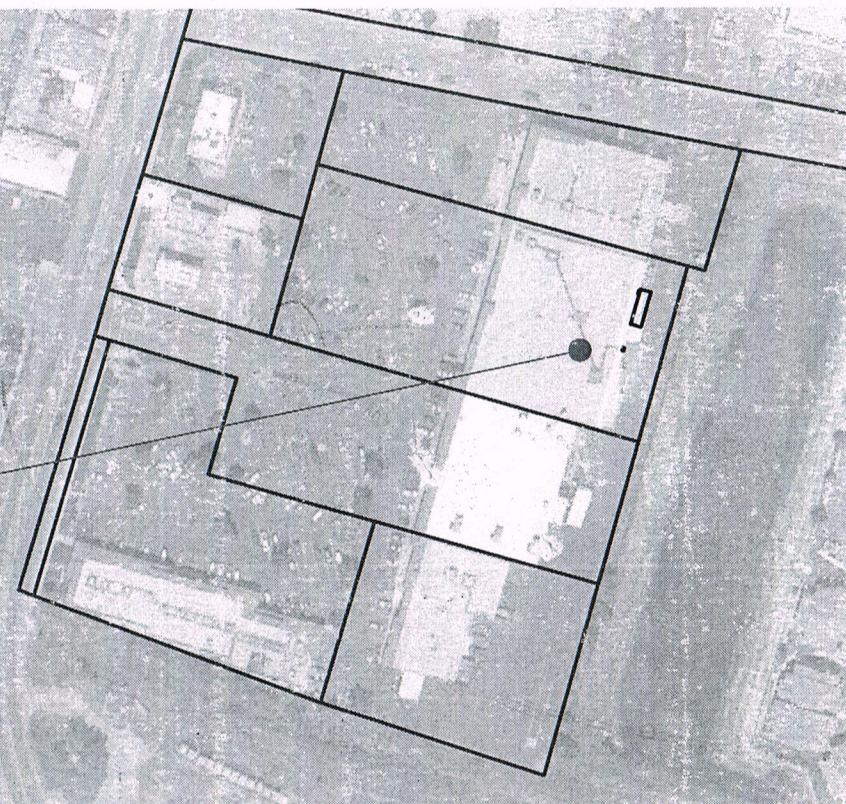
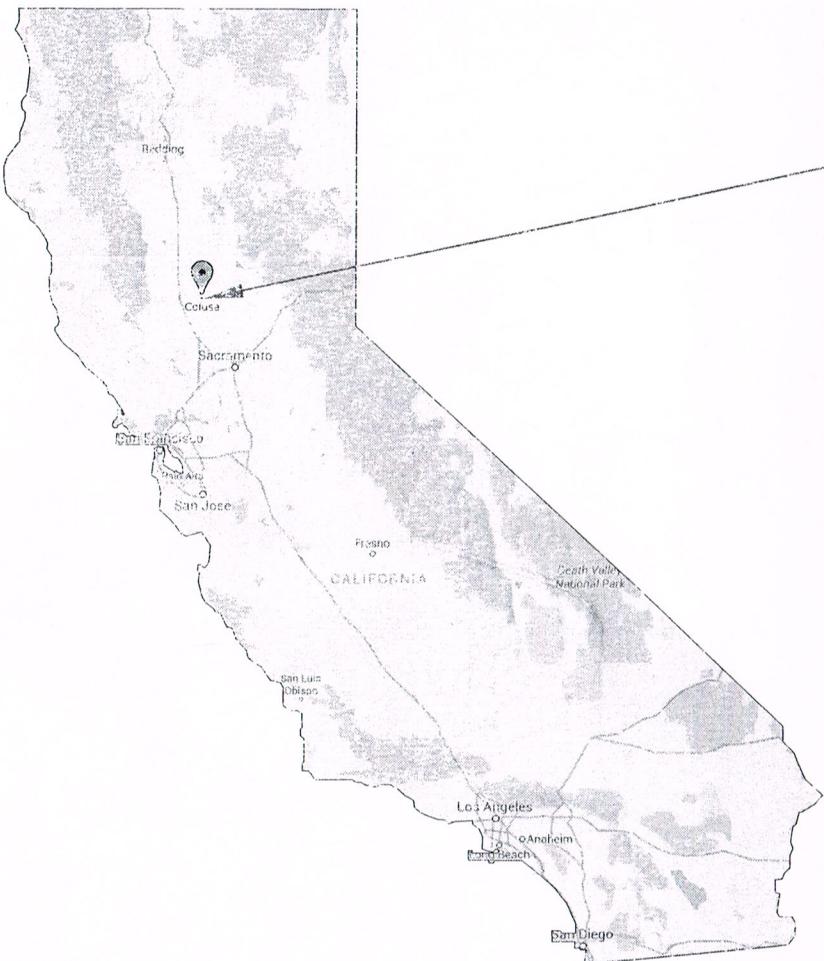


SOLAR PHOTOVOLTAIC SYSTEM

NORTH STATE GROCERY
COLUSA, CA



SYSTEM SPECIFICATIONS

Cold Design Temperature	23 F		
Max Operating Temperature	131 F		
System Type	TOTAL 12	Roof 6	Solar Structure 6
# of Inverters			
Module	Hanwha Q.Pack-G4.1 300W		Hanwha Q.Pack-G4.1 300W
# of Modules	1,882	1,090	792
DC SYSTEM SIZE	564.6 kW DC	327	237.6
Nominal AC Output Power	516 kW AC	300	216

SITE INFORMATION

Site Latitude	39° 12'
Construction Type	II
Occupancy Group	
Zoning District	M-U-B
Flood Zone	X
Exposure Category	C
Seismic Design Category	D

GENERAL CONTRACTOR

BRIGHT POWER INC
DBA BPI
PO BOX 10637
NAPA, CA 94581
info@bpi-power.com
PHONE: (707) 252-9990
FAX: (707) 252-9992
WWW.BPI-POWER.COM
LICENSE NUMBER 930054
LICENSE CLASSIFICATION: A, C10

PROPERTY OWNER

GREGORY PARTNERS, L.P.
ATTN: JON SNYDER
P.O. BOX 1018
RANCHO MURIETA, CA 95683

REVIEWED
BY: JB

ELECTRICAL ENGINEER

HIMANSHU BHARTIYA, ME, EE, FPE, LEED AP
SACRAMENTO ENGINEERING CONSULTANTS
10555 OLD PLACERVILLE ROAD
SACRAMENTO, CA 95827
himanshu@saceng.com
PHONE: (916) 368-4468 ext. 105
FAX: (916) 368-4490

STRUCTURAL ENGINEER

JESSYCA COCHRAN, PE
JVC ENGINEERING
303 POST ST
NAPA, CA 94559
jvcstructural@yahoo.com
PHONE: (805) 801-9915

SCOPE OF WORK

THE PROJECT IS TO INSTALL A NEW PHOTOVOLTAIC SYSTEM.
ALL CONSTRUCTION SHALL COMPLY WITH THE CODES ADOPTED BY THE CITY
OF COLUSA, CA AS DESCRIBED IN COLUSA, CA MUNICIPAL CODE SEC. 6
ARTICLE II INCLUDING BUT NOT LIMITED TO 2013 CEC & 2013 CBC.

THE SYSTEM CONSISTS OF ROOF MOUNT FIXED TILT SOLAR ARRAYS, FLUSH
MOUNT ON SOLAR SUPPORT STRUCTURES, AND ASSOCIATED POWER
CONDITIONING EQUIPMENT.

THE SYSTEM WILL BE INTERCONNECTED TO AND WILL BE OPERATING IN
PARALLEL WITH THE ELECTRICAL UTILITY GRID PER THE REQUIREMENTS OF
PG&E AND THE 2013 CEC.

SHEET INDEX

PV0	TITLE SHEET
PV0.1	PROJECT DETAILS
PV0.2	PLOT PLAN
PV0.3	PV SITE PLAN
PV0.4A	MODULE LAYOUT OVERVIEW
PV0.4B	MODULE LAYOUT OVERVIEW
PV0.4C	MODULE LAYOUT OVERVIEW
PV0.5A	ROOF ARRAY DIMENSIONS & INVERTER FOOTPRINTS
PV0.5B	ROOF ARRAY DIMENSIONS & INVERTER FOOTPRINTS
PV0.5C	SOLAR STRUCTURE STRING DIAGRAM & INVERTER FOOTPRINTS
PV0.5D	SOLAR STRUCTURE STRING DIAGRAM & INVERTER FOOTPRINTS
PV1.0	ARRAY PLAN
PV1.1	ARRAY PLAN
PV1.2	ARRAY PLAN
PV1.3	ARRAY PLAN
PV1.4	ARRAY PLAN
PV1.5	ARRAY PLAN
PV1.6	METER-AREA PLAN
PV2.1A	SINGLE-LINE DIAGRAM
PV2.1B	SINGLE-LINE DIAGRAM
PV2.1C	SINGLE-LINE DIAGRAM
PV2.1D	SINGLE-LINE DIAGRAM
PV3.1	PV DETAILS
PV4.1	PV SIGNAGE
ES1	SITE LIGHTING PLAN
ES2	STRUCTURE LIGHTING PLAN
ES3.1	OUTDOOR LIGHTING TITLE-24
ES3.2	OUTDOOR LIGHTING TITLE-24
S0.1	GENERAL STRUCTURAL NOTES
S2.1	STRUCTURES 1, 2, 3 - FOUNDATION & FRAMING PLAN
S3.1	DETAILS
S4.0	ROOF RACKING DETAIL



NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

PVO
TITLE SHEET
DATE: 6-14-16
BY: JB
JOB NO.: C15-700.1

1	3/28/17	Equipment change & added NSG roof array
1	3/28/17	Removed structures 4/5/6
1	1	REV. NO
1	1	REV. DATE

FIELD INSPECTION RECORD (JOB CARD)



City of Colusa Fire Department
BUILDING & SAFETY DIVISION
FOR INSPECTIONS CALL 24 HOURS IN ADVANCE
(530) 458-5890, ext. 106

PROJECT ADDRESS	1017 Bridges St
PERMIT #:	16-123
OWNER NAME & ADDRESS:	Gregory LP
PHONE #:	
CONTRACTOR NAME	BPI
ADDRESS:	Revised.
PHONE #:	
LICENSE #:	
PERMIT TYPE:	Solar Com.

INSPECTION TYPE	SIGNATURE	DATE
FOUNDATION		
FORMS/FOOTING/GRADE		
UFER		
REINFORCING STEEL/BOLTS		
SET - BACKS		
FRAMING		
HOLDDOWNS/BOLTS/STRAPS		
WALLS		
TRUSSES/ROOF FRAMING		
PLUMBING		
UNDERGROUND P.L.		
ROUGH PLUMBING (Top-Out)		
ELECTRICAL		
BELOW GRADE ELEC.	TEST	
ROUGH ELEC.	TESTED	
BONDING/GROUNDING		
HVAC/MECHANICAL		
DUCTING		
TESTING		
INSULATION		
WALLS		
CEILING		
NAILING		
TEAR OFF - ROOF		
ROOF SHEETING		
SHEAR		
DW		
LATH		
WATER HEATER		
T-BAR CEILING		
GAS TEST		
BLOCK/RETAINING WALL		
FOOTINGS/STEPS		
GROUTING		
POOLS		
PRE-DECK/BONDING		
FENCES/BARRIERS/ALARM		
FINAL INSPECTION		

**THIS CARD IS YOUR INSPECTION RECORD AND MUST
REMAIN ON THE JOB SITE POSTED IN A CONSPICUOUS PLACE**

- NOTES -

(SEE REVERSE SIDE FOR ADDITIONAL NOTES)

SMOKE
 DETECTORS + CO2
 REQUIRED

GENERAL NOTES		8.	REFILL AND RESTORE THE WORK AS DIRECTED, DURING CONSTRUCTION AND PRIOR TO PROJECT COMPLETION, TO MAINTAIN ACCEPTABLE SURFACE CONDITIONS.	17.	ALL CONSTRUCTION AND MATERIAL DELIVERY VEHICLES SHALL USE THE DESIGNATED ACCESS AND HAUL ROUTE(S) TO THE CONSTRUCTION SITE. ANY DEVIATION IN ROUTE(S) SHALL BE SUBJECT TO OWNER'S APPROVAL. THE ROUTE(S) SHALL BE MONITORED DURING THE PROJECT FOR ANY DAMAGE AND DEBRIS ATTRIBUTABLE TO THE PROJECT VEHICLES. ALL DAMAGE AND DEBRIS AS A RESULT OF THE PROJECT SHALL BE REPAIRED TO EXISTING STANDARDS.	1.	PROTECT FROM DAMAGE AND PRESERVE TREES, SHRUBS, AND OTHER PLANTS OUTSIDE THE LIMITS OF WORK AND WITHIN THE LIMIT OF THE WORK WHICH ARE DESIGNATED TO REMAIN UNDISTURBED.
1. ALL CONSTRUCTION SHALL COMPLY WITH THE CODES ADOPTED BY THE CITY OF COLUSA, CA AS DESCRIBED IN COLUSA, CA MUNICIPAL CODE SEC. 6 ARTICLE II INCLUDING BUT NOT LIMITED TO 2013 CEC & 2013 CBC.		9.	ALL ADDITIONAL MATERIALS REQUIRED SHALL BE FURNISHED WITHOUT ADDITIONAL COST TO THE OWNER.	18.	CONDUCT OPERATION ENTIRELY WITHIN THE PROJECT AREAS INDICATED IN THESE DRAWINGS.	2.	REMOVE OBSTRUCTIONS, TREES, SHRUBS, GRASS AND OTHER VEGETATION TO PERMIT INSTALLATION OF NEW CONSTRUCTION. REMOVAL INCLUDES DIGGING OUT STUMPS AND OBSTRUCTIONS AND GRUBBING ROOTS.
2. BEFORE INITIATING ANY WORK, THE CONTRACTOR SHALL NOTIFY ENGINEER OF RECORDS OF ANY DISCREPANCIES IDENTIFIED ON EXISTING CONDITIONS, STRUCTURE, ELECTRICAL, ETC.		10.	UNLESS SHOWN OR SPECIFIED OTHERWISE, ALL CONSTRUCTION AND MATERIALS SHALL COMPLY WITH THE LATEST EDITION OF THE IBC, AND ANY OTHER CODES, REQUIREMENTS OR STANDARDS REQUIRED BY THE INSPECTING AGENCY AND AUTHORITIES HAVING JURISDICTION (AHJ).	19.	WHERE ANY WORK IS BEING DONE IN AN OFF-SITE EASEMENT, NOTIFY THE PROPERTY OWNER TWO WORKING DAYS PRIOR TO COMMENCING WORK WITHIN SAID EASEMENT.	3.	FILL DEPRESSIONS CAUSED BY CLEARING AND GRUBBING OPERATIONS WITH SOIL MATERIAL APPROVED BY OWNER, UNLESS FURTHER EXCAVATION OR EARTHWORK IS INDICATED.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS, OSHA REQUIREMENTS AND SAFETY MEASUREMENTS ON SITE.		11.	ANY WORK BEGUN PRIOR TO ATTAINING APPROVAL AND SIGNATURES OF AHJ WILL BE AT CONTRACTOR'S RISK, AND WILL ONLY BE ALLOWED IF PRE-APPROVED BY PROJECT OWNER.	20.	DO NOT DISPOSE OF CHLORINATED OR OTHER CHEMICALLY TREATED OR POLLUTED WATER INTO ANY DRAINAGE SYSTEM OR TO AREA SOILS.	4.	STRIP TOPSOIL WHERE REQUIRED. STOCKPILE IN AREA APPROVED BY OWNER.
4. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL EQUIPMENT AND FOLLOWING ALL MANUFACTURER'S OR ENGINEER'S DIRECTIONS AND INSTRUCTIONS.		12.	COORDINATE OPERATIONS WITH ALL REQUIRED MATERIALS TESTING SERVICES AS REQUIRED BY THESE DRAWINGS. EACH PHASE OF CONSTRUCTION SHALL BE TESTED AND APPROVED BY AHJ AS REQUIRED PRIOR TO PROCEEDING TO SUBSEQUENT PHASES.		ELECTRICAL NOTES	5.	WITH OWNER'S APPROVAL, REMOVE EXISTING ABOVE AND BELOW GRADE IMPROVEMENTS AS INDICATED AND AS NECESSARY TO FACILITATE NEW CONSTRUCTION.
5. CONTRACTOR IS ADVISED THAT ALL DRAWINGS, COMPONENT MANUALS, ESPECIALLY INVERTER MANUALS, ARE TO BE READ AND UNDERSTOOD PRIOR TO INSTALLATION OR ENERGIZING OF ANY EQUIPMENT.		13.	NOTIFY ALL UTILITY COMPANIES INVOLVED IN THE DEVELOPMENT PRIOR TO BEGINNING OF WORK.	1.	SOLAR MODULES ARE ENERGIZED WHEN EXPOSED TO LIGHT. THE LINE AND LOAD TERMINALS ON THE DC DISCONNECTS MAY BE ENERGIZED IN THE OPEN POSITION. SWITCH IS TO BE LABELED TO COMPLY WITH ARTICLE G90.17 OF THE NEC.	6.	DISPOSE OF REMOVED TREES, BRUSH, STUMPS, ROOTS AND ORGANIC DEBRIS IN A LEGAL MANNER OFF THE SITE.
6. CONTRACTOR IS RESPONSIBLE FOR SELECTING AND PURCHASING EQUIPMENT THAT WILL LAST THE LIFETIME OF THE PV SYSTEM; ALL ENCLOSURES, CONDUITS, STRAPS, PAINTED METAL SURFACES, CONCRETE, GROUNDING EQUIPMENT AND OTHER EQUIPMENT AND OTHER PRODUCTS SHALL BE SELECTED TO LAST THE LIFECYCLE OF THE PHOTOVOLTAIC SYSTEM.		14.	COMPLY WITH ALL CURRENTLY APPLICABLE SAFETY LAWS OF ALL JURISDICTIONAL BODIES. PROVIDE AND MAINTAIN ALL BARRICADES, SAFETY DEVICES, AND CONTROL OF TRAFFIC WITHIN AND AROUND THE CONSTRUCTION AREA. FOR ALL TRENCH EXCAVATION 5 FEET OR MORE IN DEPTH, OBTAIN PERMITS PRIOR TO BEGINNING ANY EXCAVATION.	2.	PHOTOVOLTAIC SYSTEM SHALL BE CLEARLY MARKED IN ACCORDANCE WITH THE NEC LABELING REQUIREMENTS ARTICLE 690.		RECORD DRAWINGS
7. WHENEVER ANY SURFACE IMPROVEMENTS SUCH AS PAVEMENT, CURBING, PEDESTRIAN WALKS, FENCING, OR TURFING HAVE BEEN REMOVED, DAMAGED, OR OTHERWISE DISTURBED BY THE CONTRACTOR'S OPERATIONS; THEY SHALL BE REPAIRED OR REPLACED TO THE PRE-EXISTING CONDITION. THE REPAIRS ARE TO MEET THE OWNER'S SATISFACTION.		15.	Maintain continuous temporary traffic barricades, with operable flashing devices, spaced at intervals of not to exceed 50 feet whenever the work area is adjacent to an existing traffic lane and there is a pavement cut, trench, or ditch which is over 2 inches in depth, or if the traffic lane used by vehicles is not paved. If the cut, trench or ditch is more than 10 feet from a traffic lane, then the barricade spacing may be greater, provided that it does not exceed 200 feet.	3.	CONTRACTOR SHALL PERFORM INITIAL HARDWARE CHECKS AND PV/WIRING CONDUCTIVITY CHECKS PRIOR TO TERMINATING ANY WIRES.	1.	KEEP UP-TO-DATE AND ACCURATE A COMPLETE RECORD SET OF PRINTS FOR THE CONTRACT DRAWINGS SHOWING EVERY CHANGE FROM THE ORIGINAL DRAWINGS MADE DURING THE COURSE OF CONSTRUCTION INCLUDING FINAL LOCATION, ELEVATION, SIZES, MATERIALS, AND DESCRIPTION OF ALL WORK.
		16.	CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY.	5.	THE ELECTRICAL CONTRACTOR IS REQUIRED TO USE PERMANENTLY COLOR CODED INSULATION AND PROVIDE A COLOR CODE TO IDENTIFY DC AND AC CIRCUITS AND IN ACCORDANCE WITH NEC.	2.	RECORDS SHALL BE "REDLINED" ON A SET OF CONSTRUCTION PLAN DRAWINGS AT THE SITE. A COMPLETE SET OF CORRECTED AND COMPLETED RECORD DRAWING PRINTS SHALL BE SUBMITTED TO OWNER PRIOR TO SUBSTANTIAL COMPLETION AT SITE.
		17.	ALL PG&E-REQUIRED EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH CURRENT PG&E GREENBOOK STANDARDS.	6.	GROUNDING OF THE PV SYSTEM SHALL COMPLY WITH NEC 690.45 AND 690.47.		

PV MODULE INFO		1
MFG	Hanwha	
Model	Q.Peak-G4.1 300W	
STC Rating	300 W	
Vmp	32.41 V	
Imp	9.26 A	
Voc	39.76 V	
Isc	9.77 A	
Voc temp. coeff	-0.28 %/°C	
Isc temp coeff	0.04 %/°C	

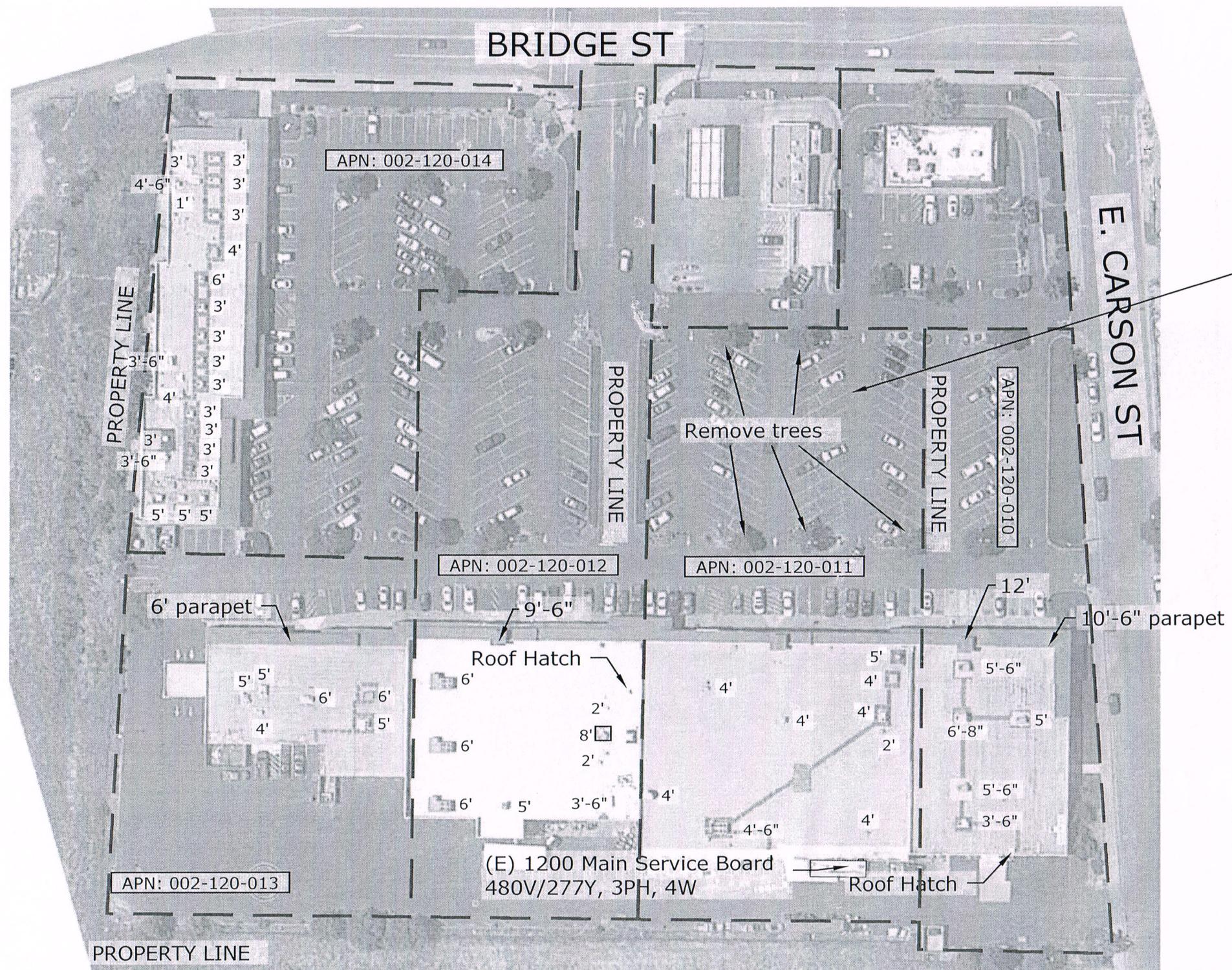
	ROOFS				SOLAR SUPPORT STRUCTURES				1
	Inverter #1	Inverter #2-#3	Inverter #4	Inverter #5	Inverter #6	Inverter #7-#8	Inverter #9-#10	Inverter #11-#12	
Manufacturer	Sungrow	Sungrow	Sungrow	Sungrow	Sungrow	Sungrow	Sungrow	Sungrow	
Model	SG60KU	SG60KU	SG60KU	SG30KU	SG30KU	SG36KU	SG36KU	SG36KU	
Voltage AC	480	480	480	480	480	480	480	480	
Nominal AC Output Power	60	60	60	30	30	36	36	36	
CEC efficiency	99%	99%	99%	98%	98%	98%	98%	98%	
Number of Strings/inverter	10	11	10	5	6	6	6	6	
Number of Panels/string	22	20	20	22	20	22	22	22	
Number of Panels/inverter	220	220	200	110	120	132	132	132	
STC DC subsystem size	66 kW DC	66 kW DC	60 kW DC	33 kW DC	36 kW DC	39.6 kW DC	39.6 kW DC	39.6 kW DC	
PV Module Azimuth	196	196	196	196	196	196	196	196	
PV Module Tilt	10	10	10	10	10	5	5	5	
Racking MFG	Renusol	Renusol	Renusol	Renusol	Renusol	Skyline	Skyline	Skyline	
Array Location	AutoZone	NSG Roof	NSG Roof	South Roof	Building 2	Structure 1	Structure 2	Structure 3	

NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

PVO.1
PROJECT DETAILS
DATE: 6-14-16
BY: JB
JOB NO.: C15-700.1

BRIGHT POWER, INC. DBA BPI
PERMIT ISSUANCE CO.
A.C. 10
LICENSE NO. 930054
STATE OF CALIFORNIA

Zoning District:	M-U-B
Front Setbacks:	5'
Side & Rear Setbacks:	5'



Scale: 1" = 80'

00 80 160



PVO.2
PLOT PLAN

DATE: 6-14-16

BY: JB

JOB NO.: C15-700.1



BPI

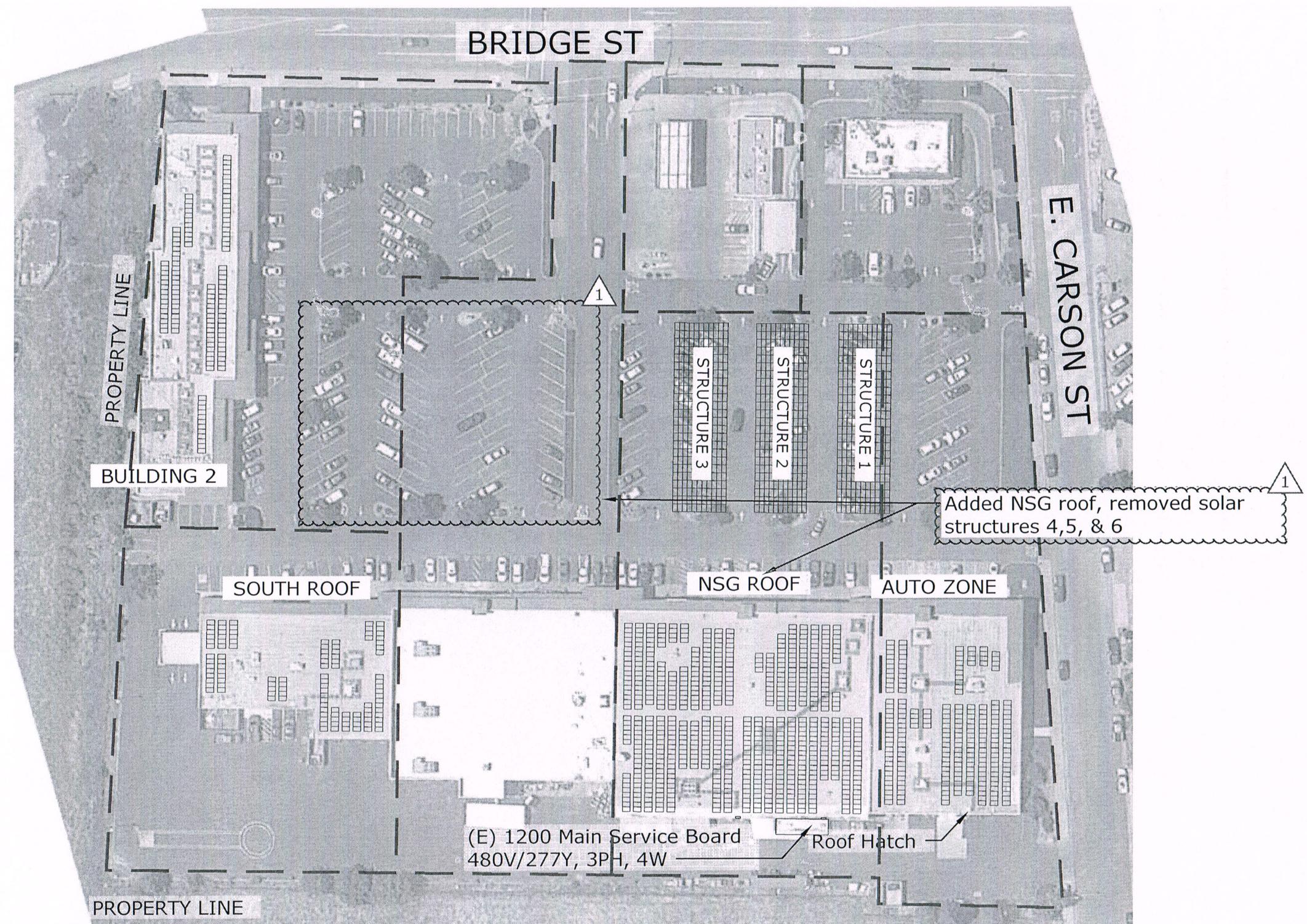
PO BOX 10637
NAPA, CA 94581
PH: (707)-252-9990

NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011



BY

Zoning District:	M-U-B
Front Setbacks:	5'
Side & Rear Setbacks:	5'



Roof Array Configuration:

4 Sungrow SG60KU Inverter(s)
2 Sungrow SG30KU Inverter(s)
1,090 Hanwha Q.Peak-G4.1 300W 300W Modules
327 kW DC Subsystem Size

Solar Structure Array Configuration:

6 Sungrow SG36KU Inverter(s)
792 Hanwha Q.Peak-G4.1 300W 300W Modules
237.6 kW DC Subsystem Size

Scale: 1" = 80'

00 80 160



PV0.3

PV SITE PLAN

DATE: 6-14-16

BY: JB

JOB NO.: C15-700.1

BPI	1	3/28/17	Equipment change & added NSG roof array
	1	3/28/17	Removed structures 4,5,6

PO BOX 10637
NAPA, CA 94581
PH: (707)-252-9990

NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

AutoZone Array Configuration:

1 Sungrow SG60KU Inverter(s)
 220 Hanwha Q.Peak-G4.1 300W 300W Modules
 66 kW DC Subsystem Size

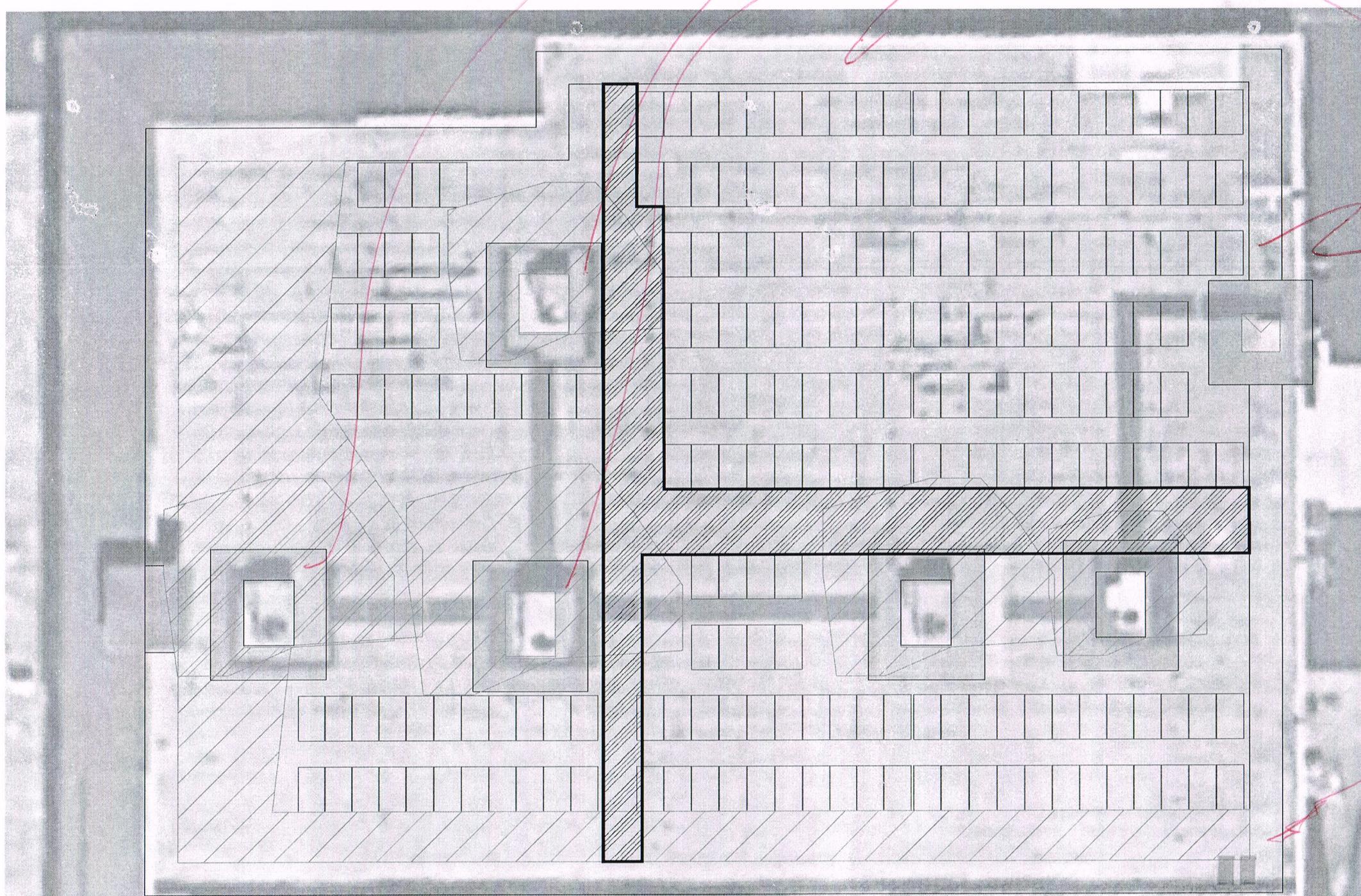
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VERIFY clearances

: Shading Setback

: 4' Equipment Access Perimeter

: Fire Access Walkways



NSG1-COLUSA
 1017 BRIDGE ST
 COLUSA, CA 95932
 APN: 002-120-011

PV0.4A
 MODULE LAYOUT
 OVERVIEW

DATE: 6-14-16

BY: JB

JOB NO.: C15-700.1

BPI	1	3/28/17	Equipment change & added NSG roof array
	1	3/28/17	Removed structures 4,5,6

BY

NSG Roof Array Configuration:

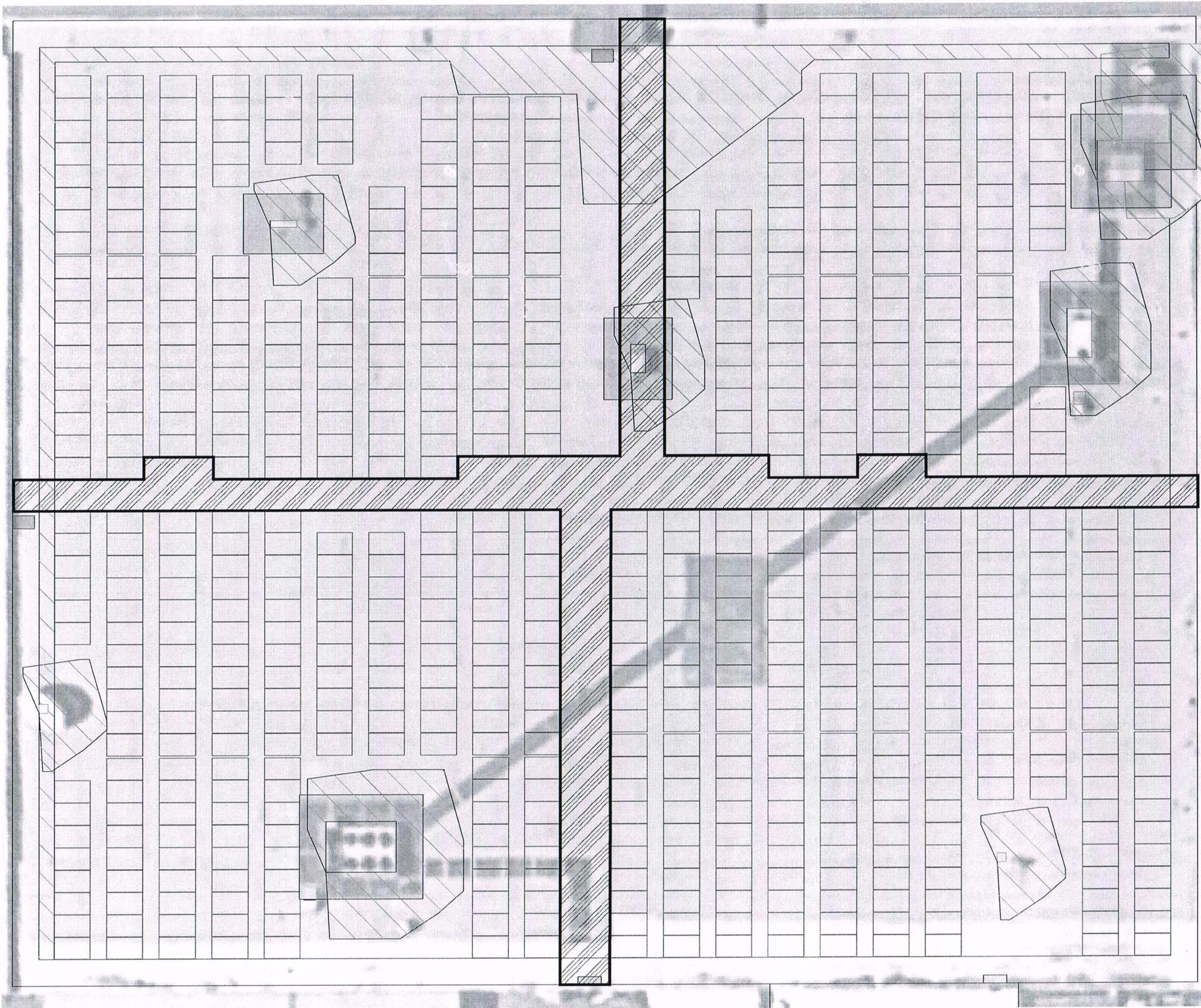
3 Sungrow SG60KU Inverter(s)
 640 Hanwha Q.PeaK-G4.1 300W 300W Modules
 192 kW DC Subsystem Size

1

□ : Shading Setback

□ : 4' Equipment Access Perimeter

□ : Fire Access Walkways



NSG1-COLUSA
 10117 BRIDGE ST
 COLUSA, CA 95932
 APN: 002-120-011

PVO.5B
 ROOF ARRAY
 DIMENSIONS &
 INVERTER
 FOOTPRINTS

DATE: 6-14-16

BY: JB

JOB NO.: C15-700.1

PO BOX 10637
 NAPA, CA 94581
 PH: (707)-252-9990

REV. NO

REV. DATE

Equipment change & added NSG roof array

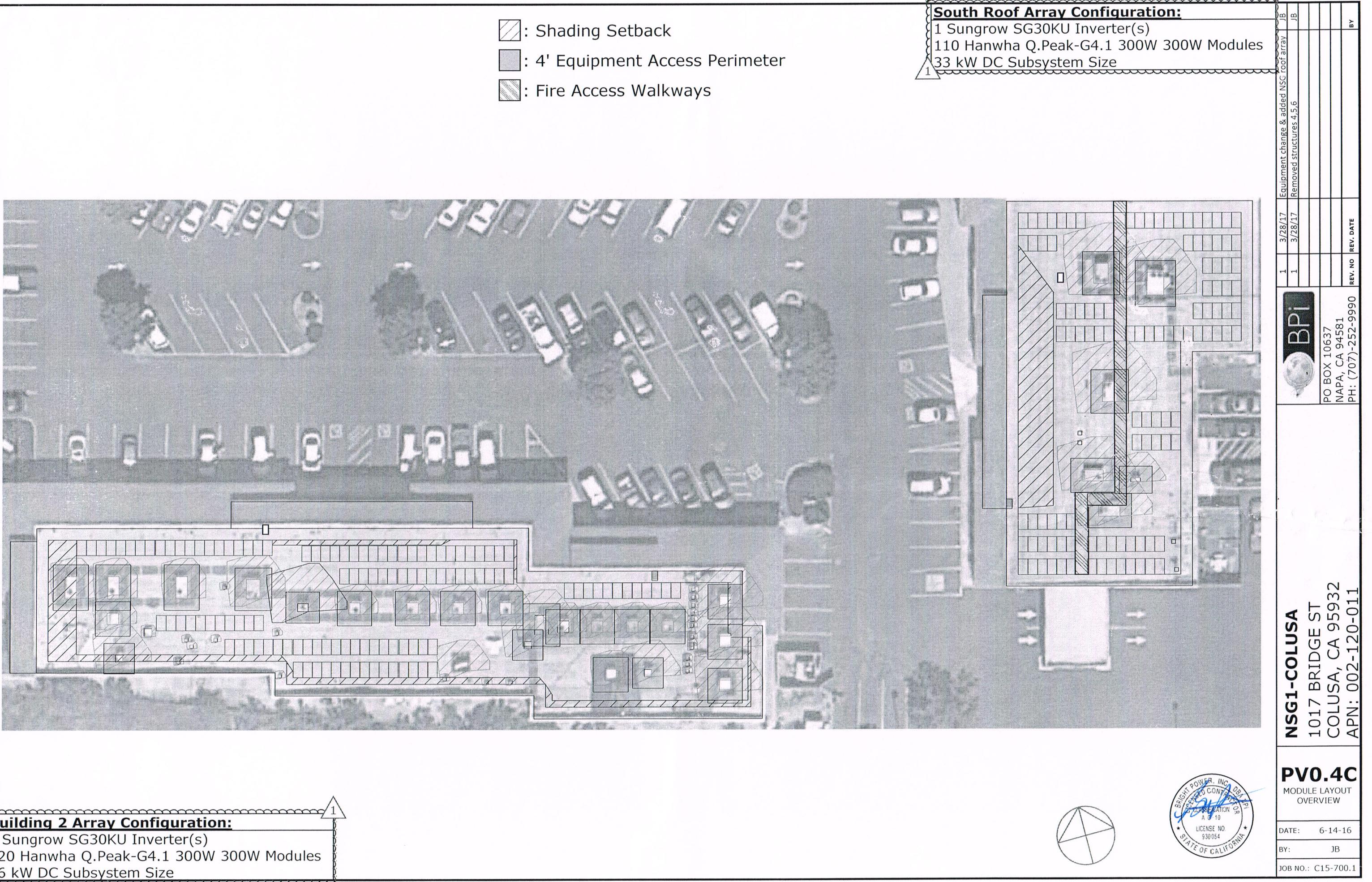
JB

Removed structures 4,5,6

JB

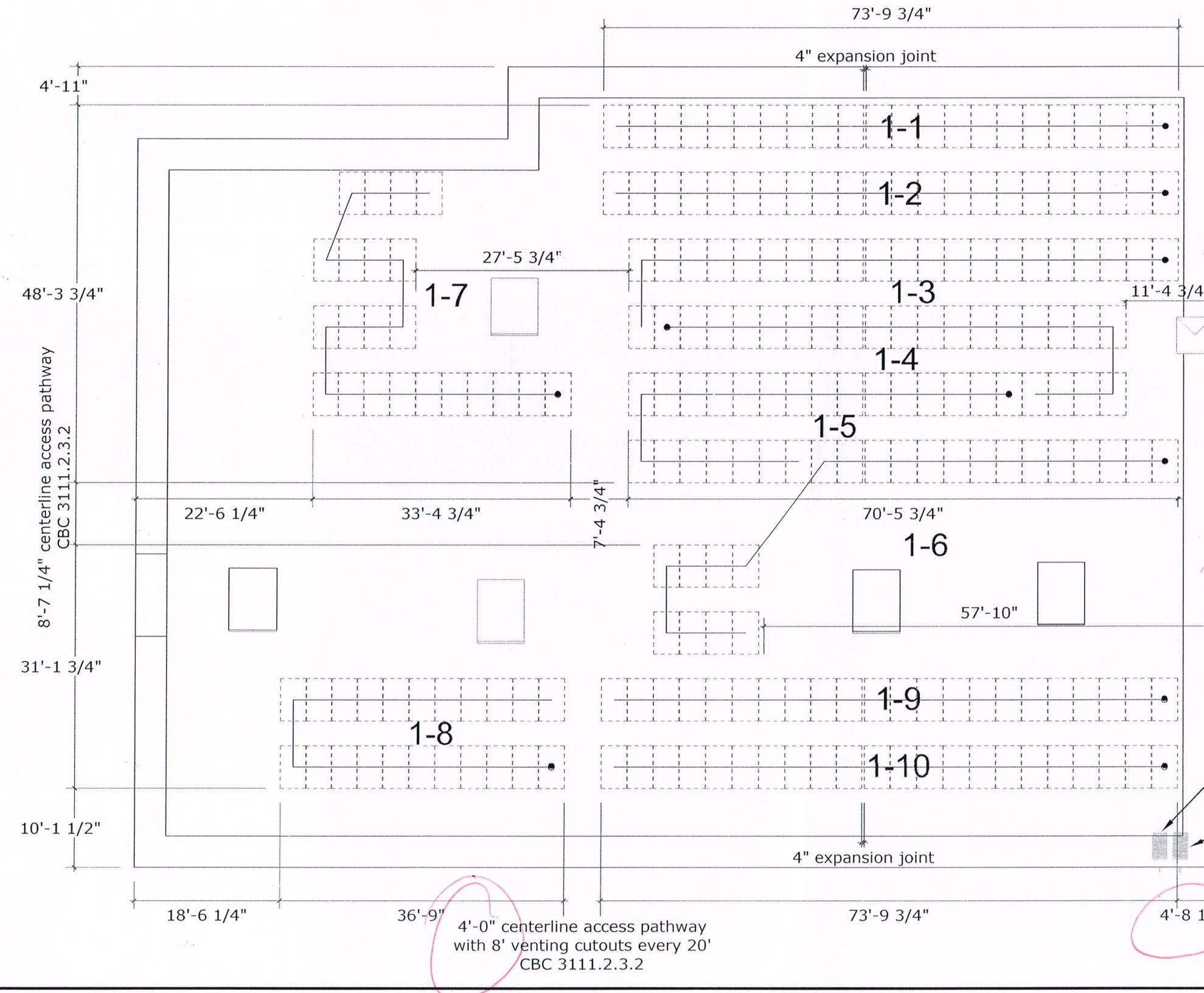
BY





AutoZone Array Configuration:

1 Sungrow SG60KU Inverter(s)
220 Hanwha Q.PeaK-G4.1 300W 300W Modules
66 kW DC Subsystem Size



BPI	1	3/28/17	Equipment change & added NSG roof array
	1	3/28/17	Removed structures 4.5.6
			JB
			JB
			BY

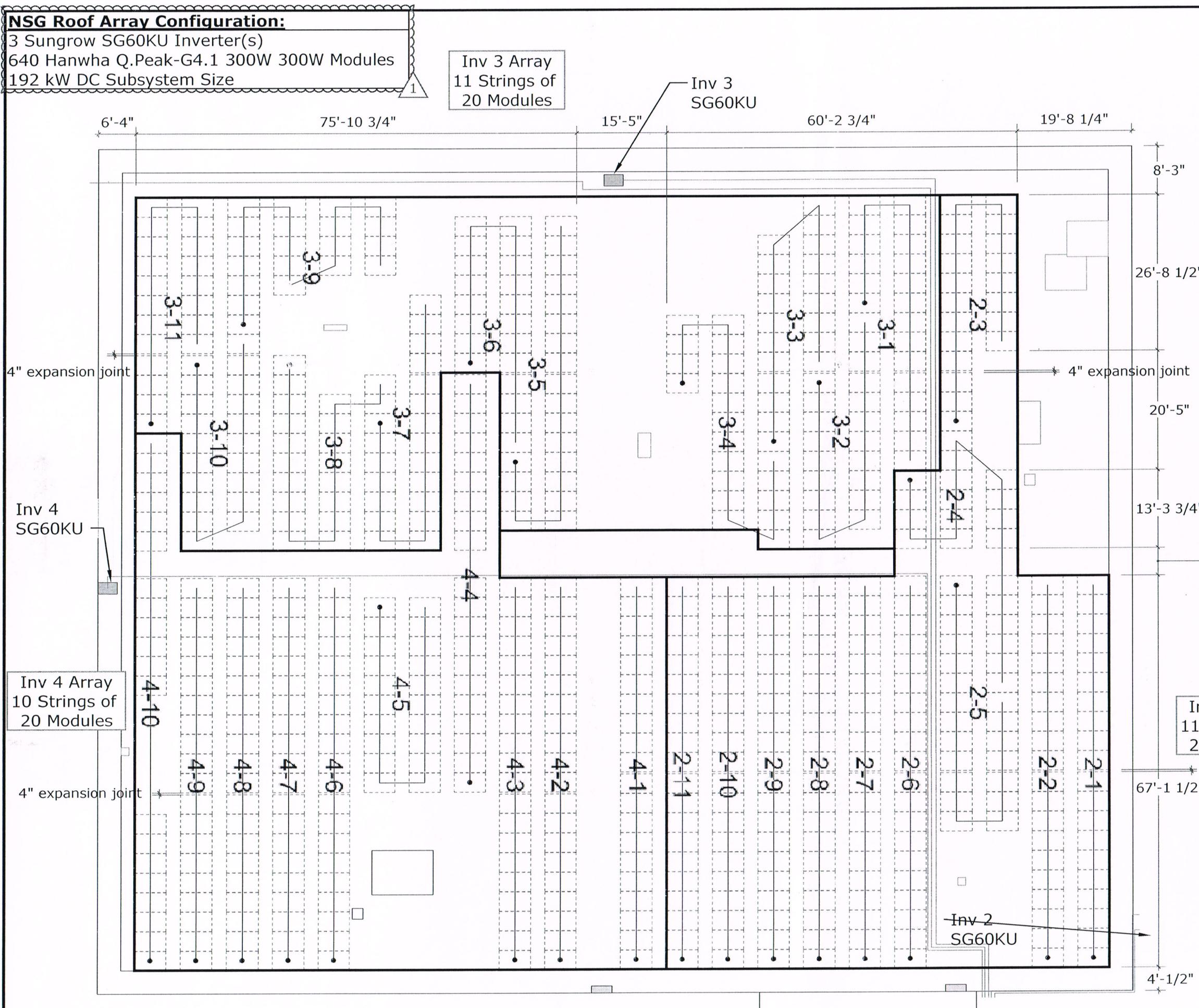
NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

PV0.5A
ROOF ARRAY
DIMENSIONS &
INVERTER
FOOTPRINTS
DATE: 6-14-16
BY: JB
JOB NO.: C15-700.1

BPI	1	3/28/17	Equipment change & added NSG roof array
	1	3/28/17	Removed structures 4.5.6
			JB
			JB
			BY

NSG Roof Array Configuration:

3 Sungrow SG60KU Inverter(s)
640 Hanwha Q.Peak-G4.1 300W 300W Modules
192 kW DC Subsystem Size



Inv 2 Array
11 Strings of
20 Modules

3/4" 4'-8 1/2" centerline access pathway
CBC 3111.2.3.2



NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95936
APN: 002-1120-01

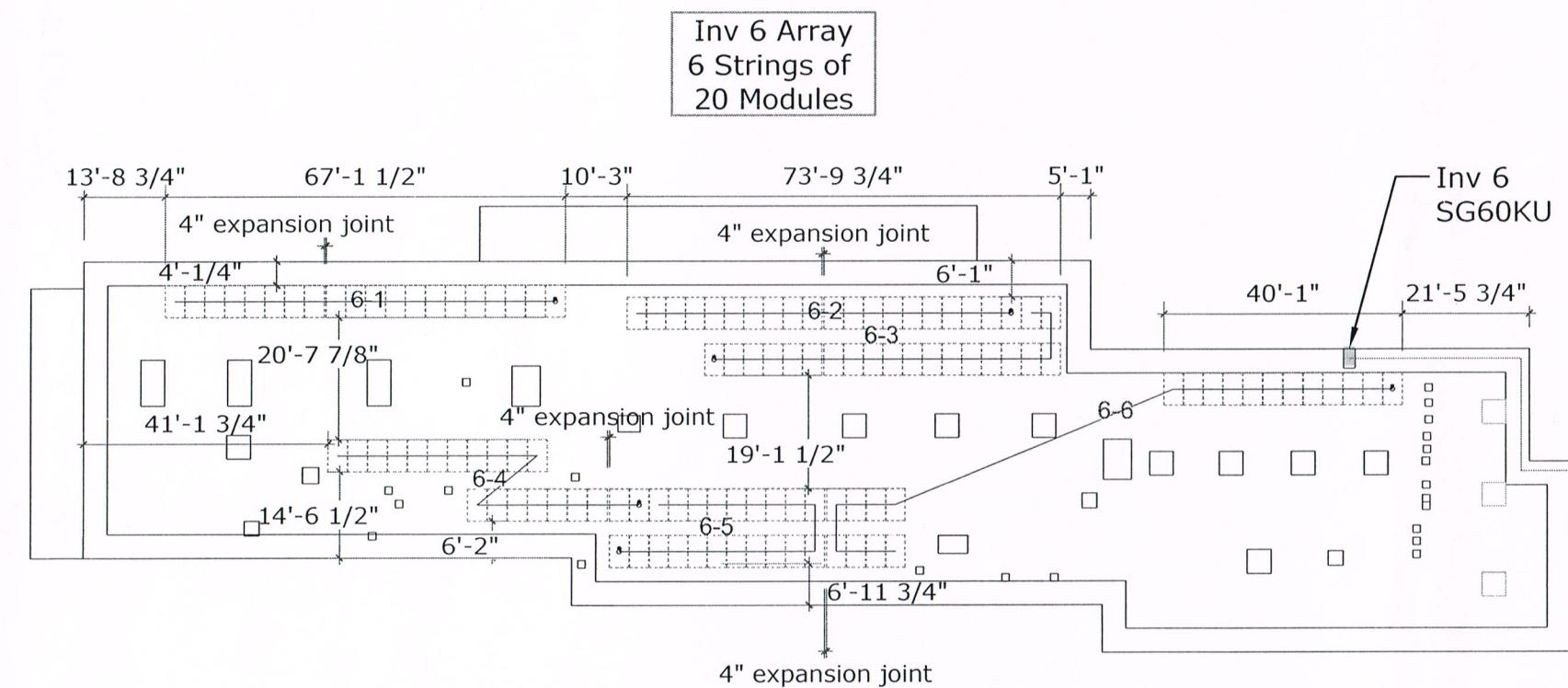
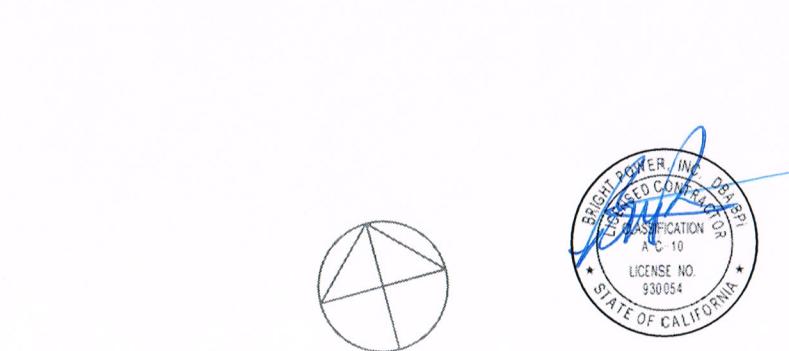
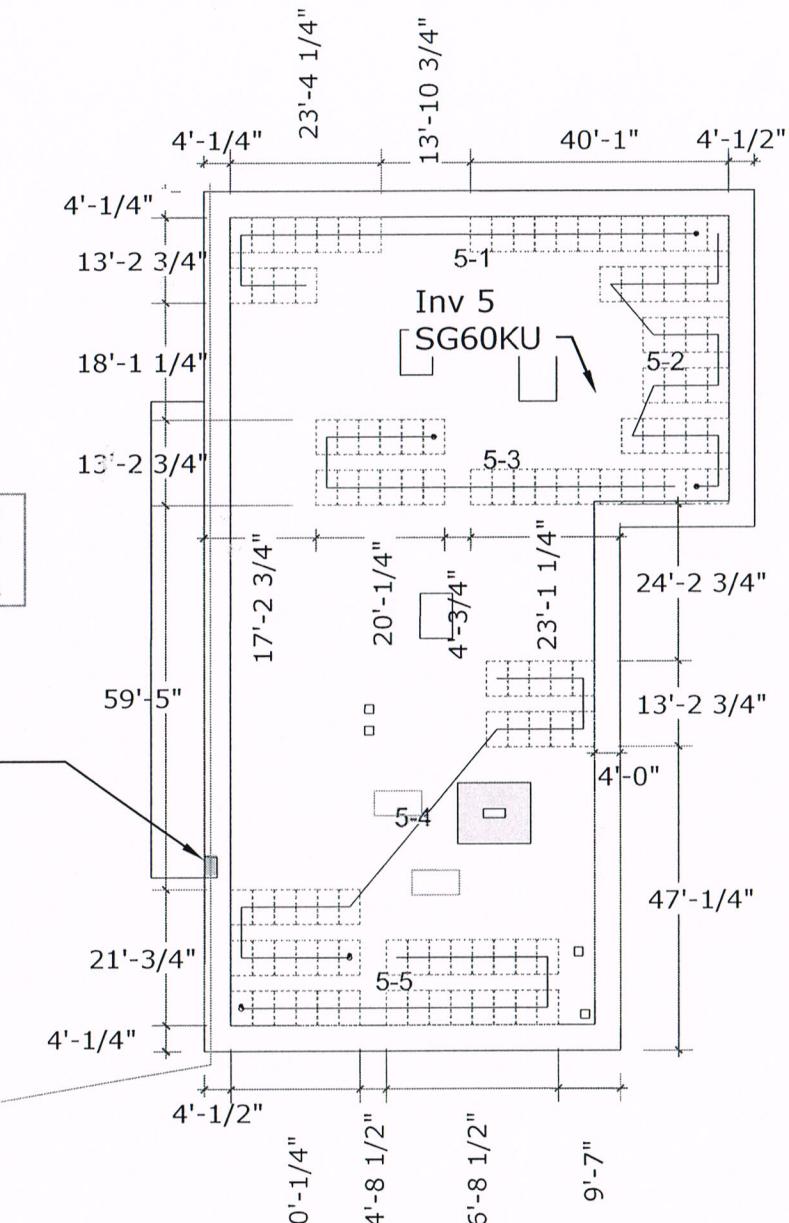
PVO.5B

ROOF ARRAY
DIMENSIONS &
INVERTER
FOOTPRINTS

PV0.5B
ROOF ARRAY
DIMENSIONS &
INVERTER
FOOTPRINTS

South Roof Array Configuration:

1 Sungrow SG30KU Inverter(s)
110 Hanwha Q.Peak-G4.1 300W 300W Modules
33 kW DC Subsystem Size



Building 2 Array Configuration:

1 Sungrow SG30KU Inverter(s)
120 Hanwha Q.Peak-G4.1 300W 300W Modules
36 kW DC Subsystem Size

PV0.5C
1017 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

ROOF ARRAY
DIMENSIONS &
INVERTER
FOOTPRINTS
SOLAR CONTRACTOR
CLASSIFICATION
A.C. 10
LICENSE NO.
930054
STATE OF CALIFORNIA
DATE: 6-14-16
BY: JB
JOB NO.: C15-700.1

1	3/28/17	Equipment change & added NSG roof array
1	3/28/17	Removed structures 4.5.6
BPi	1	1
PO BOX 10637 NAPA, CA 94581 PH: (707)-252-9990		
REV. NO	REV. DATE	

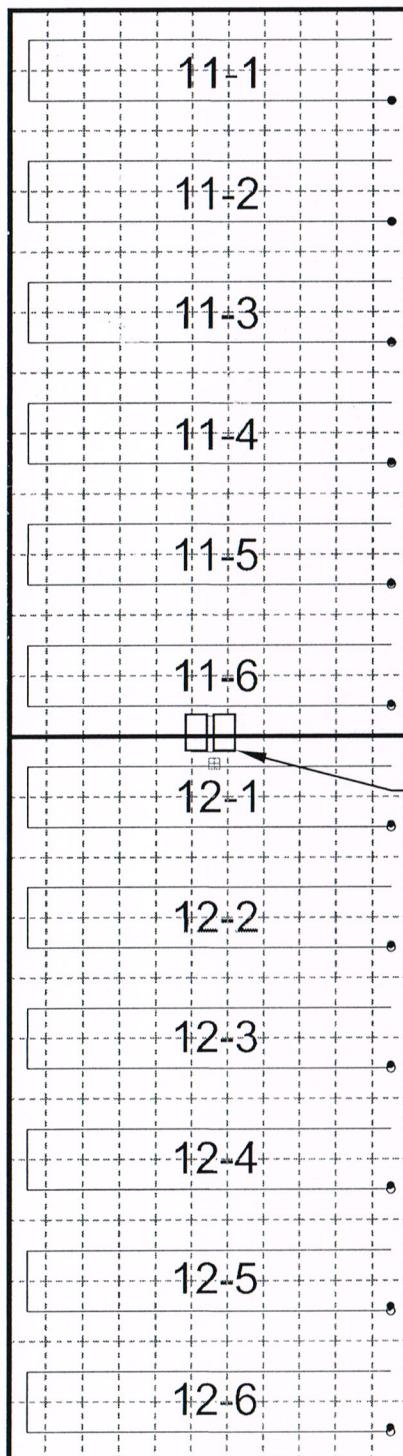
Solar Structure Array Configuration:

6 Sungrow SG36KU Inverter(s)

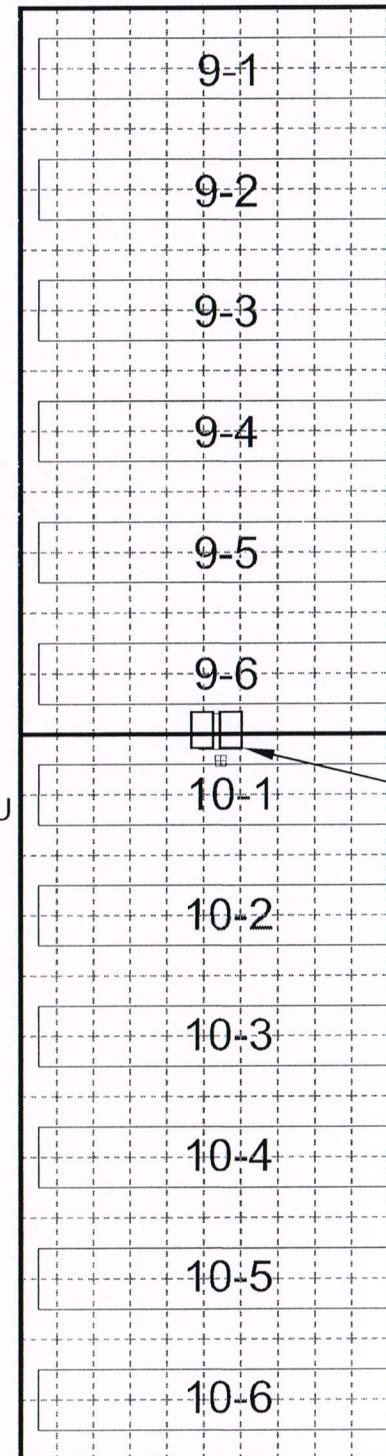
792 Hanwha Q.PeaK-G4.1 300W 300W Modules

237.6 kW DC Subsystem Size

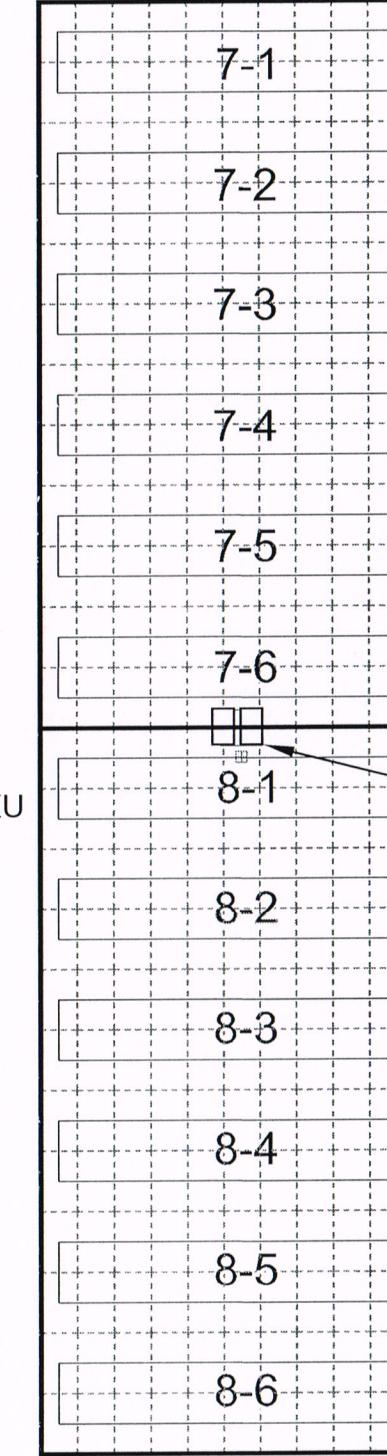
Inv 11 Array
6 Strings of
22 Modules



Inv 9 Array
6 Strings of
22 Modules



Inv 7 Array
6 Strings of
22 Modules



Inv 12 Array
6 Strings of
22 Modules

Inv 10 Array
6 Strings of
22 Modules

Inv 8 Array
6 Strings of
22 Modules



NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

PV0.5D
SOLAR STRUCTURE
STRINGING
DIAGRAM &
INVERTER
FOOTPRINTS

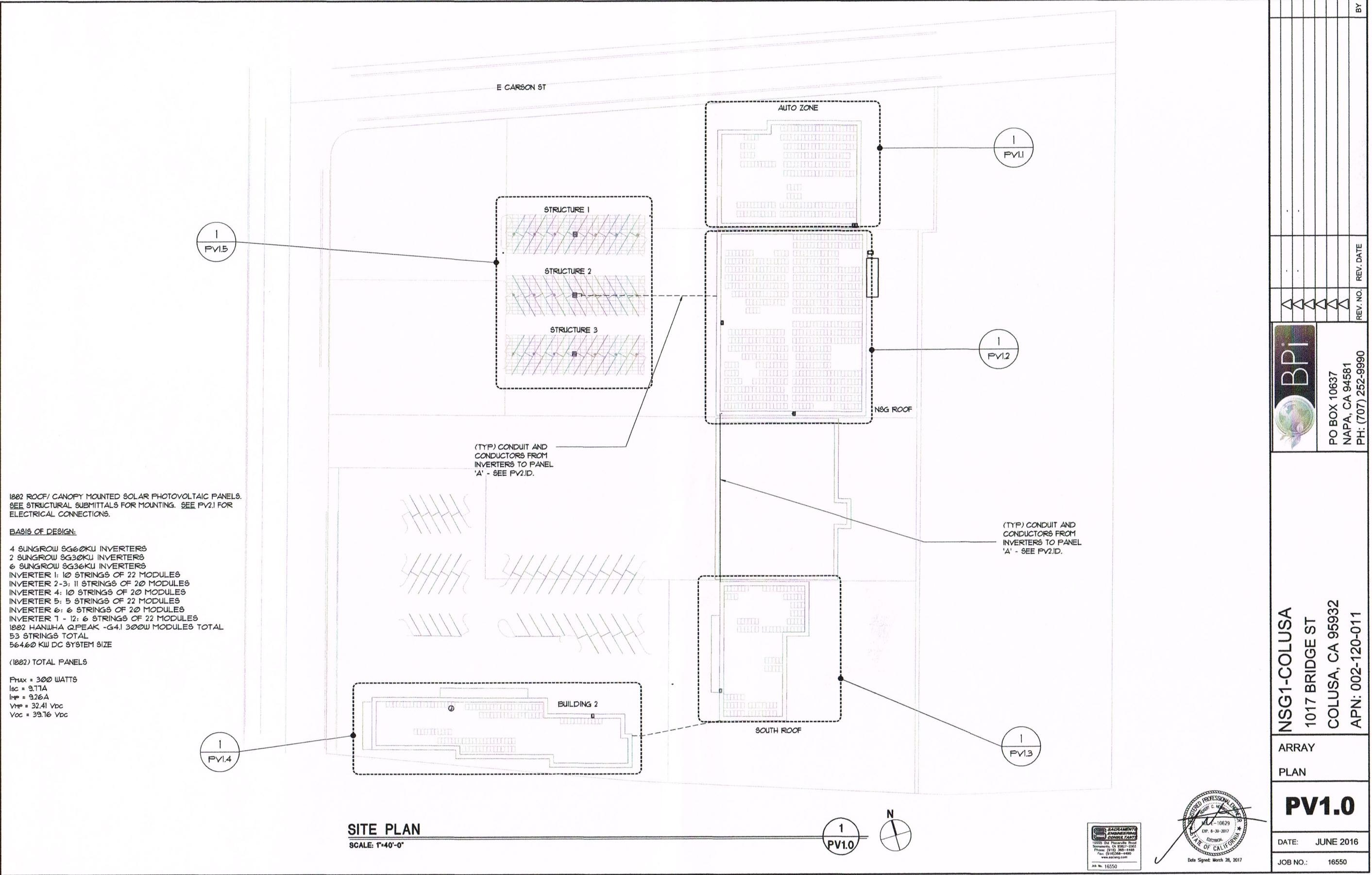
DATE: 6-14-16
BY: JB
JOB NO.: C15-700.1

1	3/28/17	Equipment change & added NSG roof array	JB
1	3/28/17	Removed structures 4,5,6	JB
			BY



PO BOX 10637
NAPA, CA 94581
PH: (707)-252-9990

REV. NO	REV. DATE		
1	3/28/17		
1	3/28/17		



REV. NO. REV. DATE
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NSG1-COLUSA
10117 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

**ARRAY
PLAN**

PV1.0

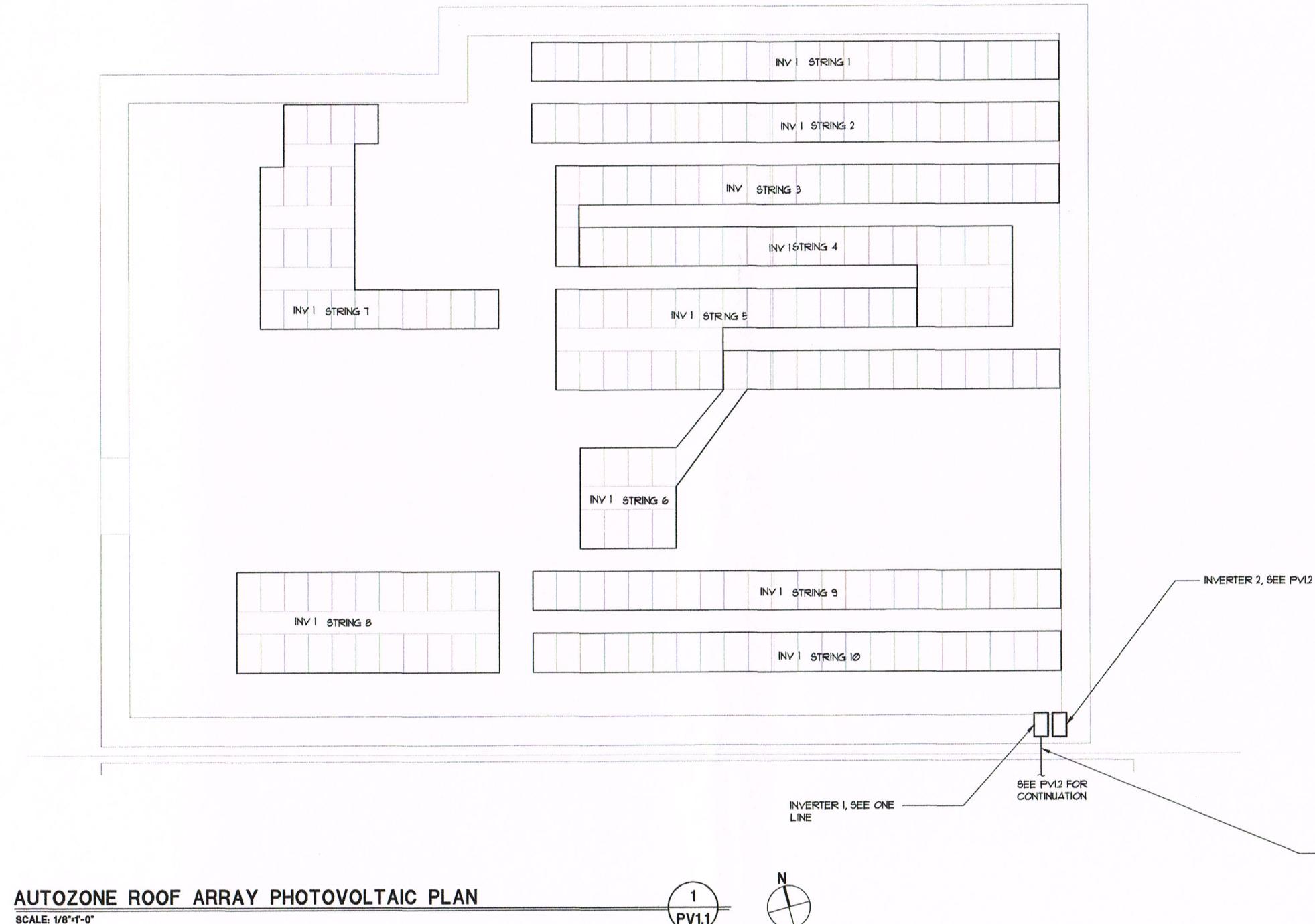
**DATE: JUNE 2016
JOB NO.: 16550**

220 ROOF MOUNTED SOLAR PHOTOVOLTAIC PANELS. SEE
STRUCTURAL SUBMITTALS FOR MOUNTING. SEE PV1.1 FOR
ELECTRICAL CONNECTIONS.

ROOF ARRAY CONFIGURATION:
1 SUNGROW SG60KU INVERTER
INVERTER I: 10 STRINGS OF 22 MODULES

220 HANWHA QPEAK -G4.I 300W MODULES
66 KW DC SYSTEM SIZE

P_{MAX} = 300 WATTS
I_{SC} = 9.77A
I_{MP} = 9.26A
V_{MP} = 32.41 VDC
V_{OC} = 39.76 VDC



AUTOZONE ROOF ARRAY PHOTOVOLTAIC PLAN

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



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APN: 002-120-011



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BY

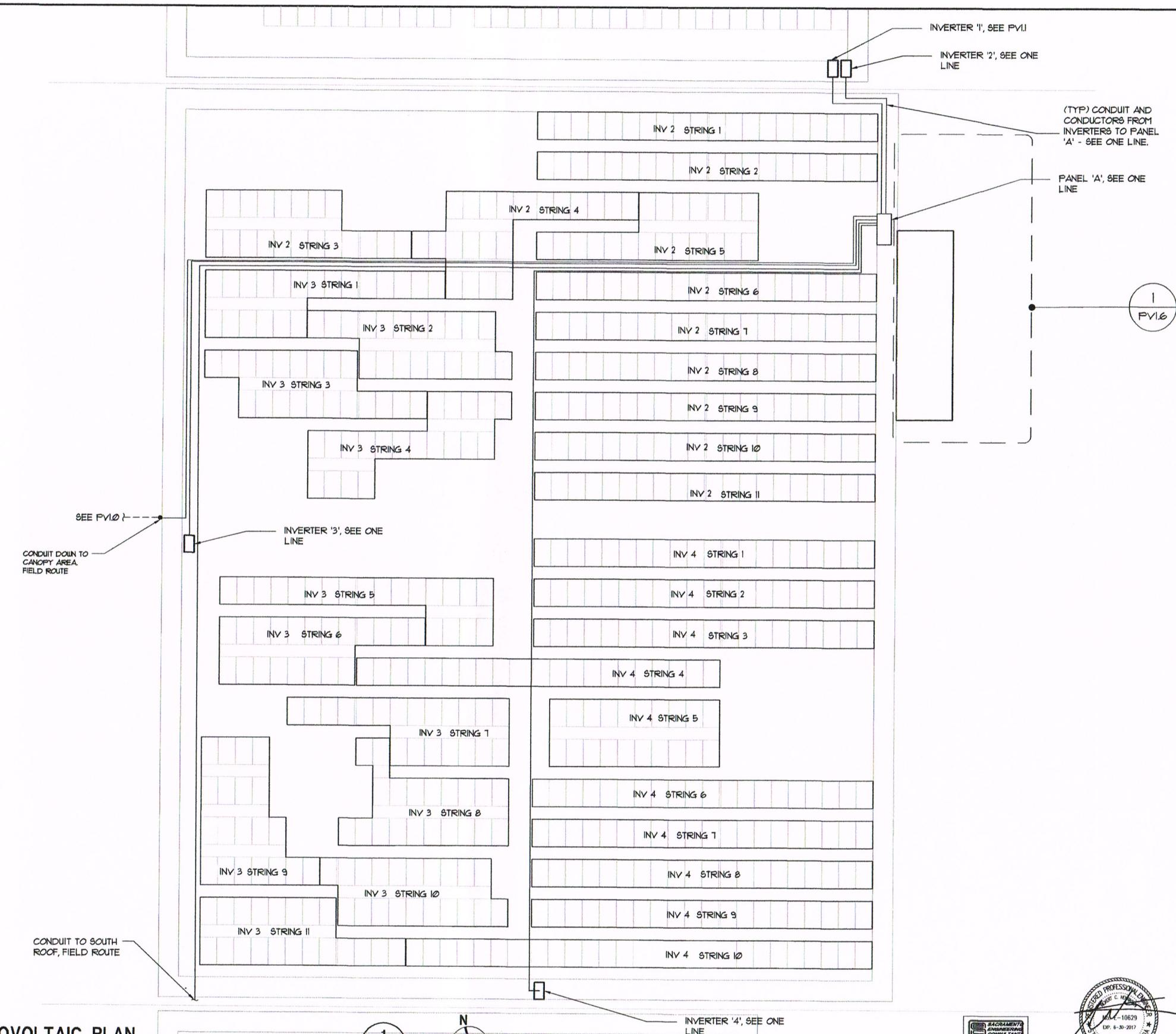
PV1.1
DATE: JUNE 2016
JOB NO.: 16550

640 ROOF MOUNTED SOLAR PHOTOVOLTAIC PANELS. SEE STRUCTURAL SUBMITTALS FOR MOUNTING. SEE PV1.1 FOR ELECTRICAL CONNECTIONS.

ROOF ARRAY CONFIGURATION:
3 SUNGROW SG60KU INVERTERS
INVERTER 2-3: 11 STRINGS OF 20 MODULES
INVERTER 4: 10 STRINGS OF 20 MODULES

640 HANWHA Q.PEAK -G4.1 300W MODULES
192 KW DC SYSTEM SIZE

P_{MAX} = 300 WATTS
I_{SC} = 9.71A
I_{MP} = 9.26A
V_{MP} = 32.41 Vdc
V_{OC} = 39.76 Vdc



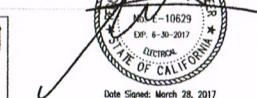
NSG ROOF ARRAY PHOTOVOLTAIC PLAN
SCALE: 1'-0"-0"

1
PV1.2



SEE PV1.0

INVERTER '1', SEE ONE LINE



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COLUSA, CA 95932
APN: 002-120-011

ARRAY
PLAN

PV1.2

DATE: JUNE 2016

JOB NO.: 16550

REV. NO. / REV. DATE

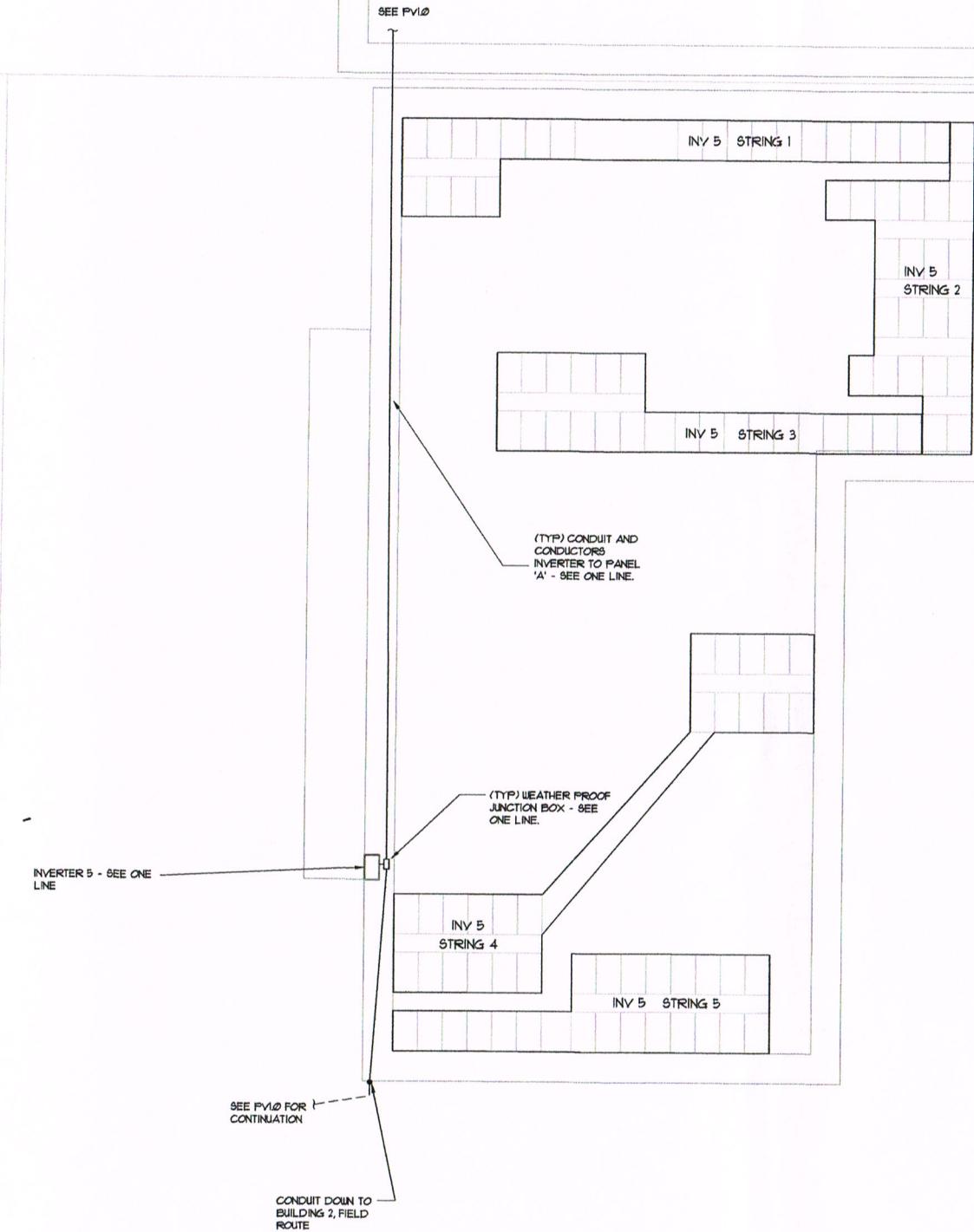
BY



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SOUTH ROOF ARRAY PHOTOVOLTAIC PLAN

SCALE: 1/10"=1'-0"



1
PV1.3



110 ROOF MOUNTED SOLAR PHOTOVOLTAIC PANELS. SEE STRUCTURAL SUBMITTALS FOR MOUNTING. SEE PV2.1 FOR ELECTRICAL CONNECTIONS.

ROOF ARRAY CONFIGURATION:
1 SUNGROW SG30KU INVERTER
INVERTER 5: 5 STRINGS OF 22 MODULES

110 HANWHA Q.PEAK -G4.1 300W MODULES
33 KW DC SYSTEM SIZE

P_{MAX} = 300 WATTS
I_{SC} = 9.71A
I_{MP} = 9.26A
V_{MP} = 32.41 VDC
V_{OC} = 39.76 VDC

NSG1-COLUSA	1017 BRIDGE ST	COLUSA, CA 95932	APN: 002-120-011
ARRAY			
PLAN			
PV1.3			



DATE: JUNE 2016
JOB NO.: 16550

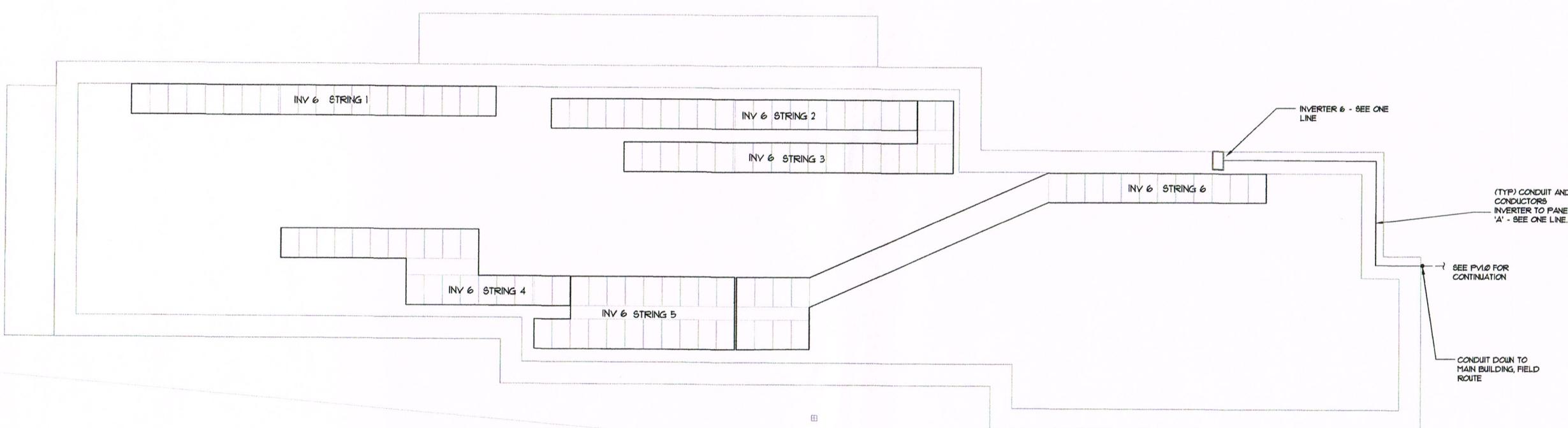
REV. DATE BY

120 ROOF MOUNTED SOLAR PHOTOVOLTAIC PANELS. SEE
STRUCTURAL SUBMITTALS FOR MOUNTING. SEE PV2.I FOR
ELECTRICAL CONNECTIONS.

ROOF ARRAY CONFIGURATION:
1 SUNGROW SG30KU INVERTER
INVERTER 6: 6 STRINGS OF 20 MODULES

110 HANWHA Q.PEAK -G4.I 300W MODULES
36 KW DC SYSTEM SIZE

P_{MAX} = 300 WATTS
I_{SC} = 9.71A
I_{MP} = 9.26A
V_{MP} = 32.41 VDC
V_{OC} = 39.76 VDC



BUILDING 2 ROOF ARRAY PHOTOVOLTAIC PLAN

SCALE: 1/10'-0"

1
PV1.4



BPi

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COLUSA, CA 95932
APN: 002-120-011
ARRAY
PLAN

PV1.4

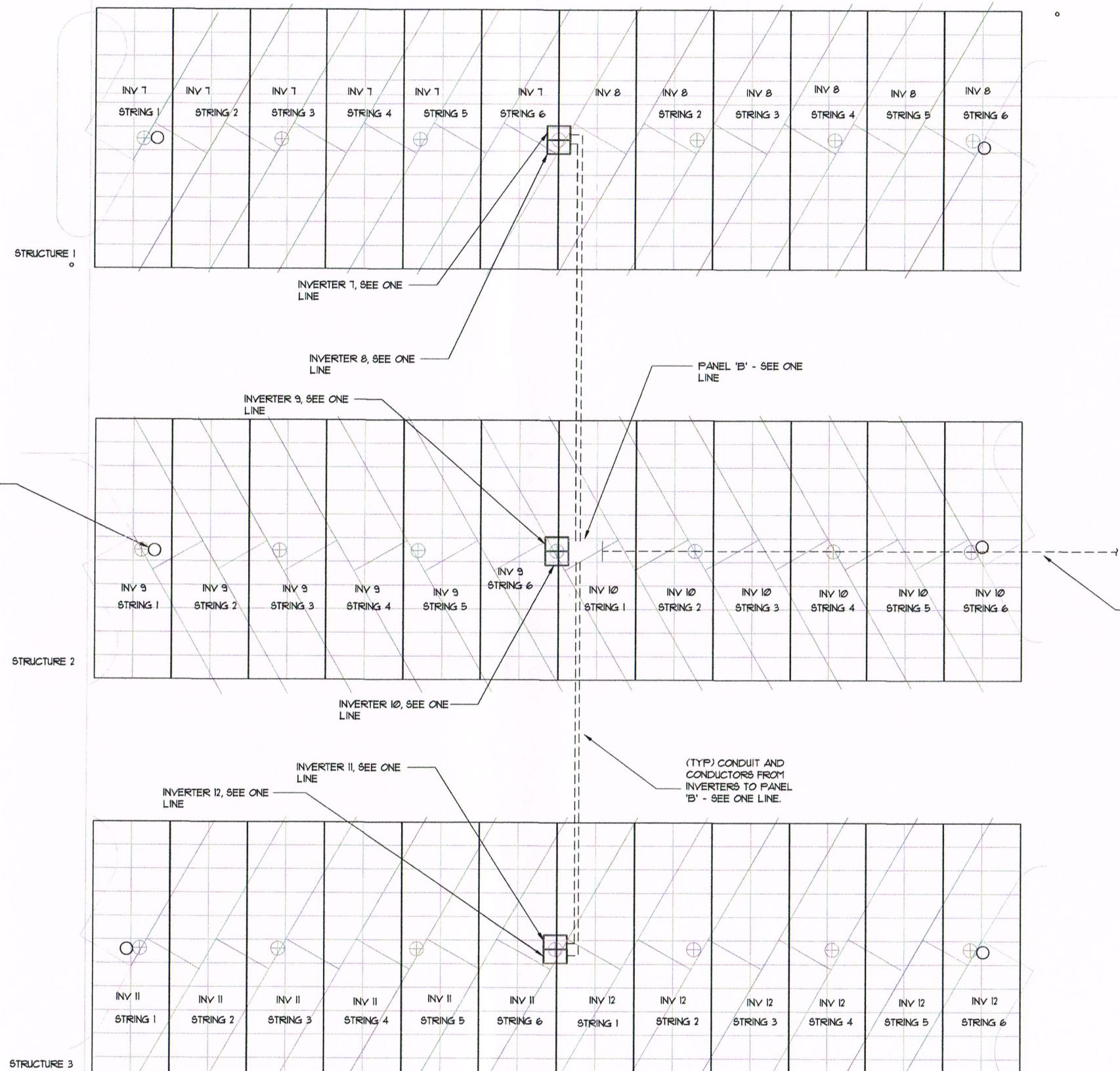
REV. NO. REV. DATE BY

792 SOLAR STRUCTURE MOUNTED SOLAR PHOTOVOLTAIC PANELS.
SEE STRUCTURAL SUBMITTALS FOR MOUNTING. SEE PV2.1 FOR
ELECTRICAL CONNECTIONS.

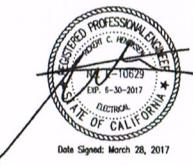
ROOF ARRAY CONFIGURATION:
6 SUNGROW SG36KU INVERTERS
INVERTER 7-12: 6 STRINGS OF 22 MODULES

792 HANWHA Q.PEAK -G4.I 300W MODULES
237.6 KW DC SYSTEM SIZE

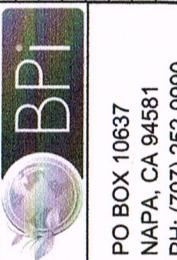
P_{MAX} = 300 WATTS
I_{SC} = 9.71A
I_{MP} = 9.26A
V_{MP} = 32.41 VDC
V_{OC} = 39.76 VDC



Job No. 16550



PV1.5
DATE: JUNE 2016
JOB NO.: 16550



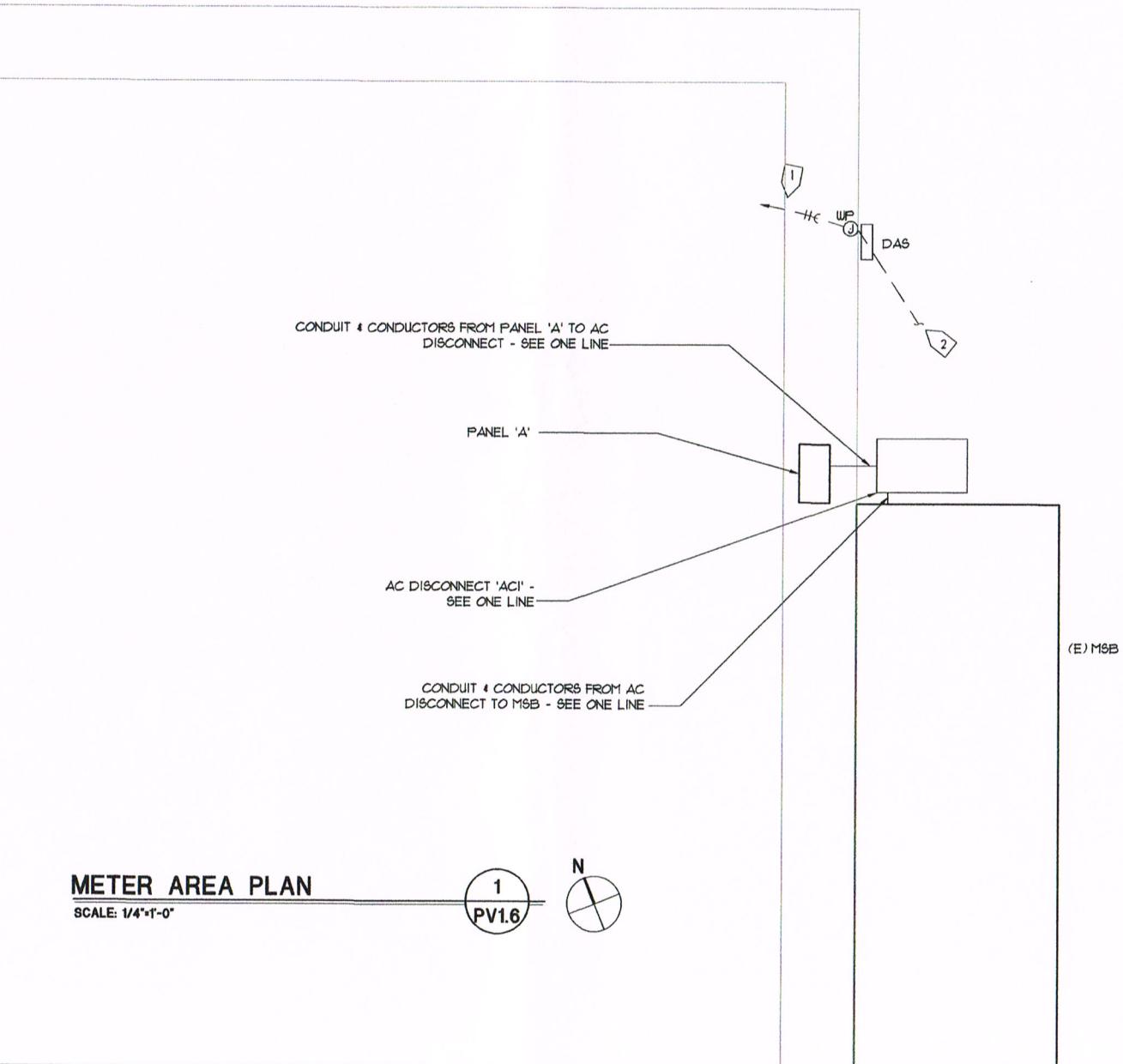
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PH: (707) 252-9990

BY _____
REV. NO. _____ REV. DATE _____

NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

NUMBERED NOTES

- 1 (2) #10, #10 G IN $\frac{3}{4}$ "C. TO NEAREST PANEL. PROVIDE 20A/PI BREAKER IN EXISTING PANEL, AND CONNECT DAS CIRCUIT TO NEW BREAKER.
- 2 (1) 1" DATA CONDUIT TO DATA CONNECTION POINT - SEE ONE LINE. FIELD ROUTE. ALTERNATELY, WIRELESS CONNECTION MAY BE PROVIDED.



SACRAMENTO COUNTY
OFFICE OF THE PUBLIC DEFENDER
SACRAMENTO COUNTY CRIMINAL TRIALS
10550 Old Pinesville Road
Sacramento, CA 95821
Phone: (916) 358-4468
Fax: (916) 358-4469
www.saccd.org
Job No. 16550



PV1.6
DATE: JUNE 2016
JOB NO.: 16550



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NAPA, CA 94581
PH: (707) 252-9990
REV. NO. REV. DATE

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	COLUSA, CA 95932
	APN: 002-120-011

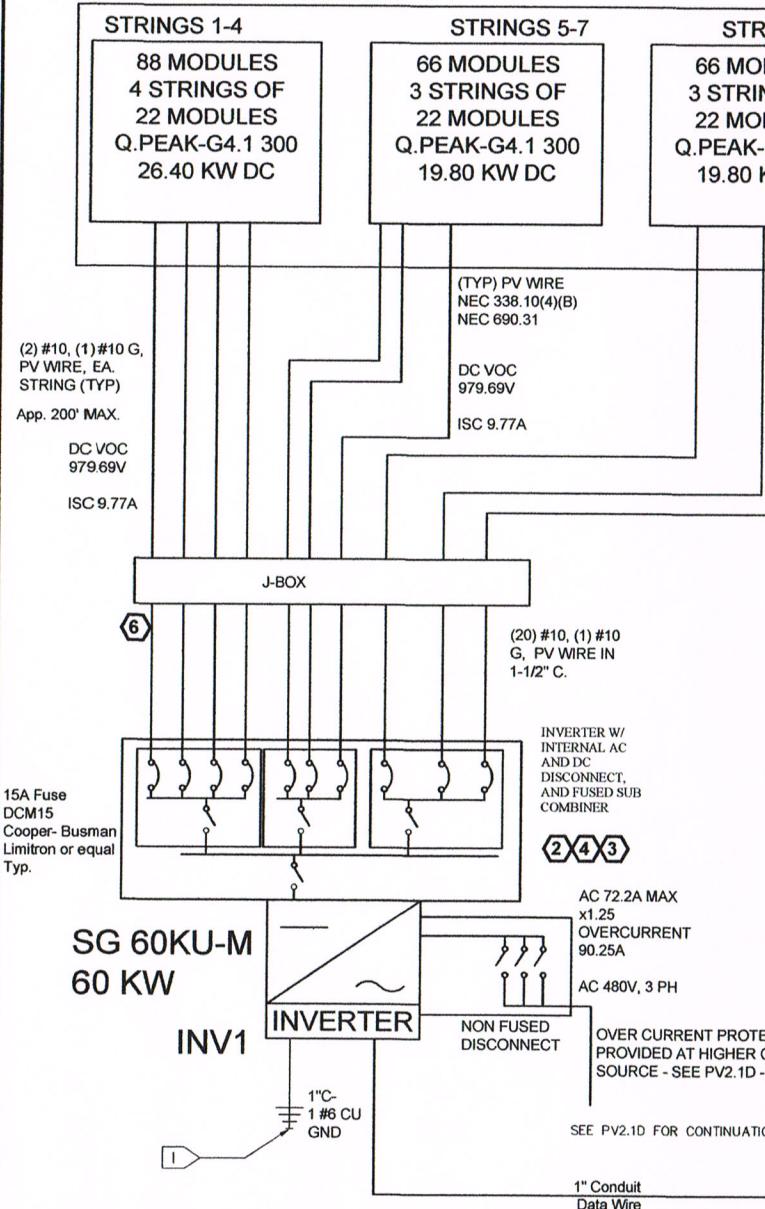
METER-AREA
PLAN

BY

Array Configuration:
 4 SUNGROW SG60KU INVERTERS, 2 SUNGROW SG30KU INVERTERS, 6 SUNGROW SG36KU INVERTERS
 INVERTER 1: 10 STRINGS OF 22 MODULES, INVERTER 2-3: 11 STRINGS OF 20 MODULES, INVERTER 4: 10 STRINGS OF 20 MODULES, INVERTER 5: 5 STRINGS OF 22 MODULES, INVERTER 6: 6 STRINGS OF 20 MODULES, INVERTER 7 - 12: 6 STRINGS OF 22 MODULES
 1882 HANWHA Q.PEAK - G4.1 300W MODULES TOTAL, 53 STRINGS TOTAL

Note: For specifications of solar equipment see attached cut sheets.

INVERTER 1



Module Model	HANWHA Q.PEAK - G4.1 300W	Modules per string	String output	Voltage Correction Factor	Corrected String Output
Module Max Power	300 W				
Maximum Power Voltage (V _{PMAX})	32.41 V		713.02 V	798.58 V	
Maximum Power Current (I _{PMAX})	9.26 A		9.26 A	9.26 A	
Open-circuit voltage (V _{OCC})	39.76 V		874.72 V	979.69 V (Not to Exceed 1000V)	
Short-circuit current (I _{SC})	9.77 A		9.77 A	9.77 A	
Fuse Size	15 A				

Module Model	HANWHA Q.PEAK - G4.	Modules per string	String output	Voltage Correction Factor	Corrected String Output
Module Max Power	300 W				
Maximum Power Voltage (V _{PMAX})	32.41 V		648.2 V	725.98 V	
Maximum Power Current (I _{PMAX})	9.26 A		9.26 A	9.26 A	
Open-circuit voltage (V _{OCC})	39.76 V		795.2 V	890.62 V (Not to Exceed 1000V)	
Short-circuit current (I _{SC})	9.77 A		9.77 A	9.77 A	
Fuse Size	18 A				

INTERCONNECTION STANDARDS COMPLIANCE

The Inverters listed have been tested and listed by Underwriters Laboratories to be in compliance with UL1741 Statistic Inverters And Charge Controllers For Use In Photovoltaic Power Systems, as well as IEEE-929-2000 Recommended Practice For Utility Interface Of Photovoltaic (PV) Systems.

IEEE-929-2000 provides guidance regarding equipment and function necessary to ensure compatible operation of photovoltaic systems which are connected in parallel with the electric utility. UL 1741 is the standard applied by Underwriters Laboratory to the Inverter to verify it meets the recommendations of IEEE-929-2000.

Refer to both documents for details of these Recommendations and test procedures.

AC Disconnect is accessible, and lockable.

Single line diagrammatic only actual layout determined by existing conditions.
 All hazardous transmission lines to be labeled:
 "CAUTION-Electrical Hazard"

NUMBERED NOTES

① PROVIDE # CU GROUNDING ELECTRODE CONDUCTOR FROM ARRAYS TO BUILDING GROUND, PER ARTICLE 250, CEC.

ELECTRICAL SIGNAGE NOTES REFER TO PV4.1 FOR DETAILS

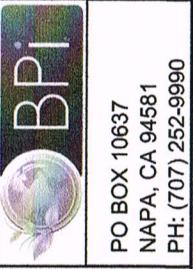
② PHOTONIC ARRAY DC DISCONNECT OPERATING CURRENT: 72.2 A OPERATING VOLTAGE: 799.69 V MAX. SYSTEM VOLTAGE: 979.69 V SHORT-CIRCUIT CURRENT: 97.7A

③ PHOTONIC ARRAY AC DISCONNECT OPERATING CURRENT: 72.2 A OPERATING VOLTAGE: 480 V

④ WARNING! ELECTRIC SHOCK HAZARD. THE DC CURRENT CIRCUIT CONDUCTORS IN THIS SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED WITH RESPECT TO GROUND DUE TO LEAKAGE PATHS AND OR GROUND FAULTS.

⑥ CAUTION: SOLAR CIRCUIT

⑦ PHOTONIC ARRAY DC DISCONNECT OPERATING CURRENT: 101.06 A OPERATING VOLTAGE: 725.98 V MAX. SYSTEM VOLTAGE: 890.62 V SHORT-CIRCUIT CURRENT: 107.47 A



NSG1-COLUSA
 1017 BRIDGE ST
 COLUSA, CA 95932
 APN: 002-120-011

SINGLE-LINE
 DIAGRAM

PV2.1A

DATE: JUNE 2016

JOB NO.: 16550



Date Signed: March 28, 2017

Job No.: 16550

**1882 HANWHA
 Q.PEAK - G4.1 300W
 MODULES
 564.6 kW DC Power**

INV #2-3 CALCULATIONS			
MPPT#	# OF STRINGS	# OF PANELS	KW
1	4	80	24.00
2	4	80	24.00
3	3	60	18.00
TOTAL	11	220	66.00

20 panel STRING Output			
# of Strings	Factored	Max Voltage	Max Current
641.87	1.25	725.98 V	725.98 A
Max Voltage	Factored	725.98 V	725.98 A
9.26 A	11.58	11.58 A	14.47 A
Open Circuit Voltage	Open Circuit Current	890.624 V	890.62 A
890.62 V	890.62 V	890.62 V	890.62 A
9.77 A	12.21	12.21 A	15.27 A

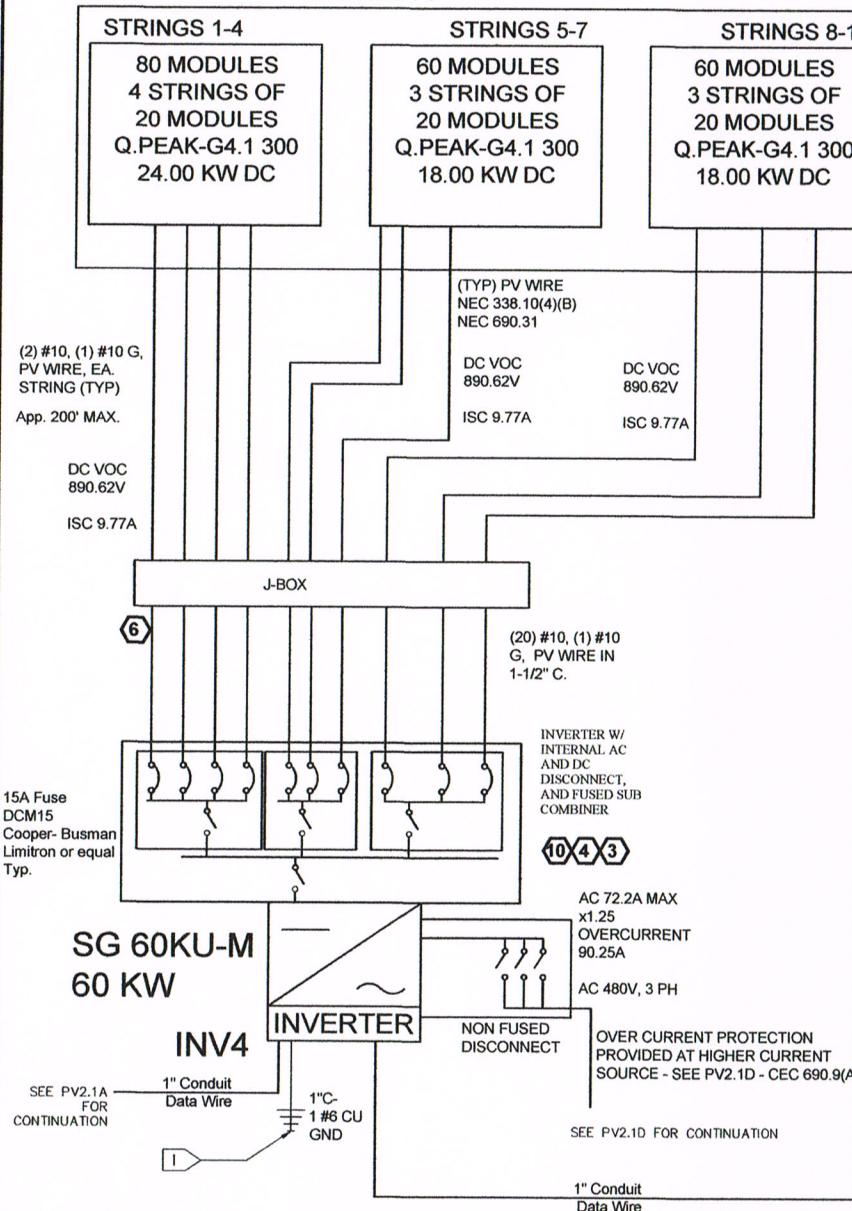
INV #1 CALCULATIONS			
MPPT#	# OF STRINGS	# OF PANELS	KW
1	4	88	26.40
2	3	66	19.80
3	3	66	19.80
TOTAL	10	220	66.00



Array Configuration:
 4 SUNGROW SG60KU INVERTERS, 2 SUNGROW SG30KU INVERTERS, 6 SUNGROW SG36KU INVERTERS
 INVERTER 1: 10 STRINGS OF 22 MODULES, INVERTER 2-3: 11 STRINGS OF 20 MODULES, INVERTER 4: 10 STRINGS OF 20 MODULES, INVERTER 5: 5 STRINGS OF 22 MODULES, INVERTER 6: 6 STRINGS OF 20 MODULES, INVERTER 7 - 12: 6 STRINGS OF 22 MODULES
 1882 HANWHA Q.PEAK - G4.1 300W MODULES TOTAL, 53 STRINGS TOTAL

Note: For specifications of solar equipment see attached cut sheets.

INVERTER 4



Module Model	HANWHA Q.PEAK - G4.1 300W	Modules per string	22	Voltage Correction Factor	1.12 (Table A)
Module Max Power	300 W	String output		Corrected String Output	
Maximum Power Voltage (V _{PMAX})	32.41 V		713.02 V		798.58 V
Maximum Power Current (I _{PMAX})	9.26 A		9.26 A		9.26 A
Open-circuit voltage (V _{OOC})	39.76 V		874.72 V		979.69 V (Not to Exceed 1000V)
Short-circuit current (I _{SC})	9.77 A		9.77 A		9.77 A
Fuse Size	15 A				

Module Model	HANWHA Q.PEAK - G4.	Modules per string	20	Voltage Correction Factor	1.12 (Table A)
Module Max Power	300 W	String output		Corrected String Output	
Maximum Power Voltage (V _{PMAX})	32.41 V		648.2 V		725.98 V
Maximum Power Current (I _{PMAX})	9.26 A		9.26 A		9.26 A
Open-circuit voltage (V _{OOC})	39.76 V		795.2 V		890.62 V (Not to Exceed 1000V)
Short-circuit current (I _{SC})	9.77 A		9.77 A		9.77 A
Fuse Size	15 A				

INTERCONNECTION STANDARDS COMPLIANCE

The Inverters listed have been tested and listed by Underwriters Laboratories to be in compliance with UL1741 Statistic Inverters And Charge Controllers For Use In Photovoltaic Power Systems, as well as IEEE-929-2000 Recommended Practice For Utility Interface Of Photovoltaic (PV) Systems.

IEEE-929-2000 provides guidance regarding equipment and function necessary to ensure compatible operation of photovoltaic systems which are connected in parallel with the electric utility. UL 1741 is the standard applied by Underwriters Laboratory to the Inverter to verify it meets the recommendations of IEEE-929-2000.

Refer to both documents for details of these Recommendations and test procedures.

AC Disconnect is accessible, and lockable.

Single line diagramatic only actual layout determined by existing conditions.
 All hazardous transmission lines to be labeled:
 "CAUTION-Electrical Hazard"

NUMBERED NOTES

1 PROVIDE #6 CU GROUNDING ELECTRODE CONDUCTOR FROM ARRAYS TO BUILDING GROUND, PER ARTICLE 250, CEC.

ELECTRICAL SIGNAGE NOTES REFER TO PV4.1 FOR DETAILS

3 PHOTOVOLTAIC ARRAY AC DISCONNECT OPERATING CURRENT: 72.2 A OPERATING VOLTAGE: 480 V

4 WARNING! ELECTRIC SHOCK HAZARD. THE DIRECT CURRENT CIRCUIT CONDUCTORS OF THIS PV SYSTEM ARE UNGROUNDED AND MAY BE ENERGIZED WITH RESPECT TO GROUND DUE TO LEAKAGE PATHS AND OR GROUND FAULTS.

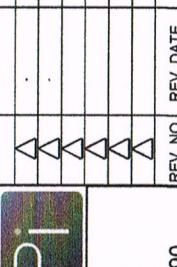
6 CAUTION: SOLAR CIRCUIT

8 PHOTOVOLTAIC ARRAY AC DISCONNECT OPERATING CURRENT: 36.1 A OPERATING VOLTAGE: 480 V

10 PHOTOVOLTAIC ARRAY DC DISCONNECT OPERATING CURRENT: 48.6 A OPERATING VOLTAGE: 725.98 V MAX. SYSTEM VOLTAGE: 890.62 V SHORT-CIRCUIT CURRENT: 97.7 A

12 PHOTOVOLTAIC ARRAY DC DISCONNECT OPERATING CURRENT: 48.3 A OPERATING VOLTAGE: 725.98 V MAX. SYSTEM VOLTAGE: 979.69 V SHORT-CIRCUIT CURRENT: 48.95 A

BY



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COLUSA, CA 95932
APN: 002-120-011

SINGLE-LINE
DIAGRAM

PV2.1B

DATE: JUNE 2016

JOB NO.: 16550

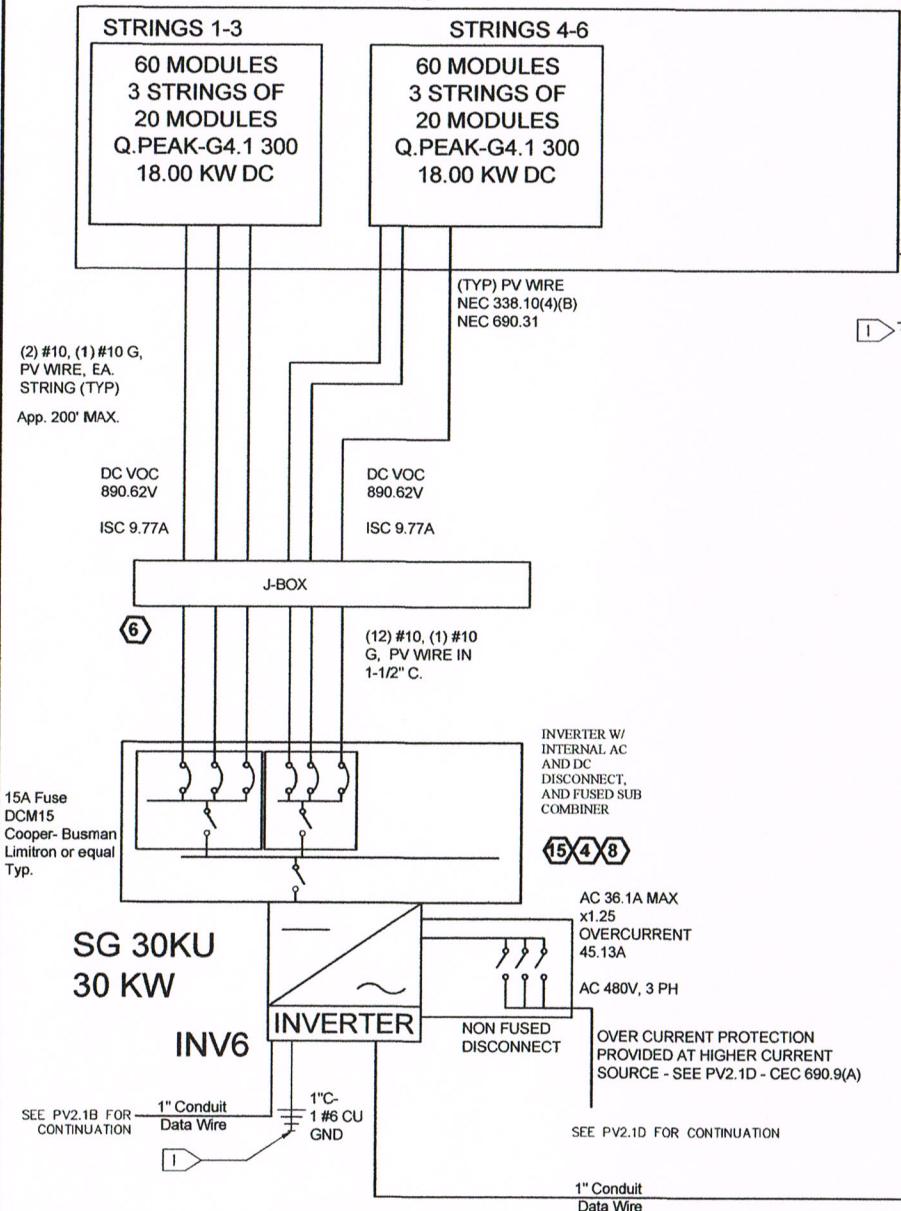
**1882 HANWHA
Q.PEAK - G4.1 300W
MODULES
564.6 kW DC Power**



Array Configuration:
4 SUNGROW SG60KU INVERTERS, 2 SUNGROW SG30KU INVERTERS, 6 SUNGROW SG36KU INVERTERS
INVERTER 1: 10 STRINGS OF 22 MODULES, INVERTER 2-3: 11 STRINGS OF 20 MODULES, INVERTER 4: 10 STRINGS OF 20 MODULES, INVERTER 5: 5 STRINGS OF 22 MODULES, INVERTER 6: 6 STRINGS OF 20 MODULES, INVERTER 7 - 12: 6 STRINGS OF 22 MODULES
1882 HANWHA Q.PEAK - G4.1 300W MODULES TOTAL, 53 STRINGS TOTAL

Note: For specifications of solar equipment see attached cut sheets.

INVERTER 6



INTERCONNECTION STANDARDS COMPLIANCE

The Inverters listed have been tested and listed by Underwriters Laboratories to be in compliance with UL1741 Statistic Inverters And Charge Controllers For Use In Photovoltaic Power Systems, as well as IEEE-929-2000 Recommended Practice For Utility Interface Of Photovoltaic (PV) Systems.

IEEE-929-2000 provides guidance regarding equipment and function necessary to ensure compatible operation of photovoltaic systems which are connected in parallel with the electric utility. UL 1741 is the standard applied by Underwriters Laboratory to the Inverter to verify it meets the recommendations of IEEE-929-2000.

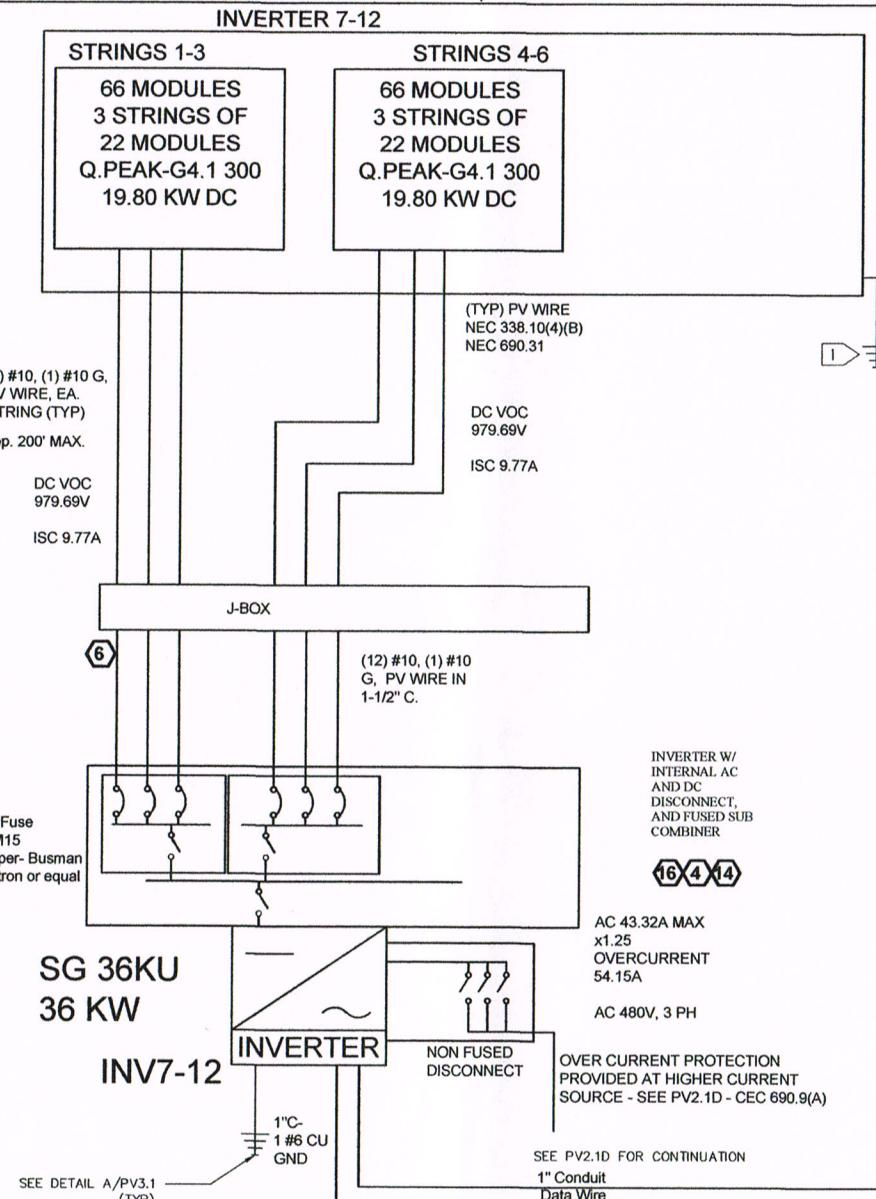
Refer to both documents for details of these Recommendations and test procedures.

AC Disconnect is accessible, and lockable.

Single line diagramatic only actual layout determined by existing conditions.
All hazardous transmission lines to be labeled:
"CAUTION-Electrical Hazard"

NUMBERED NOTES

1 PROVIDE # CU GROUNDING ELECTRODE CONDUCTOR FROM ARRAYS TO BUILDING GROUND, PER ARTICLE 250. CEC.



INV #7-12 CALCULATIONS			
MPPT#	# OF STRINGS	# OF PANELS	KW
1	3	66	19.80
2	3	66	19.80
TOTAL	6	132	39.60

20 panel STRING Output			
# of Strings	Factored	Max Voltage	Max Current
1	1.25	725.98 V	9.26 A
	1.5625	725.98 V	11.58 A
		890.62 V	14.47 A
		890.62 V	890.62 V
		9.77 A	12.21 A
		15.27 A	

Module Model	HANWHA Q.PEAK - G4.1 300W	Modules per string	String output	Voltage Correction Factor	Corrected String Output
Module Max Power	300 W	22		1.12 (Table A)	
Maximum Power Voltage (V _{PMAX})	32.41 V	713.02 V	798.58 V		
Maximum Power Current (I _{PMAX})	9.26 A	9.26 A	9.26 A		
Open-circuit voltage (V _{OC})	39.76 V	874.72 V	979.69 V (Not to Exceed 1000V)		
Short-circuit current (I _{SC})	9.77 A	9.77 A	9.77 A		
Fuse Size	15 A				

Module Model	HANWHA Q.PEAK - G4.	Modules per string	String output	Voltage Correction Factor	Corrected String Output
Module Max Power	300 W	20		1.12 (Table A)	
Maximum Power Voltage (V _{PMAX})	32.41 V	648.2 V	725.98 V		
Maximum Power Current (I _{PMAX})	9.26 A	9.26 A	9.26 A		
Open-circuit voltage (V _{OC})	39.76 V	795.2 V	890.62 V (Not to Exceed 1000V)		
Short-circuit current (I _{SC})	9.77 A	9.77 A	9.77 A		
Fuse Size	15 A				

22 panel STRING Output		
# of Strings	Factored	Max Voltage
1	1.25	725.98 V
	1.5625	725.98 V
		890.62 V
		9.77 A
		15.27 A

Table A (NEC 690.7)		
Celsius	Fahrenheit	Factor
14 to 10	58 to 50	1.06
9 to 5	49 to 41	1.08
4 to 0	40 to 32	1.1
(-1 to -5)	31 to 23	1.12
(-6 to -10)	22 to 14	1.14

INV #8 CALCULATIONS			
MPPT#	# OF STRINGS	# OF PANELS	KW
1	3	60	18.00
2	3	60	18.00
	0	0	0.00
TOTAL	6	120	36.00

**1882 HANWHA
Q.PEAK - G4.1 300W
MODULES
564.6 kW DC Power**



APRIL 10, 1929
EXPIRES APRIL 10, 2017
Date Signed: March 28, 2017
Job No. 16550

PV2.1C
DATE: JUNE 2016
JOB NO.: 16550

NSG1-COLUSA
1011 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

SINGLE-LINE
DIAGRAM
-

PV2.1C
DATE: JUNE 2016
JOB NO.: 16550

BY
REV. NO. REV. DATE
PO BOX 10637
NAPA, CA 94581
PH: (707) 252-9990

Array Configuration:
 4 SUNGROW SG60KU INVERTERS, 2 SUNGROW SG30KU INVERTERS, 6 SUNGROW SG36KU INVERTERS
 INVERTER 1: 10 STRINGS OF 22 MODULES, INVERTER 2-3: 11 STRINGS OF 20 MODULES, INVERTER 4: 10 STRINGS OF 20 MODULES, INVERTER 5: 5 STRINGS OF 22 MODULES, INVERTER 6: 6 STRINGS OF 20 MODULES, INVERTER 7 - 12: 6 STRINGS OF 22 MODULES
 1882 HANWHA Q.PEAK - G4.1 300W MODULES TOTAL, 53 STRINGS TOTAL

Note: For specifications of solar equipment see attached cut sheets.

1882 HANWHA Q.PEAK - G4.1 300W MODULES 564.6 kW DC Power

INTERCONNECTION STANDARDS COMPLIANCE

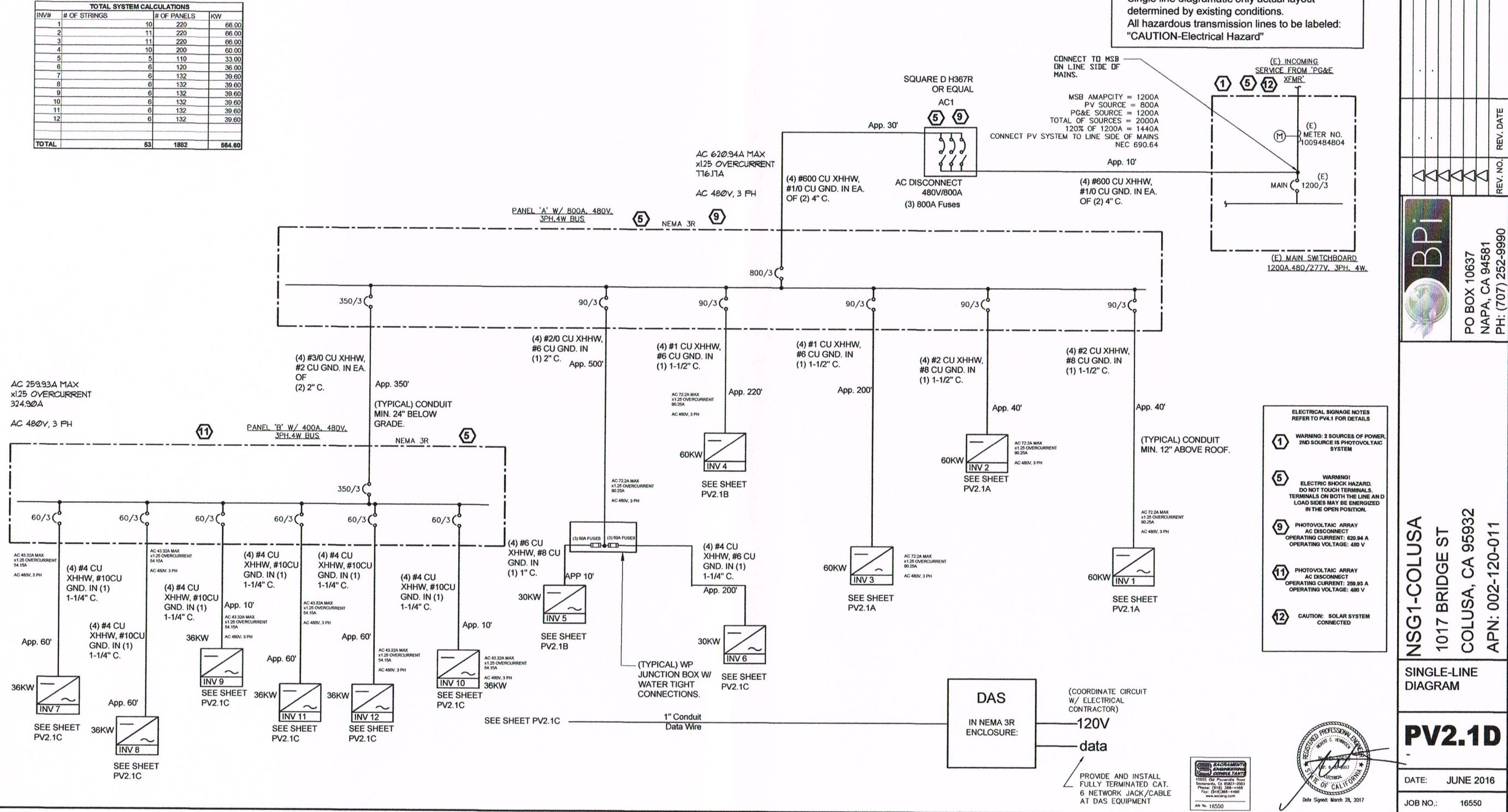
The Inverters listed have been tested and listed by Underwriters Laboratories to be in compliance with UL1741 Statistic Inverters And Charge Controllers For Use In Photovoltaic Power Systems, as well as IEEE-929-2000 Recommended Practice For Utility Interface Of Photovoltaic (PV) Systems.

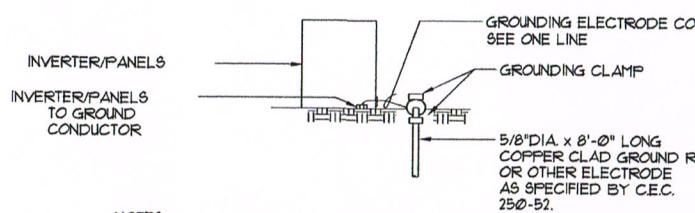
IEEE-929-2000 provides guidance regarding equipment and function necessary to ensure compatible operation of photovoltaic systems which are connected in parallel with the electric utility. UL 1741 is the standard applied by Underwriters Laboratory to the Inverter to verify it meets the recommendations of IEEE-929-2000.

AC Disconnect is accessible, and lockable.

Refer to both documents for details of these Recommendations and test procedures.

TOTAL SYSTEM CALCULATIONS			
INV#	# OF STRINGS	# OF PANELS	KW
1	10	220	66.00
2	11	220	66.00
3	11	220	66.00
4	10	200	60.00
5	5	110	33.00
6	6	120	36.00
7	6	132	39.60
8	6	132	39.60
9	6	132	39.60
10	6	132	39.60
11	6	132	39.60
12	6	132	39.60
TOTAL	53	1882	564.60





NOTES:

1. SIZE OF CONDUCTORS SHALL COMPLY WITH C.E.C. 250-94
2. BOND TO SEPARATE CONDUCTORS FROM INVERTER TO METAL BUILDING FRAME IF POSSIBLE (C.E.C. 250-68).
3. GROUND TO METAL WATER PIPE EMBEDDED AT LEAST 10'-0" INTO THE SOIL IF AVAILABLE (C.E.C. 250-68).
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 (C.E.C. 250-52). PROVIDE THIRD PARTY GROUND RESISTANCE TEST.
5. PROVIDE GAS AND WATER BOND (IF APPLICABLE).

GROUNDING ELECTRODE DETAIL

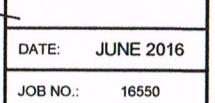
SCALE: NONE

A

PV3.1

JOB NAME: NSG1-COLUSA JOB #: 16550								VOLTAGE DROP CALCULATOR								
ARRAY	CONSTANT	DISTANCE	RUNS	WIRE	ENTER				FDR	NOTES: PF = POWER FACTOR % V.D. = VOLTAGE DROP % CB = COMBINER BOX	AL IN AIR					
					1	R	VOLTS	PHASE			CONSTANT	RUNS	WIRE	R	VD	% V.D.
TYP STR 22 MODS	5	200	1	#10	9.26	1.21	798.58	1	4.48	0.56	1	1	#8	1.26	4.67	0.58
TYP STR 20 MODS	5	200	1	#10	9.26	1.21	725.98	1	4.48	0.62	1	1	#8	1.26	4.67	0.64
60 KW INV 1-4	3	10	1	#2	72.20	0.2	480	3	0.25	0.05	6	1	#10	0.2	0.25	0.05
30 KW INV 5-6	3	10	1	#6	36.10	0.49	480	3	0.31	0.06	6	1	#4	0.51	0.32	0.07
36 KW INV 7-12	3	10	1	#4	43.32	0.31	480	3	0.23	0.05	6	1	#2	0.32	0.24	0.05
INV 1	3	30	1	#2	72.20	0.2	480	3	0.75	0.16	6	1	#10	0.2	0.75	0.16
INV 2	2	30	1	#2	72.20	0.2	480	3	0.75	0.16	4	1	#10	0.2	0.75	0.16
INV 3	3	200	1	#1	72.20	0.16	480	3	4.00	0.83	6	1	#20	0.16	4.00	0.83
INV 4	2	220	1	#1	72.20	0.16	480	3	4.40	0.92	4	1	#20	0.16	4.40	0.92
INV 6	3	200	1	#4	36.10	0.31	480	3	3.07	0.01	6	1	#2	0.32	4.00	0.83
INV 5,6	2	500	1	#20	72.20	0.1	480	3	6.25	1.30	4	1	#40	0.1	6.25	1.30
INV 7,8	2	60	1	#4	43.32	0.31	480	3	1.39	0.29	4	1	#2	0.32	1.44	0.30
INV 11,12	2	60	1	#4	43.32	0.31	480	3	1.39	0.29	4	1	#2	0.32	1.44	0.30
PANEL B'	2	350	2	#30	129.96	0.079	480	3	3.11	0.65	4	2	#250	0.086	3.38	0.70
PANEL A'	3	30	2	#600	490.97	0.025	480	3	0.32	0.07	6	2	#900	0.027	0.34	0.07
DISC	3	10	2	#600	490.97	0.025	480	3	0.11	0.02	6	2	#900	0.027	0.11	0.02
MAX VOLTAGE DROP IN SINGLE RUN (%)												1.30				1.30
TOTAL VOLTAGE DROP (A/C + D/C) %												3.28				3.32

CABLE SIZING CALCULATIONS								ALUMINUM OPTION			
ARRAY	RUNS	CU WIRE	CU CABLE AMPACITY	LOAD (AMPS)	FACTOR	REQUIRED CABLE AMPACITY	MAX. PERMISSIBLE OCP	OCP PROVIDED	RUNS	AL WIRE	AL CABLE AMPAC ITY
TYP STR 22 MODS	1	#10	35.00	9.26	1.5625	14.47	15.00	15.00	1	#8	40.00
TYP STR 20 MODS	1	#10	35.00	9.77	1.25	12.21	15.00	15.00	1	#8	40.00
60 KW INV 1-4	1	#2	115.00	72.20	1.25	90.25	90.00	90.00	1	#10	120.00
30 KW INV 5-6	1	#6	65.00	36.10	1.25	45.18	50.00	50.00	1	#4	65.00
36 KW INV 7-12	1	#4	85.00	43.32	1.25	54.15	60.00	60.00	1	#2	90.00
INV 1	1	#2	115.00	72.20	1.25	90.25	90.00	90.00	1	#10	120.00
INV 2	1	#2	115.00	72.20	1.25	90.25	90.00	90.00	1	#10	120.00
INV 3	1	#1	130.00	72.20	1.25	90.25	50.00	50.00	1	#20	135.00
INV 4	1	#1	130.00	72.20	1.25	90.25	50.00	50.00	1	#20	135.00
INV 6	1	#4	85.00	36.10	1.25	45.18	50.00	50.00	1	#2	90.00
INV 5,6	1	#20	175.00	72.20	1.25	90.25	90.00	90.00	1	#40	180.00
INV 7,8	1	#4	150.00	43.32	1.25	54.15	125.00	125.00	1	#2	155.00
INV 11,12	1	#4	150.00	43.32	1.25	54.15	125.00	125.00	1	#2	155.00
PANEL B'	2	#30	200.00	129.96	1.25	162.45	350.00	350.00	2	#250	410.00
PANEL A'	2	#600	840	490.97	1.25	613.72	800.00	800.00	2	#900	850.00
DISC	2	#600	840	490.97	1.25	613.72	800.00	800.00	2	#900	850.00



ROBERT C. HENSLY
P.E.
Date Signed: March 28, 2017

PV3.1

JUNE 2016

JOB NO.: 16550

PV DETAILS		REV. DATE
BPI	PO BOX 10637 NAPA, CA 94581 PH: (707) 252-9990	REV. NO.
NSG1-COLUSA 1017 BRIDGE ST COLUSA, CA 95932 APN: 002-120-011		
PV3.1		

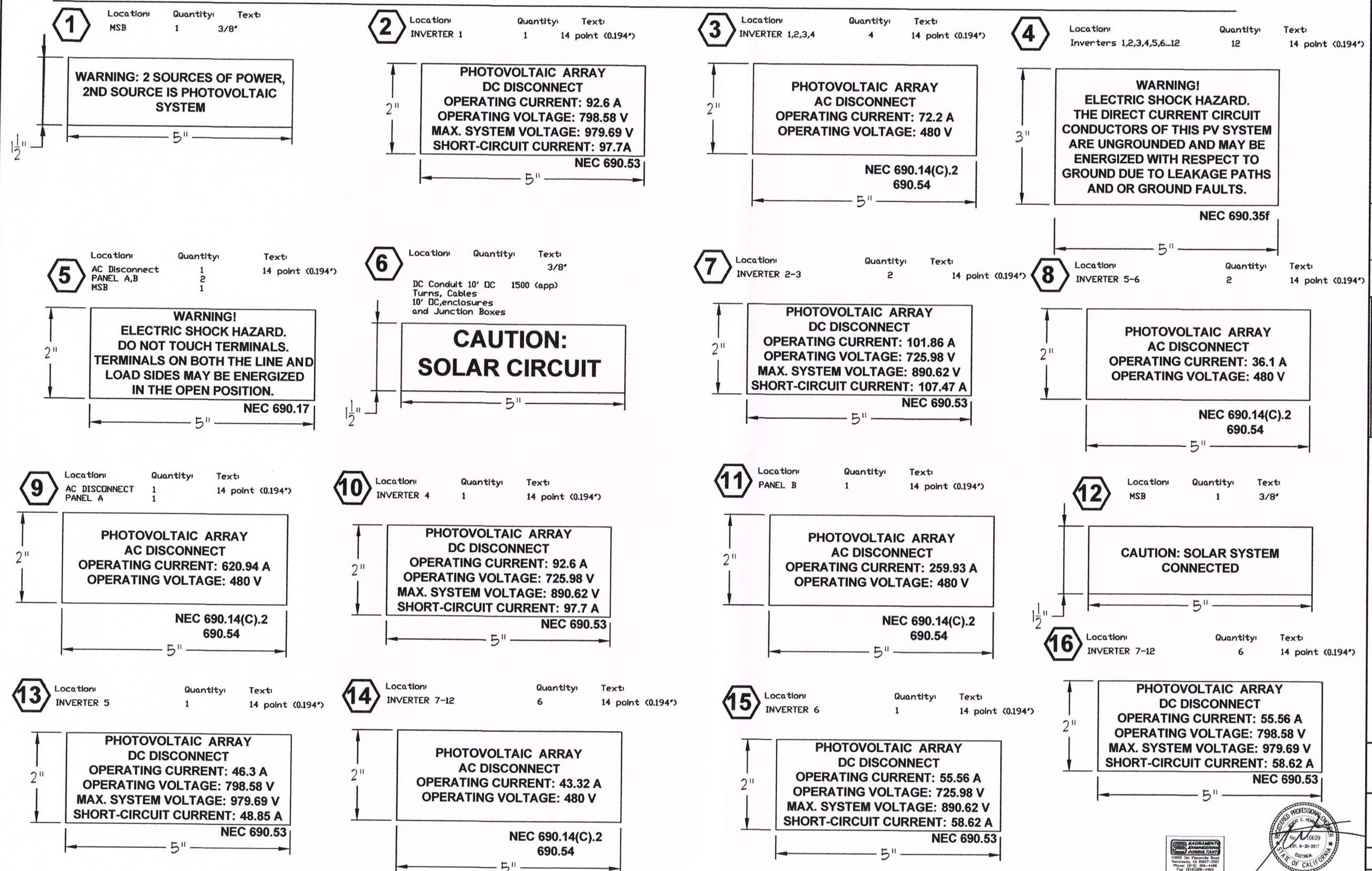
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Red Background

Material: ABS UV
Font: Arial

Scale 1:1

BY



PO BOX 10637
NAPA, CA 94581
PH: (707) 252-9990

NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

PV
SIGNAGE

PV4.1

DATE: JUNE 2016
JOB NO.: 16550

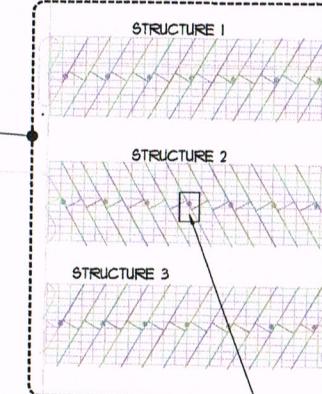


NOV 10 2017
REV. 6-30-2017
STATE OF CALIFORNIA
Date Signed: March 28, 2017
Job No. 16550

SITE LIGHTING PLAN

SCALE: 1'-0" = 40'-0"

A
E62



PANEL 'B', SEE PV
PLANS

A
ES1



BPI	◀◀◀◀◀
PO BOX 10637	
NAPA, CA 94581	
PH: (707) 252-9990	
REV. NO.	REV. DATE

NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

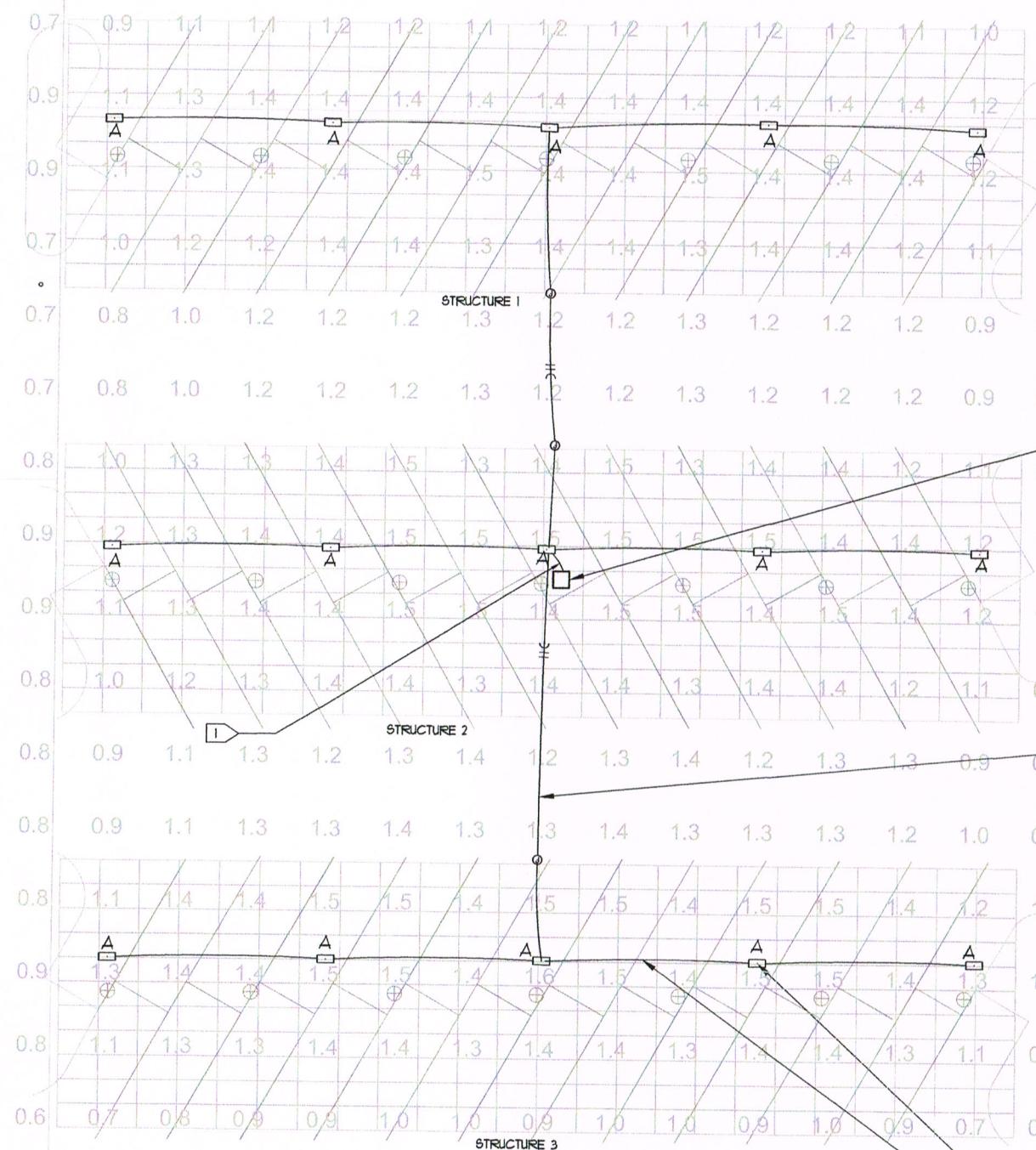
SITE
LIGHTING
PLAN

ES1

DATE: JUNE 2016

JOB NO.: 16550

BY



LIGHTING FIXTURE SCHEDULE						
TYPE	MANUFACTURER	FIXT VOLT	LAMPS NO	INPUT TYPE VA	MOUNTING	REMARKS
A	LITHONIA #DSXSC-LED-20C-350-50K-T5W-MVOLT-DMG-PIR360SS OR EQUAL	277	1	25W LED	25	CANOPY MOUNT AT BELOW CEILING LED SURFACE CANOPY LIGHT W/ MOTION SENSOR AND DIMMING BALLAST

NUMBERED NOTES

1 HOME RUN TO 20A/IP CIRCUIT IN PANEL 'B'. CONTROL VIA TIME CLOCK. INSTALL TIME CLOCK NEXT TO PANEL 'B' IN NEMA '3R' ENCLOSURE.

NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

STRUCTURE
LIGHTING
PLAN

ES2

DATE: JUNE 2016

JOB NO.: 16550



BPi
PO BOX 10637
NAPA, CA 94581
PH: (707) 252-9990
REV. NO. REV. DATE
◀◀◀◀◀

OUTDOOR LIGHTING	
CEC-NRCC-LTO-01-E (Revised 06/13)	
CERTIFICATE OF COMPLIANCE	
Outdoor Lighting	
Project Name: NSG1-COLUSA	Date Prepared: 3/1/2018
CALIFORNIA ENERGY COMMISSION NRCC-LTO (Page 1 of 1)	
Project Address [Street Address] 1017 BRIDGE STREET, COLUSA, CA 95932	
Total Illuminated Hardscape	
General Information	
Phase of Construction <input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Addition <input type="checkbox"/> Alteration	
Outdoor Lighting Zone (OLZ) <input type="checkbox"/> OLZ-1 <input type="checkbox"/> OLZ-2 <input checked="" type="checkbox"/> OLZ-3 <input type="checkbox"/> OLZ-4	
The OLZ is: <input type="checkbox"/> Default in accordance with §10-114, or <input type="checkbox"/> Amended by the AHJ	
I have confirmed with the AHJ which OLZ applies to this site. For default lighting zone designations, see Title 24 Part 6, §10-114	

 STATE OF CALIFORNIA OUTDOOR LIGHTING CEC-NRCC-LTO-01-E (Revised 06/14) CERTIFICATE OF COMPLIANCE outdoor lighting Project Name: NSG1-COLUSA	 CALIFORNIA ENERGY COMMISSION NRCC-LTO-01-E (Page 3 of 4) Date Prepared: 3/29/2017
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CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance

3 CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance June 2014

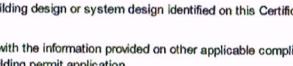
STATE OF CALIFORNIA
OUTDOOR LIGHTING
CEC-NRCC-LTO-01-E (Revised 06/14)
CERTIFICATE OF COMPLIANCE
Outdoor Lighting
Project Name: NSG1-COLUSA Date Prepared: 3/29/2017
NRCC-LTO-01-E
CALIFORNIA ENERGY COMMISSION
(Page 4 of 4)

The NRCC-LTO-02-E shall be used to document all mandatory outdoor lighting controls that are applicable to the project.

Mandatory Outdoor Lighting Control Declaration Statements

Check all that apply:

- Lighting shall be controlled by self-contained lighting control devices which are certified to the Energy Commission according to the Title 20 Appliance Efficiency Regulations in accordance with §110.9.
- Lighting shall be controlled by a lighting control system or energy management control system in accordance with §110.9. An Installation Certificate shall be submitted in accordance with §130.4(b).
- All lighting controls and equipment shall comply with the applicable requirements in §110.9 and shall be installed in accordance with the manufacturer's instructions in accordance with §130.1.
- Part-Night Outdoor Lighting Controls, as defined in Section 100.1, shall meet the requirements in Section 110.9(b)5
- All outdoor incandescent luminaires rated over 100 watts, determined in accordance with Section 130.0(c), shall be controlled by a motion sensor.
- All outdoor luminaires rated for use with lamps greater than 150 lamp watts, determined in accordance with Section 130.0(c), shall comply with Backlight, Uplight, and Glare (collectively referred to as "BUG") in accordance with Section 130.2(b)
- All installed outdoor lighting shall be controlled by a photocell or outdoor astronomical time-switch control in accordance with Section 130.2(c)1
- All installed outdoor lighting shall be circuited and independently controlled from other electrical loads by an automatic scheduling control in accordance with Section 130.2(c)2
- All installed outdoor lighting, where the bottom of the luminaire is mounted 24 feet or less above the ground, shall be controlled with automatic lighting controls in accordance with Section 130.2(c)3
- For Outdoor Sales Frontage, Outdoor Sales Lots, and Outdoor Sales Canopies lighting, an automatic lighting control in accordance with Section 130.2(c)4
- For Building Facade, Ornamental Hardscape and Outdoor Dining lighting, an automatic lighting control in accordance with Section 130.2(c)5
- Before an occupancy permit is granted for a newly constructed building or area, or a new lighting system serving a building, area, or site is operated for normal use, indoor lighting controls serving the building, area, or site shall be certified as meeting the Acceptance Requirements for Code Compliance in accordance with §130.4.(a). Outdoor lighting controls shall comply with the applicable requirements of Section 130.2(c) and Reference Nonresidential Appendix NA7.8

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT					
1. I certify that this Certificate of Compliance documentation is accurate and complete.					
Documentation Author Name: Rickett Henriksen		Documentation Author Signature 			
Company:	Sacramento Engineering Consultants		Signature Date:	3/29/2017	
Address:	10555 Old Placerville Road		CEA/HERS Certification Identification (if applicable):		
City/State/Zip:	Sacramento, CA 95827		Phone:	(916) 368-4468	
RESPONSIBLE PERSON'S DECLARATION STATEMENT					
I certify that following under penalty of perjury, under the laws of the State of California:					
1. The information provided on this Certificate of Compliance is true and correct.					
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).					
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.					
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans, and specifications submitted to the enforcement agency for approval with this building permit application.					
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.					
Responsible Designer Name: Rickett Henriksen		Responsible Designer Signature 			
Company:	Sacramento Engineering Consultants		Date Signed:	3/29/2017	
Address:	10555 Old Placerville Road		License:	E10629	
City/State/Zip:	Sacramento, CA 95827		Phone:	(916) 368-4468	



NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95932
ABN: 002-120-011

ES3.1

STATE OF CALIFORNIA OUTDOOR LIGHTING CEC-NRCC-LTO-02-E (Revised 06/14)		CALIFORNIA ENERGY COMMISSION NRCC-LTO-02-								
CERTIFICATE OF COMPLIANCE										
outdoor Lighting										
Project Name: NSG1-COLUSA		Date Prepared: 3/29/2017								
<p style="text-align: right;">(Page 3 of 3)</p> DOCUMENTATION AUTHOR'S DECLARATION STATEMENT <ol style="list-style-type: none"> I certify that this Certificate of Compliance documentation is accurate and complete. <table border="0"> <tr> <td>Documentation Author Name: Rickert HenrikSEN</td> <td>Documentation Author Signat<u>r</u>e</td> </tr> <tr> <td>Company: Sacramento Engineering Consultants</td> <td>Signature Date: 3/29/2017</td> </tr> <tr> <td>Address: 10555 Old Placerville Road</td> <td>CEA/HERS Certification Identification (if applicable):</td> </tr> <tr> <td>City/State/Zip: Sacramento, CA 95827</td> <td>Phone: (916) 368-4468</td> </tr> </table>			Documentation Author Name: Rickert HenrikSEN	Documentation Author Signat <u>r</u> e	Company: Sacramento Engineering Consultants	Signature Date: 3/29/2017	Address: 10555 Old Placerville Road	CEA/HERS Certification Identification (if applicable):	City/State/Zip: Sacramento, CA 95827	Phone: (916) 368-4468
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Company: Sacramento Engineering Consultants	Signature Date: 3/29/2017									
Address: 10555 Old Placerville Road	CEA/HERS Certification Identification (if applicable):									
City/State/Zip: Sacramento, CA 95827	Phone: (916) 368-4468									
RESPONSIBLE PERSON'S DECLARATION STATEMENT <ol style="list-style-type: none"> I certify that following under penalty of perjury, under the laws of the State of California: The information provided on this Certificate of Compliance is true and correct. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans, and specifications submitted to the enforcement agency for approval with this building permit application. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. 										
Responsible Designer Name: Rickert HenrikSEN		Responsible Designer Signat <u>r</u> e								
Company: Sacramento Engineering Consultants		Date Signed: 3/29/2017								
Address: 10555 Old Placerville Road		License: E10629								
City/State/Zip: Sacramento, CA 95827		Phone: (916) 368-4468								



PO BOX 10637
NAPA, CA 94581
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NSG1-COLUSA
1017 BRIDGE ST
COLUSA, CA 95932
APN: 002-120-011

ES3.2

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance		June 2013								
STATE OF CALIFORNIA OUTDOOR LIGHTING CEC-NRCC-LTO-03-E (Revised 06/14)										
CERTIFICATE OF COMPLIANCE Outdoor Lighting Project Name: NSG1-COLUSA		CALIFORNIA ENERGY COMMISSION NRCC-LTO-03-E (Page 4 of 4) Date Prepared: 3/29/2017								
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT <p>1. I certify that this Certificate of Compliance documentation is accurate and complete.</p> <table border="0"> <tr> <td>Documentation Author Name: Rickert Henriksen</td> <td>Documentation Author Signat^ure</td> </tr> <tr> <td>Company: Sacramento Engineering Consultants</td> <td>Signature Date: 3/29/2017</td> </tr> <tr> <td>Address: 10555 Old Placerville Road</td> <td>CEA/HERS Certification Identification (if applicable):</td> </tr> <tr> <td>City/State/Zip: Sacramento, CA 95827</td> <td>Phone: (916) 368-4468</td> </tr> </table>			Documentation Author Name: Rickert Henriksen	Documentation Author Signat ^u re	Company: Sacramento Engineering Consultants	Signature Date: 3/29/2017	Address: 10555 Old Placerville Road	CEA/HERS Certification Identification (if applicable):	City/State/Zip: Sacramento, CA 95827	Phone: (916) 368-4468
Documentation Author Name: Rickert Henriksen	Documentation Author Signat ^u re									
Company: Sacramento Engineering Consultants	Signature Date: 3/29/2017									
Address: 10555 Old Placerville Road	CEA/HERS Certification Identification (if applicable):									
City/State/Zip: Sacramento, CA 95827	Phone: (916) 368-4468									
RESPONSIBLE PERSON'S DECLARATION STATEMENT <p>I certify that following under penalty of perjury, under the laws of the State of California:</p> <ol style="list-style-type: none"> 1. The information provided on this Certificate of Compliance is true and correct. 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations. 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans, and specifications submitted to the enforcement agency for approval with this building permit application. 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. 										
Responsible Designer Name: Rickert Henriksen		Responsible Designer Signat ^u re								
Company: Sacramento Engineering Consultants		Date Signed: 3/29/2017								
Address: 10555 Old Placerville Road		License: E10629								
City/State/Zip: Sacramento, CA 95827		Phone: (916) 368-4468								



CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance Just

CA Building Energy Efficiency Standards - 2013 Nonresidential Compliance June 2014

CODE:
2013 EDITION OF THE CALIFORNIA BUILDING CODE (CBC)

DESIGN LOADS:

1. ROOF:	LIVE LOAD DEAD LOAD	0 PSF 8 PSF
2. WIND LOAD:	OCCUPANCY CATEGORY BASE MIND SPEED V EXPOSURE CATEGORY IMPACT FACTOR, Iw MEAN ROOF HEIGHT G Kd Kz Kx	I 100 MPH C 1.0 15 FT 0.85 0.85 0.9 0.95 0.95 OPEN BUILDING
3. SEISMIC LOADS:	OCCUPANCY CATEGORY IMPACT FACTOR, Ie SEISMIC SITE CLASS Ss S1 SDS SDI	I 1.0 0.792 0.331 0.625 0.384 D BASIC SEISMIC FORCE RESISTING SYSTEM STEEL ORDINARY CANTILEVER COLUMN SYSTEMS R 1.25 0 1.25 Cd 1.25 Cs 0.500 BASE SHEAR, V 0.500W
GENERAL:		
1.	THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.	
2.	THE CONTRACTOR IS RESPONSIBLE FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK THAT CONFORMS TO THE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY AND HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY.	
3.	WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.	
4.	OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. HE SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF HE CHOOSES AN OPTION AND SHALL COORDINATE ALL DETAILS.	
5.	NOTICE TO EXAMINER: DRAWINGS SHALL TAKE PREFERENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS WHERE NO SPECIFIC DETAILS ARE SHOWN. CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.	
6.	TYPICAL DETAILS ARE NOT CUT ON DRAWINGS, BUT APPLY UNLESS NOTED OTHERWISE.	
7.	CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS SHOWN ON DRAWINGS. AS PART OF THE CONTRACT OF CONSTRUCTION, ALL DIMENSIONS SHOWN ON STRUCTURAL DRAWINGS ARE TO ASSIST CONTRACTOR IN VERIFICATION. DO NOT SCALE DIMENSIONS FROM DRAWINGS.	
8.	ITEMS SHOWN BY OTHER DISCIPLINES WITH REFERENCE TO STRUCTURAL DRAWINGS BUT NOT SHOWN ON THESE STRUCTURAL DRAWINGS SHALL BE CONSIDERED DESIGN BUILD ITEMS.	
	CONTRACTOR SHALL SUBMIT DESIGN BY OTHERS FOR REVIEW	
FOUNDATIONS:		
1.	GEOTECHNICAL CONSULTANT, NA	
2.	SPEC. FOOTINGS SHALL BEAR ON COMPACTED NATIVE SOILS BASED ON CBC TABLE 1806.2 "PRESUMPTIVE LOAD-BEARING VALUES" AND CLASS 5 MATERIALS. A DESIGN SOIL BEARING VALUE OF 1,500 PSF AND LATERAL BEARING VALUE OF 100 PSF/FT HAS BEEN ASSUMED. IF ACTUAL SOIL CONDITIONS DIFFER NOTIFY THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH WORK. BOTTOM OF FOOTINGS SHALL BEAR AT A DEPTH NOT LESS THAN 1.5 FT BELOW THE NATIVE GROUND GRADE WITHIN 5 FEET OF STRUTURE OR FOUNDATION.	
3.	DRILLED POLE FOUNDATIONS SHALL BEAR ON MACHINE CLEANED, INSPECTED SOIL STRATA BASED ON CBC TABLE 1806.2 "PRESUMPTIVE LOAD-BEARING VALUES" AND CLASS 5 MATERIALS. A DESIGN SOIL BEARING VALUE OF 1,500 PSF AND LATERAL BEARING VALUE OF 100 PSF/FT HAS BEEN ASSUMED. FOR TOP OF POLE FOUNDATION ELEVATIONS, SEE FOUNDATION PLANS AND SECTIONS. IF WATER IS ENCOUNTERED DURING DRILLING, STOP AND CONSULT STRUCTURAL ENGINEER OR GEOTECHNICAL ENGINEER FOR RESOLUTION.	
CONCRETE:		
1.	CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE" AND ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".	
2.	ADDITION OF WATER TO THE BATCH FOR MATERIAL WITH INSUFFICIENT SLUMP WILL NOT BE PERMITTED, UNLESS THE SUPPLIER HAS PROVIDED A WRITER FROM THE BATCH AT THE PLANT. IN SUCH CASE THE MIX DESIGN AND PRODUCT TICKET MUST CLEARLY STATE THE MAXIMUM AMOUNT OF WATER THAT CAN BE ADDED TO THE BATCH ON SITE. IN NO CASE SHALL THE DESIGN WATER TO CEMENTOUS MATERIAL RATIO BE EXCEEDED.	
3.	MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED. MECHANICALLY VIBRATE ONLY THE TOP 5 FEET OF DRILLED PIER CONCRETE AND THE TOP OF DRILLED PIER 15 MINUTES AFTER PLACING CONCRETE.	
4.	TEST DATA FOR CONCRETE SUBMITTALS SHALL BE SUBMITTED FOR REVIEW PRIOR TO PLACEMENT OF CONCRETE. REFERENCE ACI 318 CHAPTER 5, TABLE R5.3 FOR SPECIFIC REQUIREMENTS.	
5.	DRILLED PIER CONCRETE SHALL BE CHANNELLED TO FREE FALL DOWN THE SHAFT WITHOUT STRIKING THE REINFORCING OR THE SIDES OF THE SHAFT. MAXIMUM HEIGHT OF FREE-FALL IS 15'-0".	
6.	CONCRETE PROPERTIES:	
CONCRETE USE MINIMUM 28 DAY	COMPRESSIVE STRENGTH	
UNLESS NOTED OTHERWISE ALL CONCRETE SHALL BE	3,000 PSI	
COLD-FORMED STEEL FRAMING:		
1.	ALL COLD-FORMED STEEL FRAMING SHALL BE FABRICATED AND EXAMINED IN ACCORDANCE WITH THE APPROPRIATE STANDARDS AND SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS BY THE AMERICAN IRON AND STEEL INSTITUTE AND THE STEEL STUD MANUFACTURERS ASSOCIATION. STEEL FOR ALL MEMBERS AND FOR ALL STRAPS SHALL HAVE A MINIMUM YIELD STRENGTH OF 55,000 PSI.	
2.	STEEL SHALL BE GALVANIZED AT LOCATIONS EXPOSED TO WEATHER AND WHEREVER SHOWN ON THE DRAWINGS.	
3.	ALL MEMBERS SHALL BE SECURELY SEALED FOR FULL BEARING UNLESS NOTED OTHERWISE.	
4.	ALL WELDING SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAUGE STEEL FRAMING WORK.	
5.	ALL COLD-FORMED FRAMING SIZES, GAGE AND SPACING ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL CONSTRUCT AND ASSURE PROPER PERFORMANCE OF THE COMPLETE WALL OR SOFTWOOD ASSEMBLIES.	
6.	ALL SCREWS REFERENCED IN THE DRAWINGS FOR LIGHT GAUGE CONNECTIONS SHALL BE DRIL-FLEX BY HILTI OR APPROVED EQUIVALENT (ICC ESR-332).	
7.	STEEL STUD SIZES ARE AS INDICATED IN PLANS AND KEYNOTES. THICKNESSES REFERENCED IN THE DRAWINGS ARE AS FOLLOWS:	
8.	16 GAUGE MATERIAL - 0.059 INCHES 14 GAUGE MATERIAL - 0.075 INCHES 12 GAUGE MATERIAL - 0.105 INCHES 10 GAUGE MATERIAL - 0.134 INCHES	
NOTE: THE UNCOATED MINIMUM STEEL THICKNESS OF THE COLD-FORMED STEEL PRODUCTS AS DELIVERED TO THE JOB SITE SHALL NOT AT ANY LOCATION BE LESS THAN 95 PERCENT OF THE DESIGN THICKNESS INDICATED ABOVE.		

STRUCTURAL STEEL:

- LATEST AISC AND AWS CODES APPLY. THE WORD APPROVED INSECTION 4.4 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES IS REDEFINED AS REVIEWED.
- STEEL SHALL BE FINISHED AT LOCATIONS EXPOSED TO WEATHER WITH A COLOR COAT. THE COLOR COAT SHALL BE WEATHER AND WEATHER EXPOSURE CONDITIONS OF PROJECT LOCATIONS.
- WHEN STRUCTURAL STEEL IS FURNISHED TO A SPECIFIED MINIMUM YIELD POINT GREATER THAN 36 KSI, THE ASTM OR OTHER SPECIFICATION DESIGNATION SHALL BE INCLUDED NEAR THE ERECTION MARK ON EACH SHIPPING ASSEMBLY OR IMPORTANT CONSTRUCTION COMPONENT OVER ANY SHOP COAT OF PAINT PRIOR TO SHIPMENT FROM THE FABRICATOR'S PLANT.
- IF THE CONTRACTOR REQUESTS THAT CERTAIN LOCATIONS ARE SUBJECT TO REVIEW BY STRUCTURAL ENGINEER, SPICES SHALL BE FULL PENETRATION WELDED AND TESTED PER THIS SECTION. INDICATE ALL SPLICE LOCATIONS, AND WELDING PROCEDURES ON SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION.
- ALL BEAMS SHALL BE ERECTED WITH THE NATURAL CAMBER UPWARD.
- ALL BOLTS SHALL BE INSTALLED WITH STEEL WASHERS.
- ALL WELDING BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN TYPE OF WELD SHOWN ON THE DRAWINGS OR NOTES, CERTIFICATES SHALL BE THOSE ISSUED BY AN INDEPENDENT TESTING AGENCY.
- ALL WELDERS SHALL USE E70 SERIES LOW HYDROGEN RODS. USE E90 SERIES FOR ASTM A406 FORGING BARS.
- ALL WELDS PER AMERICAN WELDING SOCIETY STANDARDS. ALL WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT HIS DISCRETION. SHOP WELDS OR FIELD WELD SHALL BE SHOWN ON DRAWINGS.
- SLAG SHALL BE REMOVED FROM ALL COMPLETED WELDS, AND THE WELD AND ADJACENT BASE METAL SHALL BE CLEANED BY BRUSH OR OTHER STABLE MEANS. WELDED Joints SHALL NOT BE PATED UNTIL AFTER WELDING HAS BEEN COMPLETED AND THE WELD ACCEPTED. ALL COMPLETE PENETRATION WELDS SHALL BE TESTED.
- ALL STRUCTURAL STEEL SHALL BE FABRICATED BY A FABRICATOR WITH ANY ONE OF THE FOLLOWING MINIMUM QUALIFICATIONS. QUALIFICATIONS SHALL BE IN EFFECT AT TIME BID.
- INTERNATIONAL ACCREDITATION SERVICE, INC. (IAS) APPROVED FABRICATOR.
- AISC CERTIFIED FABRICATOR (STD).
- STEEL PROPERTIES
 - WIDE FLANGE COLUMNS, BEAMS AND TEES: ASTM A992 ($F_y = 50$ ksi)
 - HIGH STRENGTH PLATES: ASTM A572 ($F_y = 50$ ksi)
 - CHANNELS, PLATES AND ANGLES: ASTM A36 ($F_y = 36$ ksi)
 - BOLTS: ASTM A325 OR ASTM A185 TWIST-OFF TYPE
 - ANCHOR RODS: ASTM F1554 Gr. 55 ($F_y = 55$ ksi)
 - PIPE: ASTM A500 Gr. B ($F_y = 46$ ksi)
- STEEL BOLTS SHALL BE PRETENSIONED UNLESS OTHERWISE NOTED AS A SNUG-TIGHT CONNECTION ON THE DRAWINGS OR DETAILS. ONE OF THE FOLLOWING METHODS SHALL BE USED TO ASSURE ADEQUATE PRETENSIONING IS ACHIEVED.
 - TURN-OF-NUT METHOD
 - DIRECT TENSION INDICATOR WASHERS
 - CALIBRATED WRENCH
 - TWIST-OFF TYPE BOLT

PHOTOVOLTAIC PANELS:

- THE PANEL MANUFACTURER IS RESPONSIBLE FOR THE DESIGN OF THE PANELS AND THE DESIGN OF THE PANEL CONNECTIONS TO THE STRUCTURE INCLUDING ALL COMPONENTS REQUIRED TO MAKE THE CONNECTIONS. PHOTOVOLTAIC PANELS, COMPONENTS AND CONNECTORS SHALL BE DESIGNED TO SUPPORT PANEL WEIGHT PLUS SNOW, WIND, OR SEismic LOADING, WHICHEVER COMBINATION PRODUCES THE MOST SEVERE CONDITION IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.
- THIS IS A DEFERRED SUBMITTAL ITEM.

SPECIAL STRUCTURAL INSPECTIONS:

- PER CBC SECTION 1704 AND 1705 SPECIAL INSPECTIONS ARE IN ADDITION TO THE REQUIRED INSPECTION CONDUCTED BY THE BUILDING JURISDICTION PER REGISTRATION 110. THE TYPES OF WORK LISTED BELOW SHALL BE INSPECTED BY A SPECIAL INSPECTOR.

- ALL SPECIAL INSPECTORS SHALL BE UNDER THE SUPERVISION OF A REGISTERED CITY OR COUNTY ENGINEER.
- THE QUALIFICATIONS OF ALL SPECIAL INSPECTORS SHALL BE REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.
- THE MINIMUM QUALIFICATIONS FOR THE SPECIAL INSPECTORS ARE AS FOLLOWS:
 - CONCRETE INSPECTION - I.C.C. CERTIFICATION IN REINFORCED CONCRETE OR E.I.T. CERTIFICATION
 - STRUCTURAL WELDING INSPECTION
 - VISUAL TESTING - I.C.C. CERTIFICATION IN STRUCTURAL STEEL AND WELDING OR A.W.S. CERTIFIED WELD INSPECTOR (C.W.I.).
 - NON-DESTRUCTIVE TESTING - A.W.S. C.W.I.
- HIGH STRENGTH BOLTING INSPECTION - I.C.C. CERTIFICATION IN STRUCTURAL STEEL AND WELDING
- SPECIAL CASES - EXPERIENCE ACCEPTABLE TO THE STRUCTURAL ENGINEER OF RECORD.
- DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
 - THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK REQUIRING SPECIAL INSPECTION FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
 - THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO BE KEPT AT THE SITE FOR USE BY THE BUILDING OFFICIAL, THE CONTRACTOR, THE STRUCTURAL ENGINEER OF RECORD, AND THE ARCHITECT OF RECORD. SPECIAL INSPECTION IS PROVIDED BY ANYONE WHO IS THE SPECIAL INSPECTOR FOR THE PROJECT. INSPECTION REPORTS SHALL BE SUBMITTED TO THE OFFICE OF THE STRUCTURAL ENGINEER ON A WEEKLY BASIS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, TO THE DESIGN AUTHORITY AND THE BUILDING OFFICIAL.

- TEST DATA FOR CONCRETE SUBMITTALS SHALL BE SUBMITTED FOR REVIEW PRIOR TO PLACEMENT OF CONCRETE. REFERENCE ACI 318 CHAPTER 5, TABLE R5.3 FOR SPECIFIC REQUIREMENTS.

- DRILLED PIER CONCRETE SHALL BE CHANNELLED TO FREE FALL DOWN THE SHAFT WITHOUT STRIKING THE REINFORCING OR THE SIDES OF THE SHAFT. MAXIMUM HEIGHT OF FREE-FALL IS 15'-0".

- CONCRETE PROPERTIES:

- CONCRETE USE
MINIMUM 28 DAY

- COMPRESSIVE STRENGTH

- UNLESS NOTED OTHERWISE
ALL CONCRETE SHALL BE

- 3,000 PSI

- COLD-FORMED STEEL FRAMING:

- ALL COLD-FORMED STEEL FRAMING SHALL BE FABRICATED AND EXAMINED IN ACCORDANCE WITH THE APPROPRIATE STANDARDS AND SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS BY THE AMERICAN IRON AND STEEL INSTITUTE AND THE STEEL STUD MANUFACTURERS ASSOCIATION. STEEL FOR ALL MEMBERS AND FOR ALL STRAPS SHALL HAVE A MINIMUM YIELD STRENGTH OF 55,000 PSI.
- STEEL SHALL BE GALVANIZED AT LOCATIONS EXPOSED TO WEATHER AND WHEREVER SHOWN ON THE DRAWINGS.
- ALL MEMBERS SHALL BE SECURELY SEALED FOR FULL BEARING UNLESS NOTED OTHERWISE.
- ALL WELDING SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAUGE STEEL FRAMING WORK.
- ALL COLD-FORMED FRAMING SIZES, GAGE AND SPACING ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL CONSTRUCT AND ASSURE PROPER PERFORMANCE OF THE COMPLETE WALL OR SOFTWOOD ASSEMBLIES.
- ALL SCREWS REFERENCED IN THE DRAWINGS FOR LIGHT GAUGE CONNECTIONS SHALL BE DRIL-FLEX BY HILTI OR APPROVED EQUIVALENT (ICC ESR-332).
- STEEL STUD SIZES ARE AS INDICATED IN PLANS AND KEYNOTES. THICKNESSES REFERENCED IN THE DRAWINGS ARE AS FOLLOWS:

- 16 GAUGE MATERIAL - 0.059 INCHES
14 GAUGE MATERIAL - 0.075 INCHES
12 GAUGE MATERIAL - 0.105 INCHES
10 GAUGE MATERIAL - 0.134 INCHES

- NOTE: THE UNCOATED MINIMUM STEEL THICKNESS OF THE COLD-FORMED STEEL PRODUCTS AS DELIVERED TO THE JOB SITE SHALL NOT AT ANY LOCATION BE LESS THAN 95 PERCENT OF THE DESIGN THICKNESS INDICATED ABOVE.

1705.3 SPECIAL INSPECTION OF CONCRETE CONSTRUCTION

SPECIAL INSPECTION AND VERIFICATIONS FOR CONCRETE CONSTRUCTION SHALL BE AS REQUIRED BY TABLE 1705.3.

- EXCEPTIONS: SPECIAL INSPECTIONS SHALL NOT BE REQUIRED FOR:
 - ISOLATED SPANNING JOINTS, FOOTINGS OR BUILDING THREE STOREYS OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK.
 - CONTINUOUS CONCRETE FOOTINGS SUPPORTING WALLS OF BUILDINGS THREE STOREYS OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK WHERE:
 - THE FOOTINGS SUPPORT WALLS OF LIGHT-FRAME CONSTRUCTION; THE STRUCTURAL DESIGN OF THE FOOTING IS BASED ON A SPANNING LENGTH OF 12 FEET. NO GREATER THAN 2,500 PSI REGARDLESS OF THE COMPRESSIVE STRENGTH SPECIFIED.
 - CONCRETE SLABS ON GRADE. STEEL REINFORCING STILL REQUIRES SPECIAL INSPECTION.

- APPROVED FABRICATORS: QA INSPECTIONS, EXCEPT NDT AND UT, MAY BE WAIVED WHEN THE WORK IS PERFORMED IN A FABRICATING SHOP OR BY AN ERECTOR WITH THE ONE OF THE FOLLOWING QUALIFICATIONS:
 - INTERNATIONAL ACCREDITATION SERVICE, INC. (IAS) APPROVED FABRICATOR.
 - AISC CERTIFIED FABRICATOR (STD).

- O - OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS

- P - PERFORM THESE TASKS FOR EACH WELDED JOINT OR MEMBER

TABLE 1705.3: REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCE STANDARD	IBC REFERENCE
1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.	—	X	ACI 318 3.5, 7.1-7.7	1910.4
2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1705.2, 2b	—	—	AWS D1.4 ACI 318 3.5.2	—
5. VERIFYING USE OF REQUIRED DESIGN MIX.	—	X	ACI 318 Ch 4, 5.2-5.4	1910.4, 1910.2, 1910.3
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	—	ACI 318 5.9, 5.10	1910.6, 1910.7, 1910.8
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	X	—	ACI 318 5.11-5.13	1910.9

1704.5 SPECIAL INSPECTION OF FABRICATORS:

SPECIAL INSPECTION OF FABRICATION OF STRUCTURAL STEEL BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP IS REQUIRED.

- EXCEPTION: SPECIAL INSPECTIONS OF FABRICATORS WITH ONE OF THE FOLLOWING QUALIFICATIONS IS NOT REQUIRED:
 - INTERNATIONAL ACCREDITATION SERVICE, INC. (IAS) APPROVED FABRICATOR.
 - AISC CERTIFIED FABRICATOR (STD).

THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED RECORDS OF THE QUALITY CONTROL PROGRAM THAT IS A BASIS FOR INSPECTION CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. THE SPECIAL INSPECTOR SHALL REVIEW THE PROCEDURES FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS FOR THE FABRICATOR'S SCOPE OF WORK.

1705.2 SPECIAL INSPECTION OF STRUCTURAL STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL

SPECIAL INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH TABLE 1705.2.2

TABLE 1705.2.2 REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION OTHER THAN STRUCTURAL STEEL

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCE STANDARD

1. MATERIAL VERIFICATION OF COLD-FORMED STEEL

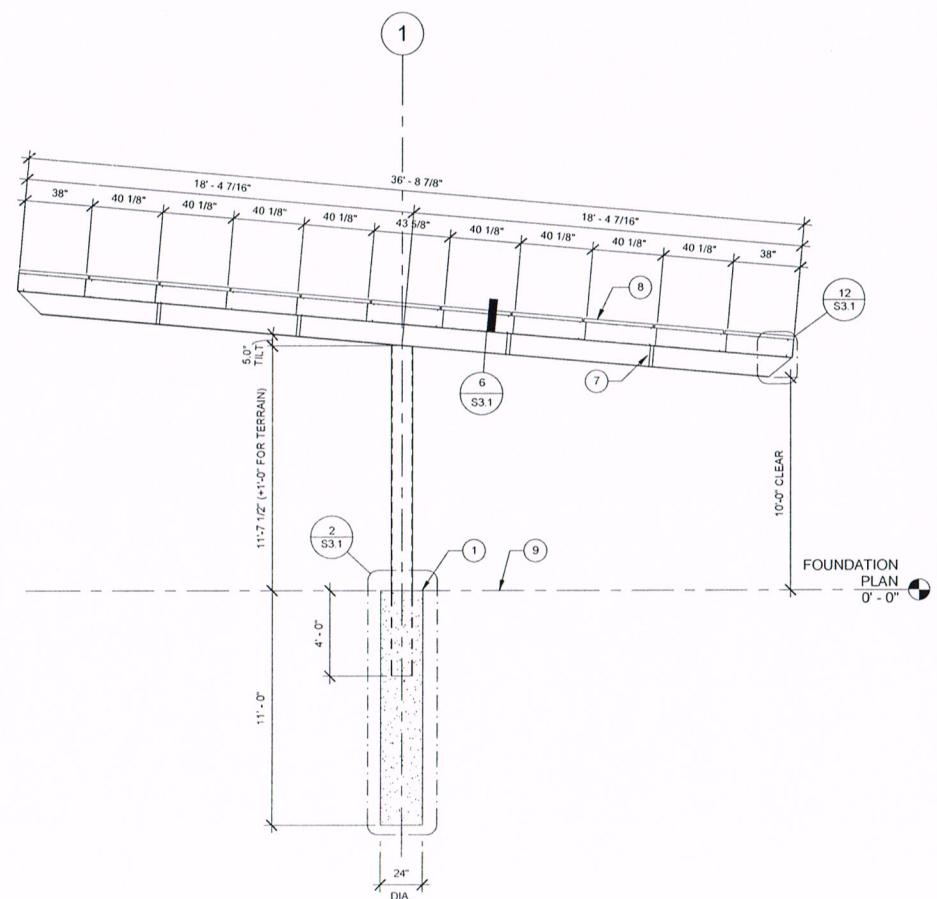
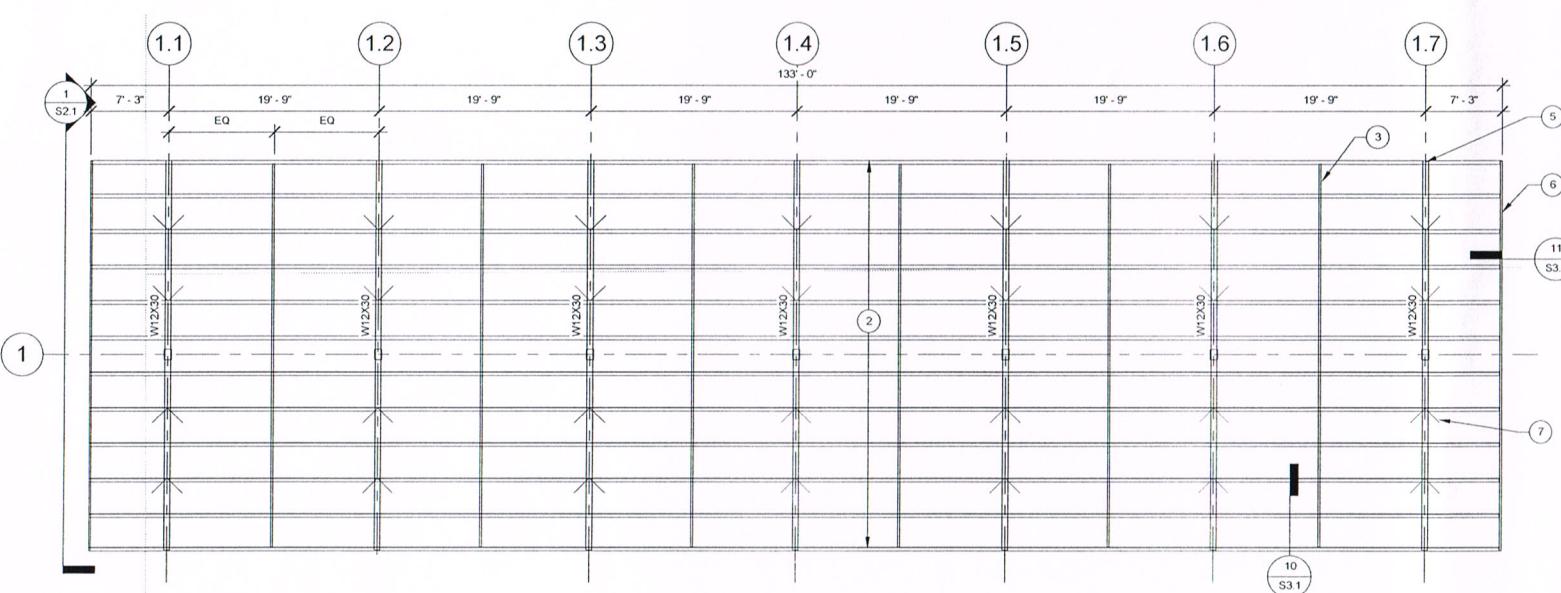
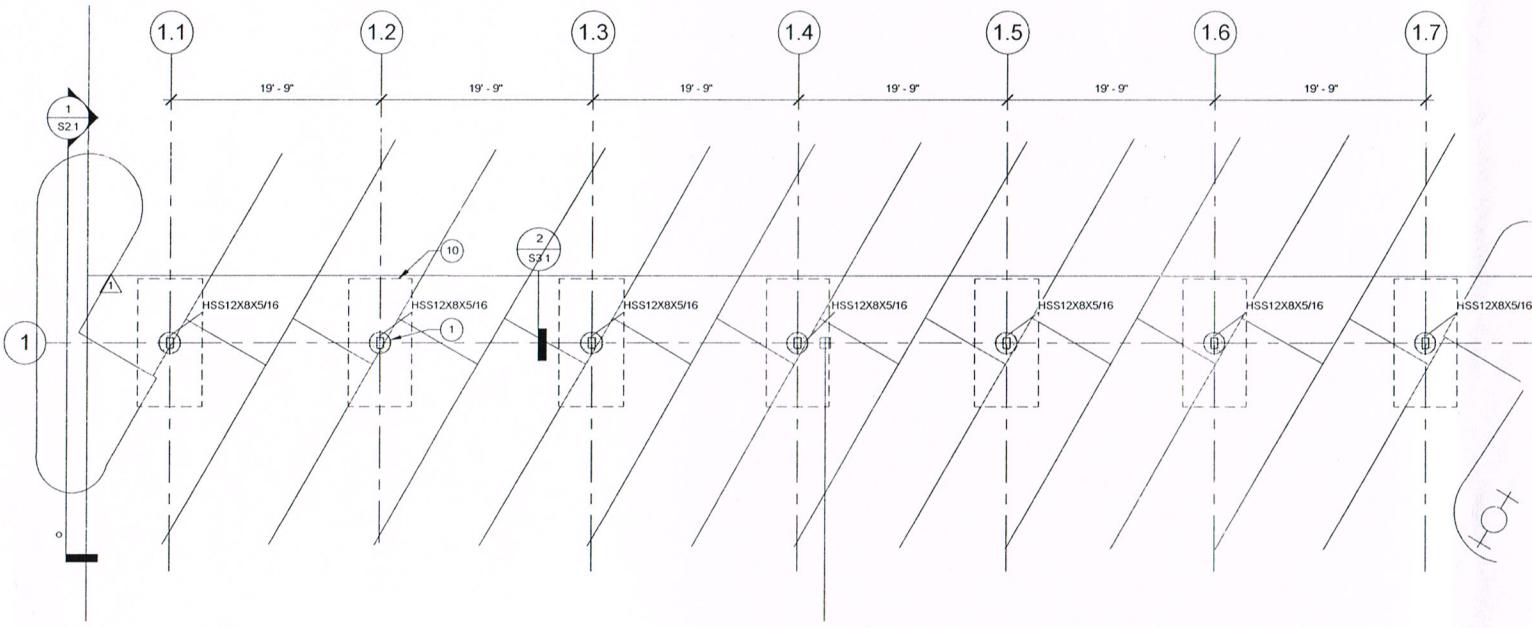
WELDS CLEANED

SHEET NOTES

1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. DIMENSIONS, ELEVATIONS WHERE SHOWN ARE TO BE USED AS AN AID AND SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION.
2. FOR ADDITIONAL INFORMATION, REFERENCE GENERAL STRUCTURAL NOTES.

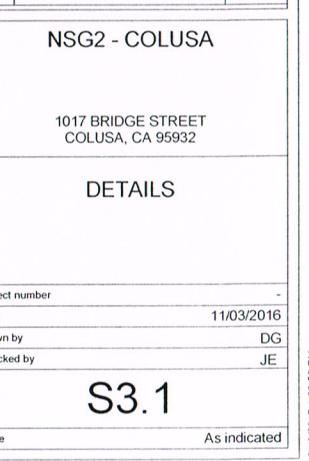
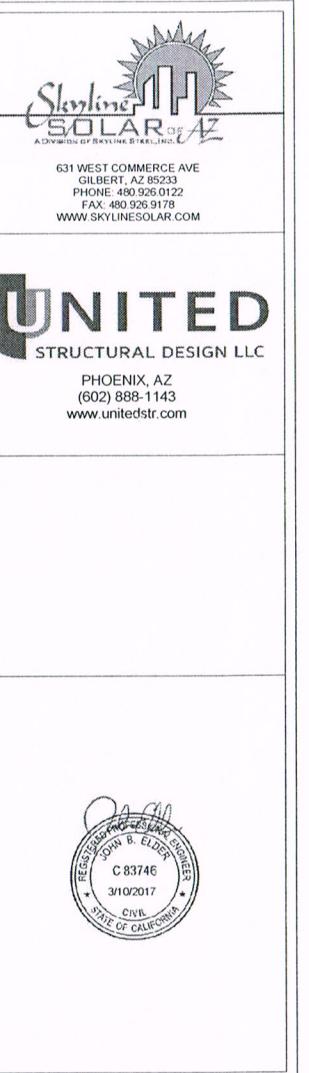
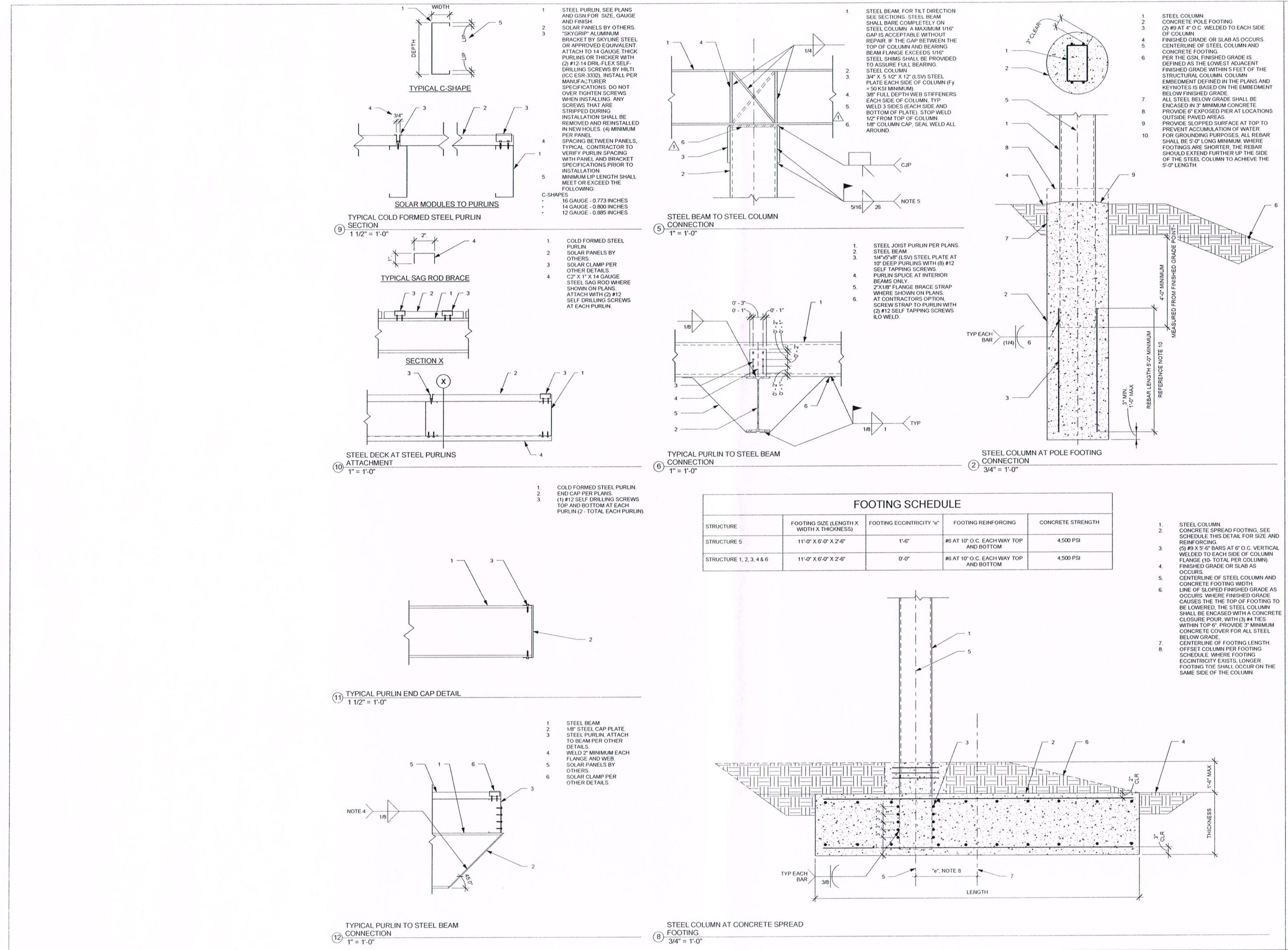
KEYNOTES

- 1 DRILLED CONCRETE POLE FOOTING. FOR DIAMETER AND EMBEDMENT OF FOOTING SEE FOUNDATION PLAN AND SECTION ON THIS SHEET. SEE DETAIL 2/S3.1 FOR REINFORCING AND STEEL COLUMN INCORPORAGE.
- 2 10 1/8" X 2 1/2" X 12 GAUGE COLD FORMED STEEL PURLINS. TYPICAL. COORDINATE EXACT LOCATION WITH SOLAR PANEL MANUFACTURER SPECIFICATIONS. SEE DETAIL 9/S3.1 FOR MORE INFORMATION ON SECTION.
- 3 SAG ROD AT 9' 0" O.C. MAXIMUM. (1) MINIMUM AT SPANS LESS THAN 18'-0" AND (2) MINIMUM AT SPANS LESS THAN 27'-0". SPACE EQUALLY BETWEEN SUPPORTS. REFERENCE DETAIL 10/S3.1.
- 4 DO NOT SPLIC PURLINS AT SUPPORT AT CANTILEVER ENDS.
- 5 10 1/8" X 2 1/2" X 12 GAUGE END CAP EACH END PER DETAIL 10/S3.1
- 6 BEAM FLANGE BRACES AT 6'-6" O.C. MAXIMUM. REFERENCE DETAIL 6/S3.1 FOR MORE INFORMATION.
- 7 PV MODULE AND ATTACHMENT BY OTHERS
- 8 FINISHED GRADE. FINISHED GRADE IS DEFINED AS THE LOWEST ADJACENT FINISHED GRADE WITHIN 5 FEET OF THE STRUCTURAL COLUMN.
- 9 IF DRILLING POLE FOUNDATIONS IS NOT POSSIBLE, USE SPREAD FOOTING PER DETAIL 8/S3.1 ILO DRILLED FOUNDATION.



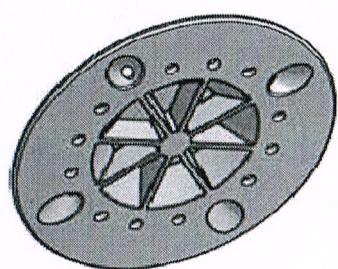
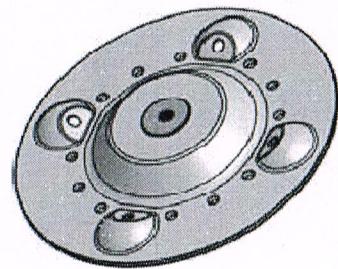
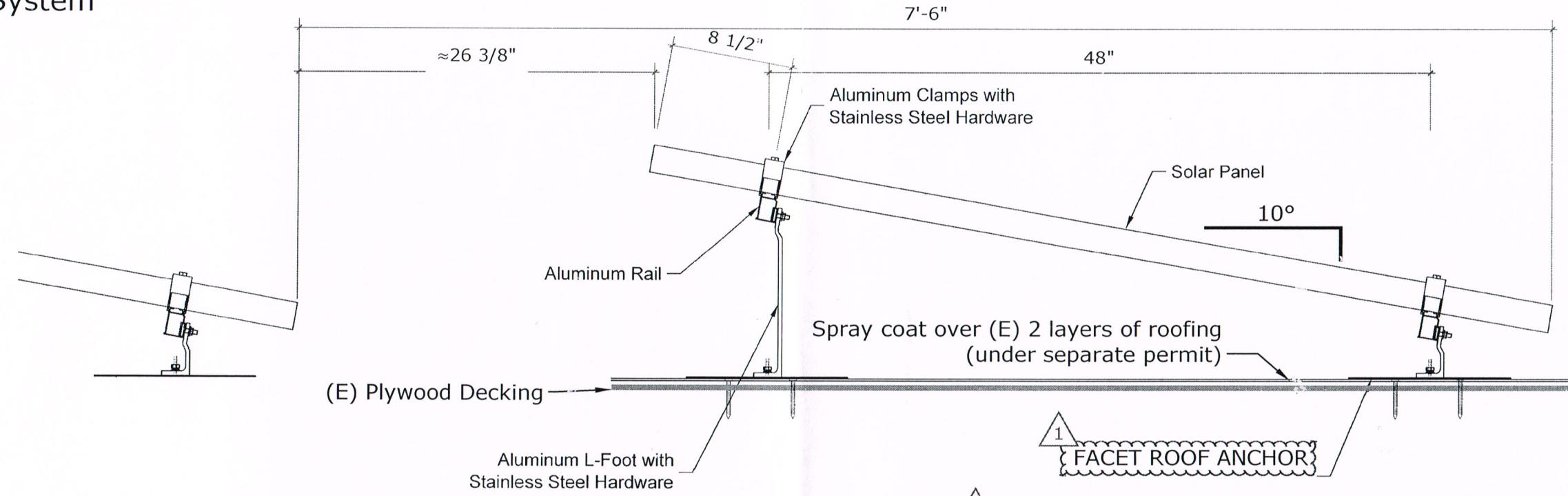
No.	Description	Date
1	OWNER REVISIONS	11/03/2016
2	OWNER REVISIONS	3/10/17
NSG2 - COLUSA		
1017 BRIDGE STREET COLUSA, CA 95932		
STRUCTURES 1, 2, 3 - FOUNDATION AND FRAMING PLAN		
Project number	-	
Date	11/03/2016	
Drawn by	DG	
Checked by	JE	
Scale	As indicated	

S2.1



ROOF RACKING DETAIL

Renusol VS Tilt System



UNLESS OTHERWISE SPECIFIED DIMENS
ARE IN in [mm]. TOLERANCES
 $.X \pm 0.02$ [0.5] $.XXX \pm 0.005$ [0
 $.XX \pm 0.01$ [0.25] $.XXXX \pm 0.001$ [0
SURFACE $^{+0.02}_{-0.05}$ [4.9] ± 1 Degree

UNLESS OTHERWISE SPECIFIED DIMENS
ARE IN [mm]. TOLERANCES

$X \pm 0.02$ [0.5]	$XXX \pm 0.005$ [0]
$XX \pm 0.01$ [0.25]	$XXXXX \pm 0.001$ [0]
SURFACE $^{125} \sqrt{[4]}$	± 1 Degree

UNLESS OTHERWISE STATED

BREAK ALL CORNERS	0.02 [0.5]
CHAMFER ALL HOLES	0.02 [0.5]
MAXIMUM CORNER RADIUS	0.02 [0.5]

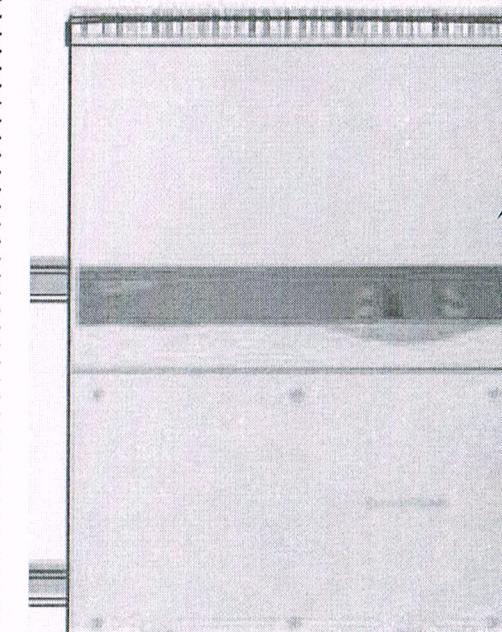
PROPRIETARY

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S I O N S A R E: [1. 3] [0. 3] [] []	APPROVALS	DATE	SUSTAINABLE TECHNOLOGIES, LLC FACET-INJ	
	DRAWN <i>JACK PATTEN</i>	5/23/16		
	CHECKED			
	APPROVED			
E W I T H O U T L O C I E S, L C O M P A C T S, L C O M	MATERIAL	A380 Aluminum		
	HEAT TREAT		DWG. NO.	REF.
	FINISH			
SCALE: N.T.S.		SHEET 1 OF		



INVERTER MOUNTING DETAIL (UNISTRUT FRAME)



SUNGROW
STRING
INVERTER

FACET ROOF ATTACHMENT



USG1-COLUSA
017 BRIDGE ST
COLUSA, CA 959
APN: 002-120-01

S4.0

ROOF RACKING DETAIL

DATE: 6.14.16

1B

JOB NO.: C15-700.1