NEW AWNING AT:
20707 N. PIMA RD.
SCOTTSDALE, AZ 85255

VICTORY AWNING CO.
CONTACT: CORY SAUTTER
1821 E. INDIAN SCHOOL RD.
PHOENIX, AZ 85016

STRUKTUR STUDIO
1850 NORTH CENTRAL AVENUE
SUITE 515
PHOENIX, AZ 85004
PH. 602-254-7444
FX. 602-258-1529

DRAWN BY: J.J. / B.R.	CHECKED BY: D.P.L.
DATE: 3/5/07	PROJECT: 071101

SK1

GENERAL NOTES

A. PROJECT INFORMATION:

1. NAME: ROMEO - NEW AWNING
   20707 NORTH PIMA ROAD, #120
   SCOTTSDALE, AZ
2. CONTRACTOR: VICTORY AWNING CO. (CONTACT: CORY SAUTTER)
   1821 EAST INDIAN SCHOOL ROAD
   PHOENIX, AZ 85016
3. DESCRIPTION: INSTALL ONE (1) FABRIC AWNING TO THE EXISTING STRUCTURE USING MECHANICAL FASTENERS

B. DESIGN CRITERIA:

1. BUILDING CODE: THIS STRUCTURE IS DESIGNED IN ACCORDANCE TO THE 2003 INTERNATIONAL BUILDING CODE WITH ORDINANCE/AMENDMENTS BY THE CITY OF SCOTTSDALE, ARIZONA.
2. STRUCTURAL LOADS

   a. DEAD: NEGLEGIBLE
   b. LIVE: AWNING = 5 psf
   c. WIND: BASIC WIND SPEED FASTEST THREE SECOND MILE V3S = 90 mph
   IMPORTANCE FACTOR Iw = 1.00
   EXPOSURE C (ANALYSIS METHOD SIMPLIFIED)
   NET UPLIFT Pul = 23 psf

C. STEEL:

1. ALL STRUCTURAL STEEL SHALL BE DESIGNED, DETAILED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE AISC, "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING", (9 TH. EDITION). ALL STEEL FABRICATION SHALL BE PERFORMED BY A LICENSED FACILITY.
2. ALL STEEL FABRICATED ITEMS SHALL SATISFY THE FOLLOWING ASTM SPECIFICATIONS:

MEMBER	ASTM	Fy (ksi)
STRUCTURAL TUBING (HSS)	A513	30
PLATES	A36	36

3. ALL WELDING SHALL BE IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF A.W.S. D1.1 USING E70XX ELECTRODES.
4. BOLT HOLES SHALL BE PUNCHED OR DRILLED AND NOT BE GREATER THAN 1/16" IN DIAMETER THAN THE SPECIFIED BOLT. ALL HOLES SHALL HAVE SMOOTH SURFACES. FIELD CUTTING OF HOLES IS NOT PERMITTED.
5. ALL SHOP OR FIELD WELDING OF STRUCTURAL STEEL, STEEL REINFORCEMENT, AND LIGHT GAUGE STEEL SHALL BE COMPLETED BY AN A.W.S. CERTIFIED WELDER.

D. GENERAL CONSTRUCTION:

1. ALL DESIGN, DRAWINGS, AND DETAIL REPRESENT COMPLETE WORK IN PLACE.
2. THE ENGINEER SHALL HAVE NO CONTROL OR CHANGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTIONS MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, FOR THE ACTS OR OMISSIONS BY THE CONTRACTOR, SUBCONTRACTOR, OR ANY OTHER PERSON PERFORMING ANY OTHER PORTION OF THE WORK OR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN CONFORMANCE WITH THE CONTRACT DOCUMENTS, OR INSTRUCTIONS OF THE OWNER OR OWNER'S AGENT.
3. WHEN A MATERIAL SYSTEM IS NOTED, ALL PARTS AND MATERIALS REQUIRED TO COMPLETE THE SYSTEM SHALL BE FURNISHED AND INSTALLED PERSUANT OF THE MANUFACTURER'S INSTRUCTIONS.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISCREPANCY OCCURS PRIOR TO COMMENCEMENT OF RELATED WORK. WORK SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES.
5. *ALL WORK IS TO BE PERFORMED TO THE CODE BY LICENSED CONTRACTORS PERFORMING* WORK IN THEIR SPECIFIC TRADES ONLY. ALL AND ANY ALTERATIONS TO THIS DOCUMENT SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY CHANGES BEING PERFORMED.
6. THE CONTRACTOR OR SUB-CONTRACTOR SHALL BE RESPOSIBLE FOR ALL UNAPPROVED MODIFICATIONS.

VICTORY AWNING

REFER TO NEXT PAGE FOR SCOPE OF WORK

Registered Professional Engineer (Structural)
CERTIFICATE NO. 35222
DAVID P. LUNENG
Date Signed 3/5/07
ARIZONA, U.S.A.

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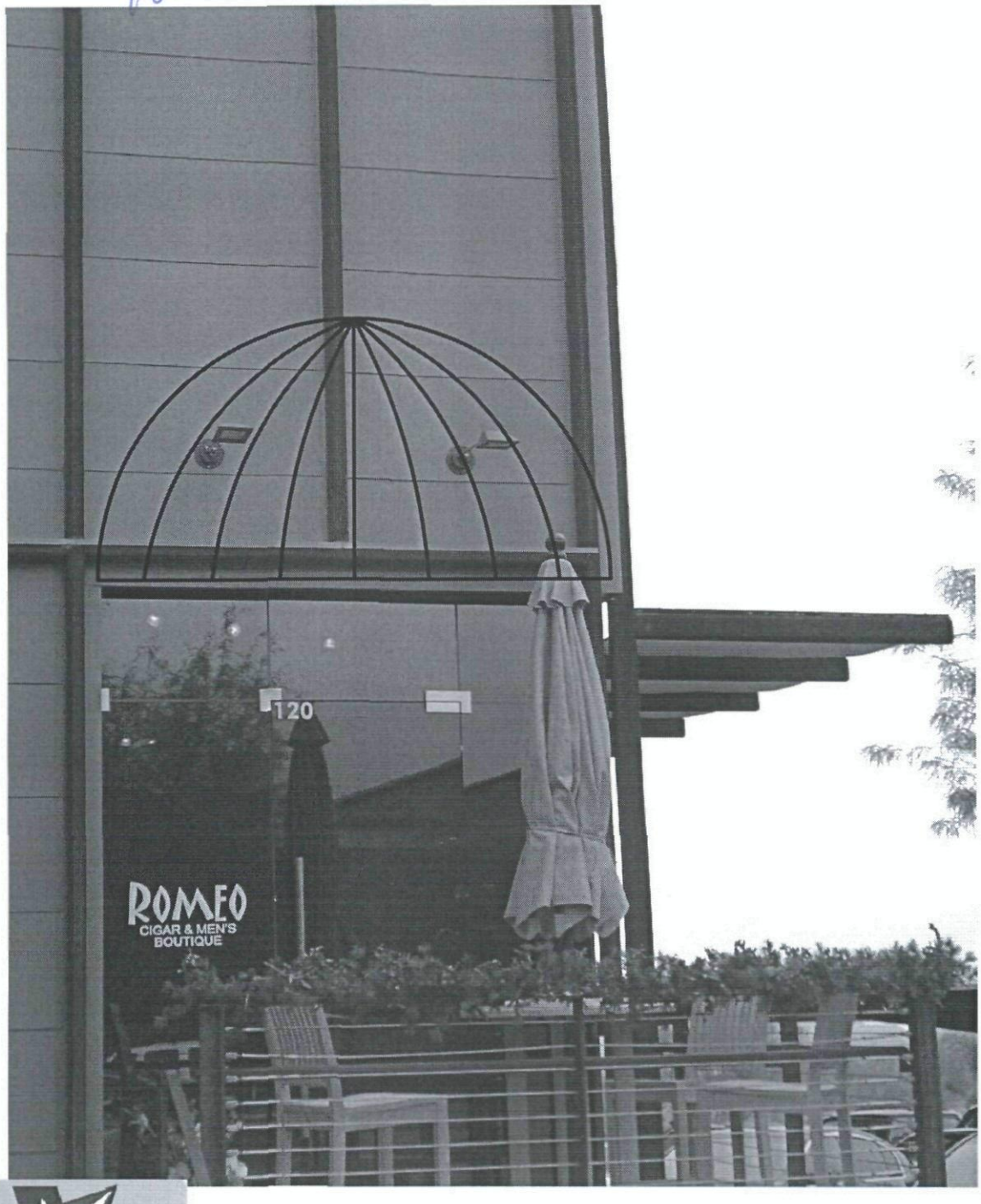
SK2



VICTORY AWNING

1 / SK2 SCHEMATIC - SCOPE OF WORK

N.T.S.

Registered Professional Engineer (Structural)
CERTIFICATE No. 35222
DAVID P. LUNENG
Date Signed 3/5/07
ARIZONA, U.S.A.

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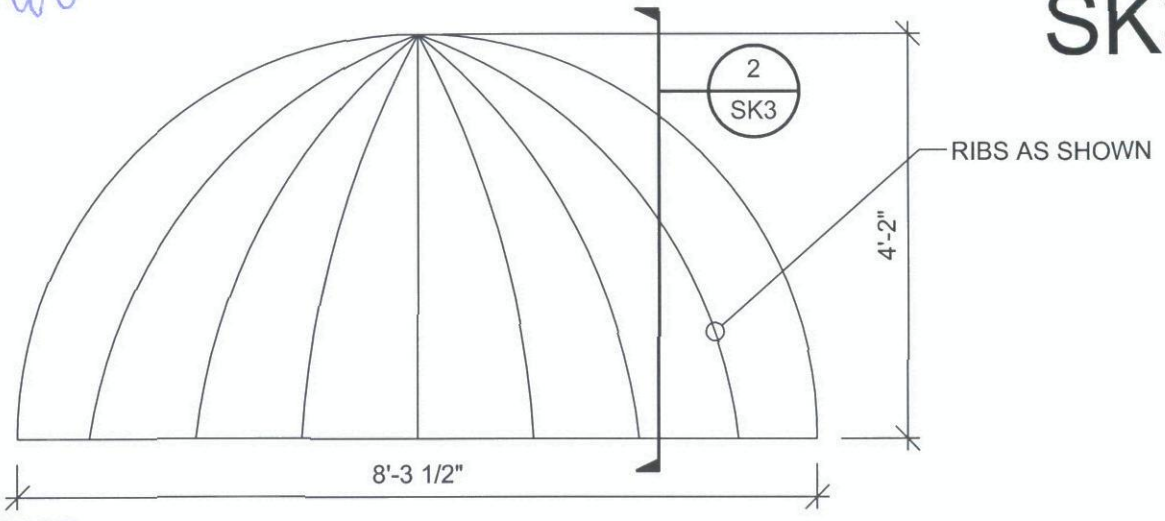
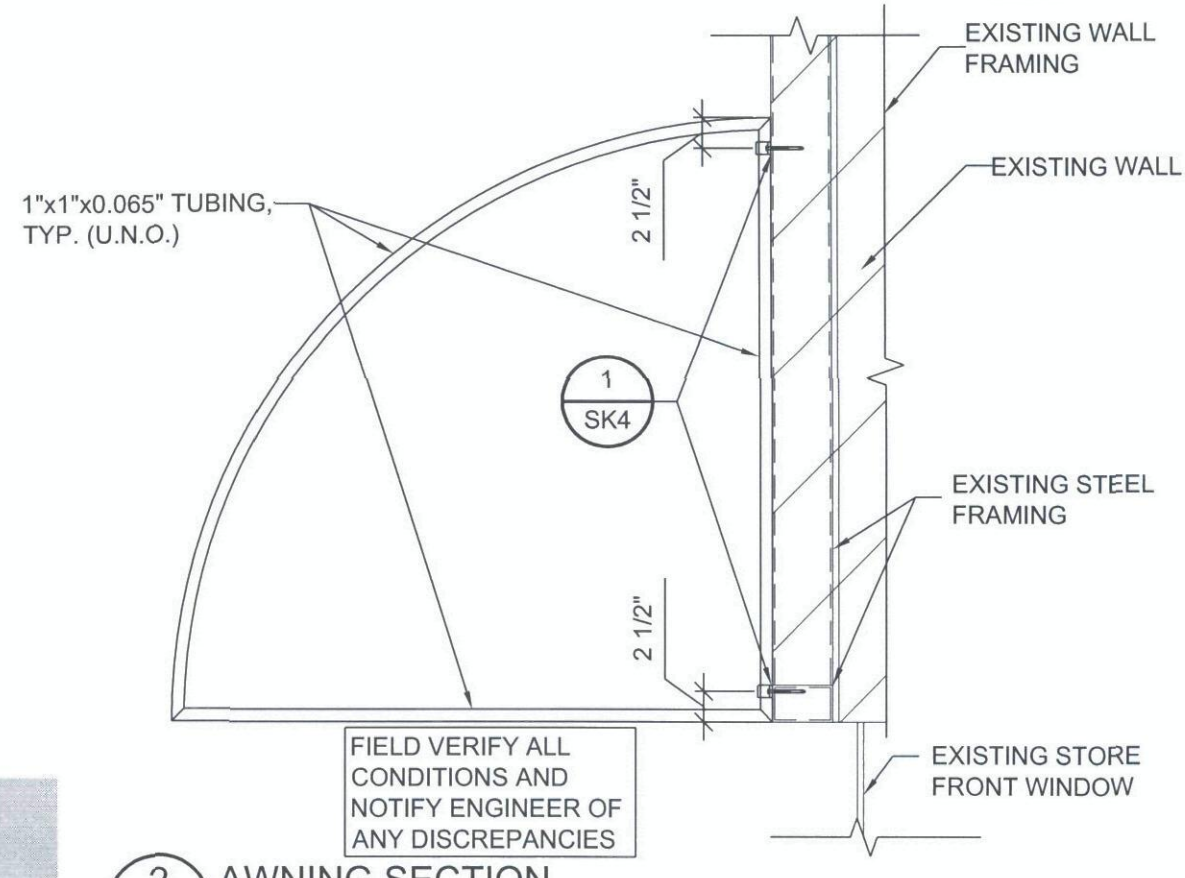
SK3



1/SK3 AWNING

N.T.S.



FIELD VERIFY ALL CONDITIONS AND NOTIFY ENGINEER OF ANY DISCREPANCIES

2/SK3 AWNING SECTION

N.T.S.

VICTORY AWNING

Registered Professional Engineer (Structural)
CERTIFICATE NO. 35222
DAVID P. LUNENG
Date Signed 3/5/07
ARIZONA, U.S.A.

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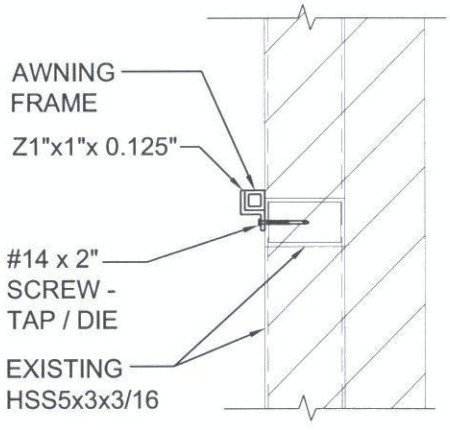
SK4



1 / SK4 Z-CLIP FRAME ATTACHMENT

N.T.S.

VICTORY AWNING

ROMEO

20707 NORTH PIMA ROAD, SUITE 120
SCOTTSDALE, ARIZONA 85255

STRUCTURAL DESIGN CALCULATIONS FOR ONE AWNING

BY:

STRUKTUR STUDIO
1850 NORTH CENTRAL AVENUE
SUITE 515
PHOENIX, AZ 85004

STRUKTUR STUDIO JOB NO. 071101

MARCH 6, 2007

DESIGN CRITERIA

LOCATION: *ROMEO*
20707 NORTH PIMA ROAD, SUITE 120
SCOTTSDALE, ARIZONA 85255

BUILDING CODE: 2003 INTERNATIONAL BUILDING CODE
WITH AMENDMENTS PER THE CITY OF SCOTTSDALE, ARIZONA

SCOPE OF WORK: DESIGN ONE AWNING FRAME TYPES AND ATTACHMENT
TO THE EXISTING STRUCTURE

DYNAMIC LOADING:

WIND:

WIND SPEED (V3S)	**90 mph**	***3 SECOND GUST***
IMPORTANCE FACTOR	**1.0**	
EXPOSURE	**C**	

WIND LOAD: ZONE 4 ON WALL
THE NEW AWNINGS ARE PROTECTED UNDER 15 FEET IN ZONE 4 WALL
USE ZONE 1 LIFT: Pup =14.6 psf x 1.21x 1.3 = 23 psf
OUTWARD PRESSURE: Pout = 18.3 psf

SEISMIC: *DOES NOT GOVERN, BY INSPECTION*

GRAVITY LOADING:

AWNING

MEMBRANE	0.5
FRAMING	2
	2.5 psf ←

LIVE:

AWNING **5 psf** ← FLAT

MATERIALS

AWNING FRAME STEEL: ASTM A513; Fy = 30 ksi

FOR FRAME 1

SECTION	HEIGHT =	1.000 inches
	WIDTH =	1.000 inches
	WALL THICKNESS	0.065 inches
	Ix = Iy =	0.036 inches^4
	A =	0.243 inches^2
	r =	0.383 inches

EXISTING STRUCTURE: HSS5X3X3/16 STEEL VERTS.

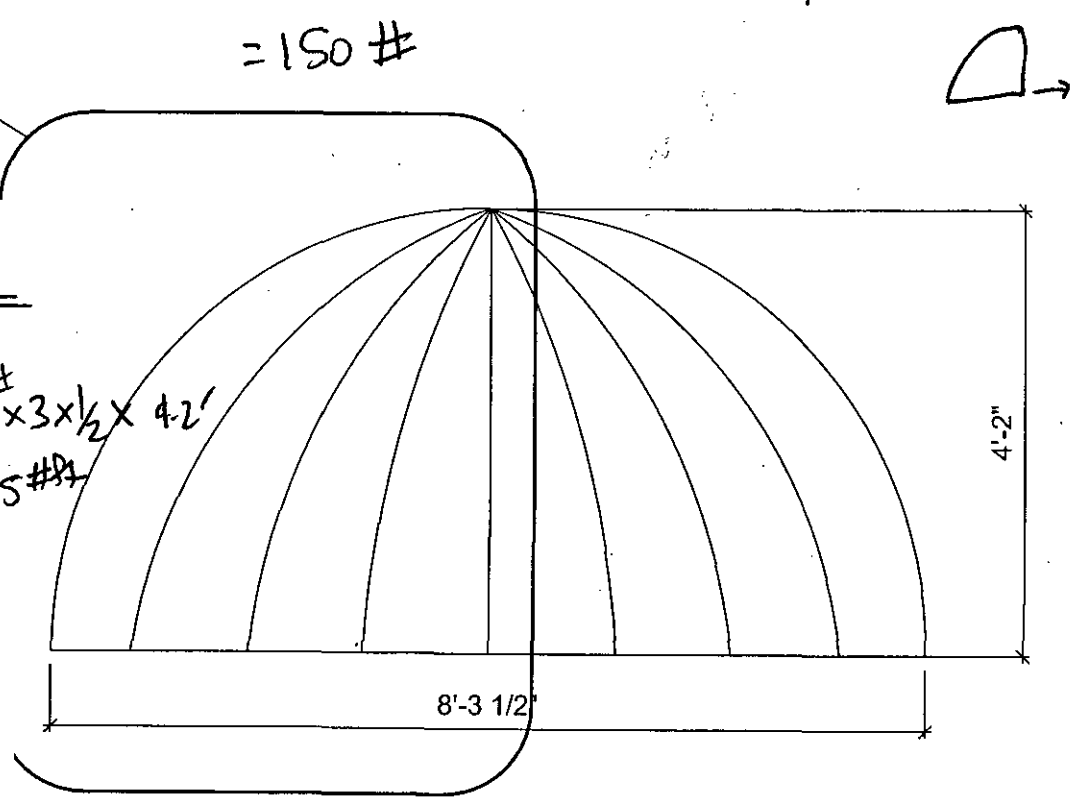
CONNECTION OF THE AWNING TO THE STRUCTURE

$A_{TRIB} = 4.16'/2 \times TT/2 = 27.3 ft^2$

$$\text{PULLOUT FORCE} = \frac{(27.3 ft^2 \times 23^{psf} + 27.3^{ft^2} \times 18.3_{psf})(0.4 \times 4.2')}{(3)\ (4.2')}$$

(3) CONNECTION POINTS

$= 150\ \#$



CHECK HSS5x3x3/16

ASD:

MOMENT $= 150^{\#} \times 3 \times 1/2 \times 4.2'$

$= 945^{\#ft}$

S_x HSS 5x3x3/16 $= 3.62 in^3$

$f_b = 3.1 ksi$

OK ✓

1 / SK1 AWNING

N.T.S.

(AISI A5.1.3)

TRY #14 SCREW: $T_R = 216^{\#}$ OK (→ ASD)

(SAY 14GA. MATERIAL)

USE #14 SCREW IN 1/8" THK Z PLATE/CLIP

THE HSS5x3x3/16 APPEARS ADEQUATE FOR THE MINOR IMPOSED LOADS