

J:\FORCE 12\2013 TEXAS DEPARTMENT OF INSURANCE\F12-SERIES-500-STRAP\_AND\_BUCKLE\_SCREEN\F12-SERIES-500-STRAP & BUCKLE.dwg, 4/20/2020 7:42:02 AM, \\HEN-FPAD\DESIGN Kyocera CS 60021.KK

# FORCE 12

FLEXIBLE WIND ABATEMENT SCREEN SYSTEM

## GENERAL NOTES

1. THIS PRODUCT IS DESIGNED IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE (IBC) AND THE 2018 INTERNATIONAL RESIDENTIAL CODE (IRC). PRODUCT MEETS ASCE 7-16 REQUIREMENTS.
2. GLASS SEPARATION WILL BE REQUIRED (SEE TABLE 3 SHEET 15).
3. WOOD FRAMING MEMBERS BY OTHERS, MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE. WOOD FRAMING MEMBERS SHALL BE "SOUTHERN PINE" WITH G=0.55 OR GREATER DENSITY.
4. PRODUCT ANCHORS SHALL BE AS LISTED AND SPACED AS SHOWN ON DETAILS. ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
5. DESIGN PRESSURE RATING: SEE CHART BELOW.
6. PANELS SHOULD BE PERMANENTLY LABELED WITH A MINIMUM OF ONE LABEL PER PANEL AS FOLLOWS:

FORCE 12 - SERIES 500 - STRAP & BUCKLE  
 HENDEE ENTERPRISES INC.  
 DESIGN PRESSURE RATING:  
 THIS PRODUCT IS DESIGNED IN COMPLIANCE WITH:  
 TAS 201-94 (LARGE MISSILE/CYCLIC LOAD)  
 TAS 202-94 (LARGE MISSILE/CYCLIC LOAD)  
 TAS 203-94 (UNIFORM STATIC LOAD PRESSURE)  
 IMPACT RESISTANT: LARGE AND SMALL MISSILE IMPACT

### HURRICANE SCREEN CONSTRUCTION (COMMON TO ALL CONDITIONS)

#### SCREEN & SCREEN TRACK CONSTRUCTION:

##### SCREEN:

THE SCREEN IS MANUFACTURED FROM A WOVEN POLYPROPYLENE MONOFILAMENT GEOTEXTILE FABRIC

##### SCREEN CONFIGURATION:

THE SCREEN IS MANUFACTURED IN (3) STYLES, VERTICAL SEAM, HORIZONTAL SEAM & NON-SEAMED OVERLAPPED FABRIC PANELS. THE MAXIMUM PANEL HEIGHT IS 12'-0".

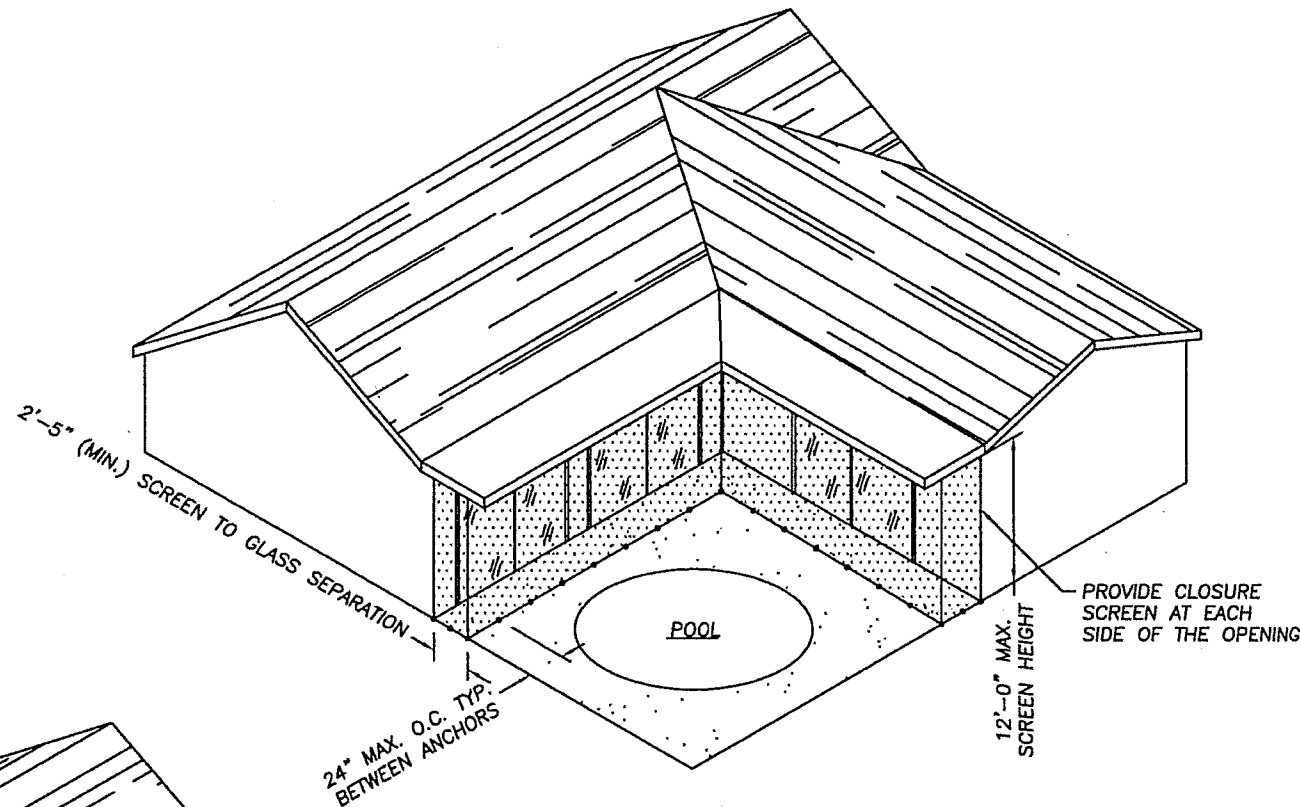
THE SCREEN IS MANUFACTURED FROM A WOVEN POLYPROPYLENE MONOFILAMENT GEOTEXTILE FABRIC WITH INDIVIDUAL FILAMENTS WOVEN INTO A BASKET WEAVE NETWORK AND CALENDERED SUCH THAT THE FILAMENTS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER.

##### SCREEN TRACK:

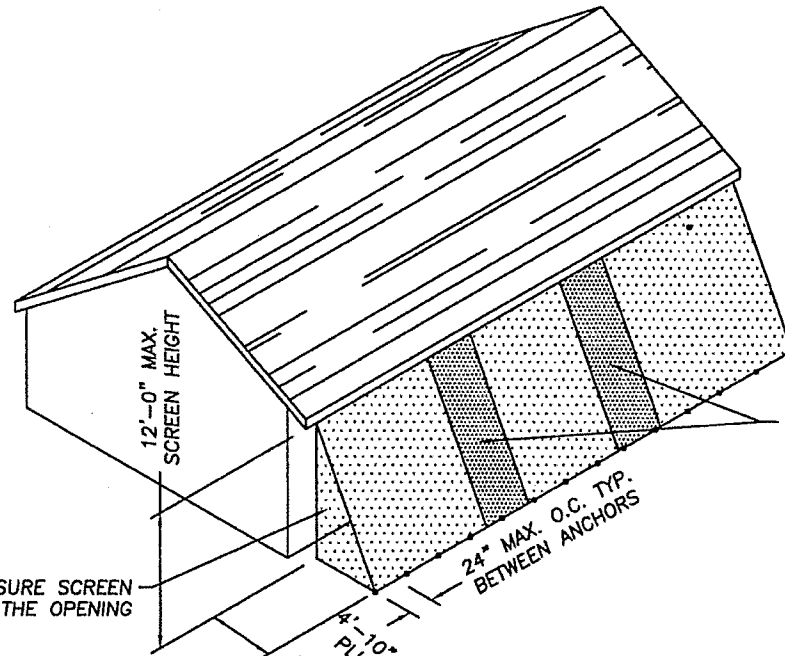
THE SCREEN TRACK IS EXTRUDED FROM 6063-T6 ALUMINUM.

#### DESIGN PRESSURE RATING

POSITIVE	+ 60.0 psf
NEGATIVE	- 60.0 psf



ELEVATION #2  
 STRAIGHT DROP SCREEN MOUNT  
 SEE SHT. 4



OVERLAP DETAIL  
 SEE SHEET 3  $\frac{7}{3}$

ELEVATION #1  
 ANGLED SCREEN MOUNT  
 SEE SHT. 2

PROVIDE CLOSURE SCREEN  
 AT EACH SIDE OF THE OPENING

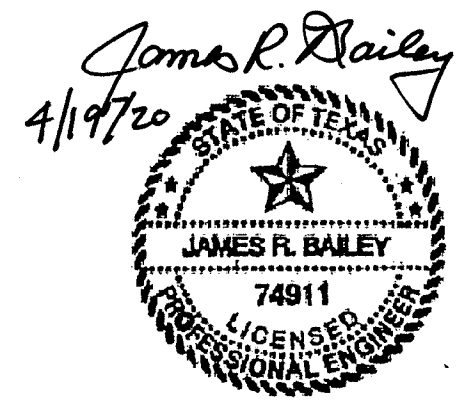
4'-10" MAX. FROM  
 PLUMB LINE OF  
 TOP ANCHOR  
 (APPLIES TO ANGLED  
 MOUNT ONLY)  
 FOR SCREEN HEIGHTS  
 LESS THAN 12'-0". SEE  
 TABLE #3 SHEET 15 OF 15

**Hendee Enterprises, Inc.**  
 The Innovative Solutions Company  
 P.O. Box 4208, Houston, TX 77210-4208 8300 South Park Dr., Houston, TX 77064  
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 Texas PE # 74911  
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 281-403-2825  
 Texas Firm # 11044

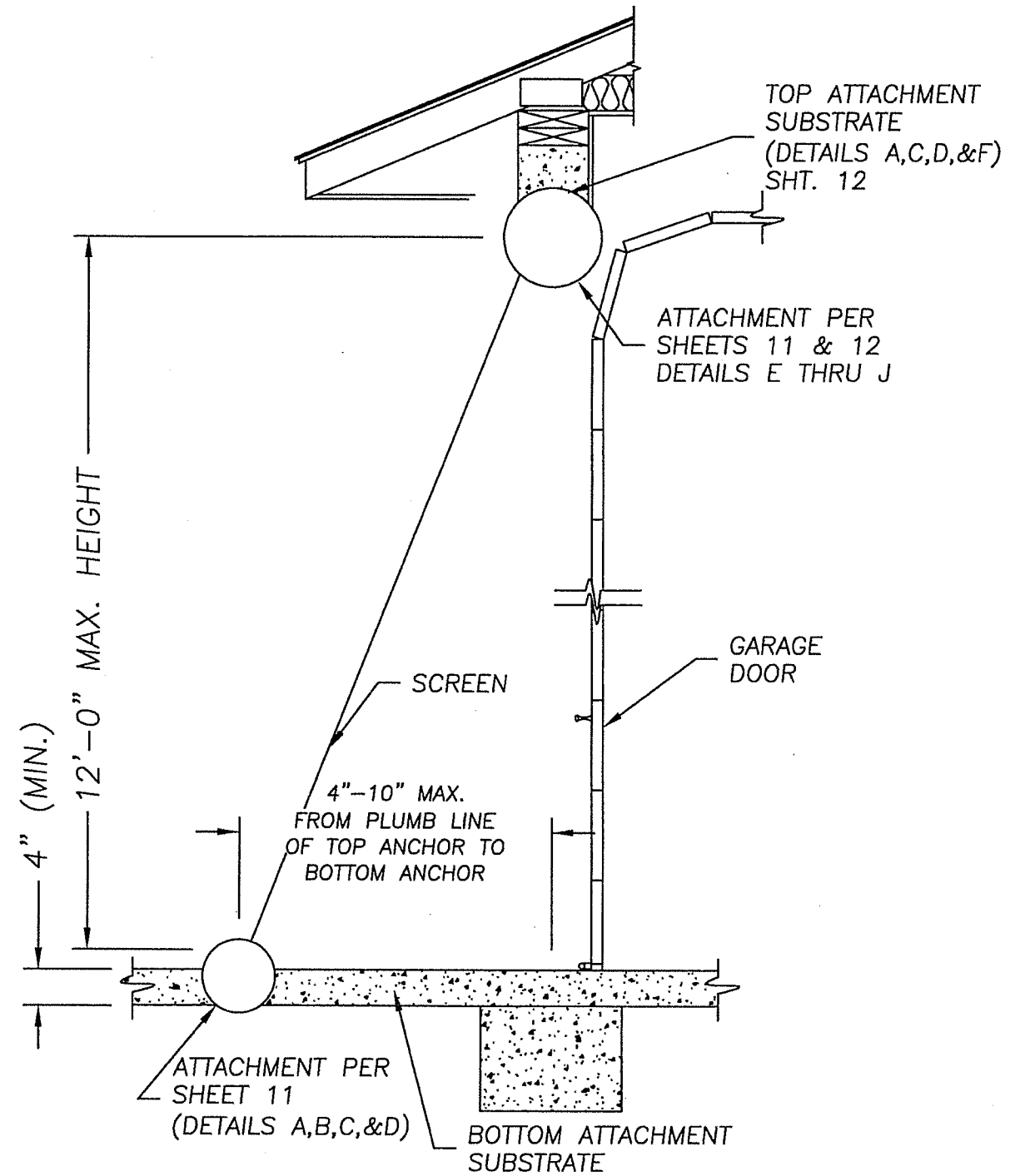
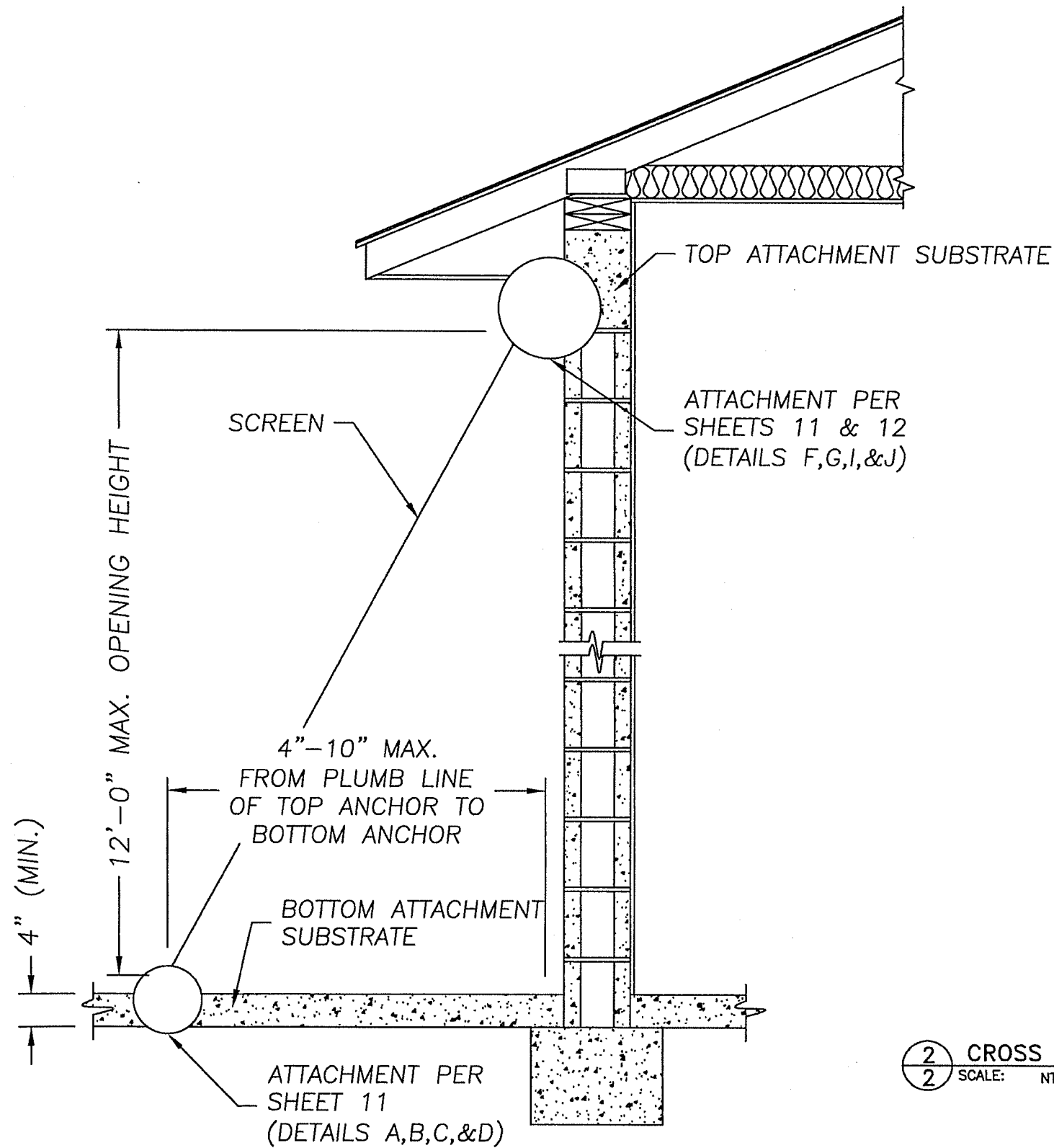
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2 CROSS SECTION OF ANG. MOUNTED SCREEN (SIDE VIEW/GARAGE DOOR)  
 2 SCALE: NTS = 1'-0"

*James R. Bailey*  
 4/19/20

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 JAMES R. BAILEY  
 74911  
 LICENSED PROFESSIONAL ENGINEER

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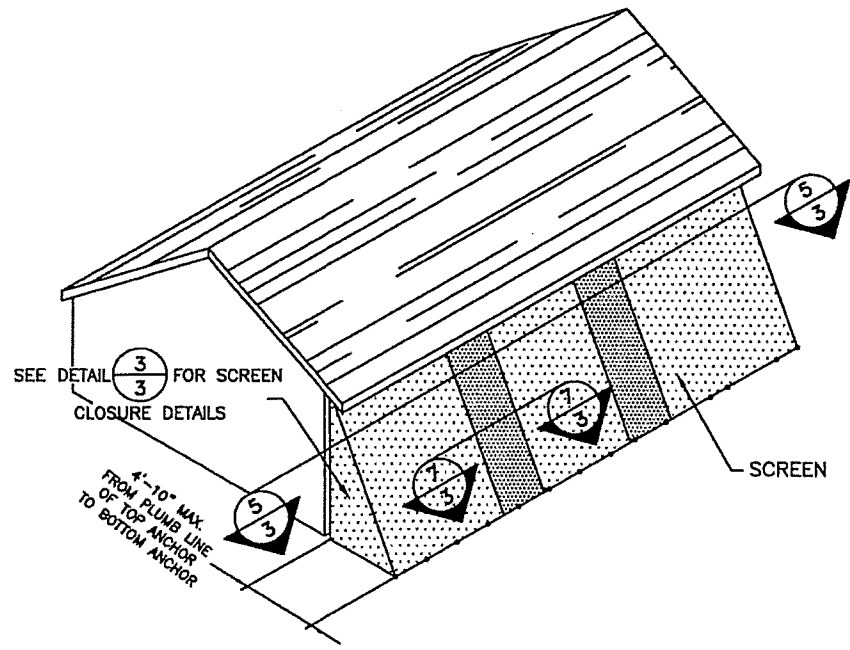
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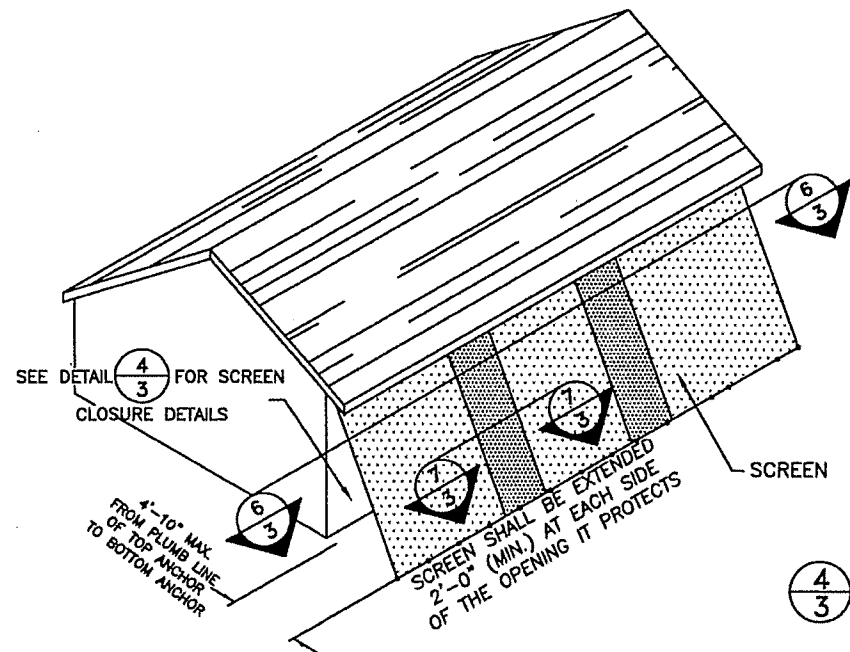
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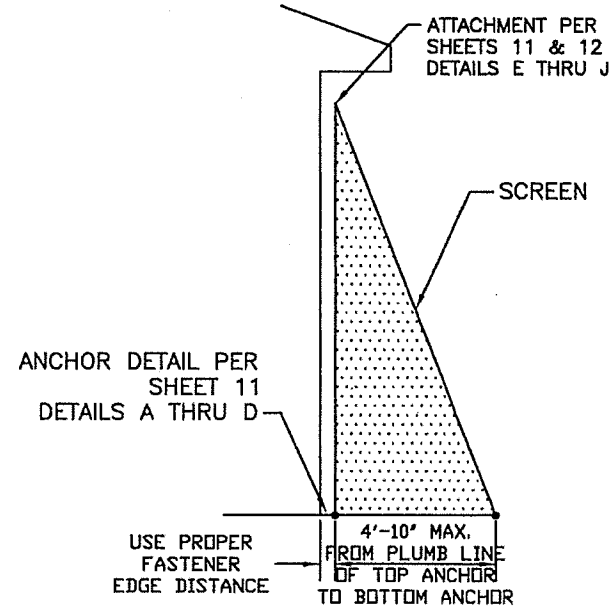
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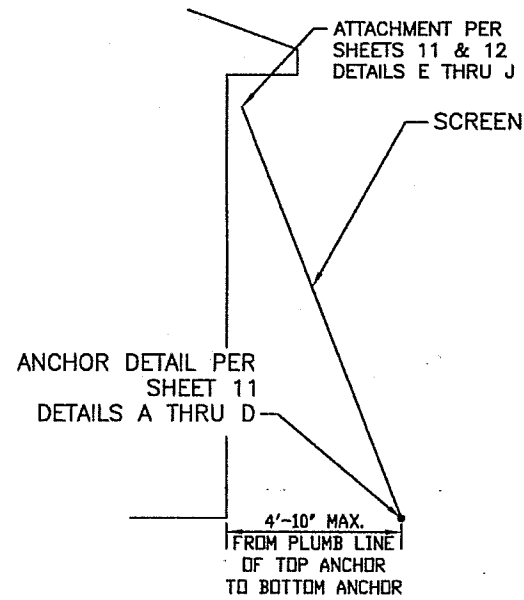
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**3** SCALE: NTS = 1'-0"



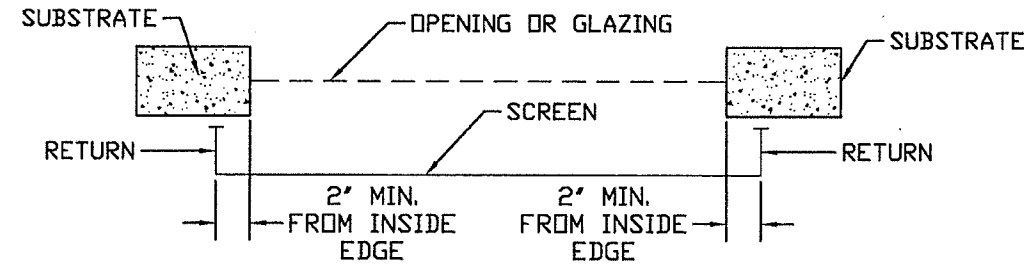
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**3** SCALE: NTS = 1'-0"



**3** SIDE CLOSURE SCREEN  
**3** SCALE: NTS = 1'-0"

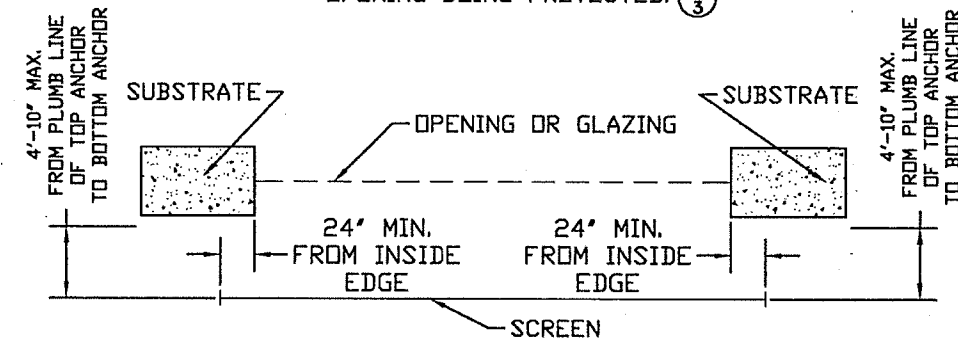


**4** SIDE CLOSURE SCREEN - NO RETURN  
**3** SCALE: NTS = 1'-0"

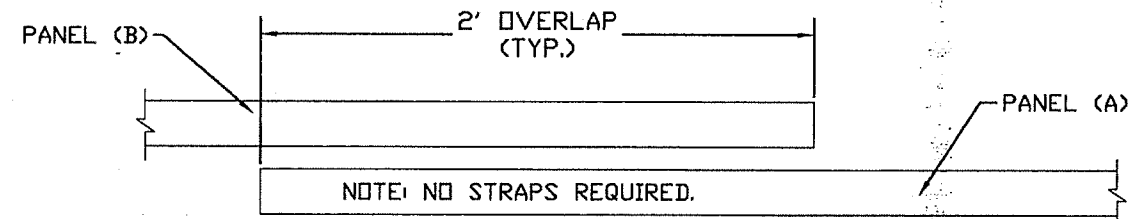


**5** ANGLED SCREEN CLOSURE WITH RETURN (PLAN VIEW)  
**3** SCALE: NTS = 1'-0"

NOTE: SCREEN CLOSURE WITH RETURN OR (MIN) 24' OVERLAP OF OPENING BEING PROTECTED.



**6** ANGLED SCREEN CLOSURE - NO RETURN (PLAN VIEW)  
**3** SCALE: NTS = 1'-0"



**7** PANEL OVERLAP - SECTION  
**3** SCALE: NTS = 1'-0"

**Hendee Enterprises, Inc.**  
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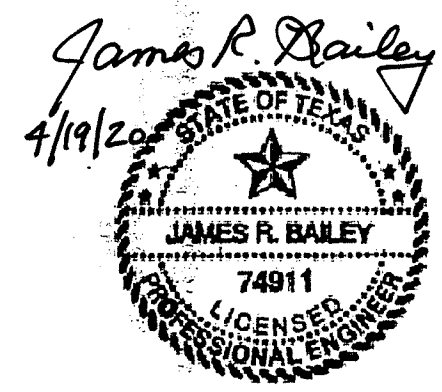
CONSULTANTS:  
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 Platinum Risk Consulting LLC  
 4931 Chappel Hill Dr.  
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 281-403-2825  
 Texas Firm # 11044

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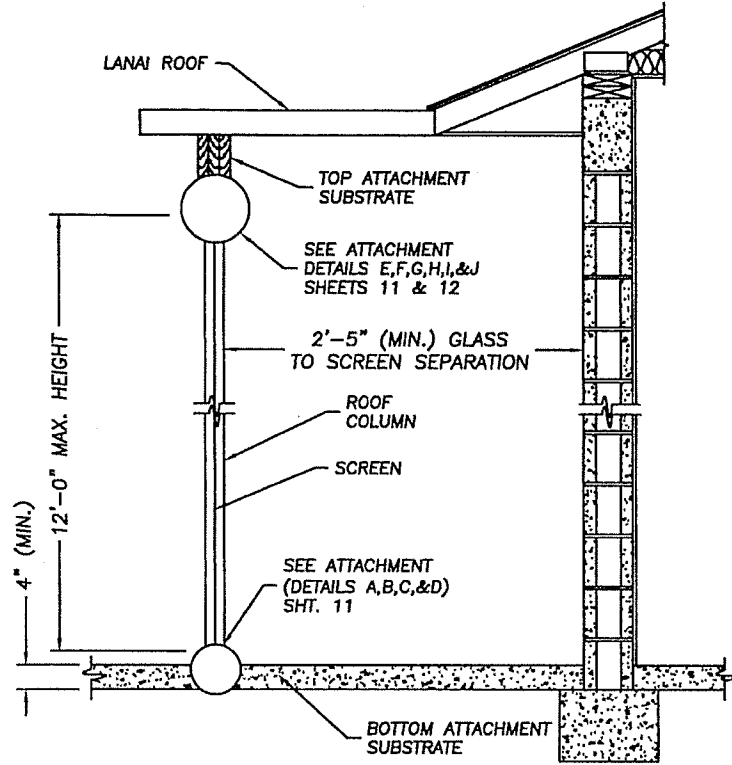
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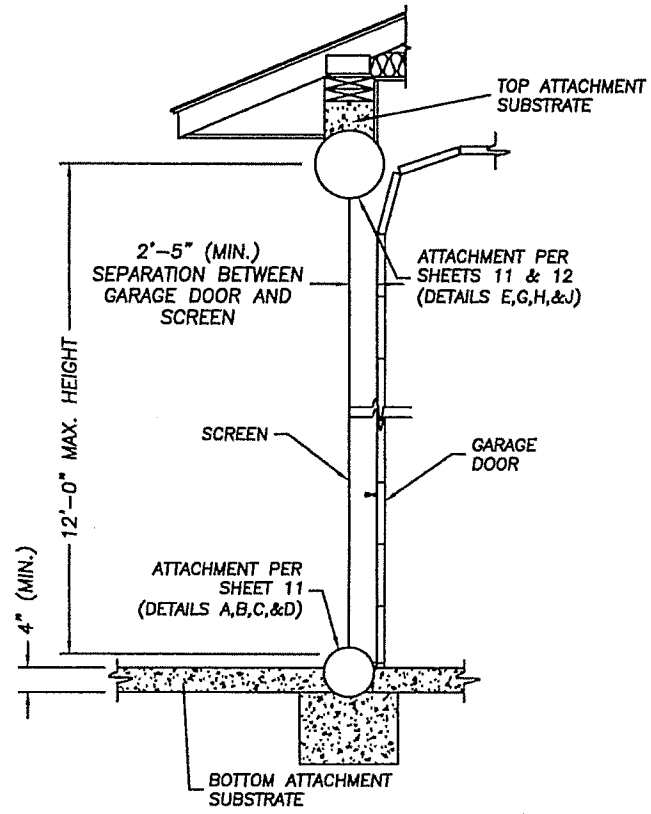
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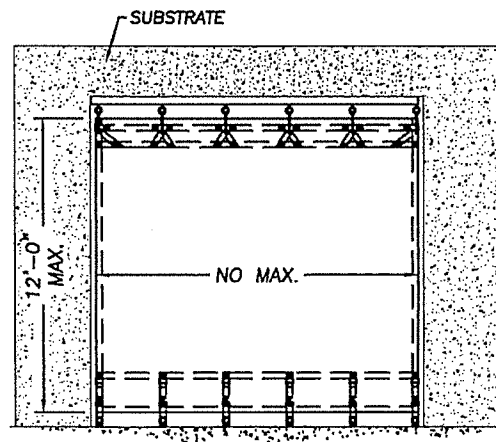
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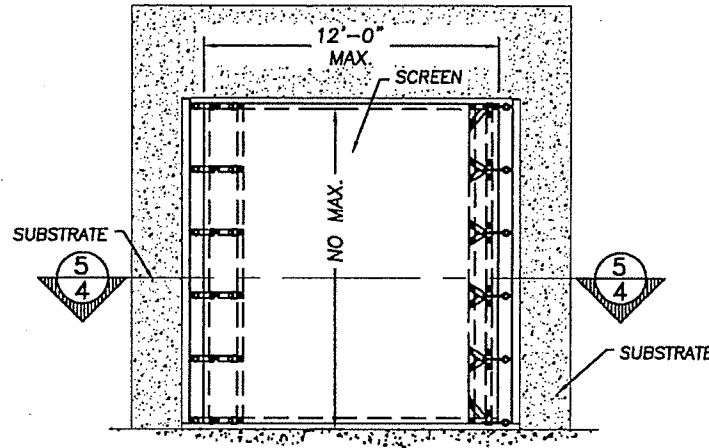
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4 SCALE: NTS=1'-0"



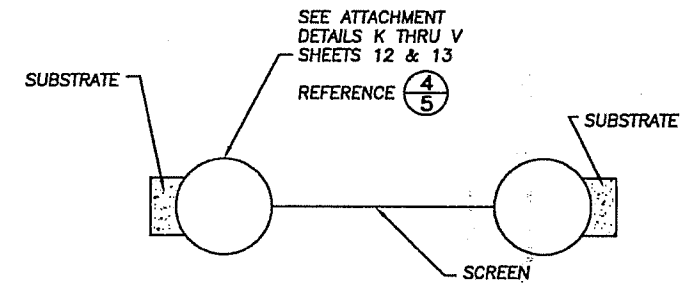
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4 SCALE: NTS=1'-0"



3 VERT. MOUNTED STRAIGHT DROP SCREEN (ELEVATION)  
4 SCALE: NTS=1'-0"

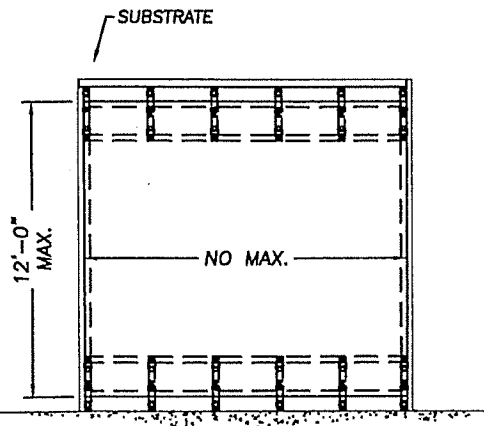


4 HOR. MOUNTED STRAIGHT DROP SCREEN (ELEVATION)  
4 SCALE: NTS=1'-0"

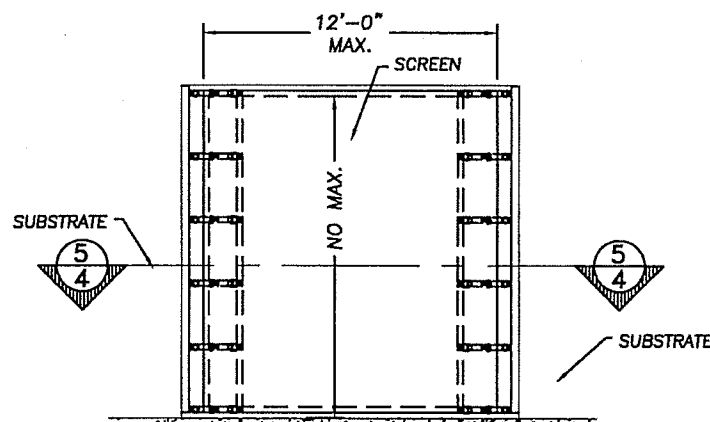


\*\*IF THE SUBSTRATE IS NOT A CONTINUOUS LATERALLY-SUPPORTED WALL MADE OF STRUCTURAL TIMBER FRAMING, RE-ENFORCED CONCRETE, OR RE-ENFORCED CONCRETE BLOCK OR THE SUBSTRATE IS A COLUMN WITHOUT INTERMEDIATE LATERAL SUPPORT, THEN A LICENSED PROFESSIONAL ENGINEER IS TO DETERMINE IF COLUMN/SUBSTRATE CAN RESIST APPLIED LOADS FROM THE SCREEN AS REQUIRED BY CODE.

5 SECTION OF HOR. MOUNTED STRAIGHT DROP SCREEN (PLAN VIEW)  
4 SCALE: NTS=1'-0"



3.1 VERT. MOUNTED STRAP AND BUCKLE (ELEVATION) OPTION 2  
4 SCALE: NTS=1'-0"



4.1 HOR. MOUNTED STRAP AND BUCKLE (ELEVATION) OPTION 2  
4 SCALE: NTS=1'-0"

*James R. Bailey*  
4/19/20

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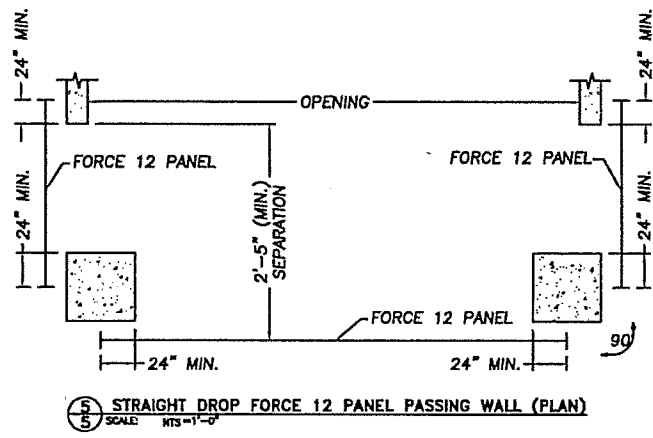
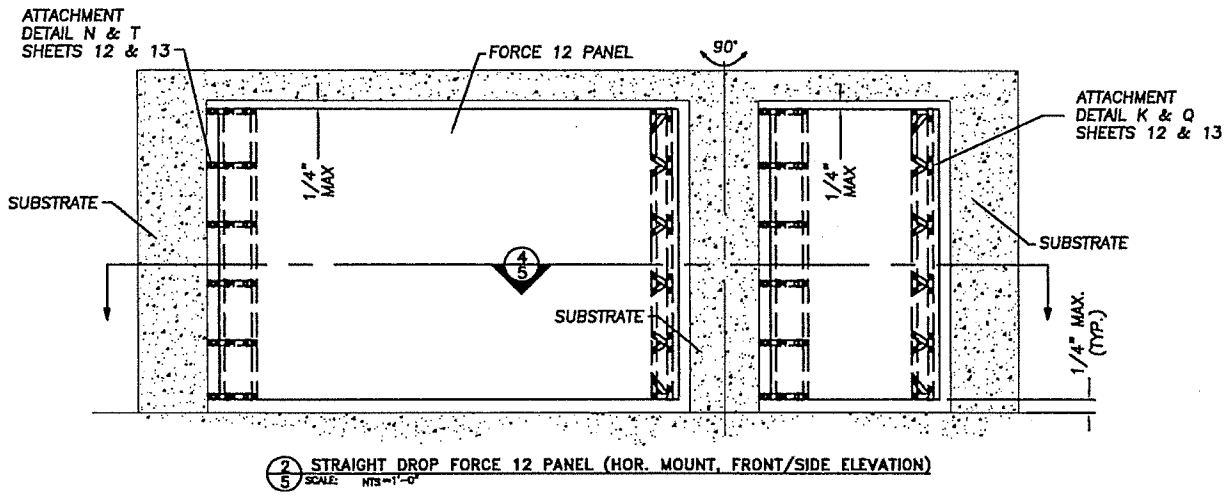
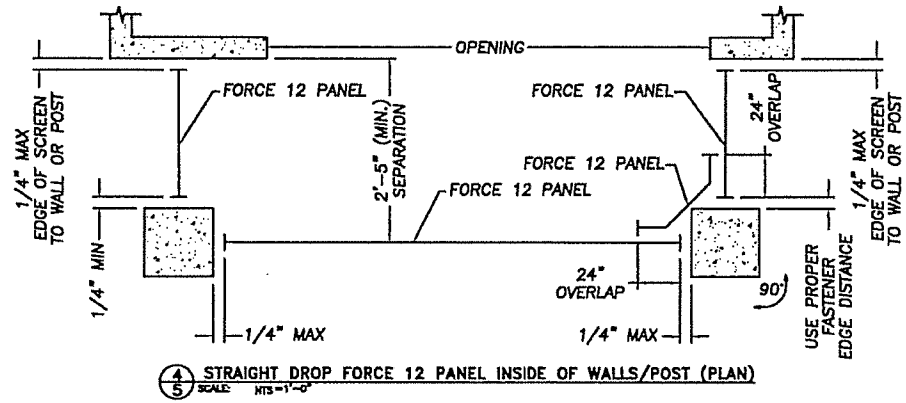
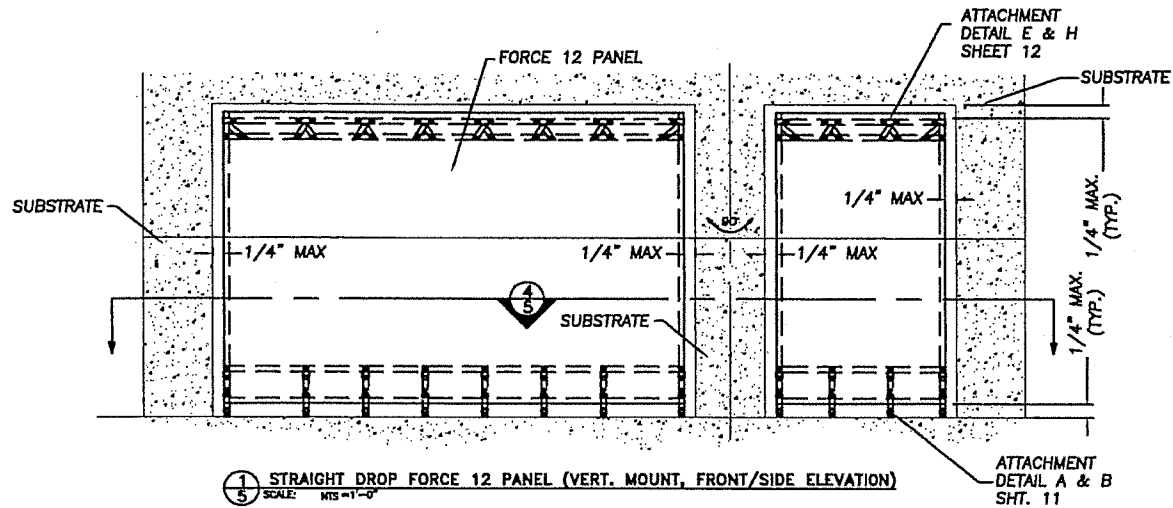
**CONSULTANTS:**  
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Texas Firm # 11044

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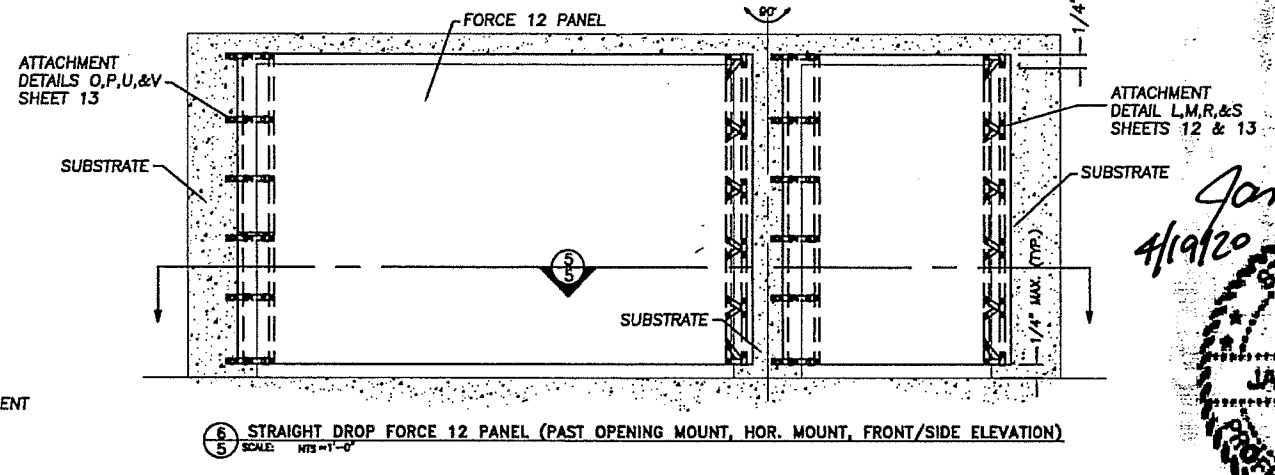
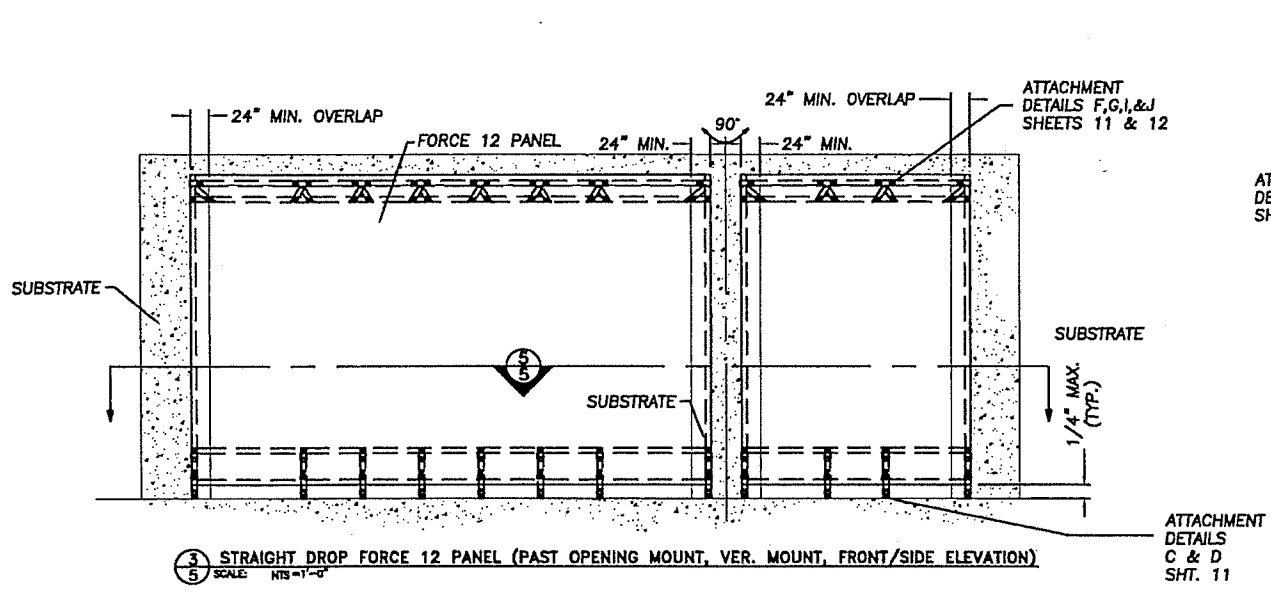
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NOTE: SCREEN CLOSURE WITH  $\frac{3}{8}$  RETURN OR (MIN) 24" OVERLAP OF OPENING BEING PROTECTED.  $\frac{3}{8}$



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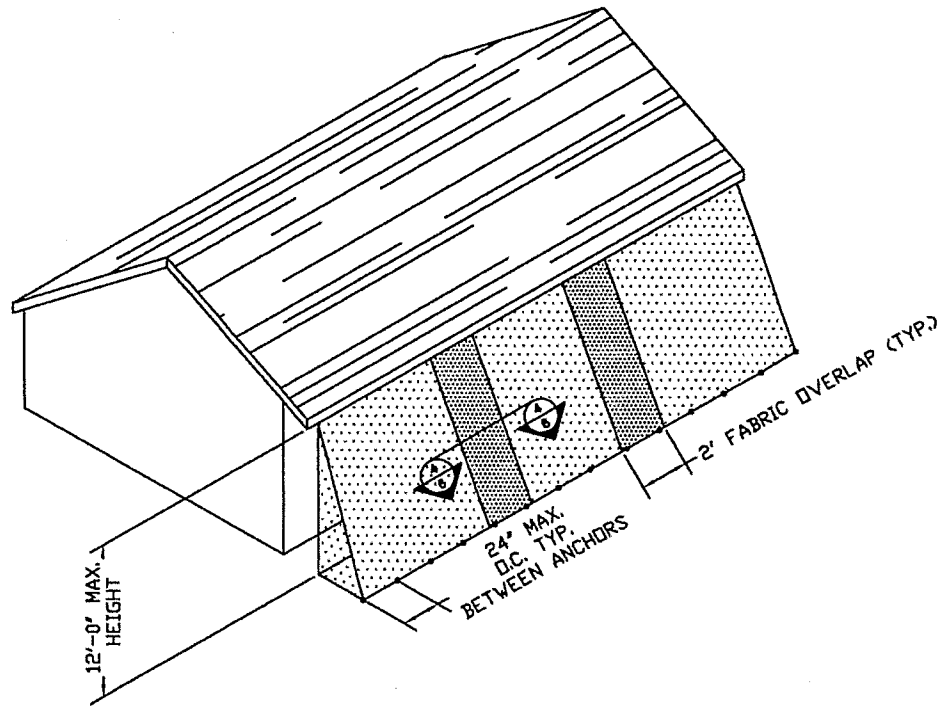
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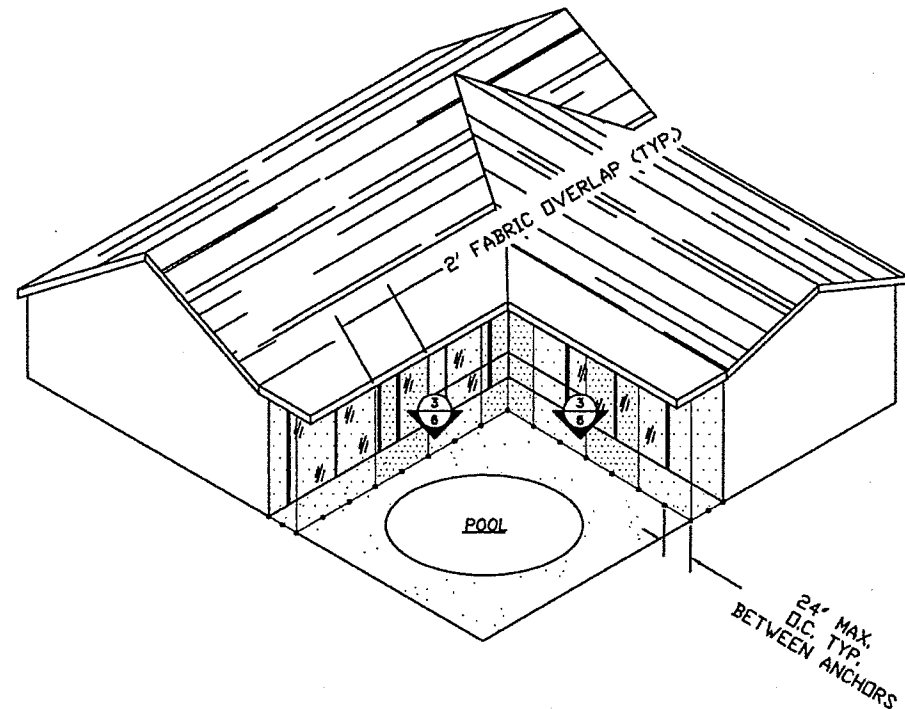
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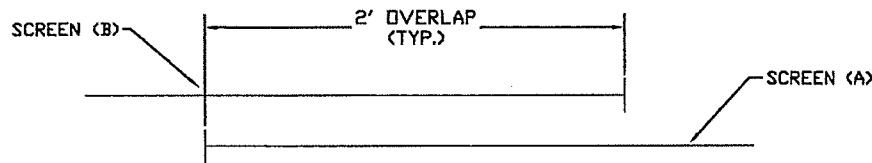
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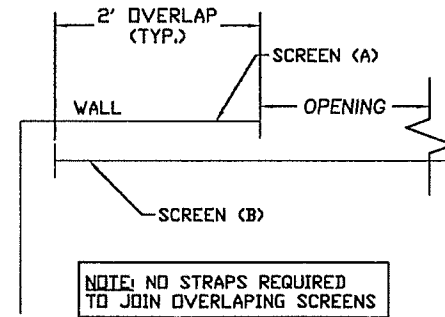
1 ANGLLED SCREEN OVERLAP - IN APPLICATION  
6 SCALE: NTS = 1'-0"



2 VERTICAL SCREEN CORNER OVERLAP - IN APPLICATION  
6 SCALE: NTS = 1'-0"



4 SCREEN OVERLAP - SECTION  
6 SCALE: NTS = 1'-0"



3 CORNER PANEL OVERLAP (PLAN VIEW)  
6 SCALE: NTS = 1'-0"

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4/19/20

STATE OF TEXAS  
JAMES R. BAILEY  
74911  
LICENSED PROFESSIONAL ENGINEER

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Texas Firm # 11044

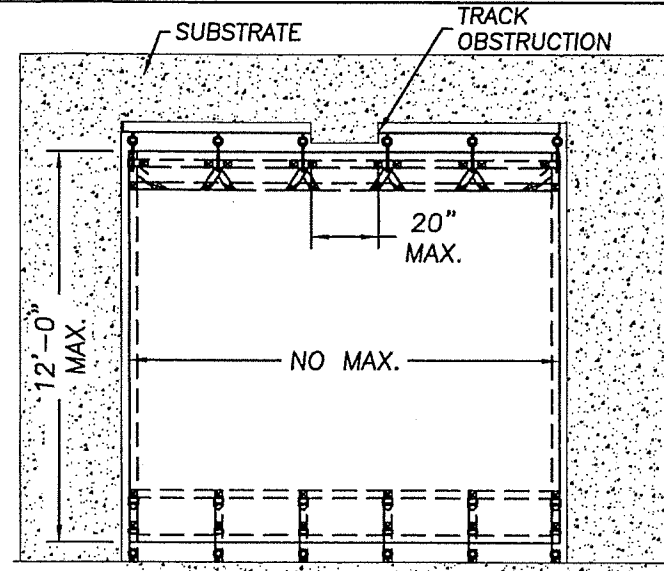
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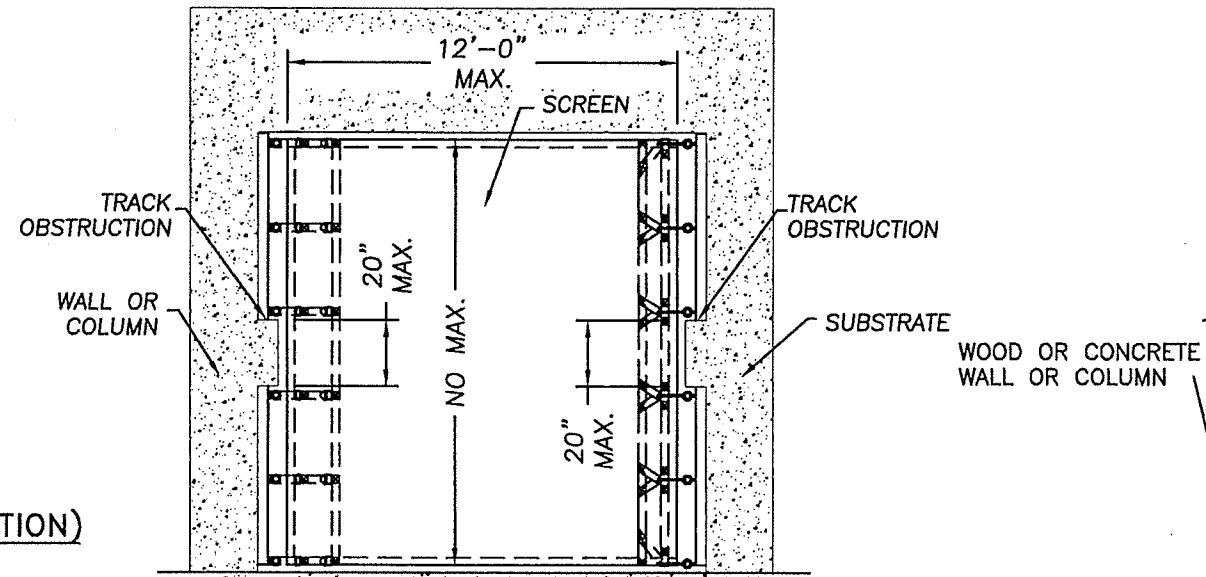
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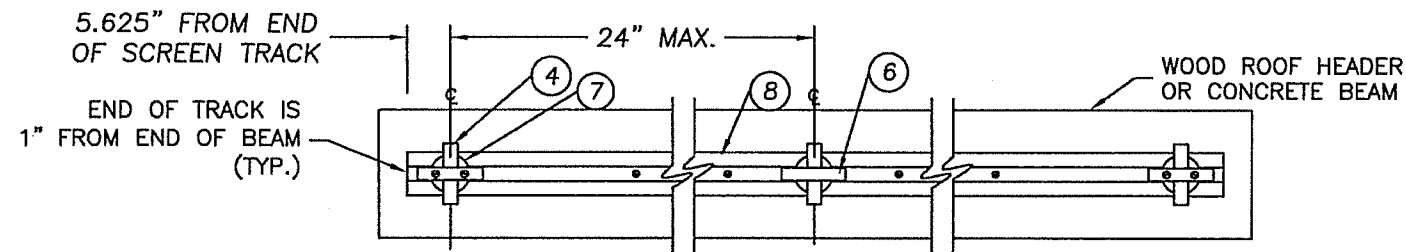
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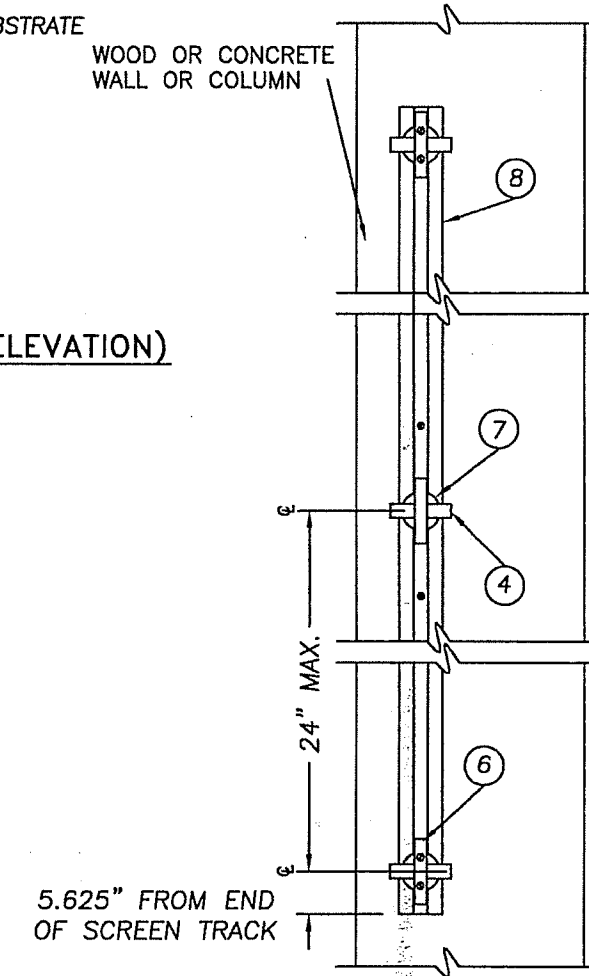
**1**  
**7** VERT. OR ANG. MOUNTED SCREEN W/ TRACK OBSTRUCTION (ELEVATION)  
SCALE: NTS = 1'-0"



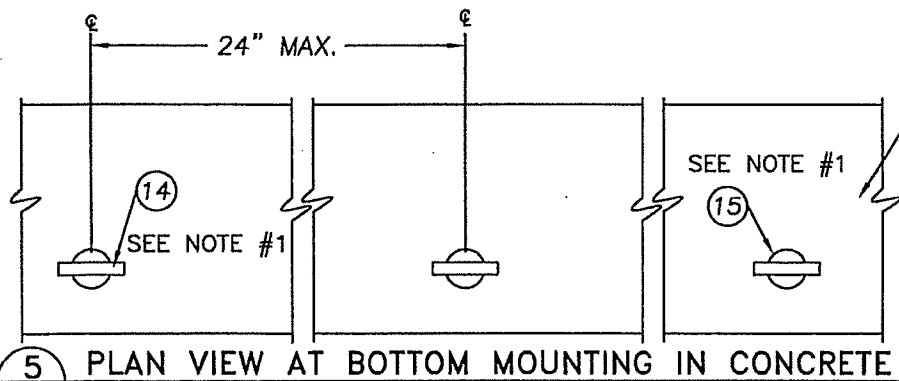
**2**  
**7** HOR. MOUNTED SCREEN W/TRACK OBSTRUCTION (ELEVATION)  
SCALE: NTS = 1'-0"



**3**  
**7** PLAN VIEW (LOOKING UP) TOP VERTICAL MOUNTING IN WOOD OR CONCRETE  
SCALE: NTS = 1'-0"



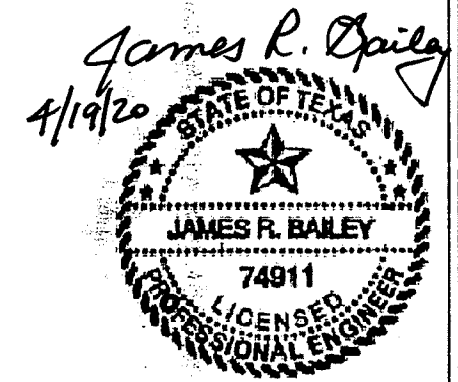
**4**  
**7** ELEVATION AT LEFT OR RIGHT SIDE MOUNTING IN WOOD OR CONCRETE  
SCALE: NTS = 1'-0"



**5**  
**7** PLAN VIEW AT BOTTOM MOUNTING IN CONCRETE  
SCALE: NTS = 1'-0"

CONCRETE  
SEE NOTE #1

NOTES:  
1. ITEMS #14 & #15 ARE USED  
WHEN MOUNTING SCREEN BOTTOM TO  
CONCRETE.



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281-403-3225  
Texas Firm # 11044

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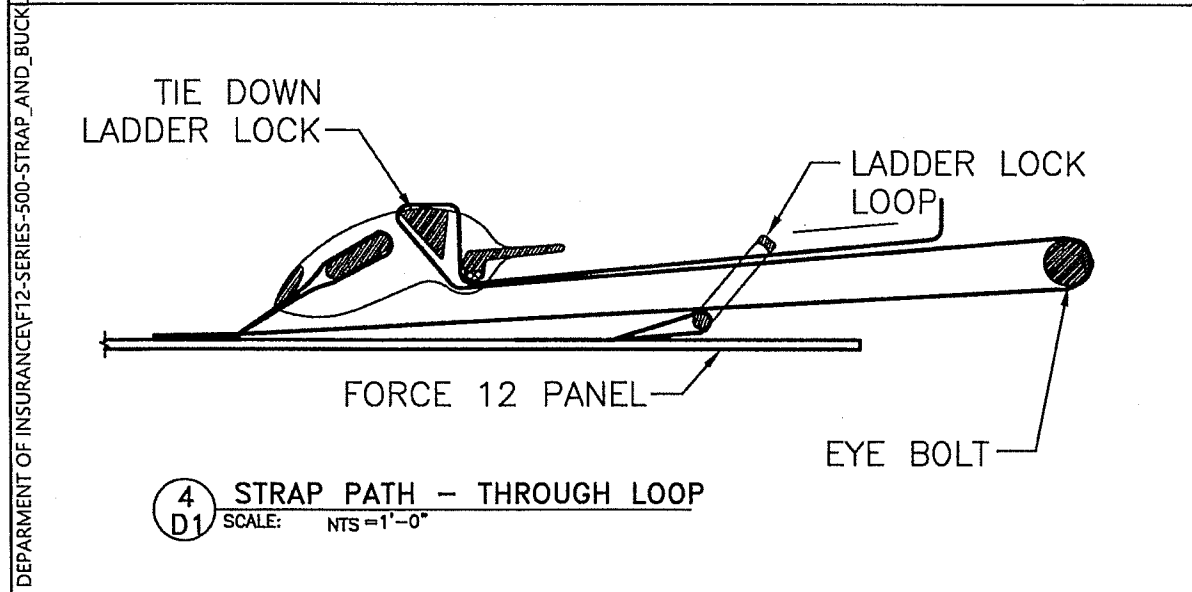
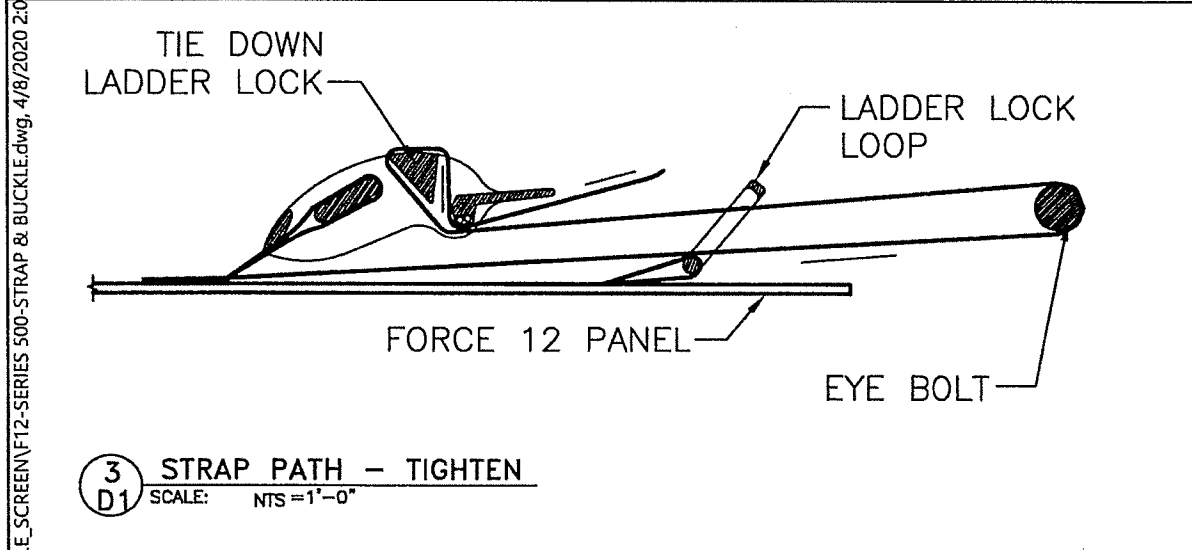
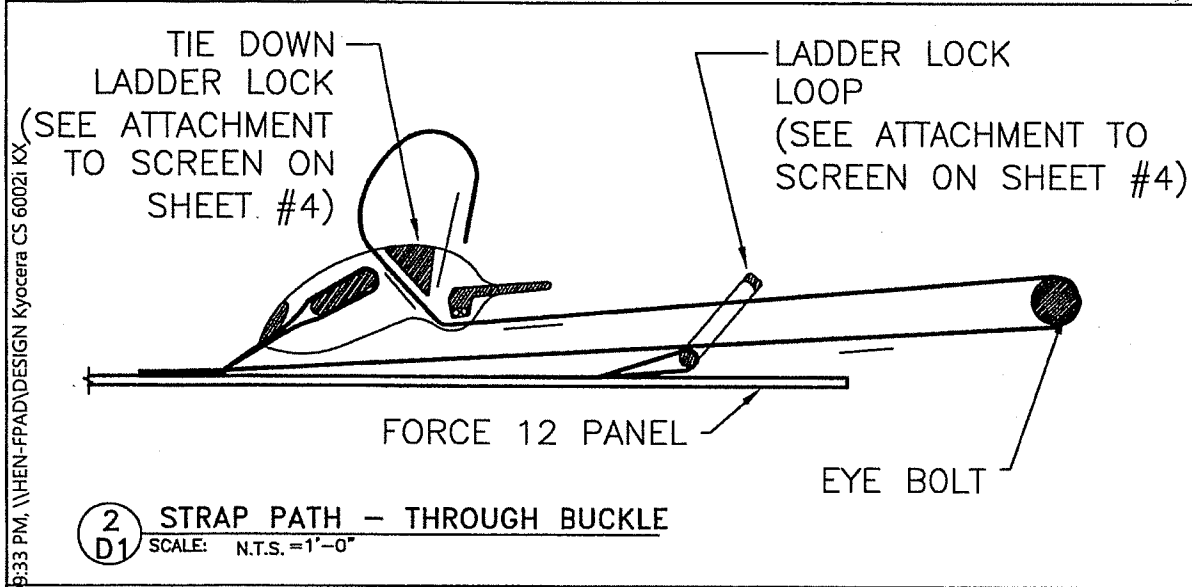
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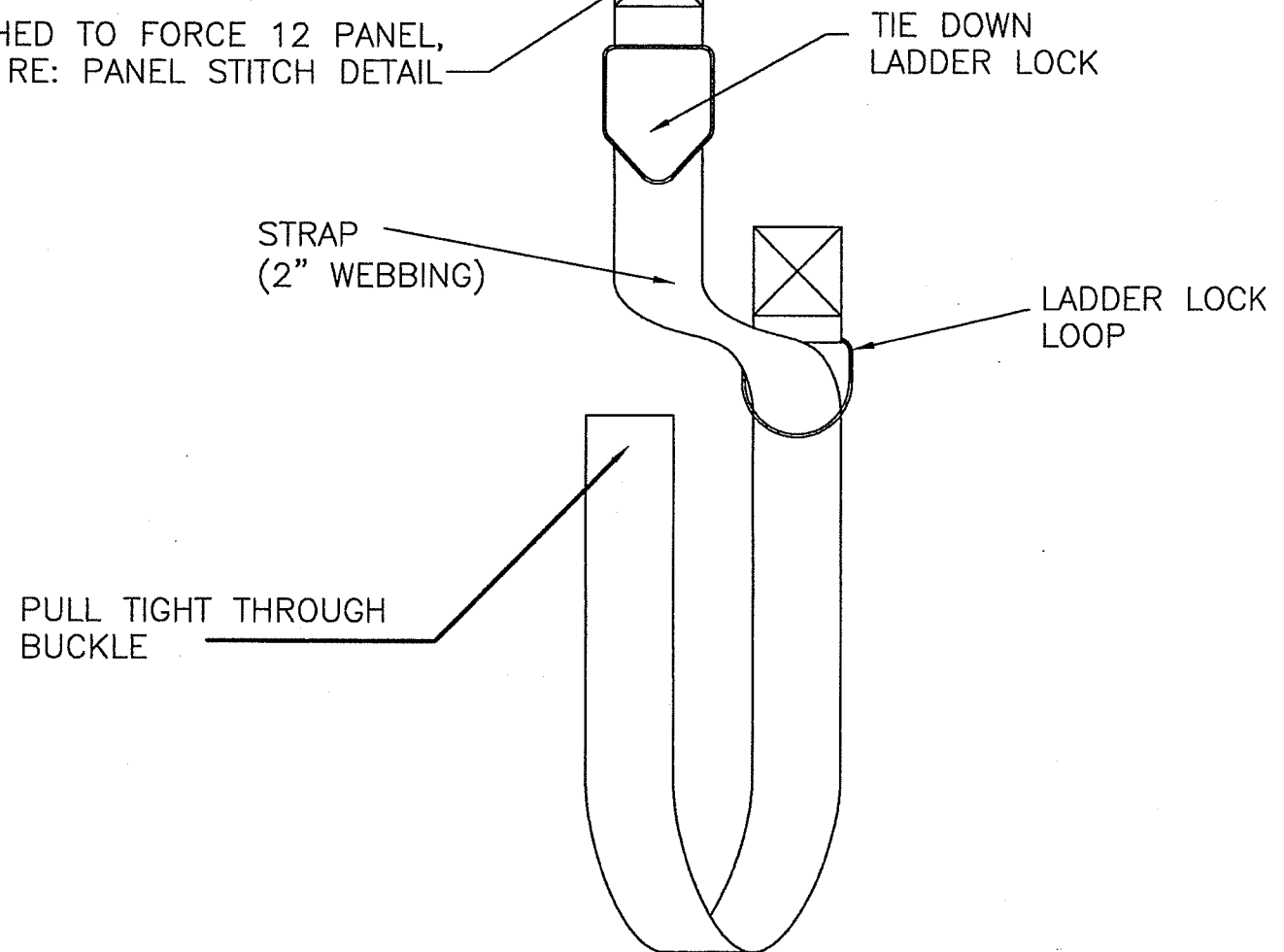


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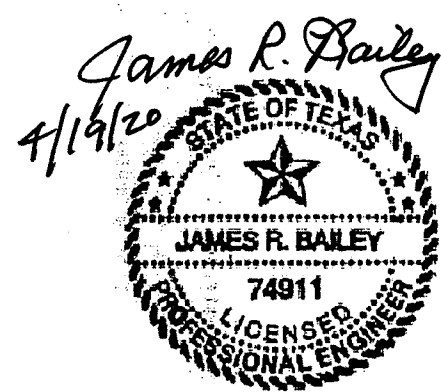


SCREEN ATTACHMENT STRAP DETAIL  
AT THE BOTTOM OF SCREEN

ATTACHED TO FORCE 12 PANEL,  
RE: PANEL STITCH DETAIL



**1** PANEL ATTACHMENT - STRAP  
D1 SCALE: N.T.S. = 1'-0"



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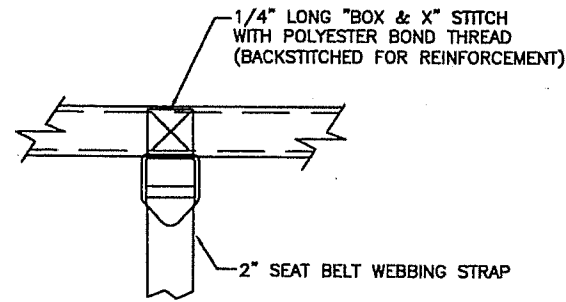
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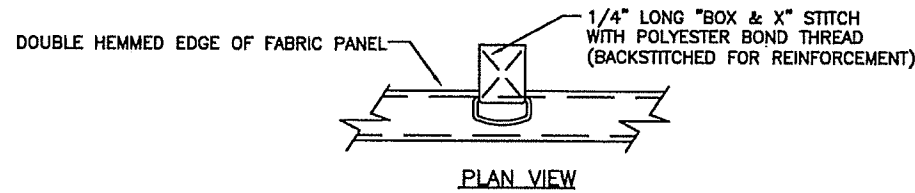
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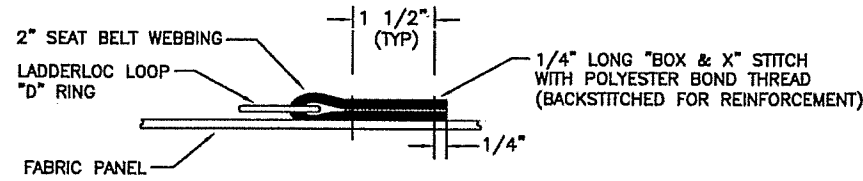
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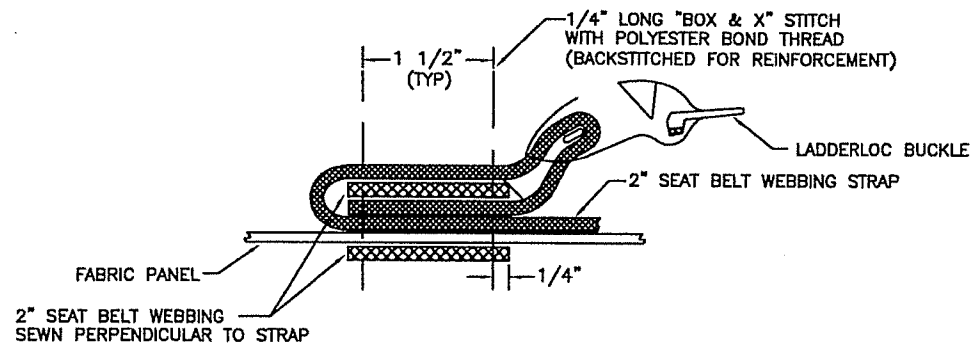
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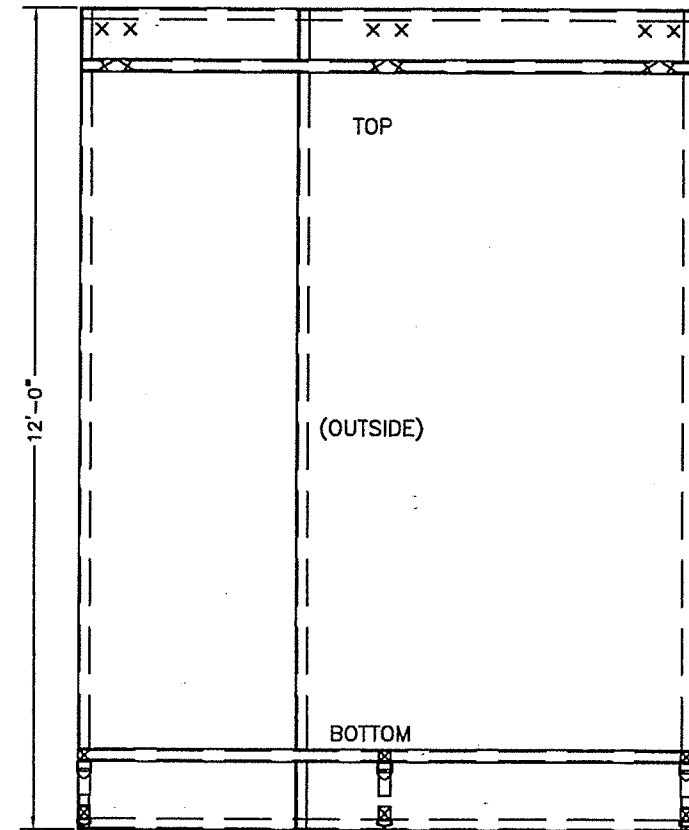
PLAN VIEW



ATTACHMENT OF LADDERLOC LOOP DETAIL TO SCREEN AT THE BOTTOM OF SCREEN



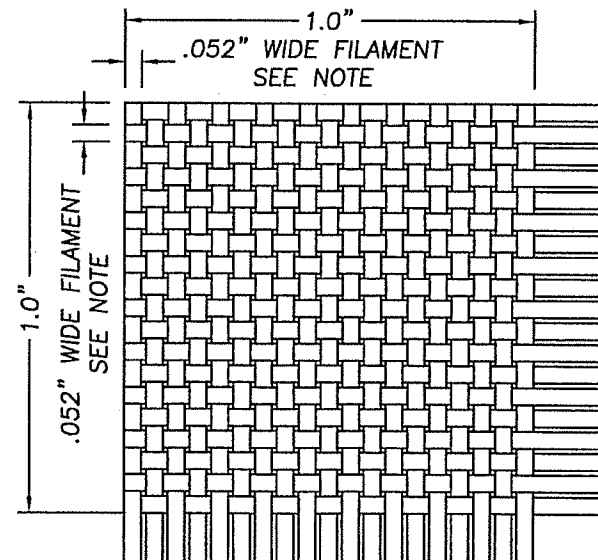
ATTACHMENT OF TIE-DOWN LADDERLOC DETAIL TO SCREEN AT THE BOTTOM OF SCREEN



HURRICANE SCREEN ELEVATION

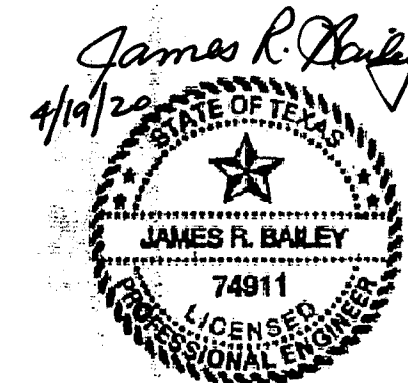
(OUTSIDE STITCHING DETAILS. THE SCREEN IS MANUFACTURED IN (3) STYLES; VERTICAL SEAM, HORIZONTAL SEAM, & NON-SEAMED OVERLAPPED FABRIC PANELS)

FORCE 12 - MATERIAL SPECIFICATIONS OF SCREEN	
FIBER CONTENT	100% POLYPROPYLENE
COLOR	BLACK OR ROYAL BLUE
FINISH	TENTERED & CALENDERED
CONSTRUCTION (APPROXIMATE)	WARP: 60 FILL: 50
WEAVE	3/4" BASKET WEAVE
THICKNESS	20 MILS
WEIGHT, (ASTM D-3776-85)	7.6 OZ/YD <sup>2</sup>
ABRASION RESISTANCE (ASTM D-3884)	WARP: 190 LBS FILL: 250 LBS
TENSILE STRENGTH (ASTM D-1682, GRAB METHOD)	WARP: 445 LBS FILL: 375 LBS
TEAR STRENGTH (ASTM D-2261, TRAP METHOD)	WARP: 185 LBS FILL: 190 LBS
BURST STRENGTH (ASTM D-3786 MULLEN)	720 LBS/IN <sup>2</sup>
PUNCTURE STRENGTH (ASTM D-3787, MODIFIED)	165 LBS
U.V. RESISTANCE (ASTM G-53, % RETAINED AT 5,000 HOURS)	90%
AIR FLOW	230 CFM



1 SQ. INCH OF SCREEN WEAVE PATTERN

NOTE:  
THERE ARE (19) .052" WIDE FILAMENTS, BOTH HORIZONTALLY & VERTICALLY IN A SQUARE INCH OF FABRIC. EACH FILAMENT IS MADE UP OF (3) .013" WIDE SUB FILAMENTS.



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281-403-2825  
Texas Firm # 11044

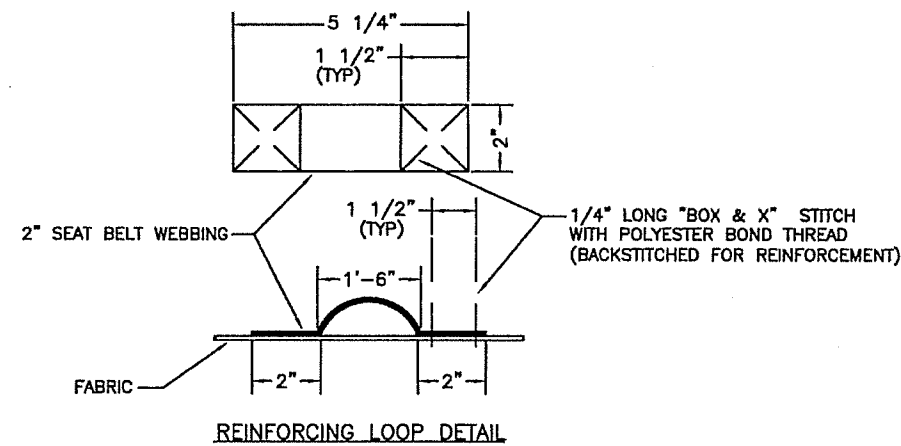
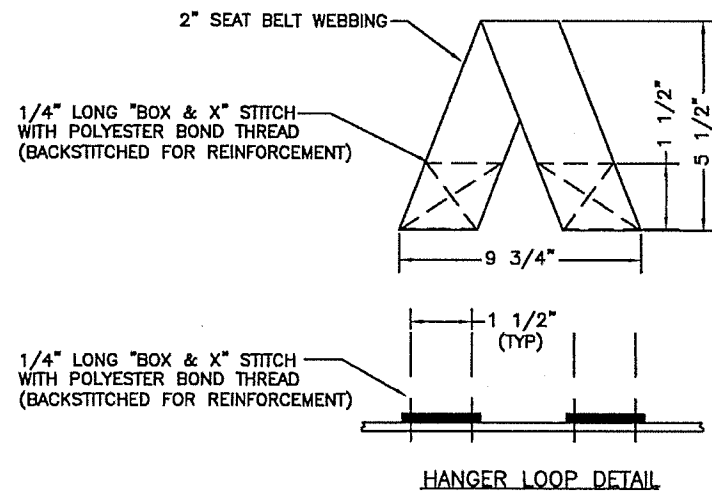
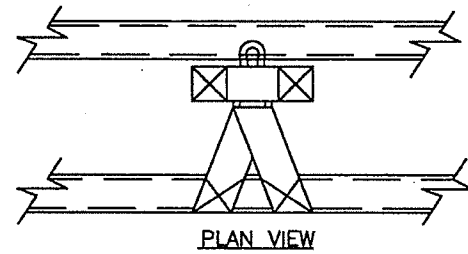
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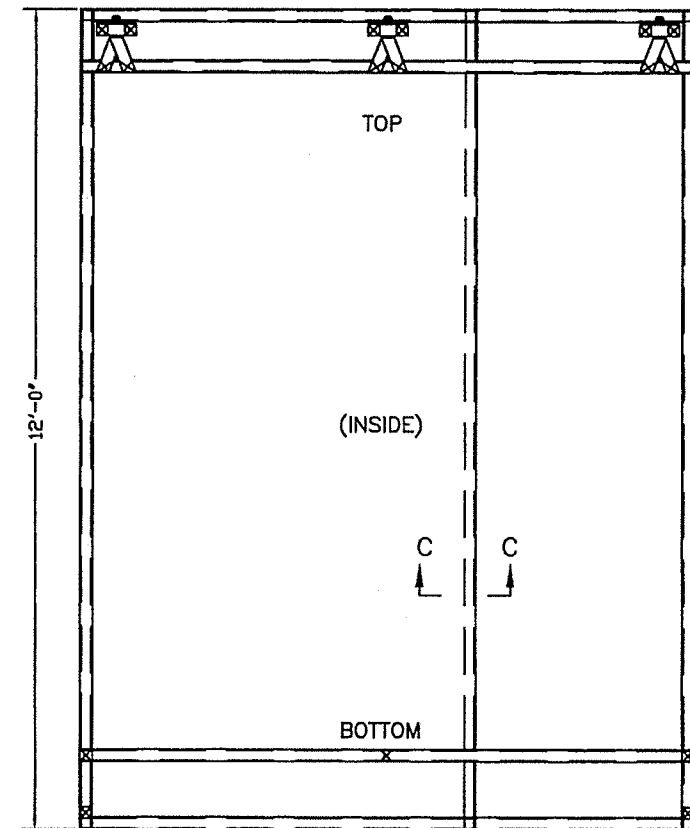
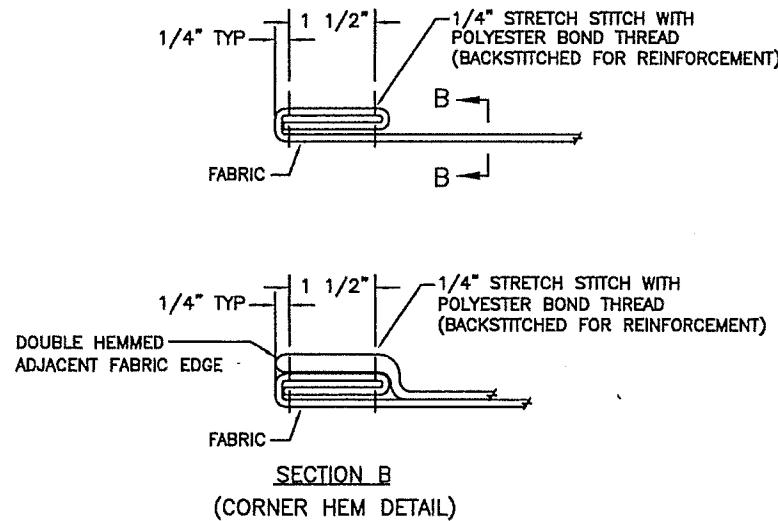
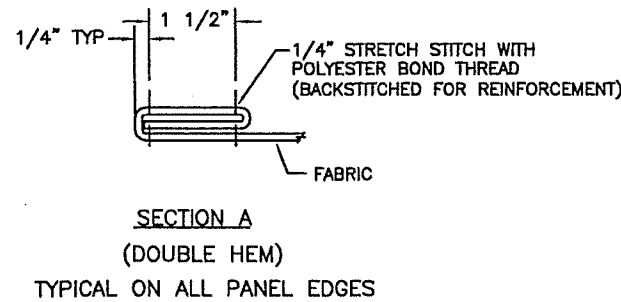
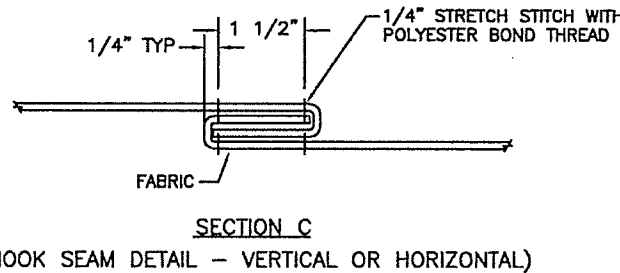
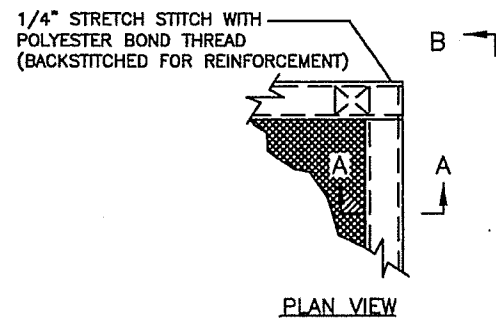
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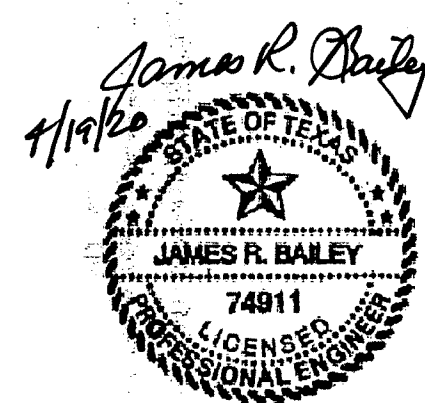
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SCREEN ATTACHMENT LOOP DETAIL AT THE TOP OF SCREEN



HURRICANE SCREEN ELEVATION  
(INSIDE STITCHING DETAILS. THE SCREEN IS MANUFACTURED IN (3) STYLES; VERTICAL SEAM, HORIZONTAL SEAM, & NON-SEALED OVERLAPPED FABRIC PANELS)



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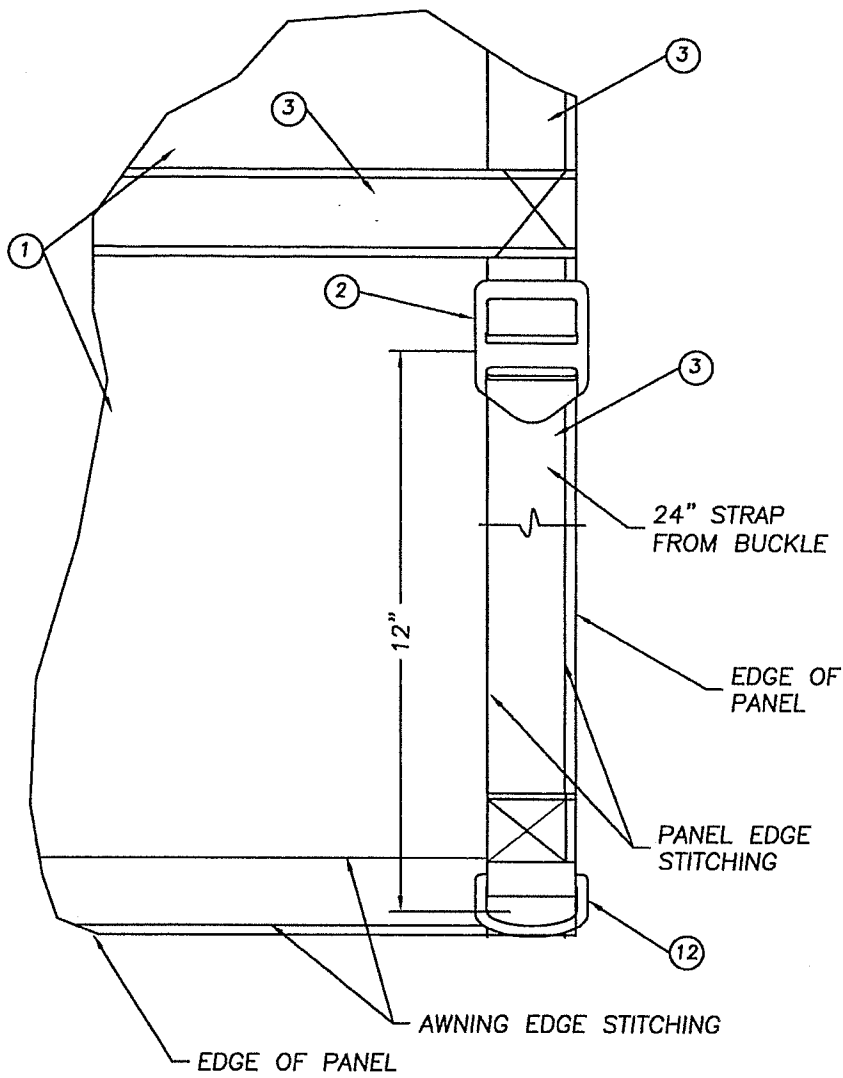
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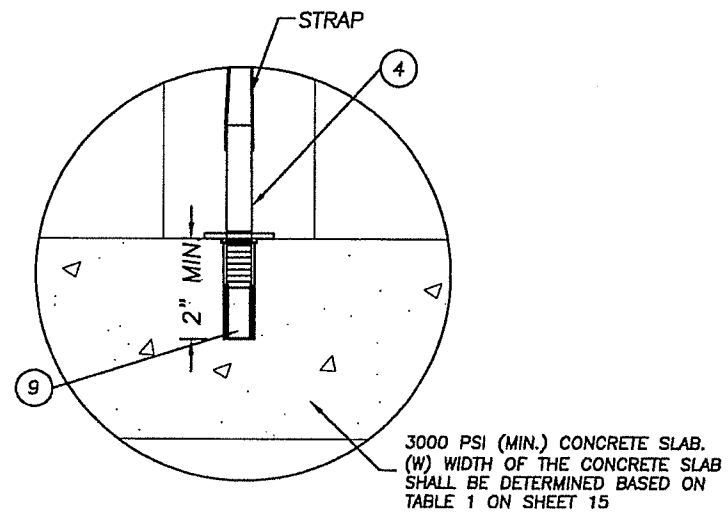
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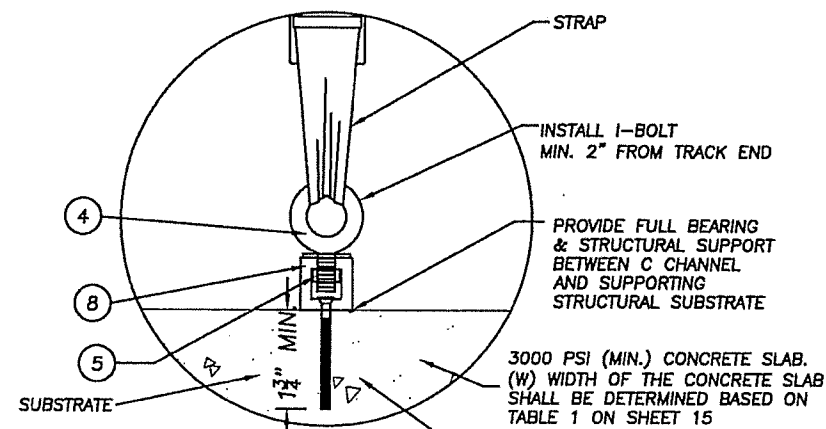
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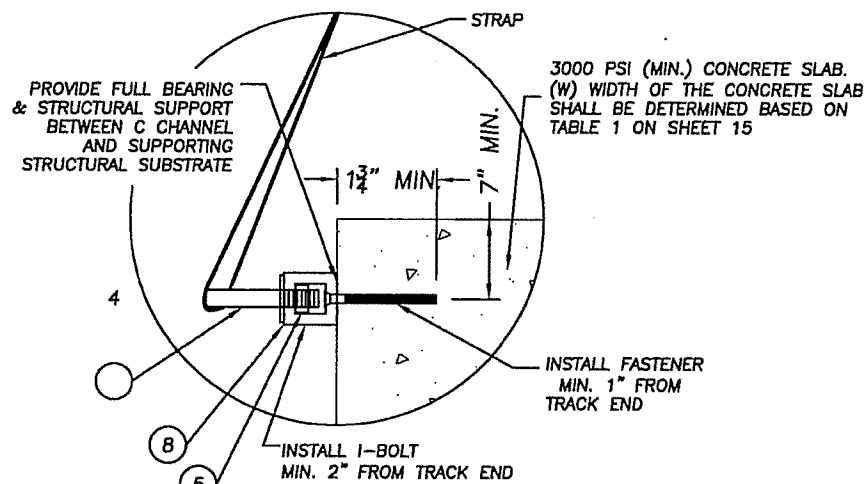
STITCHING DETAIL



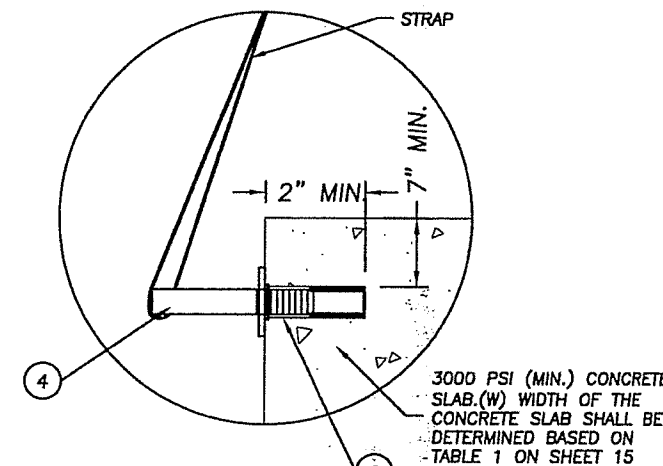
DETAIL "A"  
SCREEN TO CONCRETE @ BOTTOM  
DROP-IN ANCHOR IS INSTALLED VERTICALLY  
(USE MIN. EDGE DISTANCE)



DETAIL "B"  
SCREEN TO TRACK @ BOTTOM  
TAPCON FASTENER IS INSTALLED VERTICALLY  
(USE MIN. EDGE DISTANCE)



DETAIL "C"  
SCREEN TO TRACK @ BOTTOM  
TAPCON FASTENER IS INSTALLED HORIZONTALLY  
(USE MIN. EDGE DISTANCE)



DETAIL "D"  
SCREEN TO CONCRETE @ BOTTOM  
DROP-IN ANCHOR IS INSTALLED HORIZONTALLY  
(USE MIN. EDGE DISTANCE)

Rt: Reaction tensile force  
Rs: Reaction shear force  
Ft: Fastener allowable tensile load  
Fs: Fastener allowable shear load

Reaction (Rt or Rs) is maximum absolute value for a + 60 PSF load w/ 22.5" strap spacing or a + 55 PSF load w/ 24.0" strap spacing, with reaction acting either @ 22.5" O.C. or @ 24.0" O.C.

Fastener (Ft or Fs) is minimum allowable value for a + 60 PSF load w/ 22.5" strap spacing or a + 55 PSF load w/ 24.0" strap spacing; values for Drop-in Anchors based on one fastener either @ 22.5" O.C. or @ 24.0" O.C.; values for Tapcons based on 4 fasteners @ 6" O.C.; values for #14 Wood Screw based on 4 fasteners @ 6" O.C. (no offset) or 5 fasteners @ 5" O.C. (offset)

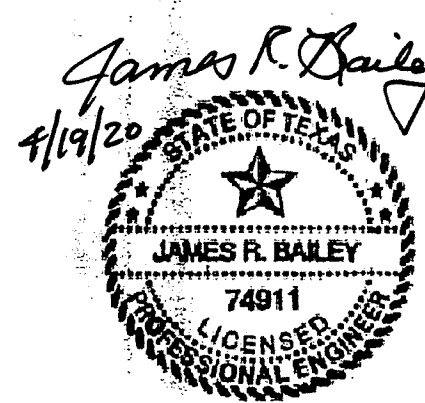
DETAIL	Rt (lbs)	Rs (lbs)	Ft (lbs)	Fs (lbs)
A	941	675	1232	1410
B	941	675	1856	1500
C	1042	1183	1856	1500
D	1042	1183	1232	1410

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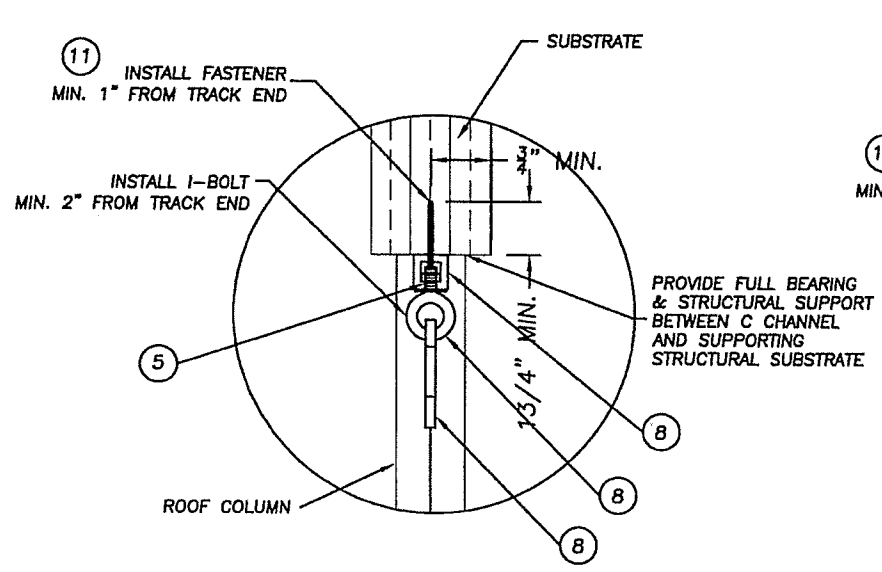
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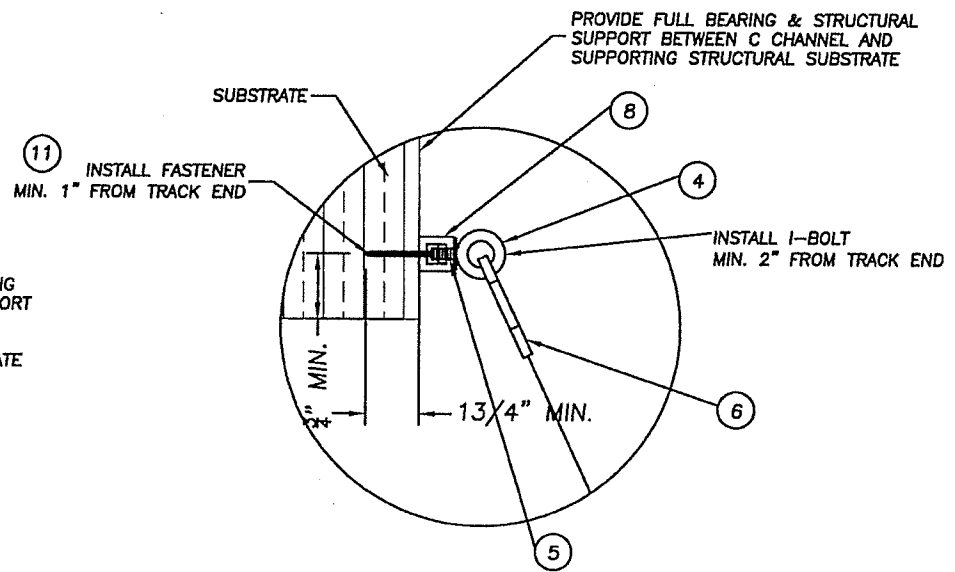
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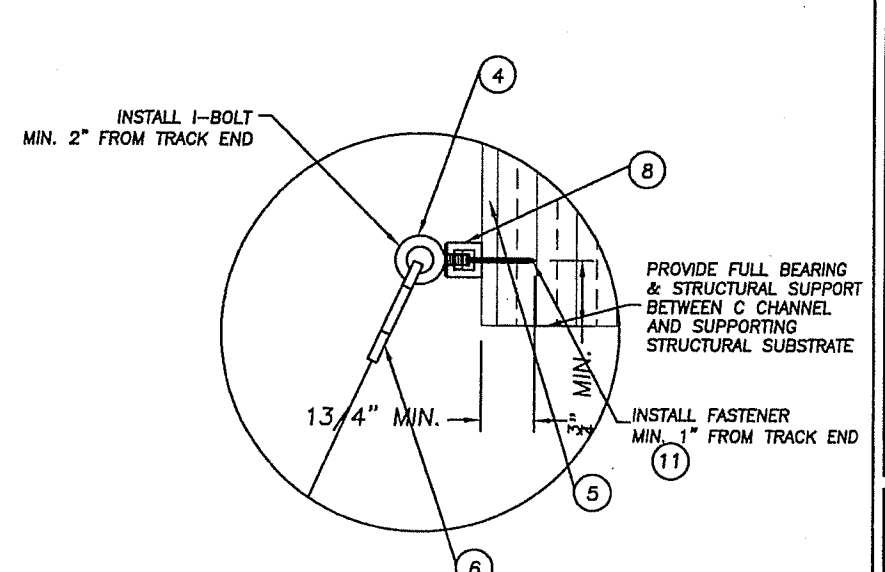
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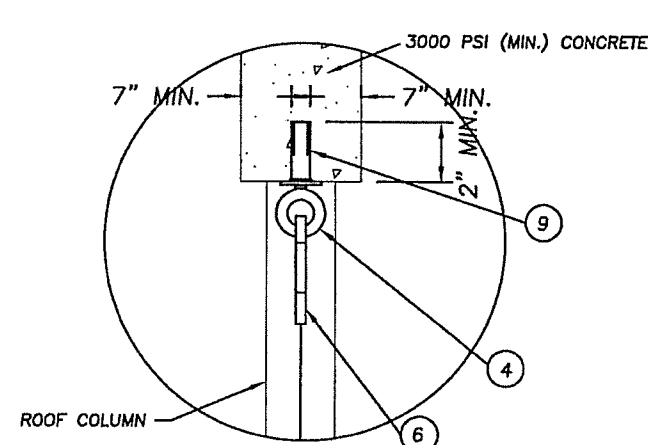
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FASTENER IS INSTALLED HORIZONTALLY  
(USE MIN. EDGE DISTANCE)



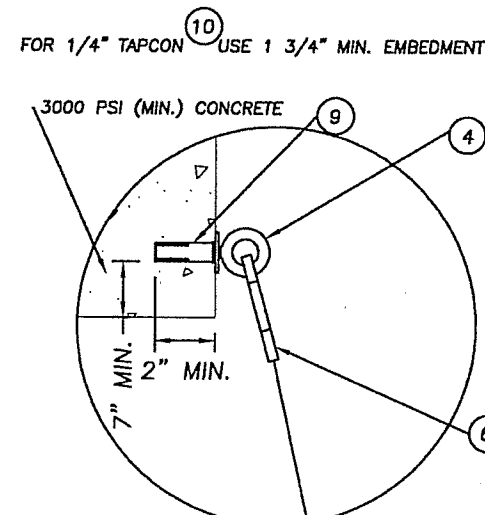
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SCREEN TO TRACK @ TOP  
FASTENER IS INSTALLED HORIZONTALLY ON INSIDE  
OF OPENING  
(USE MIN. EDGE DISTANCE)



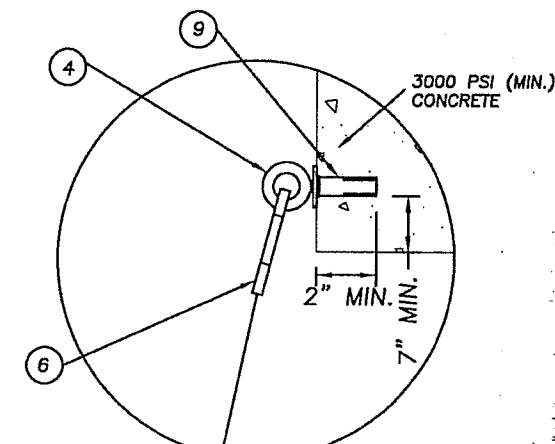
**DETAIL "C"**  
SCREEN TO TRACK @ TOP  
FASTENER IS INSTALLED HORIZONTALLY ON OUTSIDE  
OF OPENING  
(USE MIN. EDGE DISTANCE)



**DETAIL "D"**  
SCREEN TO CONCRETE @ TOP  
DROP-IN FASTENER IS INSTALLED VERTICALLY  
(USE MIN. EDGE DISTANCE)



**DETAIL "E"**  
SCREEN TO CONCRETE @ TOP  
DROP-IN FASTENER IS INSTALLED HORIZONTALLY  
ON INSIDE OF OPENING  
(USE MIN. EDGE DISTANCE)



**DETAIL "F"**  
SCREEN TO CONCRETE @ TOP  
DROP-IN FASTENER IS INSTALLED HORIZONTALLY  
ON OUTSIDE OF OPENING  
(USE MIN. EDGE DISTANCE)

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Rs: Reaction shear force  
Ft: Fastener allowable tensile load  
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DETAIL	Rt (lbs)	Rs (lbs)	Ft (lbs)	Fs (lbs)
A	941	675	1768	1080
B	1042	1183	2210	1350
C	1042	1183	2210	1350
D	941	675	1232	1410
E	1042	1183	1232	1410
F	1042	1183	1232	1410

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**DESCRIPTION:** TEXAS DEPARTMENT OF INSURANCE SUBMITTAL

**DATE:** 4/9/20

**STATE OF TEXAS**

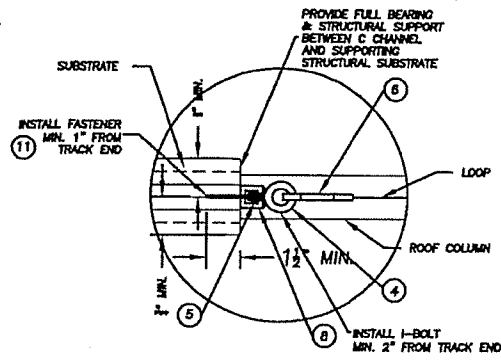
**JAMES R. BAILEY**

**74911**

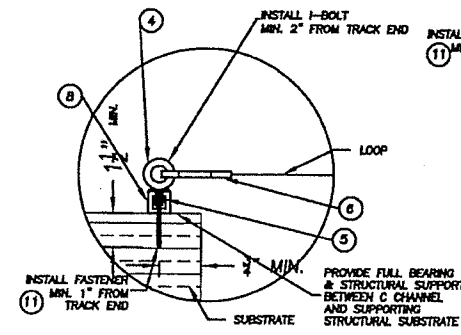
**PROFESSIONAL ENGINEER**

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**FILE NAME:** FORCE 12  
**JOB NUMBER:** N/A  
**DOCUMENT DATE:** 03/18/09  
**SHEET:** D12

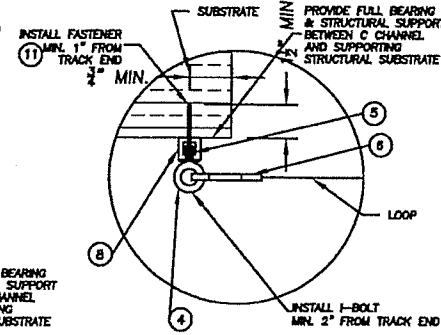
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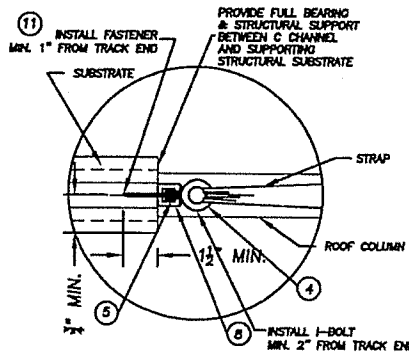
**DETAIL "A"**  
SCREEN TO TRACK @ SIDE [LOOP END]  
FASTENER IS INSTALLED HORIZONTALLY  
(USE MIN. EDGE DISTANCE)



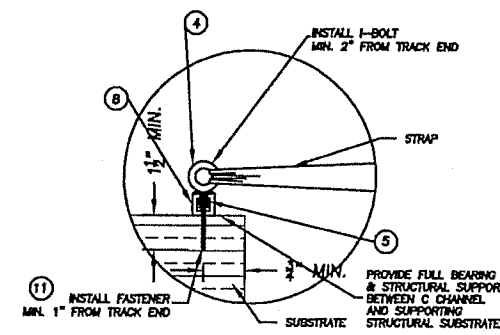
**DETAIL "B"**  
SCREEN TO TRACK @ TOP [LOOP END]  
FASTENER IS INSTALLED HORIZONTALLY ON INSIDE OF OPENING  
(USE MIN. EDGE DISTANCE)



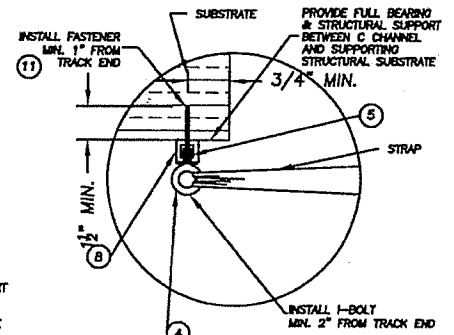
**DETAIL "C"**  
SCREEN TO TRACK @ TOP [LOOP END]  
FASTENER IS INSTALLED HORIZONTALLY ON OUTSIDE OF OPENING  
(USE MIN. EDGE DISTANCE)



**DETAIL "D"**  
SCREEN TO TRACK @ SIDE [STRAP END]  
FASTENER IS INSTALLED HORIZONTALLY  
(USE MIN. EDGE DISTANCE)

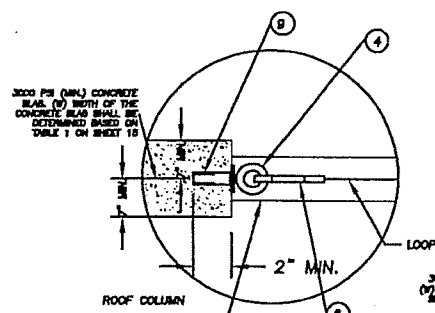


**DETAIL "E"**  
SCREEN TO TRACK @ TOP [STRAP END]  
FASTENER IS INSTALLED HORIZONTALLY ON INSIDE OF OPENING  
(USE MIN. EDGE DISTANCE)

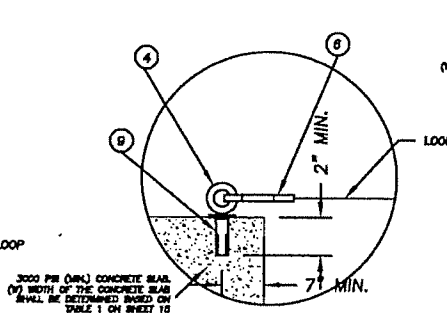


**DETAIL "F"**  
SCREEN TO TRACK @ TOP [STRAP END]  
FASTENER IS INSTALLED HORIZONTALLY ON OUTSIDE OF OPENING  
(USE MIN. EDGE DISTANCE)

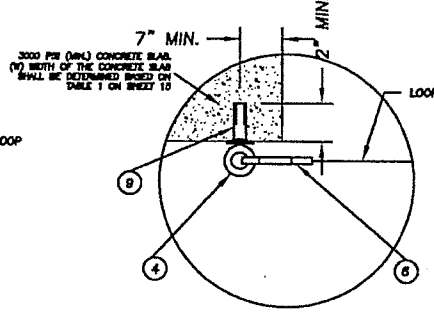
FOR 1/4" TAPCON <sup>10</sup> USE 1 3/4" MIN. EMBEDMENT



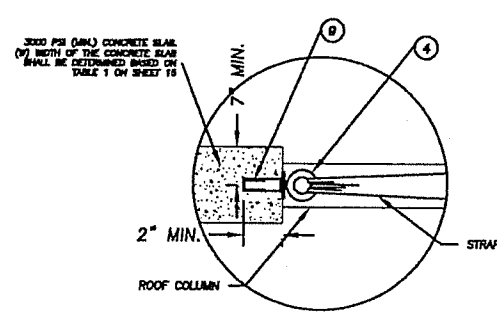
**DETAIL "G"**  
SCREEN TO CONCRETE @ TOP [LOOP END]  
DROP-IN FASTENER IS INSTALLED HORIZONTALLY  
(USE MIN. EDGE DISTANCE)



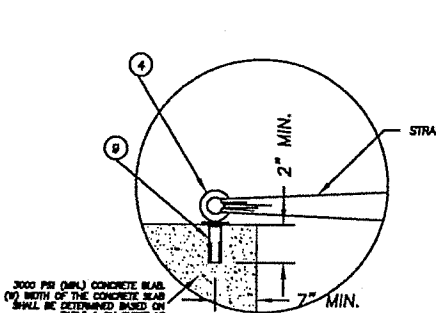
**DETAIL "H"**  
SCREEN TO CONCRETE @ TOP [LOOP END]  
DROP-IN FASTENER IS INSTALLED HORIZONTALLY ON INSIDE OF OPENING  
(USE MIN. EDGE DISTANCE)



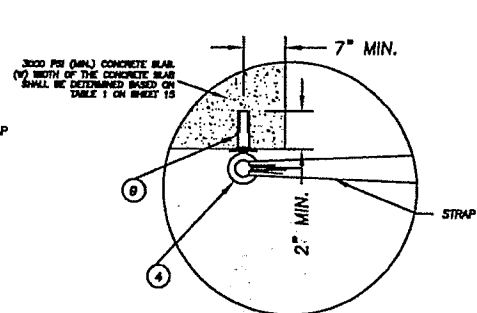
**DETAIL "I"**  
SCREEN TO CONCRETE @ TOP [LOOP END]  
DROP-IN FASTENER IS INSTALLED HORIZONTALLY ON OUTSIDE OF OPENING  
(USE 2" MIN. EDGE DISTANCE)



**DETAIL "J"**  
SCREEN TO CONCRETE @ TOP [STRAP END]  
DROP-IN FASTENER IS INSTALLED HORIZONTALLY  
(USE 2" MIN. EDGE DISTANCE)



**DETAIL "K"**  
SCREEN TO CONCRETE @ TOP [STRAP END]  
DROP-IN FASTENER IS INSTALLED HORIZONTALLY ON INSIDE OF OPENING  
(USE 2" MIN. EDGE DISTANCE)



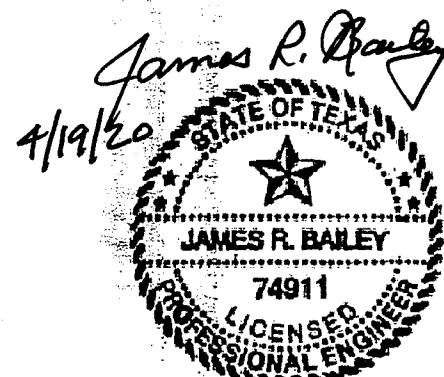
**DETAIL "L"**  
SCREEN TO CONCRETE @ TOP [STRAP END]  
DROP-IN FASTENER IS INSTALLED HORIZONTALLY ON OUTSIDE OF OPENING  
(USE 2" MIN. EDGE DISTANCE)

Rt: Reaction tensile force  
Rs: Reaction shear force  
Ft: Fastener allowable tensile load  
Fs: Fastener allowable shear load

Reaction (Rt or Rs) is maximum absolute value for a + 60 PSF load w/ 22.5" strap spacing or a + 55 PSF load w/ 24.0" strap spacing, with reaction acting either @ 22.5" O.C. or @ 24.0" O.C.

Fastener (Ft or Fs) is minimum allowable value for a + 60 PSF load w/ 22.5" strap spacing or a + 55 PSF load w/ 24.0" strap spacing; values for Drop-in Anchors based on one fastener either @ 22.5" O.C. or @ 24.0" O.C.; values for Tapcons based on 4 fasteners @ 6" O.C.; values for #14 Wood Screw based on 4 fasteners @ 6" O.C. (no offset) or 5 fasteners @ 5" O.C. (offset)

DETAIL	Rt (lbs)	Rs (lbs)	Ft (lbs)	Fs (lbs)
A	941	675	1768	1080
B	675	941	1768	1350
C	675	941	1768	1350
D	941	675	1768	1350
E	675	941	1768	1350
F	675	941	1768	1350
G	941	675	1232	1410
H	675	941	1232	1410
I	675	941	1232	1410
J	941	675	1232	1410
K	675	941	1232	1410
L	675	941	1232	1410



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Texas Firm # 11044

CLIENT: HENDÉE ENTERPRISES  
LOCATION: HOUSTON, TX  
TITLE: FORCE 12 - SERIES 500 - STRAP & BUCKLE  
DATE: 10/31/12  
REVISION: 0

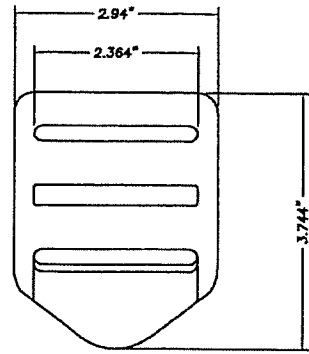
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DATE: 10/31/12

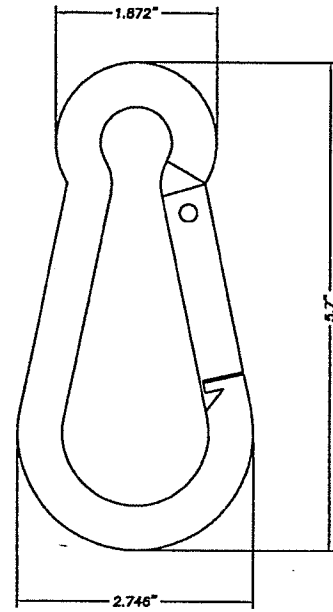
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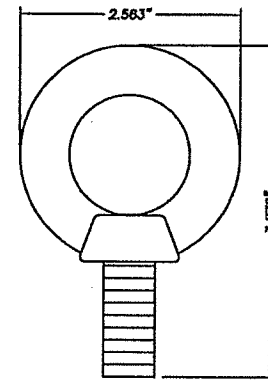
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② .22" THK. ACETAL HOSTAFORM C  
TIE DOWN LADDERLOC ACETAL HOSTAFORM C

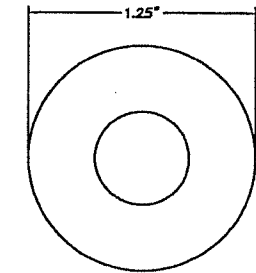


⑥ 3/4" SPRING SNAP  
.434" THK. STAINLESS STEEL BAR

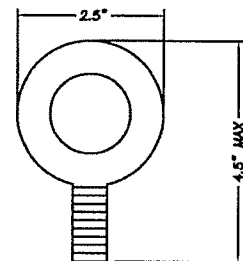


④ ø1/2" SHOULDERED EYEBOLT  
STAINLESS STEEL 1/2" THK. BAR

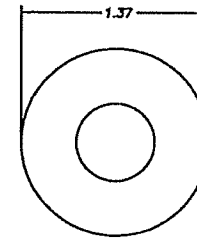
DESCRIPTION		
Item	DESCRIPTION	Material
1	HURRICANE SCREEN (SEE HURRICANE SCREEN CONSTRUCTION SHEET 1)	POLYPROP.
2	TIE DOWN LADDERLOC (ITW NEXUS, ACETAL HOSTAFORM C)	ACETAL
3	STRAP (SEE SHEET 8)	
4	1/2" EYEBOLT (CHICAGO #5, QUALITY MARINE HARDWARE, OR EQUAL)	S STEEL
5	1/2" UNI-STRUT NUT (STAINLESS STEEL, W/OUT SPRING)	S STEEL
6	3/4" SPRING SNAP (CAMMBELL #B765068, SUNCOR, OR EQUAL)	S STEEL
7	1/2" FLAT WASHER (.108" THK. STEEL)	STEEL
8	EXTRUDED ALUM. SCREEN TRACK (.325" WALL, 6063-T6)	ALUM.
9	1/2" DROP-IN ANCHOR (BY POWERS RAWL OR EQUAL)	S STEEL
10	TAPCON 1/4" x 3 1/4" LG. (ELCO) W/ 1 3/4" (MIN. EMBEDMENT)	STEEL
11	#14 WOOD SCREW INTO WOOD WITH 1 1/2" MIN. EMBEDMENT	S STEEL
12	LADDERLOC LOOP (ITW NEXUS, ACETAL HOSTAFORM C)	ACETAL
13	LEFT BLANK	-
14	1/2" EYEBOLT (CHICAGO #7, QUALITY MARINE HARDWARE, OR EQUAL)	S STEEL
15	1/2" FLAT WASHER (.108" THK. STEEL)	STEEL



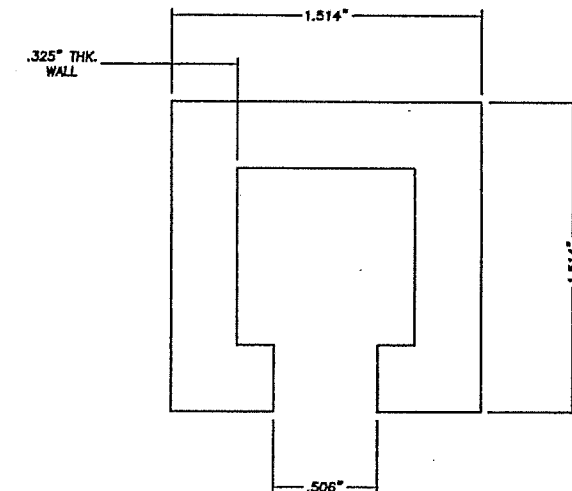
⑦ 1/2" FLAT WASHER  
.108" THK. STEEL



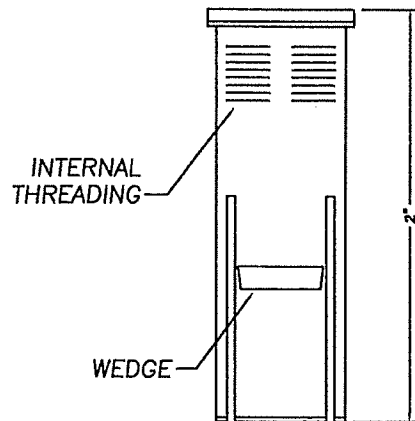
⑭ 1/2" EYEBOLT  
STAINLESS STEEL 1/2" THK. BAR



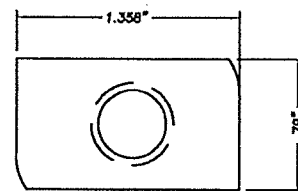
⑮ 1/2" FLAT WASHER  
.108" THK. STEEL



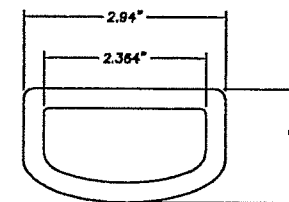
⑧ EXTRUDED ALUMINUM SCREEN TRACK  
.325" THK. 6063-T6 ALUMINUM



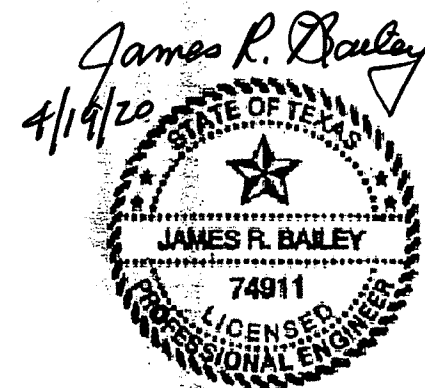
⑨ ø1/2" DROP-IN ANCHOR  
STAINLESS STEEL



⑤ 1/2" UNI-STRUT NUT W/OUT SPRING  
.364" THK. STAINLESS STEEL



⑫ LADDERLOC LOOP  
.161" THK. ACETAL HOSTAFORM C



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Missouri City, Texas 77459  
281-403-2625  
Texas Firm # 11044

CLIENT: HENDEE ENTERPRISES  
LOCATION: HOUSTON, TX  
TITLE: FORCE 12 - SERIES 500 - STRAP & BUCKLE  
DATE: 10/31/12  
REVISION: 0

DESCRIPTION: INSURANCE SUBMITTAL  
DATE: 10/31/12  
ALL O.K. 10/31/12 TEXAS DEPARTMENT OF INSURANCE SUBMITTAL

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**CONCRETE SLAB/FOUNDATION DIMENSIONS**

WIND PRESSURE (psf)	SLAB THICKNESS (in)	SLAB WIDTH IN FT.								
		SCREEN HEIGHT (ft)								
		12			10			8		
		CASE 1	CASE 2	CASE 3	CASE 1	CASE 2	CASE 3	CASE 1	CASE 2	CASE 3
60	4	36.6	43.6	28.8	31.2	37.6	24.2	25.8	31.5	19.6
	5	29.2	34.9	23.0	25.0	30.1	19.3	20.6	25.2	15.7
	6	24.4	29.1	19.2	20.8	25.1	16.1	17.2	21.0	13.0
	7	20.9	24.9	16.4	19.7	21.5	13.8	14.7	18.0	11.2
55	4	33.9	40.7	26.5	29.0	35.1	22.3	24.0	29.4	18.0
	5	27.1	32.5	21.2	23.2	28.0	17.8	19.2	23.5	14.4
	6	22.6	27.1	17.6	19.3	23.4	14.8	16.0	19.6	12.0
	7	19.4	23.2	15.1	16.6	20.0	12.7	13.7	16.8	10.3
50	4	31.2	37.7	24.1	26.7	32.5	20.3	22.1	27.3	16.4
	5	25.0	30.2	19.3	21.4	26.0	16.2	17.7	21.8	13.1
	6	20.8	25.1	16.1	17.8	21.7	13.6	14.7	18.2	11.0
	7	17.9	21.5	13.8	15.3	18.6	11.6	12.6	15.6	9.4
40	4	35.8	31.6	19.5	27.1	27.3	16.4	18.3	22.9	13.3
	5	20.6	25.3	15.6	17.6	21.8	13.1	14.6	18.3	10.6
	6	17.2	21.1	13.0	14.7	18.2	10.9	12.2	15.3	8.8
	7	14.7	18.1	11.1	12.6	15.6	9.4	10.5	13.1	7.6

**TABLE 1 NOTES:**

- WIDTH IS MEASURED PERPENDICULAR TO SCREEN.
- THE BUILDING FOUNDATION IS ASSUMED TO PROVIDE SUFFICIENT LATERAL SUPPORT TO PREVENT SLIDING TOWARDS THE BUILDING. IF THE SLAB DOES NOT PROVIDE LATERAL STABILITY, ASSUME CASE 2 FOR ALL INSTALLATIONS.
- CASE 1 - VERTICAL INSTALLATION  
CASE 2 - VERTICAL INSTALLATION PITCHED OUTWARD.  
CASE 3 - VERTICAL INSTALLATION INWARD (SEE DETAIL 1/4).
- IF SUFFICIENT LATERAL SUPPORT IS PRESENT TO RESTRAIN MOVEMENT OF THE SLAB AWAY FROM THE EXTERIOR WALL (SEE SHEET 2 AND 4), THEN THE REQUIRED SLAB WIDTH IN TABLE 1 MAY BE MULTIPLIED BY A FACTOR OF 0.55 REDUCTION

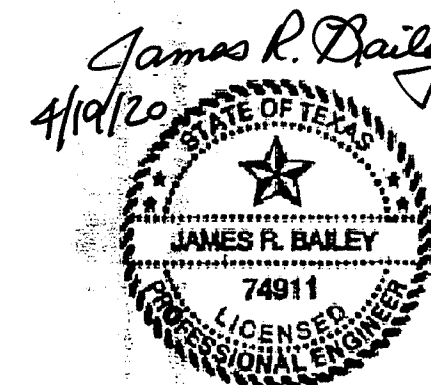
**FASTENER NOTES:**

- FASTENERS AT SILL:**
- FASTENERS ARE LOCATED PER STRAP LOCATIONS, 24" O.C. FOR WIND PRESSURES <55 PSF, AND 22 1/2" O.C. FOR PRESSURES FROM 55 TO 60 PSF.
  - FASTENER TYPES:  
CONCRETE - POWERS 1/2" DIA. DROP-IN ANCHOR. (2" MIN. EMBEDMENT) OR EQUAL.
- FASTENERS AT HEAD/JAMB**
- STRAPS ARE ATTACHED TO EYE BOLTS, WHICH ARE INSTALLED IN THE C-TRACK 24" O.C. FOR WIND PRESSURES <55 PSF, AND 22 1/2" FOR PRESSURES 55 TO 60 PSF.
  - C-CHANNEL IS ANCHORED TO STRUCTURE AT HEAD FOR VERTICAL INSTALLATIONS AND AT BOTH JAMBS FOR HORIZONTAL INSTALLATIONS.
  - FASTENER TYPES:
    - 1/4" DIA. ELCO TAPCON INTO 3000 PSI CONCRETE WITH 1 3/4" MIN. EMBEDMENT AND 2" MIN. EDGE DISTANCE.
    - 1/4" DIA. ELCO TAPCON INTO 3200 PSI CONCRETE WITH 1 3/4" MIN. EMBEDMENT AND 2" MIN. EDGE DISTANCE.
    - 1/4" DIA ELCO TAPCON INTO HOLLOW CMU BLOCK WITH 1 1/4" MIN. EMBEDMENT AND 2" MIN. EDGE DISTANCE.
    - #14 WOOD SCREW INTO WOOD WITH 1 1/2" MIN. EMBEDMENT AND 3/4" MIN. EDGE DISTANCE
  - FASTENERS ARE INSTALLED 1" FROM END OF TRACK AND SPACED PER TABLE 2 BELOW.

SCREEN HEIGHT (ft)	FASTENER TYPE	WIND PRESSURE (psf)			
		60	55	50	40
12	A	6	6	7	9
	B	6	6	7	9
	C	4	4	4	6
	D	6	6	7	9
10	A	7	7	8	10
	B	7	7	8	10
	C	4	4	5	7
	D	7	7	8	10
8	A	9	9	10	12
	B	9	9	10	12
	C	6	6	7	10
	D	9	9	10	12

**SCREEN OFFSET AT BASE**

HEIGHT	OFFSET DISTANCE (in)
6'-0"	1'-10"
8'-0"	2'-8"
10'-0"	3'-10"
12'-0"	4'-10"



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281-403-2825  
Texas Firm # 11044

**CLIENT:** HENDÉE ENTERPRISES  
**LOCATION:** HOUSTON, TX  
**TITLE:** FORCE 12 - SERIES 500 - STRAP & BUCKLE  
**DATE:** 10/31/12  
**REVISION:** 0

**DESCRIPTION:** TEXAS DEPARTMENT OF INSURANCE SUBMITTAL  
**REV. DATE:** 10/31/12  
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