SOLANO COMMUNITY COLLEGE KITCHELL MADI ARCHITECTURE + PLANNING	ADDENDUM #01
	Project: #16 - 007 Solano Community College District Horticulture Site Improvements
	Date: April 15, 2016

The following clarifications are provided based on questions received or changes in District requirements and must be added/considered when completing your submittal: Acknowledgement of receipt of this ***ADDENDUM*** is required in the proposal's cover letter of introduction. Please clearly note the addendum date and number.

ITEM:

A. CHANGES TO PROJECT MANUAL

NONE

B. CHANGES TO DRAWINGS

ITEM 1: Replace the bid drawing set in its entirety with the attached set of plans.

C. GEOTECHNICAL ENGINEERING REPORT

ITEM 1: Terracon Geotechnical Report

SOLANO COMMUNITY COLLEGE DISTRICT

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

LOUISE WILBOURN YARBROUGH

HORTICULTURE & PLANT SCIENCE INSTITUTE

AT

SOLANO COMMUNITY COLLEGE 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:

CSW I ST-2
45 LEVERONI COURT
NOVATO, CA 94949
(T) 415.883.9850 (F) 415.883.9385
WWW.CSWST2.COM

ELECTRICAL & FIRE ALARM ENGINEER:

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:

1. GRADING, PAVING, NEW FENCING AND NEW PARKING AS SHOWN.
2. NEW FARMERS MARKET STAND (SHADE STRUCTURE)
3. BID ALTERNATE: GREENHOUSE

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.

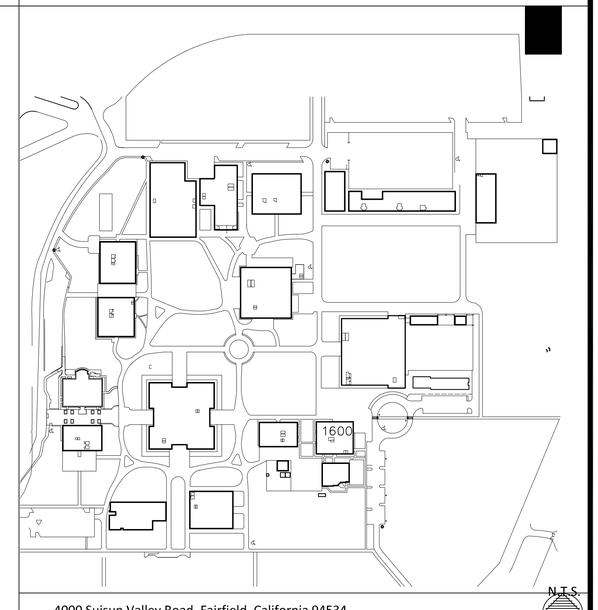
SYMBOLS

- COLUMN GRID LINE — Numbers horizontal, Letters vertical
- ROOM ID — Room name & number
- DOOR SYMBOL — Door number
- WINDOW SYMBOL — Window number
- FINISH SYMBOL — Finish mat'l identification
- SECTION CUT — Section identification, Sheet number
- DETAIL REFERENCE — Detail information, Sheet number
- INTERIOR ELEVATIONS — Detail information, Sheet number / elevation
- REVISION — Addendum letter, Supplemental instruction, revision cloud
- WORK POINT — Target
- MATCH LINE — Target
- ARCHITECTURAL WALL PANEL TYPE SYMBOL
- SHEET NOTE SYMBOL
- ELEVATION TAG

ABBREVIATIONS

@	AT
A.B.	ANCHOR BOLT
A.D.	AREA DRAIN
ADD'L	ADDITIONAL
ADJ. HT.	ADJUSTED HEIGHT
A.F.F	ABOVE FINISH FLOOR
AC	ASPHALT CONCRETE
AGG.	AGGREGATE
ALT.	ALTERNATE
ALUM.	ALUMINUM
AMP	AMPERAGE
APA	AMERICAN PLYWOOD ASSOCIATION
APPROX.	APPROXIMATE
A.S.L.	ABOVE SEA LEVEL
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS
B.F.F.	BELOW FINISH FLOOR
BLK'G/BLKNG	BLOCKING
BM	BEAM
BTM./BOTT.	BOTTOM
BTWN	BETWEEN
B.U.R	BUILT-UP ROOFING
CALCS.	CALCULATIONS
CEM. PLAST.	CEMENT PLASTER
C.I.	CAST IRON
C.J.	CONSTRUCTION JOINT
C.L.	CENTER LINE
CLG.	CEILING
C.M.U.	CONCRETE MASONRY UNIT
COL.	COLUMN
CONC.	CONCRETE
CONTR.	CONTRACTOR
CSMT	CASEMENT
DBL.	DOUBLE
DBL. PL.	DOUBLE PLATE
DET.	DETAIL
DEG.	DEGREE
D.F.	DOUGLAS FIR OR DRINKING FOUNTAIN
DIA.	DIAPHRAGM
DN	DOWN
DS	DOWNSPOUT
DW	DISHWASHER
(E)	EXISTING
EA.	EACH
ELECT.	ELECTRICAL
ELEV.	ELEVATION
E.J.	ELEVATION JOINT
EMBED.	EMBEDMENT
E.P.S.	EXTRUDED POLYSTYRENE FOAM
EXT.	EXTERIOR
F.D.	FLOOR DRAIN
FDN./FOUND.	FOUNDATION
F.F.	FINISHED FLOOR
F.G.	FUEL GAS
F.J./ FLR.JST.	FLOOR JOIST
FLASH'G	FLASHING
FLR.	FLOOR
FLUOR.	FLUORESCENT
F.O.S.	FACE OF STUD
FR.	FRENCH
FTG.	FOOTING
GA.	GAUGE
GALV.	GALVANIZED
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GIR	GIRDER
GLU-LAM	GLUE LAMINATED
G.S.M.	GALVANIZED SHEET METAL
GYP.BD.	GYPSUM BOARD
H.B.	HOSE BIBB
HD	HOLD DOWN
H.H.	HEAD HEIGHT
HMF	HOLLOW METAL FRAME
HORIZ.	HORIZONTAL
HR.	HOUR
INFO.	INFORMATION
INSUL	INSULATION OR INSULATED
JST.	JOIST
LB. OR #	POUND OR NUMBER
LEV./ LVL	LEVEL
LT.	LIGHT
LTWT.	LIGHTWEIGHT
MAX.	MAXIMUM
MBRS	MEMBERS
M.D.F.	MEDIUM DENSITY FIBERBOARD
MFR.	MANUFACTURER
(N)	NEW
NAT.	NATIONAL
M.SUITE/ M.S.	MASTER SUITE
MIN.	MINIMUM
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.H./ OPP.	OPPOSITE HAND
P.B.	PUSH BUTTON
PERF.	PERFORATED
PL.	PLATE
PL.HT.	PLATE HEIGHT
PLYWD.	PLYWOOD
PR.	PAIR
PSI	POUNDS PER SQUARE INCH
P.T.	PRESSURE TREATED
PWDR.	POWDER
R.	RISER
RECOM.	RECOMMENDATION
REINF.	REINFORCING
RFTR.	RAFTER
RM.	ROOM
R.W./RWD	REDWOOD
SAF	SELF ADHESIVE FLASHING
S.C.	SOLID CORE
S.C.D.	SEE CIVIL DRAWINGS
SCHED.	SCHEDULE
SD	SMOKE DETECTOR
S.E.D.	SEE ELECTRICAL DRAWINGS
S.F./ SQ.FT.	SQUARE FOOT
SHR.	SHEAR
SIM.	SIMILAR
S.M.D.	SEE MECHANICAL DRAWINGS
SQ.IN.	SQUARE INCH
S.S.D.	SEE STRUCTURAL DRAWINGS
ST	STRAP
STOR.	STORAGE
STR1	STRUCTURAL 1
S.W.	SHEAR WALL
SQ.	SWITCH
SYM.	SYMBOL
S3S/S4S	SMOOTH 3 OR 4 SIDES
TEMP./ T.	TEMPERED
T.H.	THRESHOLD
T./ THERM	THERMOSTAT
T.O.C.	TOP OF CURB
T.O.F.	TOP OF FLOOR
T.O.G.B.	TOP OF GRADE BEAM
T.O.P.	TOP OF PLATE
T.O.S	TOP OF SLAB
T.O.W.	TOP OF WALL
T/P /T.OF PL	TOP OF PLATE
T.P.O.	THERMOPLASTIC POLYOLEFIN
TRNSM.	TRANSOM
T&G	TONGUE & GROOVE
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
UTL./ UTIL.	UTILITY
V.	VOLTAGE
VERT.	VERTICAL
V.I.F.	VERIFY IN FIELD
WD.	WOOD
W.A.	WROUGHT IRON
WL	WALL
W.P.	WEATHERPROOF
WP.SCRD.	WEEP SCREED
W.W.F.	WELDED WIRE FABRIC
W.W.M.	WELDED WIRE MESH
W/D	WASHER/ DRYER

PROJECT LOCATION



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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:

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:

COVER SHEET

DSA APPROVAL STAMP:

SHEET NUMBER:

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

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SHEET LIST

GENERAL
G0.1 COVER SHEET
G0.2 SHEET LIST
G0.3 CAMPUS SITE MAP

CIVIL DRAWINGS
C2 GRADING & DRAINAGE PLAN
C3 UTILITY PLAN

ARCHITECTURAL DRAWINGS
A1.1 SITE PLAN - FIRE MARSHAL REVIEW
A1.2 SITE PLAN - ACCESSIBILITY PLAN
A1.3 ENLARGED SITE PLAN
A1.4 ENLARGED SITE PLAN
A1.5 ENLARGED SITE PLAN
A1.6 ENLARGED SITE PLAN
A1.7 ENLARGED SITE PLAN
A1.8 SITE DETAILS
A1.9 SITE FENCING DETAILS
A2.3A GREENHOUSE PLAN (BID ALTERNATE)
A2.5A FARMERS MARKET STAND
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

GREENHOUSE BY CONLEYS OR EQUAL (BID ALTERNATE)
FM-01 PLAN CONFIGURATION
FM-02 DETAIL SHEET

FARMERS MARKET STAND BY AMERICANA SHELTERS WITH DSA PC 02-113840 (NO SUBSTITUTION ALLOWED)
G1 DESIGN NOTES
NT30.0 DESIGN NOTES
NT30.1 PLANS AND ELEVATIONS
NT 30.2 SECTIONS AND DETAILS

ADDENDUM-1

ARCHITECT

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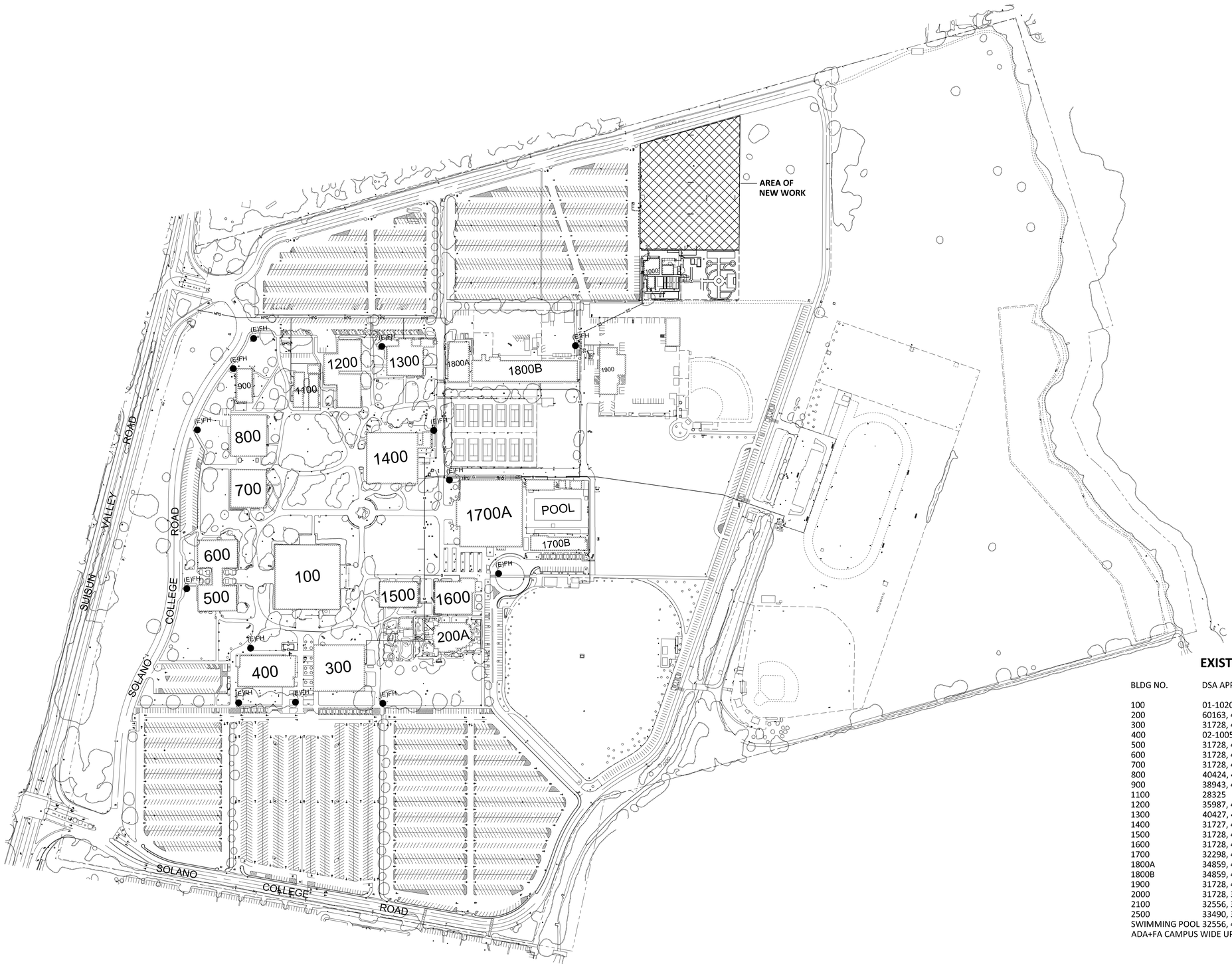

EXISTING BUILDING SUMMARY

BLDG NO.	DSA APPLICATION NO.	AREA
100	01-102029, 31727, 43623	49,600 SF
200	60163, 43623	9,252 SF
300	31728, 43623, 31407	24,240 SF
400	02-100548	1,440 SF
500	31728, 43623, 31407	11,616 SF
600	31728, 43623 31407, 02-11343	13,056 SF
700	31728, 43623, 31407	16,864 SF
800	40424, 43623, 02-107608	17,856 SF
900	38943, 43623	2,447 SF
1100	28325	17,500 SF
1200	35987, 43623	25,251 SF
1300	40427, 43623	12,240 SF
1400	31727, 43623	30,976 SF
1500	31728, 43623, 31407	11,616 SF
1600	31728, 43623, 31407	14,336 SF
1700	32298, 43623, 02-103762	48,201 SF
1800A	34859, 43623	9,660 SF
1800B	34859, 43623, 02-106610	24,610 SF
1900	31728, 43623, 31407	10,730 SF
2000	31728, 31407	3,100 SF
2100	32556, 33013, 43623	3,500 SF
2500	33490, 33013, 43623	
SWIMMING POOL	32556, 43623	
ADA+FA CAMPUS WIDE UPGRADES	02-103473	

1 CAMPUS SITE MAP

SCALE : 1: 2000

A-Site

N

C:\Users\Owner\Dropbox (mADI Group, Inc.)\mADI Group, Inc\PROJECTS\Solano Community College\SCCD-04 Horticulture\Dwg\+G0.3 SITE CONTEXT.dwg 4-06-16 03:32:58 PM Owner

ARCHITECT

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303 POTRERO STREET, SUITE 7B
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REVISIONS

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SHEET NAME:

CAMPUS SITE MAP

DSA APPROVAL STAMP:

SHEET NUMBER:

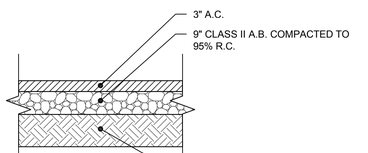
G0.3

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

EG 45.40
FS 44.30
COMMON GARDENS
ACCESSIBLE COMMON GARDENS
FS 44.50
EG 43.60
(E) SID IRR. VALVE
EG 43.30
EG 42.20
PLANTER BEDS
FS 43.90
FS 46.30
FS 45.20
FS 44.90
FS 44.60
FS 44.10
FS 46.36
FS 46.00
FS 45.60
FS 45.12
FS 45.00
FS 44.85
FS 44.80
FARMERS MARKET STAND
FF = 44.90
FS 43.80
EG 43.00
FS 43.30
FUTURE PATHWAYS
(E) DI
GRATE=41.0±
24" INV.=37.0±
FUTURE (N.I.C.)
EQUIPMENT & STORAGE BLDG.
FF = 46.40
BEG. EARTHEN SWALE
FL 46.10
EARTHEN SWALE
S=0.8%
FUTURE (N.I.C.)
RAINWATER CISTERN.
TIE IN DOWNSPOUTS
FROM STORAGE BLDG
AND GREEN HOUSE BLDG.
ADD ALTERNATE-1
GREEN HOUSE
FF = 45.68
FUTURE (N.I.C.)
RESTROOM BLDG.
FF = 45.20
FS 44.70
FS 44.50
FS/FL 44.40
FS/FL 44.60
FS 44.00
FS 43.50
FS 43.70
FS 44.00
FS 44.20
FS 44.50
FS 44.70
EG 45.87
EG 45.87
(E) HEAD HOUSE
(E) DITCH
TWO (E) 3" PVC PIPE ENDS
(E) 6" SD (LENGTH UNKNOWN)
(E) AREA DRAINS
EX. 24" SD
20' WIDE NON-VEHICULAR AC PATH. (EVA ONLY)
5' WIDE CONC. PATH
3' WIDE SLOPE AREA
REMOVE (E) FENCE
(E) CONC.
BLDG. 1000
(E) CLASSROOM
(E) FF= 46.33
(E) GREEN HOUSE
END EARTHEN SWALE
FL 44.60
EG 47.80
EG 46.10
(E) TC 47.99
(E) TC 46.60
FS 46.30
CURB RAMP (SEE DETAIL 3)
FS 45.50
EG 45.20
FS 45.70
EG 45.7
REMOVABLE BOLLARDS
(E) TC 46.46
FS (FLUSH TC) 45.90
(E) TC 43.90
(E) DI
GRATE=43.40
24" INV.=39.00
SOLANO COLLEGE ROAD
S.I.D. Siphon
Graphic Scale (in feet)
30 0 30 60
1 inch = 30 ft.

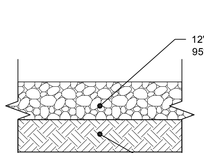
ABBREVIATIONS

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



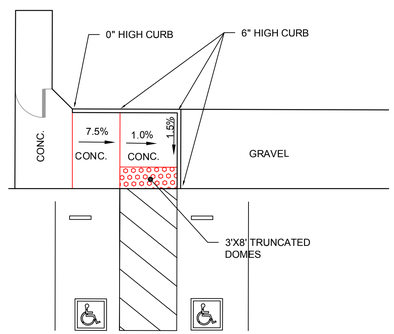
NOTES:
1. PAVEMENT SECTIONS IS BASED ON A TI OF 4 AND A "R" VALUE OF 5. ADJUST DIMENSIONS PER FIELD CONDITIONS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
2. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION.
3. PAVEMENT SECTION IS FOR EVA ONLY.

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.
2. REFER TO GEOTECHNICAL REPORT FOR SUBGRADE PREPARATION.
3. PAVEMENT SECTION IS FOR EVA ONLY.

2 AB FIRE LANE PAVEMENT SECTION
SCALE: 1" = 1'



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

ADDENDUM-1

BID SET

1900

ARCHITECT
MADI
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CONSULTANT
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tel: 415.883.9850 fax: 415.883.9835
Civil & Structural Engineers
Surveying & Mapping
Environmental Planning
Land Planning
Construction Management
http://www.csw-st2.com © 2013

PROFESSIONAL
REGISTERED PROFESSIONAL ENGINEER
KIRK S. BOVITZ
No. 74631
CIVIL
STATE OF CALIFORNIA

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

REVISIONS

REF	DESCRIPTION	DATE
-	-	-
D	VE REVISIONS	03/23/16
C	DSA BACKCHECK	03/07/16
B		
A	CLIENT SUBMITTAL	12/01/15

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

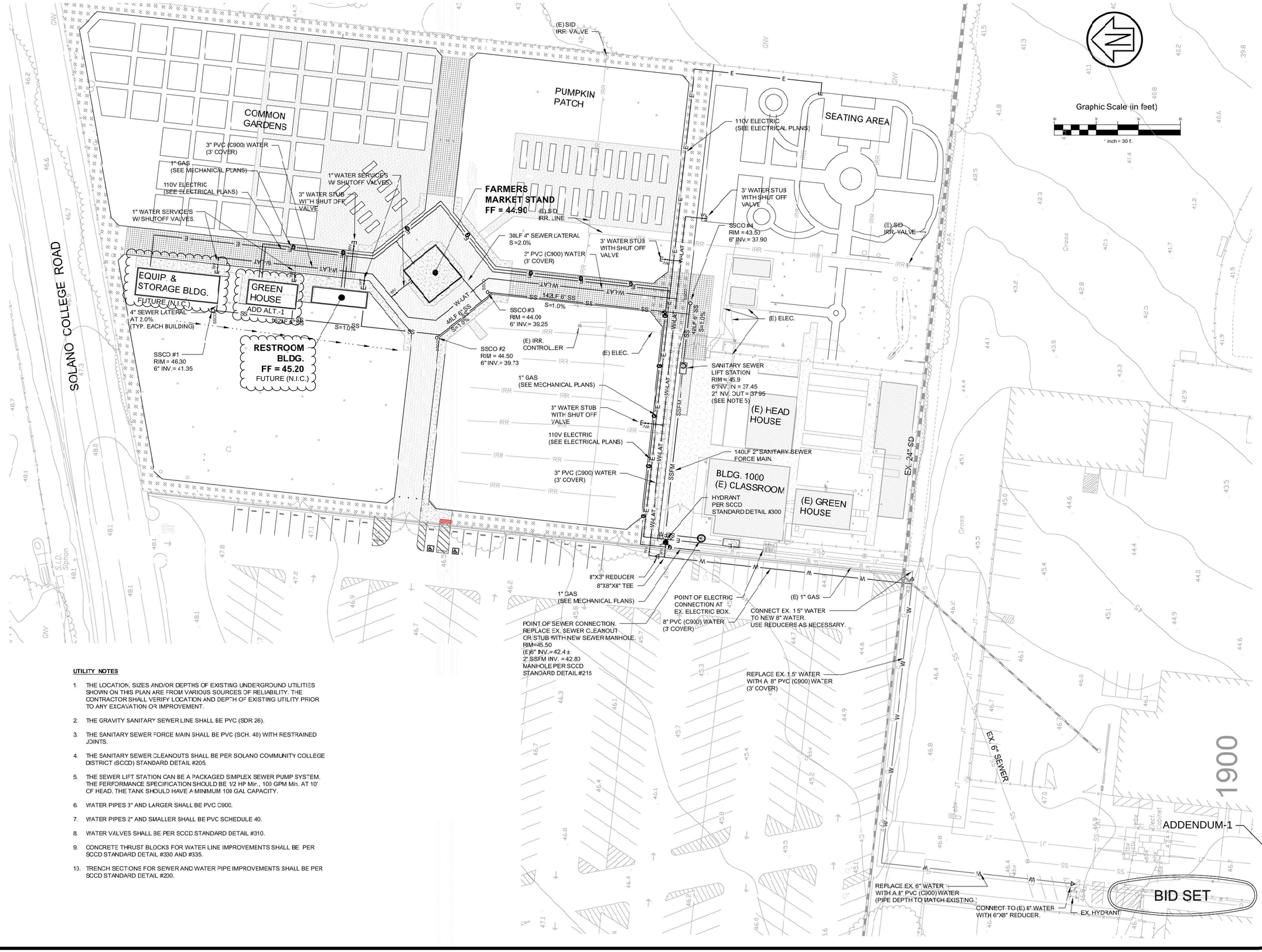
GRADING & DRAINAGE PLAN

DSA APPROVAL STAMP:

SHEET NUMBER:
C 2

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

P:\04\4116406\DWG\Sheet_Drawings\C2-Grading and Drainage Plan.dwg 3-22-16 05:08:06 PM bowks



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 1/2 HP Min., 100 GPM Min. AT 10' OF HEAD. THE TANK SHOULD HAVE A MINIMUM 100 GAL CAPACITY.
6. WATER PIPES 3" AND LARGER SHALL BE PVC C900.
7. WATER PIPES 2" 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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Civil & Structural Engineers
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Construction Management
http://www.cswst2.com

PROFESSIONAL STAMP:

REGISTERED PROFESSIONAL ENGINEER
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No. 74631
CIVIL
STATE OF CALIFORNIA

PROJECT:

LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE

4000 Suisun Valley Rd,
Fairfield, CA 94534

REVISIONS

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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

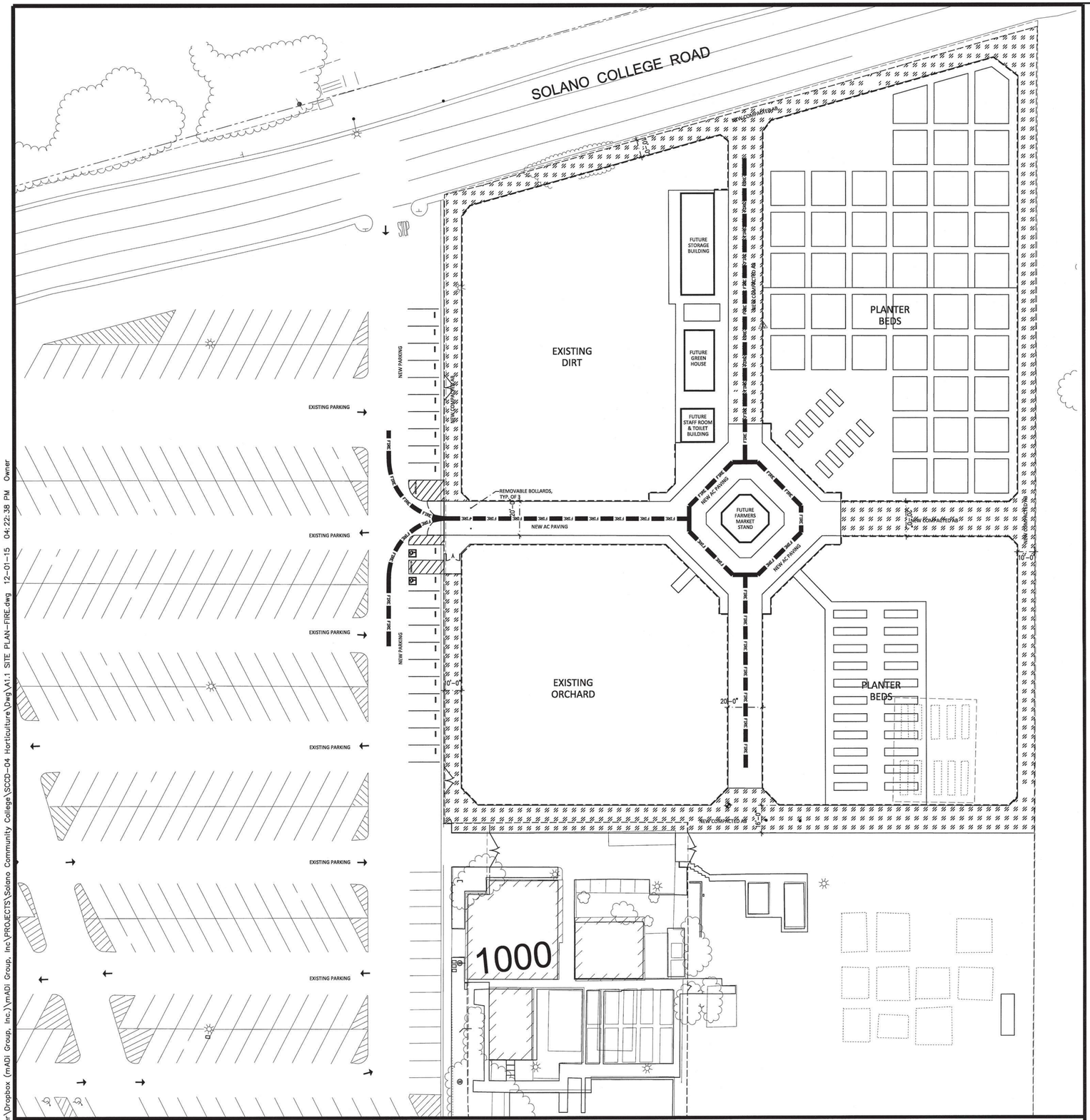
DSA APPROVAL STAMP:

SHEET NUMBER:

C 3

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

P:\04\4116406\DWG\Sheet_Drawings\C3-Utility Plan.dwg 3-22-16 04:56:30 PM bowks



1 SITE PLAN

SCALE : 1" = 30'-0"

A-Site

C:\Users\Owner\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

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: keithemartin@sbcglobal.net | 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 | Page 1 of 1 STATE OF CALIFORNIA

SEE CIVIL AND ARCHITECTURAL SHEETS A1.2 THRU A1.7 FOR EXTENT AND SCOPE OF GRADING AND PAVING

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 FIRE FIRE FIRE — FIRE TRUCK ACCESS (FIRE LANE)

(E)FHR — EXISTING FIRE HYDRANT

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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:

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

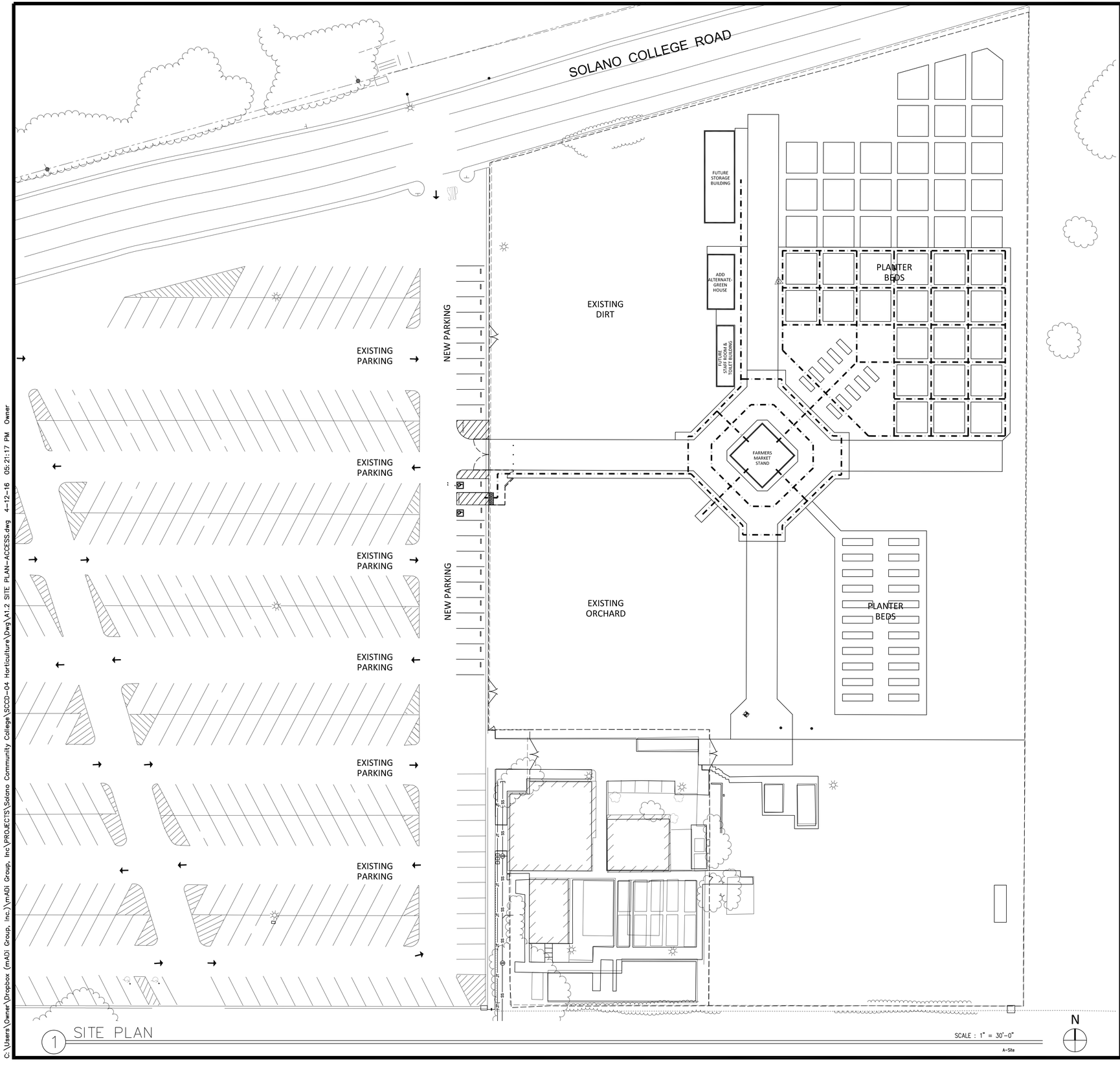
DSA APPROVAL STAMP:

ADDENDUM-1

SHEET NUMBER:

A1.1

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



1 SITE PLAN

SCALE : 1" = 30'-0"

A-Site

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."

ADDENDUM-1

ARCHITECT

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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

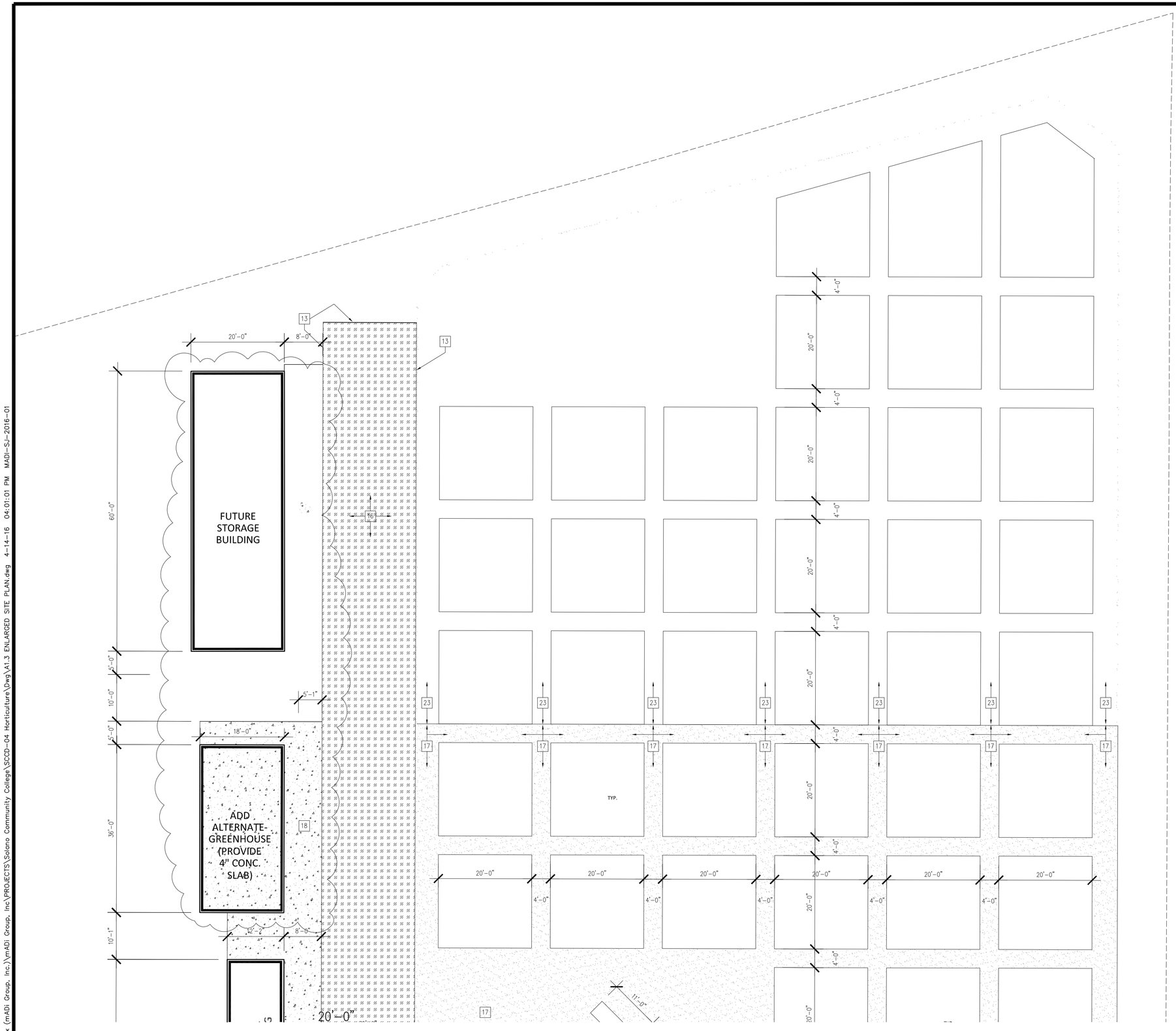
ACCESSIBILITY PLAN

DSA APPROVAL STAMP:

SHEET NUMBER:

A1.2

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



1 ENLARGED SITE PLAN

SCALE : 1" = 10'-0"

A-Site

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) REDWOOD HEADER EDGE; SEE 5/A1.8
14. (N) 6'-0" HIGH CHAINLINK FENCE
15. (N) AC PAVING
16. (N) AB PAVING
17. (N) DG PAVING.
18. (N) CONCRETE PAVING
19. NOT USED
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

ADDENDUM-1

ARCHITECT

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CONSULTANT

PROFESSIONAL STAMP:

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FRANCIS F. CHAN
No. C-7519
11/17
RENEWAL DATE
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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:

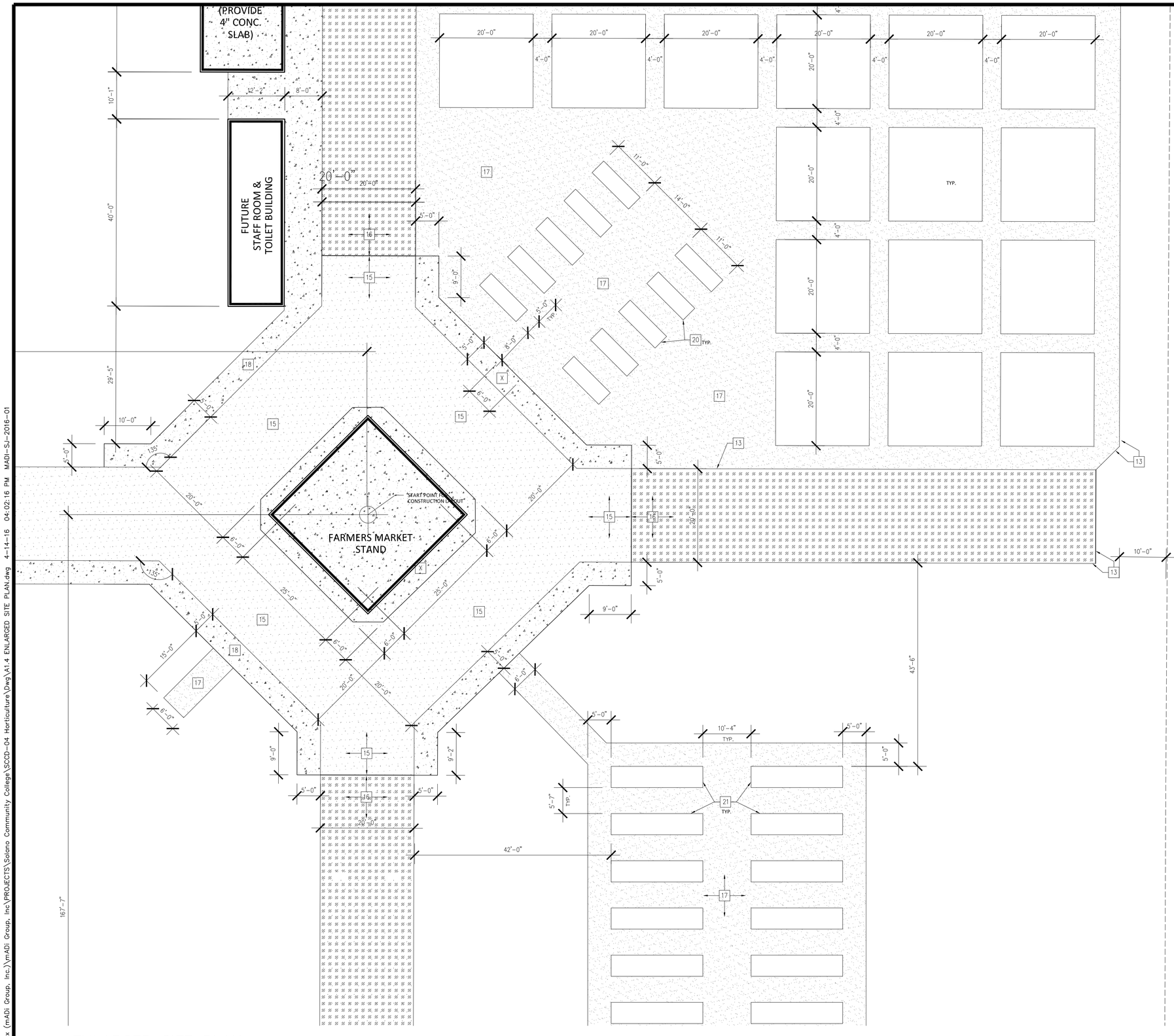
ENLARGED SITE PLAN

DSA APPROVAL STAMP:

SHEET NUMBER:

A1.3

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



1 ENLARGED SITE PLAN

SCALE : 1" = 10'-0"

A-Site

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) REDWOOD HEADER EDGE; SEE 5/A1.8
14. (N) 6'-0" HIGH CHAINLINK FENCE
15. (N) AC PAVING
16. (N) AB PAVING
17. (N) DG PAVING.
18. (N) CONCRETE PAVING
19. NOT USED
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

ADDENDUM-1

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4000 Suisun Valley Rd,
Fairfield, CA 94534

REVISIONS

REF	DESCRIPTION	DATE
-	-	-

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

SHEET NAME:

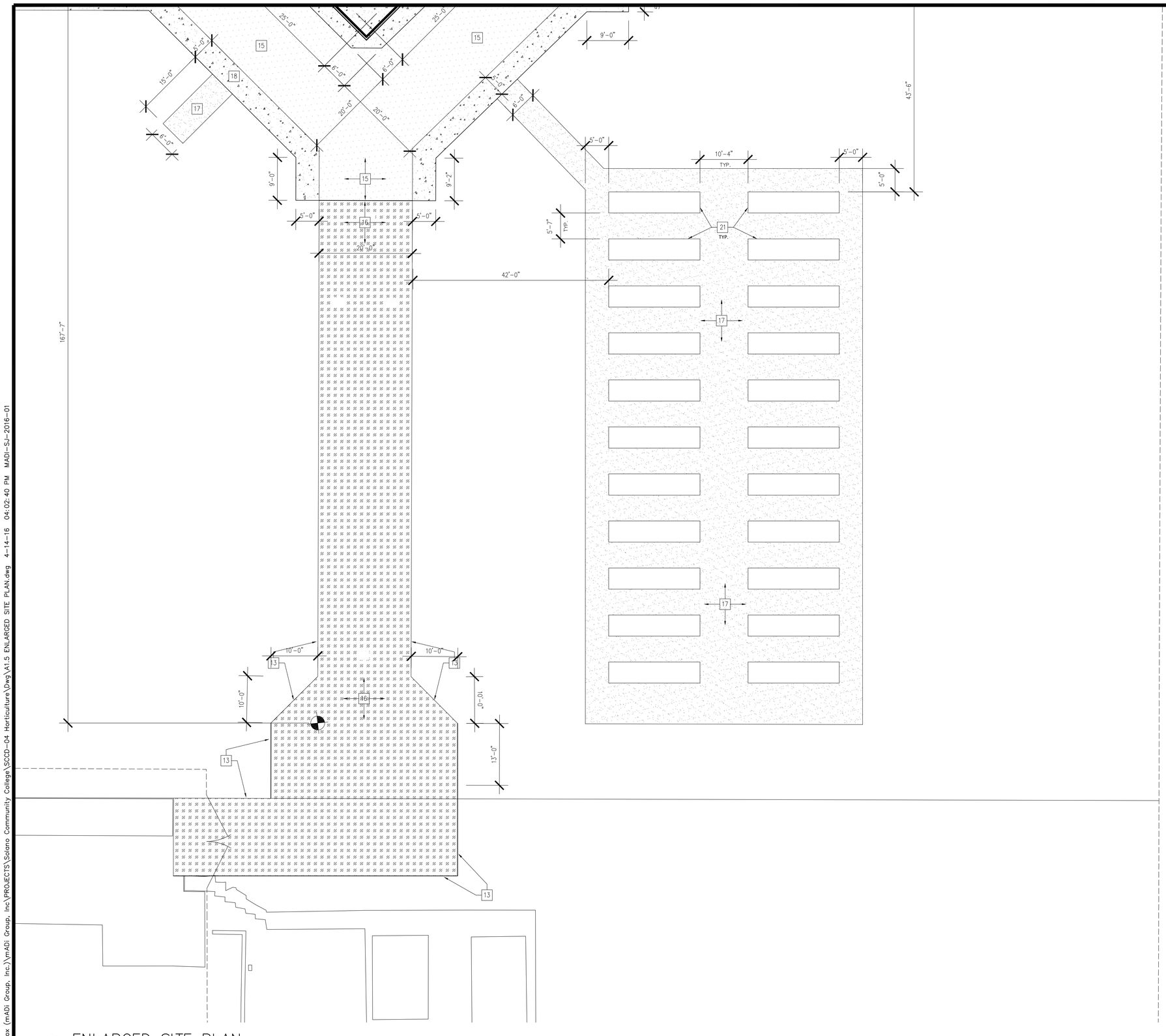
ENLARGED SITE PLAN

DSA APPROVAL STAMP:

SHEET NUMBER:

A1.4

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



1 ENLARGED SITE PLAN

SCALE : 1" = 10'-0"

A-Site

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) REDWOOD HEADER EDGE; SEE 5/A1.8
14. (N) 6'-0" HIGH CHAINLINK FENCE
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17. (N) DG PAVING.
18. (N) CONCRETE PAVING
19. NOT USED
20. (N) 3'-6"X11'-0" PLANTERS
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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

ADDENDUM-1

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4000 Suisun Valley Rd,
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REVISIONS

REF	DESCRIPTION	DATE
-	-	-

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

SHEET NAME:

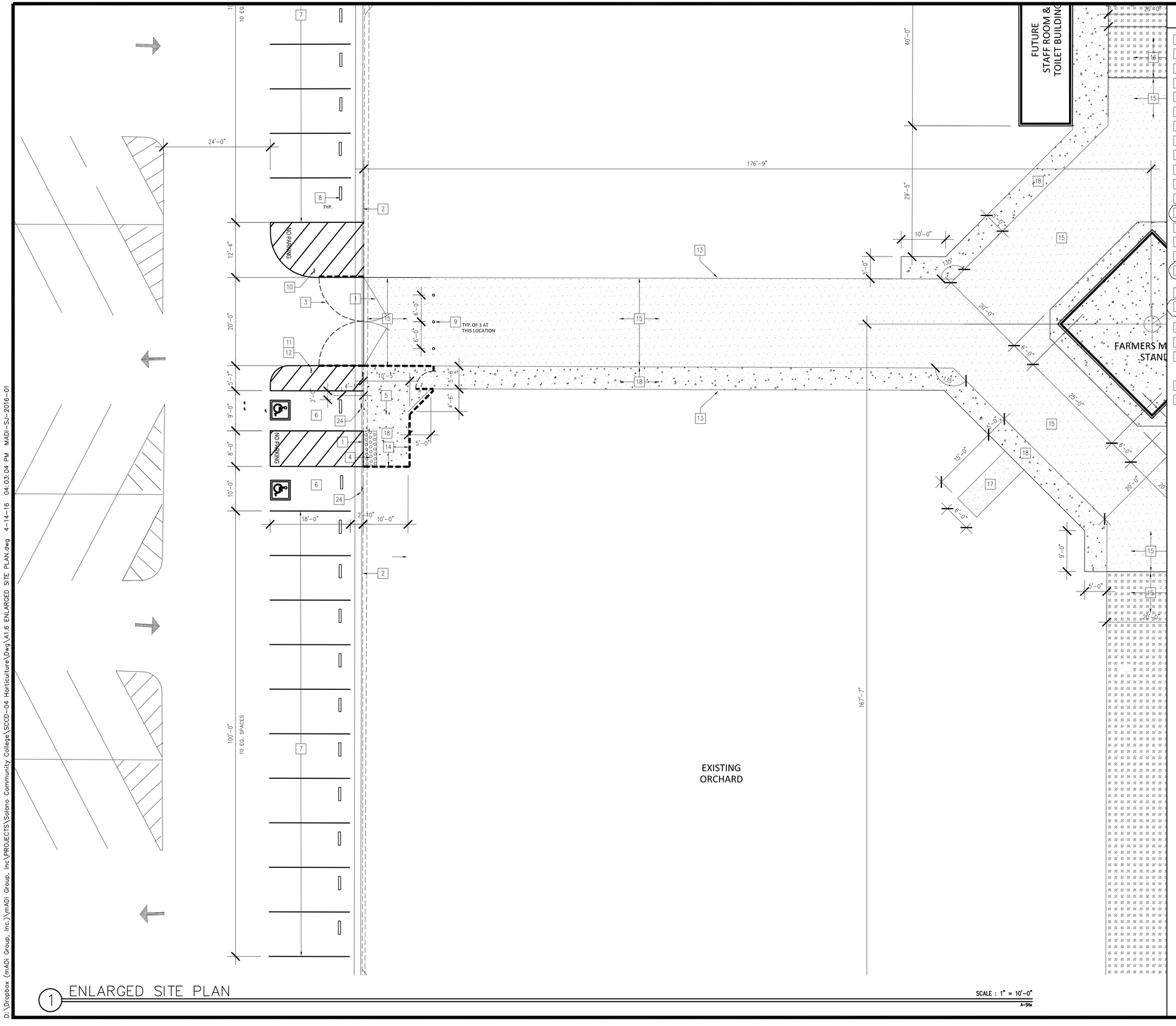
ENLARGED SITE PLAN

DSA APPROVAL STAMP:

SHEET NUMBER:

A1.5

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



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) REDWOOD HEADER EDGE; SEE 5/A1.8
14. (N) 6'-0" HIGH CHAINLINK FENCE
15. (N) AC PAVING
16. (N) AB PAVING
17. (N) DG PAVING.
18. (N) CONCRETE PAVING
19. NOT USED
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

1 ENLARGED SITE PLAN

SCALE : 1" = 10'-0"

A-Site

ADDENDUM-1

D:\Dropbox (mADi Group, Inc.)\mADi Group, Inc\PROJECTS\Solano Community College\SCCD-04 Horticulture\Dwg\A1.6 ENLARGED SITE PLAN.dwg 4-14-16 04:03:04 PM MADI-SJ-2016-01

ARCHITECT

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333 1ST STREET, SUITE C
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SANTA CRUZ, CA 95060

TEL: 800.725.0571

OWNER

SOLANO COMMUNITY COLLEGE

CONSULTANT

PROFESSIONAL STAMP:

LICENSED ARCHITECT
FRANCIS F. CHAN
No. C-7519
11/17
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:

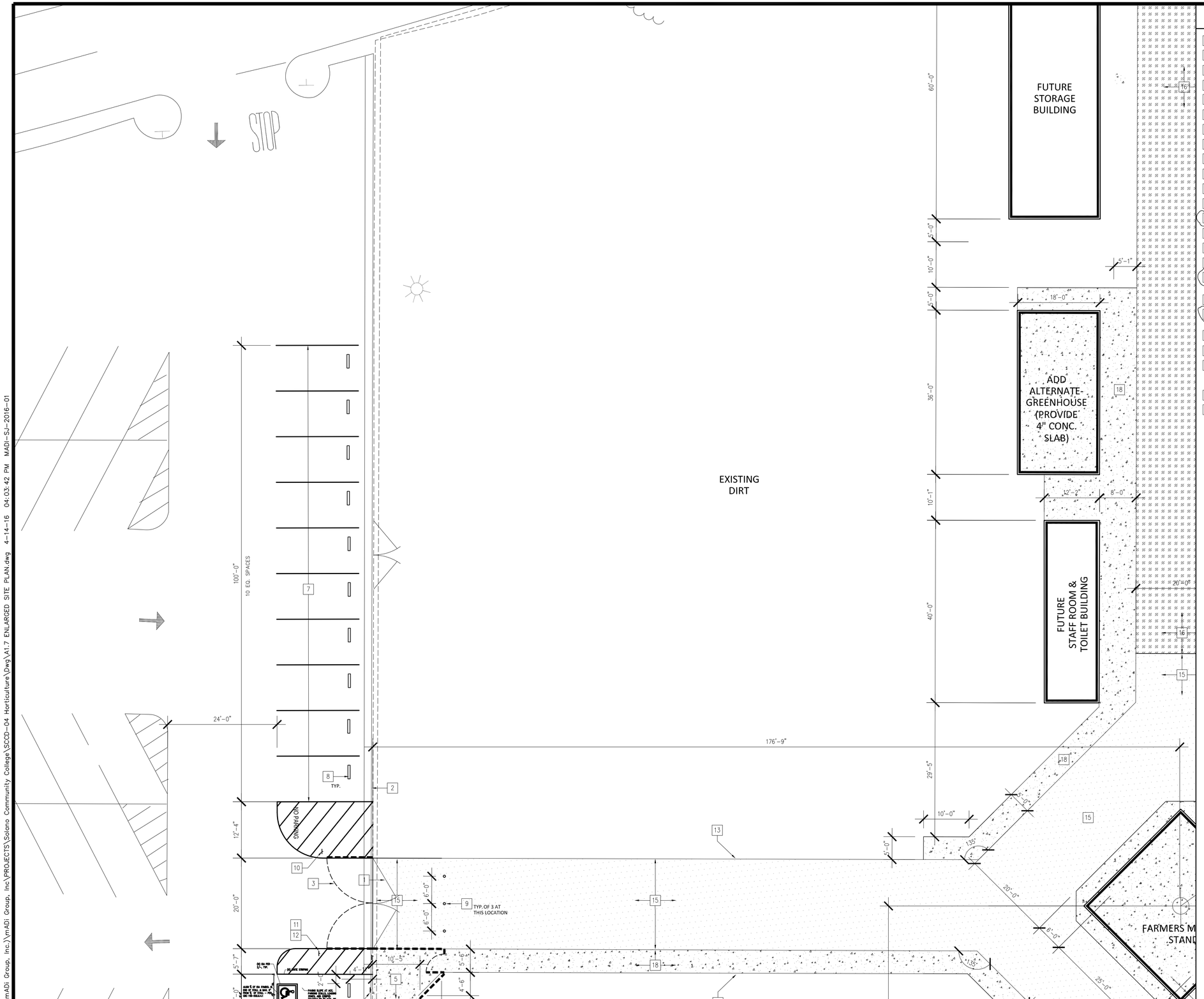
ENLARGED SITE PLAN

DSA APPROVAL STAMP:

SHEET NUMBER:

A1.6

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



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) REDWOOD HEADER EDGE; SEE 5/A1.8
14. (N) 6'-0" HIGH CHAINLINK FENCE
15. (N) AC PAVING
16. (N) AB PAVING
17. (N) DG PAVING.
18. (N) CONCRETE PAVING
19. NOT USED
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

1 ENLARGED SITE PLAN

SCALE : 1" = 10'-0"

A-Site

ADDENDUM-1

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SHEET NAME:

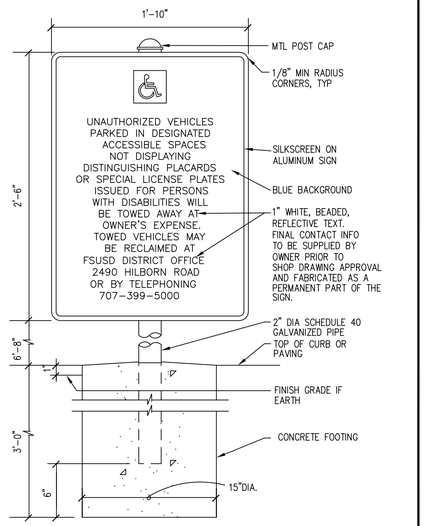
ENLARGED SITE PLAN

DSA APPROVAL STAMP:

SHEET NUMBER:

A1.7

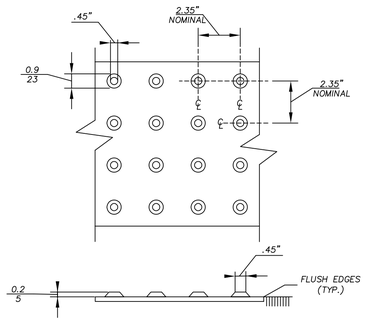
SOLANO COMMUNITY COLLEGE DISTRICT
LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE



10 UNAUTHORIZED PKNG. SIGN

1 1/2" = 1'-0"

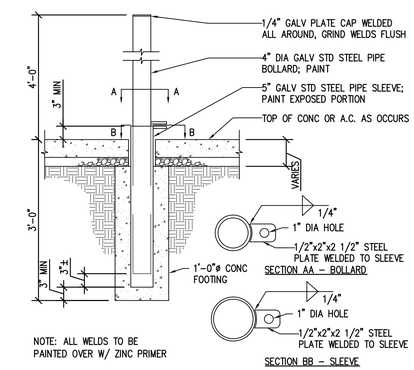
-004 -Signs



PROVIDE DETECTABLE WARNINGS (TRUNCATED DOMES) AT CURB RAMPS, BLENDED TRANSITIONS, AND ALL LOCATIONS WHERE THE ACCESSIBLE PATH OF TRAVEL CROSSES A VEHICULAR WAY, PER CBC 11B-406.5.12 & 11B-705. SEE SITE PLANS FOR LOCATIONS.

7 TRUCNATED DOMES

N.T.S.

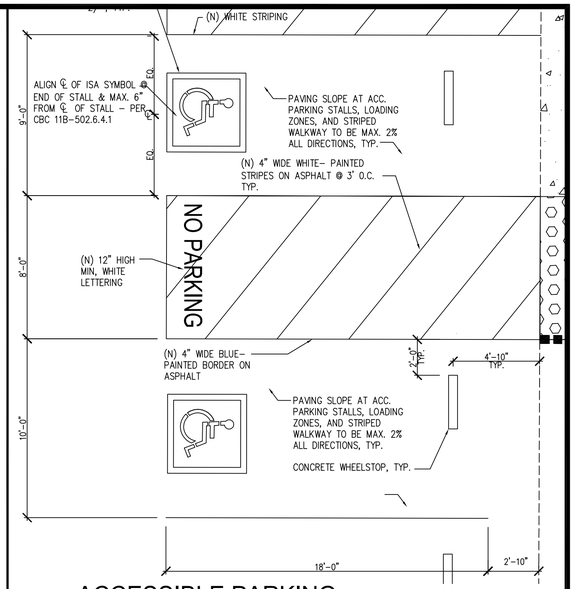


NOTE: ALL WELDS TO BE PAINTED OVER W/ ZINC PRIMER

4 (N) REMOVABLE BOLLARD

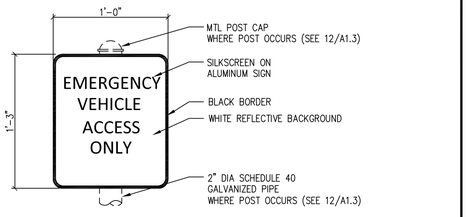
3/4" = 1'-0"

-008 -08_A1.3 -RG



1 ACCESSIBLE PARKING

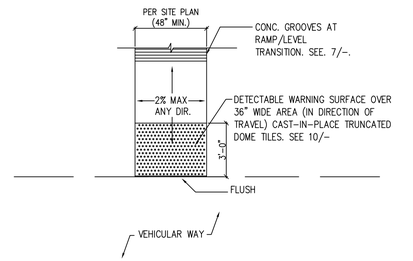
SCALE 1/4: =1'-0"



11 EMERGENCY VEHICLE SIGN

1 1/2" = 1'-0"

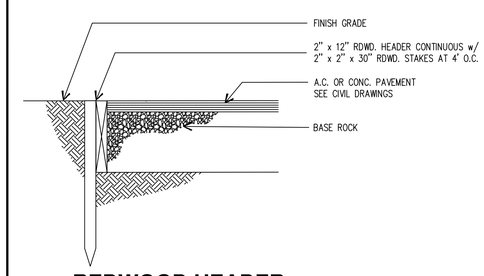
-004 -SIGNS



8 (N) DETECTABLE WARNINGS @ VEHICLULAR CROSSINGS

1/4" = 1'-0"

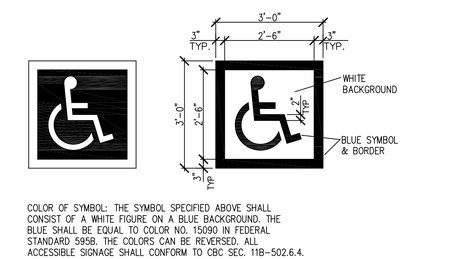
-048 -CurbCutRamp3



5 REDWOOD HEADER

SCALE : 1"=1'-0"

-REDWOOD HEADER

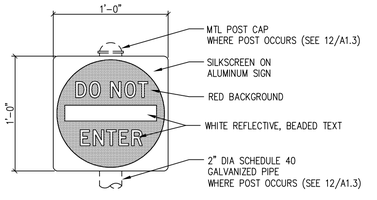


COLOR OF SYMBOL: THE SYMBOL SPECIFIED ABOVE SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND. THE BLUE SHALL BE EQUAL TO COLOR NO. 15090 IN FEDERAL STANDARD 595B. THE COLORS CAN BE REVERSED. ALL ACCESSIBLE SIGNAGE SHALL CONFORM TO CBC SEC. 11B-502.6.4. CONTRACTOR TO CONFIRM PRIOR TO ORDERING PAINT.

2 (N) ACCESSIBLE PARKING SYMB

1/2" = 1'-0"

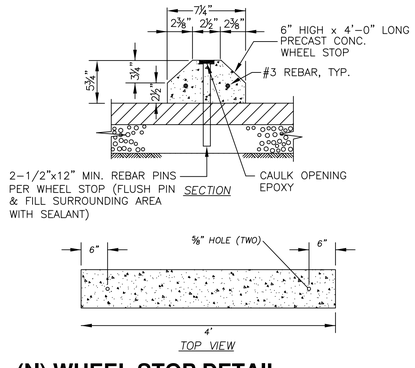
-004 -AccParkingSymb



12 DO NOT ENTER SIGN CALTRANS R5-1

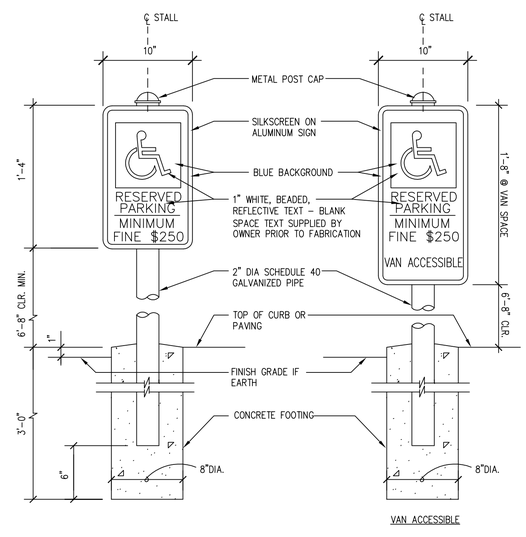
1 1/2" = 1'-0"

-004 -SIGNS



9 (N) WHEEL STOP DETAIL

N.T.S.



3 (N) ACCESSIBLE PARKING SIGN

1 1/2" = 1'-0"

-004 -AccParkingSign

ARCHITECT

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TEL: 800.725.0571

OWNER

SOLANO COMMUNITY COLLEGE

CONSULTANT

PROFESSIONAL STAMP:

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No. C-7519
11/17
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:

SITE DETAILS

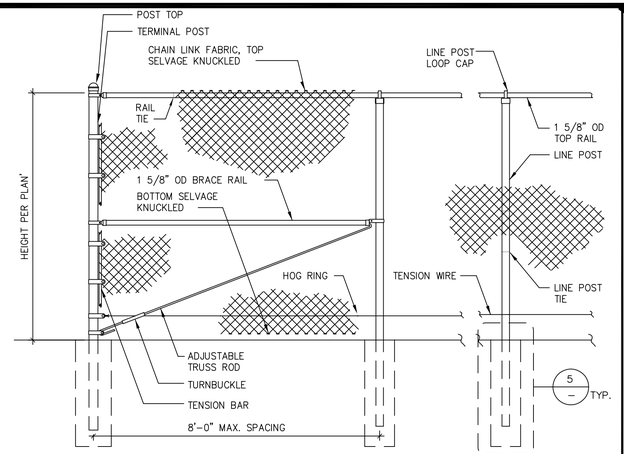
DSA APPROVAL STAMP:

SHEET NUMBER:

A1.8

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\A1.8 SITE DETAILS.dwg 4-06-16 03:43:55 PM Owner

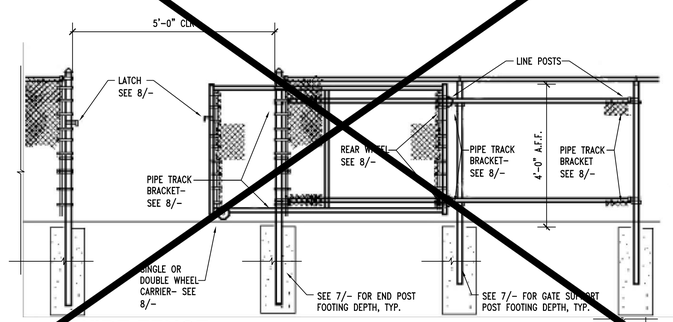


4 FENCE ELEVATION
CHAIN LINK

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

CLFence01

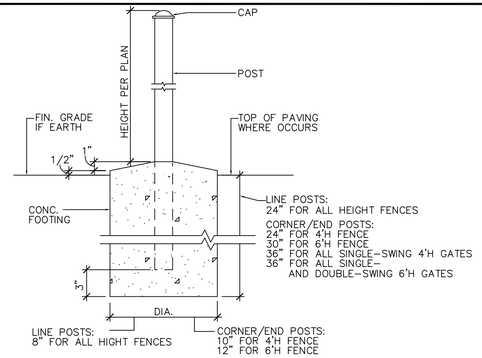
NOT USED



1 WIRE FENCE
ROLLING GATE

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

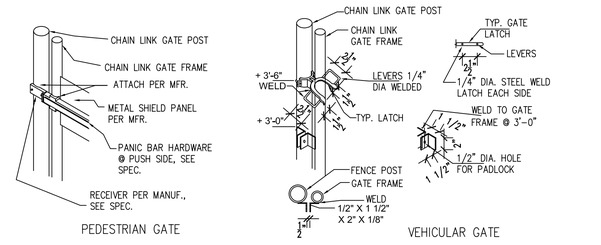
ChainlinkRollingGate



5 WIRE FENCE POST FOOTING

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

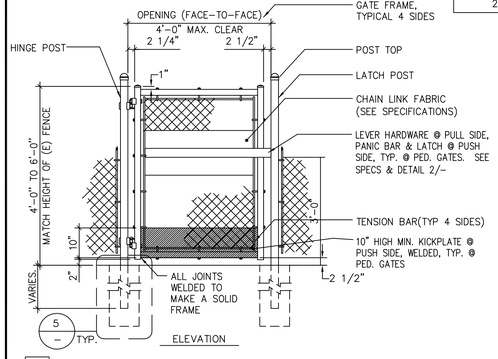
ChainLinkPost



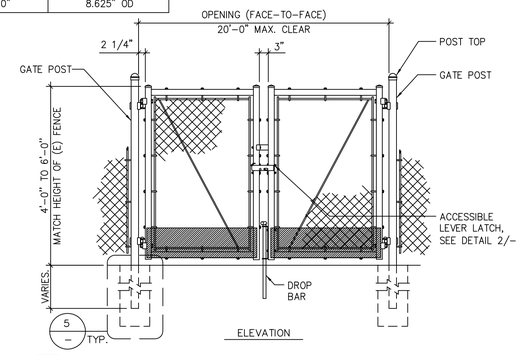
2 SWING GATE HARDWARE

SCALE : 1"=1'-0"

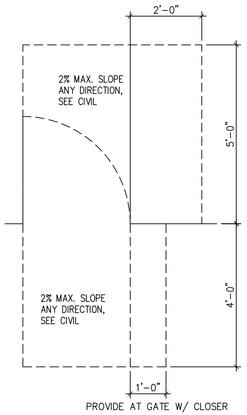
SINGLE SWING GATES		DOUBLE-SWING GATES	
OPENING FACE TO FACE	GATE POSTS SQ & RND SIZES	OPENING FACE TO FACE	GATE POSTS SQ & RND SIZES
3'-0" THROUGH 6'-0"	2 1/2" SQ OR 2.875" OD	8'-0" THROUGH 12'-0"	2 1/2" SQ OR 2.875" OD
7'-0" THROUGH 10'-0"	3" SQ OR 4" OD	14'-0" THROUGH 24'-0"	3" SQ OR 4" OD
11'-0" THROUGH 12'-0"	4" SQ OR 4" OD	26'-0" THROUGH 36'-0"	6" SQ OR 6.625" OD
13'-0" THROUGH 18'-0"	6" SQ OR 6.625" OD	38'-0" THROUGH 40'-0"	8" SQ OR 8.625" OD
19'-0" THROUGH 20'-0"	8" SQ OR 8.625" OD		



A SINGLE GATE
PROVIDE PANIC HARDWARE



B DOUBLE GATE
(SEE DETAIL A "SINGLE GATE", FOR INFORMATION NOT SHOWN)
PROVIDE PANIC HARDWARE



GENERAL NOTE: GATES IN PATH OF TRAVEL MUST COMPLY WITH EXIT DOOR REQUIREMENTS (SECTION 11B-404). PROVIDE LEVER, KICK PLATES, 5lbs PRESSURE TO OPERATE AND STRIKE SIDE CLEARANCE.

6 TYPICAL SWING GATES
CHAIN LINK

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

CLFence02

ARCHITECT

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TEL: 800.725.0571

OWNER

SOLANO COMMUNITY COLLEGE

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FRANCIS F. CHAN
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LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE
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REVISIONS

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DRAWN BY:	-
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SHEET NAME:

SITE FENCING DETAILS

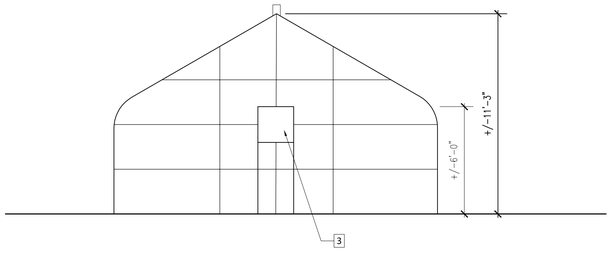
DSA APPROVAL STAMP:

ADDENDUM-1

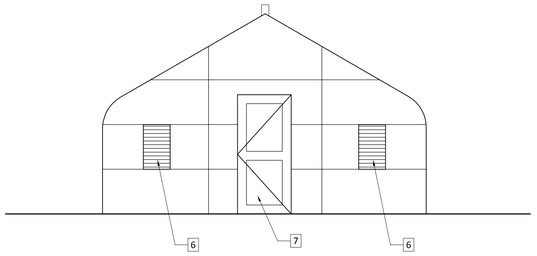
SHEET NUMBER:

A1.9

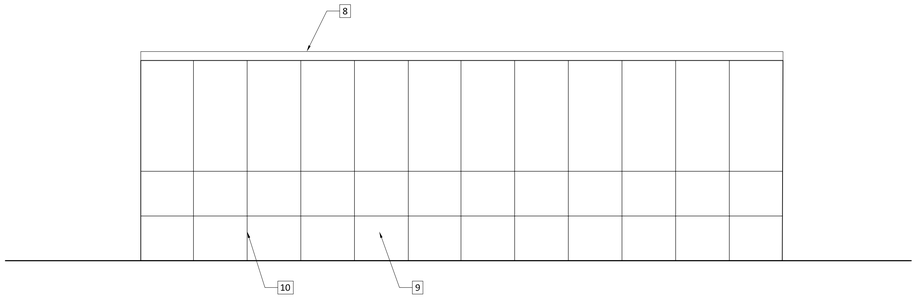
SOLANO COMMUNITY COLLEGE DISTRICT
LOUISE WILBOURN YARBROUGH HORTICULTURE & PLANT SCIENCE INSTITUTE



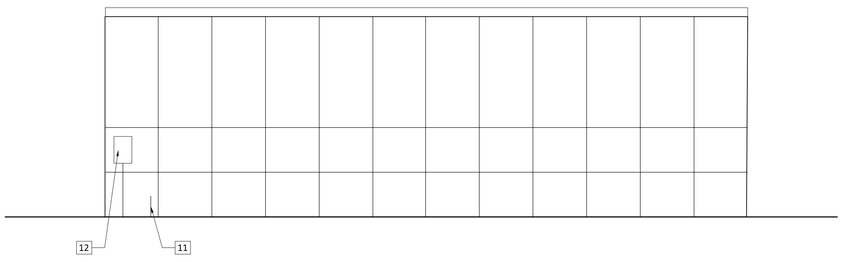
2 NORTH ELEVATION SCALE : 1/4" = 1'-0"



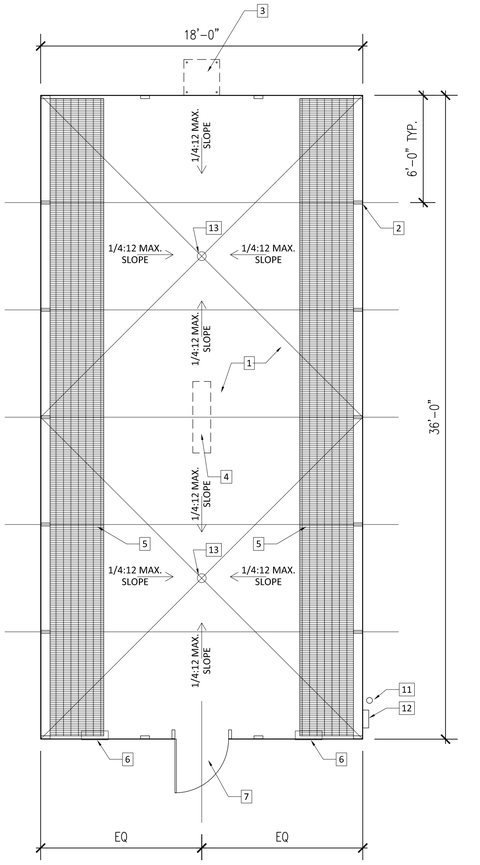
3 SOUTH ELEVATION SCALE : 1/4" = 1'-0"



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



5 WEST ELEVATION SCALE : 1/4" = 1'-0"



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

N

LEGEND

1. 4" THICK CONCRETE FLOOR SLAB & FOOTINGS. SLOPE TO DRAIN, 1/4:12 MAX.
2. GALVANIZED STEEL BLDG. FRAME, TYP. ROLL-FORMED. ALL FASTENER HOLES PRE-DRILLED PRIOR TO GALVANIZATION.
3. EVAPORATIVE COOLER, 3/4 HP, W/ THRU-WALL LOUVERED VENT & SUPPORT LEGS BY MFR.
4. 60,000 BTU GAS HEATER, ABOVE. HANGER HARDWARE BY MFR.
5. 3'-0" WIDE, FULL-LENGTH BUILT-IN METAL SHELF W/ EXPANDED METAL SURFACE, TYP.
6. LOUVERED THRU-WALL VENT W/ 12" DIA. AIRFLOW FAN, TYP.
7. 3'-0" X 6'-8" DOOR W/ GLAZED LITES & LOCKING ACCESSIBLE LEVER HARDWARE
8. MOTORIZED RIDGE VENT ASSEMBLY, FULL LENGTH OF BLDG.
9. GLAZED WALL PANELS, TYP. 6mm DUAL-WALL POLYCARB PANELS, UV CONTROL @ EXTERIOR, CONDENSATION CONTROL @ INTERIOR.
10. ANOD. ALUMINUM EXTRUSIONS @ ALL PANEL JOINTS, TYP.
11. APPROX. LOCATION OF NEW GAS CONNECTION, SEE SITEWORK DRAWINGS
12. APPROX. LOCATION OF NEW ELECTRICAL CONNECTION & PANEL, SEE SITEWORK DRAWINGS
13. NEW AREA DRAIN BY SITE CONTRACTOR, CONNECT TO SITE SEWER LINE, SEE SITEWORK DRAWINGS

GENERAL NOTES

1. THESE DRAWINGS ARE TO SHOW DESIGN INTENT ONLY. BUILDING MFR. TO PROVIDE FINAL CONSTRUCTION DRAWINGS TO ARCHITECT FOR REVIEW.
2. UTILITY LINES WITHIN 5' OF BUILDING FOOTPRINT ARE TO BE INSTALLED BY BUILDING CONTRACTOR, IN COORDINATION WITH SITE CONTRACTOR.
3. FIRE ALARM SYSTEM WITHIN BUILDING TO BE INSTALLED BY SITE CONTRACTOR, IN COORDINATION WITH BUILDING MFR.
4. BUILDING TO COMPLY WITH ALL APPLICABLE PROVISIONS OF THE 2013 CALIFORNIA BUILDING CODE.
5. BUILDING FOUNDATION TO BE CAST-IN-PLACE CONCRETE SLAB AND FOOTINGS, BY BUILDING CONTRACTOR.
6. BUILDING PAD TO BE PROVIDED BY SITE CONTRACTOR PER BUILDING MFR'S REQUIREMENTS.

ADDENDUM-1

ARCHITECT

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SHEET NAME:

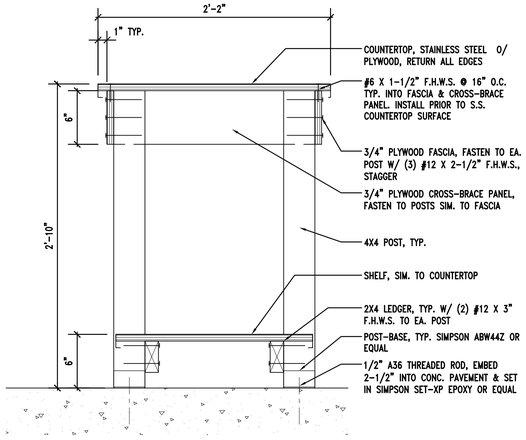
ADD ALTERNATE-GREENHOUSE PLANS AND ELEVATIONS

DSA APPROVAL STAMP:

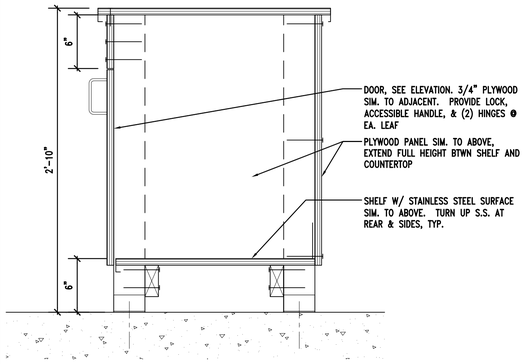
SHEET NUMBER:

A2.3A

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

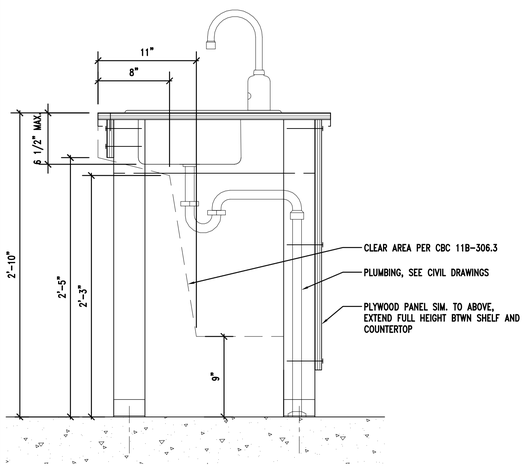


A OPEN SHELVING



B ENCLOSED CABINET

SEE DRAWING A FOR ALL INFO NOT SHOWN, TYP.



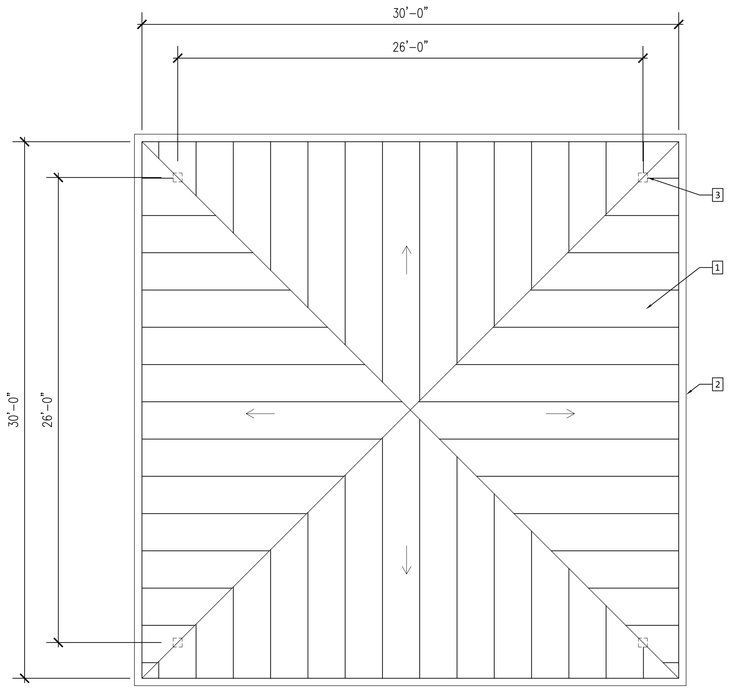
C AT SINK

SEE DRAWING A FOR ALL INFO NOT SHOWN, TYP.

TYPICAL NOTES:
ALL COMPONENTS TO BE STAINED & SEALED. ALL GALVANIZED COMPONENTS TO BE PAINTED.

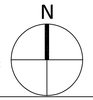
4 FREESTANDING COUNTERTOP

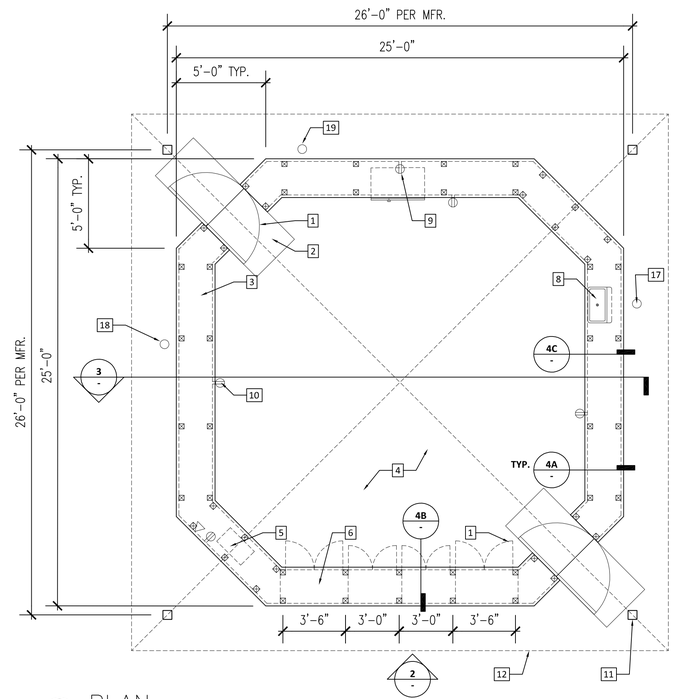
1-1/2" = 1'-0"



1 ROOF PLAN

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





5 PLAN

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

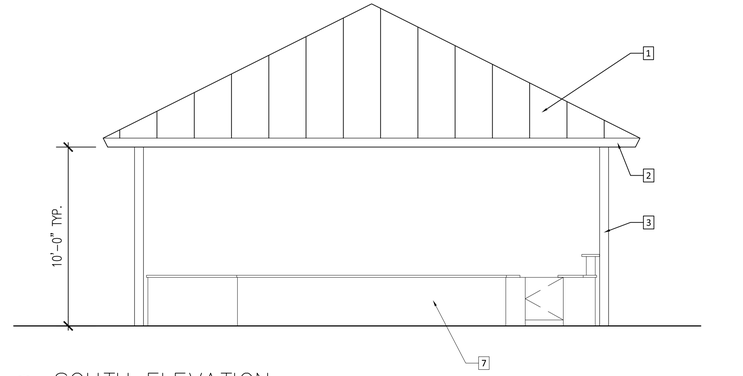
REFER TO MANUFACTURER DRAWINGS FOR STRUCTURE PROVIDED WITH THIS BID SET

LEGEND

1. STANDING SEAM METAL ROOFING SYSTEM, TYP. 24 GA. MIN. "COOL ROOF" FINISH.
2. GALV. SHEET METAL GUTTER, FINISH TO MATCH ROOFING PANELS, TYP. PROVIDE DOWNSPOUT TO GRADE AT EACH POST
3. SUPPORT POST, TYP. PER MFR. SQUARE HSS STEEL TUBE W/ CAST-IN-PLACE CONCRETE FOOTING. ALL SURFACES PAINTED.
4. ROOF STRUCTURE PER MFR, TYP. HSS STEEL TUBES THROUGHOUT, W/ WELDED OR CONCEALED BOLTED CONNECTIONS. ALL SURFACES PAINTED.
5. EAVE BEAM, HSS STEEL TUBE SIM. TO ROOF STRUCTURE. ALL SURFACES PAINTED
6. CEILING FAN, SUSPEND FROM HIGH POINT OF ROOF FRAMING. CONCEAL ELECTRICAL CONDUIT INSIDE STEEL FRAMING.
7. CASEWORK, BY GENERAL CONTRACTOR

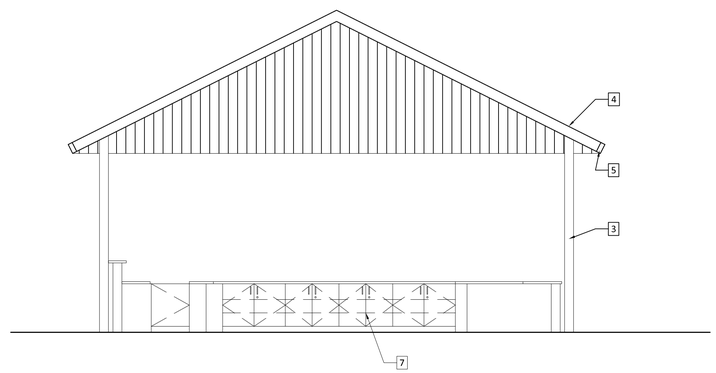
GENERAL NOTES

1. THESE DRAWINGS ARE TO SHOW DESIGN INTENT ONLY. BUILDING MFR. TO PROVIDE FINAL DRAWINGS TO ARCHITECT, FOR DSA REVIEW AND APPROVAL.
2. UTILITY LINES WITHIN 5' OF BUILDING FOOTPRINT ARE TO BE INSTALLED BY BUILDING CONTRACTOR, IN COORDINATION WITH SITE CONTRACTOR.
3. FIRE ALARM SYSTEM WITHIN BUILDING TO BE INSTALLED BY SITE CONTRACTOR, IN COORDINATION WITH BUILDING MFR.
4. BUILDING TO COMPLY WITH ALL APPLICABLE PROVISIONS OF THE 2013 CALIFORNIA BUILDING CODE.
5. BUILDING FLOOR/FOUNDATION SYSTEM TO BE CAST-IN-PLACE CONCRETE FOOTINGS, BY BUILDING CONTRACTOR.
6. BUILDING PAD TO BE PROVIDED BY SITE CONTRACTOR PER BUILDING MFR'S REQUIREMENTS.
7. PAVEMENT UNDER AND ADJACENT TO BUILDING TO BE PROVIDED BY SITE CONTRACTOR.



2 SOUTH ELEVATION

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



3 SECTION

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

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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:

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:

FARM STAND PLANS AND ELEVATIONS

DSA APPROVAL STAMP:

ADDENDUM-1

SHEET NUMBER:

A2.5A

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

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. SAMPLE, "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 5#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 V2400EC. 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 ROOM'S. 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 AREAS 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 1616A.1.18 THROUGH 1616A.1.26 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 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 ELECTRICAL DISTRIBUTION SYSTEMS.

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

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 1#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.
,	PANELBOARD, SEE SCHEDULE.
	TERMINAL CABINET BACKBOARD.
J	JUNCTION BOX.
	15 AMP DOUBLE DUPLEX RECEPTACLE MOUNT IN IDF.
	15 AMP DUPLEX RECEPTACLE, 48".
FATC	FIRE ALARM TERMINAL CABINET.
T	TRANSFORMER
S_{wp}	WEATHERPROOF SINGLE POLE DISCONNECT SWITCH, TOGGLE TYPE WITH LOCKING COVER, 45".
1	NUMBER CONSTRUCTION NOTES SPECIFIC TO THE SHEET.
(E)	EXISTING PANELBOARD.
(E)	ABBREVIATION FOR EXISTING.
GND	ABBREVIATION FOR GROUND.
N.I.E.S.	ABBREVIATION FOR NOT IN ELECTRICAL SECTIONS OF THESE PLANS AND SPEC'S.
STC	ABBREVIATION FOR SIGNAL TERMINAL CABINET.
WP	ABBREVIATION FOR WEATHERPROOF.

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 #66MI-50 WITH 89B STAND-OFF. MAKE FULL USE OF BRIDGE CLIPS.
    B. BUCHANAN #0525 SERIES. PROVIDE CHANNEL CLAMPS, CHANNEL AND END SECTIONS.

PLOT DATE: 04-14-16

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

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HYA Job #16120

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 SYMBOL LIST & NOTES

DSA APPROVAL STAMP:

SHEET NUMBER:

E0.1

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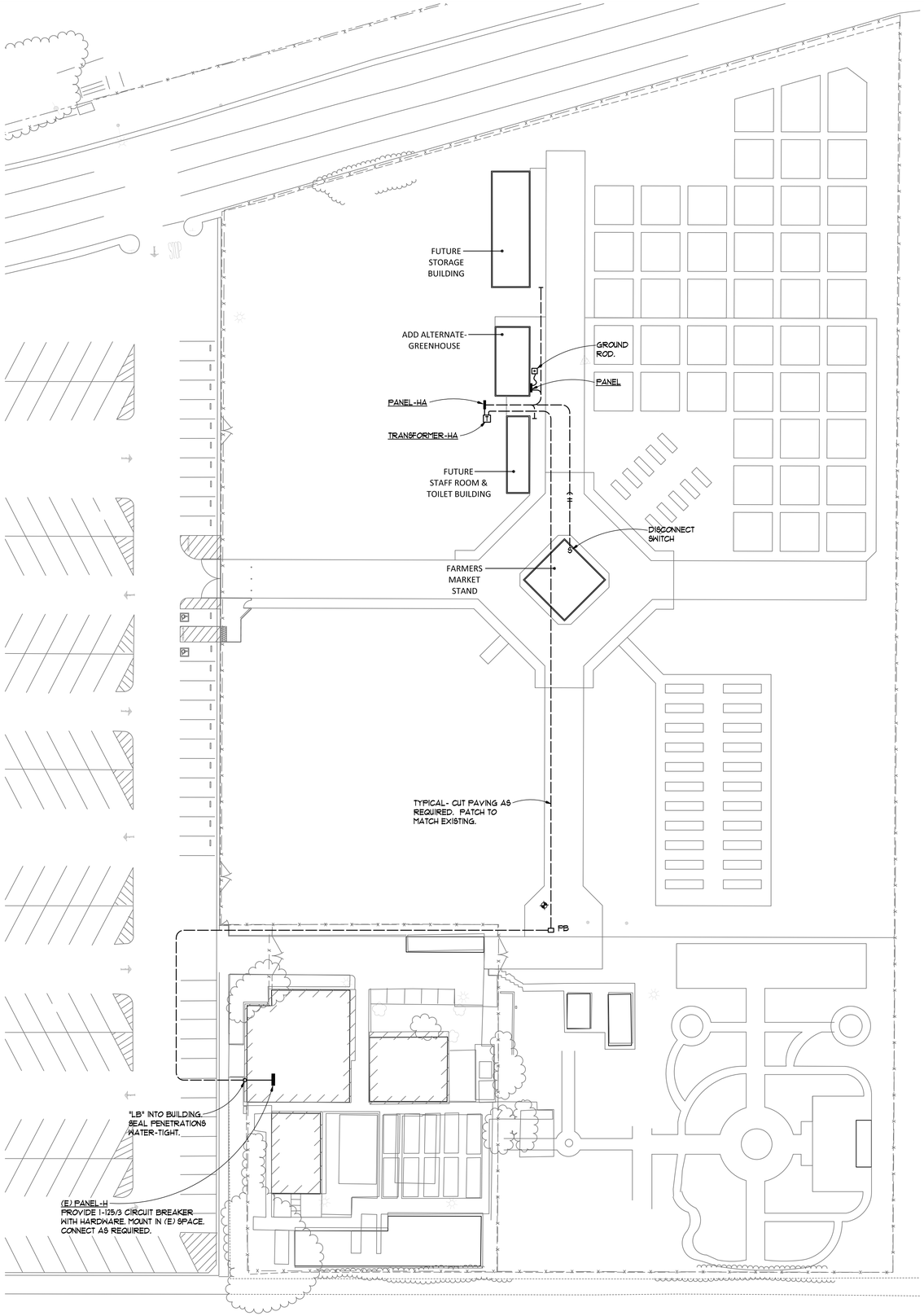
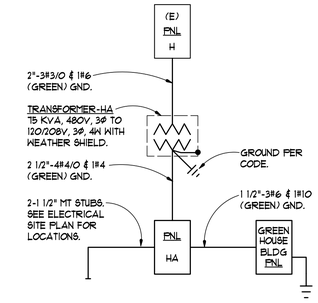


B / E1.1A PARTIAL ONE LINE DIAGRAM

NO SCALE



GND | NEUT — PANEL-HA

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

VOLTAGE: ☒ 120/208 ☐ 480Y/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	.
			5	C	6			
.	STORAGE BLDG.	100/3	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: .

A / E1.1 POWER SITE PLAN

SCALE: 1" = 30'-0"

PLOT DATE: 04-14-16

ARCHITECT

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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

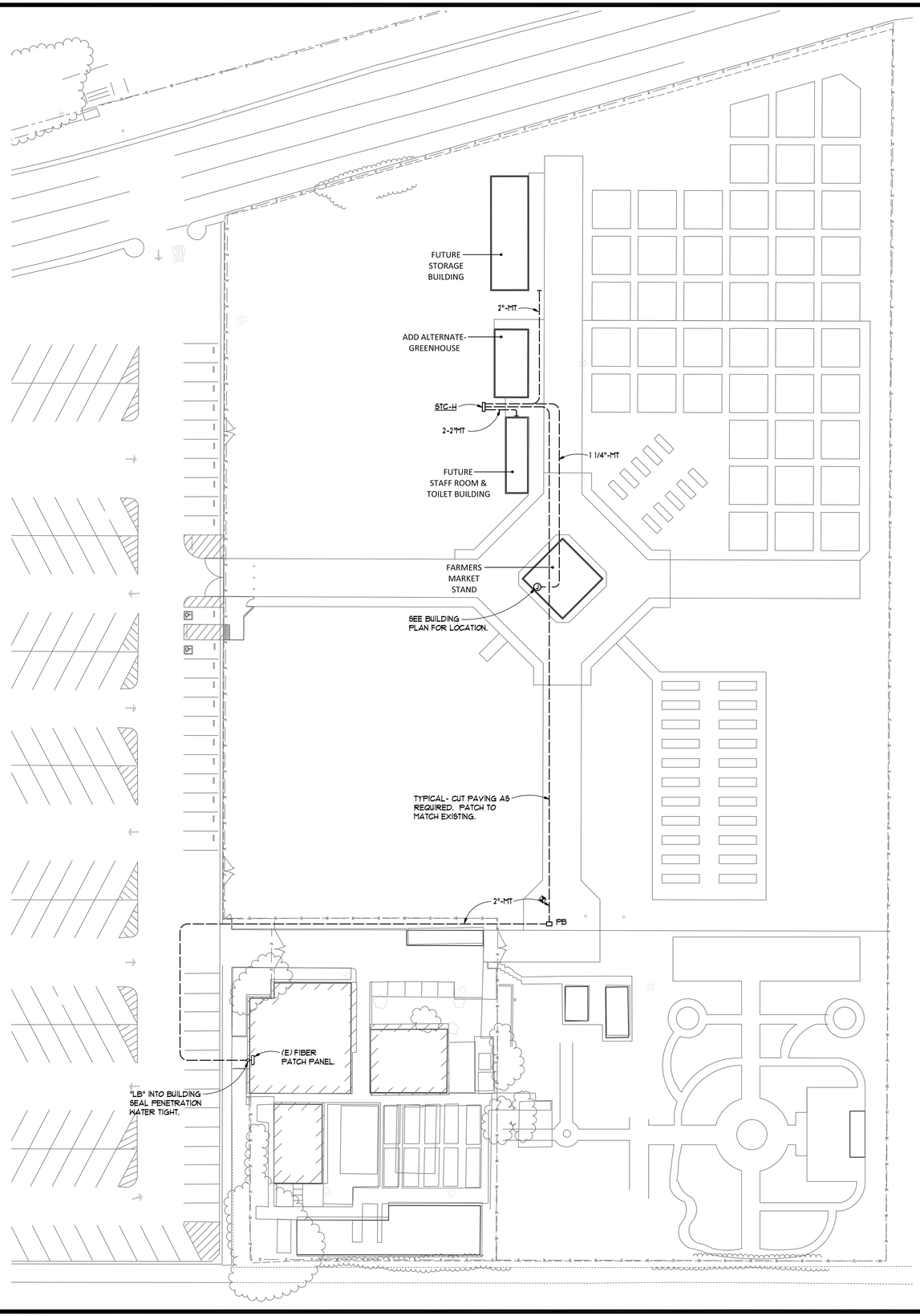
PROJECT CODE: SCCD-04
START DATE: -
DRAWN BY: HW-DB
CHECKED BY: DY

SHEET NAME:
POWER SITE PLAN

DSA APPROVAL STAMP:

SHEET NUMBER:
E1.1

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



A E1.2 SIGNAL SITE PLAN

SCALE: 1" = 30'-0"

PLOT DATE: 04-14-16

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STATE OF CALIFORNIA

PROFESSIONAL STAMP:

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Fairfield, CA 94534

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-	DSA SUBMITTAL	3/7/16

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

SHEET NAME:

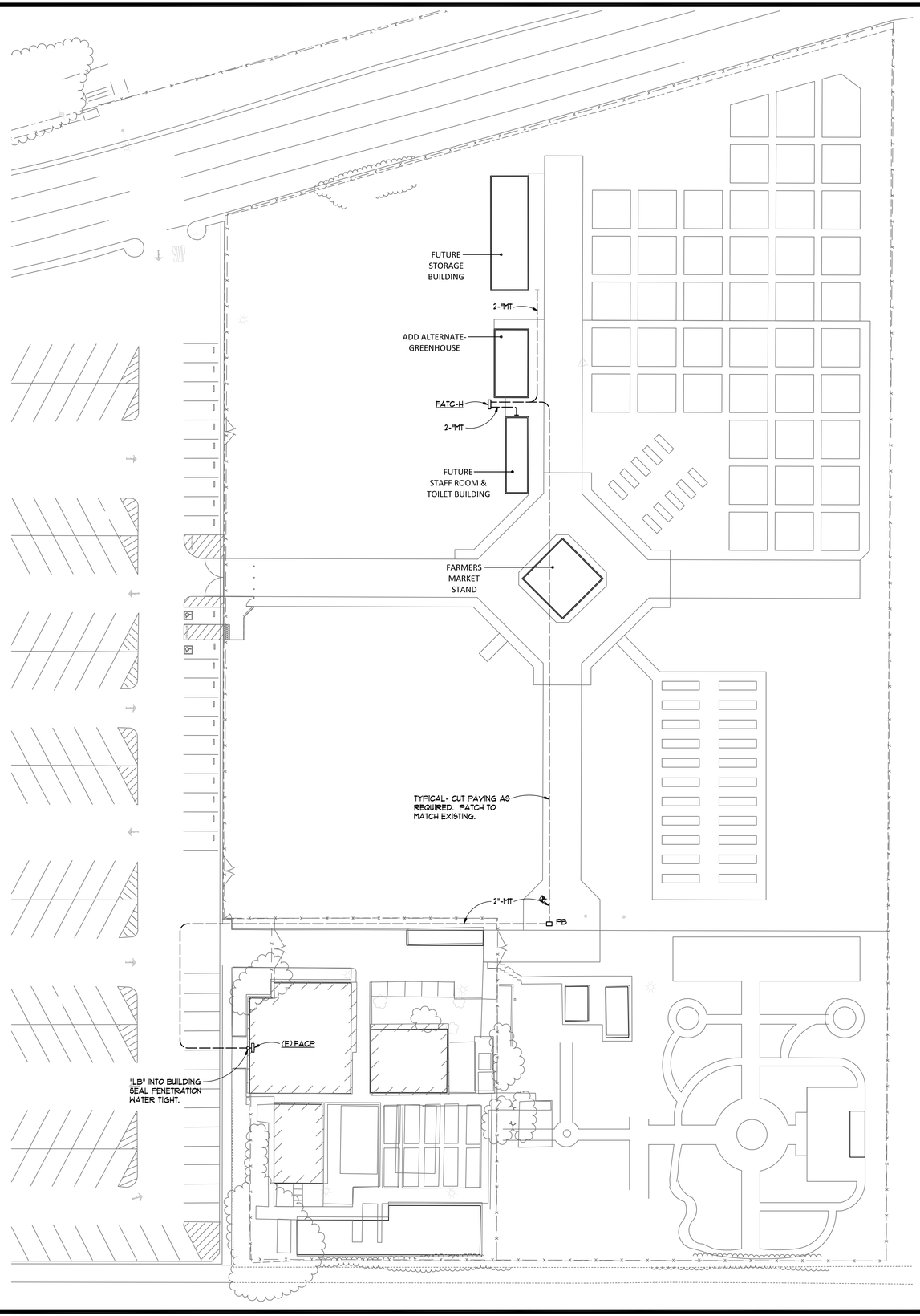
SIGNAL SITE PLAN

DSA APPROVAL STAMP:

SHEET NUMBER:

E1.2

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



A E1.3 FIRE ALARM SITE PLAN

SCALE: 1" = 30'-0"

PLOT DATE: 04-14-16

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. E14087
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 #1612C

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:

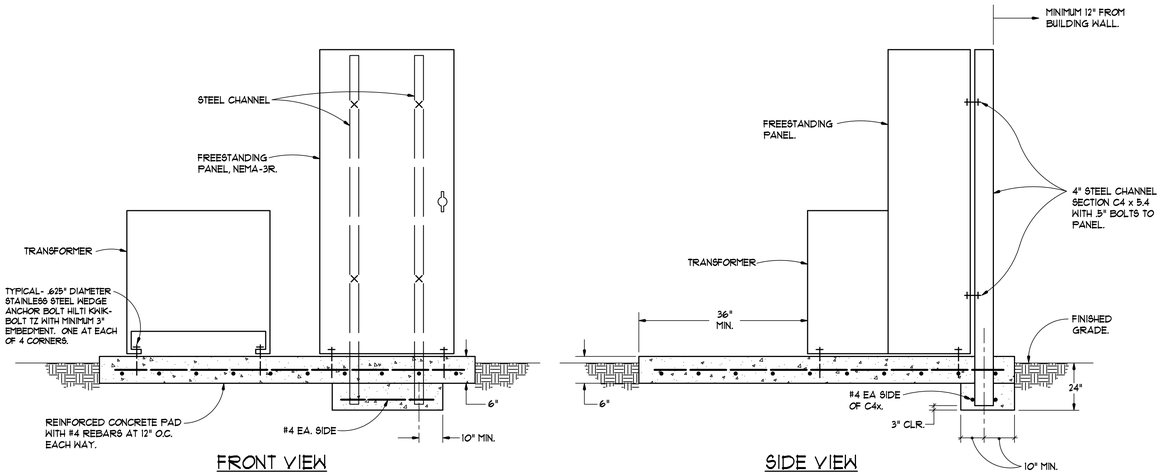
FIRE ALARM SITE PLAN

DSA APPROVAL STAMP:

SHEET NUMBER:

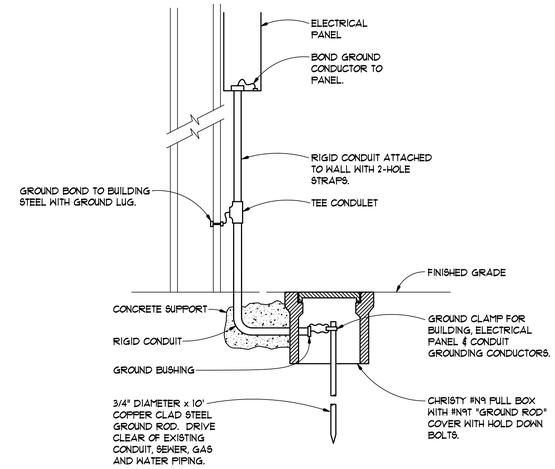
E1.3

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



E E2.1 **PANEL AND TRANSFORMER MOUNTING DETAILS**

NO SCALE

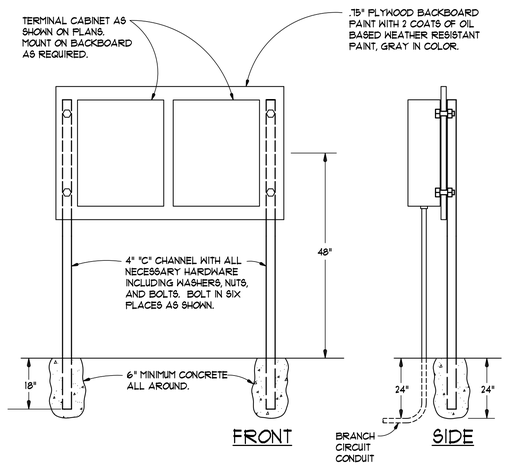


NOTES:

1. SIZE OF CONDUCTORS SHALL COMPLY WITH CEC TABLE 250-66.
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 250-50) 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 250-50 AND 250-52).
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.

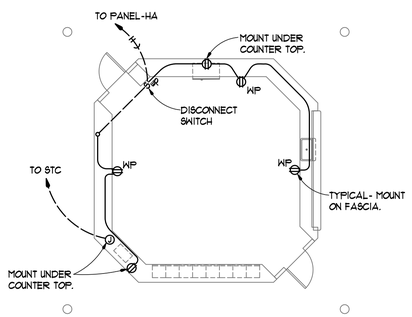
D E2.1 **GROUNDING DETAIL**

NO SCALE



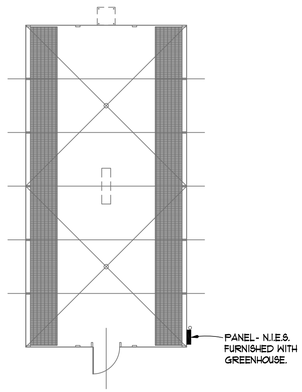
C E2.1 **TERMINAL CABINET MOUNTING DETAIL**

NO SCALE



B E2.1 **FARM STAND POWER & SIGNAL FLOOR PLAN**

SCALE: 1/8" = 1'-0"



A E2.1 **GREENHOUSE POWER & SIGNAL FLOOR PLAN**

SCALE: 1/8" = 1'-0"

PLOT DATE: 04-14-16

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

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 #1612C

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:

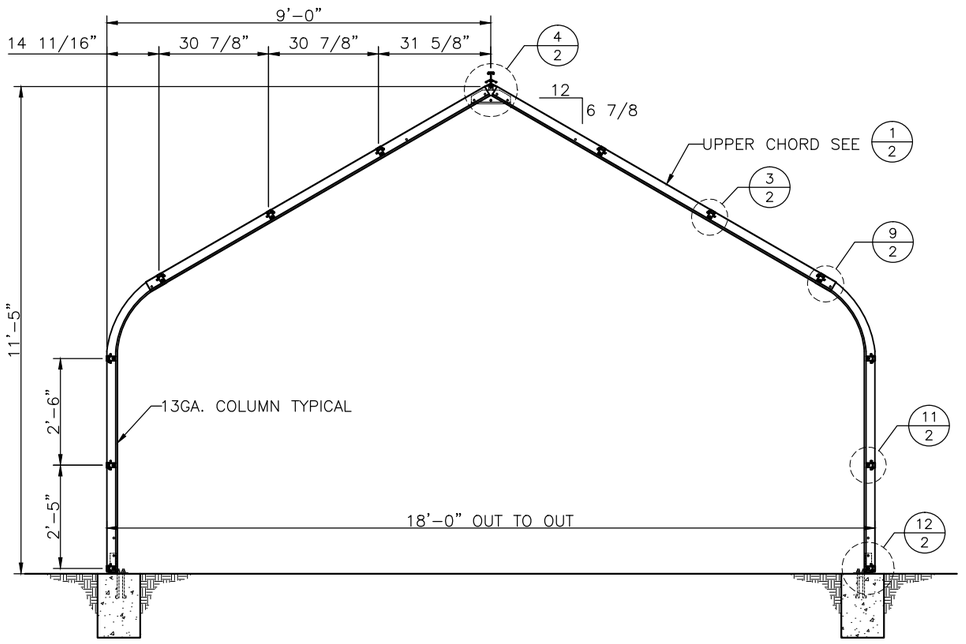
POWER & SIGNAL FLOOR PLANS & DETAILS

DSA APPROVAL STAMP:

SHEET NUMBER:

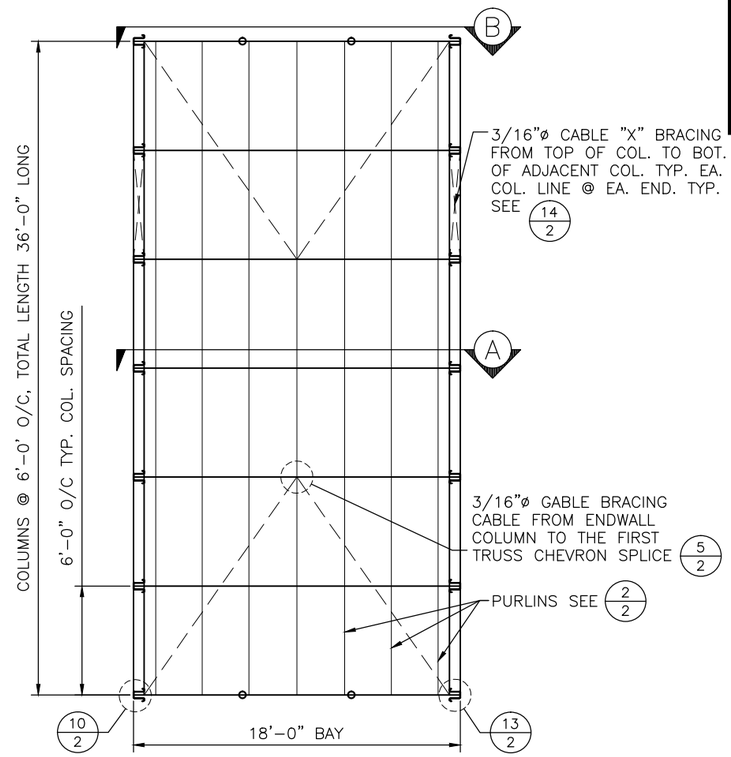
E2.1

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



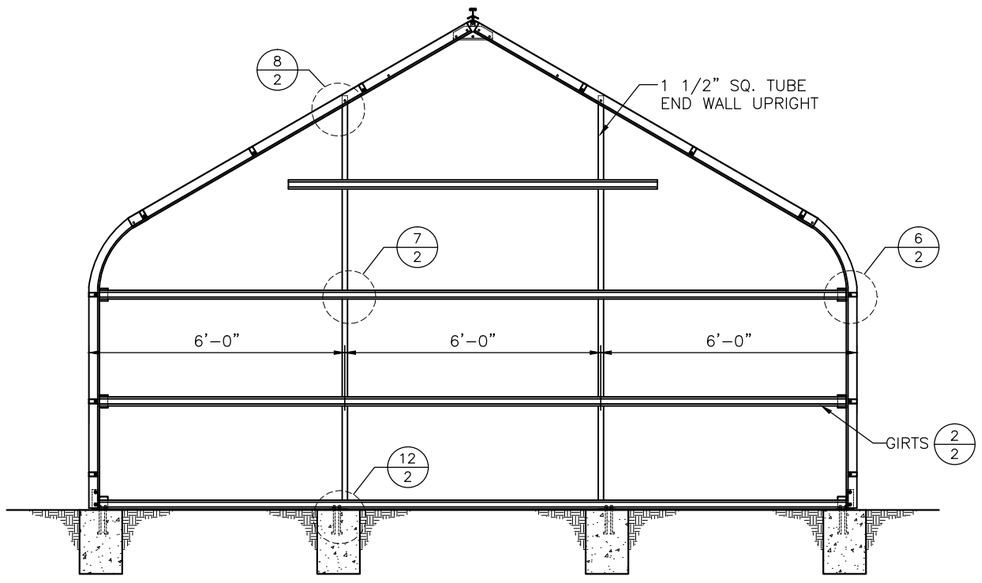
TYPICAL SECTION (A)

SCALE: 3/8" = 1'



TYPICAL PLAN VIEW

SCALE: NTS



TYPICAL ENDWALL (B)

SCALE: 3/8" = 1'

ADD ALTERNATE-1

PROVIDE CONLEY'S OR EQUAL

CONCRETE NOTES:

1. ALL CONCRETE SHALL WITHSTAND 2500 LBS. PER SQUARE INCH ULTIMATE COMPRESSIVE STRESS AT 28 DAYS.

2. CONTRACTOR SHALL INFORM CONLEY'S MANUFACTURING & SALES OF ANY DISCREPANCIES, OMISSIONS, OR ERRORS ON THE PLANS BEFORE BEGINNING CONSTRUCTION, OTHERWISE, IT SHALL BE DONE AS INTENDED BY THE ENGINEER.

3. THE ENGINEER AND/OR CONLEY'S MANUFACTURING & SALES ASSUMES NO RESPONSIBILITY FOR CONSTRUCTION SUPERVISION OR DEVIATION FROM THESE PLANS WITHOUT PRIOR WRITTEN APPROVAL.

4. ALL CONSTRUCTION SHALL COMPLY WITH THE C.B.C. LATEST EDITION AS AMENDED BY THE LOCAL AGENCY HAVING JURISDICTION.

5. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS ON DRAWINGS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.

6. ANY ENGINEERING DESIGN PROVIDED BY OTHERS MUST BE SUBMITTED FOR REVIEW AND SHALL BEAR THE STAMP AND SIGNATURE OF A REGISTERED ENGINEER.

7. ALL PLUMBING, ELECTRICAL OR MISCELLANEOUS STUB OUT SHALL BE A MINIMUM OF NINE (9) INCHES CLEAR OF THE OUTSIDE CONCRETE IN ORDER TO CLEAR THE WALLS.

8. FOOTINGS SHALL BE CENTERED ON THE CENTERLINE OF THE COLUMN ABOVE UNLESS OTHERWISE NOTED.

9. ALL FOOTINGS SHALL BEAR AGAINST FIRM NATURAL UNDISTURBED SOIL OR CERTIFIED COMPACTED FILL. SOIL BEARING PRESSURE EQUAL TO 1500 PSF.

10. THE MINIMUM REQUIREMENTS AND LOCAL FROST LINE REQUIREMENTS MAY SUPERSEDE THE DESIGN CALL OUTS. CONTACT THE LOCAL BUILDING DEPARTMENT FOR MINIMUM DEPTH REQUIREMENTS.

* BUILDINGS WITH SNOW LOADS ARE DESIGNED AS HEATED BUILDINGS

BUILDING SPECIFICATIONS:

THIS STRUCTURE HAS BEEN DESIGNED AND DETAILED FOR THE LOADS AND CONDITIONS SHOWN ON THESE DRAWINGS. ANY ALTERATIONS TO THE STRUCTURAL SYSTEM OR REMOVAL OF ANY COMPONENT PARTS OR THE ADDITION OF OTHER CONSTRUCTION MATERIALS OR LOADS MUST BE DONE UNDER THE ADVICE AND DIRECTION OF A REGISTERED ARCHITECT, CIVIL OR STRUCTURAL ENGINEER. CONLEY'S MANUFACTURING & SALES WILL ASSUME NO RESPONSIBILITY FOR ANY LOADS NOT INDICATED.

THIS METAL BUILDING IS DESIGNED WITH CONLEY'S MANUFACTURING & SALES DESIGN PRACTICES WHICH ARE BASED ON PERTINENT PROCEDURES AND RECOMMENDATIONS OF THE FOLLOWING ORGANIZATIONS AND CODES, AND ARE ACCEPTED PRACTICES IN THE LOW RISE METAL AND AGRICULTURAL BUILDING INDUSTRY.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION:
"STEEL CONSTRUCTION MANUAL" 13TH EDITION.
2005 A.I.S.C. (M.B.M.A.) "SERVICEABILITY" STANDARDS WILL BE USED FOR THIS DESIGN.

AMERICAN IRON AND STEEL INSTITUTE:
2007 EDITION: NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD–FORMED STEEL STRUCTURAL MEMBERS.

INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS:
"CALIFORNIA BUILDING CODE" 2013 EDITION

AMERICAN WELDING SOCIETY:
"STRUCTURAL WELDING CODE" A.W.S D1.1–10

METAL BUILDING MANUFACTURER'S ASSOCIATION:
"METAL BUILDING SYSTEMS MANUAL" 2006

STEEL NOTES:

1. ALL CONSTRUCTION TO COMPLY WITH THE LATEST EDITION OF THE C.B.C. AND A.I.S.C.

2. ALL MACHINE BOLTS TO COMPLY WITH A.S.T.M. A–307*. HOLES SHALL BE BOLT DIAMETER PLUS 1/16". (* UNLESS OTHERWISE NOTED)

3. ALL HOT ROLLED OR COLD ROLLED SHEETS AND STRIPS USED IN THE FABRICATION OF COLD FORMED STRUCTURAL MEMBERS SHALL HAVE A MINIMUM YIELD STRENGTH OF 55 K.S.I.

4. LIGHT GAGE – COLD FORMED STRUCTURAL STEEL MEMBERS SHALL CONFORM TO A.S.T.M. SPEC. A–500 GRADE "D" (Fy=50 K.S.I.), UNLESS OTHERWISE NOTED.

5. ALL STRUCTURAL STEEL MEMBERS SHALL BE GALVANIZED.

6. ROUND TUBES SHALL CONFORM TO A.S.T.M. SPEC. A–500 GRADE "C" (Fy=46K.S.I.).

7. CABLES SHALL BE OF AIRCRAFT TYPE CABLE WITH THE FOLLOWING BREAKING STRENGTHS: 1/8"ø = 1,700 LBS., 3/16"ø =4,200 LBS., 1/4"ø = 7,000 LBS.

REVISIONS
1 –
2 –
3 –
4 –
5 –

NATIONAL GREENHOUSE MANUFACTURERS ASSN. NGMA ESTABLISHED 1958 STANDARD OF QUALITY THROUGH UNIFORM CONTROL

CONLEY'S GREENHOUSE MANUFACTURING & SALES
4344 MISSION BLVD. MONTCLAIR, CA 91763
(909) 627-2508 FAX (909) 628-3774
SERVING AGRICULTURE SINCE 1946

DATE 12/30/14
SCALE N.T.S.
JOB NO –
DRAWN BY AGM
APPROVED

TITLE 18' X 36' HOBBY HOUSE
JOB NAME I

ENGINEER –

LOADING 12LL–100–C

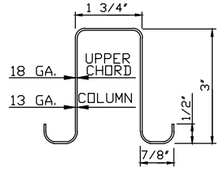
DRAWING NO. FM-01

DRAWING SET – – –

SHEET 1 OF 2

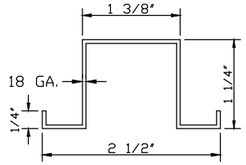
CERTIFICATION

12/30/14 –



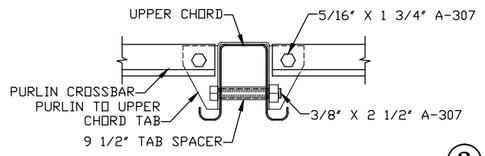
UPPER CHORD / COLUMN (1)

SCALE: NTS



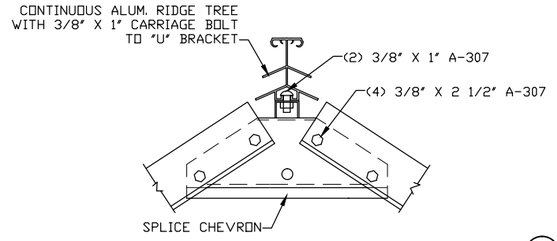
PURLIN / GIRT (2)

SCALE: NTS



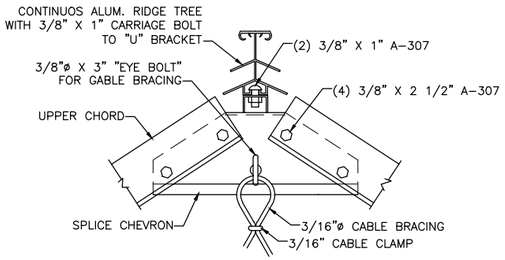
PURLIN / GIRT TO UPPER CHORD (3)

SCALE: NTS



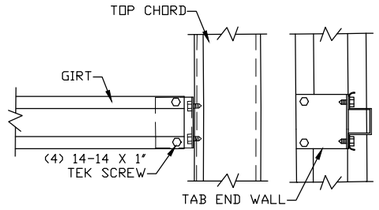
CHEVRON CONN. TO UPPER CHORD (4)

SCALE: NTS



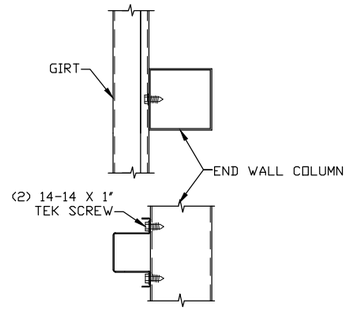
CHEVRON CONN. TO UPPER CHORD (5)

SCALE: NTS



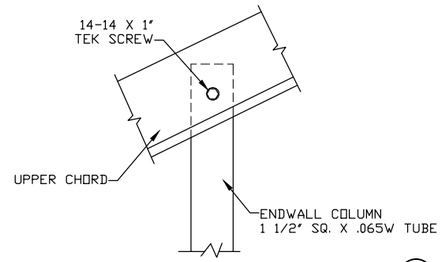
SIDEWALL AND ENDWALL UPRIGHT CONN. (6)

SCALE: NTS



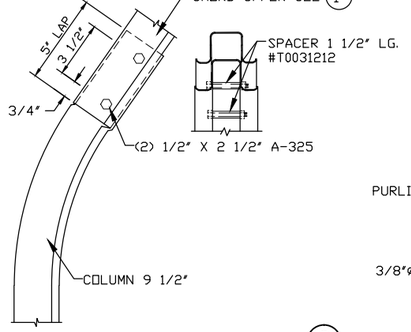
GIRT CONN. AT ENDWALL COLUMN (7)

SCALE: NTS



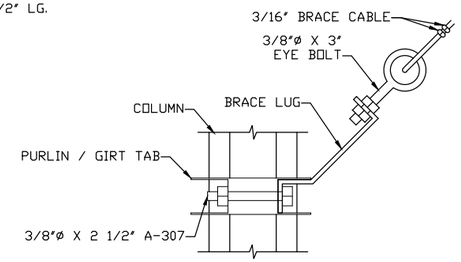
END WALL UPRIGHT AT CHORD (8)

SCALE: NTS



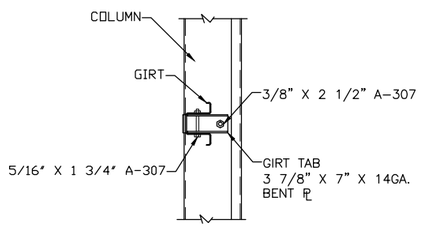
COLUMN CONN. TO UPPER CHORD (9)

SCALE: NTS



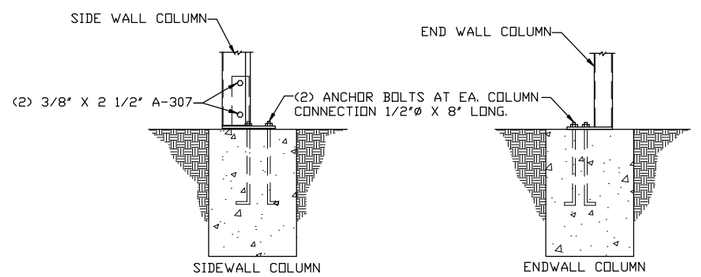
BRACE CABLE CONNECTION (10)

SCALE: NTS



GIRT AT COLUMN CONNECTION (11)

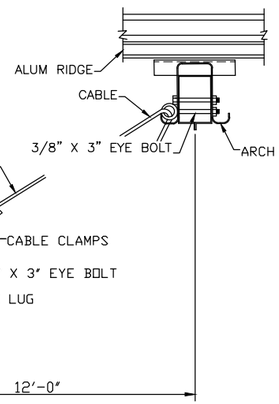
SCALE: NTS



* OR 1/2"ø X 3 1/4" HILTI KWIK BOLTS PER KB-TZ ICC-ES ESR-1917

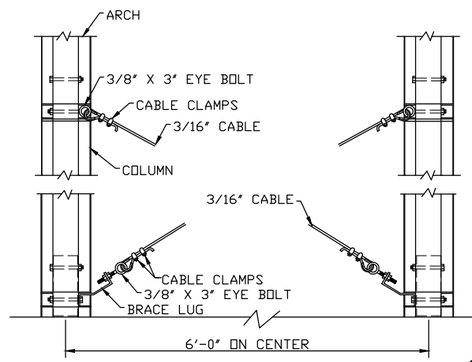
SIDEWALL AND ENDWALL UPRIGHT CONN. (12)

SCALE: NTS



CABLE BRACING AT RIDGE (13)

SCALE: NTS



COLUMN "X" BRACING (14)

SCALE: NTS

ADD ALTERNATE-1

PROVIDE CONLEY'S OR EQUAL

REVISIONS

1 –
2 –
3 –
4 –
5 –
6 –

CONLEY'S
GREENHOUSE MANUFACTURING & SALES
4344 MISSION BLVD. MONTCLAIR, CA 91763
(909) 627-2288 FAX (909) 628-3774
SERVING AGRICULTURE SINCE 1946

DATE 12/30/14
SCALE N.T.S.
JOB NO –
DRAWN BY AGM
APPROVED

TITLE HOBBY HOUSE DETAILS

JOB NAME

ENGINEER
–

LOADING
12LL–100–C

DRAWING NO.
FM-02

DRAWING SET
–
–
–

SHEET 2 OF 2

CERTIFICATION

12/30/14 –

EXAMPLE FORM DSA 103

NOTE: THE EXAMPLE FORM DSA-103 SHOWN ON THIS SHEET IS FOR ILLUSTRATION PURPOSES ONLY TO ASSIST IN THE COMPLETION OF FUTURE PROJECT SPECIFIC FORM DSA-103'S. A FORM DSA-103 IS TO BE COMPLETED FOR EACH APPLICATION THAT THIS PC IS BEING INCORPORATED INTO AND THE EXAMPLE FORM DSA-103 IS TO BE CROSSED OUT ON THIS DRAWING.

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

REQUIRED	TEST OR SPECIAL INSPECTION	TYPE[1]	PERFORMED BY[2]	
-	**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. Use PI in lieu of GE if there is no GE for the site specific project.
-	**2. COMPACTED FILLS:**	**Table 1705A.6**		
X	a. Perform qualification testing of fill materials.	**Test**	**Lab***	* Under the supervision of the geotechnical engineer.
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. Use PI in lieu of GE if there is no GE for the site specific project.
X	c. Test compaction of fill.	**Test**	**Lab***	* Under the supervision of the geotechnical engineer.
-	**4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):**	**Table 1705A.7**		
X	a. Inspect drilling operations and maintain complete and accurate records for each pier.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. Use PI in lieu of GE if there is no GE for the site specific project.
X	b. Verify locations of piers.	**Continuous**	**PI**	
X	c. Confirm pier diameters, plumbness, bell diameters (if applicable), lengths, and embedment into bedrock (if applicable). Record concrete or grout volumes.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. Use PI in lieu of GE if there is no GE for the site specific project.
X	d. Confirm adequate end strata bearing capacity.	**Test**	**Lab***	* Under the supervision of the geotechnical engineer.
X	e. Concrete piers.	Provide tests and inspections per CONCRETE section below.		
-	**CONCRETE**	**Table 1705A.3**		
-	**7. CAST IN PLACE CONCRETE**			
	Material Verification and Testing:			
X	a. Verify use of required design mix.	**Periodic**	**SI & PI***	* To be performed by batch-plant special inspector and project inspector.
X	c. Perform slump, temperature, and (where required) air content tests.	**Test**	**Lab**	ASTM C172, ASTM C31.
X	d. Test concrete (compression).	**Test**	**Lab**	**ACI 318 Section 5.6 and 1905A.1.2** (1913.3.1*). ASTM C39.
	Inspection:			
X	e. Batch plant inspection	**Continuous**	**SI**	**1705A.3.2.** If approved by DSA, batch plant inspection may be reduced to periodic if plant complies with **1705A.3.3**, Item 1, and requires first batch inspection, weighmaster, and batch tickets.
X	g. Inspect placement of formwork, 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 402-11/ACI 530-11/ASCE 5-11 Table 1.19.3**		
-	**STEEL**	**Table 1705A.2.1**		
-	**17. STRUCTURAL STEEL AND COLD-FORMED STEEL USED FOR STRUCTURAL PURPOSES**			
	Material Verification:			
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	b. Test unidentified materials	**Test**	**Lab**	**2203A.1** (2203.1*). ASTM A370.
X	c. Examine seam welds of structural tubes and pipes	**Periodic**	**SI***	* DSA IR 17-3.
	Inspection:			
X	d. Verify member locations, bracing and all details constructed in the field.	**Continuous**	**PI**	
X	e. Verify stiffener locations, connection tab locations and all construction details fabricated in the shop.	**Periodic**	**SI**	
-	**18. HIGH STRENGTH BOLTS:**			
	Material Verification of High-Strength Bolts, Nuts, and Washers:			
X	a. Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA approved documents.	**Periodic**	**SI**	DSA IR 17-9
X	b. Test high-strength bolts, nuts and washers.	**Test**	**Lab**	**2213A.1** (2212.6.1*). ASTM F606, A370. DSA IR 17-8
	Inspection of High-Strength Bolt Installation:			
X	c. Bearing-type ("snug tight") connections.	**Periodic**	**SI***	DSA IR 17-9
	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	a. Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.	**Periodic**	**SI**	
X	b. Verify weld filler material manufacturer's certificate of compliance.	**Periodic**	**SI**	
X	c. Verify WPS, welder qualifications and equipment.	**Periodic**	**SI**	DSA IR 17-3.
-	**19.1 SHOP WELDING:**			
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	b. Inspect single-pass fillet welds ≤ 5/16"	**Periodic**	**SI**	Per AISC 360 (and AISC 341 as applicable). DSA IR 17-3.
+	**WOOD**			
+	**OTHER**			

1 Soils testing and inspection: Geotechnical Verified Report - Form DSA-293
2 All Structural Testing: Laboratory Verified Report - Form DSA-291
3 Concrete Batch Plant Inspection: Special Inspection Verified Report - Form DSA-292
4 HS Bolt Installation 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

Shelter Options

Shelter Style	Available Options						
			Eave Height				
	Length	Width	Min.	Max.	Recessed Anchor Bolts./Footings	Roof Downspouts	"V" plugs for bird control.
20' Meramec	30', 42'		7'	12'	Y/N	Y/N	Y/N
30' Meramec	42', 54'		7'	12'	Y/N	Y/N	Y/N
16' Navajo			7'	12'	Y/N	Y/N	Y/N
20' Navajo			7'	12'	Y/N	Y/N	Y/N
24' Navajo			7'	12'	Y/N	Y/N	Y/N
30' Navajo			7'	12'	Y/N	Y/N	Y/N
36' Navajo			7'	12'	Y/N	Y/N	Y/N
40' Navajo			7'	12'	Y/N	Y/N	Y/N
Illini	13' to 58' in 9' increments.	10', 16'	7'-6"	12'	Y/N	Y/N	Y/N
7' Shawnee	9'-8" to 55'-8" in 7'-8" increments.		7'-6"	12'	Y/N	Y/N	Y/N

2013 CBC PC STRUCTURAL DESIGN NOTES

DESCRIPTION	DESIGN VALUES
DEAD AND LIVE LOADS	
ROOF LIVE LOAD (Lr)	20 PSF
ROOF DEAD LOAD (D)	5 PSF
ALLOWABLE SOIL PRESSURE	
DL	1000 PSF
DL+Lr	1000 PSF
DL+SNOW	1000 PSF
ROOF SNOW LOAD	
GROUND SNOW LOAD (Pg)	22 PSF
SLOPED ROOF SNOW LOAD (Ps)	20 PSF
SNOW EXPOSURE FACTOR (Ce)	1.1
SNOW IMPORTANCE FACTOR (I)	1.0
THERMAL FACTOR (Ct)	1.2
FLOOD DESIGN	
FLOOD HAZARD AREA	NO
WIND DESIGN	
ULTIMATE DESIGN WIND SPEED (Vult)	130 MPH
WIND EXPOSURE FACTOR	C
TOPOGRAPHIC FACTOR (Kzt)	1.0
ASCE 7-10 WIND ANALYSIS METHOD	CHAPTER 27 DIRECTIONAL PROCEDURE
VELOCITY PRESSURE EXPOSURE COEFFICIENT (Kz)	0.85
NET PRESSURE COEFFICIENT	VARIES, SEE CALCULATIONS
WIND DIRECTIONALITY FACTOR (Kd)	0.85
WIND VELOCITY PRESSURE (qh)	31.3 PSF
SEISMIC DESIGN	
ASCE 7-10 ANALYSIS PROCEDURE	SECTION 12.8 EQUIVALENT LATERAL FORCE PROCEDURE
SEISMIC DESIGN CATEGORY	E
SEISMIC IMPORTANCE FACTOR	1.0
SITE CLASS	D
MAPPED MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD (Ss)	1.875
SHORT PERIOD SITE COEFFICIENT (Fa)	1.0
DESIGN MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD (Sds)	1.0
MAPPED MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD (S1)	1.3
LONG PERIOD SITE COEFFICIENT (Fv)	1.5
DESIGN, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD (Sm)	1.3
HORIZONTAL OR VERTICAL IRREGULARITY TYPES	NONE

BUILDING DATA

CONSTRUCTION CLASSIFICATION	TYPE II-B
OCCUPANCY CLASSIFICATION	A-2
RISK CATEGORY	II
NUMBER OF STORIES	1

SHEET INDEX

GENERAL NOTES

I. SHELTER DESIGN
A. THE STRUCTURAL DESIGN OF THE COMPONENTS AND CONNECTIONS OF THIS SHELTER ARE SUFFICIENT FOR EAVE HEIGHTS RANGING FROM 7' UP TO 12' TALL.
B. REQUIRED EAVE HEIGHT FOR EACH SITE SHALL BE DETERMINED BY OWNER.
C. THIS SHELTER HAS BEEN DESIGNED AS AN OPEN STRUCTURE. THE ADDITION OF ANY ENCLOSURE DIRECTLY ATTACHED TO THE SHELTER, SUCH AS WALLS, INSECT MESH, OR SHADE SCREENS, SHALL BE PROHIBITED AS INCREASED WIND FORCES MAY RESULT.

II. DESIGN AND CONSTRUCTION STANDARDS
A. THE DESIGN OF THIS STRUCTURE IS IN CONFORMANCE WITH THE FOLLOWING STANDARDS AND ALL PHASES OF CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING STANDARDS.
1. 2013 CALIFORNIA ADMINISTRATIVE CODE (CAC) ..... (PART 1, TITLE 24, CCR)
2. 2013 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1 AND 2 (PART 2, TITLE 24, CCR) (2012 INTERNATIONAL BUILDING CODE WITH 2013 CALIFORNIA AMENDMENTS)
3. 2013 CALIFORNIA ELECTRICAL CODE ..... (PART 3, TITLE 24, CCR) (2011 NATIONAL ELECTRICAL CODE WITH 2013 CALIFORNIA AMENDMENTS)
4. 2013 CALIFORNIA MECHANICAL CODE (CMC) ..... (PART 4, TITLE 24, CCR) (2012 UNIFORM MECHANICAL CODE WITH 2013 CALIFORNIA AMENDMENTS)
5. 2013 CALIFORNIA PLUMBING CODE (CPC) ..... (PART 5, TITLE 24, CCR) (2012 UNIFORM PLUMBING CODE WITH 2013 CALIFORNIA AMENDMENTS)
6. 2013 CALIFORNIA ENERGY CODE ..... (PART 6, TITLE 24, CCR)
7. 2013 CALIFORNIA FIRE CODE (CFC) ..... (PART 9, TITLE 24, CCR) (2012 INTERNATIONAL FIRE CODE WITH 2013 CALIFORNIA AMENDMENTS)
8. 2013 CALIFORNIA GREEN BUILDING STANDARDS CODE ..... (PART 11, TITLE 24, CCR)
9. 2013 CALIFORNIA REFERENCED STANDARDS CODE ..... (PART 12, TITLE 24, CCR)
10. NFPA 13 - 2013
11. NFPA 72 - 2013

III. CONSTRUCTION CHANGES
A. CHANGES TO THE APPROVED PLANS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR CONSTRUCTION CHANGE DOCUMENT APPROVED BY THE DIVISION OF THE STATE ARCHITECT AS REQUIRED BY PART 1, TITLE 24, C.C.R.

IV. FOUNDATION
A. THE FOUNDATION SHALL REST ON SOUND SOIL THAT IS FREE OF ORGANIC AND DELETERIOUS MATERIALS AND CAPABLE OF SUPPORTING 1000 PSF VERTICAL BEARING PRESSURE.
B. FOR LATERAL LOADING, THE FOUNDATION HAS BEEN DESIGNED TO THE MINIMUM LATERAL BEARING VALUE IN CBC TABLE 1806A.2. THIS IS 100 PSF/FT LATERAL BEARING.
C. FOUNDATION DESIGN SHOWN IS BASED ON SOIL CONDITIONS GIVEN IN NOTES A AND B, ABOVE. OWNER SHALL VERIFY ACTUAL SOIL CONDITIONS AT EACH JOB SITE AND ANY REQUIRED ADJUSTMENTS TO THE FOOTING DESIGN SHALL BE DESIGNED BY OTHERS.

V. CONCRETE
A. COMPRESSION STRENGTH OF ALL REINFORCED CONCRETE SHALL NOT BE LESS THAN 4000 PSI AT 28 DAYS.
B. REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO THE REQUIREMENTS OF MINIMUM ASTM A615 GRADE 40 FOR #4 AND SMALLER BARS AND GRADE 60 FOR BARS LARGER THAN #4.
C. MINIMUM CONCRETE CLEAR COVER FOR REINFORCING BARS SHALL BE 3".
D. A CONCRETE MIX DESIGN IN ACCORDANCE WITH CBC SECTION CHAPTER 19A SHALL BE PERFORMED AND STAMPED BY A CIVIL ENGINEER LICENSED IN THE STATE OF CALIFORNIA. THE CONCRETE MIX DESIGN SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD PRIOR TO CONSTRUCTION.
E. THE MIX DESIGN SHALL MEET THE CRITERIA HEREIN AND SHALL BE PROPER FOR LOCAL CONDITIONS INCLUDING, BUT NOT LIMITED TO, FREEZING AND THAWING EXPOSURE, CHEMICAL AND SALT EXPOSURE, AND SOIL CORROSIVITY WHERE SUCH PROBLEMS EXIST.
F. NON-SHRINK GROUT OR DRY PACK SHALL BE A PREMIXED, NONMETALLIC FORMULA WITH A MINIMUM COMPRESSIVE STRENGTH OF 7000 PSI AT 28 DAYS AND HAVING THE FOLLOWING CHARACTERISTICS: NO SHRINKAGE AFTER PLACEMENT OR EXPANSION AFTER SET (ASTM C1090). ONE DAY COMPRESSIVE STRENGTH OF AT LEAST 3000 PSI (ASTM C109) AND INITIAL SET TIME OF NOT LESS THAN 45 MINUTES (ASTM C191). PROVIDE "HI-FLOW GROUT" OR "DRY PACK GROUT" BY EUCLID, OR AN APPROVED EQUAL.

VI. STRUCTURAL STEEL
A. STEEL PLATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
B. HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B.
C. ALL STRUCTURAL STEEL SHALL BE IDENTIFIED BY MILL CERTIFICATE.
D. HIGH STRENGTH BOLTS (HSB) SHALL BE GALVANIZED AND SHALL CONFORM TO THE REQUIRMENTS OF ASTM A325-N. HIGH STRENGTH BOLTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION PLUS AN ADDITIONAL HALF TURN.
E. ALL HIGH STRENGTH BOLTS SHALL HAVE CERTIFICATION.
F. WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY'S SPECIFICATION FOR THE MATERIAL BEING WELDED. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.
G. WELD ELECTRODES SHALL BE E70XX AND SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.8-6.3 FOR DEMAND CRITICAL WELDS.
H. ALL WELDING SHALL BE APPROVED BY AN AWS CERTIFIED INSPECTOR.
I. STEEL FRAMING SHALL BE COATED WITH ANTI-GRAFFITI POLYESTER TGIC POWDER COAT FINISH MEETING AAMA 2604-02 SPECIFICATIONS.
J. SHOP DRAWINGS OF ALL STRUCTURAL STEEL SHALL BE SUBMITTED TO HYYTINEN ENGINEERING FOR APPROVAL PRIOR TO FABRICATION.
K. ALL BOLT HOLE DIAMETERS SHALL BE EQUAL TO THE BOLT DIAMETER PLUS 1/16" U.N.O. BOLT HOLES FOR ANCHOR BOLTS SHALL BE EQUAL TO THE BOLT DIAMETER PLUS 1/8".
L. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 36 AND SHALL BE HOT DIP GALVANIZED.

VII. ALUMINUM
A. INTERLOCKING SEAM ALUMINUM ROOF DECK SHALL BE ROLL FORMED FROM ALUMINUM ALLOY 3004-H151 AND SHALL CONFORM TO THE DECK PROFILE SHOWN ON THE DRAWINGS.
B. ALUMINUM ROOF DECK SHALL BE COATED WITH HEAT REFLECTIVE BASF ULTRA-COOL COATING OR APPROVED EQUAL.
C. EXTRUDED ALUMINUM RIDGE CAP SHALL BE FABRICATED FROM ALUMINUM ALLOY 6105-T5 AND SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THE DRAWINGS.
D. EXTRUDED ALUMINUM FASCIA SHALL BE FABRICATED FROM ALUMINUM ALLOY 6063-T5. EXTRUDED ALUMINUM GUTTER SHAL BE FABRICATED FROM ALUMINUM ALLOY 6105-T5. ALUMINUM COMPONENTS SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THE DRAWINGS.
E. EXTRUDED ALUMINUM RIDGE CAP, GUTTER, AND FASCIA SHALL BE COATED WITH ANTI-GRAFFITI POLYESTER TGIC POWDER COAT FINISH MEETING AAMA 2604-02 SPECIFICATIONS.

VIII. SCREWS
A. SCREWS SHALL BE HILTI KWIK-PRO SELF DRILLING SCREWS WITH BOND SEAL WASHERS PER ICC ESR-2196 OR APPROVED EQUAL.
B. SCREWS ATTACHING TO STEEL SHALL BE 12-24 HEX WASHER HEAD (HWH) #5 POINT SCREWS. SCREWS ATTACHING TO ALUMINUM SHALL BE 8-18 HEX WASHER HEAD (HWH) #2 POINT SCREWS.
C. ALL SCREWS SHALL BE STAINLESS STEEL OR COATED WITH ZINC.
D. THE MANUFACTURER SHALL PROVIDE A SCREW CERTIFICATION LETTER STATING THAT SCREWS PROVIDED MATCH THE SIZE AND TYPE SPECIFIED HEREIN. THE CERTIFICATION LETTER SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD PRIOR TO INSTALLATION.

IX. SHOP FABRICATION AND FIELD ASSEMBLY
A. ALL STRUCTURAL STEEL AND ALUMINUM COMPONENTS SHALL BE SHOP FABRICATED SO THAT FIELD ASSEMBLY OF CONNECTIONS CAN BE PERFORMED USING ONLY BOLTING AND SCREW PLACEMENT.

X. SPECIAL INSPECTION
A. THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PERFORM INSPECTION OF THE CONSTRUCTION OF THIS PC IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17A OF THE 2013 CALIFORNIA BUILDING CODE (PART 2, TITLE 24, C.C.R.) AND THE DIVISION OF THE STATE ARCHITECT.

XI. FIRE LIFE SAFETY
A. AN AUTOMATIC FIRE PROTECTION SYSTEM MAY BE REQUIRED FOR THIS BUILDING DEPENDING ON SITE SPECIFIC REQUIREMENTS. WHERE REQUIRED, THE AUTOMATIC FIRE PROTECTION SYSTEM SHALL BE DESIGNED BY OTHERS.
B. THE DESIGN OF THIS SHELTER IS CAPABLE OF SUPPORTING THE WEIGHT OF A FIRE SPRINKLER SYSTEM (1.5 PSF).
C. THE METAL ROOFING COMPLIES WITH FIRE CLASSIFICATION B. THIS SHELTER HAS NOT BEEN DESIGNED FOR PLACEMENT WITHIN ANY FIRE HAZARD SEVERITY ZONE.

NOTICE OF DISCLAIMER FOR STRUCTURAL ENGINEERING RESPONSIBILITY

1. PER TITLE 24, PART 1, SECTION 4-316(e) OF THE CALIFORNIA CODE OF REGULATIONS, THIS NOTICE SHALL BE GIVEN TO DSA PRIOR TO THE APPROVAL OF PLANS AND SPECIFICATIONS.
2. FOR THE SITE SPECIFIC PROJECT, ROGER HYYTINEN IS NOT THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE, UNLESS NOTED OTHERWISE.
3. FOR THE SITE SPECIFIC PROJECT, ROGER HYYTINEN'S RESPONSIBILITY IS LIMITED TO THE PREPARATION OF PLANS AND SPECIFICATIONS FOR THE SHELTER(S) OF THIS PC ONLY.
4. STRUCTURAL OBSERVATION OF CONSTRUCTION IS SPECIFICALLY EXCLUDED FROM ROGER HYYTINEN'S RESPONSIBILITY FOR THE SITE SPECIFIC PROJECT.
5. ALL CONSTRUCTION ACTIVITIES RELATED TO STRUCTURAL ENGINEERING SHALL BE DELEGATED TO A QUALIFIED ENGINEER BY THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE. THESE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO, APPROVAL OF INSPECTOR QUALIFICATIONS, STRUCTURAL OBSERVATION OF CONSTRUCTION, REVIEW OF INSPECTION REPORTS, AND SIGNING OFF THE VERIFIED REPORT FOR COMPLETED WORK.
6. ROGER HYYTINEN WILL BE RESPONSIBLE FOR RESPONDING TO QUESTIONS PERTAINING TO THE PLANS AND SPECIFICATIONS FOR THE SHELTER(S) OF THIS PC WHICH ARISE DURING PLAN CHECK AND CONSTRUCTION.
7. IN THE EVENT THAT ROGER HYYTINEN IS REQUIRED TO PROVIDE STRUCTURAL OBSERVATION OF CONSTRUCTION, HE SHALL BE NOTIFIED IN WRITING PRIOR TO THIS REQUIREMENT BEING MADE. ALSO, HIS ANTICIPATED ADDITIONAL FEES FOR THIS ADDITIONAL WORK SHALL BE PAID IN ADVANCE, PRIOR TO ANY STRUCTURAL OBSERVATION OR CONSTRUCTION SERVICES BEING PERFORMED.

PRE-CHECK (PC) DOCUMENT
CODE: 2013 CBC
A separate project application for construction is required.

STATE OF CALIFORNIA
DEPARTMENT OF GENERAL SERVICES
OCT 23 2014
DIVISION OF THE STATE ARCHITECT
DSA/SFM OFFICE OF REGULATION SERVICES
FILE NO.: PC-058
APPL. NO.: 02-113840

HYYTINEN ENGINEERING
5458 Longley Lane, Suite B
Reno, Nevada 89511
(775) 826-3019 PHONE
(775) 826-3076 FAX

REGISTERED PROFESSIONAL ENGINEER
ROGER C. HYYTINEN
No. 52732
EXP. 11-30-14
STRUCTURAL
STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 113840
AC. TM FLS BC SS SF
DATE 10/23/14
PC

PROJECT:
AMERICANA SHELTERS
AMERICANA BUILDING PRODUCTS
#2 Industrial Dr. - Salem, IL 62881
(800)851-0865 www.americana.com

SITE ADDRESS:

SHEET TITLE:
DESIGN NOTES, EXAMPLE FORM DSA 103

DRAWN: NVGI
CHECKED: R.H.
DATE: 10/21/14
SCALE: AS NOTED
JOB NO.: 44-14
DRAWING NO.: G.1
SHEET: G.1

EXAMPLE FORM DSA 103

NOTE: THE EXAMPLE FORM DSA-103 SHOWN ON THIS SHEET IS FOR ILLUSTRATION PURPOSES ONLY TO ASSIST IN THE COMPLETION OF FUTURE PROJECT SPECIFIC FORM DSA-103'S. A FORM DSA-103 IS TO BE COMPLETED FOR EACH APPLICATION THAT THIS PC IS BEING INCORPORATED INTO AND THE EXAMPLE FORM DSA-103 IS TO BE CROSSED OUT ON THIS DRAWING.

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

REQUIRED	TEST OR SPECIAL INSPECTION	TYPE[1]	PERFORMED BY[2]	
-	**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. Use PI in lieu of GE if there is no GE for the site specific project.
-	**2. COMPACTED FILLS:**	**Table 1705A.6**		
X	**a.** Perform qualification testing of fill materials.	**Test**	**Lab***	* Under the supervision of the geotechnical engineer.
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. Use PI in lieu of GE if there is no GE for the site specific project.
X	**c.** Test compaction of fill.	**Test**	**Lab***	* Under the supervision of the geotechnical engineer.
-	**4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):**	**Table 1705A.7**		
X	**a.** Inspect drilling operations and maintain complete and accurate records for each pier.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. Use PI in lieu of GE if there is no GE for the site specific project.
X	**b.** Verify locations of piers.	**Continuous**	**PI**	
X	**c.** Confirm pier diameters, plumbness, bell diameters (if applicable), lengths, and embedment into bedrock (if applicable). Record concrete or grout volumes.	**Continuous**	**GE***	* By geotechnical engineer or his or her qualified representative. Use PI in lieu of GE if there is no GE for the site specific project.
X	**d.** Confirm adequate end strata bearing capacity.	**Test**	**Lab***	* Under the supervision of the geotechnical engineer.
X	**e.** Concrete piers.	Provide tests and inspections per CONCRETE section below.		
-	**CONCRETE**	**Table 1705A.3**		
-	**7. CAST IN PLACE CONCRETE**			
	Material Verification and Testing:			
X	**a.** Verify use of required design mix.	**Periodic**	**SI & PI***	* To be performed by batch-plant special inspector and project inspector.
X	**c.** Perform slump, temperature, and (where required) air content tests.	**Test**	**Lab**	ASTM C172, ASTM C31.
X	**d.** Test concrete (compression).	**Test**	**Lab**	**ACI 318 Section 5.6 and 1905A.1.2** (1913.3.1*). ASTM C39.
	Inspection:			
X	**e.** Batch plant inspection	**Continuous**	**SI**	**1705A.3.2**: If approved by DSA, batch plant inspection may be reduced to periodic if plant complies with **1705A.3.3**, Item 1, and requires first batch inspection, weighmaster, and batch tickets.
X	**g.** Inspect placement of formwork, 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 402-11/ACI 530-11/ASCE 5-11 Table 1.19.3**		
-	**STEEL**	**Table 1705A.2.1**		
-	**17. STRUCTURAL STEEL AND COLD-FORMED STEEL USED FOR STRUCTURAL PURPOSES**			
	Material Verification:			
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	**b.** Test unidentified materials	**Test**	**Lab**	**2203A.1** (2203.1*). ASTM A370.
X	**c.** Examine seam welds of structural tubes and pipes	**Periodic**	**SI***	* DSA IR 17-3.
	Inspection:			
X	**d.** Verify member locations, bracing and all details constructed in the field.	**Continuous**	**PI**	
X	**e.** Verify stiffener locations, connection tab locations and all construction details fabricated in the shop.	**Periodic**	**SI**	
-	**18. HIGH STRENGTH BOLTS:**			
	Material Verification of High-Strength Bolts, Nuts, and Washers:			
X	**a.** Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA approved documents.	**Periodic**	**SI**	DSA IR 17-9
X	**b.** Test high-strength bolts, nuts and washers.	**Test**	**Lab**	**2213A.1** (2212.6.1*). ASTM F606, A370. DSA IR 17-8
	Inspection of High-Strength Bolt Installation:			
X	**c.** Bearing-type ("snug tight") connections.	**Periodic**	**SI***	DSA IR 17-9
	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	**a.** Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.	**Periodic**	**SI**	
X	**b.** Verify weld filler material manufacturer's certificate of compliance.	**Periodic**	**SI**	
X	**c.** Verify WPS, welder qualifications and equipment.	**Periodic**	**SI**	DSA IR 17-3.
-	**19.1 SHOP WELDING:**			
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	**b.** Inspect single-pass fillet welds ≤ 5/16"	**Periodic**	**SI**	Per AISC 360 (and AISC 341 as applicable). DSA IR 17-3.
+	**WOOD**			
+	**OTHER**			

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2 All Structural Testing: Laboratory Verified Report - Form DSA-291
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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

2013 CBC PC STRUCTURAL DESIGN NOTES

DESCRIPTION	DESIGN VALUES
DEAD AND LIVE LOADS	
ROOF LIVE LOAD (Lr)	20 PSF
ROOF DEAD LOAD (D)	5 PSF
ALLOWABLE SOIL PRESSURE	
DL	1000 PSF
DL+Lr	1000 PSF
DL+SNOW	1000 PSF
ROOF SNOW LOAD	
GROUND SNOW LOAD (Pg)	22 PSF
SLOPED ROOF SNOW LOAD (Ps)	20 PSF
SNOW EXPOSURE FACTOR (Ce)	1.1
SNOW IMPORTANCE FACTOR (I)	1.0
THERMAL FACTOR (Ct)	1.2
FLOOD DESIGN	
FLOOD HAZARD AREA	NO
WIND DESIGN	
ULTIMATE DESIGN WIND SPEED (Vult)	130 MPH
WIND EXPOSURE FACTOR	C
TOPOGRAPHIC FACTOR (Kzt)	1.0
ASCE 7-10 WIND ANALYSIS METHOD	CHAPTER 27 DIRECTIONAL PROCEDURE
VELOCITY PRESSURE EXPOSURE COEFFICIENT (Kz)	0.85
NET PRESSURE COEFFICIENT	VARIES, SEE CALCULATIONS
WIND DIRECTIONALITY FACTOR (Kd)	0.85
WIND VELOCITY PRESSURE (qh)	31.3 PSF
SEISMIC DESIGN	
LATERAL FORCE RESISTING SYSTEM	STEEL ORDINARY MOMENT RESISTING FRAMES
ASCE 7-10 ANALYSIS PROCEDURE	SECTION 12.8 EQUIVALENT LATERAL FORCE PROCEDURE
SEISMIC DESIGN CATEGORY	E
SEISMIC IMPORTANCE FACTOR	1.0
DESIGN BASE SHEAR (V)	1305 #
SEISMIC RESPONSE COEFFICIENT (C_s)	0.29
RESPONSE MODIFICATION FACTOR (R)	3.5
SYSTEM OVERSTRENGTH FACTOR (Ω_0)	3.0
DEFLECTION AMPLIFICATION FACTOR (Cd)	3.0
SITE CLASS	D
MAPPED MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD (S_s)	1.875
SHORT PERIOD SITE COEFFICIENT (Fa)	1.0
DESIGN MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD (S_{DS})	1.0
MAPPED MCE, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD (S_1)	1.3
LONG PERIOD SITE COEFFICIENT (Fv)	1.5
DESIGN, 5% DAMPED, SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD (S_{D1})	1.3
HORIZONTAL OR VERTICAL IRREGULARITY TYPES	NONE

BUILDING DATA

CONSTRUCTION CLASSIFICATION	TYPE II-B
OCCUPANCY CLASSIFICATION	A-2
RISK CATEGORY	II
NUMBER OF STORIES	1
MINIMUM SEISMIC SEPARATION	3"
BUILDING AREA	900 SF

NOTICE OF DISCLAIMER FOR STRUCTURAL ENGINEERING RESPONSIBILITY

1. PER TITLE 24, PART 1, SECTION 4-316(e) OF THE CALIFORNIA CODE OF REGULATIONS, THIS NOTICE SHALL BE GIVEN TO DSA PRIOR TO THE APPROVAL OF PLANS AND SPECIFICATIONS.
2. FOR THE SITE SPECIFIC PROJECT, ROGER HYYTINEN IS NOT THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE, UNLESS OTHERWISE NOTED.
3. FOR THE SITE SPECIFIC PROJECT, ROGER HYYTINEN'S RESPONSIBILITY IS LIMITED TO THE PREPARATION OF PLANS AND SPECIFICATIONS FOR THE SHELTER(S) OF THIS PC ONLY.
4. STRUCTURAL OBSERVATION OF CONSTRUCTION IS SPECIFICALLY EXCLUDED FROM ROGER HYYTINEN'S RESPONSIBILITY FOR THE SITE SPECIFIC PROJECT.
5. ALL CONSTRUCTION ACTIVITIES RELATED TO STRUCTURAL ENGINEERING SHALL BE DELEGATED TO A QUALIFIED ENGINEER BY THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE. THESE ACTIVITIES INCLUDE, BUT ARE NOT LIMITED TO, APPROVAL OF INSPECTOR QUALIFICATIONS, STRUCTURAL OBSERVATION OF CONSTRUCTION, REVIEW OF INSPECTION REPORTS, AND SIGNING OFF THE VERIFIED REPORT FOR COMPLETED WORK.
6. ROGER HYYTINEN WILL BE RESPONSIBLE FOR RESPONDING TO QUESTIONS PERTAINING TO THE PLANS AND SPECIFICATIONS FOR THE SHELTER(S) OF THIS PC WHICH ARISE DURING PLAN CHECK AND CONSTRUCTION.
7. IN THE EVENT THAT ROGER HYYTINEN IS REQUIRED TO PROVIDE STRUCTURAL OBSERVATION OF CONSTRUCTION, HE SHALL BE NOTIFIED IN WRITING PRIOR TO THIS REQUIREMENT BEING MADE. ALSO, HIS ANTICIPATED ADDITIONAL FEES FOR THIS ADDITIONAL WORK SHALL BE PAID IN ADVANCE, PRIOR TO ANY STRUCTURAL OBSERVATION OR CONSTRUCTION SERVICES BEING PERFORMED.

GENERAL NOTES

I. SHELTER DESIGN
- A. THE STRUCTURAL DESIGN OF THE COMPONENTS AND CONNECTIONS OF THIS SHELTER ARE SUFFICIENT FOR EAVE HEIGHTS RANGING FROM 7' UP TO 12' TALL.
- B. REQUIRED EAVE HEIGHT FOR EACH SITE SHALL BE DETERMINED BY OWNER.
- C. THIS SHELTER HAS BEEN DESIGNED AS AN OPEN STRUCTURE. THE ADDITION OF ANY ENCLOSURE DIRECTLY ATTACHED TO THE SHELTER, SUCH AS WALLS, INSECT MESH, OR SHADE SCREENS, SHALL BE PROHIBITED AS INCREASED WIND FORCES MAY RESULT.

II. DESIGN AND CONSTRUCTION STANDARDS
- A. THE DESIGN OF THIS STRUCTURE IS IN CONFORMANCE WITH THE FOLLOWING STANDARDS AND ALL PHASES OF CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE FOLLOWING STANDARDS.
  1. 2013 CALIFORNIA ADMINISTRATIVE CODE (CAC) ..... (PART 1, TITLE 24, CCR)
  2. 2013 CALIFORNIA BUILDING CODE (CBC), VOLUMES 1 AND 2 (PART 2, TITLE 24, CCR) (2012 INTERNATIONAL BUILDING CODE WITH 2013 CALIFORNIA AMENDMENTS)
  3. 2013 CALIFORNIA ELECTRICAL CODE ..... (PART 3, TITLE 24, CCR) (2011 NATIONAL ELECTRICAL CODE WITH 2013 CALIFORNIA AMENDMENTS)
  4. 2013 CALIFORNIA MECHANICAL CODE (CMC) ..... (PART 4, TITLE 24, CCR) (2012 UNIFORM MECHANICAL CODE WITH 2013 CALIFORNIA AMENDMENTS)
  5. 2013 CALIFORNIA PLUMBING CODE (CPC) ..... (PART 5, TITLE 24, CCR) (2012 UNIFORM PLUMBING CODE WITH 2013 CALIFORNIA AMENDMENTS)
  6. 2013 CALIFORNIA ENERGY CODE ..... (PART 6, TITLE 24, CCR)
  7. 2013 CALIFORNIA FIRE CODE (CFC) ..... (PART 9, TITLE 24, CCR) (2012 INTERNATIONAL FIRE CODE WITH 2013 CALIFORNIA AMENDMENTS)
  8. 2013 CALIFORNIA GREEN BUILDING STANDARDS CODE .....(PART 11, TITLE 24, CCR)
  9. 2013 CALIFORNIA REFERENCED STANDARDS CODE ..... (PART 12, TITLE 24, CCR)
  10. NFPA 13 - 2013
  11. NFPA 72 - 2013

III. CONSTRUCTION CHANGES
- A. CHANGES TO THE APPROVED PLANS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR CONSTRUCTION CHANGE DOCUMENT APPROVED BY THE DIVISION OF THE STATE ARCHITECT AS REQUIRED BY PART 1, TITLE 24, C.C.R.

IV. FOUNDATION
- A. THE FOUNDATION SHALL REST ON SOUND SOIL THAT IS FREE OF ORGANIC AND DELETERIOUS MATERIALS AND CAPABLE OF SUPPORTING 1000 PSF VERTICAL BEARING PRESSURE.
- B. FOR LATERAL LOADING, THE FOUNDATION HAS BEEN DESIGNED TO THE MINIMUM LATERAL BEARING VALUE IN CBC TABLE 1806A.2. THIS IS 100 PSF/FT LATERAL BEARING.
- C. FOUNDATION DESIGN SHOWN IS BASED ON SOIL CONDITIONS GIVEN IN NOTES A AND B, ABOVE. OWNER SHALL VERIFY ACTUAL SOIL CONDITIONS AT EACH JOB SITE AND ANY REQUIRED ADJUSTMENTS TO THE FOOTING DESIGN SHALL BE DESIGNED BY OTHERS.

V. CONCRETE
- A. COMPRESSION STRENGTH OF ALL REINFORCED CONCRETE SHALL NOT BE LESS THAN 4000 PSI AT 28 DAYS.
- B. REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO THE REQUIREMENTS OF MINIMUM ASTM A615 GRADE 40 FOR #4 AND SMALLER BARS AND GRADE 60 FOR BARS LARGER THAN #4.
- C. MINIMUM CONCRETE CLEAR COVER FOR REINFORCING BARS SHALL BE 3".
- D. A CONCRETE MIX DESIGN IN ACCORDANCE WITH CBC SECTION CHAPTER 19A SHALL BE PERFORMED AND STAMPED BY A CIVIL ENGINEER LICENSED IN THE STATE OF CALIFORNIA. THE CONCRETE MIX DESIGN SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD PRIOR TO CONSTRUCTION.
- E. THE MIX DESIGN SHALL MEET THE CRITERIA HEREIN AND SHALL BE PROPER FOR LOCAL CONDITIONS INCLUDING, BUT NOT LIMITED TO, FREEZING AND THAWING EXPOSURE, CHEMICAL AND SALT EXPOSURE, AND SOIL CORROSIVITY WHERE SUCH PROBLEMS EXIST.
- F. NON-SHRINK GROUT OR DRY PACK SHALL BE A PREMIXED, NONMETALLIC FORMULA WITH A MINIMUM COMPRESSIVE STRENGTH OF 7000 PSI AT 28 DAYS AND HAVING THE FOLLOWING CHARACTERISTICS: NO SHRINKAGE AFTER PLACEMENT OR EXPANSION AFTER SET (ASTM C1090), ONE DAY COMPRESSIVE STRENGTH OF AT LEAST 3000 PSI (ASTM C109) AND INITIAL SET TIME OF NOT LESS THAN 45 MINUTES (ASTM C191). PROVIDE "HI-FLOW GROUT" OR "DRY PACK GROUT" BY EUCLID, OR AN APPROVED EQUAL.

VI. STRUCTURAL STEEL
- A. STEEL PLATE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
- B. HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B.
- C. ALL STRUCTURAL STEEL SHALL BE IDENTIFIED BY MILL CERTIFICATE.
- D. HIGH STRENGTH BOLTS (HSB) SHALL BE GALVANIZED AND SHALL CONFORM TO THE REQUIRMENTS OF ASTM A325-N. HIGH STRENGTH BOLTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION PLUS AN ADDITIONAL HALF TURN.
- E. ALL HIGH STRENGTH BOLTS SHALL HAVE CERTIFICATION.
- F. WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY'S SPECIFICATION FOR THE MATERIAL BEING WELDED. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.
- G. WELD ELECTRODES SHALL BE E70XX AND SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.5-6.3 FOR DEMAND CRITICAL WELDS.
- H. ALL WELDING SHALL BE APPROVED BY AN AWS CERTIFIED INSPECTOR.
- I. STEEL FRAMING SHALL BE COATED WITH ANTI-GRAFFITI POLYESTER TGIC POWDER COAT FINISH MEETING AAMA 2604-02 SPECIFICATIONS.
- J. SHOP DRAWINGS OF ALL STRUCTURAL STEEL SHALL BE SUBMITTED TO HYYTINEN ENGINEERING FOR APPROVAL PRIOR TO FABRICATION.
- K. ALL BOLT HOLE DIAMETERS SHALL BE EQUAL TO THE BOLT DIAMETER PLUS 1/16" U.N.O. BOLT HOLES FOR ANCHOR BOLTS SHALL BE EQUAL TO THE BOLT DIAMETER PLUS 1/8".
- L. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 36 AND SHALL BE HOT DIP GALVANIZED.

VII. ALUMINUM
- A. INTERLOCKING SEAM ALUMINUM ROOF DECK SHALL BE ROLL FORMED FROM ALUMINUM ALLOY 3004-H151 AND SHALL CONFORM TO THE DECK PROFILE SHOWN ON THE DRAWINGS.
- B. ALUMINUM ROOF DECK SHALL BE COATED WITH HEAT REFLECTIVE BASF ULTRA-COOL COATING OR APPROVED EQUAL.
- C. EXTRUDED ALUMINUM RIDGE CAP SHALL BE FABRICATED FROM ALUMINUM ALLOY 6105-T5 AND SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THE DRAWINGS.
- D. EXTRUDED ALUMINUM FASCIA SHALL BE FABRICATED FROM ALUMINUM ALLOY 6063-T5. EXTRUDED ALUMINUM GUTTER SHAL BE FABRICATED FROM ALUMINUM ALLOY 6105-T5. ALUMINUM COMPONENTS SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THE DRAWINGS.
- E. EXTRUDED ALUMINUM RIDGE CAP, GUTTER, AND FASCIA SHALL BE COATED WITH ANTI-GRAFFITI POLYESTER TGIC POWDER COAT FINISH MEETING AAMA 2604-02 SPECIFICATIONS.

VIII. SCREWS
- A. SCREWS SHALL BE HILTI KWIK-PRO SELF DRILLING SCREWS WITH BOND SEAL WASHERS PER ICC ESR-2196 OR APPROVED EQUAL.
- B. SCREWS ATTACHING TO STEEL SHALL BE 12-24 HEX WASHER HEAD (HWH) #5 POINT SCREWS. SCREWS ATTACHING TO ALUMINUM SHALL BE 8-18 HEX WASHER HEAD (HWH) #2 POINT SCREWS.
- C. ALL SCREWS SHALL BE STAINLESS STEEL OR COATED WITH ZINC.
- D. THE MANUFACTURER SHALL PROVIDE A SCREW CERTIFICATION LETTER STATING THAT SCREWS PROVIDED MATCH THE SIZE AND TYPE SPECIFIED HEREIN. THE CERTIFICATION LETTER SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD PRIOR TO INSTALLATION.

IX. SHOP FABRICATION AND FIELD ASSEMBLY
- A. ALL STRUCTURAL STEEL AND ALUMINUM COMPONENTS SHALL BE SHOP FABRICATED SO THAT FIELD ASSEMBLY OF CONNECTIONS CAN BE PERFORMED USING ONLY BOLTING AND SCREW PLACEMENT.

X. SPECIAL INSPECTION
- A. THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR TO PERFORM INSPECTION OF THE CONSTRUCTION OF THIS PC IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 17A OF THE 2013 CALIFORNIA BUILDING CODE (PART 2, TITLE 24, C.C.R.) AND THE DIVISION OF THE STATE ARCHITECT.

XI. FIRE LIFE SAFETY
- A. AN AUTOMATIC FIRE PROTECTION SYSTEM MAY BE REQUIRED FOR THIS BUILDING DEPENDING ON SITE SPECIFIC REQUIREMENTS. WHERE REQUIRED, THE AUTOMATIC FIRE PROTECTION SYSTEM SHALL BE DESIGNED BY OTHERS.
- B. THE DESIGN OF THIS SHELTER IS CAPABLE OF SUPPORTING THE WEIGHT OF A FIRE SPRINKLER SYSTEM (1.5 PSF).
- C. THE METAL ROOFING COMPLIES WITH FIRE CLASSIFICATION B. THIS SHELTER HAS NOT BEEN DESIGNED FOR PLACEMENT WITHIN ANY FIRE HAZARD SEVERITY ZONE.

SITE SPECIFIC OPTIONS

TO BE COMPLETED PRIOR TO PLAN CHECK SUBMITTAL.

QUANTITY OF SHELTERS OF THIS PC AT THIS SITE	_____
SHELTER EAVE HEIGHT (7'-6" MIN, 12' MAX)	
CONCRETE SLAB OR ASPHALT PAVING (BY OTHERS) OVER FOOTINGS?	☐ YES ☐ NO
ROOF DOWNSPOUTS?	☐ YES ☐ NO
ALUMINUM "V" PLUGS IN ROOF VOIDS FOR BIRD CONTROL?	☐ YES ☐ NO

SHEET INDEX

PRE-CHECK (PC) DOCUMENT
CODE: 2013 CBC
A separate project application for construction is required.

FILE NO.: PC-058
APPL. NO.: 02-113840

HYYTINEN ENGINEERING
5458 Longley Lane, Suite B
Reno, Nevada 89511
(775) 826-3019 PHONE
(775) 826-3076 FAX

REGISTERED PROFESSIONAL ENGINEER ROGER G. HYYTINEN No. S2732 Exp. 12-31-14 STRUCTURAL STATE OF CALIFORNIA

IDENTIFICATION STAMP ONLY OF THE STATE ARCHITECT
02 113840
AC TM FLS SS SF
DATE 10/29/14

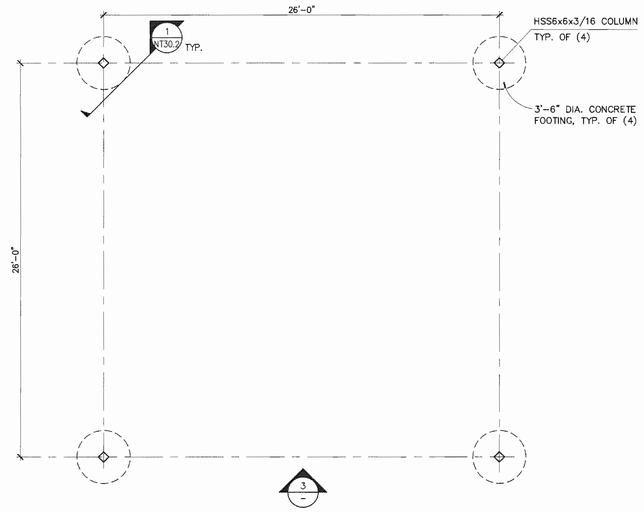
PC

PROJECT:
30' NAVAJO SHELTERS
AMERICANA BUILDING PRODUCTS
#2 Industrial Dr. - Salem, IL 62881
(800)851-0865 www.americana.com

SITE ADDRESS:

SHEET TITLE:
DESIGN NOTES, EXAMPLE FORM DSA 103

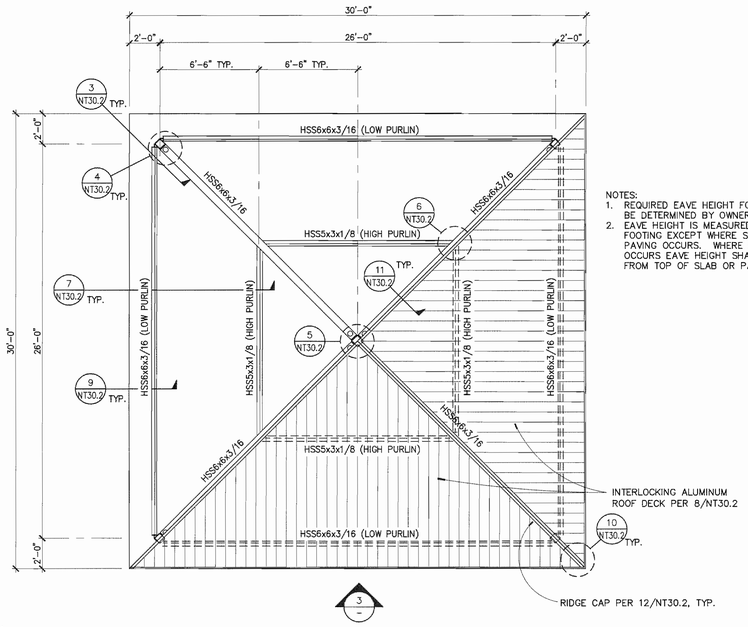
DRAWN: NVGI
CHECKED: R.H.
DATE: 10/21/14
SCALE: AS NOTED
JOB NO.: 44-14
DRAWING NO.: NT30
SHEET: NT30.0



30' NAVAJO SHELTER FOUNDATION PLAN

1/4" = 1'-0"

1

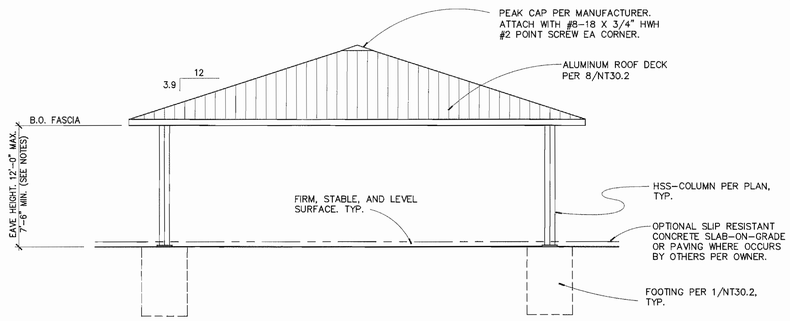


NOTES:
1. REQUIRED EAVE HEIGHT FOR EACH SITE SHALL BE DETERMINED BY OWNER.
2. EAVE HEIGHT IS MEASURED FROM TOP OF FOOTING EXCEPT WHERE SLAB-ON-GRADE OR PAVING OCCURS. WHERE SLAB OR PAVING OCCURS EAVE HEIGHT SHALL BE MEASURED FROM TOP OF SLAB OR PAVING.

30' NAVAJO SHELTER ROOF PLAN

1/4" = 1'-0"

2



BUILDING ELEVATION

1/4" = 1'-0"

3

PRE-CHECK (PC) DOCUMENT
CODE: 2013 CBC
A separate project application for construction is required.

FILE NO.: PC-058
APPL. NO.: 02-113840

HYYTINEN ENGINEERING
5468 Longley Lane, Suite B
Reno, Nevada 89511
(775) 826-3019 PHONE
(775) 826-3076 FAX

REGISTERED PROFESSIONAL ENGINEER
ROGER S. HYYTINEN
No. 52715
EXP. 12-31-14
STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 113840
AC TM P.E. SC SI
DATE 10/27/14

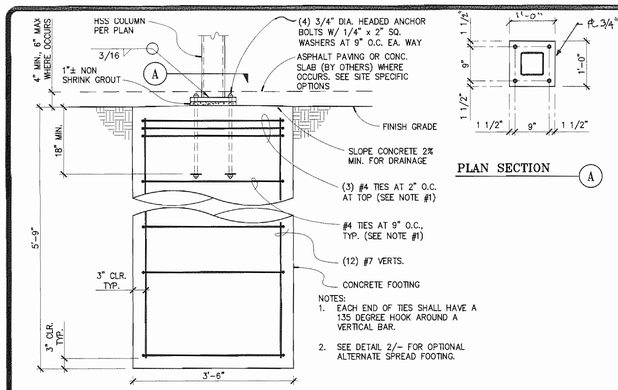
PC

PROJECT:
30' NAVAJO SHELTERS
AMERICANA BUILDING PRODUCTS
#2 Industrial Dr. - Salem, IL 62881
(800)851-0865 www.americana.com

SITE ADDRESS:

SHEET TITLE:
PLANS AND ELEVATIONS

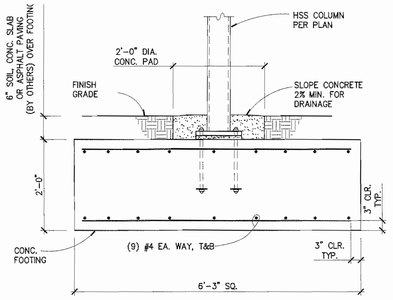
DRAWN: NVGI
CHECKED: R.H.
DATE: 10/21/14
SCALE: AS NOTED
JOB NO.: 44-14
DRAWING NO.: NT30
SHEET: NT30.1



PLAN SECTION A

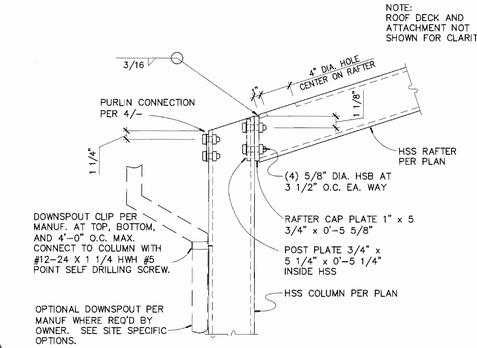
FOUNDATION SECTION
3/4" = 1'-0"

1



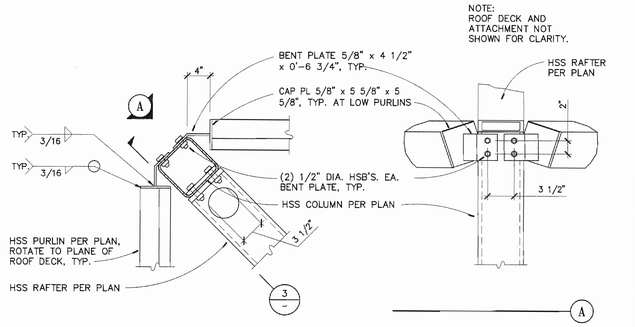
ALTERNATE FOUNDATION SECTION
3/4" = 1'-0"

2



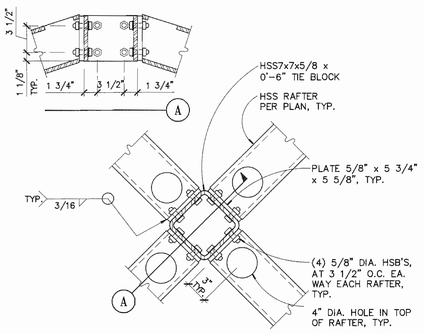
RAFTER TO COLUMN CONNECTION
1 1/2" = 1'-0"

3



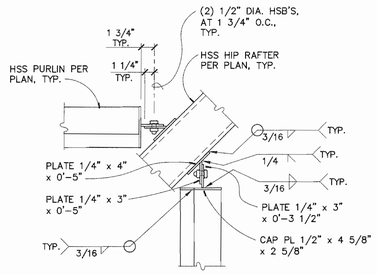
LOW PURLIN TO COLUMN CONNECTION
1 1/2" = 1'-0"

4



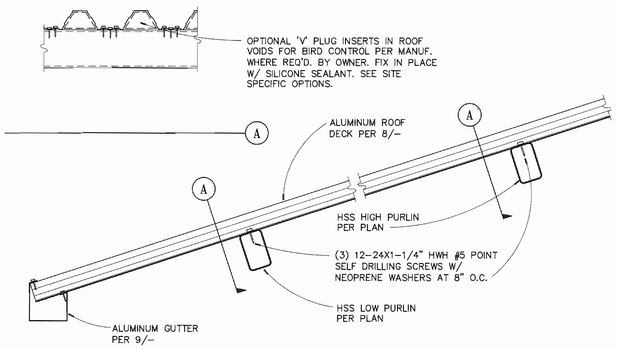
RAFTER TO TIE-BLOCK CONNECTION
1 1/2" = 1'-0"

5



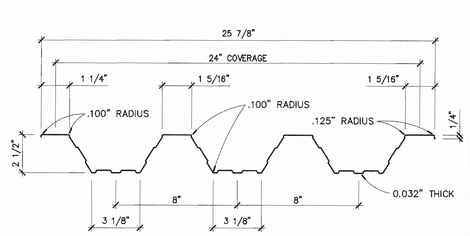
HIGH PURLIN TO RAFTER CONNECTION
1 1/2" = 1'-0"

6



ROOF DECK TO PURLIN CONNECTIONS
1 1/2" = 1'-0"

7

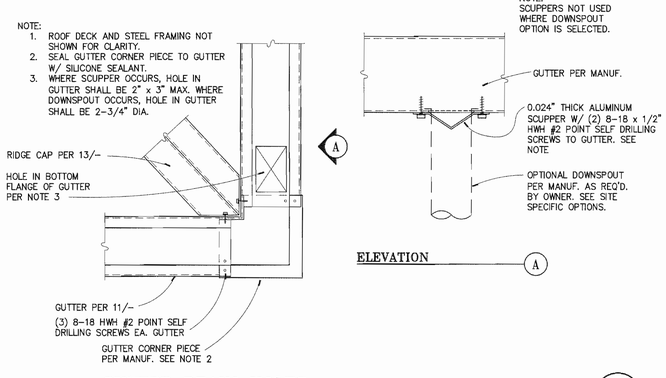


INTERLOCKING ROOF DECK PROFILE
3" = 1'-0"

8

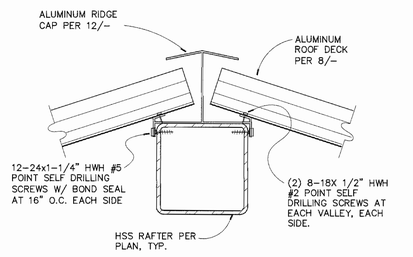
GUTTER SECTION AND GUTTER SPLICE DETAILS
3" = 1'-0"

9



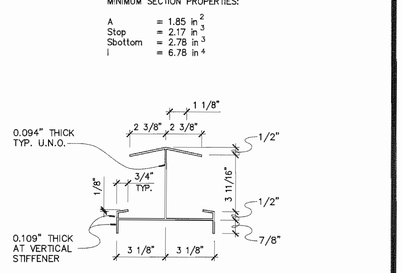
GUTTER DRAIN HOLES
3" = 1'-0"

10



ROOF DECK TO RAFTER CONNECTION
3" = 1'-0"

11



RIDGE CAP PROFILE
3" = 1'-0"

12

PRE-CHECK (PC) DOCUMENT
CODE: 2013 CBC
A separate project application for construction is required.

FILE NO.: PC-058
APPL. NO.: 02-113840

HYYTINEN ENGINEERING
5458 Longley Lane, Suite B
Reno, Nevada 89511
(775) 826-3019 PHONE
(775) 826-3076 FAX

REGISTERED PROFESSIONAL ENGINEER
ROGER R. HYYTINEN
No. 52132
EXP. 12-31-14
STRUCTURAL
STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 113840
AC TM FLS SS/CCO SI
DATE 10/24/14

PC

PROJECT:
30' NAVAJO SHELTERS
AMERICANA BUILDING PRODUCTS
#2 Industrial Dr. - Salem, IL 62881
(800)851-0865 www.americana.com

SITE ADDRESS:

SHEET TITLE:
SECTIONS AND DETAILS

DRAWN: NVGI
CHECKED: R.H.
DATE: 10/21/14
SCALE: AS NOTED
JOB NO.: 44-14
DRAWING NO.: NT30
SHEET: NT30.2

Geotechnical Engineering Report

Proposed Horticulture Expansion
Solano Community College District, Fairfield Campus
4000 Suisun Valley Road
Fairfield, California

December 22, 2015
Terracon Project No. NB155061

Prepared for:
Solano Community College District
Fairfield, California

Prepared by:
Terracon Consultants, Inc.
Sacramento, California

December 22, 2015

Solano Community College District
360 Campus Lane, suite 203
Fairfield, CA 94534

Attn: Mr. John Pranys, Sr. Project Engineer
P: (707) 863-7869
C: (916) 208-2197
E: john.pranys@solano.edu

Re: **Geotechnical Engineering Report**
Proposed Horticulture Expansion
Solano Community College District, Fairfield Campus
4000 Suisun Valley Road
Fairfield, California
Terracon Project No. NB155061

Dear Mr. Pranys:

Terracon Consultants, Inc. (Terracon) has completed the geotechnical engineering report for the above referenced project. This study was performed in general accordance with our proposal dated October 5, 2015 with proposal number PNB150339. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of the proposed expansion.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,
TERRACON CONSULTANTS, INC.

Gerry Lenehan, PE
Professional Engineer 73459
Project Manager

Robert Holmer, GE
Geotechnical Engineer 2672
Office Manager

Enclosures
cc: 1 – Client (PDF)
1 – File

TABLE OF CONTENTS

TABLE OF CONTENTS (continued)

EXECUTIVE SUMMARY

A geotechnical exploration has been performed for the proposed the horticulture expansion at the existing Solano Community College located at 4000 Suisun Valley Road in Fairfield, California. Three (3) borings were drilled to depths of 11½ to 51½ feet below ground surface (bgs) within the footprint of the proposed buildings. The geotechnical considerations identified included the following:

- **Site Soils:** The subsurface soils were generally consistent between borings. The subsurface soils generally consisted of lean clay to sandy lean clay to the maximum depth explored of 51½ feet bgs. Groundwater was encountered at an initial depth of 20 feet bgs and was measured at approximately 16 feet bgs immediately after our exploration was completed.

- **Foundations:** The proposed buildings may be supported by spread footings extending to a depth of at least 24 inches below the lowest adjacent finished soil grade bearing on native soil. The near surface clay soils are not suitable for reuse as engineered fill for this project.

- **Seismic Considerations:** The 2013 California Building Code (CBC) Seismic Site Classification for this site is D.

- **Earthwork:** Close monitoring of the construction operations discussed herein will be critical in achieving the design subgrade support. We therefore recommend that Terracon be retained to monitor this portion of the work.

This summary should be used in conjunction with the entire report for design purposes. It should be recognized that details were not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein. The section titled **GENERAL COMMENTS** should be read for an understanding of the report limitations.

GEOTECHNICAL ENGINEERING REPORT
PROPOSED HORTICULTURE EXPANSION
SOLANO COMMUNITY COLLEGE, FAIRFIELD CAMPUS
4000 SUISUN VALLEY ROAD
SACRAMENTO, CALIFORNIA

Terracon Project No. NB155061
December 22, 2015

1.0 INTRODUCTION

This report presents the results of our geotechnical engineering services performed for the proposed Horticulture Expansion to the existing Solano Community College located at 4000 Suisun Valley Road in Fairfield, California. The Site Location Map (Exhibit A-1) is included in Appendix A of this report. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- subsurface soil conditions
- seismic considerations
- earthwork
- exterior concrete sidewalks
- groundwater conditions
- foundation design and construction
- floor slab design and construction
- retaining walls

Our geotechnical engineering scope of work for this project included the advancement of three (3) borings to a maximum depth of 51½ feet below ground surface (bgs) within the footprint of the proposed buildings.

Logs of borings along with a Boring Location Diagram (Exhibit A-2) are included in Appendix A of this report. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included in Appendix B of this report. Descriptions of the field exploration and laboratory testing are included in their respective appendices.

2.0 PROJECT INFORMATION

2.1 Project Description

Item	Description
Site layout	See Appendix A, Exhibit A-1 and A-2: Site Diagram and Boring Location Diagram.
Structures	The proposed construction will consist of a total of three (3) pre-fabricated buildings, Earthwork and grading will be required at all three locations. The three buildings will include a storage facility (1600 ft^2), greenhouse (700 ft^2), and a farmer's stand (1225 ft^2).

Item	Description
Construction	Construction will consist of pre-fabricated wood frame buildings founded on a spread footing foundation system with concrete slab on grade floors, with associated asphalt-paved roads and concrete walkways.
Maximum loads	■ Maximum Column Loads: 20-30 kips (assumed) ■ Maximum Wall Loads: less than 2 kips/ft. (assumed) ■ Maximum Floor Loads: less than 100 psf (assumed)
Grading	Based upon site topography, cuts and fills on the order of approximately two (2) foot are anticipated to provide a level building pad.

2.2 Site Location and Description

Item	Description
Location	4000 Suisun Road, Fairfield, California.
Existing site features	The site is located at the northeastern edge of the Solano Community College campus. The immediate site around the proposed building consists of asphalt paved roadways and parking with structures associated with the campus to the south.
Surrounding developments	The general location of this site is in Fairfield which is highly developed. North: Solano College Road followed by agricultural land. West: Asphalt-paved parking lot developed by solar car port canopies. South: Solano Community College Campus. East: Solano College Road followed by undeveloped land.
Current ground cover	The site is covered with grass.
Existing topography	Site topography is relatively flat with changes in elevation on the order of 1 feet across the site.
Seismic Hazards	Based on our review of the State of California Seismic Hazard Zone Maps, the site is not shown to be within an Alquist-Priolo special studies zone for earthquake faults. Upon our review of the Association of Bay Area Governments earthquake liquefaction susceptibility maps, the project site si mapped in a 'moderate' area of susceptibility. A liquefaction analysis has been performed as per the 2013 California Building Code.

3.0 SUBSURFACE CONDITIONS

3.1 Geology

The project area is situated within the Coast Range geomorphic province of California. The native soils underlying the site are considered to consist of undifferentiated alluvial deposits (Q_a) as described on the Geologic Map of the area.[1] According to the map, the sediments are late Quaternary in age (2.6 million years ago and present) and consist of pebble gravel, sand, and clay of valley areas. The surficial mapped geology is consistent with the materials encountered throughout the boring depths.

3.2 Typical Subsurface Profile

Specific conditions encountered at the boring locations are indicated on the individual boring logs. Stratification boundaries on the boring logs represent the approximate location of changes in soils types; in-situ, the transition between materials may be gradual. Details for the borings can be found on the attached boring logs.

The site conditions generally encountered are as follows:

Description	Approximate Depth to Bottom of Stratum	Material Encountered	Consistency/Density
Stratum 1	50½ feet bgs (Maximum Depth of Exploration)	Lean Clay to Sandy Lean Clay	soft to very stiff

Laboratory tests were conducted on selected soil samples and the test results are presented in Appendix B. The upper soils encountered at the site generally consisted of lean clay to sandy lean clay. The lean clays exhibited medium to high plasticity, and were found to have the following characteristics:

Sample Location	Depth (feet)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index	< No. 200 Sieve (%)
Boring B-1	5 to 6½	37	20	17	78
Boring B-3	10 to 11½	38	22	16	90
Boring B-3	1 to 2½	39	19	20	72

[1] Helly, E.J., 1979, Preliminary Geologic Map of Cenozoic Deposits of the Davis, Knights Landing, Lincoln, and Fair Oaks quadrangles, California, USGS, Scale 1:62,500

3.3 Groundwater

The boreholes were observed while drilling and after completion for the presence and level of groundwater. Groundwater was observed in the boring B-2 while drilling at a depth of approximately 20 feet and at the completion of drilling at a depth of approximately 16 feet. Groundwater was not encountered in borings B-1 or B-3 during our exploration.

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring logs.

3.4 Seismic Considerations

The site is located in Northern California, which is a seismically active area. The type and magnitude of seismic hazards affecting the site are dependent on the distance to causative faults, the intensity, and the magnitude of the seismic event. The table below indicates the distance of the fault zones and the associated maximum credible earthquake that can be produced by nearby seismic events, as calculated using the USGS Earthquake Hazard Program 2008 interactive deaggregations.

Characteristics and Estimated Earthquakes for Regional Faults		
Fault Name	**Approximate Distance to Site**	**Maximum Considered Earthquake (MCE) Magnitude**
N. San Andreas; SAO+SAN+SAP+SAS	134.3 km	8.03
Great Valley 7 Char	66.7 km	6.80
Hunting Creek-Berryessa Char	97.1 km	7.05

Based on nearby faults within the proximity of the site, the Maximum Considered Earthquake (MCE) peak ground acceleration at the subject site for a 2% Probability of Exceedance in 50 years is expected to be about 0.782g per the ASCE 7-10 standard with March 2013 errata. The site is not located within an Alquist-Priolo Earthquake Fault Zone based on our review of the State Fault Hazard Maps.[2]

The following table provides the seismic design criteria in accordance with the 2013 California Building Code at the approximate center of the site, obtained from the USGS Earthquake Hazards website (http://geohazards.usgs.gov/designmaps/us/application.php):

[2] California Department of Conservation Division of Mines and Geology (CDMG), *"Digital Images of Official Maps of Alquist-Priolo Earthquake Fault Zones of California, Southern Region"*, CDMG Compact Disc 2000-003, 2000.

Code Used	Site Classification
2013 California Building Code (CBC)[1]	D [2]
Site Latitude	38.2382°
Site Longitude	-121.1183°
S_s Spectral Acceleration for a Short Period	2.059g
S_1 Spectral Acceleration for a 1-Second Period	0.727g

1. In general accordance with the *2013 California Building Code,* Table 1613.5.2.
2. The 2013 California Building Code requires a site soil profile determination extending a depth of 100 feet for seismic site classification. The current scope requested does not include the required 100 foot soil profile determination. Borings for this report extended to a maximum depth of approximately 51.5 feet and this seismic site class assignment considers that hard native sandy clay continues below the maximum depth of the subsurface exploration. Additional exploration to greater depths could be considered to confirm the conditions below the current depth of exploration. Alternatively, a geophysical exploration could be utilized in order to attempt to justify a more favorable seismic site class.

3.5 Liquefaction

Liquefaction is a mode of ground failure that results from the generation of high pore water pressures during earthquake ground shaking, causing loss of shear strength. Liquefaction is typically a hazard where loose sandy soils exist below groundwater. The CGS has designated certain areas within California Bay Area as potential liquefaction hazard zones. These are areas considered at a risk of liquefaction-related ground failure during a seismic event, based upon mapped surficial deposits and the presence of a relatively shallow water table. The project site is not located within a liquefaction hazard zone as mapped or evaluated by the CGS. However, the Association of Bay Area Governments Resilience Program (ABAG) liquefaction susceptibility map based on United States Geological Survey (USGS) was reviewed and indicated the site has a moderate liquefaction susceptibility.

The consequences of one-dimensional settlement may be largely mitigated by the presence of the thick non-liquefied layer above the potentially liquefiable soils (Ishihara 1985, Naesgaard et al. 1998, Bouckovalas and Dakoulas 2007). It is our opinion that the presence of stiff lean clay and sandy lean clay soils (non-liquefiable layer) found beneath the existing ground surface may act as a bridging layer that redistributes stresses and therefore results in more uniform ground surface settlement if there is a deeper liquefiable soil beneath the 51½ foot depth of our borings. Based on our experience in this area of Fairfield and the soil conditions found at this site, we have concluded that liquefaction is not a potential hazard at this site.

4.0 RECOMMENDATIONS FOR DESIGN AND CONSTRUCTION

4.1 Geotechnical Considerations

Based on the results of the subsurface exploration, laboratory testing, and our analysis, it is our opinion that the proposed buildings may be supported on spread foundations that bear on firm undisturbed native clay soils. Geotechnical considerations for this project include:

- Expansion potential of subgrade soils

4.1.1 Expansion Potential of Subgrade Soils

Moderately expansive clay soils are present at this site. This report provides recommendations to help mitigate the effects of soil shrinkage and expansion on buildings supported on the expansive clay soil. However, even if these procedures are followed, some movement and at least minor cracking in the structure should be anticipated. The severity of cracking and other cosmetic damage such as uneven floor slabs will probably increase if any modification of the site results in excessive wetting or drying of the expansive soils. Eliminating the risk of movement and cosmetic distress may not be feasible, but it may be possible to further reduce the risk of movement if more expensive measures are used during construction.

Spread footing foundations should bear at least 24 inches into the native clay soils. Floor slabs and exterior flatwork should bear on at least 18 inches of engineered fill consisting of low volume change material. The onsite native clay soils materials are not suitable for use as engineered fill for this project.

Geotechnical engineering recommendations for foundation systems and other earth connected phases of the project are outlined below. The recommendations contained in this report are based upon the results of field and laboratory testing (which are presented in Appendices A and B), engineering analyses, and our current understanding of the proposed project.

4.2 Earthwork

The following presents recommendations for site preparation, excavation, subgrade preparation and placement of engineered fills on the project. The recommendations presented are for the design and construction of earth supported elements including foundations and concrete slabs on grade and are contingent upon following the recommendations outlined in this section. All grading for the structure should incorporate the limits of the proposed structure plus a lateral distance of at least five feet beyond the outside perimeter (the building pad).

Earthwork on the project should be observed and evaluated by Terracon. The evaluation of earthwork should include observation and testing of engineered fill, subgrade preparation,

foundation bearing soils, and other geotechnical conditions exposed during the construction of the project. Such evaluation is considered an extension of this study.

4.2.1 Site Preparation

Strip and remove any existing structures, foundations, slabs, trees, and other deleterious materials within the footprint of the proposed construction. Exposed native soils should be free of mounds and depressions which could prevent uniform compaction. Near surface clay soils are not suitable for use as engineered fill for this project.

4.2.2 Subgrade Preparation

Floor slabs and exterior flatwork should be supported on a minimum of 18 inches of engineered fill. The moisture content and compaction of subgrade soils should be maintained until foundation and slab construction. The minimum lateral extent of engineered fill should be at least 5 feet wider than the foundation perimeter. The on-site clay soils are not suitable for use as engineered fill.

During grading operations, exposed soils should be proof rolled and approved by the Engineer prior to the placement of engineered fill. Any soft spots, where the Contractor may have difficulty in obtaining the desired compaction, shall be removed and replaced with compacted engineered fill as described in this report.

4.2.3 Engineered Fill Material Requirements

All engineered fill materials from any source should be inorganic soils free of vegetation, debris, and fragments larger than three inches in size. Pea gravel or other similar non-cementitious, poorly-graded materials should not be used as fill or backfill without the prior approval of the geotechnical engineer.

Native clay soils are expansive and not suitable to be used as engineered fill. Import materials for use as engineered fill should be pre-approved by our representative during construction.

Import soils for use as compacted engineered fill material within the proposed building areas should conform to low volume change materials as indicated as follows:

Gradation	Percent Finer by Weight (ASTM C 136)
3”	100
No. 4 Sieve	50-100
No. 200 Sieve	20 - 40

- Liquid Limit ..... 30 (max)
- Plasticity Index ..... 12 (max)
- Maximum expansive index* ..... 20 (max)

*ASTM D4829

Engineered fill should be placed and compacted in horizontal lifts, using equipment and procedures that will produce recommended moisture contents and densities throughout the lift. Fill lifts should not exceed ten inches loose thickness.

4.2.4 Compaction Requirements

Recommended compaction and moisture content criteria for engineered fill materials are as follows:

Material Type and Location	Per the Modified Proctor Test (ASTM D 1557)		
	Minimum Compaction Requirement (%)	Range of Moisture Contents for Compaction Above Optimum	
		Minimum	Maximum
Approved import engineered fill soils:			
Beneath foundations:	90	0	+3
Beneath slabs:	90	0	+3
Beneath exterior sidewalks:	90	0	+3
Utility trenches (structural areas):	90	0	+3
On site Soils:			+3
Bottom of excavation receiving fill:	90	0	+3
Miscellaneous backfill:	90	0	+3
Utility trenches (Landscape areas):	90	0	+3
Beneath asphalt pavements:	95	0	+3
Beneath concrete pavements:	95	0	+3
Aggregate base (beneath pavements):	95	0	+3

4.2.5 Grading and Drainage

All final grades must provide effective drainage away from the buildings during and after construction. Water permitted to pond next to the building can result in greater soil movements than those discussed in this report. These greater movements can result in unacceptable differential movements, cracks, and leaks. Estimated movements described in this report are based on effective drainage for the life of the structure and cannot be relied upon if effective drainage is not maintained.

Exposed ground should be sloped at least 2 percent away from the building extending a minimum of 5 feet beyond the perimeter of the building. After building construction and landscaping, we recommend the Civil Engineer/Surveyor verify final grades to document that effective drainage has been achieved. Grades around the structure should also be periodically inspected and adjusted as necessary, as part of the structure maintenance program.

Planters located within 10 feet of the structure should be self-contained to prevent water accessing the building and pavement subgrade soils. Locate sprinkler mains and spray heads a minimum of 5 feet away from the building lines. Collect roof runoff in drains or gutters. Discharge roof drains and downspouts onto pavements which slope away from the building or extend down spouts a minimum of 10 feet away from the structure.

Downspouts, roof drains or scuppers should discharge into splash blocks or extensions when the ground surface beneath such features is not protected by exterior slabs or paving. Sprinkler systems should not be installed within 5 feet of foundation walls. Landscaped irrigation adjacent to the foundation systems should be minimized or eliminated.

4.2.6 Earthwork Construction Considerations

Based upon the subsurface conditions determined from the geotechnical exploration, subgrade soils exposed during construction are anticipated to be relatively workable. The workability of the subgrade may be affected by precipitation, repetitive construction traffic or other factors. If unworkable conditions develop, workability may be improved by scarifying and drying. If the construction schedule does not allow for scarifying and drying by aeration in place, the contractor may utilize dry crushed rock materials to stabilize wet subgrade materials. If soil stabilization is needed, Terracon should be consulted to evaluate the situation as needed.

Upon completion of filling and grading, care should be taken to maintain the subgrade moisture content. Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and re-compacted.

The contractor is responsible for designing and constructing stable, temporary excavations (including utility trenches) as required to maintain stability of both the excavation sides and bottom. Excavations should be sloped or shored in the interest of safety following local and federal regulations, including current OSHA excavation and trench safety standards.

The geotechnical engineer should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation; proof-rolling; placement and compaction of controlled compacted fills; backfilling of excavations to the completed subgrade.

We recommend that the earthwork portion of this project be completed during extended periods of dry weather if possible. If earthwork is completed during the wet season it may be necessary to take extra precautionary measures to protect subgrade soils. Wet season earthwork may require additional mitigative measures beyond that which would be expected during the drier summer and fall months. This could include diversion of surface runoff around exposed soils and draining of ponded water on the site. Once subgrades are established, it may be necessary to protect the exposed subgrade soils from construction traffic.

4.3 Foundations

In our opinion, the proposed building can be supported by a shallow, spread footing foundation system bearing on native soils with footings extending a minimum of 24 inches below lowest adjacent grade. Design recommendations for shallow foundations for the proposed structure are presented in the following paragraphs.

4.3.1 Foundation Design Recommendations

DESCRIPTION	RECOMMENDATION
Foundation Type	Conventional Shallow Spread Footings
Bearing Material	Native undisturbed soil
Allowable Bearing Pressure	2,200 psf
Minimum Plan View Dimensions	Walls: 12 inches; Columns: 24 inches
Minimum Embedment Below Finished Grade	24 inches
Total Estimated Settlement	1-inch
Lateral Resistance	Passive: 300 pcf Coefficient of Friction: 0.30
Estimated Differential Settlement	½ inch over 40 feet

4.3.2 Foundation Construction Considerations

Finished grade is defined as the lowest adjacent grade within five feet of the foundations. The allowable foundation bearing pressures apply to dead loads plus design live load conditions. The design bearing pressure may be increased by one-third when considering total loads that include transient conditions, such as wind or seismic. The weight of the foundation concrete below grade may be neglected in dead load computations. Passive and friction may be combined to resist lateral loads provided the passive resistance is reduced by half.

Total and differential settlements should not exceed predicted values, provided that:

- Foundations are constructed as recommended, and
- Essentially no changes occur in water contents of foundation soils.

Additional foundation movements could occur if water from any source infiltrates the foundation soils; therefore, proper drainage should be provided in the final design and during construction.

Footings and foundations should be reinforced as necessary to reduce the potential for distress caused by differential foundation movement.

Foundation excavations and bearing soils should be observed by the geotechnical engineer. If the soil conditions encountered differ significantly from those presented in this report, then supplemental recommendations will be required.

The base of all foundation excavations should be free of water, loose soil, and gravel prior to placing concrete. Concrete should be placed soon after excavating and placement of engineered fill to reduce bearing soil disturbance. Should the soils at bearing level become excessively dry, disturbed, or saturated, the affected soil should be removed prior to placing concrete. In addition, as previously described, unsuitable soils should be completely removed from any proposed construction areas prior to construction. We recommend that Terracon be retained to observe and test the soil foundation bearing materials exposed in the over excavation.

4.4 Floor Slab

4.4.1 Design Recommendations

Item	Description
Floor slab support[1]	At least 18 inches of engineered fill consisting of low volume change material.
Modulus of subgrade reaction	150 pounds per square inch per inch (psi/in) (The modulus was obtained based on our experience with similar subgrade conditions.)[2]
Aggregate base course/capillary break	4-inches of crushed, washed ¾-inch gravel; or, 6-inches of compacted Aggregate Base (Caltrans Class 2)

1. Upon completion of grading operations in the building area, the recommended subgrade moisture content and density should be maintained to construction of the building floor slabs.
2. This value is for a small load area (1 sq. ft. or less) such as for forklift wheel loads or point loads and should be adjusted for large loaded areas.

The use of a vapor retarder should be considered beneath concrete slabs on grade that will be covered with wood, tile, carpet or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder.

In areas of exposed concrete, control joints should be saw-cut into the slab after concrete placement in accordance with ACI Design Manual, Section 302.1R-37 8.3.12 (tooled control joints are not recommended). To control the width of cracking (should it occur), continuous slab reinforcement should be considered in exposed concrete slabs.

4.4.2 Floor Slab Construction Considerations

Interior trench backfill placed beneath slabs should be compacted in accordance with recommendations outlined in the Earthwork section of this report. Other design and construction considerations, as outlined in the ACI Design Manual, Section 302.1R are recommended.

On most project sites, the site grading is generally accomplished early in the construction phase. However as construction proceeds, the subgrade may be disturbed due to utility excavations, construction traffic, desiccation, rainfall, etc. As a result, the floor slab subgrade may not be suitable for placement of base rock and concrete and corrective action will be required.

We recommend the area underlying the floor slab be rough graded and then thoroughly proof-rolled with a loaded tandem axel dump truck prior to final grading and placement of base rock. Particular attention should be paid to high traffic areas that were rutted and disturbed earlier and to areas where backfilled trenches are located. Areas where unsuitable conditions are located should be repaired by removing and replacing the affected material with properly compacted fill.

All floor slab subgrade areas should be moisture conditioned and properly compacted to the recommendations in this report immediately prior to placement of the base rock and concrete.

4.5 Lateral Earth Pressures

For on-site native soils and fill materials, or imported engineered fill materials above any free water surface, recommended equivalent fluid pressures for foundation elements are:

ITEM	Onsite Soils	Engineered Fill Soils
Active Case (psf/ft)	50	40
Passive Case (psf/ft)	300	400
At-Rest Case (psf/ft)	65	55
Coefficient of Friction	0.30	0.40

The lateral earth pressures herein do not include any factor of safety and are not applicable for submerged soils/hydrostatic loading. These values assume a level backfill. Additional recommendations may be necessary if such conditions are to be included in the design.

Fill against foundation and retaining walls should be compacted to densities recommended in the Earthwork section of this report. Compaction of each lift adjacent to walls should be accomplished with hand-operated tampers or other lightweight compactors.

4.6 Pavements

4.6.1 Subgrade Preparation

On most project sites, the site grading is accomplished relatively early in the construction phase. Fills are placed and compacted in a uniform manner. However, as construction proceeds, excavations are made into these areas, rainfall and surface water saturates some areas, heavy traffic from concrete trucks and other delivery vehicles disturbs the subgrade and many surface irregularities are filled in with loose soils to improve trafficability temporarily. As a result, the pavement subgrades, initially prepared early in the project, should be carefully evaluated as the time for pavement construction approaches.

We recommend the moisture content and density of the top 10 inches of the subgrade be evaluated and the pavement subgrades be proof rolled within two days prior to commencement of actual paving operations. Areas not in compliance with the required ranges of moisture or density should be moisture conditioned and recompacted. Particular attention should be paid to high traffic areas that were rutted and disturbed earlier and to areas where backfilled trenches are located. Areas where unsuitable conditions are located should be repaired by removing and replacing the materials with properly compacted fills.

After proof rolling and repairing deep subgrade deficiencies, the entire subgrade should be scarified and developed as recommended in Section **4.2** of the **Earthwork** section this report to provide a uniform subgrade for pavement construction. Areas that appear severely desiccated following site stripping may require further undercutting and moisture conditioning. If a significant precipitation event occurs after the evaluation or if the surface becomes disturbed, the subgrade should be reviewed by qualified personnel immediately prior to paving. The subgrade should be in its finished form at the time of the final review

4.6.2 Design Considerations

Traffic patterns and anticipated loading conditions were not available at the time that this report was prepared. However, we anticipate that traffic loads will be produced primarily by automobile traffic and occasional delivery and trash removal trucks. The thickness of pavements subjected to heavy truck traffic should be determined using expected traffic volumes, vehicle types, and vehicle loads and should be in accordance with local, city or county ordinances.

Two soil samples were obtained from the near surface soils on the site. Due to similarities in soil type, only one of the two samples was subjected to an R-value test in our laboratory. The approximate locations of the samples are shown on Exhibit A-2 in Appendix A. From the results of the R-value test, an R-value of 5 was obtained.

Pavement performance is affected by its surroundings. In addition to providing preventive maintenance, the civil engineer should consider the following recommendations in the design and layout of pavements:

- Final grade adjacent to parking lots and drives should slope down from pavement edges at a minimum 2%;
- The subgrade and the pavement surface should have a minimum ¼ inch per foot slope to promote proper surface drainage;
- Install pavement drainage surrounding areas anticipated for frequent wetting (e.g., garden centers, wash racks);
- Install joint sealant and seal cracks immediately;
- Seal all landscaped areas in, or adjacent to pavements to reduce moisture migration to subgrade soils;
- Place compacted, low permeability backfill against the exterior side of curb and gutter; and,
- Place curb, gutter and/or sidewalk directly on subgrade soils rather than on unbound granular base course materials.

4.6.3 Minimum Pavement Thickness

Assuming the pavement subgrades will be prepared as recommended within this report, the following pavement sections should be considered minimums for this project for the traffic indices assumed in the table below. As more specific traffic information becomes available, we should be contacted to reevaluate the pavement calculations.

Typical Pavement Section (inches)					
Traffic Area	**Alternative**	**Asphalt Concrete (AC) Surface Course**	**Portland Cement Concrete (PCC) [1]**	**Aggregate Base (AB) Course**	**Total Thickness**
Car Parking Assumed Traffic Index (TI) = 4.0	PCC	--	5.0	4.0	9.0
	AC	2.5	--	7.5	10.0
Auto Drive Areas Assumed Traffic Index (TI) = 5.0	PCC	--	6.0	4.0	10.0
	AC	3.5	--	8.5	11.0
Trucks/Heavy Traffic Assumed Traffic Index (TI) = 6.0	PCC	--	6.0	4.0	10
	AC	4.5	--	10.5	15.0

1. 4,000 psi at 28 days, 4-inch maximum slump and 5 to 7 percent air entrained, 6-sack min. mix. PCC pavements are recommended for trash container pads and in any other areas subjected to heavy wheel loads and/or turning traffic.

These pavement sections are considered minimal sections based upon the expected traffic and the existing subgrade conditions. However, they are expected to function with periodic maintenance and overlays if good drainage is provided and maintained. Base course or pavement materials should not be placed when the surface is wet. Surface drainage should be provided away from the edge of paved areas to minimize lateral moisture transmission into the subgrade.

Subgrade soils beneath all pavements should be scarified, moisture conditioned, and compacted to a minimum depth of 10 inches. All materials should meet the Caltrans Standard Specifications for Highway Construction. Aggregate base materials should meet the gradation and quality requirements of Class 2 Aggregate Base in Caltrans Standard Specifications, latest edition, Sections 25 through 29.

All concrete for rigid pavements should have a minimum flexural strength of 600 psi, and be placed with a maximum slump of four inches. Proper joint spacing will also be required to prevent excessive slab curling and shrinkage cracking. All joints should be sealed to prevent entry of foreign material and dowelled where necessary for load transfer.

4.6.4 Pavement Drainage

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet should be provided to remove water from the granular subgrade.

4.6.5 Pavement Maintenance

The pavement sections provided in this report represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration, and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing). Preventive maintenance is usually the first priority when implementing a pavement maintenance program. Additional engineering observation is recommended to determine the type and extent of a cost effective program. Even with periodic maintenance, some movements and related cracking may still occur and repairs may be required.

5.0 GENERAL COMMENTS

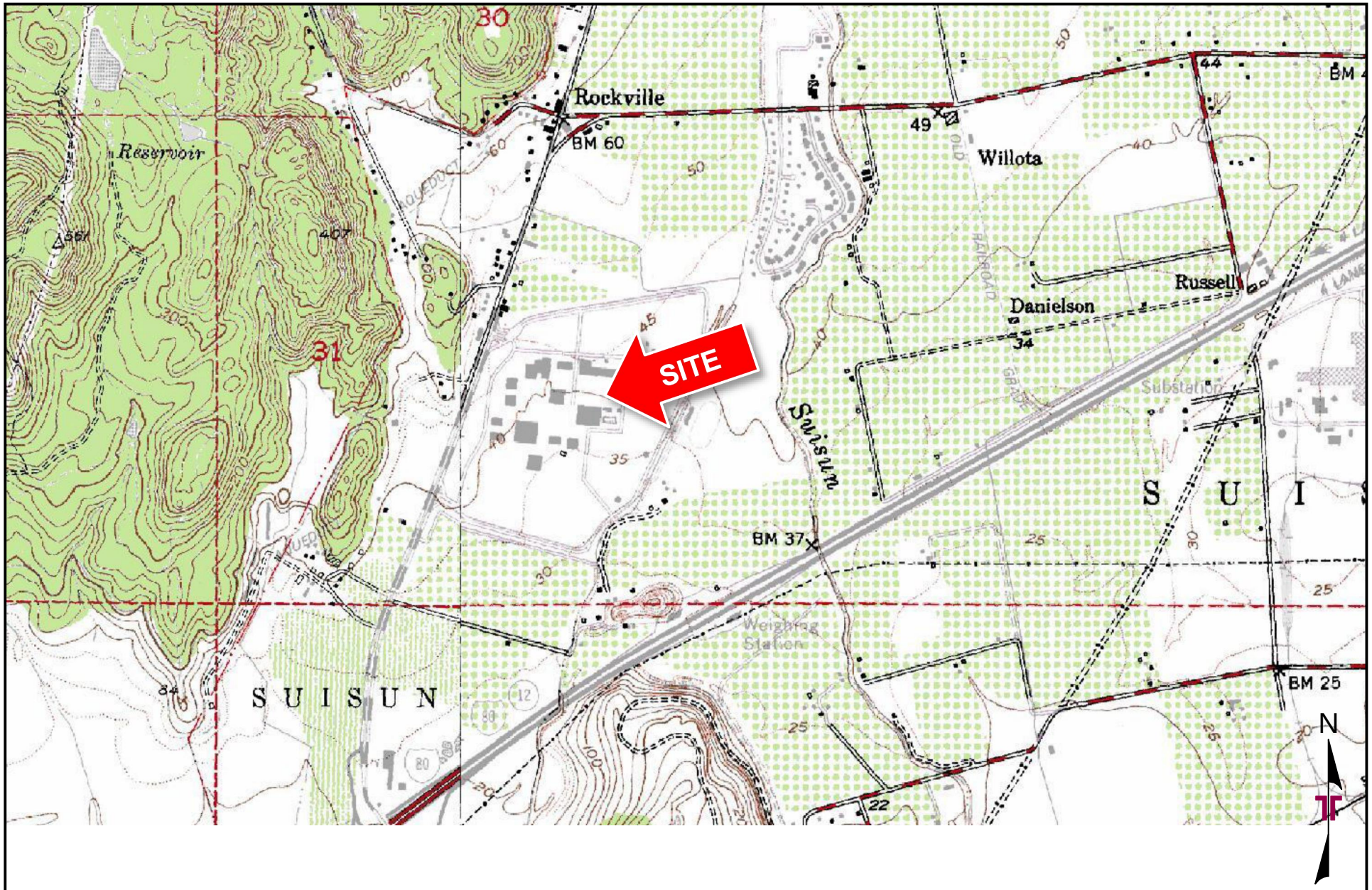
Terracon should be retained to review the final design plans and specifications so comments can be made regarding interpretation and implementation of our geotechnical recommendations in the design and specifications. Terracon also should be retained to provide observation and testing services during grading, excavation, foundation construction and other earth-related construction phases of the project.

The analysis and recommendations presented in this report are based upon the data obtained from the borings performed at the indicated locations and from other information discussed in this report. This report does not reflect variations that may occur between borings, across the site, or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. If variations appear, we should be immediately notified so that further evaluation and supplemental recommendations can be provided.

The scope of services for this project does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either expressed or implied, are intended or made. Site safety, excavation support, and dewatering requirements are the responsibility of others. In the event that changes in the nature, design, or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid unless Terracon reviews the changes and either verifies or modifies the conclusions of this report in writing.

APPENDIX A
FIELD EXPLORATION



Project Mngr: GL	Project No. NB155061	Terracon Consulting Engineers and Scientists	**SITE DIAGRAM**
Drawn By: EMD	Scale: AS SHOWN	50 GOLDENLAND CT, SUITE 100 SACRAMENTO, CA 95834	SOLANOCCDHORTICULTUREEXPANSION
Checked By: NN	File No. ~	PH. (916) 928-4690 FAX. (916) 928-4697	4000SUISUNVALLEYROAD
Approved By: GL	Date: 12/11/15		FAIRFIELD,CA

EXHIBIT A-1

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES.

LEGEND	
	APPROXIMATE BORING LOCATION

THIS DIAGRAM IS FOR GENERAL LOCATION ONLY AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES.

Project Mngr:	GL
Drawn By:	EMD
Checked By:	NN
Approved By:	GL

Project No.	NB155061
Scale:	AS SHOWN
File No.	~
Date:	12/11/15

Terracon
Consulting Engineers and Scientists
50 GOLDENLAND CT, SUITE 100 SACRAMENTO, CA 95834
PH. (916) 928-4690 FAX. (916) 928-4697

BORING LOCATION DIAGRAM

SOLANOCCDHORTICULTUREEXPANSION
4000SUISUNVALLEYROAD
FAIRFIELD,CA

EXHIBIT
A-2

Field Exploration Description

Our field exploration for this project included performing three (3) test borings to approximate a maximum depth of 50 feet bgs on December 7, 2015. The approximate exploration locations are shown on the Boring Location Diagram, Exhibit A-2. Exploration locations were located in the field by measuring from the existing site features shown on an aerial photo. The exploration locations should only be considered accurate to the degree implied by the means and methods used to define them.

The test borings were advanced with a truck-mounted CME-75 drill rig which utilized 8-inch diameter hollow-stem auger. A continuous log of each boring was recorded during the drilling operations. At selected intervals, samples of the subsurface materials were taken by driving either split-spoon samplers. These logs include visual classifications of the materials encountered during drilling as well as the field engineer's interpretation of the subsurface conditions between samples. Final boring logs included with this report represent the engineer's interpretation of the field logs and include modifications based on laboratory observation and tests of the samples. Groundwater conditions were evaluated in each boring at the time of drilling and upon completion of the field exploration. Groundwater was measured immediately after drilling at a depth of 16 feet in one boring.

Samples of the soils encountered in the borings were obtained using the split barrel sampling procedures described below. The samples were stored in moisture tight containers and transported to our laboratory for further visual classification and testing.

Penetration resistance measurements were obtained by driving the split-spoon and a 2.5-inch outside diameter Modified California sampler into the subsurface materials with a 140-pound hammer falling 30 inches. This test is referred to as the standard penetration test (SPT) and displayed on the logs as an "N" value when the standard 2-inch outer diameter sampler is used. The penetration resistance value is a useful index in estimating the consistency or relative density of materials encountered.

The samples were tagged for identification, sealed to reduce moisture loss, and taken to our laboratory for further examination, testing, and classification. Information provided on the borings logs attached to this report includes soil descriptions, consistency evaluations, borings depths, sampling intervals, relative density and groundwater conditions. The borings were backfilled with soil cuttings and cold patched with asphalt upon completion.

BORING LOG NO. B1

PROJECT: Solano CCD Horticulture Expansion

CLIENT: Solano Community College District
Fairfield, CA

SITE: 4000 Suisun Valley Road
Fairfield, CA

LOCATION See Exhibit A-2

Latitude: 38.2384° Longitude: -122.1184°

DEPTH	GRAPHIC LOG	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY TORVANE/HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
LEAN CLAY WITH SAND (CL), fine grained, medium plasticity, dark brown to brown, very stiff					8-13-15	4.25 (HP)	12	99		
low to medium plasticity, light brown to orange		5			8-12-15	4.5 (HP)	15	98	37-20-17	78
8.0										
LEAN CLAY (CL), silty with fine sand, fine grained, medium plasticity, brown to orange, stiff		10			4-5-5	1.5 (HP)	27	86		
11.5										
Boring Terminated at 11.5 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic SPT Hammer

Advancement Method:
8" Hollow Stem Auger

Abandonment Method:
Borings backfilled with neat cement grout upon completion.

See Exhibit A-3 for description of field procedures.

See Appendix B for description of laboratory procedures and additional data (if any).

See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
50 Goldenland Ct., Ste. 100
Sacramento, California

Boring Started: 12/7/2015 Boring Completed: 12/7/2015

Drill Rig: CME-75 Driller: Terracon

Project No.: NB155061 Exhibit: A-4

BORING LOG NO. B2

PROJECT: Solano CCD Horticulture Expansion

CLIENT: Solano Community College District
Fairfield, CA

SITE: 4000 Suisun Valley Road
Fairfield, CA

LOCATION See Exhibit A-2

Latitude: 38.2382° Longitude: -122.1184°

DEPTH	GRAPHIC LOG	DESCRIPTION	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY TORVANE/HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		LEAN CLAY (CL), silty, fine grained, low to medium plasticity, dark brown to brown, very stiff								
					5-13-17	4.25 (HP)	12	98		
4.0										
		SANDY SILTY CLAY (CL-ML), fine grained, low to medium plasticity, light brown, very stiff								
5					5-12-15	4.25 (HP)	13	99		
8.0										
		LEAN CLAY WITH SAND (CL), fine grained, medium to high plasticity, light brown to gray, medium stiff								
10					2-2-3	1.25 (HP)	27	86	38-22-16	90
15			▽		1-6-8	2.25 (HP)	25	98		
18.0										
		SANDY LEAN CLAY (CL), fine grained, medium to high plasticity, brown to gray, soft	▽							
20					1-1-3 N=4	1.0 (HP)	23	109		75
		very stiff								
25					2-8-9 N=17	4.0 (HP)	27	110		
28.0										

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic SPT Hammer

Advancement Method:
8" Hollow Stem Auger

Abandonment Method:
Borings backfilled with neat cement grout upon completion.

See Exhibit A-3 for description of field procedures.

See Appendix B for description of laboratory procedures and additional data (if any).

See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

▽ *While drilling*

▽ *At completion of drilling*

Terracon
50 Goldenland Ct., Ste. 100
Sacramento, California

Boring Started: 12/7/2015 | Boring Completed: 12/7/2015

Drill Rig: CME-75 | Driller: Terracon

Project No.: NB155061 | Exhibit: A-5

BORING LOG NO. B2

PROJECT: Solano CCD Horticulture Expansion

CLIENT: Solano Community College District
Fairfield, CA

SITE: 4000 Suisun Valley Road
Fairfield, CA

LOCATION See Exhibit A-2

Latitude: 38.2382° Longitude: -122.1184°

GRAPHIC LOG	DEPTH	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY TORVANE/HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
	LEAN CLAY (CL), trace sand, fine grained, medium plasticity, brown, very stiff, with black specs	30								
					4-7-13 N=20	4.0 (HP)	21	109		94
		35			4-10-15 N=25	4.5 (HP)	22	109		
	with fine sand, gray mottling	40			5-10-13 N=23	4.5 (HP)	24	94		94
	43.0 **SANDY LEAN CLAY (CL)**, fine grained, stiff, orange mottling	45			3-7-6 N=13	1.5 (HP)	33	107		
	48.0 **LEAN CLAY WITH SAND (CL)**, fine grained, medium plasticity, light brown, very stiff, gray mottling	50			6-10-8 N=18	2.25 (HP)	24	108		81
	51.5 ***Boring Terminated at 51.5 Feet***									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic SPT Hammer

Advancement Method:
8" Hollow Stem Auger

Abandonment Method:
Borings backfilled with neat cement grout upon completion.

See Exhibit A-3 for description of field procedures.

See Appendix B for description of laboratory procedures and additional data (if any).

See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

While drilling

At completion of drilling

Terracon
50 Goldenland Ct., Ste. 100
Sacramento, California

Boring Started: 12/7/2015 Boring Completed: 12/7/2015

Drill Rig: CME-75 Driller: Terracon

Project No.: NB155061 Exhibit: A-5

BORING LOG NO. B3

PROJECT: Solano CCD Horticulture Expansion

CLIENT: Solano Community College District
Fairfield, CA

SITE: 4000 Suisun Valley Road
Fairfield, CA

LOCATION See Exhibit A-2

Latitude: 38.2381° Longitude: -122.1183°

DEPTH	GRAPHIC LOG		DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	LABORATORY TORVANE/HP (tsf)	WATER CONTENT (%)	DRY UNIT WEIGHT (pcf)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
		LEAN CLAY WITH SAND (CL), fine to medium, medium plasticity, brown, stiff									
						7-8-10	4.25 (HP)	13	92	39-19-20	72
		fine grained, low plasticity, light brown to orange, very stiff	5			6-11-15	4.5 (HP)	15	101		
8.0											
		SANDY LEAN CLAY (CL), fine grained, medium to high plasticity, gray to brown with orange, medium stiff	10			3-2-4	1.5 (HP)	26	88		
13.0											
		LEAN CLAY WITH SAND (CL), fine grained, medium to high plasticity, stiff	15			3-4-9	3.25 (HP)	32	89		
16.5											
		Boring Terminated at 16.5 Feet									

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic SPT Hammer

Advancement Method:
8" Hollow Stem Auger

Abandonment Method:
Borings backfilled with neat cement grout upon completion.

See Exhibit A-3 for description of field procedures.

See Appendix B for description of laboratory procedures and additional data (if any).

See Appendix C for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

Groundwater not encountered

Terracon
50 Goldenland Ct., Ste. 100
Sacramento, California

Boring Started: 12/7/2015 | Boring Completed: 12/7/2015

Drill Rig: CME-75 | Driller: R. Anderson

Project No.: NB155061 | Exhibit: A-6

APPENDIX B
LABORATORY TESTING

Laboratory Testing

Samples retrieved during the field exploration were taken to the laboratory for further observation by the project geotechnical engineer and were classified in accordance with the Unified Soil Classification System (USCS) described in Appendix C. At that time, the field descriptions were confirmed or modified as necessary and an applicable laboratory testing program was formulated to determine engineering properties of the subsurface materials.

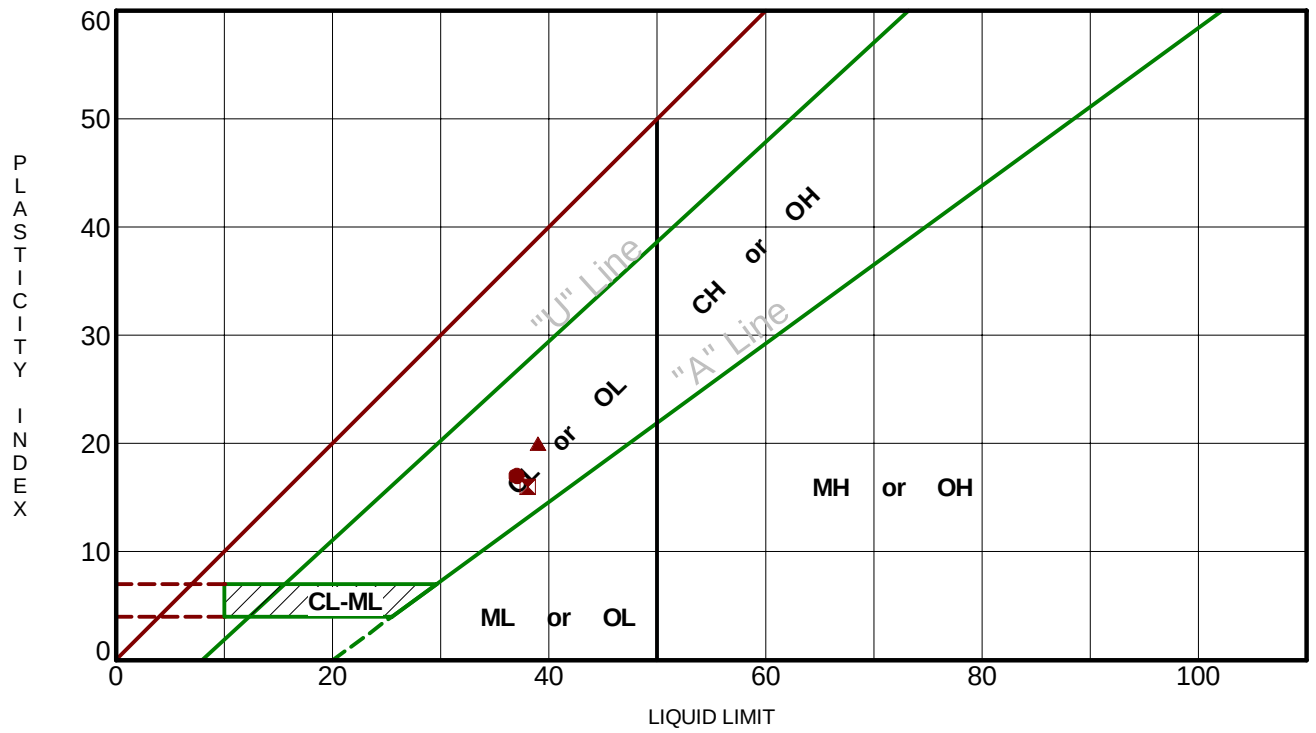
Laboratory tests were conducted on selected soil samples and the test results are presented on the logs of the borings or in the body of the report. The laboratory test results were used for the geotechnical engineering analyses, and the development of engineering, earthwork, and construction recommendations. Laboratory tests were performed in general accordance with the applicable ASTM, local, or other accepted standards.

Selected soil samples obtained from the site were tested for the following engineering properties:

- In-situ Water Content
- Unit Weight
- Grain Size Analysis
- Atterberg Limits

ATTERBERG LIMITS RESULTS

ASTM D4318



Boring ID	Depth	LL	PL	PI	Fines	USCS	Description
● B1	5 - 6.5	37	20	17	78	CL	LEAN CLAY with SAND
⊠ B2	10 - 11.5	38	22	16	90	CL	LEAN CLAY
▲ B3	1 - 2.5	39	19	20	72	CL	LEAN CLAY with SAND

PROJECT: Solano CCD Horticulture

SITE: 4000 Suisun Valley Road
Fairfield, CA

Terracon
50 Goldenland Ct., Ste. 100
Sacramento, California

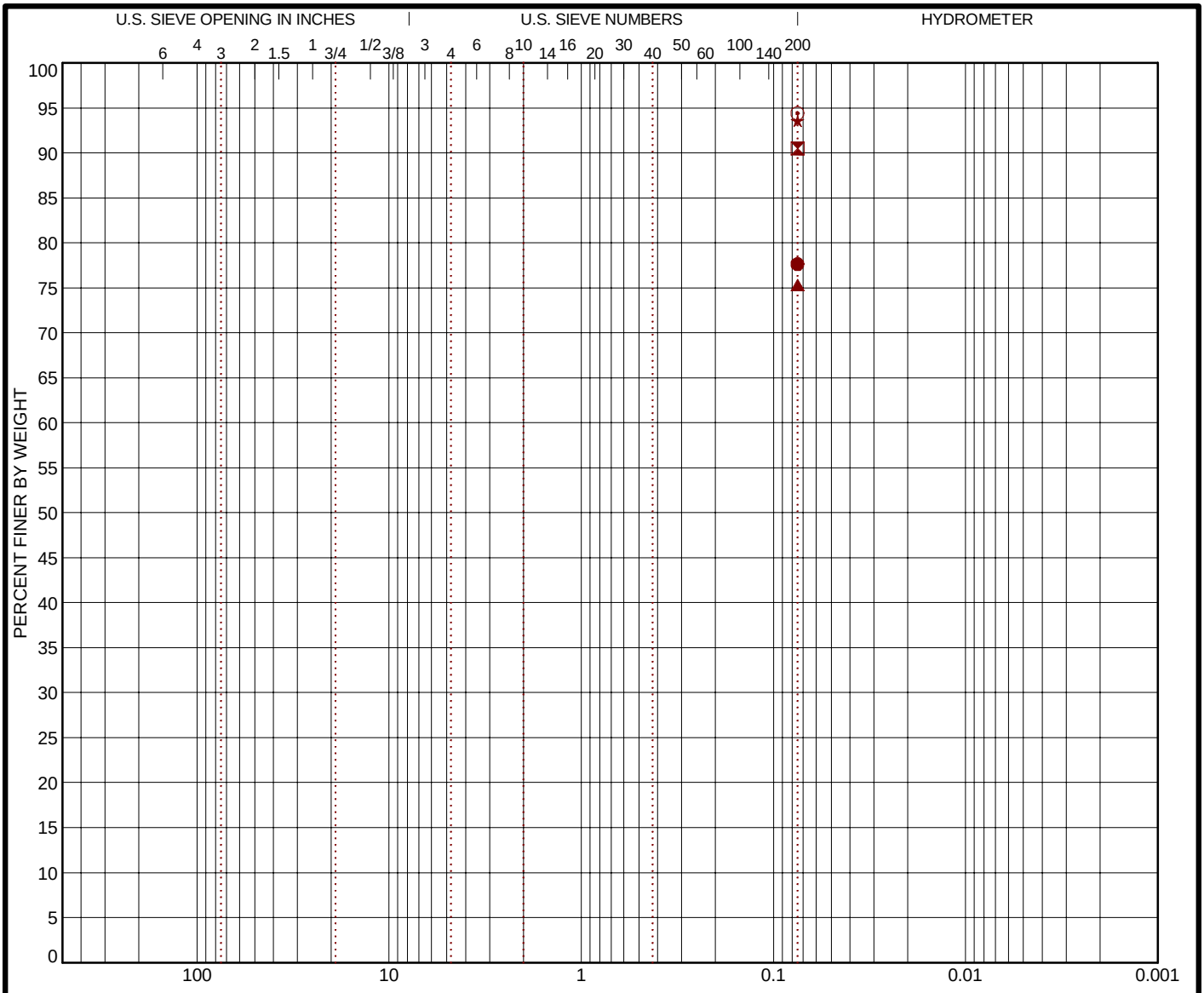
PROJECT NUMBER: NB155061

CLIENT:SolanoCommunityCollegeDistrict
Fairfield,CA

EXHIBIT:B-2

GRAIN SIZE DISTRIBUTION

ASTM D422



Boring ID	Depth	USCS Classification	AASHTO Classification	USDA Textural Classification
B1	5 - 6.5	LEAN CLAY with SAND(CL)	A-6(12)	
B2	10 - 11.5	LEAN CLAY(CL)	A-6(15)	
B2	20 - 21.5		()	
B2	30 - 31.5		()	
B2	40 - 41.5		()	

PROJECT: Solano CCD Horticulture

SITE: 4000 Suisun Valley Road
Fairfield, CA

Terracon
50 Goldenland Ct., Ste. 100
Sacramento, California

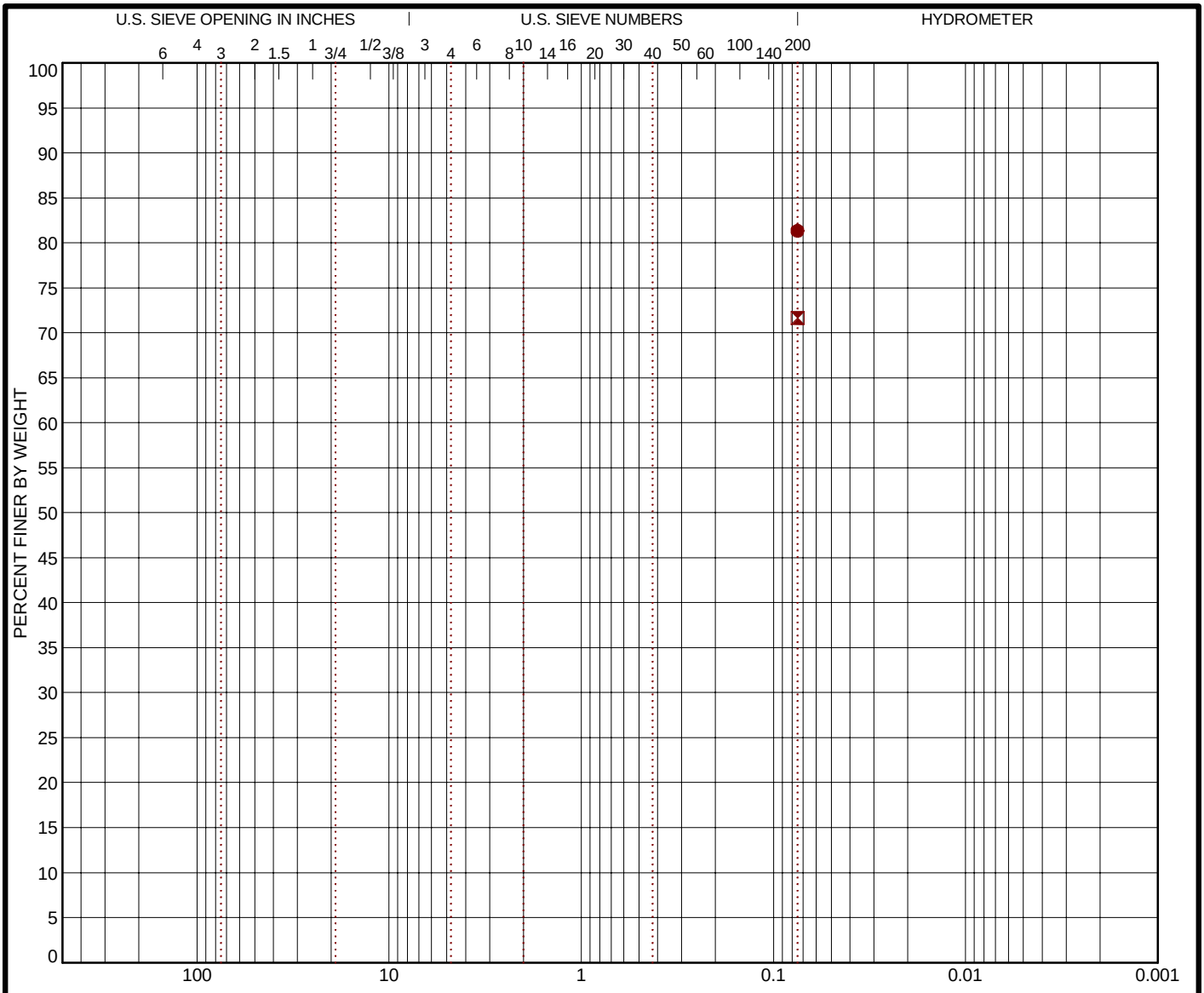
PROJECT NUMBER: NB155061

CLIENT:SolanoCommunityCollegeDistrict
Fairfield,CA

EXHIBIT:B-3

GRAIN SIZE DISTRIBUTION

ASTM D422



Boring ID	Depth	USCS Classification	AASHTO Classification	USDA Textural Classification
B2	50 - 51.5		()	
B3	1 - 2.5	LEAN CLAY with SAND(CL)	A-6(13)	

PROJECT: Solano CCD Horticulture

SITE: 4000 Suisun Valley Road
Fairfield, CA

Terracon
50 Goldenland Ct., Ste. 100
Sacramento, California

PROJECT NUMBER: NB155061

CLIENT:SolanoCommunityCollegeDistrict
Fairfield,CA

EXHIBIT:B-4

APPENDIX C
SUPPORTING DOCUMENTS

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING


Auger


Shelby Tube


Split Spoon


Rock Core


Macro Core


Modified California Ring Sampler


Grab Sample


No Recovery


Modified Dames & Moore Ring Sampler

WATER LEVEL


Water Initially Encountered


Water Level After a Specified Period of Time


Water Level After a Specified Period of Time

Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.

FIELD TESTS

(HP)	Hand Penetrometer
(T)	Torvane
(b/f)	Standard Penetration Test (blows per foot)
N	N value
(PID)	Photo-Ionization Detector
(OVA)	Organic Vapor Analyzer
(WOH)	Weight of Hammer

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance			
Descriptive Term (Density)	**Standard Penetration or N-Value Blows/Ft.**	**Ring Sampler Blows/Ft.**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength, Qu, psf**	**Standard Penetration or N-Value Blows/Ft.**	**Ring Sampler Blows/Ft.**
Very Loose	0 - 3	0 - 6	Very Soft	less than 500	0 - 1	< 3
Loose	4 - 9	7 - 18	Soft	500 to 1,000	2 - 4	3 - 4
Medium Dense	10 - 29	19 - 58	Medium-Stiff	1,000 to 2,000	4 - 8	5 - 9
Dense	30 - 50	59 - 98	Stiff	2,000 to 4,000	8 - 15	10 - 18
Very Dense	> 50	≥ 99	Very Stiff	4,000 to 8,000	15 - 30	19 - 42
			Hard	> 8,000	> 30	> 42

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

Major Component of Sample	Particle Size
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

Term	Plasticity Index
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]		GW	Well-graded gravel [F]
			$Cu < 4$ and/or $1 > Cc > 3$ [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F,G,H]
			Fines classify as CL or CH		GC	Clayey gravel [F,G,H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$ [E]		SW	Well-graded sand [I]
			$Cu < 6$ and/or $1 > Cc > 3$ [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G,H,I]
			Fines classify as CL or CH		SC	Clayey sand [G,H,I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A" line [J]		CL	Lean clay [K,L,M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K,L,M]
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay [K,L,M,N]
			Liquid limit - not dried			Organic silt [K,L,M,O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K,L,M]
			PI plots below "A" line		MH	Elastic Silt [K,L,M]
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay [K,L,M,P]
			Liquid limit - not dried			Organic silt [K,L,M,Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.