND 2012 EDITION OF THE NDS. BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF OF THE LATEST EDITION OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION BY THE NATIONAL FOREST PRODUCTS ASSOCIATION (NDS). BOLT HOLES SHALL BE 1/32 TO 1/16 INCH LARGER THAN BOLT DIAMETER. RE-TIGHTEN BOLTS BEFORE CLOSING IN WORK. BOLTS SHALL BE FULL BODY STEEL BOLTS WITH MINIMUM YIELD STRENGTH OF 45,000 PSI
4. LAG SCREWS SHALL BE STEEL AND CONFORM TO ANSI/ASME STANDARD AND THE REQUIREMENTS OF THE 2012 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS). HOLES FOR LAG SCREW SHANKS SHALL BE BORED THE SAME DEPTH AND DIAMETER AS THE SHANK. THE REMAINING DEPTH OF PENETRATION OF THE SCREW SHALL BE BORED TO 70% OF THE SHANK DIAMETER. ONE QUARTER INCH (1/4") DIAMETER LAG SCREWS NEED NOT HAVE PRE-DRILLED HOLES IF IT CAN BE SHOWN THAT THE WOOD MEMBERS ARE NOT DAMAGED DURING INSTALLATION. PROVIDE FULL DIAMETER BODY LAG SCREWS WITH BENDING YIELD STRENGTHS PER THE 2012 NDS.
5. PROVIDE MALLEABLE IRON WASHERS OR EQUIVALENT CUT PLATE WASHERS (NOT LESS THAN A STANDARD CUT WASHER) UNDER NUTS AND BOLT OR LAG SCREW HEADS WHICH BEAR ON WOOD.
6. WOOD SCREWS SHALL CONFORM TO ANSI/ASME STANDARD AND THE REQUIREMENTS OF THE 2012 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION BY THE NATIONAL FOREST PRODUCTS ASSOCIATION (NDS). GALVANIZED OR OTHER CORROSION RESISTANT COATING WHERE EXPOSED TO WEATHER OR USED IN FOUNDATIONS. SCREWS SHALL BE STEEL WITH CUT THREADS AND BENDING YIELD STRENGTHS NDS.
7. WOOD MEMBERS SHALL BE CUT OR NOTCHED ONLY AS SHOWN ON STRUCTURAL DRAWINGS.
8. WHEN REQUIRED NAILING TENDS TO SPLIT WOOD MEMBERS, NAIL HOLES SHALL BE PRE-BORED TO 3/4 OF THE NAIL DIAMETER.
9. STRUCTURAL NAILING SHALL BE WITH FULL HEAD COMMON NAILS PER ALL REQUIREMENTS OF THE 2012 NDS. NAILING NOT SPECIFICALLY INDICATED SHALL COMPLY WITH CCR TITLE 24, PART 2, TABLE 2304.9.1. ALL NAILS SHALL BE GALVANIZED OR OTHER CORROSION RESISTANT COATING WHERE EXPOSED TO WEATHER, IN FOUNDATIONS AND AS NOTED ON PLANS, PER THE REQUIREMENTS OF CCR TITLE 24, PART 2, WITH MINIMUM BENDING YIELDS PER THE 2012 NDS. (SEE NAIL EQUIVALENCE BELOW.)
10. NAIL EQUIVALENCE: (PROVIDE MINIMUM NAIL LENGTHS AS REQUIRED FOR SPECIFIED PENETRATION, TYP UNO)
    6d EQUALS .113"ø – PROVIDE 1.36" MIN POINT PENETRATION
    8d EQUALS .131"ø – PROVIDE *1.57" MIN POINT PENETRATION
    10d EQUALS .148"ø – PROVIDE *1.78" MIN POINT PENETRATION
    16d EQUALS .162"ø – PROVIDE *1.94" MIN POINT PENETRATION
    * 1 1/2" AT 2x MEMBERS
11. EXCEPT WHERE MORE STRINGENT CONSTRUCTION IS SHOWN ON THE DRAWINGS, WOOD CONSTRUCTION SHALL COMPLY WITH TITLE 24, PART 2, SECTION 2308, CONVENTIONAL LIGHT-FRAME CONSTRUCTION PROVISIONS, AS A MINIMUM
12. PRESSURE PRESERVATIVE TREATMENT SHALL BE PER SECTION 2303.1.8, CCR TITLE 24, PART 2. PROVIDE QUALITY MARK ON ALL TREATED FOUNDATION MEMBERS FROM AGENCY LISTED BY AN ACCREDITATION BODY THAT COMPLIES WITH THE REQUIREMENTS OF THE AMERICAN LUMBER STANDARDS TREATED WOOD PROGRAM. ALL FOUNDATION MEMBERS SHALL BE MARKED AS "FOR GROUND CONTACT (LP22)" OR "FOR ABOVE GROUND USE (LP2)" AS APPROPRIATE. TREAT ALL CUT ENDS OF PRESSURE TREATED MEMBERS WITH AN APPROVED PRESERVATIVE. (WILLARD W/B COPPER GREEN 2% OR AN APPROVED EQUIVALENT). WHERE NOTED, MEMBERS BELOW THE SUB FLOOR THAT ARE NOT A PART OF THE FOUNDATION SHALL BE PRESSURE TREATED PER LP2. A QUALITY CONTROL STAMP IS NOT REQUIRED FOR STRUCTURAL MEMBERS BELOW THE SUB FLOOR THAT ARE NOT PART OF THE FOUNDATION
13. MACHINE NAILING IS SUBJECT TO APPROVAL BY THE STRUCTURAL ENGINEER OR ARCHITECT AND THE DIVISION OF THE STATE ARCHITECT.
14. POWDER DRIVEN FASTENERS SHALL BE BY HILTI, INC, HILTI FASTENING SYSTEMS – OR EQUAL. INSTALL IN ACCORDANCE WITH DRAWINGS AND THE MANUFACTURER'S RECOMMENDATIONS AND ICC APPROVALS
15. FASTENERS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE-RETARDANT TREATED WOOD SHALL COMPLY WITH SECTION 2304.9.5 OF CBC
16. NAILS AND SPIKES USED IN WET OR EXTERIOR LOCATIONS SHALL COMPLY WITH SECTION 2304.9.1.1 OF CBC

CONCRETE:

1. CONCRETE SHALL DEVELOP A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 3500 PSI AT 28 DAYS IN ACCORDANCE WITH ASTM C31 AND C39. TESTING SHALL BE IN ACCORDANCE WITH CBC (CCR TITLE 24, PART 2) SECTION 1905A.1.2 AND ACI 318 SECTION 5.6. SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, OR NOT LESS THAN ONCE FOR EACH 50 CUBIC YARDS (38.3 m^3) OF CONCRETE, OR NOT LESS THAN 2000 SQUARE FEET (186 m^2) OF SURFACE AREA FOR SLABS OR WALLS. ADDITIONAL SAMPLES FOR SEVEN-DAY COMPRESSIVE STRENGTH TESTS SHALL BE TAKEN FOR EACH CLASS OF CONCRETE AT THE BEGINING OF THE CONCRETE WORK OR WHENEVER THE MIX OR AGGREGATE IS CHANGED.
2. **CONCRETE THAT WILL BE EXPOSED TO FREEZING AND THAWING, DEICING CHEMICALS OR OTHER EXPOSURE CONDITIONS SHALL COMPLY WITH SECTION 1904A.1, ACI 318 SECTION 4.4 &4.5**
3. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CBC (CCR TITLE 24, PART 2) AND ACI STANDARD 318, 2011 EDITION, OF THE AMERICAN CONCRETE INSTITUTE, UNLESS SHOWN OR NOTED OTHERWISE ON THESE DRAWINGS.
4. AGGREGATE SHALL CONFORM TO ASTM C33 FOR NORMAL CONCRETE WEIGHT AND C330 FOR LIGHT WEIGHT CONCRETE AND CBC SECTION 1903A.
5. CEMENT SHALL BE ASTM C150, TYPE I OR TYPE II
6. REINFORCING STEEL SHALL BE DEFORMED CONFORMING TO ASTM A615 GRADE 40 UNLESS OTHERWISE NOTED.
7. WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185.
8. WELDING OF REINFORCING STEEL SHALL BE PERFORMED ONLY WHERE INDICATED ON THE DRAWINGS AND SHALL BE IN COMPLIANCE WITH ALL REQUIREMENTS OF THE CBC AND THE REINFORCING STEEL WELDING CODE, AWS D1.4, LATEST REVISION, OF THE AMERICAN WELDING SOCIETY. PROVIDE WELDING PROCEDURE AND MILL TEST REPORTS FOR ALL REINFORCEMENT TO BE WELDED. REINFORCING WITH C.E. ABOVE .75 SHALL NOT BE WELDED. ARCHITECT SHALL APPROVE WELDING PROCEDURE, WELDER QUALIFICATIONS AND MILL TEST REPORTS PRIOR TO EXECUTION OF WELDING. PROVIDE INSPECTION PER SECTION 1705A.3 AND TABLE 1705A.2.1, TITLE 24, PART 2. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706.
9. COVERAGE FOR REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CBC AND ACI STANDARD 318 UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
10. LAP SPLICES FOR REINFORCING BARS SHALL BE 50 BAR DIAMETERS OR 18" MINIMUM UNLESS SHOWN OTHERWISE ON THE DRAWINGS. WIRE BARS TOGETHER AT LAPS OR SPLICES. STAGGER LAPS IN ADJACENT HORIZONTAL OR SLOPING REINFORCING BARS A MINIMUM OF THE REQUIRED SPLICE LENGTH. HOOKS AND BENDS SHALL BE ACI 318-11 SECTION 7.1, 7.2 & 7.3 UNLESS SHOWN OTHERWISE. WELDED WIRE FABRIC SHALL BE SPLICED BY LAPPING A MINIMUM OF 12 INCHES OR TWO CROSS WIRES, WHICHEVER IS GREATER.
11. CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ASTM C94 AND ACI STANDARD 304. ALSO COMPLY WITH REQUIREMENTS OF ACI 318-11 CHAPTER 5
12. ALL EMBEDDED ITEMS SHALL BE PLACED ACCURATELY AND SECURED PRIOR TO BEGINNING CONCRETE PLACEMENT.
13. CONSTRUCTION JOINTS SHALL BE LOCATED SO AS NOT TO IMPAIR THE STRENGTH OF THE STRUCTURE. CONSTRUCTION JOINTS SHALL COMPLY WITH ACI 318-11 CHAPTER 6. LOCATE CONSTRUCTION JOINTS AS SHOWN ON THE DRAWINGS OR APPROVED IN ADVANCE BY THE STRUCTURAL ENGINEER AND DSA.
14. PROVIDE SHOP DRAWINGS FOR ALL REINFORCING STEEL TO ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO BEGINNING ANY FABRICATION.
15. CONTRACTOR SHALL PREPARE AND SUBMIT CONCRETE MIX DESIGNS TO THE ARCHITECT FOR APPROVAL PRIOR TO PLACEMENT OF ANY CONCRETE. CONCRETE MIX DESIGNS SHALL BE PER CBC SECTION 1904A.2 AND ACI 318-11 SECTION 5.2, A REGISTERED CIVIL ENGINEER WITH EXPERIENCE IN CONCRETE MIX DESIGN SHALL SELECT THE RELATIVE AMOUNTS OF INGREDIENTS TO BE USED AS BASIC PROPORTIONS OF THE CONCRETE MIXES PROPOSED FOR USE UNDER THIS PROVISION AND TESTING SHALL BE PERFORMED IN A LABORATORY ACCECPTABLE TO THE ENFORCEMENT AGENCY. ALL GROUT SHALL BE NONMETALLIC NON-SHRINK HIGH STRENGTH GROUT BY MASTER BUILDERS OR EQUIVALENT AS APPROVED BY THE ARCHITECT. UTILIZE PRODUCTS RECOMMENDED BY THE MANUFACTURER FOR EACH APPLICATION AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
16. REINFORCING AND EMBEDMENT ITEMS SHALL BE FREE OF EXCESSIVE SCALE OR RUST, DIRT, GREASE, OIL OR ANY OTHER SUBSTANCE THAT WILL IMPAIR BOND WITH CONCRETE.
17. OWNER SHALL PROVIDE INSPECTIONS IN ACCORDANCE WITH CCR TITLE 24 FOR THE PLACEMENT OF CONCRETE AND CONCRETE REINFORCEMENT, FOR BOLTS INSTALLED IN CONCRETE AND FOR SAMPLING CONCRETE. OWNER'S INSPECTOR SHALL PROVIDE INSPECTION REPORTS TO THE ARCHITECT AND THE DIVISION OF THE STATE ARCHITECT.
18. ADDITIONALLY, PROVIDE TESTS AND INSPECTIONS IN ACCORDANCE WITH TITLE 24, PART 2, SECTION 1913A. A PLACING RECORD SHALL BE MAINTAINED FOR ALL CONCRETE PLACED IN THE STRUCTURE.
19. BATCH PLANT INSPECTION, CEMENT AND REINFORCING TESTS ARE NOT REQUIRED. FOR SINGLE-STORY LIGHT FRAMED BUILDINGS AND ISOLATED FOUNDATIONS SUPPORTING EQUIPMENT ONLY, WHERE THE SPECIFIED COMPRESSIVE STRENGTH Fc OF THE CONCRETE DELIVERED TO THE JOBSITE IS 3,500 PSI (24.13 MPa) AND WHERE THE Fc USED IN THE DESIGN IS NOT GREATER THAN 3,000 PSI (20.68 MPa). THE QUANTITIES OF CONCRETE MATERIALS SHALL BE CERTIFIED BY A LICENSED WEIGHMASTER AND THE QUALITY OF MATERIALS SHALL BE VERIFIED BY THE OWNER'S TESTING AGENCY:
    1. QUALIFIED TECHNICIAN OF THE TESTING LABORATORY SHALL CHECK THE FIRST BATCH AT THE START OF THE DAY.
    2. LICENSED WEIGHMASTER TO POSITIVELY IDENTIFY MATERIALS AS TO QUANTITY AND CERTIFY TO EACH LOAD BY A BATCH TICKET.
    3. BATCH TICKETS, INCLUDING ACTUAL MATERIAL QUANTITIES AND WEIGHTS SHALL ACCOMPANY THE LOAD AND SHALL BE TRANSMITTED TO THE INSPECTOR OF RECORD BY A TRUCK DRIVER WITH LOAD IDENTIFIED THERON. THE LOAD SHALL NOT BE PLACED WITHOUT A BATCH TICKET IDENTIFYING THE MIX. THE INSPECTOR WILL KEEP A DAILY RECORD OF PLACEMENTS, IDENTIFYING EACH TRUCK, ITS LOAD, TIME OF RECEIPT AND APPROXIMATE LOCATION OF DEPOSIT IN THE STRUCTURE AND WILL TRANSMIT A COPY OF THE DAILY RECORD TO THE ENFORCEMENT AGENCY.

    COMPLY WITH ALL REQUIREMENTS OF TITLE 24, PART 2, SECTIONS 1705A.3.3.
20. ALL CONCRETE WORK SHALL BE FORMED. CASTING OF FOUNDATION CONCRETE AGAINST SIDES OF FOOTING EXCAVATIONS SHALL NOT BE ALLOWED EXCEPT AS SPECIFICALLY APPROVED BY ARCHITECT, STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT.
21. MAX CONC SLUMP TO BE 4"±1"

CONCRETE FOUNDATION:

1. FOUNDATION BEARING SHALL BE AS APPROVED BY THE DIVISION OF THE STATE ARCHITECT AND THE OWNER'S ARCHITECT. IT IS THE SCHOOL DISTRICT'S RESPONSIBILITY TO PROVIDE ADEQUATE BEARING TO DEVELOP THE ALLOWABLE BEARING PRESSURE NOTED BELOW.
2. CONCRETE FOUNDATIONS ARE DESIGNED FOR A MAXIMUM DEAD PLUS LIVE LOAD ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF PER TITLE 24, TABLE 1806A.2.
3. THE BOTTOM OF ALL FOOTINGS SHALL BE LEVEL. CHANGES IN FOOTING ELEVATIONS SHALL BE MADE UTILIZING THE TYPICAL FOOTING STEP DETAILS ON THESE DRAWINGS.
4. CENTER FOOTINGS UNDER WALLS OR COLUMNS UNLESS OTHERWISE INDICATED ON THESE DRAWINGS.
5. PROVIDE PROPER GRADING OF SITE SUCH THAT WATER DOES NOT POND OR OTHERWISE COLLECT UNDER THE BUILDING.
6. FOUNDATIONS ARE DESIGNED AS PERMANENT FOUNDATIONS IN ACCORDANCE WITH TITLE 24, CHAPTER 18A.
   A. ALL BUILDINGS, PERMANENT OR OTHER RELOCATABLE, ADJACENT TO THESE RELOCATABLE BUILDINGS MUST BE SEPARATED FROM THESE RELOCATABLE BUILDINGS. SEE COVER SHEET FOR MINIMUM SEPARATION REQUIRED

STRUCTURAL STEEL:

1. NOT USED
2. NOT USED
3. NOT USED
4. ALL WELDING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA BUILDING CODE (CBC) AND THE STRUCTURAL WELDING CODE – STEEL, AWS D1.1, 2010 EDITION OF THE AMERICAN WELDING SOCIETY. WELDING DONE BY SHIELDING ELECTRIC-ARC OR FLUX-CORED PROCESS COMPLYING WITH AWS.
5. FABRICATION AND ERECTION OF STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2010 EDITION OF THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) (CBC CHAPTER 22A). ALSO COMPLY WITH REQUIREMENTS OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES. TEMPORARY BRACING IS REQUIRED AS NEEDED UNTIL ALL ELEMENTS SHOWN ON STRUCTURAL DRAWINGS ARE IN PLACE.
6. PRIME ALL STEEL SURFACES WITH AN APPROVED PRIMER, EXCEPT SURFACES TO BE EMBEDDED IN CONCRETE AND SURFACES TO RECEIVE FIELD WELDS. TOUCH-UP FIELD WELDS AND OTHER EXPOSED STEEL SURFACES AFTER ERECTION. ALTERNATE: PROVIDE GALVANIZED PER ASTM A-123.
7. PROVIDE TESTS AND INSPECTIONS IN ACCORDANCE WITH CCR TITLE 24, PART 2, SECTION 1705A.2. ALL STEEL SHALL BE PROPERLY IDENTIFIED PER SECTION 2203A.
8. WELDING SHOULD BE IN ACCORDANCE WITH CCR TITLE 24. PART 2, SECTION 1705A.2.2.5.
9. ALL WELDS USED IN PRIMARY MEMBERS AND CONNECTIONS IN THE LATERAL FORCE- RESISTING SYSTEM SHALL BE MADE WITH A FILLER METAL THAT HAS A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 ft-lbs AT O DEGREES F, AS REQ. BY SEC. 2212A.2.3
10. QUALIFIED AND CERTIFIED WELDERS SHALL BE USED FOR ALL WELDING. ALL WELDING TO CONFORM TO THE 2010 EDITION OF THE AMERICAN WELDING SOCIETY STRUCTURAL WEDLING CODE AWS D1.1
11. MATERIALS:

ROLLED STRUCTURAL STEEL SHAPES	ASTM A-992, GRADE 50
ANGLES, MISC STEEL	ASTM A36
MISCELLANEOUS PLATES	ASTM A-572
STRUCTURAL STEEL PIPES	ASTM A53 TYPE E OR S, GRADE B
WELDING ELECTRODES	AWS STRUCTURAL STEEL E70XX, REINFORCING STEEL E90XX
ANCHOR BOLTS	ASTM F-1554 GRADE 36
TYPICAL STEEL CONNECTION BOLTS	ASTM A-325
MISCELLANEOUS BOLTS	ASTM A-307
GALVANZING	ASTM A-123
RUSH-INHIBITING PRIMER	TT-P-645 ASTM
STEEL TUBING	ASTM A-500 GRADE B (Fy = 46 KSI)

12. CONNECTED MEMBERS SHALL BEAR ONLY UPON UNTHREADED PORTIONS OF BOLTS
13. BURNING OF HOLES IS NOT ALLOWED
14. INSPECTION OF WELDING SHALL CONFORM TO CBC REQUIREMENTS (CHAPTER 17A)
15. THE STRUCUTRAL STEEL FABRICATOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION
16. BOLT HOLES SHALL BE 1/16" LARGER IN DIAMETER THAN NOMINAL SIZE OF BOLTS USED, UNO

PAD FOUNDATIONS: (RESTRAINED)

1. FOUNDATION BEARING SHALL BE AS APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AND THE OWNER'S ARCHITECT. IT IS THE SCHOOL DISTRICT'S RESPONSIBILITY TO PROVIDE ADEQUATE BEARING TO DEVELOP THE ALLOWABLE BEARING PRESSURE NOTED BELOW
2. FOUNDATIONS ARE DESIGNED FOR A MAXIMUM DEAD PLUS LIVE LOAD ALLOWABLE SOIL BEARING PRESSURE OF 1000 PSF, AS PER IR 16-1.
3. THE BOTTOM OF ALL FOOTINGS SHALL BE LEVEL. CHANGES IN FOOTING ELEVATIONS SHALL BE MADE UTILIZING THE FOOTING SHIM DETAILS ON THESE DRAWINGS
4. CENTER FOOTINGS UNDER WALLS OR COLUMNS UNLESS OTHERWISE INDICATED ON THESE DRAWINGS
5. PROVIDE PROPER GRADING OF SITE SUCH THAT WATER DOES NOT POND OR OTHERWISE COLLECT UNDER THE BUILDING.
6. VERIFY THAT NO PIPES, UTILITIES, OR OTHER SUCH ITEMS OCCUR BELOW FOOTINGS.
7. FOUNDATIONS ARE DESIGNED AS "RESTRAINED FOUNDATION", IN ACCORDANCE WITH IR 16-1, SUBSTANDARD FOUNDATIONS
   a. ANCHOR FOOTINGS AT BUILDING PERIMETER WITH 1"ø HOT DIPPED GALVANIZED STANDARD WEIGHT STEEL PIPES DRIVEN FLUSH WITH TOP OF WOOD FOUNDATION PADS AND PENETRATING SOIL 12" MINIMUM AT A MAXIMUM SPACING OF 10'-0" OC AT SIDEWALLS AND 2'-0" FROM EACH CORNER IN BOTH DIRECTIONS
   b. STAIRS AND RAMPS SHALL BE PROPERLY ANCHORED TO BUILDING TO PREVENT SEPARATION
   c. ALL BUILDINGS, PERMANENT OR OTHER RELOCATABLE, ADJACENT TO THESE RELOCATABLE BUILDINGS MUST BE SEPARATED FROM THESE RELOCATABLE BUILDINGS BY 4" MINIMUM
8. FINISH GRADES SHALL BE WITHIN MAX 18" BELOW BOTTOM OF FLOOR JOISTS WITHOUT EXCEPTION
9. THE TIE PLATE WHICH ATTACHES THE FLOOR BEAM TO THE WOOD FOUNDATION AND THAT IS EXPOSED TO THE WEATHER IS TO BE GALVANIZED. TEK SCREWS THAT ATTACH THE TIE PLATE TO THE FLOOR BEAM ARE TO BE HOT-DIPPED GALVANIZED. ANCHOR BOLTS AND MECHANICAL EXPANSION ANCHORS WHICH ARE EXPOSED TO THE WEATHER ARE TO BE PAINTED WITH ZINC-BASED PAINT

ACCEPTABLE FASTENERS / ICC REPORTS:

SILL PLATE THROUGH LIGHTWEIGHT CONCRETE: ICC REPORT #ESR-2269 OR #ESR-1752
SHOT PIN THROUGH LIGHT GAUGE STEEL: ICC REPORT #ESR-2269
WOOD/METAL JAMB STUDS TO STEEL COLUMN: ICC REPORT #ESR-2269
SHOT PIN CONNECTION FOR METAL B-DECK: ICC REPORT #ESR-2776

SELF-TAPPING SCREWS	SECT 3.2.12 ASTM C1513
SELF-DRILLING SCREWS	SECT 3.2.9 ASTM C1513
SELF-PIERCING SCREWS	SECT 3.2.9 ASTM C1513

REFERENCE ASTM C1513, STANDARD SPECIFICATION FOR TAPPING SCREWS FOR COLD-FORMED STEEL FRAMING CONNECTION

REFERENCE AISI S213-07/S2-10, NORTH AMERICAN STANDARD FOR COLD-FORMED STEEL FRAMING-LATERAL DESIGN

FASTENERS MANUFACTURED WITH CARBON STEEL WIRE SHALL CONFORM TO ASTM A510

TESTING – THE OPERATOR, TOOL, AND FASTENER SHALL BE PRE-QUALIFIED BY THE PROJECT INSPECTOR. HE SHALL OBSERVE THE TESTING OF THE FIRST 10 FASTENER INSTALLATIONS. A TEST "PULL-OUT" LOAD OF NOT LESS THAN TWICE THE DESIGN LOAD SHALL BE APPLIED TO THE PIN IN SUCH A MANNER AS NOT TO RESIST THE SPALLING TENDENCY OF THE CONCRETE SURROUNDING THE PIN. THEREAFTER, RANDOM TEST UNDER THE PROJECT INSPECTOR'S SUPERVISION SHALL BE MADE OF APPROXIMATELY 1 IN 10 PINS. IF ANY PIN FAILS TESTING, TEST ALL PINS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE PASS, THEN RESUME THE INITIAL TESTING FREQUENCY.

MACHINE APPLIED NAILING:

USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOBSITE DEMONSTRATION FOR EACH PROJECT AND THE APPROVAL BY THE PROJECT ARCHITECT OR STRUCTURAL ENGINEER AND THE DIVISION OF THE STATE ARCHITECT. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. MACHINE NAILING WILL NOT BE APPROVED IN 5/16" PLYWWOD. IF NAILHEADS PENETRATE THE OUTER PLY MORE THAN WOULD BE NORMAL FOR A HAND HAMMER OR IF MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY AND MACHINE NAILING SHALL BE DISCONTINUED.

COLD FORMED STRUCTURAL STEEL:

1. ALL LIGHT GAUGE METAL FRAMING SHALL BE THE TYPE, SIZE AND GAUGE AS SHOWN ON THE PLANS AND BE FABRICATED AND ERECTED IN ACCORDANCE WITH LATEST AISI SPECIFICATIONS
2. ALL GALVANIZED STUDS, TRACKS, AND OR JOISTS 12, 14, AND 16 GAUGE SHALL CONFORM TO ASTM A653, SS GRADE 50 (Fy = 50 KSI) AND ASTM A653, SS GRADE 33 (Fy = 33 KSI) FOR 18 AND 20 GAUGE UNO
3. NOT USED
4. GALVANIZED COATINGS MUST MEET ASTM A-525 SPECIFICATIONS
5. CARBON SHEET STEEL MUST MEET THE MINIMUM REQUIREMENTS OF ASTM A-1011 GRADE 40 KSI FOR 12, 14, AND 16 GAUGE AND GRADE 33 KSI FOR 18 GAUGE AND LIGHT MEMBERS. CARBON SHEET STEEL PRODUCTS MUST BE THOROUGHLY COATED WITH A RUST INHIBITIVE PAINT.
6. ALL STRUCTURAL MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS LATEST EDITION (AISI S100-07).
7. METAL STUDS AND OR JOIST:
   A. FOR METAL STUD WALLS, UNLESS OTHERWISE SHOWN ON THE DRAWINGS, PROVIDE STANDARD PUNCHED STEEL MEMBERS OF THE GAUGES SHOWN ON THE DRAWINGS.
   B. USE ONLY ONE TYPE THROUGHOUT THE WORK, UNLESS OTHERWISE NOTED ON THE DRAWINGS OR SPECIFICALLY APPROVED IN ADVANCE BY THE ARCHITECT/ENGINEER
8. PROVIDE ALL ACCESSORIES INCLUDING, BUT NOT NECESSARILY LIMITED TO, TRACKS, CLIPS, WEB STIFFENERS, ANCHORS, FASTENING DEVICES, RESILIENT CLIPS AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATION, AND AS RECOMMENDED BY THE MANUFACTURER FOR THE STEEL MEMBERS USED
9. FASTENINGS OF COMPONENTS SHALL BE WITH SELF-DRILLINGS SCREWS OR WELDING. SCREWS OR WELDS SHALL BE SUFFICIENT SIZE TO INSURE THE STRENGTH OF THE CONNECTION. ALL WELDS OF GALVANIZED STEEL SHALL BE TOUCHED UP WITH ZINC-RICH PAINT. ALL WELDS OF CARBON SHEET STEEL SHALL BE TOUCHED UP WITH PAINT
10. ALL METAL STUDS SHALL BE BY SSMA APPROVED SUPPLIED, ICC ERS-3064P. ALTERNATE METAL STUDS MUST BE OF EQUAL OR GREATER SECTIONS PROPERTIES AND SHALL BE APPROVED BY THE ENGINEER
11. PROVIDE SHOP DRAWINGS INDICATING MEMBERS GAUGES, SHAPES, SIZES, SPACING, LOCATIONS AND CONNECTIONS
12. STUDS SHALL BE INSTALLED WITH THEIR BEARING ENDS POSITIONED FLUSH AGAINST THE INSIDE TRACK WEB.
13. FULL-HEIGHT DOUBLE STUDS SHALL BE PROVIDED AT THE ENDS OF PARTITIONS, AT ALL WALL OPENINGS, AND AT OTHER LOCATIONS SHOWN ON THE PLANS
14. BRIDGING SHALL BE COLD FORMED CHANNEL, MINIMUM 1-1/2" DEEP WITH 9/16" FLANGE SPACED AT 4'-0" ON CENTER MAXIMUM VERTICALLY. DOUBLE UP STUDS AT ALL DOOR JAMBS, WALL ENDS AND WALL CORNERS
15. SHEATHING SHALL BE ATTACHED TO BOTH FACES OF METAL STUDS THROUGHOUT THEIR LENGTH UNO
16. TRACK AT TOP AND BOTTOM OF STUD WALLS SHALL AT A MINIMUM MATCH THE STUD GRADE UNO
17. ALL SHEET METAL SCREWS SHALL E THREAD FORMING OR THREAD CUTTING WITH OR WITHOUT A SELF-DRILLING POINT PER AISI
18. ALL WELDING OR MATERIAL LESS THAN 0.18 INCHES IN THICKNESS SHALL BE MADE IN ACCORDANCE WITH THE AWS D1.3 WELDERS AND WELDING PROCEDURES AND SHALL BE QUALIFIED AS SPECIFIED IN AWS D1.3
19. TOUCH UP COLD GALVANIZING USING ZRC CHEMICAL PRODUCTS CO.M, ZRC COLD GALVANIZING COMPOUND OR EQUAL
20. SPLICES IN STUDS SHALL NOT BE PERMITTED

STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) STEEL STUD FORMAT CONVERSION CHART

ORDINARY FORMAT	SSMA FORMAT
C-3 5/8" X 1 1/2" X 20 GA (TRACK) C-3 5/8" X 1 5/8" X 20 GA (STUD)	362T150-33 (TRACK) 362S162-33 (STUD)
C-3 5/8" X 1 1/2" X 18 GA (TRACK) C-3 5/8" X 1 5/8" X 18 GA (STUD)	362T150-43 (TRACK) 362S162-43 (STUD)
C-3 5/8" X 1 1/2" X 16 GA (TRACK) C-3 5/8" X 1 5/8" X 16 GA (STUD)	362T150-54 (TRACK) 362S162-54 (STUD)
C-4" X 1 1/2" X 20 GA (TRACK) C-4" X 1 5/8" X 20 GA (STUD)	400T150-33 (TRACK) 400S162-33 (STUD)
C-4" X 1 1/2" X 18 GA (TRACK) C-4" X 1 5/8" X 18 GA (STUD)	400T150-43 (TRACK) 400S162-43 (STUD)
C-4" X 1 1/2" X 16 GA (TRACK) C-4" X 1 5/8" X 16 GA (STUD)	400T150-54 (TRACK) 400S162-54 (STUD)
C-5 1/2" X 1 1/2" X 20 GA (TRACK) C-5 1/2" X 1 5/8" X 20 GA (STUD)	550T150-33 (TRACK) 550S162-33 (STUD)
C-5 1/2" X 1 1/2" X 18 GA (TRACK) C-5 1/2" X 1 5/8" X 18 GA (STUD)	550T150-43 (TRACK) 550S162-43 (STUD)
C-5 1/2" X 1 1/2" X 16 GA (TRACK) C-5 1/2" X 1 5/8" X 16 GA (STUD)	550T150-54 (TRACK) 550S162-54 (STUD)
C-6" X 1 1/2" X 20 GA (TRACK) C-6" X 1 5/8" X 20 GA (STUD)	600T150-33 (TRACK) 600S162-33 (STUD)
C-6" X 1 1/2" X 18 GA (TRACK) C-6" X 1 5/8" X 18 GA (STUD)	600T150-43 (TRACK) 600S162-43 (STUD)
C-6" X 1 1/2" X 16 GA (TRACK) C-6" X 1 5/8" X 16 GA (STUD)	600T150-54 (TRACK) 600S162-54 (STUD)
C-8" X 1 1/2" X 20 GA (TRACK) C-8" X 1 5/8" X 20 GA (STUD)	800T150-33 (TRACK) 800S162-33 (STUD)
C-8" X 1 1/2" X 18 GA (TRACK) C-8" X 1 5/8" X 18 GA (STUD)	800T150-43 (TRACK) 800S162-43 (STUD)
C-8" X 1 1/2" X 16 GA (TRACK) C-8" X 1 5/8" X 16 GA (STUD)	800T150-54 (TRACK) 800S162-54 (STUD)

AMERICAN INSITUTE OF STEEL CONSTRUCTION (AISC) HOT ROLLED MEMBER FORMAT CONVERSION CHART

ORDINARY FORMAT	AISC FORMAT
C-6" X 8.2 LB	C 6x8.2
C-7" X 9.8 LB	C 7x9.8
C-10" X 15.3 LB	C 10x15.3
L-1 1/2" X 1 1/2" X 3/16"	L 1-1/2x1-1/2x3/16
L-5" X 3" X 3/8"	L 5x3x3/8

STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) MIL THICKNESS FORMAT CONVERSION CHART

GUAGE FORMAT	DESIGN THICKNESS	MILS
25	0.0188	18
22	0.0283	27
20	0.0346	33
18	0.0451	43
16	0.0566	54
14	0.0713	68
12	0.1017	97
10	0.1242	118

IMPACT
CONSTRUCTION SERVICES INC.
CONTRACTORS LICENSE #945691

NORTHERN CALIFORNIA DIVISION
450 COMMERCE AVE.
ATWATER, CA 95301
PHONE: (209) 580-6506
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SOUTHERN CALIFORNIA DIVISION
1090 W. HARLEY KNOX BLVD.
PERRIS, CA 92571
PHONE: (951) 943-9999
FAX: (951) 943-9430

WEBSITE: WWW.IMPACTCONSTRUCTION.COM

PROJECT NAME:

SHEET TITLE:

STRUCTURAL NOTES AND SPECIFICATIONS

MFR. STRUCTURAL ENGINEER OF RECORD ON PC

REGISTERED PROFESSIONAL ENGINEER
JAMES T. SIMPSON
No. 3602
EXP. 06/30/16
STRUCTURAL
STATE OF CALIFORNIA

DATE SIGNED
MAY 05 2016

MFR. PROJECT SPECIFIC PROFESSIONAL OF RECORD

ARCHITECT OF RECORD

PROJECT SPECIFIC STATE AGENCY APPROVAL

PRE-CHECK (PC) DOCUMENT
CODE: 2013 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
PC 02-114488
FILE #: PC-80
AC — FLS — SS Ar
DATE: F2 24 16

REVISIONS

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PROJECT NO.:	00-0000
DRAWN BY:	00
SCALE:	AS NOTED
DATE:	00-00-00

SHEET NUMBER

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