

**GENERAL NOTES**

1. ARNOUD SMARERS CONSULTING ENGINEERS, INC. HAS NO CONTROL OF THE MANUFACTURING, PERFORMANCE, OR INSTALLATION OF THIS PRODUCT. THESE GENERIC PLANS WERE ENGINEERED IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES AND TEST DATA PROVIDED BY THE MANUFACTURER.
2. THE WIND ABATEMENT SCREEN SYSTEM SHOWN ON THIS PRODUCT EVALUATION DOCUMENT HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, 2004 EDITION WITH 2006 REVISIONS. THIS WIND ABATEMENT SCREEN SYSTEM SHALL NOT BE INSTALLED IN HIGH VELOCITY HURRICANE ZONES (DUNE COUNTY/BROWARD COUNTIES); DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1609 OF THE ABOVE REFERENCED CODE. IN ACCORDANCE WITH ASCE 7-02, AND FOR A BASIC WIND SPEED AS REQUIRED BY THE JURISDICTION WHERE THE WIND ABATEMENT SCREEN SYSTEM WILL BE INSTALLED, THE WIND ABATEMENT SCREEN SYSTEM RESISTANCE FOR IMPACT, DETECTION AND FAILURE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.4 OF THE ABOVE REFERENCED CODE AND AS PER ASTM E330, E1986, & E1998 AT FLEXION/TENSION TESTING LABORATORY, INC. PER THEIR REPORTS. (SEE LIST OF REPORTS)
3. LIMITATIONS OF USE:
  - A. THIS PRODUCT IS NOT TO BE USED IN HIGH VELOCITY HURRICANE ZONES.
  - B. MAXIMUM SIZE: 60 PSF MAX. PRESSURE @ 208" MAX. WIDTH  
SEE TABLES ON SHEET 5 OF 5
  - C. IMPACT LEVEL: 9-1/4" LARGE MISSILE IMPACT
  - D. ANCHORING OR LOADING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
  - E. THIS PRODUCT CAN BE USED AS A WIND-BORENE DEBRIS SHUTTER PRODUCT.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE EXISTING STRUCTURE IS DESIGNED TO SUPPORT THE MINIMUM LOADS SHOWN ON THE TABLES ON SHEET 5. EXISTING STRUCTURES NOT ADEQ. TO SUPPORT THESE LOADS SHALL BE EVALUATED AS A SITE SPECIFIC PROJECT. SEE NOTE # 4 OF PRODUCT EVALUATION NOTES.
5. ALL ALUMINUM EXTRUSION SHALL BE 6063-T6 ALLOY (UNLESS OTHERWISE NOTED).
6. ALL SCREEN PANELS SHALL BE PERMANENTLY LABELED WITH AT LEAST ONE LABEL STATING:
  - SCREEN SIZE AND DIMENSIONS
  - OPENING NO. /
  - PRODUCT APPROVAL NO. /
7. ROLL-UP SCREENS MAY BE MOTOR, WIRE PULLEY OR GEAR DRIVEN.
8. FOR DETERMINING INTERNAL PRESSURE IN THE ABOVE REFERENCED CODES, THIS PRODUCT IS CLASSIFIED AS NON-POROUS, HAVING A POROSITY OF LESS THEN 10%, FOR ALL CONDITIONS SHOWN IN THIS PRODUCT EVALUATION DOCUMENT.
9. THE ROLL-UP SCREEN SHOULD BE STORED IN THE ROLL-UP POSITION DURING NORMAL WEATHER CONDITIONS.

**PRODUCT EVALUATION NOTES**

1. THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, I.E. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
2. CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT EVALUATION PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.
3. THIS PRODUCT EVALUATION DOCUMENT WILL BE CONSIDERED UNALtered (I.E. HIGHLIGHTED, MARKED ETC.) BY ANY MEANS.
4. SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

**ANCHOR & EMBEDMENT NOTES**

1. ALL FASTENERS SHALL BE CORROSION RESISTANT COATED CARBON STEEL, AS PER DM 50018 OR STAINLESS STEEL 304 OR 316 SERIES WITH 50 KSI YIELD POINT AND 90 KSI ULTIMATE TENSILE STRENGTH.
2. NO EMBEDMENT INTO NON-STRUCTURAL COMPONENTS SUCH AS, STUCCO, TILE, SPONGE, ETC. SHALL BE CONSIDERED AS PART OF THE EMBEDMENT.
3. THE ANCHOR SPACING ARE VALID FOR EDGE DISTANCES AND MINIMUM EMBEDMENT BELOW. FOR EDGE DISTANCES LESS THAN SPECIFIED, THE ANCHOR SPACING SHALL BE REDUCED BY THE EDGE DISTANCE REDUCTION FACTORS SHOWN BELOW. THE EDGE DISTANCE SHALL NOT BE LESS THAN 1 1/2" IN CONCRETE OR CMU, 3/4" IN WOOD, OR MINIMUM SPECIFIED BY THE MANUFACTURER. ANCHOR SPACING SHALL NOT BE LESS THAN 3". THE MINIMUM EDGE DISTANCE FOR THE 1/4"-14 DRILL-FLX SCREEN IS 1/2".

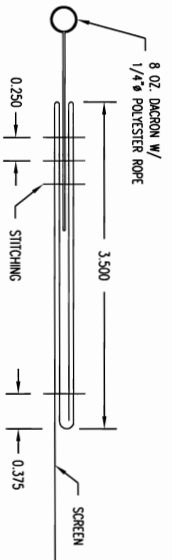
ANCHOR	CONC. & FILLED CMU (3900 PSI)		HOLLOW CMU (1800 PSI)		WOOD (S.G. = 84)	
	MIN. EDGE	MIN. EMB.	MIN. EDGE	MIN. EMB.	MIN. EDGE	MIN. EMB.
5/16" ULTRASON HPH	3 1/4"	2"	3 1/4"	1 1/4"	2"	2"

EDGE DISTANCE REDUCTION FACTORS FOR ANCHOR SPACING						
EDGE DISTANCE	10d1	8d	7d	6d	5d	4d
REDUCTION FACTOR	1.0	0.9	0.8	0.7	0.6	0.4

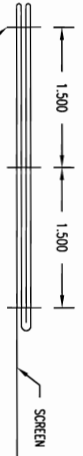
NOTE: D = NOMINAL ANCHOR DIAMETER

**FABRIC SPECIFICATIONS**

- FIBER CONTENT: 100% POLYPROPYLENE  
 CONSTRUCTION: 3/4 BASKET WEAWE, WARP - 60 ENDS PER INCH, WEFT - 50 ENDS PER INCH  
 FINISH: UNCOLORED  
 WEIGHT (ASTM D-3776): 7.6 - 02/SQUARE YARD  
 SIZING: HEAT CUT OR WOVEN  
 TENSILE STRENGTH (90DE METHOD, ASTM D - 4632): WARP - 540 lbs, WEFT - 475 lbs.  
 BURST STRENGTH (ASTM D - 3786): 825 PSF  
 TEAR STRENGTH (ASTM D - 4531): WARP - 200 lbs, WEFT - 170 lbs.  
 ABRASION RESISTANCE (ASTM D - 4886) 95% STRENGTH RETAINED  
 PUNCTURE STRENGTH (ASTM D - 4832): 190 lbs.  
 AIR FLOW: 230 CFM  
 UV RETENTION (ASTM D-6154): 90%
- SEAMING:  
 SINGE RAIL AND WEIGHT EDGES - 3 SINGLE ROWS OF STRAIGHT STITCH AT INTERVALS OF 1/4" USING 138 DENIER POLYESTER THREAD (SEE STITCHING DETAIL BELOW)  
 OTHER SCREEN EDGES - 3 SINGLE ROWS OF STRAIGHT STITCH AT INTERVALS OF 1 1/2" USING 138 DENIER POLYESTER THREAD (SEE STITCHING DETAIL BELOW)
- EDGES:  
 3 1/2" QUAD FOLDED ALL AROUND THE PERIMETER THREE CONTINUOUS SEAMS



**STITCHING DETAIL**  
SINGE RAIL AND WEIGHT EDGE - N.T.S.



**STITCHING DETAIL**  
OTHER SCREEN EDGE - N.T.S.

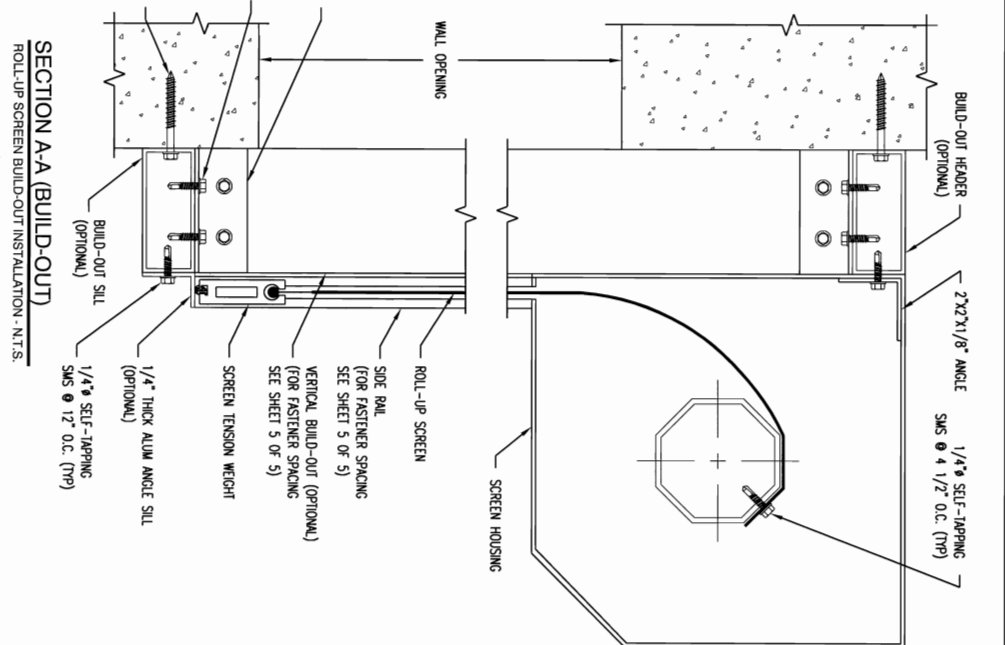
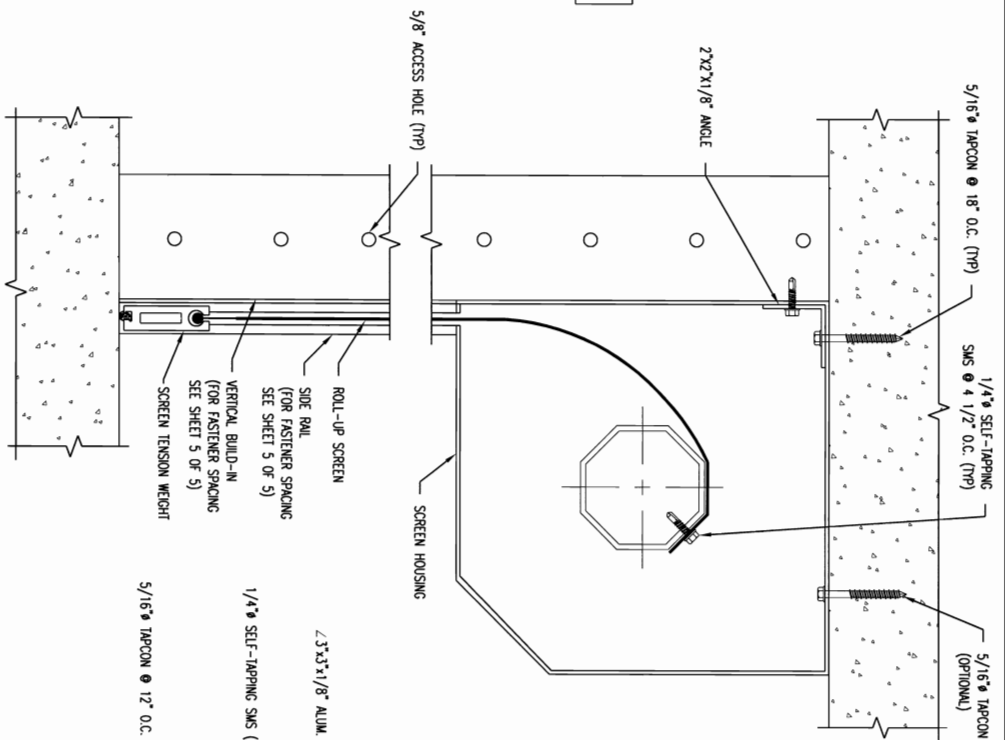
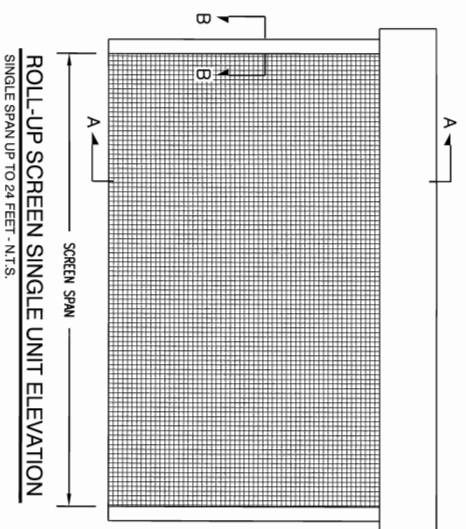
**LIST OF REPORTS**

LABORATORY No.	DATE	TEST PERIOD	TEST RESULTS
4750	DECEMBER 7, 2005	05-427	ASTM E330, E1986 & E1998-02
07-508	07-508	07-508	ASTM E330-02, E1986 & E1998-05
60 PSF	60 PSF	60 PSF	ASTM E330-02, E1986 & E1998-05
120 PSF	120 PSF	120 PSF	ASTM E330-02, E1986 & E1998-05
150.5"	150.5"	150.5"	ASTM E330-02, E1986 & E1998-05
90 PSF	90 PSF	90 PSF	ASTM E330-02, E1986 & E1998-05
135 PSF	135 PSF	135 PSF	ASTM E330-02, E1986 & E1998-05

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 CERTIFICATE OF AUTHORIZATION: 19451



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 WIND ABATEMENT SYSTEM  
 STORM SMART INDUSTRIES  
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 Ph: (239) 278-9092  
 www.stormsmart.com  
 DATE: 3/28/08  
 DWG. No.: 1  
 REV.:  
 SCALE: N.T.S.  
 SHEET: 1 OF 5



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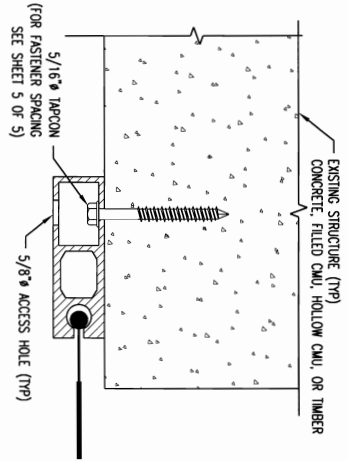


SMART SCREEN  
 WIND ABATEMENT SYSTEM

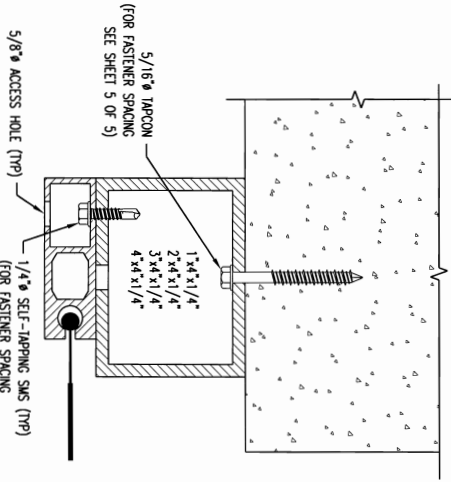
STORM SMART INDUSTRIES  
 6182 IDLEWILD STREET, FORT WERTS, FL 33966  
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 www.stormsmart.com

DATE: 3/28/08  
 DWG. No.: 2  
 REV.:

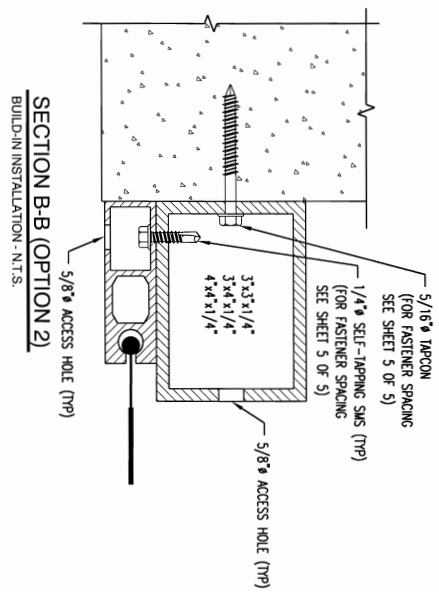
SCALE: N.T.S. SHEET: 2 OF 5



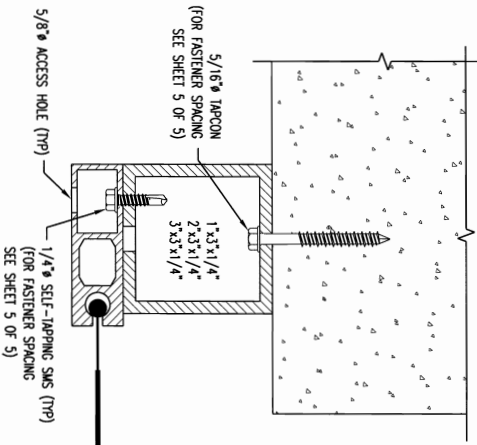
**SECTION B-B (OPTION 1)**  
WALL MOUNT INSTALLATION - N.T.S.



**SECTION B-B (OPTION 2A)**  
4" BUILD-OUT INSTALLATION - N.T.S.

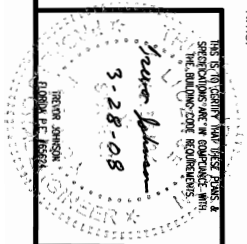


**SECTION B-B (OPTION 2)**  
BUILD-IN INSTALLATION - N.T.S.

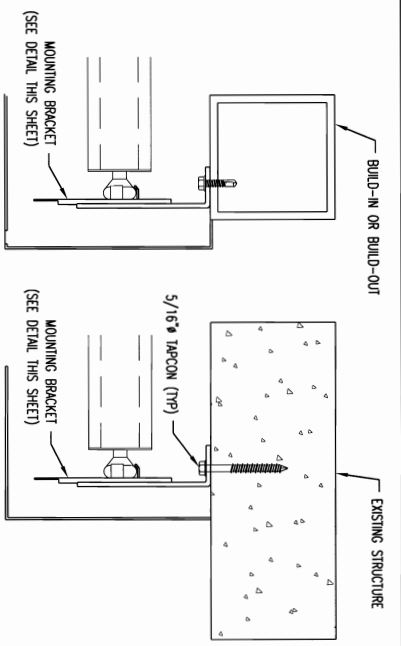


**SECTION B-B (OPTION 3B)**  
3" BUILD-OUT INSTALLATION - N.T.S.

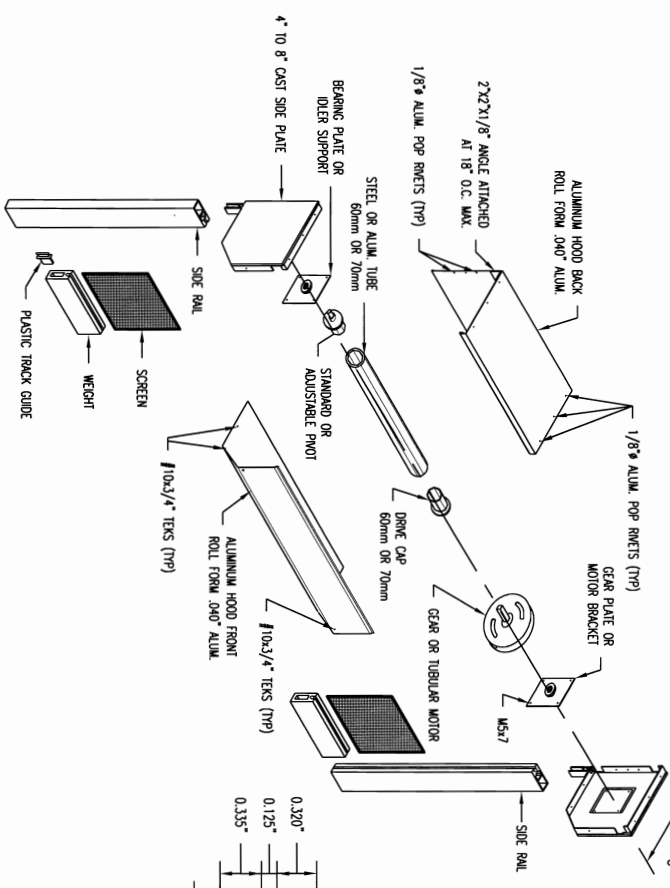
ENGINEERING REVIEW BY:  
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CERTIFICATE OF AUTHORIZATION: 19451



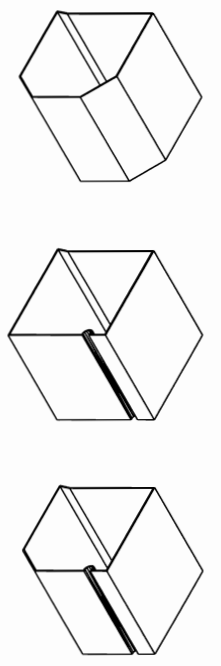
SMART SCREEN WIND ABATEMENT SYSTEM	
STORM SMART INDUSTRIES 6182 IDELWILD STREET, FORT MYERS, FL 33966 Ph: (239) 278-9092 www.stormsmart.com	
DATE: 3/28/08	DMC. No.: 3
SCALE: N.T.S.	SHEET: 3 OF 5



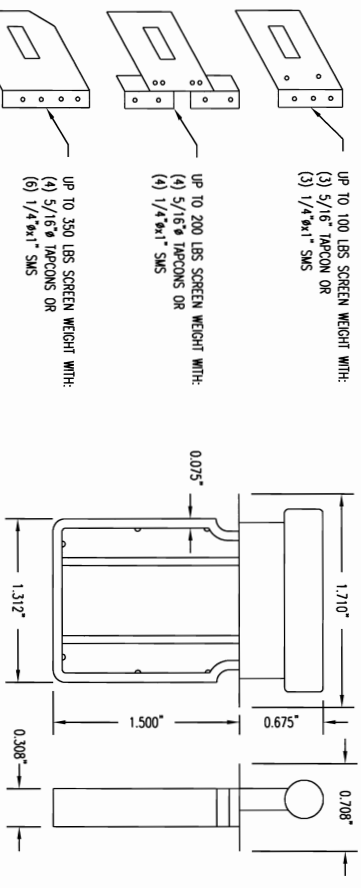
**MOUNTING BRACKET INSTALLATION**  
ROLL-UP SCREEN - N.T.S.



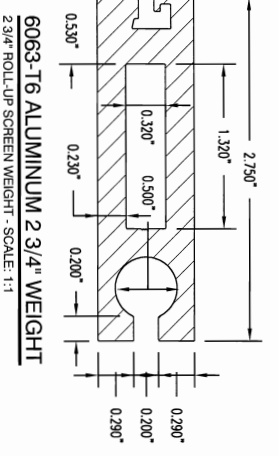
**END CAP COMPONENTS AND ASSEMBLY DETAIL**  
ROLL-UP SCREEN INSTALLATION - N.T.S.



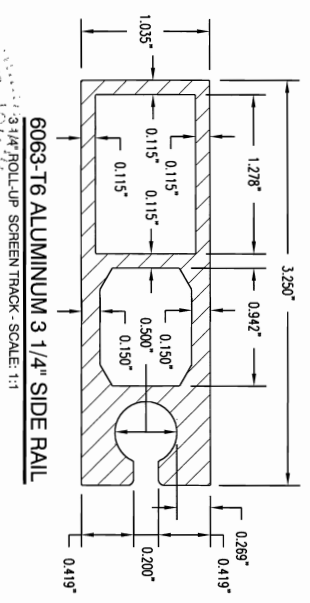
**ALUMINUM BOX COVER**  
ROLL-UP SCREEN INSTALLATION - N.T.S.



**PLASTIC TRACK GUIDE FOR WEIGHT**  
ROLL-UP SCREEN INSTALLATION - SCALE: 1:1



**6063-T6 ALUMINUM 2 3/4\"/> SCALE: 1:1**

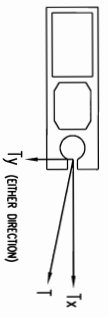


**6063-T6 ALUMINUM 3 1/4\"/> SCALE: 1:1**

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CERTIFICATE OF AUTHORIZATION: 19451

THIS IS TO CERTIFY THAT THESE PLANS & SPECIFICATIONS ARE IN ACCORDANCE WITH THE CURRENT CODE REQUIREMENTS.  
Trevor Johnson  
3-28-08  
Trevor Johnson  
Florida P.E. #5674

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Ph: (239) 278-9092  
DATE: 3/28/08  
SCALE: N.T.S.  
DWG. No.: 4  
REV.:  
SHEET: 4 OF 5



**LOADS ON EXISTING STRUCTURE**  
ROLL-UP INSTALLATIONS

LOADS ON EXISTING STRUCTURE FROM SCREEN SYSTEM			LOADS ON EXISTING STRUCTURE FROM SCREEN SYSTEM		
T <sub>1</sub> = PARALLEL LOADS (PLF)			T <sub>1</sub> = PERPENDICULAR LOADS (PLF)		
SCREEN SPAN	CONC. & FILLED CMU PRESSURE (PSF)	HOLLOW CMU PRESSURE (PSF)	SCREEN SPAN	CONC. & FILLED CMU PRESSURE (PSF)	HOLLOW CMU PRESSURE (PSF)
3'-0"	404	358	310	256	209
4'-0"	488	433	374	309	256
5'-0"	565	501	433	358	309
6'-0"	637	565	488	404	358
7'-0"	704	626	540	447	396
8'-0"	769	683	590	488	433
9'-0"	831	737	637	527	466
10'-0"	890	790	683	565	501
11'-0"	947	841	726	602	539
12'-0"	1002	890	769	637	571
13'-0"	1056	938	810	671	602
14'-0"	1108	984	851	704	637
15'-0"	1159	1029	890	737	666
16'-0"	1208	1073	928	769	696
17'-0"	1256	1116	966	800	726
18'-0"	1303	1158	1002	831	756
19'-0"	1350	1200	1038	860	785
20'-0"	1395	1240	1073	890	810
21'-0"	1440	1280	1108	918	839
22'-0"	1483	1319	1145	947	866
23'-0"	1526	1357	1175	975	890
24'-0"	1569	1395	1208	1002	910

**DIRECT MOUNT**  
MAXIMUM DESIGN PRESSURE OF A ROLL-UP SCREEN FOR ANY LENGTH ATTACHED WITH 5/8" HH ELCO ULTRACON @ 4" O.C.

SCREEN SPANS UP TO	CONC. & FILLED CMU PRESSURE (PSF)	HOLLOW CMU PRESSURE (PSF)	TIMBER PRESSURE (PSF)
8'-0"	60	60	60
9'-0"	60	57	60
10'-0"	60	51	60
11'-0"	60	47	60
12'-0"	60	43	60
13'-0"	60	40	60
14'-0"	60	37	60
15'-0"	60	34	60
16'-0"	60	32	58
17'-0"	60	30	55
18'-0"	60	29	52
19'-0"	60	27	49

**DIRECT MOUNT**  
MAXIMUM DESIGN PRESSURE OF A ROLL-UP SCREEN FOR ANY LENGTH ATTACHED WITH 5/8" HH ELCO ULTRACON HH @ 6" O.C.

SCREEN SPANS UP TO	CONC. & FILLED CMU PRESSURE (PSF)	HOLLOW CMU PRESSURE (PSF)	TIMBER PRESSURE (PSF)
4'-0"	60	60	60
5'-0"	60	60	60
6'-0"	60	54	60
7'-0"	60	46	60
8'-0"	60	40	60
9'-0"	60	36	60
10'-0"	60	32	57
11'-0"	60	30	52
12'-0"	60	27	48
13'-0"	60	25	44
14'-0"	60	23	41
15'-0"	60	22	38
16'-0"	58	20	36
17'-0"	54	19	34
18'-0"	51	18	32
19'-0"	49	17	30

**DIRECT MOUNT**  
MAXIMUM DESIGN PRESSURE OF A ROLL-UP SCREEN FOR ANY LENGTH ATTACHED WITH 5/8" HH ELCO ULTRACON @ 8" O.C.

SCREEN SPANS UP TO	CONC. & FILLED CMU PRESSURE (PSF)	HOLLOW CMU PRESSURE (PSF)	TIMBER PRESSURE (PSF)
4'-0"	60	36	60
5'-0"	60	29	49
6'-0"	60	24	41
7'-0"	59	21	35
8'-0"	52	18	31
9'-0"	46	16	27
10'-0"	41	15	25
11'-0"	38	13	23
12'-0"	34	12	21
13'-0"	32	11	19
14'-0"	30	11	18
15'-0"	28	10	17
16'-0"	26	9	16
17'-0"	25	9	15
18'-0"	23	8	14
19'-0"	22	8	13

**MOUNTED TO BUILD-OUTS & BUILDINGS**  
MAXIMUM DESIGN PRESSURE OF A ROLL-UP SCREEN FOR ANY LENGTH ATTACHED WITH 1/4" - 14 HH ELCO DRILL-FLEX

SCREEN SPANS UP TO	@ 4" O.C. PRESSURE (PSF)	@ 6" O.C. PRESSURE (PSF)
17'-0"	60	60
18'-0"	60	57
19'-0"	60	54
24'-0"	60	-

**4" BUILD-OUTS**  
MAXIMUM DESIGN PRESSURE OF A ROLL-UP SCREEN FOR ANY LENGTH ATTACHED WITH 5/8" HH ELCO ULTRACON @ 4" O.C.

SCREEN SPANS UP TO	CONC. & FILLED CMU PRESSURE (PSF)	HOLLOW CMU PRESSURE (PSF)	TIMBER PRESSURE (PSF)
8'-0"	60	41	60
9'-0"	60	33	60
10'-0"	60	30	60
11'-0"	60	28	60
12'-0"	60	26	60
13'-0"	60	24	56
14'-0"	60	21	49
15'-0"	60	20	46
16'-0"	60	19	44
17'-0"	60	18	42
18'-0"	60	17	40
19'-0"	60	16	38
20'-0"	60	15	37
21'-0"	60	14	35
22'-0"	60	13	34
23'-0"	60	12	33
24'-0"	60	11	32

**3" BUILD-OUTS**  
MAXIMUM DESIGN PRESSURE OF A ROLL-UP SCREEN FOR ANY LENGTH ATTACHED WITH 5/8" HH ELCO ULTRACON @ 4" O.C.

SCREEN SPANS UP TO	CONC. & FILLED CMU PRESSURE (PSF)	HOLLOW CMU PRESSURE (PSF)	TIMBER PRESSURE (PSF)
8'-0"	60	39	60
9'-0"	60	35	60
10'-0"	60	32	60
11'-0"	60	29	60
12'-0"	60	27	60
13'-0"	60	25	58
14'-0"	60	23	54
15'-0"	60	21	51
16'-0"	60	21	48
17'-0"	60	20	45
18'-0"	60	19	43
19'-0"	60	18	41
20'-0"	60	17	39
21'-0"	60	16	38
22'-0"	60	15	36
23'-0"	60	15	35
24'-0"	58	15	33

**4" BUILDINGS**  
MAXIMUM DESIGN PRESSURE OF A ROLL-UP SCREEN FOR ANY LENGTH ATTACHED WITH 5/8" HH ELCO ULTRACON @ 4" O.C.

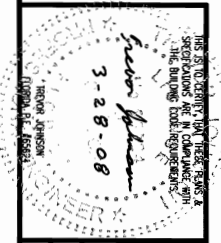
SCREEN SPANS UP TO	CONC. & FILLED CMU PRESSURE (PSF)	HOLLOW CMU PRESSURE (PSF)	TIMBER PRESSURE (PSF)
8'-0"	60	45	60
9'-0"	60	40	60
10'-0"	60	36	60
11'-0"	60	33	60
12'-0"	60	30	60
13'-0"	60	28	60
14'-0"	60	26	60
15'-0"	60	25	60
16'-0"	60	23	60
17'-0"	60	22	57
18'-0"	60	21	54
19'-0"	60	20	51
20'-0"	60	19	49
21'-0"	60	18	47
22'-0"	60	17	45
23'-0"	60	17	43
24'-0"	60	16	41

**3" BUILDINGS**  
MAXIMUM DESIGN PRESSURE OF A ROLL-UP SCREEN FOR ANY LENGTH ATTACHED WITH 5/8" HH ELCO ULTRACON @ 4" O.C.

SCREEN SPANS UP TO	CONC. & FILLED CMU PRESSURE (PSF)	HOLLOW CMU PRESSURE (PSF)	TIMBER PRESSURE (PSF)
8'-0"	60	42	60
9'-0"	60	37	60
10'-0"	60	34	60
11'-0"	60	31	60
12'-0"	60	29	60
13'-0"	60	27	60
14'-0"	60	25	60
15'-0"	60	23	59
16'-0"	60	22	56
17'-0"	60	21	53
18'-0"	60	20	50
19'-0"	60	19	48
20'-0"	60	18	46
21'-0"	60	17	44
22'-0"	60	17	42
23'-0"	58	16	41
24'-0"	56	16	39

NOTE: LOADS AND FASTENING SCHEDULES ARE FOR ATTACHING THE SIDE RAILS, BUILD-OUTS, OR BUILDINGS TO THE EXISTING STRUCTURE

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CERTIFICATE OF AUTHORIZATION: 19451



SMART SCREEN  
WIND ABATEMENT SYSTEM  
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