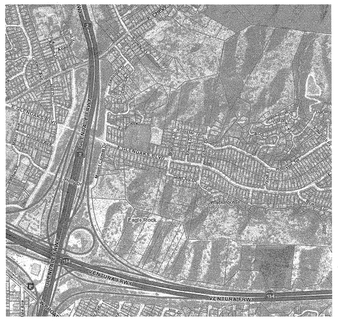
GLENDALE UNIFIED SCHOOL DISTRICT
GLENOAKS ES-SHADE STRUCTURE

GLENDALE, CA



N

VICINITY MAP
Scale: NTS

SHADE STRUCTURE

N

LOCATION MAP
Scale: NTS

OWNER
GLENDALE UNIFIED SCHOOL DISTRICT
223 NORTH JACKSON STREET
GLENDALE CA 91206
818-241-3111
TONY BARRIOS

ARCHITECT
NAC|ARCHITECTURE
837 NORTH SPRING, THIRD FLOOR
LOS ANGELES CA 90012
323.475.8075
DAWN BRISCO

ACCEPTABALE CODES

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHALL FIRE REGULATIONS
TITLE 24 CCR, PART 1 - 2016 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE
TITLE 24 CCR, PART 2 - 2016 CALIFORNIA BUILDING CODE, VOL. 1 & 2 (CBC) (2012 IBC, AS AMENDED BY CA)
TITLE 24 CCR, PART 3 - 2016 CALIFORNIA ELECTRICAL CODE, (CEC) (2011 NEC, AS AMENDED BY CA)
TITLE 24 CCR, PART 4 - 2016 CALIFORNIA MECHANICAL CODE, (CMC) (2012 IAMPO UMC, AS AMENDED BY CA)
TITLE 24 CCR, PART 5 - 2016 CALIFORNIA PLUMBING CODE, (CPC) (2012 IAMPO UMC, AS AMENDED BY CA)
TITLE 24 CCR, PART 6 - 2016 CALIFORNIA ENERGY CODE
TITLE 24 CCR, PART 7 - NOT USED
TITLE 24 CCR, PART 8 - 2016 CALIFORNIA HISTORICAL CODE
TITLE 24 CCR, PART 9 - 2016 CALIFORNIA FIRE CODE, (CFC) (2012 IFC, AS AMENDED BY CA)
TITLE 24 CCR, PART 10 - 2016 CALIFORNIA EXISTING BUILDING CODE, (2009 IEBC), AS AMENDED BY CA)
TITLE 24 CCR, PART 11 - 2016 CALIFORNIA GREEN BUILDING CODE STANDARDS, (CALGreen CODE)
TITLE 24 CCR, PART 12 - 2016 CALIFORNIA REFERENCED STANDARDS

PARTIAL LIST OF APPLICABLE CODES

2016 CALIFORNIA BUILDING CODE (FOR SFM) REFERENCED STANDARDS CHAPTER 35
2016 CALIFORNIA FIRE CODE REFERENCED STANDARDS CHAPTER 80
2016 NFPA 13, AUTOMATIC SPRINKLER SYSTEMS (AS AMENDED BY CA)
2016 NFPA 72, NATIONAL FIRE ALARM CODE (AS AMENDED BY CA) SEE UL STD 1971 FOR "VISUAL DEVICES"
2016 NFPA 80, FIRE DOOR AND OTHER OPENING PROTECTIVES
2006 NFPA 253 CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS

CAL GREEN CODE

Project must meet the mandatory measures of the 2016 California Green X
Building Standards (CALGreen) Code (Title 24, Part 11 - Effective 1/1/17)

SHEET INDEX

INDEX OF DRAWINGS

IDENTIFICATION STAMP
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IDENTIFICATION STAMP
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GLENDALE UNIFIED SCHOOL DISTRICT
GLENOAKS ES-SHADE STRUCTURE
2015 EAST GLENOAKS, BLVD, GLENDALE, CA 91206

REGISTERED ARCHITECT
TIMOTHY A. BALLARD
No. C-29177
EXP. 8/31/17
STATE OF CALIFORNIA

NAC
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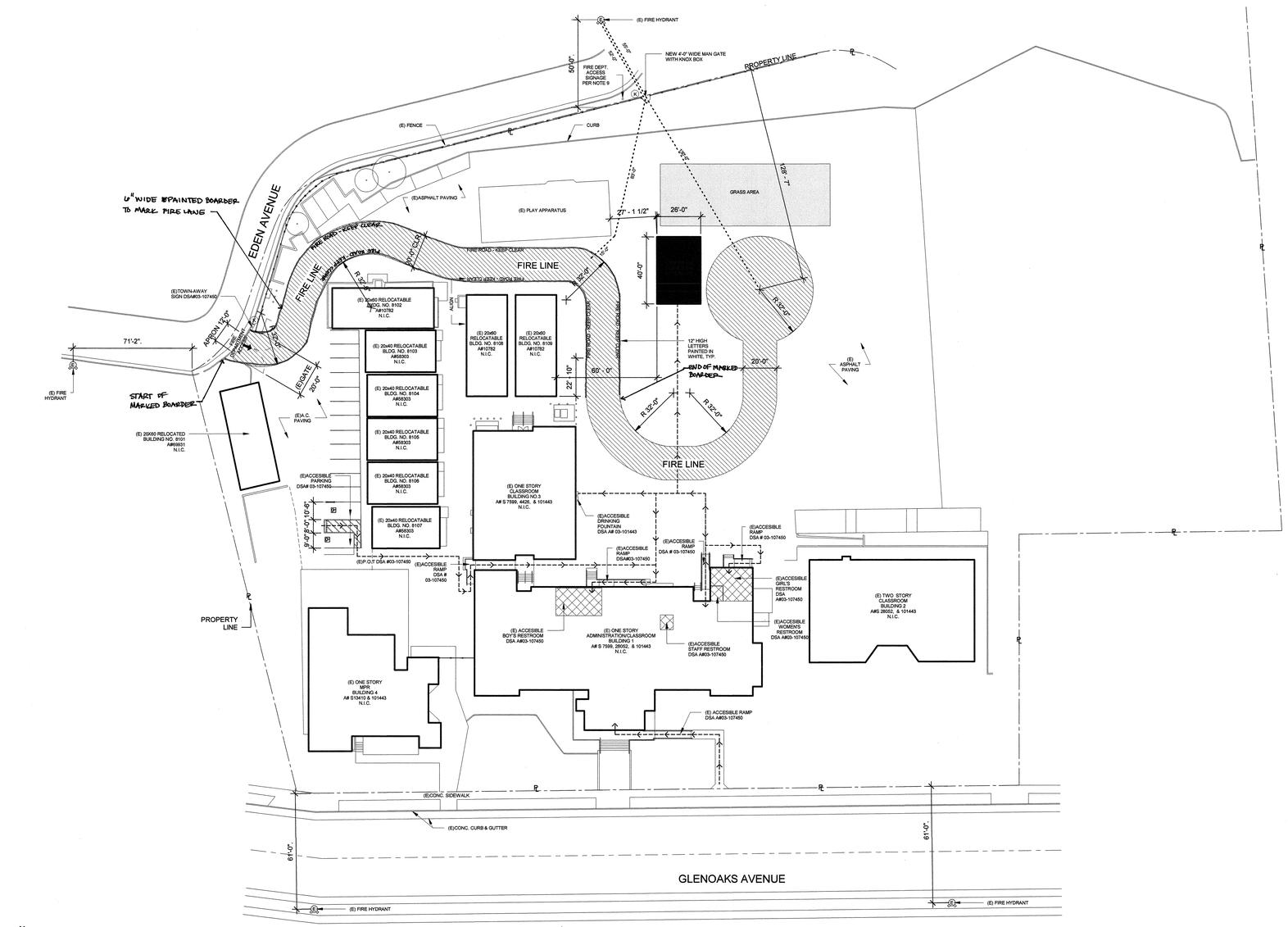
nacarchitecture.com
837 N SPRING STREET | THIRD FLOOR
LOS ANGELES CA 90012

NAC NO	161-15004
DRAWN	BR
CHECKED	GC
DATE	04-18-17

COVER SHEET

G0.01



N

SITE PLAN

Scale: 1" = 30'-0"

DSA 810

LOCAL FIRE AUTHORITY REVIEW

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

PROJECT INFORMATION

School District/Owner: Glendale Unified School District

Project Name/School: Glenoaks Elementary School - Shade Structure

Project Address: 2015 East Glenoaks Blvd. Glendale, CA 91206

LOCAL FIRE AUTHORITY (LFA)

LFA Agency Name: CITY OF GLENDALE

LFA Reviewer Name: SITA DEMIRSIAN Title: FIRE ENVIRONMENTAL SPECIALIST

Email: SDEMIRSIAN@GLENDALECA.GOV Telephone Number: 818 548 3207

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

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

LFA Reviewer's Signature: Date: 04/17/17

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

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

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

FIRE DEPARTMENT NOTES

1. THE FIRE AUTHORITY HAVING JURISDICTION SHALL BE CONSULTED REGARDING ACCESS ROADS, GATES IN PERIMETER FENCES, LOCATION OF FIRE HYDRANTS, FIRE DEPARTMENT PUMPER CONNECTIONS, PORTABLE FIRE EXTINGUISHERS AND FIRE PROTECTION DURING CONSTRUCTION.

2. ACCESS ROAD AND GATE ENTRANCES ARE IN COMPLIANCE WITH TITLE 19, CALIFORNIA CODE OF REGULATIONS SUB CHAPTER 1, ARTICLE 3.05 ACCESS ROADS AND 3.16, GATE ENTRANCES TO SCHOOL GROUNDS.

3. STAMPED AND SIGNED SITE PLAN ON FILE AT DSA.

4. FIRE FLOW AND HYDRANT LOCATION AND DISTRIBUTION ARE IN COMPLIANCE PER CALIFORNIA FIRE CODE, APPENDIX BB, FIRE FLOW AND APPENDIZ CC, HYDRANT LOCATION, APPENDICES FROM 2016 C.F.C.

5. ADDRESS NUMBERS: APPROVED ADDRESS NUMBERS, BUILDING NUMBERS OR APPROVED BUILDING IDENTIFICATION SHALL BE PLACED IN POSITION THAT IS PLAINLY LEGIBLE AND VISIBLE FROM THE STREET, ROAD, ALLEY, AND WALKWAYS GIVEN ACCESS TO AND WITHIN THE PROPERTY. THESE NUMBERS SHALL CONTRAST WITH THEIR BACKGROUND. ADDRESS NUMBERS SHALL BE ARABIC NUMERALS OR ALPHABET LETTERS. NUMBERS SHALL BE A MINIMUM OF 9 INCHES (152.4mm) HIGH WITH A MINIMUM STROKE WIDTH OF 0.5 INCH (12.7mm) AND SHALL BE ILLUMINATED IN AN APPROVED MANNER.IF NUMBERS ARE ON THE EXTERIOR), NUMBER HEIGHT AND STROKE WIDTH SHALL BE INCREASED AS NEEDED FOR LEGIBILITY BASED ON VISIBILITY DISTANCE.

6. KNOX BOX: THE MOUNTING HIGH FOR THE KNOX BOX SHALL NOT EXCEED 6' ABOVE THE GROUND LEVEL/FINISHED FLOOR. PROVIDE (3) SETS OF KEYS (WITH PERMANENT ENGRAVED IDENTIFICATION) FOR ALL EXTERIOR DOORS, GATES, FIRE ALARM PANEL, AN OTHER AS DIRECTED BY THE FIRE INSPECTOR. KNOX BOXES SHALL BE PURCHADED PRIOR TO THE BEGINNING OF CONSTRUCTION, AND INSTALLED IN APPROVED LOCATION FOR THE DURATION OF THE CONSTRUCTION.

7. MANUAL SWINGING GATES SHALL BE OPERABLE BY ONE PERSON.

8. GATE COMPONENTS SHALL BE MAINTAINED IN AN OPERATIVE CONDITION AT ALL THE TIMES AND REPLACED OR REPAIRED WHEN DEFECTIVE.

9. SIGNAGE DURING AND AFTER CONSTRUCTION: THE FIRE DEPARTMENT ACCESS SIGNAGE SHALL BE INSTALLED PRIOR TO THE NEW BUILDING CONSTRUCTION COMMENCING TO FACILITATE FIRE DEPARTMENT ACCESS DURING CONSTRUCTION. THIS SIGNAGE SHALL ALSO REMAIN IN PLACE UPON COMPLETION OF CONSTRUCTION AND SHALL BE UPDATED AS NEEDED TO FACILITATE FIRE DEPARTMENTS ACCESS.

FIRE DEPARTMENT ACCESS LEGEND

- NEW SHADE STRUCTURE
- (E)BUILDING N.I.C.
- FIRE ACCESS ROUTE
- GRASS AREA
- ACCESSIBLE PATH OF TRAVEL
- PROPERTY LINE
- (K) NEW KNOX BOX
- (E) E.F.H EXISTING FIRE HYDRANT
- FIRE DEPARTMENT ACCESS TO SITE

GLENDALE FIRE PREVENTION BUREAU (818) 548-4610
APR 17 2017
APPROVED BY FIELD INSPECTION SUBJECT TO

CODE ANALYSIS

(N)SHADE STRUCTURE
TYPE OF CONSTRUCTION -TYPE V-B
ALLOWABLE SQ. FT. = 9,500 SQ. FT.
ACTUAL SQ. FT. = 1,040 SQ. FT.
FIRE FLOW REQUERIMENT PER TABLE BB 105.1 =1, 500 GPM
~~FIRE FLOW ACTUAL(SEE ATTACHED FIRE FLOW)=~~

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LICENSED ARCHITECT TIMOTHY B. BOLYARD No. C-21424 REN. 8/31/17 STATE OF CALIFORNIA

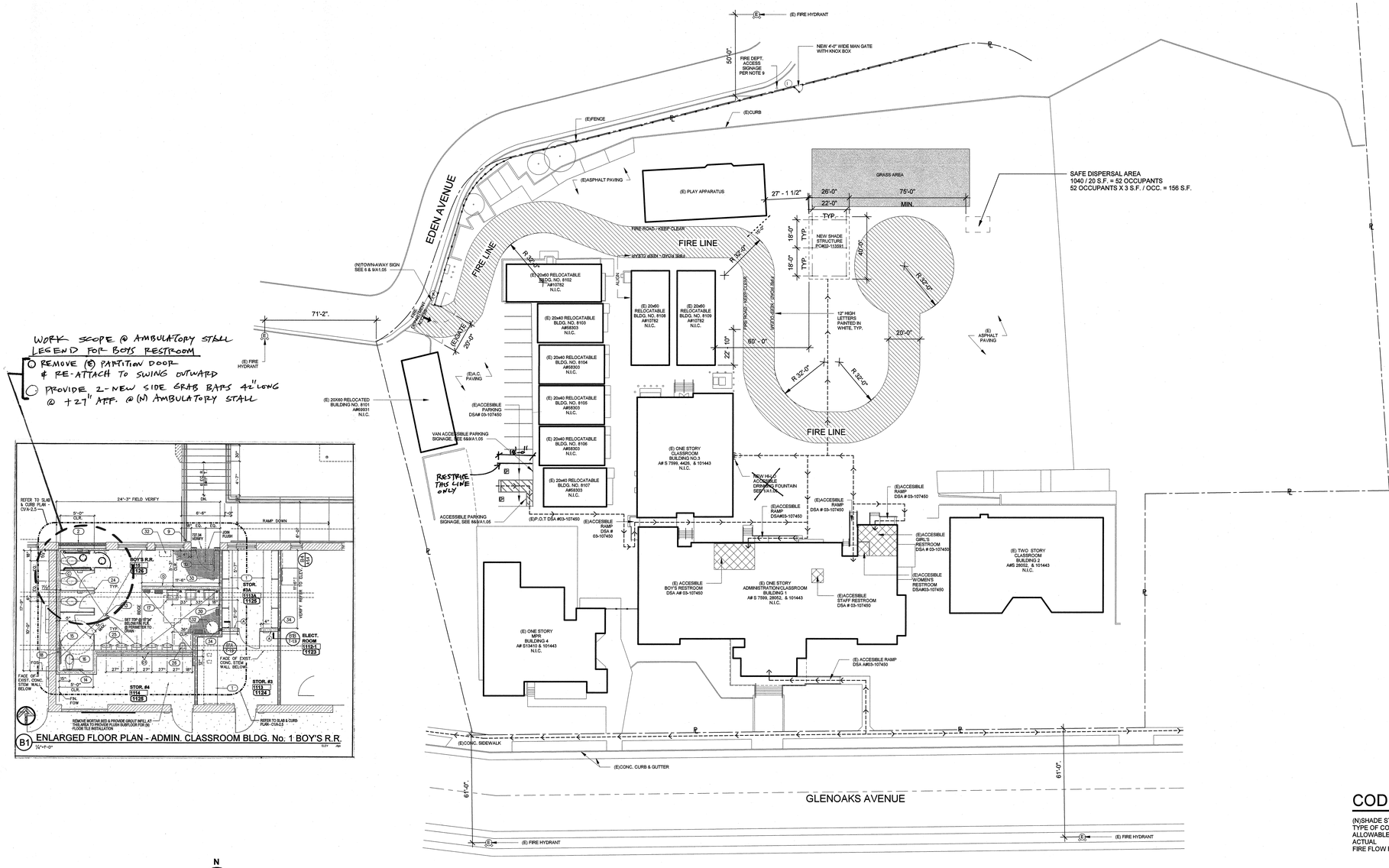
GLENDALE UNIFIED SCHOOL DISTRICT
GLENOAKS ES-SHADE STRUCTURE
2015 EAST GLENOAKS, BLVD. GLENDALE, CA 91206

NAC ARCHITECTURE
nacarchitecture.com
837 N SPRING STREET | THIRD FLOOR
LOS ANGELES CA 90012

NAC NO 161-15004
DRAWN Author
CHECKED Checker
DATE 04-12-17

FIRE ACCESS SITE PLAN

G2.01



SITE PLAN
Scale: 1" = 30'-0"

WORK SCOPE @ AMBULATORY STALL
LEGEND FOR BOYS RESTROOM
- REMOVE (E) PARTITION DOOR & RE-ATTACH TO SWING OUTWARD
- PROVIDE 2- NEW SIDE GRAB BARS 42" LONG @ +27" AFF. @ (N) AMBULATORY STALL

B1 ENLARGED FLOOR PLAN - ADMIN. CLASSROOM BLDG. No. 1 BOY'S R.R.
1/4"=1'-0"

9. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATION SHALL COMPLY WITH ALL LOCAL ORDINANCES

5. A DSA CERTIFIED CLASS 2 PROJECT INSPECTOR IS REQUIRED FOR THIS PROJECT
6. ALL WORK SHALL CONFORM TO 2013 EDITION OF TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
7. CHANGE TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE ORDER (CCD) APPROVED BY DSA, AS REQUIRED BY SECTION 4-338 PART 1, TITLE 24 CCR
8. A "DSA CERTIFIED" PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1 TITLE 24 CCR

FLOOD ZONE

BASED ON FLOOD INSURANCE RATE MAP DATED SEPT 26, 2008

FLOOD ZONE: X

BASE FLOOD ELEVATION: N/A

ACCESSIBILITY NOTES

1. SITE WALKWAYS SHALL PROVIDE A BARRIER FREE PATH OF TRAVEL IN A WHEELCHAIR. THE PATH OF TRAVEL SHALL BE HARD, DURABLE AND SLIP RESISTANT ROUTE A MINIMUM OF 48 INCHES IN WIDTH (11B-4035.1 EXCEPTION 3) AND WITH A MAXIMUM IN VERTICAL DIFFERENTIAL LEVELS. CONCRETE FINISH SHALL BE MEDIUM SALTED

2. PATH OF TRAVEL (P.O.T) AS INDICATED, IS A COMMON BARRIER FREE EGRESS / ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAXIMUM SLOPE. EXCEPT THAT LEVEL CHANGES DO NOT EXCEED 1/4" VERTICAL AND IS AT LEAST 48" WIDE. THE PATH SURFACE IS SLIP RESISTANT, STABLE, FIRM, AND SMOOTH. PASSING SPACE (11B-403.5.3) AT LEAST 80" X 60" ARE LOCATED NOT MORE THAN 400' APART. THE CROSS-SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL AND LESS THAN 5% UNLESS OTHERWISE INDICATED. (P.O.T.) SHALL BE MAINTAINED FREE OF OVERHANG OBSTRUCTIONS TO 80" MINIMUM (11B-307.4) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80" (11B-307.2)

3. GATES IN PATH OF TRAVEL SHALL HAVE LEVER HARDWARE AND KICK PLATES.

4. FOR ALL SITE GRADIENTS SEE CIVIL PLANS.

PATH OF TRAVEL STATEMENT

THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECTS WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

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

CODE ANALYSIS

(N)SHADE STRUCTURE
TYPE OF CONSTRUCTION -TYPE V-B
ALLOWABLE SQ. FT. = 9,500 SQ. FT.
ACTUAL SQ. FT. = 1,040 SQ. FT.
FIRE FLOW REQUERIMENT PER TABLE BB 105.1 =1, 500 GPM

LEGEND

- (E)BUILDING N.I.C.
- NEW SHADE STRUCTURE
- LIMIT OF WORK
- ACCESSIBLE PATH OF TRAVEL
- PROPERTY LINE
- LINE OF ROOF/CANOPY ABOVE
- (E)ACCESSIBLE RESTROOM
- K NEW KNOX BOX

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Date APR 18 2017

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GLENDALE UNIFIED SCHOOL DISTRICT
GLENOAKS ES-SHADE STRUCTURE
2015 EAST GLENOAKS, BLVD. GLENDALE, CA 91206

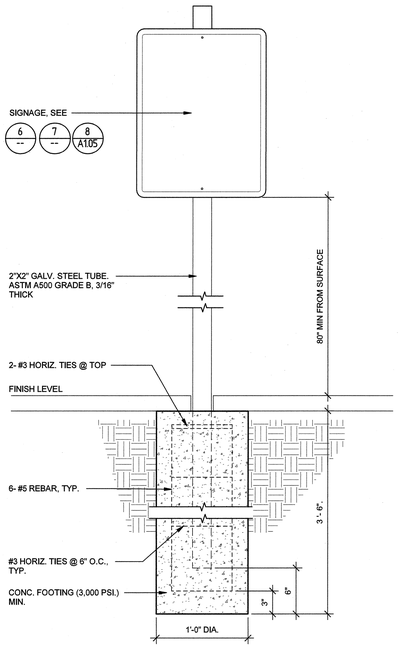
REGISTERED PROFESSIONAL ENGINEER
No. C 21424
Exp. 6/31/17
STATE OF CALIFORNIA

NAC ARCHITECTURE
nacarchitecture.com
837 N SPRING STREET | THIRD FLOOR
LOS ANGELES CA 90012

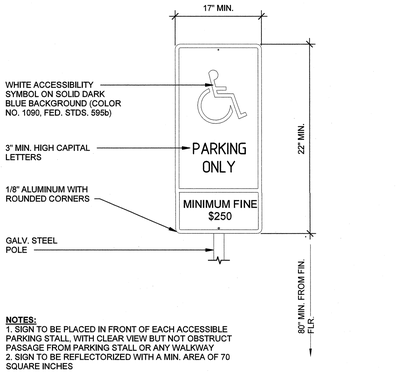
NAC NO	161-15004
DRAWN	Author
CHECKED	Checker
DATE	04-18-17

SITE PLAN

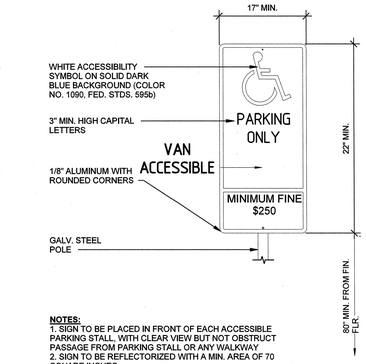
A1.03



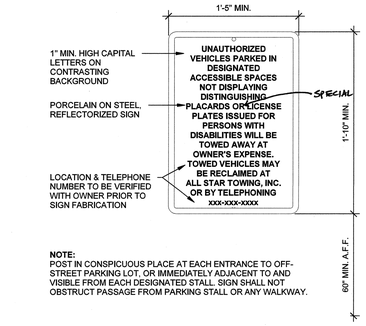
9 POLE MOUNTED SIGN
Scale: 1 1/2" = 1'-0"



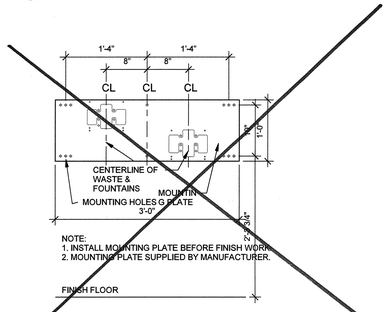
8 PARKING ONLY
Scale: 1" = 1'-0"



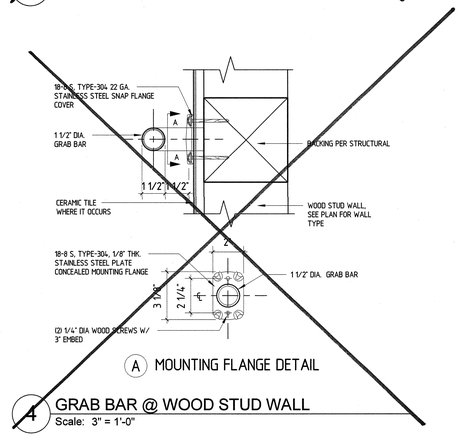
7 SIGNAGE @ VAN ACCESIBLE PARKING STALL
Scale: 1" = 1'-0"



6 TOWN AWAY SIGN
Scale: 1 1/2" = 1'-0"

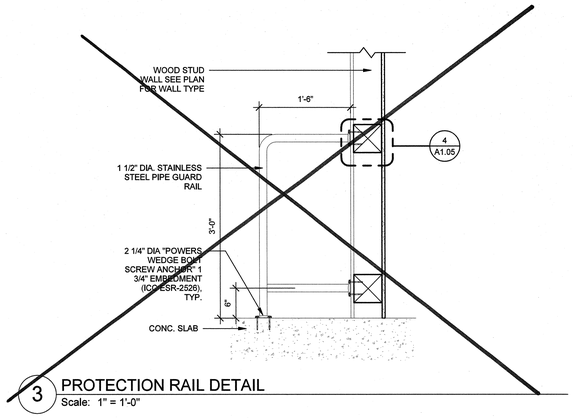


5 HI-LOW DRINKING FOUNTAIN DETAIL PLATE
Scale: 1" = 1'-0"

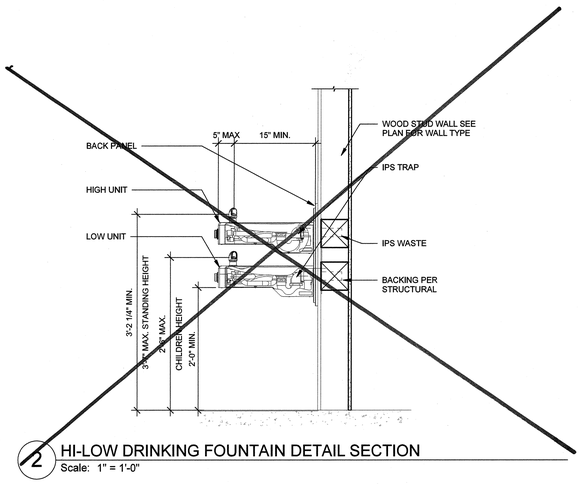


A MOUNTING FLANGE DETAIL

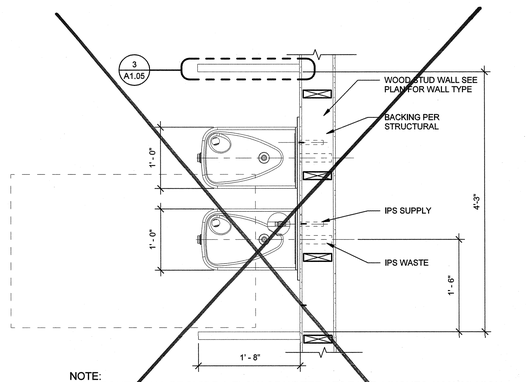
4 GRAB BAR @ WOOD STUD WALL
Scale: 3" = 1'-0"



3 PROTECTION RAIL DETAIL
Scale: 1" = 1'-0"



2 HI-LOW DRINKING FOUNTAIN DETAIL SECTION
Scale: 1" = 1'-0"



NOTE:
THE SPOUT SHALL PROVIDE A FLOW OF WATER AT LEAST 4 INCHES (102MM) HIGH MINIMUM, AND SHALL BE LOCATED 5 INCHES (127MM) MAXIMUM FROM THE FRONT OF THE UNIT. THE ANGLE OF THE WATER SHALL BE MEASURED HORIZONTALLY RELATIVE TO THE FRONT FACE OF THE UNIT. WHERE SPOUTS ARE LOCATED LESS THAN 3 INCHES (76MM) OF THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 30 DEGREES MAXIMUM. WHERE SPOUTS ARE LOCATED BETWEEN 3 INCHES (76MM) AND 5 INCHES (127 MM) MAXIMUM FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 15 DEGREES MAXIMUM. ON AN ACCESSIBLE DRINKING FOUNTAIN WITH A ROUND OR OVAL BOWL, THE SPOUT MUST BE POSITIONED SO THE FLOW OF WATER IS WITHIN 3 INCHES (75MM) OF THE FRONT EDGE OF THE FOUNTAIN

1 HI-LOW DRINKING FOUNTAIN DETAIL PLAN
Scale: 1" = 1'-0"

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GLENDALE UNIFIED SCHOOL DISTRICT
GLENOAKS ES-SHADE STRUCTURE
2015 EAST GLENOAKS, BLVD. GLENDALE, CA 91206

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Exp. 8/31/17
STATE OF CALIFORNIA

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837 N SPRING STREET | THIRD FLOOR
LOS ANGELES CA 90012

NAC NO	161-15004
DRAWN	Author
CHECKED	Checker
DATE	04-18-17

SITE DETAILS

A1.05

2014A

DESIGN VALUES:

DESCRIPTION	DESIGN VALUES
DEAD AND LIVE LOADS	
ROOF LIVE LOAD	20 PSF
ROOF DEAD LOAD (SUPERIMPOSED ON FRAME)	VARIES
ALLOWABLE SOIL PRESSURE	
DL+LL (CONCRETE FOOTING)	2000 PSF
DL+LL+SEISMIC (CONCRETE FOOTING)	2000 PSF
ROOF SNOW LOAD	
GROUND SNOW LOAD, Pg, FROM COUNTY	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	1.0
SNOW EXPOSURE FACTOR, Ce	1.2
SNOW LOAD IMPORTANCE FACTOR, Is	[X] 1.0 [ ] 1.1
THERMAL FACTOR, Ct	[ ] 1.0 [X] 1.2
FLOOD DESIGN	
FLOOD HAZARD AREA: [ ] YES [X] NO	
WIND DESIGN	
BASIC WIND SPEED (3 SECOND GUST), Vult	110 MPH
RISK CATEGORY	[X] II [ ] III
EXPOSURE CATEGORY	[X] C [ ] D
TOPOGRAPHIC FACTOR, Kzt (1 MINIMUM)	1.0
INTERNAL PRESSURE COEFFICIENT, GCpi (IF APPLICABLE)	0.0
SEISMIC DESIGN	
LATERAL FORCE-RESISTING SYSTEM	STEEL ORDINARY CANTILEVER COLUMN SYSTEMS
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, 3, 4 } Cs = { 0.80, 0.80, 1.07, 1.28 }
RESPONSE MODIFICATION FACTOR, R	1.25
SITE CLASS	[X] D [ ] E
REDUNDANCY FACTOR, p	1.3
MAPPED SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, Ss - USED TO DETERMINE Cs (WITH CAP PER CBC 1616A.1.12)	LOAD SCENARIO = { 1, 2, 3, 4 } Ss (MAX) = { 1.875, 1.875, 2.500, 3.000 }
MAPPED SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, Ss - USED TO DETERMINE OTHER PARAMETERS AND NON-STRUCTURAL COMPONENT ANHORAGE (NO CAP)	3.00
SHORT-PERIOD SITE COEFFICIENT, Fa	1.0
DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, Sds - USED TO DETERMINE Cs (WITH CAP PER CBC 1616.1.12)	LOAD SCENARIO = { 1, 2, 3, 4} Sds (MAX) = { 1.00, 1.00, 1.33, 1.60 }
DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIOD, Sds - USED TO DETERMINE OTHER PARAMETERS AND NON-STRUCTURAL COMPONENTS ANCHORAGE (NO CAP)	2.00
MAPPED SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD, S1	1.07
LONG-PERIOD SITE COEFFICIENT, Fv	1.5
DESIGN SPECTRAL RESPONSE ACCELERATION AT 1 SECOND PERIOD, Sd1	1.07
HORIZONTAL OR VERTICAL IRREGULARITIES TYPE(S)	NONE

ARCHITECTURAL REQUIREMENTS:

DESCRIPTION	DESIGN VALUES
TYPE OF CONSTRUCTION	VB
OCCUPANCY CLASSIFICATION	A3
NUMBER OF STORIES	1
FIRE HAZARD SEVERITY ZONE	VERY HIGH
FIRE SPRINKLER SYSTEM	NOT BY POLIGON

POLIGON ASSUMES ANY OCCUPANT LOAD CALCULATIONS ARE BASED ON 15 SQ FT/ PERSON. PROJECT ARCHITECT MAY ADJUST OCCUPANT LOAD AS PERMITTED BY THE BUILDING CDE.

RELATED BUILDING CODES AND STANDARDS:

TITLE 24 CODES:

2013 California Administrative Code (CAC).....(Part 1, Title 24, CCR)
2013 California Building Code (CBC), Volumes 1, and 2 (Part 2, Title 24, CCR)
(2012 International Building Code with 2013 California amendments)
2013 California Electrical Code .....(Part 3, Title 24, CCR)
(2011 National Electrical Code with 2013 California amendments)
2013 California Mechanical Code (CMC) .....(Part 4, Title 24, CCR)
(2012 Uniform Mechanical Code with 2013 California amendments)
2013 California Plumbing Code (CPC) .....(Part 5, Title 24, CCR)
(2012 Uniform Plumbing Code with 2013 California amendments)
2013 California Energy Code .....(Part 6, Title 24, CCR)
(Effective July 1, 2014)
2013 California Fire Code (CFC) .....(Part 9, Title 24, CCR)
(2012 International Fire Code with 2010 California Amendments)
2013 California Green Building Standards Code.....(Part 11, Title 24, CCR)
(Effective January 1, 2014)
2013 California Referenced Standards Code ..... (Part 12, Title 24, CCR)

NFPA 13 - 2013
NFPA 72 - 2013

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS:

2013 CBC, CHAPTER **35**
2013 CFC, CHAPTER **45**

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.

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 REQUIREMENTS.
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.

STRUCTURAL AND MISCELLANEOUS STEEL:

1. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFIATION MANUAL REFERENCED BY THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.
2. PIPE SECTIONS SHALL CONFORM TO ASTM A53, Fy = 35 ksi, GRADE B OR A501 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, 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 2203A.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 AS REQUIRED BY DSA.
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 @ (0° F).
3. ALL WELDING SHALL BE DONE IN THE SHOP WITH REQUIRED INSPECTION, PRE-APPROVED BY DSA, TO INSURE 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 A325 HIGH STRENGTH BOLTS (UNO), TYPE 3.
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 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.
6. HIGH STRENGTH WASHERS SHALL CONFORM TO ASTM F436.
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 341-10 J7; AISC 360-10 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:

3. ALLOWABLE SOIL PRESSURES ASSUME CLASS 4 SOIL CLASSIFICATION PER CBC TABLE 1806A.
2. **A GEOTECHNICAL REPORT / LETTER IS REQUIRED AT THE OVER-THE-COUNTER APPOINTMENT FOR EACH PROJECT.**
3. FILL AND BACKFILL SHALL BE COMPACTED TO 95% OF MAX. DENSITY IN ACCORDANCE WITH ASTM TEST METHOD D1557-70. FLOODING NOT PERMITTED.
4. 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.

CONCRETE:

1. MIX DESIGN REQUIREMENTS: (NORMAL WEIGHT CONCRETE)

STRENGTH f'c (28 DAYS)	W/C RATIO (NON-AIR ENTRAINED)	W/C RATIO (AIR ENTRAINED)	SLUMP (± 1")	UNIT WEIGHT (NORMAL WEIGHT)
5000 PSI	0.63	0.55	3"	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 WITH PROVEN SHRINKAGE CHARACTERISTICS OF LESS THAN .005. 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 318-11 5.2.
8. CONCRETE SHALL BE TESTED PER CBC 1905A.1.2, 1913A.1, 1705A.3, AND ACI 318-11 5.6.

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 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. REINFORCING SHALL BE LAP SPLICED 45 BAR DIA. MINIMUM IN CONCRETE AND MUST COMPLY WITH ACI 318-11.
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 1913A.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

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	RH	RIGHT HAND
IN	INCHES	SQ	SQUARE
KSI	KIPS PER SQUARE INCH	SS	STANDING SEAM ROOF PANEL (MCELROY)
LH	LEFT HAND	TYP	TYPICAL
MAX	MAXIMUM	UNO	UNLESS NOTED OTHERWISE
MIN	MINIMUM	USGS	U.S. GEOLOGICAL SURVEY
MISC	MISCELLANEOUS	W/	WITH
MPH	MILES PER HOUR		

INSTRUCTIONS FOR ARCHITECTS SUBMITTING THESE PRE-CHECKED DRAWINGS TO DSA:

BEFORE SUBMITTING THESE PRE-CHECKED DRAWINGS FOR YOUR PROJECT, FOLLOW THE STEPS BELOW TO PROPERLY DEFINE THE APPROVED OPTIONS:
THE POLIGON ENGINEERING DEPARTMENT IS AVAILABLE TO HELP YOU COMPLETE THESE STEPS (616-399-1963).

STEP 1: SELECT FRAME DIMENSIONS FOR YOUR PROJECT
- STRUCTURES UP TO 20' WIDE USE THE "RAM 20" BASE FRAME
- STRUCTURES UP TO 30' WIDE USE THE "RAM 30" BASE FRAME
- THE 20' AND 30' WIDTHS ARE SUGGESTED BECAUSE THEY ARE THE MOST ECONOMICAL
- MAXIMUM WIDTH IS 30'; (SEE 'ARCHITECTURAL VIEWS' SHEET FOR REFERENCE)
- THE 44', 64', AND 84' LENGTHS ARE SUGGESTED BECAUSE THEY ARE THE MOST COMMON (20' BAYS ARE MOST ECONOMICAL)
- FRAME WIDTHS AND LENGTHS ASSUME 2' OVERHANGS (UNO BY ARCHITECT - 2' MAX DIMENSION)

STEP 2: 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

STEP 3: IDENTIFY THE Ss ACCELERATION (g) FOR YOUR PROJECT
- Ss VALUE DETERMINES THE REQUIRED SEISMIC DESIGN FORCES
- Ss VALUE DEPENDS ON THE PROJECTS GEOGRAPHICAL LOCATION (VALUES RANGE FROM 0.00 TO 3.73)
  - FIND Ss VALUES FOR YOUR PROJECT ON THE USGS WEBSITE (SEARCH INTERNET FOR "USGS SEISMIC DESIGN MAPS")
- THIS PC IS NOT APPROVED FOR Ss VALUES GREATER THAN 3.00 (CONTACT POLIGON FOR ADDITIONAL OPTIONS)

STEP 4: IDENTIFY THE Ss REGION FOR YOUR PROJECT
- THE REGIONS ARE DEPENDANT ON THE Ss VALUE DETERMINED IN STEP 3
- REFERENCE DSA BU 14-01 FOR A MAP OF VARIOUS Ss REGIONS
- THE Ss REGION DICTATES THE MAXIMUM DEAD LOAD PERMITTED ON THE FRAME (SEE TABLE TO THE RIGHT)

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
- BE SURE THE TOTAL ROOF DEAD LOAD FOR YOUR PROJECT IS LESS THAN OR EQUAL TO THE MAX DEAD LOAD SHOWN IN STEP 4

STEP 6: IDENTIFY THE FOUNDATION REQUIREMENTS FOR YOUR PROJECT
- REFERENCE THE Ss REGION (STEP 4) AND THE TOTAL ROOF DEAD (STEP 5)
- IDENTIFY A **SINGLE** LOAD SCENARIO
  - E.G. A PROJECT IN THE WHITE Ss REGION WITH A 4 PSF ROOF DEAD LOAD IS LOAD SCENARIO 2
  - LOAD SCENARIOS HAVE NO IMPACT ON FRAME DESIGN OR COST (BUT DO AFFECT FOUNDATION SIZE)
- SELECT **EITHER** SPREAD PAD OR DRILLED PIER FOUNDATION
  - FOUNDATION TYPE IMPACTS STEEL FABRICATION (COLUMN LENGTH) AND CONSTRUCTION (TIMING, SEQUENCE, COST, ETC.)
  - POLIGON CAN REVIEW THE SITE-SPECIFIC SOILS REPORT TO EVALUATE THE POSSIBILITY OF SMALLER FOUNDATIONS

STEP 1

FRAME DIMENSIONS	SUGGESTED			OTHER
FRAME WIDTH	□ 20'	□ 30'		□ 26'-0" (30' MAX)
FRAME LENGTH	□ 44'	□ 64'	□ 84'	□ 40'-0" (NO MAX)

STEP 2

ROOF DECK		
ROOF DECK TYPE	X MR	□ SS

STEP 3

Ss ACCELERATION (g)
2.822 g

STEP 4

Ss REGIONS[1]		Ss REGIONS	MAX DEAD LOAD
DESCRIPTION	□ WHITE	0.000 < Ss <= 1.875	5 PSF
	X BLUE	1.875 < Ss <= 2.500	3.5 PSF
	□ GREEN	2.500 < Ss <= 2.750	2 PSF
	□ YELLOW	2.750 < Ss <= 3.000	2 PSF

[1] REFERENCE DSA BU 14-01 FOR A MAP OF VARIOUS Ss REGIONS

STEP 5

TOTAL ROOF DEAD LOAD		
	DEAD LOAD	EXAMPLES
ROOF DECK	1.2 PSF	MR = 1.2 PSF ; SS = 1.8 PSF (SEE STEP 2)
COLLATERAL[1]	— PSF	LIGHTING, FIRE SUPPRESSION, PV PANELS, ETC.
TOTAL[2]	1.2 PSF	ADD ROOF DECK AND COLLATERAL LOADS

[1] PROVIDE DSA WITH EVIDENCE THAT THE COLLATERAL LOAD FOR YOUR PROJECT MEETS THESE REQUIREMENTS
[2] MAY NOT EXCEED REQUIREMENTS LISTED IN STEP 6 BELOW

STEP 6

FOUNDATION REQUIREMENTS				
Ss REGION	DEAD LOAD (DL)	LOAD SCENARIO	SPREAD PAD	DRILLED PIER
WHITE	DL <= 2 PSF	□ LOAD SCENARIO 1		
	2 PSF < DL <= 5 PSF	□ LOAD SCENARIO 2		
BLUE	DL <= 3.5 PSF	X LOAD SCENARIO 3	□	X
GREEN	DL <= 2 PSF	□ LOAD SCENARIO 4		
YELLOW	DL <= 2 PSF	□ LOAD SCENARIO 4		

STEP 7: SELECT MISCELLANEOUS OPTIONS FOR YOUR PROJECT
- MAXIMUM CLEAR HEIGHT IS 10'-0"; (SEE 'ARCHITECTURAL VIEWS' SHEET FOR REFERENCE)
- MARK UP PC DRAWINGS WITH SIZE AND LOCATION OF CUTOUTS BEFORE SUBMITTING TO DSA

STEP 8: SELECT APPLICABLE SHEET INDEX FOR YOUR PROJECT
- REFERENCE THE BASE FRAME (STEP 1) AND THE ROOF DECK TYPE (STEP 2)
- IDENTIFY THE APPLICABLE SHEET INDEX

STEP 9: INCLUDE APPLICABLE SHEETS WITH YOUR DSA SUBMITTAL
- EXCLUDE 'MISC DESIGN OPTIONS' SHEET FOR PROJECTS WITHOUT ELECTRICAL CUTOUTS OR GUTTERS

STEP 10: IDENTIFY PROJECT NAME AND SCHOOL DISTRICT

PROJECT NAME:
GLENOAKS ES - SHADE STRUCTURE

SCHOOL DISTRICT:
GLENDALE UNIFIED SCHOOL DISTRICT

STEP 7

MISCELLANEOUS	DESIGN OPTIONS	
CLEAR HEIGHT	X 10'-0"	□ (10' MAX)
ELECTRICAL CUTOUTS	□ YES	X NO
GUTTERS	□ YES	X NO

STEP 8

SHEET INDEX

BASE FRAME	RAM 20		RAM 30	
ROOF DECK	MR	SS	MR	SS
SELECT ONE	□	□	X	□
GENERAL NOTES	PD1.0	PD1.0	PD1.0	PD1.0
SPECIAL INSPECTIONS	PD1.1	PD1.1	PD1.1	PD1.1
FOUNDATION PLAN	PD2.0	PD2.0	PD2.1	PD2.1
FRAMING PLAN	PD3.0	PD3.0	PD3.1	PD3.1
FRAME CONNECTION DETAILS	PD4.0	PD4.0	PD4.1	PD4.1
SECTION DETAILS	PD5.0	PD5.0	PD5.1	PD5.1
PLATE DETAILS	PD6.0 - PD6.1		PD6.2 - PD6.3	
ARCHITECTURAL VIEWS	PD7.0	PD7.0	PD7.1	PD7.1
ROOF CONNECTION DETAILS	PD8.0	PD8.1	PD8.0	PD8.1
MISC DESIGN OPTIONS	PD9.0	PD9.0	PD9.0	PD9.0

STATEMENT OF GENERAL CONFORMANCE

FOR ARCHITECT/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS (APPLICATION NO.)

☑ THE DRAWINGS OR SHEETS LISTED ON THE COVER OR ASSOCIATED WITH PC #03-115591
☐ THIS DRAWING, PAGE OF SPECIFICATIONS/CALCULATIONS

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1. DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENTS OF TITLE 24, CALIFORNIA CODE OF REGULATIONS
2. COORDINATION WITH MY PLANS AND SPECIFICATIONS
3. ACCEPTABILITY FOR INCORPORATION INTO THE CONSTRUCTION OF THIS PROJECT.

THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 7302 AND 8135 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341, AND 4-344 OF TITLE 24, PART 1 (TITLE 24, PART 1, SECTION 4-317(b)).

I FIND THAT:
☒ ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEET
☐ THIS DRAWING OR PAGE

☒ ISSUE IN GENERAL CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS
☐ ISSUE IN GENERAL CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, WITH THE EXCEPTIONS NOTED BELOW
☐ HAS NOT BEEN COORDINATED WITH THE PROJECT PL

2014A

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 DIVISION OF THE STATE ARCHITECT DEPARTMENT OF GENERAL SERVICES

DSA-103 rev 12/20/13

Statement of Structural Tests & Special Inspections - 2013 CBC

INCREMENT # | DSA File No.: PC-1 | Application No.: 02-113591 | Date Submitted: | Revised: | Revised:

School Name	EXAMPLE - REMOVE ON SITE-SPECIFIC PROJECTS	District	EXAMPLE - REMOVE ON SITE-SPECIFIC PROJECTS

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

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

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

REQUIRED	TEST OR SPECIAL INSPECTION	TYPE[1]	PERFORMED BY[2]	CODE REFERENCE AND NOTES
-	**SOILS**			
	1. GENERAL:			**Table 1705A.6**
X	a. Verify that: • site has been prepared properly prior to placement of controlled fill and/or excavations for foundations, • foundation excavations are extended to proper depth and have reached proper material, and • materials below footings are adequate to achieve the design bearing capacity.	Periodic	GE*	* By geotechnical engineer or his or her qualified representative.
-	**4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):**			**Table 1705A.7**
X	a. Inspect drilling operations and maintain complete and accurate records for each pier.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative.
X	b. Verify locations of piers.	Continuous	PI	
X	c. Confirm pier diameters, plumbness, bell diameters (if applicable), lengths, and embedment into bedrock (if applicable). Record concrete or grout volumes.	Continuous	GE*	* By geotechnical engineer or his or her qualified representative.
X	e. Concrete piers.	Provide tests and inspections per CONCRETE section below.		
-	**CONCRETE**	**Table 1705A.3**		
-	**7. CAST IN PLACE CONCRETE**			
	Material Verification and Testing:			
X	a. Verify use of required design mix.	Periodic	SI & PI*	* To be performed by batch-plant special inspector and project inspector.
X	b. Test reinforcing steel.	Test	Lab	**1913A.2** (1913.2.6*), ASTM A370. DSA IR 17-10
X	c. Perform slump, temperature, and (where required) air content tests.	Test	Lab	ASTM C172, ASTM C31.
X	d. Test concrete (compression).	Test	Lab	**ACI 318 Section 5.6 and 1905A.1.2** (1913.3.1*). ASTM C39.
X	g. Inspect placement of formwork, reinforcing steel, embedded items and concrete. Inspect curing and form removal.	Continuous	PI*	* May be performed by a special inspector when specifically approved by DSA.
+	**MASONRY**	**TMS 402-11/ACI 530-11/ASCE 5-11 Table 1.19.3**		
-	**STEEL**	**Table 1705A.2.1**		
-	**17. STRUCTURAL STEEL AND COLD-FORMED STEEL USED FOR STRUCTURAL PURPOSES**			
	Material Verification:			
X	a. Verify that all materials are appropriately marked and that: • Mill certificates indicate material properties that comply with requirements, • Material sizes, types and grades comply with requirements.	Periodic	*	* By special inspector when performed off-site; by project inspector for steel shipped directly to project site without welding or fabrication.
X	b. Test unidentified materials	Test	Lab	**2203A.1** (2203.1*). ASTM A370.
X	c. Examine seam welds of structural tubes and pipes	Periodic	SI*	* DSA IR 17-3.
	Inspection:			
X	d. Verify member locations, bracing and all details constructed in the field.	Continuous	PI	
X	e. Verify stiffener locations, connection tab locations and all construction details fabricated in the shop.	Periodic	SI	
-	**18. HIGH STRENGTH BOLTS:**			
	Material Verification of High-Strength Bolts, Nuts, and Washers:			
X	a. Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA approved documents.	Periodic	SI	DSA IR 17-9
X	b. Test high-strength bolts, nuts and washers.	Test	Lab	**2213A.1** (2212.6.1*), ASTM F606, A370. DSA IR 17-8
	Inspection of High-Strength Bolt Installation:			
X	d. Slip-critical connections.	*	SI	* "Continuous" or "Periodic" depends on the tightening method used, DSA IR 17-9 and **1705A.2.1.**
-	**19. WELDING:**			DSA IR 17-3, AWS D1.1 and AWS D1.8 (AWS D1.3 for cold formed steel).
	Verification of Materials, Equipment, Welders, etc:			
X	a. Verify weld filler material identification markings per AWS designation listed on the DSA approved documents and the WPS.	Periodic	SI	
X	b. Verify weld filler material manufacturer's certificate of compliance.	Periodic	SI	
X	c. Verify WPS, welder qualifications and equipment.	Periodic	SI	DSA IR 17-3.
-	**19.1 SHOP WELDING:**			
X	a. Inspect groove, multi-pass, and fillet welds > 5/16"	Continuous	SI	Per AISC 360 (and AISC 341 as applicable). DSA IR 17-3.
X	b. Inspect single-pass fillet welds ≤ 5/16"	Periodic	SI	Per AISC 360 (and AISC 341 as applicable). DSA IR 17-3.
+	**WOOD**			
+	**OTHER**			

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

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

Name of Architect or Engineer in general responsible charge
THOMAS A. BURKHART
Name of Structural Engineer (When structural design has been delegated)
T.A. Burkhart 8/28/14
Signature of Architect or Structural Engineer date

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DIV OF THE STATE ARCHITECT
APP. # 02-113591
AC N/A F/LS N/A SS
DATE

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03 116020
AC / FLS / SS
Date APR 18 2014

REGISTERED PROFESSIONAL ENGINEER THOMAS A. BURKHART No. S4378 Exp. 3/31/16 STRUCTURAL STATE OF CALIFORNIA

CARLTON Engineering Inc.

poligon

STATE APPROVALS
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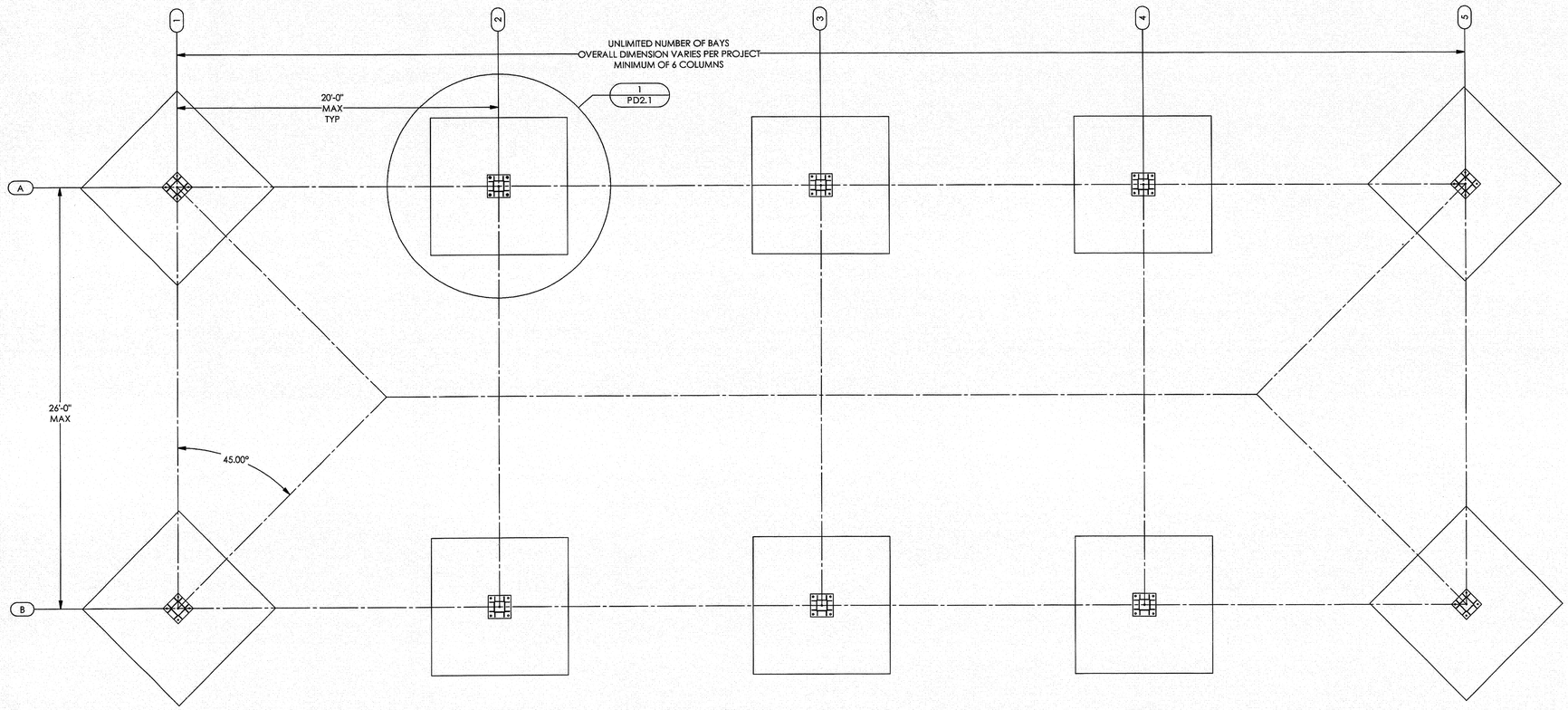
DATE 8-4-14

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

SPECIAL INSPECTIONS
HIP ROOF (RAM)
PC DRAWINGS
DRAWN BY: JMD
CHECKED BY: CE
POLIGON #: 51458

PD1.1

2014A



FOUNDATION PLAN (SPREAD PAD)

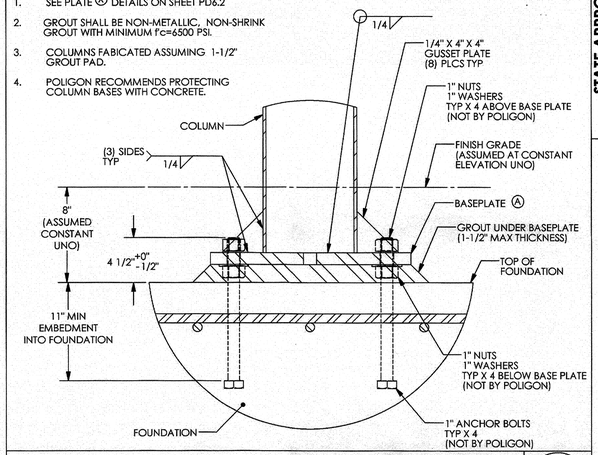
SCALE: 1/4" = 1'-0"

FOUNDATION PLAN NOTES:

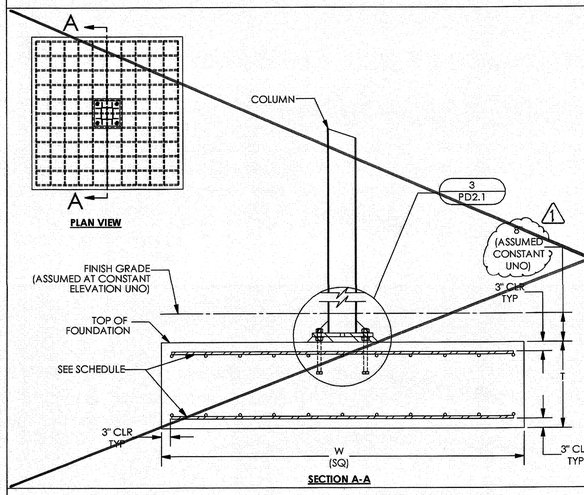
1. TOP OF ALL FOUNDATIONS MUST BE CONSTRUCTED AT ONE COMMON ELEVATION (COORDINATE WITH SITE PLANS - NOT BY POLIGON)
2. ALL FOUNDATIONS MUST BE CENTERED UNDER COLUMNS (UNO).
3. SEE SHEET PD1.0 FOR CONCRETE REQUIREMENTS.
4. PRIOR TO FORMING AND CASTING FOUNDATIONS, REVIEW FOUNDATION PLAN FOR REQUIRED ORIENTATION.
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).

NOTES:

1. SEE PLATE Ⓧ DETAILS ON SHEET PD6.2
2. GROUT SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH MINIMUM f'c=6500 PSI.
3. COLUMNS FABICATED ASSUMING 1-1/2" GROUT PAD.
4. POLIGON RECOMMENDS PROTECTING COLUMN BASES WITH CONCRETE.



COLUMN BASE PLATE AND ANCHOR BOLTS — 3



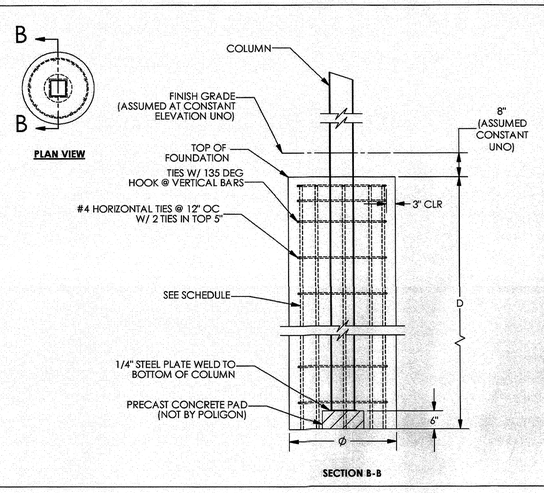
FOUNDATION REQUIREMENTS VARY PER PROJECT
SEE SHEET PD1.0 FOR REQUIRED LOAD SCENARIO AND FOUNDATION TYPE (STEP 6 OF 'INSTRUCTIONS')
ONLY REFERENCE COPY OF PC DRAWINGS SUBMITTED FOR THIS PROJECT

SPREAD PAD
SIZE AND REINFORCING REQUIREMENTS

LOAD SCENARIO	WIDTH (W)	THICKNESS (T)	HORIZONTAL REINFORCING[1]	
			QTY	SIZE
1	6'-6"	2'-0"	8	#6
2	8'-0"	2'-0"	10	#6
3	9'-0"	2'-0"	11	#6
4	9'-6"	2'-0"	12	#6

[1] EQUALLY SPACED EACH WAY, TOP AND BOTTOM

SPREAD PAD FOUNDATION — 1



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FOUNDATION REQUIREMENTS VARY PER PROJECT
SEE SHEET PD1.0 FOR REQUIRED LOAD SCENARIO AND FOUNDATION TYPE (STEP 6 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'-6"	10'-0"	8	#6
2	2'-6"	11'-6"	8	#6
3	2'-6"	12'-0"	8	#6
4	2'-6"	12'-0"	8	#6

[1] EQUALLY SPACED AROUND DRILLED PIER

PRIOR TO CONCRETE PLACEMENT, POLIGON STRONGLY RECOMMENDS ERECTING ENOUGH OF THE FRAME (E.G. BEAMS AND PURLINS) TO ENSURE ACCURATE COLUMN SPACING, ROTATION, AND VERTICALITY.

DRILLED PIER FOUNDATION (BURIED COLUMN) — 2

REGISTERED PROFESSIONAL ENGINEER
THOMAS A. BURGHART
No. S4378
Exp. 3/31/16
STRUCTURAL
STATE OF CALIFORNIA

CARLTON Engineering Inc.
TEMA BRADY BOOTHBY
PRINCIPAL ENGINEER
2040 MARKET STREET
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Rev.1

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

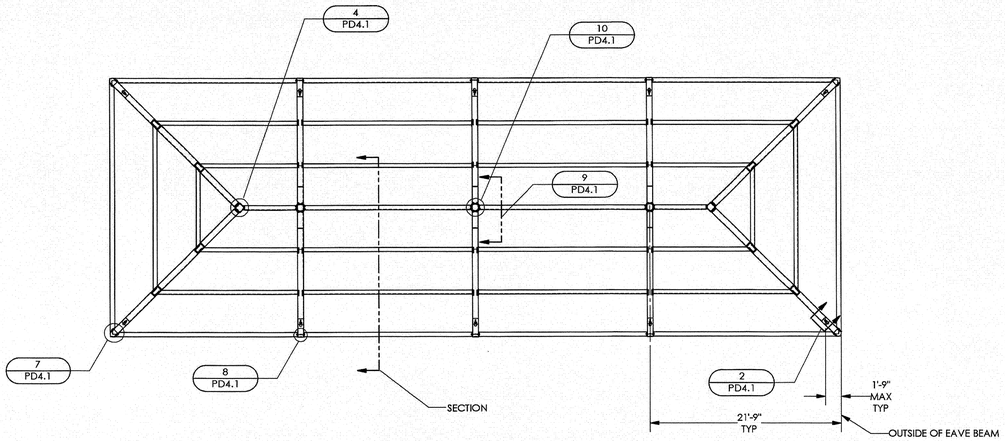
FOUNDATION PLAN
RAM 30

HIP ROOF (RAM)
PC DRAWINGS

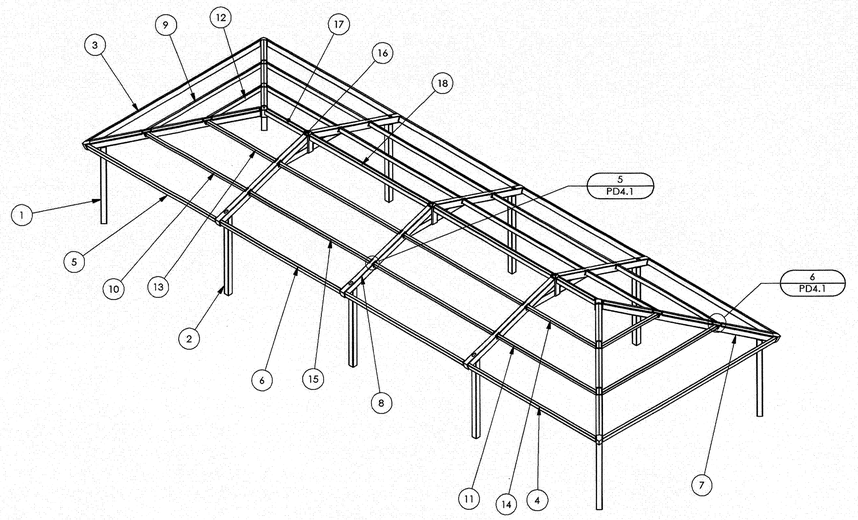
DRAWN BY: JMD
CHECKED BY: CE
POLIGON #: 51458

PD2.1

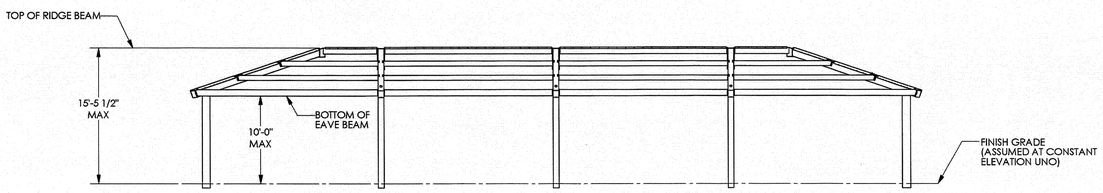
2014A



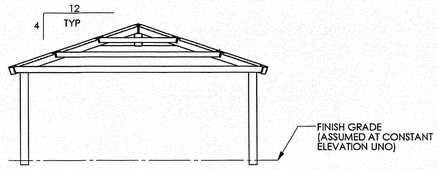
PLAN VIEW
SCALE: 1/8" = 1'-0"



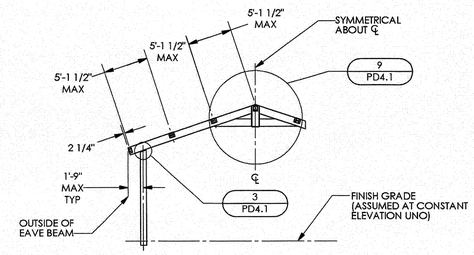
ISOMETRIC VIEW
SCALE: 1/8" = 1'-0"



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



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



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

ITEM	FRAME /QTY.	PART NO.	DESCRIPTION	MATERIAL
18	2	-	RIDGE BEAM ASM, MID	HSS8X6X3/16
17	2	-	RIDGE BEAM ASM, END	HSS8X6X3/16
16	3	-	COMPRESSION TUBE ASM	HSS10X10X5/8
15	8	-	PURLIN ASM, SIDE	HSS6X4X3/16
14	2	-	PURLIN ASM, RH UPPER	HSS6X4X3/16
13	2	-	PURLIN ASM, LH UPPER	HSS6X4X3/16
12	2	-	PURLIN ASM, END UPPER	HSS6X4X3/16
11	2	-	PURLIN ASM, RH LOWER	HSS6X4X3/16
10	2	-	PURLIN ASM, LH LOWER	HSS6X4X3/16
9	2	-	PURLIN ASM, END LOWER	HSS6X4X3/16
8	6	-	GABLE BEAM ASM	HSS10X8X1/4
7	4	-	HIP BEAM ASM	HSS10X8X1/4
6	4	-	EAVE BEAM ASM, SIDE	HSS8X4X3/16
5	2	-	EAVE BEAM ASM, RH	HSS8X4X3/16
4	2	-	EAVE BEAM ASM, LH	HSS8X4X3/16
3	2	-	EAVE BEAM ASM, END	HSS8X4X3/16
2	6	-	COLUMN ASM, SIDE	HSS8X8X1/4
1	4	-	COLUMN ASM, CORNER	HSS8X8X1/4

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03 118020
AC FLS SS
Date APR 18 2014

REGISTERED PROFESSIONAL ENGINEER
THOMAS A. BURKETT
No. S4378
Exp. 3/31/16
STRUCTURAL
STATE OF CALIFORNIA

CARLTON Engineering Inc.

poligon

STATE APPROVALS

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02 113591
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DATE 9-2-14

PRE-CHECK (PC) DOCUMENT

CODE: 2013 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

FRAMING PLAN
RAM 30

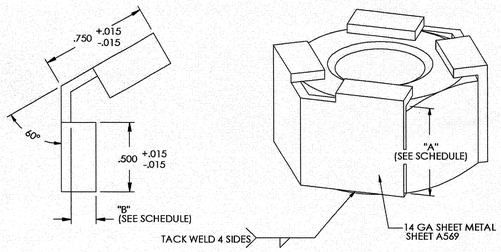
HIP ROOF (RAM)
PC DRAWINGS

DRAWN BY: JMD
CHECKED BY: CE
POLIGON #: 51458

PD3.1

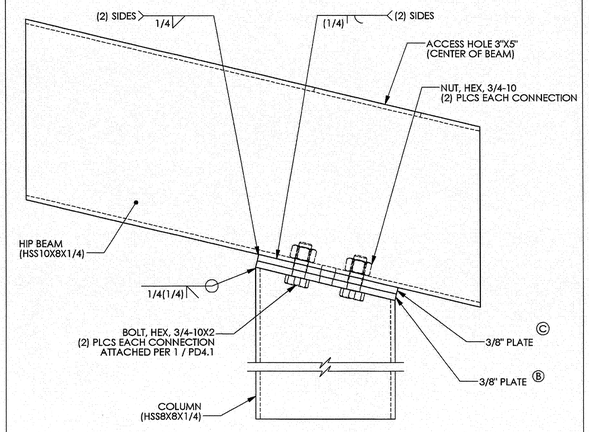
2014A

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

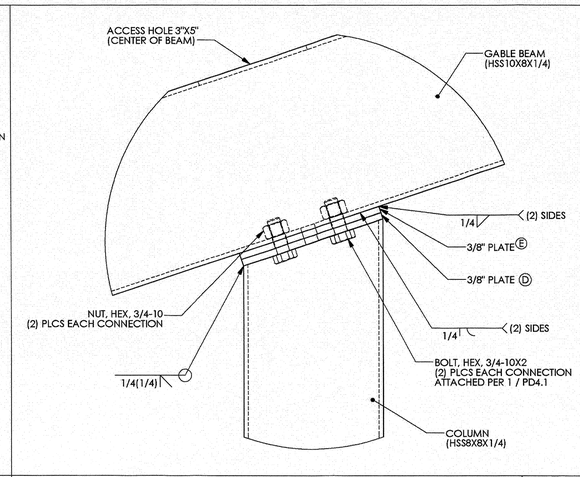


DIMENSION SCHEDULE				
FASTENER	DIM A		DIM B	
5/8" NUT	.631	+.000 -.015	.180	+.015 -.015
5/8" BOLT	.403	+.000 -.015	.250	+.015 -.015
3/4" NUT	.758	+.000 -.015	.180	+.015 -.015
3/4" BOLT	.483	+.000 -.015	.375	+.015 -.015
1" NUT	1.012	+.000 -.015	.180	+.015 -.015
1" BOLT	.643	+.000 -.015	.375	+.015 -.015

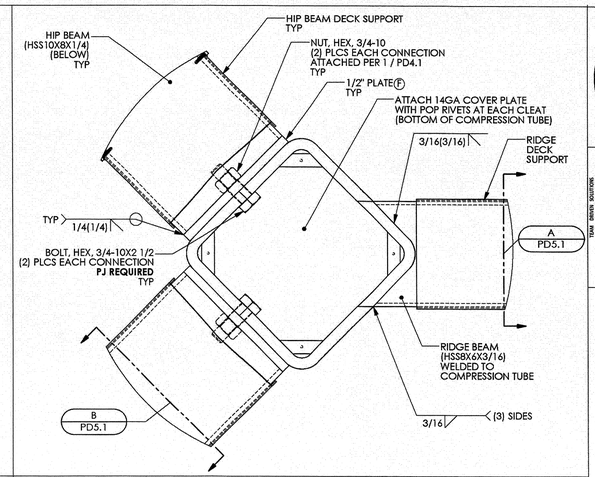
NUT & BOLT RESTRAINING SYSTEM 1



HIP BEAM CONNECTION @ COLUMN 2



GABLE BEAM CONNECTION @ COLUMN 3



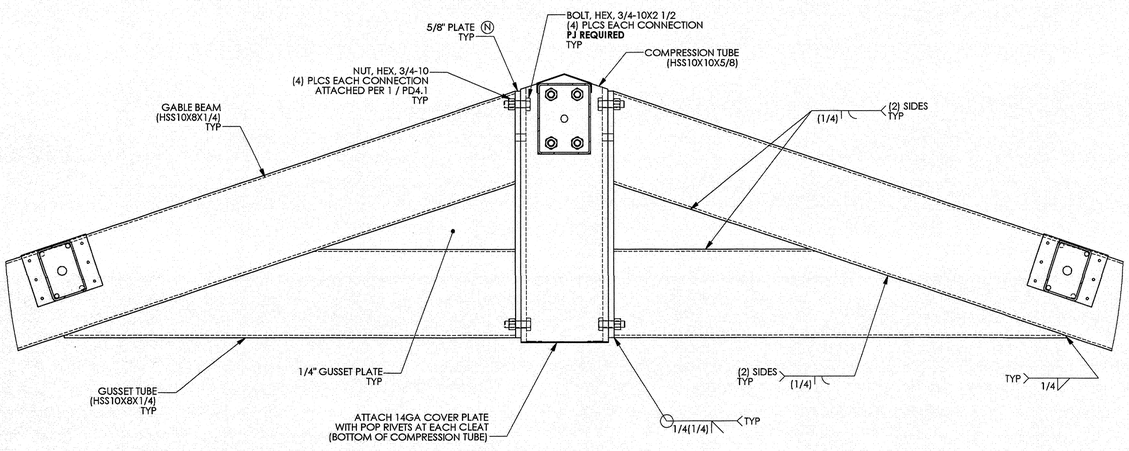
HIP BEAM CONNECTION @ COMPRESSION TUBE 4

PURLIN CONNECTION @ GABLE BEAM 5

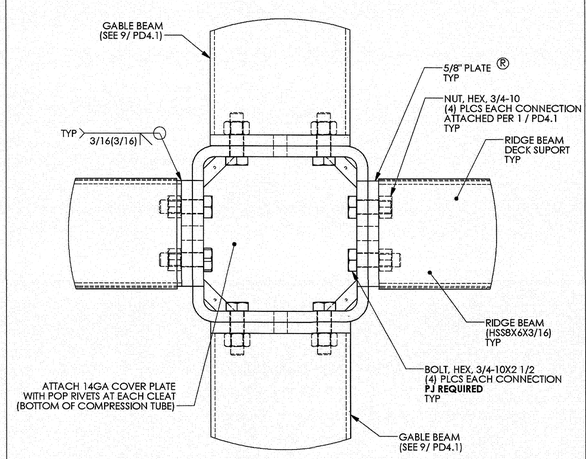
PURLIN CONNECTION @ HIP BEAM 6

EAVE BEAM CONNECTION @ HIP BEAM 7

EAVE BEAM CONNECTION @ GABLE BEAM 8



GABLE BEAM CONNECTION @ COMPRESSION TUBE 9



RIDGE BEAM CONNECTION @ COMPRESSION TUBE 10

FRAME CONNECTION DETAIL NOTES:

1. SEE SECTIONS ON SHEET PD5.1.
2. SEE PLATE Ⓧ DETAILS ON SHEET PD6.2 AND PD6.3
3. COVER ACCESS HOLES WITH GRACE ICE AND WATER SHIELD BEFORE ATTACHING ROOF DECK.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
03 118020
AC FLS SS
Date APR 18 2017

REGISTERED PROFESSIONAL ENGINEER
THOMAS A. BURKHART
No. S4378
Exp. 3/31/16
STRUCTURAL
STATE OF CALIFORNIA

CARLTON Engineering Inc.

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DATE 9-24-14

PRE-CHECK (PC) DOCUMENT

CODE: 2013 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

FRAME CONNECTION DETAILS
RAM 30

HIP ROOF (RAM)
PC DRAWINGS

DRAWN BY: JMD
CHECKED BY: CE
POLIGON #: 51458

PD4.1

PD5.1

SECTION DETAILS
RAM 30

HIP ROOF (RAM)
PC DRAWINGS

DRAWN BY: JMD
CHECKED BY: CE
POLIGON #: 51458

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CODE: 2013 CBC
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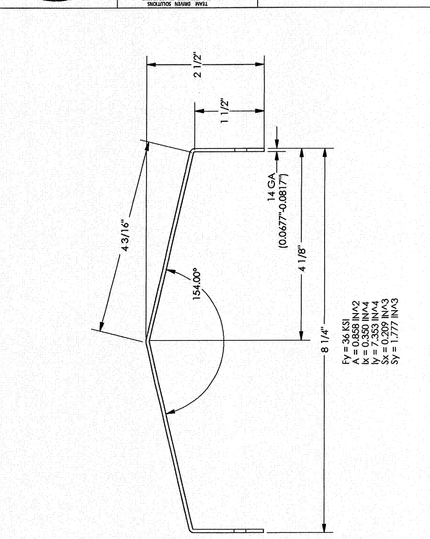
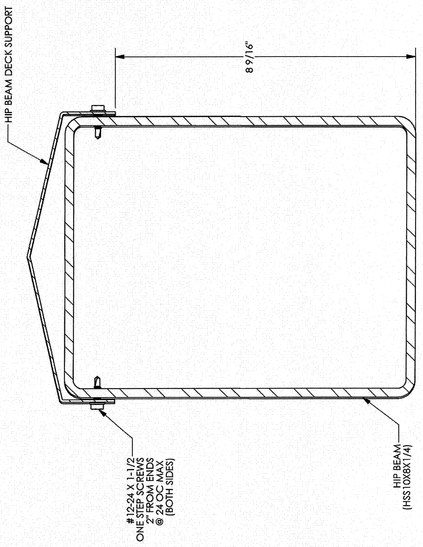
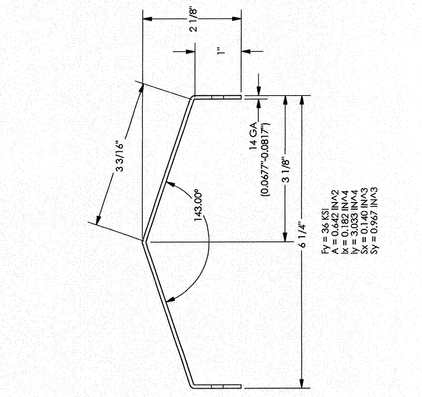


B

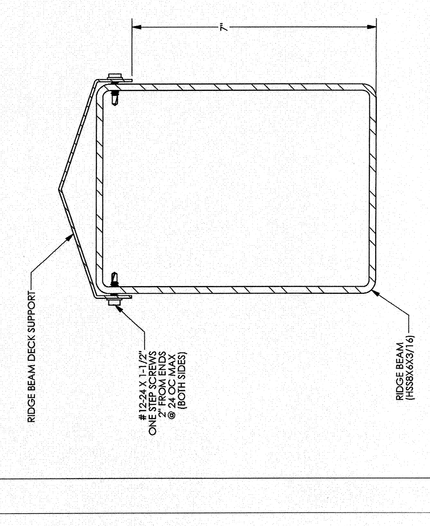
HIP BEAM DECK SUPPORT





A

RIDGE BEAM DECK SUPPORT



2014A

2013A

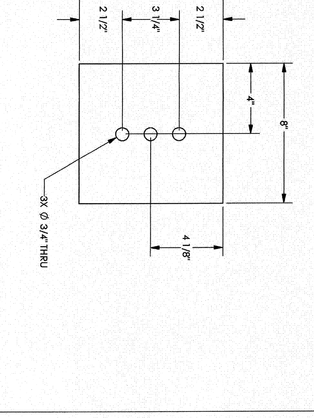


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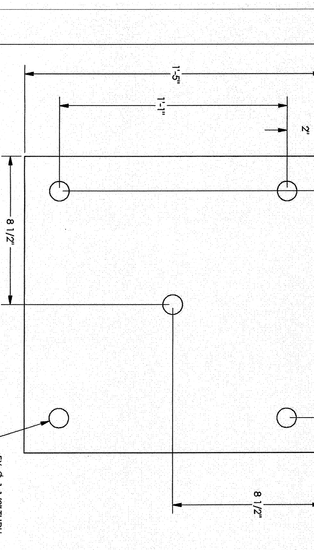
PLATE



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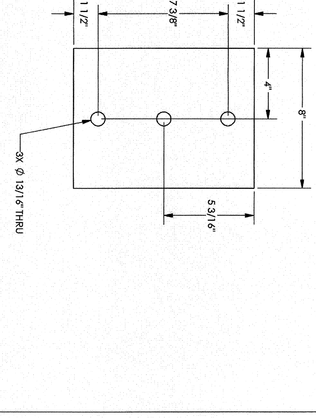

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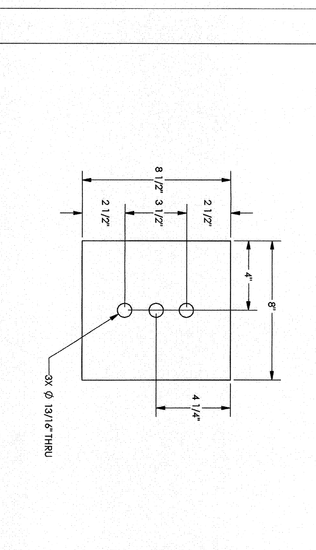

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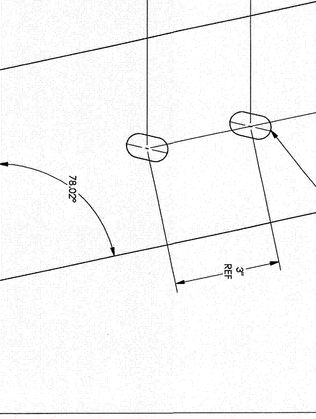

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PLATE

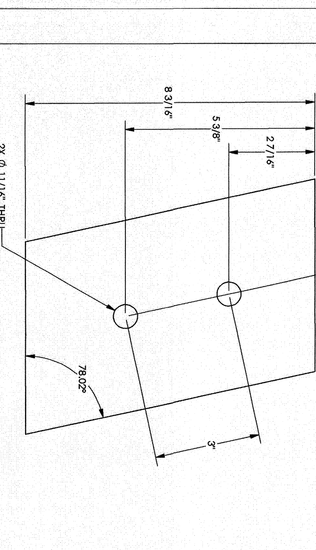

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PLATE

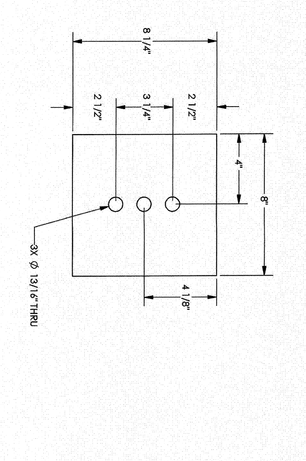

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PLATE

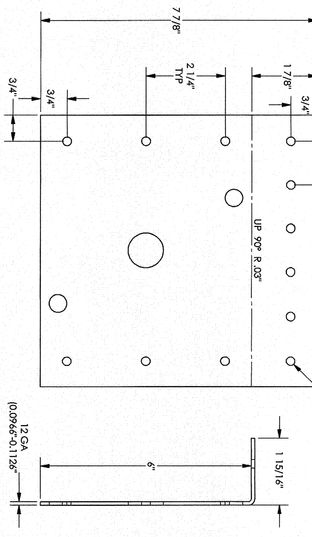

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PLATE

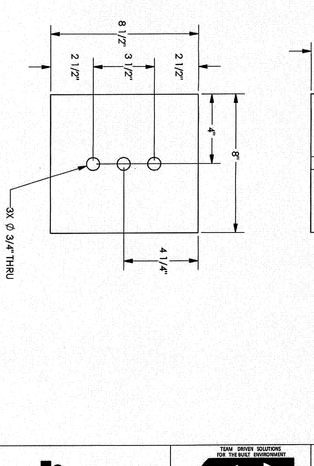

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PLATE

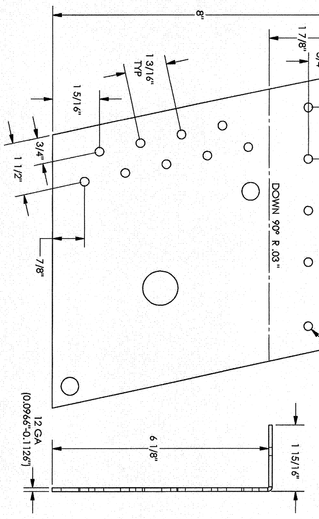

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PLATE

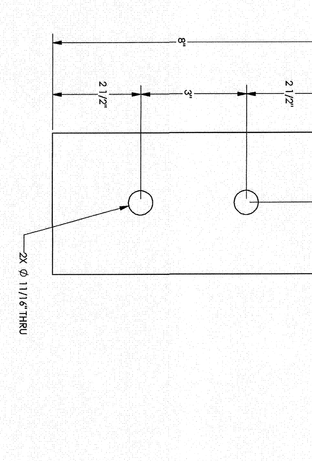

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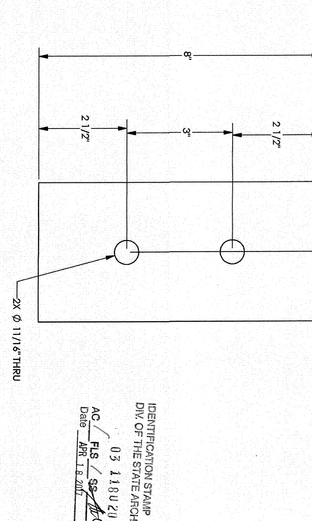
PLATE



M

PLATE

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 113591
AC FLS SS
Date APR 19 2013

PD6.2

PLATE DETAILS
RAM 30

DRAWN BY: JMD
CHECKED BY: CE
POLIGON #: 51458

HIP ROOF (RAM)
PC DRAWINGS

PRE-CHECK (PC) DOCUMENT

CODE: 2013 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

STATE APPROVALS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
02 113591
AC FLS SS
DATE 9-7-14

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CARLTON Engineering Inc.

REGISTERED PROFESSIONAL ENGINEER
THOMAS A. BUDINGER
No. 39918
Exp. 3/31/15
STRUCTURAL
STATE OF CALIFORNIA

2014A

N

PLATE

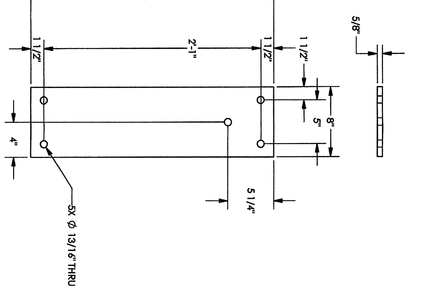

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PLATE

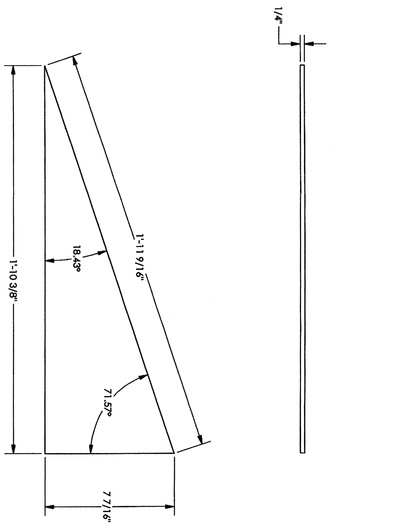

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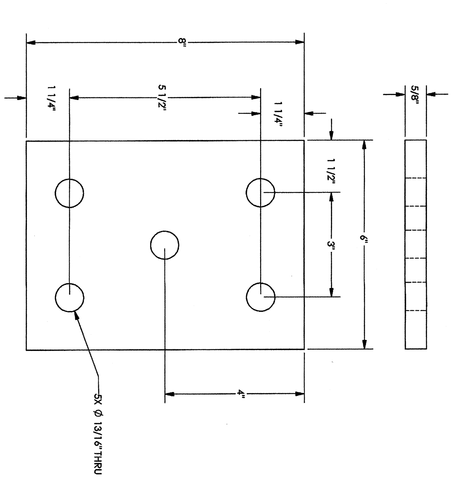
PLATE



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
03 110U 20
AC FLS SS
Date APR 18 2011

PD6.3

PLATE DETAILS
RAM 30

DRAWN BY: JMD
CHECKED BY: CE
POLIGON #: 51458

HIP ROOF (RAM)
PC DRAWINGS

PRE-CHECK (PC) DOCUMENT

CODE: 2013 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

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THOMAS A. CARLTON
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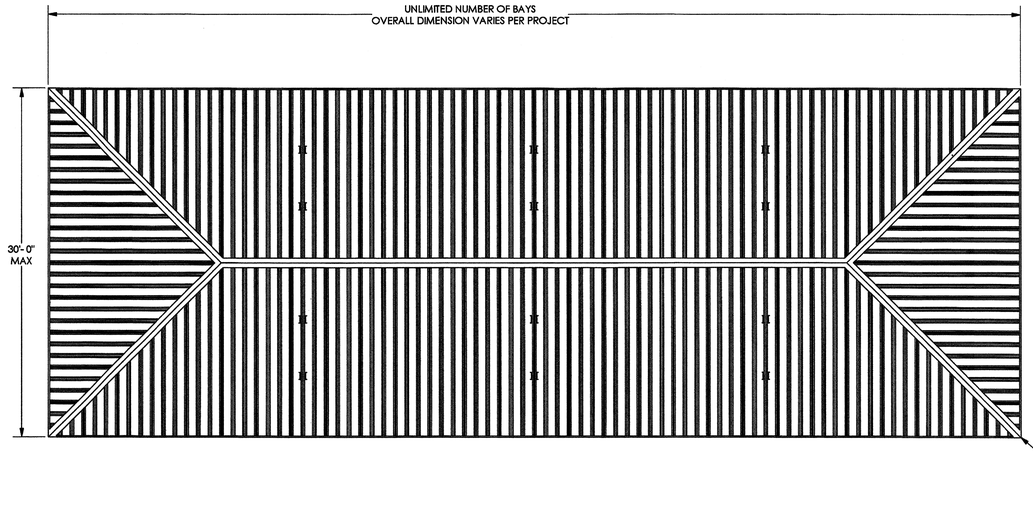
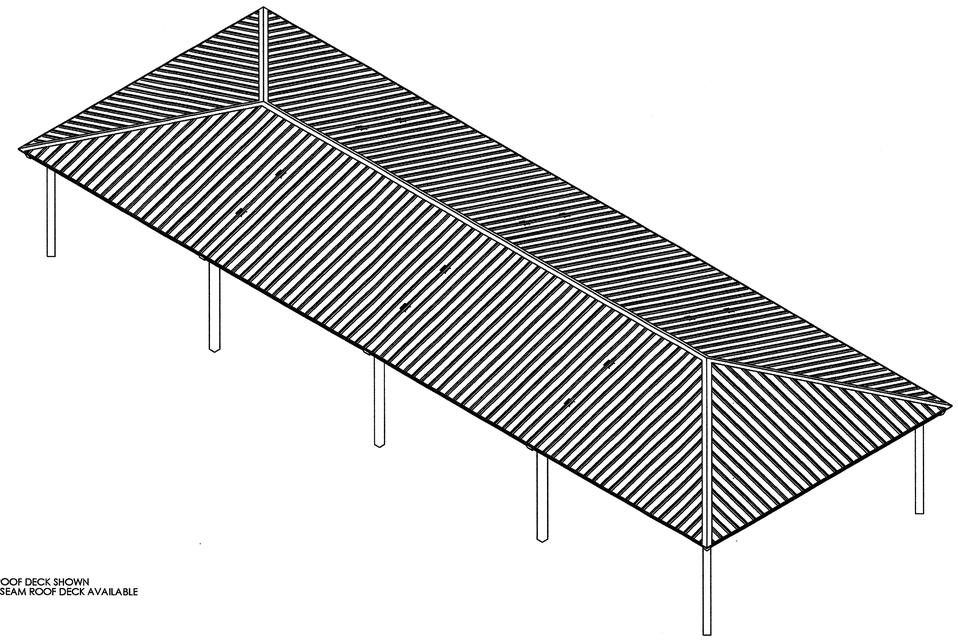
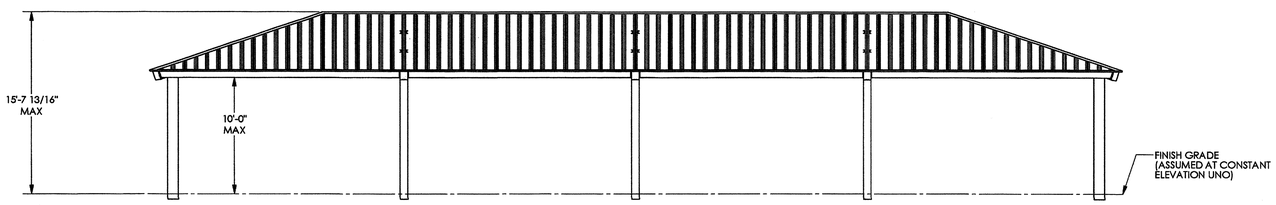


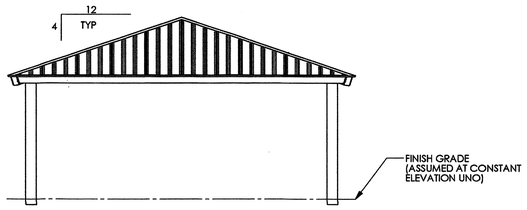
PLAN VIEW
SCALE: 3/16" = 1'-0"



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



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



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

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
03 118424
AC FLS SS
Date APR 18 2014

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Exp. 3/31/16
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EXEMPT PER AB10, ARCHITECT
118591
FLS
DATE 9-12-14

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

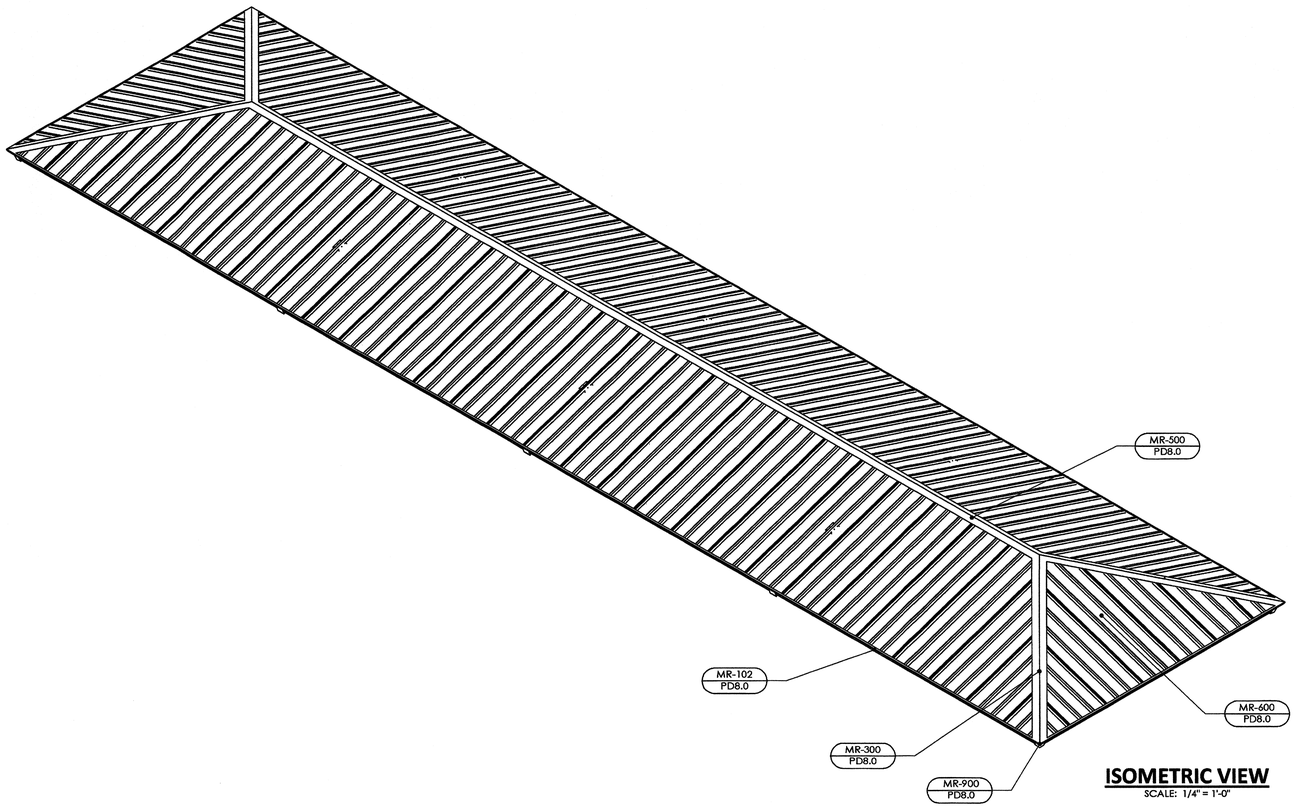
ARCHITECTURAL VIEWS
RAM 30

HIP ROOF (RAM)
PC DRAWINGS

DRAWN BY: JMD
CHECKED BY: CE
POLIGON #: 51458

PD7.1

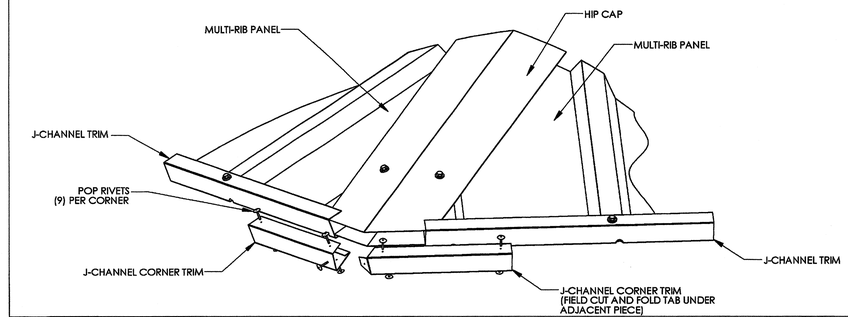
2014A



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

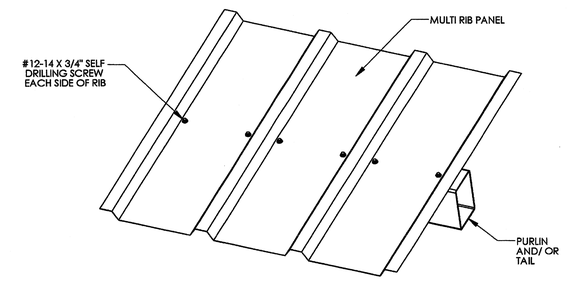
ROOF LAYOUT NOTES (MR):

1. IT SHALL BE THE RESPONSIBILITY OF THE ERECTOR TO ENSURE THAT THE DETAILS MEET THE BUILDING REQUIREMENTS AND TO ASSURE ADEQUATE WATER TIGHTNESS.
2. THE PANELS SHOULD BE INSTALLED PLUMB, STRAIGHT, AND ACCURATELY TO THE ADJACENT WORK.
3. FLASHING AND TRIM SHALL BE INSTALLED TRUE, AND IN PROPER ALIGNMENT, WITH ANY EXPOSED FASTENERS EQUALLY SPACED FOR THE BEST APPEARANCE.
4. 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.
5. WORKMANSHIP SHALL BE OF THE BEST INDUSTRY STANDARDS AND INSTALLATION SHALL BE PERFORMED BY EXPERIENCED METAL CRAFTSMEN.
6. 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.

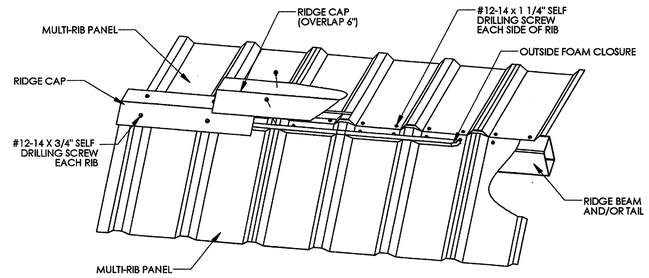


CORNER DETAIL — MR-900

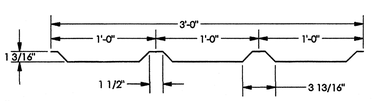
ROOF FASTENER TIGHTENING — MR-950



PURLIN DETAIL — MR-600



RIDGE DETAIL — MR-500

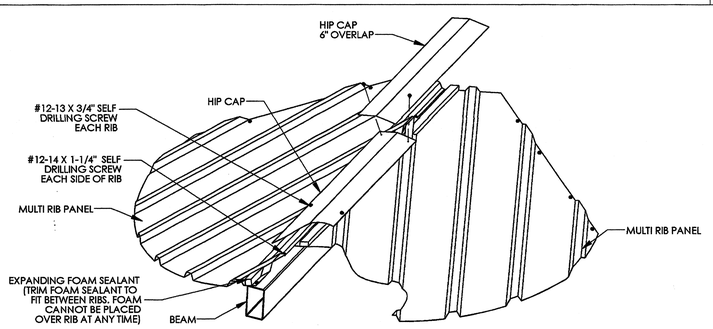


GENERAL:
GAGE = 24
fy = 50 KSI

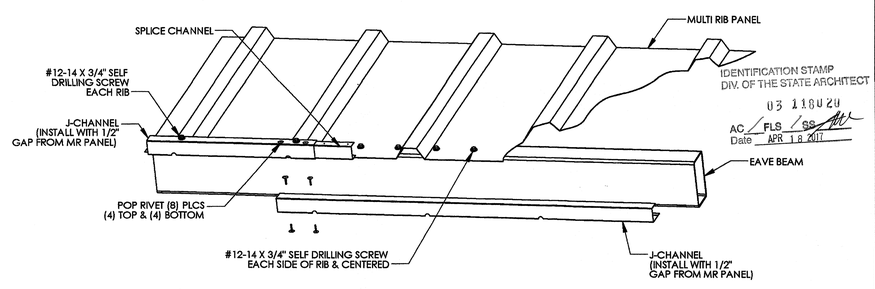
TOP IN COMPRESSION:
Ix=0.0486 IN^4
Se=0.0499IN^3
Ma=1.494 IN-KIPS

BOTTOM IN COMPRESSION:
Ix=0.0286 IN^4
Se=0.0462 IN^3
Ma=1.382 IN-KIPS

MR ROOF DECK SECTION PROPERTIES — MR-951



BEAM DETAIL — MR-300



EAVE DETAIL — MR-102

STATE APPROVALS

IDENTIFICATION STAMP
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02 118691
AC FLS SS
DATE 9-7-16

PRE-CHECK (PC) DOCUMENT

CODE: 2013 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

ROOF CONNECTION DETAILS
MR ROOF DECK

HIP ROOF (RAM)
PC DRAWINGS

DRAWN BY: JMD
CHECKED BY: CE
POLIGON #: 51458

PD8.0

REGISTERED PROFESSIONAL ENGINEER
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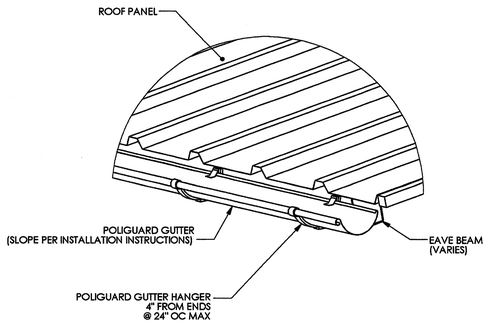
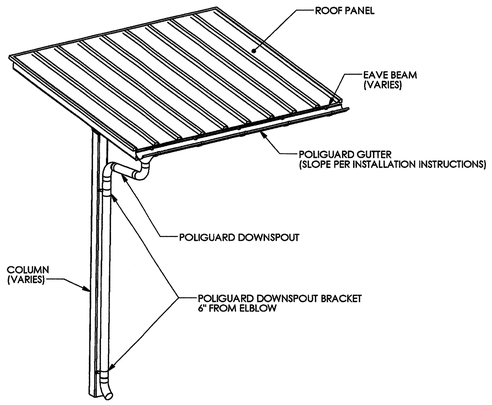


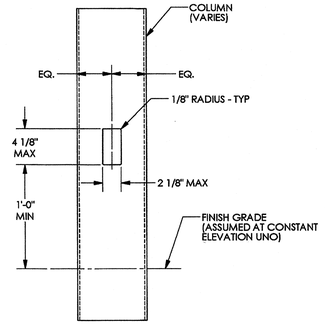
GUTTER DETAIL — GS-100

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.



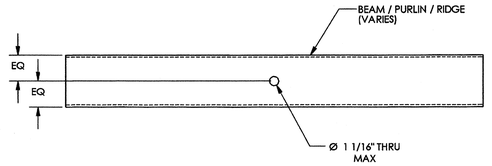
DOWNSPOUT DETAIL — GS-200



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.



ELECTRICAL CUTOUT IN BEAMS / PURLINS / RIDGES — EC-200

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AC / FLS / SS
Date APR 18 2017

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THOMAS A. BURCHAM
No. S4379
Exp. 3/31/16
STRUCTURAL
STATE OF CALIFORNIA

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IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
03 118591
AC FLS SS
DATE 4-7-16

PRE-CHECK (PC) DOCUMENT

CODE: 2013 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED.

MISC DESIGN OPTIONS

DRAWN BY: JMD
CHECKED BY: CE
POLIGON #: 51458

HIP ROOF (RAM)
PC DRAWINGS

PD9.0