

# FABRIC-SHIELD™ STORM PANEL

## DESIGN SCHEDULE:

MAX ALLOWABLE SPAN	MIN FLAP REINFORCING LENGTH	ALLOWABLE PRESSURES				DESIGN LOADS	
		DIRECT MOUNT		TRACK MOUNT		TENSION	SHEAR
108"	2-1/8"	+62 PSF	-66 PSF	+62 PSF	-60 PSF	308 LB/FT	627 LB/FT
76-1/4"	6-3/8"	+96 PSF	-96 PSF	-	-	305 LB/FT	479 LB/FT
61"	6-3/8"	+119 PSF	-119 PSF	-	-	302 LB/FT	407 LB/FT
39"	6-3/8"	+128 PSF	-128 PSF	-	-	209 LB/FT	418 LB/FT

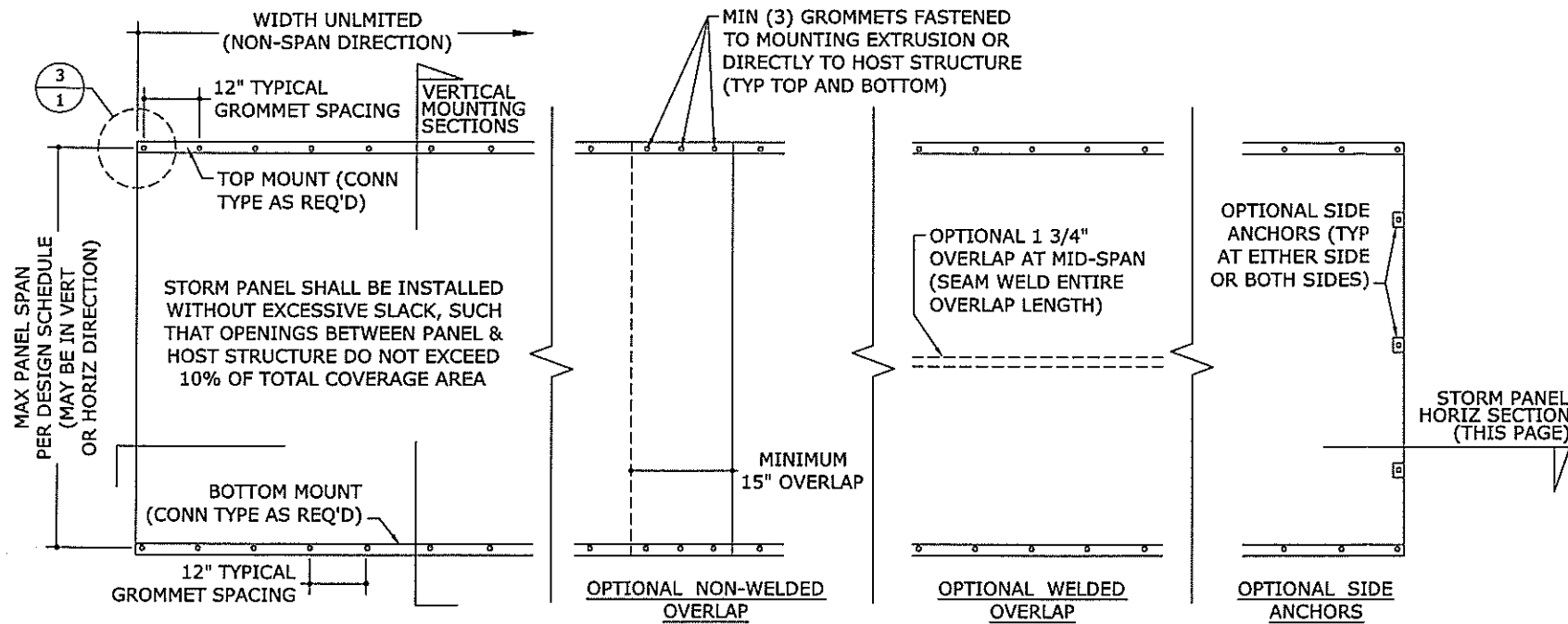
NOTE: 9.25" MINIMUM ALLOWABLE WIDTH (NON-SPAN DIMENSION)  
9.25" MINIMUM ALLOWABLE SPAN

## SPAN NOTES:

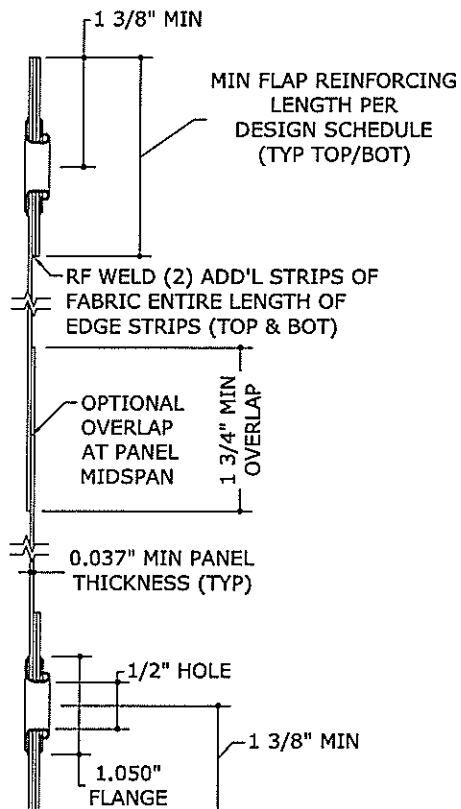
1. ALLOWABLE PRESSURES SHALL NOT BE EXCEEDED.
2. PANEL SPANS LONGER THAN MAXIMUM NOTED ABOVE ARE NOT ACCEPTABLE.
3. PANEL SPANS LESS THAN MINIMUM NOTED ABOVE ARE NOT ACCEPTABLE.
4. NO SEPARATION FROM GLASS IS REQUIRED WHEN PANEL SPAN IS GREATER THAN MINIMUM SPAN NOTED ABOVE.
5. VALID FOR PANELS MOUNTED VERTICALLY OR HORIZONTALLY.

## GENERAL NOTES:

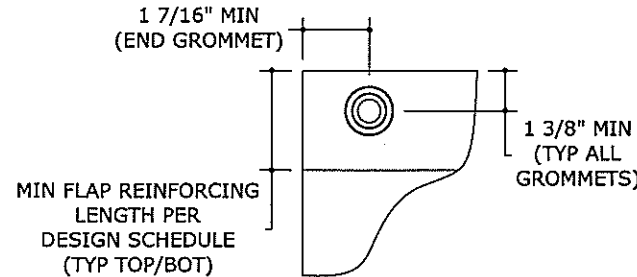
1. THIS STORM PANEL SYSTEM HAS BEEN TESTED AND EVALUATED AS A LARGE MISSILE IMPACT PROTECTIVE SYSTEM IN ACCORDANCE WITH THE 2007 FLORIDA BUILDING CODE AND THE 2006 INTERNATIONAL BUILDING/RESIDENTIAL CODE, FOR USE OUTSIDE FLORIDA'S HIGH VELOCITY HURRICANE ZONE (HVHZ) ONLY.
2. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT. WIND LOAD DURATION FACTOR Cd=1.6 HAS BEEN USED FOR WOOD ANCHOR DESIGN.
3. POSITIVE AND NEGATIVE DESIGN PRESSURES TO BE USED WITH THESE DRAWINGS SHALL BE DETERMINED BY OTHERS FOR SPECIFIC JOBS IN ACCORDANCE WITH THE GOVERNING CODE. WHEN CALCULATING PRESSURES PER ASCE 7-98 (OR LATER EDITION), USE OF DIRECTIONALITY FACTOR Kd=0.85 IS ALLOWED.
4. THE SHUTTER SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. IF SITE CONDITIONS DEVIATE FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS TO BE USED IN CONJUNCTION WITH THIS DOCUMENT.
5. PERMIT HOLDER SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND NEW SUPERIMPOSED LOADS.
6. STORM PANELS SHALL BE PVC COATED WOVEN POLYESTER FABRIC (THICKNESS t=0.037") WITH A MIN. Fu=16.053 KSI.
7. PANELS SHALL BE PERMANENTLY LABELED WITH A MINIMUM OF ONE LABEL PER PANEL AS FOLLOWS:  
WAYNE-DALTON CORP.  
PENSACOLA, FL  
FLORIDA STATEWIDE APPROVAL
8. PANELS MAY BE MOUNTED HORIZONTALLY WHERE APPLICABLE (i.e. WITH LINE OF ANCHORAGE IN VERTICAL DIRECTION).
9. PANELS MAY BE INSTALLED WITH OPTIONAL SIDE ANCHORS AS DEPICTED HEREIN, HOWEVER SYSTEM PERFORMANCE IS BASED ON TESTING WITHOUT SIDE ANCHORS. TESTS SHOW A FAILURE LOAD OF 987 LBS FOR THE #4 GROMMET AND 4"x3" 3-PLY PVC-WELDED FABRIC CONSTRUCTION AT EACH SIDE ANCHOR (ANCHOR NOT CONSIDERED).
10. ALL BOLTS & WASHERS SHALL BE ZINC COATED, GALVANIZED OR STAINLESS STEEL WITH A MINIMUM TENSILE STRENGTH OF 60 KSI.
11. ALL ACCEPTANCE CRITERIA HAVE BEEN MET FOR THIS SHUTTER AS A NON-POROUS SYSTEM, AS DEFINED IN ASTM E1996. IN KEEPING WITH THIS STANDARD, NO MINIMUM SEPARATION FROM THE GLAZING BEING PROTECTED IS REQUIRED, AND BREAKING OF THIS GLAZING DOES NOT COMPROMISE THE BUILDING ENVELOPE.



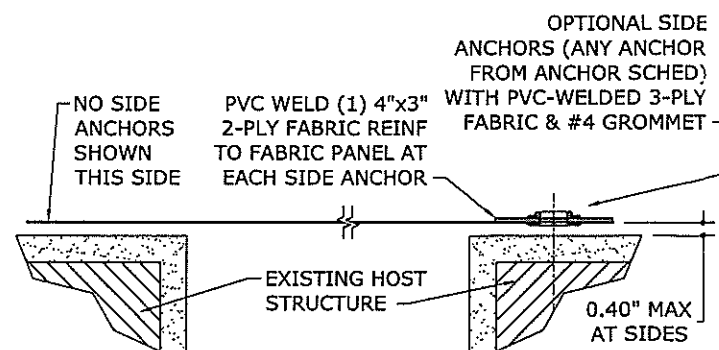
1 TYPICAL VERTICAL MOUNT  
1 N.T.S. ELEV



2 PANEL PROFILE  
1 6" = 1'-0"



3 CORNER GROMMET  
1 3" = 1'-0" ELEV



4 HORIZONTAL SECTION  
1 N.T.S. HORIZ SECTION

FRANK L. BENNARDO, P.E.  
# PE96064

09/24/2008

LICENSED AFFILIATE OF  
**ENGINEERING EXPRESS**  
160 SW 12th AVENUE, #106  
DEERFIELD BEACH, FL 33442  
Ph: (954) 354-0660 Fax: (954) 354-0443  
WWW.ENGEXP.COM  
CERT OF AUTH #8885

MANUFACTURED BY:  
**WAYNE-DALTON CORP**  
3395 ADDISON DRIVE  
PENSACOLA, FL 32514  
www.wayne-dalton.com

**Wayne Dalton**

FABRIC-SHIELD STORM PANEL  
FLORIDA STATEWIDE APPROVAL

REMARKS	DWN	CHKD	DATE
ADD'L ANCHORS	KL	CL	04/13/07
REVISE FOR 07 FBC	RKB	CL	09/17/08
2004 FBC	CL	FLB	8/5/05
ADD 'SPDS' OPTION	CL	FLB	11/17/05
OPT'L ANCHORS AT SIDES	CL	FLB	4/10/05

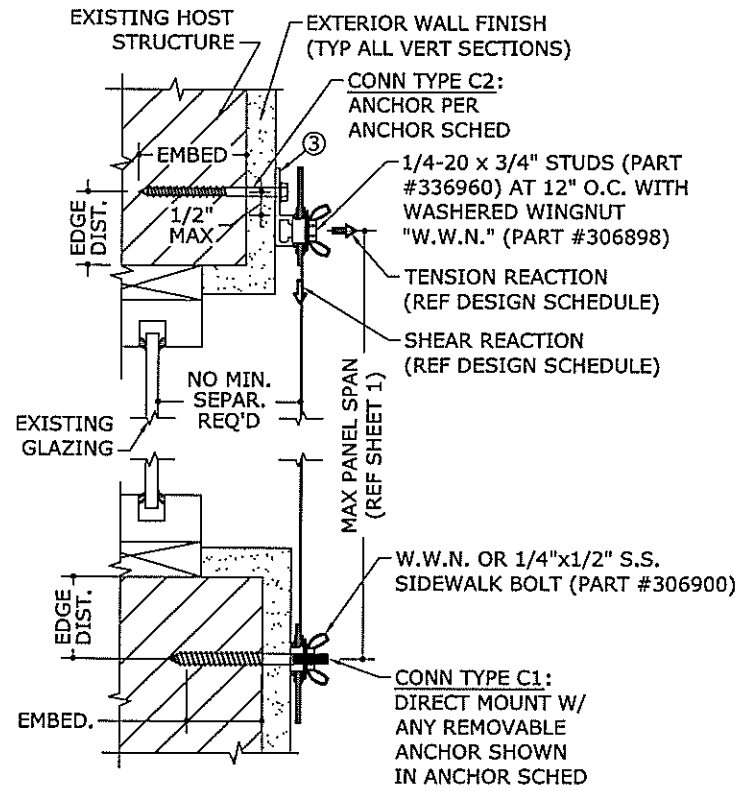
THIS DOCUMENT IS THE PROPERTY OF FRANK L. BENNARDO, P.E. AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF FRANK L. BENNARDO, P.E. ALL REVISIONS, ADDITIONS, DELETIONS, OR OTHER MODIFICATIONS TO THIS DOCUMENT ARE NOT PERMITTED AND WILL BE AT THE USER'S RISK.

COPYRIGHT 2004 FRANK L. BENNARDO P.E.

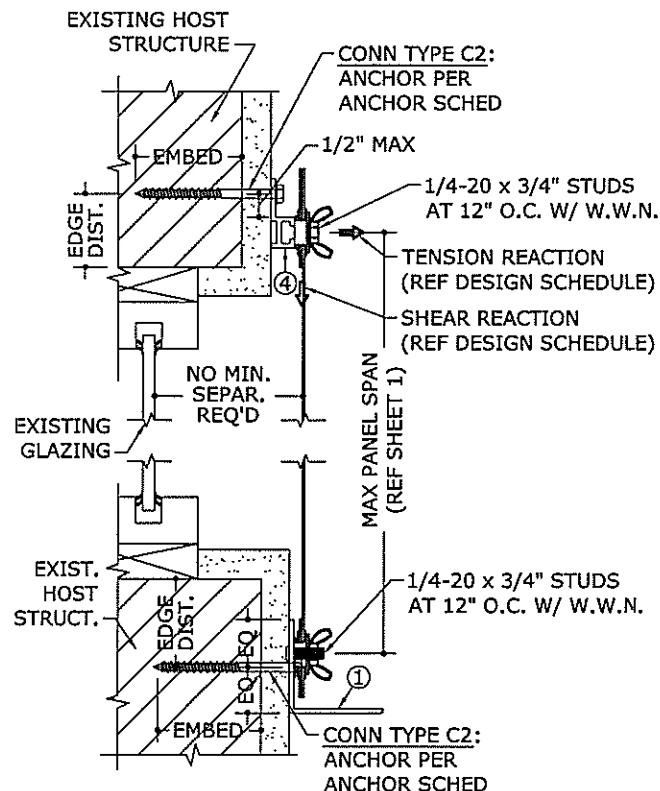
04-WDF-0004

PAGE SCALE:  
DESCRIPTION:  
WAYNE-DALTON PART #317477

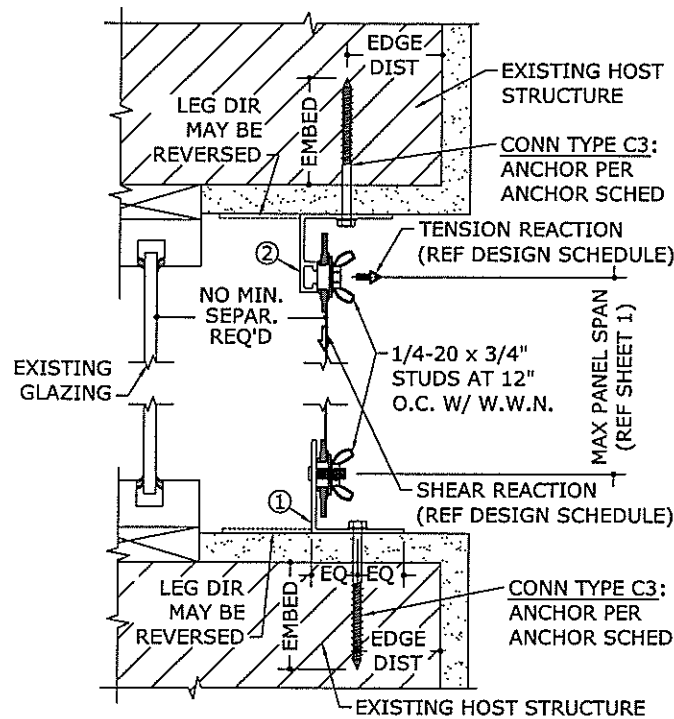
09/24/2008 - 9:17am rbarlett F:\01 Project Files\Wayne-Dalton (WDF)\2004 Jobs\04-WDF-0004 Fabric-Shield Storm Panel + Tracks (FSA)\04-WDF-0004\_06c Fabric-Shield Storm Panel + Tracks (FSA).dwg



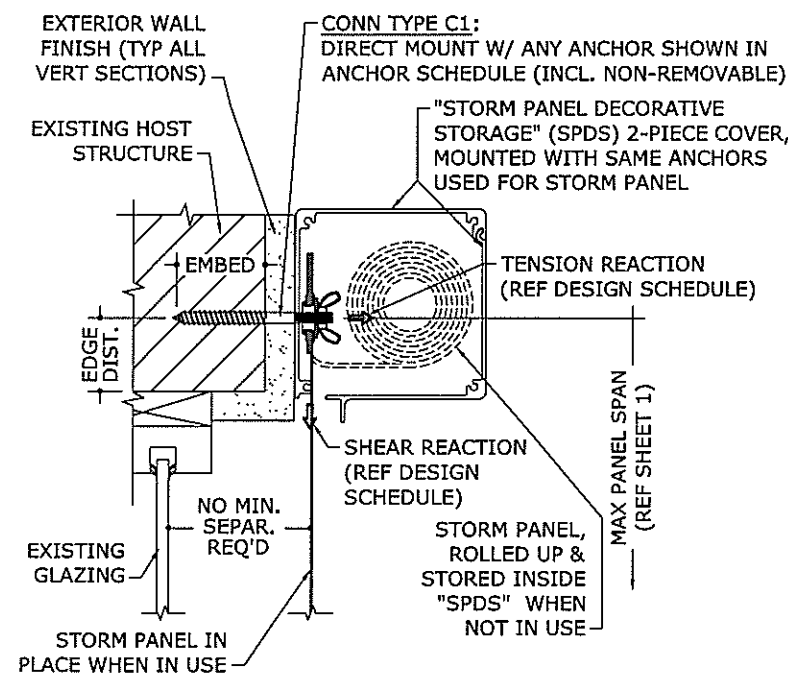
**1 MOUNTING SECTION**  
3" = 1'-0" VERT SECTION



**2 MOUNTING SECTION**  
3" = 1'-0" VERT SECTION



**3 MOUNTING SECTION**  
3" = 1'-0" VERT SECTION



**"SPDS" SECTION (OPTIONAL)**  
3" = 1'-0" VERT SECTION

## ANCHOR SCHEDULE 1

HOST STRUCT.	ANCHOR	LOAD (psf)	3/4" MIN EDGE DISTANCE (UNLESS OTHERWISE NOTED)											
			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"					
			CONN TYPE	C1	C2	C3	CONN TYPE	C1	C2	C3	CONN TYPE	C1	C2	C3
WOOD (G=0.55)	1/4" LAG SCREW WITH MIN 2-3/32" THREAD PENETR.	38	10"	10"	3"	7"	7"	4"	4"	4"	4"	4"	4"	4"
		47	8"	8"	3"	5"	5"	3"	3"	3"	3"	3"	3"	3"
		66	6"	6"	3"	4"	4"	3"	3"	3"	3"	3"	3"	3"
		96	4"	4"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
		128	4"	4"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
	1/4" TAPCON (ELCO OR ITW) OR #14 WOOD SCREW WITH 1-1/2" MIN EMBED	38	9"	9"	4"	6"	6"	3"	4"	4"	3"	3"	3"	3"
		47	7"	7"	3"	5"	5"	3"	3"	3"	3"	3"	3"	3"
		66	5"	5"	3"	4"	4"	3"	3"	3"	3"	3"	3"	3"
		96	4"	4"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
		128	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
	1/4" ITW TAPCON SG WITH 1-1/2" MIN EMBED	38	12"	12"	12"	11"	11"	12"	7"	7"	10"			
		47	12"	12"	12"	9"	9"	12"	6"	6"	7"			
	66	9"	9"	12"	6"	6"	8"	4"	4"	4"				
	96	8"	8"	9"	5"	5"	4"	4"	4"	4"				
	128	6"	6"	7"	5"	5"	4"	4"	4"	4"				
3/16" ITW SAMMY SUPER SCREW WITH 1-1/2" MIN EMBED	38	12"	12"	12"	12"	12"	12"	8"	8"	8"				
	47	12"	12"	12"	10"	10"	10"	7"	7"	6"				
	66	11"	11"	11"	7"	7"	7"	5"	5"	4"				
	96	10"	10"	8"	6"	6"	4"	5"	5"	4"				
	128	7"	7"	6"	6"	6"	4"	4"	4"	4"				
1/4" ELCO PANELMATE (MALE OR FEMALE) WITH 1-7/8" MIN EMBED	38	12"	12"	12"	12"	12"	12"	10"	10"	9"				
	47	12"	12"	12"	12"	12"	11"	8"	8"	7"				
	66	12"	12"	11"	8"	8"	8"	6"	6"	4"				
	96	11"	11"	9"	7"	7"	5"	6"	6"	4"				
	128	8"	8"	7"	7"	7"	5"	6"	6"	4"				
1/4" HANGER BOLT (MALE) W/ 2 1/2" MIN EMBED & 1 1/4" E.D.	38	10"	10"	3"	7"	7"	4"	4"	4"	4"				
	47	8"	8"	3"	5"	5"	4"	4"	4"	4"				
	66	6"	6"	4"	4"	4"	3"	3"	3"	3"				
	96	4"	4"	3"	3"	3"	3"	3"	3"	3"				
	128	4"	4"	3"	3"	3"	3"	3"	3"	3"				
5/16" HANGER BOLT (MALE) W/ 2 1/2" MIN EMBED & 1 1/4" E.D.	38	12"	12"	12"	12"	12"	12"	11"	11"	10"				
	47	12"	12"	12"	12"	12"	12"	9"	9"	8"				
	66	12"	12"	12"	9"	9"	9"	6"	6"	5"				
	96	12"	12"	10"	8"	8"	5"	6"	6"	5"				
	128	9"	9"	8"	8"	8"	5"	6"	6"	5"				
3/8" HANGER BOLT (MALE) W/ 3" MIN EMBED & 1 1/2" E.D.	38	12"	12"	12"	12"	12"	12"	10"	10"	12"				
	47	12"	12"	12"	12"	12"	12"	8"	8"	9"				
	66	12"	12"	12"	9"	9"	10"	6"	6"	5"				
	96	12"	12"	11"	8"	8"	6"	6"	6"	5"				
	128	9"	9"	9"	8"	8"	6"	6"	6"	5"				

### ANCHOR NOTES:

- 1) 1/4" TAPCONS SHALL BE BY ITW OR BY ELCO, AS LISTED IN APPROPRIATE ANCHOR SCHEDULE. "ELCO PANELMATE" ANCHORS MAY BE MALE OR FEMALE ONLY, AS ILLUSTRATED.
- 2) ENSURE MINIMUM EDGE DISTANCE FOR ALL ANCHORS PER RESPECTIVE ANCHOR SCHEDULE. EDGE DISTANCE OF 3/4" IS ACCEPTABLE FOR ANCHORS TO WOOD, EXCEPT FOR 5/16" AND 3/8" HANGER BOLTS. REFERENCE ANCHOR SCHEDULE FOR MINIMUM EDGE DISTANCE REQUIREMENTS FOR THESE ANCHORS.
- 3) MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
- 4) ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
- 5) WHERE EXISTING STRUCTURE IS WOOD FRAMING, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT ANCHORS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT INTO PLYWOOD.
- 6) ANCHORS FASTENED TO NARROW FACE OF STUD FRAMING SHALL BE LOCATED IN CENTER OF NOMINAL 2x4 (MIN) WOOD STUD (I.e. 3/4" EDGE DISTANCE IS ACCEPTABLE FOR ANCHORS TO WOOD FRAMING). WOOD STRUCTURE SHALL BE "SOUTHERN PINE" G=0.55, "SPRUCE-PINE-FIR" G=0.42, OR GREATER DENSITY.
- 7) ANCHOR SCHEDULE APPLIES FOR ALL PRODUCTS CERTIFIED HEREIN, BUT ONLY PROVIDES MAXIMUM ALLOWABLE ANCHOR SPACING. MAXIMUM ALLOWABLE SPANS AND PRESSURES INDICATED IN SPAN SCHEDULE SHALL APPLY.
- 8) MACHINE SCREWS SHALL HAVE MINIMUM OF 1/4" ENGAGEMENT OF THREADS IN BASE ANCHOR AND MAY HAVE A PAN HEAD, TRUSS HEAD, OR WAFER HEAD ("SIDEWALK BOLT") U.N.O.
- 9) [Hatched pattern] DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE FOR USE.
- 10) \* DESIGNATES ANCHORS WHICH ARE REMOVABLE AND MAY BE USED FOR DIRECT MOUNT INSTALLATIONS.

FRANK L. BENNARDO, P.E.  
#PE96064

09/24/2008

LICENSED AFFILIATE OF  
**ENGINEERING EXPRESS**  
160 SW 12th AVENUE, #166  
DEERFIELD BEACH, FL 33442  
Ph: (954) 354-0660 Fax: (954) 354-0443  
WWW.ENGGEXP.COM  
CERT OF AUTH #9885

MANUFACTURED BY:  
**WAYNE-DALTON CORP**  
3395 ADDISON DRIVE  
PENSACOLA, FL 32514  
www.wayne-dalton.com

**Wayne Dalton**  
FABRIC-SHIELD STORM PANEL  
FLORIDA STATEWIDE APPROVAL

REMARKS	DWN	CHKD	DATE
ADDL ANCHORS	KL	CL	04/13/07
REVISE FOR 07 FBC	RKB	CL	09/17/08
Z004 FBC	CL	FLB	8/5/05
ADD SPDS OPTION	CL	FLB	11/17/05
OPTL ANCHORS AT SIDES	CL	FLB	4/10/06

THIS DOCUMENT IS THE PROPERTY OF FRANK L. BENNARDO, P.E. AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF FRANK L. BENNARDO, P.E. ALTERATIONS, ADDITIONS, IMPROVEMENTS, OR OTHER MODIFICATIONS ARE NOT PERMITTED AND WILL VOID OUR CERTIFICATE.

COPYRIGHT 2004 FRANK L. BENNARDO, P.E.  
**04-WDF-0004**

PAGE SCALE:  
DESCRIPTION:  
WAYNE-DALTON PART #317477

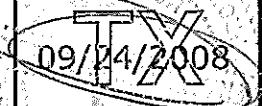
2 4

### ANCHOR SCHEDULE 2

HOST STRUCT.	ANCHOR	LOAD (psf)	3/4" MIN EDGE DISTANCE									
			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"			
			CONN TYPE			CONN TYPE			CONN TYPE			
			C1	C2	C3	C1	C2	C3	C1	C2	C3	
WOOD (G=0.42)	1/4" LAG SCREW WITH MIN 2-3/32" THREAD PENETR. 	38	9"	9"	3"	6"	6"		4"	4"		
		47	7"	7"		5"	5"		3"	3"		
		66	5"	5"		4"	4"					
		96	4"	4"		3"	3"					
	128	3"	3"		3"	3"						
	1/4" TAPCON (ELCO OR ITW) OR #14 WOOD SCREW WITH 1-1/2" MIN EMBED 	38	8"	8"	3"	5"	5"		4"	4"		
		47	6"	6"	3"	4"	4"		3"	3"		
		66	5"	5"		3"	3"					
		96	4"	4"								
	128	3"	3"									
	1/4" ITW TAPCON SG WITH 1-1/2" MIN EMBED 	38	11"	11"	12"	7"	7"	10"	5"	5"	6"	
		47	9"	9"	12"	6"	6"	8"	4"	4"	5"	
66		6"	6"	8"	4"	4"	5"	3"	3"	3"		
96		5"	5"	6"	4"	4"	3"	3"	3"			
128	4"	4"	5"	4"	4"	3"						
3/16" ITW SAMMY SUPER SCREW WITH 1-1/2" MIN EMBED 	38	12"	12"	12"	8"	8"	8"	6"	6"	5"		
	47	10"	10"	10"	7"	7"	7"	5"	5"	4"		
	66	7"	7"	7"	5"	5"	5"	3"	3"			
	96	6"	6"	5"	4"	4"	3"	3"	3"			
128	5"	5"	4"	4"	4"	3"						
1/4" ELCO PANELMATE (MALE OR FEMALE) WITH 1-7/8" MIN EMBED 	38	12"	12"	12"	9"	9"	9"	6"	6"	6"		
	47	11"	11"	11"	8"	8"	7"	5"	5"	4"		
	66	8"	8"	8"	5"	5"	5"	4"	4"	3"		
	96	7"	7"	6"	5"	5"	3"	4"	4"	3"		
128	5"	5"	5"	5"	5"	3"	4"	4"	3"			
1/4" HANGER BOLT (MALE) W/ 2 1/2" MIN EMBED & 1 1/4" E.D. 	38	9"	9"	3"	6"	6"		4"	4"			
	47	7"	7"		5"	5"		3"	3"			
	66	5"	5"		4"	4"						
	96	4"	4"		3"	3"						
128	3"	3"		3"	3"							
5/16" HANGER BOLT (MALE) W/ 2 1/2" MIN EMBED & 1 1/4" E.D. 	38	12"	12"	12"	12"	12"	11"	8"	8"	7"		
	47	12"	12"	12"	10"	10"	9"	7"	7"	6"		
	66	11"	11"	9"	7"	7"	6"	5"	5"	3"		
	96	9"	9"	7"	6"	6"	4"	5"	5"	3"		
128	7"	7"	6"	6"	6"	4"	5"	5"	3"			
3/8" HANGER BOLT (MALE) W/ 3" MIN EMBED & 1 1/2" E.D. 	38	12"	12"	12"	12"	12"	12"	9"	9"	9"		
	47	12"	12"	12"	10"	10"	11"	7"	7"	7"		
	66	11"	11"	11"	7"	7"	7"	5"	5"	4"		
	96	10"	10"	8"	6"	6"	4"	5"	5"	4"		
128	7"	7"	7"	6"	6"	4"	5"	5"	4"			

### ANCHOR SCHEDULE 3

HOST STRUCT.	ANCHOR	LOAD (psf)	2" MIN EDGE DISTANCE									2-1/2" MIN EDGE DISTANCE								
			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"		
			CONN TYPE			CONN TYPE			CONN TYPE			CONN TYPE			CONN TYPE			CONN TYPE		
			C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3	C1	C2	C3
CONCRETE	1/4" TAPCON (ELCO OR ITW) WITH 1-3/4" EMBED (3320psi MIN CONC) 	38	12"	12"	10"	11"	11"	6"	8"	8"	4"	12"	12"	12"	12"	12"	8"	9"	9"	5"
		47	12"	12"	8"	9"	9"	5"	6"	6"	3"	12"	12"	10"	11"	11"	6"	8"	8"	4"
		66	10"	10"	5"	7"	7"	4"	4"	4"		12"	12"	7"	8"	8"	5"	6"	6"	3"
		96	8"	8"	4"	5"	5"	3"	4"	4"		10"	10"	5"	7"	7"	3"	6"	6"	3"
	128	6"	6"	3"	5"	5"	3"				8"	8"	4"	7"	7"	3"				
	1/4" ELCO PANELMATE WITH 1-3/4" EMBEDMENT (MIN 3000psi CONC) 	38	12"	12"	12"	12"	12"	11"	10"	10"	7"	12"	12"	12"	12"	12"	12"	12"	9"	
		47	12"	12"	12"	12"	12"	12"	9"	8"	8"	6"	12"	12"	12"	12"	11"	10"	10"	7"
		66	12"	12"	9"	9"	9"	6"	6"	6"	4"	12"	12"	11"	11"	11"	8"	8"	8"	5"
		96	11"	11"	7"	7"	7"	4"	4"	4"		12"	12"	9"	9"	9"	5"	8"	8"	5"
	128	8"	8"	6"	7"	7"	4"				11"	11"	7"	9"	9"	5"				
	1/4-20 ALL POINTS SOLID-SET ANCHOR W/ 7/8" EMBED (MIN 3000psi CONC) 	38	12"	12"	12"	12"	12"	10"	12"	12"	7"	12"	12"	12"	12"	12"	12"	12"	7"	
		47	12"	12"	12"	12"	12"	12"	10"	10"	5"	12"	12"	12"	12"	12"	12"	12"	6"	
66		12"	12"	8"	11"	11"	6"	7"	7"	3"	12"	12"	10"	12"	12"	6"	9"	9"	4"	
96		12"	12"	6"	9"	9"	4"	7"	7"	3"	12"	12"	7"	10"	10"	5"	9"	9"	4"	
128	10"	10"	5"	9"	9"	4"				12"	12"	6"	10"	10"	5"					
1/4-20 POWERS CALK-IN WITH 7/8" EMBEDMENT (MIN 3000psi CONC) 	38	12"	12"	12"	9"	9"	8"	6"	6"	6"	12"	12"	12"	12"	12"	9"	8"	8"	6"	
	47	10"	10"	10"	7"	7"	7"	5"	5"	4"	12"	12"	11"	10"	10"	7"	7"	7"	5"	
	66	7"	7"	7"	5"	5"	5"	3"	3"	3"	11"	11"	8"	7"	7"	5"	5"	5"	3"	
	96	6"	6"	5"	4"	4"	3"	3"	3"	3"	9"	9"	6"	6"	6"	3"	5"	5"	3"	
128	5"	5"	4"	4"	4"	3"				7"	7"	5"	6"	6"	3"					
1/4" ITW TAPCON SG OR SAMMY SUPER SCREW W/ MIN 1 3/4" EMBEDMENT (MIN 3295psi CONC) 	38	12"	12"	12"	12"	12"	9"	9"	9"	6"	12"	12"	12"	12"	12"	10"	10"	7"		
	47	12"	12"	10"	11"	11"	7"	7"	7"	4"	12"	12"	12"	12"	12"	9"	8"	8"	6"	
	66	12"	12"	7"	8"	8"	5"	5"	5"	3"	12"	12"	10"	9"	9"	6"	6"	6"	4"	
	96	10"	10"	6"	7"	7"	3"	5"	5"	3"	11"	11"	7"	7"	7"	4"	6"	6"	4"	
128	7"	7"	5"	7"	7"	3"				8"	8"	6"	7"	7"	4"					
3/8-16 POWERS CALK-IN W/ 1 1/4" EMBED (MIN 3000psi CONC) 	38	12"	12"	12"	12"	12"	12"	12"	12"	9"	12"	12"	12"	12"	12"	12"	12"	11"		
	47	12"	12"	12"	12"	12"	11"	12"	12"	7"	12"	12"	12"	12"	12"	12"	12"	9"		
	66	12"	12"	12"	12"	12"	8"	9"	9"	5"	12"	12"	12"	12"	12"	12"	12"	6"		
	96	12"	12"	9"	11"	11"	5"	9"	9"	5"	12"	12"	11"	12"	12"	7"	12"	12"	6"	
128	12"	12"	7"	11"	11"	5"				12"	12"	9"	12"	12"	7"					



LICENSED AFFILIATE OF  
**ENGINEERING EXPRESS**  
160 SW 12th AVENUE, #106  
DEERFIELD BEACH, FL 33442  
PH: (954) 354-0660 FAX: (954) 354-0443  
WWW.ENGEXP.COM  
CERT OF AUTH #9885

MANUFACTURED BY:  
**Wayne Dalton Corp**  
3395 ADDISON DRIVE  
PENSACOLA, FL 32514  
www.wayne-dalton.com



REMARKS	DWN	CHKD	DATE
ADDL ANCHORS	KL	CL	04/13/07
REVISE FOR 07 FBC	RKB	CL	09/17/08
ADD SPDS OPTION	CL	FLB	8/5/05
OPTL ANCHORS AT SIDES	CL	FLB	11/17/05
	CL	FLB	4/10/06

THIS DOCUMENT IS THE PROPERTY OF FRANK L. BENNARDO, P.E. AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF FRANK L. BENNARDO, P.E.  
\* ALTERATIONS, ADDITIONS, HIGHLIGHTING, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATE.

COPYRIGHT 2004 FRANK L. BENNARDO P.E.  
**04-WDF-0004**

PAGE SCALE:  
DESCRIPTION:  
WAYNE-DALTON PART #317477

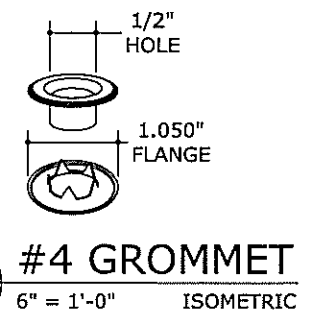
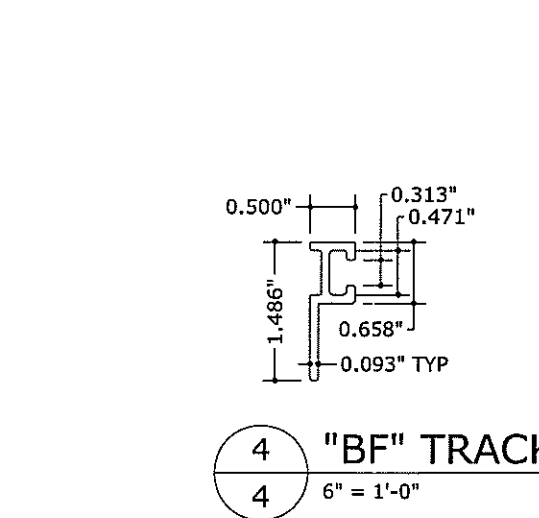
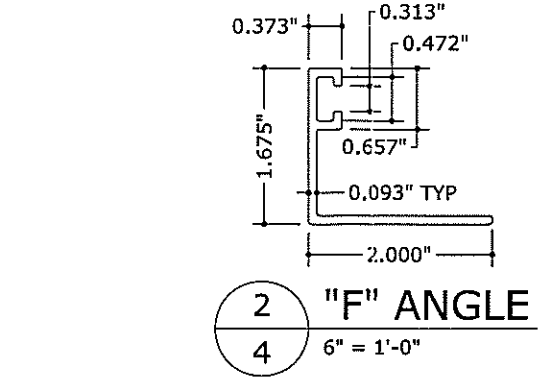
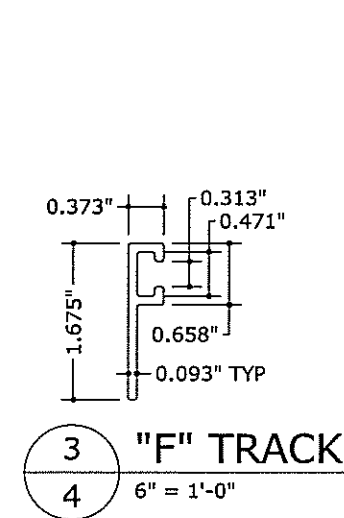
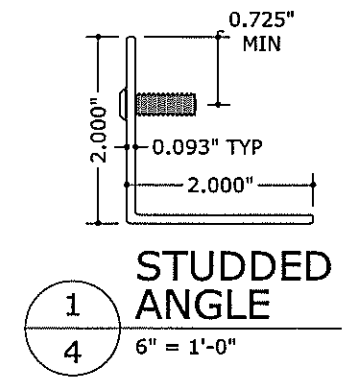
# ANCHOR SCHEDULE 4

09/24/2008 - 9:19am rbanflett F:\01 Project Files\Wayne-Dalton (WDF)\2004 Jobs\04-WDF-0004 Fabric-Shield Storm Panel + Tracks (FSA).dwg

HOST STRUCT.	ANCHOR	LOAD (psf)	2" MIN EDGE DISTANCE										
			Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"				
			CONN TYPE			CONN TYPE			CONN TYPE				
HOLLOW BLOCK	1/4" TAPCON (ELCO) WITH 1-1/4" EMBED	38	12"	12"	9"	12"	12"	9"	12"	12"	8"	8"	4"
		47	12"	12"	8"	10"	10"	5"	6"	6"	3"		
		66	10"	10"	5"	7"	7"	4"	5"	5"			
		96	8"	8"	4"	6"	6"		5"	5"			
	1/4" TAPCON (ITW) WITH 1-1/4" EMBED	38	9"	9"	4"	6"	6"		4"	4"			
		47	8"	8"	3"	5"	5"		3"	3"			
		66	5"	5"		4"	4"						
		96	4"	4"		3"	3"						
	1/4" ELCO PANELMATE (MALE OR FEMALE) WITH MIN 1-1/4" EMBEDMENT	38	12"	12"	9"	8"	8"	6"	5"	5"	4"		
		47	10"	10"	7"	6"	6"	5"	4"	4"	3"		
		66	7"	7"	5"	5"	5"	3"	3"	3"			
		96	6"	6"	4"	4"	4"		3"	3"			
1/4" ITW TAPCON SG OR SAMMY SUPER SCREW W/ MIN 1 1/4" EMBEDMENT	38	12"	12"	11"	10"	10"	8"	7"	7"	5"			
	47	12"	12"	9"	8"	8"	6"	6"	6"	4"			
	66	9"	9"	7"	6"	6"	4"	4"	4"	3"			
	96	8"	8"	5"	5"	5"	3"	4"	4"	3"			
1/4-20 ALL POINTS SOLID-SET ANCHOR WITH MIN 7/8" EMBEDMENT	38	12"	12"	12"	12"	12"	8"	8"	8"	5"			
	47	12"	12"	10"	10"	10"	6"	6"	6"	4"			
	66	10"	10"	7"	7"	7"	5"	5"	5"	3"			
	96	9"	9"	5"	6"	6"	3"	5"	5"	3"			
1/4-20 POWERS CALK-IN WITH MIN 7/8" EMBEDMENT	38	11"	11"	6"	7"	7"	4"	5"	5"	3"			
	47	9"	9"	5"	6"	6"	3"	4"	4"				
	66	6"	6"	3"	4"	4"		3"	3"				
	96	5"	5"	3"	3"	3"		3"	3"				
5/16" TAPCON (ELCO) WITH MIN 1 1/4" EMBED	38												
	47												
	66												
	96												
3/8" RED HEAD LDT W/ MIN 1 1/4" EMBEDMENT	38												
	47												
	66												
	96												
CONCRETE	5/16" TAPCON (ELCO) WITH MIN 1 1/4" EMBEDMENT	38	12"	12"	10"	12"	12"	7"	10"	10"	4"		
		47	12"	12"	8"	12"	12"	5"	8"	8"	4"		
		66	12"	12"	6"	9"	9"	4"	6"	6"	3"		
		96	11"	11"	4"	7"	7"	3"	6"	6"	3"		
	3/8" RED HEAD LDT W/ MIN 1 1/4" EMBEDMENT	38	12"	12"	8"	12"	12"	5"	12"	12"	4"		
		47	12"	12"	7"	12"	12"	4"	11"	11"	3"		
		66	12"	12"	5"	11"	11"	3"	8"	8"			
		96	12"	12"	4"	8"	8"		8"	8"			
	3/8-16 POWERS CALK-IN W/ MIN 1 1/4" EMBEDMENT	38	12"	12"	12"	12"	12"	8"	11"	11"	6"		
		47	12"	12"	10"	12"	12"	7"	9"	9"	4"		
		66	12"	12"	7"	10"	10"	5"	6"	6"	3"		
		96	12"	12"	6"	8"	8"	3"	6"	6"	3"		

2-1/2" MIN EDGE DISTANCE											
Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"					
CONN TYPE			CONN TYPE			CONN TYPE					
12"	12"	12"	12"	12"	8"	10"	10"	5"	6"	6"	3"
12"	12"	9"	12"	12"	6"	8"	8"	4"	6"	6"	3"
12"	12"	7"	8"	8"	4"	6"	6"	3"	6"	6"	3"
10"	10"	5"	7"	7"	3"	6"	6"	3"	6"	6"	3"
8"	8"	4"	7"	7"	3"	5"	5"		4"	4"	
12"	12"	5"	8"	8"	3"	5"	5"		4"	4"	
9"	9"	4"	6"	6"		4"	4"		3"	3"	
7"	7"	3"	4"	4"		3"	3"		3"	3"	
5"	5"		4"	4"		3"	3"		3"	3"	
4"	4"		4"	4"		3"	3"		3"	3"	
12"	12"	7"	8"	8"	5"	5"	5"	3"	4"	4"	
8"	8"	5"	6"	6"	3"	4"	4"		4"	4"	
7"	7"	4"	5"	5"		4"	4"		4"	4"	
5"	5"	3"	5"	5"		4"	4"		4"	4"	
5"	5"	3"	5"	5"		4"	4"		4"	4"	
12"	12"	12"	12"	12"	8"	8"	8"	5"	6"	6"	3"
12"	12"	10"	10"	10"	6"	7"	7"	4"	6"	6"	3"
11"	11"	7"	7"	7"	5"	5"	5"	3"	5"	5"	3"
9"	9"	5"	6"	6"	3"	5"	5"	3"	4"	4"	3"
7"	7"	4"	6"	6"	3"	4"	4"		4"	4"	
12"	12"	12"	12"	12"	9"	10"	10"	6"	6"	6"	3"
12"	12"	10"	10"	10"	7"	8"	8"	4"	6"	6"	3"
12"	12"	7"	9"	9"	5"	6"	6"	3"	5"	5"	3"
11"	11"	6"	7"	7"	3"	6"	6"	3"	4"	4"	3"
8"	8"	5"	7"	7"	3"	4"	4"		4"	4"	
12"	12"	7"	10"	10"	5"	7"	7"	3"	4"	4"	
12"	12"	6"	8"	8"	4"	5"	5"		4"	4"	
9"	9"	4"	6"	6"	3"	4"	4"		4"	4"	
7"	7"	3"	5"	5"		4"	4"		4"	4"	
5"	5"		5"	5"		4"	4"		4"	4"	
12"	12"	9"	12"	12"	6"	8"	8"	4"	6"	6"	3"
12"	12"	8"	10"	10"	5"	7"	7"	3"	5"	5"	3"
11"	11"	5"	7"	7"	4"	5"	5"		4"	4"	
9"	9"	4"	6"	6"	3"	5"	5"		4"	4"	
7"	7"	3"	6"	6"	3"	4"	4"		4"	4"	
5"	5"		5"	5"		4"	4"		4"	4"	
12"	12"	12"	12"	12"	10"	12"	12"	7"	9"	9"	4"
12"	12"	12"	12"	12"	8"	12"	12"	5"	9"	9"	4"
12"	12"	9"	12"	12"	6"	9"	9"	4"	9"	9"	4"
12"	12"	7"	11"	11"	4"	9"	9"	4"	9"	9"	4"
12"	12"	5"	11"	11"	4"	9"	9"	4"	9"	9"	4"

3 1/2" MIN EDGE DISTANCE											
Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"					
CONN TYPE			CONN TYPE			CONN TYPE					
38	12"	12"	10"	12"	12"	7"	10"	10"	4"		
47	12"	12"	8"	12"	12"	5"	8"	8"	4"		
66	12"	12"	6"	9"	9"	4"	6"	6"	3"		
96	11"	11"	4"	7"	7"	3"	6"	6"	3"		
128	8"	8"	4"	7"	7"	3"					



FRANK L. BENNARDO, P.E.  
# PE96064

09/24/2008

LICENSED AFFILIATE OF  
**ENGINEERING EXPRESS**

160 SW 12th AVENUE, #105  
DEERFIELD BEACH, FL 33442  
PH: (954) 354-0660 FAX: (954) 354-0443  
WWW.ENGEXP.COM  
CERT OF AUTH #8985

MANUFACTURED BY:  
**Wayne Dalton Corp**  
3395 ADDISON DRIVE  
PENSACOLA, FL 32514  
www.wayne-dalton.com

**Wayne Dalton**

FABRIC-SHIELD STORM PANEL  
FLORIDA STATEWIDE APPROVAL

REMARKS	DWN	CHKD	DATE
ADDL ANCHORS	KL	CL	04/13/07
REVISE FOR 07 FEB	RKB	CL	09/17/08
2004 FEB	CL	FLB	8/5/05
ADD SPDS OPTION	CL	FLB	11/17/05
OPTL ANCHORS AT SIDES	CL	FLB	4/10/06

THIS DOCUMENT IS THE PROPERTY OF FRANK L. BENNARDO, P.E. AND SHALL NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT OF FRANK L. BENNARDO, P.E. \*ALTERATIONS, ADDITIONS, HIGHLIGHTING, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE OUR CERTIFICATION.

COPYRIGHT 2004 FRANK L. BENNARDO P.E.

04-WDF-0004

PAGE SCALE:

DESCRIPTION:  
WAYNE-DALTON PART #317477

4

# FABRIC-SHIELD™ STORM PANEL

## ADDENDUM ANCHOR SCHEDULE TO FLORIDA STATEWIDE APPROVAL #FL3227.1

FRANK L. BENNARDO, P.E.  
# PE96064

10/24/2008

**ENGINEERING EXPRESS®**  
160 SW 12th AVENUE, #106  
DEERFIELD BEACH, FL 33442  
Ph: (954) 354-0660 Fax: (954) 354-0443  
WWW.ENGEXP.COM  
CERT OF AUTH #8865  
A FRANK L. BENNARDO, P.E., INC. INNOVATION

### GENERAL NOTES:

- 1) THIS DRAWING SHALL SERVE AS AN ADDENDUM TO FLORIDA PRODUCT APPROVAL #FL3227.1, DRAWING #04-WDF-0004. ALL PREVIOUS DETAILS, NOTES, AND DESIGN LIMITATIONS FROM THE ABOVE DRAWING AND PRODUCT APPROVAL SHALL APPLY.
- 2) THIS SYSTEM HAS BEEN DESIGN IN ACCORDANCE WITH THE 2007 FLORIDA BUILDING CODE AND THE 2006 INTERNATIONAL BUILDING/RESIDENTIAL CODE. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT.
- 3) POSITIVE AND NEGATIVE DESIGN PRESSURES TO BE USED WITH THESE DRAWINGS SHALL BE DETERMINED BY OTHERS FOR SPECIFIC JOBS IN ACCORDANCE WITH THE GOVERNING CODE. WHEN CALCULATING PRESSURES PER ASCE 7, USE OF DIRECTIONALITY FACTOR  $K_d=0.85$  IS ALLOWED.

### ANCHOR NOTES:

1. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
2. ANCHOR SCHEDULE APPLIES TO ALL PRODUCTS CERTIFIED HEREIN, BUT ONLY PROVIDES MAXIMUM ALLOWABLE ANCHOR SPACING. MAXIMUM ALLOWABLE SPANS AND PRESSURES INDICATED IN SPAN SCHEDULE SHALL APPLY.
3. EDGE DISTANCE OF 1/2" IS ACCEPTABLE FOR ANCHORS TO STEEL OR ALUMINUM
4. DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE FOR USE.

### ANCHOR SCHEDULES

HOST STRUCT.	ANCHOR	LOAD (psf)	Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"		
			CONN TYPE			CONN TYPE			CONN TYPE		
			C1	C2	C3	C1	C2	C3	C1	C2	C3
18GA STEEL	#14 SMS TO MINIMUM 18GA (0.0478") STEEL STUDS (MIN Fu = 50 KSI) 	38	12"	12"	6"	12"	12"	4"	8"	8"	3"
		47	12"	12"	5"	10"	10"	3"	7"	7"	
		66	10"	10"	3"	7"	7"		5"	5"	
		96	8"	8"	3"	5"	5"		5"	5"	
		128	7"	7"		5"	5"				

HOST STRUCT.	ANCHOR	LOAD (psf)	Spans Up To 4'-0"			Spans Up To 6'-0"			Spans Up To 9'-0"		
			CONN TYPE			CONN TYPE			CONN TYPE		
			C1	C2	C3	C1	C2	C3	C1	C2	C3
ALUMINUM	#14 SMS TO 6063-T6 ALUMINUM (1/8" MIN) 	38	12"	12"	7"	12"	12"	5"	10"	10"	3"
		47	12"	12"	6"	12"	12"	4"	8"	8"	3"
		66	12"	12"	4"	9"	9"	3"	6"	6"	
		96	10"	10"	3"	7"	7"		6"	6"	
		128	8"	8"	3"	7"	7"				

MANUFACTURED BY:  
**WAYNE-DALTON CORP**  
3395 ADDISON DRIVE  
PENSACOLA, FL 32514  
www.wayne-dalton.com



FABRIC SHIELD STORM PANELS  
ADDENDUM TO FL #3227.1

REMARKS	DRWN	CHKD	DATE
INIT ISSUE	RKB	CL	10/21/08

08-WDF-0001  
SCALE: 1/01  
PAGE DESCRIPTION:

F:\01 Project Files\Wayne-Dalton (WDF)\200808-WDF-0001 Fabric Shield All Anchor Addendum.dwg 10/24/2008 - 12:20pm rbarlett