

**CITY OF SACRAMENTO**  
1231 I Street, Sacramento, CA 95814

**Permit No: 0105546**  
**Insp Area: 4**

**Site Address: 2057 NORTH BEND DR SAC**  
Parcel No: 225-1370-068

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

**CONTRACTOR**  
YANCEY BROTHERS  
8250 ALPINE AV STE A  
SAC CA 95826

**OWNER**  
ROBERT GARGANTILLA  
2057 NORTH BEND DR  
SAC, CA. 95835

**ARCHITECT**

**Nature of Work: 19' X 14' PATIOCOVER**

**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 B License Number 731709 Date 5-3-01 Contractor Signature JM

**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 \_\_\_\_\_  
MAY 07 2001

**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 other 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 5-3-01 Applicant/Agent Signature JM

**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 STATE FUND Policy Number 1604244 Exp Date 11/01/2001

(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 5-3-01 Applicant Signature JM

**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.**

Date of Request: \_\_\_\_\_

By: \_\_\_\_\_

**CITY OF SACRAMENTO DEVELOPMENT SERVICES DIVISION  
PLANNING AND ZONING INFORMATION REQUEST**

Project Address: 2057 North Bend Dr.

Assessor's Parcel Number: 2057100100

Previous Use: R

Description of Request/Proposed Use: 19x14 Solid Patio Cover

Is This a Change of Use? NO

Prior Applications for Project Site(P#, Z#, DRPB#): ~~2057100100~~ Zoning Designation: R-1  
P99-050

Comments: NO SIGNAGE FROM STREET

~~NO SIGNAGE FROM STREET~~ REQUIRED

NO SIGNAGE FROM STREET

Are There Any Planning Issues?: (circle one) YES  NO

\* Staff Site Plan Check Required? (Circle one) YES  NO

\* Field Inspection Required? (Circle one) YES  NO

\* Design Review/Preservation Required?: (Circle one) YES  NO

Planning Review by/Date: Michael York 6-3-01

A list of items that must be reviewed by Planning is provided on the reverse side of this form.

MICROFILM AFTER FINAL



**GENERAL NOTES:**  
(CONTINUED FROM SHEET NO. 1)

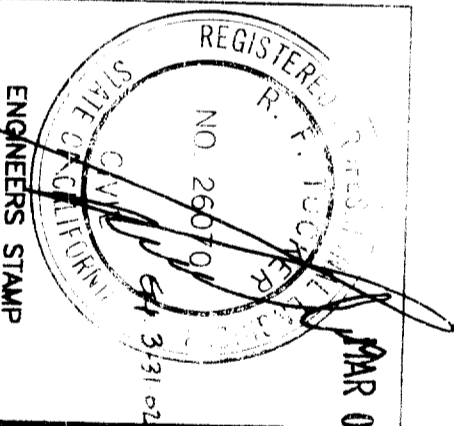
- NOTE: EXPOSURE "B" HAS TERRAIN WHICH HAS BUILDINGS, FOREST OR SURFACE IRREGULARITIES COVERING AT LEAST 20 PERCENT OF THE GROUND LEVEL AREA EXTENDING ONE MILE OR MORE FROM THE SITE.  
EXPOSURE "C" HAS TERRAIN WHICH IS FLAT AND GENERALLY OPEN, EXTENDING ONE-HALF MILE OR MORE FROM THE SITE, IN ANY FULL QUADRANT.
5. CONCRETE MIX:  $F_c=2500$  PSI 28 DAYS. APPENDIX CHAPTER 31 DIVISION III PATIO STRUCTURES MAY BE ATTACHED TO CONCRETE SLAB WITHOUT FOOTINGS WHEN THE COLUMN LOAD IS 750# OR LESS. CONCRETE SHALL BE A MINIMUM OF 3.5 INCHES THICK AND NO CRACKS WITHIN 2'-6" OF COLUMNS. COLUMNS SHALL BE SET BACK A MINIMUM OF 4 INCHES FROM EDGE OF SLAB.
  6. FOOTINGS HAVE BEEN DESIGNED FOR CLASS 5 SOIL. ALLOWABLE SOIL BEARING PRESSURE OF 1000 POUNDS PER SQUARE FOOT. STRUCTURES SUPPORTED BY FLAGPOLE TYPE COLUMNS ARE NOT ADVERSELY AFFECTED BY A 1/2 INCH LATERAL GROUND MOVEMENT AND FOOTINGS FOR THOSE STRUCTURES HAVE BEEN DESIGNED FOR AN ALLOWABLE LATERAL SOIL BEARING PRESSURE OF 200 POUNDS PER SQUARE FOOT PER FOOT OF DEPTH. SOILS OF ORGANIC CLAYS OR SILTS REQUIRE A SOIL INVESTIGATION AND SPECIALLY DESIGNED FOOTINGS. FILLS MUST BE PLACED UNDER A LABORATORY CONTROLLED COMPACTION SUBJECT TO APPROVAL OF THE BUILDING OFFICIAL.
  7. ALUMINUM BOLTS TO BE 2024-T4.
  8. COMMERCIAL STRUCTURES MAY BE USED FOR PARKING OF MOTOR VEHICLES PER LOCAL BUILDING CODES. APPENDIX CHAPTER 31 DIVISION III PATIO STRUCTURES MAY NOT BE USED FOR PARKING OF MOTOR VEHICLES.
  9. FREESTANDING STRUCTURES SHALL NOT BE ENCLOSED IN ANY MANNER
  10. STEEL BOLTS SHALL BE ASTM A-307
  11. ALTERNATE ALUMINUM ALLOYS OF EQUAL OR HIGHER STRENGTHS MAY BE USED
  12. STEEL FASTENERS SHALL BE EITHER STAINLESS, GALVANIZED OR DOUBLE CADMIUM PLATED "AN" BOLTS.
  13. HIGH STRENGTH BOLTS SHALL BE ASTM A-325.
  14. EMBEDDED COLUMN SURFACES SHALL BE CLEAN AND FREE FROM OILY SURFACES.
  15. PATIO STRUCTURES ARE DESIGNED IN ACCORDANCE WITH APPENDIX CHAPTER 31 DIVISION III OF THE UNIFORM BUILDING CODE.
  16. HEADER SPLICES SHALL NOT BE LOCATED NEARER TO THE END OF THE STRUCTURE THAN THE FIRST INTERIOR COLUMN.

17. PATIO STRUCTURES MAY BE ENCLOSED WITH INSECT SCREENING.
18. STRUCTURES MAY BE ATTACHED TO RAFTER OVERHANGS PER SCHEDULE.
19. WHERE ALUMINUM ALLOY PARTS ARE IN CONTACT WITH DISSIMILAR METALS OTHER THAN STAINLESS, ALUMINIZED OR GALVANIZED STEEL, OR ABSORBENT BUILDING MATERIALS, LIKELY TO BE CONTINUOUSLY OR INTERMITTENTLY WET, THE FACING SURFACES SHALL BE PAINTED OR OTHERWISE SEPARATED IN ACCORDANCE WITH U.B.C. SECTION 2004.3.
20. ALL SCREWS CONFORM TO ANSI B18-6-4 AND SAE J933.

**GENERAL NOTES FOR LATTICE STRUCTURES:**

(PERTAINS TO LATTICE STRUCTURES ON DRAWINGS 97SC02 AND 97LT01 THRU 97LT06.)

1. SEE GENERAL NOTES, SHEET 1, SECTION 4 FOR LEVELLOAD AND WIND LOADS.
2. OPEN LATTICE STRUCTURES SHALL NOT BE ENCLOSED.



**Amertimax**  
Engineering Services  
1140 All Pro Drive  
Elkhart, IN 46514

IOBO ES EVALUATION REPORT NO. ER-2621P

SCALE: NONE  
DRAWING OR PART NAME: GENERAL NOTES

DATE: 2/8/2000  
BY: [Signature]  
CHECKED BY: [Signature]

DATE	REVISION	DATE	REVISION



1.0 ROOF PANEL SPANS AND OVERHANGS FOR PATIO AND COMMERCIAL STRUCTURES

3 1/2" x 12" ROOF PANEL DESIGN  
SPAN FOR PATIO STRUCTURES

LIVE LOAD (PSF)	PANEL TYPE	12' HEIGHT		
		70 MPH	90 MPH	OVER HANG
10	0.018	16-7"	16-2"	7-10"
	0.024	18-8"	16-8"	8-7"
	0.032	20-6"	20-6"	9-6"
	0.036	21-4"	21-4"	9-10"
20	0.018	11-11"	11-11"	5-9"
	0.024	13-8"	13-8"	6-8"
	0.032	15-11"	15-11"	7-6"
	0.036	17-0"	17-0"	7-10"
25	0.018	10-9"	10-9"	5-2"
	0.024	12-3"	12-3"	5-11"
	0.032	14-4"	14-4"	7-0"
	0.036	15-4"	15-4"	7-3"
30	0.018	9-10"	9-10"	4-9"
	0.024	11-3"	11-3"	5-5"
	0.032	13-1"	13-1"	6-4"
	0.036	14-0"	14-0"	6-10"
40	0.018	8-7"	8-7"	4-1"
	0.024	9-10"	9-10"	4-9"
	0.032	11-5"	11-5"	5-6"
	0.036	12-3"	12-3"	5-11"
60	0.018	7-1"	7-1"	3-4"
	0.024	8-1"	8-1"	3-10"
	0.032	9-5"	9-5"	4-6"
	0.036	10-1"	10-1"	4-10"

TABLE 1.1

2 1/2" x 18" STRUCTURAL PANEL  
FOR PATIO COVERS

LIVE LOAD (PSF)	PANEL TYPE	12' HEIGHT		
		70 MPH	90 MPH	OVER HANG
10	0.018	12-4"	11-11"	5-9"
	0.018	8-10"	8-10"	4-3"
	0.018	8-0"	8-0"	3-10"
	0.018	7-4"	7-4"	3-6"
40	0.018	6-5"	6-5"	3-0"
	0.018	4-10"	4-10"	2-5"

TABLE 1.2

2 1/2" x 12" STEEL PANEL DESIGN  
SPANS FOR PATIO STRUCTURES

LIVE LOAD (PSF)	PANEL TYPE	12' HEIGHT		
		70 MPH	90 MPH	OVER HANG
10	0.0120	14-8"	14-8"	5-1"
	0.0149	16-2"	16-2"	5-5"
20	0.0120	8-4"	8-4"	4-0"
	0.0149	11-8"	11-8"	4-4"
25	0.0120	6-9"	6-9"	3-4"
	0.0149	10-6"	10-6"	4-0"
30	0.0120	5-7"	5-7"	2-9"
	0.0149	9-7"	9-7"	3-9"
40	0.0120	4-3"	4-3"	2-1"
	0.0149	8-4"	8-4"	3-5"
60	0.0120	2-10"	2-10"	1-5"
	0.0149	5-10"	5-10"	2-11"

TABLE 1.3

2 1/2" x 6" ROOF PANEL DESIGN  
SPAN FOR PATIO STRUCTURES

LIVE LOAD (PSF)	PANEL TYPE	12' HEIGHT		
		70 MPH	90 MPH	OVER HANG
10	0.018	13-5"	13-3"	6-5"
	0.020	14-5"	14-4"	6-11"
	0.024	16-3"	16-3"	7-10"
	0.032	18-8"	18-8"	8-7"
	0.036	19-4"	19-4"	8-11"
20	0.018	9-9"	9-9"	4-8"
	0.020	10-5"	10-5"	5-0"
	0.024	11-9"	11-9"	5-8"
	0.032	14-1"	14-1"	6-10"
	0.036	15-1"	15-1"	7-1"
25	0.018	8-9"	8-9"	4-2"
	0.020	9-5"	9-5"	4-6"
	0.024	10-7"	10-7"	5-1"
	0.032	12-8"	12-8"	6-1"
	0.036	13-7"	13-7"	6-7"
30	0.018	7-8"	7-8"	3-7"
	0.020	8-8"	8-8"	4-1"
	0.024	9-9"	9-9"	4-8"
	0.032	11-8"	11-8"	5-7"
	0.036	12-6"	12-6"	6-0"
40	0.018	5-10"	5-10"	2-9"
	0.020	6-11"	6-11"	3-3"
	0.024	8-6"	8-6"	4-0"
	0.032	10-2"	10-2"	4-10"
	0.036	10-11"	10-11"	5-3"
60	0.018	4-1"	4-1"	1-10"
	0.020	5-3"	5-3"	2-2"
	0.024	7-0"	7-0"	3-0"
	0.032	8-5"	8-5"	4-0"
	0.036	9-0"	9-0"	4-3"

TABLE 1.4

2 1/2" x 12" ROOF PANEL DESIGN  
SPAN FOR PATIO STRUCTURES

LIVE LOAD (PSF)	PANEL TYPE	12' HEIGHT		
		70 MPH	90 MPH	OVER HANG
10	0.018	12-4"	12-0"	5-10"
	0.024	14-5"	14-5"	6-7"
	0.032	15-9"	15-9"	7-3"
	0.036	16-5"	16-5"	7-6"
20	0.018	8-11"	8-11"	4-3"
	0.024	11-6"	11-6"	5-3"
	0.032	12-7"	12-7"	5-9"
	0.036	13-1"	13-1"	6-0"
25	0.018	8-0"	8-0"	3-10"
	0.024	10-5"	10-5"	4-10"
	0.032	11-9"	11-9"	5-4"
	0.036	12-2"	12-2"	5-6"
30	0.018	7-4"	7-4"	3-6"
	0.024	9-6"	9-6"	4-7"
	0.032	10-11"	10-11"	5-0"
	0.036	11-6"	11-6"	5-3"
40	0.018	6-5"	6-5"	3-0"
	0.024	8-4"	8-4"	4-0"
	0.032	9-6"	9-6"	4-7"
	0.036	10-0"	10-0"	4-9"
60	0.018	5-4"	5-4"	2-6"
	0.024	7-10"	7-10"	3-3"
	0.032	8-3"	8-3"	3-11"
	0.036	8-3"	8-3"	3-11"

TABLE 1.5

3 1/2" x 12" PANEL ALLOW. DESIGN SPAN  
FOR COMMERCIAL STRUCTURES

LIVE LOAD (PSF)	PANEL TYPE	EXP. B EXPOSURE C			MAX OVER HANG
		70 MPH	90 MPH	90 MPH	
20	0.018	11-11"	11-11"	11-5"	5-6"
	0.024	13-8"	13-8"	13-2"	6-5"
	0.032	15-11"	15-11"	15-6"	7-6"
	0.036	16-11"	16-11"	16-7"	7-9"
25	0.018	10-8"	10-8"	10-8"	5-2"
	0.024	12-3"	12-3"	12-3"	5-11"
	0.032	14-3"	14-3"	14-3"	6-11"
	0.036	15-3"	15-3"	15-3"	7-3"
30	0.018	9-10"	9-10"	9-10"	4-8"
	0.024	11-3"	11-3"	11-3"	5-5"
	0.032	13-1"	13-1"	13-1"	6-4"
	0.036	14-0"	14-0"	14-0"	6-9"
40	0.018	8-7"	8-7"	8-7"	4-1"
	0.024	9-10"	9-10"	9-10"	4-8"
	0.032	11-5"	11-5"	11-5"	5-6"
	0.036	12-2"	12-2"	12-2"	5-11"
60	0.018	7-1"	7-1"	7-1"	3-4"
	0.024	8-1"	8-1"	8-1"	3-10"
	0.032	9-5"	9-5"	9-5"	4-6"
	0.036	10-1"	10-1"	10-1"	4-10"

TABLE 1.6

2 1/2" x 12" STEEL PANEL ALLOW. SPAN  
FOR COMMERCIAL STRUCTURES

LIVE LOAD (PSF)	PANEL TYPE	EXP. B EXPOSURE C			MAX OVER HANG
		70 MPH	90 MPH	90 MPH	
20	0.0120	8-9"	8-9"	8-9"	4-0"
	0.0149	12-1"	12-1"	12-1"	4-4"
25	0.0120	7-1"	7-1"	7-1"	4-0"
	0.0149	10-11"	10-11"	10-11"	4-0"
30	0.0120	6-0"	6-0"	6-0"	3-4"
	0.0149	10-0"	10-0"	10-0"	3-9"
40	0.0149	4-7"	4-7"	4-7"	2-1"
	0.0149	8-4"	8-4"	8-4"	3-5"
60	0.0120	3-2"	3-2"	3-2"	1-5"
	0.0149	6-2"	6-2"	6-2"	2-11"

TABLE 1.7

2 1/2" x 18" ROOF PNL ALLOW. DSGN SPANS  
FOR COMM. STRUCTURES - ROOF HGT 18'

LIVE LOAD (PSF)	PANEL TYPE	EXP. B EXPOSURE C			MAX OVER HANG
		70 MPH	90 MPH	90 MPH	
20	0.018	7-5"	7-5"	7-5"	3-6"
	0.024	9-10"	9-10"	9-10"	4-9"
	0.030	11-8"	11-8"	11-8"	5-3"
	0.036	12-7"	12-7"	12-7"	5-9"
30	0.018	6-9"	6-9"	6-9"	3-2"
	0.024	9-1"	9-1"	9-1"	4-4"
	0.030	11-0"	11-0"	11-0"	5-0"
	0.036	11-10"	11-10"	11-10"	5-4"
40	0.018	5-11"	5-11"	5-11"	2-9"
	0.024	7-11"	7-11"	7-11"	3-9"
	0.030	9-7"	9-7"	9-7"	4-6"
	0.036	10-10"	10-10"	10-10"	4-10"
60	0.018	4-11"	4-11"	4-11"	2-3"
	0.024	6-6"	6-6"	6-6"	3-1"
	0.030	7-11"	7-11"	7-11"	3-9"
	0.036	9-0"	9-0"	9-0"	4-3"

TABLE 1.8

2 1/2" x 12" ROOF PNL ALLOW. SPAN FOR COMMERCIAL STRUCTURES

LIVE LOAD (PSF)	PANEL TYPE	EXP. B EXPOSURE C			MAX OVER HANG
		70 MPH	90 MPH	90 MPH	
20	0.018	10-5"	10-5"	10-2"	4-10"
	0.024	11-9"	11-9"	11-6"	5-6"
	0.032	14-1"	14-1"	13-10"	6-8"
	0.036	15-1"	15-1"	14-11"	7-1"
25	0.018	8-9"	8-9"	8-9"	4-2"
	0.024	9-5"	9-5"	9-5"	4-6"
	0.032	10-7"	10-7"	10-7"	5-1"
	0.036	12-8"	12-8"	12-8"	6-1"
30	0.018	7-8"	7-8"	7-8"	3-7"
	0.024	8-8"	8-8"	8-8"	4-1"
	0.032	9-9"	9-9"	9-9"	4-8"
	0.036	11-8"	11-8"	11-8"	5-7"
40	0.018	6-11"	6-11"	6-11"	3-3"
	0.024	8-6"	8-6"	8-6"	4-0"
	0.032	10-2"	10-2"	10-2"	4-10"
	0.036	10-11"	10-11"	10-11"	5-3"
60	0.018	4-1"	4-1"	4-1"	1-10"
	0.020	4-9"	4-9"	4-9"	2-2"
	0.024	6-5"	6-5"	6-5"	3-0"
	0.032	8-5"	8-5"	8-5"	4-0"
	0.036	9-0"	9-0"	9-0"	4-3"

TABLE 1.9

ALT. 2 1/2" x 12" PANEL ALLOW.  
SPAN FOR PATIO STRUCTURES

LIVE LOAD (PSF)	PANEL TYPE	12' HEIGHT		
		70 MPH	90 MPH	OVER HANG
10	0.018	14-8"	14-8"	5-4"
	0.024	16-9"	16-9"	6-8"
	0.030	15-9"	15-9"	7-2"
	0.036	16-11"	16-11"	7-9"
20	0.018	8-2"	8-2"	3-11"
	0.024	11-0"	11-0"	5-3"
	0.030	12-7"	12-7"	5-8"
	0.036	13-6"	13-6"	6-2"
25	0.018	7-5"	7-5"	3-6"
	0.024	9-10"	9-10"	4-9"
	0.030	11-8"	11-8"	5-3"
	0.036	12-7"	12-7"	5-9"
30	0.018	6-9"	6-9"	3-2"
	0.024	9-1"	9-1"	4-4"
	0.030	11-0"	11-0"	5-0"
	0.036	11-10"	11-10"	5-4"
40	0.018	5-11"	5-11"	2-9"
	0.024	7-11"	7-11"	3-9"
	0.030	9-7"	9-7"	4-6"
	0.0			

**2.0 FREESTANDING AND ATTACHED PATIO STRUCTURES**

LOAD	TRIB WIDTH	MAX COLUMN SPACING FOR ATTACHED PATIO ON SLAB		3" SQUARE STEEL HEADER		6" ROLL-FORMED C BEAM		10" ROLL-FORMED C BEAM		6" I BEAM		6 1/2" ROLL-FORMED HEADER		ALUMINUM EXTRUDED HEADER		5 1/2" EXTRUDED HEADER		TRIB WIDTH	
		USING COLUMN X 1" MAX COL LENGTH	OTHERS ON SLAB	COLUMN SPACING (FT)	CONG. FOOTER SIZE	COLUMN SPACING (FT)	CONG. FOOTER SIZE	COLUMN SPACING (FT)	CONG. FOOTER SIZE	COLUMN SPACING (FT)	CONG. FOOTER SIZE	COLUMN SPACING (FT)	CONG. FOOTER SIZE	COLUMN SPACING (FT)	CONG. FOOTER SIZE	COLUMN SPACING (FT)	CONG. FOOTER SIZE		
(PSF)	30	5'-10"	4'-10"	6'-6"	20	18-3"	31	18-3"	31	18-3"	31	18-3"	31	18-3"	31	18-3"	31	18-3"	4
	5	4'-8"		7'-5"	20	16-10"	32	16-10"	32	16-10"	32	16-10"	32	16-10"	32	16-10"	32	16-10"	5
	6			7-5"	22	16-10"	33	16-10"	33	16-10"	33	16-10"	33	16-10"	33	16-10"	33	16-10"	6
	7			7-5"	22	16-10"	33	16-10"	33	16-10"	33	16-10"	33	16-10"	33	16-10"	33	16-10"	7
	8			6-11"	23	15-8"	34	15-8"	34	15-8"	34	15-8"	34	15-8"	34	15-8"	34	15-8"	8
	9			5-10"	23	15-8"	34	15-8"	34	15-8"	34	15-8"	34	15-8"	34	15-8"	34	15-8"	9
	10			5-4"	22	15-3"	35	15-3"	35	15-3"	35	15-3"	35	15-3"	35	15-3"	35	15-3"	10
	11			5-1"	23	14-10"	36	14-10"	36	14-10"	36	14-10"	36	14-10"	36	14-10"	36	14-10"	11
	12			4-11"	25	14-8"	37	14-8"	37	14-8"	37	14-8"	37	14-8"	37	14-8"	37	14-8"	12
	40	4	4		7-8"	19	14-8"	37	14-8"	37	14-8"	37	14-8"	37	14-8"	37	14-8"	37	14-8"
5	5	5		7-2"	21	14-11"	30	14-11"	30	14-11"	30	14-11"	30	14-11"	30	14-11"	30	14-11"	5
6	6	6		6-5"	22	13-10"	31	13-10"	31	13-10"	31	13-10"	31	13-10"	31	13-10"	31	13-10"	6
7	7	7		6-1"	23	13-10"	32	13-10"	32	13-10"	32	13-10"	32	13-10"	32	13-10"	32	13-10"	7
8	8	8		5-10"	23	12-2"	33	12-2"	33	12-2"	33	12-2"	33	12-2"	33	12-2"	33	12-2"	8
9	9	9		5-8"	23	11-7"	33	11-7"	33	11-7"	33	11-7"	33	11-7"	33	11-7"	33	11-7"	9
10	10	10		5-8"	24	11-7"	33	11-7"	33	11-7"	33	11-7"	33	11-7"	33	11-7"	33	11-7"	10
11	11	11		5-8"	25	10-7"	34	10-7"	34	10-7"	34	10-7"	34	10-7"	34	10-7"	34	10-7"	11
12	12	12		5-4"	25	10-7"	34	10-7"	34	10-7"	34	10-7"	34	10-7"	34	10-7"	34	10-7"	12
4	4	4		6-6"	18	13-10"	34	13-10"	34	13-10"	34	13-10"	34	13-10"	34	13-10"	34	13-10"	4
5	5	5		6-3"	20	14-6"	31	14-6"	31	14-6"	31	14-6"	31	14-6"	31	14-6"	31	14-6"	5
6	6	6		5-10"	20	13-4"	32	13-4"	32	13-4"	32	13-4"	32	13-4"	32	13-4"	32	13-4"	6
7	7	7		5-4"	22	13-4"	34	13-4"	34	13-4"	34	13-4"	34	13-4"	34	13-4"	34	13-4"	7
8	8	8		5-1"	23	12-2"	34	12-2"	34	12-2"	34	12-2"	34	12-2"	34	12-2"	34	12-2"	8
9	9	9		4-11"	23	12-2"	35	12-2"	35	12-2"	35	12-2"	35	12-2"	35	12-2"	35	12-2"	9
10	10	10		4-11"	25	11-5"	35	11-5"	35	11-5"	35	11-5"	35	11-5"	35	11-5"	35	11-5"	10

**TABLE 2.3**

COL	COLUMN SCHEDULE FOR ATTACHED PATIO STRUCTURES	MAX COL HEIGHT	COLUMN SCHEDULE FOR FREESTANDING STRUCTURES AND INTERMEDIATE COLUMNS FOR MULTISPAN STRUCTURES
A	0.024" x 3.3" SQUARE ALUM. COLUMN	11'-8"	8'-7" MAX. COLUMN HEIGHT
B	0.027" x 1.127" SQUARE ALUM.	8'-0"	11" MAX. COLUMN LENGTH
C	0.027" x 3" SQUARE ALUM. COLUMN	11'-4"	12" MAX. COLUMN LENGTH
D	3" GLOBULED ALUM. 0.040"	12'-0"	12" MAX. COLUMN LENGTH
E	3" GLOBULED ALUM. 0.062"	12'-0"	
F	3" GLOBULED ALUM. 0.048"	12'-0"	
G	3" SQUARE STEEL COLUMN	12'-0"	
H	4" SQUARE STEEL COLUMN	12'-0"	
I	5" SQUARE STEEL COLUMN	12'-0"	
J	6" SQUARE STEEL COLUMN	12'-0"	

**TABLE 2.4**

COL	COLUMN SCHEDULE FOR FREESTANDING STRUCTURES AND INTERMEDIATE COLUMNS FOR MULTISPAN STRUCTURES	NOTES
F	8'-7" MAX. COLUMN HEIGHT	
G	11" MAX. COLUMN LENGTH	
H	12" MAX. COLUMN LENGTH	

ALL COLUMNS MAY BE REPLACED WITH A STRONGER COLUMN  
 A) MAY BE REPLACED W/ B, J  
 B) MAY BE REPLACED W/ C, I, ETC  
 LINEAR INTERPOLATION FOR ALL CALCULATIONS IS ALLOWED

**SCHEDULE OF MAX. COLUMN SPACING, FOOTING SIZE AND COLUMN TYPE FOR PATIO APPLICATIONS**

LOAD	TRIB WIDTH	0.036" x 3" 8" BEAM		0.042" x 3" 8" BEAM		DOUBLE 0.032" x 2" 6" BEAM	
		MAX. COLUMN SPACING	CONG. FOOTER SIZE	MAX. COLUMN SPACING	CONG. FOOTER SIZE	MAX. COLUMN SPACING	CONG. FOOTER SIZE
(PSF)	10	12-1"	27	14-1"	28	13-3"	27
	5'-0"	10-8"	26	12-7"	27	11-10"	24
	6'-0"	9-10"	25	11-6"	26	10-9"	24
	7'-0"	9-1"	25	10-7"	26	10-0"	26
	8'-0"	8-7"	25	9-11"	26	9-4"	26
	9'-0"	7-3"	25	8-4"	26	8-10"	26
	10'-0"	6-8"	25	8-10"	27	8-4"	27
	20	5'-0"	25	10-2"	28	8-7"	27
	4'-0"	6-10"	23	10-2"	25	8-6"	25
	5'-0"	5-8"	22	8-3"	25	7-8"	22
6'-0"	5-8"	22	8-3"	25	7-8"	22	
7'-0"	4-10"	23	7-8"	23	7-3"	23	
8'-0"	4-3"	23	6-9"	23	6-9"	23	
9'-0"	4-3"	23	6-0"	23	6-4"	25	
10'-0"	5-5"	25	5-5"	25	5-9"	25	
25	4'-0"	23	8-2"	25	8-7"	25	
5'-0"	5-8"	22	8-2"	25	7-8"	21	
6'-0"	4-7"	19	7-3"	23	7-0"	21	
7'-0"	4-7"	19	6-3"	23	6-6"	22	
8'-0"	4-10"	23	5-5"	23	5-9"	23	
9'-0"	4-10"	23	5-2"	25	5-2"	23	
10'-0"	5-9"	25	4-10"	22	4-7"	25	
30	4'-0"	17	8-4"	20	7-10"	19	
5'-0"	4-7"	22	7-4"	21	7-0"	20	
6'-0"	4-7"	22	6-1"	21	6-5"	21	
7'-0"	4-7"	22	5-3"	23	5-7"	21	
8'-0"	4-7"	22	4-7"	21	4-10"	21	
9'-0"	4-7"	22	4-10"	23	4-10"	23	
10'-0"	5-6"	22	5-6"	22	5-10"	18	
40	4'-0"	16	6-11"	18	6-11"	18	
5'-0"	4-7"	22	5-6"	19	5-10"	19	
6'-0"	4-7"	22	4-7"	19	4-11"	19	
7'-0"	4-7"	22	4-7"	19	4-11"	19	
8'-0"	4-7"	22	4-7"	19	4-11"	19	
9'-0"	4-7"	22	4-7"	19	4-11"	19	
10'-0"	4-8"	22	4-8"	16	4-11"	16	

- GENERAL METHOD FOR USING THESE TABLES**
- 1 CHOOSE FREESTANDING OR ATTACHED, COMMERCIAL OR PATIO STRUCTURE.
  - 2 CHOOSE PROJECTION WIDTH, OVERHANG, WIND LOAD AND LIVE LOAD.
  - 3 FIND TRIBUTARY WIDTH FROM TABLE 2.8 AND DRAWINGS ON 97502 OF "STRUCTURAL CONFIGURATIONS".
  - 4 CHOOSE A PANEL FROM SHEET 1 THAT HAS ADEQUATE CLEARSPAN FOR YOUR NEEDS.
  - 5 CHOOSE A HEADER FROM SHEETS 2-5 THAT HAS ADEQUATE COLUMN SPACING.
  - 6 USE THE FOOTER SIZE SHOWN.
  - 7 FOR SINGLE SPAN ATTACHED PATIO, USE THE POST SHOWN.
  - 8 LOOK AT THE TABLES PROVIDED FOR ALL OTHERS.
  - 9 FIND THE O/C SPACING OF WALL CONNECTIONS ON TABLE 6.5.
  - 10 FIND THE NUMBER OF PANEL TO HEADER FASTENERS ON TABLE A OF 97C004 DETAIL AE.
  - 11 FIND THE APPROPRIATE DETAILS ON 97C001 TO 97C003.
- FOR CONCRETE PATIO SLABS**
- 1 FOLLOW 1-4 ABOVE.
  - 2 CHOOSE A COLUMN LENGTH IF USING COLUMN "A" (8'-0" OR 10'-0")
  - 3 FIND THE MAXIMUM COLUMN SPACING ON SLABS FROM TABLE 2.1
  - 4 CHOOSE A HEADER (TABLE 2.1 OR 2.5) THAT HAS THE SAME OR GREATER COLUMN SPACING FOR THAT TRIB WIDTH AND LIVE AND WIND LOAD
  - 5 USE COLUMN TYPE "B" OR STRONGER (UNLESS USING COLUMN "A")
  - 6 FOLLOW STEP 8, 9 AND 10 ABOVE.

**TABLE 2.8**

TRIBUTARY WIDTHS FOR SINGLE SPAN ATTACHED STRUCTURES FOR GIVEN PROJECTION AND OVERHANG (ROUNDED UP)

PROJ. (FT)	OVERHANG (FT)							
	0	1	2	3	4	5	6	7
6	3	4	4	5	5	N/A	N/A	N/A
7	4	4	5	5	6	N/A	N/A	N/A
8	4	4	5	5	6	7	7	8
9	5	5	6	6	7	7	8	8
10	5	6	6	7	7	8	8	9
11	6	6	7	7	8	8	9	10
12	6	7	7	8	8	9	9	10
13	7	7	8	8	9	9	10	11
14	7	8	8	9	9	10	10	11
15	8	8	9	9	10	10	11	11
16	8	9	9	10	10	11	11	12
17	9	9	10	10	11	11	12	12
18	9	10	10	11	11	12	12	13
19	10	10	11	11	12	12	13	13
20	10	11	11	12	12	13	13	14
21	11	11	12	12	13	13	14	14
22	11	12	12	13	13	14	14	15
23	12	12	13	13	14	14	15	15
24	12	13	13	14	14	15	15	16
25	13	13	14	14	15	15	16	16
26	13	14	14	15	15	16	16	17
27	14	14	15	15	16	16	17	17
28	14	15	15	16	16	17	17	18
29	15	15	16	16	17	17	18	18
30	15	16	16	17	17	18	18	18
31	16	16	17	17	18	18	19	19
32	16	17	17	18	18	19	19	20
33	17	17	18	18	19	19	20	20
34	17	18	18	19	19	20	20	21
35	18	18	19	19	20	20	21	21
36	18	19	19	20	20	21	21	22
37	19	19	20	20	21	21	22	22
38	19	20	20	21	21	22	22	23
39	20	20	21	21	22	22	23	23
40	20	21	21	22	22	23	23	24
41	21	21	22	22	23	23	24	24
42	21	22	22	23	23	24	24	25

THIS TABLE MAY BE USED FOR COMMERCIAL, PATIO OR LATTICE STRUCTURES

**REGISTERED PROFESSIONAL ENGINEER**  
**R. F. TUCKER**  
 NO. 26070  
 Exp 3-31-02  
 MAR 03 2000  
 CIVIL ENGINEER  
 STATE OF CALIFORNIA

**Amerimax**  
**ENGINEERING, INC.**  
 1140 ALL PRO DRIVE  
 ELKHART, IN 46514

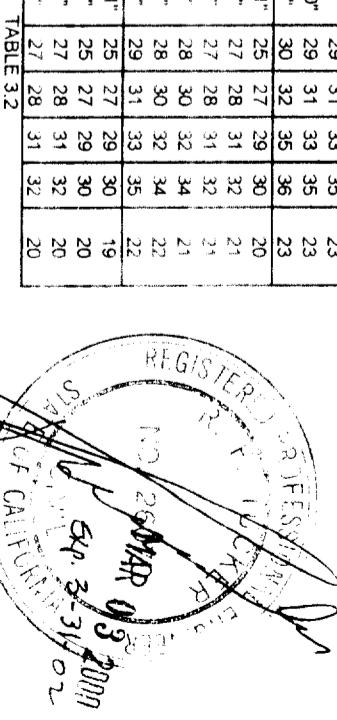
ICBO'S EVALUATION REPORT ER-2621P  
 HEADER SPANS, COLUMN SPACING,  
 FOOTER SIZE AND COLUMN TYPE FOR  
 FREESTANDING AND ATTACHED  
 PATIO STRUCTURES  
 SHEET 3 OF 8  
 DATE: 2/8/2000

**3.0 FREESTANDING AND ATTACHED COMMERCIAL STRUCTURES**

LIVE LOAD WIDTH (PSF)	TRIB	6" I BEAM				7" I BEAM				10" I BEAM									
		MAX COLUMN SPACING	CON'S FOOTER SIZE	ATT FOOTER SIZE	MAX COLUMN SPACING	CON'S FOOTER SIZE	ATT FOOTER SIZE	MAX COLUMN SPACING	CON'S FOOTER SIZE	ATT FOOTER SIZE	MAX COLUMN SPACING	CON'S FOOTER SIZE	ATT FOOTER SIZE						
25	4	22'-6"	33	35	38	40	28	24'-11"	34	36	39	41	29	30'-7"	36	38	41	43	31
5	5	20'-1"	33	35	37	39	29	22'-4"	33	35	38	40	31	27'-4"	35	37	40	42	33
6	6	18'-4"	32	34	37	38	30	20'-4"	33	35	37	39	32	24'-11"	34	36	39	41	33
7	7	17'-0"	31	33	36	37	31	18'-10"	32	34	37	38	32	23'-1"	33	35	38	40	35
8	8	15'-11"	32	32	35	36	32	17'-8"	33	33	36	37	33	21'-7"	35	35	37	39	35
9	9	15'-0"	32	32	35	36	32	16'-7"	34	34	36	37	34	20'-4"	36	36	37	39	36
10	10	14'-2"	33	33	35	36	33	15'-9"	34	34	35	36	34	19'-4"	37	37	37	38	37
11	11	13'-6"	34	34	34	35	34	15'-0"	35	35	35	36	35	18'-10"	37	37	37	38	37
12	12	13'-0"	34	34	34	35	34	14'-5"	35	35	35	36	35	18'-1"	38	38	38	38	38
13	13	12'-5"	35	35	35	35	35	13'-10"	35	35	35	36	35	17'-4"	38	38	38	38	38
14	14	12'-0"	35	35	35	35	35	13'-4"	36	36	36	36	36	16'-8"	38	38	38	38	38
15	15	11'-7"	36	36	36	36	36	12'-10"	36	36	36	36	36	16'-2"	39	39	39	39	39
90 MPH EXPOSURE C																			
30	4	21'-1"	33	35	37	39	28	24'-11"	34	36	39	41	29	31'-3"	36	38	41	43	32
5	5	18'-10"	32	34	37	38	29	22'-4"	33	35	38	40	31	28'-0"	35	37	40	42	33
6	6	17'-2"	31	33	36	37	30	20'-4"	33	35	37	39	32	25'-6"	34	36	39	41	34
7	7	15'-11"	30	32	35	36	30	18'-10"	32	34	37	38	32	23'-8"	35	35	38	40	35
8	8	14'-10"	31	32	35	36	31	17'-8"	33	34	36	37	33	22'-10"	36	36	38	40	36
9	9	14'-0"	32	32	33	34	32	16'-7"	34	34	36	37	34	20'-10"	36	36	37	39	36
10	10	13'-4"	33	33	33	34	33	15'-9"	34	34	35	36	34	19'-9"	37	37	37	38	37
11	11	12'-8"	33	33	33	34	33	15'-0"	35	35	35	36	35	18'-10"	37	37	37	38	37
12	12	12'-2"	34	34	34	35	34	14'-5"	36	36	36	36	36	17'-4"	38	38	38	38	38
13	13	11'-8"	34	34	34	35	34	13'-10"	36	36	36	36	36	16'-8"	38	38	38	38	38
14	14	11'-3"	35	35	35	35	35	13'-4"	36	36	36	36	36	16'-2"	39	39	39	39	39
90 MPH EXPOSURE B / 70 MPH EXPOSURE C																			
30	4	18'-4"	28	30	32	34	26	22'-3"	29	31	34	35	28	30'-7"	32	34	36	38	31
5	5	16'-4"	27	29	31	33	27	19'-10"	28	30	32	34	28	27'-4"	32	32	35	37	32
6	6	14'-11"	27	28	30	32	27	18'-2"	30	30	32	34	30	24'-11"	33	33	34	36	33
7	7	13'-10"	28	28	29	31	28	16'-9"	30	30	31	33	30	23'-1"	34	34	34	35	34
8	8	12'-11"	29	29	31	31	29	15'-8"	31	31	32	32	31	21'-7"	35	35	35	35	35
9	9	12'-2"	30	30	31	31	29	14'-10"	31	31	32	32	31	20'-4"	35	35	35	35	35
10	10	11'-7"	30	30	30	30	30	14'-0"	33	33	33	33	33	19'-4"	36	36	36	36	36
11	11	11'-0"	30	30	30	30	30	13'-5"	33	33	33	33	33	18'-9"	36	36	36	36	36
12	12	10'-7"	31	31	31	31	31	12'-10"	33	33	33	33	33	17'-11"	37	37	37	37	37
90 MPH EXPOSURE C																			
40	4	18'-4"	32	34	37	38	27	22'-3"	33	35	38	40	28	30'-7"	36	38	41	43	31
5	5	16'-4"	31	33	36	37	28	19'-10"	32	34	37	38	29	27'-4"	35	37	40	42	33
6	6	14'-11"	30	32	35	36	29	18'-2"	32	34	37	38	30	24'-11"	34	36	39	41	35
7	7	13'-10"	29	31	33	35	28	16'-9"	31	33	36	37	31	23'-1"	35	35	38	40	35
8	8	12'-11"	30	31	33	35	30	15'-8"	32	32	35	36	32	21'-7"	35	35	37	39	35
9	9	12'-2"	31	31	33	35	30	14'-10"	32	32	35	36	32	20'-4"	36	36	37	39	36
10	10	11'-7"	31	31	32	34	31	14'-0"	33	33	33	34	33	19'-4"	37	37	37	38	37
11	11	11'-0"	31	31	32	34	31	13'-5"	34	34	34	35	34	18'-9"	38	38	38	38	38
12	12	10'-7"	32	32	32	34	32	12'-10"	34	34	35	36	34	17'-11"	38	38	38	38	38
90 MPH EXPOSURE C																			
60	4	15'-0"	30	32	35	36	25	18'-3"	32	34	37	38	27	25'-7"	34	36	39	41	30
5	5	13'-5"	29	31	33	35	26	16'-3"	31	33	36	37	28	22'-10"	33	35	38	40	31
6	6	12'-3"	29	31	33	35	27	14'-10"	30	32	35	36	29	20'-10"	33	35	37	39	32
7	7	11'-4"	28	30	32	34	28	13'-9"	30	31	33	35	30	19'-4"	33	34	37	38	33
8	8	10'-7"	28	30	32	34	28	12'-10"	31	31	33	35	31	18'-1"	34	34	37	38	34
9	9	10'-0"	29	29	31	32	29	12'-2"	33	33	33	35	31	17'-0"	34	34	36	37	34
10	10	9'-6"	30	30	30	31	32	11'-5"	33	33	33	34	33	16'-2"	35	35	36	37	35

TABLE 3.1

LIVE LOAD (PSF)	PROJ. TON	5" I/2" EXTRUDED HEADER					
		MAX COLUMN SPACING	CON'S FOOTER SIZE	ATT FOOTER SIZE	TRIB WIDTH		
25	8	10'-0"	23	25	27	28	21
9	9	9'-5"	23	25	27	28	22
10	10	8'-11"	23	25	27	28	22
11	11	8'-6"	24	26	28	29	22
12	12	8'-2"	24	26	28	29	22
13	13	7'-10"	24	26	28	29	23
14	14	7'-6"	25	27	29	31	23
15	15	7'-3"	25	27	29	31	23
90 MPH EXPOSURE B							
25	8	10'-0"	23	25	27	28	21
9	9	9'-5"	23	25	27	28	22
10	10	8'-11"	23	25	27	28	22
11	11	8'-6"	24	26	28	29	22
12	12	8'-2"	24	26	28	29	22
13	13	7'-10"	24	26	28	29	23
14	14	7'-6"	25	27	29	31	23
15	15	7'-3"	25	27	29	31	23
90 MPH EXPOSURE C							
30	8	9'-2"	27	28	31	32	21
9	9	8'-7"	27	28	31	32	21
10	10	8'-2"	27	28	31	32	22
11	11	7'-9"	28	30	32	34	22
12	12	7'-5"	28	30	32	34	22
13	13	7'-2"	29	31	33	35	23
14	14	6'-10"	29	31	33	35	23
15	15	6'-7"	30	32	35	36	23
90 MPH EXPOSURE B							
30	8	9'-2"	27	28	31	32	21
9	9	8'-7"	27	28	31	32	21
10	10	8'-2"	27	28	31	32	22
11	11	7'-9"	28	30	32	34	22
12	12	7'-5"	28	30	32	34	22
13	13	7'-2"	29	31	33	35	23
14	14	6'-10"	29	31	33	35	23
15	15	6'-7"	30	32	35	36	23
90 MPH EXPOSURE C							
30	8	9'-2"	27	28	31	32	21
9	9	8'-7"	27	28	31	32	21
10	10	8'-2"	27	28	31	32	22
11	11	7'-9"	28	30	32	34	22
12	12	7'-5"	28	30	32	34	22
13	13	7'-2"	29	31	33	35	23
14	14	6'-10"	29	31	33	35	23
15	15	6'-7"	30	32	35	36	23



COL	COLUMN DESCRIPTION	SINGLE SPAN ATTACHED	FREESTANDING OR MULTISPAN ATTACHED
A	FOR ALL COLUMNS SEE DETAIL "X" AND "Y"		
E	3" CLOVERLEAF STEEL COL	12'-0"	8'-7"
F	3" SQUARE STEEL COLUMN	18'-0"	11'-0"
G	4" SQUARE STEEL COLUMN	18'-0"	15'-0"
H	5" SQUARE STEEL COLUMN	18'-0"	18'-0"
J	6" SQUARE STEEL COLUMN	18'-0"	18'-0"

TABLE 3.3

**5.0 FREESTANDING AND ATTACHED LATTICE COMMERCIAL STRUCTURES**

LIVE LOAD	TRIB WIDTH	8" C BEAM HEADER				LIVE LOAD	TRIB WIDTH	8" C BEAM HEADER									
		MAX COLUMN SPACING	CONSTRAINED FOOTER SIZES	ATTACHED	MIN COL TYPE			MAX COLUMN SPACING	CONSTRAINED FOOTER SIZES	ATTACHED	MIN COL TYPE						
20	4'	31'-9"	27	29	32	33	21	D	30	4'	27'-9"	30	32	34	35	23	D
		29'-6"	27	29	31	33	22	D			25'-9"	30	32	34	36	25	E
		27'-9"	27	28	31	32	23	D			23'-1"	33	35	38	40	24	E
		25'-8"	27	28	31	32	24	D			21'-1"	33	35	38	40	24	E
		24'-0"	29	31	34	35	24	E			19'-6"	32	34	37	38	26	E
		22'-8"	29	31	34	35	25	E			20'-11"	29	31	33	35	26	E
		21'-6"	29	31	34	35	25	E			18'-3"	32	34	37	38	27	E
		21'-6"	29	31	34	35	25	E			19'-2"	28	30	32	34	26	E
		21'-9"	29	30	33	34	29	E			18'-2"	28	30	32	34	27	E
		21'-9"	29	30	33	34	29	E			16'-4"	31	33	36	37	28	E
20	4'	31'-9"	31	33	36	38	24	D	40	4'	25'-3"	30	32	34	36	23	E
		29'-6"	31	33	35	37	26	D			23'-5"	29	31	34	35	24	E
		27'-9"	30	32	35	36	27	D			22'-0"	29	31	33	35	25	E
		26'-1"	30	32	35	36	28	E			20'-11"	29	31	33	35	26	E
		24'-4"	30	32	34	36	29	E			20'-0"	30	32	32	34	26	E
		23'-0"	29	31	33	35	29	E			19'-6"	30	32	32	34	26	E
		21'-9"	29	31	33	35	29	E			18'-3"	32	34	37	38	27	E
		21'-9"	29	31	33	35	29	E			19'-2"	28	30	32	34	27	E
		21'-9"	29	30	33	34	29	E			18'-2"	28	30	32	34	27	E
		21'-9"	29	30	33	34	29	E			16'-4"	31	33	36	37	28	E
25	4'	29'-6"	31	33	35	37	24	D	60	4'	22'-0"	33	35	37	39	22	E
		27'-4"	30	32	35	37	25	D			20'-5"	33	35	37	39	24	E
		25'-9"	30	32	34	36	26	E			19'-3"	32	34	37	38	24	E
		24'-6"	30	32	34	36	26	E			17'-10"	31	33	36	37	25	E
		23'-5"	29	31	34	35	24	E			17'-10"	31	33	36	37	26	E
		22'-5"	29	31	34	35	25	E			16'-9"	30	32	35	36	26	E
		22'-5"	29	31	34	35	25	E			15'-9"	30	32	35	36	26	E
		21'-6"	29	31	34	35	25	E			14'-11"	30	32	35	36	26	E
		21'-6"	29	31	34	35	25	E			14'-11"	30	32	35	36	26	E
		21'-6"	29	31	34	35	25	E			14'-11"	30	32	35	36	26	E

COL	COLUMN DESCRIPTION FOR ALL COLUMNS SEE DETAILS "K", "L" AND "M"	MAXIMUM COLUMN HEIGHT
D	FLUTED COLUMN ALUM. 0.062	12'-0"
E	3" OVERLEAF STEEL 0.048	18'-0"
F	3" SQUARE STEEL COLUMN	11'-0"
G	4" SQUARE STEEL COLUMN	15'-0"
H	5" SQUARE STEEL COLUMN	18'-0"
I	6" SQUARE STEEL COLUMN	18'-0"

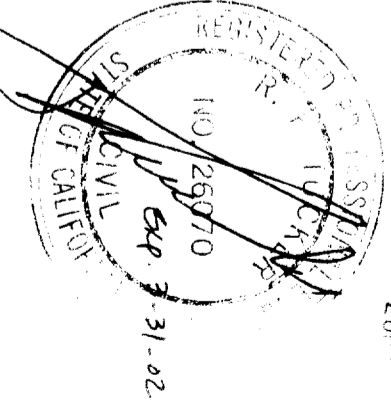
24" O.C. 3"x8" RAFTER CLEARSPANS	MAX ROOF HEIGHT 18'	EXPOSURES	MAX OVER HANG
LIVE LOAD (PSF)	"w"	B AND C	HANG
20	0.036	7-8"	4'-11"
25	0.042	8-10"	6'-7"
30	0.048	11-9"	5'-10"
40	0.064	7-8"	3'-10"
60	0.102	5-10"	5'-4"
	0.032	9-4"	4'-8"
	0.024	N/A	1'-11"
	0.032	7-8"	3'-10"

TRIBUTARY WIDTHS (FT) FOR SINGLE SPAN ATTACHED STRUCTURES FOR A GIVEN PROTECTION AND OVERHANG (ROUNDED UP)	1	1 1/2	2	2 1/2	3
PROJ. (FT)	0	1	1	1	1
17'	4	4	4	4	4
16	4	4	4	4	4
15	4	4	4	4	4
14	4	4	4	4	4
13	4	4	4	4	4
12	4	4	4	4	4
11	4	4	4	4	4
10	4	4	4	4	4
9	4	4	4	4	4
8	4	4	4	4	4
7	4	4	4	4	4
6	4	4	4	4	4
5	4	4	4	4	4
4	4	4	4	4	4
3	4	4	4	4	4

- GENERAL METHOD FOR USING THESE TABLES
1. CHOOSE FREESTANDING OR ATTACHED COMMERCIAL OR PATIO LATTICE STRUCTURE.
  2. DETERMINE PROTECTION, WIDTH, OVERHANG, WIND LOAD AND LIVE LOAD.
  3. FIND TRIBUTARY WIDTH FROM TABLE 5.6 AND DRAWING 57SC02.
  4. CHOOSE A RAFTER FROM TABLES 4.3, 4.5, 5.3 OR 5.4 THAT HAS ADEQUATE CLEARSPAN FOR YOUR NEEDS.
  5. CHOOSE A HEADER FROM TABLES 4.1, 4.2 OR 5.2 THAT HAS ADEQUATE COLUMN SPACING.
  6. USE THE FOOTER SIZE SHOWN.
  7. USE THE COLUMN SHOWN FOR SINGLE SPAN ATTACHED PATIO.
  8. LOOK AT THE TABLES PROVIDED FOR ALL OTHERS.
  9. FIND THE APPROPRIATE DETAILS IN THE CONNECTION DETAILS SHEETS.

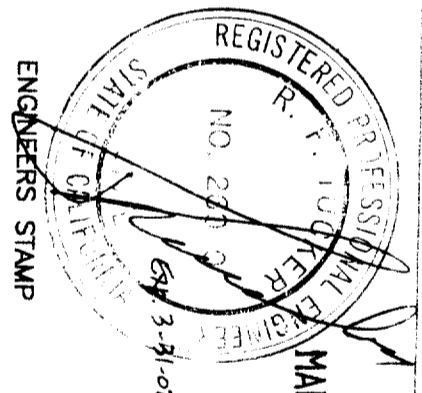
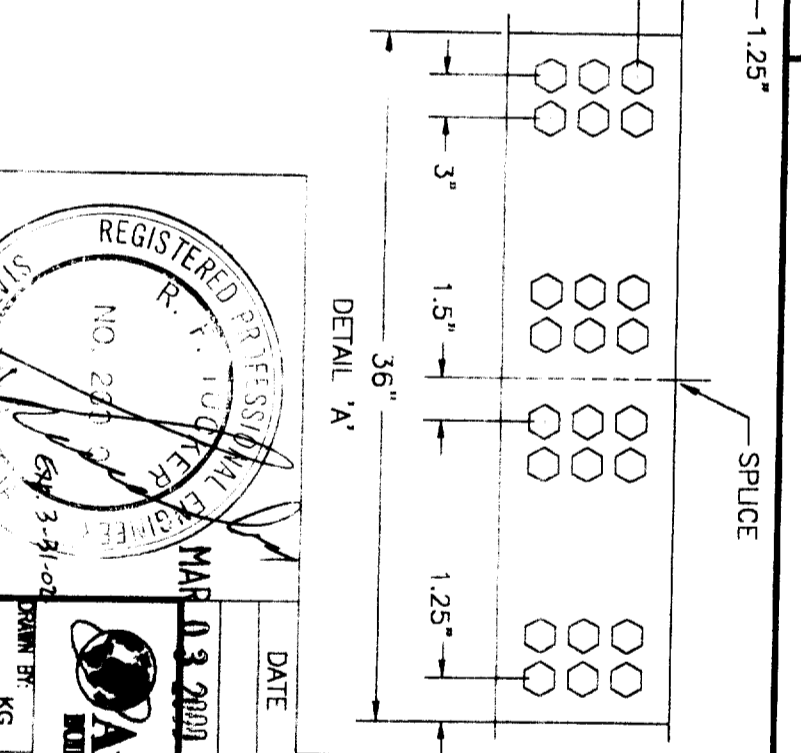
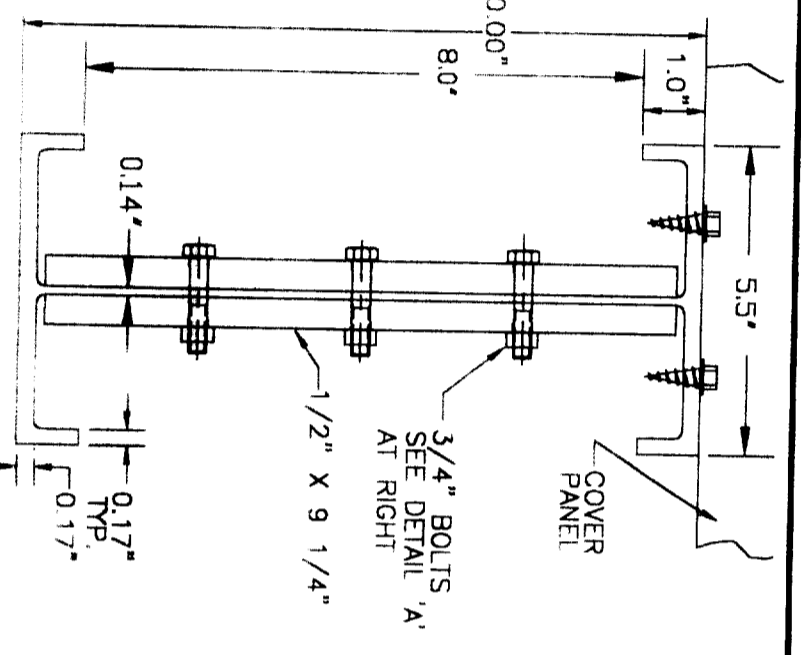
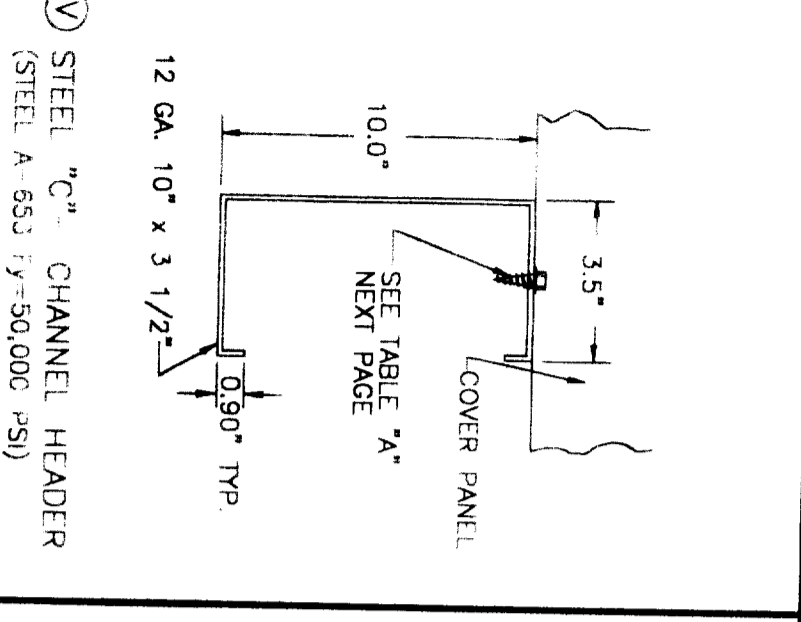
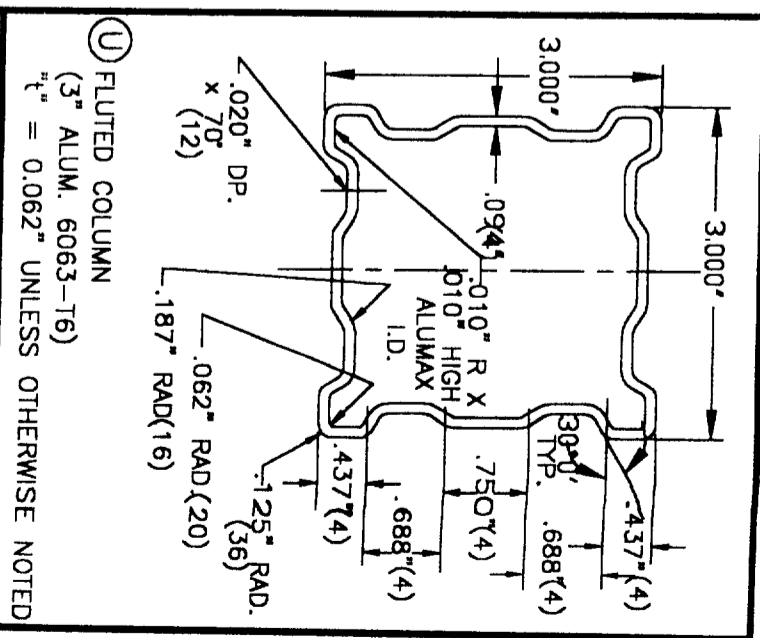
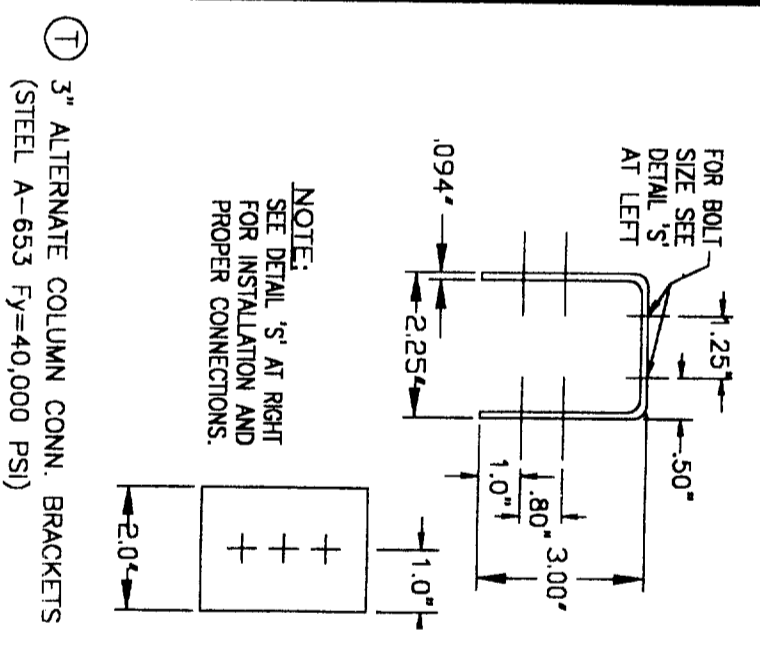
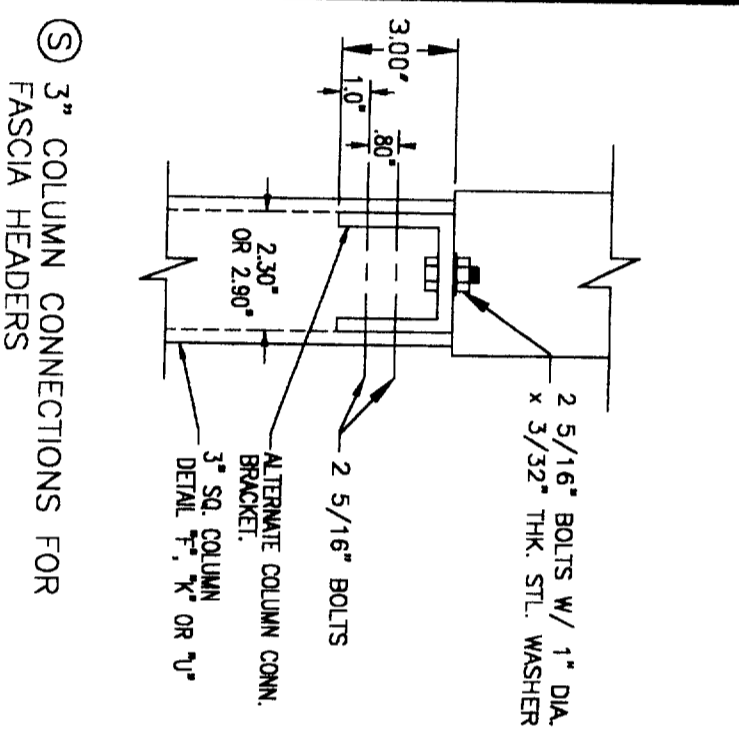
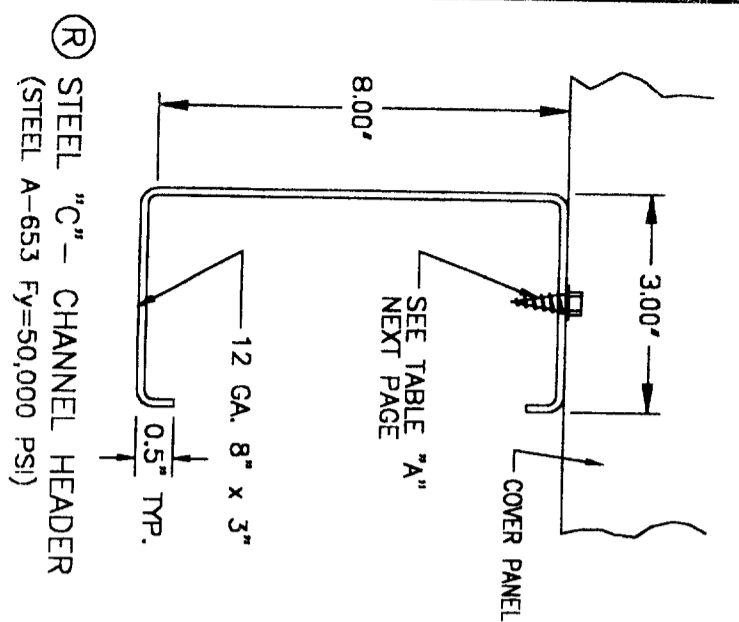
- FOR CONCRETE PATIO SLABS
1. FOLLOW 1.4 ABOVE.
  2. FIND THE MAXIMUM COLUMN SPACING ON SLAB FROM THE DESIRED COLUMN HEIGHT.
  3. CHOOSE A HEADER FROM TABLE 4.1 OR 4.2 THAT CAN SPAN THAT DISTANCE FOR THAT TRIM WIDTH AND LIVE AND WIND LOAD.
  4. FIND THE APPROPRIATE DETAILS IN THE CONNECTION DETAILS SHEETS.

**Amerimax**  
BUILDING PRODUCTS, INC.  
1140 ALL PRO DRIVE  
ELMHART, IN 46514  
ICBO'S EVALUATION REPORT ER-2621P  
HEADER SPANS, COLUMN SPACING,  
FOOTER SIZE AND COLUMN TYPE FOR  
FREESTANDING AND ATTACHED  
COMMERCIAL LATTICE STRUCTURES  
SHEET 7 OF 8  
DATE: 2/8/2000



MAR 03 2002





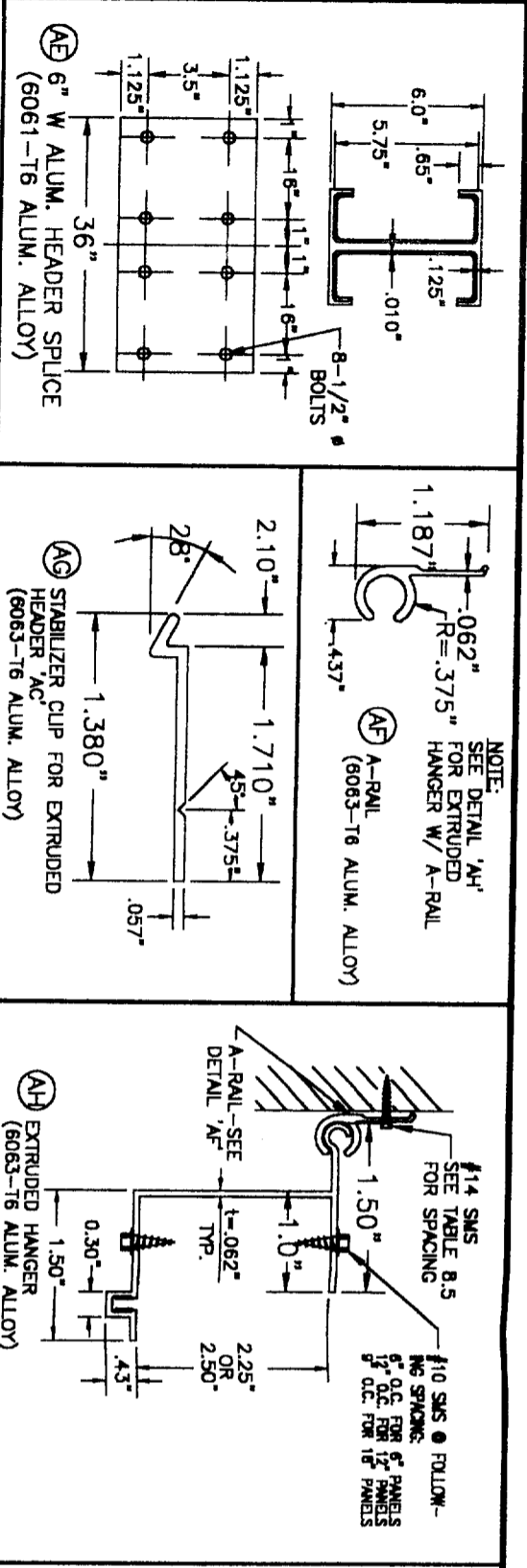
**Amerimax** Engineering Services  
1140 All Pro Drive  
Elkhart, IN 46514

ICBO ES EVALUATION REPORT NO. ER-2621P

DATE	REVISION	DATE	REVISION
MAR 03 2000			

DRAWN BY: KG  
SCALE: NONE  
DATE: 2/8/2000

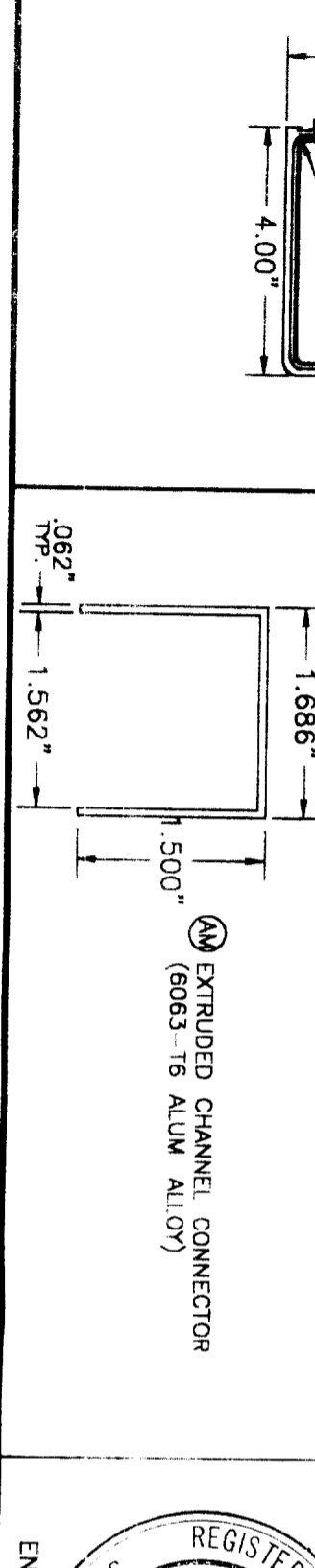
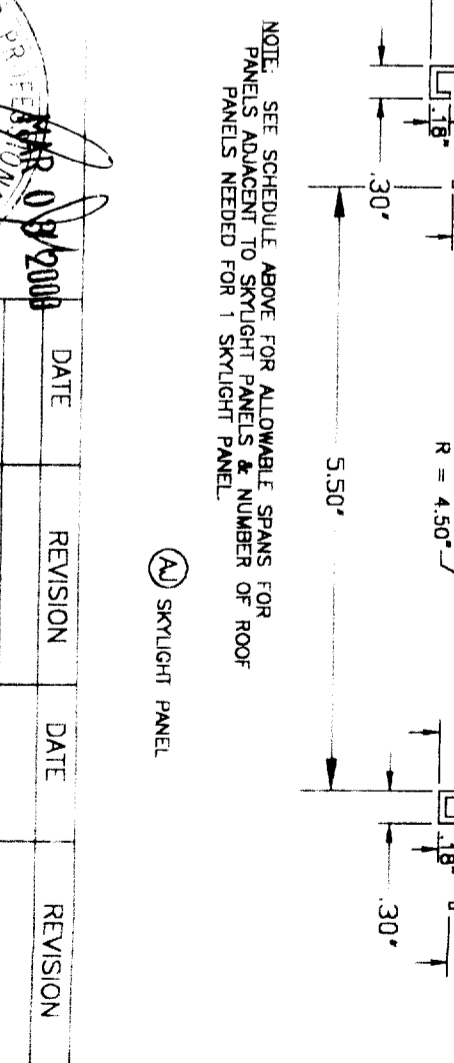
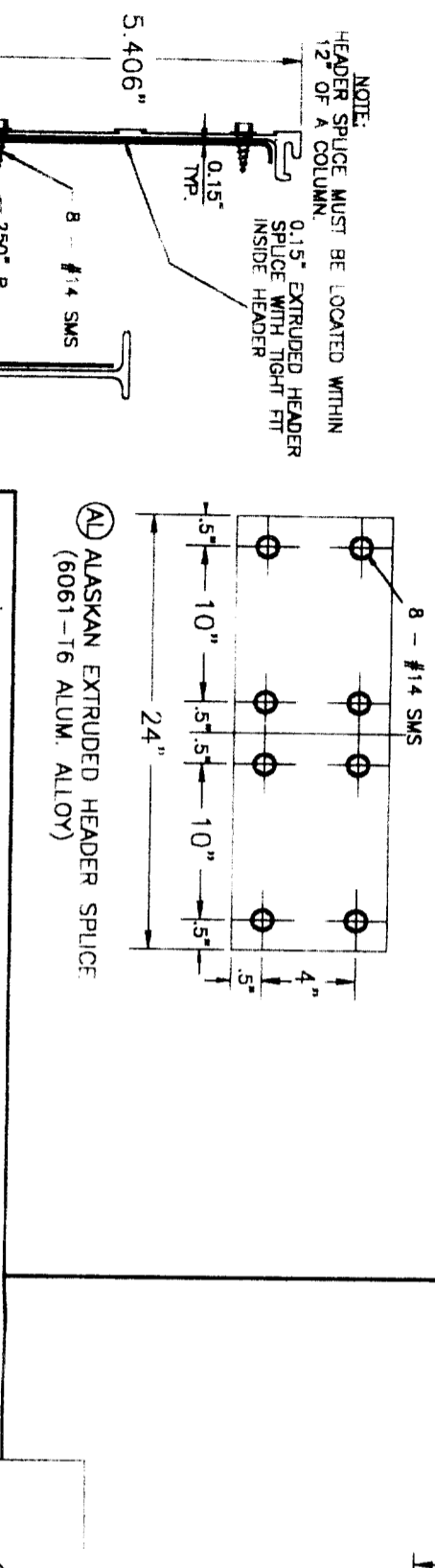
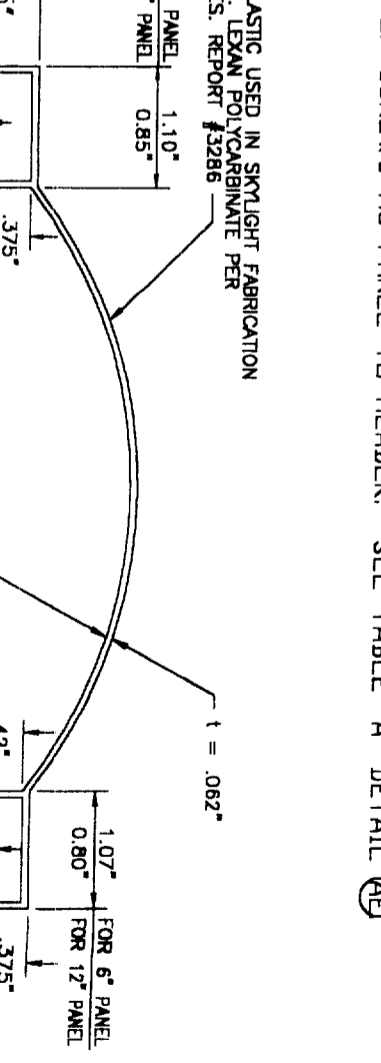
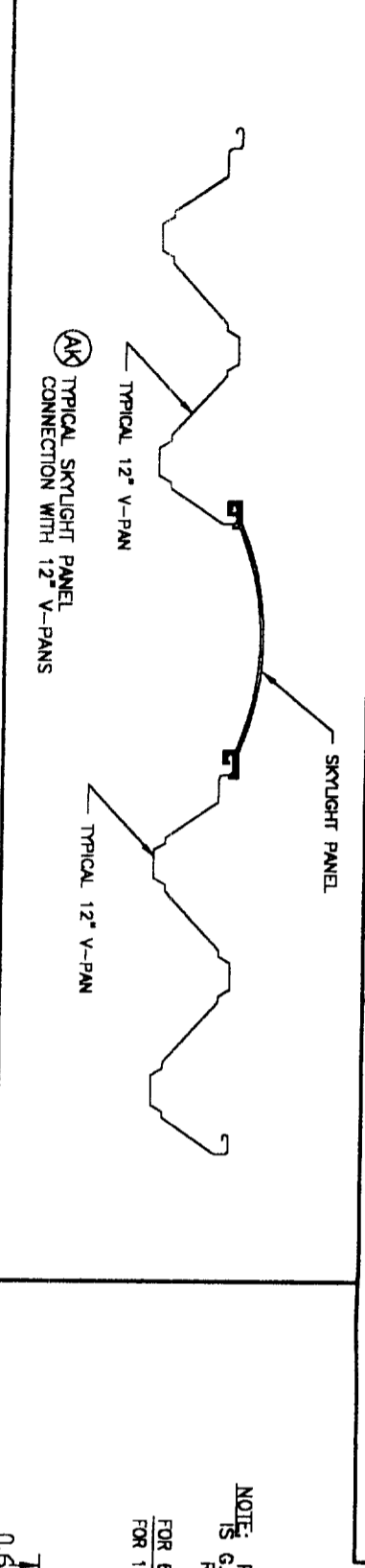
DRAWING OR PART NAME: ICB0 ES EVALUATION REPORT PARTS & CONNECTION DETAILS  
DRAWING NUMBER: 97CD03  
SHEET: 3 OF 9



**SCHEDULE OF ALLOWABLE SPANS FOR 6" & 12" PANELS ADJACENT TO SKYLIGHT PANELS.**

LEVEL LOAD (PSF)	*6" PANEL SPANS				*12" PANEL SPANS			
	t = 0.018	t = 0.024	t = 0.032	t = 0.036	t = 0.018	t = 0.024	t = 0.032	t = 0.036
10	11'-9"	14'-5"	17'-2"	17'-9"	11'-0"	13'-3"	14'-7"	15'-1"
20	8'-8"	10'-6"	12'-6"	13'-5"	7'-11"	10'-4"	11'-8"	12'-1"
25	7'-2"	9'-5"	11'-3"	12'-1"	7'-2"	9'-3"	10'-7"	11'-2"
30	6'-1"	8'-8"	10'-4"	11'-1"	6'-7"	8'-6"	9'-9"	10'-3"

\* USE A MINIMUM OF (1) SKYLIGHT PANEL PER (4) - 6' ROOF PANELS AND (1) SKYLIGHT PANEL PER (2) - 12' ROOF PANELS FOR SKYLIGHT TO PANEL CONNECTIONS, USE THE SAME NUMBER OF SCREWS AS PANEL TO HEADER. SEE TABLE 'A' DETAIL **AD**

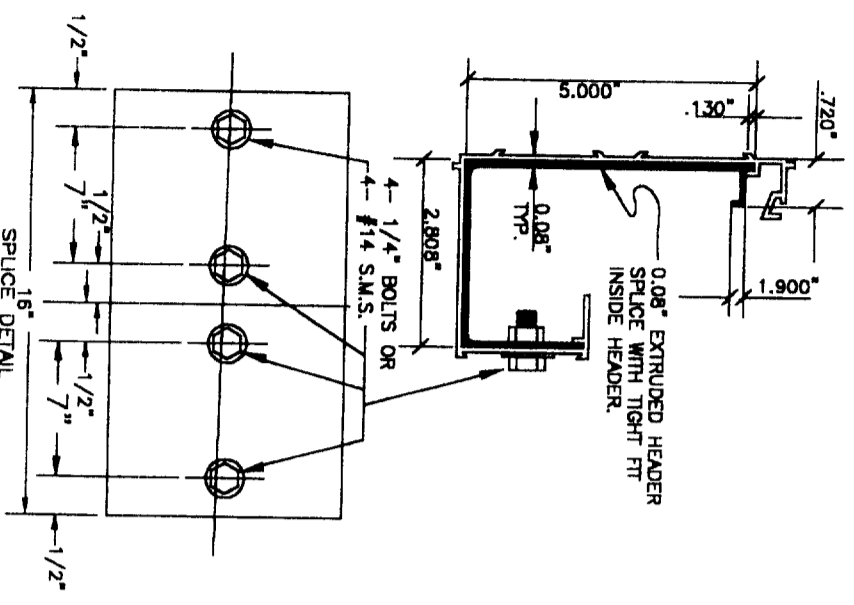


**REGISTERED PROFESSIONAL ENGINEER**  
**R. F. LUCKER**  
 NO. 26070  
 STATE OF CALIFORNIA  
 APR 09/2008  
 643 3146

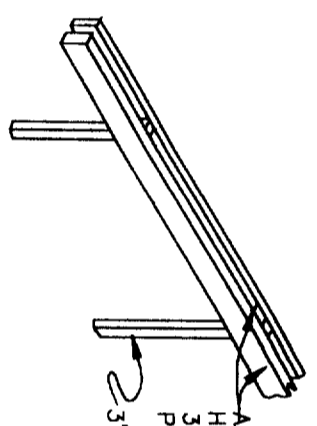
**Amerimax**  
 ROLLING PRODUCTS, INC.  
 Engineering Services  
 1140 All Pro Drive  
 Elkhart, IN 46514

SCALE: NONE  
 DRAWING OR PART NAME: ICBO ES EVALUATION REPORT NO. ER-2621P  
 DATE: 2/8/2000  
 DRAWING NUMBER: 97CD05  
 SHEET: 5 OF 9

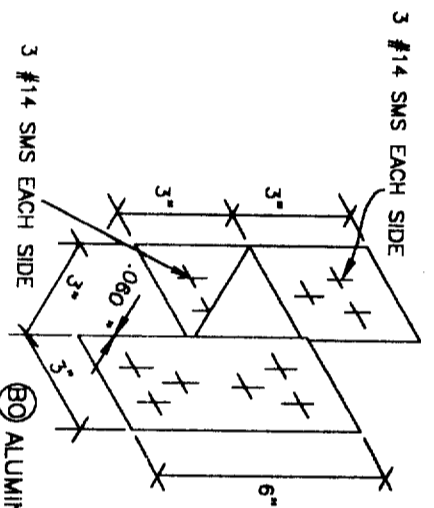




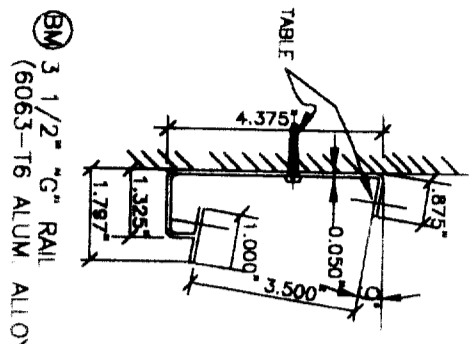
BA 5 1/2" EXTRUDED HEADER SPLICE  
(6061-T6 ALUM. ALLOY)



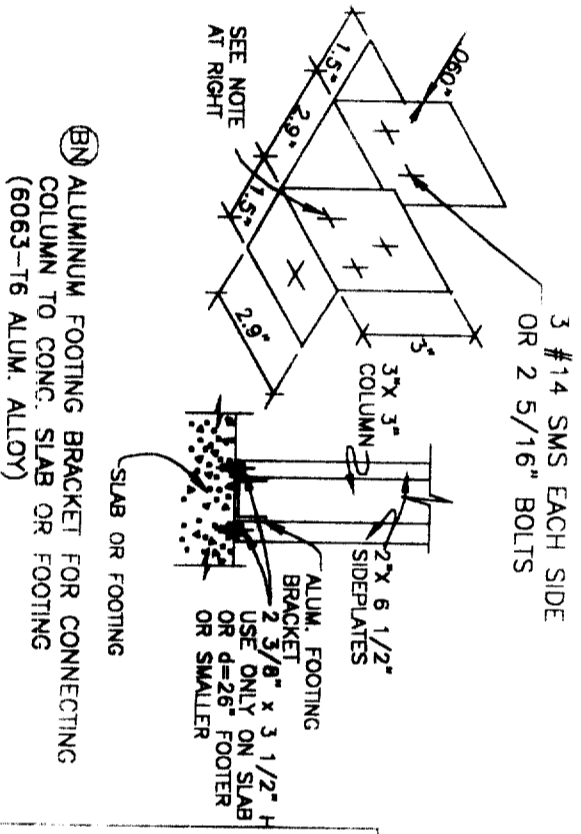
BK ALTERNATE 2-2" X 6 1/2" HEADERS



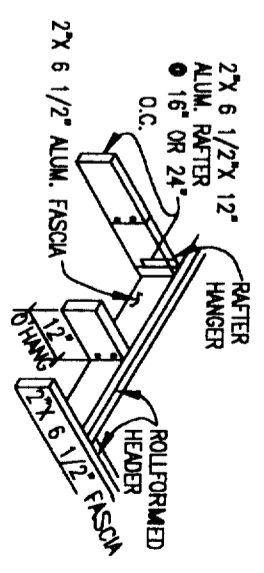
BO ALUMINUM "H" BRACKET FOR  
CONNECTING COLUMN TO HEADER  
(6063-T6 ALUM. ALLOY)



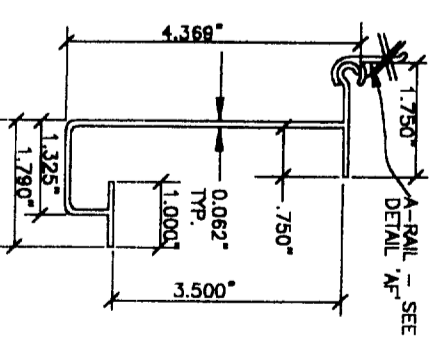
BM 3 1/2" "G" RAIL  
(6063-T6 ALUM. ALLOY)



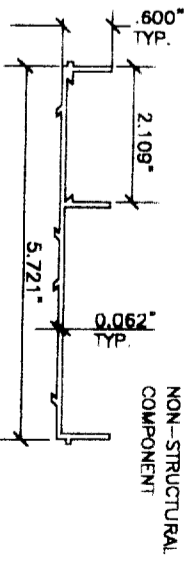
BN ALUMINUM FOOTING BRACKET FOR CONNECTING  
COLUMN TO CONC. SLAB OR FOOTING  
(6063-T6 ALUM. ALLOY)



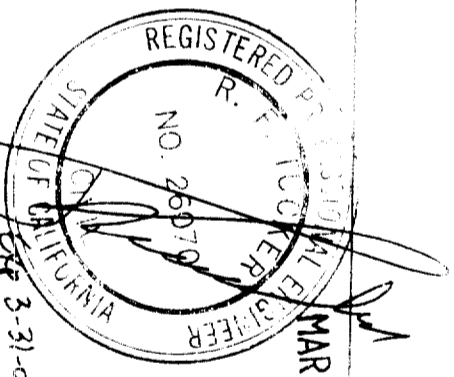
BL ALTERNATE-DECORATIVE  
FASCIA TRIM



BP 3 1/2" "J" HANGER  
(6063-T6 ALUM. ALLOY)



BO 5 1/2" EXTRUDED SIDE FASCIA  
(6063-T6 ALUM. ALLOY)



ENGINEERS STAMP

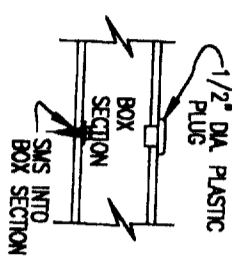


**Amerimax**  
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Elkhart, IN 46514

DRAWN BY: KG	ICBO ES EVALUATION REPORT NO. ER-2621P
SCALE: NONE	DRAWING OR PART NAME: COMPONENT PARTS & CONNECTION DETAILS
DATE: 2/8/2000	DRAWING OR PART NUMBER: 97CD09
	SHEET: 9 OF 9

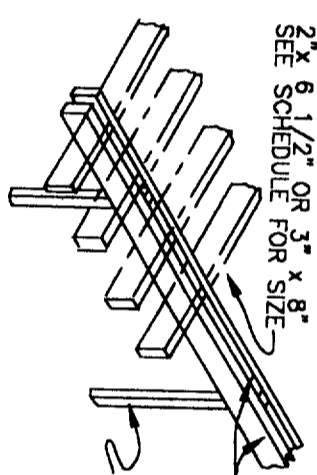
NON-STRUCTURAL  
COMPONENT

REVISION	DATE	REVISION

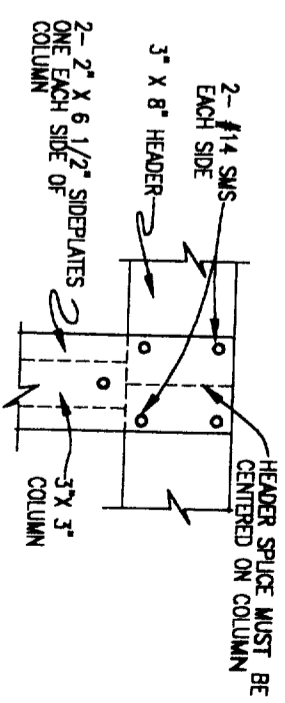


NOTE: USE PLASTIC PLUG TO FILL 1/2" DIA. ACCESS HOLES USED WHEN ATTACHING SMS INTO ANOTHER BOX SECTION IN WHICH THE SMS LENGTH WOULD EXCEED 2 1/2".

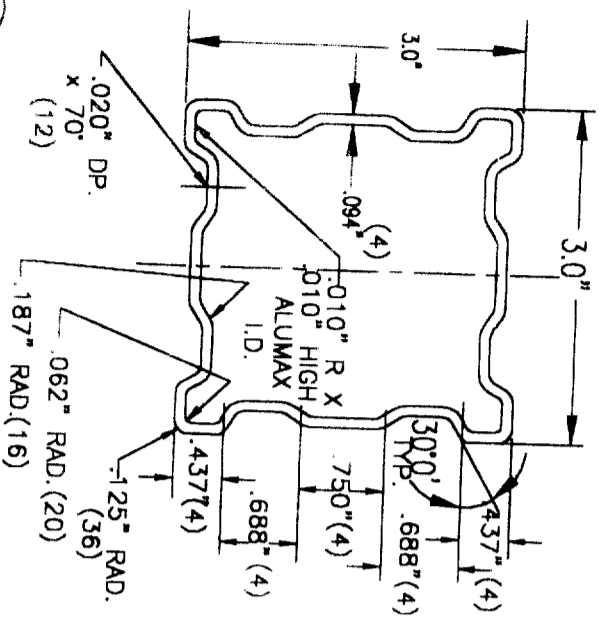
L10 PLASTIC PLUG DETAIL



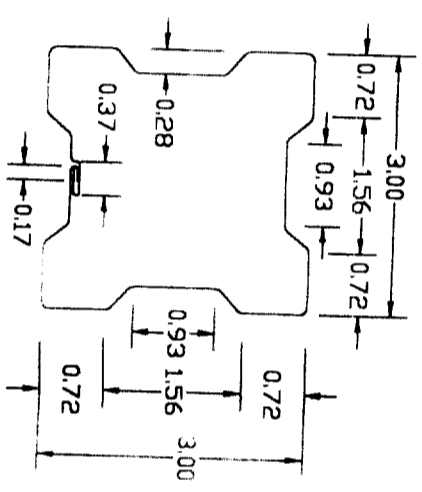
L11 ALTERNATE 2-2" X 6 1/2" HEADERS



L16 HEADER SPLICE DETAIL



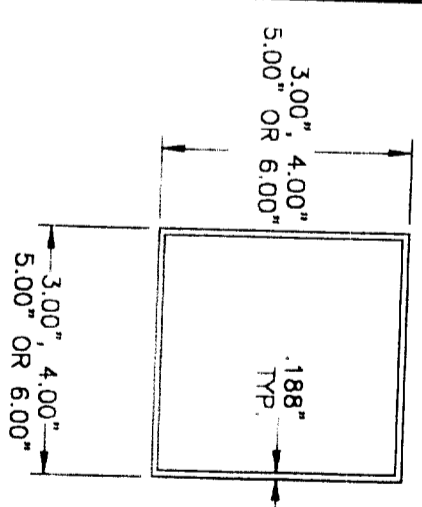
L31 FLUTED COLUMN  
(3" ALUM. 6063-T6)  
t<sub>min</sub> = 0.062" UNLESS OTHERWISE NOTED



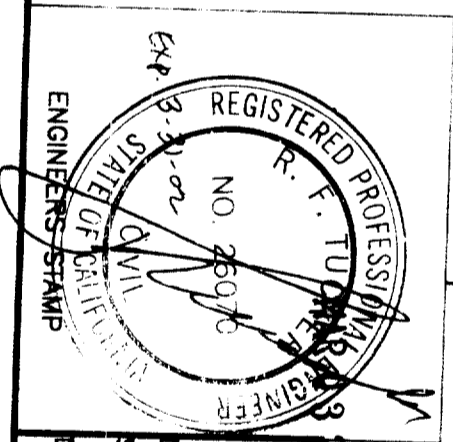
T (IN) = 0.024, 0.030, 0.040 (ALUM)  
= 0.048 (STEEL)

NOTE:  
COLUMNS MAY BE TRIMMED W/FLEX-ALUM. FACING.

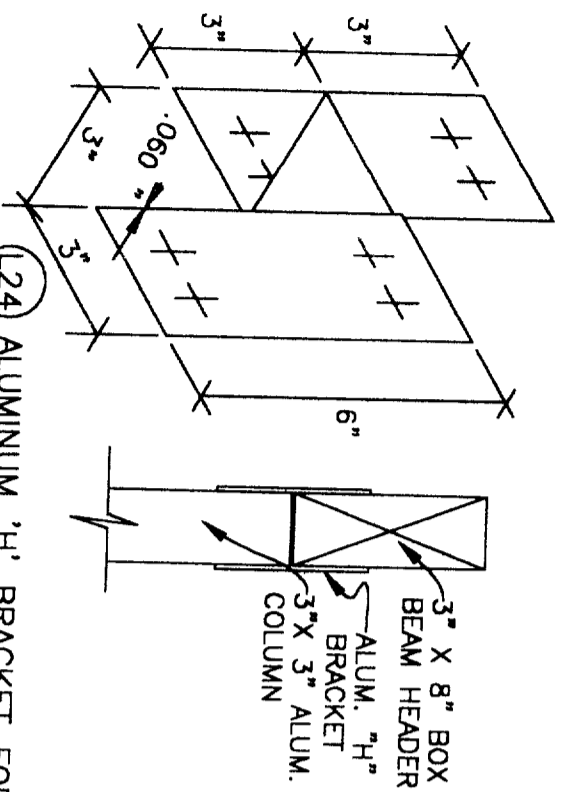
L30 3" ALTERNATE COLUMN  
(3003-H16 ALUM. ALLOY OR A-446 Fy=40 KSI STEEL)



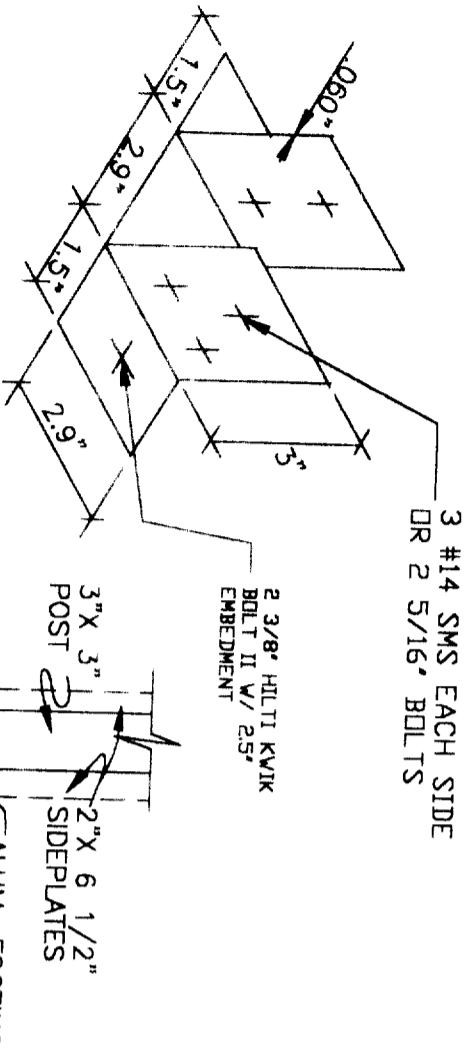
L32 3", 4", 5" OR 6" STEEL COLUMN  
Fy=36 KSI



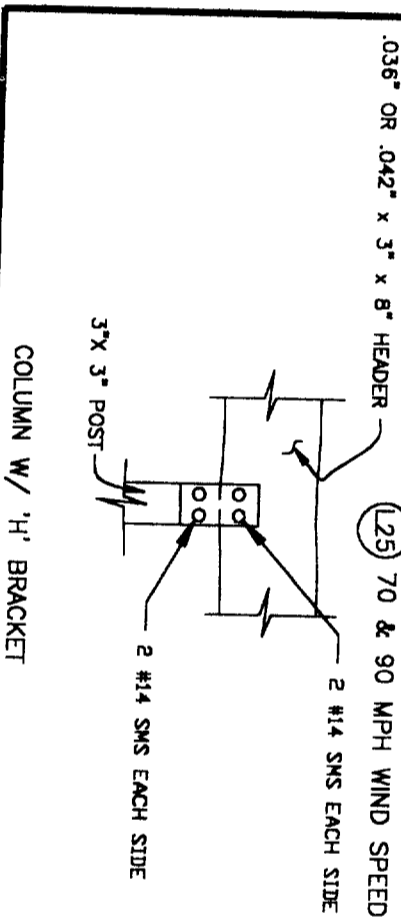
DATE	REVISION	DATE	REVISION
<p><b>Amerimax</b> Engineering Services          BUILDING PRODUCTS, INC. 1140 All Pro Drive          Elkhart, IN 46514</p>			
DATE	DRAWING NUMBER	SHEET	
2/8/2000	97L103	2 OF 4	
SCALE	DRAWING COMPONENT PARTS & CONNECTION DETAILS FOR PATIO & COMMERCIAL LATTICE STRUCTURES		
NONE			
DRAWN BY:	ICBO ES EVALUATION REPORT NO. ER-2621P		
KG			



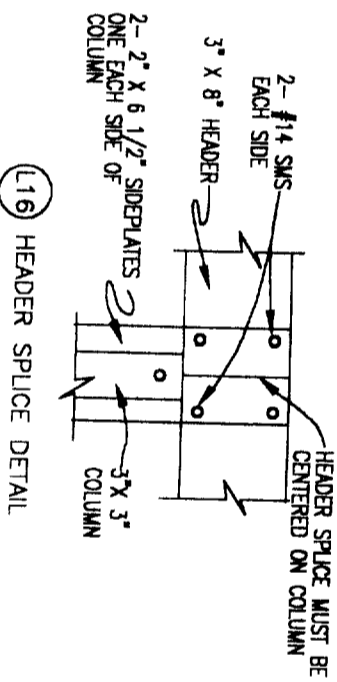
(L24) ALUMINUM 'H' BRACKET FOR CONNECTING COLUMN TO HEADER (6063-T6 ALUM. ALLOY)



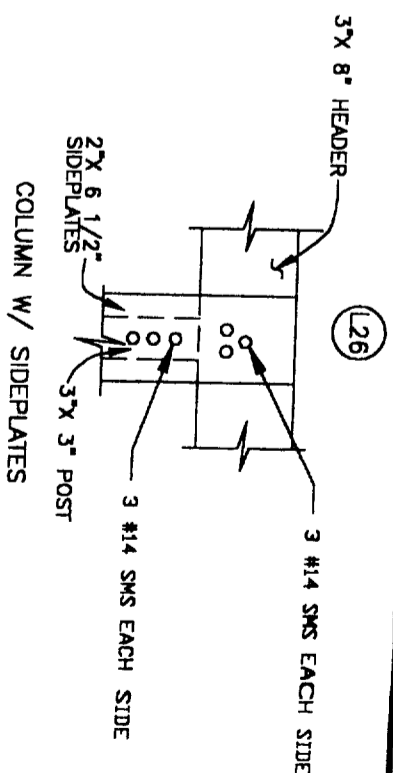
(L27) ALUMINUM FOOTING BRACKET FOR CONNECTING POST TO CONC. SLAB OR FOOTING (6063-T6 ALUM. ALLOY)



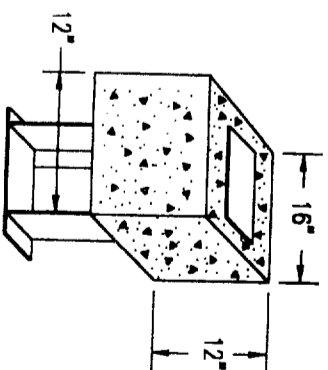
(L25) 70 & 90 MPH WIND SPEED  
COLUMN W/ 'H' BRACKET



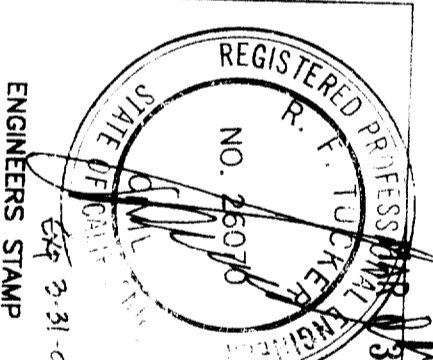
(L16) HEADER SPLICE DETAIL



(L26)



(L13) SAFETY STAKE IN CONCRETE FOOTING  
(USE ONLY FOR ATTACHED LATTICE PATIO STRUCTURES)



DATE	REVISION	DATE	REVISION
2/8/2000			

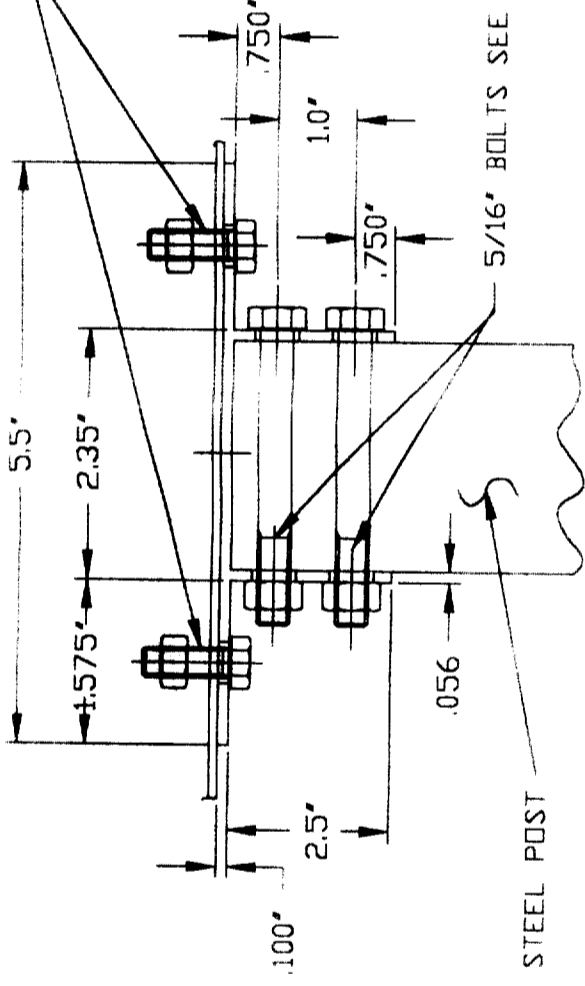
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 1140 All Pro Drive  
 Elkhart, IN 46514

ICBO ES EVALUATION REPORT NO. ER-2621P

DRAWN BY: KG  
 SCALE: NONE  
 DATE: 2/8/2000

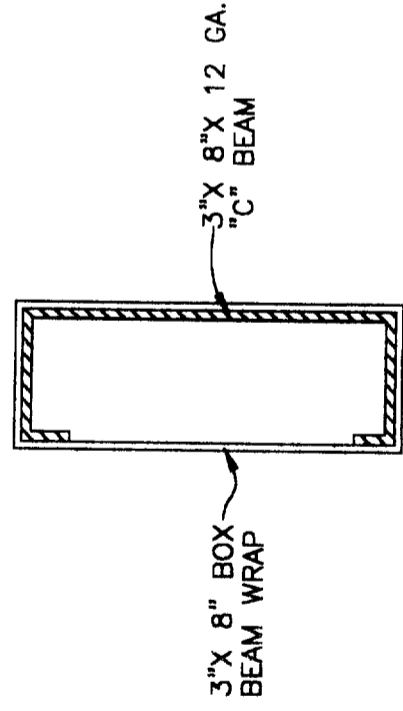
DRAWING COMPONENT PARTS & CONNECTION DETAILS FOR PATIO & COMMERCIAL LATTICE STRUCTURES  
 SHEET 4 OF 4

5/16" BOLTS W/ 1" DIA.  
x 3/32" THK. STL. WASHER  
TO 8" STEEL 'C' BEAM  
SEE TABLE 8.4 COLUMN E4  
FOR QUANTITY



048 x 3' x 3' STEEL POST

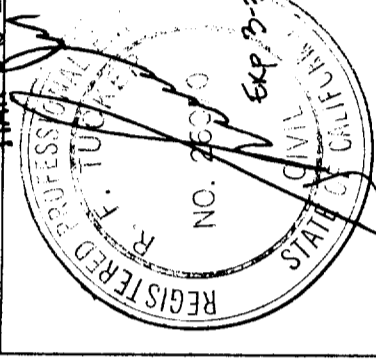
(AN) ALTERNATE 3" SQ. COLUMN CONNECTOR BRACKET  
(6063-T6 ALUM. ALLOY)



(L23) 3" X 12" X 12 GA. STL. 'C' BEAM  
WRAP W/ 3" X 8" ALUM. BOX BEAM

DETAIL 3" X 8" - 1 FOR ATTACHED STRUCTURES  
COLUMN TO WRAPPED 3" X 8" X 12 GA.  
'C' BEAM HEADER CONNECTIONS

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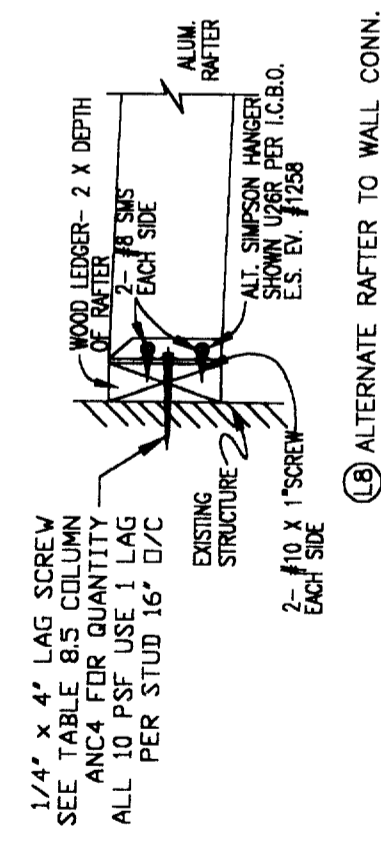
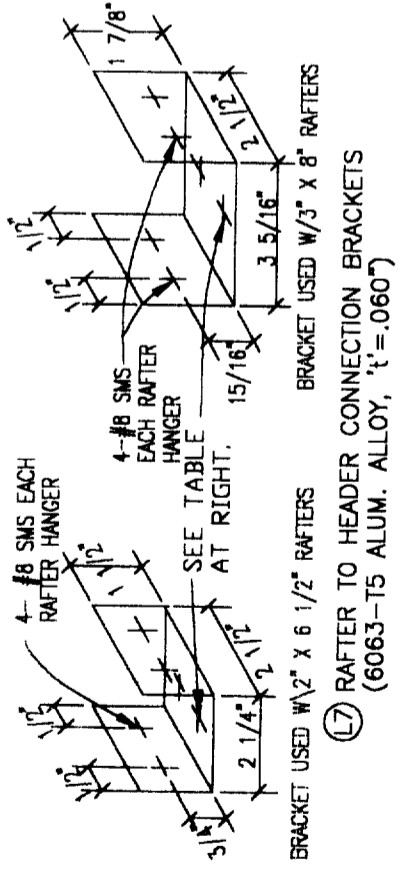
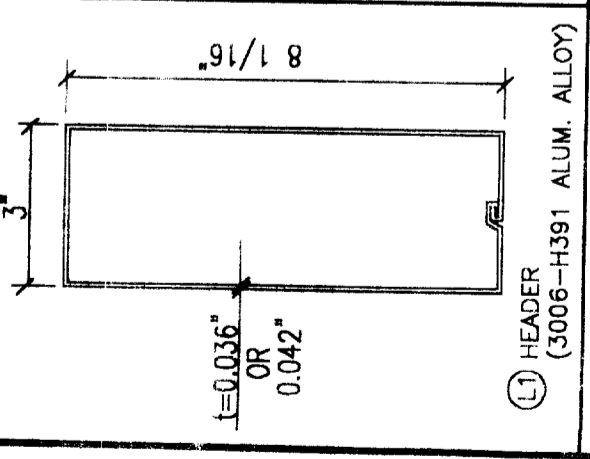
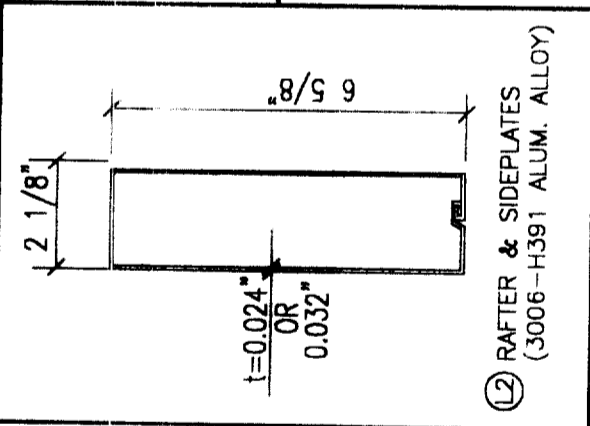
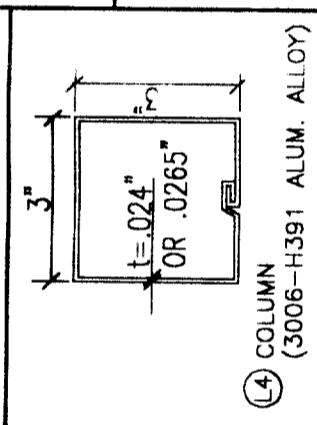
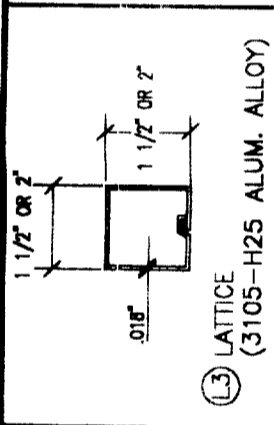
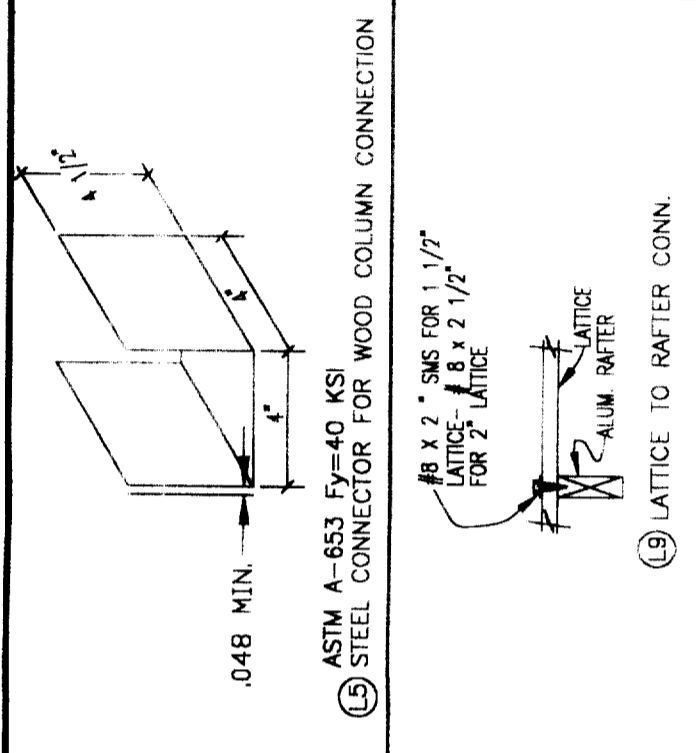
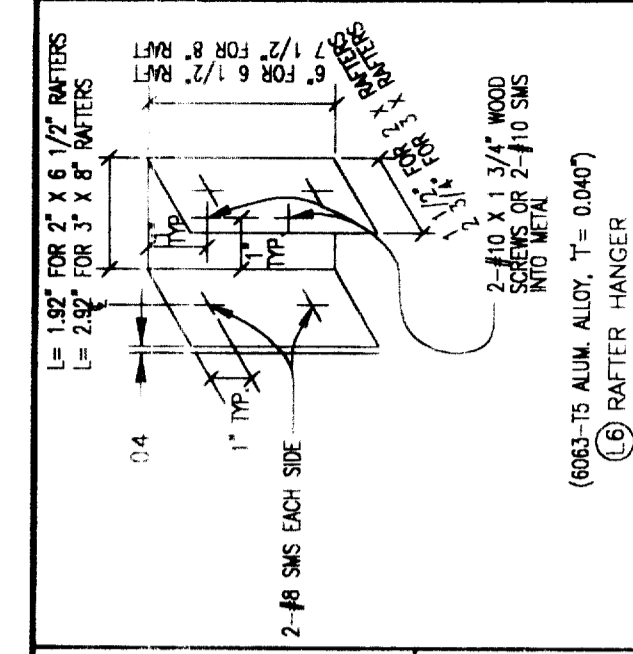


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DATE	REVISION	DATE	REVISION

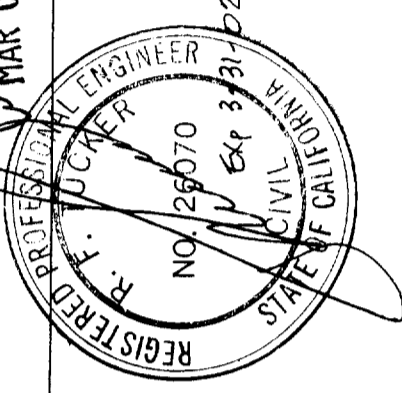
  

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DRAWN BY: KG SCALE: NONE DATE: 2/8/2000	ICBO ES EVALUATION REPORT NO. ER-2621P DRAWING COMPONENT PARTS & CONNECTION DETAILS OR PART FOR PATIO & COMMERCIAL LATTICE STRUCTURES DRAWING NAME DRAWING NUMBER 97LT03
SHEET 3 OF 4	SHEET 3 OF 4



HEADER GAGE	HEADER	DETAIL	MAXIMUM WIND LOAD	MAX TRIB	FASTENING
.042	3" x 8"	L1	90 MPH PATIO	6'	2-#8 SMS EACH BRKT.
.036	3" x 8"	L1	90 MPH PATIO	10'	3-#8 SMS EACH BRKT.
.032	DBL 2 x 6	L11	90 MPH PATIO	10'	2-#8 SMS EACH BRKT.
.094	8" STEEL C	L23	90 MPH PATIO 90 EXP C	10'	4-#8 SMS EACH BRKT.
					3-#8 SMS EACH BRKT.
					2-#14 SMS EACH BRKT.
					2-#14 SMS EACH BRKT.

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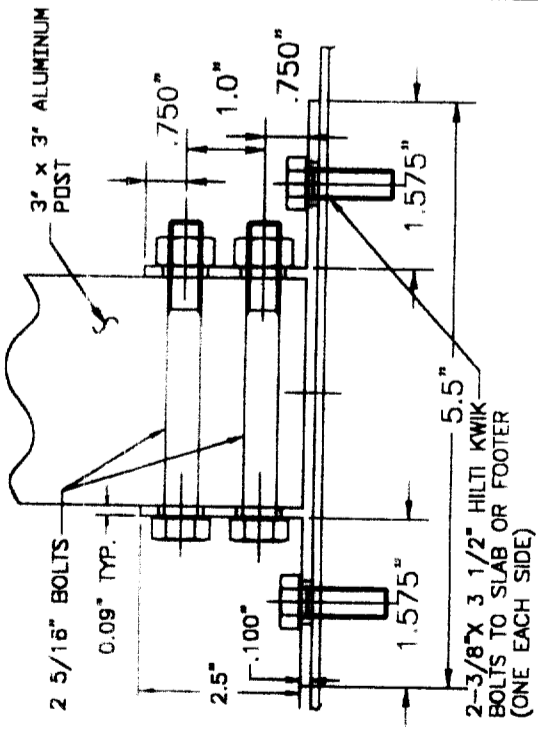
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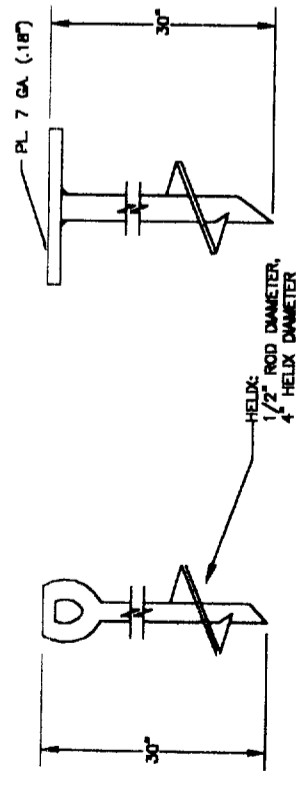
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 SHEET: 1 OF 4

ICBO ES EVALUATION REPORT NO. ER-2621P  
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 OR PART FOR PATIO & COMMERCIAL LATTICE STRUCTURES





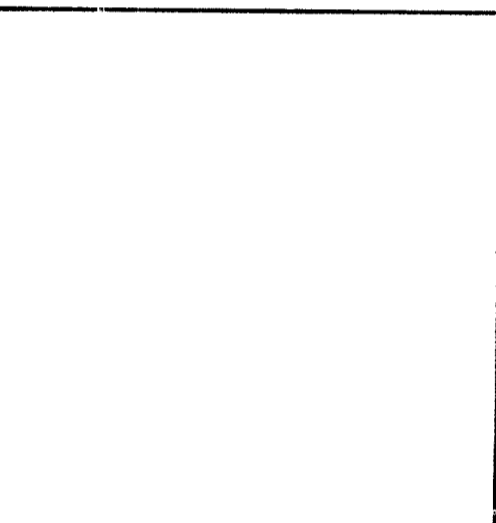
(AN) ALTERNATE 3" SQ. COLUMN CONNECTOR BRACKET (6063-T6 ALUM. ALLOY)



ALTERNATE TO CONCRETE SLAB ATTACHMENT

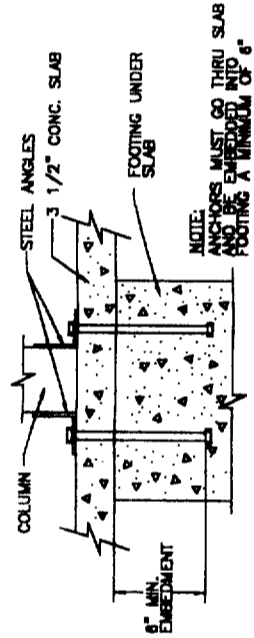
- NOTES:
1. ALL PARTS TO BE HOT-DIP GALVANIZED OR ELECTROPLATED ZINC. MAY BE USED IN LIEU OF ATTACHING TO CONCRETE SLAB.
  2. FABRICATION OF AWNING ANCHORS AND SAFETY STAKES IS BEYOND THE SCOPE OF THIS REPORT. FABRICATION DETAILS AND QUALITY CONTROL PROGRAM MUST BE SUBMITTED TO BUILDING OFFICIAL FOR APPROVAL.
  3. AWNING ANCHORS MAY BE USED IN THE FOLLOWING TYPES OF SOIL: SAND, GRAVEL, CLAY, SANDY GRAVEL, SILTY GRAVEL, SILTY SAND, CLAYEY SAND, CLAYEY GRAVEL, SANDY CLAY, SILTY CLAY, AND CLAYEY SILT.

(AR) AWNING ANCHOR

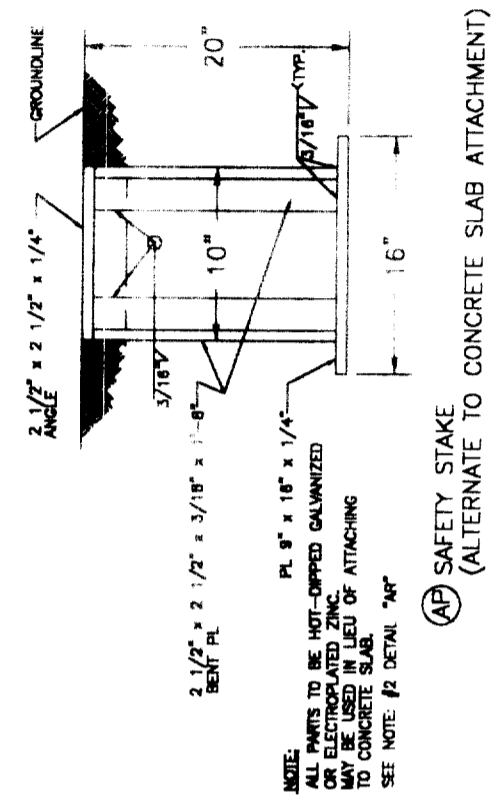


REQUIRED FASTENER SIZE	MINIMUM "W" (WIDTH)	MINIMUM "W" (WIDTH)
1/4"	3"	3"
3/8"	4 1/2"	6"
1/2"	6"	7 1/2"
5/8"	7 1/2"	9"
3/4"	9"	9"

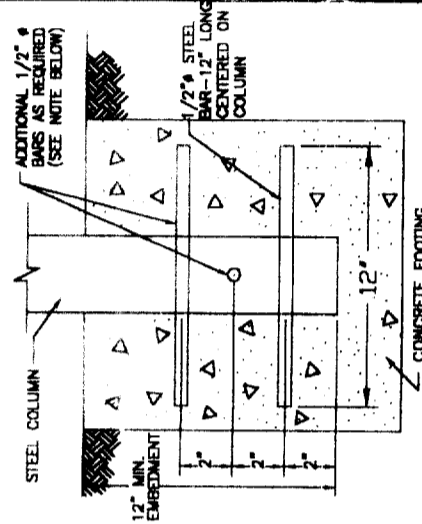
(AS) ATTACHED STRUCTURE COLUMN TO FOOTING CONNECTION DETAIL "d" = 18" TO 32" HILTI FASTENER ALTERNATE



(AU) COLUMN CONNECTION DETAIL FOR SLAB & FOOTING ATTACHMENT



(AP) SAFETY STAKE (ALTERNATE TO CONCRETE SLAB ATTACHMENT)



(AT) ALTERNATE FREESTANDING STRUCTURE COLUMN TO FOOTING CONNECTION DETAIL

SCHEDULE "F" - COLUMN TO FOOTING CONNECTIONS FOR 18" TO 42" FOOTING SIZES		REQUIRED TENSION FOR ANCHOR BOLTS	
FOOTING SIZE "d" (INCHES) (OR EQUAL) SIZE	HILTI FASTENER (OR EQUAL) SIZE	CONNECTION TO COLUMN TUBE	
18"	2-1/4" x 2" d	1-5/16" BOLT	430#
20"	2-3/8" x 2 1/2" d	2-5/16" BOLT	580#
22"	2-1/2" x 3 1/2" d	2-3/8" BOLT	650#
24"	2-1/2" x 3 1/2" d	2-3/8" BOLT	790#
26"	2-1/2" x 3 1/2" d	3-5/16" BOLT	1330#
28"			1330#
30"	2-5/8" x 4" d		1670#
32"			2080#
34"			N/A
36"			N/A
38"			N/A
40"			N/A
42"		3-3/8" BOLT	N/A

\*"d" SIZE IN ANCHOR BOLT OR HILTI FASTENER SIZES INDICATES DEPTH OF EMBEDMENT. EXAMPLE: 2 1/2" d INDICATES 2 1/2" EMBEDMENT OF ANCHOR OR EQUAL TO HILTI FASTENERS. ALTERNATE MUST BE ICBO ES. APPROVED TO PROVIDE ALLOWABLE TENSION EQUAL TO "REQ'D" TENSION FOR ANCHOR BOLT VALUES SHOWN. HILTI INDICATES HILTI KB-II ANCHOR BOLTS PER ICBO E.S. EV #4627.

(AV) FOOTING SCHEDULE

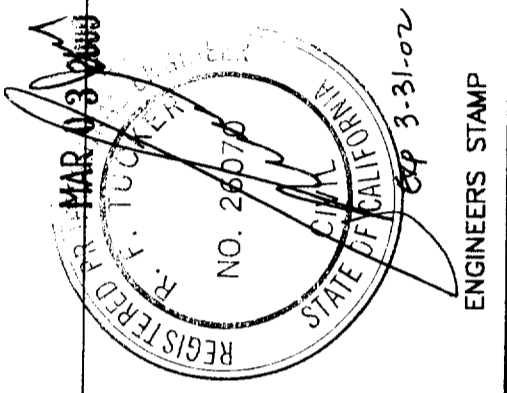
DATE	REVISION	DATE	REVISION

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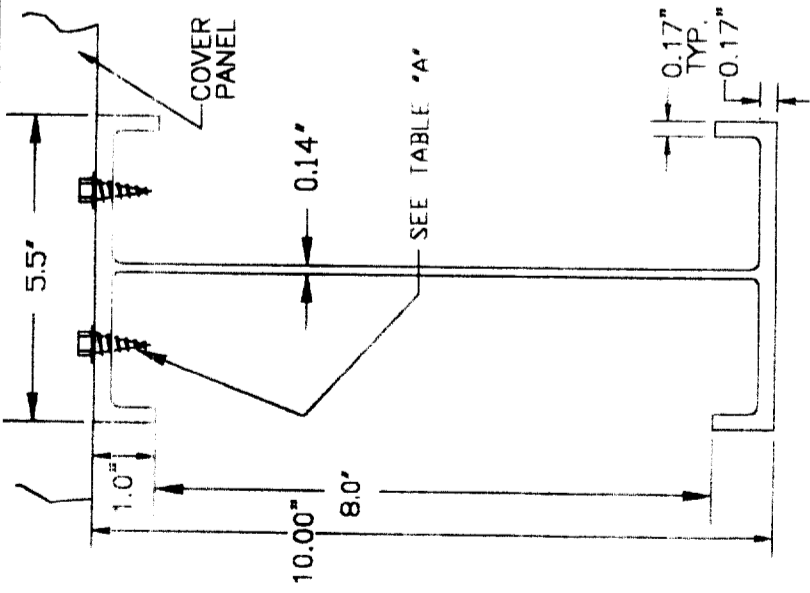
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SCALE: NONE  
DATE: 2/8/2000

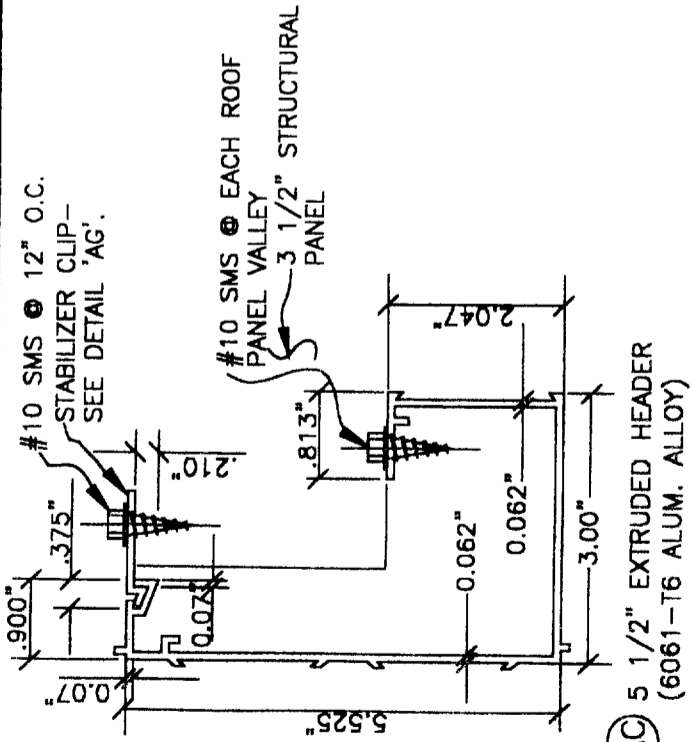
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DRAWING OR PART NAME: COMPONENT PARTS & CONNECTION DETAILS  
DRAWING OR PART NUMBER: 97CD06  
SHEET: 6 OF 9



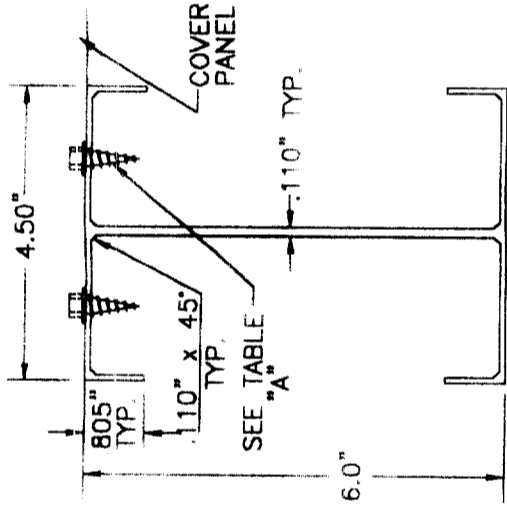
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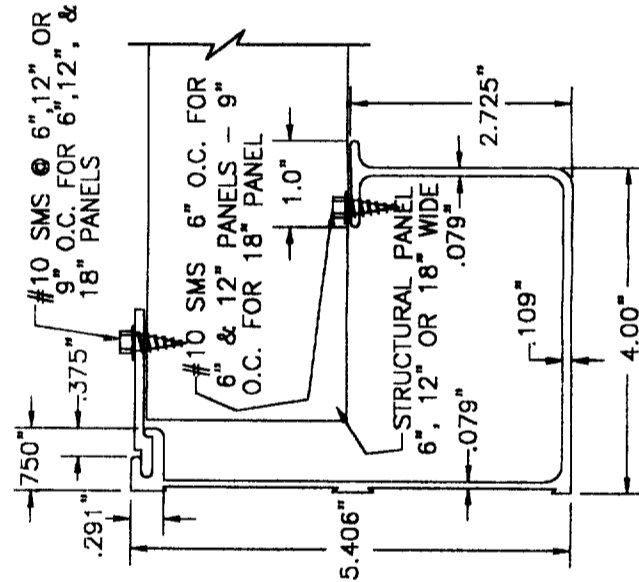
Y 10" X 5 1/2" W BEAM HEADER  
(6061-T6 ALUM. ALLOY)



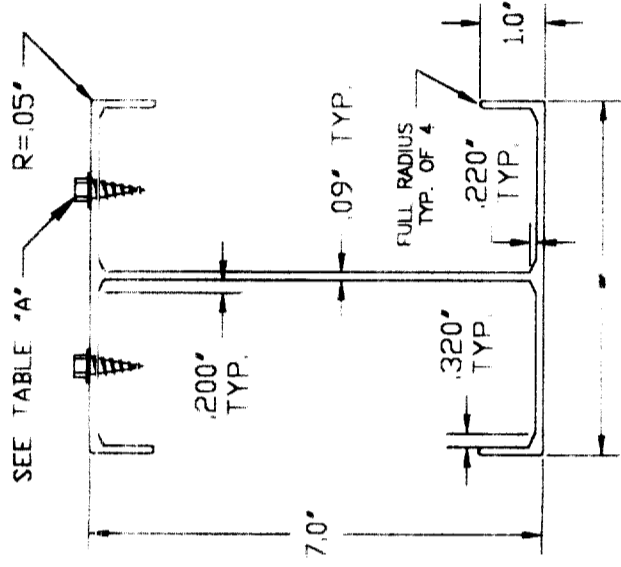
AC 5 1/2" EXTRUDED HEADER  
(6061-T6 ALUM. ALLOY)



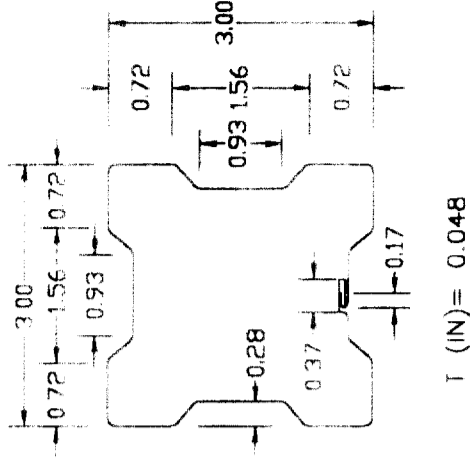
Z 6" W BEAM HEADER  
(6061-T6 ALUM. ALLOY)



AD ALASKAN EXTRUDED HEADER  
(6061-T6 ALUM. ALLOY)



AA 7" X 5 1/2" W BEAM HEADER  
(6061-T6 ALUM. ALLOY)



AB 3" X 3" HEADER (STEEL)  
(A-653 Fy=40 KSI STEEL)

FASTENERS REQUIRED FOR PANEL TO HEADER CONNECTIONS

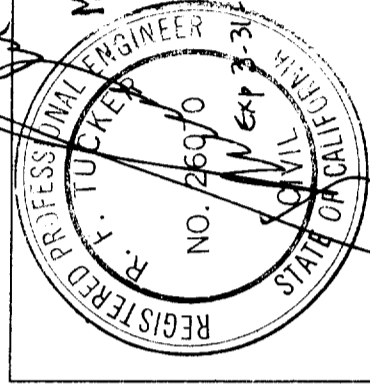
TABLE "A"

MAX. WIND LOAD	HEADER DESCRIPTION	MAX. TRIB WIDTH	FASTENING SCHEDULE	NOTE'S
90 MPH PATIO	ALL FASCIA	10'	2-#10 SMS PER 12" PANEL	
	STEEL CLOVER, C BEAMS, I BEAMS	12'	2-#14 SMS PER 12" PANEL	
	STEEL CLOVER, C BEAMS, I BEAMS	21'	3-#14 SMS PER 12" PANEL	
70 MPH EXP C AND 90 MPH EXP B	ALL FASCIA	10'	2-#10 SMS PER 12" PANEL	SEE #1
	STEEL CLOVER, C BEAMS, I BEAMS	16'	3-#14 SMS PER 12" PANEL	SEE #2
	STEEL CLOVER, C BEAMS, I BEAMS	16'	2-#14 SMS PER 12" PANEL	SEE #1
90 MPH EXP C	ALL FASCIA	10'	2-#14 SMS PER 12" PANEL	SEE #2
	STEEL CLOVER, C BEAMS, I BEAMS	16'	4-#14 SMS PER 12" PANEL	SEE #1
	STEEL CLOVER, C BEAMS, I BEAMS	16'	3-#14 SMS PER 12" PANEL	SEE #2

AE

6' PANEL USE 50% LESS SCREWS  
18' PANELS USE 50% MORE SCREWS

#1 .018 & .024 PANELS  
#2 .032 & .036 PANELS

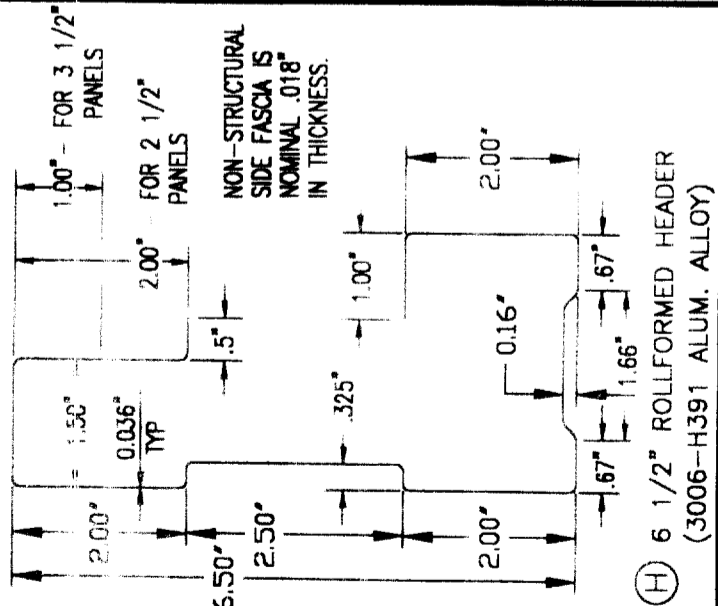


DATE	REVISION	DATE	REVISION
MAR 03 2000			

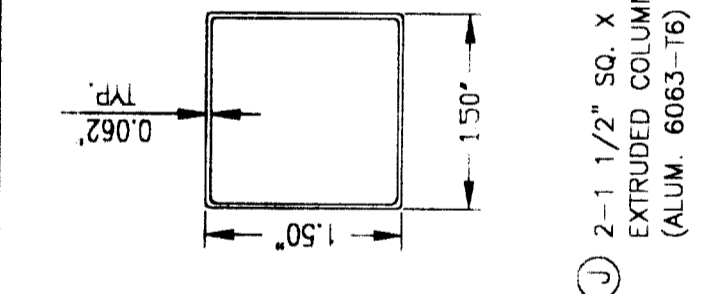


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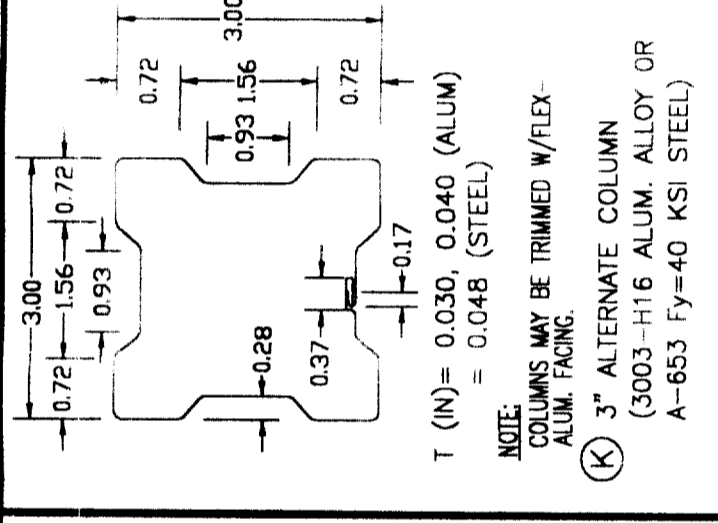
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DATE: 2/8/2000	DRAWING NUMBER OR PART NUMBER: 97CD04
	SHEET: 4 OF 9



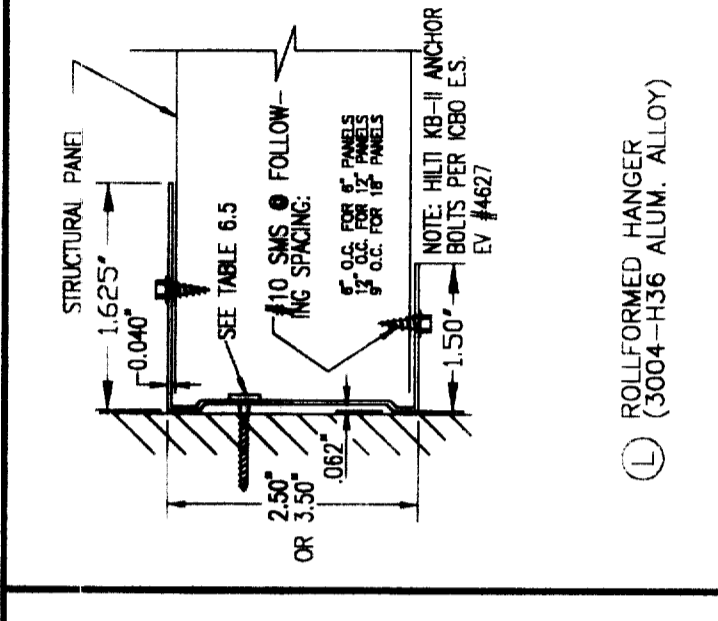
(H) 6 1/2" ROLLFORMED HEADER (3006-H391 ALUM. ALLOY)



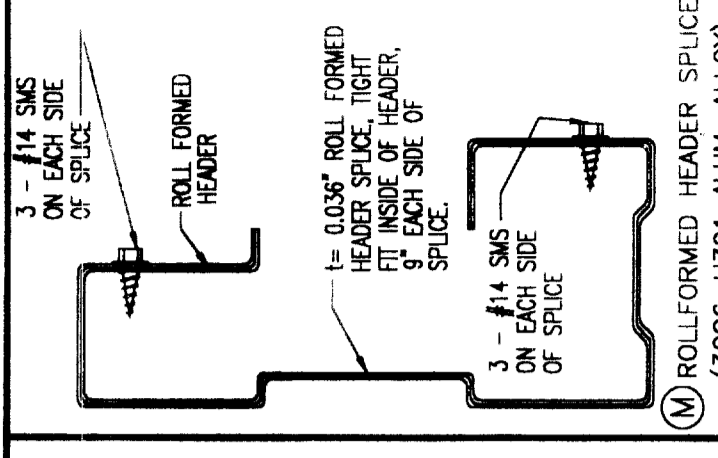
(J) 2-1 1/2" SQ. X .062" EXTRUDED COLUMN (ALUM. 6063-T6)



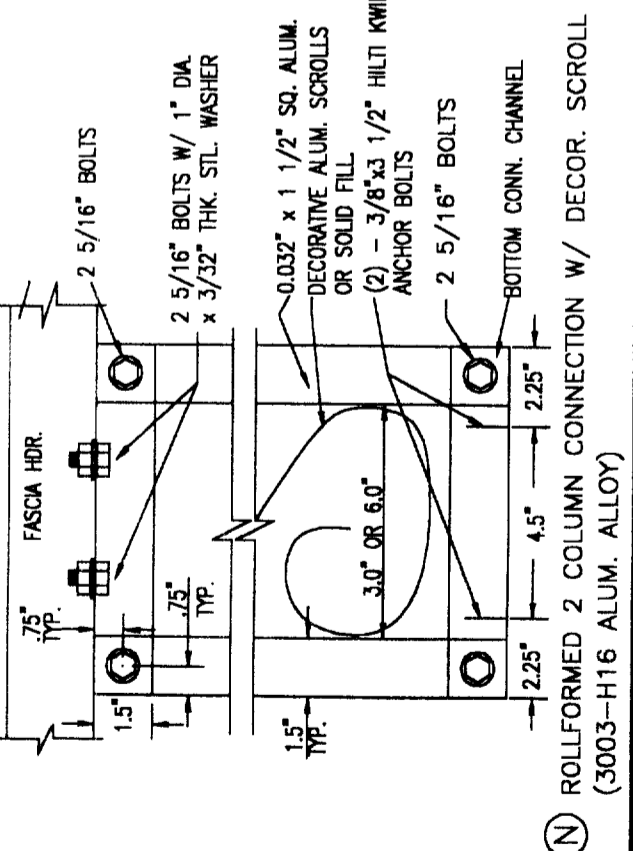
(K) 3" ALTERNATE COLUMN (3003-H16 ALUM. ALLOY OR A-653 Fy=40 KSI STEEL)  
NOTE: COLUMNS MAY BE TRIMMED W/FLEX-ALUM. FACING.



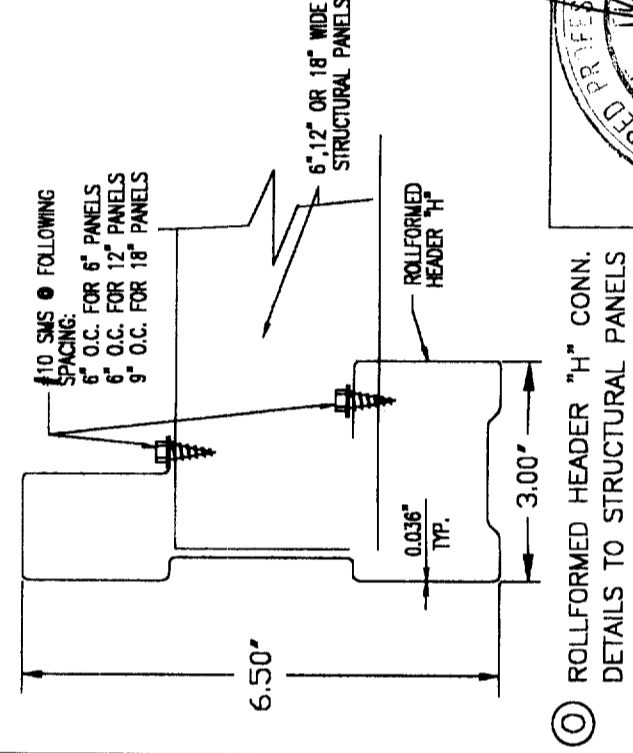
(L) ROLLFORMED HANGER (3004-H36 ALUM. ALLOY)



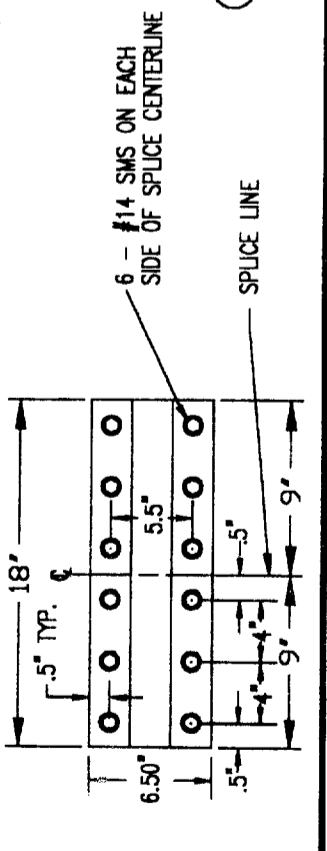
(M) ROLLFORMED HEADER SPLICE (3006-H391 ALUM. ALLOY)



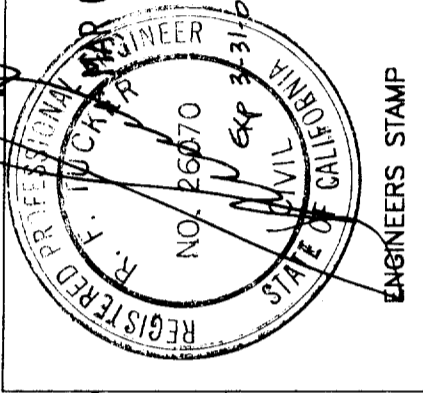
(N) ROLLFORMED 2 COLUMN CONNECTION W/ DECOR. SCROLL (3003-H16 ALUM. ALLOY)



(O) ROLLFORMED HEADER "H" CONN. DETAILS TO STRUCTURAL PANELS



(Q) ROLLFORMED SPLICE CONNECTION DETAILS (3006-H391 ALUM. ALLOY)



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 DRAWING NAME: NONE  
 DRAWING NUMBER: 97CD02  
 SHEET: 2 OF 9

**6.0 COLUMN AND FASTENER REQUIREMENTS FOR COMMERCIAL AND PATIO STRUCTURES**

Column Spacing multiplied by Trib Width	Minimum Column Required for Attached Structures					
	Live Load (psf)					
Lattice Tributary Area (sq ft)	10	20	25	30	40	60
23	A1	A1	A1	A1	A2	C
31	A1	A1	A1	A2	C	C
37	A1	A1	A2	B	C	C
44	A1	A2	B	C	C	D
55	A1	B	C	C	C	D
62	A1	C	C	C	C	E
69	A1	C	C	C	D	E
77	A1	C	C	C	D	E
85	A2	C	C	C	D	E
92	A2	C	C	C	D	E
100	A2	C	C	C	D	E
105	B	C	D	D	E	E
108	C	C	D	D	E	E
115	C	C	D	D	E	E
123	C	C	D	D	E	E
138	C	D	E	E	E	E
154	C	D	E	E	E	F
185	C	E	E	E	E	F
215	C	E	E	E	F	F
245	D	E	E	E	F	G
277	D	E	E	F	F	G
308	D	E	E	F	F	G
338	E	E	E	F	F	G
385	E	E	F	F	G	G
492	E	F	F	G	G	H
615	E	F	G	G	G	H
692	E	G	G	G	G	H
789	F	G	G	G	G	H
923	F	G	G	G	G	H

Table 6.1

COLUMN TYPE	COLUMN DESCRIPTIONS	DETAIL	MAX COL HIGHT
A1	0.024" x 3" SQUARE ALUM COLUMN	F	10'-6"
A2	0.024" x 3" SQUARE ALUM COLUMN	F	8'-0"
B	0.032" x 1 1/2" SQUARE ALUM SCROLL COLUMN	E, N	8'-0"
B	0.027" x 3" SQUARE ALUM COLUMN	F	11'-4"
C	3" CLOVERLEAF ALUM. 0.040"	K	12'-0"
D	FLUTED COLUMN ALUM. 0.062"	U	12'-0"
E	3" CLOVERLEAF STEEL 0.048"	K	8'-7"
F	3" SQUARE STEEL COLUMN	X	18'-0"
G	4" SQUARE STEEL COLUMN	X	18'-0"
H	5" SQUARE STEEL COLUMN	X	18'-0"
J	6" SQUARE STEEL COLUMN	X	18'-0"

Table 6.2

Table 6.3: Required Number of Fasteners for Shearing Loads

Slab	Aluminum Material Gage (in)						Steel Gage (in)			
	A	B	C	D	E	F	G	H	I	J
26	6	2	2	4	4	2	3	1	3	1
27	6	2	2	4	4	2	3	1	3	1
28	6	3	2	4	4	2	3	1	3	1
29	7	3	2	5	4	2	4	2	4	1
30	8	3	3	5	5	2	4	2	4	1
31	8	4	3	6	5	2	5	2	5	1
32	9	4	3	6	6	3	5	2	5	2
33	n/a	4	4	7	6	3	6	2	6	2
34	n/a	5	4	8	7	3	6	2	6	2
35	n/a	5	4	9	8	3	7	2	7	2
36	n/a	6	4	n/a	9	4	7	3	7	2
37	n/a	6	5	n/a	9	4	8	3	8	2
38	n/a	7	5	n/a	n/a	4	8	3	8	2
39	n/a	7	6	n/a	n/a	5	9	3	9	2
40	n/a	8	6	n/a	n/a	5	n/a	3	n/a	3
41	n/a	8	6	n/a	n/a	5	n/a	4	n/a	3
42	n/a	9	7	n/a	n/a	6	n/a	4	n/a	3
43	n/a	n/a	7	n/a	n/a	6	n/a	4	n/a	3
44	n/a	n/a	8	n/a	n/a	6	n/a	4	n/a	3
45	n/a	n/a	n/a	n/a	n/a	7	n/a	5	n/a	3
46	n/a	n/a	n/a	n/a	n/a	7	n/a	5	n/a	4
47	n/a	n/a	n/a	n/a	n/a	8	n/a	6	n/a	4
48	n/a	n/a	n/a	n/a	n/a	8	n/a	6	n/a	4
49	n/a	n/a	n/a	n/a	n/a	8	n/a	6	n/a	4
50	n/a	n/a	n/a	n/a	n/a	9	n/a	6	n/a	4

Fastener Terminology  
 #14 SMS = #14 sheet metal or Tek screw, 3/4" minimum length  
 5/16" B = 5/16" Diameter Bolt  
 See General Notes for specifics on fasteners

- Clearspan on this chart is the distance from the wall to the first row of columns.
- Hilti Kwik Bolt II 1/4" diameter and 2" embedment. ICBO ER-4627 or other anchor w/ 550# shear vs wind and seismic loads.
- Masonry anchors must have a shear value of 250# for wind or seismic loads.
- 1/4" Lag screws must have 2 1/4" of penetration into studs. These lag screws must have an 1/8" lead hole.
- 10 psf evaluated at 90 mph wind load (15 psf). All other loads evaluated at 90 mph exposure C.

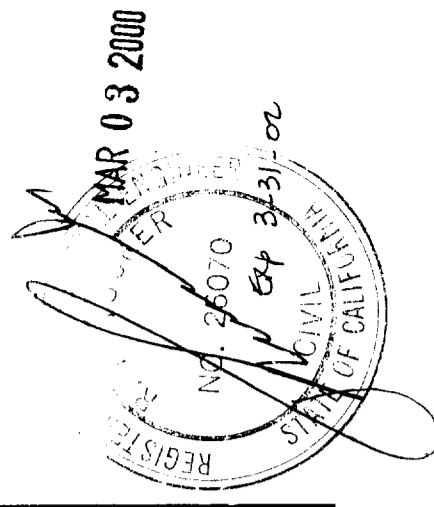
Table 6.4: Required Number of Fasteners for Tension Loads

Slab	Aluminum Gage (in)						Steel Gage (in)	
	K	L	M	N	O	P	Q	
26	2	7	2	1	5	3	1	
27	2	7	2	1	5	3	1	
28	3	8	2	1	5	3	1	
29	3	9	2	1	6	3	1	
30	3	n/a	2	2	6	3	1	
31	4	n/a	2	2	7	3	1	
32	4	n/a	2	2	7	3	1	
33	4	n/a	3	2	8	3	1	
34	5	n/a	3	2	9	3	1	
35	5	n/a	3	2	n/a	n/a	n/a	
36	5	n/a	3	2	n/a	n/a	n/a	
37	6	n/a	4	3	n/a	n/a	n/a	
38	6	n/a	4	3	n/a	n/a	n/a	
39	7	n/a	4	3	n/a	n/a	n/a	
40	7	n/a	4	3	n/a	n/a	n/a	
41	8	n/a	5	3	n/a	n/a	n/a	
42	8	n/a	5	4	n/a	n/a	n/a	
43	9	n/a	5	4	n/a	n/a	n/a	
44	9	n/a	6	4	n/a	n/a	n/a	
45	n/a	n/a	6	4	n/a	n/a	n/a	
46	n/a	n/a	6	5	n/a	n/a	n/a	
47	n/a	n/a	7	5	n/a	n/a	n/a	
48	n/a	n/a	7	5	n/a	n/a	n/a	
49	n/a	n/a	8	5	n/a	n/a	n/a	
50	n/a	n/a	8	6	n/a	n/a	n/a	

TABLE 6.5: WALL ATTACHMENTS FOR PATIO AND COM. STRUCTURES

LIVE LOAD (PSF)	ANC 1		ANC 2		ANC 3		ANC 4	
	O/C SPACING CONCRETE ANCHORS	O/C SPACING MASONRY ANCHORS	O/C SPACING CONCRETE ANCHORS	O/C SPACING MASONRY ANCHORS	O/C SPACING FOR #10 x 2" SMS SCREWS	CLEAR-SPAN (FT)	# OF 1/4" LAG SCREWS PER STUD	16" O/C SPACING
10	24"	24"	24"	24"	16"	22'	1	1
20	24"	16"	16"	16"	8"	11'	1	1
25	24"	15"	15"	15"	8"	11'	1	1
30	24"	14"	14"	14"	8"	10'	1	1
40	24"	12"	12"	12"	8"	13'	2	2
60	16"	10"	10"	10"	4"	11'	2	2

- Spacing between bolts and screws shall be 2.5 times the shank diameter
- The edge distance of bolts and screws shall be 3 times the shank diameter
- Connections shall be arranged so that the center of resistance of the connection shall coincide with the resultant line of action of the load





3.0 FREESTANDING AND ATTACHED COMMERCIAL STRUCTURES

LIVE LOAD (PSF)	TRIB WIDTH (FT)	4" BEAM			7" BEAM			10" BEAM			3" CLOVERLEAF STEEL HEADER			8" STEEL C BEAM			10" STEEL C BEAM			TRIB WIDTH		
		MAX COLUMN SPACING (FT)	CONS. FOOTER SIZE (IN)	ATT FTR "d" (IN)	MAX COLUMN SPACING (FT)	CONS. FOOTER SIZE (IN)	ATT FTR "d" (IN)	MAX COLUMN SPACING (FT)	CONS. FOOTER SIZE (IN)	ATT FTR "d" (IN)	MAX COLUMN SPACING (FT)	CONS. FOOTER SIZE (IN)	ATT FTR "d" (IN)	MAX COLUMN SPACING (FT)	CONS. FOOTER SIZE (IN)	ATT FTR "d" (IN)	MAX COLUMN SPACING (FT)	CONS. FOOTER SIZE (IN)	ATT FTR "d" (IN)	MAX COLUMN SPACING (FT)	CONS. FOOTER SIZE (IN)	ATT FTR "d" (IN)

70 MPH EXPOSURE B																																
20	4	24'-3"	26	28	30	31	33	26	40'-11"	29	31	34	36	29	20	22	24	25	18	25'-3"	26	28	30	31	25	34'-8"	28	30	33	34	27	4
	5	22'-6"	26	27	29	31	32	27	37'-11"	30	31	33	35	30	23	25	27	28	19	23'-5"	26	27	29	31	26	32'-3"	29	30	32	34	29	5
	6	20'-11"	26	28	29	30	31	28	35'-9"	32	32	33	34	32	20	22	24	25	20	24'-0"	27	27	29	30	28	30'-4"	30	30	32	33	30	6
	7	19'-4"	27	27	28	29	30	27	33'-3"	33	33	33	34	33	20	22	24	25	20	20'-11"	28	28	29	30	28	28'-10"	31	31	31	31	31	7
	8	18'-1"	28	28	28	29	30	28	31'-1"	34	34	34	34	34	21	22	24	25	21	20'-0"	29	29	29	29	29	27'-6"	32	32	32	32	32	8
	9	17'-1"	28	28	28	29	30	28	29'-8"	31	31	31	31	31	22	24	25	22	21	19'-2"	30	30	30	30	30	26'-6"	33	33	33	33	33	9
	10	16'-2"	29	29	29	30	30	28	19'-8"	31	31	31	31	31	22	24	25	22	22	18'-2"	30	30	30	30	30	25'-7"	34	34	34	34	34	10
	11	15'-5"	30	30	30	30	30	30	17'-11"	32	32	32	32	32	23	24	25	22	21	17'-4"	31	31	31	31	31	24'-1"	34	34	34	34	34	11
	12	14'-9"	30	30	30	30	30	30	17'-3"	33	33	33	33	33	23	24	25	22	22	16'-7"	31	31	31	31	31	23'-4"	36	36	36	36	36	12
	13	14'-2"	31	31	31	31	31	31	16'-7"	33	33	33	33	33	23	24	25	22	22	15'-11"	31	31	31	31	31	22'-5"	36	36	36	36	36	13
	14	13'-8"	31	31	31	31	31	31	16'-7"	33	33	33	33	33	23	24	25	22	22	15'-4"	32	32	32	32	32	22'-5"	36	36	36	36	36	14
	15	13'-2"	31	31	31	31	31	31	16'-0"	34	34	34	34	34	23	24	25	22	23	14'-10"	32	32	32	32	32	21'-9"	37	37	37	37	37	15
	16	12'-9"	31	31	31	31	31	31	15'-6"	34	34	34	34	34	24	25	27	28	24	14'-4"	33	33	33	33	33	21'-0"	37	37	37	37	37	16

70 MPH EXPOSURE C																																
20	4	24'-3"	30	32	34	36	37	26	39'-6"	33	36	38	40	29	20	25	27	28	18	23'-3"	29	31	34	35	24	34'-1"	32	35	37	39	27	4
	5	22'-6"	29	31	34	35	37	27	35'-4"	32	35	37	39	30	23	25	27	28	19	20'-10"	29	31	33	35	25	30'-6"	32	34	36	38	28	5
	6	20'-11"	29	31	33	35	37	27	32'-3"	32	34	37	39	31	20	22	24	25	20	19'-0"	28	30	32	34	26	27'-10"	30	32	35	37	29	6
	7	19'-4"	28	30	32	34	36	29	29'-10"	31	33	36	37	31	17	19	20	20	20	17'-7"	27	29	31	33	26	25'-9"	30	32	34	36	30	7
	8	18'-1"	28	30	32	34	36	28	27'-11"	32	32	35	37	32	16	18	19	21	21	16'-5"	27	29	31	33	27	24'-1"	31	32	34	36	31	8
	9	17'-1"	29	29	31	33	35	30	26'-4"	33	33	35	37	33	15	16	17	18	21	15'-6"	28	28	30	32	28	22'-9"	31	31	34	36	31	9
	10	16'-2"	29	29	31	33	35	31	25'-0"	33	33	34	36	33	14	15	16	17	22	14'-9"	28	28	30	32	28	21'-7"	32	32	33	35	32	10
	11	15'-5"	30	30	30	32	34	31	24'-6"	34	34	34	36	34	13	14	15	16	21	14'-0"	28	28	29	31	28	20'-7"	32	32	33	35	32	11
	12	14'-9"	30	30	30	32	34	30	23'-6"	35	35	35	35	35	12	13	14	15	21	13'-5"	29	29	29	31	29	19'-8"	33	33	33	34	33	12
	13	14'-2"	31	31	31	32	34	32	22'-6"	35	35	35	35	35	11	12	13	14	22	12'-11"	26	27	29	31	29	18'-11"	33	33	33	34	33	13
	14	13'-8"	31	31	31	32	34	33	21'-9"	36	36	36	36	36	10	11	12	13	22	12'-5"	26	27	29	31	30	18'-3"	34	34	34	34	34	14
	15	13'-2"	31	31	31	32	34	34	21'-0"	37	37	37	37	37	9	10	11	12	23	12'-0"	26	28	30	32	31	17'-7"	34	34	34	34	34	15
	16	12'-9"	31	31	31	32	34	34	20'-4"	37	37	37	37	37	8	9	10	11	24	11'-7"	26	28	30	32	31	17'-0"	35	35	35	35	35	16

90 MPH EXPOSURE B																																
20	4	24'-3"	30	32	34	36	37	28	39'-6"	33	36	39	40	34	20	25	27	28	21	23'-7"	29	31	33	35	28	34'-7"	32	34	37	39	32	4
	5	22'-6"	30	32	34	36	38	30	35'-10"	34	36	39	40	35	21	23	25	27	22	21'-1"	29	30	33	34	29	30'-11"	33	33	36	38	33	5
	6	20'-11"	31	33	34	36	38	31	32'-8"	35	36	37	38	36	23	25	27	28	23	19'-3"	30	30	32	33	30	28'-3"	34	34	35	37	34	6
	7	19'-4"	32	32	33	34	35	32	30'-3"	37	37	37	38	37	24	26	27	28	23	17'-10"	31	31	31	31	31	26'-2"	35	35	35	36	35	7
	8	18'-1"	33	33	33	33	33	33	21'-11"	34	34	34	34	34	25	26	27	28	24	16'-8"	32	32	32	32	32	24'-5"	36	36	36	36	36	8
	9	17'-1"	33	33	33	33	33	33	20'-8"	35	35	35	35	35	24	24	25	27	24	15'-9"	32	32	32	32	32	23'-1"	37	37	37	37	37	9
	10	16'-2"	34	34	34	34	34	34	19'-8"	36	36	36	36	36	25	25	26	28	25	14'-11"	33	33	33	33	33	21'-10"	37	37	37	37	37	10
	11	15'-5"	34	34	34	34	34	34	18'-9"	36	36	36	36	36	26	26	27	28	25	14'-3"	34	34	34	34	34	20'-10"	38	38	38	38	38	11
	12	14'-9"	35	35	35	35	35	35	17'-11"	37	37	37	37	37	27	27	28	29	26	13'-7"	35	35	35	35	35	19'-2"	39	39	39	39	39	12
	13	14'-2"	36	36	36	36	36	36	17'-3"	38	38	38	38	38	28	28	29	31	26	13'-1"	35	35	35	35	35	18'-6"	40	40	40	40	40	13
	14	13'-8"	36	36	36	36	36	36	16'-7"	38	38	38	38	38	29	29	30	31	27	12'-7"	35	35	35	35	35	18'-6"	40	40	40	40	40	14
	15	13'-2"	37	37	37	37	37	37	16'-0"	39	39	39	39	39	30	30	31	32	27	12'-2"	36	36	36	36	36	17'-10"	40	40	40	40	40	15
	16	12'-9"	36	36	36	36	36	36	15'-6"	39	39	39	39	39	31	31	32	32	28	11'-9"	35	35	35	35	35	17'-3"	41	41	41	41	41	16

90 MPH EXPOSURE C																																
20	4	22'-6"	33	35	38	40	42	28	44'-11"	34	36	39	41	43	20	24	26	27	21	17'-11"	31	33	36	37	26	26'-3"	35	37	40	42	30	4
	5	20'-1"	33	35	37	39	40	31	42'-4"	33	35	38	40	42	21	23	25	27	22	16'-0"	30	32	35	36	27	23'-6"	33	35	38	40	31	5
	6	18'-4"	32	34	37	38	40	32	41'-1"	33	35	37	39	41	22	24	26	27	23	14'-7"	30	32	35	36	28	21'-5"	33	35	37	39	32	6
	7	17'-0"	31	33	36	37	38	33	40'-3"	32	34	37	38	40	23	25	27	29	24	13'-6"	29	31	33	35	29	19'-10"	33	34	37	38	33	7
	8	15'-11"	32	32	35	36	37	32	39'-7"	33	33	36	37	39	24	26	27	29	24	12'-8"	30	31	33	35	30	18'-7"	34	34	37	38	34	8
	9	15'-0"	32	32	35	36	37	32	39'-4"	34	34	36	37	39	25	26	27	29	25	12'-11"	30	30	32	34	30	17'-6"	34	34	36	37	34	9
	10	14'-2"	33	33	35	36	37	33	39'-1"	35	35	36	37	39	26	27	28	31	25	11'-4"	31	31	32	34	31	16'-7"	35	35	36	37	35	10
	11	13'-6"	34	34	35	36	37	34	38'-5"	35	35	36	37	39	27	28	29	32	26	10'-9"	31	31	32	34	31	15'-10"	35	35	36	37	35	11
	12	13'-0"	34	34	35	36	37	35	38'-1"	36	36	36	36	36	28	28	30	32	25	10'-4"	32	32	32	32	32	15'-2"	36	36	36	36	36	12

**2.0 FREESTANDING AND ATTACHED PATIO STRUCTURES**

LIVE LOAD (PSF)	WIND SPEED (MPH)	3' CLOVERLEAF STEEL HEADER			8" ROLLFORMED C BEAM			10" ROLLFORMED C BEAM			6" I BEAM			7" I BEAM			6 1/2" ROLLFORMED HEADER			ALASKAN EXT. HEADER			5 1/2" EXTENDED HEADER		
		MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	MAX. COLUMN SPACING (FT)	
10	4	18'-0"	13'-0"	10'-0"	17'-0"	13'-0"	10'-0"	17'-0"	13'-0"	10'-0"	17'-0"	13'-0"	10'-0"	17'-0"	13'-0"	10'-0"	17'-0"	13'-0"	10'-0"	17'-0"	13'-0"	10'-0"	17'-0"	13'-0"	
10	5	16'-0"	11'-0"	9'-0"	15'-0"	11'-0"	9'-0"	15'-0"	11'-0"	9'-0"	15'-0"	11'-0"	9'-0"	15'-0"	11'-0"	9'-0"	15'-0"	11'-0"	9'-0"	15'-0"	11'-0"	9'-0"	15'-0"	11'-0"	
10	6	14'-0"	10'-0"	8'-0"	13'-0"	10'-0"	8'-0"	13'-0"	10'-0"	8'-0"	13'-0"	10'-0"	8'-0"	13'-0"	10'-0"	8'-0"	13'-0"	10'-0"	8'-0"	13'-0"	10'-0"	8'-0"	13'-0"	10'-0"	
10	7	12'-0"	9'-0"	7'-0"	11'-0"	9'-0"	7'-0"	11'-0"	9'-0"	7'-0"	11'-0"	9'-0"	7'-0"	11'-0"	9'-0"	7'-0"	11'-0"	9'-0"	7'-0"	11'-0"	9'-0"	7'-0"	11'-0"	9'-0"	
10	8	10'-0"	8'-0"	6'-0"	9'-0"	8'-0"	6'-0"	9'-0"	8'-0"	6'-0"	9'-0"	8'-0"	6'-0"	9'-0"	8'-0"	6'-0"	9'-0"	8'-0"	6'-0"	9'-0"	8'-0"	6'-0"	9'-0"	8'-0"	
10	9	8'-0"	7'-0"	5'-0"	8'-0"	7'-0"	5'-0"	8'-0"	7'-0"	5'-0"	8'-0"	7'-0"	5'-0"	8'-0"	7'-0"	5'-0"	8'-0"	7'-0"	5'-0"	8'-0"	7'-0"	5'-0"	8'-0"	7'-0"	
10	10	7'-0"	6'-0"	4'-0"	7'-0"	6'-0"	4'-0"	7'-0"	6'-0"	4'-0"	7'-0"	6'-0"	4'-0"	7'-0"	6'-0"	4'-0"	7'-0"	6'-0"	4'-0"	7'-0"	6'-0"	4'-0"	7'-0"	6'-0"	
10	11	6'-0"	5'-0"	3'-0"	6'-0"	5'-0"	3'-0"	6'-0"	5'-0"	3'-0"	6'-0"	5'-0"	3'-0"	6'-0"	5'-0"	3'-0"	6'-0"	5'-0"	3'-0"	6'-0"	5'-0"	3'-0"	6'-0"	5'-0"	
10	12	5'-0"	4'-0"	2'-0"	5'-0"	4'-0"	2'-0"	5'-0"	4'-0"	2'-0"	5'-0"	4'-0"	2'-0"	5'-0"	4'-0"	2'-0"	5'-0"	4'-0"	2'-0"	5'-0"	4'-0"	2'-0"	5'-0"	4'-0"	
10	13	4'-0"	3'-0"	1'-0"	4'-0"	3'-0"	1'-0"	4'-0"	3'-0"	1'-0"	4'-0"	3'-0"	1'-0"	4'-0"	3'-0"	1'-0"	4'-0"	3'-0"	1'-0"	4'-0"	3'-0"	1'-0"	4'-0"	3'-0"	
10	14	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	
10	15	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	
10	16	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	
10	17	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	
10	18	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	
10	19	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	
10	20	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	
10	21	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	
20	4	16'-0"	11'-0"	8'-0"	15'-0"	11'-0"	8'-0"	15'-0"	11'-0"	8'-0"	15'-0"	11'-0"	8'-0"	15'-0"	11'-0"	8'-0"	15'-0"	11'-0"	8'-0"	15'-0"	11'-0"	8'-0"	15'-0"	11'-0"	
20	5	14'-0"	10'-0"	7'-0"	13'-0"	10'-0"	7'-0"	13'-0"	10'-0"	7'-0"	13'-0"	10'-0"	7'-0"	13'-0"	10'-0"	7'-0"	13'-0"	10'-0"	7'-0"	13'-0"	10'-0"	7'-0"	13'-0"	10'-0"	
20	6	12'-0"	9'-0"	6'-0"	11'-0"	9'-0"	6'-0"	11'-0"	9'-0"	6'-0"	11'-0"	9'-0"	6'-0"	11'-0"	9'-0"	6'-0"	11'-0"	9'-0"	6'-0"	11'-0"	9'-0"	6'-0"	11'-0"	9'-0"	
20	7	10'-0"	8'-0"	5'-0"	9'-0"	8'-0"	5'-0"	9'-0"	8'-0"	5'-0"	9'-0"	8'-0"	5'-0"	9'-0"	8'-0"	5'-0"	9'-0"	8'-0"	5'-0"	9'-0"	8'-0"	5'-0"	9'-0"	8'-0"	
20	8	8'-0"	7'-0"	4'-0"	8'-0"	7'-0"	4'-0"	8'-0"	7'-0"	4'-0"	8'-0"	7'-0"	4'-0"	8'-0"	7'-0"	4'-0"	8'-0"	7'-0"	4'-0"	8'-0"	7'-0"	4'-0"	8'-0"	7'-0"	
20	9	7'-0"	6'-0"	3'-0"	7'-0"	6'-0"	3'-0"	7'-0"	6'-0"	3'-0"	7'-0"	6'-0"	3'-0"	7'-0"	6'-0"	3'-0"	7'-0"	6'-0"	3'-0"	7'-0"	6'-0"	3'-0"	7'-0"	6'-0"	
20	10	6'-0"	5'-0"	2'-0"	6'-0"	5'-0"	2'-0"	6'-0"	5'-0"	2'-0"	6'-0"	5'-0"	2'-0"	6'-0"	5'-0"	2'-0"	6'-0"	5'-0"	2'-0"	6'-0"	5'-0"	2'-0"	6'-0"	5'-0"	
20	11	5'-0"	4'-0"	1'-0"	5'-0"	4'-0"	1'-0"	5'-0"	4'-0"	1'-0"	5'-0"	4'-0"	1'-0"	5'-0"	4'-0"	1'-0"	5'-0"	4'-0"	1'-0"	5'-0"	4'-0"	1'-0"	5'-0"	4'-0"	
20	12	4'-0"	3'-0"	0'-0"	4'-0"	3'-0"	0'-0"	4'-0"	3'-0"	0'-0"	4'-0"	3'-0"	0'-0"	4'-0"	3'-0"	0'-0"	4'-0"	3'-0"	0'-0"	4'-0"	3'-0"	0'-0"	4'-0"	3'-0"	
20	13	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	0'-0"	3'-0"	2'-0"	
20	14	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	0'-0"	2'-0"	1'-0"	
20	15	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	0'-0"	1'-0"	0'-0"	
20	16	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	
20	17	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	
20	18	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	
20	19	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	
20	20	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	
20	21	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	0'-0"	

THIS TABLE MAY BE USED WITH COMMERCIAL PATIO OR LATTICE STRUCTURES

TABLE 2.2

