USASHADE
& Fabric Structures, Inc.

SHADE STRUCTURE

DSA P.C. 04-118151

(REVISIONS TO 04-117219)

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118151 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 05.22.19

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
8505-A CHANCELLOR ROW
DALLAS, TX, 75247
800-966-5005

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

CUSTOMER:
Walnut Creek Sch District

PROJECT NAME:
Walnut Creek Intermediate

LOCATION:
2425 Walnut Blvd
Walnut Creek, CA 94597
MODEL NUMBER: SEE SELECTION

SITE SPECIFIC APPLICATION TITLE SHEET SHALL INCLUDE:

APPLICABLE CODES

- 2019 CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.
- 2016 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2015 INTERNATIONAL BUILDING CODE VOLUMES 1-2 AND 2016 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA ELECTRICAL CODE (CEC) , PART 3, TITLE 24 C.C.R. (2014 NATIONAL ELECTRICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (2015 UNIFORM MECHANICAL CODE AND 2016 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (2015 UNIFORM PLUMBING CODE AND 2016 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.
- 2016 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (2015 INTERNATIONAL FIRE CODE AND 2016 CALIFORNIA AMENDMENTS)
- 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.
- 2016 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
- TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
- 2013 ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS

PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 13	AUTOMATIC FIRE SPRINKLER SYSTEMS	2016 EDITION
NFPA 14	STANDPIPE AND HOSE SYSTEMS	2013 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 17a	WET CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 20	STATIONARY PUMPS FOR FIRE PROTECTION	2016 EDITION
NFPA 22	WATER TANKS FOR PRIVATE FIRE PROTECTION	2013 EDITION
NFPA 24	PRIVATE FIRE MAINS & THEIR APPURTENANCES	2016 EDITION
NFPA 25	STANDARD FOR INSPECTION, TESTING AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS	2013 EDITION
NFPA 72	NATIONAL FIRE ALARM & SIGNALING CODE	2016 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2016 EDITION
NFPA 92	STANDARD FOR SMOKE CONTROL SYSTEMS	2015 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2015 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2015 EDITION
ICC 300	ICC STANDARDS ON BLEACHERS, FOLDING AND TELESCOPING SEATING, AND GRAND STANDS	2012 EDITION
UL 300	FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF RESTAURANT COOKING AREAS	2005 EDITION
UL 464	AUDIBLE SIGNAL APPLIANCES	2003 EDITION
UL521	HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	1999 EDITION

REFERENCE CODE SECTION FOR NFPA STANDARDS-2016 CBC (SFM) CHAPTER 35. SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

SEE INDIVIDUAL STRUCTURAL DRAWINGS FOR SPECIFIC DESIGN NOTES AND LOADING.

ALL WORK SHALL CONFORM TO 2016 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (C.C.R.).

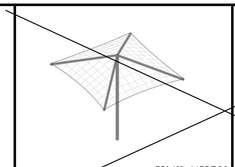
ALL WORK SHALL BE IN COMPLIANCE WITH CFC CHAPTER 33 - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.

CODE DATA

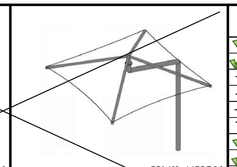
SITE SPECIFIC APPLICATION SITE PLAN SHALL INCLUDE:

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 2016 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 7-10).
7. ACTUAL SITE ELEVATION (FT.) TO DETERMINE SITE OCCURS AT OR BELOW THE UPPER ELEVATION LIMIT FOR THE GROUND SNOW LOAD SHOWN IN ASCE 7-10 (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 19-10, "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.
13. PROVIDE COPY OF CURRENT REGISTERED FLAME RESISTANT PRODUCT LETTER ON SPECIFIC SITE PLAN.

GENERAL NOTES


DSA 103 - 1 / PC T-2.0

MODEL: DSA1032020-16
STRUCTURE: 20' x 20' x 12' SINGLE POST PYRAMID UNIT
MAX. AREA - 400 SQ. FT.
MAX. OCCUPANCY = 26

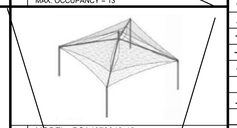

DSA 103 - 1 / PC T-2.0

MODEL: DSA1241414-16
STRUCTURE: 14' x 14' x 12' SINGLE POST PYRAMID CANTILEVER
MAX. AREA - 196 SQ. FT.
MAX. OCCUPANCY = 13

DSA 103 - 2 / PC T-2.0

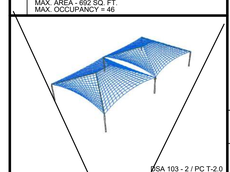
MODEL: DSA30125-16
STRUCTURE: TRIANGLE
MAX. AREA - 271 SQ. FT.
MAX. OCCUPANCY = 18

MODEL: DSA30140-16
STRUCTURE: TRIANGLE
MAX. AREA - 692 SQ. FT.
MAX. OCCUPANCY = 46



MODEL: DSA4073040-16
STRUCTURE: 30' x 40' x 14' MARINER PEAK
MAX. AREA - 1200 SQ. FT.
MAX. OCCUPANCY = 80

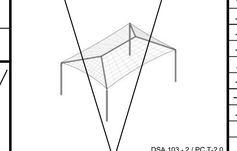
MODEL: DSA4073040-16
STRUCTURE: 30' x 40' x 18' MARINER PEAK
MAX. AREA - 1200 SQ. FT.
MAX. OCCUPANCY = 80


DSA 103 - 2 / PC T-2.0

MODEL: DSA401J-16
STRUCTURE: JOINED HIP
MAX. AREA - VARIES. SEE 24.1-1000 FOR OPTIONS
MAX. OCCUPANCY = VARIES

SEE SHEET 24.1-1000 FOR SELECTION OPTIONS

NUMBER OF UNITS JOINED IS GOVERNED BY TOTAL AREA, OCCUPANCY AND SITE CONDITIONS.

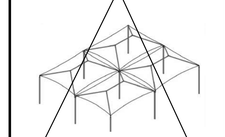

DSA 103 - 2 / PC T-2.0

MODEL: DSA4012000-16
STRUCTURE: 20' x 30' x 12' HIP UNIT
MAX. AREA - 600 SQ. FT.
MAX. OCCUPANCY = 40

MODEL: DSA4030030-16
STRUCTURE: 30' x 30' x 12' HIP UNIT
MAX. AREA - 900 SQ. FT.
MAX. OCCUPANCY = 60

MODEL: DSA4013040-16
STRUCTURE: 30' x 40' x 15' HIP UNIT
MAX. AREA - 1200 SQ. FT.
MAX. OCCUPANCY = 80

MODEL: DSA4014040-16
STRUCTURE: 40' x 40' x 15' HIP UNIT
MAX. AREA - 1600 SQ. FT.
MAX. OCCUPANCY = 106


DSA 103 - 2 / PC T-2.0

MODEL: DSA401Q-16
STRUCTURE: QUAD JOINED HIP
MAX. AREA - VARIES. SEE 25.1-1000 FOR OPTIONS
MAX. OCCUPANCY = VARIES

SEE SHEET 25.1-1000 FOR SELECTION OPTIONS

NUMBER OF UNITS JOINED IS GOVERNED BY TOTAL AREA, OCCUPANCY AND SITE CONDITIONS.

DSA 103 - 2 / PC T-2.0

MODEL: DSA603M01-16
STRUCTURE: 40' Ø HEXAGON
MAX. AREA - 1,040 SQ. FT.
MAX. OCCUPANCY = 69

MODEL: DSA603M002-16
STRUCTURE: 60' Ø HEXAGON
MAX. AREA - 2,338 SQ. FT.
MAX. OCCUPANCY = 156

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 FORMS			
	~~16.1-1000~~	~~PRODUCT INFORMATION~~	~~SINGLE POST PYRAMID~~	~~20 X 20~~	~~DSA1032020-16~~
	~~16.2-2000~~	~~REACTIONS~~	~~SINGLE POST PYRAMID~~	~~20 X 20~~	~~DSA1032020-16~~
	~~17.1-1000~~	~~PRODUCT INFORMATION~~	~~SINGLE POST PYRAMID CANTILEVER~~	~~14 X 14~~	~~DSA1241414-16~~
	~~17.2-2000~~	~~REACTIONS~~	~~SINGLE POST PYRAMID CANTILEVER~~	~~14 X 14~~	~~DSA1241414-16~~
✓	18.1-1000	PRODUCT INFORMATION	TRIANGLE	25 X 25	DSA30125-16
✓	18.2-2000	REACTIONS	TRIANGLE	25 X 25	DSA30125-16
	~~19.1-1000~~	~~PRODUCT INFORMATION~~	~~TRIANGLE~~	~~40 X 40~~	~~DSA30140-16~~
	~~19.2-2000~~	~~REACTIONS~~	~~TRIANGLE~~	~~40 X 40~~	~~DSA30140-16~~
	~~20.1-1000~~	~~PRODUCT INFORMATION~~	~~HIP~~	~~20 X 30~~	~~DSA401203012-16~~
	~~20.2-2000~~	~~REACTIONS~~	~~HIP~~	~~20 X 30~~	~~DSA401203012-16~~
	~~21.1-1000~~	~~PRODUCT INFORMATION~~	~~HIP~~	~~30 X 30~~	~~DSA401303012-16~~
	~~21.2-2000~~	~~REACTIONS~~	~~HIP~~	~~30 X 30~~	~~DSA401303012-16~~
	~~22.1-1000~~	~~PRODUCT INFORMATION~~	~~HIP~~	~~30 X 40~~	~~DSA401304012-16~~
	~~22.2-2000~~	~~REACTIONS~~	~~HIP~~	~~30 X 40~~	~~DSA401304012-16~~
	~~23.1-1000~~	~~PRODUCT INFORMATION~~	~~HIP~~	~~40 X 40~~	~~DSA4014040-16~~
	~~23.2-2000~~	~~REACTIONS~~	~~HIP~~	~~40 X 40~~	~~DSA4014040-16~~
	~~24.1-1000~~	~~PRODUCT INFORMATION~~	~~JOINED HIPS~~	~~VARIES~~	~~DSA401J-16~~
	~~24.2-1001~~	~~DETAILS~~	~~JOINED HIPS~~	~~VARIES~~	~~DSA401J-16~~
	~~24.3-2000~~	~~REACTIONS~~	~~JOINED HIPS~~	~~VARIES~~	~~DSA401J-16~~
	~~25.1-1000~~	~~PRODUCT INFORMATION~~	~~QUAD JOINED HIPS~~	~~VARIES~~	~~DSA401Q-16~~
	~~25.2-1001~~	~~DETAILS~~	~~QUAD JOINED HIPS~~	~~VARIES~~	~~DSA401Q-16~~
	~~25.3-2000~~	~~REACTIONS~~	~~QUAD JOINED HIPS~~	~~VARIES~~	~~DSA401Q-16~~
	~~26.1-1000~~	~~PRODUCT INFORMATION~~	~~HEXAGON~~	~~40 Ø~~	~~DSA60340-16~~
	~~26.2-2000~~	~~REACTIONS~~	~~HEXAGON~~	~~40 Ø~~	~~DSA60340-16~~
	~~27.1-1000~~	~~PRODUCT INFORMATION~~	~~HEXAGON~~	~~60 Ø~~	~~DSA60360-16~~
	~~27.2-2000~~	~~REACTIONS~~	~~HEXAGON~~	~~60 Ø~~	~~DSA60360-16~~
	~~28.1-1000~~	~~PRODUCT INFORMATION~~	~~MARINER PEAK~~	~~30 X 40~~	~~DSA4073040-16~~
	~~28.2-2000~~	~~REACTIONS~~	~~MARINER PEAK~~	~~30 X 40~~	~~DSA4073040-16~~

TOTAL SHEET COUNT: 30 SHEETS

ARCHITECT

HIGGINSON ARCHITECTS INCORPORATED
707 Brookside Avenue
Redlands, CA 92373
(909) 375-3030
www.haarchinc.com

LICENSED ARCHITECT — DAVID HIGGINSON — NO.C19166 — REN. 10-31-19 — STATE OF CALIFORNIA

ARCHITECT

Mark Lowe, S.E.
Structural Engineer
19471 Misty Ridge Lane
Trabuco Canyon, California 92367
ph. 949-400-1265
malowe@me.com

REGISTERED PROFESSIONAL ENGINEER — MARK ALBERT LOWE — No. 3693 — STRUCTURAL — STATE OF CALIFORNIA
5/21/19

ENGINEER

DSA PRE-CHECK
SHADE
STRUCTURES

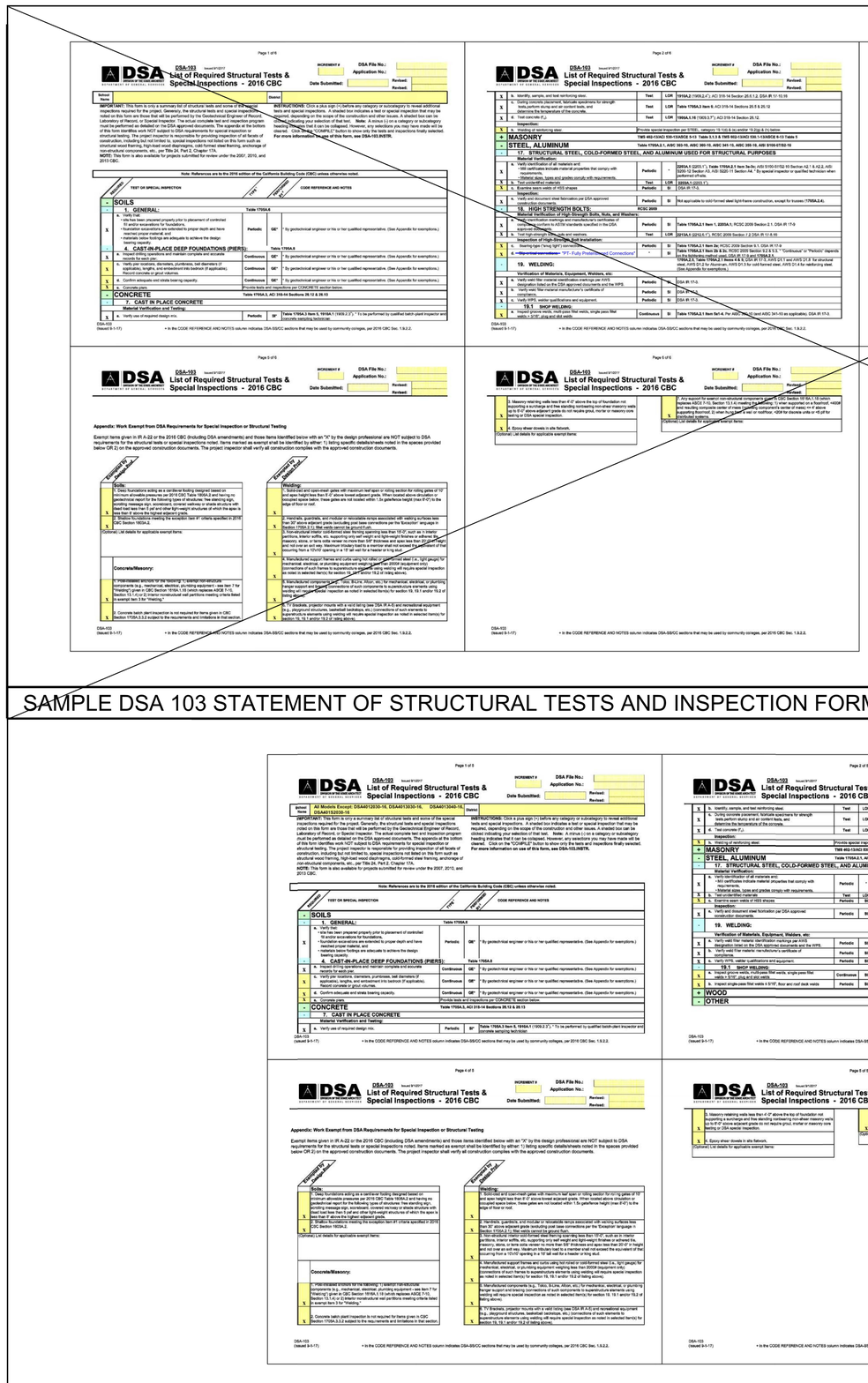
P.C. 04-118151
(REVISIONS TO 04-117219)

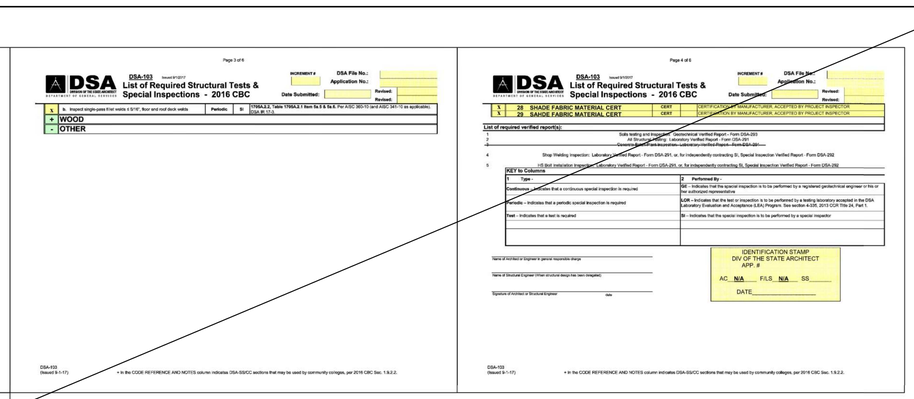
PRE-CHECK (PC) DOCUMENT
Code : 2016 CBC
A separate project application for construction is required.

Eng. By :	DWH	05/22/19
Design By :	DWH	05/22/19
Approved By :	DWH	05/22/19

DRAWING DESCRIPTION:
P.C. TITLE SHEET

SHEET
P.C. T-1.0



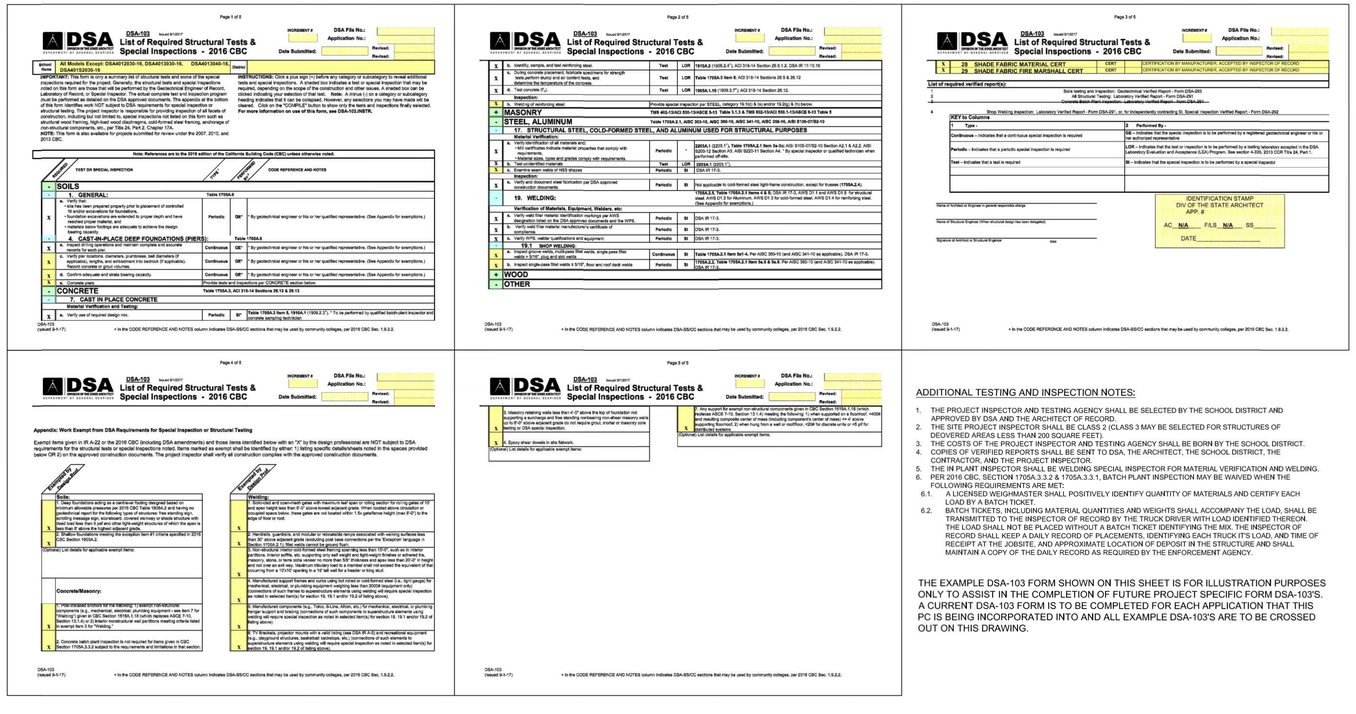


ADDITIONAL TESTING AND INSPECTION NOTES:

1. THE PROJECT INSPECTOR AND TESTING AGENCY SHALL BE SELECTED BY THE SCHOOL DISTRICT AND APPROVED BY DSA AND THE ARCHITECT OF RECORD.
2. THE SITE PROJECT INSPECTOR SHALL BE CLASS 2 (CLASS 3 MAY BE SELECTED FOR STRUCTURES OF DEOVERED AREAS LESS THAN 200 SQUARE FEET).
3. THE COSTS OF THE PROJECT INSPECTOR AND TESTING AGENCY SHALL BE BORN BY THE SCHOOL DISTRICT.
4. COPIES OF VERIFIED REPORTS SHALL BE SENT TO DSA, THE ARCHITECT, THE SCHOOL DISTRICT, THE CONTRACTOR, AND THE PROJECT INSPECTOR.
5. THE IN PLANT INSPECTOR SHALL BE WELDING SPECIAL INSPECTOR FOR MATERIAL VERIFICATION AND WELDING.
6. PER 2016 CBC, SECTION 1705A.3.3.2 & 1705A.3.3.1, BATCH PLANT INSPECTION MAY BE WAIVED WHEN THE FOLLOWING REQUIREMENTS ARE MET:
   6.1. A LICENSED WEIGHMASTER SHALL POSITIVELY IDENTIFY QUANTITY OF MATERIALS AND CERTIFY EACH LOAD BY A BATCH TICKET.
   6.2. BATCH TICKETS, INCLUDING MATERIAL QUANTITIES AND WEIGHTS SHALL ACCOMPANY THE LOAD, SHALL BE TRANSMITTED TO THE INSPECTOR OF RECORD BY THE TRUCK DRIVER WITH LOAD IDENTIFIED THEREON. THE LOAD SHALL NOT BE PLACED WITHOUT A BATCH TICKET IDENTIFYING THE MIX. THE INSPECTOR OF RECORD SHALL KEEP A DAILY RECORD OF PLACEMENTS, IDENTIFYING EACH TRUCK IT'S LOAD, AND TIME OF RECEIPT AT THE JOBSITE, AND APPROXIMATE LOCATION OF DEPOSIT IN THE STRUCTURE AND SHALL MAINTAIN A COPY OF THE DAILY RECORD AS REQUIRED BY THE ENFORCEMENT AGENCY.

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

SAMPLE DSA 103 STATEMENT OF STRUCTURAL TESTS AND INSPECTION FORMS FOR CANTILEVER AND SINGLE POST UNITS | --- | 1



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SAMPLE DSA 103 STATEMENT OF STRUCTURAL TESTS AND INSPECTION FORMS FOR ALL UNITS EXCEPT CANITLEVER AND SINGLE POST | --- | 2

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP. 04-118151 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 05.22.19

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

USA SHADE & Fabric Structures

CORPORATE HEADQUARTERS
8505-A CHANCELLOR ROW
DALLAS, TX, 75247
800-966-5005

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

CUSTOMER:
Walnut Creek Sch District

PROJECT NAME:
Walnut Creek Intermediate

LOCATION:
2425 Walnut Blvd
Walnut Creek, CA 94597
MODEL NUMBER: SEE SELECTION

LICENSED ARCHITECT DAVID HIGGINSON NO. C19168 REN. 10-31-19 STATE OF CALIFORNIA

HIGGINSON ARCHITECTS INCORPORATED
707 Brookside Avenue
Redlands, CA 92373
(909)375-3030
www.haarchinc.com

ARCHITECT

REGISTERED PROFESSIONAL ENGINEER MARK ALBERT LOWE No. 3693 STRUCTURAL STATE OF CALIFORNIA
5/21/19

Mark Lowe, S.E.
Structural Engineer

19471 Misty Ridge Lane
Trabuco Canyon, California 923679
949-400-1265
malowe@me.com

ENGINEER

DSA PRE-CHECK
SHADE
STRUCTURES

P.C. 04-118151
(REVISIONS TO 04-117219)

PRE-CHECK (PC) DOCUMENT
Code : 2016 CBC
A separate project application for construction is required.

Eng. By :	DWH	05/22/19
Design By :	DWH	05/22/19
Approved By :	DWH	05/22/19

DRAWING DESCRIPTION:
DSA 103 FORMS

SHEET
P.C. T-2.0

GENERAL NOTES

DESIGN LOADS

BUILDING CODE	CBC 2016 (BASED ON IBC 2015)
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 2016 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 2016, TABLE 1806A.2, SOIL CLASS 5 (ALLOWABLE FOUNDATION PRESSURE 1500 PSF)

4.- DESIGN PER FOLLOWING CODES: CBC 2016, ASCE 7-10, AISC 360-10, AISC 341-10, ACI 318-14, ASCE 55-10 & ASCE 19-10

STRUCTURAL STEEL

1.- FABRICATION OF THE STEEL STRUCTURES SHALL BE PERFORMED BY USA SHADE OR AN AUTHORIZED LICENSEE. MATERIAL TESTING (OR MILL CERTIFICATES) AND INSPECTION OF WELDING SHALL BE CONDUCTED PER CBC 2016 SECTIONS 1704A, 1705A, 1705A.2, AND TABLE 1705A.2.1.

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

3.- ALL WORK SHALL CONFORM TO CBC 2016 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 A500-10: GRADE "B", IN ITS' ENTIRETY.
TYPICAL MECHANICAL PROPERTIES ARE:
ROUND TUBE 42,000 PSI YIELD STRESS / 58,000 PSI TENSILE STRESS

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 STAINLESS STEEL BOLTS SHALL COMPLY WITH ASTM F-593, FYS = 60 KSI, FS = 95KSI ,ALLOY GROUP 1 OR 2 ALL NUTS SHALL COMPLY WITH ASTM F-594 ALLOY GROUP 1 OR 2. REFERRING TO RCSC, ASTM F-593 IS NOT CONSIDERED AS HIGH STRENGTH BOLTS.

12.- ALL STRUCTURAL STEEL (ITEMS FROM NOTE 5) SHALL BE PAINTED WITH ONE SHOP COAT (2.5 TO 3.5 MILS THICK 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 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, INCLUDING CAST-IN-PLACE ANCHOR BOLTS/RODS, 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 TESTED PER CBC 2016 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). 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 DSA AT SITE SPECIFIC INSTALLATION.

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".

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. SHADE STRUCTURE 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 TENSION IS 1738 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.

2016 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	
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 7-10, SECTION 27.4.3

-ULTIMATE 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	0.87
-VELOCITY PRESSURE	qz	25.04 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	1699 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.

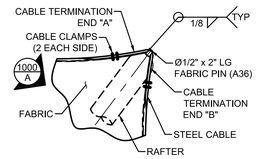
MINIMUM CLASS 2 PROJECT INSPECTOR REQUIRED.

CODE ANALYSIS

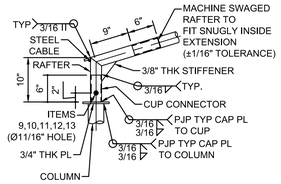
BUILDING	OCCUPANCY	CONST. TYPE	AREA (SQ. FT.)	OCCUPANT LOAD FACTOR	OCCUPANT LOAD
SHADE STRUCTURE					

MAXIMUM OCCUPANT LOAD (PER CBC 2016 TABLE 1604A.5)

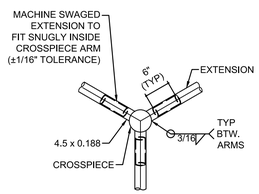
-K-12:	250 PERSONS
-PUBLIC ASSEMBLY:	300 PERSONS
-EDUCATIONAL OCCUPANCIES ABOVE 12TH GRADE:	500 PERSONS



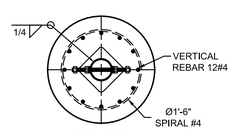
DETAIL 1
REFER TO TOP VIEW



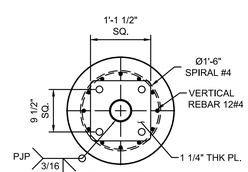
VIEW-A
REFER TO DETAIL-1



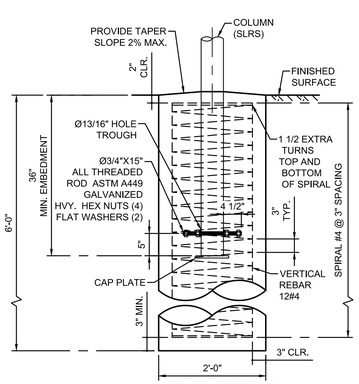
DETAIL-2
REFER TO TOP VIEW



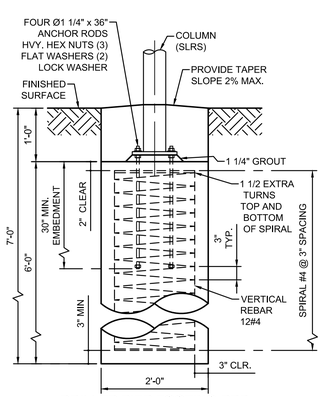
TOP VIEW



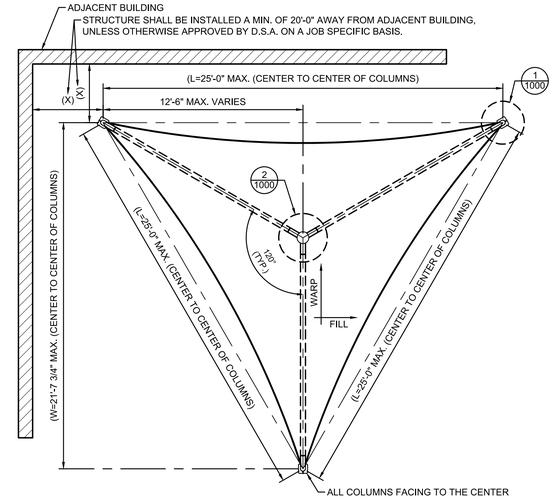
TOP VIEW



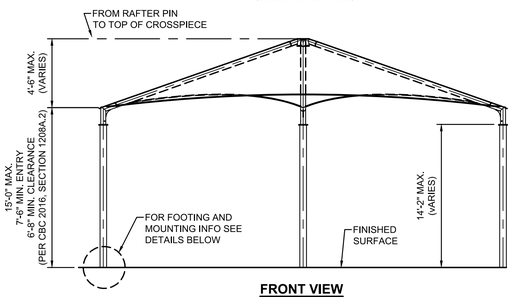
DRILLED PIER FOOTING-PIH
(EMBEDDED, PIH)
(USE FOR NON-CONSTRAINED CASES)



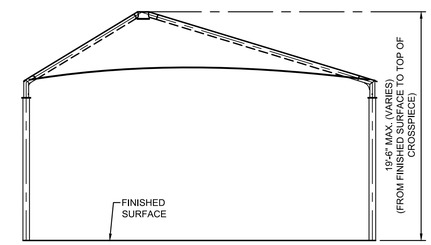
DRILLED PIER FOOTING-RBP
(RECESSED BASE PLATE, RBP)
(USE FOR NON-CONSTRAINED CASES)
(OPTIONAL)



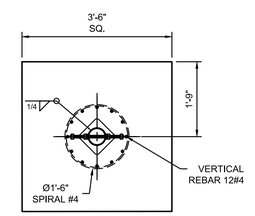
TOP VIEW
(SCHEMATIC VIEW ONLY)



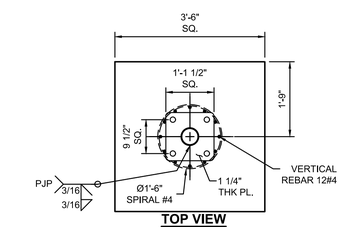
FRONT VIEW
(SCHEMATIC VIEW ONLY)



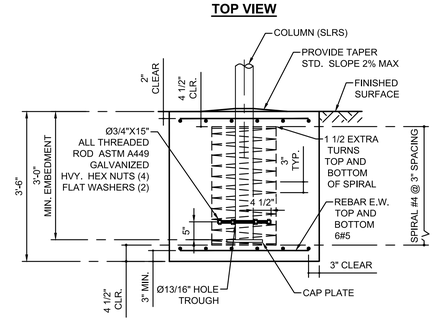
SIDE VIEW
(SCHEMATIC VIEW ONLY)



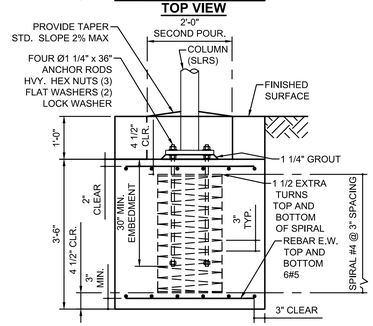
TOP VIEW



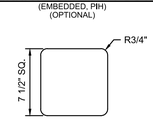
TOP VIEW



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. 04-118151 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 05.22.19

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

USA SHADE & Fabric Structures
CORPORATE HEADQUARTERS
8505-A CHANCELLOR ROW
DALLAS, TX, 75247
800-966-5005

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

CUSTOMER:
Walnut Creek Sch District

PROJECT NAME:
Walnut Creek Intermediate

LOCATION:
2425 Walnut Blvd.
Walnut Creek, CA 94597

MODEL NUMBER:
DSA30125-16

STRUCTURE TYPE:
TRIANGLE
DSA

SIZE: **MAXIMUM**
25' x 25' x 15'e MAX.

SCALE : NONE

DRAWING SIZE:
D

PRE-CHECK (PC) DOCUMENT
Code : 2016 CBC
A separate project application for construction is required.

Eng. By :	JO	02/26/18
Design By :	MP	02/26/18
Approved By :	JO	02/26/18

DRAWING DESCRIPTION:
PRODUCT INFORMATION

DWG. **DSA30125-16**

SHEET **18.1-1000**

REV. **NC**

LICENSED ARCHITECT DAVID HIGGINSON NO.C19163 REN. 10-31-19 STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER MARK LOVE No. 3693 STRUCTURAL STATE OF CALIFORNIA
5/21/19

ENVELOPE JOINT REACTIONS

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

ASD REACTIONS

Node No.		Support Forces [kip] P_x	P_y	P_z	Support Moments [kipft] M_x	M_y	M_z		Support Forces [kip] SHEAR RESULTANT	Support Moments [kipft] MOMENT RESULTANT	Support Forces [kip] UPLIFT	Support Forces [kip] AXIAL
						MAXIMUM REACTIONS			0.674	7.030	0.331	-1.090
Node No.		Support Forces [kip] P_x	P_y	P_z	Support Moments [kipft] M_x	M_y	M_z					
98	Max	0.451	0.535	0.331	7.030	4.087	0.740					
	Min	0.000	-0.674	-1.006	-4.684	-0.001	-0.537					
	Max PX'	**0.451**	-0.106	-0.115	0.869	4.070	0.103	CO 24	0.463	4.162		-0.115
	Min PX'	**0.000**	-0.501	0.185	3.772	-0.001	0.000	CO 7	0.501	3.772	0.185	
	Max PY'	0.000	**0.535**	-0.669	-4.684	0.000	0.000	CO 23	0.535	4.684		-0.669
	Min PY'	0.000	**-0.674**	-0.693	7.030	0.000	0.000	CO 4	0.674	7.030		-0.693
	Max PZ'	0.000	-0.162	**0.331**	1.233	0.000	0.000	CO 41	0.162	1.233	0.331	
	Min PZ'	0.000	0.364	**-1.006**	-3.572	0.001	0.000	CO 15	0.364	3.572		-1.006
	Max MX'	0.000	-0.674	-0.693	**7.030**	0.000	0.000	CO 4	0.674	7.030		-0.693
	Min MX'	0.000	0.535	-0.669	**-4.684**	0.000	0.000	CO 23	0.535	4.684		-0.669
	Max MY'	0.451	-0.059	-0.460	0.535	**4.087**	0.103	CO 22	0.455	4.122		-0.460
	Min MY'	0.000	-0.481	0.041	3.626	**-0.001**	0.000	CO 13	0.481	3.626	0.041	
	Max MZ'	0.181	-0.233	-0.558	2.517	1.713	**0.740**	CO 2	0.295	3.045		-0.558
	Min MZ'	0.295	-0.308	0.155	2.388	3.028	**-0.537**	CO 5	0.426	3.856	0.155	
100	Max	0.652	0.541	0.324	2.904	5.666	0.592					
	Min	-0.120	-0.271	-1.090	-4.786	-1.116	-0.722					
	Max PX'	**0.652**	0.115	0.066	-0.921	5.666	-0.052	CO 24	0.662	5.740	0.066	
	Min PX'	**-0.120**	-0.212	-1.090	2.060	-1.116	-0.557	CO 16	0.244	2.343		-1.090
	Max PY'	0.154	**0.541**	-0.011	-4.786	1.240	0.090	CO 25	0.562	4.944		-0.011
	Min PY'	-0.088	**-0.271**	-0.799	2.904	-0.997	-0.693	CO 39	0.285	3.070		-0.799
	Max PZ'	0.279	0.478	**0.324**	-4.398	1.812	-0.454	CO 41	0.553	4.757	0.324	
	Min PZ'	-0.120	-0.212	**-1.090**	2.060	-1.116	-0.557	CO 16	0.244	2.343		-1.090
	Max MX'	-0.088	-0.271	-0.799	**2.904**	-0.997	-0.693	CO 39	0.285	3.070		-0.799
	Min MX'	0.154	0.541	-0.011	**-4.786**	1.240	0.090	CO 25	0.562	4.944		-0.011
	Max MY'	0.652	0.115	0.066	-0.921	**5.666**	-0.052	CO 24	0.662	5.740	0.066	
	Min MY'	-0.120	-0.212	-1.090	2.060	**-1.116**	-0.557	CO 16	0.244	2.343		-1.090
	Max MZ'	0.217	0.308	-0.597	-3.012	2.248	**0.592**	CO 3	0.377	3.758		-0.597
	Min MZ'	-0.059	-0.229	-0.804	2.394	-0.789	**-0.722**	CO 4	0.236	2.521		-0.804
102	Max	0.507	0.541	0.324	2.904	4.604	0.722					
	Min	-0.354	-0.271	-1.090	-4.786	-3.079	-0.591					
	Max PX'	**0.507**	-0.033	-0.641	0.222	4.472	-0.051	CO 22	0.508	4.478		-0.641
	Min PX'	**-0.354**	-0.064	0.210	0.898	-3.079	-0.394	CO 7	0.360	3.207	0.210	
	Max PY'	-0.154	**0.541**	-0.011	-4.786	-1.240	-0.090	CO 25	0.562	4.944		-0.011
	Min PY'	0.088	**-0.271**	-0.799	2.904	0.997	0.693	CO 39	0.285	3.070		-0.799
	Max PZ'	-0.279	0.478	**0.324**	-4.398	-1.812	0.454	CO 41	0.553	4.757	0.324	
	Min PZ'	0.120	-0.212	**-1.090**	2.060	1.116	0.557	CO 16	0.244	2.343		-1.090
	Max MX'	0.088	-0.271	-0.799	**2.904**	0.997	0.693	CO 39	0.285	3.070		-0.799
	Min MX'	-0.154	0.541	-0.011	**-4.786**	-1.240	-0.090	CO 25	0.562	4.944		-0.011
	Max MY'	0.435	-0.165	-0.654	1.968	**4.604**	-0.138	CO 37	0.465	5.007		-0.654
	Min MY'	-0.354	-0.064	0.210	0.898	**-3.079**	-0.394	CO 7	0.360	3.207	0.210	
	Max MZ'	0.059	-0.229	-0.804	2.394	0.789	**0.722**	CO 4	0.236	2.521		-0.804
	Min MZ'	-0.217	0.308	-0.597	-3.014	-2.246	**-0.591**	CO 3	0.377	3.759		-0.597

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 (3 SEC GUST)	115 MPH
VELOCITY PRESSURE qz	25.04 PSF
COMPONENT AND CLADDING qz (CABLE AND CABLE HARDWARE ONLY)	25.04 PSF
SEISMIC LOAD	
SEISMIC RESPONSE COEFFICIENTS Cs	1.6
DESIGN BASE SHEAR	1699 LB

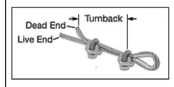
Forged Single-Saddle Wire Rope Clamps—Not for Lifting

A forged fabrication allows these to be used in critical applications such as tie downs and support lines. They must be oriented with the saddle on the long (live) end and U-bolt on the short (dead) end. Also known as wire rope clips.

Galvanized steel clamps have a thick coating for corrosion resistance.

316 stainless steel clamps are the most corrosion resistant fittings we offer. They provide excellent resistance to salt water and chemicals.

Warning: Test all assemblies for required strength before use. Do not use with coated rope unless the coating is removed.



For Rope Dia.	No. of Clamps Required	Rope Turnback	Required Torque, ft.-lbs.	Clamp Ht.	Clamp Wd.	Clamp Thick.	Capacity	Specifications Met
Galvanized Steel								
1/8"	2	3 1/4"	4.5	1 1/8"	1"	13/16"	80% of the Rope's Capacity	—
3/16"	2	3 3/4"	7.5	1 1/2"	1 3/16"	1"	80% of the Rope's Capacity	—
1/4"	2	4 3/4"	15	1 3/4"	1 7/16"	1 1/4"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
5/16"	2	5 1/4"	30	2 1/8"	1 11/16"	1 5/16"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
3/8"	2	6 1/2"	45	2 7/16"	2"	1 11/16"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
7/16"	2	7"	65	3 1/16"	2 5/16"	1 15/16"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
1/2"	3	11 1/2"	65	3 1/16"	2 5/16"	1 15/16"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
9/16"	3	12"	95	3 5/8"	2 1/2"	2 1/16"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
5/8"	3	12"	95	3 5/8"	2 1/2"	2 1/16"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
3/4"	4	18"	130	4 3/16"	2 7/8"	2 1/4"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
7/8"	4	19"	225	4 3/4"	3 3/16"	2 1/2"	80% of the Rope's Capacity	Fed. Spec. FF-C-450
1"	5	26"	225	5 5/16"	3 1/2"	2 13/16"	90% of the Rope's Capacity	Fed. Spec. FF-C-450
1 1/8"	6	34"	225	5 13/16"	3 9/16"	2 13/16"	90% of the Rope's Capacity	Fed. Spec. FF-C-450
1 1/4"	7	44"	360	6 5/16"	4 3/16"	3 3/16"	90% of the Rope's Capacity	Fed. Spec. FF-C-450
1 3/8"	7	44"	360	6 3/4"	4 1/4"	3 3/16"	90% of the Rope's Capacity	Fed. Spec. FF-C-450
1 1/2"	8	54"	360	7 7/16"	4 1/2"	3 7/16"	90% of the Rope's Capacity	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 Dia. (In)	Approx. Wt 1000 Ft/lbs	Galvanized Min. Breaking Strengths (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. 04-118151 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 05.22.19

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

USA SHADE & Fabric Structures
CORPORATE HEADQUARTERS
8505-A CHANCELLOR ROW
DALLAS, TX, 75247
800-966-5005

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

CUSTOMER:
Walnut Creek Sch District

PROJECT NAME:
Walnut Creek Intermediate

LOCATION:
2425 Walnut Blvd.
Walnut Creek, CA 94597

MODEL NUMBER:
DSA30125-16

STRUCTURE TYPE:
TRIANGLE
DSA

SIZE: MAXIMUM
25' x 25' x 15'e MAX.

SCALE : NONE

DRAWING SIZE: **D**

PRE-CHECK (PC) DOCUMENT
Code : 2016 CBC
A separate project application for construction is required.

Eng. By :	JO	02/26/18
Design By :	MP	02/26/18
Approved By :	JO	02/26/18

DRAWING DESCRIPTION:
REACTIONS

DWG. DSA30125-16

SHEET 18.2-2000

REV. NC

Sheet 128 of 128

LICENSED ARCHITECT DAVID HIGGINSON NO.C19162 REN. 10-31-19 STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER MARK MEYER No. 3693 STRUCTURAL STATE OF CALIFORNIA

5/21/19