

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0011556
Insp Area: 2

Site Address: 7745 RIVER LANDING DR SAC
Parcel No: 031-1360-029

Sub-Type: RES
Housing (Y/N): N

CONTRACTOR
SIERRA PACIFIC HOME
3790 OMEC CIRCLE
RANCHO CORDOVA, CA. 95742

OWNER
TOY JOSEPH/JANNIE
7745 RIVER LANDING DR
SACRAMENTO CA 95831

ARCHITECT

Nature of Work: ALUMINUM TRELIS & SOLAR POOL HEATER

CONSTRUCTION LENDING AGENCY : I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

Lender's Name _____ Lender's Address _____

LICENSED CONTRACTORS DECLARATION: I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

License Class 5346, 2413 License Number 457302 Date 9-28-00 Contractor Signature [Signature]

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500.00):

I, as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law).

I am exempt under Sec. _____ B & PC for this reason: _____

Date _____ Owner Signature _____

IN ISSUING THIS BUILDING PERMIT, the applicant represents, and the city relies on the representation of the applicant, that the applicant verified all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 9-28-00 Applicant/Agent Signature [Signature]

WORKER'S COMPENSATION DECLARATION: I hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier EXPLORER INSURANCE Policy Number 170204300 Exp Date 01/01/2001

(This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date 9-28-00 Applicant Signature [Signature]

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.

THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.

(MARK) PRE-SITE (TRELLIS)



HOME & COMFORT

"The Guys in the Big Red Trucks"

3790 OMEC CIRCLE • RANCHO CORDOVA, CALIFORNIA 95742 • (916) 638-0543
Calif. State Contractor's License No. 453302

INSTALLATION DIRECTIVE

CUSTOMER JOSEPH + JEANNIE TOY MAP COORD _____
 ADDRESS 2745 RIVER LANDING DR DIRECTIONS TO JOB SITE: _____
 CITY SACRAMENTO
 PHONE: work (his) _____ work (hers) _____ home 916-8469
 DATE OF ORDER 8-21-00 BUILDER _____ DESIGNER BASSLER

EQUIPMENT LIST SPS INSTALL SELF INSTALL
6 12' Solar Panels AUTO Type Of Control
 _____ 10' Solar Panels 1 System Assembly Package
 _____ 8' Solar Panels Sweep Delay
 _____ Fiberglass Substrate _____ Existing Control Type

SOLUTION
FAFCO
 SOLAR HEATING SYSTEMS

TYPE OF ROOF TRELLIS PITCH _____ COMPASS DIRECTION S %
 POOL AREA SQ. FT. 480 SHADE ON POOL? _____ ON ROOF? _____
 PUMP H.P. 3/4 TYPE CLEANER POLARIS 1 Story 2 Story _____
 FILTER TYPE & SQ. FT. 350 CBRT HEATER SIZE _____

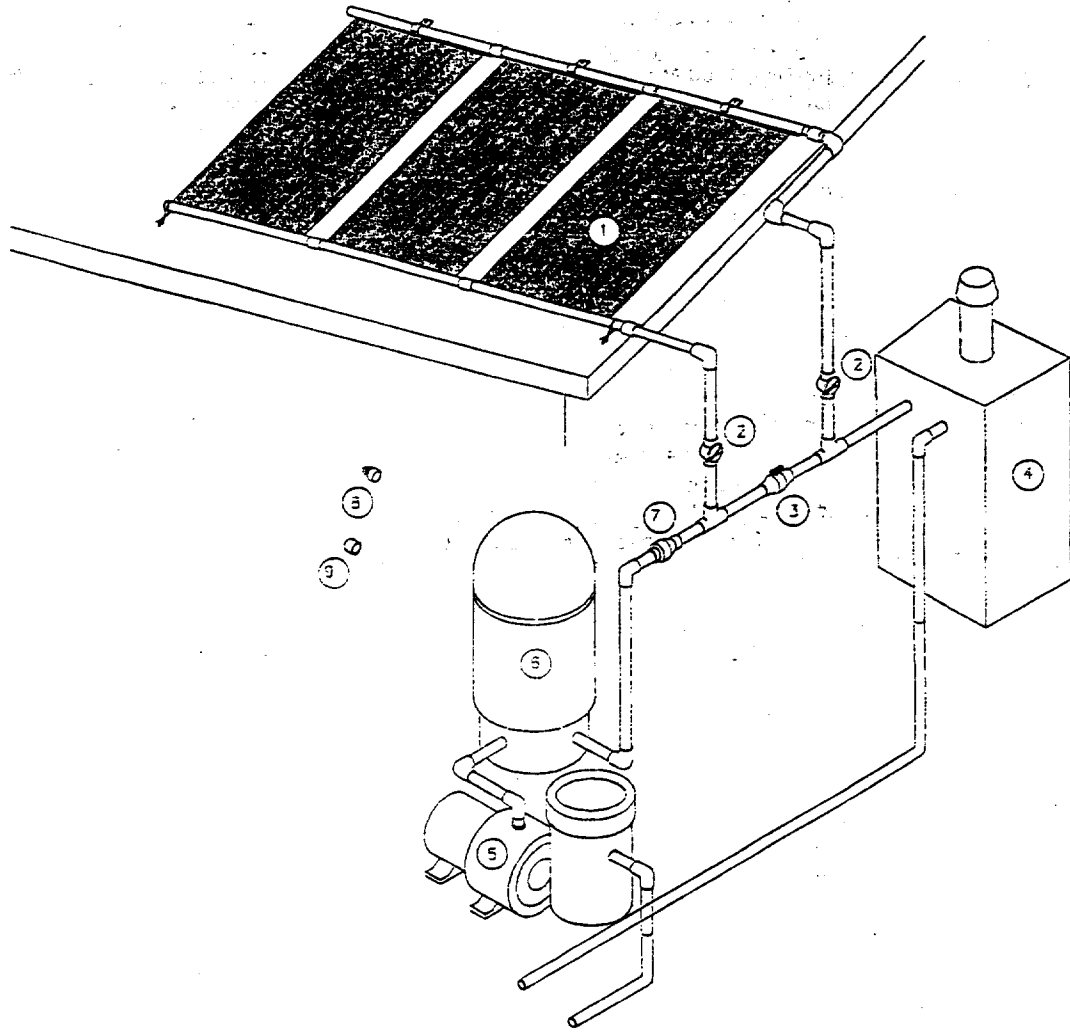
OTHER CHARGES _____ SPS TO BUILD? YES NO
 _____ SACRAMENTO CITY RACKS _____ ALUM _____ REDWOOD IF NOT, WHO? _____
 _____ TAR & GRAVEL FLAT ROOF RACKS ARBOR _____
 _____ TILE ROOF RACKS GROUND RACK _____
 _____ HEATER REMOVAL & HAUL AWAY PATIO RACK _____
 _____ SYSTEM REMOVAL _____ PIPE _____ PANELS TRELLIS _____

COMMENTS TO CREW _____

STATEMENT OF PERFORMANCE

Due to variations in weather and other environmental conditions surrounding a solar heating system, the specific performance of this system cannot be guaranteed; however, the design of this proposed system is expected to yield a nominal pool water temperature of _____ degrees (F) from _____ to _____ without the use of supplementary heating.

CUSTOMER SIGNATURE



County of Sacramento
SOLAR INSTALLATION WORKSHEET

Pool/Spa

Domestic Hot Water Space Heating

PLOT PLAN Show Location of Collector(s), Storage Tank(s) and Control

DESIGN DATA

Collector MFG. FAFCO Model PROFILE
 Dimensions: L. 12 x W. 4 x H. 4
 Weight 21 lbs. Dry 73.3 lbs. Wet
 Max. Live Load 1.33 lbs/ft
 Heat Transfer (Fluid/Gas)
 Certification IAPMO S-1089 Size
 Storage Tank MFG. N/A IAPMO No. S-1889
 Model IAPMO No.
 Control MFG. COMPOOL
 Model LX-22 IAPMO No. S-1889
 Circulator Pump MFG. Motor
 Model IAPMO No.
 Max. Flow Rate 8 GPM/SCPM
 System Operating Pressure 0-15
 System Operating Temp. i 111. 95° F/L0 400 F

ROOF DESIGN

Type Covering
 Type Frame: Truss Conventional
 Size of Frame Members 2 x 6 @ 2 o.c.
 Clear Span. 10 Ft. Roof Pitch 4:12
 Support Required: Yes No

ADDITIONAL INFORMATION

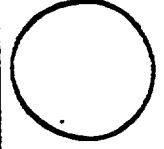
MFR. Installation Data Yes No
 MFR. System Flow Diagram Yes No
 MFR. Electrical Schematic Yes No
 MFR. Test Instruction Yes No
 System Certification(s) Yes No

Front Scale:

Owner: Telephone:

Address: zip:

Location: zip:



Indicate North

EW/CL 2-20-01

Contractor SIERRA SUN INDUSTRIES Co. Reg. No.

Mounting the Solar Collectors

FAFCO

BRACKET INSTALLATION



1. Locate bracket base on roofing above subroof or sheathing. (Do not attempt to attach brackets to roof material only!)
2. Mark and drill a pilot hole.
3. Inject the FAFCO recommended sealant into the pilot hole, being certain to leave enough on top of the hole so that a small amount will ooze out around the bracket when it is secured.
4. Put the lag screw into the bracket base and secure the bracket base to the roof.
5. Lay the panel strap through the bracket base. Panel straps can be put through single or doubled over.
6. Screw on a bracket cap and hand tighten. A 1/2" ratchet may be used to tighten the cap if desired.



SUBSTRATE

Substrate is a sheet of 2 1/2" corrugated 4 oz. fiberglass that is used as a protective measure and goes between the solar panel and mounting surface. It will provide the necessary support for the panels and protect the roof. Substrate is required on all roof types and shake or wooden shingle, tar and gravel, tile or cement shingle. Simply lay it under the panel.

SEALING SEQUENCE

SPECIAL CARE AND ATTENTION SHOULD BE EXERCISED IN SEALING THE LAG SCREWS WHERE THEY PENETRATE THE PRIMARY ROOF. FOLLOW THE DIRECTIONS CAREFULLY.

BUILT UP ROOFING

A tar and gravel or tile roof requires special care. For further instructions contact your local distributor.

TOP AND BOTTOM HEADER TIE-DOWN



Both the top and bottom ties are secured the same way. Use the webbed strap for the top ties and the stretchy vinyl strap for the bottom ties.

1. Pass the strap around the rubber coupler.
2. Mark a spot 4" to 7" from the header pipe of the panel.
3. Secure a mounting bracket at the spot you marked per the instructions above.
4. Lay both ends of the strap through the mounting bracket base and screw on a cap.

ALUMAWOOD PATIO COVER INSTALLATION INSTRUCTIONS

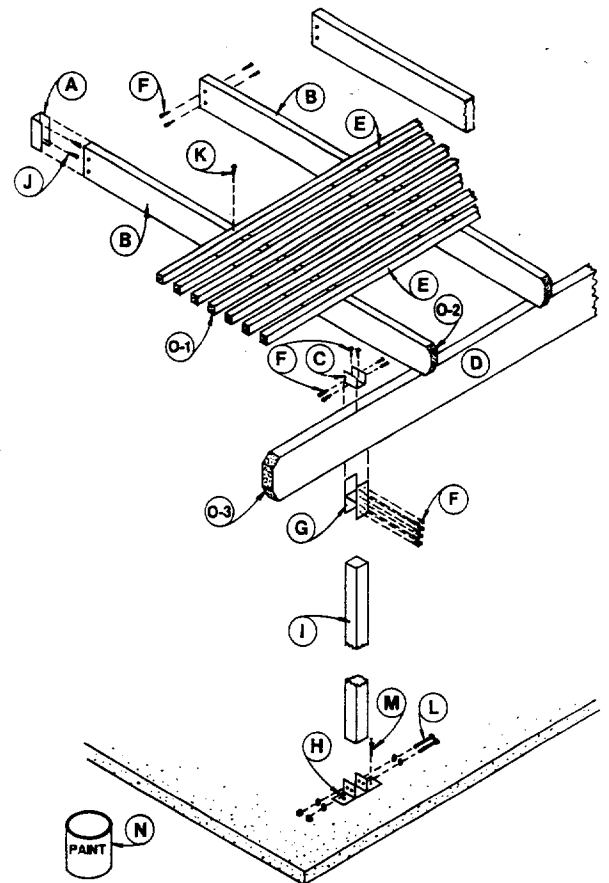
General Information

This lattice patio cover has been designed to be attached to a ledger that is 16' to 20' in length and a 3 1/2" thick concrete pad 8', 10' or 12' wide and 16' to 20' long. It is designed to resist a 10 lb.-per-square-foot live load. Requirements for building permits vary with geographic location. This installation was designed by a registered engineer and approved under ICBO Report 3976P.

COMPONENT PARTS

LTR	PART NAME
A.	1 1/2" x 2" x 1 1/2" x 5 1/2" Rafter Hanger
B.	2" x 6" x 10'0" Rafter
C.	1" x 2" x 1" x 2" Rafter To Header Bracket
D.	3" x 8" x 16' to 20'0" Header
E.	1 1/2" x 1 1/2" x 16' to 20'0" Lattice
F.	#8 x 1/2" Tek Sheet Metal Screws (SMS) = Self Drilling
G.	Top Post -H-Bracket
H.	3" Bottom Post Bracket
I.	3" x 3" x 9'3" Post
J.	#10 x 1 1/2" SMS
K.	#8 x 2" SMS & Neoprene Washer
L.	3/8" x 3 1/2" Hex-head Bolts (with nuts & washers)
M.	1/4" Nail-in Anchors (Concrete)
N.	Pint Can Touch-up Paint
O.	#1. 1 1/2" sq. End Cap #2. 2" x 6" End Cap #3. 3" x 8" End Cap

*5/8"
9/16"*

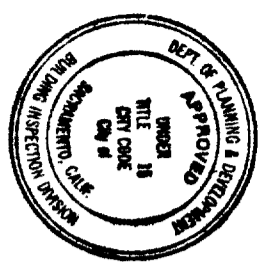
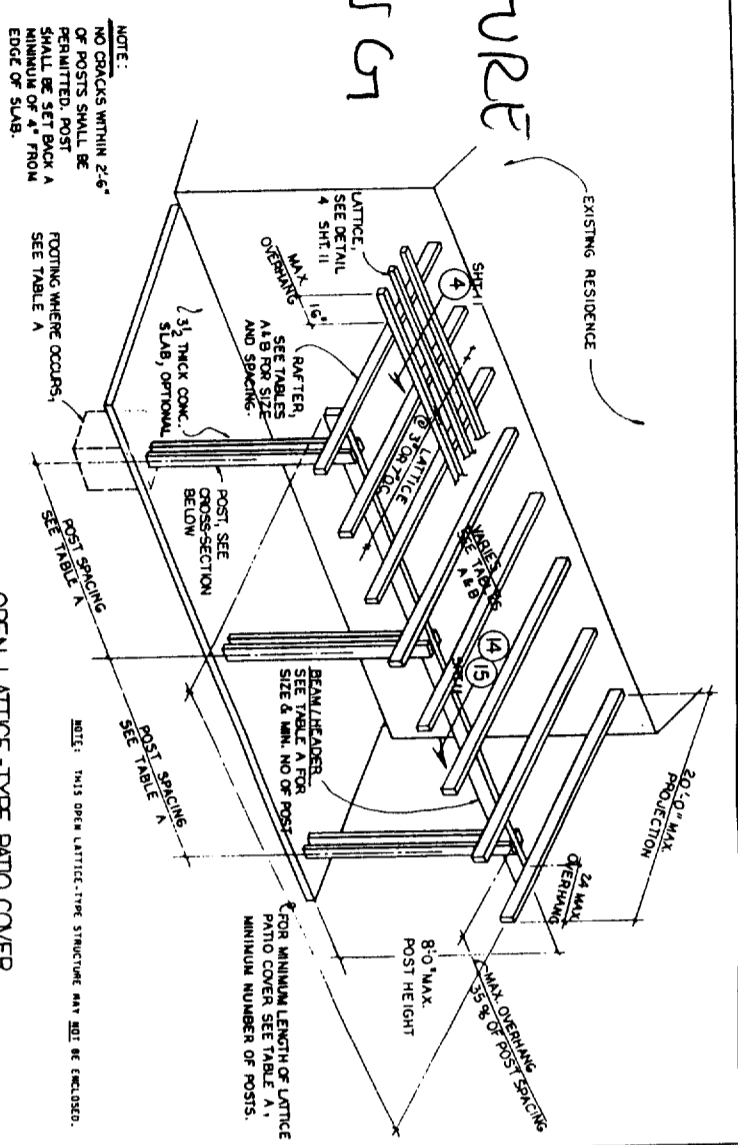


Recommended Tools:

- 3/8" variable speed drill
- Level
- Hammer
- Crescent wrench
- Screwdriver
- 20' Measuring tape
- Chalk line
- Large carpenter's square
- 2 ea. 8' stepladders
- Hacksaw or circular saw with fine-tooth plywood blade
- 1/4" Masonry drill bit
- 7/16" x 3 1/2" length metal drill bit
- 1/4" x 6/16" drive sockets for #8 & 10 SMS

STRUCTURE IS EXISTING

FIELD VERIFY SIZE OF FTG PER HIGHLIGHTED PERIMETERS

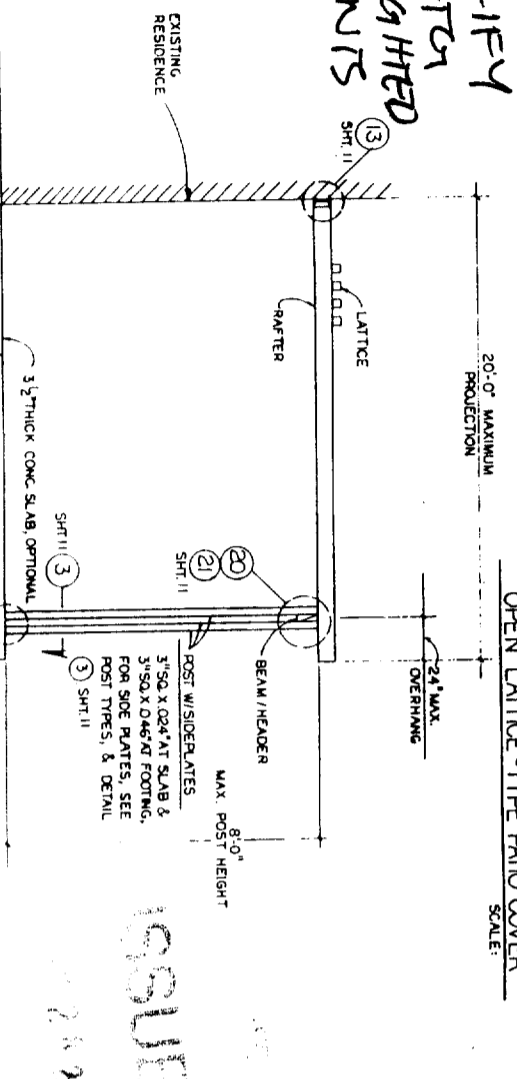


REVIEWED BY: [Signature] 9/26/00

This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations from the same without written permission from the Building Inspection Division.

The approval of this plan and specifications SHALL NOT be held to permit or approve the violation of any City Ordinance or State Law.

- GENERAL NOTES AND SPECIFICATIONS:
1. Aluminum window and doors are to be the latest edition of the Aluminum Association Manual.
 2. Aluminum window and doors are to be substituted for those shown, provided they are of equal or greater strength and ultimate strength of 2,000 psi.
 3. All concrete shall have a minimum compressive strength of 3,000 psi.
 4. All steel shall have a minimum yield strength of 36,000 psi.
 5. All footing shall be on firm, undisturbed soil, or on a concrete pad of minimum thickness and shall be in good condition.
 6. All footing shall be on firm, undisturbed soil, or on a concrete pad of minimum thickness and shall be in good condition.
 7. All steel anchors shall be not-drip galvanized or electroplated and conform to A.S.T.M. A307, Grade C.
 8. All other fasteners shall be aluminum fasteners of minimum grade.
 9. All bolts shall conform to A.S.T.M. A307 and have standard cut plate washers. Note for bolts shall be bolt diameter shall be 1/4" larger than diameter of hole.
 10. All bolts shall have a minimum edge distance of 8 bolt diameters. Identifying tag giving the type and grade of the manufacturer, design loads and incompatibility.
 11. All steel anchors shall be not-drip galvanized or electroplated and shall be of the same size and type as shown on the drawings.
 12. All steel anchors shall be not-drip galvanized or electroplated and shall be of the same size and type as shown on the drawings.
 13. All steel anchors shall be not-drip galvanized or electroplated and shall be of the same size and type as shown on the drawings.
 14. All steel anchors shall be not-drip galvanized or electroplated and shall be of the same size and type as shown on the drawings.
 15. For all detail references, see Sheet 11 of 12.



NOTE: THIS OPEN LATTICE-TYPE STRUCTURE MAY BE ENCLOSED.

ATTACHED LATTICE PATIO COVERS (WIND SPEED = 70 & 90 MPH)

PROJECTION INCLUDES 24" MAXIMUM OVERHANG	RAFTER SIZE 24" O.C.	MAXIMUM POST SPACING & FOOTING SIZE		WIND = 70/15 PSF UPLIFT = 10/15 PSF		BEAM/HEADER POST CONNECTION	NO. OF SCREWS 3
		POST SPACING	FOOTING SIZE	POST SPACING	FOOTING SIZE		
10'-0"	2x6x10x24	13'-5"	13'-5"	19	21	2	2
11'-0"	2x6x10x24	12'-0"	12'-0"	19	21	2	2
12'-0"	2x6x10x24	12'-6"	12'-6"	19	22	2	2
13'-0"	2x6x10x24	12'-1"	12'-1"	19	22	2	2
14'-0"	2x6x10x24	11'-9"	11'-9"	20	22	2	2
15'-0"	2x6x10x24	11'-4"	11'-4"	20	22	2	2
16'-0"	2x6x10x24	11'-0"	11'-0"	20	23	2	2
17'-0"	2x6x10x24	10'-5"	10'-5"	20	23	2	2
18'-0"	2x6x10x24	9'-0"	10'-6"	20	23	2	2
19'-0"	2x6x10x24	9'-5"	10'-4"	20	23	2	2
20'-0"	2x6x10x24	9'-0"	10'-1"	20	23	2	2

FASTENER / ANCHOR BOLT CONNECTION

THICKNESS & SPACING	RAFTER TO BEAM CONNECTION		RAFTER TO POST CONNECTION		BEAM TO POST CONNECTION		
	WIND SPEED = 70 MPH	WIND SPEED = 90 MPH	WIND SPEED = 70 MPH	WIND SPEED = 90 MPH	WIND SPEED = 70 MPH	WIND SPEED = 90 MPH	
8'-0"	2x6x10x24	7'-3"	9'-0"	16	18	2	2
9'-0"	2x6x10x24	6'-8"	8'-8"	16	18	2	2
10'-0"	2x6x10x24	6'-2"	8'-4"	16	18	2	2
11'-0"	2x6x10x24	5'-9"	8'-0"	16	18	2	2
12'-0"	2x6x10x24	5'-4"	7'-9"	16	19	2	2
13'-0"	2x6x10x24	5'-0"	7'-6"	16	19	2	2
14'-0"	2x6x10x24	4'-8"	7'-3"	17	19	2	2
15'-0"	2x6x10x24	4'-5"	7'-0"	17	19	2	2
16'-0"	2x6x10x24	4'-1"	6'-7"	18	20	2	2

TABLE B: RAFTER TO BEAM CONNECTION

THICKNESS & SPACING	RAFTER TO BEAM CONNECTION		RAFTER TO POST CONNECTION		BEAM TO POST CONNECTION		
	WIND SPEED = 70 MPH	WIND SPEED = 90 MPH	WIND SPEED = 70 MPH	WIND SPEED = 90 MPH	WIND SPEED = 70 MPH	WIND SPEED = 90 MPH	
8'-0"	2x6x10x24	7'-3"	9'-0"	16	18	2	2
9'-0"	2x6x10x24	6'-8"	8'-8"	16	18	2	2
10'-0"	2x6x10x24	6'-2"	8'-4"	16	18	2	2
11'-0"	2x6x10x24	5'-9"	8'-0"	16	18	2	2
12'-0"	2x6x10x24	5'-4"	7'-9"	16	19	2	2
13'-0"	2x6x10x24	5'-0"	7'-6"	16	19	2	2
14'-0"	2x6x10x24	4'-8"	7'-3"	17	19	2	2
15'-0"	2x6x10x24	4'-5"	7'-0"	17	19	2	2
16'-0"	2x6x10x24	4'-1"	6'-7"	18	20	2	2

TABLE A ATTACHED LATTICE PATIO COVERS WITH MAXIMUM OVERHANGS (WIND SPEED = 70 & 90 M.P.H.)

PROJECTION: (INCLUDES MAXIMUM OVERHANG)	RAFTER SIZE: 24" O.C.	MAXIMUM RAFTER SPAN	MAXIMUM RAFTER OVERHANG	MAXIMUM POST SPACING & FOOTING SIZE WITH CHANNEL INSERT		MAXIMUM POST SPACING & FOOTING SIZE WITH CHANNEL INSERT		BEAM / HEADER TO POST CONNECTION
				3" X 8" X .042" BEAM / HEADER WITH CHANNEL INSERT	FOOTING SIZE	3" X 8" X .042" BEAM / HEADER WITH CHANNEL INSERT	FOOTING SIZE	
17'-8"	3" X 8" X 0.30"	12'-8"	5'-0"	16'-11"	2'-2 1/2" X 18" X 11"	NO SLAB	NO SLAB	SEE BEAM TO POST CONNECTION TABLE BELOW.
21'-2"	3" X 8" X 0.30"	15'-2"	6'-0"	15'-0"	2'-2 1/2" X 18" X 11"	NO SLAB	NO SLAB	
24'-9"	3" X 8" X 0.42"	17'-9"	7'-0"	12'-5"	2'-5 1/2" X 18" X 11"	NO SLAB	NO SLAB	
14'-8"	3" X 8" X 0.30"	10'-6"	4'-2"	15'-0"	2'-2 1/2" X 18" X 11"	NO SLAB	NO SLAB	
17'-7"	3" X 8" X 0.36"	12'-7"	5'-0"	14'-2"	2'-2 1/2" X 18" X 11"	NO SLAB	NO SLAB	
20'-7"	3" X 8" X 0.42"	14'-9"	5'-10"	11'-4"	2'-4 1/2" X 18" X 11"	NO SLAB	NO SLAB	

FASTENER CONNECTION TABLE

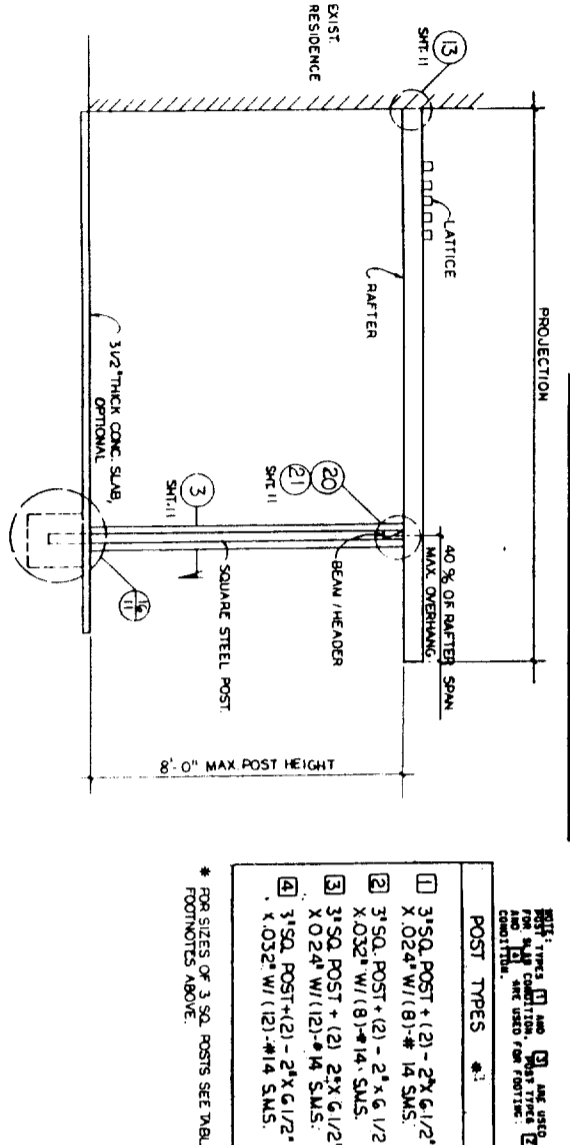
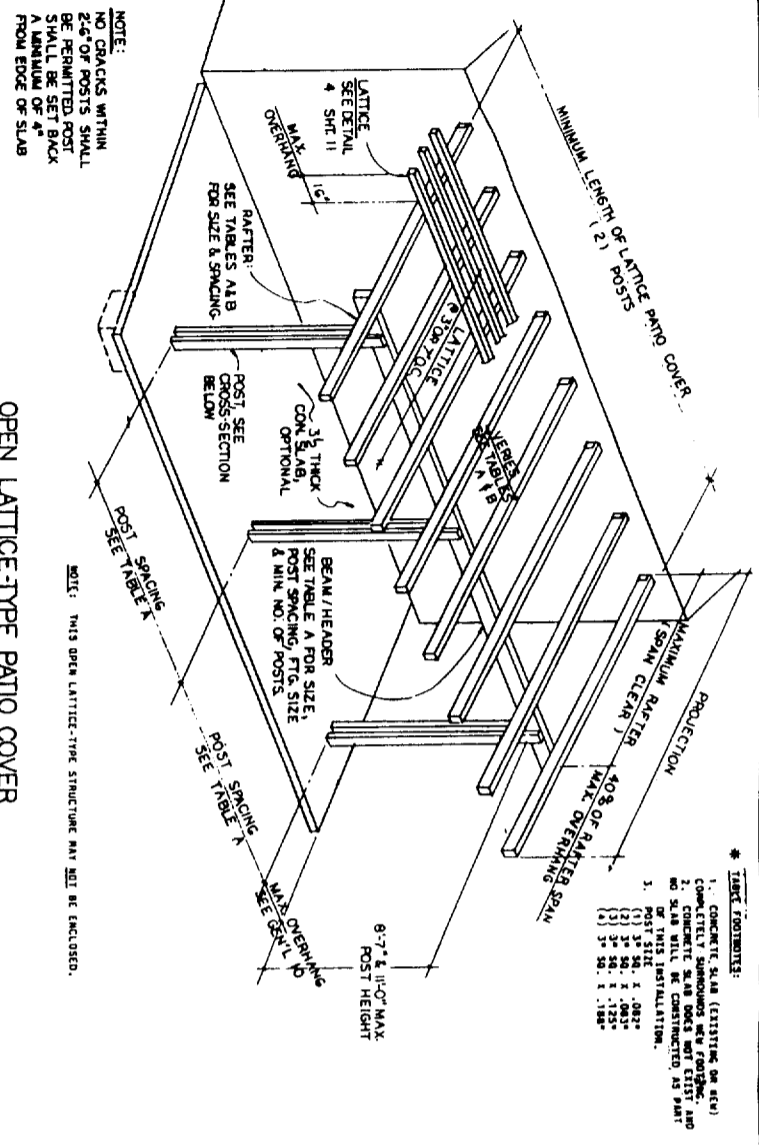
DETAIL	RAFTER TO BEAM CONNECTION		RAFTER TO BEAM CONNECTION		RAFTER TO BEAM CONNECTION		RAFTER TO BEAM CONNECTION	
	WIND SPEED = 70 M.P.H.	WIND SPEED = 90 M.P.H.	WIND SPEED = 100 M.P.H.	WIND SPEED = 110 M.P.H.	WIND SPEED = 100 M.P.H.	WIND SPEED = 110 M.P.H.	WIND SPEED = 110 M.P.H.	WIND SPEED = 110 M.P.H.
(14) (2) #10 S.M.S. EACH LEG (2) #10 S.M.S. EACH LEG (4-TOTAL)	TO RAFTER	TO BEAM	TO RAFTER	TO BEAM	TO RAFTER	TO BEAM	TO RAFTER	TO BEAM
(15) EACH SIDE OF RAFTER (4-TOTAL)	TO RAFTER	TO BEAM	TO RAFTER	TO BEAM	TO RAFTER	TO BEAM	TO RAFTER	TO BEAM

BEAM TO POST CONNECTION

DETAIL	WIND SPEED = 70 M.P.H.	WIND SPEED = 90 M.P.H.	WIND SPEED = 100 M.P.H.	WIND SPEED = 110 M.P.H.
(21) LIVE LOAD = 20	2	2	2	2
(22) LIVE LOAD = 30	2	2	2	2

TABLE B ATTACHED LATTICE PATIO COVERS WITH MAXIMUM OVERHANGS (WIND SPEED = 100 & 110 M.P.H.)

PROJECTION (INCLUDES MAXIMUM OVERHANG)	RAFTER SIZE: 24" O.C.	MAXIMUM RAFTER SPAN	MAXIMUM RAFTER OVERHANG	MAXIMUM POST SPACING & FOOTING SIZE, WIND = 100 & 110 M.P.H.		MAXIMUM POST SPACING & FOOTING SIZE, WIND = 100 & 110 M.P.H.		BEAM / HEADER TO POST CONNECTION
				3" X 8" X .042" BEAM / HEADER WITH CHANNEL INSERT	FOOTING SIZE	3" X 8" X .042" BEAM / HEADER WITH CHANNEL INSERT	FOOTING SIZE	
17'-8"	3" X 8" X 0.30"	12'-8"	5'-0"	16'-11"	2'-2 1/2" X 18" X 11"	NO SLAB	NO SLAB	SEE BEAM TO POST CONNECTION TABLE ABOVE.
21'-2"	3" X 8" X 0.30"	15'-2"	6'-0"	15'-0"	2'-2 1/2" X 18" X 11"	NO SLAB	NO SLAB	
24'-9"	3" X 8" X 0.42"	17'-9"	7'-0"	12'-5"	2'-5 1/2" X 18" X 11"	NO SLAB	NO SLAB	
14'-8"	3" X 8" X 0.30"	10'-6"	4'-2"	15'-0"	2'-2 1/2" X 18" X 11"	NO SLAB	NO SLAB	
17'-7"	3" X 8" X 0.36"	12'-7"	5'-0"	14'-2"	2'-2 1/2" X 18" X 11"	NO SLAB	NO SLAB	
20'-7"	3" X 8" X 0.42"	14'-9"	5'-10"	11'-4"	2'-4 1/2" X 18" X 11"	NO SLAB	NO SLAB	



CROSS-SECTION

- GENERAL NOTES AND SPECIFICATIONS:
1. Aluminum design and stresses are per the latest edition of the Uniform Building Code and the 1987 edition of the Aluminum Construction Manual.
 2. Aluminum design stresses are per the Aluminum Association and have been provided for aluminum alloy 6061-T6.
 3. All concrete shall have a minimum 28 day compressive strength of 2,000 p.s.i.
 4. Concrete shall have a minimum 3/8" minimum thickness and shall be in good condition.
 5. All steel members shall be Grade 50.
 6. All steel members shall be 2024-T4. All other fasteners shall be aluminum.
 7. Expansion bolts shall be multi-head bolts 1/2" carbon steel or 3/8" aluminum.
 8. Each installation shall bear an identifying tag stating the name and address of the contractor.
 9. L.L. project, post spacing, footing detail, etc.
 10. Open lattice patio covers have only been applied to the horizontal projected area of the lattice, rafters, beams, etc. per I.C.C. criteria.
 11. For all detail references, see Sheet 11 of 12.

REG. E.S. EVALUATION REPORT NO. 50338

DATE: 7-22-92

BY: JAMES M. FOX

PROJECT: ATTACHED LATTICE-TYPE PATIO COVER

FOX ENGINEERING

JAMES M. FOX, STRUCTURAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER

ALUMINA-LATTICE PATIO COVER

VALLEY ALUMINUM COMPANY

6021 278-6224

3 OF 12

FREESTANDING LATTICE PATIO COVER WITH OVERHANG (WIND SPEED = 100 & 110 M.P.H.) TABLE A

TRIBUTARY WIDTH	3' X 8' X .042" HEADER / BEAM				3' X 8' X .042" W/ INSERT HEADER / BEAM			
	MAXIMUM POST HEIGHT - 8'-7"	MAXIMUM POST HEIGHT - 8'-7"	MAXIMUM POST HEIGHT - 8'-7"	MAXIMUM POST HEIGHT - 8'-7"	MAXIMUM POST HEIGHT - 8'-7"	MAXIMUM POST HEIGHT - 8'-7"	MAXIMUM POST HEIGHT - 8'-7"	MAXIMUM POST HEIGHT - 8'-7"
100 MPH	110 MPH	100 MPH	110 MPH	100 MPH	110 MPH	100 MPH	110 MPH	110 MPH
W/SLAB	NO SLAB	W/SLAB	NO SLAB	W/SLAB	NO SLAB	W/SLAB	NO SLAB	W/SLAB

RAFTER SIZE (AT 24" O.C.)	WIND SPEED 100 M.P.H.		WIND SPEED 110 M.P.H.		DETAIL SHIT #	WIND SPEED 100 M.P.H.	WIND SPEED 110 M.P.H.	WIND SPEED 100 M.P.H.	WIND SPEED 110 M.P.H.
	MAX. CLEAR SPAN	MAX. OVERHANG	MAX. CLEAR SPAN	MAX. OVERHANG					
5'-0" 8'-1"	18' x 2'-2 1/2"	2'-4 1/2"	18' x 2'-2 1/2"	2'-4 1/2"	10	20	30	20	30
6'-0" 7'-5"	18' x 2'-0 1/2"	2'-3 1/2"	18' x 2'-0 1/2"	2'-3 1/2"	10	20	30	20	30
7'-0" 6'-10"	18' x 2'-0 1/2"	2'-3 1/2"	18' x 2'-0 1/2"	2'-3 1/2"	10	20	30	20	30
8'-0" 6'-5"	18' x 2'-2 1/4"	2'-4 1/4"	18' x 2'-2 1/4"	2'-4 1/4"	10	20	30	20	30
9'-0" 6'-0"	18' x 2'-2 1/4"	2'-4 1/4"	18' x 2'-2 1/4"	2'-4 1/4"	10	20	30	20	30
10'-0" 5'-9"	18' x 2'-4 1/4"	2'-6 1/4"	18' x 2'-4 1/4"	2'-6 1/4"	10	20	30	20	30
11'-0" 5'-5"	18' x 2'-4 1/4"	2'-6 1/4"	18' x 2'-4 1/4"	2'-6 1/4"	10	20	30	20	30
12'-0" 5'-3"	18' x 2'-6 1/4"	2'-8 1/4"	18' x 2'-6 1/4"	2'-8 1/4"	10	20	30	20	30
13'-0" 5'-0"	18' x 2'-6 1/4"	2'-8 1/4"	18' x 2'-6 1/4"	2'-8 1/4"	10	20	30	20	30
14'-0" 4'-10"	18' x 2'-6 1/4"	2'-8 1/4"	18' x 2'-6 1/4"	2'-8 1/4"	10	20	30	20	30
15'-0" 4'-8"	18' x 2'-6 1/4"	2'-8 1/4"	18' x 2'-6 1/4"	2'-8 1/4"	10	20	30	20	30

RAFTER SIZE (AT 24" O.C.)	WIND SPEED 100 M.P.H.		WIND SPEED 110 M.P.H.		DETAIL SHIT #	WIND SPEED 100 M.P.H.	WIND SPEED 110 M.P.H.	WIND SPEED 100 M.P.H.	WIND SPEED 110 M.P.H.
	MAX. CLEAR SPAN	MAX. OVERHANG	MAX. CLEAR SPAN	MAX. OVERHANG					
2 x 6 1/2 x 024"	9'-5"	3'-0"	9'-5"	3'-0"	10	20	30	20	30
2 x 6 1/2 x 032"	12'-8"	4'-0"	12'-8"	4'-0"	10	20	30	20	30
2 x 6 1/2 x 040"	15'-9"	5'-0"	15'-9"	5'-0"	10	20	30	20	30
3 x 8 x 042"	18'-4"	6'-0"	18'-4"	6'-0"	10	20	30	20	30

RAFTER SIZE (AT 24" O.C.)	WIND SPEED 100 M.P.H.		WIND SPEED 110 M.P.H.		DETAIL SHIT #	WIND SPEED 100 M.P.H.	WIND SPEED 110 M.P.H.	WIND SPEED 100 M.P.H.	WIND SPEED 110 M.P.H.
	MAX. CLEAR SPAN	MAX. OVERHANG	MAX. CLEAR SPAN	MAX. OVERHANG					
3" X 8" X .042"	31'-9"	7'-0"	31'-9"	7'-0"	10	20	30	20	30
3" X 8" X .042"	26'-5"	5'-10"	31'-9"	7'-0"	10	20	30	20	30

NOTE REFER TO SHTS. 4 & 11 FOR CROSS SECTIONS & DETAIL CONNECTIONS

RAFTER SIZE (AT 24" O.C.)	WIND SPEED 100 M.P.H.		WIND SPEED 110 M.P.H.		DETAIL SHIT #	WIND SPEED 100 M.P.H.	WIND SPEED 110 M.P.H.	WIND SPEED 100 M.P.H.	WIND SPEED 110 M.P.H.
	MAX. CLEAR SPAN	MAX. OVERHANG	MAX. CLEAR SPAN	MAX. OVERHANG					
3" X 8" X .042"	31'-9"	7'-0"	31'-9"	7'-0"	10	20	30	20	30
3" X 8" X .042"	26'-5"	5'-10"	31'-9"	7'-0"	10	20	30	20	30

- GENERAL NOTES AND SPECIFICATIONS
1. Aluminum design and drawings are per the latest edition of the Aluminum Building Code and the 1982 edition of the Aluminum Construction Code.
 2. All aluminum fasteners shall be anodized for corrosion resistance.
 3. All aluminum fasteners shall be installed in accordance with the Aluminum Association's Aluminum Fastener Manual.
 4. All aluminum fasteners shall be installed in accordance with the Aluminum Association's Aluminum Fastener Manual.
 5. All aluminum fasteners shall be installed in accordance with the Aluminum Association's Aluminum Fastener Manual.
 6. All aluminum fasteners shall be installed in accordance with the Aluminum Association's Aluminum Fastener Manual.
 7. All aluminum fasteners shall be installed in accordance with the Aluminum Association's Aluminum Fastener Manual.
 8. All aluminum fasteners shall be installed in accordance with the Aluminum Association's Aluminum Fastener Manual.
 9. All aluminum fasteners shall be installed in accordance with the Aluminum Association's Aluminum Fastener Manual.
 10. All aluminum fasteners shall be installed in accordance with the Aluminum Association's Aluminum Fastener Manual.
 11. All aluminum fasteners shall be installed in accordance with the Aluminum Association's Aluminum Fastener Manual.

ICBDO E.S. EVALUATION REPORT NO 5038

DATE: 10-15-22

FOX ENGINEERING

JAMES M. FOX, REGISTERED PROFESSIONAL ENGINEER

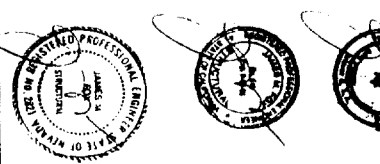
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ALUMA-LATTICE PATIO COVER

WALLEY ALUMINUM COMPANY

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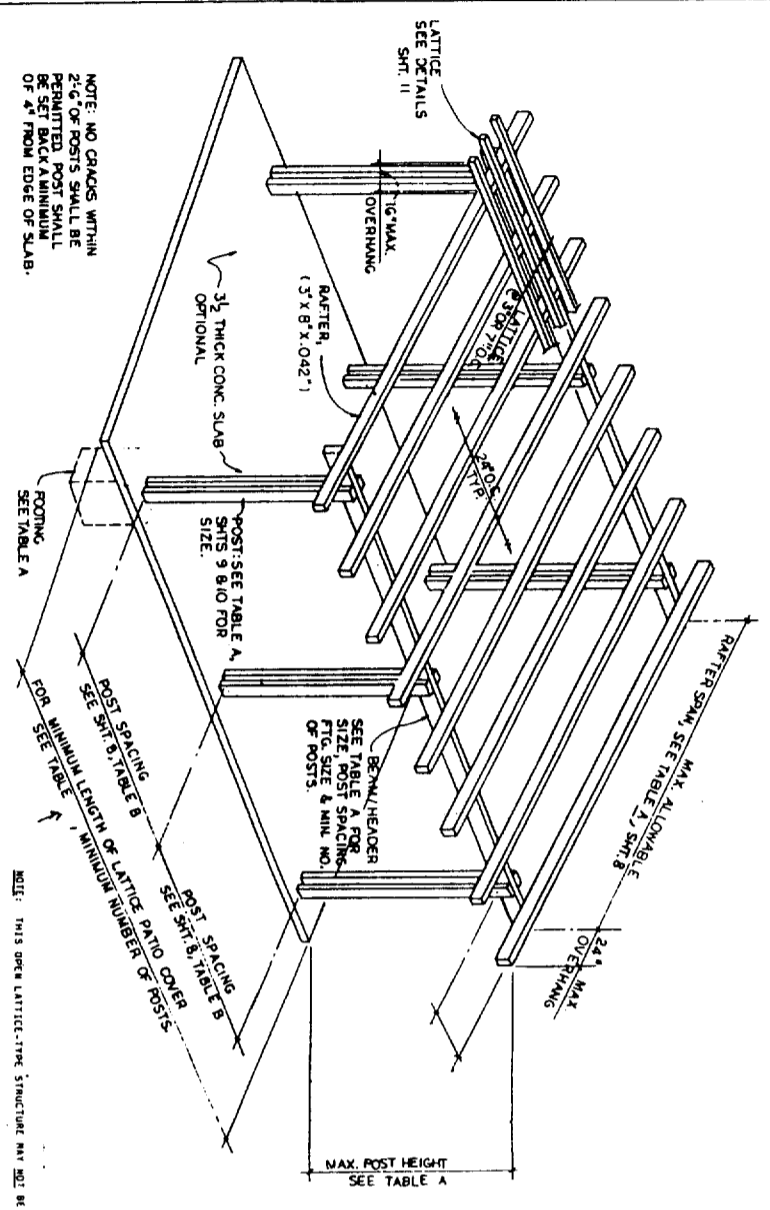
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FREESTANDING LATTICE / COMMERCIAL STRUCTURES TABLE A

WIND SPEED & EXPOSURE	POST SIZE AND FOOTING SIZES			WIND 11/18.5 / 18.1 / 30.6			UPLIFT 14.35 / 24.2 / 23.7 / 40		
	POST SIZE	POST HEIGHT	FOOTING SIZE	MAXIMUM POST HEIGHT	MAXIMUM POST HEIGHT	MAXIMUM POST HEIGHT	MAXIMUM POST HEIGHT	MAXIMUM POST HEIGHT	MAXIMUM POST HEIGHT
8'-7"	11'-0"	14'-6"	18'-0"	8'-7"	11'-0"	14'-6"	18'-0"	8'-7"	11'-0"
70-B	3" SQ X 0.62"	3" SQ X 0.62"	3" SQ X 0.62"	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB
70-C	3" SQ X 0.83"	3" SQ X 0.83"	3" SQ X 1.25"	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB
90-B	3" SQ X 0.83"	3" SQ X 0.83"	3" SQ X 1.25"	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB
90-C	3" SQ X 1.25"	3" SQ X 1.25"	3" SQ X 1.88"	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB	NO SLAB / W/ SLAB

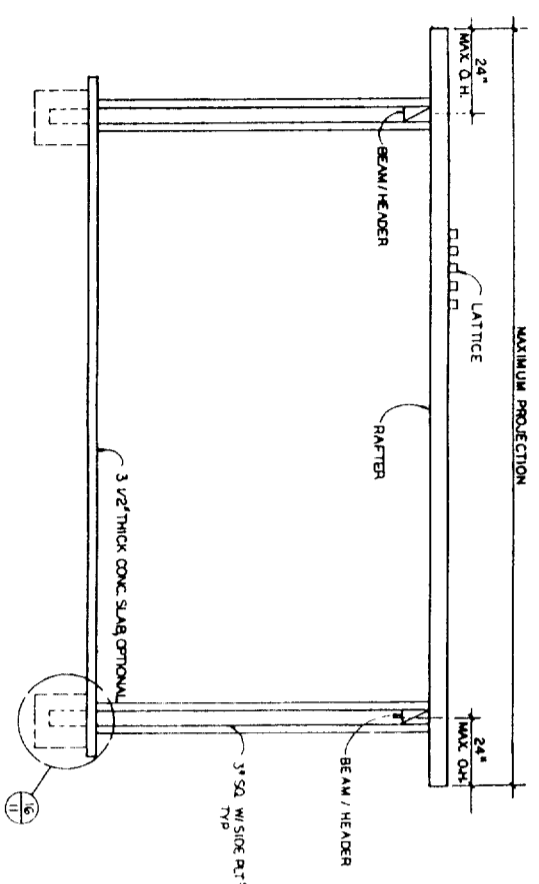
TABLE CONTINUES:
 1. CONCRETE SLAB (EXISTING OR NEW) SHALL BE CONSTRUCTED PER LOCAL CODE.
 2. CONCRETE SLAB DOES NOT EXIST AND NO SLAB SHALL BE CONSTRUCTED IN PART OF THIS INSTALLATION.



NOTE: NO CRACKS WITHIN 2'-6\"/>

NOTE: THIS OPEN LATTICE-TYPE STRUCTURE MAY NOT BE ENCLOSED.

FREESTANDING OPEN LATTICE-TYPE PATIO COVER



CROSS-SECTION

GENERAL NOTES AND SPECIFICATIONS:

1. Aluminum design and stresses are per the latest edition of the Uniform Building Code and the 1987 edition of the Aluminum Construction Handbook.
2. Alternative aluminum alloys may be substituted for those shown, provided they are registered with the Aluminum Association and have equal or greater strength and ultimate elongation as shown.
3. All steel members shall be hot-dip galvanized or electroplated and certified fill. Design vertical soil bearing pressure = 1,000 P.S.F.
4. All steel members shall be 1/4\"/>

FASTENER CONNECTION TABLE B

DETAIL	RAFTER TO BEAM CONNECTION		WIND SPEED & EXPOSURE	
	70-B	70-C	90-B	90-C
TO RAFT. TO BEAM	TO RAFT. TO BEAM	TO RAFT. TO BEAM	TO RAFT. TO BEAM	TO RAFT. TO BEAM
TO BEAM TO RAFT.	TO BEAM TO RAFT.	TO BEAM TO RAFT.	TO BEAM TO RAFT.	TO BEAM TO RAFT.

- POST TYPES
- 1. 3" SQ. POST + (2) - 2" X 6 1/2" X 0.24" W/ (8) - #14 S.M.S.
 - 2. 3" SQ. POST + (2) - 2" X 6 1/2" X 0.32" W/ (8) - #14 S.M.S.
 - 3. 3" SQ. POST + (2) - 2" X 6 1/2" X 0.24" W/ (12) - #14 S.M.S.
 - 4. 3" SQ. POST + (2) - 2" X 6 1/2" X 0.32" W/ (12) - #14 S.M.S.

WIND SPEED & EXPOSURE	BEAM TO POST CONNECTION			WIND SPEED & EXPOSURE		
	TO BEAM	TO POST	TO POST	TO BEAM	TO POST	TO POST
70-B	4	4	2	70-B	2	2
70-C	(3) - 5/8"	(3) - 5/8"	(2) - 5/8"	70-C	(2) - 5/8"	(2) - 5/8"
90-B	(3) - 1/2"	(3) - 1/2"	(2) - 5/8"	90-B	(2) - 5/8"	(2) - 5/8"
90-C	(3) - 1"	(3) - 1"	(2) - 1"	90-C	(2) - 1"	(2) - 1"

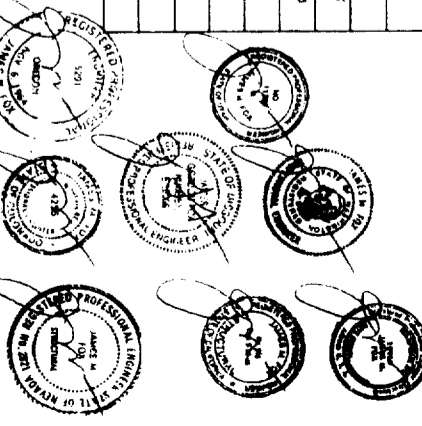
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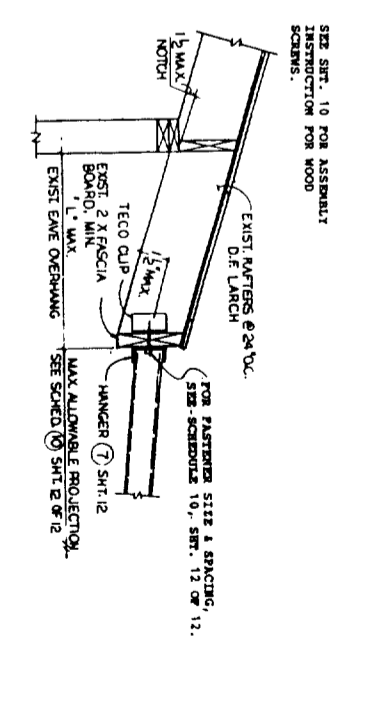
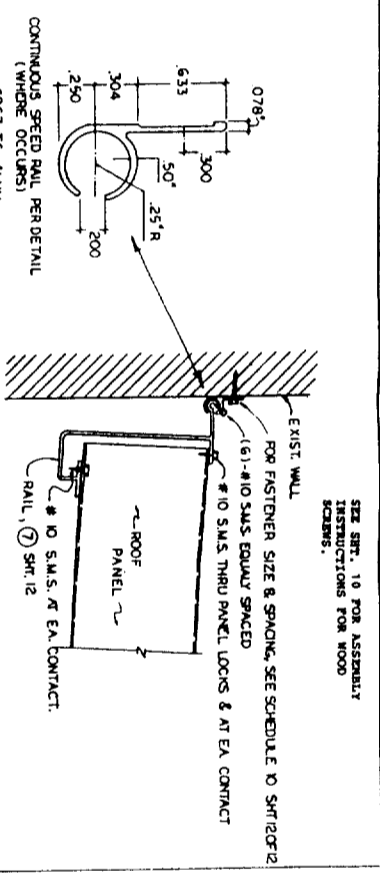
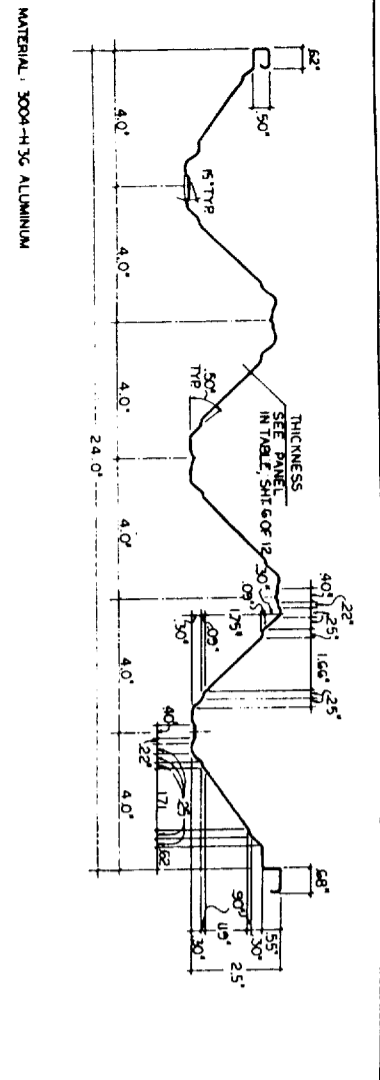
7-28-92 APPROVED SHT. E.C.D.3

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ALUMINUM-LATTICE PATIO COVER
 COMMERCIAL STRUCTURES
 WALLEY ALUMINUM COMPANY
 1602 27th 4224

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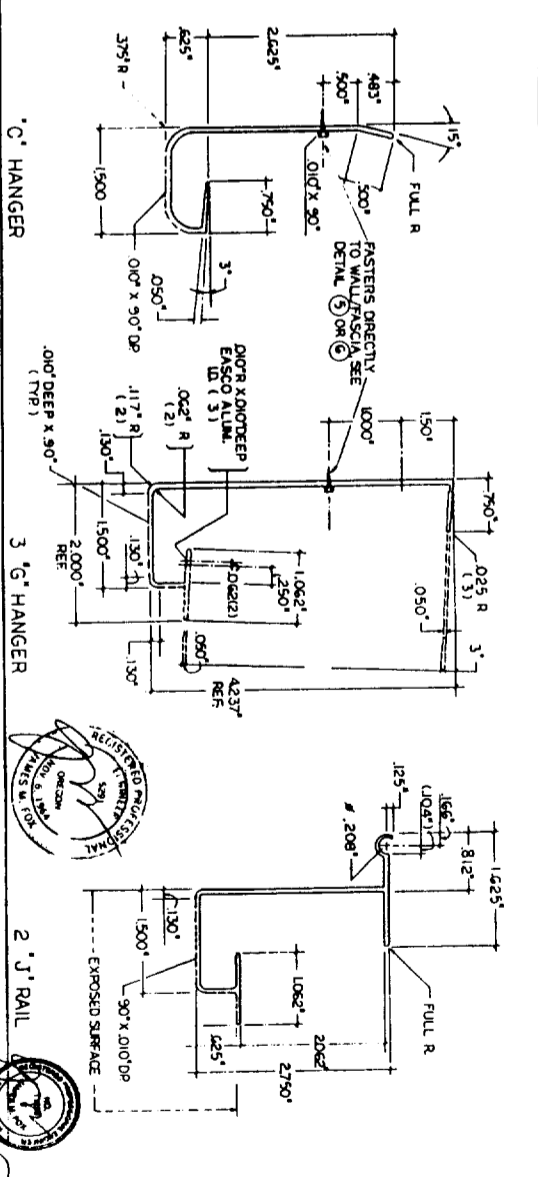
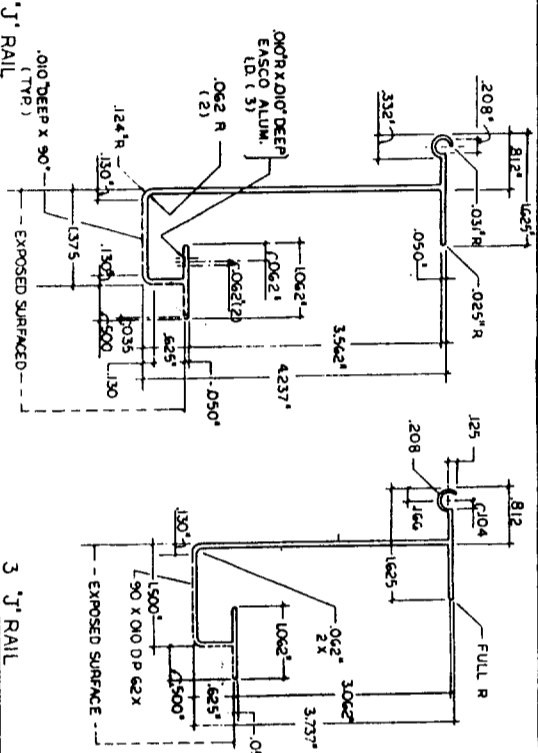
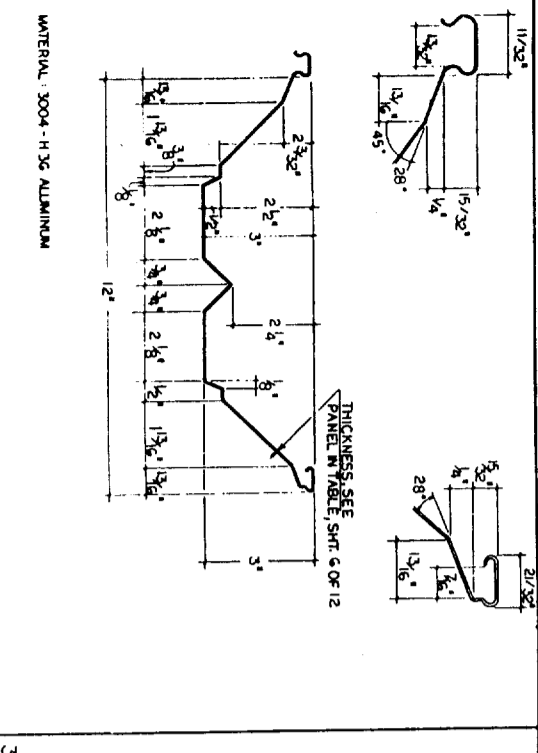




24" ROOF PANEL

J" RAIL ATTACHMENT

EXISTING EAVE ATTACHMENT



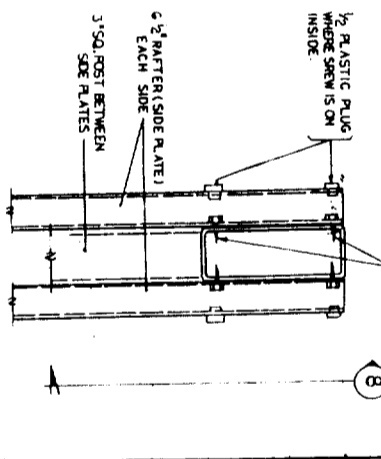
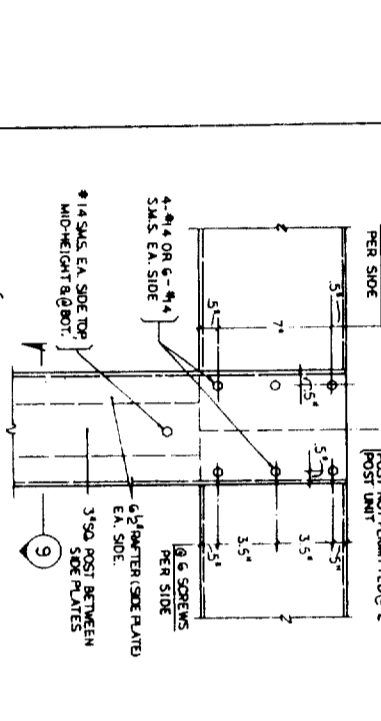
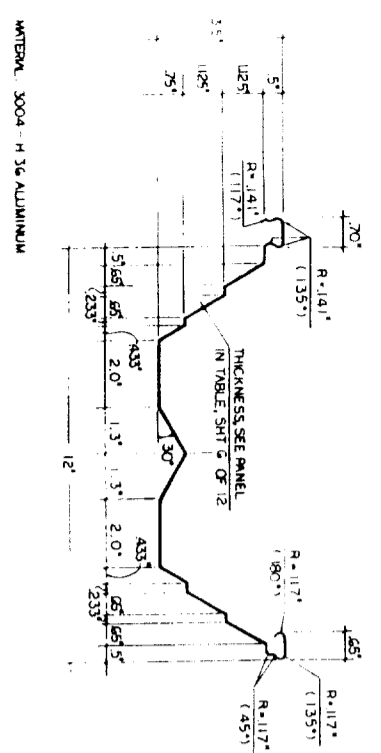
12" X 3" W PANEL

3" J" RAIL

HANGER & RAIL PROFILES

ALUMINUM ALLOY 6063-T6

2" J" RAIL



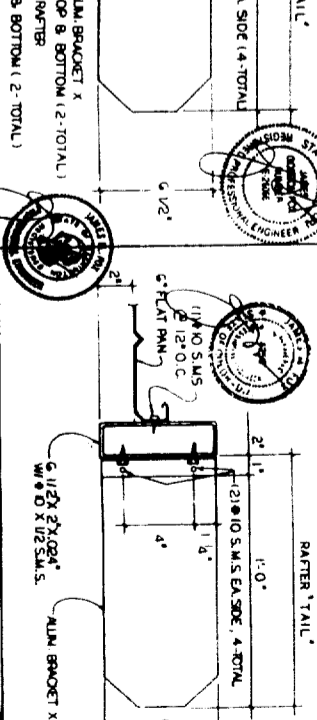
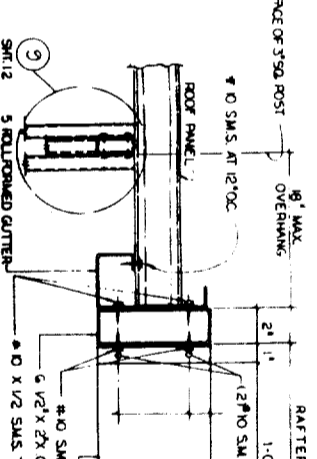
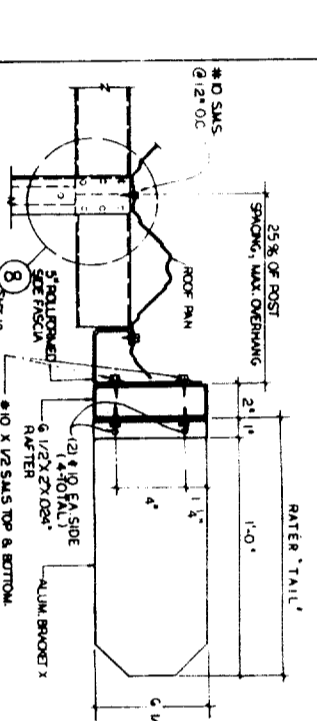
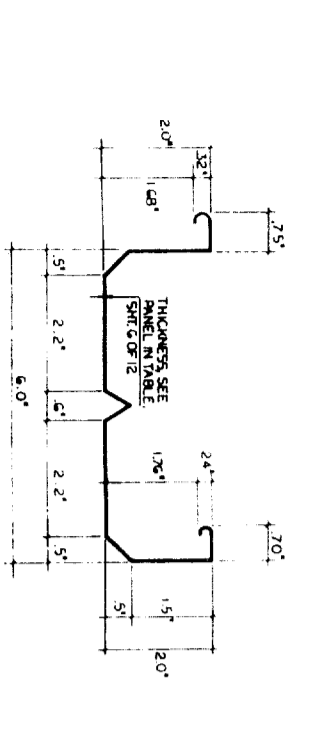
RAFTER / BATT. FASTENER TO FASCIA, WALL, (STUD, MASONRY OR CONC.)	AT 2" X 4" FASCIA	AT WOOD STUD	AT MASONRY OR CONCRETE
WIND DESIGN	L.L.-1, L.L.-2, L.L.-3	L.L.-1, L.L.-2, L.L.-3	L.L.-1, L.L.-2, L.L.-3
10	20	30	10
70	C	E	H
90	C	E	H
100	C	F	H
110	C	F	H

12" X 3 1/2" W PANEL

BEAM / HEADER TO POST CONN.

BEAM / HEADER TO POST CONN.

RAFTER 'TAIL'



6" X 2" FLAT PANEL

RAFTER 'TAIL' AT SIDES

RAFTER 'TAIL' AT FRONT

RAFTER 'TAIL' AT FRONT

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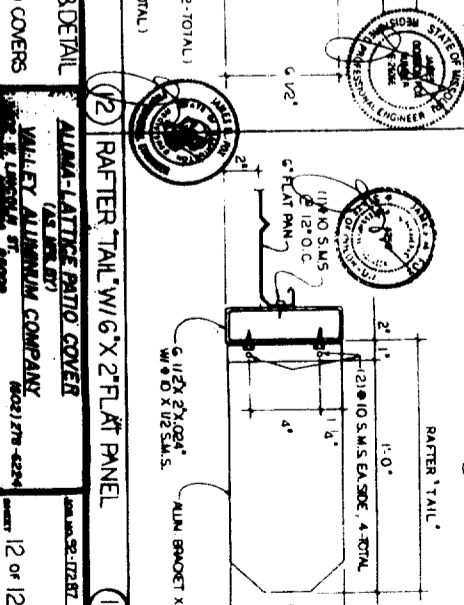
7-2-92 A(10)15 K.K. CHANGED SHIT C OF 12

FOX ENGINEERING
JAMES M. FOX, STRUCTURAL ENGINEER

COMPONENTS & DETAIL CONNECTION FOR ROOFED-TYPE RAMP COVERS

ALUM-LATICE PATIO COVER
WILLY ALUMINUM COMPANY

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ATTACHED LATTICE / COMMERCIAL STRUCTURES

TABLE A

WIND SPEED & EXPOSURE	POST SIZES AND FOOTING SIZES			WIND = 22.3/37.6/27/45.5 UPLIFT = 23.2/49.2/35.3/59.5		
	POST SIZE		FOOTING SIZE	POST SIZE		FOOTING SIZE
	MAX.	MIN.		MAX.	MIN.	
8-7'	11'-0"	14'-0"	18'-0"	8'-7"	11'-0"	14'-6"
L.L. = 20 PSF	100-B	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
	100-C	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
	110-B	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
	110-C	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
L.L. = 30 PSF	100-B	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
	100-C	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
	110-B	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
	110-C	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB

NOTE: REFER TO SHT. 8 & 12 FOR CROSS-SECTIONS & DETAIL CONNS.

TABLE FOOTINGS:
 1. CONCRETE SLAB (EXISTING OR NEW) COMPLETELY SURROUNDING NEW FOOTING.
 2. CONCRETE SLAB DOES NOT EXIST AND NO SLAB WILL BE CONSTRUCTED AS PART OF THIS INSTALLATION.

FREESTANDING LATTICE / COMMERCIAL STRUCTURES

WIND SPEED & EXPOSURE	POST SIZES AND FOOTING SIZES			WIND = 22.3/37.6/27/45.5 UPLIFT = 23.2/49.2/35.3/59.5		
	POST SIZE		FOOTING SIZE	POST SIZE		FOOTING SIZE
	MAXIMUM	MINIMUM		MAXIMUM	MINIMUM	
8-7'	11'-0"	14'-0"	18'-0"	8'-7"	11'-0"	14'-6"
L.L. = 20 PSF	100-B	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
	100-C	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
	110-B	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
	110-C	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
L.L. = 30 PSF	100-B	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
	100-C	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
	110-B	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB
	110-C	3" SQ X 125"	3" SQ X 188"	3" SQ X 188"	NO SLAB	NO SLAB

NOTE: REFER TO SHT. 9 & 12 FOR CROSS-SECTIONS & DETAIL CONNS.

TABLE FOOTINGS:
 1. CONCRETE SLAB (EXISTING OR NEW) COMPLETELY SURROUNDING NEW FOOTING.
 2. CONCRETE SLAB DOES NOT EXIST AND NO SLAB WILL BE CONSTRUCTED AS PART OF THIS INSTALLATION.

FASTENER CONNECTION (ATTACHED & FREESTANDING) TABLE C

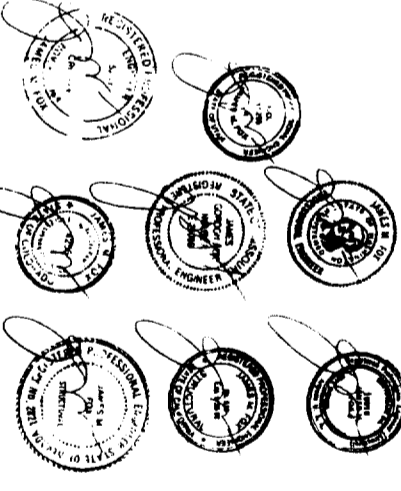
DETAIL	RAFTER TO BEAM CONNECTION			WIND SPEED & EXPOSURE		
	WIND SPEED & EXPOSURE		TO RAFT	WIND SPEED & EXPOSURE		TO BEAM
	100-B	100-C		110-B	110-C	
100-B	TO BEAM	TO RAFT	TO RAFT	TO BEAM	TO RAFT	TO BEAM
110-C	TO BEAM	TO RAFT	TO RAFT	TO BEAM	TO RAFT	TO BEAM
L.L. = 20 PSF	8	30 PSF	8	30 PSF	8	30 PSF
(10)	(21)-14 S.M.S. TENS. EA. LEG. (4-TOTAL)	(21)-14 S.M.S. TENS. EA. LEG. (4-TOTAL)	(21)-14 S.M.S. TENS. EA. LEG. (4-TOTAL)	(21)-14 S.M.S. TENS. EA. LEG. (4-TOTAL)	(21)-14 S.M.S. TENS. EA. LEG. (4-TOTAL)	(21)-14 S.M.S. TENS. EA. LEG. (4-TOTAL)

BEAM TO POST CONNECTION (ATTACHED & FREESTANDING) TABLE D

WIND SPEED & EXPOSURE	TO BEAM		TO POST		WIND SPEED & EXPOSURE		TO BEAM		TO POST	
	SHT. II		SHT. II		SHT. II		SHT. II		SHT. II	
	100-B	100-C	110-B	110-C	100-B	100-C	110-B	110-C	100-B	100-C
100-B	(3)-5/8" M.B.	(3)-3/4" M.B.	(3)-5/8" M.B.	(3)-3/4" M.B.	100-B	(3)-5/8" M.B.	(3)-3/4" M.B.	100-B	(3)-5/8" M.B.	(3)-3/4" M.B.
100-C	(3)-3/4" M.B.	(3)-1" M.B.	(3)-3/4" M.B.	(3)-1" M.B.	100-C	(3)-3/4" M.B.	(3)-1" M.B.	100-C	(3)-3/4" M.B.	(3)-1" M.B.
110-B	(3)-3/4" M.B.	(3)-1" M.B.	(3)-3/4" M.B.	(3)-1" M.B.	110-B	(3)-3/4" M.B.	(3)-1" M.B.	110-B	(3)-3/4" M.B.	(3)-1" M.B.
110-C	(3)-1" M.B.	(3)-1" M.B.	(3)-1" M.B.	(3)-1" M.B.	110-C	(3)-1" M.B.	(3)-1" M.B.	110-C	(3)-1" M.B.	(3)-1" M.B.

ASSEMBLY INSTRUCTIONS FOR FASTENERS TO WOOD STRUCTURES:
 LAG SCREWS - LAG HOLES FOR LAG SCREWS SHALL BE BORED AS FOLLOWS: THE LAG HOLE FOR THE THREADED PORTION SHALL BE AT LEAST 1/8" LARGER IN DIAMETER THAN THE LAG SCREW. THE LAG HOLE FOR THE UNTHREADED PORTION OF THE LAG SCREW SHALL BE BORED AS FOLLOWS: THE THREADED PORTION OF THE LAG SCREW SHALL BE INSERTED IN ITS LAG HOLE BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER. SOAP OR OTHER LUBRICANT SHALL BE USED ON THE LAG SCREWS OR IN THE LAG HOLES TO FACILITATE INSERTION AND PREVENT DAMAGE TO THE WOOD SCREW.
 WOOD SCREWS - LAG HOLES FOR WOOD SCREWS LOADED IN WITHDRAWAL SHALL HAVE A DIAMETER EQUAL TO APPROXIMATELY 70 PERCENT OF THE WOOD SCREW ROOT DIAMETER IN WOOD. LAG HOLES FOR WOOD SCREWS LOADED LATERALLY SHALL BE BORED AS FOLLOWS: THE PART OF THE LAG HOLE RECEIVING THE SHANK SHALL BE ABOUT SEVEN-EIGHTS THE DIAMETER OF THE SHANK AND THAT RECEIVING THE THREADS SHALL BE THE DIAMETER OF THE SHANK PLUS ONE EIGHTH THE DIAMETER OF THE SHANK. THE PART OF THE SHANK AND THAT RECEIVING THE THREADS SHALL BE THE DIAMETER OF THE SHANK PLUS ONE EIGHTH THE DIAMETER OF THE SHANK. SOAP OR OTHER LUBRICANT SHALL BE USED ON THE LAG SCREWS OR IN THE LAG HOLES TO FACILITATE INSERTION AND PREVENT DAMAGE TO THE WOOD SCREW.

- GENERAL NOTES AND SPECIFICATIONS:
1. All framing design and stresses are per the latest edition of the Uniform Building Code and the 1997 edition of the Structural Construction Manual.
 2. Alternate aluminum alloy may be substituted for those shown, provided they are of equivalent strength and have same modulus of elasticity.
 3. All concrete shall have a minimum 28 day compressive strength of 2,000 p.s.i. Concrete shall have a minimum 3/4" minimum thickness and shall be in accordance with ACI 308.1R.
 4. All footings shall bear on firm, natural undisturbed soil or certified fill. Design vertical soil bearing pressure = 1,000 p.s.f. (conform to 4.5.1.1, AASHTO, Grade C).
 5. All framing members shall be 2024 T-3 aluminum (fasteners shall be 2024 T-3 aluminum) and shall be galvanized or anodized.
 6. All framing members shall be galvanized or anodized.
 7. All framing members shall be galvanized or anodized.
 8. All framing members shall be galvanized or anodized.
 9. All framing members shall be galvanized or anodized.
 10. All framing members shall be galvanized or anodized.
 11. All framing members shall be galvanized or anodized.
 12. All framing members shall be galvanized or anodized.



IC80 ES
 EVALUATION
 REPORT NO.
 5038

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 JAMES M. FOX, STRUCTURAL ENGINEER
 6000 TELEGRAPH RD., ROBERTS, CALIFORNIA 92388

ALUMINA-LATTICE PATIO COVER
 VALLEY ALUMINUM COMPANY
 6021 278-6224

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