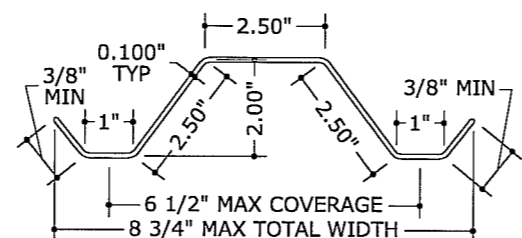
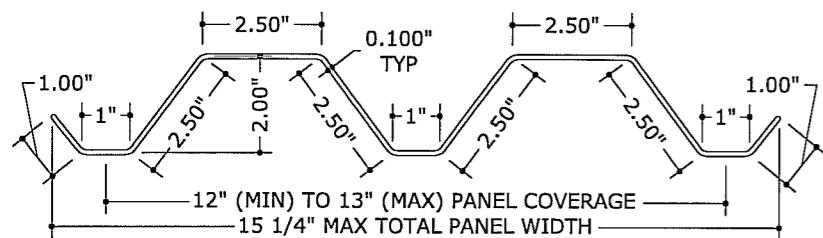




POLYCARBONATE STORM PANELS (Non-HVHZ)

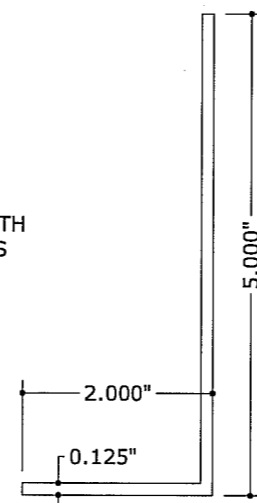
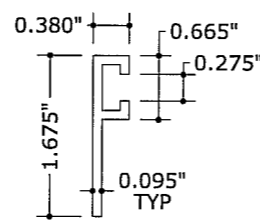
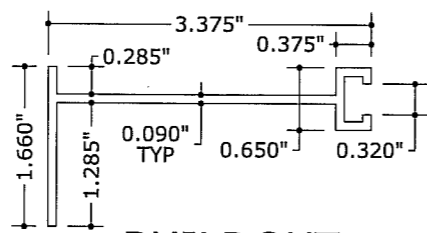
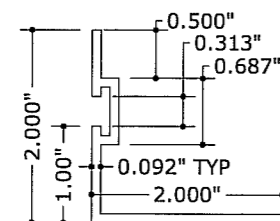
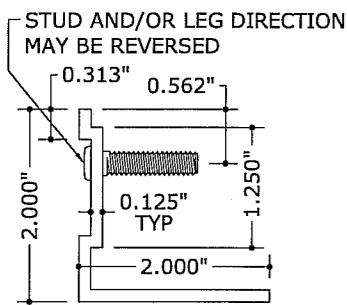
FRANK L. BENNARDO, P.E.
PE0046549

03/02/2006



1 FULL PANEL PROFILE
3" = 1'-0"
(SEE GEN NOTE 7)
MOUNT WITH FASTENERS OR STUDS AT 13" O.C. MAX

2 HALF PANEL PROFILE
3" = 1'-0"
(SEE GEN NOTE 7)
MOUNT WITH FASTENERS OR STUDS AT 6-1/2" O.C. MAX



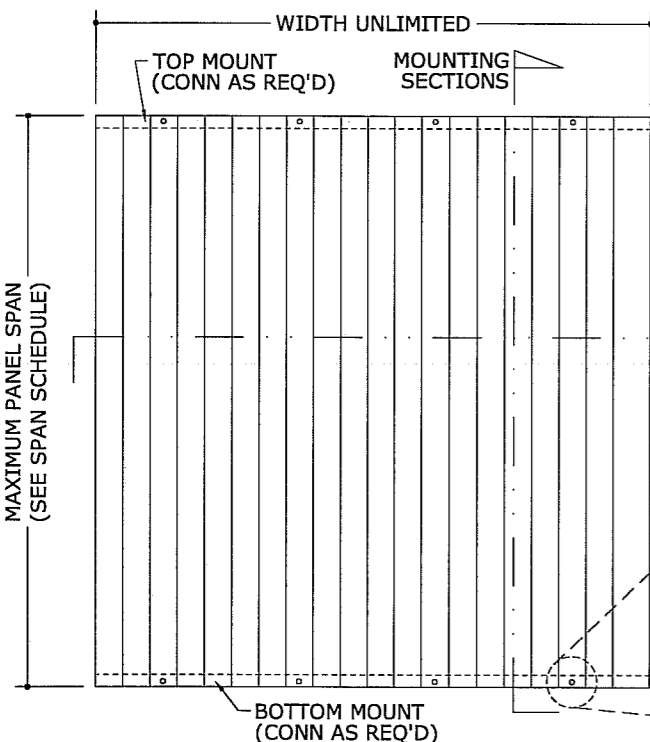
3 STUD ANGLE
6" = 1'-0"

4 REVERSE 'F' ANGLE
6" = 1'-0"

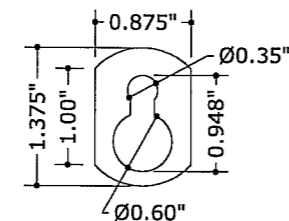
5 BUILDOUT 'F' TRACK
6" = 1'-0"

6 'F' TRACK
6" = 1'-0"

7 CLOSURE ANGLE
6" = 1'-0"



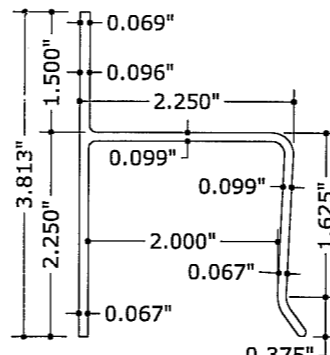
1 TYPICAL ELEVATION
1 N.T.S.



8 KEYHOLE WASHER
6" = 1'-0"

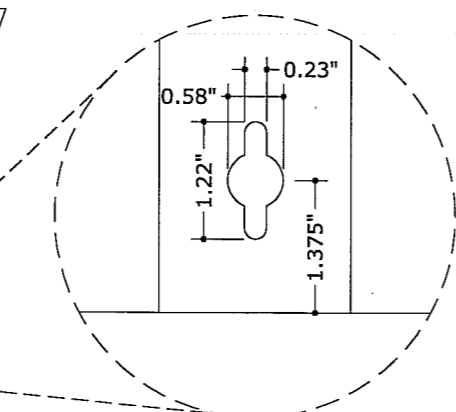


9 WASHERED WINGNUT
6" = 1'-0"

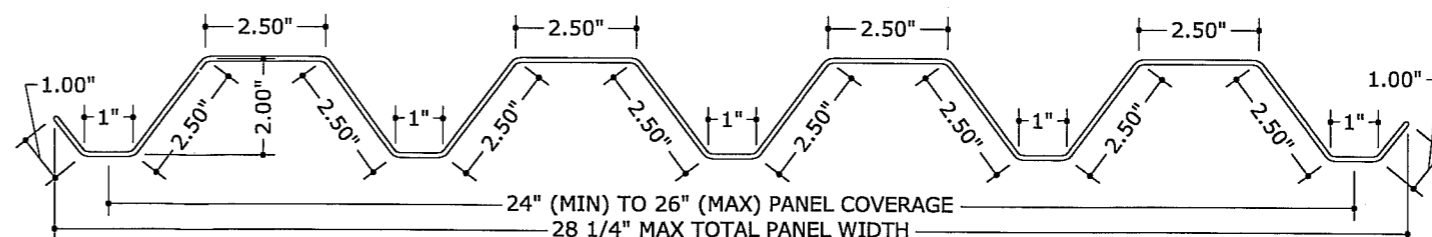


10 'H' HEADER
6" = 1'-0"

PLAN VIEWS



2 KEYHOLE DETAIL
1 N.T.S.
ALT: FIELD DRILL Ø3/8" HOLE (OR Ø5/8" HOLE W/ KEYHOLE WASHER)



11 "CLEARMAX™" DOUBLE-WIDE PANEL PROFILE
3" = 1'-0"
(SEE GEN NOTE 6)
MOUNT WITH FASTENERS OR STUDS AT 13" O.C. MAX

GENERAL NOTES:

- THIS SYSTEM HAS BEEN TESTED AND EVALUATED AS A LARGE MISSILE IMPACT PROTECTIVE SYSTEM IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2004 FLORIDA BUILDING CODE AND THE 2003 INTERNATIONAL BUILDING/RESIDENTIAL CODE PER ASTM STANDARDS E330, E1886, & E1996. PANELS ARE APPROVED FOR USE IN FLORIDA OUTSIDE THE HIGH VELOCITY HURRICANE ZONE, OR THROUGHOUT OTHER AREAS GOVERNED BY THE 2003 IBC/IRC.
- TESTING HAS BEEN PERFORMED IN ACCORDANCE WITH THE ASTM E1996-02 STANDARD FOR USE IN HIGH VELOCITY WIND ZONES (WIND ZONE 4) WHERE THE BASIC WIND SPEED IS GREATER THAN 140 MPH.
- NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS PRODUCT.
- 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 7-02, USE OF DIRECTIONALITY FACTOR $K_d=0.85$ IS ALLOWED.
- THE 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.
- CLEAR POLYCARBONATE STORM PANELS (FULL, HALF, & DOUBLE-WIDE) MAY VARY IN "COVERAGE" WIDTH UP TO THE RESPECTIVE MAXIMA SHOWN HEREIN, PROVIDED THAT THE PANEL PROFILE HEIGHT BE MAINTAINED. PANELS SHALL BE MOUNTED WITH FASTENERS OR STUDS AT MAXIMUM SPACING SHOWN FOR EACH PROFILE.
- ALL POLYCARBONATE PANELS SHALL BE MANUFACTURED BY TRANSPARENT PROTECTION SYSTEMS, Inc.
- THIS PRODUCT APPROVAL IS FOR THE USE OF CLEAR POLYCARB PANELS ONLY. ALL POLYCARB PANELS SHALL BE EXTRUDED WITH THICKNESS $t=0.100"$ ($\pm 0.010"$) AND SHALL BE MANUFACTURED FROM 100% SYNTHETIC THERMOPLASTIC POLYMER RESIN (UV STABILIZED). TYPICAL SYNTHETIC THERMOPLASTIC POLYMER TENSILE STRENGTH $F_y=8,908$ KSI, FLEXURAL STRENGTH $F_{by}=12.90$ KSI, & FLEXURAL MODULUS IS 328.7 KSI.
- ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, U.N.O.
- PANELS SHALL BE PERMANENTLY LABELED WITH A MINIMUM OF ONE LABEL PER PANEL CONTAINING THE FOLLOWING:
TRANSPARENT PROTECTION SYSTEMS, INC.
WEST PALM BEACH, FLORIDA
- STORM PANELS HAVE BEEN DESIGNED AND TESTED TO THE MAXIMUM SPANS AND CORRESPONDING LOADS SHOWN HEREIN. REFERENCE CONSTRUCTION TESTING CORPORATION (CTC OF MIAMI, FL) TEST REPORTS #04-009-FE-ASTM & #04-009-LE-ASTM, AS WELL AS HURRICANE TEST LAB (HTL OF RIVIERA BEACH, FL) TEST REPORT #0239-0107-05.
- TOP & BOTTOM MOUNTING SECTIONS MAY BE INTERCHANGED AS FIELD CONDITIONS DICTATE. PANELS MAY BE MOUNTED VERTICALLY OR HORIZONTALLY AS APPLICABLE.
- USE OF KEYHOLE WASHERS IS OPTIONAL IN CONJUNCTION WITH ANY MOUNTING CONDITION. HOLES MAY BE FIELD DRILLED AT Ø3/8" (OR Ø5/8" WITH KEYHOLE WASHER) WITH ANY FASTENER TYPE. WASHERED WINGNUTS SHALL HAVE 0.865" MINIMUM WASHER DIAMETER.
- ALL BOLTS & WASHERS SHALL BE ZINC COATED STEEL, GALVANIZED STEEL, OR STAINLESS STEEL WITH A MINIMUM TENSILE YIELD STRENGTH OF 60 KSI.

FRANK L. BENNARDO, P.E., Inc.
CONSULTING ENGINEERS
4441 N. DIXIE HIGHWAY
BOCA RATON, FL 33431
PH: (561) 391-2888 FAX: (561) 391-2862
CERTIFICATE OF AUTHORIZATION: #9885

Transparent Protection Systems, Inc.
6643 42nd Terrace North
West Palm Beach, FL 33407

TPS
FOR USE OUTSIDE THE HVHZ
FLORIDA STATEWIDE APPROVAL

REMARKS	DRWN	CHKD	DATE
ORIG ISSUE	CL	FLB	8/17/04
2ND ISSUE	CL	FLB	9/15/05
2004 FBC	CL	FLB	8/5/05
ClearMAX PROFILE ADDED	CL	FLB	2/6/06

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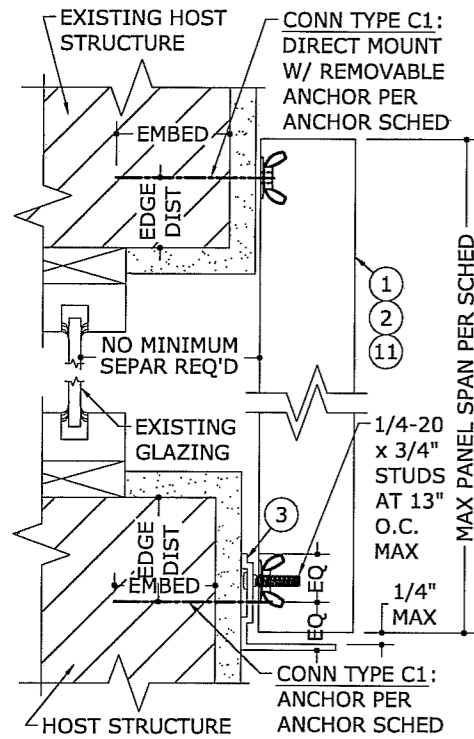
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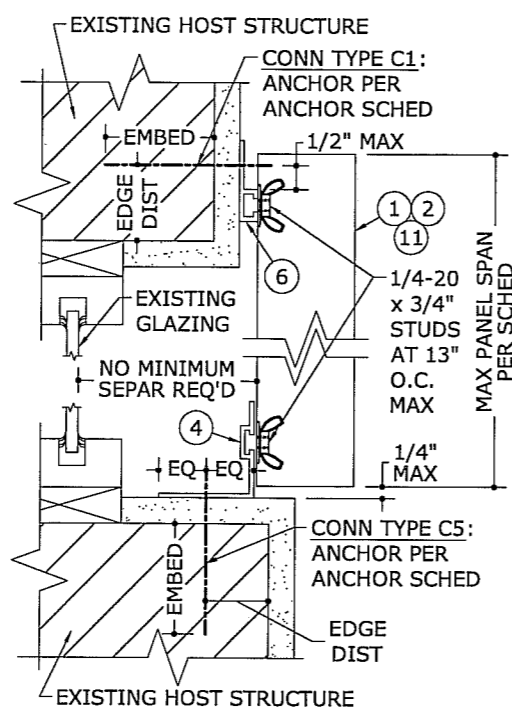
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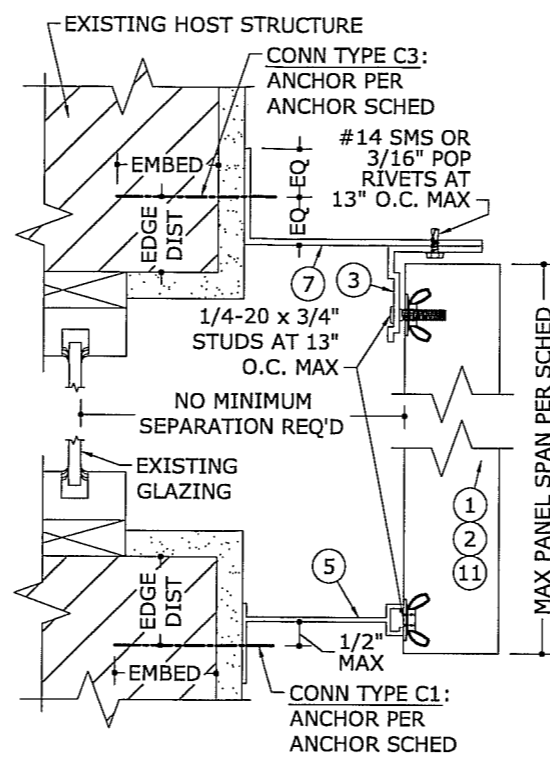
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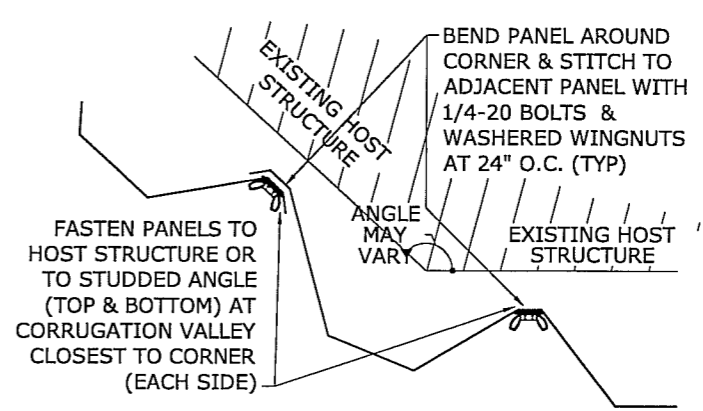
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2 3" = 1'-0" VERT SECTION



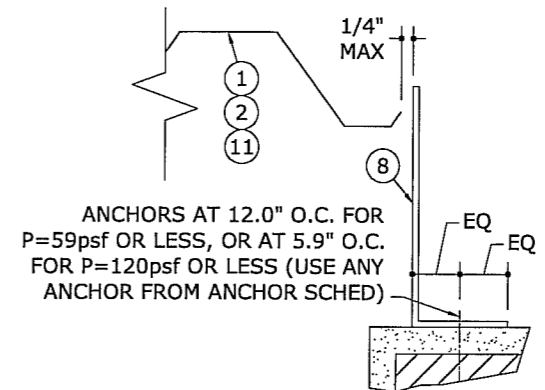
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2 3" = 1'-0" VERT SECTION



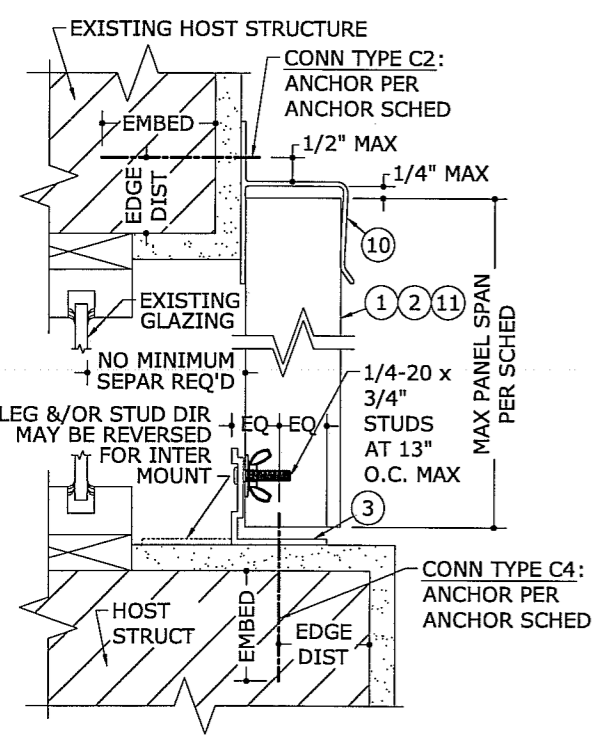
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2 3" = 1'-0" VERT SECTION



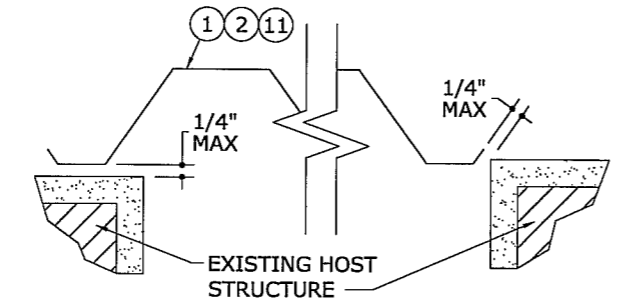
5 CORNER CLOSURE
2 N.T.S. PLAN VIEW



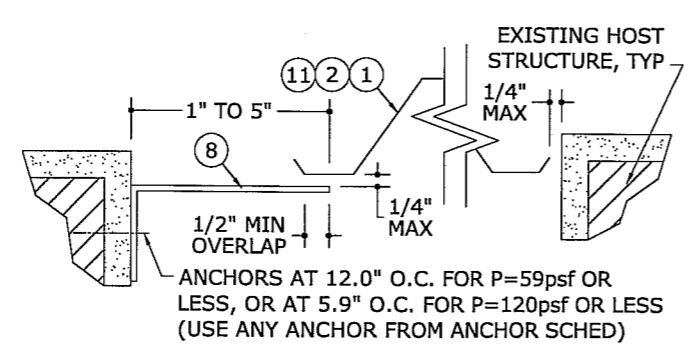
6 BUILD-OUT CLOSURE
2 3" = 1'-0" PLAN VIEW



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



7 WALL MOUNT CLOSURE
2 3" = 1'-0" PLAN VIEW



8 TRAP MOUNT CLOSURE
2 3" = 1'-0" PLAN VIEW

MAXIMUM PANEL SPAN SCHEDULE (POSITIVE CONN.)

LOAD (psf)	MAX SPAN (ft)
25	11'-4"
30	10'-4"
35	9'-7"
40	8'-11"
45	8'-5"
50	8'-0"
55	7'-7"
60	7'-4"
65	7'-0"
70	6'-7"
75	6'-1"
80	5'-9"
90	5'-1"
100	4'-7"
110	4'-2"
120	3'-10"

MAXIMUM PANEL SPAN SCHEDULE (W/ "H" HEADER)

LOAD (psf)	MAX SPAN (ft)
17.3	8'-7"
24.2	7'-9"
34.6	7'-0"
41.6	6'-0"
55.4	5'-0"
104	4'-0"

MAXIMUM SPAN SCHEDULE NOTES:

1. SPANS SHOWN IN "MAX PANEL SPAN SCHEDULES" ARE MAXIMUM ALLOWABLE SPANS AT EACH RESPECTIVE DESIGN PRESSURE.
2. THE <POSITIVE CONNECTION> SPAN SCHEDULE MAY BE USED TO DETERMINE MAXIMUM ALLOWABLE SPANS FOR PANELS INSTALLED USING ANY COMBINATION OF MOUNTING EXTRUSIONS INVOLVING A POSITIVE CONNECTION - i.e. ALL INSTALLATIONS WHICH DO NOT INCLUDE AN "H" HEADER.
3. THE <WITH "H" HEADER> SPAN SCHEDULE SHALL BE USED FOR ALL INSTALLATIONS WHICH INCLUDE AN "H" HEADER.
4. TABLES ARE VALID FOR PANELS MOUNTED HORIZONTALLY OR VERTICALLY. SPAN DIRECTION IS ALWAYS PERPENDICULAR TO LINE OF ANCHORAGE.

FRANK L. BENNARDO, P.E., INC.
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CERTIFICATE OF AUTHORIZATION: #9885

03/02/2006

CREATORS OF
ENGINEERING EXPRESS
WWW.ENGP.COM

TPS Transparent Protection Systems, Inc.
6643 42nd Terrace North
West Palm Beach, FL 33407

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OF 3

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