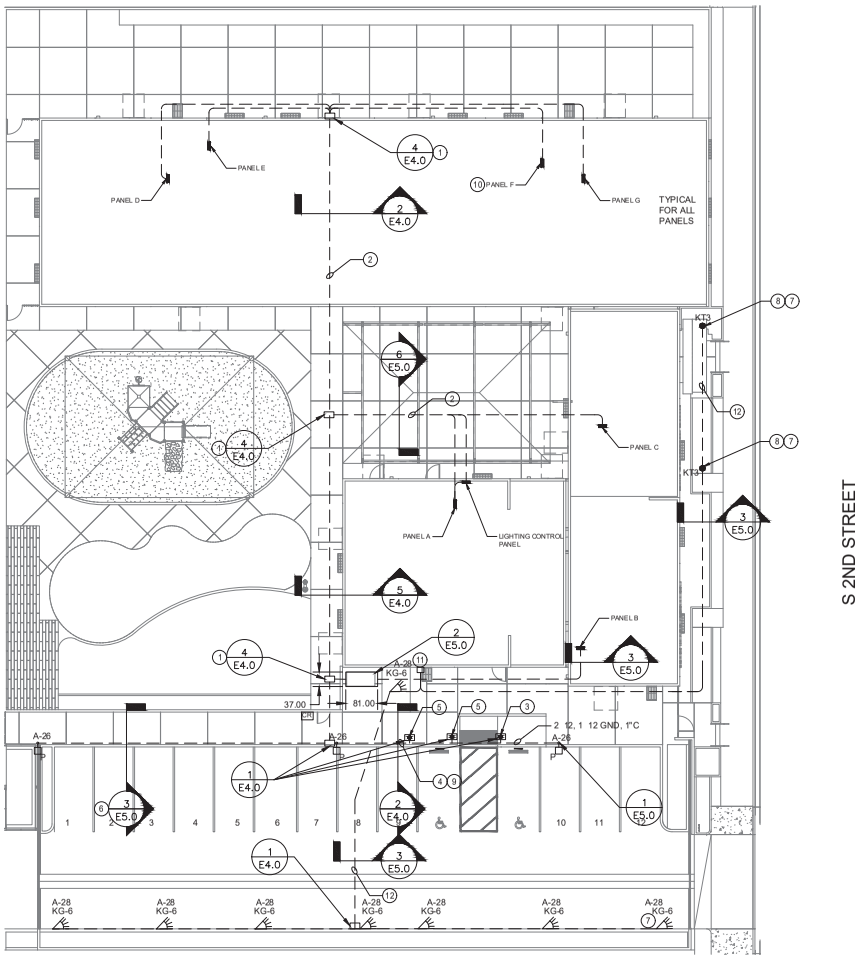

1 POWERSITE PLAN
SCALE: 3/32" 1'-0"

3/32" 1'-0" 8' 4' 0' 8' 16' 24'

KEYNOTES

SHEET NOTES:

1. PROVIDE PULLBOX. TYPICAL FOR POWER DISTRIBUTION.
2. SEE SINGLE LINE DIAGRAM FOR CONDUIT AND WIRE SI ES. TYPICAL.
3. STUB UP AND CAP CONDUIT FOR FUTURE SOLAR PANEL SHADE STRUCTURE.
4. PROVIDE 2 12, 1 12 GND IN 1"C FOR LIGHTING FROM PANEL A.
   PROVIDE (2)-2"C SPARE CONDUITS FOR FUTURE EV CHARGING STATION
   (1)-2"C SPARE CONDUIT FOR FUTURE SOLAR PANEL SHADE STRUCTURE
   FROM MDP.
5. STUB UP AND CAP CONDUIT FOR FUTURE EV CHARGING STATION.
6. PROVIDE 2 12, 1 12 GND IN 1"C FOR LIGHTING.
7. LANDSCAPE LIGHTING EXEMPT PER TITLE 24 140.7-a.9
8. PROVIDE IN-GROUND LANDSCAPING LIGHTING.
9. SEE SHEET SHEET SLV1.0 FOR SECURITY AND LOW VOLTAGE CONDUITS.
10. SEE AMS DRAWINGS FOR LOCATION OF PANELBOARDS.
11. FX LUMINAIRE TRANSFORMER/CONTROLLER FOR LANDSCAPE LIGHTING. 300W WITH ASTRONOMICAL CLOCK CONTROLS.
12. PROVIDE 1-1/2" CONDUIT AND 12/2 DIRECT BURIAL(IN CONDUIT) FOR LANDSCAPE LIGHTING PER LANDSCAPE DRAWINGS. 24" BELOW GRADE.

LEGEND

GENERAL NOTES

CLIENT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

PROJECT NAME

PALO VERDE COLLEGE
CHILD DEVELOPMENT CENTER BLYTHE

141 S 2ND STREET
BLYTHE CA, 92225

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REGISTRATION STAMPS

REGISTERED PROFESSIONAL ENGINEER
C20131
EXPIRES 12-31-23
ELECTRICAL
STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	AS SHOWN
SUBMITTAL:	03/09/22

KEY PLAN

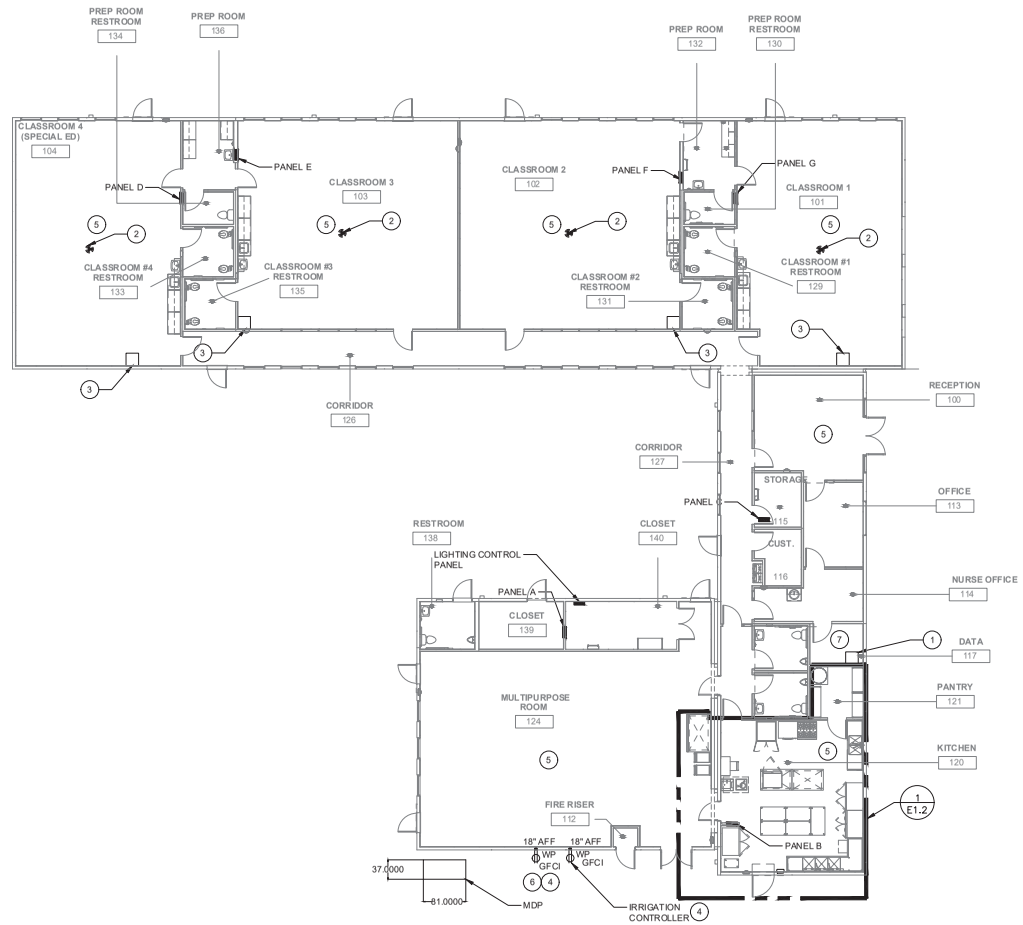
SHEET TITLE

OVERALL
SITE PLAN

SHEET NUMBER

ES1.0

File Path:



1 ENLARGED FLOOR PLAN
SCALE: 1/8" 1'-0"

1/8" 1'-0" 8' 4' 0' 8' 16'

KEYNOTES

SHEET NOTES:

1. PROVIDE 24" x 24" MDF CABINET. REFER TO AMS DRAWINGS FOR POWER TO THIS UNIT.
2. PROVIDE WIRELESS ACCESS POINT. POWER OVER ETHERNET. TYPICAL.
3. PROVIDE 24" X 24" IDF CABINET. REFER TO AMS DRAWINGS FOR POWER TO THIS UNIT.
4. REFER TO AMS DRAWINGS FOR PANEL SCHEDULE.
5. REFER TO AMS DRAWINGS FOR POWER AND DATA FLOOR PLANS.
6. RECEPTACLE FOR LANDSCAPING LIGHTING TRANSFORMER. PROVIDE IN-USE COVER.

LEGEND

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REGISTRATION STAMPS

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C20151
ELECTRICAL
STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	AS SHOWN
SUBMITTAL:	03/09/22

KEY PLAN

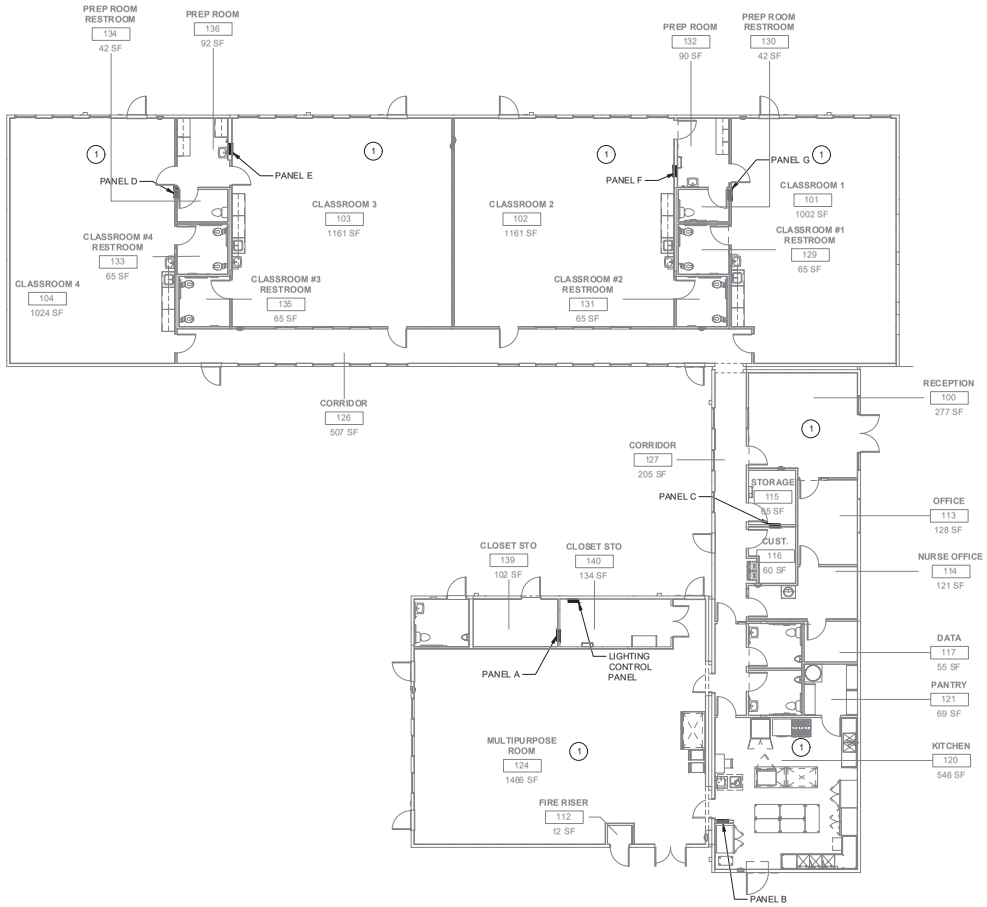
SHEET TITLE

ENLARGED FLOOR PLANS

SHEET NUMBER

E1.0

File Path:



1 LIGHTING FLOOR PLAN
SCALE: 1/8" 1'-0"

1/8" 1'-0" 8' 4' 0' 8' 16'

KEYNOTES

SHEET NOTES:

1. REFER TO AMS DRAWINGS FOR LIGHTING PLANS.

LEGEND

GENERAL NOTES

CLIENT

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REGISTRATION STAMPS

REGISTERED PROFESSIONAL ENGINEER
C21211
EXPIRES 12-31-23
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STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	
SUBMITTAL:	03/09/22

KEY PLAN

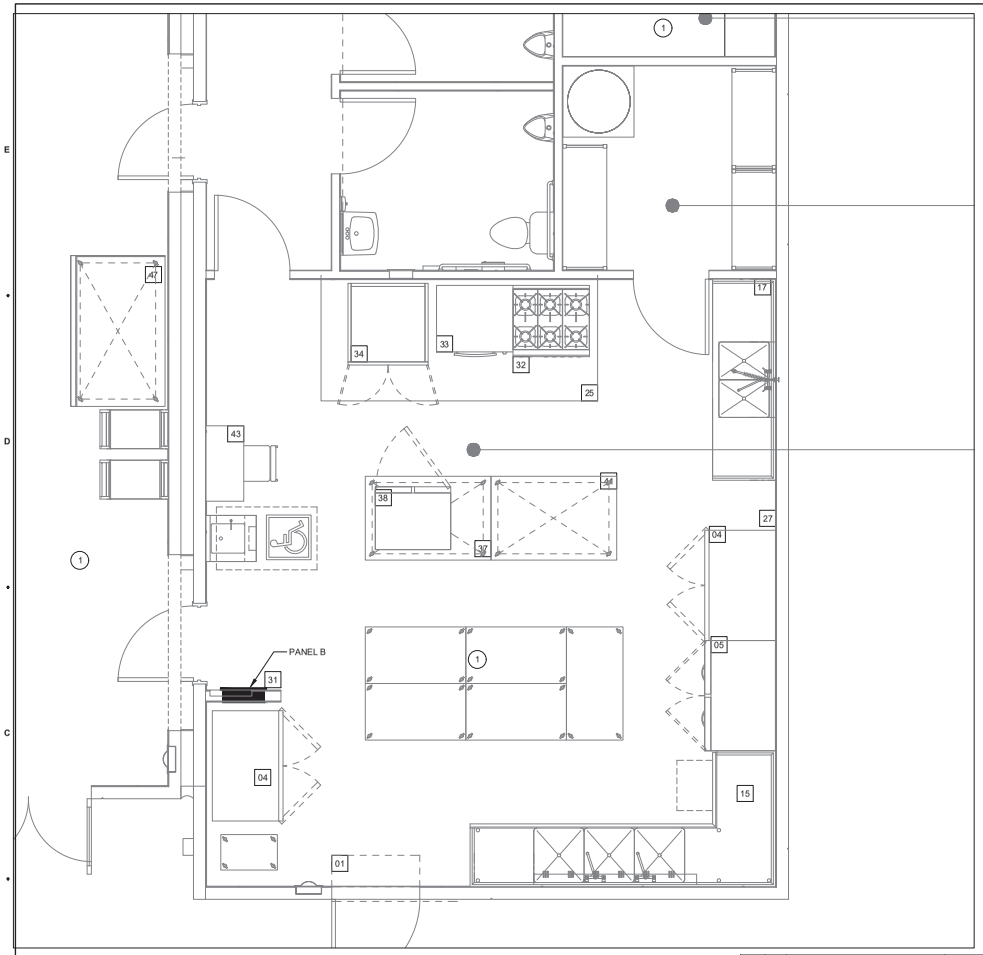
SHEET TITLE

ENLARGED RCP PLANS

SHEET NUMBER

E1.1

File Path:



1 ENLARGED KITCHEN FLOOR PLAN
SCALE: 1/2" 1'-0"

1/2" 1'-0" 2' 1' 0' 2' 4'

ITEM	QTY	ELECTRICAL EQUIPMENT	MANUFACTURER	MODEL #	VOLTS	K.W	AMPS	H.P	PHASE	ELEC. CONN.	ELECTRICAL REMARKS
1	1	AIR CURTAIN RECEIVING	MARS	NH242-1UA-TS	120		90		1		WIRE THRU DOOR ACTIVATED MICRO SWITCH
4	2	REACH-IN REFRIGERATOR	TRUE	STR2R-2S-HC	120		5.9		1		
5	1	REACH-IN REFRIGERATOR	TRUE	STR2R-2S-HC	120		9.4		1		
15	1	UNDERCOUNTER DISH WASHING	CHAMPION	UH230B	208		22		3		
17	1	WORK TABLE 2/2 COMP. PREP SINK	SFI	ITM-WBB	120		6		1		
25	1	EXHAUST HOOD		PB-C-W-132-ND-60	120		15		1		
27	1	EDISON	CADDY	R102	120		6		1		
31	1	FIRE PULL BOX									PROVIDE 4X4 OCTAGONAL BOX WITH 1/2" CONDUIT
32	1	36" ELECTRIC RANGE	SOUTHBEND		208		64.9		3		
33	1	36" ELECTRIC GRIDDLE	SOUTHBEND		208		68.7		3		
34	1	DOUBLE CONVENTION OVEN	SOUTHBEND		208		58		3		
37	1	MOBILE WORK TABLE	SFI	MT-WBB-ADA	120		6		1		
38	1	MICROWAVE OVEN	AMANA	RMS10TSA	120		13		1		
41	1	MOBILE DATA WORK TABLE	SFI	MT-WBB-ADA	120		6		1		
43	1	OFFICE DESK AND CHAIR			120		6		1		PROVIDE DATA CONNECTION
47	1	UTILITY FOOD COUNTER(MOBILE)			120		6		1		

KEYNOTES

SHEET NOTES:

1 REFER TO AMS DRAWINGS FOR POWER AND DATA FLOOR PLANS.

LEGEND

GENERAL NOTES

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REGISTRATION STAMPS

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EXPIRES 12-31-22
ELECTRICAL
STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	AS SHOWN
SUBMITTAL:	03/09/22

KEY PLAN

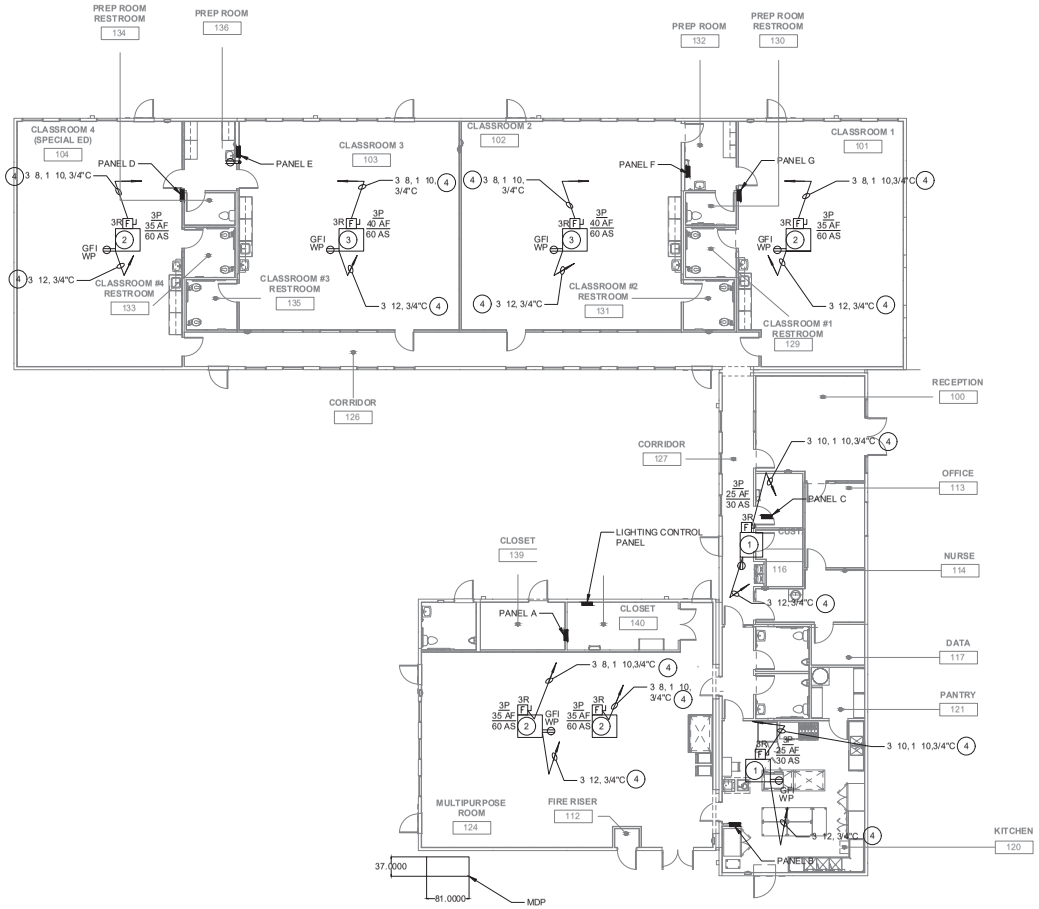
SHEET TITLE

ENLARGED KITCHEN PLANS

SHEET NUMBER

E1.2

File Path:



1 ENLARGED MECHANICAL PLAN
SCALE: 1/8" 1'-0"

1/4" 1'-0" 4' 2' 0' 4' 8'

KEYNOTES

SHEET NOTES:

1. 3 TON UNIT(ON ROOFTOP)
2. 4 TON UNIT(ON ROOFTOP)
3. 5 TON UNIT(ON ROOFTOP)
4. REFER TO AMS DRAWINGS FOR PANEL SCHEDULE.

LEGEND

GENERAL NOTES

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STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	AS SHOWN
SUBMITTAL:	03/09/22

KEY PLAN

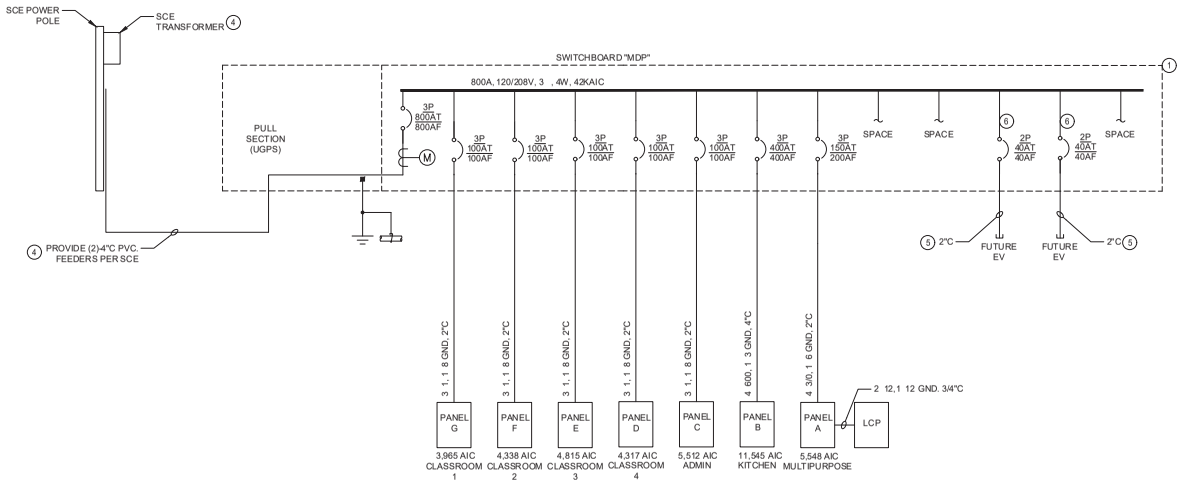
SHEET TITLE

MECHANICAL PLAN

SHEET NUMBER

E1.3

File Path:

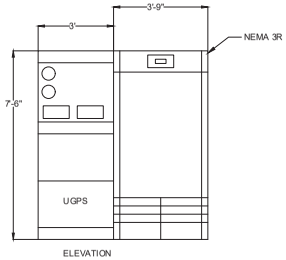


1 SINGLE LINE DIAGRAMS
SCALE: NONE

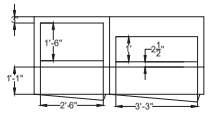
LOAD CALCULATION		
NEW PANELBOARD "MDB" 800A, 120V/208V, 3PH, 4W		
LOADS		
PANEL G (CLASSROOM 1)	=	**17.0 kVA**
PANEL F (CLASSROOM 2)	=	**15.5 kVA**
PANEL E (CLASSROOM 3)	=	**15.5 kVA**
PANEL D (CLASSROOM 4)	=	**17.7 kVA**
PANEL C (ADMIN)	=	**17.9 kVA**
PANEL B(KITCHEN)	=	**107.4 kVA**
PANEL A(MULTIPURPOSE)	=	**29.9 kVA**
FUTURE EV CHARGING STATIONS	=	**13.3 kVA**
TOTAL	=	**234.1 KVA**
AT 120/208V, 3 PHASE, 4W =		**650 AMPS**

3

2 LOAD CALCULATIONS
SCALE: NONE

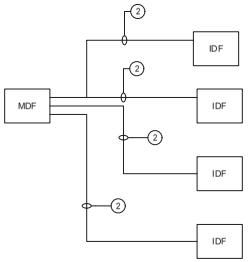


ELEVATION



FLOOR PLAN

5 SWITCHBOARD MDP
SCALE: 1/2" 1'-0"



4 DATA RISER DIAGRAM
SCALE: NONE

CIRCUIT	FIXTURES	VL	VA	CU (K)	LENGTH	I(VA/V)	Cmil	CONDUCTOR	VD=2KxLxI/CM	V%=VD/VL
A-17	2	120	144	12.9	30	1.20	6530	12	0.14	0.12
A-17	1	120	71	12.9	60	0.59	6530	12	0.14	0.12
A-17	1	120	71	12.9	105	0.59	6530	12	0.25	0.20
% CIRCUIT VOLTAGE DROP										0.45

3 LIGHTING VOLTAGE DROP
SCALE: NONE

KEYNOTES

SHEET NOTES:

1. PROVIDE EATON POW-R-LINE C OR APPROVED E UAL DISTRIBUTION BOARD.
2. PROVIDE 24 STRAND FIBER OPTIC CABLE.
3. REFER TO AMS' DRAWINGS FOR PANEL SCHEDULES.
4. COORDINATE WITH SOUTHERN CALIFORNIA EDISON(S.C.E).

LEGEND

GENERAL NOTES

CLIENT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR:
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

PROJECT NAME

PALO VERDE COLLEGE
CHILD DEVELOPMENT CENTER BLYTHE

141 S 2ND STREET
BLYTHE CA, 92225

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REGISTRATION STAMPS

REGISTERED PROFESSIONAL ENGINEER
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12-31-22
STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	AS SHOWN
SUBMITTAL:	03/09/22

KEY PLAN

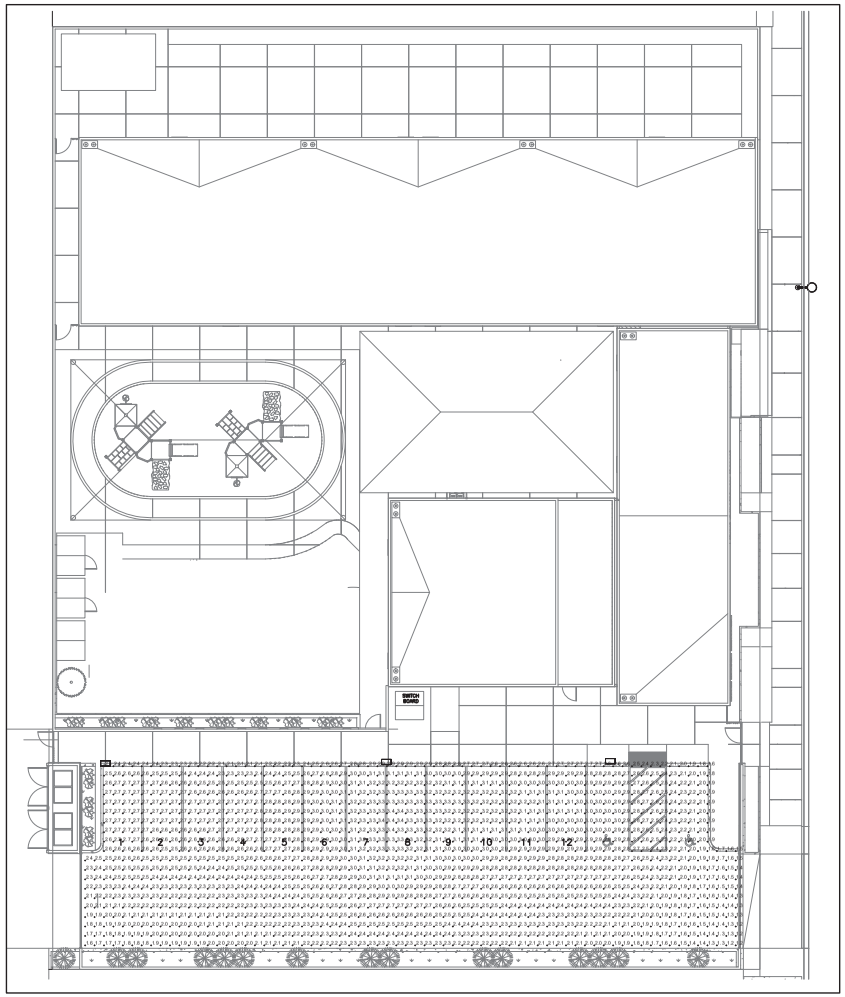
SHEET TITLE

SINGLE LINE DIAGRAM - NEW WORK

SHEET NUMBER

E2.0

File Path:



1 PHOTOMETRIC PLAN-PARKING LOT
SCALE: NTS

AVERAGE FOOT CANDLE	2.5

KEYNOTES

LEGEND

GENERAL NOTES

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EXP. 12-31-22
ELECTRICAL
STATE OF CALIFORNIA

AGENCY APPROVAL

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MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	
SUBMITTAL:	03/09/22

KEY PLAN

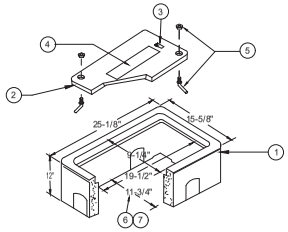
SHEET TITLE

PHOTOMETRIC PLAN-PARKING LOT

SHEET NUMBER

E3.0

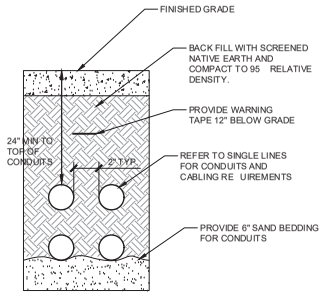
File Path:



1. PRECAST CONCRETE, BOTTOMLESS PULL BOX REINFORCED FOR H20 BRIDGE LOADING (IN TRAFFIC AREAS).
2. GALVANI ED STEEL TRAFFIC COVER WITH CHECKERED TOP SURFACE.
3. LIFTING HOLE
4. PROVIDE IDENTIFICATION "SIGNAL" OR " ELECTRICAL" AS APPROPRIATE, ON COVER IN 1" LETTERING.
5. STAINLESS STEEL HEAD NUT AND SWING BOLT (2 RE UIRED)
6. PROVIDE MIN. 8" GRAVEL FILL BED UNDER BODY OF BOX FOR DRAINAGE.
7. HANDHOLES USED TO SERVE LIGHTING AT POLES SHALL BE PROVIDED WITH GND. ROD AND SUBMERSIBLE INLINE FUSE HOLDERS WITH 10A FUSES.

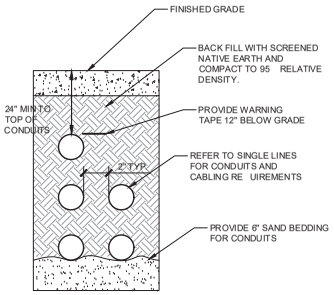
1 / E4.0 POWER/SIGNAL HANDHOLE DETAIL

SCALE: NONE



2 / E4.0 DETAIL - TRENCHING

SCALE: NONE

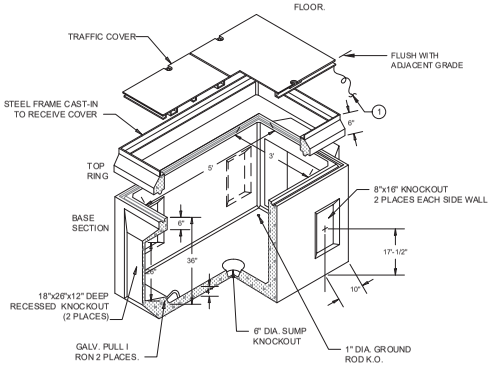


3 / E4.0 DETAIL - TRENCHING

SCALE: NONE

INSTALLATION

BOX TO BE PLACED ON 6" OF COMPACTED ROCK OR SAND TO INSURE UNIFORM DISTRIBUTION OF SOIL PRESSURE ON FLOOR.

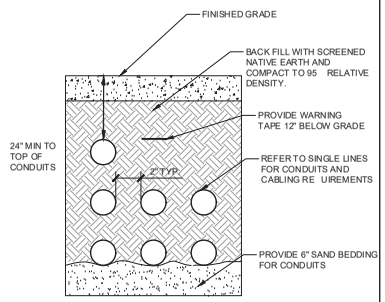


NOTES

1. BOND 6 AWG STRANDED COPPER E UIPMENT GROUND TO METALLIC COVER BY MEANS OF GROUND LUG BOLTED TO COVER. PROVIDE 3'-0" SLACK WIRE ABOVE GRADE LEVEL TO ALLOW REMOVAL OF COVER.

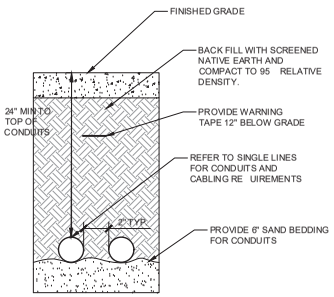
4 / E4.0 RECESSED (FLUSH WITH GRADE) MOUNTED PULL BOX DETAIL

SCALE: NONE



5 / E4.0 DETAIL - TRENCHING

SCALE: NONE



6 / E4.0 DETAIL - TRENCHING

SCALE: NONE

KEYNOTES

LEGEND

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DESIGN CONSULTANT

EPI THE ENGINEERING PARTNERS, INC.
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EPI JOB :187-64E

REGISTRATION STAMPS

REGISTERED PROFESSIONAL ENGINEER
C20131
STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	AS SHOWN
SUBMITTAL:	03/09/22

KEY PLAN

SHEET TITLE

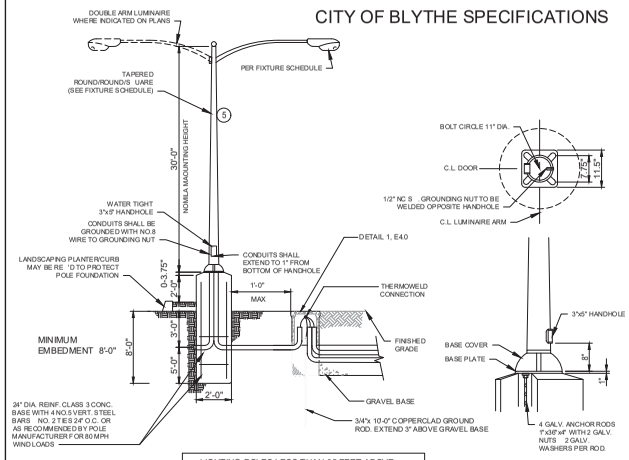
ELECTRICAL DETAILS

SHEET NUMBER

E4.0

File Path:

CITY OF BLYTHE SPECIFICATIONS



LIGHTING POLES LESS THAN 35 FEET ABOVE GRADE EXEMPT FROM DSA REVIEW PER 2022 CALIFORNIA ADMINISTRATIVE CODE.

1 (1/E5.0) DETAIL - LIGHT POLE AND BASE
SCALE: NONE

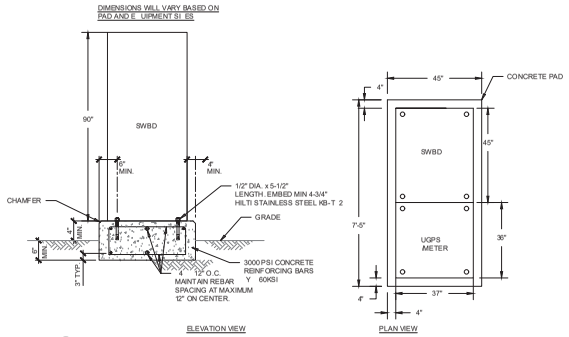
SHEET NOTES:

1. SEE STRUCTURAL DETAIL 1 ON SDI.I
2. SEE STRUCTURAL DETAIL 2 ON SDI.I
3. PROVIDE nDTC TIME CLOCK OPTION. nDTC COMPLIES WITH 130.2 (c) AUTOMATIC SCHEDULING CONTROLS.
4. PROVIDE DIMMING WIRING TO COMPLY WITH 130.2 (c).2 AUTOMATIC SCHEDULING CONTROLS.
5. COORDINATE WITH MANUFACTURING CAMERA POLE MOUNTING OPTION.
6. FIXTURE CONTROLLED BY LANDSCAPE TRANSFORMER'S BUILT IN ASTRONOMICAL CLOCK OPTION.

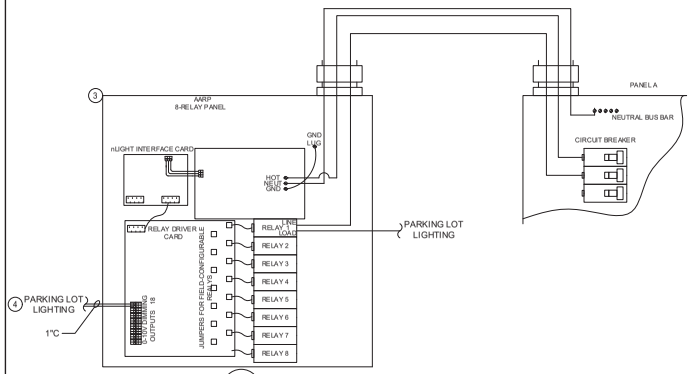
LIGHTING FIXTURE SCHEDULE

TYPE	SYMBOL	WATT	VOLT	AMP #	AMP TYPE	DESCRIPTION	MANUFACTURER AND CATALOG NUMBER #	MANUFACTURER AND CATALOG NUMBER TYPE	MANUFACTURER AND CATALOG NUMBER	MOUNTING
P		72.1	120 MVOLT		LED 11,285	PARKING LOT LIGHT FIXTURE, TYPE IV MEDIUM LIGHT DISTRIBUTION, CAST ALUMINUM HOUSING. PROVIDE WITH NEMA PHOTOSENSOR RECEPTACLE AND AUTOMATIC SCHEDULING CONTROLS			LITHONIA RSX2 LED RSX2-P1-40K-R3S-SPA PROVIDE WITH CAMERA MOUNTING OPTION	SQUARE POLE
KT3		4.5 VA	10-15V		LED 168 LUMENS	KT 3 LED IN GRADE LIGHT(ENTRY DOORS)			FX LUMINAIRE KT IN-GRADE LIGHT KT-3LED	IN GRADE (6)
KG6		9.7	10-15V		LED 285 LUMENS	KG 6 LED WELL LIGHT (TREE LIGHTS)			KG WELL LIGHTS KG-6LED	TREE LIGHTS (6)

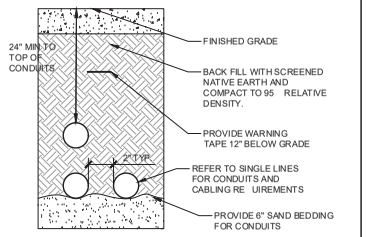
4 (4/E5.0) FIXTURE SCHEDULE
SCALE: NONE



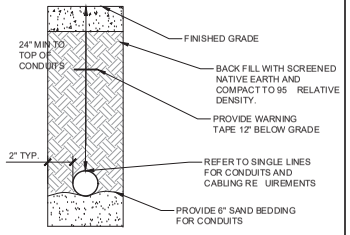
2 (2/E5.0) SWITCHBOARD ANCHORING DETAIL
SCALE: NONE



5 (5/E5.0) LIGHTING PANEL WIRING DIAGRAM
SCALE: NONE



6 (6/E5.0) DETAIL - TRENCHING
SCALE: NONE



3 (3/E5.0) DETAIL - TRENCHING
SCALE: NONE

KEYNOTES

LEGEND

GENERAL NOTES

CLIENT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR:
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

PROJECT NAME

PALO VERDE COLLEGE
CHILD DEVELOPMENT CENTER BLYTHE

141 S 2ND STREET
BLYTHE CA, 92225

BUILDER

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REGISTRATION STAMPS

REGISTERED PROFESSIONAL ENGINEER
C20131
ELECTRICAL
STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	AS SHOWN
SUBMITTAL:	03/09/22

KEY PLAN

SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

E5.0

File Path:

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	PVC CDC	Report Page:	(Page 1 of 7)
Project Address:	141 S 2nd Street	Date Prepared:	2/23/2022

A. GENERAL INFORMATION

01	Project Location (city)	Blythe	04	Total Illuminated Hardscape Area (ft^2)	5182
02	Climate Zone	15			
03	Outdoor Lighting Zone per Title 24 Part 1 §10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Rural Areas	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval		
☐	LZ-1: Low - Developed Parkland	☒ LZ-3: Moderately High - Urban Areas			

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.7 or §141.0(b)2L for alterations.

My Project Consists of:

01	02
☒ New Lighting System	Must Comply with Allowances from §140.7
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)? ○ Yes ○ No

03	04	05
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%		

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.0.001
Schema Version: rev 20190401

Report Generated: 2022-02-23 17:12:35

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	PVC CDC	Report Page:	(Page 2 of 7)
Project Address:	141 S 2nd Street	Date Prepared:	2/23/2022

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through I. Note: if any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) §140.7 or §141.0(b)2L													Compliance Results		
01		02		03		04		05		06			07		08	09
General Hardscape Allowance §140.7(d)1 (See Table I)	+	Per Application §140.7(d)2 (See Table J)	+	Sales Frontage §140.7(d)2 (See Table K)	+	Ornamental §140.7(d)2 (See Table L)	+	Per Specific Area §140.7(d)2 (See Table M)	OR	Existing Power Allowance §141.0(b)2L (See Table N)	=	Total Allowed (Watts)	≥	Total Actual (Watts)	07 must be >= 08
568.3	+	---	+	---	+	---	+	---	OR	---	=	568.3	≥	216.3	COMPLIES
Cutoff Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H for Details)															COMPLIES with Exceptional Conditions

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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Schema Version: rev 20190401

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STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	PVC CDC	Report Page:	(Page 3 of 7)
Project Address:	141 S 2nd Street	Date Prepared:	2/23/2022

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with §140.7 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per §141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included).

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[2,3]	How is Wattage determined	Total number luminaires[4]	Luminaire Status[5]	Excluded per §140.7(a)	Design Watts	Cutoff Req. > 6,200 initial lumen output §130.2(b)[6]	Field Inspector	
										Pass	Fail
P	P	☐ Linear	72.1	CEC Default	3	New	☐	216.3	NA: < 6200 lumens	☐	☐
							Total Design Watts:	216.3			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to §130.2(b)

[1] FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per §130.0(c)

[2] For linear luminaires, wattage should be indicated as W/ft instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.

[3] Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Relocated" for existing luminaires which are being removed and reinstalled as part of the project scope.

[4] Compliance with mandatory cutoff requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by §130.2(b)

G. CUTOFF REQUIREMENTS (BUG)

This section does not apply to this project.

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

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Schema Version: rev 20190401

Report Generated: 2022-02-23 17:12:35

STATE OF CALIFORNIA
Outdoor Lighting
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CERTIFICATE OF COMPLIANCE			NRCC-LTO-E
Project Name:	PVC CDC	Report Page:	(Page 4 of 7)
Project Address:	141 S 2nd Street	Date Prepared:	2/23/2022

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
*When an option having a * is selected, the notes section of this table must be completed. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

Mandatory Controls

01	02	03	04	05	
Area Description	Shut-Off §130.2(c)1	Auto-Schedule §130.2(c)2	Motion Sensor §130.2(c)3	Field Inspector	
				Pass	Fail
Parking Light	Photocontrol	Yes	Exempt*	☐	☐

* NOTES: Controls with a * require a note in the space below explaining how compliance is achieved.
EX: Not permitted by health & safety to be turned off; EXCEPTION 1 to §130.2(c)

Parking Light	

Registration Number: | Registration Date/Time: | Registration Provider: Energysoft

CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance

Report Version: 2019.0.001
Schema Version: rev 20190401

Report Generated: 2022-02-23 17:12:35

1 TITLE 24
SCALE: NONE

KEYNOTES

LEGEND

GENERAL NOTES

CLIENT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR:
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

PROJECT NAME

PALO VERDE COLLEGE
CHILD DEVELOPMENT CENTER BLYTHE

141 S 2ND STREET
BLYTHE CA, 92225

BUILDER

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C21711
Exp. 06-30-23
ELECTRICAL
STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	AS SHOWN
SUBMITTAL:	03/09/22

KEY PLAN

SHEET TITLE

TITLE
24-OUTDOOR

SHEET NUMBER

E6.0

File Path:

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTO-E**
Project Name:	PVC CDC	**Report Page:**	**(Page 5 of 7)**
Project Address:	141 S 2nd Street	**Date Prepared:**	2/23/2022

I. LIGHTING POWER ALLOWANCE (per §140.7)

This table includes areas using allowance calculations per §140.7. General Hardscape Allowance is per Table 140.7-A while "Use it or lose it" Allowances are per Table 140.7-B - indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.

☒ General Hardscape Allowance Table I (below)	01 "Use It or lose It" Allowance (select all that apply) (select all that apply)			
	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A (L2 0, 1 & 4)

This section does not apply to this project.

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A (L2 2 & 3)

02	03	04	05	06	07	08	09	10
Area Description	Surface Type	Area Wattage Allowance (AWA)			Area Wattage Allowance (AWA)			Total General AWA + LWA (Watts)
		Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
Parking Lot	Asphalt	5182	0.03	129.55	355	0.4	88.75	218.3
						Initial Wattage Allowance for Entire Site (Watts):		350
						Total General Hardscape Allowance (Watts):		568.3

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

Registration Number:	**Registration Date/Time:**	**Registration Provider: Energysoft**
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2022-02-23 17:12:35

STATE OF CALIFORNIA
Outdoor Lighting
NRCC-LTO-E
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTO-E**
Project Name:	PVC CDC	**Report Page:**	**(Page 6 of 7)**
Project Address:	141 S 2nd Street	**Date Prepared:**	2/23/2022

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRC/

Yes	No	Form/Title	Field Inspector Pass	Field Inspector Fail
●	○	NRCI-LTO-01-E - Must be submitted for all buildings	☐	☐
●	○	NRCI-LTO-02-E- Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance.	☐	☐

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Yes	No	Form/Title	Field Inspector Pass	Field Inspector Fail
●	○	NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	☐	☐

Registration Number:	**Registration Date/Time:**	**Registration Provider: Energysoft**
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2022-02-23 17:12:35

STATE OF CALIFORNIA
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CERTIFICATE OF COMPLIANCE			**NRCC-LTO-E**
Project Name:	PVC CDC	**Report Page:**	**(Page 7 of 7)**
Project Address:	141 S 2nd Street	**Date Prepared:**	2/23/2022

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Company: The Engineering Partners, Inc.	Signature Date:
Address:	CEA/HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the 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: Benedick Balisi	Responsible Designer Signature:
Company: EPI Engineering Inc.	Date Signed: 2022-02-23
Address: 10150 Meanley Drive, Suite 200	License: C21213
City/State/Zip: San Diego CA 92131	Phone: 858 824-1761

Registration Number:	**Registration Date/Time:**	**Registration Provider: Energysoft**
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance	Report Version: 2019.0.001 Schema Version: rev 20190401	Report Generated: 2022-02-23 17:12:35

1 TITLE 24
SCALE: NONE

KEYNOTES

LEGEND

GENERAL NOTES

CLIENT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR:
SS ☑ FLS ☑ ACS ☑
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PROJECT NAME

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CHILD DEVELOPMENT CENTER BLYTHE

141 S 2ND STREET
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(858) 824-1761 FAX (858) 824-1768
EPI JOB :187-64E

REGISTRATION STAMPS

REGISTERED PROFESSIONAL ENGINEER
BENEDICK BALISI
C21213
Exp. 06-30-23
ELECTRICAL
STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	AS SHOWN
SUBMITTAL:	03/09/22

KEY PLAN

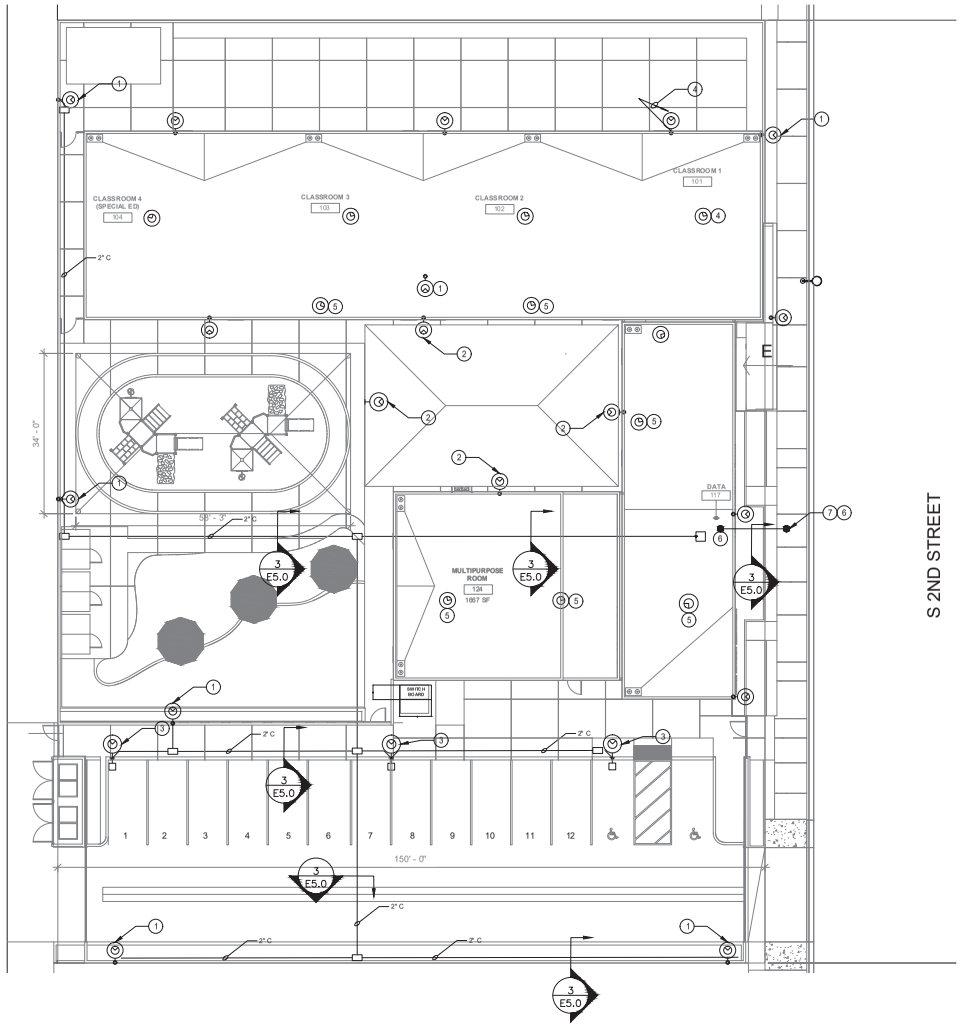
SHEET TITLE

TITLE
24-OUTDOOR

SHEET NUMBER

E6.1

File Path:



1 TITLE: SECURITY AND LOW VOLTAGE
SCALE: 3/32" 1'-0"

KEYNOTES

SHEET NOTES:

1. PROVIDE RECESSED JUNCTION BOX TO MOUNT CAMERA ON WALL.
2. MOUNT CAMERA UNDER SHADE'S(COVERED AREA) STRUCTURE.
3. MOUNT CAMERA ON LIGHTING POLE.
4. PROVIDE INFRASTRUCTURE FOR CAMERAS(1"CONDUIT TO DATA ROOM PATHWAY). CAMERA LOCATIONS ARE SHOWN FOR REFERENCE ONLY. TYPICAL.
5. MOUNT ON CEILING.
6. STUB UP AND CAP CONDUIT.
7. PROVIDE 2" CONDUIT FOR FRONTIER INTERNET SERVICE.

LEGEND

GENERAL NOTES

GENERAL NOTES:

1. PROVIDE CAT5/6 FOR POWER OVER INTERNET TO CAMERAS.

CLIENT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR:
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

PROJECT NAME

PALO VERDE COLLEGE
CHILD DEVELOPMENT CENTER BLYTHE

141 S 2ND STREET
BLYTHE CA, 92225

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REGISTRATION STAMPS

REGISTERED PROFESSIONAL ENGINEER
C21011
EXPIRES 12-31-22
ELECTRICAL
STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	AS SHOWN
SUBMITTAL:	03/09/22

KEY PLAN

SHEET TITLE

SECURITY PLAN AND LOW VOLTAGE

SHEET NUMBER

SLV1.0

File Path:

SUMMARY OF WORK

PROVIDE A NEW INTELLIGENT REPORTING, NETWORKED, MICROPROCESSOR-CONTROLLED FIRE DETECTION AND EMERGENCY VOICE ALARM COMMUNICATION SYSTEM IN ACCORDANCE WITH THE APPLICABLE CRITERIA, SPECIFICATIONS, AND AS INDICATED ON THE DRAWINGS. SYSTEM SHALL BE EXPANDABLE AND INCLUDE ADDRESSABLE DEVICES, NOTIFICATION APPLIANCES, CONTROLS AND SUPERVISORY DEVICES.

WORK SHALL INCLUDE FURNISHING OF LABOR, EQUIPMENT AND MATERIALS FOR INSTALLATION OF THE FIRE ALARM AND VOICE EVACUATION SYSTEM AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS. THE SYSTEM SHALL CONSIST OF ALL NECESSARY HARDWARE, EQUIPMENT AND SOFTWARE PROGRAMMING TO PERFORM FIRE-ALARM AND DETECTION OPERATIONS, AND ONE-WAY SUPERVISED AUTOMATIC VOICE ALARM OPERATIONS. THE SYSTEM SHALL BE DIGITAL ADDRESSABLE TYPE.

WHERE SPECIFIC SYSTEM COMPONENTS ARE NOT SHOWN ON THE DRAWINGS, IT SHALL BE THE RESPONSIBILITY OF THE INSTALLING CONTRACTOR TO PROVIDE A COMPLETE SYSTEM IN ACCORDANCE WITH THE APPLICABLE CRITERIA.

APPLICABLE CRITERIA

- 2022 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R. (EFFECTIVE 3/5/2022 FOR CAC ONLY)
- 2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2018 INTERNATIONAL BUILDING CODE VOLUMES 1-2 AND 2016 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R. (2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R. (2018 INTERNATIONAL MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (2018 INTERNATIONAL PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.
- 2019 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS) 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11,
- TITLE 24 C.C.R. 2019 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
- TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
- NFPA 70, NATIONAL ELECTRIC CODE (2017 EDITION)
- NFPA 72, NATIONAL FIRE ALARM & SIGNALING CODE (2016 EDITION)

PROJECT LIFE SAFETY CODE ANALYSIS

- SEE SHEET G004

INSTALLATION NOTES

THE INSTALLATION OF THE FIRE ALARM AND VOICE EVACUATION SYSTEM SHALL COMPLY WITH NFPA 72 (2016 EDITION) AND NFPA 70 (2017 EDITION) AS AMENDED BY THE CALIFORNIA FIRE CODE (CFC) AND CALIFORNIA ELECTRIC CODE (CEC) RESPECTIVELY. SEE SHEET SPECIFIC NOTES FOR ADDITIONAL REQUIREMENTS AND SUB-TRADE DESIGN DOCUMENTATION FOR REQUIRED COORDINATION

PLANS AND CALCULATIONS

2. DEVIATIONS FROM APPROVED PLANS, INCLUDING PRODUCT SUBSTITUTIONS ARE SUBJECT TO REVIEW AND SHALL REQUIRE PERMISSION OF THE AUTHORITY HAVING JURISDICTION (DSA).

ANY DEVIATIONS FROM THE APPROVED PLANS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGNER OF RECORD AND MODIFICATIONS SUBMITTED TO DSA FOR REVIEW AND APPROVAL.

GENERAL FIRE ALARM NOTES

1. GENERAL FIRE ALARM NOTES ALL PENETRATIONS THROUGH RATED ASSEMBLIES, REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER LAB TESTING CRITERIA.
2. APPROVED TYPE OF MATERIALS SHALL BE IDENTIFIED WITHIN THE SPECIFICATION WITHIN THE FIRE ALARM SECTION. REFER TO FLOOR PLANS FOR LOCATIONS OF FIRE-RATED ASSEMBLIES AND DETAILS.
3. WALL MOUNTED VISUAL NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
4. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM. AUDIBLE DEVICES TO BE AT LEAST 15 dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5 dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF 60 SECONDS WHICHEVER IS GREATER, BUT NOT LESS THAN 75 dBA AT 10 FEET OR MORE THAN 110 dBA AT THE MINIMUM HEARING DISTANCE.
5. AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN, EXCEPT TEMPORAL 4 FOR CO DETECTORS.
6. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
7. VISUAL DEVICES SHOULD NOT EXCEED 2 FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN 1 FLASH EVERY SECOND.
8. VISUAL DEVICES LOCATED WITHIN THE SAME ROOM SHALL BE SYNCHRONIZED.
9. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE 'WATERTIGHT' FITTINGS AND WIRE FOR WET LOCATIONS.
10. ALL FIRE ALARM WIRING SHALL BE PER PLAN.
11. ALL FIRE ALARM WIRING SHALL BE MODIFIED CLASS B IN ACCORDANCE WITH GUIDE SPECIFICATION SECTION 28311.
12. PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. THERE MUST BE AT LEAST 6 FT OF LEAD WIRE FROM THE BOX TO THE DEVICE. ALL BOXES TO BE SIZED PER CEC.
13. PER NFPA 72 SECTION 17.5.3.1.2, DETECTORS SHALL NOT BE REQUIRED IN COMBUSTIBLE BLIND SPACES IF ANY OF THE FOLLOWING CONDITIONS EXIST:
    - 13.1. WHERE THE CEILING IS ATTACHED DIRECTLY TO THE UNDERSIDE OF THE SUPPORTING BEAMS OF A COMBUSTIBLE ROOF OR FLOOR DECK.
    - 13.2. WHERE THE CONCEALED SPACE IS ENTIRELY FILLED WITH A NONCOMBUSTIBLE INSULATION, I.E. IN SOLID JOIST CONSTRUCTION. THE INSULATION SHALL BE REQUIRED TO FILL ONLY THE SPACE FROM THE CEILING TO THE BOTTOM EDGE OF THE JOIST OF THE ROOF OR FLOOR DECK.
    - 13.3. WHERE THERE ARE SMALL CONCEALED SPACES OVER ROOMS, PROVIDED THAT ANY SPACE IN QUESTION DOES NOT EXCEED 50 SQ-FT IN AREA.
    - 13.4. IN SPACES FORMED BY SETS OF FACING STUDS OR SOLID JOISTS IN WALLS, FLOORS, OR CEILINGS, WHERE THE DISTANCE BETWEEN THE FACING STUDS OR SOLID JOISTS IS LESS THAN 6 IN. SMOKE DETECTORS SHALL BE PROVIDED THROUGHOUT, UNLESS SPECIFIC ENVIRONMENTAL CONDITIONS, I.E. AREAS WHERE DUST AND ELEVATED TEMPERATURES ARE ANTICIPATED, HEAT DETECTORS SHALL BE PERMITTED.
14. SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1 FT FROM FIRE SPRINKLERS OR 3 FT FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM DEVICES SHALL BE COVERED UNTILL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
15. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS. UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
16. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
17. WHERE AVAILABLE, EXISTING DEDICATED BRANCH CIRCUIT SHALL BE UTILIZED FOR FIRE ALARM EQUIPMENT. FOR NEW FIRE ALARM EQUIPMENT, ENSURE DEDICATED BRANCH CIRCUITS ARE ENERGIZED FROM THE COMMON USE AREA PANEL ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL, AND HAVE NO OTHER OUTLETS.
18. ENSURE THE CIRCUIT BREAKERS ARE PROVIDED WITH A RED LOCKING DEVICE TO LOCK THE HANDLE IN THE "ON" POSITION.
19. ENSURE THE CIRCUIT BREAKERS ARE LABELED "FIRE ALARM CIRCUIT CONTROL".
20. ENSURE THE CIRCUIT BREAKER ID AND LOCATION IS LABELED AT FIRE ALARM CONTROL PANEL AND REMOTE POWER SUPPLY PANELS.
21. THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION PER NFPA 72, FIGURE 10.18.2.1.1.
22. CONTROL PANELS, REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48 IN.
23. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 907.6.2.
24. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
25. ALL NEW ABOVEGROUND WIRING FOR THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN METALLIC CONDUIT (U-HC, MINIMUM UNLESS NOTED OTHERWISE. PROVIDE EMT, IMT, RIGID METALLIC CONDUIT IN DRY AREAS. PROVIDE RIGID METALLIC CONDUIT IN WET LOCATIONS. LOCATE SMOKE DETECTORS IN ACCORDANCE WITH THE SPACING REQUIREMENTS DESCRIBED IN NFPA 72 27. SECTION 17.7.3.2
26. COMMISSIONING MUST FOLLOW NFPA 72 REQUIREMENTS AND THE REQUIREMENTS OF DSA.

FIRE ALARM DRAWING INDEX

Sheet Num er	Sheet Title
FA001	FIRE ALARM GENERAL NOTES AND LEGENDS
FA101	FIRE ALARM SITE PLAN
FA200	FIRE ALARM OVERALL FLOOR PLAN
FA200.1	FIRE ALARM OVERALL CEILING PLAN
FA201.A	FIRE ALARM PLAN AREA A
FA201.B	FIRE ALARM PLAN AREA B
FA201.C	FIRE ALARM PLAN AREA C
FA201.D	FIRE ALARM PLAN AREA D
FA300	FIRE ALARM ENLARGED PLANS
FA500	FIRE ALARM DEVICE DETAILS
FA501	FIRE ALARM E UIPMENT DETAILS
FA600	FIRE ALARM EXTERIOR ELEVATIONS
FA601	FIRE ALARM EXTERIOR SECTION VIEWS
FA602	FIRE ALARM INTERIOR SECTION VIEWS
FA700	FIRE ALARM RISER DIAGRAM
FA701	FIRE ALARM SCHEMATIC DIAGRAMS
FA801	FIRE ALARM LOAD CALCULATIONS
FA802	FIRE ALARM SPEAKER SCHEDULES
FA803	FIRE ALARM POINT SCHEDULES

DEVICE LEGEND

SYMBOL	QTY	MANUFACTURER	PART NO	DESCRIPTION	CSFM	MOUNTING
SS	1	DITEK	DTK-2MHLP24BWB	2 PAIR / 4 WIRE SURGE MODULE W/BASE FOR PIV, NAC, IDC ETC.	7300-2105:0100	SURFACE
	3	GENERIC	TAMPER SWITCH	TAMPER SWITCH	DIV 2.1 SUBMITTAL	N/A
	1	GAMEWELL FCI	E3 SERIES CLASSIC	EMERGENCY VOICE EVACUATION SYSTEM	7165-1703:0125	SURFACE
	1	GAMEWELL FCI	DACT-E3	DACT CARD		
	1	GAMEWELL FCI	ILI-MB-E3	INTELLIGENT LOOP INTERFACE-MAIN BOARD		
	2	GAMEWELL FCI	AM-50-25	AM-50, 25V VRMS AUDIO OUTPUT, 50 WATT		
	1	GAMEWELL FCI	LCD-SLP MAIN BOARD	LCD TOUCHSCREEN ANNUNCIATOR DISPLAY, MAIN BOARD		
	1	GAMEWELL FCI	ASM-16	ADDRESSABLE SWITCH MODULE		
	1	HONEYWELL	IP-DACT2 MAIN BOARD	INTERNET DIGITAL FIRE ALARM COMMUNICATOR		
	1	GAMEWELL FCI	IN-VGX	TRANSPONDER VOICE GATEWAY (UTP ONLY)		
	1	GAMEWELL FCI	PM-9	POWER SUPPLY CARD		
	1	GAMEWELL FCI	IN-CC-M/C	PAGING MICROPHONE MODULE (OCCUPIES 1 SLOT ON INNER DOOR)		
NAC	1	HONEYWELL	HPF24S8	8-AMP, 24-VOLT POWER SUPPLY	7315-1637:0102	SURFACE
RAA	1	GAMEWELL FCI	LCD-SLP	LCD TOUCHSCREEN DISPLAY	7165-1703:0125	SURFACE
	1	GAMEWELL FCI	LCD-SLP MAIN BOARD	LCD TOUCHSCREEN ANNUNCIATOR DISPLAY, MAIN BOARD		
F	1	GAMEWELL FCI	MS-7AF	VELOCITI ADDRESSABLE DOUBLE ACTION STATION	7150-1703:0119	SEMI-FLUSH
AIM	1	GAMEWELL FCI	AIMM-2F	ADDRESSABLE MINI MONITOR MODULE	7300-1703:0102	SURFACE
AIM	2	GAMEWELL FCI	AIMM-2IF	ADDRESSABLE DUAL MONITOR MODULE W/ FLASHSCAN, 2 CLASS B	7300-1703:0107	FLUSH
AOM	6	GAMEWELL FCI	AOM-2RF	ADDRESSABLE RELAY MODULE W/ FLASHSCAN, 2 FORM C DRY CONTACTS	7300-1703:0102	FLUSH
AOM	1	GAMEWELL FCI	AOM-2SF	ADDRESSABLE CONTROL MODULE W/ FLASHSCAN, 1 CLASS A OR 1 CLASS B	7300-1703:0102	FLUSH
TH	4	GAMEWELL FCI	ATD-L3 W/B300-6	THERMAL HEAT DETECTOR, 135°F FIXED, BRIGHT WHITE, VELOCITI W/ 6" FLANGED MOUNTING BASE, BRIGHT WHITE	7270-1703:0502	FLUSH
S	56	GAMEWELL FCI	ASD-PL3 W/B300-6	PHOTOELECTRIC SMOKE DETECTOR, BRIGHT WHITE, VELOCITI W/ 6" FLANGED MOUNTING BASE, BRIGHT WHITE	7272-1703:0501	FLUSH
WF	1	GENERIC	WATERFLOW SWITCH	CONTACT DEVICE	DIV 2.1 SUBMITTAL	N/A
	6	GENERIC	GENERIC FIRE SMOKE DAMPER	HARDWARE DAMPER, FIRE SMOKE DAMPER	DIV 2.3 SUBMITTAL	N/A
	1	SYSTEM SENSOR	SSM24-8	ALARM BELL 8" 24VDC, RED	7135-1653:0217	SURFACE
	1	SYSTEM SENSOR	SP-SWL	SPEAKER STROBE WALL MOUNT, WHITE	7320-1653:0905	SURFACE
	3	SYSTEM SENSOR	SPWK	SPEAKER OUTDOOR, WHITE 1/4 TO 2 WATT TAP	7320-1653:0201	SURFACE
	39	SYSTEM SENSOR	SPSCWL	SPEAKER/STROBE CEILING MOUNT, WHITE	7320-1653:0905	SEMI-FLUSH
BAT	1	GAMEWELL FCI	B-C-1	BATTERY CABINET	7300-0653:0111	SURFACE MOUNTED
	2	POWER SONIC	PS- 12260	(1) 12V 26 AH BATTERY		
SS	1	DITEK	DTK-120HW	120VAC 5/4KA PARALLEL CONNECTED SURGE PROTECTIVE DEVICE	7300-2105:0102	DIRECT MOUNT

SEQUENCE OF OPERATIONS

OUTPUTS \ INPUTS	MANUAL PULL STATION	AREA SMOKE OR HEAT DETECTOR	FIRE SPRINKLER WATER FLOW SWITCH	FIRE SPRINKLER SUPERVISORY SWITCH	CARBON MONOXIDE DETECTOR	BUILDING POWER FAIL LOW BATTERY	SYSTEM TROUBLES	VOICE MESSAGE ACTIVATION	LIVE VOICE OVERRIDE	TYPE 1 HOOD SUPPRESSION ACTIVATION
ANNUNCIATE ALARM CONDITION AT FIRE CONTROL PANEL	●	●	●		●					●
ANNUNCIATE TROUBLE CONDITION AT FIRE CONTROL PANEL						●	●			
ANNUNCIATE SUPERVISORY CONDITION AT FIRE CONTROL PANEL				●				●	●	
ACTIVATE AUDIBLE/VISUAL ALARM SIGNAL	●	●	●		●			●		●
TRANSMIT ALARM SIGNALS TO MONITORING STATION	●	●	●		●					●
TRANSMIT TROUBLE SIGNALS TO MONITORING STATION						●	●			
TRANSMIT SUPERVISORY SIGNALS TO MONITORING STATION				●				●		
ACTIVATE FIRE SPRINKLER WATER FLOW BELL			●							
ACTIVATE AUDIBLE APPLIANCE CIRCUIT	●	●	●					●	●	●
DISCONNECT /OVERRIDE AUDIO SYSTEM									●	
CLOSE FIRE/SMOKE DAMPERS	●	●	●		●			●		●

THE DEFAULT FIRE ALARM VOICE EVACUATION MESSAGE SHALL BE: (TEMPORAL 3 ALERT TONE) "MAY I HAVE YOUR ATTENTION PLEASE. MAY I HAVE YOUR ATTENTION PLEASE. A FIRE EMERGENCY HAS BEEN REPORTED IN THE BUILDING. PLEASE LEAVE THE BUILDING AND REPORT TO THE ASSEMBLY LOCATION. DO NOT USE THE ELEVATORS! PROVIDE A 2 SECOND PAUSE. "MAY I HAVE YOUR ATTENTION PLEASE..." (REPEAT THE MESSAGE)
THE DEFAULT CO DETECTOR MESSAGE SHALL BE: (TEMPORAL 4 ALERT TONE) "CARBON MONOXIDE HAS BEEN DETECTED IN THE BUILDING. PLEASE LEAVE THE BUILDING BY THE NEAREST EXIT AND REPORT TO THE ASSEMBLY LOCATION."

CLIENT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR:
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

PROJECT NAME

PALO VERDE COLLEGE CHILD DEVELOPMENT CENTER

BUILDER

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REGISTRATION STAMPS

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	VELTRE
CHECKED BY:	VELTRE
SCALE:	As indicated
SUBMITTAL:	7/06/22

KEY PLAN

SHEET TITLE

FIRE ALARM GENERAL NOTES AND LEGENDS

SHEET NUMBER

FA001

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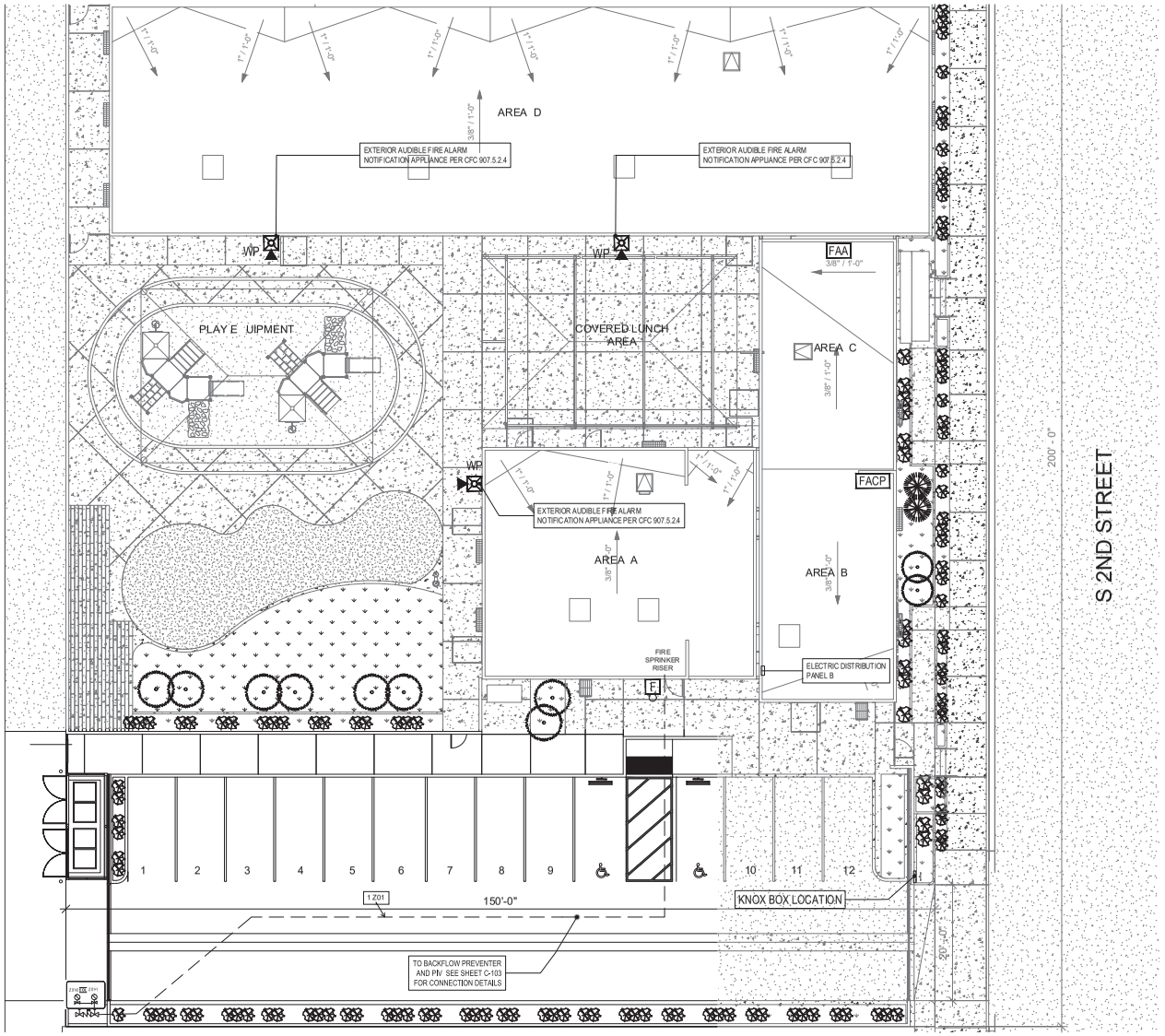

A. FIELD VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
B. REFER TO LANDSCAPE DRAWINGS FOR ADDITIONAL INFORMATION.
C. REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.

1 FIRE ALARM SITE PLAN
FA101 SCALE: 1/8" - 1'

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SUBMITTAL:	7/06/22

KEY PLAN

SHEET TITLE

FIRE ALARM SITE PLAN

SHEET NUMBER

FA101

File Path:0:\15277\29\2022\!PROJECTS_EPI\21037 EPI PVC CDC BLYTHE\03 VEI SHEETS

INSTALLATION NOTES

- ALL PENETRATIONS THROUGH RATED ASSEMBLIES, RE UIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM. REFER TO LIFE SAFETY CODE ANALYSIS FLOOR PLANS FOR LOCATIONS OF FIRE-RATED ASSEMBLIES AND FIRE ALARM E UIPMENT DETAILS FOR DIAGRAMMATIC VIEWS.
- LOCATE DEVICES AND DETECTORS IN ACCORDANCE WITH NFPA 72, NFPA 101, NFPA 70, CBC, CMC, CFC AND APPLICABLE CRITERIA.
- WALL MOUNTED VISUAL NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
- WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM.
- AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN, EXCEPT TEMPORAL 4 FOR CO DETECTORS.

DEVICES LOCATED WITHIN THE SAME ROOM SHALL BE SYNCHRONIZED.
DETECTORS SHALL NOT BE ANY CLOSER THAN 1 FT FROM FIRE SPRINKLERS OR 3 FT FROM ANY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY ED FIRE ALARM DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO NER.
RMPANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER ACTURERS SPECIFICATIONS.
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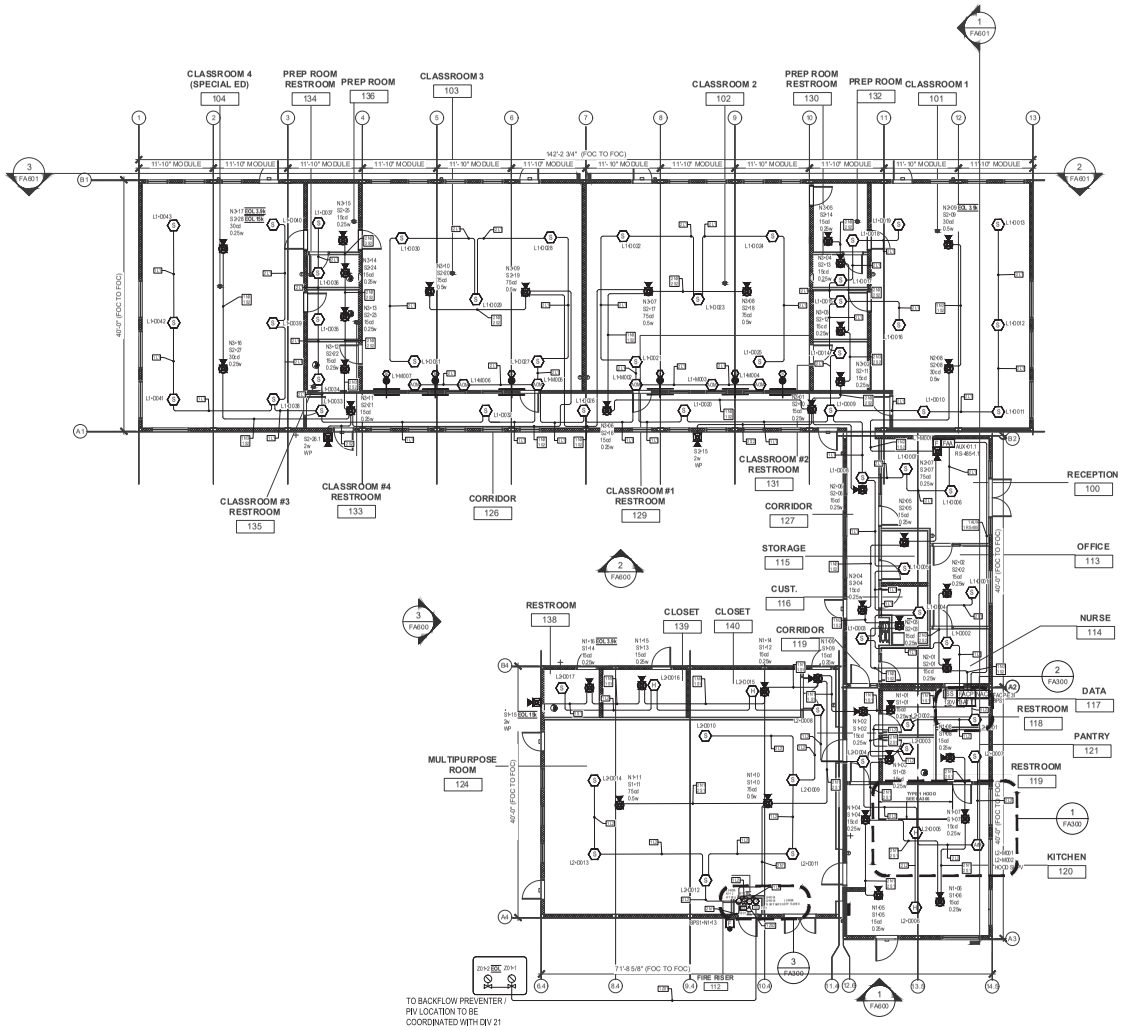
THE CIRCUIT BREAKERS ARE PROVIDED WITH A RED LOCKING DEVICE TO LOCK THE HANDLE IN THE SITION.
THE CIRCUIT BREAKERS ARE LABELED "FIRE ALARM CIRCUIT CONTROL".
THE CIRCUIT BREAKER ID AND LOCATION IS LABELED AT FIRE ALARM CONTROL PANEL AND REMOTE SUPPLY PANELS.
ING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DO NOT SPLICE THE WIRE. THERE MUST BE AT LEAST 6 FT OF LEAD WIRE FROM THE BOX TO THE

E ALARM SYSTEM SHALL BE INSTALLED IN METALLIC CONDUIT (3/4"C. MINIMUM) OR SURFACE
LY SIZED TO PROVIDE FILL CAPACITY EQUAL TO OR GREATER THAN ½" CONDUIT UNLESS NOTED
/ISE.
IROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRE FOR WET LOCATIONS.
E EMT, IMT, RIGID METALLIC CONDUIT IN DRY AREAS. PROVIDE RIGID METALLIC CONDUIT IN WET
ONS. PROVIDE SCHEDULE 40 PVC CONDUIT FOR UNDERGROUND PATHWAYS SIZED 1" MIN.



1 FIRE ALARM OVERALL FLOOR PLAN
FA200 SCALE: 1 / 8 " = 1'

GRAPHIC SCALE
0' 4' 8' 16' 32'
SCALE: 1/8" 1' - 0" (1:96)
Re . N.

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DRAWN BY:	VELTRE
CHECKED BY:	VELTRE
SCALE:	As indicated
SUBMITTAL:	7/06/22

KEY PLAN

SHEET TITLE

FIRE ALARM OVERALL FLOOR PLAN

SHEET NUMBER

FA200

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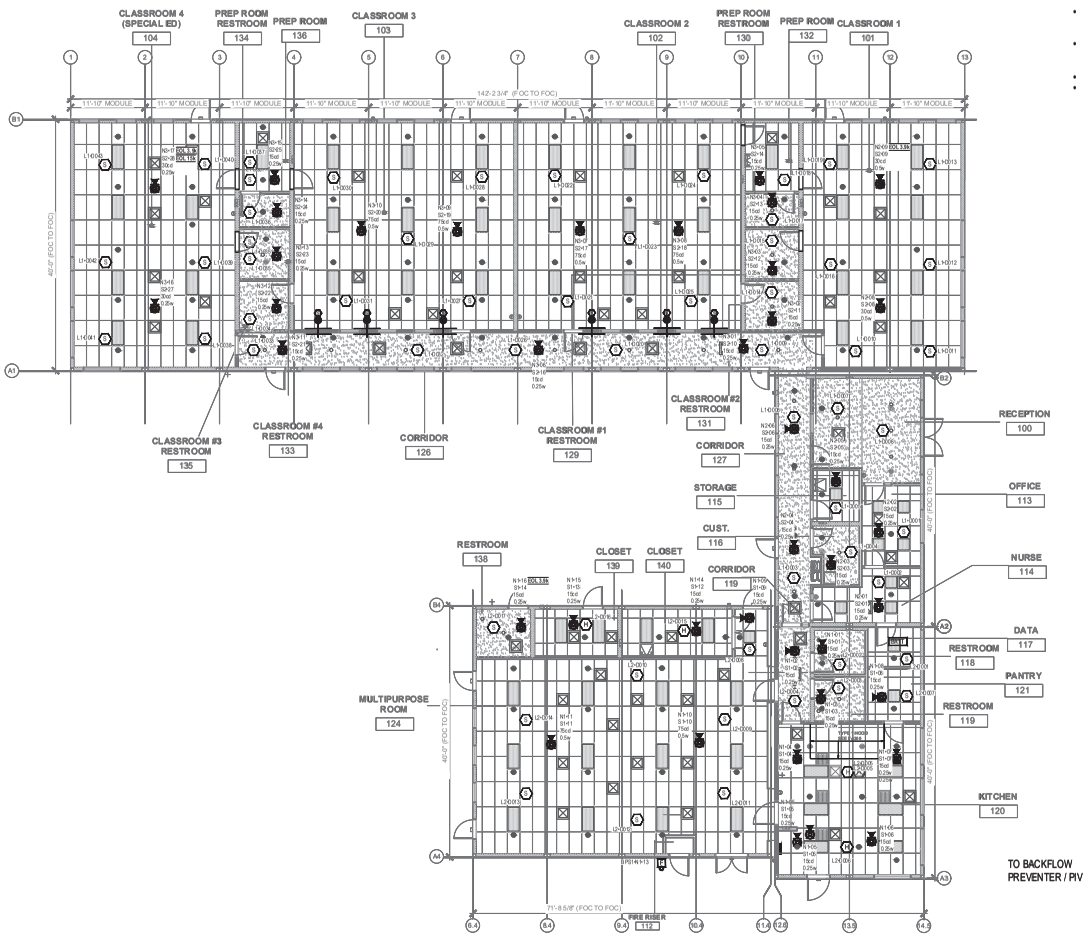

1 FIRE ALARM OVERALL CEILING PLAN

FA200.1 SCALE: 1 / 8 " = 1'

INSTALLATION NOTES

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- WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM.
- AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN, EXCEPT TEMPORAL 4 FOR CO DETECTORS.
- VISUAL DEVICES LOCATED WITHIN THE SAME ROOM SHALL BE SYNCHRONIZED.
- SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1 FT FROM FIRE SPRINKLERS OR 3 FT FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY
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- ENSURE THE CIRCUIT BREAKERS ARE PROVIDED WITH A RED LOCKING DEVICE TO LOCK THE HANDLE IN THE "ON" POSITION.
- ENSURE THE CIRCUIT BREAKERS ARE LABELED "FIRE ALARM CIRCUIT CONTROL".
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- UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRE FOR WET LOCATIONS.
- PROVIDE EMT, IMT, RIGID METALLIC CONDUIT IN DRY AREAS. PROVIDE RIGID METALLIC CONDUIT IN WET LOCATIONS. PROVIDE SCHEDULE 40 PVC CONDUIT FOR UNDERGROUND PATHWAYS SIZED 1 " MIN.

GRAPHIC SCALE

0' 4' 8' 16' 32'

SCALE: 1/8" 1' - 0" (1:96) Re . N.

File Path:0:15277222022V:\PROJECTS_EPI21037 EPI PVC CDC BLYTHE\03 VE\ SHEETS

CLIENT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC.
REVIEWED FOR:
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

PROJECT NAME

PALO VERDE COLLEGE CHILD DEVELOPMENT CENTER

BUILDER

DESIGN CONSULTANT

SILLMAN
7515 Metropolitan Dr.
Suite 400
San Diego, CA 92108
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DESIGN CONSULTANT

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SAN DIEGO, CA 92106 (858)490-9043

REGISTRATION STAMPS

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	VELTRE
CHECKED BY:	VELTRE
SCALE:	As indicated
SUBMITTAL:	7/06/22

KEY PLAN

SHEET TITLE

FIRE ALARM OVERALL CEILING PLAN

SHEET NUMBER

FA200.1

CABLE AND WIRE LEGEND				
LABEL	PART NO	AWG	RESISTANCE (Ω/KFT)	DESCRIPTION
A	18/2 FPL (SLC)	18	7.77	2 COND. SOLID COPPER FPL UNSHIELDED
S	16/2 FPL (SPEAKER)	16	4.89	2 COND. SOLID COPPER FPL SHIELDED
V	14/2 FPL OR THHN (NAC)	14	3.07	2 COND. SOLID COPPER FPL OR THHN UNSHIELDED
Z	18/2 FPL OR THHN (IDC)	18	7.77	2 COND. SOLID COPPER FPL OR THHN UNSHIELDED

CONDUIT SCHEDULE			
SIZE	NAME	DESCRIPTION	INNER DIAMETER (IN)
3/4"	EMT	ELECTRICAL METAL TUBING - INTERIOR PATHWAYS	0.82
1-1/4"	RNC (SCH 80)	RIGID PVC CONDUIT SCH 80 - UNDERGROUND PATHWAYS	1.26

INSTALLATION NOTES

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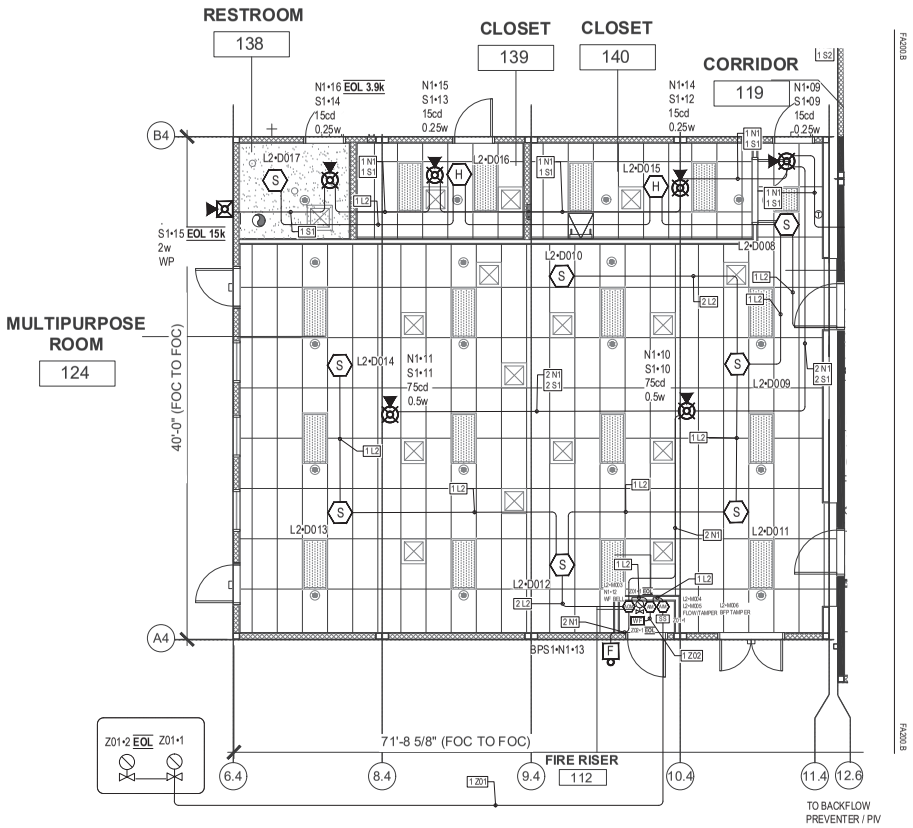
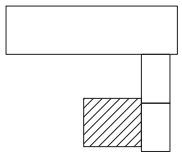


1 FIRE ALARM PLAN AREA A

FA201.A SCALE: 1 / 4 " = 1'

KEY PLAN



GRAPHIC SCALE

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KEY PLAN

SHEET TITLE

FIRE ALARM PLAN AREA A

SHEET NUMBER

FA201.A

File Path:0.015272/2022/V:\PROJECTS_EPI\21037 EPI PVC CDC BLYTHE\03 VEI SHEETS

CABLE AND WIRE LEGEND				
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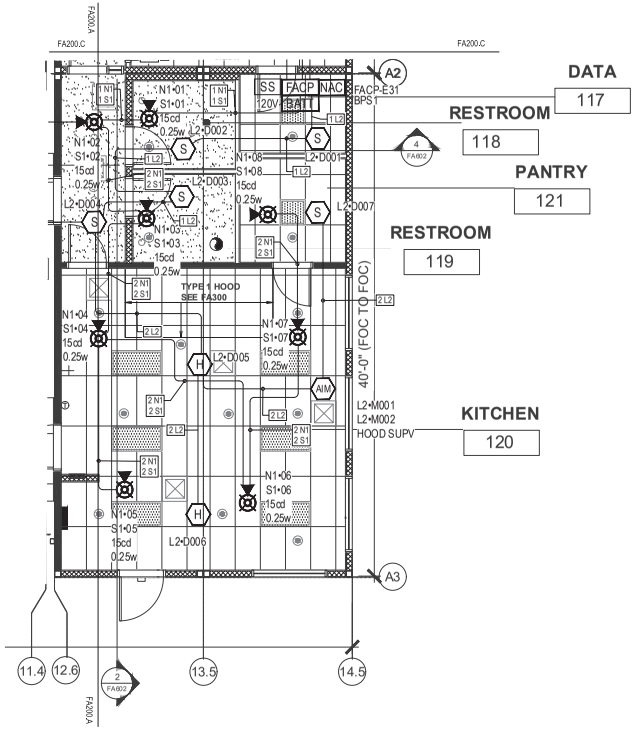
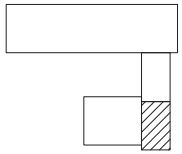


1 FIRE ALARM PLAN AREA B

FA201.B SCALE: 1 / 4" = 1'

KEY PLAN



GRAPHIC SCALE

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SCALE: 1/8" 1' - 0" (1:96) Re . N.

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AGENCY APPROVAL

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DESIGNER PROJ. NO.

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SCALE:	As indicated
SUBMITTAL:	7/06/22

KEY PLAN

SHEET TITLE

FIRE ALARM PLAN AREA B

SHEET NUMBER

FA201.B

File Path:0:\15277\2022\V:\PROJECTS_EPI\21037 EPI PVC CDC BLYTHE\03 VEI SHEETS

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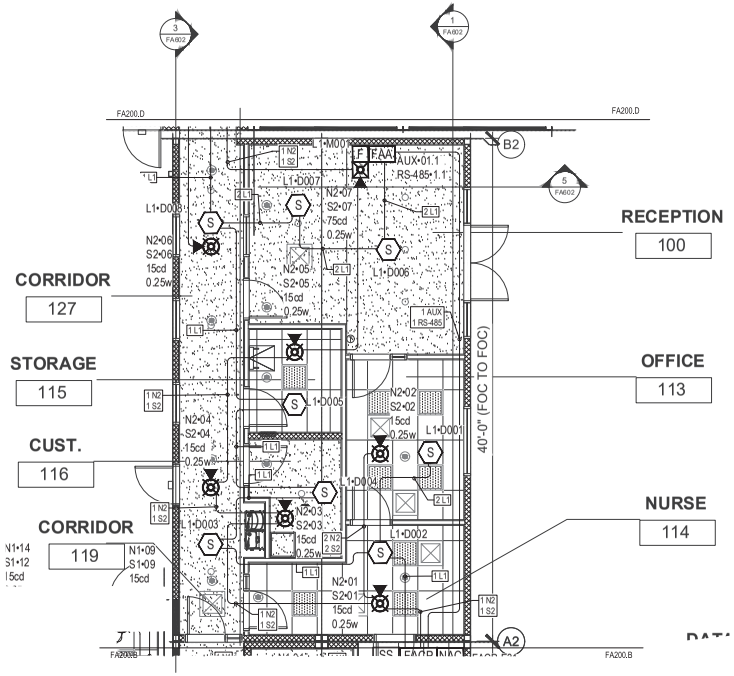
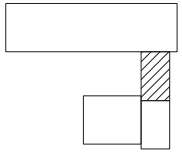


1 FIRE ALARM PLAN AREA C
FA201.C SCALE: 1 / 4 " = 1'

KEY PLAN



GRAPHIC SCALE

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KEY PLAN

SHEET TITLE

FIRE ALARM PLAN AREA C

SHEET NUMBER

FA201.C

File Path:0:\15277\2022\V:\PROJECTS_EPI\21037 EPI PVC CDC BLYTHE\03 VE\ SHEETS

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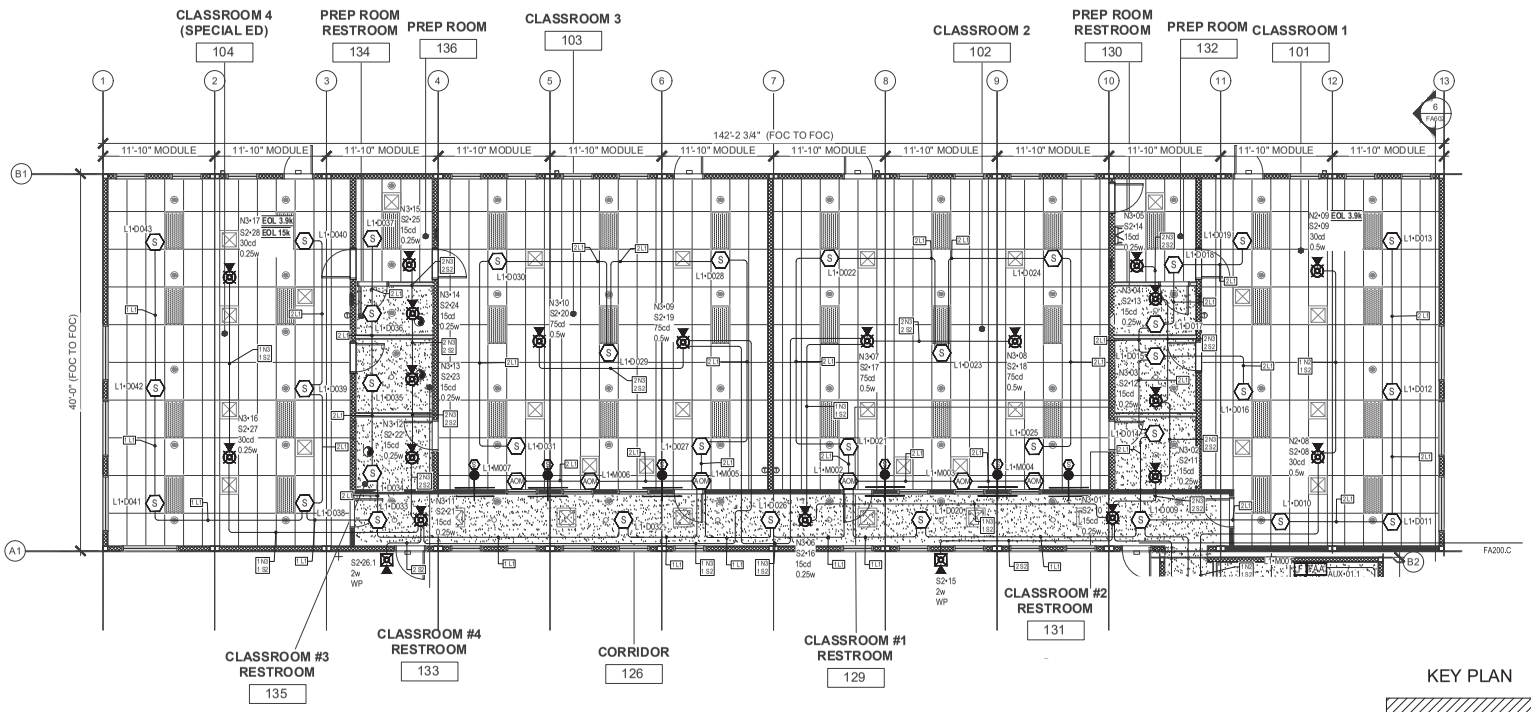
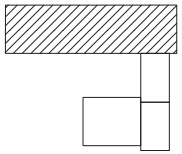


1 FIRE ALARM PLAN AREA D
FA201.D SCALE: 1 / 4" = 1'

KEY PLAN



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SHEET TITLE

FIRE ALARM PLAN AREA D

SHEET NUMBER

FA201.D

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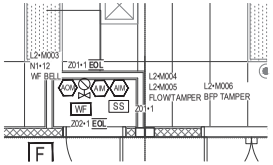
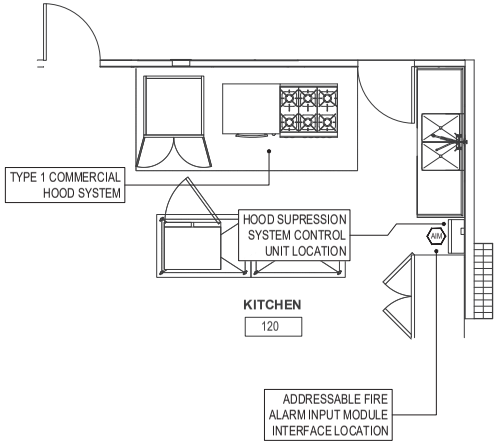
INSTALLATION NOTES

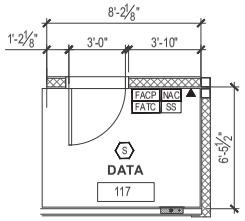
- ALL PENETRATIONS THROUGH RATED ASSEMBLIES, RE UIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM. REFER TO LIFE SAFETY CODE ANALYSIS FLOOR PLANS FOR LOCATIONS OF FIRE-RATED ASSEMBLIES AND FIRE ALARM E UIPMENT DETAILS FOR DIAGRAMMATIC VIEWS.
- LOCATE DEVICES AND DETECTORS IN ACCORDANCE WITH NFPA 72, NFPA 101, NFPA 70, CBC, CMC, CFC AND APPLICABLE CRITERIA.
- WALL MOUNTED VISUAL NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
- WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM.
- AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN, EXCEPT TEMPORAL 4 FOR CO DETECTORS.
- VISUAL DEVICES LOCATED WITHIN THE SAME ROOM SHALL BE SYNCHRONIZED.
- SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1 FT FROM FIRE SPRINKLERS OR 3 FT FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY
- INSTALLED FIRE ALARM DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
- FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS.
- DEDICATED BRANCH CIRCUIT SHALL BE UTILIZED FOR FIRE ALARM EQUIPMENT, ENSURE DEDICATED BRANCH CIRCUITS ARE ENERGIZED FROM THE COMMON USE AREA PANEL
- ENSURE THE CIRCUIT BREAKERS ARE PROVIDED WITH A RED LOCKING DEVICE TO LOCK THE HANDLE IN THE "ON" POSITION.
- ENSURE THE CIRCUIT BREAKERS ARE LABELED "FIRE ALARM CIRCUIT CONTROL".
- ENSURE THE CIRCUIT BREAKER ID AND LOCATION IS LABELED AT FIRE ALARM CONTROL PANEL AND REMOTE POWER SUPPLY PANELS.
- ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE..THERE MUST BE AT LEAST 6 FT OF LEAD WIRE FROM THE BOX TO THE DEVICE.
- THE FIRE ALARM SYSTEM SHALL BE INSTALLED IN METALLIC CONDUIT (3/4"C. MINIMUM) OR SURFACE RACEWAY SIZED TO PROVIDE FILL CAPACITY EQUAL TO OR GREATER THAN ¾" CONDUIT UNLESS NOTED OTHERWISE.
- UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRE FOR WET LOCATIONS.
- PROVIDE EMT, IMT, RIGID METALLIC CONDUIT IN DRY AREAS. PROVIDE RIGID METALLIC CONDUIT IN WET LOCATIONS. PROVIDE SCHEDULE 40 PVC CONDUIT FOR UNDERGROUND PATHWAYS SIZED 1 " MIN.



3 FIRE RISER 112 - FIRE PROTECTION VALVE SUPERVISION
FA300 SCALE: 3/8" = 1'



1 KITCHEN 120 - HOOD SUPPRESSION
FA300 SCALE: 3/8" = 1'



2 DATA 117 - FIRE ALARM CONTROL E UIPMENT LOCATION
FA300 SCALE: 3/8" = 1'

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REGISTRATION STAMPS

AGENCY APPROVAL

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DESIGNER PROJ. NO.

DRAWN BY:	VELTRE
CHECKED BY:	VELTRE
SCALE:	As indicated
SUBMITTAL:	7/06/22

KEY PLAN

SHEET TITLE

FIRE ALARM ENLARGED PLANS

SHEET NUMBER

FA300

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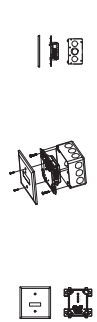
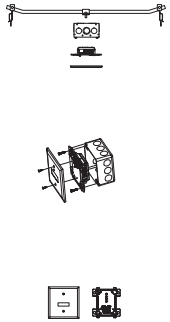
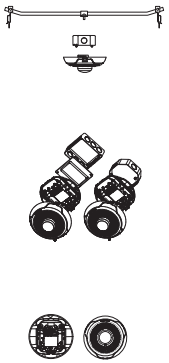


AMM-2IF / 4F ADDRESSABLE INPUT MODULE



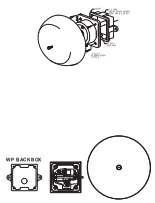
AOM-2SF ADDRESSABLE SUPERVISED OUTPUT MODULE

DTK120HW - 120V SURGE SUPPRESSION

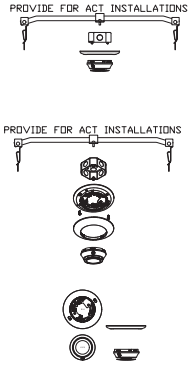


SPSCW-L CEILING SPEAKER STROBE

SPSW-L WALL SPEAKER STROBE



SSM24-8 24VDC MOTOR BELL



ASD-PL3R ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR - RESETABLE

MS7-AF DOUBLE ACTION ADDRESSABLE PULL STATION

1 FA500 FIRE ALARM DEVICE DETAILS
SCALE: NTS

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KEY PLAN

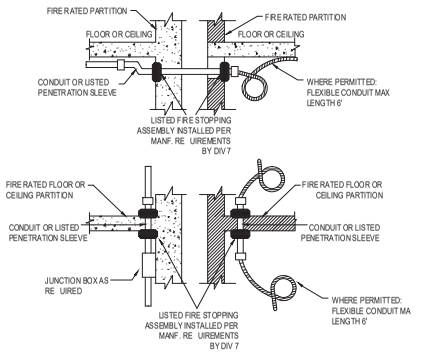
SHEET TITLE

FIRE ALARM DEVICE DETAILS

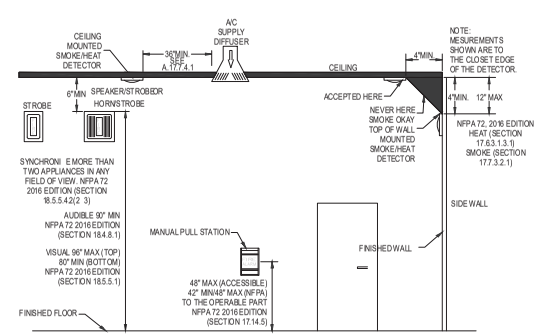
SHEET NUMBER

FA500

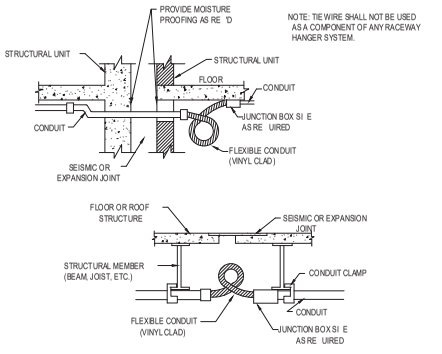
CONDUIT PENETRATION THROUGH FIRE RATED ASSEMBLIES



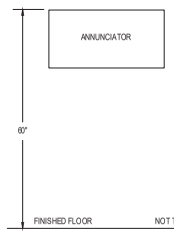
FIRE ALARM DEVICE ELEVATIONS



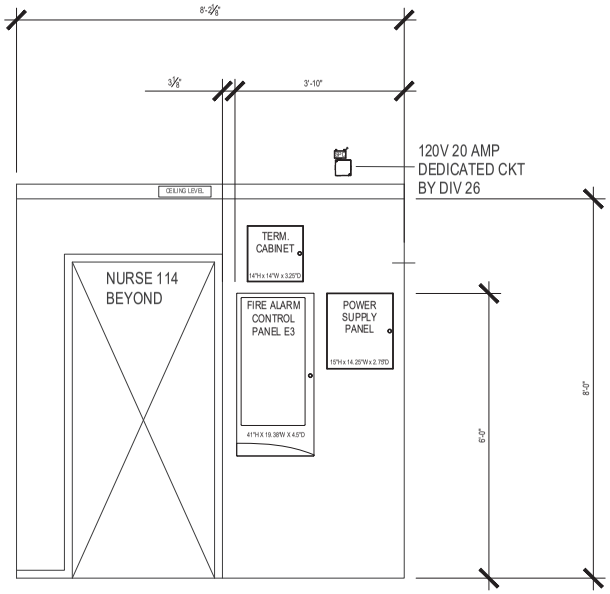
CONDUIT CROSSING SEISMIC OR EXPANSION JOINT



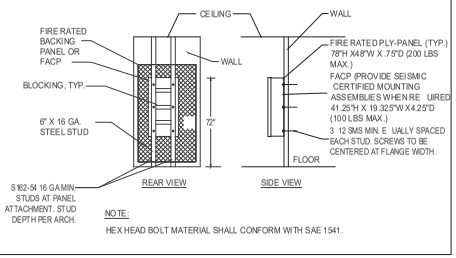
ANNUNCIATOR ELEVATION DETAIL



ROOM 117 DATA - CONTROL E UIPMENT DETAIL

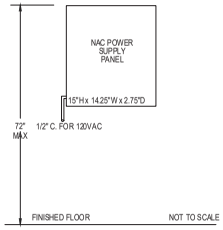


WALL MOUNTED E UIPMENT SUPPORT DETAIL



NOTE:
HEX HEAD BOLT MATERIAL SHALL CONFORM WITH SAE 1541.

NAC PANEL ELEVATION DETAIL



NOTES:
1. 2" MINIMUM DISTANCE BETWEEN PANELS

1 FIRE ALARM E UIPMENT DETAILS
FA501 SCALE: NTS

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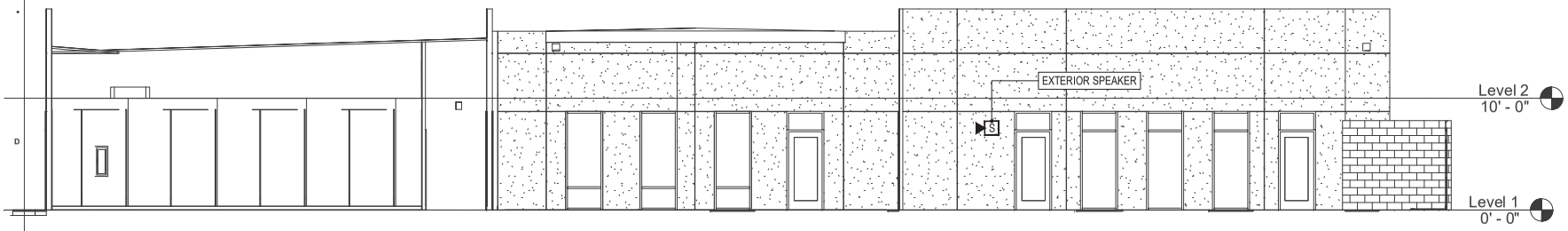
KEY PLAN

SHEET TITLE

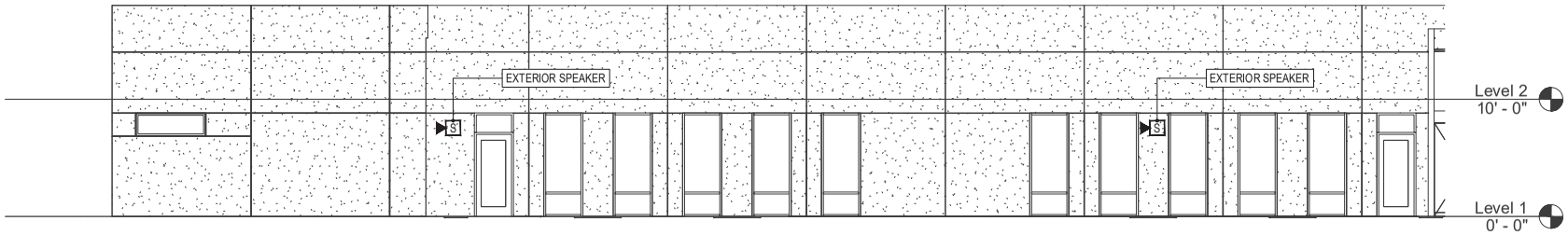
FIRE ALARM E UIPMENT DETAILS

SHEET NUMBER

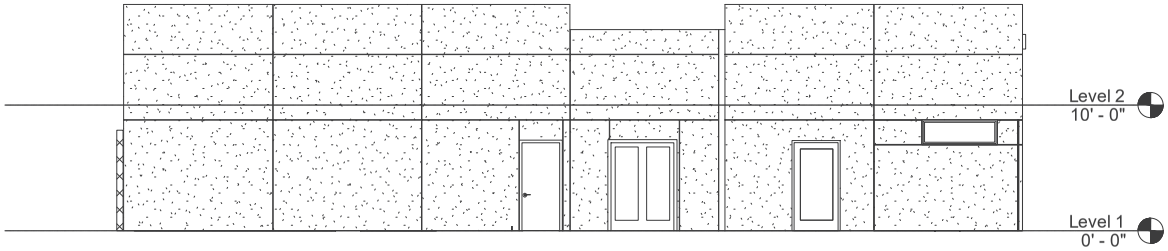
FA501



3 EXTERIOR EAST - AREA A, B, C,
FA600 SCALE: 1/4" = 1'



2 EXTERIOR NORTH - AREA D
FA600 SCALE: 1/4" = 1'



1 EXTERIOR NORTH - AREA A AND AREA B
FA600 SCALE: 1/4" = 1'

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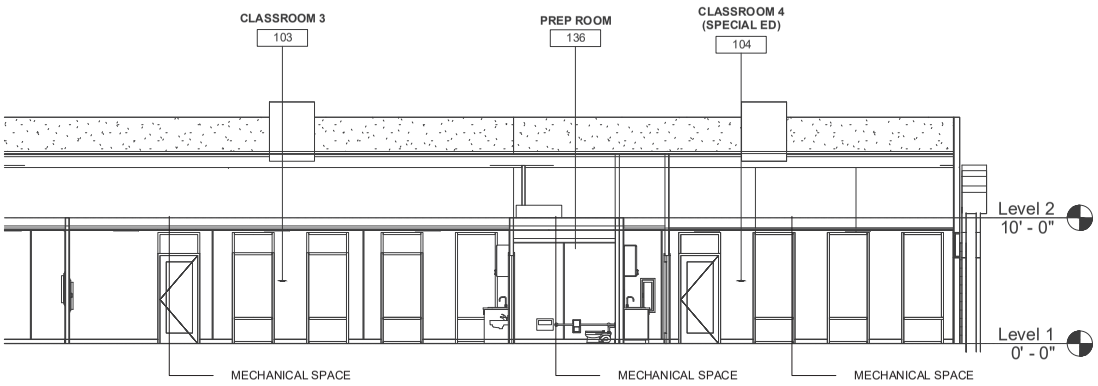
KEY PLAN

SHEET TITLE

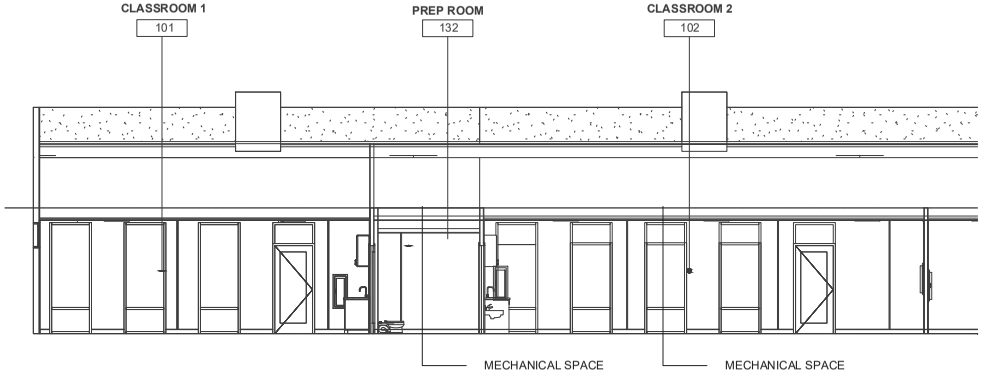
FIRE ALARM EXTERIOR ELEVATIONS

SHEET NUMBER

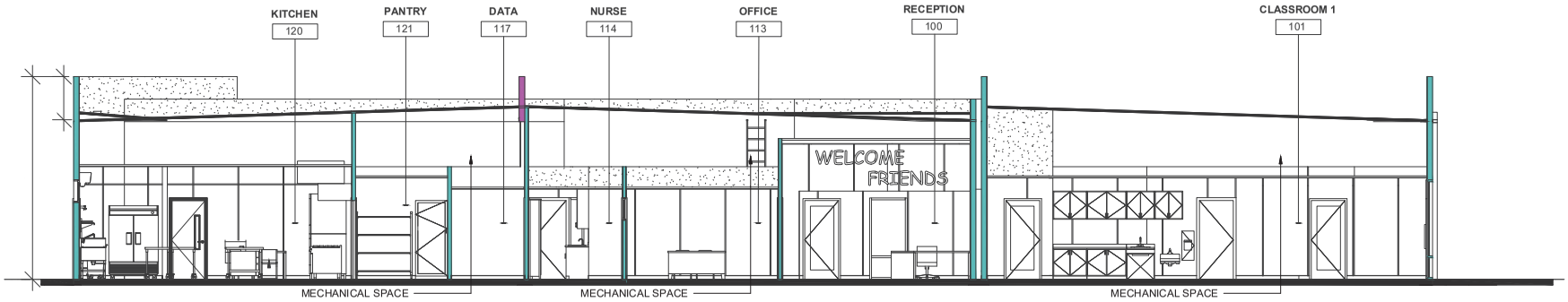
FA600



3 FA601 EXTERIOR SECTION - SOUTH AREA D WEST
SCALE: 1/4" = 1'



2 FA601 EXTERIOR SECTION - SOUTH AREA D EAST
SCALE: 1/4" = 1'



1 FA601 EXTERIOR SECTION WEST - AREA B AND C
SCALE: 1/4" = 1'

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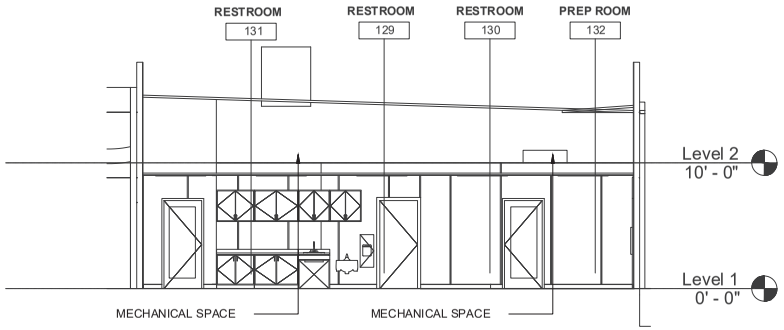
KEY PLAN

SHEET TITLE

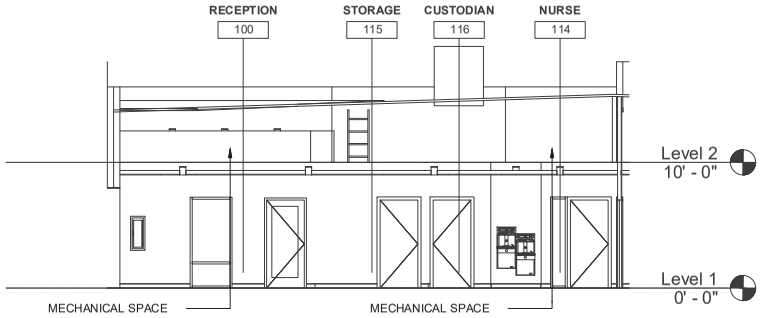
FIRE ALARM EXTERIOR SECTION VIEWS

SHEET NUMBER

FA601



5 FA602 INTERIOR SECTION WEST - AREA D
SCALE: 1/4" = 1'



3 FA602 INTERIOR SECTION SOUTH- AREA C
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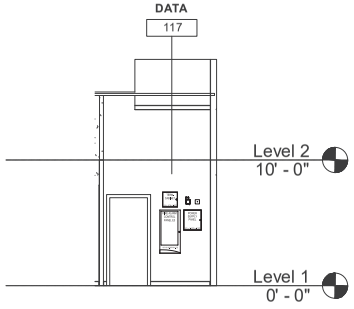
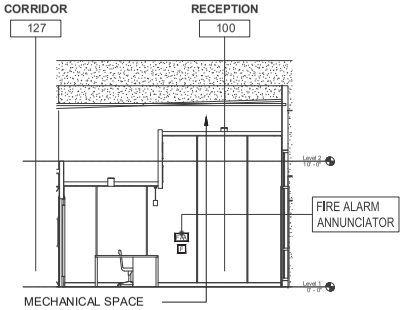
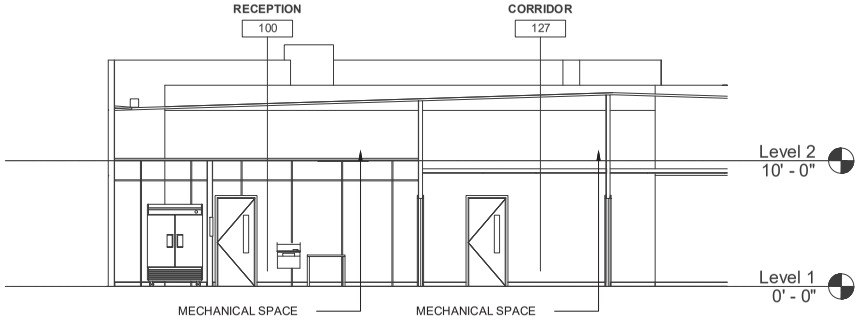


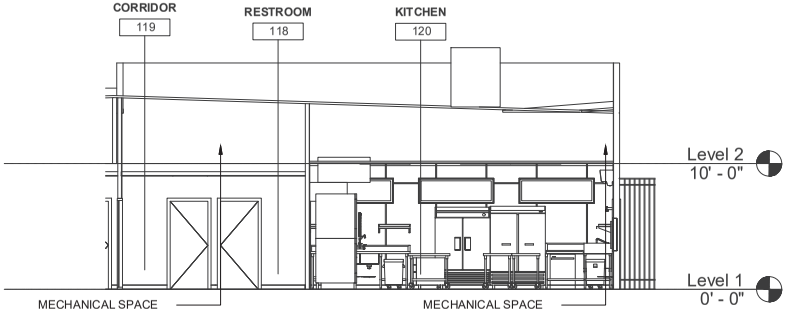
4 FA602 INTERIOR SECTION NORTH - AREA B
SCALE: 1/4" = 1'



5 FA602 INTERIOR SECTION NORTH - AREA C
SCALE: 1/4" = 1'



1 FA602 INTERIOR SECTION WEST - AREA A
SCALE: 1/4" = 1'



2 FA602 INTERIOR SECTION SOUTH- AREA B
SCALE: 1/4" = 1'

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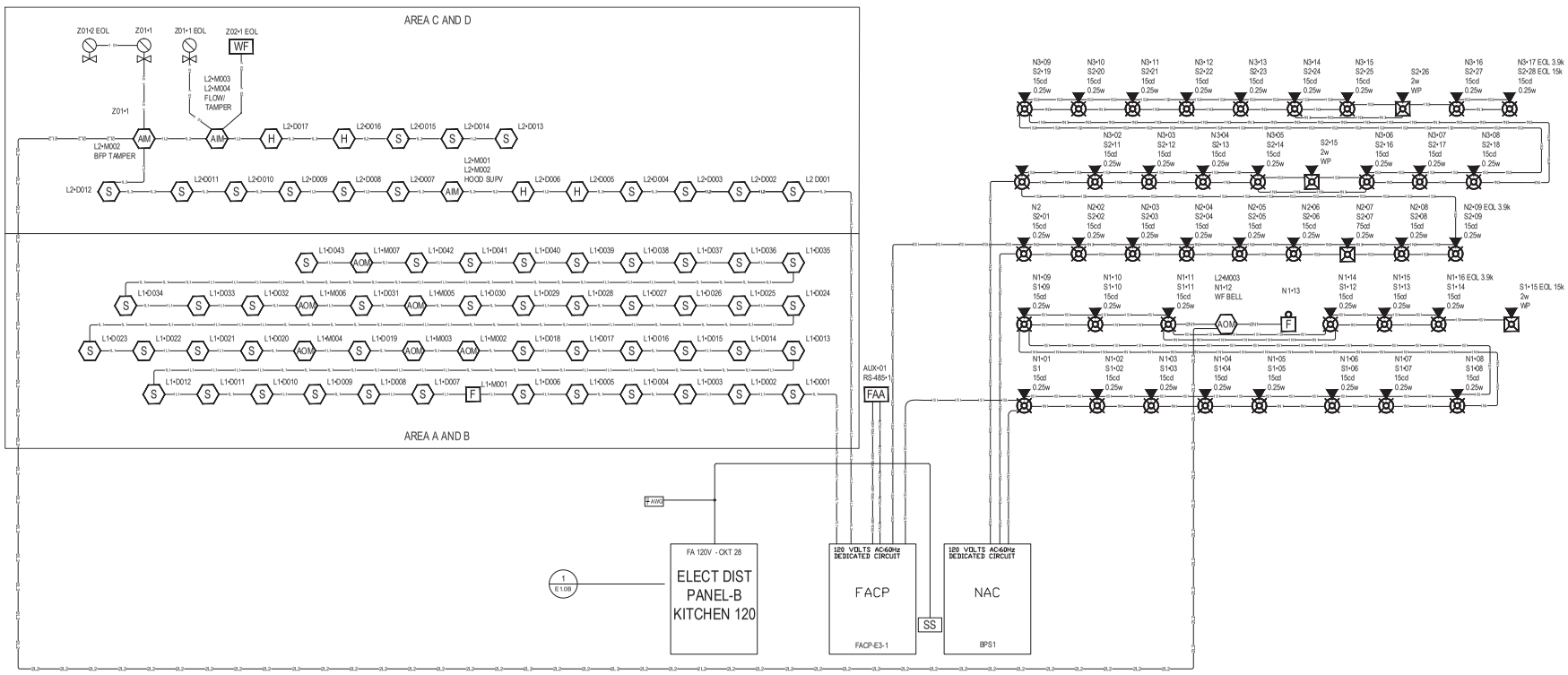
KEY PLAN

SHEET TITLE

FIRE ALARM INTERIOR SECTION VIEWS

SHEET NUMBER

FA602



1 FIRE ALARM RISER DIAGRAM
FA700 SCALE: PVC-CDC BLYTHE

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FIRE PROTECTION ENGINEERING
LIFE SAFETY | CODE CONSULTING
2699 DICKENS ST, UNIT C-01
SAN DIEGO, CA 92106 (858)490-9043

REGISTRATION STAMPS

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	VELTRE
CHECKED BY:	VELTRE
SCALE:	As indicated
SUBMITTAL:	7/06/22

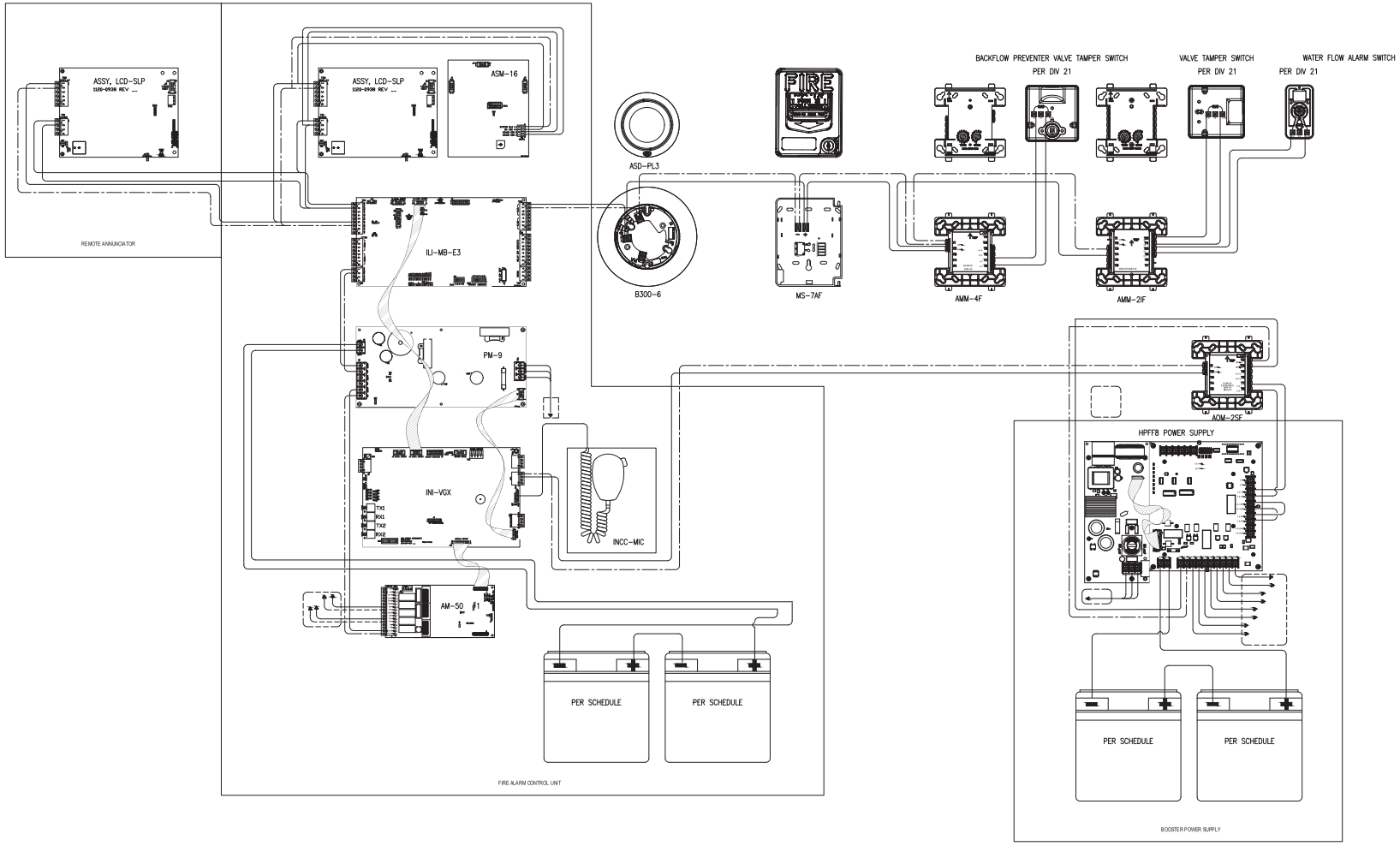
KEY PLAN

SHEET TITLE

FIRE ALARM RISER DIAGRAM

SHEET NUMBER

FA700



1 FIRE ALARM SCHEMATIC DIAGRAMS

FA701 SCALE: PVC-CDC BLYTHE

File Path:0:015272/2022V:\PROJECTS_EPI\21037 EPI PVC CDC BLYTHE\03 VEI SHEETS

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR:
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

PROJECT NAME

PALO VERDE COLLEGE CHILD DEVELOPMENT CENTER

BUILDER

DESIGN CONSULTANT

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FIRE ALARM SCHEMATIC DIAGRAMS

SHEET NUMBER

FA701

PANEL FACP-E31 (E3 SERIES CLASSIC) BATTERY CALCULATION

(SECONDARY POWER SOURCE REQUIREMENTS)

					STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)	
		QTY	PART NO.	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL
PANEL COMPONENTS		2	AM-50-25	AM-50, 25V VRMS audio output, 50 watt	0.049	**0.098**	2.3	**4.6**
		1	ASM-16	Addressable Switch Module	0.011	**0.011**	0.011	**0.011**
		1	DACT-E3	Dact Card	0.018	**0.018**	0.018	**0.018**
		1	ILI-MB-E3	Intelligent Loop Interface-Main Board	0.081	**0.081**	0.15	**0.15**
		1	INCC-MIC	Paging microphone module (occupies 1 slot on inner door)	0.001	**0.001**	0.001	**0.001**
		1	INI-VGX	Transponder Voice Gateway (UTP only)	0.15	**0.15**	0.15	**0.15**
		1	IP-DACT2 Main Board	Internet Digital Fire Alarm Communicator	0.136	**0.136**	0.136	**0.136**
		1	LCD-SLP MAIN BOARD	LCD Touchscreen Annunciator Display, Main Board	0.03	**0.03**	0.065	**0.065**
		1	PM-9	Power Supply Card	0.05	**0.05**	0.05	**0.05**
CIRCUIT	SYMBOL	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
FACP-E31•NODE1•AUX	FAA	1	LCD-SLP	LCD Touchscreen Display	0.03	**0.03**	0.065	**0.065**
FACP-E31•NODE1•L1	AOM	6	AOM-2RF	Addressable Relay Module W/ FlashScan, 2 Form-C Dry Contacts	0.0003	**0.0018**	0.0003	**0.0018**
	S	43	ASD-PL3 w/B300-6	Photoelectric smoke detector, bright white, Velocti w/ 6" Flanged mounting base, bright white	0.0002	**0.0086**	0.0045	**0.1935**
	F	1	MS-7AF	Veloci® addreasable double action station	0.0003	**0.0003**	0.007	**0.007**
FACP-E31•NODE1•L2	AIM	1	AIMM-2F	Addressable Mini Monitor Module	0.0003	**0.0003**	0.0003	**0.0003**
	AIM	2	AIMM-2IF	Addressable Dual Monitor Module W/ FlashScan, 2 Class B	0.0007	**0.0014**	0.0007	**0.0014**
	AOM	1	AOM-2SF	Addressable Control Module W/ FlashScan, 1 Class A or 1 Class B	0.0003	**0.0003**	0.0003	**0.0003**
	S	13	ASD-PL3 w/B300-6	Photoelectric smoke detector, bright white, Velocti w/ 6" Flanged mounting base, bright white	0.0002	**0.0026**	0.0045	**0.0585**
	H	2	ATD-L3 w/B300-6	Thermal heat detector, 135°F fixed, bright white, Velocti w/ 6" Flanged mounting base, bright white	0.0002	**0.0004**	0.0045	**0.009**
	H	2	ATD-L3R w/B300-6	Thermal heat detector, 135°F rate of rise, bright white, Velocti w/ 6" Flanged mounting base, bright white	0.0002	**0.0004**	0.0045	**0.009**
					TOTAL STANDBY (A)	**0.6211**	TOTAL ALARM (A)	**5.5268**

		REQUIRED STANDBY TIME = 24 HOURS	
		REQUIRED ALARM TIME = 15 MINUTES	
SECONDARY STANDBY LOAD (A)	**0.6211**	24	**14.91**
SECONDARY ALARM LOAD (A)	**5.5268**	0.25	**1.38**
STANDBY AND ALARM SUBTOTAL (AMP HOURS)		**16.29**	
DERATING FACTOR		1.2	
SECONDARY LOAD REQUIREMENTS (AMP HOURS)		**19.55**	

***26 AH BATTERIES INCLUDED IN EXTERNAL BATTERY CABINET.**

PANEL BPS1 (HPF24S8) BATTERY CALCULATION

(SECONDARY POWER SOURCE REQUIREMENTS)

PANEL POWER SUPPLY MAX CURRENT = 8A

TOTAL USED CAPACITY (IN ALARM) = 2.3425A (29.28 %)

					STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)	
PANEL COMPONENTS		QTY	PART NO.	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL
		1	HPFF8 Main Board	Main board	0.206	**0.206**	0.075	**0.075**
CIRCUIT	SYMBOL	QTY	PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
BPS1•N1	AOM	1	AOM-2SF	Addressable Control Module W/ FlashScan, 1 Class A or 1 Class B	0	**0**	0	**0**
	SPSCWL	12	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0	**0**	0.041	**0.492**
	SPSCWL	2	SPSCWL	Speaker/Strobe Ceiling Mount, White 75cd	0	**0**	0.111	**0.222**
	B	1	SSM24-8	Alarm Bell 8" 24VDC, red	0	**0**	0.0535	**0.0535**
BPS1•N2	SPSCWL	6	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0	**0**	0.041	**0.246**
	SPSCWL	2	SPSCWL	Speaker/Strobe Ceiling Mount, White 30cd	0	**0**	0.063	**0.126**
	SPSWL	1	SPSWL	Speaker/Strobe Wall Mount, White 75cd	0	**0**	0.107	**0.107**
BPS1•N3	SPSCWL	11	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0	**0**	0.041	**0.451**
	SPSCWL	2	SPSCWL	Speaker/Strobe Ceiling Mount, White 30cd	0	**0**	0.063	**0.126**
	SPSCWL	4	SPSCWL	Speaker/Strobe Ceiling Mount, White 75cd	0	**0**	0.111	**0.444**
					TOTAL STANDBY (A)	**0.206**	TOTAL ALARM (A)	**2.3425**

		REQUIRED STANDBY TIME = 24 HOURS	
		REQUIRED ALARM TIME = 15 MINUTES	
SECONDARY STANDBY LOAD (A)	**0.206**	24	**4.94**
SECONDARY ALARM LOAD (A)	**2.3425**	0.25	**0.59**
STANDBY AND ALARM SUBTOTAL (AMP HOURS)		**5.53**	
DERATING FACTOR		1.2	
SECONDARY LOAD REQUIREMENTS (AMP HOURS)		**6.64**	

PROVIDE (2) 12V 7AH BATTERIES

*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.

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KEY PLAN

SHEET TITLE

FIRE ALARM LOAD CALCULATIONS

SHEET NUMBER

FA801

File Path:0:\15277\22\2022\!PROJECTS_EPI\21037 EPI PVC CDC BLYTHE\03 VE\SHEETS

FACP-E31 S1 SPEAKER SCHEDULE

Circuit Wiring Properties: 'S' 16/2 FPLP/R (SPEAKER) 16 AWG, 2 Cond. Solid Copper FPLP/R Analog Speaker
Distance measured using drawn segment lengths with 10.00 % additional length calculated

CIRCUIT SETTINGS	
Starting Calculation Voltage:	25
Min. Operational Voltage:	20
Max. Circuit Watts:	50
Wire Resistance (Ω/kFt):	4.89
Total Circuit Length (Ft):	374
Total Circuit Resistance (Ω):	3.654876 Ω

TOTALS	
Max. dB Loss:	-0.195355
End Of Line Voltage:	24.44
Voltage Drop Percent:	2.22 %
Total Circuit Watts:	6
Spare Watts:	44 W
Spare Watts Percent:	88.00 %

Device Label	Part No.	Description	Device Watts	Watts To Amps Conversion	Remaining Watts	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent	dB Loss From Previous	Total dB Loss
S1•01	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	6	14	0.13815	0.03	24.97	0.03	0.13 %	-0.011527	-0.011527
S1•02	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	5.75	3	0.034073	0.01	24.96	0.04	0.16 %	-0.002727	-0.014254
S1•03	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	5.5	10	0.102261	0.02	24.94	0.06	0.25 %	-0.007833	-0.022087
S1•04	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	5.25	13	0.122658	0.03	24.91	0.09	0.36 %	-0.008977	-0.031063
S1•05	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	5	12	0.120421	0.02	24.89	0.11	0.45 %	-0.008402	-0.039465
S1•06	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	4.75	37	0.357546	0.07	24.82	0.18	0.73 %	-0.023743	-0.063208
S1•07	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	4.5	15	0.146289	0.03	24.79	0.21	0.83 %	-0.00922	-0.072428
S1•08	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	4.25	12	0.119711	0.02	24.77	0.23	0.91 %	-0.007133	-0.079561
S1•09	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	4	86	0.844087	0.14	24.64	0.36	1.45 %	-0.047484	-0.127045
S1•10	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.5w	0.5	0.02	3.75	32	0.311262	0.05	24.59	0.41	1.64 %	-0.016476	-0.143521
S1•11	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.5w	0.5	0.02	3.25	25	0.240823	0.03	24.56	0.44	1.76 %	-0.011065	-0.154586
S1•12	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	2.75	66	0.649302	0.07	24.49	0.51	2.05 %	-0.025297	-0.179884
S1•13	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	2.5	25	0.242685	0.02	24.46	0.54	2.15 %	-0.008613	-0.188496
S1•14	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	2.25	13	0.126189	0.01	24.45	0.55	2.19 %	-0.004033	-0.192529
S1•15 EOL 15k	SPWK	Speaker Outdoor, White 1/4 to 2 Watt Tap 2w	2	0.08	2	10	0.099419	0.01	24.44	0.56	2.22 %	-0.002826	-0.195355

Calculation Methods:
Watts To Amps Conversion = Device Watts / Voltage
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)
dB Loss From Previous = 20 × Log (Voltage At Previous Device / Voltage At Device)
Max. dB Loss = 20 × Log (Voltage At Last Device / Start Voltage)

FACP-E31 S2 SPEAKER SCHEDULE

Circuit Wiring Properties: 'S' 16/2 FPLP/R (SPEAKER) 16 AWG, 2 Cond. Solid Copper FPLP/R Analog Speaker
Distance measured using drawn segment lengths with 10.00 % additional length calculated

CIRCUIT SETTINGS	
Starting Calculation Voltage:	25
Min. Operational Voltage:	20
Max. Circuit Watts:	50
Wire Resistance (Ω/kFt):	4.89
Total Circuit Length (Ft):	731
Total Circuit Resistance (Ω):	7.148194 Ω

TOTALS	
Max. dB Loss:	-0.675699
End Of Line Voltage:	23.13
Voltage Drop Percent:	7.48 %
Total Circuit Watts:	12
Spare Watts:	38 W
Spare Watts Percent:	76.00 %

Device Label	Part No.	Description	Device Watts	Watts To Amps Conversion	Remaining Watts	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent	dB Loss From Previous	Total dB Loss
S2•01	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	12	6	0.061574	0.03	24.97	0.03	0.12 %	-0.010275	-0.010275
S2•02	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	11.75	14	0.135742	0.06	24.91	0.09	0.37 %	-0.022221	-0.032496
S2•03	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	11.5	38	0.368995	0.17	24.74	0.26	1.05 %	-0.059397	-0.091892
S2•04	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	11.25	7	0.069589	0.03	24.71	0.29	1.18 %	-0.011003	-0.102895
S2•05	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	11	17	0.16552	0.07	24.63	0.37	1.47 %	-0.025643	-0.128538
S2•06	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	10.75	17	0.161889	0.07	24.56	0.44	1.75 %	-0.024581	-0.153119
S2•07	SPSWL	Speaker/Strobe Wall Mount, White 0.25w	0.25	0.01	10.5	20	0.20023	0.08	24.48	0.52	2.08 %	-0.029789	-0.182908
S2•08	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.5w	0.5	0.02	10.25	38	0.371439	0.15	24.33	0.67	2.69 %	-0.054206	-0.237113
S2•09	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.5w	0.5	0.02	9.75	24	0.23413	0.09	24.24	0.76	3.06 %	-0.032664	-0.269777
S2•10	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	9.25	53	0.515393	0.19	24.04	0.96	3.82 %	-0.068615	-0.338392
S2•11	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	9	7	0.07093	0.03	24.02	0.98	3.92 %	-0.009229	-0.347621
S2•12	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	8.75	10	0.09976	0.03	23.98	1.02	4.06 %	-0.012636	-0.360257
S2•13	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	8.5	13	0.126835	0.04	23.94	1.06	4.24 %	-0.015631	-0.375888
S2•14	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	8.25	4	0.03463	0.01	23.93	1.07	4.28 %	-0.004147	-0.380035
S2•15	SPWK	Speaker Outdoor, White 1/4 to 2 Watt Tap 2w	2	0.08	8	57	0.55926	0.18	23.75	1.25	5.00 %	-0.065203	-0.445238
S2•16	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	6	61	0.592329	0.14	23.61	1.39	5.57 %	-0.052145	-0.497383
S2•17	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.5w	0.5	0.02	5.75	25	0.249082	0.06	23.55	1.45	5.79 %	-0.021103	-0.518486
S2•18	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.5w	0.5	0.02	5.25	16	0.155203	0.03	23.52	1.48	5.92 %	-0.012029	-0.530515
S2•19	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.5w	0.5	0.02	4.75	83	0.807356	0.15	23.37	1.63	6.54 %	-0.056838	-0.587353
S2•20	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.5w	0.5	0.02	4.25	21	0.208526	0.04	23.33	1.67	6.68 %	-0.013188	-0.600541
S2•21	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	3.75	92	0.898209	0.13	23.2	1.8	7.22 %	-0.050307	-0.650848
S2•22	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	3.5	7	0.065166	0.01	23.19	1.81	7.26 %	-0.003417	-0.654265
S2•23	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	3.25	7	0.06797	0.01	23.18	1.82	7.29 %	-0.003311	-0.657576
S2•24	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	3	5	0.053335	0.01	23.17	1.83	7.32 %	-0.002399	-0.659974
S2•25	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	2.75	4	0.034756	0	23.17	1.83	7.33 %	-0.001433	-0.661408
S2•26.1	SPWK	Speaker Outdoor, White 1/4 to 2 Watt Tap 2w	2	0.08	2.5	30	0.288957	0.03	23.14	1.86	7.45 %	-0.010841	-0.672248
S2•27	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	0.5	38	0.36766	0.01	23.13	1.87	7.48 %	-0.002761	-0.675009
S2•28 EOL 15k	SPSCWL	Speaker/Strobe Ceiling Mount, White 0.25w	0.25	0.01	0.25	19	0.183729	0	23.13	1.87	7.48 %	-0.00069	-0.675699

Calculation Methods:
Watts To Amps Conversion = Device Watts / Voltage
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)
dB Loss From Previous = 20 × Log (Voltage At Previous Device / Voltage At Device)
Max. dB Loss = 20 × Log (Voltage At Last Device / Start Voltage)

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REGISTRATION STAMPS

REGISTERED PROFESSIONAL ENGINEER
JOHN VELTRE
No. 1508
Exp. 6/30/23
FIRE PROTECTION
STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.	
DRAWN BY:	VELTRE
CHECKED BY:	VELTRE
SCALE:	As indicated
SUBMITTAL:	7/06/22

KEY PLAN

SHEET TITLE

FIRE ALARM SPEAKER SCHEDULES

SHEET NUMBER

FA802

File Path:0.01527/22/2022V:\PROJECTS_EPI\21037 EPI PVC CDC BLYTHE\03 VEI SHEETS

BPS1 N1 POINT-TO-POINT REPORT

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Distance measured using drawn segment lengths with 10.00 % additional length calculated

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	20.4	Max. Voltage Drop:	0.92
Min. Operational Voltage:	16	End Of Line Voltage:	19.48
Max. Circuit Current (A):	3	Voltage Drop Percent:	4.49 %
Wire Resistance (Ω/Kft):	3.07	Total Circuit Current (A):	0.7675
Total Circuit Length (Ft):	415	Spare Current (A):	2.2325
Total Circuit Resistance (Ω):	2.545631	Spare Current (A) Percent:	74.42 %

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
N1•01	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.7675	17	0.101436	0.08	20.32	0.08	0.38 %
N1•02	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.7265	3	0.021392	0.02	20.31	0.09	0.46 %
N1•03	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.6855	10	0.0642	0.04	20.26	0.14	0.67 %
N1•04	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.6445	13	0.077006	0.05	20.21	0.19	0.92 %
N1•05	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.6035	12	0.075602	0.05	20.17	0.23	1.14 %
N1•06	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.5625	37	0.224472	0.13	20.04	0.36	1.76 %
N1•07	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.5215	15	0.091842	0.05	19.99	0.41	1.99 %
N1•08	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.4805	12	0.075156	0.04	19.96	0.44	2.17 %
N1•09	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.4395	86	0.529928	0.23	19.72	0.68	3.31 %
N1•10	SPSCWL	Speaker/Strobe Ceiling Mount, White 75cd	0.111	0.3985	32	0.195414	0.08	19.65	0.75	3.69 %
N1•11	SPSCWL	Speaker/Strobe Ceiling Mount, White 75cd	0.111	0.2875	25	0.151191	0.04	19.6	0.8	3.91 %
N1•12	AOM-2SF	Addressable Control Module W/ FlashScan, 1 Class A or 1 Class B	0	0.1765	45	0.275799	0.05	19.55	0.85	4.15 %
BPS1•N1•13	SSM24-8	Alarm Bell 8" 24VDC, red	0.0535	0.1765	4	0.024777	0	19.55	0.85	4.17 %
N1•14	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.123	66	0.405833	0.05	19.5	0.9	4.41 %
N1•15	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.082	25	0.15236	0.01	19.49	0.91	4.47 %
N1•16 EOL 3.9k	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.041	13	0.079223	0	19.48	0.92	4.49 %

Calculation Methods:

Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)

Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

BPS1 N2 POINT-TO-POINT REPORT

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Distance measured using drawn segment lengths with 10.00 % additional length calculated

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	20.4	Max. Voltage Drop:	0.3
Min. Operational Voltage:	16	End Of Line Voltage:	20.1
Max. Circuit Current (A):	3	Voltage Drop Percent:	1.47 %
Wire Resistance (Ω/Kft):	3.07	Total Circuit Current (A):	0.479
Total Circuit Length (Ft):	183	Spare Current (A):	2.521
Total Circuit Resistance (Ω):	1.125372	Spare Current (A) Percent:	84.03 %

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
N2•01	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.479	9	0.053361	0.03	20.37	0.03	0.13 %
N2•02	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.438	14	0.08522	0.04	20.34	0.06	0.31 %
N2•03	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.397	38	0.231659	0.09	20.25	0.15	0.76 %
N2•04	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.356	7	0.043689	0.02	20.23	0.17	0.84 %
N2•05	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.315	17	0.103916	0.03	20.2	0.2	1.00 %
N2•06	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.274	17	0.101636	0.03	20.17	0.23	1.13 %
N2•07	SPSWL	Speaker/Strobe Wall Mount, White 75cd	0.107	0.233	20	0.125707	0.03	20.14	0.26	1.28 %
N2•08	SPSCWL	Speaker/Strobe Ceiling Mount, White 30cd	0.063	0.126	38	0.233194	0.03	20.11	0.29	1.42 %
N2•09 EOL 3.9k	SPSCWL	Speaker/Strobe Ceiling Mount, White 30cd	0.063	0.063	24	0.14699	0.01	20.1	0.3	1.47 %

Calculation Methods:

Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)

Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

BPS1 N3 POINT-TO-POINT REPORT

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Distance measured using drawn segment lengths with 10.00 % additional length calculated

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	20.4	Max. Voltage Drop:	1.85
Min. Operational Voltage:	16	End Of Line Voltage:	18.55
Max. Circuit Current (A):	3	Voltage Drop Percent:	9.05 %
Wire Resistance (Ω/Kft):	3.07	Total Circuit Current (A):	1.021
Total Circuit Length (Ft):	517	Spare Current (A):	1.979
Total Circuit Resistance (Ω):	3.176668	Spare Current (A) Percent:	65.97 %

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
N3•01	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	1.021	80	0.493388	0.5	19.9	0.5	2.47 %
N3•02	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.98	7	0.04453	0.04	19.85	0.55	2.68 %
N3•03	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.939	10	0.062631	0.06	19.79	0.61	2.97 %
N3•04	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.898	13	0.079628	0.07	19.72	0.68	3.32 %
N3•05	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.857	4	0.021741	0.02	19.7	0.7	3.41 %
N3•06	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.816	71	0.437821	0.36	19.35	1.05	5.16 %
N3•07	SPSCWL	Speaker/Strobe Ceiling Mount, White 75cd	0.111	0.775	25	0.156377	0.12	19.23	1.17	5.76 %
N3•08	SPSCWL	Speaker/Strobe Ceiling Mount, White 75cd	0.111	0.664	16	0.097438	0.06	19.16	1.24	6.08 %
N3•09	SPSCWL	Speaker/Strobe Ceiling Mount, White 75cd	0.111	0.553	83	0.506867	0.28	18.88	1.52	7.45 %
N3•10	SPSCWL	Speaker/Strobe Ceiling Mount, White 75cd	0.111	0.442	21	0.130915	0.06	18.82	1.58	7.73 %
N3•11	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.331	92	0.563906	0.19	18.64	1.76	8.65 %
N3•12	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.29	7	0.040912	0.01	18.62	1.78	8.71 %
N3•13	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.249	7	0.042672	0.01	18.61	1.79	8.76 %
N3•14	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.208	5	0.033484	0.01	18.61	1.79	8.79 %
N3•15	SPSCWL	Speaker/Strobe Ceiling Mount, White 15cd	0.041	0.167	4	0.021821	0	18.6	1.8	8.81 %
N3•16	SPSCWL	Speaker/Strobe Ceiling Mount, White 30cd	0.063	0.126	53	0.327189	0.04	18.56	1.84	9.01 %
N3•17 EOL 3.9k	SPSCWL	Speaker/Strobe Ceiling Mount, White 30cd	0.063	0.063	19	0.115348	0.01	18.55	1.85	9.05 %

Calculation Methods:

Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)

Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

File Path:0:\15277\22\2022\/PROJECTS_EPI\21037 EPI PVC CDC BLYTHE\03 VE\SHEETS

CLIENT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR:
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

PROJECT NAME

PALO VERDE COLLEGE CHILD DEVELOPMENT CENTER

BUILDER

DESIGN CONSULTANT

SILLMAN
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DESIGN CONSULTANT

VE
VELTRE ENGINEERING, INC.
FIRE PROTECTION ENGINEERING
LIFE SAFETY | CODE CONSULTING
2699 OVERLAND ST, UNIT C-01
SAN DIEGO, CA 92106 (858)490-9043

REGISTRATION STAMPS

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	VELTRE
CHECKED BY:	VELTRE
SCALE:	As indicated
SUBMITTAL:	7/06/22

KEY PLAN

SHEET TITLE

FIRE ALARM POINT SCHEDULES

SHEET NUMBER

FA803

GENERAL NOTES

1. THESE PLANS ARE A GENERAL ARRANGEMENT OF EQUIPMENT FOR THE CONVENIENCE OF CONTRACTORS AND IS MADE FROM AVAILABLE INFORMATION. WEBB FOODSERVICE DESIGN ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE MEASUREMENTS. FABRICATORS, CONTRACTORS, AND OTHERS UTILIZING THESE PLANS IN CONNECTION WITH THIS JOB ARE RESPONSIBLE FOR SECURING THEIR OWN MEASUREMENTS FOR PREPARATION OF SUBMITTALS AND CONSTRUCTION. PLUMBING AND ELECTRICAL INFORMATION INDICATED ON THESE PLANS ARE GENERALLY FOR FOOD SERVICE EQUIPMENT AND ARE INTENDED AS REFERENCE ONLY. WEBB FOODSERVICE DESIGN IS NOT RESPONSIBLE FOR THE ENGINEERING THEREOF OR FOR ANY PLUMBING OR ELECTRICAL FITTINGS, WORK, AND/OR CONNECTIONS UNLESS SPECIFICALLY PROVIDED FOR IN THE SPECIFICATIONS. WEBB FOODSERVICE DESIGN ASSUMES NO RESPONSIBILITY FOR THE WORK DONE BY THE CONTRACTORS NOR FOR ANY CHANGES MADE NECESSARY BY THE LOCAL BUILDING CODES, ORDINANCES, STRUCTURAL CONDITIONS, OR BY THE SUBSTITUTION OR CHANGES MADE NECESSARY IN EQUIPMENT SHOWN ON THIS PLAN. THE PLANS AND DESIGNS CONTAINED HEREIN ARE THE PROPERTY OF WEBB FOODSERVICE DESIGN AND MAY NOT BE REPRODUCED OR USED BY ANYONE, EITHER ALL OR IN PART, WITHOUT FIRST SECURING THE WRITTEN PERMISSION OF WEBB FOODSERVICE DESIGN.
2. CONTRACTORS ARE TO MAKE ALLOWANCE FOR ELBOWS, TRAPS, ETC. AND ARE TO MAKE FINAL CONNECTIONS ON THE JOB, SUPPLYING ALL NECESSARY VALVES, TRAPS, STEAM TRAPS, FAUCETS, STARTING SWITCHES FOR MOTORS, ETC. EXCEPT WHERE SPECIFICALLY NOTED OTHERWISE IN THE WRITTEN SPECIFICATIONS.
3. ANY DISCREPANCIES BETWEEN PLANS, BUILDING, AND LOCAL CODE REQUIREMENTS THAT MAY AFFECT THE INSTALLATION, FABRICATION, OR OVERALL WORK IN ANY WAY SHALL BE BROUGHT TO THE ATTENTION OF THE FOOD SERVICE EQUIPMENT CONTRACTOR IMMEDIATELY.
4. IT SHALL BE THE RESPONSIBILITY OF THE OWNER, ARCHITECT, ENGINEERS, AND/OR GENERAL CONTRACTOR TO INSURE THAT THE FOOD SERVICE EQUIPMENT CONTRACTOR RECEIVES COPIES OF ALL ADDENDUMS AND CHANGES TO THE BUILDING PLANS, PRIOR TO, OR DURING CONSTRUCTION WHEREAS, ADDENDUMS AND/OR CHANGES AFFECT ANY AREAS PERTINENT TO THE FOOD AND BEVERAGE PORTION OF THE PROJECT.
5. IF THERE ARE ANY AMBIGUITIES, DISCREPANCIES, OR IRREGULARITIES, VERIFY WITH ARCHITECTURAL TEAM PRIOR TO COMMENCING WORK.
6. ALL WORK IS TO BE COMPLETED IN CRAFTSMAN LIKE MANNER AND CONFORM TO ALL APPLICABLE BUILDING AND SAFETY CODES.
7. REFER TO ARCHITECTURAL PLANS FOR ADA CLEARANCE REQUIREMENTS FOR ALL SPACES, DOOR STRIKES, EXITS, AND AISLE WAYS AS THEY PERTAIN TO CODE ENFORCEMENT AND INTERPRETATION.
8. CONTRACTORS SHALL SUBMIT ALL SHOP DRAWINGS, FINISHES, STAINS, AND COLORS TO THE ARCHITECTURAL TEAM FOR APPROVAL PRIOR TO FABRICATION.
9. SEE ENGINEERING DOCUMENTS FOR TITLE 24 ENGINEERING CALCULATIONS FOR BUILDING PERMIT REQUIREMENTS.
10. CONTRACTOR TO VERIFY ALL EQUIPMENT CLEARANCES THRU BUILDING DOORS, HALLWAYS, OR ENTRY POINTS. NOT ALL EQUIPMENT WILL FIT THRU STANDARD DOOR OPENINGS.
11. ALL DRAWINGS BY WEBB FOODSERVICE DESIGN ARE FOOD SERVICE EQUIPMENT CONTRACT DOCUMENTS ONLY TO BE USED BY CONSULTANTS/ARCHITECTS AND FOR BIDDING, NOT FOR CONSTRUCTION.
12. VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE PRIOR TO PROCEEDING WITH WORK.
13. PARTITIONS ARE DIMENSIONED FROM FINISHED SURFACE, UNLESS OTHERWISE NOTED.
14. ALL HORIZONTAL DIMENSIONS ARE FROM FINISHED FACE OF WALL TO FINISHED FACE OF WALL OR CENTERLINE OF COLUMN.
15. ALL VERTICAL DIMENSIONS ARE FROM FINISHED FLOOR TO WALL OR WALL OPENING.
16. PROVIDE SMOOTH AND LEVEL FLOORS BELOW ALL KITCHEN EQUIPMENT UNLESS THESE DRAWINGS SHOW OTHERWISE.
17. GENERAL CONTRACTOR TO PROVIDE AND INSTALL BLOCKING IN WALLS FOR MOUNTING WALL SHELVES, POT RACKS, DISPLAY CASES, HOSE REELS, ETC., AS SHOWN ON PLANS.
18. SEE STRUCTURAL ENGINEER AND/OR ARCHITECTURAL PLANS FOR STRUCTURAL SUPPORT REQUIREMENTS OF ROOF SUPPORTING ALL FOOD SERVICE EQUIPMENT SUCH AS EXHAUST AND MAKE-UP AIR SYSTEMS, AIR CONDITIONING, ETC., PRIOR TO BEGINNING CONSTRUCTION.
19. ARCHITECT AND/OR MECHANICAL ENGINEER TO PROVIDE ADEQUATE VENTILATION AND COOLING FOR SPACES CONTAINING SELF-CONTAINED REFRIGERATION AND OTHER FOOD SERVICE EQUIPMENT EMITTING HEAT.
20. FOOD SERVICE FACILITIES REQUIRE A DESIGNATED HOT WATER SUPPLY FOR FOODHANDLING AREAS, WAREWASHING AREAS, JANITOR SINKS AND EMPLOYEE RESTROOMS. REFER TO MECHANICAL AND/OR PLUMBING DRAWINGS.
21. HOT WATER SUPPLY TO POT AND PREPARATION SINKS SHALL BE 120 DEGREES MINIMUM. HOT WATER SUPPLY TO ALL DISH MACHINES SHALL BE 120 DEGREES MINIMUM.
22. ALL MATERIALS FOR FLOORS, WALLS, AND CEILINGS SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
23. COUNTERS ARE TO BE FABRICATED PROPERLY TO SUPPORT THE SPECIFIED COUNTER TOP MATERIAL IN ACCORDANCE WITH THE MATERIAL MANUFACTURER'S GUIDELINES.
24. ALL "DROP-IN" EQUIPMENT AND OTHER EQUIPMENT "ATTACHED TO", "SET ON", OR "BUILT-IN" TO THE COUNTERTOP MATERIAL IS TO BE INSTALLED IN ACCORDANCE WITH THE MATERIAL MANUFACTURER'S GUIDELINES AND TECHNICAL BULLETINS FOR THE INSTALLATION OF COMMERCIAL FOOD SERVICE EQUIPMENT.

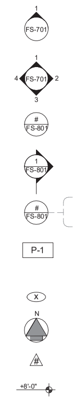
ENVIRONMENTAL NOTES

1. ALL FOOD-RELATED AND UTENSIL RELATED EQUIPMENT SHALL BEAR THE ANSI/NSF EMBLEM AND/OR BE MANUFACTURED OR FABRICATED IN ACCORDANCE WITH APPROPRIATE ANSI/NSF STANDARD. SPECIFICALLY STANDARD 2 AND FOR ALL REFRIGERATED EQUIPMENT STANDARD 7.
2. FLOORS IN FOOD PREPARATION, FOOD STORAGE, WAREWASHING, JANITORIAL, HANDWASHING AND TOILET AREAS SHALL BE SMOOTH AND IMPERVIOUS TO WATER, GREASE, AND ACID AND OF EASILY CLEANABLE CONSTRUCTION WITH 6" CONTINUOUS SELF-COVED BASE WITH 3/8" RADIUS. WHERE EQUIPMENT IS INSTALLED ON A CURB, SELF-COVED BASE IS TO EXTEND 4".
3. AT EXTERIOR TRASH HOLDING AREAS, A CONCRETE SLAB MUST BE PROVIDED FOR TRASH , GARBAGE AND GREASE CONTAINERS. IF WALLS ENCLOSE THE AREA, THE INTERIOR WALL SURFACES ARE TO BE SMOOTH, SEALED AND WASHABLE (E.G. PLASTERED SMOOTH AND PAINTED, ETC.)
4. ALL FLOOR MOUNTED EQUIPMENT WILL BE INSTALLED ON MINIMUM 6" SANITARY LEGS, CASTERS OR COMPLETELY SEALED IN POSITION ON A 4" HIGH CURB WITH CONTINUOUSLY COVED BASE. COUNTER TOP EQUIPMENT SHALL BE MOUNTED ON 4" SANITARY LEGS OR SEALED TO THE COUNTER UNLESS READILY MOVEABLE.
5. ALL REFRIGERATION EQUIPMENT SHALL HAVE A THERMOMETER WHICH IS EASILY READABLE AND IN PROPER WORKING CONDITION.
6. WALLS IN FOOD PREPARATION AREAS AND DISHWASHING AREAS SHALL BE SMOOTH AND NON-ABSORBENT WITH A LIGHT COLORED, EASILY CLEANABLE FINISH. ALL PAINTED SURFACES SHALL BE SEALED WITH A GLOSS OR SEMI-GLOSS ENAMEL.
7. CEILINGS IN KITCHEN PREPARATION AREAS SHALL BE SMOOTH AND NON-ABSORBENT WITH A LIGHT COLORED, EASILY CLEANABLE FINISH. ALL PAINTED SURFACES SHALL BE SEALED WITH A GLOSS OR SEMI-GLOSS FINISH.
8. LAVATORY (HANDWASHING) SINKS SHALL BE PROVIDED IN THE FOOD PREPARATION, FOOD SERVING AND WAREWASHING AREAS. SOAP AND SANITARY TOWELS SHALL BE PROVIDED IN SINGLE SERVICE, PERMANENTLY INSTALLED DISPENSERS AT THE LAVATORY SINKS. ALL HANDWASHING SINKS SHALL HAVE A COMBINATION FAUCET OR PREMIXING FAUCET. PRE-MIXING FAUCETS MUST BE CAPABLE OF SUPPLYING WATER TEMPERED TO 100 F TO 108 F AND BE SELF CLOSING OR METERED TO PROVIDE TO PROVIDE AT LEAST 15 SECOND OF WATER WITHOUT REACTIVATION.
9. TOILET FACILITIES SHALL BE PROVIDED WITHIN EACH FOOD ESTABLISHMENT CONVENIENT FOR THE EMPLOYEES.
10. ALL TOILET ROOMS, JANITOR CLOSETS WITH JANITOR SINKS, INDOOR TRASH ROOMS AND DRESSING/CHANGE ROOMS SHALL BE PROVIDED WITH MECHANICAL VENTILATION, LIGHTS AND SWITCHES CONSISTENT WITH MECHANICAL CODE REQUIREMENTS.
11. ALL DELIVERY DOORS LEADING TO THE OUTSIDE SHALL OPEN OUTWARD, BE SELF-CLOSING, AND SHALL BE PROVIDED WITH AN OVERHEAD AIR CURTAIN. AIR CURTAIN SHALL BE TYPE NH2 NSF CERTIFIED RECEIVING DOOR MODELS.
12. ALL EXTERIOR DOORS SHALL OPEN OUTWARD AND BE SELF-CLOSING AND TIGHT-FITTING. BI-FOLD, FRENCH, ACCORDIAON STYLE AND ROLL-UP DOORS CANNOT OPEN INTO FOOD PREPARATION, UNPACKAGED FOOD SERVICE OR WAREWASHING AREA.
13. TOILET ROOM DOORS ARE TO BE SELF-CLOSING AND TIGHT-FITTING.
14. ALL PLUMBING, ELECTRICAL AND GAS LINES SHALL BE CONCEALED WITHIN THE BUILDING STRUCTURE TO AS GREAT AN EXTENT AS POSSIBLE. ALL EXPOSED CONDUIT, PLUBMING LINES, ETC. SHALL BE INSTALLED A MINIMUM OF 6" ABOVE THE FLOOR AND ¾" FROM THE WALLS USING EASILY CLEANABLE STANDOFF BRACKETS.
15. UTENSIL SINKS TO HAVE 3 COMPARTMENTS THAT ARE A MINIMUM SIZE OF 18" X 18" X 12" DEEP WITH A MINIMUM 18" DRAINBOARD AT EACH END AND 10" BACKSPLASH. IF THE END IS AGAINST A WALL, THE END MUST HAVE A 10" INTEGRAL SPLASH TO MATCH BACKSPLASH. THE SINK TUB MUST BE CAPABLE OF ACCOMMODATING THE LARGEST UTENSIL TO BE WASHED AND THE DRAINBOARD MUST BE EQUAL OR GREATER IN LENGTH THAN THE SINK TUB.
16. PREP SINK COMPARTMENTS MUST BE AT LEAST 18" X 18" X 12" DEEP WITH A MINIMUM DRAINBOARD OF 18".
17. FAUCETS SHALL HAVE SPOUTS CAPABLE OF REACHING EACH SINK COMPARTMENT.
18. APPROVED BACKFLOW PREVENTION DEVICES SHALL BE PROPERLY INSTALLED UPSTREAM OF ANY POTENTIAL HAZARD BETWEEN THE POTABLE WATER SUPPLY AND A SOURCE OF CONTAMINATION. HOSES SHALL NOT BE ATTACHED TO A FAUCET OR HOSE BIBB UNLESS AN APPROVED BACKFLOW PREVENTER IS SUPPLIED.
19. IN EVERY ROOM AND AREA IN WHICH ANY FOOD IS PREPARED, MANUFACTUERED, PROCESSED, OR PREPACKAGED OR IN WHICH EQUIPMENT OR UTENSILS ARE CLEANED, SUFFICIENT NATURAL OR ARTIFICIAL LIGHTING SHALL BE PROVIDED TO PRODUCE LIGHT INTENSITY, WHILE THE AREA IS IN USE:
   A) AT LEAST 10-FOOT CANDLES FOR THE FOLLOWING:
      1) AT A DISTANCE OF 30 INCHES ABOVE THE FLOOR, IN WALK-IN REFRIGERATION UNITS AND DRY FOOD STORAGE UNITS.
      2) AT A WORKING SURFACE ON WHICH ALCOHOLIC BEVERAGES ARE PREPARED OR WHERE UTENSILS USED IN THE PREPARATION OR SERVICE OF ALCOHOLIC BEVERAGES ARE CLEANED.
      3) INSIDE EQUIPMENT SUCH AS REACH-IN OR UNDER THE COUNTER REFRIGERATORS.
   B) AT LEAST 20-FOOT CANDLES FOR THE FOLLOWING:
      1) AT A SURFACE WHERE FOOD IS PROVIDED FOR CONSUMER SELF-SERVICE OR WHERE FRESH PRODUCE OR PREPACKAGED FOODS ARE SOLD OR OFFERED FOR CONSUMPTION.
      2) IN SERVER STATIONS WHERE FOOD IS PREPARED.
      3) AT A DISTANCE OF 30 INCHES ABOVE THE FLOOR IN AREAS USED FOR HANDWASHING, WAREWASHING, EQUIPMENT AND UTENSIL STORAGE AND IN TOILET ROOMS.
      4) IN ALL AREAS AND ROOMS DURING PERIODS OF CLEANING.
   C) AT LEAST 50-FOOT CANDLES AT A SURFACE WHERE A FOOD EMPLOYEE IS WORKING WITH FOOD OR WORKING WITH UTENSILS OR EQUIPMENT SUCH AS KNIVES, SLICERS, GRINDERS OR SAWS WHERE EMPLOYEE SAFETY IS A FACTOR.
   D) LIGHT FIXTURES SHALL BE OF SHATTERPROOF CONSTRUCTION OR SHALL BE PROTECTED WITH SHATTERPROOF SHEILDS AND SHALL BE READILY CLEANABLE

ABBREVIATIONS

"T"	TEE
(N)	NEW
*	SEE REMARKS COLUMN
A	AMPS
A.F.F.	ABOVE FINISH FLOOR
A.G.A.	AMERICAN GAS ASSOCIATION
AL	ALUMINUM
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT
BLDG	BUILDING
BTU	BRITISH THERMAL UNIT
C	CONVENIENCE OUTLET
C.M.U.	CONCRETE MASONRY UNITS
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CLG.	CEILING
CLR	CLEAR
CO	CONVENIENCE OUTLET
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CW	COLD WATER
D	DIRECT CONNECTION
DCO	DUPLEX CONVENIENCE OUTLET
DET	DETAIL
DFA	DOWN FROM ABOVE
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DW	DIRECT WASTE
DWG	DRAWINGS
EA.	EACH
EH	EXHAUST
ELEC	ELECTRICAL
F	FREEZER
FD	FLOOR DRAIN
FIN	FINISH
FLR	FLOOR
FS	FLOOR SINK
FSEC	FOOD SERVICE EQUIPMENT CONTRACTOR
FT	FOOT
GA	GAUGE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GL	GLASS
GPH	GALLONS PER HOURS
GYP. BD.	GYPSUM BOARD
HP	HORSEPOWER
HR	HOUR
HTR	HEATER
HW	HOT WATER
I.D.	INSIDE DIAMETER
IN	INCH
INS	INSIDE INSULATION
INT	INTERIOR
IW	INDIRECT WASTE
JAN	JANITOR
KIT	KITCHEN
KW	KILOWATT
L	LENGTH
LOT	LOT
MAX	MAXIMUM
MECH	MECHANICAL
MED	MEDIUM
MET	METAL
MFG	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MOB	MOBILE
MTD	MOUNTED
N.I.C.	NOT IN CONTRACT
NIFSEC	NOT IN FOOD SERVICE EQUIPMENT CONTRACT
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
P.S.I.	POUNDS PER SQUARE INCH
PLY	PLYWOOD
POB	PART OF BUILDING
POF	PART OF FIXTURE
POL	POLISH, POLISHED
POT	PORTABLE
PR	PAIR
PT	PAINT
QTY	QUANTITY
R	REFRIGERATOR
REQ	REQUIRED
REQ'S	REQUIREMENTS
RM	ROOM
S/S	STAINLESS STEEL
SCH	SCHEDULE
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SOV	SHUT-OFF VALVE
SQ	SQUARE
STD	STANDARD
STRUCT	STRUCTURAL
THK	THICK
TYP	TYPICAL
W	WIDE, WIDTH, WASTE
W/	WITH
WD	WOOD

GENERAL SYMBOLS



ELEVATION REFERENCE

MULTIPLE ELEVATION REFERENCE

DETAIL REFERENCE

SECTION REFERENCE

ENLARGED PLAN/ DETAIL REFERENCE

SPECIFICATION REFERENCE
SEE TYPICAL SPECIFICATION SYMBOLS
(ON INTERIOR DRAWINGS)

ITEM NUMBER

NORTH ARROW

REVISION DELTA

ELEVATION HEIGHT REFERENCE

SHEET INDEX

FS-100	SYMBOLS, NOTES, & INDEX
FS-101	REFERENCE PLAN
FS-102	EQUIPMENT FLOOR PLAN
FS-201	EQUIPMENT SCHEDULE
FS-301	PLUMBING PLAN
FS-401	ELECTRICAL PLAN
FS-501	BUILDING WORKS & EXHAUST PLAN
FS-502	HOOD DETAILS
FS-503	HOOD DETAILS
FS-601	EQUIPMENT ELEVATIONS
FS-701	CONSTRUCTION DETAILS
FS-801	EQUIPMENT SECTIONS
FS-802	ANCHORAGE DETAILS

THIS PLAN IS A GENERAL ARRANGEMENT OF EQUIPMENT FOR THE CONVENIENCE OF CONTRACTORS AND IS MADE FROM AVAILABLE INFORMATION. WEBB FOODSERVICE DESIGN ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF SUCH MEASUREMENTS. FABRICATORS, CONTRACTORS, AND OTHERS UTILIZING THESE PLANS IN CONNECTION WITH THIS JOB ARE RESPONSIBLE FOR SECURING THEIR OWN MEASUREMENTS. PLUMBING AND ELECTRICAL INFORMATION INDICATED ON THESE PLANS ARE GENERALLY FOR FOOD SERVICE EQUIPMENT AND ARE INTENDED AS REFERENCE ONLY. WEBB DESIGN IS NOT RESPONSIBLE FOR THE ENGINEERING THEREOF OR FOR ANY PLUMBING OR ELECTRICAL FITTINGS, WORK, AND OR CONNECTIONS UNLESS SPECIFICALLY PROVIDED FOR IN THE SPECIFICATIONS. WEBB FOODSERVICE DESIGN ASSUMES NO RESPONSIBILITY FOR THE WORK DONE BY THE CONTRACTORS NOR FOR ANY CHANGES MADE NECESSARY BY THE LOCAL BUILDING CODES, ORDINANCES, STRUCTURAL CONDITIONS, OR BY THE SUBSTITUTION OR CHANGES MADE NECESSARY IN EQUIPMENT SHOWN ON THIS PLAN. CONTRACTORS ARE TO MAKE ALLOWANCES FOR ELBOWS, TRAPS, ETC. AND ARE TO MAKE FINAL CONNECTIONS ON THE JOB, SUPPLYING ALL NECESSARY VALVES, TRAPS, STEAM TRAPS, FAUCETS, STARTING SWITCHES FOR MOTORS, ETC. EXCEPT WHERE SPECIFICALLY NOTES OTHERWISE IN THE WRITTEN SPECIFICATIONS. THESE PLANS AND DESIGNS CONTAINED HERIN ARE THE PROPERTY OF WEBB FOODSERVICE DESIGN AND MAY NOT BE REPRODUCED OR USED BY ANYONE, EITHER ALL OR IN PART WITHOUT FIRST SECURING THE WRITTEN PERMISSION OF WEBB FOODSERVICE DESIGN.

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SS ☑ FLS ☑ ACS ☑
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PROJECT NAME

PALO VERDE COLLEGE
CHILD DEVELOPMENT CENTER BLYTHE

141 S 2ND STREET
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REGISTRATION STAMPS

LICENSED ARCHITECT C-18627 08/30/22 STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	12" = 1'-0"
SUBMITTAL:	07/06/22

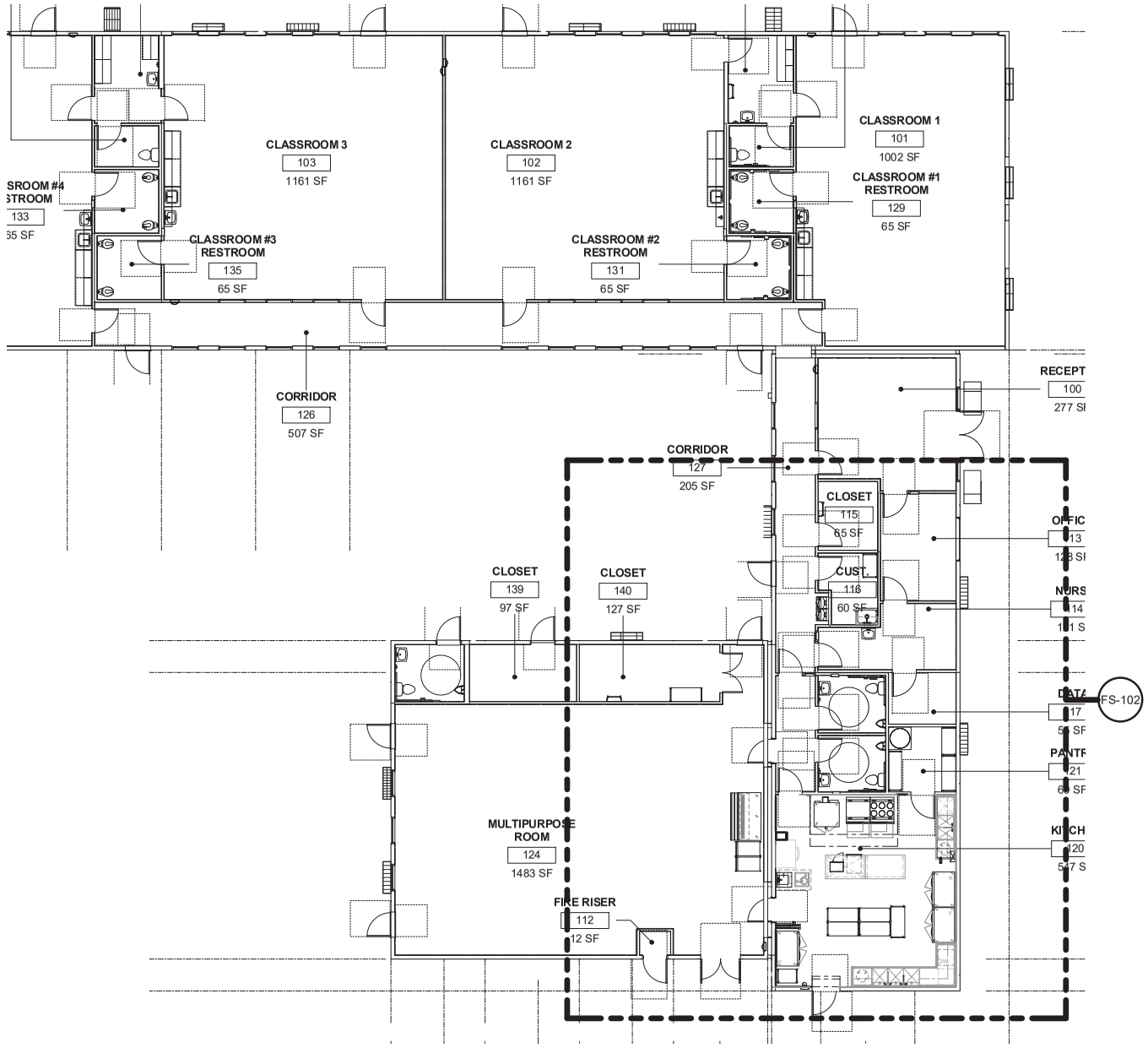
KEY PLAN

SHEET TITLE

SYMBOLS, NOTES, & INDEX

SHEET NUMBER

FS-100



1 REFERENCE PLAN
3/16" = 1'-0"

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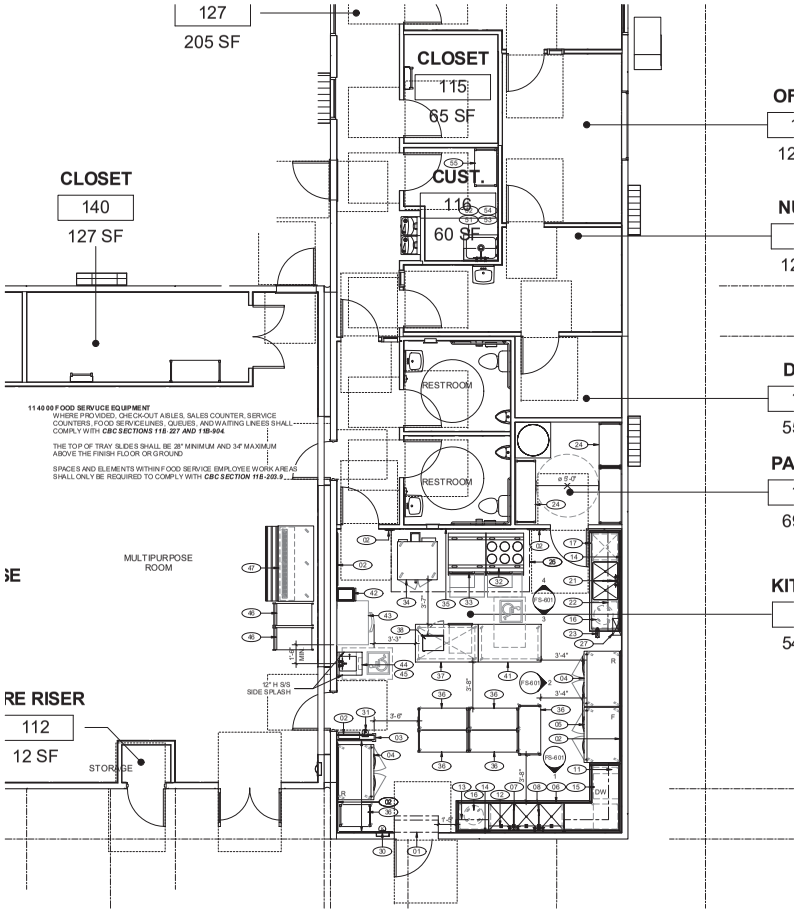
KEY PLAN

SHEET TITLE

REFERENCE PLAN

SHEET NUMBER

FS-101



1 EQUIPMENT FLOOR PLAN
1/4" = 1'-0"

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SCALE:	1/4" = 1'-0"
SUBMITTAL:	07/06/22

KEY PLAN

SHEET TITLE

EQUIPMENT FLOOR PLAN

SHEET NUMBER

FS-102

EQUIPMENT SCHEDULE								PLUMBING							ELECTRICAL							
ITEM #	QTY.	DESCRIPTION	MANUFACTURER	MODEL #	ANCHORAGE DETAILS	HEIGHT	WEIGHT	CW	HW	DW	IW	GAS	MBTU/ HR	PLUMBING REMARKS	VOLTS	K.W.	AMPS	H.P.	PHASE	ELEC. CONN.	ELECTRICAL REMARKS	GENERAL REMARKS
01	1	AIR CURTAIN, RECEIVING	MARS	NH242-1UA-TS	A-6/FS-802	18"	120 LBS								120		9.0		1	D	WIRE THRU DOOR ACTIVATED MICRO-SWITCH	
02	8	BUMPER RAILS	SFI	BR-WBB		"	"															
03	1	WALL CAPS	SFI	WC-WBB	7/FS-701																	
04	2	REACH-IN REFRIG. (2 DOOR) (MOBILE) (SELF CONTAINED)	TRUE	STR2R-2S-HC	A-34/FS-802	77 3/4" H	710 LBS								120		5.9		1	C	NEMA 5-15R. PER UNIT REQ'S.	
05	1	REACH-IN FREEZER (2 DOOR) (MOBILE) (SELF CONTAINED)	TRUE	STR2F-2S-HC	A-34/FS-802	77 3/4" H	715 LBS								120		9.4		1	C	NEMA 5-15P	
06	1	3 COMPARTMENT SINK	SFI	PS3-WBB	A-2/FS-802	36" H	425 LBS			2"	F.S.			DRAIN PER LOCAL CODE REQUIREMENTS								
07	1	SPLASH MOUNTED HI-FLO UTENSIL SINK FAUCET	FISHER	53155	POF	9" H	5 LBS	3/4"	3/4"													
08	1	PRE-RINSE FAUCET WITH ADD ON FAUCET ASSEMBLY	FISHER	53473	POF	38" H	13 LBS	1/2"	1/2"													
09	1	SPARE #																				
10	1	SPARE #																				
11	1	WALL SHELF (KNIFE BRACKETS)	SFI	WSK-WBB	A-17/FS-802	11" H	210 LBS															
12	1	UTENSIL RACK	SFI	UR-WBB	A-17/FS-802	2" H	120 LBS															
13	1	WALL SHELF (KNIFE BRACKETS)	SFI	WSK-WBB	A-17/FS-802	11" H	50 LBS															
14	1	WALL FLASHING	SFI	WF-WBB	6/FS-701	"	"															
15	1	UNDERCOUNTER DISH MACHINE	CHAMPION	UH230B		33 3/4" H	215 LBS		1/2"		F.S.				208		22.0		3	D		
16	2	TRASH RECEPTACLE W/ DOLLY	RUBBERMAID	FG262000GRAY	MOB	23" H	6 LBS															
17	1	WORK TABLE W/ 2 COMP. PREP SINK	SFI	ITM-WBB	A-2/FS-802	36" H	275 LBS				F.S.				120		6.0		1	C	2 LOCATIONS	
18	1	SPARE #																				
19	1	SPARE #																				
20	1	SPARE #																				
21	1	PREP SINK FAUCET (SPLASH MOUNT)	FISHER	53139	POF	7 1/2" H	5 LBS	1/2"	1/2"													
22	1	WALL SHELF (KNIFE BRACKETS)	SFI	WSK-WBB	A-17/FS-802	11" H	260 LBS															
23	1	MANUAL CAN OPENER	EDLUND	S-11	POF	"	10 LBS															
24	3	DRY STORAGE SHELVING UNITS	METRO	SUPER ERECTA	A-23/FS-802	72" H	800 LBS															
25	1	EXHAUST HOOD (TYPE I)	CADDY	PB-C-W-132-ND-60	8/SD1.0	"	"								120		15.0		1	D	WIRE THROUGH LIGHTS & SWITCH. SEE SHEET FS-502 FOR ADDITIONAL INFO.	SEE MECH. SECTION FOR FAN, DUCT, SWITCHES & CONTROLS INFO.
26	1	HOOD TRIM AND CLOSURE PANELS	SFI	HTP-WBB	5/FS-701	12" H	110 LBS															
27	1	FIRE PROTECTION SYSTEM	CADDY	R102										CONTRACTOR TO INSTALL GAS SHUT-OFF VALVE IN ACCESSIBLE CEILING SPACE.	120		6.0		1	D	SEE SHEET FS-503 FOR ADDITIONAL INFO.	
28	1	SPARE #																				
29	1	SPARE #																				
30	1	CLASS K FIRE EXTINGUISHERS		SEE ARCHITECT SECTION																		
31	1	FIRE PULL BOX	CADDY	PART OF ITEM #27											"	"	"	"	"	"	CONTRACTOR TO INSTALL 4/0 BOX AT +48" A.F.F. SEE DETAIL 1/FS-701 FOR ADD. INFO.	
32	1	6 OB RANGE (ELEC)	SOUTHBEND	SE36D-BBB	A-7/FS-802	36" H	650 LBS								208		64.9		3	D		
33	1	36" GRIDDLE (ELEC)	SOUTHBEND	SE36D-TTT	A-7/FS-802	36" H	700 LBS								208		68.7		3	D		
34	1	DBL CONV. OVEN (ELEC) (MOBILE)	SOUTHBEND	SLEB/20CCH	A-34/FS-802	64" H	1180 LBS								208		34.0		3	D		
35	1	WALL FLASHING	SFI	WFH-WBB	6/FS-701	"	"															
36	6	MOBILE STORAGE SHELVING UNIT	METRO	SUPER ERECTA	A-34/FS-802	72" H	800 LBS															
37	1	MOBILE WORK TABLE	SFI	MT-WBB	MOB	34" H	107 LBS								120		6.0		1	C	PER UNIT REQ'S.	
38	1	MICROWAVE OVEN	AMANA	RMS10TSA		12" H	32 LBS								120		13.0		1	C	NEMA 5-15P	
39	1	SPARE #																				
40	1	SPARE #																				
41	1	MOBILE ADA WORK TABLE	SFI	MT-WBB-ADA	MOB	34" H	85 LBS								120		6.0		1	C		
42	1	EMPLOYEE LOCKERS	NIFSEC			"	"															
43	1	OFFICE DESK AND CHAIR	NIFSEC												120		6.0		1	C	PROVIDE DATA CONNECTION	
44	1	WALL MOUNT HAND SINK W/ SOAP & TOWEL DISPENSER	EAGLE GROUP	HSAP-14-ADA-FW	A-6/FS-802	24" H	55 LBS			2"												
45	1	HAND SINK FAUCET (SPLASH MOUNT)	FISHER	62650	POF	8" H	5 LBS	1/2"	1/2"													
46	2	CART, TRAY TRANSPORT	LAKESIDE	744	MOB	37 1/8" H	78 LBS															
47	1	UTILITY FOOD COUNTER (MOBILE)	MULTITERIA	ULST2	MOB	34"	530 LBS								120		6.0		1	C	2 LOCATIONS	
48	1	SPARE #																				
49	1	SPARE #																				
50	1	SPARE #																				
51	1	JANITOR'S MOP SINK (FLOOR MOUNTED)	ADVANCE/TABCO	9-OP-28		10" H	47 LBS			3"				P-TRAP BELOW SLAB								
52	1	JANITOR'S SINK FAUCET	FISHER	18031	POF	14" H	6 LBS	1/2"	1/2"													
53	1	JANITOR'S MOP RACK	ADVANCE TABCO	K-242	A-11/FS-802	"	2 LBS															
54	1	WALL SHELF (KNIFE BRACKETS)	SFI	WS-WBB	A-17/FS-802	11" H	55 LBS															
55	1	CHEMICAL STORAGE SHELVING UNIT	METRO	SUPER ERECTA	A-23/FS-802	72" H	800 LBS															

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REGISTRATION STAMPS

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AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

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CHECKED BY: SILLMAN
SCALE:
SUBMITTAL: 07/06/22

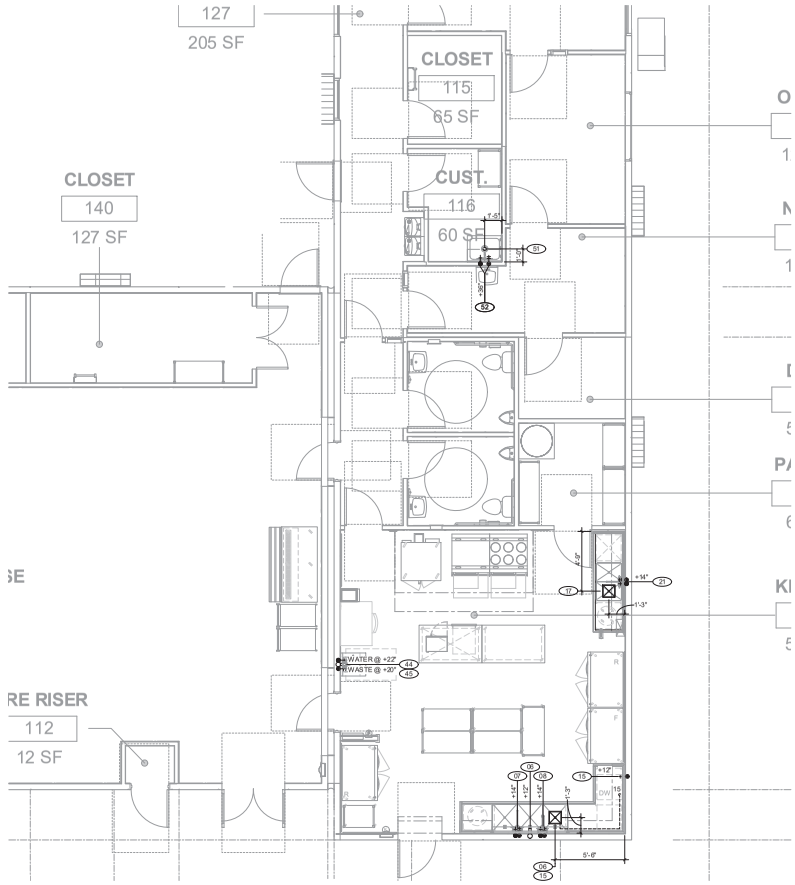
KEY PLAN

SHEET TITLE

EQUIPMENT SCHEDULE

SHEET NUMBER

FS-201



1 PLUMBING PLAN
1/4" = 1'-0"

PLUMBING NOTES

1. PLUMBING CONTRACTOR TO VERIFY ALL INCOMING SERVICES AND MAKE ALL EXTERNAL AND INTERNAL CONNECTIONS . PLUMBING CONTRACTOR TO PROVIDE ALL PIPING, FITTINGS, PARTS, ETC., NECESSARY TO MAKE EQUIPMENT FUNCTIONAL.
2. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL INDIVIDUAL SHUT-OFF VALVES ON ALL WATER AND GAS LINES.
3. ALL BUILDING AND FIXTURE PENETRATIONS MUST BE SEALED WATER-TIGHT AND VERMIN PROOF. PROVIDE escutcheon PLATES TO SURROUND OPENINGS.
4. ALL PLUMBING OUTLETS AND CONNECTIONS SHOWN ARE FOR EQUIPMENT SHOWN ON FOOD SERVICE EQUIPMENT PLAN ONLY. (SEE ARCHITECTURAL PLANS FOR FURTHER PLUMBING REQUIREMENTS).
5. ALL HORIZONTAL DIMENSIONS SHOWN ARE FROM FINISHED FACE ON WALL TO CENTERLINE OF STUB OUT OR FROM CENTERLINE OF STUB OUT TO CENTERLINE OF STUB OUT UNLESS OTHERWISE NOTED ON PLANS OR DETAILS (VERIFY ALL DIMENSIONS AT JOB SITE).
6. ALL SYMBOLS NOTED +12", +24", ETC., ARE TO STUB OUT OF WALL AT HEIGHT INDICATED.
7. HEIGHT IS GIVEN FROM FINISHED FLOOR (NOT FINISHED CURB) TO CENTERLINE OF STUB OUT. ALL SYMBOLS NOTED STUB UP ARE TO STUB UP ABOVE FINISHED FLOOR OR FINISHED CURB AT LOCATION INDICATED ON PLAN. (VERIFY ALL DIMENSIONS AT JOB SITE)
8. ALL FLOOR SINKS SHOWN ARE TO BE SET FLUSH WITH FINISHED FLOOR. VERIFY LOCATION OF FLOOR SINKS PRIOR TO FINAL POUR. (VERIFY WITH FOOD SERVICE EQUIPMENT CONTRACTOR.)
9. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL REMOVABLE GRILLS OR COVERS FOR ALL FULL OR PARTIALLY EXPOSED FLOOR SINKS.
10. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL TYPE "L" COPPER TUBING DRAIN LINES FROM ALL APPLICABLE EQUIPMENT TO FLOOR SINKS. REFRIGERATION EQUIPMENT ETC. PLUMBING CONTRACTOR TO INSTALL DRAIN LINES SO THEY DO NOT AFFECT UNDER COUNTER STORAGE AND OTHER OPERATIONAL FUNCTIONS OF THE FIXTURES.
11. DRAIN FOR DISHWASHER TO HAVE A MINIMUM 3" DRAIN PIPE UNLESS MFG. REQUIREMENTS STATE OTHERWISE.
12. PLUMBING CONTRACTOR TO VERIFY ALL INCOMING WATER TEMPERATURES. GPMS WITH DISHWASHER SPECIFICATIONS. (120 DEGREE MIN.) UNLESS MFG. REQUIREMENTS STATE OTHERWISE.
13. IF INLET PRESSURE ON HOT WATER LINE IS IN EXCESS OF 25 LBS. FLOW PRESSURE, PLUMBING CONTRACTOR TO PROVIDE AND INSTALL PRESSURE REGULATING VALVE. G.P.H. (RINSE CONSUMPTION AT 25 LBS. FLOW PRESSURE REQUIRED FOR DISH WASHING MACHINE)
14. PLUMBING CONTRACTOR TO INSTALL AND FOOD SERVICE EQUIPMENT CONTRACTOR TO PROVIDE, AUTOMATIC SHUT-OFF VALVE(S) IN GAS LINE FOR FIRE SUPPRESSION SYSTEM IN HOOD.
15. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL STRAINERS OR APPROVED TYPE FILTERS ON GAS SUPPLY LINES.
16. PLUMBING CONTRACTOR TO INSTALL AND FOOD SERVICE EQUIPMENT CONTRACTOR TO PROVIDE, ALL GAS PRESSURE REGULATING VALVES.
17. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL BACK FLOW PREVENTION DEVICES FOR FIXTURES AS REQUIRED BY LOCAL PLUMBING AND BUILDING DEPARTMENTS.
18. THIS PLAN IS FOR PLUMBING REQUIREMENTS FOR SPECIFIC FOOD SERVICE AREAS ONLY. PLUMBING CONTRACTOR TO REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL PLUMBING REQUIREMENTS NOT SHOWN.
19. FOR GREASE INTERCEPTOR SIZING REFER TO MECHANICAL DOCUMENTS.
20. PLUMBING CONTRACTOR TO PROVIDE ALL SHUT-OFF AND MIXING VALVES, TRIM, TRAPS AND FINAL CONNECTIONS TO THE FIXTURES, EXCEPT AS NOTED DIFFERENTLY IN THE SPECIFICATIONS OR ON THE DRAWINGS.

PLUMBING SYMBOLS

- COLD WATER
- HOT WATER
- DIRECT WASTE
- 12" X 12" FLOOR SINK
- 12" X 12" FLOOR SINK WITH HALF GRATE
- 12" X 12" FLOOR SINK WITH 3/4 GRATE
- FLOOR DRAIN
- (1) ITEM NUMBER, REFER TO SHEET FS-201

NOTE: ALL FLOOR DRAIN LOCATIONS SHOWN ARE SUGGESTED ONLY. ACTUAL LOCATIONS AND QUANTITIES TO BE DETERMINED BY THE ARCHITECT. VARIATIONS DUE TO FLOORING TYPE AND PITCH MAY BE REQUIRED.

HOT WATER DEMAND

EQUIPMENT	GPH
HAND SINKS	5
PRE RINSE UNITS	45
FOOD PREPARATION SINKS	5
JANITOR SINKS	15
UTENSIL SINKS 24"X26" PER COMPARTMENT	37.5
UNDERCOUNTER DISHMACHINE	25

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SUBMITTAL:	07/06/22

KEY PLAN

SHEET TITLE

PLUMBING PLAN

SHEET NUMBER

FS-301

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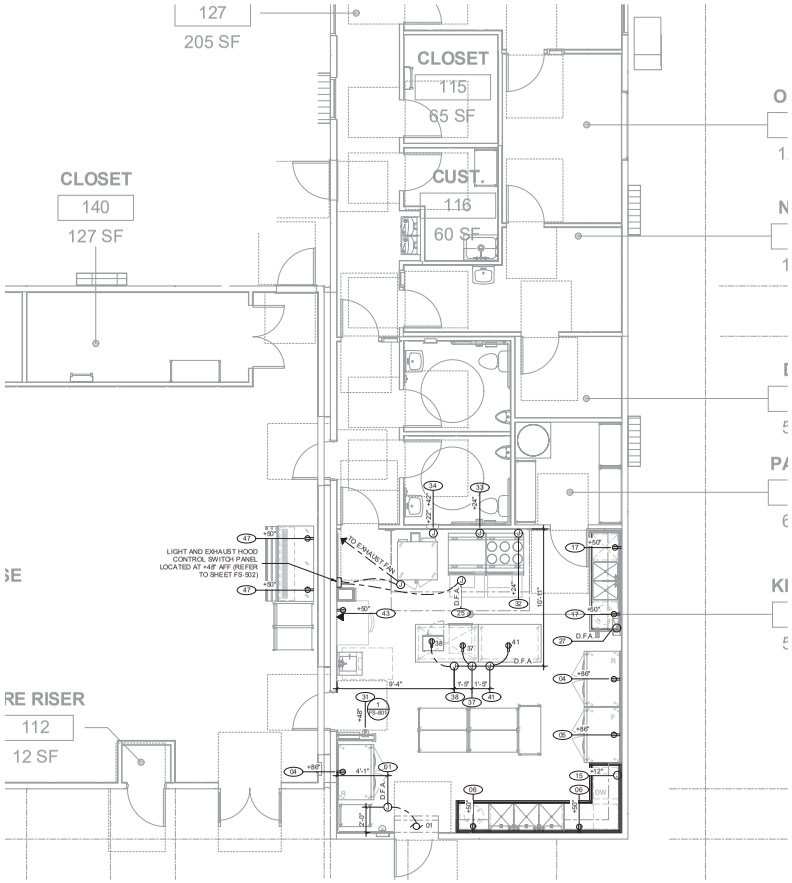

1 ELECTRICAL PLAN
1/4" = 1'-0"

ELECTRICAL NOTES

1. ELECTRICAL CONTRACTOR TO VERIFY ALL INCOMING SERVICE AND FINAL HOOK-UP TO ALL APPLICABLE EQUIPMENT AND TO PROVIDE ALL SWITCHES, BREAKERS, CONDUIT, ETC., UNLESS SPECIFICALLY STATED OTHERWISE.
2. FIXTURE FABRICATOR TO PROVIDE JUNCTION/OUTLET BOXES WHEN PART OF FIXTURE. INTERNAL WIRING, RECEPTACLES, COVERS, ETC. TO BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS SPECIFIED AS PART OF A PRE-ENGINEERED DESIGN.
3. ALL ELECTRICAL OUTLETS AND CONNECTIONS SHOWN ON THE PLAN ARE FOR EQUIPMENT SHOWN ON FOOD SERVICE EQUIPMENT PLAN (SEE ARCHITECTURAL PLAN) FOR ADDITIONAL ELECTRICAL REQUIREMENTS.
4. ALL HORIZONTAL DIMENSIONS SHOWN ARE FROM FINISHED FACE OF WALL TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED ON PLANS OR DETAILS. ELECTRICAL CONTRACTOR TO VERIFY ALL DIMENSIONS AT JOB SITES. ALL SYMBOLS NOTES +12", +24", ETC., TO STUB OUT OF WALL AT HEIGHT INDICATED.
5. HEIGHT IS GIVEN FROM FINISHED FLOOR (NOT FINISHED CURB) TO CENTERLINE OF OUTLET. ALL SYMBOLS NOTED "STUB UP" ARE TO STUB UP ABOVE FINISHED FLOOR AT HEIGHT AND LOCATION INDICATED (MINIMUM HEIGHT TO BE 6" A.F.F.)
6. ELECTRICAL CONTRACTOR TO PROVIDE A PIGTAIL FLEX CONDUIT AT ALL DIRECT CONNECT STUB OUTS OF SUFFICIENT LENGTH TO EXTEND AND CONNECT TO FIXTURES.
7. ELECTRICAL CONTRACTOR TO WIRE MAGNETIC CONTACTORS AND/OR SHUNT TRIP BREAKERS FOR POWER SHUT-OFF TO ALL COOKING EQUIPMENT PROTECTED BY THE FIRE SUPPRESSION SYSTEM. CONNECT CONTROL CIRCUIT FROM MICRO-SWITCH ON SYSTEM AUTOMAN TO CONTRACTOR COIL. REFER TO DETAIL ON FIRE SUPPRESSION SYSTEM DRAWINGS.
8. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL STAINLESS STEEL COVER PLATES FOR ALL RECEPTACLES AND SWITCHES IN FOOD PREPARATION AREAS UNLESS OTHERWISE NOTED. ALL RECEPTACLES TO BE SET HORIZONTALLY.
9. LIGHT FIXTURES THAT ARE SUPPLIED BY THE FOOD SERVICE EQUIPMENT CONTRACTOR ARE TO BE INSTALLED BY THE ELECTRICAL CONTRACTOR WITH LAMPS BY OWNER, UNLESS OTHERWISE NOTED.
10. ELECTRICAL CONTRACTOR TO PROVIDE CAPS AND CORDS FOR ALL ITEMS WHICH USE CONVENIENCE OUTLETS WHEN NOT SUPPLIED BY THE MANUFACTURER AND SHORTEN ANY CORDS IF NECESSARY OR REQUESTED.
11. FIXTURE FABRICATOR SHALL CUT ACCESS HOLES TO CONVENIENCE OUTLETS AS REQUIRED.
12. ELECTRICAL CONTRACTOR TO VERIFY ALL DIMENSIONS WITH JOBSITE CONDITIONS.
13. ELECTRICAL CONTRACTOR TO VERIFY ANY ADDITIONAL ELECTRICAL SERVICES REQUIRED ELSEWHERE IN THE BUILDING FOR ITEMS NOT SHOWN ON THE PLANS, AND FOR N.I.F.S.E.C. ITEMS.
14. ELECTRICIAN TO PROVIDE CONDUIT THAT MEETS LOCAL BUILDING AND ELECTRICAL CODES.

ELECTRICAL SYMBOLS

- 120 VOLT DUPLEX CONV OUTLET
- SPECIALTY OUTLET
- JUNCTION BOX
- MOTOR
- SWITCH
- TELEPHONE/ DATA
- ITEM NUMBER, REFER TO SHEET FS-201
- 4/0 FIRE PULL BOX
- DFA DOWN FROM ABOVE
- FINAL CONNECTION POINT

CLIENT

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC.
REVIEWED FOR:
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

PROJECT NAME

PALO VERDE COLLEGE
CHILD DEVELOPMENT CENTER BLYTHE

141 S 2ND STREET
BLYTHE CA, 92225

BUILDER

DESIGN CONSULTANT

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REGISTRATION STAMPS

LICENSED ARCHITECT
C.118427
Exp. 12-31-22
STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	As indicated
SUBMITTAL:	07/06/22

KEY PLAN

SHEET TITLE

ELECTRICAL PLAN

SHEET NUMBER

FS-401

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DCV NOTES

1. DCV SYSTEM(S) TO BE SPECIFIED BY DIVISION 23 (HEATING, VENTILATING AND AIR CONDITIONING).
2. DIVISION 23 CONTRACTOR SHALL COORDINATE, FURNISH, INSTALL AND COMMISSION THE DCV SYSTEM(S).
3. DIVISION 23 CONTRACTOR SHALL CONTRACT WITH THE HOOD MANUFACTURE FOR ALL OF THE DCV SYSTEM COMPONENTS AND/OR WIRING REQUIRING/INSTALLATION IN THE HOOD AT THE FACTORY.
4. DIVISION 23 & 26 (INTEGRATION AUTOMATION) (ELECTRICAL AND LIGHTING) CONTRACTOR(S) REFER TO DIVISION 23 SPECIFICATIONS AND/OR DRAWINGS FOR SYSTEM INTEGRATION AND INSTALLATION REQUIREMENTS.
5. DIVISION 11400 (FOOD SERVICE EQUIPMENT) DCV SYSTEM DRAWING(S) ARE OFFERED FOR COORDINATION PURPOSES ONLY.

EXHAUST NOTES

1. EXHAUST HOOD(S) WITH MECHANICAL EXHAUST SYSTEM(S) TO BE PROVIDED OVER COOKING EQUIPMENT. MINIMUM OVERHANG SHALL BE AS REQUIRED BY ALL GOVERNING AGENCIES. PROVIDE OVERHANG IN EXCESS OF MINIMUM AS SHOWN ON DRAWINGS.
2. MECHANICALLY INDUCED MAKE-UP AIR MUST BE PROVIDED FOR COOKING AND DISHWASHING EXHAUST HOOD(S) IN CONJUNCTION WITH THE H.V.A.C SYSTEMS IN ORDER TO REPLACE 100% OF EXHAUSTED AIR. REFER TO MECHANICAL ENGINEER'S DRAWINGS AND SPECIFICATIONS FOR DETAILS.
3. EXHAUST AND MAKE-UP AIR SYSTEMS MUST BE ELECTRICALLY INTERLOCKED FOR SIMULTANEOUS OPERATION EXCEPT IN THE CASE OF EMERGENCY AS MANDATED BY THE FIRE MARSHALL. REFER TO MECHANICAL ENGINEER'S DRAWINGS AND SPECIFICATIONS FOR DETAILS.
4. MAKE-UP AIR DELIVERED IN THE PROXIMITY OF THE EXHAUST HOOD(S), I.E. WITHIN 10 LINEAL FEET, SHALL NOT INCLUDE 4-WAY AIR DIFFUSERS NOR EXCEED 75 FEET PER MINUTE VELOCITY.
5. SEE MECHANICAL ENGINEER'S DRAWINGS FOR ADDITIONAL INFORMATION REGARDING COMPLETE BALANCED EXHAUST AND MAKE-UP AIR SYSTEMS.

BUILDING WORKS NOTES

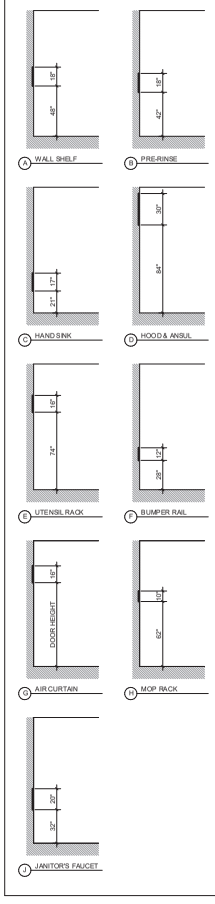
1. ALL WALL BACKING TO BE 16 GAUGE GALVANIZED METAL SECURELY ATTACHED TO STUD WALL FRAMING.
2. WALL BACKING LENGTHS SHOWN ON BUILDING WORKS PLAN REQUIREMENTS ARE THE MINIMUM. ALWAYS EXTEND WALL BACKING TO NEXT STUD OVER IN EACH DIRECTION.
3. ALL WORK SHOWN ON BUILDING WORKS PLAN TO BE BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.

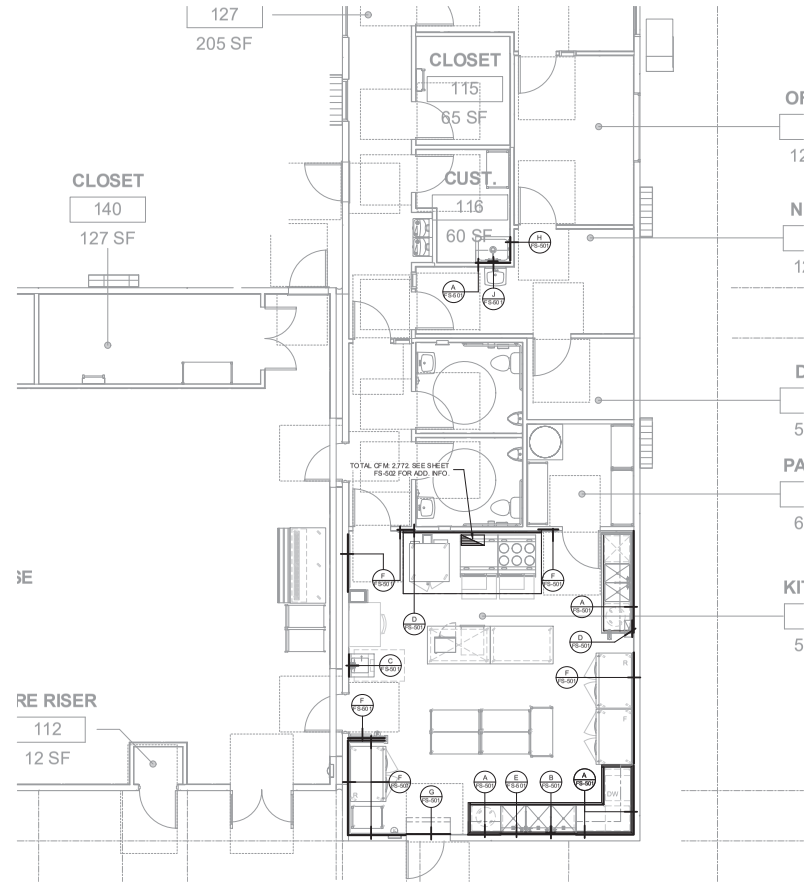
EXHAUST & MAKE-UP AIR

EXHAUST HOOD DUCT CONNECTION

SUPPLY AIR PLENUM CONNECTION

WALLBACKING DETAILS





1 BUILDING WORKS PLAN
1/4" = 1'-0"

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C.J. BAZZI
STATE OF CALIFORNIA

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KEY PLAN

SHEET TITLE

BUILDING WORKS & EXHAUST PLAN

SHEET NUMBER

FS-501

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THE CADDY VENTILATOR TESTING, LISTING AND APPROVAL REFERENCES:

NATIONAL FIRE PROTECTION ASSOCIATION
IN ACCORDANCE WITH RECOMMENDATION OF NATIONAL FIRE PROTECTION ASSOCIATION'S NFPA NO. 96 "VAPOR REMOVAL FROM COOKING EQUIPMENT"

NATIONAL SANITATION FOUNDATION
STANDARD #2 - "FOOD SERVICE EQUIPMENT"

ETL, INTERTEK
TESTED UNDER STANDARD U.L. 710 "EXHAUST HOODS FOR COMMERCIAL COOKING EQUIPMENT". ETL LISTED UNDER CONTROL # 3177269

UNIFORM MECHANICAL CODE
SECTION 507 - COMMERCIAL KITCHEN HOODS AND KITCHEN VENTILATION SYSTEMS

THE BOCA NATIONAL MECHANICAL CODE
CHAPTER 5 - KITCHEN EXHAUST EQUIPMENT

STANDARD MECHANICAL CODE (SBCCI)
SECTION 504 - COMMERCIAL HOODS

UNIFORM BUILDING CODE (ICBO)

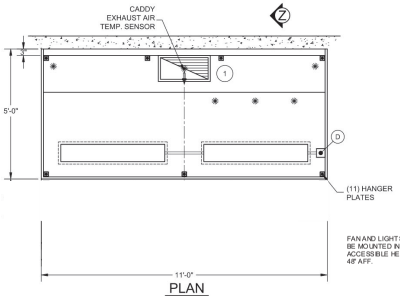
INTERNATIONAL MECHANICAL CODE (IMC)
SECTION 507 - COMMERCIAL KITCHEN HOODS
EXCLUDES CODE #507.2.1.1. CONSULT FACTORY FOR COMPLIANCE OPTIONS.

NOTE:

K.E.C. MUST VERIFY THE EXACT DIMENSION OF THE COOKING EQUIPMENT FROM EITHER THE WALL OR FROM THE FRONT OF THE HOOD, SO CADDY MAY PROPERLY LOCATE THE FIRE PROTECTION NOZZLES AT TIME-OF-FABRICATION IN THE FACTORY. IF EQUIPMENT IS NOT LOCATED AS SHOWN AND THE DRAWING IS APPROVED FOR FABRICATION, THEN NOZZLES MUST BE RELOCATED AT THE EXPENSE OF OTHERS.

CONTRACTOR NOTE:

ALLOW SUFFICIENT ACCESS ON TOP OF VENTILATOR TO SERVICE COMPONENTS AND UTILITIES

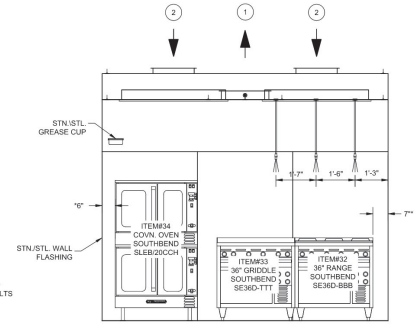


PLAN

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

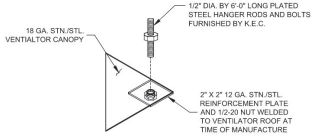
TOTAL EXHAUST : 2,772 C.F.M.

(1) 10" X 22" EXHAUST DUCT 2,772 C.F.M. @ 1.00" S.P.



ELEVATION

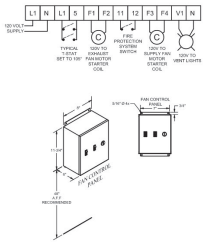
SCALE: 1/2"=1'-0"



HANGER DETAIL A-A

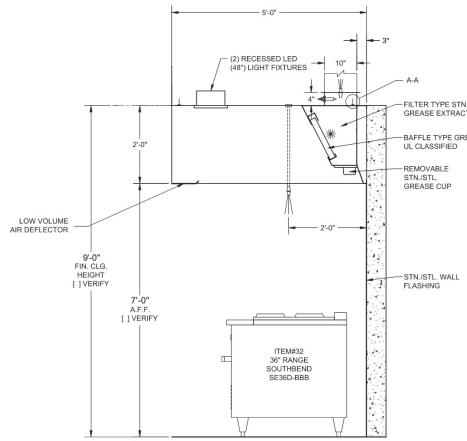
SCALE: 1/4"=1"

FAN CONTROL PACKAGE



ELECTRICAL NOTES:

1. LIGHT FIXTURES, VAPORPROOF, U.L. LISTED, FURNISHED, INSTALLED AND WIRED TO J-BOX Ⓓ BY CADDY.
2. 120 VOLTS 15 AMP. A.C. SERVICE BY ELECTRICAL CONTRACTOR TO CADDY FAN CONTROL PANEL.
3. INTERCONNECTION FROM CADDY FAN CONTROL PANEL TERMINALS TO EXHAUST FAN MOTOR STARTER, SUPPLY FAN MOTOR STARTER, TEMPERATURE SENSORS, FIRE PROTECTION SYSTEM SWITCH, AND HOOD LIGHT J-BOX BY ELECTRICAL CONTRACTOR.



SECTION Z-Z

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

GENERAL NOTES

EXHAUST AIR REQUIREMENTS:
1. EXHAUST C.F.M. BASED ON 252 C.F.M. PER LINEAR FOOT.
2. EXHAUST STATIC PRESSURE IS 1.00" W.G. AT DUCT TAKE-OFF COLLAR. TOTAL DUCT STATIC MUST BE ADDED. STATIC BASED ON OPERATION AT MEAN SEA LEVEL.
3. DUCT SIZE BASED ON 1,800 F.P.M.

EXHAUST FAN REQUIREMENTS:
1. EXHAUST FAN DISCHARGE SHOULD BE VERTICAL, AWAY FROM AIR INTAKES. FAN FURNISHED BY OTHERS.
2. EXHAUST FAN MUST BE FURNISHED WITH A MAGNETIC STARTER WITH 120 VOLT HOLDING COIL. STARTER FURNISHED BY OTHERS.

MAKE-UP AIR REQUIREMENTS:
1. AIR EXHAUSTED FROM KITCHEN MUST BE REPLACED - WITH DISTRIBUTION CONTROLLED TO PROVIDE FOR TOTAL KITCHEN. VENTILATION AND TO ESTABLISH NECESSARY AIR PATTERNS FOR PROPER PERFORMANCE OF THE VENTILATORS. AIR DISTRIBUTION SYSTEMS SHALL BE IN ACCORDANCE WITH ALL GOVERNING CODES.
2. MAKE-UP AIR MUST BE TEMPERED-HEATED OR COOLED-CONSISTENT WITH THE STYLE OF HOOD, HEAT LOAD, CLIMATIC CONDITIONS AND APPLICABLE CODES.
3. FAN MUST BE FURNISHED WITH A MAGNETIC STARTER WITH 120 VOLT HOLDING COIL. STARTER FURNISHED BY OTHERS.

INSTALLATION:
1. VENTILATORS TO BE INSTALLED IN ACCORDANCE WITH ALL CODES. CONTRACTORS MUST REVIEW APPLICABLE CODES WITH CODE AUTHORITIES BEFORE APPROVING DRAWINGS FOR FABRICATION. SPECIAL ATTENTION MUST BE GIVEN TO CODE REGULATIONS RELATIVE TO CLEARANCES FROM SURROUNDING COMBUSTIBLE CONSTRUCTION (WALL, CEILINGS, ETC.).
2. VENTILATORS ARE NOT TO BE INSTALLED IN AREAS MEANT TO HANDLE ENVIRONMENTAL AIR.
3. ALL DUCTWORK BEYOND VENTILATOR DUCT TAKE-OFF COLLAR TO BE PROVIDED AND INSTALLED BY OTHERS, IN ACCORDANCE WITH JURISDICTIONAL CODES. DUCTS MUST BE MECHANICALLY STRONG, GREASE AND WATER TIGHT.
4. MOUNTING RODS FURNISHED AND INSTALLED BY OTHERS.

CONSTRUCTION:
1. VENTILATORS TO BE MANUFACTURED IN STRICT ACCORDANCE WITH CADDY SPECIFICATIONS.
2. VENTILATORS CONSTRUCTED OF 18 GA. STAINLESS STEEL.

FIRE PROTECTION:
1. SURFACE FIRE PROTECTION PROVIDED AND INSTALLED BY CADDY (ANSUL R-102).
2. CAUTION: SURFACE FIRE PROTECTION SYSTEM INSTALLATION MUST BE COORDINATED WITH CADDY TO PREVENT SYSTEMS INTERFERENCE WITH VENTILATOR'S OPERATION/PERFORMANCE. IMPROPER INSTALLATION MAY VOID LISTINGS OF THE EQUIPMENT.
3. IMPORTANT NOTE: NFPA 96 REQUIRES THAT ALL GAS AND ELECTRIC COOKING EQUIPMENT THAT IS PROTECTED BY A SURFACE FIRE PROTECTION SYSTEM MUST AUTOMATICALLY SHUT OFF UPON ACTIVATION OF THE SYSTEM.

ELECTRICAL REQUIREMENTS:
1. LIGHT FIXTURE BULBS PROVIDED AND INSTALLED BY CADDY.

SEE DETAIL 8/SD1.0 FOR HOOD ANCHORAGE DETAILS

Intertek NSF NFPA

GENERAL CONTRACT CONDITIONS

ELECTRICAL WORK DONE BY CADDY CORPORATION IS EXECUTED IN COMPLIANCE WITH STANDARDS PUBLISHED BY THE UNDERWRITER'S LABORATORIES, INC. INSOFAR AS APPLICABLE WITH THE NATIONAL ELECTRICAL CODE (NEC). CADDY CORPORATION DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE REQUIREMENTS OF ANY REGIONAL AND/OR LOCAL CODES THAT ADD OR DEVIATED FROM THE ACCEPTED STANDARDS OF THE ABOVE AGENCIES.
ANY FIELD WORK RELATING TO THE MODIFICATION OF ELECTRIC OR PLUMBING SYSTEMS, TO MEET REGIONAL OR LOCAL CODE REQUIREMENTS, IS TO BE DONE BY OTHERS AND WITHOUT BACK CHARGES TO CADDY CORPORATION, UNLESS THESE CONDITIONS WERE PREVIOUSLY BROUGHT TO OUR ATTENTION AND ARE EXPRESSLY INCLUDED IN OUR WRITTEN QUOTATION.
ALL WIRING AND PLUMBING AT THE JOB SITE IS THE RESPONSIBILITY OF OTHERS. EQUIPMENT WILL BE CONSTRUCTED IN ACCORDANCE WITH OUR DRAWING(S) WHICH MUST BE APPROVED PRIOR TO FABRICATION. ANY SUBSEQUENT CHANGES REQUIRED MUST BE SUBMITTED TO US IN WRITING AND ACKNOWLEDGED ON OUR STANDARD FORM.

K.E.C. TO VERIFY ALL MAKES AND MODELS OF COOKING EQUIPMENT, REVIEW PLAN FOR PROPER LINE-UP PRIOR TO FABRICATION OF VENTILATORS, AND TO NOTIFY CADDY OF ANY CHANGES.

MINIMUM OVERHANG FROM EDGE OF COOKING EQUIPMENT TO END OF HOOD MUST BE 6"

INSTALLATION INFORMATION

ALLOW SUFFICIENT ACCESS TO BRING VENTILATOR INTO KITCHEN AREA MAXIMUM VENTILATOR DIMENSIONS 11'-0" LONG x 5'-0" WIDE x 28 1/2" HIGH ESTIMATED TOTAL HANGING WEIGHT: 990 LBS.

VENTILATOR TO BE SHIPPED IN (2) UNITS. ALL PLUMBING AND ELECTRICAL DISCONNECTED FOR SHIPMENT. RECONNECTED IN FIELD BY PLUMBING AND ELECTRICAL CONTRACTORS.

ROUGH-IN SCHEDULE

SYM	QTY	DESCRIPTION
D	1	120V, 60HZ, 1PH, 0.07 K.W. FROM CONNECTED LOAD

REVISIONS

REV	DATE	BY	REMARKS
A	11/5/21	BJW	ADDED CEILING SUPPLY PLENUM PER REQUEST ON 11/4/21
B	11/9/21	BJW	REVISED TO A REMOTE MOUNT FAN CONTROL PANEL INCLODING FAN AND LIGHT SWITCH PER LOCAL GUIDELINES
C	01/11/22	KCD	UPDATED EQUIPMENT PER 1/10/22 REVISED FS PLANS

DATE 11/03/2021 | SCALE AS NOTED
DR BY SS | APP'D BY BJW

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509 SHARPTOWN ROAD, P.O. BOX 345
BRIDGEPORT, NJ 08014
TEL:(856) 467-4222 FAX:(856) 467-5511
WWW. CADDYCORP.COM

EQUIPMENT SCHEDULE

PB-C-W-132-ND-60
W/ CEILING SUPPLY PLENUM

CADDY NO. 37093 ITEM NO. 25

JOB: PVC CHILD DEVELOPMENT CENTER
LOC: BLYTHE, CA
CUST:
CUST#:

DWG# 37093

SHT 1 OF 2

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SUBMITTAL:	07/06/22

KEY PLAN

SHEET TITLE

HOOD DETAILS

SHEET NUMBER

FS-502

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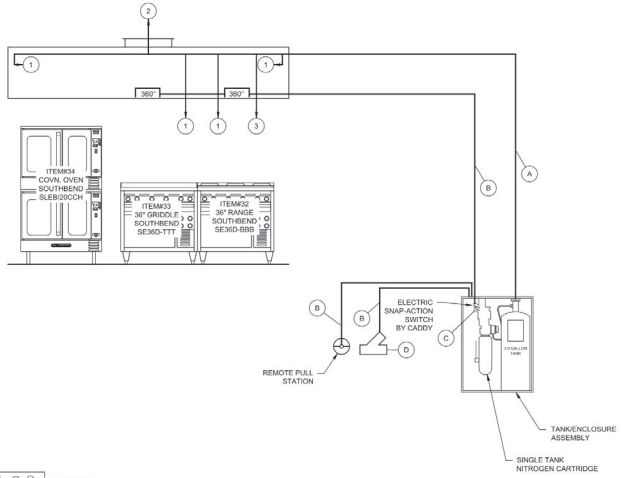
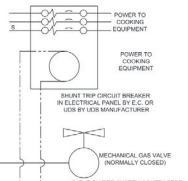
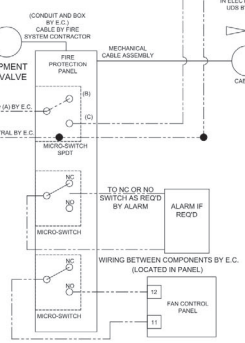


TYPICAL WET CHEMICAL FIRE PROTECTION SYSTEM INTERLOCK



HVAC/MAKE-UP AIR AND GAS/ ELECTRICAL EQUIPMENT SHUTDOWN WHEN USING AN MECHANICAL GAS VALVE



1. CONNECT THE INCOMING LIVE LEAD (A) TO THE COMMON TERMINAL SWITCH.
2. CONNECT THE FIRE-STAT RELAY (B).
3. CONNECT THE SHUNT TRIP RELAY TO THE MICRO-SWITCH (C).

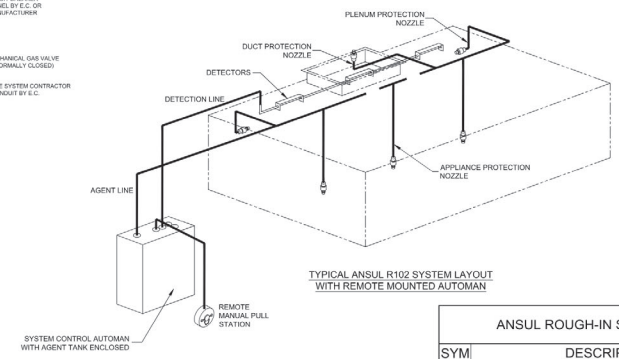
OPERATION

WHEN DETECTION LINES OR HAND "PULL" STATION ENERGIZE THE FIRE PROTECTION SYSTEM, THE MICRO-SWITCH REPOSITIONS TO:

1. ACTIVATE SHUNT TRIP CIRCUIT BREAKER, SHUTTING OFF FUEL AND POWER TO THE EQUIPMENT
2. TRANSFER POWER TO THE FIRE-STAT RELAY TO OPEN CONTACT TO SHUT DOWN HVAC UNIT (SUPPLY AIR).
3. DETECTION LINE WILL CLOSE MECHANICAL GAS VALVE.

ANSUL R-102 3 SYSTEM

FOR VENTILATOR ITEM #25



TYPICAL ANSUL R102 SYSTEM LAYOUT
WITH REMOTE MOUNTED AUTOMAN

ANSUL NOZZLE DATA

SYM	QTY	DESCRIPTION	FLOW POINTS EACH	MIN.-MAX. HEIGHT ABOVE HAZARD
1	4	ANSUL #1N	1	30"-40" (RANGE) 35"-40"(GRIDDLE)
2	1	ANSUL #2W	2	
3	1	ANSUL #260	2	30"-40" (RANGE)

UNDERWRITERS LABORATORIES, INC
TESTED UNDER STANDARD U.L. 300 "FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF RESTAURANT COOKING AREAS ".

NFPA®

ANSUL ROUGH-IN SCHEDULE

SYM	DESCRIPTION
A	3/8" SCH 40 BLACK IRON PIPE. ALL EXPOSED PIPING TO BE CHROME SLEEVE OR STN./STL.
B	1/2" EMT CONDUIT
C	MICRO SWITCH FOR ELECTRIC SHUT-DOWN AND/OR FIRE SUPPRESSION SYSTEM ALARM BY CADDY WIRING BY E.C.
D	UP TO 2" MECHANICAL TYPE GAS VALVE FURNISHED BY SUB CONTRACTOR AND INSTALLED BY P.C. ([ ] VERIFY SIZE).

REVISIONS

REV	DATE	BY	REMARKS
A	11/9/21	BJW	NO CHANGES TO THIS SHEET
B	11/9/21	BJW	NO CHANGES TO THIS SHEET
C	01/11/22	KCD	NO CHANGES TO THIS SHEET

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BRIDGEPORT, NJ 08014
TEL:(856) 467-4222 FAX:(856) 467-5511
WWW. CADDYCORP.COM

EQUIPMENT SCHEDULE

ANSUL R-102 3

CADDY NO. 37093 ITEM NO. 27

JOB: PVC CHILD DEVELOPMENT CENTER
LOC: BLYTHE, CA
CUST:
CUST#:

DATE	SCALE	
11/03/2021	AS NOTED	
DR BY SS	APPD BY BJW	DWG# 37093

SHT 2 OF 2

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DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	
SUBMITTAL:	07/06/22

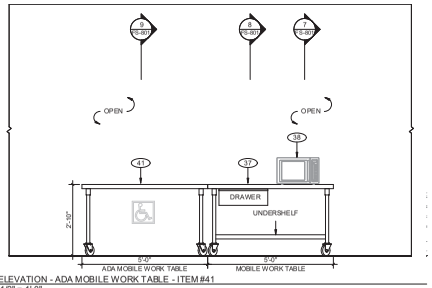
KEY PLAN

SHEET TITLE

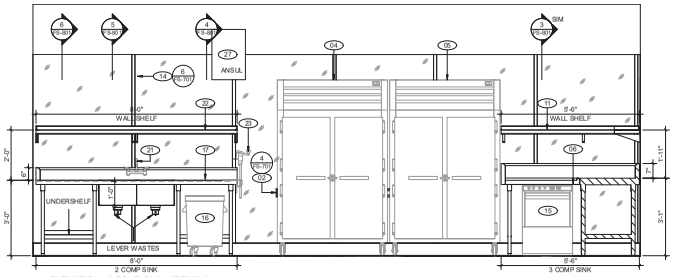
HOOD DETAILS

SHEET NUMBER

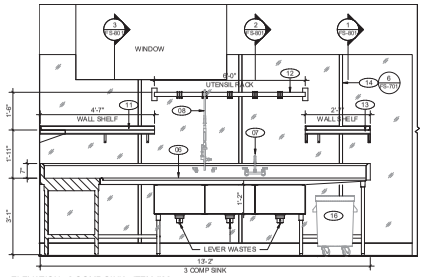
FS-503



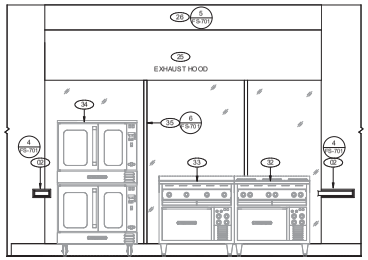
3 ELEVATION - ADA MOBILE WORK TABLE - ITEM #41
1/2" = 1'-0"



2 ELEVATION - 2 COMP SINK - ITEM #17
1/2" = 1'-0"



1 ELEVATION - 3 COMP SINK - ITEM #06
1/2" = 1'-0"



4 ELEVATION - COOKLINE - ITEM #25
1/2" = 1'-0"

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APP: 04-120944 INC.
REVIEWED FOR:
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

PROJECT NAME

PALO VERDE COLLEGE
CHILD DEVELOPMENT CENTER BLYTHE

141 S 2ND STREET
BLYTHE CA, 92225

BUILDER

DESIGN CONSULTANT

SILLMAN
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REGISTRATION STAMPS

LICENSED ARCHITECT
C.L18427
STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	1/2" = 1'-0"
SUBMITTAL:	07/06/22

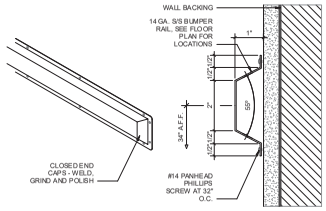
KEY PLAN

SHEET TITLE

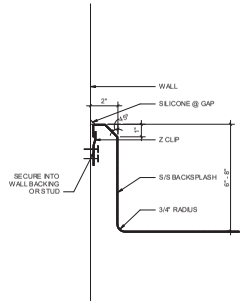
EQUIPMENT ELEVATIONS

SHEET NUMBER

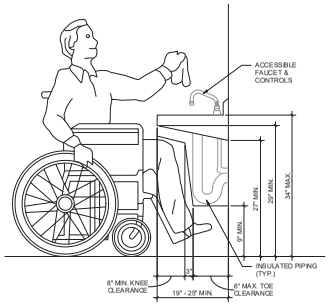
FS-601



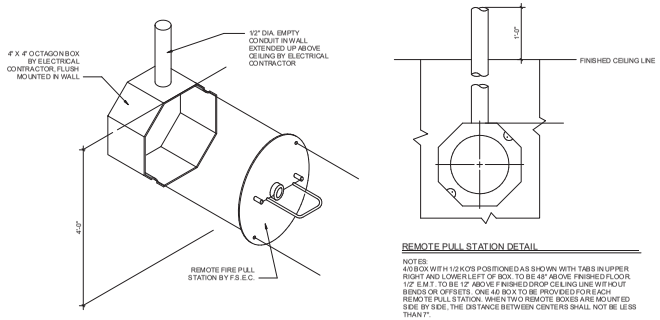
4 BUMPER RAIL DETAIL
NOT TO SCALE



3 BACKSPLASH DETAIL
NOT TO SCALE



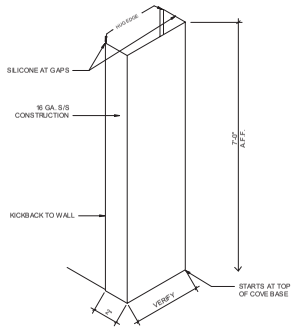
2 ACCESSIBLE HAND SINK DETAIL
NOT TO SCALE



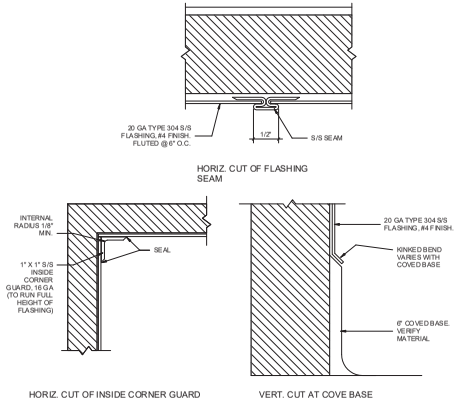
REMOTE PULL STATION DETAIL

NOTES:
4/0 BOX WITH 1/2 KO'S POSITIONED AS SHOWN WITH TABS IN UPPER RIGHT AND LOWER LEFT OF BOX. TO BE 48" ABOVE FINISHED FLOOR. 1/2" E.M.T. TO BE 12" ABOVE FINISHED DROP CEILING LINE WITHOUT BENDS OR OFFSETS. ONE 4/0 BOX TO BE PROVIDED FOR EACH REMOTE PULL STATION. WHEN TWO REMOTE BOXES ARE MOUNTED SIDE BY SIDE, THE DISTANCE BETWEEN CENTERS SHALL NOT BE LESS THAN 7".

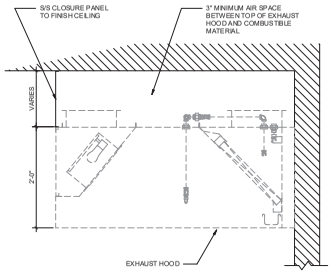
1 FIRE PULL DETAIL
NOT TO SCALE



7 WALL CAP DETAIL
NOT TO SCALE



6 WALL FLASHING DETAIL
NOT TO SCALE



5 HOOD CLOSURE PANEL DETAIL
NOT TO SCALE

CLIENT

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DIV. OF THE STATE ARCHITECT
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DATE: 08/30/2022

PROJECT NAME

PALO VERDE COLLEGE
CHILD DEVELOPMENT CENTER BLYTHE

141 S 2ND STREET
BLYTHE CA, 92225

BUILDER

DESIGN CONSULTANT

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REGISTRATION STAMPS

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STATE OF CALIFORNIA

AGENCY APPROVAL

ISSUE

MARK	DATE	DESCRIPTION

DESIGNER PROJ. NO.

DRAWN BY:	SILLMAN
CHECKED BY:	SILLMAN
SCALE:	NOT TO SCALE
SUBMITTAL:	07/06/22

KEY PLAN

SHEET TITLE

CONSTRUCTION DETAILS

SHEET NUMBER

FS-701

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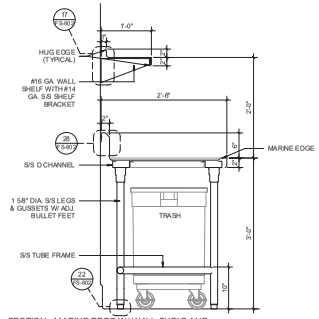
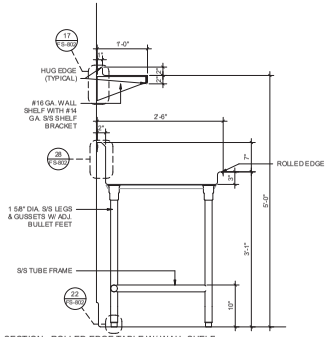
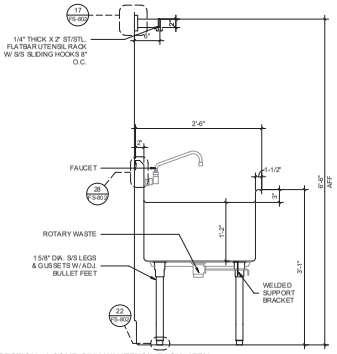


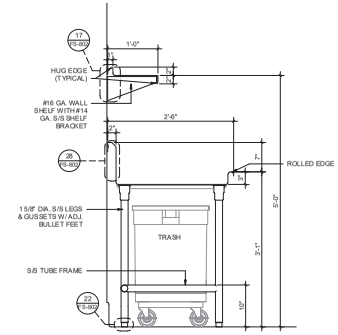
SECTION - MARINE EDGE W/ WALL SHELF AND TRASH - ITEM # 17
4 1" = 1'-0"



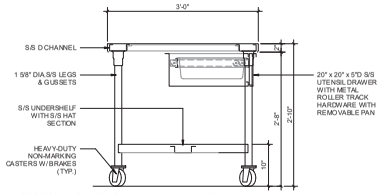
SECTION - ROLLED EDGE TABLE W/ WALL SHELF - ITEM #06
3 1" = 1'-0"



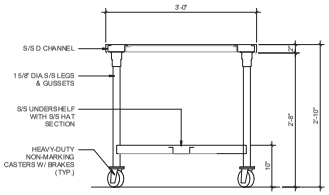
SECTION - 3 COMP SINK W/ UTENSIL RACK - ITEM #06
2 1" = 1'-0"



SECTION - ROLLED EDGE TABLE W/ WALL SHELF AND TRASH - ITEM #06
1 1" = 1'-0"



SECTION - MOBILE WORK TABLE W/ DRAWER - ITEM #37
8 1" = 1'-0"



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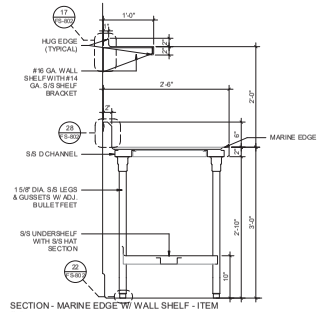
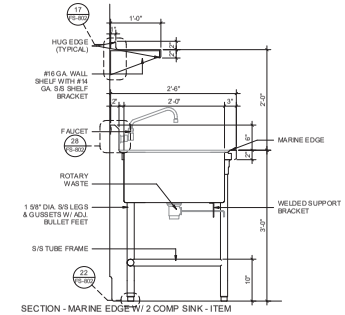
7 1" = 1'-0"



SECTION - MARINE EDGE W/ WALL SHELF - ITEM #17
6 1" = 1'-0"



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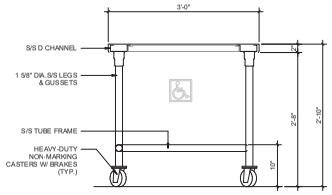
5 1" = 1'-0"



SECTION - ADA MOBILE WORK TABLE - ITEM #41
9 1" = 1'-0"

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KEY PLAN

SHEET TITLE

EQUIPMENT SECTIONS

SHEET NUMBER

FS-801

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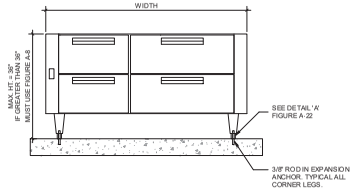


NOTES:

1. THE LEAST PLAN DIMENSION MUST BE GREATER THAN OR EQUAL TO 6/10 HEIGHT OR USE FIGURE A-8.
2. APPLIANCES WITHIN COUNTER MUST BE ATTACHED TO COUNTER IF THE COUNTER IS ATTACHED TO THE FLOOR WITHIN 24" (610 mm) OF APPLIANCE EACH SIDE.

FIGURE A-7 FLOOR MOUNTED APPLIANCE

7 A-7
1" = 1'-0"

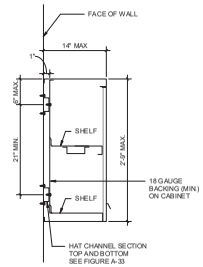
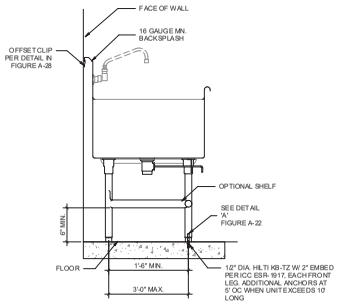


FIGURE A-6 WALL ATTACHMENT

6 A-6
1" = 1'-0"



NOTE:
THE DETAILS SHOWN OF JOINTS AND SEAMS ARE GRAPHIC REPRESENTATIONS ONLY AND ARE NOT INTENDED TO INDICATE SPACING BETWEEN THE METAL ELEMENTS

FIGURE A-2 WALL ATTACHED SINK WORK TABLE WITH WALL CAP

2 A-2
1" = 1'-0"

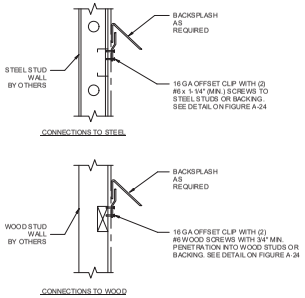


FIGURE A-28 OFFSET CLIPS

28 A-28
1" = 1'-0"

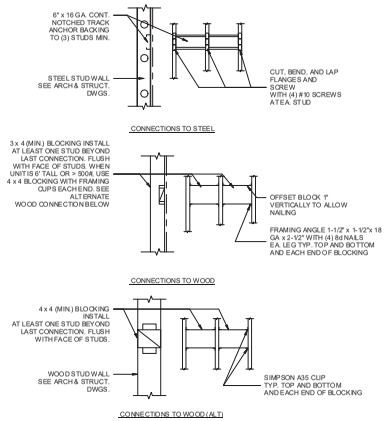


FIGURE A-24 WALL SUPPORT BACKING

24 A-24
1" = 1'-0"

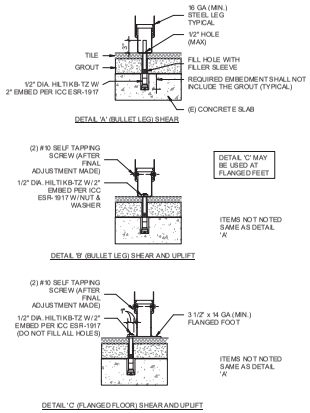


FIGURE A-22 FOOT DETAILS

22 A-22
1" = 1'-0"

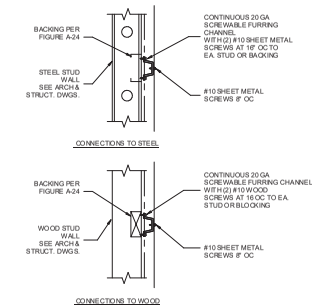


FIGURE A-17 WALL MOUNTED SHELVES

17 A-17
1" = 1'-0"

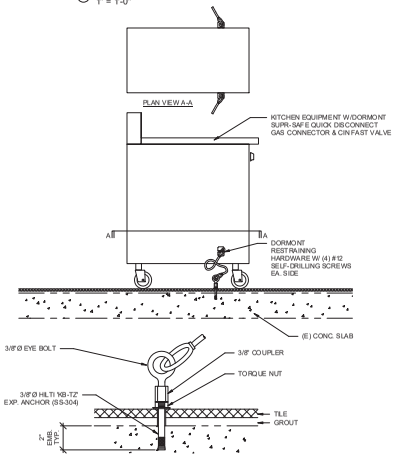


FIGURE A-34 TYPICAL ANCHORAGE FOR MOBILE EQUIPMENT

34 A-34
1" = 1'-0"

FIGURE A-33 FURRING CHANNEL CONNECTIONS

33 A-33
1" = 1'-0"

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SCALE:	1" = 1'-0"
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KEY PLAN

SHEET TITLE

ANCHORAGE DETAILS

SHEET NUMBER

FS-802

FABRIC SHADE STRUCTURE
DSA P.C. 04-119455

SITE SPECIFIC APPLICATION SITE PLAN SHALL INCLUDE:

1. ACTUAL DIMENSIONS OF SHADE STRUCTURES.
2. DIMENSIONS FROM ADJACENT STRUCTURES AND PROXIMITY OF ASSUMED OR ACTUAL PROPERTY LINES.
3. PROVIDE CODE ANALYSIS INCLUDING ACTUAL SHADE STRUCTURE AREA (SQ. FT.), OCCUPANCY TYPE (A-3), AND TYPE OF CONSTRUCTION (V-B), INDICATE OCCUPANT LOAD FACTOR per 2019 CBC, SECTION 1004.
4. INDICATE LOCATIONS OF FIRE EXTINGUISHER WITHIN 75 FEET.
5. SHOW LOCATIONS OF AUDIBLE FIRE ALARM.
6. INDICATE DIMENSIONS FROM THE ROOF TO THE HIGHER STRUCTURE OR TERRAIN FEATURE. MINIMUM DIMENSION OF 20' FOR SNOW LOAD MODEL (ASCE 7-16).
7. ACTUAL SITE ELEVATION (FT.) TO DETERMINE SITE OCCURS AT OR BELOW THE UPPER ELEVATION LIMIT FOR THE GROUND SNOW LOAD SHOWN IN ASCE 7-16 (FOR SNOW LOAD MODEL).
8. FOR RECESSED BASE PLATE (RBP) OPTION: ARCHITECT/ENGINEER OF RECORD TO SPECIFY THE LOWEST ANTICIPATED SERVICE TEMPERATURE (LAST), AS DEFINED IN AISC 341-10 SECTION A.3.4b, A4.1 AND A4.2 PER NOTE ON EACH INDIVIDUAL MODEL ENGINEERING DRAWING WHICH RELATES TO DEMAND CRITICAL WELD AND "L.A.S.T." TEMPERATURE (EITHER STRUCTURAL STEEL NOTE #14).
9. COMPLETE SCOPE OF WORK INCLUDING THE SHADE STRUCTURE MODEL NUMBER, P.C. NUMBER, AND SPECIFIC SIZE OF SHADE STRUCTURE.
10. ALL SADDLES, CLAMPS AND FITTINGS SHALL CONFORM TO THE GUIDELINES AS SPECIFIED IN APPENDICES "A, B & C" RESPECTIVELY IN ASCE 19-16, "STRUCTURAL APPLICATIONS OF STEEL CABLES FOR BUILDINGS."
11. ARCHITECTS OF RECORD TO DETERMINE IF SPECIFIC SITE IS IN MAPPED GEOLOGIC HAZARD ZONE. GEOHAZARD REPORT REQUIREMENTS PER DSA IR A-4.
12. ARCHITECTS OF RECORD TO DETERMINE IF SPECIFIC SITE IS IN A MAPPED FIRE HAZARD SEVERITY ZONE OR WILDLAND INTERFACE AREA.

GENERAL NOTES

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-119455 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☒ CG ☐
DATE: 03/26/2021

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF USA SHADE AND FABRIC STRUCTURES AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN

CORPORATE HEADQUARTERS
2580 ESTERS BLVD. SUITE 100
DFW AIRPORT, TX, 75261
800-966-5005

CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
CLARK COUNTY MANUFACTURER CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
Palo Verde College

PROJECT NAME:
Palo Verde College

LOCATION:
One College Drive
Blythe, CA 92225

MODEL NUMBER:

SITE SPECIFIC APPLICATION TITLE SHEET SHALL INCLUDE:

PARTIAL LIST OF APPLICABLE CODES

- 2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 C.C.R.
- 2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
  (2018 INTERNATIONAL BUILDING CODE VOLUMES 1-2 AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA ELECTRICAL CODE (CEC) , PART 3, TITLE 24 C.C.R.
  (2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.
  (2018 IAPMO UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
  (2018 IAPMO UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.
- 2019 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.
  (2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 C.C.R.
  (2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA AMENDMENTS)
- 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 C.C.R.
- 2019 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 C.C.R.
- TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
- 2016 ASME A17.1/CSA B44-13 SAFETY CODE FOR ELEVATORS AND ESCALATORS
  (PER 2019 CBC, PART 2, CHAPTER 35)

NOTE: CAL/OSHA ELEVATOR UNIT ENFORCES C.C.R. TITLE 8 AND USES THE 2004 ASME A17.1 BY ADOPTION

PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 13	STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED)	2016 EDITION
NFPA 14	STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS	2016 EDITION
NFPA 17	STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS	2017 EDITION
NFPA 17A	STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS	2017 EDITION
NFPA 20	STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION	2016 EDITION
NFPA 22	STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION	2013 EDITION
NFPA 24	STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES	2016 EDITION
NFPA 72	NATIONAL FIRE ALARM & SIGNALING CODE (CA AMENDED)	2016 EDITION
NFPA 80	STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 2001	STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION
UL 300	STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT	2005 (R2010)
UL 464	AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES	2003 EDITION
UL521	STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	1999 EDITION
UL 1971	STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED	2002 (R2010)
ICC 300	SANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING AND GRANDSTANDS	2017 EDITION

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2019 CBC (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

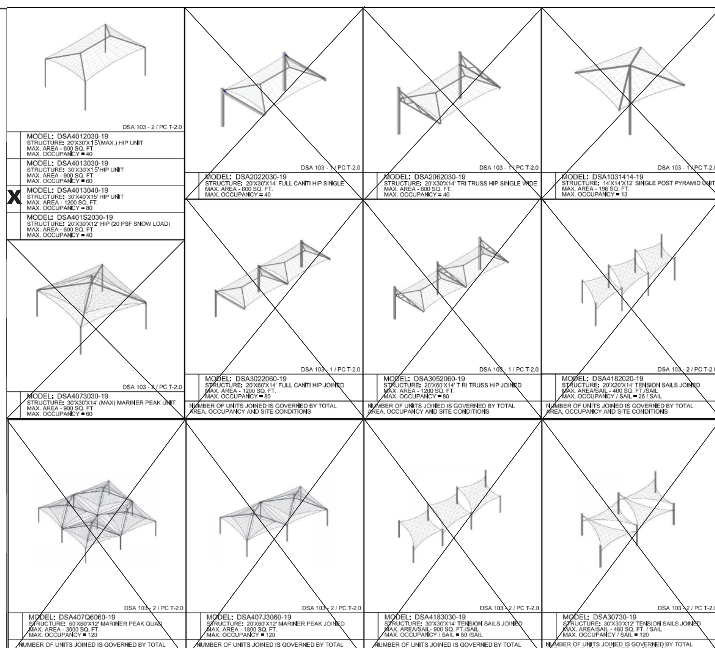
SEE CALIFORNIA BUILDING CODE, CHAPTER 35, FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.

SEE INDIVIDUAL STRUCTURAL DRAWINGS FOR SPECIFIC DESIGN NOTES AND LOADING.

ALL WORK SHALL CONFORM TO 2019 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (C.C.R.).

ALL WORK SHALL BE IN COMPLIANCE WITH CFC CHAPTER 33 - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

BUILDING CODE DATA



UNIT SELECTION AND DESCRIPTION

	DRAWING NUMBER	DRAWING DESCRIPTION	STRUCTURE TYPE	MAX SIZE	MODEL NUMBER
	P.C. T-1.0	P.C. TITLE SHEET			
	P.C. T-2.0	DSA 103 SAMPLE FORM			
	P.C. T-2.1	DSA 103 SAMPLE FORM			
	P.C. T-3.0	DSA 103 SAMPLE FORM			
	P.C. T-3.1	DSA 103 SAMPLE FORM			
	1.1-1000	PRODUCT INFORMATION	HIP	20 X 30	DSA4012030-19
	1.2-2000	REACTIONS	HIP	20 X 30	DSA4012030-19
	2.1-1000	PRODUCT INFORMATION	HIP	30 X 30	DSA4013030-19
	2.2-2000	REACTIONS	HIP	30 X 30	DSA4013030-19
	3.1-1000	PRODUCT INFORMATION	HIP	30 X 40	DSA4013040-19
	3.2-2000	REACTIONS	HIP	30 X 40	DSA4013040-19
	4.1-1000	PRODUCT INFORMATION	HIP (20# SNOW LOAD)	20 X 30	DSA401S2030-19
	4.2-2000	REACTIONS	HIP (20# SNOW LOAD)	20 X 30	DSA401S2030-19
	5.1-1000	PRODUCT INFORMATION	SINGLE POST PYRAMID	14 X 14	DSA1031414-19
	5.2-2000	REACTIONS	SINGLE POST PYRAMID	14 X 14	DSA1031414-19
	6.1-1000	PRODUCT INFORMATION	MARINER	30 X 30	DSA4073030-19
	6.2-2000	REACTIONS	MARINER	30 X 30	DSA4073030-19
	7.1-1000	PRODUCT INFORMATION	JOINED MARINER	30 X 200	DSA407J3060-19
	7.2-2000	REACTIONS	JOINED MARINER	30 X 200	DSA407J3060-19
	8.1-1000	PRODUCT INFORMATION	QUAD MARINER	60 X 60	DSA407Q6060-19
	8.2-2000	REACTIONS	QUAD MARINER	60 X 60	DSA407Q6060-19
	9.1-1000	PRODUCT INFORMATION	FULL CANTILEVER	20 X 30	DSA2022030-19
	9.2-2000	REACTIONS	FULL CANTILEVER	20 X 30	DSA2022030-19
	10.1-1000	PRODUCT INFORMATION	FULL CANTILEVER JOINED	20 X 300	DSA3022060-19
	10.2-2000	REACTIONS	FULL CANTILEVER JOINED	20 X 300	DSA3022060-19
	11.1-1000	PRODUCT INFORMATION	TRI TRUSS CANTILEVER	20 X 30	DSA2062030-19
	11.2-2000	REACTIONS	TRI TRUSS CANTILEVER	20 X 30	DSA2062030-19
	12.1-1000	PRODUCT INFORMATION	TRI TRUSS CANTILEVER JOINED	20 X 300	DSA3052060-19
	12.2-2000	REACTIONS	TRI TRUSS CANTILEVER JOINED	20 X 300	DSA3052060-19
	13.1-1000	PRODUCT INFORMATION	THREE POINT SAILS	30 X 200	DSA30730-19
	13.2-2000	REACTIONS	THREE POINT SAILS	30 X 200	DSA30730-19
	14.1-1000	PRODUCT INFORMATION	FOUR-POINT SAILS	20 X 300	DSA4182020-19
	14.2-2000	REACTIONS	FOUR-POINT SAILS	20 X 300	DSA4182020-19
	15.1-1000	PRODUCT INFORMATION	FOUR POINT SAILS	30 X 200	DSA4183030-19
	15.2-2000	REACTIONS	FOUR POINT SAILS	30 X 200	DSA4183030-19

SHEET INDEX - P.C. DRAWINGS

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REGISTERED PROFESSIONAL ENGINEER MARK ALBERT LOWE No. 3593 STRUCTURAL STATE OF CALIFORNIA
12/04/2020

ENGINEER OF RECORD

STRUCTURE TYPE:

SCALE : VARIES

DRAWING SIZE: **D**

PRE-CHECK (PC) DOCUMENT
Code : 2019 CBC
A separate project application for construction is required.

Eng. By :	DWH	09/18/20
Design By :	DWH	09/18/20
Approved By :	DWH	09/18/20

DRAWING DESCRIPTION:
P.C. TITLE SHEET

DWG.

SHEET **P.C. T-1.0**

REV.

GENERAL NOTES
DESIGN LOADS

BUILDING CODE	CBC 2019 (BASED ON IBC 2018)
LIVE LOADS	5 PSF
SNOW LOAD	5 PSF
WIND LOADS	115 MPH (3-Sec. Gust); EXPOSURE C; TOPOGRAPHIC FACTOR , Kzt = 1.0

1.- SPECIAL INSPECTION REQUIREMENTS SHALL FOLLOW THE ATTACHED SAMPLE TEST AND INSPECTION LIST (T & I LIST) APPROVED BY DSA. THE SHOP WELDING INSPECTION SHALL INCLUDE WELDING OF ALL STEEL MEMBERS AND IDENTIFICATION OF STEEL THROUGH MILL CERTIFICATE OR MATERIAL TESTING. UNCERTIFIED STEEL SHALL BE TESTED TO THE REQUIREMENTS OF CBC 2019 CHAPTER 17A. THE FIELD SPECIAL INSPECTION SHALL INCLUDE COMPRESSION CYLINDER TESTS FOR THE CONCRETE FOUNDATION.

2.- STRUCTURE SHALL BE IN THE LOCATION SHOWN ON THE SITE SPECIFIC DSA APPLICATION DRAWING.

3.- FOUNDATION DESIGN BASED ON CBC 2019, TABLE 1806A.2, SOIL CLASS 5 (ALLOWABLE FOUNDATION PRESSURE 1500 PSF)

4.- DESIGN PER FOLLOWING CODES: CBC 2019, ASCE 7-16, AISC 360-16, AISC 341-16, ACI 318-14, ASCE 55-16 & ASCE 19-16

STRUCTURAL STEEL

1.- FABRICATION OF THE STEEL STRUCTURES SHALL BE PERFORMED BY SHADE STRUCTURES OR AN AUTHORIZED LICENSEE. MATERIAL TESTING (OR MILL CERTIFICATES) AND INSPECTION OF WELDING SHALL BE CONDUCTED PER CBC 2019 SECTIONS 1704A, 1705A, 1705A.2, AND TABLE 1705A.2.1.

2.- ONLY CALIFORNIA LICENSED CONTRACTORS AUTHORIZED BY SHADE STRUCTURES SHALL INSTALL THE SHADE STRUCTURES.

3.- ALL WORK SHALL CONFORM TO CBC 2019 EDITION, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)

4.- ALL GALVANIZED STEEL TUBE PRODUCTS MANUFACTURED BY ALLIED TUBE & CONDUIT FOR THIS STRUCTURE SHALL BE, AND CONFORM TO ASTM A500-16, IN ITS' ENTIRETY.
TYPICAL MECHANICAL PROPERTIES ARE:
ROUND TUBE 42,000 PSI YIELD STRESS MINIMUM / 48,000 PSI TENSILE STRESS MINIMUM

5.- ALL STRUCTURAL SHAPES SHALL BE COLD FORMED HSS ASTM A500 GRADE B, UNLESS OTHERWISE NOTED. TYPICAL MECHANICAL PROPERTIES ACHIEVED FOR HSS PRODUCTS:
SQUARE AND RECTANGULAR 46,000 PSI YIELD STRESS / 58,000 PSI TENSILE STRESS
ROUND PIPE 42,000 PSI YIELD STRESS / 58,000 PSI TENSILE STRESS

6.- ALL PLATES PRODUCTS SHALL COMPLY WITH ASTM A572 GRADE 50.

7.- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.

8.- ALL WELDING TO CONFORM WITH AMERICAN WELDING SOCIETY STANDARDS AND SHALL BE INSPECTED BY AN AWS/CWI INSPECTOR. AWS D1.1 FOR HOT ROLLED. AWS D1.3 FOR SHEET/COLD FORMED. AWS D1.8 SEISMIC SUPPLEMENT.

9.- ALL FULL PENETRATION WELD SHALL BE CONTINUOUSLY INSPECTED PER AWS D1.1 & D1.8.

10.- SHOP CONNECTIONS SHALL BE WELDED UNLESS NOTED OTHERWISE. FIELD CONNECTIONS SHALL BE AS INDICATED ON THE DRAWINGS (IF REQUIRED). ALL FILLET WELDS SHALL BE A MINIMUM OF 3/16" ER70SX ELECTRODES UNLESS OTHERWISE NOTED. EITHER SMAW OR GMAW IS ACCEPTABLE.

11.- ALL HIGH STRENGTH BOLTS SHALL COMPLY WITH ASTM F3125 GRADE A325 N (GALVANIZED). ALL NUTS SHALL COMPLY WITH ASTM A563DH, AND WASHERS SHALL COMPLY WITH ASTM F436. ALL HIGH STRENGTH BOLTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION.

12.- ALL STRUCTURAL STEEL (ITEMS FROM NOTE 5) SHALL BE POWDER COATED WITH ONE SHOP COAT (2.5 MILS MIN.) OF ZINC-RICH PRIMER, UNDERCOAT, AND FINISH COAT, OR EQUIVALENT PAINT SYSTEM. THIS COAT IS A WEATHER RESISTANT POWDER COATING BASED ON POLYESTER TGIC (MANUFACTURED BY SHERWIN WILLIAMS, ASKO NOBEL, PPG OR TIGER DRYLAC). TO ACHIEVE OPTIMUM ADHESION, IT IS RECOMMENDED THAT THE PROPER TREATMENT AND DRYING TAKE PLACE BEFORE COATING. POLYESTER POWDER (TGIC) SPECIFICATIONS SHALL BE AS FOLLOWS:
- PENCIL HARDNESS (ASTM D-3363). - HUMIDITY (ASTM D-2247).
- SOLVENT RESISTANCE (PCI METHOD) - 50 DBL RUBS SL. SOFTNESS.

13.- ALL STEEL ROUND TUBING (ITEMS FROM NOTE 4) SHALL BE TRIPLE COATED FOR RUST PROTECTION USING THE IN-LINE ELECTROPLATING COAT PROCESS. TUBING SHALL BE INTERNALLY COATED WITH ZINC AND ORGANIC COATINGS TO PREVENT CORROSION AS MANUFACTURED BY ALLIED TUBE & CONDUIT.

14.- COLD-FORMED STEEL MEMBERS SHALL BE 55% ALUMINUM ZINC ALLOY COATED PER ASTM A792/A792M STANDARD IN ACCORDANCE TO AISI S200 TABLE A4-1, CP 90 COATING DESIGNATION. ALL EXPOSED STEEL FASTENERS SHALL BE STAINLESS STEEL (TYPE 304 MINIMUM), HOT DIP GALVANIZED (ASTM A153, CLASS D MINIMUM OR ASTM F2329), OR PROTECTED WITH CORROSION PREVENTIVE COATING THAT DEMONSTRATED NO MORE THAN 2% OF RED RUST IN MINIMUM 1,000 HOURS OF EXPOSURE IN SALT SPRAY TEST PER ASTM B117. ZINC-PLATED FASTENERS DO NOT COMPLY WITH THIS REQUIREMENT.

CONCRETE SPECIFICATION

1.- CONCRETE SHALL BE SAMPLED AND TESTED PER CBC 2019 SECTION 1903A & SHALL BE INSPECTED PER SECTION 1903A.

2.- CONCRETE TO BE F'c= 4500 PSI, TYPE V CEMENT, WATER/CEMENT RATIO OF 0.45, PER ACI 318-14 CHAPTER 5. REINFORCING STEEL TO BE Fy= 60000 PSI , MIN. GR. 60

3.- ALL ANCHOR BOLTS SET IN NEW CONCRETE (WHEN APPLICABLE) SHALL COMPLY WITH ASTM F-1554 GRADE 55 (GALVANIZED PER ASTM A153, CLASS D MINIMUM OR ASTM F2329).
ANCHOR BOLT'S EMBEDMENT NEEDS TO BE AS FOLLOW:
A) ANCHOR BOLT Ø1 1/4" 30 IN (MINIMUM EMBEDMENT)

4.- CERTIFIED MILL TEST REPORTS ARE TO BE PROVIDED FOR EACH SHIPMENT OF REINFORCEMENT.

5.- ALL NON-SHRINK GROUT SHALL HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 5000 PSI, AND SHALL COMPLY THE REQUIREMENTS OF ASTM C109, ASTM C939, ASTM C1090, ASTM C1107, WHEN APPLICABLE.

FABRIC SPECIFICATION

1.- FABRIC SHALL BE MANUFACTURED BY MULTIKNIT LTD. OR OTHER COMPANY WHO CAN MANUFACTURE FABRIC, WHICH MEETS THE SPECIFICATIONS LISTED ON PAGE 2000, AND SHALL BE FABRICATED FROM POLYETHYLENE MATERIALS.

2.- THE FABRIC SHALL RETAIN 80% OF ITS TENSILE AND TEARING STRENGTH AFTER ULTRAVIOLET EXPOSURE PER ASTM G53 USING A 313 NM LIGHT SOURCE FOR 500 HOURS WHILE MOISTENED FOR 1 HOUR EVERY 12 HOURS.

3.- PROVIDE CERTIFICATION BY MANUFACTURER AND STATE FIRE MARSHAL TO SCHOOL'S DISTRICT INSPECTOR OF RECORD AT SITE SPECIFIC INSTALLATION. COPY OF FIRE CERTIFICATION SHALL BE SENT TO DSA.

4.- FABRIC SHALL REQUIRE ANNUAL INSPECTION AND MAINTENANCE BY THE DISTRICT. FABRICS SAMPLES OF THE SAME MATERIAL WHICH ARE MAINTAINED AT THE PROJECTS SITE SHALL BE TESTED TO BE IN COMPLIANCE WITH ASTM D5034 AND D2261. THE ANNUAL TESTING ON THE APPROVED PLANS SHALL BE COMPARED TO THE FABRIC SPECIFICATIONS INDICATED IN NOTE 1 OF "FABRIC SPECIFICATION" ON THE APPROVED PLANS. THE FABRIC SHALL BE REPLACED WHEN THE TEST RESULTS RETURN LESS THAN 50% OF THE ULTIMATE VALUES IN NOTE 1 OF "FABRIC SPECIFICATION". FIRE TEST ON FABRIC: NFPA 701 TEST 2 AND ASTM E 84 EXTENDED 30 MINUTES TEST. FLAME SPREAD INDEX (FSI): 10. SMOKE DEVELOPED INDEX (SDI): 50. FABRIC IS ACCEPTABLE FOR USE IN WILDLIFE URBAN INTERFACE AREA.

5.- FABRIC TOP NEEDS TO BE REMOVED IF SNOW EXCEEDING 5 PSF ARE ANTICIPATED, FABRIC TOP NEEDS TO BE REMOVED IF WINDS EXCEEDING 115 MPH ARE ANTICIPATED.

6.- A VISUAL INSPECTION LOOKING FOR TEAR AND ABNORMAL WEAR IN FABRIC MATERIAL AND THREAD IS REQUIRED PRIOR TO RE-INSTALLATION. USA SHADE & FABRIC STRUCTURES SHALL BE NOTIFIED IF SIGNIFICANT DAMAGE IS PRESENT BEFORE RE-INSTALLATION.

AIRCRAFT CABLE

1.- FOR FABRIC ATTACHMENT USE 3/8" 7x19 GALV. CABLE PER ASTM A1023A, ASTM 1023M-02, WITH A BREAKING STRENGTH VALUE OF 14,400 LBS. CABLE SHALL BE TENSIONED TO 250 LBS MINIMUM. THE MAXIMUM CALCULATED CABLE ALLOWABLE CAPACITY IS Sa=4909 LB.

2.- CABLES SHALL BE FED THROUGH THE FABRIC SLEEVES AROUND THE PERIMETER OF THE CANOPY AND TENSIONED UNTIL THE FABRIC PANELS (DESIGNED PURPOSELY UNDERSIZED) REACH A TAUT APPEARANCE. ANY LONG TERM CABLE SAG SHALL BE MINIMIZED DURING THE MAINTENANCE RE-TIGHTING VISITS AS REQUIRED.

2019 CBC PC DESIGN NOTES

FLOOR LIVE LOAD N/A
ROOF LIVE LOAD RLL 5 PSF

ALLOWABLE SOIL PRESSURE:
DL + LL (CONC FTG) 1500 PSF
DL + LL + SEISMIC (CONC FTG) 1500 PSF
LATERAL BEARING DESIGN VALUE 100 PSF/FT BELOW NATURAL GRADE, PER TABLE 1806A.2

TWO TIMES THE TABULAR VALUE IS USED (200 PSF/FT)
PER CBC SECTION 1806A.3.4.
ALLOWABLE PIER FRICTIONAL RESISTANCE 250 PSF MAXIMUM
BASED ON SECTION 1810A.3.3.1.4 (ONE-SIXTH OF THE BEARING VALUE).
UPLIFT FRICTIONAL RESISTANCE HAVE A SAFETY FACTOR OF 3.

ROOF SNOW LOAD 5 PSF
ICE LOAD ZERO PSF
FLOOD HAZARD AREA NO
WHEN A SITE SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X, A LETTER STAMPED AND SIGNED FROM A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL VALUES SPECIFIED IN THE PC ARE STILL APPLICABLE.

WIND DESIGN DIRECTIONAL PROCEDURE: ASCE 7-16, SECTION 27.3.2
-BASIC DESIGN WIND SPEED (3 SEC GUST) V 115 MPH
-WIND EXPOSURE FACTOR C
-TOPOGRAPHIC FACTOR Kzt 1
-RISK CATEGORY II
-VELOCITY PRESSURE EXPOSURE COEFFICIENT Kz 0.88
-VELOCITY PRESSURE qz 25.32 PSF

SEISMIC DESIGN:
-SITE CLASS D
SS 3.00g
S1 1.389g
-SPECTRAL RESPONSE COEFFICIENTS SDS 2.00
SD1 1.39

-LATERAL FORCE RESISTING SYSTEM G.2 ORDINARY CANTILEVERED COLUMN SYSTEM.

-SEISMIC IMPORTANCE FACTOR I 1.0
-DESIGN BASE SHEAR V 4210 LB
-SEISMIC RESPONSE COEFFICIENTS Cs 1.6
-RESPONSE MODIFICATION FACTOR R 1.25
-ANALYSIS PROCEDURE EQUIVALENT LATERAL FORCE
-RISK CATEGORY II
-SEISMIC DESIGN CATEGORY E
-SITE COEFFICIENT CATEGORY Fa 1
Fv 1.5

GEOHAZARD REPORT IS NOT REQUIRED FOR OPEN FABRIC STRUCTURES 1,600 SQF OR LESS COMPLYING WITH THE REQUIREMENTS OF IR A-4 SECTION 3.1.1. OPEN FABRIC SHADE STRUCTURES GREATER THAN 1,600 SQUARE FEET UP TO A MAXIMUM OF 4,000 SQUARE FEET AND COMPLYING WITH THE REQUIREMENTS NOTED IN IR A-4 SECTION 3.1.1 DO NOT REQUIRE A GEOHAZARD REPORT PROVIDED A GEOTECHNICAL REPORT INDICATES THAT NO LIQUEFACTION POTENTIAL EXISTS.

ARCHITECT OF RECORD TO DETERMINE IF SPECIFIC SITE IS IN GEOLOGIC HAZARD ZONE, GEOHAZARD REPORT REQUIREMENTS PER DSA IR A-4.

PC OPTIONS SHALL NOT INCLUDE LIQUEFIABLE SOIL (EXCEPTION: OPEN FABRIC SHADE STRUCTURES 1,600 SQUARE FEET OR LESS COMPLYING WITH REQUIREMENTS OF IR A-4 SECTION 3.1.1). IF STRUCTURE IS LOCATED IN AN AREA WITH LIQUEFIABLE SOIL OR SITE CLASS F, OVER-THE-COUNTER SUBMITTAL IS NOT ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIRED. IF SITE IS NOT IN A MAPPED LIQUEFACTION HAZARD ZONE, IT MAY BE PRESUMED THAT NO LIQUEFACTION HAZARD EXISTS ON THAT SITE UNLESS A SITE-SPECIFIC GEOTECHNICAL REPORT IDENTIFIES SUCH HAZARD.

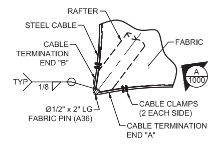
MINIMUM FOUNDATION SETBACK LIMIT IN ADJACENT SLOPE: THE DEPTH OF REQUIRED PIER EMBEDMENT SHALL START FROM AN ELEVATION THAT CORRESPONDS WITH A HORIZONTAL CLEAR DISTANCE OF 14 FEET THAT INTERSECT WITH THE SLOPE (DAYLIGHTING). IF SETBACK LIMITS ARE SMALLER THAN CBC REQUIRES, A SITE-SPECIFIC SOILS REPORT IS REQUIRED.

MINIMUM CLASS 2 PROJECT INSPECTOR REQUIRED.

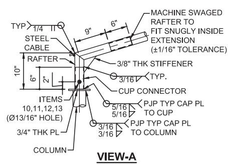
CODE ANALYSIS

BUILDING	OCCUPANCY	CONST. TYPE	AREA (SQ. FT.)	OCCUPANT LOAD FACTOR	OCCUPANT LOAD
SHADE STRUCTURE					

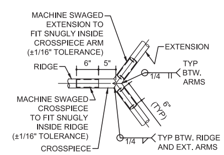
MAXIMUM OCCUPANT LOAD (PER CBC 2019 TABLE 1604A.5)
-K-12: 250 PERSONS
-PUBLIC ASSEMBLY: 300 PERSONS
-EDUCATIONAL OCCUPANCIES ABOVE 12TH GRADE: 500 PERSONS



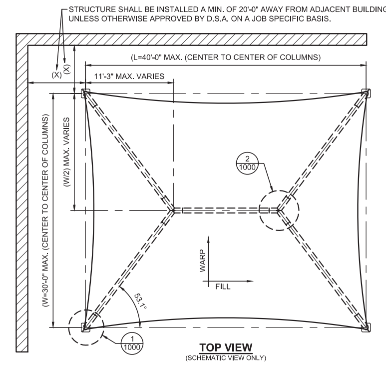
DETAIL 1
REFER TO TOP VIEW



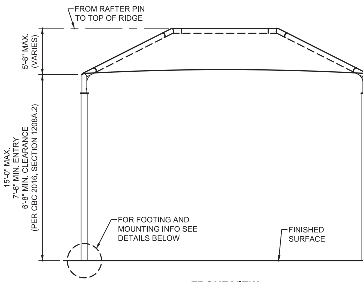
VIEW-A
REFER TO DETAIL-1



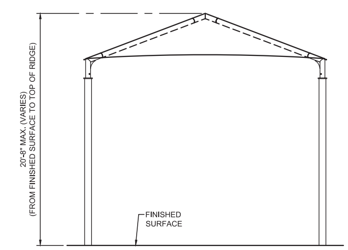
DETAIL-2
REFER TO TOP VIEW



TOP VIEW
(SCHEMATIC VIEW ONLY)



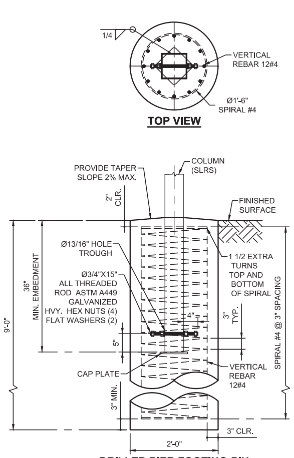
FRONT VIEW
(SCHEMATIC VIEW ONLY)



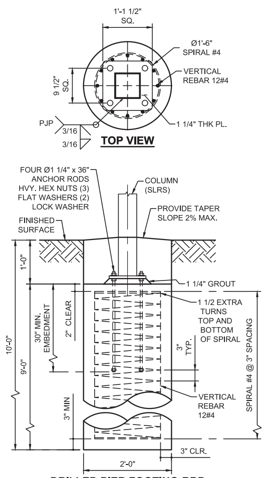
SIDE VIEW
(SCHEMATIC VIEW ONLY)

LIST OF MATERIALS

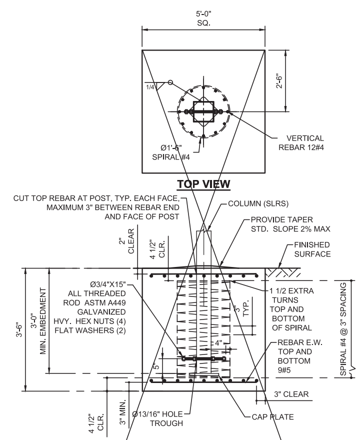
ITEM	QTY	DESCRIPTION	MATERIAL
1	4	COLUMN	HSS 7.0 x 7.0 x 0.250
2	4	CUP CONNECTOR (6" LG)	HSS 5.0 x 0.375
3	4	RAFTER	HSS 5.563 x 0.258
4	4	EXTENSION	HSS 5.563 x 0.258
5	2	CROSSPIECE	HSS 5.563 x 0.258
6	1	RIDGE	HSS 5.563 x 0.258
7	1	FABRIC TOP	FR COLOURSHADE Z25
8	1	3/8" CABLE	GALVANIZED STEEL
9	4	3/8" CABLE CLAMP	GALVANIZED STEEL
10	4	3/4"-10NC x 7" HEX BOLT	ASTM F3125 GRADE A325, GALVANIZED
11	4	3/4"-10NC HEX NUT	ASTM A563 GALVANIZED
12	4	3/4" SPLIT LOCK WASHER	ASTM F436 GALVANIZED
13	8	3/4" FLAT WASHER	ASTM F436 GALVANIZED



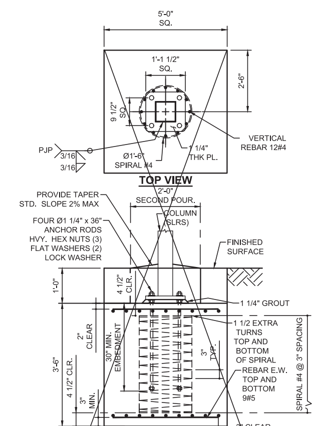
DRILLED PIER FOOTING-PIH
(EMBEDDED, PIH)
(USE FOR NON-CONSTRAINED CASES)



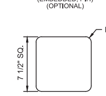
DRILLED PIER FOOTING-RBP
(RECESSED BASE PLATE, RBP)
(USE FOR NON-CONSTRAINED CASES)
(OPTIONAL)



ALTERNATE SPREAD FOOTING
(EMBEDDED, PIH)
(OPTIONAL)



ALTERNATE SPREAD FOOTING
(RECESSED BASE PLATE, RBP)
(OPTIONAL)



CAP PLATE
(3/4" THK)
(TYP. FOR ALL COLUMNS)
(TOP OF RBP COLUMNS)
(TOP & BOT. OF PIH COLUMNS)

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF USA SHADE AND FABRIC STRUCTURES AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.

USASHADE & Fabric Structures
CORPORATE HEADQUARTERS
2580 ESTERS BLVD. SUITE 100
DFW AIRPORT, TX, 75261
800-966-5005

CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
CLARK COUNTY MANUFACTURER CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
Palo Verde College

PROJECT NAME:
Palo Verde College

LOCATION:
One College Drive
Blythe, CA 92225

MODEL NUMBER:
DSA4013040-19

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-119455 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 03/26/2021

STRUCTURE TYPE:
HIP
DSA

SIZE: MAXIMUM
30' x 40' x 15'e MAX.

SCALE : NONE

DRAWING SIZE:
D

PRE-CHECK (PC) DOCUMENT
Code : 2019 CBC
A separate project application for construction is required.

Eng. By :	JO	06/26/20
Design By :	JO	06/26/20
Approved By :	JO	06/26/20

DRAWING DESCRIPTION:
PRODUCT INFORMATION

DWG. DSA4013040-19

SHEET 3.1-1000

REV. NC

ENVELOPE JOINT REACTIONS

Shear resultant = $\sqrt{Px^2 + Py^2 + Pz^2}$ Moment resultant = $\sqrt{Mx^2 + My^2 + Mz^2}$

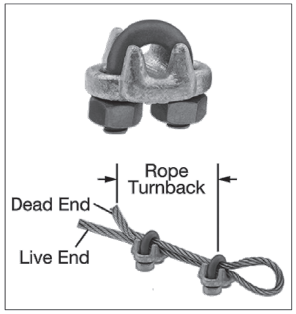
ASD REACTIONS												
Node		Support Forces [kip]			Support Moments [kipft]				Support Forces [kip]	Support Moments [kipft]	Support Forces [kip]	Support Forces [kip]
No.		P_X	P_Y	P_Z	M_X	M_Y	M_Z		SHEAR RESULTANT	MOMENT RESULTANT	UPLIFT	AXIAL
						MAXIMUM REACTIONS			1.744	20.730	1.488	-2.858
Node		Support Forces [kip]			Support Moments [kipft]							
No.		P_X	P_Y	P_Z	M_X	M_Y	M_Z					
84	Max	1.648	1.499	1.488	3.291	19.156	1.328					
	Min	-0.921	-0.326	-2.609	-17.322	-11.388	-1.766					
	Max P_X	1.648	-0.317	1.352	0.824	19.156	-1.722	CO 5	1.678	19.174	1.352	
	Min P_X	-0.921	1.424	-1.937	-16.457	-11.115	0.847	CO 7	1.696	19.859		-1.937
	Max P_Y	-0.892	1.499	-2.558	-16.471	-9.315	0.170	CO 11	1.744	18.923		-2.558
	Min P_Y	1.008	-0.326	0.447	2.030	10.749	-0.580	CO 4	1.059	10.939	0.447	
	Max P_Z	1.571	-0.290	1.488	0.650	18.105	-1.766	CO 34	1.598	18.117	1.488	
	Min P_Z	0.083	0.397	-2.609	-2.202	3.884	0.555	CO 10	0.406	4.465		-2.609
	Max M_X	0.491	-0.134	-1.732	3.291	7.592	1.282	CO 2	0.509	8.275		-1.732
	Min M_X	-0.919	1.456	-1.689	-17.322	-11.388	0.986	CO 32	1.722	20.730		-1.689
	Max M_Y	1.648	-0.317	1.352	0.824	19.156	-1.722	CO 5	1.678	19.174	1.352	
	Min M_Y	-0.919	1.456	-1.689	-17.322	-11.388	0.986	CO 32	1.722	20.730		-1.689
	Max M_Z	0.468	-0.099	-1.735	2.920	7.509	1.328	CO 31	0.478	8.057		-1.735
	Min M_Z	1.571	-0.290	1.488	0.650	18.105	-1.766	CO 34	1.598	18.117	1.488	
86	Max	1.285	1.010	0.553	6.020	19.378	3.569					
	Min	-0.261	-0.631	-2.858	-10.130	-1.285	-1.333					
	Max P_X	1.285	0.514	-2.177	-6.987	19.378	3.569	CO 32	1.384	20.599		-2.177
	Min P_X	-0.261	-0.571	-1.580	5.450	-1.285	0.562	CO 30	0.628	5.599		-1.580
	Max P_Y	0.294	1.010	0.017	-10.130	3.282	0.394	CO 19	1.052	10.648	0.017	
	Min P_Y	-0.254	-0.631	-1.896	6.020	-0.980	0.655	CO 1	0.680	6.099		-1.896
	Max P_Z	0.532	0.766	0.553	-6.875	4.107	-0.378	CO 34	0.933	8.008	0.553	
	Min P_Z	0.620	-0.239	-2.858	1.059	11.930	2.881	CO 11	0.664	11.977		-2.858
	Max M_X	-0.254	-0.631	-1.896	6.020	-0.980	0.655	CO 1	0.680	6.099		-1.896
	Min M_X	0.294	1.010	0.017	-10.130	3.282	0.394	CO 19	1.052	10.648	0.017	
	Max M_Y	1.285	0.514	-2.177	-6.987	19.378	3.569	CO 32	1.384	20.599		-2.177
	Min M_Y	-0.261	-0.571	-1.580	5.450	-1.285	0.562	CO 30	0.628	5.599		-1.580
	Max M_Z	1.285	0.514	-2.177	-6.987	19.378	3.569	CO 32	1.384	20.599		-2.177
	Min M_Z	0.467	0.100	-1.735	-2.924	7.482	-1.333	CO 31	0.478	8.033		-1.735
88	Max	1.005	1.010	1.002	9.531	10.726	0.392					
	Min	-1.286	-0.875	-2.858	-10.129	-19.389	-3.563					
	Max P_X	1.005	-0.292	-0.978	3.245	10.726	-0.885	CO 16	1.047	11.206		-0.978
	Min P_X	-1.286	0.516	-2.177	-7.014	-19.389	-3.563	CO 32	1.386	20.619		-2.177
	Max P_Y	-0.294	1.010	0.017	-10.129	-3.283	-0.395	CO 19	1.052	10.648	0.017	
	Min P_Y	0.547	-0.875	-2.217	9.531	5.038	-1.776	CO 10	1.032	10.781		-2.217
	Max P_Z	-0.519	0.788	1.002	-7.273	-4.576	0.267	CO 33	0.944	8.593	1.002	
	Min P_Z	-0.620	-0.238	-2.858	1.042	-11.943	-2.878	CO 11	0.664	11.988		-2.858
	Max M_X	0.547	-0.875	-2.217	9.531	5.038	-1.776	CO 10	1.032	10.781		-2.217
	Min M_X	-0.294	1.010	0.017	-10.129	-3.283	-0.395	CO 19	1.052	10.648	0.017	
	Max M_Y	1.005	-0.292	-0.978	3.245	10.726	-0.885	CO 16	1.047	11.206		-0.978
	Min M_Y	-1.286	0.516	-2.177	-7.014	-19.389	-3.563	CO 32	1.386	20.619		-2.177
	Max M_Z	-0.576	0.813	0.540	-7.348	-4.477	0.392	CO 5	0.996	8.604	0.540	
	Min M_Z	-1.286	0.516	-2.177	-7.014	-19.389	-3.563	CO 32	1.386	20.619		-2.177
90	Max	1.005	1.499	1.486	7.802	11.366	1.828					
	Min	-1.647	-0.839	-2.557	-17.329	-19.149	-0.984					
	Max P_X	1.005	0.292	-0.978	-3.246	10.725	0.884	CO 16	1.047	11.205		-0.978
	Min P_X	-1.647	-0.316	1.351	0.811	-19.149	1.720	CO 5	1.677	19.166	1.351	
	Max P_Y	0.891	1.499	-2.557	-16.477	9.301	-0.170	CO 11	1.744	18.921		-2.557
	Min P_Y	-0.588	-0.839	0.949	7.802	-5.313	-0.264	CO 4	1.025	9.439	0.949	
	Max P_Z	-1.569	-0.288	1.486	0.631	-18.098	1.762	CO 34	1.595	18.109	1.486	
	Min P_Z	0.891	1.499	-2.557	-16.477	9.301	-0.170	CO 11	1.744	18.921		-2.557
	Max M_X	-0.588	-0.839	0.949	7.802	-5.313	-0.264	CO 4	1.025	9.439	0.949	
	Min M_X	0.918	1.456	-1.687	-17.329	11.366	-0.984	CO 32	1.721	20.724		-1.687
	Max M_Y	0.918	1.456	-1.687	-17.329	11.366	-0.984	CO 32	1.721	20.724		-1.687
	Min M_Y	-1.647	-0.316	1.351	0.811	-19.149	1.720	CO 5	1.677	19.166	1.351	

BASIC LOAD CASES

DEAD LOAD 0.0378 PSF (FABRIC)
FLOOR LIVE LOAD N/A
ROOF LIVE LOAD 5 PSF
ROOF SNOW LOAD 5 PSF
SUPERIMPOSED LOADS N/A

WIND LOAD
ULTIMATE DESIGN WIND SPEED (3SEC GUST) 115 MPH
VELOCITY PRESSURE qz 25.32 PSF
COMPONENT AND CLADDING qz
(CABLE AND CABLE HARDWARE ONLY) 25.32 PSF

SEISMIC LOAD
SEISMIC RESPONSE COEFFICIENTS Cs 1.6
DESIGN BASE SHEAR 4210 LB



FORGED WIRE ROPE CLAMP

FITTING TYPE ROPE CLAMP
FABRICATION: FORGED
MATERIAL: GALVANIZED STEEL
FOR WIRE ROPE DIAMETER 3/8"
NUMBER OF CLAMPS REQUIRED: 2
ROPE TURNBACK: 6 1/2"
FOR WIRE ROPE CONSTRUCTION 7 × 19
ATTACHMENT TYPE: LOOP
CLAMP:WIDTH 2", HEIGHT 1 15/16", THICKNESS 1 11/16"
REQUIRED INSTALLATION TOOL TORQUE WRENCH
REQUIRED TORQUE 45 FT.-LBS.
CAPACITY 80% OF THE ROPE'S CAPACITY
SPECIFICATIONS MET ASME B30.26, FED. SPEC. FF-C-450

Aircraft Cable

Preformed, made in accordance with commercial specifications military and federal specification rope available.

Carbon Steel (Aircraft Cable) - Galvanized cable has the highest strength and greatest fatigue life of the materials offered. It has good to fair corrosion resistance in rural to industrial atmosphere environments. This material is most widely used for small diameter cables. Tin over galvanized cable offers greater corrosion resistance and reduced friction over pulleys.

7 x 19

7 x 19		Galvanized Min. Breaking Strengths (lbs)
Dia. (In)	Approx. Wt 1000 Ft/lbs	
3/32	17.	1,000
1/8	29.	2,000
5/32	45.	2,800
3/16	65.	4,200
7/32	86.	5,600
1/4	110.	7,000
9/32	139.	8,000
5/16	173.	9,800
3/8	243.	14,400

Multiknit INTERNATIONAL

190/F5 Fire rated specifications

Standard range   Revision 0   28-Oct-12

Colour	Shade %	UV Block %	Average GSM	Average Warp break strength kgs	Average Elongation %	Average Weft break strength kgs	Average Elongation %	Average Burst Kpa	Average Burst to Mass ratio
Desert Sand	80	92	185	50	40	72	73	156	0.84
Blue	80	85	185	50	40	72	73	156	0.84
Brown	85		185	50	40	72	73	156	0.84
Green	80	85	185	50	40	72	73	156	0.84
Red	80	86	185	50	40	72	73	156	0.84
Silver	80	81	185	50	40	72	73	156	0.84
Terracotta	75	82	185	50	40	72	73	156	0.84
Yellow	80	89	185	50	40	72	73	156	0.84
				110 LB		159 LB		3258 PSF	

CONVERSION TO IMPERIAL UNITS:
185 GSM = .0378 psf
50 KGS = 110 Lb
72 KGS = 159 Lb
156 Kpa = 3258 psf

Notes:
- 190/F5 conforms to The California State Fire Marshal Title 19 Test for Small scale Fabrics
- Tear tests are done using a 50mm wide strip and a cross head speed of 500mm/min
- This report has been compiled using the mean results from all tests conducted on the given sample by our Quality Control Laboratory, the information provided is considered to be a good reflection of the relevant properties of the fabric tested. These results must only be used as an indication of the quality and characteristics of the fabric tested. Company cannot be held responsible or liable in any way whatsoever should this information differ to that of a registered testing institution.

PP Deon Joubert
General Manager - Multiknit (Pty) Ltd

Tommy Rogers
Managing Director - Multiknit (Pty) Ltd

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF USA SHADE AND FABRIC STRUCTURES AND SHALL NOT BE REPRODUCED WITHOUT THEIR WRITTEN PERMISSION.

USASHADE & Fabric Structures®

CORPORATE HEADQUARTERS
2580 ESTERS BLVD. SUITE 100
DFW AIRPORT, TX, 75261
800-966-5005

CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
CLARK COUNTY MANUFACTURER CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
Palo Verde College

PROJECT NAME:
Palo Verde College

LOCATION:
One College Drive
Blythe, CA 92225

MODEL NUMBER:
DSA4013040-19

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-119455 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☒ CG ☐
DATE: 03/26/2021

STRUCTURE TYPE:
HIP
DSA

SIZE: MAXIMUM
30' x 40' x 15'e MAX.

SCALE : NONE

DRAWING SIZE:
D

PRE-CHECK (PC) DOCUMENT
Code : 2019 CBC
A separate project application for construction is required.

Eng. By :	JO	06/26/20
Design By :	JO	06/26/20
Approved By :	JO	06/26/20

DRAWING DESCRIPTION:
REACTIONS

DWG. DSA4013040-19

SHEET 3.2-2000

REV. NC

LICENSED ARCHITECT DAVID HIGGINSON NO.C19168 REN 10-3-21 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER MARK ALBERT LOWE No. 3693 STRUCTURAL STATE OF CALIFORNIA
12/04/2020

DESIGN VALUES

DESCRIPTION	DESIGN VALUES
DEAD AND LIVE LOADS	
ROOF LIVE LOAD	20 PSF
ROOF DEAD LOAD (SUPERIMPOSED ON FRAME)	LOAD SCENARIO= {1,2} DL = {3.5 PSF, 2.0 PSF}
ALLOWABLE SOIL PRESSURE	
SPREAD PAD	
VERTICAL BEARING: DL + Lr + SEISMIC (CONCRETE FOOTING)	1500 PSF
LATERAL COHESION: DL + Lr + SEISMIC (CONCRETE FOOTING)	130 PSF
DRILLED PIER	
SKIN FRICTION DOWN : DL + Lr + SEISMIC (CONCRETE FOOTING) PER 1810A.3.3.1.4	167 PSF
SKIN FRICTION (UPLIFT): DL + LR SEISMIC (CONCRETE FOOTING) PER 1810A.3.31.5	83 PSF
LATERAL BEARING: DL + Lr + SEISMIC (CONCRETE FOOTING) PER 1810A.3.3.2	100 PSF/FT
ROOF SNOW LOAD	
GROUND SNOW LOAD, Pg	10 PSF
RISK CATEGORY	[X] II [ ] III
ROOF SNOW LOAD: [ ] FLAT, Pf OR [ ] LOW SLOPE, Pm OR [X] SLOPED, Ps	10 PSF
SNOW ROOF SLOPE FACTOR, Cs	1
SNOW EXPOSURE FACTOR, Ce	1.2
SNOW LOAD IMPORTANCE FACTOR, Is	[X] 1.0 [ ] 1.1
THERMAL FACTOR, Ct	[ ] 1.0 [X] 1.2
DRIFT SURCHARGE LOAD, Pd	0 PSF
DISTANCE FROM ADJACENT STRUCTURE, Pg = 0 PSF	4 IN
DISTANCE FROM ADJACENT STRUCTURE, Pg > 0 PSF	20 FT
ICE LOAD	0 PSF
FLOOD DESIGN	
FLOOD HAZARD AREA	[X] NO [ ] YES
WIND DESIGN	
BASIC WIND SPEED (3 SECOND GUST), Vult	110 MPH
EXPOSURE CATEGORY	[X] C [ ] D
TOPOGRAPHIC FACTOR, Kzt (1 MINIMUM)	1
INTERNAL PRESSURE COEFFICIENT, GCpi (IF APPLICABLE)	0.0
CLEAR WIND FLOW	[ ] NO [X] YES
OBSTRUCTED WIND FLOW	[ ] NO [X] YES
SEISMIC DESIGN	
LATERAL FORCE-RESISTING SYSTEM	STEEL ORDINARY CANTILEVER COLUMN SYSTEM
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE PROCEDURE
SEISMIC DESIGN CATEGORY (SDC)	E
SEISMIC IMPORTANCE FACTOR, Ie	[X] 1.0 [ ] 1.25
DESIGN BASE SHEAR, V	Cs x W
SEISMIC RESPONSE COEFFICIENT, Cs	LOAD SCENARIO = {1,2} Cs = {0.90,1.32}
RESPONSE MODIFICATION FACTOR, R	1.25
SITE CLASS	[ ] D [X] E
REDUNDANCY FACTOR, p	1.3
MAPPED SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, Ss - USED TO DETERMINE Cs	LOAD SCENARIO = {1,2} Ss = {1.406, 2.063}
SHORT-PERIOD SITE COEFFICIENT, Fa	1.2
DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, Sds - USED TO DETERMINE Cs	LOAD SCENARIO = {1,2} Sds (MAX) = {1.125, 1.650}
MAPPED SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD, S1	LOAD SCENARIO = {1,2} S1 = {0.844, 1.07}
LONG-PERIOD SITE COEFFICIENT, Fv	2.0
DESIGN SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD, Sd1	LOAD SCENARIO = {1,2} Sd1 = {1.125, 1.427
HORIZONTAL OR VERTICAL IRREGULARITIES TYPE(S)	NONE

1. IF SITE-SPECIFICDESIGN CRITERIA ARE OUTSIDE THE LIMITS OF THESE PC DRAWINGS, CONTACT POLIGON ENGINEERING TO SEE IF AN ENGINEERING LETTER, SUPPLEMENTAL DRAWINGS, AND/OR CALCULATIONS COULD BE SUBMITTED FOR A SITE-SPECIFIC SOLUTION. ANY SITE- SPECIFIC DEVIATION FROM THIS PC MAY NOT BE SUBMITTING TO DSA AS AN OVER-THE-COUNTER.

2. STRUCTURE IS NOT DESIGNED TO SUPPORT SOLAR PANELS. STRUCTURE IS NOT DESIGNED TO SUPPORT SPRINKLER SYSTEMS IN LOAD SCENARIO 2 REGIONS.

3. GEOHAZARD REPORTS ARE REQUIRED IF THE AREA COVERED UNDER THE ROOF EXCEEDS 4000 SQ FT.

4. STRUCTURAL SEPARATION BETWEEN ADJACENT STRUCTURES: RAM 20= 5.0", RAM 30= 3.0" STRUCTURAL SEPARATION BETWEEN EXISTING STRUCTURES: RAM 20= 5.5", RAM 30= 4.0"

5. WHEN PLACING MULTIPLE CANOPIES WITH PIER FOOTINGS ADJACENT TO ONE ANOTHER, THE DESIGN MAY REQUIRE AN ANALYSIS OF GROUP EFFECTS ON THE FOUNDATIONS. THE MINIMUM CLEARANCE BETWEEN CENTER OF PIERS IS EIGHT TIMES PIER DIAMETER WITHOUT AN ACCOMPANYING ENGINEERING LETTER

6. SITE APPLICATION DSA REVIEWER SHALL VERIFY THE STRUCTURE TO BE LOCATED AT LEAST 20 FEET FROM ANY ADJACENT STRUCTURE IF GROUND SNOW IS GREATER THAN ZERO.

ARCHITECTURAL REQUIREMENTS:

DESCRIPTION	DESIGN VALUES
TYPE OF CONSTRUCTION	II B
NUMBER OF STORIES	1
FIRE SPRINKLER SYSTEM	NOT BY POLIGON

RELATED BUILDING CODES AND STANDARDS:

TITLE 24 CODES:

2019 California Administrative Code (CAC)............................(Part 1, Title 24, CCR)
2019 California Building Code (CBC), Volumes 1 and 2 (Part 2, Title 24, CCR)
(2018 International Building Code with 2019 California amendments)
2019 California Electrical Code ....(Part 3, Title 24, CCR)
(2017 National Electrical Code with 2019 California amendments)
2019 California Mechanical Code (CMC) ....(Part 4, Title 24, CCR)
(2018 Uniform Mechanical Code with 2019 California amendments)
2019 California Plumbing Code (CPC) ....(Part 5, Title 24, CCR)
(2018 Uniform Plumbing Code with 2019 California amendments)
2019 California Energy Code ....(Part 6, Title 24, CCR)
2019 California Fire Code (CFC) ....(Part 9, Title 24, CCR)
(2018 International Fire Code with 2019 California Amendments)
2019 California Green Building Standards Code ....(Part 11, Title 24, CCR)
2019 California Referenced Standards Code ....(Part 12, Title 24, CCR)

NFPA 13 - 2016
NFPA 72 - 2016

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS:

2019 CBC, CHAPTER **35**
2019 CFC, CHAPTER **80**

SCOPE OF WORK NARRATIVE:

THESE DRAWINGS ILLUSTRATE THE FABRICATION AND INSTALLATION REQUIREMENTS FOR A FREE-STANDING PREFABRICATED STEEL SHADE STRUCTURE. THE ENTIRE STRUCTURAL SYSTEM IS COMPRISED OF TUBULAR STEEL MEMBERS SUPPORTED ON CONCRETE FOUNDATIONS. THE FLEXIBILITY INCLUDED HEREIN ALLOWS THIS STRUCTURE TO COMPLY WITH A WIDE VARIETY OF PROJECT SITES AND LOADING REQUIREMENTS.

INSTRUCTIONS FOR ARCHITECTS PLANNING TO SUBMIT THESE PRE-CHECKED DRAWINGS TO DSA:

STEP 1 PROJECT INFORMATION

PROJECT NAME		
SCHOOL DISTRICT		
USE AND OCCUPANCY CLASSIFICATION		**(PROPOSED OCCUPANCY: A3)**
OCCUPANT LOAD FACTOR	**SQ. FT / PERSON**	**(15FT SQ.FT. PER PERSON MAX;5 SQ.FT PER PERSON MIN)**
TOTAL ROOF AREA		**(MAX ALLOWABLE AREA: 9500 SQ FT)**
NUMBER OF OCCUPANTS		

STEP 2 DESIGN OPTIONS

ROOF DECK	[X] MULTI-RIB (MR)	**DEFAULT**, WEIGHT 1.2 PSF
	[ ] STANDING SEAM (SS)	WEIGHT 1.8 PSF
GUTTERS	[X] NO	**DEFAULT**
	[ ] YES	SEE RAM-7.0 FOR DETAILS
ELECTRICAL ACCESS	[X] NO	**DEFAULT**
	[ ] YES	SEE RAM-7.1 FOR DETAILS
CLEAR HEIGHT	[ ] 8'	**DEFAULT**
	[X] 10' ______ OTHER	10' MAX

STEP 3 SEISMIC ACCELERATION

0.000 < Ss <= 1.406	S1 <= 0.844
1.406 < Ss <= 2.063	S1 <= 1.070

Ss 0 . 2 9 0 **(g)**
S1 0 . 1 5 4 **(g)**

STEP 4 SEISMIC REGIONS

WHITE	[X] WHITE	3.5 PSF MAX DEA LOAD
GREEN	[ ] GREEN	2.0 PSF MAX DEAD LOAD

STEP 5 TOTAL ROOF DEAD LOAD

ROOF DECK	1 . 2 PSF	SEE STEP 2' 'ROOF DECK FOR WEIGHTS
COLLATERAL	0 . 0 PSF	LIGHTING , FIRE SUPPRESSION, ETC.
TOTAL	1 . 2 PSF	ADD 'ROOF DECK' AND 'COLLATERAL'

STEP 6 LOAD SCENARIO

WHITE	TOTAL ROOF DEAD LAOD <= 3.5 PSF	[X] **LOAD SCENARIO 1**
GREEN	TOTAL ROOF DEAD LOAD < 2.0 PSF	[ ] **LOAD SCENARIO 2**

STEP 7 PC STRUCTURE

ROOF WIDTH <= 20	[ ] **RAM 20**
20 < ROOF WIDTH <= 30	[X] **RAM 30**

STEP 8 STRUCTURE SIZE

	RAM 20		RAM 30	
		DEFAULT		**DEFAULT**
ROOF WIDTH	[ ] 20'		[X] 30'	
	[ ] ______ OTHER	9' MIN; 20' MAX	[ ] ______ OTHER	20'-6" MIN; 30' MAX
ROOF LENGTH	[ ] 44'	2 BAYS	[X] 44'	2 BAYS
	[ ] 64'	3 BAYS	[ ] 64'	3 BAYS
	[ ] 84'	4 BAYS	[ ] 84'	4 BAYS
	[ ] ______ OTHER		[ ] ______ OTHER	

STEP 9 FOUNDATION TYPE

	RAM 20		RAM 30	
FOUNATION TYPE	[ ] SPREAD PAD	[ ] DRILLED PIER	[X] SPREAD PAD	[ ] DRILLED PIER

STEP 10 FOUNDATION SUMMARY

RAM 20		RAM 30	
[ ] LOAD SCENARIO 1 SPREAD PAD	[ ] LOAD SCENARIO 1 DRILLED PIER	[X] LOAD SCENARIO 1 SPREAD PAD	[ ] LOAD SCENARIO 1 DRILLED PIER
[ ] LOAD SCENARIO 2 SPREAD PAD	[ ] LOAD SCENARIO 2 DRILLED PIER	[ ] LOAD SCENARIO 2 SPREAD PAD	[ ] LOAD SCENARIO 2 DRILLED PIER

STEP 11 SHEET INDEX

BASE FRAME	RAM 20 SHEET INDEX				RAM 30 SHEET INDEX			
ROOF DECK	MR		SS		MR		SS	
FOUNDATION TYPE	SPREAD PAD	DRILLED PIER	SPREAD PAD	DRILLED PIER	SPREAD PAD	DRILLED PIER	SPREAD PAD	DRILLED PIER
SELECT ONE	[ ]	[ ]	[ ]	[ ]	[X]	[ ]	[ ]	[ ]
ORDER FORM	RAM 1.0	RAM 1.0	RAM 1.0	RAM 1.0	RAM 1.0	RAM 1.0	RAM 1.0	RAM 1.0
NOTES AND SPECIAL INSPECTIONS	RAM 1.1	RAM 1.1	RAM 1.1	RAM 1.1	RAM 1.1	RAM 1.1	RAM 1.1	RAM 1.1
FOUNDATION PLAN	RAM 2.0	RAM 2.1	RAM 2.0	RAM 2.1	RAM 2.2	RAM 2.3	RAM 2.2	RAM 2.3
FRAMING PLAN	RAM 3.0	RAM 3.0	RAM 3.0	RAM 3.0	RAM 3.1	RAM 3.1	RAM 3.1	RAM 3.1
FRAME CONNECTION DETAILS	RAM 4.0	RAM 4.0	RAM 4.0	RAM 4.0	RAM 4.2	RAM 4.2	RAM 4.2	RAM 4.2
SECTION DETAILS	RAM 4.1	RAM 4.1	RAM 4.1	RAM 4.1	RAM 4.3	RAM 4.3	RAM 4.3	RAM 4.3
ARCHITECTURAL VIEWS	RAM 5.0	RAM 5.0	RAM 5.0	RAM 5.0	RAM 5.1	RAM 5.1	RAM 5.1	RAM 5.1
ROOF CONNECTION DETAILS	RAM 6.0	RAM 6.0	RAM 6.1	RAM 6.1	RAM 6.0	RAM 6.0	RAM 6.1	RAM 6.1
MISC DESIGN OPTIONS	RAM 7.0	RAM 7.0	RAM 7.0	RAM 7.0	RAM 7.0	RAM 7.0	RAM 7.0	RAM 7.0
ELETRICAL CUTOUTS	RAM 7.1	RAM 7.1	RAM 7.1	RAM 7.1	RAM 7.1	RAM 7.1	RAM 7.1	RAM 7.1

STEP 12 MULTIPLE STRUCTURES

	ROOF WIDTH X LENGTH	QTY
MULTIPLE STRUCTURES		

STEP 1: GENERAL PROJECT INFORMATION

- IDENTIFY PROJECT NAME AND SCHOOL DISTRICT
- IDENTIFY USE AND OCCUPANCY CLASSIFICATION
  - THE USE AND OCCUPANCY DETERMINE THE MAXIMUM SQUARE FOOTAGE OF THE STRUCTURE
  - THE MAXIMUM SQUARE FOOTAGE IS ALSO LIMITED BY THE NUMBER OF OCCUPANTS
- IDENTIFY THE OCCUPANT LOAD PER TABLE 1004.5 IN THE CBC
- IDENTIFY TOTAL ROOF AREA
- IDENTIFY EXPECTED NUMBER OF OCCUPANTS BASED ON THE ESTIMATED OCCUPANT LOAD
  - THE MAXIMUM NUMBER OF OCCUPANTS FOR THIS STRUCTURE IS 250
  - TOTAL ROOF AREA DIVIDED BY OCCUPANT LOAD CAN DETERMINE NUMBER OF OCCUPANTS

STEP 2: DESIGN OPTIONS

- SELECT ROOF DECK FOR YOUR PROJECT
  - "MR" REPRESENTS MCELROY METAL "MULTI-RIB" ROOF DECK
  - "SS" REPRESENTS MCELROY METAL "MEDALLION-LOK" 16" STANDING SEAM ROOF DECK
- SELECT WHETHER GUTTERS AND DOWNSPOUTS FROM POLIGON IS NEEDED FOR YOUR PROJECT
  - IF "YES", THEN INCLUDE SHEET RAM-7.0 IN THE DRAWING SET
- SELECT WHETHER ELECTRICAL CUTOUTS ARE NEEDED FOR YOUR PROJECT
  - SHEET RAM-7.0 SHOWS ELECTRICAL CUTOUT SIZE AND LOCATION CUTOUTS IN COLUMNS
  - SHEET RAM-7.1 HAS INSTRUCTIONS AND SHEET TO IDENTIFY WHICH COLUMNS
  - SHEET RAM-7.1 MUST BE FILLED OUT IN THE SUBMITTAL SET APPROVED BY DSA
  - IF NOTHING IS FILLED IN ON RAM-7.1, POLIGON WILL ASSUME CUTOTUS ARE ONLY IN COLUMN A1 (SEE 'FRAMING PLAN' FOR REFERENCE)
- SELECT CLEAR HEIGHT (SEE 'ARCHITECTURAL VIEWS' SHEET FOR REFERENCE)
  - MIN 6'-8"; MAX 10'-0"
- **IF NOTHING IS SELECTED, POLIGON WILL ASSUME THE DEFAULT FOR EACH DESIGN OPTION**

STEP 3: IDENTIFY THE Ss & S1 ACCELERATION (g) FOR YOUR PROJECT AND GEOTECHNICAL INFORMATION

- Ss & S1 VALUE DETERMINES THE REQUIRED SEISMIC DESIGN FORCES
- Ss & S1 VALUE DEPENDS ON PROJECT'S GEOGRAPHICAL LOCATION
  - FIND Ss & S1 VALUES FOR YOUR PROJECT IN THE SITE SPECIFIC GEOTECHNICAL REPORT
  - FIND Ss & S1 VALUES FOR YOUR PROJECT USING (https://asce7hazardtool.online/)
- THIS PC IS NOT APPROVED FOR Ss VALUES GREATER THAN 2.063 (CONTACT POLIGON FOR ADDITIONAL OPTIONS)

STEP 4: IDENTIFY THE SEISMIC REGION FOR YOUR PROJECT

- THE REGIONS ARE DEPENDANT ON THE Ss & S1 VALUE DETERMINED IN STEP 3
- THE SEISMIC REGION DICTATES THE MAXIMUM DEAD LOAD PERMITTED (SEE TABLE TO THE LEFT)

STEP 5: IDENTIFY THE ROOF DEAD LOAD FOR YOUR PROJECT

- THE ROOF DECK DEAD LOAD WILL ALWAYS BE INCLUDED
- THE COLLATERAL LOAD REPRESENTS ADDITIONAL LOAD THAT CAN BE SUPPORTED BY THE FRAME
- TOTAL ROOF DEAD LOAD MUST BE LESS THAN OR EQUAL TO THE MAX DEAD LOAD SHOWN IN STEP 4
- CUT SHEETS OF ANY BOARDS, BOXES AND EQUIPMENT TO BE MOUNTED ON THE STRUCTURE, INCLUDING WEIGHTS AND DIMENSIONS ARE REQUIRED

STEP 6: IDENTIFY THE LOAD SCENARIO

- REFERENCE THE STEP 4 COLOR AND SELECT THE APPLICABLE LOAD SCENARIO
- LOAD SCENARIOS HAVE NO IMPACT ON FRAME DESIGN OR COST, BUT DO AFFECT FOUNDATION SIZE

STEP 7: IDENTIFY PC STRUCTURE

- ROOF WIDTHS UP TO 20' WIDE USE THE "RAM 20"
- ROOF WIDTHS UP TO 30' WIDE USE THE "RAM 30"
- THE 20' AND 30' WIDTHS ARE SUGGESTED BECAUSE THEY ARE THE MOST ECONOMICAL
- MAXIMUM WIDTH IS 30'; (SEE 'ARCHITECTURAL VIEWS' SHEET FOR REFERENCE)

STEP 8: IDENTIFY SITE SPECIFIC ROOF WIDTH AND LENGTH

- DO NOT EXCEED THE TOTAL ROOF AREA FROM STEP 1 (ROOF WIDTH MULTIPLIED BY ROOF LENGTH)

STEP 9: FOUNDATION TYPE

- SELECT A FOUNDATION BASED THE DESIRED FOUNDATION TYPE
- SELECT EITHER SPREAD PAD OR DRILLED PIER FOUNDATION PRIOR TO APPROVAL
- FOUNDATION TYPE IMPACTS CONSTRUCTION (TIMING, SEQUENCE, COST, ETC.)
- FOUNDATION TYPE IMPACTS ANCHOR BOLT LENGTH (NOT PROVIDED BY POLIGON)
- REVIEW OF SITE-SPECIFIC SOILS REPORT TO EVALUATE APPLICABILITY OF FOUNDATION OPTIONS AVAILABLE

STEP 10: FOUNDATION SUMMARY

- USE THE SELECTIONS FROM STEP 6 AND STEP 9 TO SELECT THE APPROPRIATE FOUNDATION

STEP 11: SELECT APPLICABLE SHEET INDEX FOR YOUR PROJECT

- IDENTIFY THE APPLICABLE SHEET INDEX
- INCLUDE APPLICABLE SHEETS WITH YOUR DSA SUBMITTAL
- EXCLUDE 'MISC DESIGN OPTIONS' SHEET FOR PROJECTS WITHOUT ELECTRICAL CUTOUTS OR GUTTERS
- EXCLUDE 'ELECTRICAL CUTOUTS' SHEET FOR PROJECTS WITHOUT ELECTRICAL CUTOUTS

STEP 12: MULTIPLE STRUCTURES WITH THE SAME PC#

- FILL IN ROOF LENGTH AND WIDTH OF STRUCTURES AS WELL AS QUANTITY
- UNO ON THE POLIGON DRAWINGS, POLIGON WILL ASSUME ALL DESIGN CRITERIA FOR EACH STRUCTURE IS THE SAME
- CONTACT POLIGON FOR FURTHER INFORMATION

SHEET INDEX					
1	RAM1.0	ORDER FORM	11	RAM4.2	FRAME CONNECTION DETAILS - RAM 30
2	RAM1.1	NOTES AND SPECIAL INSPECTIONS	12	RAM4.3	SECTION DETAILS - RAM 30
3	RAM2.0	FOUNDATION PLAN SPREAD PAD - RAM 20	13	RAM5.0	ARCHITECTURAL VIEWS - RAM 20
4	RAM2.1	FOUNDATION PLAN DRILLED PIER - RAM 20	14	RAM5.1	ARCHITECTURAL VIEWS - RAM 30
5	RAM2.2	FOUNDATION PLAN SPREAD PAD - RAM 30	15	RAM6.0	ROOF CONNECTION DETAILS
6	RAM2.3	FOUNDATION PLAN DRILLED PIER - RAM 30	16	RAM6.1	ROOF CONNECTION DETAILS
7	RAM3.0	FRAMING PLAN - RAM 20	17	RAM7.0	MISC DESIGN OPTIONS
8	RAM3.1	FRAMING PLAN - RAM 30	18	RAM7.1	ELECTRICAL CUTOUTS
9	RAM4.0	FRAME CONNECTION DETAILS - RAM 20			
10	RAM4.1	SECTION DETAILS - RAM 20			
TOTAL SHEETS = 18					

ABBREVIATIONS:

ACI	AMERICAN CONCRETE INSTITUTE	MR	MULTI-RIB ROOF PANEL (MCELROY)
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	NTS	NOT TO SCALE
ASM	ASSEMBLY (INTERNAL REFERENCE)	NO	NUMBER
ASTM	AMERICAN SOCIETY FOR TESTING AND MAT'LS	OC	ON CENTER
AWS	AMERICAN WELDING SOCIETY	OSHA	OCCUPATIONAL HEALTH AND SAFETY ADM.
CBC	CALIFORNIA BUILDING CODE	PCF	POUNDS PER CUBIC FOOT
CJP	COMPLETE JOINT PENETRATION	PD	POLIGON DRAWING
CLR	CLEAR	PJ	PRETENSIONED JOINT
DEG	DEGREE	PLCS	PLACES
DIA	DIAMETER	PLT	PLATE
DIM	DIMENSION	PSF	POUNDS PER SQUARE FOOT
DSA	DIVISION OF THE STATE ARCHITECT	PSI	POUNDS PER SQUARE INCH
EQ	EQUAL	QTY	QUANTITY
FT	FEET	REF	REFERENCE
GA	GAGE	SQ	SQUARE
IN	INCHES	SS	STANDING SEAM ROOF PANEL (MCELROY)
KSI	KIPS PER SQUARE INCH	TYP	TYPICAL
MAX	MAXIMUM	UNO	UNLESS NOTED OTHERWISE
MIN	MINIMUM	USGS	U.S. GEOLOGICAL SURVEY
MISC	MISCELLANEOUS	W/	WITH
MPH	MILES PER HOUR		

SPECIFICATIONS

PART 1 - GENERAL

1.1 STRUCTURE DESCRIPTION
A. STRUCTURE(S) BASED ON THE FOLLOWING PC DESIGN(S):
1. HIP ROOF (RAM)

1.2 DESIGN REQUIREMENTS
A. MEET THE DESIGN INTENT SHOWN ON THE PC DRAWINGS APPROVED FOR THIS PROJECT.
1. DESIGN CRITERIA
2. MEMBERS SIZES
3. HIDDEN BOLTED CONNECTIONS BETWEEN STRUCTURAL MEMBERS
4. COLUMN ANCHORAGE SHALL INCLUDE FOUR (4) BOLTS IN COMPLIANCE WITH OSHA 1926.755(A)(1).
5. NO FIELD WELDING PERMITTED
6. NO FIELD PAINTING PERMITTED
7. ROOF DIMENSIONS AND SLOPES
8. EXPOSED STEEL ROOF FASTENERS (IF APPLICABLE) POWDER COATED BY MANUFACTURER
9. ROOF DECK SPANS FROM PEAK TO EAVE AND PERMITS PROPER DRAINAGE WITHOUT DEBRIS BUILD-UP.

1.3 SUBMITTALS
A. DRAWINGS AND CALCULATIONS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE APPROPRIATE STATE.
B. ONLY MANUFACTURERS THAT SUBMIT DRAWINGS AND CALCULATIONS PRIOR TO BID SHALL BE CONSIDERED.
C. MANUFACTURER MUST BE ABLE TO SUBMIT APPROPRIATE LABORATORY TESTS FOR THE FOLLOWING:
1. FRAME FINISH REQUIREMENTS LISTED IN PART 2 OF THIS SPECIFICATION.
2. CERTIFIED MILL TEST REPORTS FOR STRUCTURAL STEEL (DESCRIBING THE CHEMICAL AND PHYSICAL PROPERTIES).
3. CERTIFIED MILL TEST REPORTS FOR STRUCTURAL BOLTS.

1.4 TECHNICAL SUPPORT
A. MANUFACTURER MUST HAVE IN-HOUSE ENGINEERING DEPARTMENT AND A PROFESSIONAL ENGINEER LICENSED IN THE APPROPRIATE STATE TO ANSWER TECHNICAL QUESTIONS.

1.5 QUALITY ASSURANCE
A. GENERAL
1. FABRICATION PROCEDURES SHALL COMPLY WITH APPLICABLE CODES AND LOCAL REGULATIONS.
2. REQUIRED STRUCTURAL TESTS AND SPECIAL INSPECTIONS INCLUDED ON THE PROJECT DSA-103 FORM.
B. MANUFACTURER QUALIFICATIONS
1. MINIMUM (10) YEARS ENGINEERING AND FABRICATING PRE-ENGINEERED STRUCTURES
2. MANUFACTURER OWNED AND OPERATED POWDER COAT PAINT FINISH SYSTEM
3. ALL AWS CERTIFIED WELDERS
4. FULL-TIME PROFESSIONAL ENGINEER ON STAFF LICENSED IN THE APPROPRIATE STATE
5. FULL-TIME AWS CERTIFIED ASSOCIATE WELDING INSPECTOR ON STAFF
6. FULL-TIME QUALITY ASSURANCE MANAGER ON STAFF
7. FULL-TIME LEED AP ON STAFF
C. MANUFACTURER CERTIFICATIONS
1. PCI 4000 CERTIFICATION THROUGH POWDER COATING INSTITUTE (PCI)

1.6 MANUFACTURER WARRANTY
A. STRUCTURE MUST HAVE (10) YEAR LIMITED WARRANTY ON STEEL FRAME MEMBERS.
B. STRUCTURE MUST HAVE (10) YEAR LIMITED WARRANTY ON PAINT SYSTEM.
C. PASS THROUGH WARRANTY OF ROOFING MANUFACTURER SHALL BE PROVIDED UPON REQUEST.

PART 2 - PRODUCTS

2.1 MANUFACTURER
A. ACCEPTABLE MANUFACTURERS
1. POLIGON, A DIVISION OF PORTERCORP.
A. 4240 N 136TH AVE., HOLLAND, MI 49424; (616) 399-1963; WWW.POLIGON.COM.
I. FOR POLIGON STRUCTURES IN *NORTHERN CALIFORNIA*, THE LOCAL REPRESENTATIVE IS ALL ABOUT PLAY (WWW.PLAYGROUNDPROS.COM). EMAIL AAP@PLAYGROUNDPROS.COM OR CALL (916) 923-2180
II. FOR POLIGON STRUCTURES IN *SOUTHERN CALIFORNIA*, THE LOCAL REPRESENTATIVE IS MIRACLE PLAYGROUND SALES (MIRACLEPLAYGROUNDSALES.COM EMAIL SALES@MIRACLEPLAYGROUND.COM OR CALL (951) 695-4515
B. SUBSTITUTION LIMITATIONS
1. THE ENGINEERING FOR THIS STRUCTURE IS ONLY APPLICABLE IF POLIGON SUPPLIES THE MATERIAL.
2. IF THE CONTRACTOR ELECTS TO SUBSTITUTE A DIFFERENT STRUCTURE, THEY ARE RESPONSIBLE TO OBTAIN THE NECESSARY DSA APPROVAL WITH:
A. NO COST TO THE DISTRICT OR ARCHITECT
B. NO CHANGE TO THE CONSTRUCTION SCHEDULE
3. SUBSTITUTIONS MUST BE APPROVED A MINIMUM OF (10) DAYS BEFORE BID.
4. ALL APPROVED MANUFACTURERS SHALL BE NOTIFIED IN WRITING BEFORE THE BID DATE.
5. SUBSTITUTE MANUFACTURERS SHALL NOT BE ALLOWED TO BID WITHOUT WRITTEN NOTIFICATION.
6. SUBSTITUTE MANUFACTURERS MUST MEET "MANUFACTURER QUALIFICATIONS" LISTED IN PART 1 OF THIS SPECIFICATION.
7. SUBSTITUTE MANUFACTURERS MUST PROVIDE PROOF OF "MANUFACTURER CERTIFICATIONS" ABOVE.
8. SUBSTITUTE MANUFACTURERS MUST PROVIDE PAINT FINISH DESCRIBED IN "FRAME FINISH" BELOW.

2.2 FRAME
A. MATERIALS
1. ANCHOR BOLTS: SEE DRAWINGS FOR REQUIREMENTS. ANCHOR BOLTS NOT PROVIDED BY MANUFACTURER
2. STRUCTURAL STEEL: SEE DRAWINGS FOR REQUIREMENTS.
3. STRUCTURAL BOLTS: SEE DRAWINGS FOR REQUIREMENTS.
B. FINISH
1. FRAME FINISH: POLI-5000 POWDER COAT. NO FIELD PAINTING PERMITTED.
A. COMPONENTS SHALL BE CLEANED, PRE-TREATED, AND FINISHED AT A FACILITY OWNED AND DIRECTLY SUPERVISED BY THE MANUFACTURER.
B. COMPONENTS SHALL BE SHOT BLASTED TO SSPC-SP10 NEAR-WHITE BLAST CLEANING. SSPC-SP2 HAND TOOL CLEANING WILL NOT BE AN ACCEPTABLE ALTERNATIVE.
C. COMPONENTS SHALL BE PRETREATED IN A (3) STAGE IRON PHOSPHATE OR EQUAL WASHER.
D. COMPONENTS SHALL RECEIVE EPOXY PRIMER COAT FOR SUPERIOR CORROSION PROTECTION.
E. COMPONENTS SHALL RECEIVE TOP COAT OF SUPER DURABLE TGIC POWDER COAT.
F. FINISH SHALL NOT HAVE ANY VOC EMISSIONS.
G. MANUFACTURER SHALL BE ABLE TO PRODUCE DOCUMENTATION STATING SAMPLE PRODUCTION COMPONENTS HAVE BEEN TESTED TO MEET THE FOLLOWING:
I. SALT SPRAY RESISTANCE PER ASTM B 117/ ASTM D 1654 TO 10,000 HOURS WITH NO CREEP FROM SCRIBE LINE AND RATING OF 10.
II. HUMIDITY RESISTANCE PER ASTM D2247-02 TO 5,000 HOURS WITH NO LOSS OF ADHESION OR BLISTERING.
III. COLOR/UV RESISTANCE PER ASTM G154-04 TO 2,000 HOURS EXPOSURE, ALTERNATE CYCLES WITH RESULTS OF NO CHALKING, 75% COLOR RETENTION, COLOR VARIATION MAXIMUM 3.0 E VARIATION CIE FORMULA (BEFORE AND AFTER 2,000 HOURS EXPOSURE).
2. FRAME COLOR: DETERMINED BY DISTRICT.
C. FABRICATION
1. FABRICATE COMPONENTS TO PERMIT BOLTED CONNECTIONS ON SITE. NO FIELD WELDING PERMITTED.
2. LABEL EACH MEMBER WITH UNIQUE PART NUMBER TO STREAMLINE ERECTION.
3. WELDING REQUIREMENTS: SEE DRAWINGS FOR REQUIREMENTS.

2.3 ROOF
A. MATERIALS
1. ROOF MATERIAL: SEE DRAWINGS FOR REQUIREMENTS.
2. ROOF HARDWARE: SEE DRAWINGS FOR REQUIREMENTS.
B. FINISH
1. ROOF FINISH: KYNAR 500 HIGH-PERFORMANCE RESIN-BASED PAINT.
2. ROOF COLOR: DETERMINED BY OWNER.

2.4 MISCELLANEOUS
A. MATERIALS
1. CONCRETE MATERIAL: SEE DRAWINGS FOR REQUIREMENTS. CONCRETE NOT PROVIDED BY MANUFACTURER.

PART 3 - EXECUTION

3.1 STORAGE AND HANDLING
A. PROTECT MATERIAL AFTER DELIVERY FROM WEATHER, SUNLIGHT, AND DAMAGE.
B. ELEVATE MATERIAL TO ALLOW CIRCULATION AND REDUCE MOLD, FUNGI DECAY, AND INSECT INFESTATION.
C. HANDLE MATERIAL WITH PROTECTIVE STRAPS OR PADDED FORKLIFT. HANDLING MATERIAL WITH CHAIN OR CABLE WILL NOT BE ACCEPTED AND MAY VOID MANUFACTURER'S WARRANTY.
D. TO PREVENT MOISTURE DAMAGE TO ANY WOOD MATERIAL (IF APPLICABLE), KEEP WOOD PACKAGED BEFORE INSTALLATION AND COVER IMMEDIATELY WITH ANY SECONDARY ROOF MATERIAL.

3.2 ERECTION
A. INSTALL COMPONENTS ACCORDING TO MANUFACTURER'S INSTALLATION DRAWINGS AND THESE SPECIFICATIONS.
B. ANCHOR BOLT AND COLUMN LAYOUT IS CRITICAL.
C. **COMPLY WITH SPECIFIC BOLTING INSTALLATION REQUIREMENTS PROVIDED ON DRAWINGS REQUIRING THE CONTRACTOR TO COORDINATE THIS PHASE OF CONSTRUCTION WITH THE SPECIAL BOLTING INSPECTOR AND THE INSPECTOR OF RECORD *PRIOR TO THE ERECTION OF THE FRAME*.**
D. NO FIELD SLOTTING OR OPENING OF HOLES WILL BE ALLOWED. TOLERANCES ON STEEL STRUCTURAL MEMBERS ARE SET ACCORDING TO AISC CONSTRUCTION PRACTICES, FOLLOWED DURING FABRICATION, AND CANNOT BE INCREASED.
E. AFTER INSTALLATION, RESTORE DAMAGED SURFACES TO THE ORIGINAL CONDITION USING TOUCH-UP PAINT PROVIDED BY MANUFACTURER. IF THE ARCHITECT DOES NOT ACCEPT THAT, REPLACE DAMAGED MATERIAL AT NO COST TO THE DISTRICT.
F. COORDINATE AS REQUIRED WITH OTHER DISCIPLINES (ELECTRICAL, PLUMBING, ETC.)
G. COMPLY WITH ALL APPLICABLE OHSA REQUIREMENTS

3.3 REPAIR
A. DO NOT ATTEMPT ANY FIELD CHANGES TO THE STRUCTURE WITHOUT FIRST CONTACTING THE MANUFACTURER.

3.4 QUALITY CONTROL
A. TESTS AND INSPECTIONS DURING ERECTION ARE NOT REQUIRED BY THE MANUFACTURER, BUT MAY BE REQUIRED BY OTHERS.
B. THE PROJECT INSPECTOR, AND ENTIRE CONSTRUCTION OVERSIGHT PROCESS, SHALL COMPLY WITH DSA PR 13-01. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

STATE APPROVALS-SITE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

GHD
4080 PLAZA GOLDORADO CIRCLE
SUITE B
CAMERON PARK, CA 95682
530 677 5515

poligon
PORTER

REGISTERED PROFESSIONAL ENGINEER
SAMANTHA K. MOOSE
NO. S6729
STRUCTURAL
STATE OF CALIFORNIA

STATE APPROVALS-PC

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119077 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 07/22/2021

PRE-CHECK (PC) DOCUMENT
CODE: 2019 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

ORDER FORM

HIP ROOF - RAM

RAM1.0

GENERAL:

1. GENERAL NOTES AND TYPICAL DETAILS SHALL APPLY TO ALL PARTS OF THE JOB EXCEPT WHERE THEY MAY CONFLICT WITH DETAILS AND NOTES ON OTHER SHEETS. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED SUBJECT TO REVIEW BY THE STRUCTURAL ENGINEER FOR THIS PROJECT.
2. WORK SHALL CONFORM TO THE REQUIREMENTS, AS AMENDED TO DATE, OF THE LATEST ADOPTED EDITION OF THE CBC, C.A.C. TITLE 24, AND ALL OTHER LOCAL, STATE AND FEDERAL REGULATIONS.
3. OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR THIS PROJECT PRIOR TO PROCEEDING WITH ANY WORK INVOLVED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE STRUCTURAL ENGINEER FOR THIS PROJECT AND BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
5. THESE CONSTRUCTION DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, INCLUDING, BUT NOT LIMITED TO, BRACING, TEMPORARY SUPPORTS, AND SHORING. OBSERVATION VISITS TO THE SITE BY FIELD REPRESENTATIVES OF THE ARCHITECT/ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES. ANY SUPPORT SERVICES PERFORMED BY THE ARCHITECT/ENGINEER DURING THE CONSTRUCTION SHALL BE DISTINGUISHED FROM CONSTRUCTION AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ARCHITECT/ENGINEER, WHETHER OF MATERIAL OR WORK, ARE FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DOCUMENTS, BUT DO NOT GUARANTEE CONSTRUCTION.
6. ASTM DESIGNATIONS AND ALL STANDARDS REFER TO THE LATEST AMENDMENTS.
7. CONFORM TO APPLICABLE CAL/OSHA CONSTRUCTION SAFETY REGULATIONS FOR ALL WORK PERFORMED DURING CONSTRUCTION. JOB SITE SAFETY IS STRICTLY THE RESPONSIBILITY OF THE CONTRACTOR AND NOT THE ARCHITECT/ENGINEER OR OWNER.
8. THE ENGINEER AND THEIR CONSULTANTS SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, HANDLING, REMOVAL OR DISPOSAL OF HAZARDOUS MATERIALS AT THE PROJECT SITE, INCLUDING BUT NOT LIMITED, TO ASBESTOS, ASBESTOS PRODUCTS, POLYCHLORINATED BIPHENYL (PCB) OR OTHER TOXIC SUBSTANCES.
9. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, OR IF A CHANGE IN THE SCOPE OF WORK IS PROPOSED, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED CHANGE(S) SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK.
10. THE SCHOOL DISTRICT'S INSPECTOR OF RECORD SHALL INSPECT AND APPROVE THE ERECTED FRAME PRIOR TO ROOF INSTALLATION.
11. SEE REQUIREMENTS FOR LOCATION IN ANY FIRE HAZARD SEVERITY ZONE FOR WILDLAND URBAN INTERFACE AREAS (WUI) AS SPECIFIED IN THE APPLICABLE VERSION OF THE CALIFORNIA BUILDING CODE. PROVIDE PROTECTION AND DETAILS OF ALL AREAS COMPLYING WITH THE WUI REQUIRMENTS.
12. LOCATING THIS STRUCTURE CLOSER THAN 20 FEET TO OTHER STRUCTURES MAY AFFECT THE ALLOWABLE AREA FOR THE EXISTING CONSTRUCTION PER THE APPLICABLE VERSION OF THE CALIFORNIA BUILDING CODE.
13. VIEWS AND DETAILS ARE NOT DRAWN TO SCALE (UNLESS NOTED OTHERWISE). DO NOT SCALE THESE DRAWINGS.
14. OTHER SITE SPECIFIC ITEMS MAY BE REQUIRED.
15. WHEN A SITE-SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X, A LETTER STAMPED AND SIGNED FROM A SOILS ENGINEEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL VALUES SPECIFIED IN THE PC ARE STILL APPLICABLE.

STRUCTURAL AND MISCELLANEOUS STEEL:

1. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 360 - 16 AND 303-16 MANUAL REFERENCED BY THE 2019 EDITION OF THE CALIFORNIA BUILDING CODE.
2. PIPE SECTIONS SHALL CONFORM TO ASTM A53, Fy = 35 ksi, GRADE B UNLESS NOTED OTHERWISE.
3. STRUCTURAL TUBING (HSS SHAPES) SHALL CONFORM TO ASTM A500, GRADE B (OR HIGHER), Fy = 46 KSI.
4. IF MATERIAL AVAILABILITY IS LIMITED, MEMBER THICKNESSES CAN BE INCREASED BEYOND WHAT IS SHOWN IN THESE DRAWINGS (MAXIMUM INCREASE OF 1/8").
5. ALL CHANNELS, ANGLES, PLATES AND MISC. STEEL SHALL CONFORM TO ASTM A36, Fy = 36 KSI.
6. ALL COLD FORM STEEL SHALL CONFORM TO ASTM A653, CS = TYPE B, Fy = 50 KSI.
7. STRUCTURAL STEEL AND DECK SHALL BE IDENTIFIED FOR CONFORMITY PER CBC 2202A.1.
8. ROOF DECK SHALL HAVE KYNAR 5000 METAL COATING.
9. ROOF DECK SHALL CONFORM TO ATSM A792, Fy = 50 KSI.
10. MR ROOF SCREWS MEET ASTM A510 WITH A HEAD DIMENSION OF 0.31" (FLAT-TO-FLAT) AND INTEGRAL WASHER DIMENSION OF 0.58" (OUTSIDE DIAMETER).
11. SS ROOF SCREWS MEET ASTM A510 WITH A HEAD DIMENSION OF 0.437" (OUTSIDE DIAMETER).

WELDING:

1. ALL WELDING SHALL COMPLY WITH AWS D1.1 SPECIFICATIONS AND SHALL BE DONE BY AWS QUALIFIED WELDERS CERTIFIED FOR THE TYPE OF WELDING TO BE PERFORMED.
2. ALL WELDING SHALL BE DONE BY GAS METAL ARC PROCESS WITH E70XX ELECTRODES. FLUX CORE ARC WELD SHALL CONFORM TO CHARPY NOTCH TOUGHNESS RATING OF 20 ft-lb @ (O° F).
3. ALL WELDING SHALL BE DONE IN THE SHOP WITH REQUIRED INSPECTION, PRE-APPROVED BY DSA, TO ENSURE PROPER MATERIAL ID AND WELDING.
4. WELD FILLER METAL MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION OF COMPLIANCE WITH CODE AND SPECIFICATIONS.

BOLTING:

1. ALL BOLTS SHOWN ON THESE DRAWINGS ARE ASTM F3125 (A325 TYPE 1) HIGH STRENGTH BOLTS (UNO) AND SHALL BE HOT DIPPED GALVANIZED PER ASTM F2329.
2. HIGH STRENGTH BOLTS SHALL BE SAMPLED AND TESTED IN COMPLANCE WITH CBC 2213A.1.
3. BEFORE ERECTING THE FRAME, VERIFY ALL BOLTS AND NUTS ARE CLEAN OF DEBRIS AND BURRS - INCLUDING THE HARDWARE ARE ALREADY FASTENED INSIDE THE MEMBERS. CHASING SOME OF THE BOLTS AND NUTS MAY BE REQUIRED.
4. ANCHOR BOLTS (HEAVY HEX HEAD, ASTM F1554, GRADE 55) SHALL BE HOT DIPPED GALVANIZED PER ASTM F2329. ANCHOR BOLTS MAY BE HEADED OR THREADED WITH A NUT THAT IS PREVENTED FROM ROTATING.
5. HIGH STRENGTH NUTS SHALL CONFORM TO ASTM A563 AND SHALL BE GALVANIZED PER ASTM F2329.
6. HIGH STRENGTH WASHERS SHALL CONFORM TO ASTM F436 AND SHALL BE GALVANIZED PER ASTM F2329.
7. THE BOLTING INSTALLATION REQUIREMENTS OUTLINED BELOW ARE CRITICAL TO THE STRUCTURE'S DESIGN AND PERFORMANCE. **THE INSTALLER IS REQUIRED TO COORDINATE THIS PHASE OF CONSTRUCTION WITH THE SPECIAL BOLTING INSPECTOR AND THE INSPECTOR OF RECORD PRIOR TO THE ERECTION OF THE FRAME.** ALL BOLTS SHALL BE INSTALLED AND INSPECTED PER THE APPLICABLE VERSION OF AISC'S "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS", CBC 1705A.2.1; AISC 341-16 J7; AISC 360-16 N5.6.
   A. PRETENSIONED JOINTS (IDENTIFIED ON THE FRAME CONNECTION DETAILS WITH A "PJ REQUIRED") MUST BE INSTALLED AND INSPECTED TO MEET ONE OF FOLLOWING REQUIREMENTS:
      1. TURN-OF-NUT PRETENSIONING
      2. CALIBRATED WRENCH PRENTENSIONING
      3. DIRECT-TENSION-INDICATOR PRETENSIONING (CONTRACTOR RESPONSIBLE FOR PURCHASE OF REQUIRED WASHERS)
   B. ALL OTHER JOINTS MUST BE INSTALLED AND INSPECTED TO MEET THE REQUIREMENTS OF SNUG-TIGHTENED JOINTS. **NOTE TO INSTALLER AND INSPECTOR(S): THE SNUG-TIGHT CONDITION EXISTS, IN PART, WHEN ALL THE BOLTS IN THE JOINT HAVE BEEN TIGHTENED SUFFICIENTLY TO PREVENT THE REMOVAL OF THE NUTS WITHOUT THE USE OF A WRENCH.**

THE CONTRACTOR, SPECIAL BOLTING INSPECTOR AND THE INSPECTOR OF RECORD MUST ALL AGREE ON WHICH APPROACH WILL BE USED TO PRETENSION THE BOLTS. THE CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING THE APPROACH AGREED TO BY ALL PARTIES LISTED ABOVE.

FOUNDATIONS:

1. ALLOWABLE SOIL PRESSURES ASSUME CLASS 5 SOIL CLASSIFICATION PER 2019 CBC TABLE 1806A. 2.
2. FILL AND BACKFILL SHALL BE COMPACTED TO 95% OF MAX. DENSITY IN ACCORDANCE WITH ASTM TEST METHOD D1557. FLOODING NOT PERMITTED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING, ETC. NECCESSARY TO SUPPORT CUT AND/OR FILL BANKS DURING EXCAVATION, AND FORMING AND PLACEMENT OF CONCRETE.
4. STRUCTURES SHALL BE SETBACK FROM ADAJCENT SLOPES TO PROVIDE FIRM MATERIAL FOR EMBEDMENT AND FOR PROTECTION FROM SLOPE DRAINAGE, EROSION, AND SHALLOW FAILURES.
   A. BOTTOM OF ASCENDING SLOPE: THE SMALLER OF HALF THE HEIGHT OF THE SLOPE AND 15FT MEASURED FROM THE FACE OF THE STRUCTURE TO THE TOE OF THE SLOPE
   B. TOP OF DECENDING SLOPE: THE SMALLER OF A THIRD OF THE HEIGHT OF THE SLOPE AND 40 FT MEASURED FROM THE FACE OF THE FOOTING TO THE TOP OF THE SLOPE

   ALTERNATE SETBACKS ARE PERMITTED, SUBJECT FOR APPROVAL. A GEOTECHNICAL INVESTIGATION MAY BE REQUIRED.
5. STRUCTURES PLACED ON LIQUIFIABLE SOILS OR SITE CLASS F MAY NOT BE SUBMITTED FOR AN OVER THE COUNTER REVIEW.

CONCRETE:

1. MIX DESIGN REQUIREMENTS: (NORMAL WEIGHT CONCRETE)

STRENGTH f'c (28 DAYS)	W/C RATIO (NON-AIR ENTRAINED)	W/C RATIO (AIR ENTRAINED)	AIR ENTRAINMENT	SLUMP (± 1")	UNIT WEIGHT (NORMAL WEIGHT)
5000 PSI	0.45	0.4	6%	4"	150 PCF

2. CHANGES TO THE MIX DESIGN MUST BE APPROVED BY THE ENGINEER OR ARCHITECT OF RECORD AND DSA
3. AGGREGATES SHALL CONFORM TO ASTM C33. MAX AGGREGATE SIZE = 1".
4. CEMENT SHALL CONFORM TO ASTM C150 (TYPE V) UNLESS NOTED OTHERWISE ON THE DRAWINGS.
5. CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR A MINIMUM OF FIVE DAYS AFTER PLACEMENT. ALTERNATE METHODS WILL BE APPROVED IF SATISFACTORY PERFORMANCE CAN BE ASSURED.
6. CONCRETE SHALL NOT FREE FALL MORE THAN FIVE FEET.
7. CONCRETE SHALL BE PROPORTIONED PER ACI 318-14 26.4.
8. CONCRETE SHALL BE TESTED PER CBC 1910A.1, 1705A.3, AND ACI 318-14 24.13. BATCH PLANT INSPECTION NOT REQUIRED. CONTRACTOR SHALL IMPLEMENT WEIGHMASTER AND BATCH TICKET REQUIREMENTS OF CBC 1705A.3.3.1.

REINFORCING STEEL:

1. REINFORCING STEEL SHALL BE DEFORMED STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A615, (DEFORMATIONS SHALL BE IN ACCORDANCE WITH ASTM A305) AS FOLLOWS:
   GR 60: (#4 BARS AND LARGER)
   GR 40: (#3 BARS)
2. DETAILING, FABRICATION, AND ERECTION OF REINFORCING BARS SHALL CONFORM TO THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCING CONCRETE STRUCTURES."
3. MIN. COVER FOR CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:
   A. CAST AGAINST EARTH.......... 3"
   B. CAST AGAINST FORM BELOW GRADE.......... 2"
   C. FORMED SLABS (#11 BAR & SMALLER).......... 3/4"
   D. SLABS ON GRADE (FROM TOP OF SLAB).......... 1"
   E. COLUMNS AND BEAMS (MAIN BARS).......... 2"
   F. WALLS EXPOSED TO WEATHER (#6-#18 BARS).......... 2"
      (#5 & SMALLER).......... 11/2"
   G. NOT EXPOSED TO WEATHER (#11 & SMALLER).......... 3/4"
4. BARS SHALL BE CLEAN OF RUST, GREASE OR OTHER MATERIAL LIKELY TO IMPAIR BOND. BENDS SHALL BE MADE COLD.
5. FOR #6 BARS AND SMALLER, REINFORCING SHALL BE LAP SPLICED 45 BAR DIA MINIMUM IN CONCRETE. FOR #7 BARS AND LARGER, REINFORCING SHALL BE LAP SPLICED 55 BAR DIAMETERS MINIMUM IN CONCRETE. ALL LAP SPLICES MUST COMPLY WITH ACI 318-14.
6. PRIOR TO PLACING OF CONCRETE, REINFORCING STEEL AND EMBEDDED ITEMS SHALL BE WELL SECURED IN POSITION.
7. WELDING OF REINFORCING IS NOT ALLOWED
8. REINFORCING STEEL SHALL BE SAMPLED AND TESTED PER CBC 1910A.2.

POWDER COATED AND EPOXY PRIMED FINISH:

1. ENTIRE POWDER COATING PROCESS COMPLETED IN SAME FACILITY AS STEEL FABRICATION.
2. ALL CARBON STEEL MEMBERS (COLUMNS, BEAMS, PLATES, ETC.) PAINTED WITH PRIME COAT PER THE "AISC CODE OF STANDARD PRACTICE" AND THE "AISC SPECIFICATION SECTION M3" (UNLESS NOTED OTHERWISE).
3. PARTS PRETREATED IN A 3 STAGE IRON PHOSPHATE WASHER (OR EQUAL).
4. EPOXY PRIMER POWDER COAT APPLIED TO PARTS FOR SUPERIOR CORROSION PROTECTION.
5. TOP POWDER COAT OF SUPER DURABLE TGIC (COLOR SELECTED FROM MANUFACTURER'S STANDARD OPTIONS OR CUSTOM COLOR).
6. SAMPLE PRODUCTION PARTS TESTED TO MEET THE FOLLOWING CRITERIA:
   A. SALT SPRAY RESISTANCE PER ASTM B 117/ ASTM D 1654
      1. 10000 HOURS WITH NO CREEP FROM SCRIBE LINE AND RATING OF 10
   B. HUMIDITY RESISTANCE PER ASTM D2247-02
      1. 5000 HOURS WITH NO LOSS OF ADHESION OR BLISTERING
   C. COLOR/UV RESISTANCE PER ASTM G154-04
      1. 2000 HOURS EXPOSURE ALTERNATE CYCLES WITH NO CHALKING, 75% COLOR RETENTION, AND COLOR VARIATION MAXIMUM 3.0 E VARIATION CIE FORMULA (BEFORE AND AFTER 2000 HOURS EXPOSURE

CONSTRUCTION NOTES

1. A DSA-CERTIFIED CLASS 2 INSPECTOR IS REQUIRED FOR THIS PROJECT.
2. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24 CCR AND DSA IR A-6.
3. A "DSA-CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE OWNER (E.G. DISTRICT, ETC.) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
4. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE OWNER (E.G. DISTRICT, ETC.) SHALL CONDUCT ALL THE REQUIRED TEST AND INSPECTIONS FOR THE PROJECT.

NOTICE OF DISCLAIMER FOR STRUCTURAL ENGINEER RESPONIBILITY

1. FOR THE SITE-SPECIFIC PROJECT, NEITHER POLIGON OR GHD ARE THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE.
2. FOR THE SITE-SPECIFIC PROJECT, GHD AND POLIGON'S RESPONSIBILITY IS LIMITED TO THE PREPARATION OF THE PLANS AND SPECIFICATIONS FOR THE STRUCTURES OF THIS PC ONLY.
3. STRUCTURAL OBSERVATION OF CONSTRUCTION IS SPECIFICALLY EXCLUDED FROM GHD AND POLIGON'S RESPONSIBILITY FOR THE SITE-SPECIFIC PROJECT.
4. 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 OBSERVATIONS OF CONSTRUCTION, REVIEW OF INSPECTIONS REPORTS, AND SIGNING OFF ON THE VERIFIED REPORT FOR COMPLETED WORK.
5. POLIGON WILL BE RESPONSIBLE FOR RESPONDING TO QUESTIONS PERTAINING TO THE PLANS AND SPECIFICATIONS FOR THE STRUCTURES OF THIS PC WHICH ARISE DURING PLAN REVIEW AND CONSTRUCTION.

SPECIAL INSPECTION NOTES:

1. THE PROJECT INSPECTOR AND TESTING AGENCY SHALL BE SELECTED BY THE SCHOOL DISTRICT AND APPROVED BY DSA AND THE ARCHITECT OF RECORD.
2. COSTS OF THE PROJECT INSPECTOR AND THE TESTING AGENCY SHALL BE BORN BY THE SCHOOL DISTRICT.
3. THE PROJECT INSPECTOR, AND ENTIRE CONSTRUCTION OVERSIGHT PROCESS, SHALL COMPLY WITH DSA PR 13-01.
4. ON APPROVED PC DRAWINGS, THE STATEMENT OF STRUCTURAL TESTS AND SPECIAL INSPECTIONS (FORM DSA-103) BELOW IS ONLY AN EXAMPLE. ON APPROVED PC DRAWINGS, THE EXAMPLE FORM DSA-103 MUST BE CROSSED OUT BEFORE THE PC DRAWINGS CAN BE APPROVED AS PART OF A SITE-SPECIFIC (OR STOCKPILE) PROJECT SO THEY WILL NOT CONFLICT WITH THE OFFICIAL FORM DSA-103 FOR THE PROJECT.

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2019 CBC

Application Number:	**School Name:**	**School District:**
DSA File Number:	**Increment Number:**	**Date Submitted:**

2019 CBC

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A (2019 CBC).

****NOTE:** Undefined section and table references found in this document are from the CBC, or California Building Code.

KEY TO COLUMNS

1. TYPE	2. PERFORMED BY
Continuous – Indicates that a continuous special inspection is required **Periodic** – Indicates that a periodic special inspection is required **Test** – Indicates that a test is required	**GE** – Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative. **LOR** – Indicates that the test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See CAC Section 4-335. **PI** – Indicates that the special inspection may be performed by a project inspector when specifically approved by DSA. **SI** – Indicates that the special inspection shall be performed by an appropriately qualified/approved special inspector.

	1. GENERAL:	**Table 1705A.6**		
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**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. • Materials below footings are adequate to achieve the design bearing capacity.	**See Notes**	**PI**	Refer to specific items identified in the Appendix listing exemptions for limitations. Placement of controlled fill exceeding 12" depth under foundations is not permitted without a geotechnical report.

	4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):	**Table 1705A.8**		
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Inspect drilling operations and maintain complete and accurate records for each pier.	**Continuous**	**PI**	Continuous inspection to be provided by project inspector. Refer to specific items identified in the Appendix listing exemptions for limitations.
☑	**b.** Verify pier locations, diameters, plumbness, bell diameters (if applicable), lengths and embedment into bedrock (if applicable); record concrete or grout volumes.	**Continuous**	**PI**	Continuous inspection to be provided by project inspector. Refer to specific items identified in the Appendix listing exemptions for limitations.
☑	**c.** Concrete piers.	Provide tests and inspections per CONCRETE section below.		

	7. CAST-IN-PLACE CONCRETE			
	Material Verification and Testing:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Verify use of required design mix.	**Periodic**	**SI**	**Table 1705A.3 Item 5, 1910A.1.**
☑	**b.** Identifiy, sample, and test reinforcing steel.	**Test**	**LOR**	**1910A.2;** ACI 318-14 Section 26.6.1.2; DSA IR 17-10. (See Appendix for exemptions.)
☑	**c.** During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	**Test**	**LOR**	**Table 1705A.3 Item 6**; ACI 318-14 Sections 26.5 & 26.12.
☑	**d.** Test concrete (f'_c).	**Test**	**LOR**	**1905A.1.15;** ACI 318-14 Section 26.12.

	17. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES			
	Material Verification and Testing:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Verify identification of all materials and: • Mill certificates indicate material properties that comply with requirements. • Material sizes, types and grades comply with requirements.	**Periodic**	*	**Table 1705A.2.1 Item 3a–3c.** 2202A.1; AISI S100-16 Section A3.1 & A3.2, AISI S240-15 Section A3 & A5, AISI S220-15 Sections A4 & A6. * By special inspector or qualified technician when performed off-site.
☑	**b.** Test unidentified materials	**Test**	**LOR**	**2202A.1.**
☑	**c.** Examine seam welds of HSS shapes	**Periodic**	**SI**	DSA IR 17-3.
	Inspection:			
☑	**d.** Verify and document steel fabrication per DSA-approved construction documents.	**Periodic**	**SI**	Not applicable to cold-formed steel light-frame construction, except for trusses (**1705A.2.4**).

	18. HIGH-STRENGTH BOLTS: RCSC 2014			
	Material Verification and Testing of High-Strength Bolts, Nuts and Washers:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA-approved documents.	**Periodic**	**SI**	**Table 1705A.2.1 Items 1a & 1b, 2202A.1;** AISC 360-16 Section A3.3, J3.1, and N3.2; RCSC 2014 Section 1.5 & 2.1; DSA IR 17-8 & DSA IR 17-9.
☑	**b.** Test high-strength bolts, nuts and washers.	**Test**	**LOR**	**Table 1705A.2.1 Item 1c, 2213A.1**; RCSC 2014 Section 7.2; DSA IR 17-8.
	Inspection of High-Strength Bolt Installation:			
☑	**c.** Bearing-type ("snug tight") connections.	**Periodic**	**SI**	**Table 1705A.2.1 Item 2a, 1705A.2.6, 2204A.2;** AISC 360-16 J3.1, J3.2, M2.5 & N5.6; RCSC 2014 Section 9.1; DSA IR 17-9.
☑	**d.** Pretensioned and slip-critical connections.	*	**SI**	**Table 1705A.2.1 Items 2b & 2c, 1705A.2.6, 2204A.2;** AISC 360-16 J3.1, J3.2, M2.5 & N5.6; RCSC 2014 Sections 9.2 & 9.3; DSA IR 17-9. * "Continuous" or "Periodic" depends on the tightening method used.

	19. WELDING:	**1705A.2.5, Table 1705A.2.1 Items 4 & 5;** AWS D1.1 and AWS D1.8 for structural steel; AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel; DSA IR 17-3 (See Appendix for exemptions.)		
	Verification of Materials, Equipment, Welders, etc.:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Verify weld filler material identification markings per AWS designation listed on the DSA-approved documents and the WPS.	**Periodic**	**SI**	DSA IR 17-3.
☑	**b.** Verify weld filler material manufacturer's certificate of compliance.	**Periodic**	**SI**	DSA IR 17-3.
☑	**c.** Verify WPS, welder qualifications and equipment.	**Periodic**	**SI**	DSA IR 17-3.
	19.1 SHOP WELDING:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	**Continuous**	**SI**	**Table 1705A.2.1 Items 5a.1–4;** AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.
☑	**b.** Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds.	**Periodic**	**SI**	**1705A.2.2, Table 1705A.2.1 Items 5a.5 & 5a.6;** AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.

	22. ANCHOR BOLTS AND ANCHOR RODS:			
	Test or Special Inspection	**Type**	**Performed By**	**Code References and Notes**
☑	**a.** Anchor Bolts and Anchor Rods	**Test**	**LOR**	Sample and test anchor bolts and anchor rods not readily identifiable per procedures noted in DSA IR 17-11.

Name of Architect or Engineer in general responsible charge:

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

Signature of Architect or Structural Engineer: Date:

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

DSA STAMP

DSA 103-19: LIST OF REQUIRED VERIFIED REPORTS, 2019 CBC

1. Soils Testing and Inspection: Geotechnical Verified Report Form DSA 293
2. Structural Testing and Inspection: Laboratory Verified Report Form DSA 291
3. Shop Welding Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292
4. High-Strength Bolt Installation Inspection: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292

STATE APPROVALS-SITE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

GHD
4080 PLAZA GOLDORADO CIRCLE
SUITE B
CAMERON PARK, CA 95682
530 677 4814

poligon
PORTER

REGISTERED PROFESSIONAL ENGINEER
SAMANTHA K. MOOSE
NO. S6729
STRUCTURAL
STATE OF CALIFORNIA

STATE APPROVALS-PC

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119077 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 07/22/2021

PRE-CHECK (PC) DOCUMENT
CODE: 2019 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

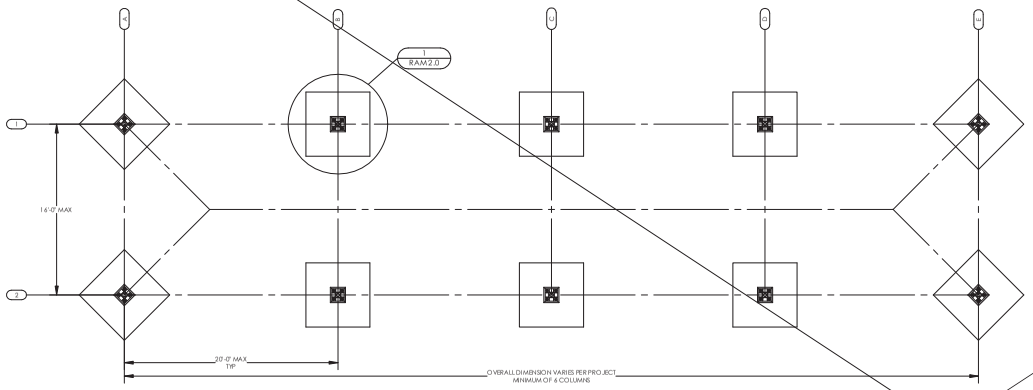
NOTES AND SPECIAL INSPECTIONS

HIP ROOF - RAM

RAM1.1

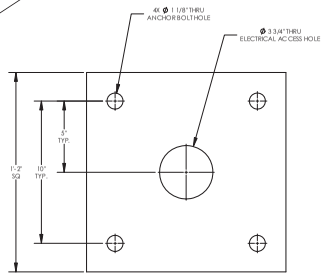
FOUNDATION PLAN NOTES:

1. TOP OF ALL FOUNDATIONS MUST BE CONSTRUCTED AT ONE COMMON ELEVATION (COORDINATE WITH SITE PLANS - NOT BY POLIGON)
2. ALL FOUNDATIONS MUST BE CENTERED UNDER COLUMNS (UNO).
3. SEE SHEET RAM1.1 FOR CONCRETE REQUIREMENTS.
4. PRIOR TO FORMING AND CASTING FOUNDATIONS, REVIEW FOUNDATION PLAN FOR REQUIRED ORIENTATION.
5. FOUNDATION MATERIAL AND INSTALLATION NOT BY POLIGON.
6. VIBRATE CONCRETE FULL DEPTH OF FOUNDATION.



FOUNDATION PLAN (SPREAD PAD)

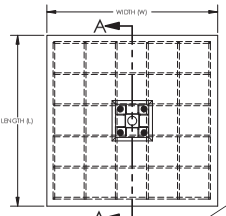
SCALE: 3/16" = 1'-0"



DETAIL 3

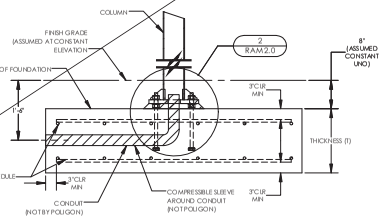
SCALE: 3" = 1'-0"

COLUMN BASEPLATE | 3



DETAIL 1

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



SECTION A-A

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

FOUNDATION REQUIREMENTS VARY PER PROJECT.

SEE SHEET RAM 1.0 FOR REQUIRED LOAD SCENARIO AND FOUNDATION TYPE (STEP 9 OF 'INSTRUCTIONS')

ONLY REFERENCE COPY OF PC DRAWINGS SUBMITTED FOR THIS PROJECT

SPREAD PAD

SIZE AND REINFORCING REQUIREMENTS

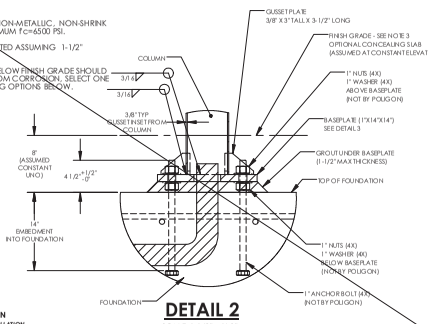
LOAD SCENARIO	WIDTH (W)	LENGTH (L)	THICKNESS (T)	HORIZONTAL REINFORCING[1]	
				QTY	SIZE
1	7'-6"	7'-6"	1'-6"	7	#6
2	8'-0"	8'-0"	1'-6"	7	#6

[1] EQUALLY SPACED EACH WAY, TOP AND BOTTOM

SPREAD PAD FOUNDATION | 1

NOTES:

1. GROUT SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH MINIMUM f'c=6500 PSI.
2. COLUMNS FABRICATED ASSUMING 1-1/2" GROUT PAD.
3. COLUMN BASES BELOW FINISH GRADE SHOULD BE PROTECTED FROM CORROSION. SELECT ONE OF THE FOLLOWING OPTIONS BELOW:



COLUMN BASE PROTECTION

BELOW SURFACE COLUMN INSTALLATION

[ ] CONCRETE SLAB - 3" MIN ANCHOR BOLT COVER

[ ] MASTIC COATING - 1/4" THICK MIN COATING ON ALL STEEL SURFACES BELOW GRADE

DETAIL 2

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

COLUMN BASEPLATE AND ANCHOR BOLTS | 2

STATE APPROVALS-SITE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

GHD
4258 FLOYD COLDER ROAD CIRCLE
SUITE B
CAMARILLO, PARK, CA 93003
805-977-8616

poligon

PORTER

STATE APPROVALS-PC

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119077 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 07/22/2021

PRE-CHECK (PC) DOCUMENT
CODE: 2019 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

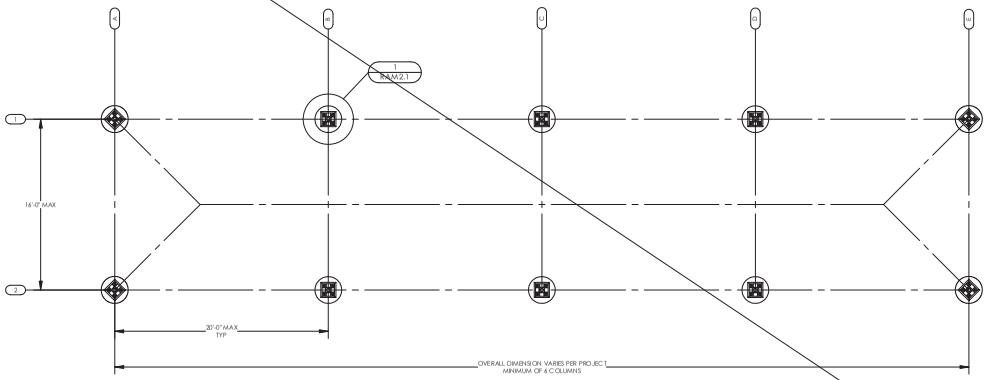
FOUNDATION PLAN
SPREAD PAD

HIP ROOF - RAM 20

RAM2.0

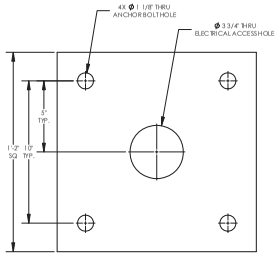
FOUNDATION PLAN NOTES:

1. TOP OF ALL FOUNDATIONS MUST BE CONSTRUCTED AT ONE COMMON ELEVATION (COORDINATE WITH SITE PLANS - NOT BY POLIGON)
2. ALL FOUNDATIONS MUST BE CENTERED UNDER COLUMNS (UNO).
3. SEE SHEET RAM1.1 FOR CONCRETE REQUIREMENTS.
4. PRIOR TO FORMING AND CASTING FOUNDATIONS, REVIEW FOUNDATION PLAN FOR REQUIRED ORIENTATION.
5. FOUNDATION MATERIAL AND INSTALLATION NOT BY POLIGON.
6. VIBRATE CONCRETE FULL DEPTH OF FOUNDATION.
7. FOR DRILLED PIER FOUNDATIONS, PREVENT SOIL FROM ENTERING EXCAVATED HOLE (FORM, ETC)



FOUNDATION PLAN (DRILLED PIER)

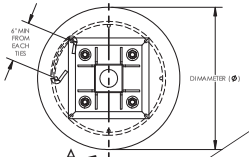
SCALE: 3/16" = 1'-0"



DETAIL 3

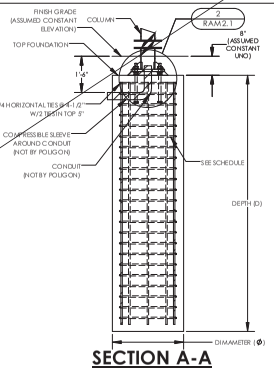
SCALE: 3" = 1'-0"

COLUMN BASEPLATE | 3



DETAIL 1

SCALE: 1" = 1'-0"



SECTION A-A

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

FOUNDATION REQUIREMENTS VARY PER PROJECT

SEE SHEET RAM1.0 FOR REQUIRED LOAD SCENARIO AND FOUNDATION TYPE (STEP 9 OF 'INSTRUCTIONS')

ONLY REFERENCE COPY OF PC DRAWINGS SUBMITTED FOR THIS PROJECT

DRILLED PIER

SIZE AND REINFORCING REQUIREMENTS

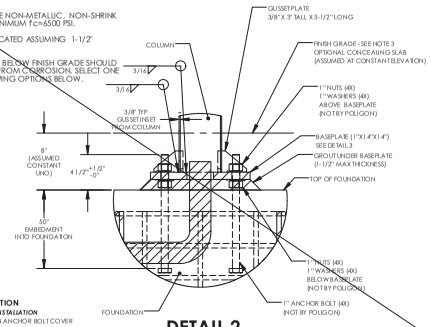
LOAD SCENARIO	DIAMETER (Ø)	DEPTH (D)	VERTICAL REINFORCING[1]	
			QTY	SIZE
1[2]	2'-6"	11'-0"	8	#6
2[3]	2'-6"	11'-6"	8	#6

[1] EQUALLY SPACED AROUND DRILLED PIER
[2] UPLIFT CAPACITY: 14.62 KIPS (FOUNDATION WEIGHT 8.10 KIPS, SKIN FRICTION 6.52 KIPS)
[3] UPLIFT CAPACITY: 15.31 KIPS (FOUNDATION WEIGHT 8.47 KIPS, SKIN FRICTION 6.84 KIPS)

DRILLED PIER FOUNDATION | 1

NOTES:

1. GROUT SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH MINIMUM f'c=6500 PSI.
2. COLUMNS FABRICATED ASSUMING 1-1/2" GROUT PAD.
3. COLUMN BASES BELOW FINISH GRADE SHOULD BE PROTECTED FROM CORROSION. SELECT ONE OF THE FOLLOWING OPTIONS BELOW.



COLUMN BASE PROTECTION

BELOW SURFACE COLUMN INSTALLATION

[ ] CONCRETE SLAB - 3" MIN ANCHOR BOLT COVER
[ ] MASTIC COATING - 1/4" THICK MIN. COATING ON ALL STEEL SURFACES BELOW GRADE

DETAIL 2

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

COLUMN BASEPLATE AND ANCHOR BOLTS | 2

STATE APPROVALS-SITE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

GHD
4258 FLOYD COLDERADO CIRCLE
SUITE B
LAS VEGAS, NEVADA, CA 89032
NV 917.2.8.5.6

poligon
PORTER

STATE APPROVALS-PC

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119077 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 07/22/2021

PRE-CHECK (PC) DOCUMENT
CODE: 2019 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

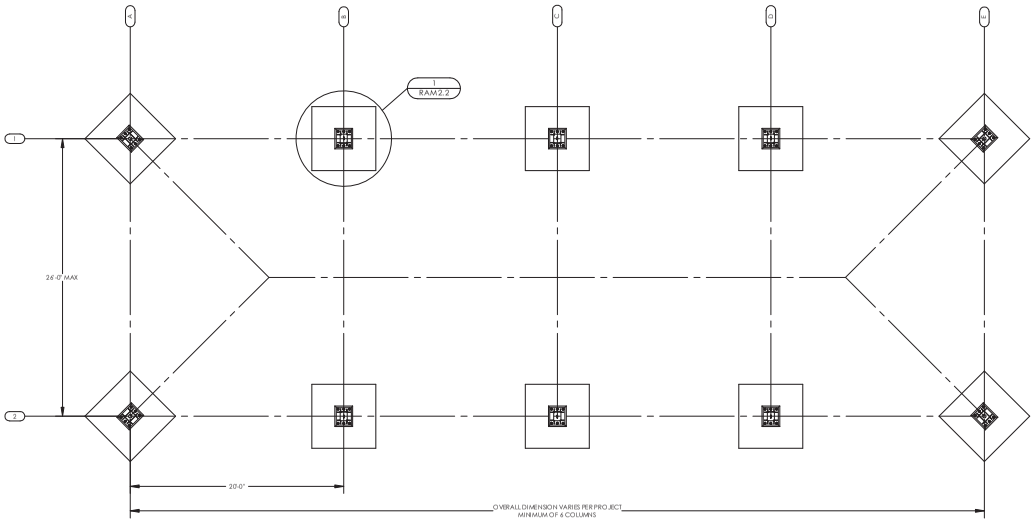
FOUNDATION PLAN
DRILLED PIER

HIP ROOF - RAM 20

RAM2.1

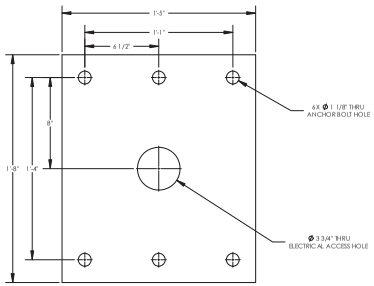
FOUNDATION PLAN NOTES:

1. TOP OF ALL FOUNDATIONS MUST BE CONSTRUCTED AT ONE COMMON ELEVATION (COORDINATE WITH SITE PLANS - NOT BY POLIGON)
2. ALL FOUNDATIONS MUST BE CENTERED UNDER COLUMNS (UNO).
3. SEE SHEET RAM1.1 FOR CONCRETE REQUIREMENTS.
4. PRIOR TO FORMING AND CASTING FOUNDATIONS, REVIEW FOUNDATION PLAN FOR REQUIRED ORIENTATION.
5. FOUNDATION MATERIAL AND INSTALLATION NOT BY POLIGON.
6. VIBRATE CONCRETE FULL DEPTH OF FOUNDATION.



FOUNDATION PLAN (SPREAD PAD)

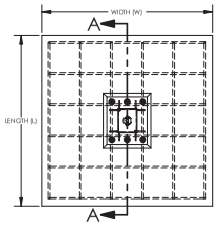
SCALE: 3/16" = 1'-0"



DETAIL 3

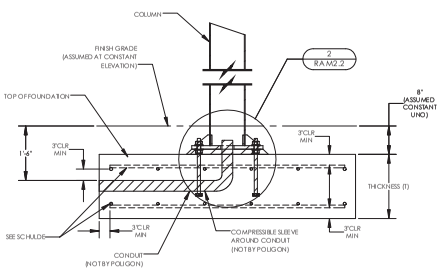
SCALE: 1-1/2" = 1'-0"

COLUMN BASEPLATE | 3



DETAIL 1

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



SECTION A-A

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

FOUNDATION REQUIREMENTS VARY PER PROJECT

SEE SHEET RAM1.0 FOR REQUIRED LOAD SCENARIO AND FOUNDATION TYPE (STEP 9 OF 'INSTRUCTIONS')

ONLY REFERENCE COPY OF PC DRAWINGS SUBMITTED FOR THIS PROJECT

SPREAD PAD

SIZE AND REINFORCING REQUIREMENTS

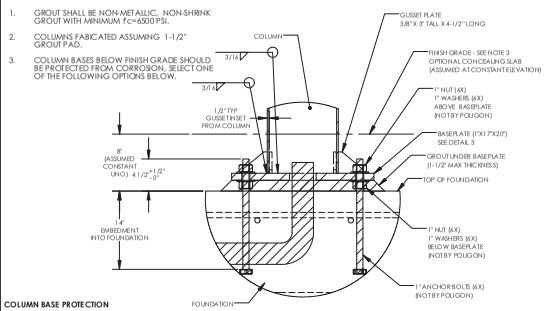
LOAD SCENARIO	WIDTH (W)	LENGTH (L)	THICKNESS (T)	HORIZONTAL REINFORCING[1]	
				QTY	SIZE
1	9'-0"	9'-0"	1'-6"	8	#6
2	10'-0"	10'-0"	1'-6"	9	#6

[1] EQUALLY SPACED EACH WAY, TOP AND BOTTOM

SPREAD PAD FOUNDATION | 1

NOTES:

1. GROUT SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH MINIMUM f'c=6500 PSI.
2. COLUMNS FABICATED ASSUMING 1-1/2" GROUT PAD.
3. COLUMN BASES BELOW FINISH GRADE SHOULD BE PROTECTED FROM CORROSION. SELECT ONE OF THE FOLLOWING OPTIONS BELOW.



COLUMN BASE PROTECTION

BELOW SURFACE COLUMN INSTALLATION

[ ] CONCRETE SLAB - 3" MIN. ANCHOR BOLT COVER

[ ] MASTIC COATING - 1/4" THICK MIN COATING ON ALL STEEL SURFACES BELOW GRADE

DETAIL 2

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

COLUMN BASEPLATE AND ANCHOR BOLTS | 2

STATE APPROVALS-SITE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

GHD
4258 FLOYD COLDERA COURT CIRCLE
SUITE B
CONCORD, PARK, CA 94520
925-972-0616

poligon
PORTER

NO. 5172
STRUCTURAL
STATE OF CALIFORNIA

STATE APPROVALS-PC

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119077 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 07/22/2021

PRE-CHECK (PC) DOCUMENT
CODE: 2019 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

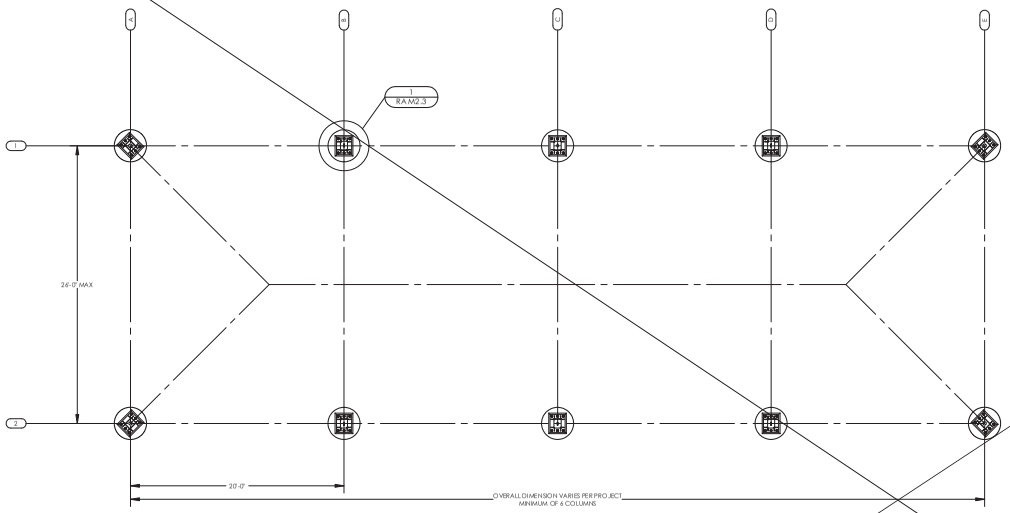
FOUNDATION PLAN
SPREAD PAD

HIP ROOF - RAM 30

RAM2.2

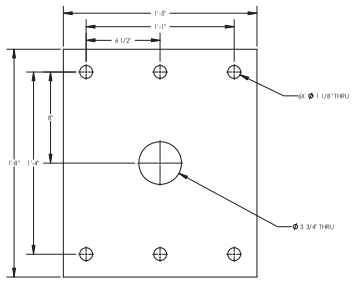
FOUNDATION PLAN NOTES:

1. TOP OF ALL FOUNDATIONS MUST BE CONSTRUCTED AT ONE COMMON ELEVATION (COORDINATE WITH SITE PLANS - NOT BY POLIGON)
2. ALL FOUNDATIONS MUST BE CENTERED UNDER COLUMNS (UNO).
3. SEE SHEET RAM1.1 FOR CONCRETE REQUIREMENTS.
4. PRIOR TO FORMING AND CASTING FOUNDATIONS, REVIEW FOUNDATION PLAN FOR REQUIRED ORIENTATION.
5. FOUNDATION MATERIAL AND INSTALLATION NOT BY POLIGON.
6. VIBRATE CONCRETE FULL DEPTH OF FOUNDATION.
7. FOR DRILLED PIER FOUNDATIONS, PREVENT SOIL FROM ENTERING EXCAVATED HOLE (FORM, ETC.).



FOUNDATION PLAN (DRILLED PIER)

SCALE: 3/16" = 1'-0"

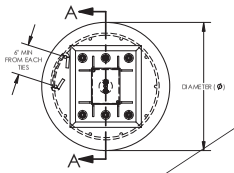


DETAIL 3

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

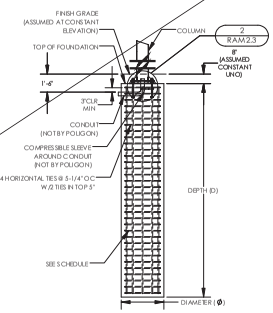
COLUMN BASEPLATE

3



DETAIL 1

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



SECTION A-A

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

FOUNDATION REQUIREMENTS VARY PER PROJECT

SEE SHEET RAM1.0 FOR REQUIRED LOAD SCENARIO AND FOUNDATION TYPE (STEP 9 OF 'INSTRUCTIONS')

ONLY REFERENCE COPY OF PC DRAWINGS SUBMITTED FOR THIS PROJECT

DRILLED PIER

SIZE AND REINFORCING REQUIREMENTS

LOAD SCENARIO	DIAMETER (Ø)	DEPTH (D)	VERTICAL REINFORCING[1]	
			QTY	SIZE
1[2]	3'-0"	13'-0"	10	#7
2[3]	3'-0"	15'-0"	10	#7

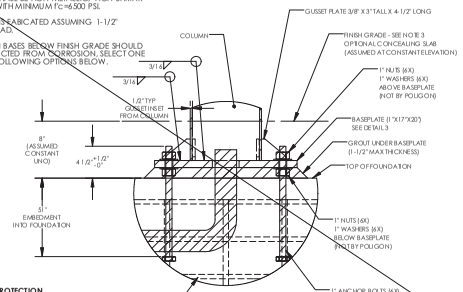
EQUALLY SPACED AROUND DRILLED PIER
2 UPLIFT CAPACITY: 23.2 KIPS (FOUNDATION WEIGHT 13.8 KIPS, SKIN FRICTION 9.4 KIPS)
3 UPLIFT CAPACITY: 26.9 KIPS (FOUNDATION WEIGHT 15.9 KIPS, SKIN FRICTION 11.0 KIPS)

DRILLED PIER FOUNDATION

1

NOTES:

1. GROUT SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH MINIMUM f'c =6,500 PSI.
2. COLUMNS FABRICATED ASSUMING 1-1/2" GROUT PAD.
3. COLUMN BASES BELOW FINISH GRADE SHOULD BE PROTECTED FROM CORROSION. SELECT ONE OF THE FOLLOWING OPTIONS BELOW.



COLUMN BASE PROTECTION

BELOW SURFACE COLUMN INSTALLATION

[ ] CONCRETE SLAB - 3" MIN ANCHOR BOLT COVER
[ ] MASTIC COATING - 1/4" THICK MIN COATING ON ALL STEEL SURFACES BELOW GRADE

DETAIL 2

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

COLUMN BASEPLATE AND ANCHOR BOLTS

2

STATE APPROVALS-SITE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

GHD
4258 FLOYD COLDERA COLE CIRCLE
SUITE B
LAS VEGAS, NEVADA
NV 89122-5616

poligon

PORTER

STATE APPROVALS-PC

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DATE: 07/22/2021

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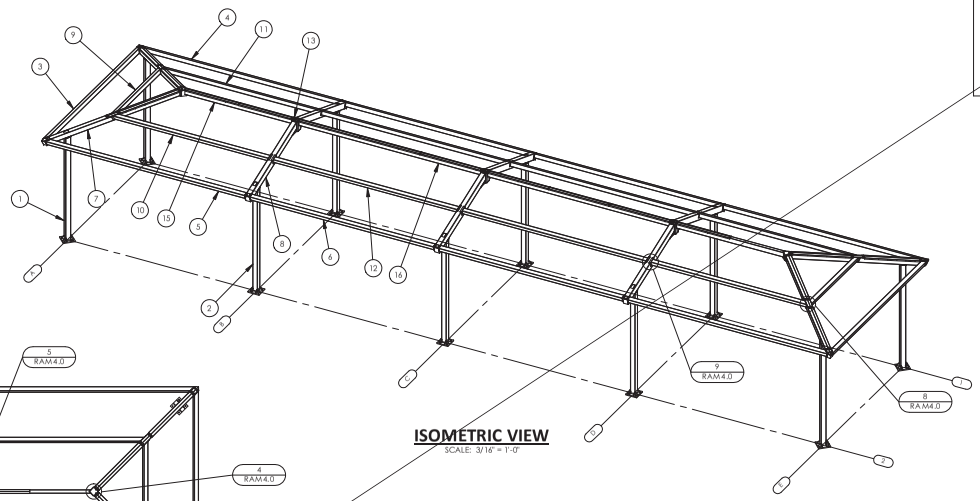
CODE: 2019 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

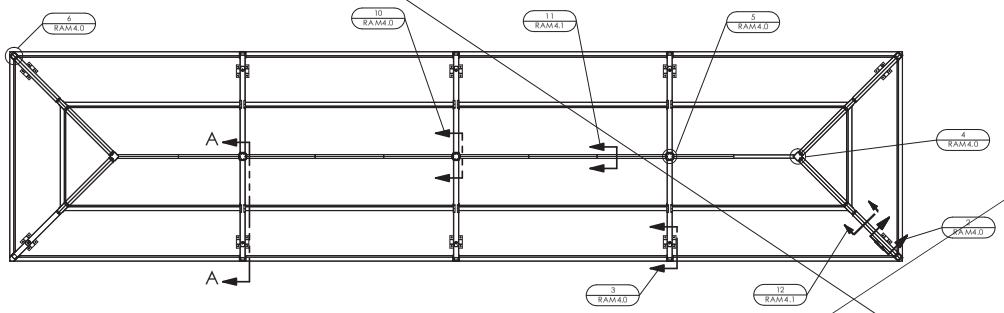
FOUNDATION PLAN DRILLED PIER

HIP ROOF - RAM 30

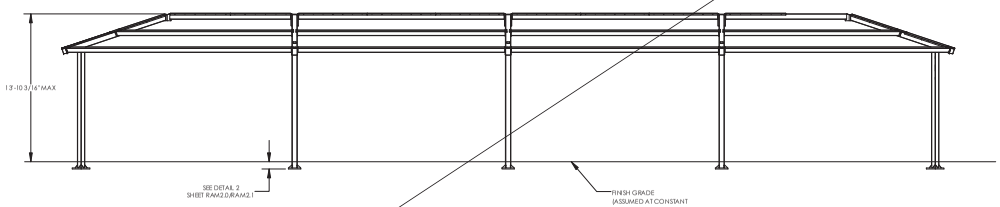
RAM2.3



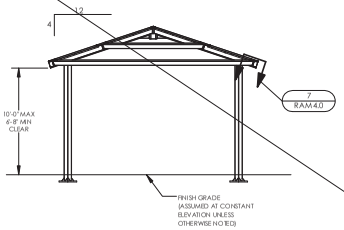
ISOMETRIC VIEW
SCALE: 3/16" = 1'-0"



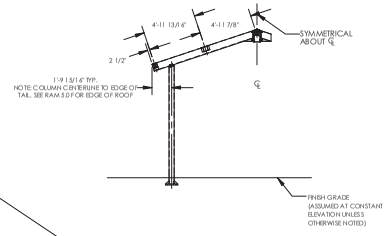
PLAN VIEW
SCALE: 3/16" = 1'-0"



FRONT ELEVATION
SCALE: 3/16" = 1'-0"



SIDE ELEVATION
SCALE: 3/16" = 1'-0"



SECTION A-A
SCALE: 3/16" = 1'-0"

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL	WEIGHT
16	2	-	R-BEAM ASM	HSS6X4X1/8	162.55
15	2	-	END R-BEAM ASM	HSS6X4X1/8	129.92
13	6	-	C-TUBE ASM	HSS8X8X5/8	62.53
12	4	-	SIDE PURLIN ASM	HSS5X5X3/16	236.20
11	2	-	CORNER PURLIN ASM	HSS5X5X3/16	197.28
10	2	-	CORNER PURLIN ASM	HSS5X5X3/16	197.43
9	2	-	END PURLIN ASM	HSS5X5X3/16	110.65
8	6	-	GABLE BEAM ASM	HSS8X6X3/16	193.39
7	4	-	HIP BEAM ASM	HSS6X6X3/16	211.24
6	4	-	SIDE EAVE BEAM ASM	HSS5X5X1/8	162.31
5	2	-	CORNER EAVE BEAM ASM	HSS5X5X1/8	175.09
4	2	-	CORNER EAVE BEAM ASM	HSS5X5X1/8	175.09
3	2	-	END EAVE BEAM ASM	HSS5X5X1/8	155.31
2	6	-	SIDE COLUMN ASM	HSS6X6X1/4	220.08
1	4	-	CORNER COLUMN ASM	HSS6X6X1/4	221.88

STATE APPROVALS-SITE

IDENTIFICATION STAMP
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SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

GHD
4258 FLORIDA COLORADO CIRCLE
SUITE B
LOS ALAMITOS, CA 90720
310-972-2616

poligon
PORTER

REGISTERED PROFESSIONAL ENGINEER
NO. 87129
STRUCTURAL
STATE OF CALIFORNIA

STATE APPROVALS-PC

IDENTIFICATION STAMP
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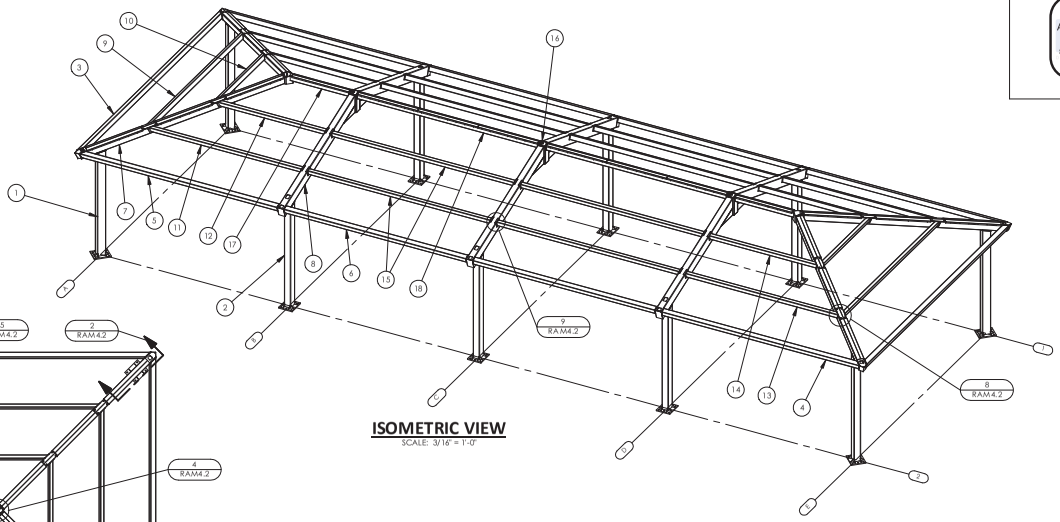
DATE: 07/22/2021

PRE-CHECK (PC) DOCUMENT
CODE: 2019 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

FRAMING PLAN

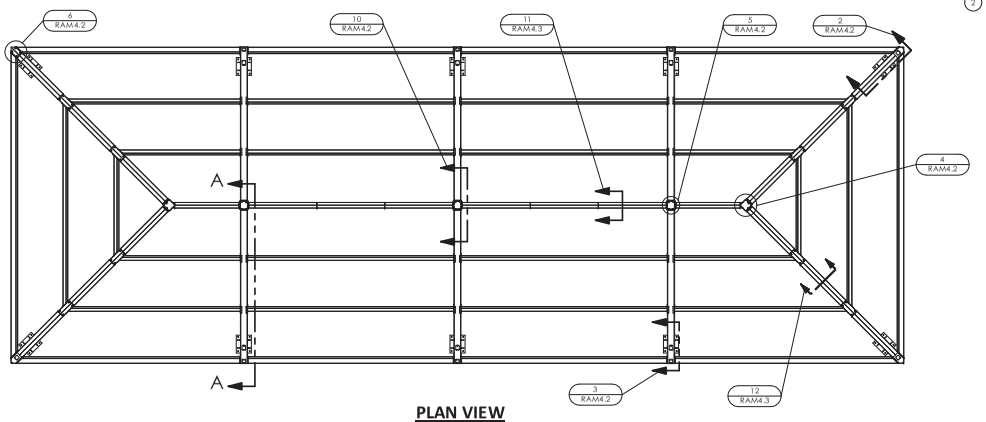
HIP ROOF - RAM 20

RAM3.0



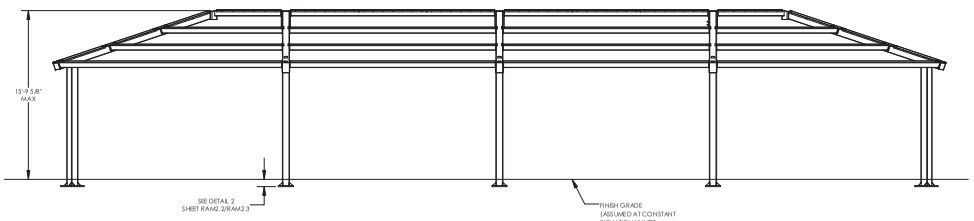
ISOMETRIC VIEW

SCALE: 3/16" = 1'-0"



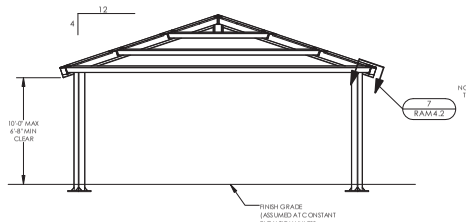
PLAN VIEW

SCALE: 3/16" = 1'-0"



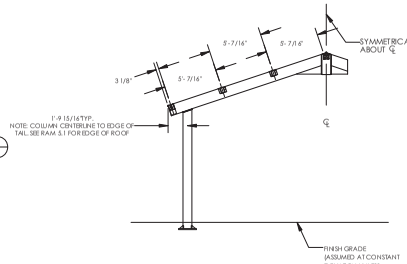
FRONT ELEVATION

SCALE: 3/16" = 1'-0"



SIDE ELEVATION

SCALE: 3/16" = 1'-0"



SECTION A-A

SCALE: 3/16" = 1'-0"

ITEM	QTY.	PART NO.	DESCRIPTION	MATERIAL	WEIGHT
18	2	-	R-BEAM ASM	HSS6X6X3/16	287.26
17	2	-	END R-BEAM ASM	HSS6X6X3/16	154.14
16	6	-	C-TUBE ASM	HSS10X10X5/8	143.92
15	8	-	SIDE PURLIN ASM	HSS6X4x3/16	234.29
14	2	-	CORNER PURLIN ASM	HSS6X4x3/16	136.79
13	2	-	CORNER PURLIN ASM	HSS6X4x3/16	193.62
12	2	-	CORNER PURLIN ASM	HSS6X4x3/16	136.94
11	2	-	CORNER PURLIN ASM	HSS6X4x3/16	193.78
10	2	-	END PURLIN ASM	HSS6X4x3/16	110.56
9	2	-	END PURLIN ASM	HSS6X4x3/16	224.23
8	6	-	GABLE BEAM ASM	HSS12X8X1/4	559.76
7	4	-	HIP BEAM ASM	HSS8X8X3/16	431.12
6	4	-	SIDE EAVE BEAM ASM	HSS6X6X3/16	284.96
5	2	-	CORNER EAVE BEAM ASM	HSS6X6X3/16	306.07
4	2	-	CORNER EAVE BEAM ASM	HSS6X6X3/16	306.00
3	2	-	END EAVE BEAM ASM	HSS6X6X3/16	413.48
2	6	-	SIDE COLUMN ASM	HSS10X8X1/4	425.36
1	4	-	CORNER COLUMN ASM	HSS10X8X1/4	433.63

STATE APPROVALS-STF

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

GHD
4258 FLOYD COLDER ROAD CIRCLE
SUITE B
CLEARWATER PARK, CA 95822
530.977.8616

poligon
PORTER

STATE APPROVALS-PC

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119077 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 07/22/2021

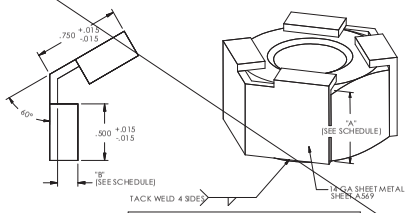
PRE-CHECK (PC) DOCUMENT
CODE: 2019 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

FRAMING PLAN

HIP ROOF - RAM 30

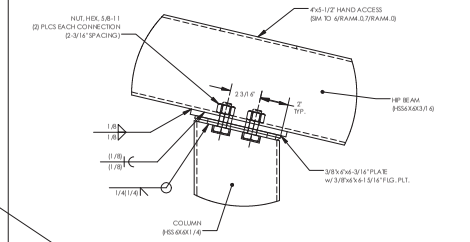
RAM3.1

ALL HIDDEN NUTS AND BOLTS (INSTALLED IN SHOP DURING FABRICATION) ARE SECURED WITH THIS NUT AND BOLT RESTAINING SYSTEM.

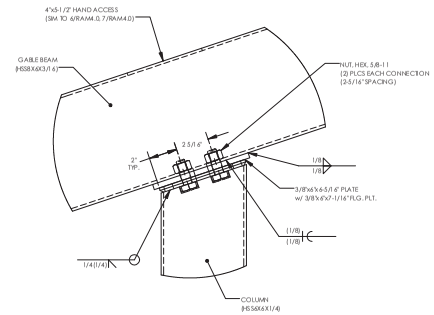


DIMENSION SCHEDULE				
FASTENER	DIM A		DIM B	
5/8" NUT	.631	+.000 -.015	.180	+.015 -.015
5/8" BOLT	.403	+.000 -.015	.250	+.015 -.015
3/4" NUT	.758	+.000 -.015	.180	+.015 -.015
3/4" BOLT	.483	+.000 -.015	.375	+.015 -.015
1" NUT	1.012	+.000 -.015	.180	+.015 -.015
1" BOLT	.643	+.000 -.015	.375	+.015 -.015

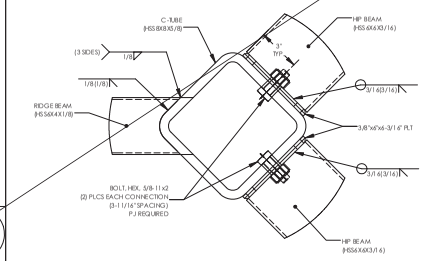
NUT & BOLT RESTRAINING SYSTEM 1



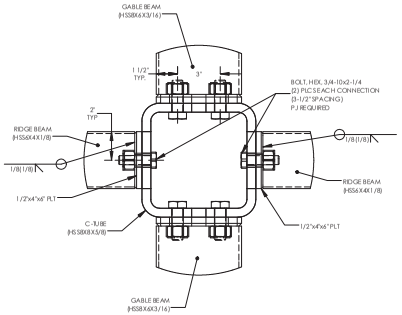
HIP BEAM CONNECTION @ COLUMN 2



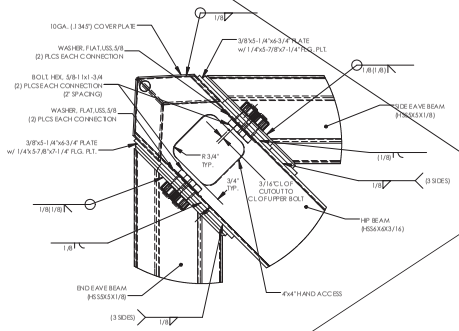
GABLE BEAM CONNECTION @ COLUMN 3



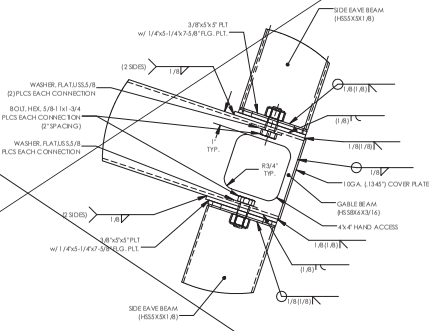
HIP BEAM CONNECTION @ COMPRESSION TUBE 4



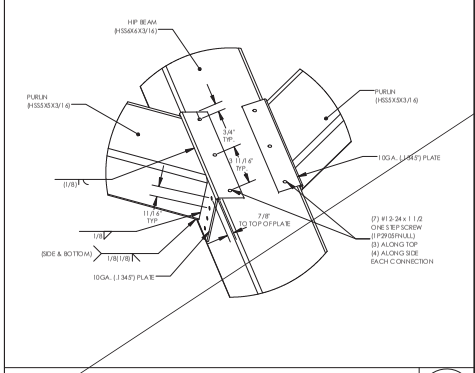
RIDGE BEAM CONNECTION @ COMPRESSION TUBE 5



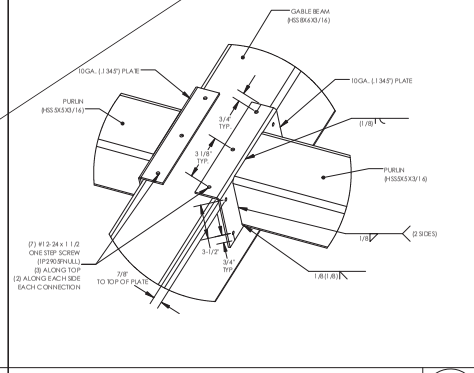
EAVE BEAM CONNECTION @ HIP BEAM 6



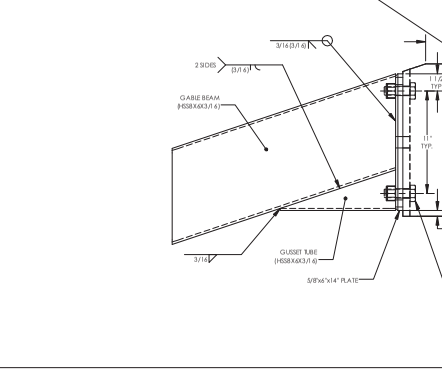
EAVE BEAM CONNECTION @ GABLE BEAM 7



PURLIN CONNECTION @ HIP BEAM 8



PURLIN CONNECTION @ GABLE BEAM 9



GABLE BEAM CONNECTION @ COMPRESSION TUBE 10

STATE APPROVALS-SITE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

GHD
4258 FLOYD COLDERADO CIRCLE
SUITE B
CAMARILLO, MARK, CA 93012
X10-972-8414

poligon
PORTER

REGISTERED PROFESSIONAL ENGINEER
NO. 68720
STRUCTURAL
STATE OF CALIFORNIA

STATE APPROVALS-PC

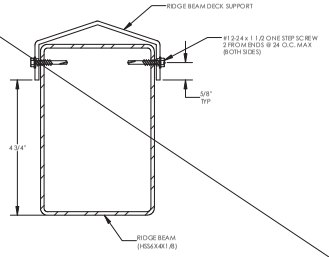
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119077 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 07/22/2021

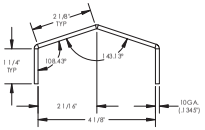
PRE-CHECK (PC) DOCUMENT
CODE: 2019 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

FRAME CONNECTION DETAILS

HIP ROOF - RAM 20

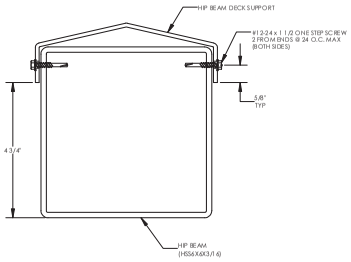
RAM4.0

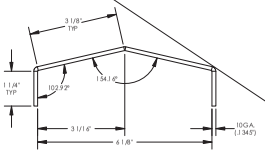




RAM 20 - RIDGE
Fy = 36 KSI
A = 0.948 IN^2
Ix = 0.570 IN^4
Iy = 2.476 IN^4
Sx = 0.444 IN^3
Sy = 1.127 IN^3

RIDGE BEAM DECK SUPPORT DETAIL 11





RAM 20 - HIP
Fy = 36 KSI
A = 1.208 IN^2
Ix = 0.809 IN^4
Iy = 6.194 IN^4
Sx = 0.590 IN^3
Sy = 1.938 IN^3

HIP BEAM DECK SUPPORT DETAIL 12

STATE APPROVALS-SITE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

GHD
4258 FLOYD COLDERADO CIRCLE
SUITE B
LOS OSOS, PASO ROBLES, CA 93402
805.977.8616

poligon
PORTER

REGISTERED PROFESSIONAL ENGINEER
NO. 68720
STRUCTURAL
STATE OF CALIFORNIA

STATE APPROVALS-PC

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119077 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 07/22/2021

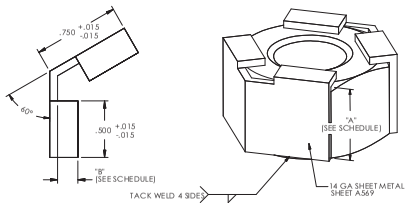
PRE-CHECK (PC) DOCUMENT
CODE: 2019 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

SECTION DETAILS

HIP ROOF - RAM 20

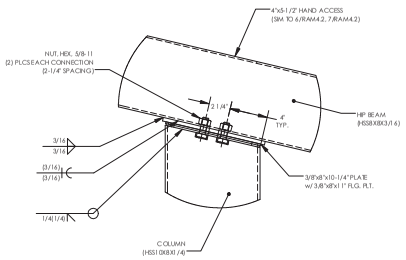
RAM4.1

ALL HIDDEN NUTS AND BOLTS (INSTALLED IN SHOP DURING FABRICATION) ARE SECURED WITH THIS NUT AND BOLT RESTAINING SYSTEM.

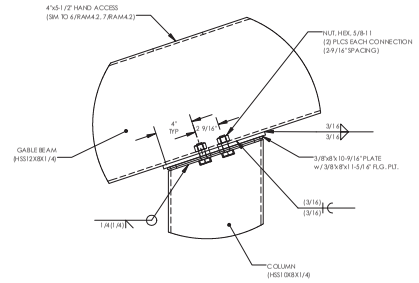


DIMENSION SCHEDULE				
FASTENER	DIM A		DIM B	
5/8" NUT	.631	+.000 -.015	.180	+.015 -.015
5/8" BOLT	.403	+.000 -.015	.250	+.015 -.015
3/4" NUT	.758	+.000 -.015	.180	+.015 -.015
3/4" BOLT	.483	+.000 -.015	.375	+.015 -.015
1" NUT	1.012	+.000 -.015	.180	+.015 -.015
1" BOLT	.643	+.000 -.015	.375	+.015 -.015

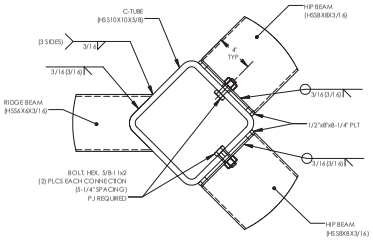
NUT & BOLT RESTRAINING SYSTEM 1



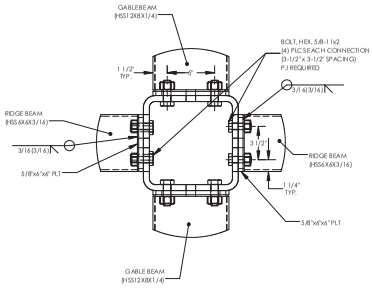
HIP BEAM CONNECTION @ COLUMN 2



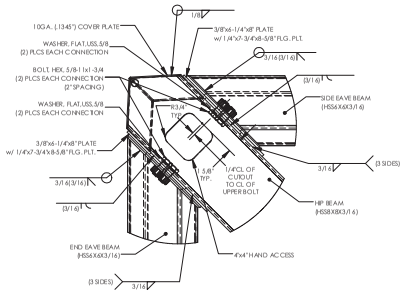
GABLE BEAM CONNECTION @ COLUMN 3



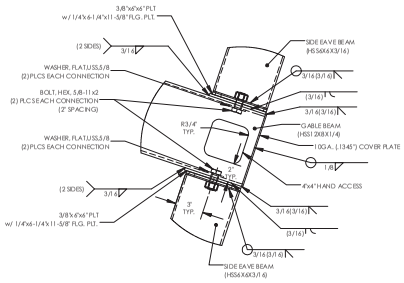
HIP BEAM CONNECTION @ COMPRESSION TUBE 4



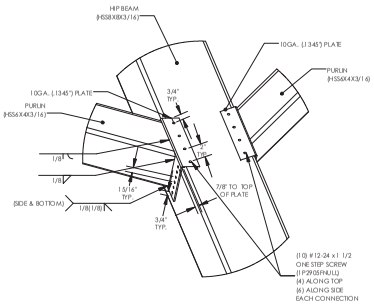
RIDGE BEAM CONNECTION @ COMPRESSION TUBE 5



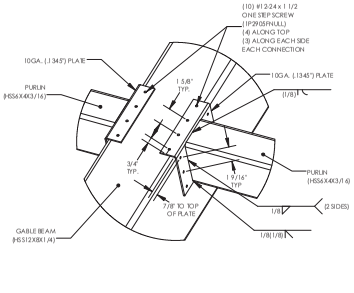
EAVE BEAM CONNECTION @ HIP BEAM 6



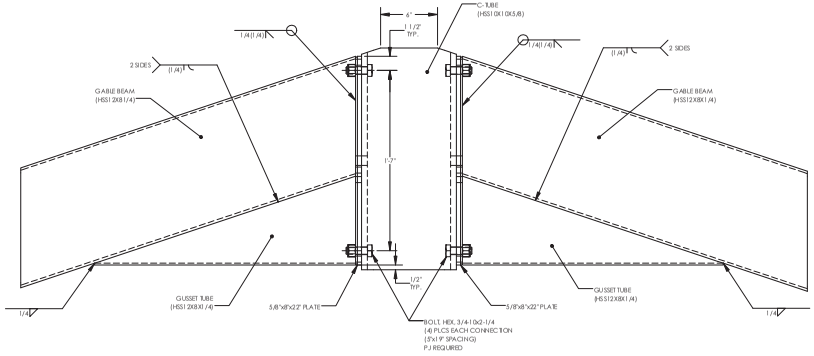
EAVE BEAM CONNECTION @ GABLE BEAM 7



PURLIN CONNECTION @ HIP BEAM 8



PURLIN CONNECTION @ GABLE BEAM 9



GABLE BEAM CONNECTION @ COMPRESSION TUBE 10

STATE APPROVALS-SITE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

STATE APPROVALS-PC

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119077 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 07/22/2021

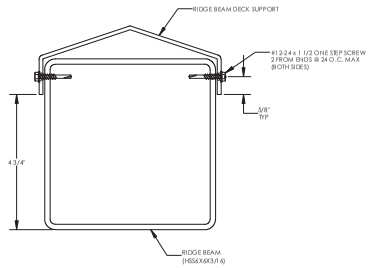
GHD
4258 FLOYD COLORADO CIRCLE
SUITE B
CAMARILLO, CA 93012
805.977.8616
poligon
PORTER

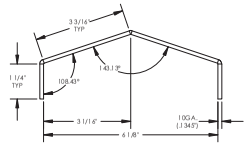
PRE-CHECK (PC) DOCUMENT
CODE: 2019 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

FRAME CONNECTION DETAILS

HIP ROOF - RAM 30

RAM4.2

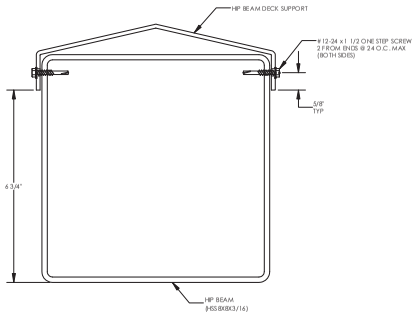


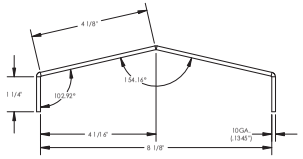


RAM 30 - RIDGE
Fy = 36 KSI
A = 1.231 IN^2
Ix = 1.149 IN^4
Iy = 6.272 IN^4
Sx = 0.771 IN^3
Sy = 1.962 IN^3

RIDGE BEAM DECK SUPPORT DETAIL

11





RAM 30 - HIP
Fy = 36 KSI
A = 1.484 IN^2
Ix = 1.341 IN^4
Iy = 12.353 IN^4
Sx = 0.886 IN^3
Sy = 2.943 IN^3

HIP BEAM DECK SUPPORT DETAIL

12

STATE APPROVALS-SITE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

GHD
4258 FLOW COLORADO CIRCLE
SUITE B
LAS VEGAS, NEVADA, CA 89122
(702) 577-2615

poligon
PORTER

STATE APPROVALS-PC

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-119077 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 07/22/2021

PRE-CHECK (PC) DOCUMENT
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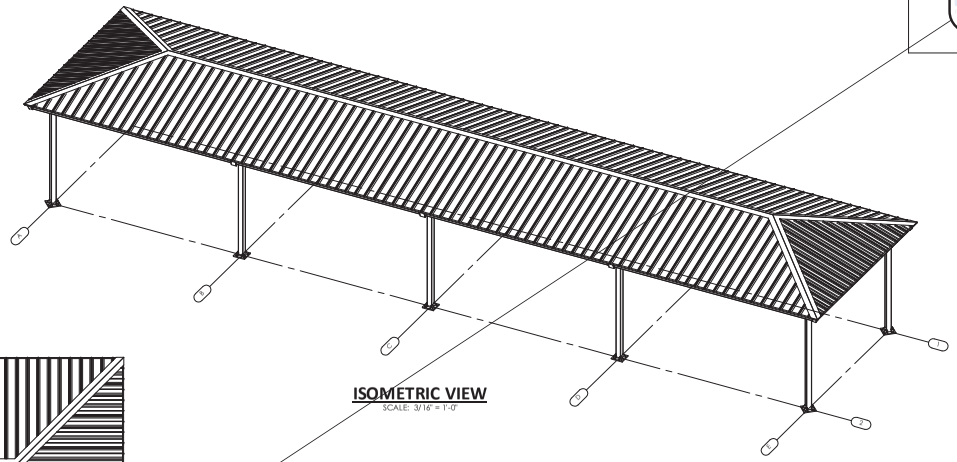
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

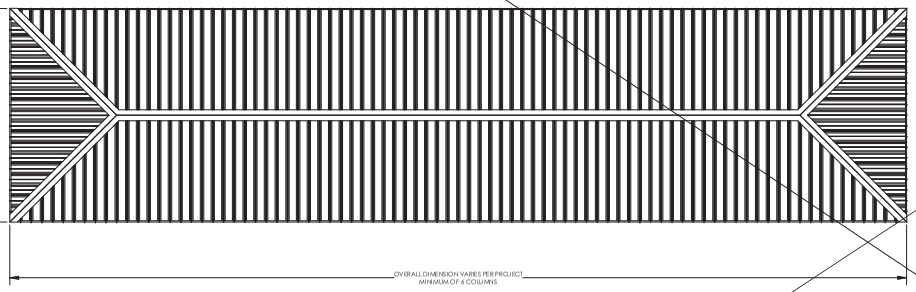
SECTION DETAILS

HIP ROOF - RAM 30

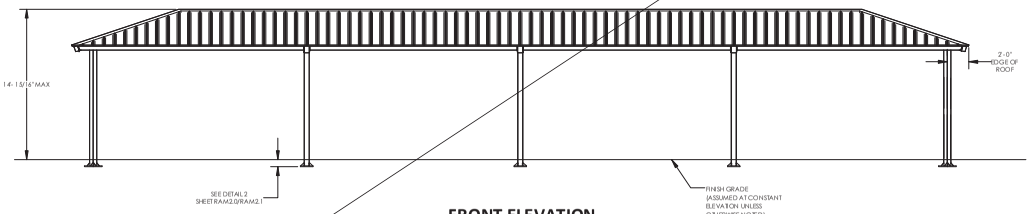
RAM4.3



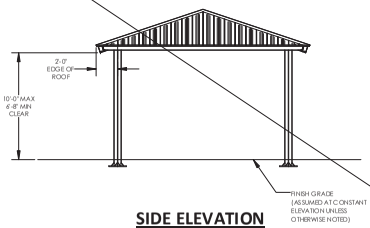
ISOMETRIC VIEW
SCALE: 3/16" = 1'-0"



PLAN VIEW
SCALE: 3/16" = 1'-0"



FRONT ELEVATION
SCALE: 3/16" = 1'-0"



SIDE ELEVATION
SCALE: 3/16" = 1'-0"

STATE APPROVALS-SITE

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DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
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SS ☑ FLS ☑ ACS ☑
DATE: 08/30/2022

4258 FLO/COLORADO CIRCLE
SUITE B
CHINO HILLS, CA 91710
909-972-8616

STATE APPROVALS-PC

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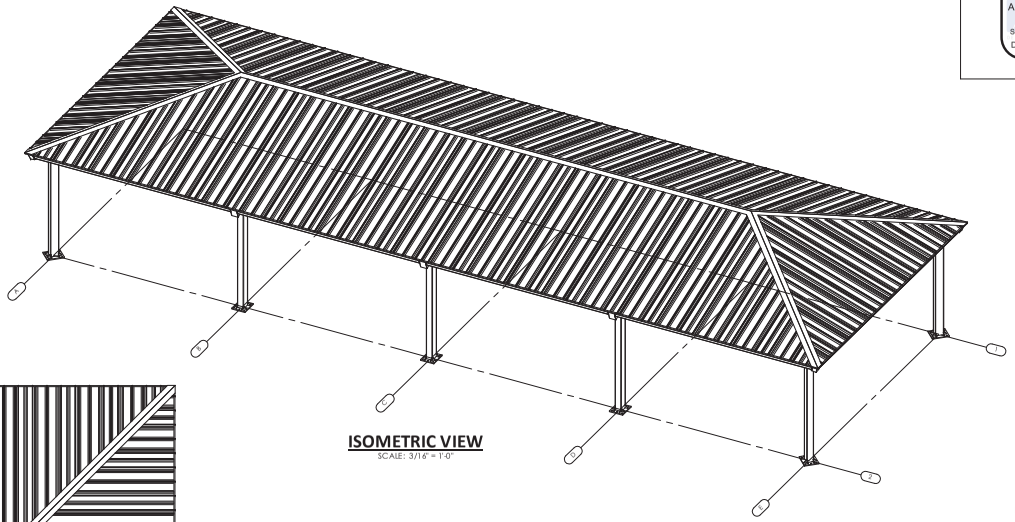
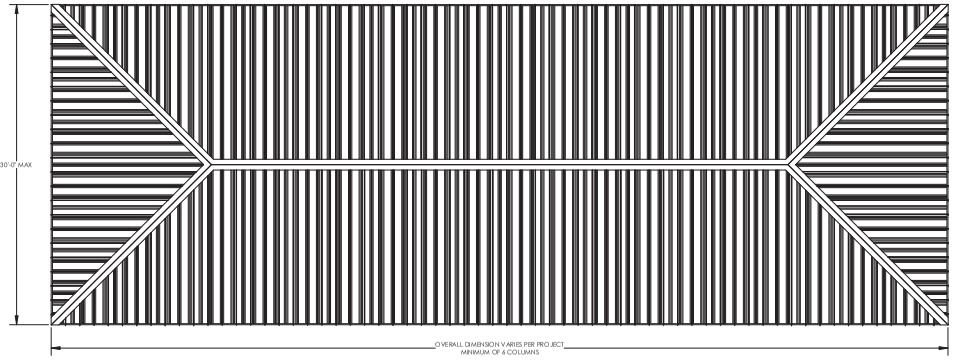
ARCHITECTURAL VIEWS

HIP ROOF - RAM 20

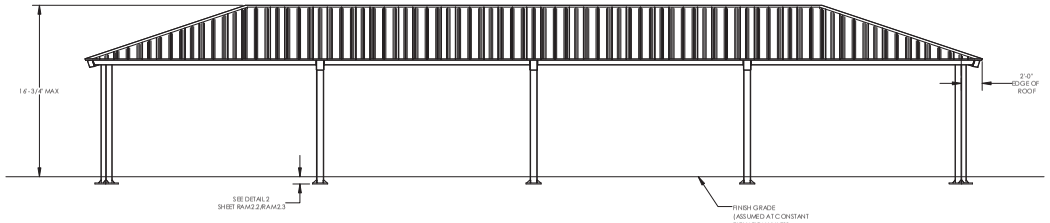
RAM5.0



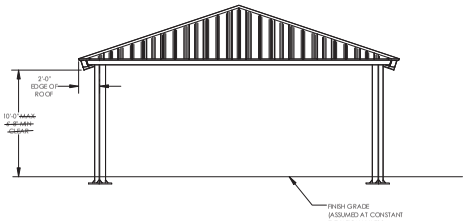
ISOMETRIC VIEW
SCALE: 3/16" = 1'-0"



PLAN VIEW
SCALE: 3/16" = 1'-0"



FRONT ELEVATION
SCALE: 3/16" = 1'-0"



SIDE ELEVATION
SCALE: 3/16" = 1'-0"

STATE APPROVALS-SITE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
REVIEWED FOR
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DATE: 08/30/2022

GHD
4258 FLORIDA COLORADO CIRCLE
SUITE B
CHINO HILLS, CA 91710
909.972.4616

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PRE-CHECK (PC) DOCUMENT
CODE: 2019 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

ARCHITECTURAL VIEWS

HIP ROOF - RAM 30

RAM5.1

MULTI-RIB NOTES:

THE DETAILS SHOWN ARE SUGGESTIONS OR GUIDELINES ON HOW TO ERECT THE SYSTEMS. THE INFORMATION SHOWN IS ACCURATE, BUT IT IS NOT INTENDED TO COVER ALL INSTANCES, BUILDING REQUIREMENTS, DESIGNS, OR CODES. THE DETAILS MAY REQUIRE CHANGES OR REVISIONS DUE TO FIELD CONDITIONS.

IT SHALL BE THE RESPONSIBILITY OF THE ERECTOR TO ENSURE THAT THE DETAILS MEET PARTICULAR BUILDING REQUIREMENTS AND TO ASSURE ADEQUATE WATER TIGHTNESS.

THE ERECTOR SHOULD THOROUGHLY FAMILIARIZE HIMSELF/HERSELF WITH ALL ERECTION INSTRUCTIONS BEFORE STARTING WORK.

THE PANELS SHOULD BE INSTALLED PLUMB, STRAIGHT, AND ACCURATELY TO THE ADJACENT WORK.

FLASHING AND TRIM SHALL BE INSTALLED TRUE, AND IN PROPER ALIGNMENT, WITH ANY EXPOSED FASTENERS EQUALLY SPACED FOR THE BEST APPEARANCE.

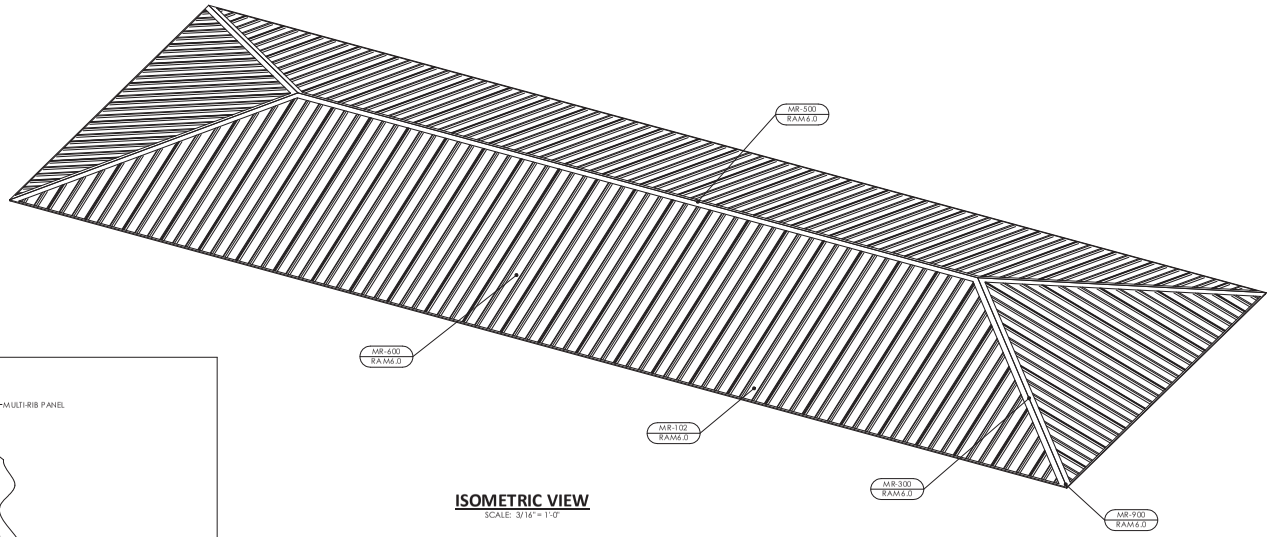
SEALANT SHALL BE FIELD APPLIED ON DRY, CLEAN SURFACES. SOME FIELD CUTTING AND FITTING OF PANELS AND FLASHING IS TO BE EXPECTED BY THE ERECTOR AND MINOR FIELD CORRECTIONS ARE A PART OF NORMAL ERECTION WORK.

WORKMANSHIP SHALL BE OF THE BEST INDUSTRY STANDARDS AND INSTALLATION SHALL BE PERFORMED BY EXPERIENCED METAL CRAFTSMEN.

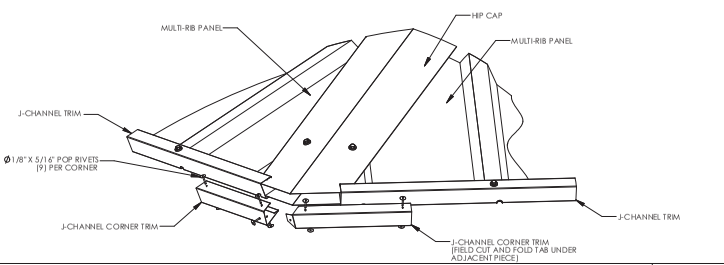
METAL SHAVINGS FROM DRILLING OR INSTALLATION OF ROOF FASTENERS MUST BE CAREFULLY REMOVED FROM THE ROOF BY BRUSHING OR SWEEPING AT THE END OF EACH DAY DURING INSTALLATION. SHAVINGS LEFT ON THE ROOF WILL QUICKLY RUST AND STAIN THE ROOF FINISH.

COVER ACCESS HOLES WITH GRACE ICE AND WATER SHIELD BEFORE ATTACHING ROOF DECKING

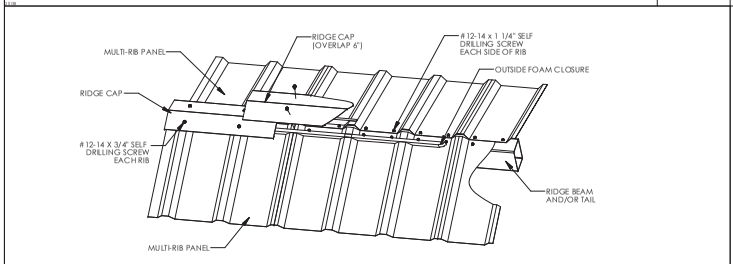
METAL ROOFING PRODUCT AND INSTALLATION SHALL MEET ALL REQUIREMENTS OF UL580.



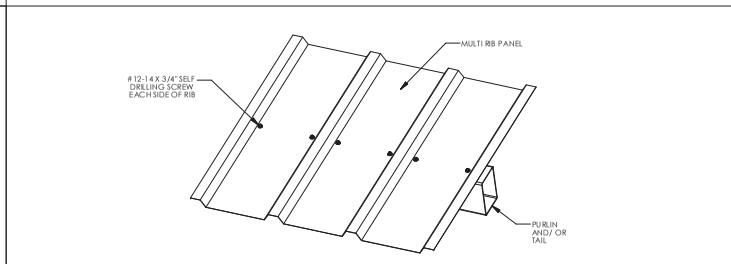
ISOMETRIC VIEW
SCALE: 3/16" = 1'-0"



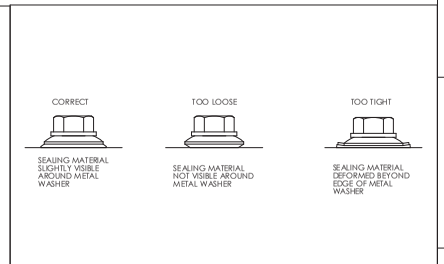
CORNER DETAIL | MR-900



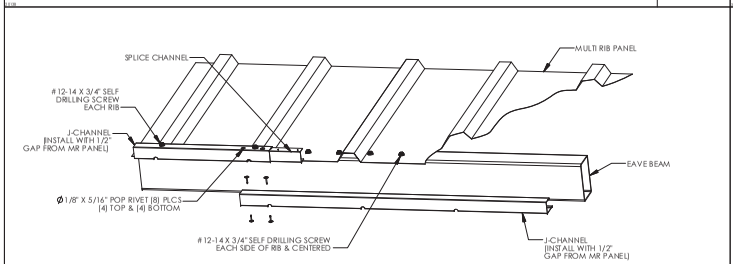
RIDGE DETAIL | MR-500



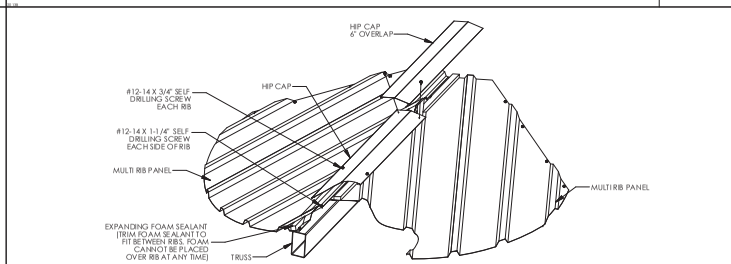
PURLIN DETAIL | MR-600



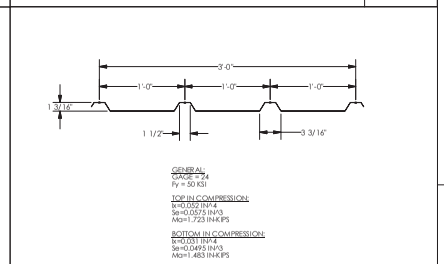
ROOF FASTENER TIGHTENING | MR-950



EAVE DETAIL | MR-102



TRUSS DETAIL | MR-300



MR ROOF DECK SECTION PROPERTIES | MR-951

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GHD
4258 FLOJO COLDERADO CIRCLE
SUITE B
LAS VEGAS, NEVADA 89115
702-977-2615

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STATE APPROVALS-PC
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ROOF CONNECTION DETAILS

HIP ROOF - RAM

RAM6.0

STANDING SEAM INSTALLATION NOTES:

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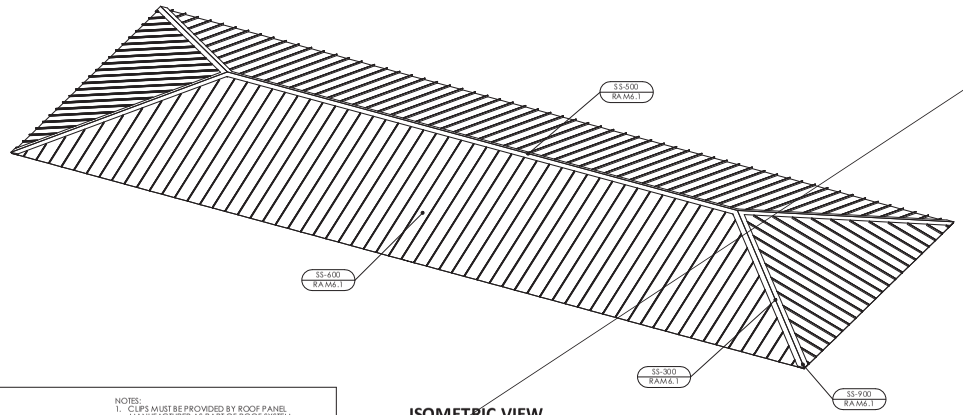
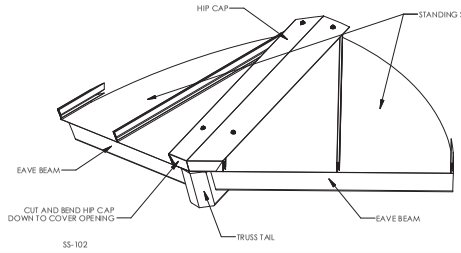
COVER ACCESS HOLES WITH GRACE ICE AND WATER SHIELD BEFORE ATTACHING ROOF DECKING

METAL ROOFING PRODUCT AND INSTALLATION SHALL MEET ALL REQUIREMENTS OF ICC-ES REPORT ESL-1082

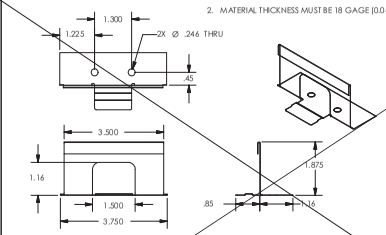


ISOMETRIC VIEW
SCALE: 3/16" = 1'-0"

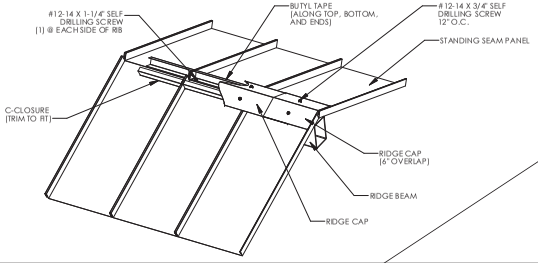


CORNER DETAIL | SS-900

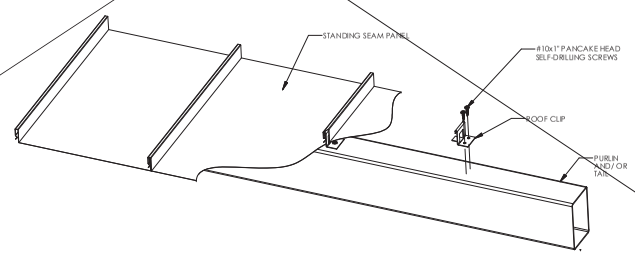
NOTES:
1. CLIPS MUST BE PROVIDED BY ROOF PANEL MANUFACTURER AS PART OF ROOF SYSTEM.
2. MATERIAL THICKNESS MUST BE 18 GAGE (0.048"-0.053")



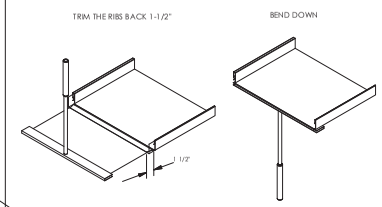
CLIP DETAIL | SS-CLP



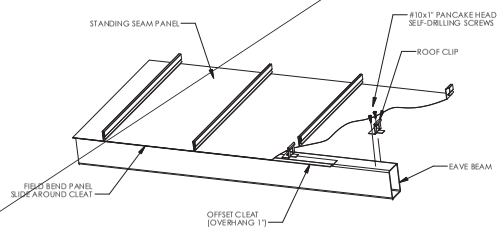
RIDGE DETAIL | SS-500



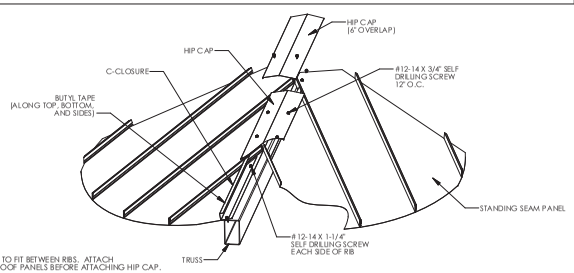
PURLIN DETAIL | SS-600



HEMMING DETAIL | SS-HEM

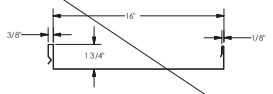


EAVE DETAIL | SS-200



NOTE:
TRIM C-CLOSURE TO FIT BETWEEN RIBS. ATTACH C-CLOSURE TO ROOF PANELS BEFORE ATTACHING HIP CAP.

TRUSS DETAIL | SS-300



GENERAL
GAGE = 22
FY = 50 KSI

TOP IN COMPRESSION
Ix = 0.1200 IN^4
Se = 0.0803 IN^3
Ma = 2.4056 IN-KIPS

BOTTOM IN COMPRESSION
Ix = 0.0570 IN^4
Se = 0.0729 IN^3
Ma = 1.7220 IN-KIPS

ROOF DECK SECTION PROPERTIES | SS-950

STATE APPROVALS-STF
IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 04-120944 INC:
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DATE: 08/30/2022

GHD
4258 FLOYD COLORADO CIRCLE
SUITE B
CARSON CITY, NV, CA 89703
X10-972-8414

poligon
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STATE APPROVALS-PC
IDENTIFICATION STAMP
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APP: 02-119077 PC
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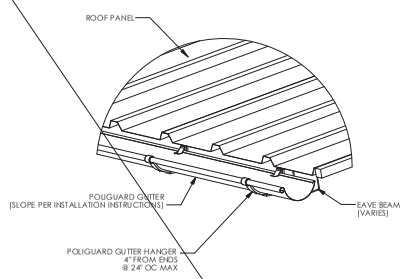
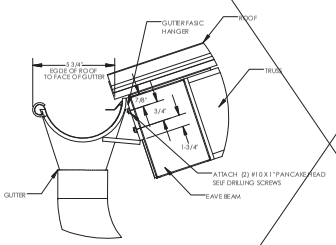
ROOF CONNECTION DETAILS

HIP ROOF - RAM

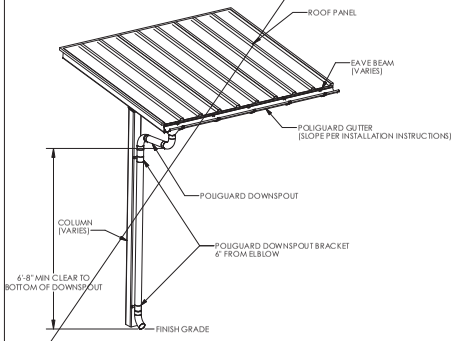
RAM6.1



GUTTER DETAIL | GS-100



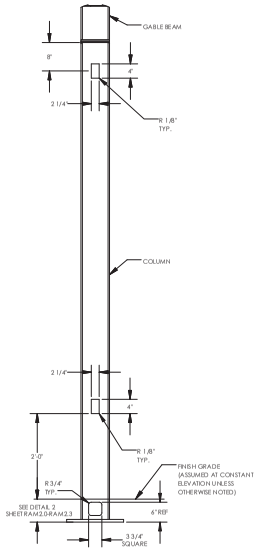
GUTTER DETAIL | GS-200



DOWNSPOUT DETAIL | GS-300

POLIGUARD GUTTER SYSTEM NOTES:

1. PREFABRICATED GUTTER SYSTEM IS ATTACHED TO THE STRUCTURE AFTER ROOF IS INSTALLED.
2. DETAILED INSTALLATION INSTRUCTIONS ARE SHIPPED WITH THE STRUCTURE.
3. DOWNSPOUTS REQUIRED AT EACH COLUMN.



ELECTRICAL CUTOUT IN COLUMNS | EC-100

ELECTRICAL CUTOUT NOTES:

1. MAXIMUM ONE CUTOUT PERMITTED IN EACH MEMBER.
2. CUTOUTS CAN BE PLACED ON ANY SIDE OF A MEMBER.
3. CUTOUTS CAN BE PLACED ALONG MEMBERS AS INDICATED IN THE DETAILS.
4. ARCHITECTS REQUESTING CUTOUTS MUST MARKUP APPROVED PC DRAWINGS TO LOCATE CUTOUTS FOR APPROVAL AND FABRICATION.

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4000 E. JAMES CAPE, SUITE B
PALM DESERT, CALIFORNIA 92260
760-340-0300 / 760-340-0305

STATE APPROVALS-PC

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MISC DESIGN OPTIONS

HIP ROOF - RAM

RAM7.0

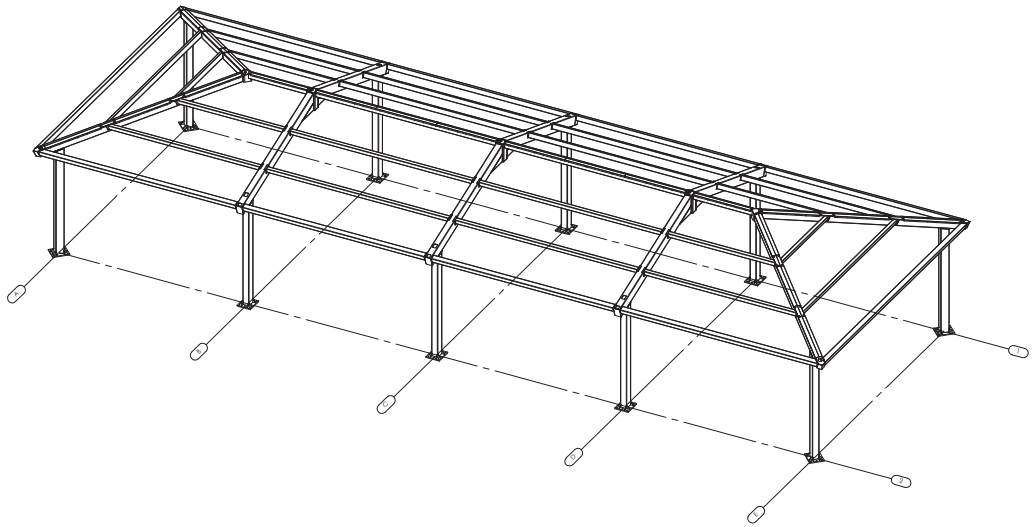
ELECTRICAL CUTOUT AND ACCESS INSTRUCTIONS

- IF 'YES' IS NOT SELECTED IN STEP 2 ON ORDER FORM, THEN THIS SHEET NEED NOT BE INCLUDED IN SITE-SPECIFIC DRAWINGS
- ONLY COLUMNS ARE PERMITTED TO HAVE ELECTRICAL ACCESS
- THE COLUMN CUTOUTS ARE STATIC AND SHOWN IN THE 'MISC DESIGN OPTIONS SHEET'
- IDENTIFY THE COLUMNS WITH ELECTRICAL CUTOUTS BELOW (REFERENCE GRID LINES IN ISOMETRIC FRAME VIEW TO THE RIGHT)
- STRUCTURES MAY BE LONGER OR SHORTER THAN THE ISOMETRIC FRAME VIEW SHOWN
- IF SITE-SPECIFIC STRUCTURE HAS A DIFFERENT NUMBER OF COLUMNS THAN ISOMETRIC SHOWN, REFERENCE COLUMN A1 IN THE ISOMETRIC VIEW AND CONTINUE PATTERN TO FIT SITE-SPECIFIC LAYOUT
- IF NO COLUMNS ARE IDENTIFIED, POLIGON WILL ASSUME CUTOUTS ONLY IN COLUMN A1
- CONTACT POLIGON ENGINEERING FOR SPECIAL PROJECT SPECIFIC REQUIREMENTS

ELECTRICAL CUTOUT IDENTIFICATION IN COLUMNS
SPECIFIC MEMBERS _____

EXAMPLE:

ELECTRICAL CUTOUT IDENTIFICATION IN COLUMNS
SPECIFIC MEMBERS A1, B1, F1



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GHD
4258 FLACO COLORADO CIRCLE
SUITE B
CAMARILLO, PARK, CA 93012
X10 977 2015

poligon
PORTER

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ELECTRICAL CUTOUTS

HIP ROOF - RAM

RAM7.1