

GENERAL NOTES:

1. THIS PRODUCT HAS BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE TABLE(S)".
2. OPENINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
4. THIS PRODUCT HAS BEEN DESIGNED IN ACCORDANCE WITH AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ) & IS BOTH SMALL & LARGE MISSILE IMPACT RATED.
5. WHEN GLAZED FOR SMALL MISSILE IMPACT, THIS PRODUCT MAY NOT BE INSTALLED AT ELEVATIONS BELOW 30 FT. ABOVE GRADE OR AT ANY CODE DESIGNATED LARGE MISSILE IMPACT LOCATION WITHOUT AN APPROVED SHUTTER.
6. WHEN LARGE MISSILE IMPACT GLAZED, IMPACT SHUTTERS ARE NOT REQUIRED WITH THIS PRODUCT.
7. ALL ANCHORS SECURING PRODUCT FRAMES TO PRESSURE TREATED BUCKS OR WOOD FRAMING SHALL BE CAPABLE OF RESISTING CORROSION CAUSED BY THE PRESSURE TREATING CHEMICALS IN THE WOOD.
8. DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF Kd = 0.85 MAY BE APPLIED PER THE ASCE-7 STANDARD.
9. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE.
10. TO THE BEST OF OUR KNOWLEDGE, THE PRODUCT SHOWN HEREIN IS QUALITY ASSURED BY A FLORIDA STATE APPROVED CERTIFICATION/QA ENTITY & SHALL BE LABELED IN ACCORDANCE WITH THE FBC AND THE FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REGULATION SPECIFICATIONS. THESE DRAWINGS SHOW ALL APPLICABLE ELEVATION, COMBINATION, INSTALLATION & COMPARATIVE ANALYSIS CONDITIONS AS DETERMINED THROUGH TESTING & ENGINEERING RATIONAL ANALYSIS. PRODUCT ASSEMBLY SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, THE MANUFACTURER'S QUALITY ASSURANCE SPECIFICATIONS & TESTING REPORTS.
11. CERTIFICATION OF THIS PRODUCT SHALL BE CONSIDERED VOID IF IT IS INSTALLED WITHOUT A BUILDING PERMIT FROM THE APPLICABLE LOCAL BUILDING DEPARTMENT OR IF IT IS INSTALLED BY ANYONE OTHER THAN A LICENSED CONTRACTOR EXPERIENCED WITH INSTALLATIONS OF THIS TYPE OF PRODUCT.
12. CONDITIONS OUTSIDE OF THOSE SHOWN IN THIS DRAWING SHALL BE REVIEWED & CERTIFIED BY A FLORIDA LICENCED P.E. UNDER A JOB SPECIFIC CERTIFICATION.

CORNER & FRAME END CONSTRUCTION:

FRAME HEAD CORNER (APPLICABLE TO ITEM #1A): HEAD IS SQUARE CUT, BUTTED TO SIDE, FASTENED WITH THREE(3) NO. 12 X 1" PHTFS FASTENERS THROUGH THE SIDE MEMBER INTO THE HEAD MEMBER SCREW SPLINES & SEALED WITH SILICONE.

FRAME HEAD CORNER (APPLICABLE TO ITEM #1B): HEAD IS MITER CUT, BUTTED TO SIDE, FASTENED WITH TWO(2) NO. 12 X 1 1/2" PHTFS FASTENERS THROUGH THE SIDE MEMBER INTO THE HEAD MEMBER SCREW SPLINES & SEALED WITH SILICONE.

FRAME SILL CORNER: SILL IS SQUARE CUT, BUTTED TO SIDE, FASTENED WITH THREE(3) NO. 12 X 1" PHTFS FASTENERS THROUGH THE SIDE MEMBER INTO THE SILL MEMBER SCREW SPLINES & SEALED WITH SILICONE.

FRAME DOOR JAMB SILL CORNER: SILL IS SQUARE CUT, BUTTED TO SIDE, FASTENED WITH 1 JAMB PIVOT ASSEMBLY. EACH PIVOT ASSEMBLY WAS FASTENED TO THE SIDE WITH THREE(3) NO. 12-24 X 5/8" FHMS. THE THRESHOLD IS THEN FASTENED TO PIVOT ASSEMBLY WITH TWO(2) NO. 12-24 X 3/8" FHMS & SEALED WITH SILICONE.

HORIZONTAL FRAME MULLION END (APPLICABLE TO ITEMS #6A & #7): HORIZONTAL IS SQUARE CUT, BUTTED TO SIDE, FASTENED WITH THREE(3) NO. 12 X 1" SS PHTFS FASTENERS THROUGH THE SIDE MEMBER INTO THE MULLION MEMBER SCREW SPLINES & SEALED WITH SILICONE.

HORIZONTAL FRAME MULLION END (APPLICABLE TO ITEM #6B): HORIZONTAL IS SQUARE CUT, BUTTED TO SIDE, JOINED VIA A SHEAR BLOCK (PART #21). THE SHEAR BLOCK IS FASTENED TO THE VERTICAL FRAME MEMBER WITH FOUR(4) NO. 12 X 1 7/8" FHTF TYPE B SCREWS. THE HORIZONTAL MEMBER IS FASTENED TO THE SHEAR BLOCK WITH THREE(3) NO. 12 X 1" FHTF TYPE AB SCREWS. EACH CORNER IS SEALED WITH DOW 795 SILICONE SEALANT.

FRAME ANCHOR REQUIREMENTS TABLE

ANCHOR TYPE	OPENING TYPE (SUBSTRATE)	JAMB TO OPENING FASTENER TYPE	MINIMUM EMBED	MINIMUM EDGE DIST.
A	2X_ WOOD FRAME OR BUCK (MIN. GR. 3 & G=0.55)	NO. 12 SMS SCREWS	1 1/4"	3/4"
B	MIN. 1/8" THICK A36 STEEL (MIN. Fy = 36 ksi)	(2) 1/4-20 SELF DRILLING/TAPPING SCREW	FULL	3/4"
C	MIN. 3000 P.S.I. CONCRETE	(1) 1/4" CONCRETE SCREW	1 1/2"	2 1/2"
D	MIN. 18 GA. 33 KSI METAL STUD	(2) NO. 12 SELF DRILLING/TAPPING SCREW	FULL	1/2"
E	MIN. C90 BLOCK	(1) 1/4" CONCRETE SCREW	1 1/4"	2 1/2"
(4) F	MIN. 3000 P.S.I. CONCRETE	(3) 3/8" WEDGE/SLEEVE ANCHOR	2 1/2"	3"

- (1) CONCRETE SCREWS SHALL BE ELCO ULTRACONS, ELCO CRETE-FLEX, ITW RAMSET/RED HEAD TAPCONS OR HILTI KWIK-CON II (HARDENED STEEL OR S.S.). **NOTE THAT RED HEAD TAPCONS MAY NOT BE USED WITH CMU.**
- (2) SELF DRILLING & SELF TAPPING SCREWS SHALL BE MIN. GRADE 5 CORRISION RESISTANT STEEL
- (3) WEDGE/SLEEVE ANCHORS SHALL BE RAMSET/RED HEAD DYNABOLT, HILTI KWIK-BOLT 3, OR POWERS RAWL POWER BOLT (STEEL OR S.S.)
- (4) ANCHOR TYPE "F" IS ONLY APPLICABLE FOR USE WITH THE SILL ANCHOR BLOCK AT THE VERTICAL DOOR MULLION BOTTOM END.

ALLOWABLE GLASS D.L.O. SIZE/PRESSURE TABLE (GLASS OPTION 1, 3 & 4)

MAXIMUM D.L.O. WIDTH (IN.)	MAXIMUM D.L.O. HEIGHT (IN.)	ALLOWABLE PRESSURE (+/- PSF)
30 3/4	144	65.0
33 3/4	132	65.0
37	120	65.0
41 1/4	108	65.0
43 1/2	102	65.0
46 1/4	96	65.0
48	92 3/4	65.0
49 1/2	90	65.0
53	84	65.0
57	78	65.0
60	72	65.0

ALLOWABLE GLASS D.L.O. SIZE/PRESSURE TABLE (GLASS OPTION 2 & 5)

MAXIMUM D.L.O. WIDTH (IN.)	MAXIMUM D.L.O. HEIGHT (IN.)	ALLOWABLE PRESSURE (+/- PSF)
43	144	70.0
46 3/4	132	70.0
51 1/2	120	70.0
57 1/4	108	70.0
60	103	70.0

GLASS D.L.O. SIZE/PRESSURE TABLE NOTES:

1. D.L.O. SIZES SHOWN ARE MAXIMUM SIZES. SMALLER SIZES SHALL APPLY TO PRESSURE EQUAL TO THE NEAREST LARGER SIZE SHOWN IN TABLE.
2. SIZES BETWEEN THOSE SHOWN MAY BE INTERPOLATED.
3. WHEN GLASS IS ABOVE A DOOR, THE D.L.O. HEIGHT & WIDTH STATED IN THESE TABLES MAY BE INTERCHANGED SUCH THAT THE HEIGHT SHALL BE CONSIDERED THE WIDTH AND WIDTH THE HEIGHT. NOTE THAT THE ACTUAL D.L.O. WIDTH ABOVE THE DOOR SHALL BE LIMITED TO 96" AS SPECIFIED IN THE DOOR ELEVATIONS.
4. SEE GLAZING DETAILS FOR GLASS OPTIONS.

NOTE: RAMSET RED HEAD TAPCONS MAY NOT BE USED WITH CMU.

EVALUATION OF THIS PRODUCT IS BASED ON APPLICABLE STANDARDS AND/OR INFORMATION & RESULTS FROM APPLICABLE TEST REPORTS. THE FLORIDA BUILDING CODE VERSION CONSIDERED WITH THIS EVALUATION WAS THAT IN FORCE AT THE TIME OF THE EVALUATION. IN THE EVENT OF CODE VERSION CHANGES/UPDATES OR IN THE EVENT THAT NEW OR ADDITIONAL TESTING IS COMPLETED ON THIS PRODUCT, PRIOR TO STATING CODE COMPLIANCE WITH THE STATE, THE MANUFACTURER SHALL CONFIRM WITH THE EVALUATION ENGINEER OF RECORD THAT EVERYTHING SPECIFIED HERE-IN IS CURRENT WITH ALL CURRENT TESTING, CODES AND APPLICABLE STANDARDS.

THESE DRAWINGS ARE APPLICABLE ONLY TO THE PRODUCT SPECIFIED. THEY MAY NOT BE USED FOR THE ASSEMBLY AND/OR INSTALLATION OF ANY OTHER PRODUCT NOR MAY THEY BE USED FOR RATIONAL AND/OR LOCAL APPROVAL OF ANY PRODUCT NOT PRODUCED BY THE MANUFACTURER STATED ON THESE DRAWINGS.

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 07/14/06	
DATE	09/02/11	09/27/16	09/29/17
BY	W.W.S.	W.W.S.	W.W.S.
REVISION	DESCRIPTION	DATE	BY
C1	UPDATE TO PRESENT STANDARDS	09/02/11	W.W.S.
D1	CHANGE TO STATE ONLY APPROVAL	09/27/16	W.W.S.
D1	CHANGE TO STATE ONLY APPROVAL	09/27/16	W.W.S.
E1	UPDATE FOR NEW TESTING	09/29/17	W.W.S.
F1	CHANGED GLAZING GASKET #30	07/15/20	W.W.S.
DRAWING TITLE: IR501 ALUMINUM STORE FRONT SYSTEM - LARGE & SMALL MISSILE IMPACT			
CONSULTANTS		MANUFACTURER	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		KAWNEER COMPANY, INC. 555 GUTHRIDGE COURT NORCROSS, GA 30092 770-449-5555	
CERTIFICATION		P.E. NO. 44135	
MAR 08 2021		W. W. SCHAEFER, P.E.	
DRAWING NO. 1461		REV. F	
SHEET NO. 1		OF 10	

FOR MAX. FRAME HEIGHT, SEE INTERMEDIATE MULLION PRESSURE TABLE ON THIS SHEET

(NOT TO EXCEED 144" WHEN JAMB MID-SPAN ANCHOR CLUSTER EXISTS NOR 108" WHEN NO JAMB MID-SPAN ANCHOR CLUSTER EXISTS)

FOR MAX. D.L.O. HEIGHT, SEE GLASS D.L.O. SIZE/PRESSURE TABLE ON SHEET 1.

FOR MAX. LOAD WIDTH, SEE SIDE JAMB MULLION & ANCHOR PRESSURE TABLES

SEE "INTERMEDIATE MULLION END ANCHOR QUANTITY/PRESSURE TABLE" ON SHEET 3 FOR QUANTITY OF ANCHORS REQUIRED AT CORRESPONDING JOB REQUIRED PRESSURES (6 ANCHORS SHOWN; 4, 6 OR 8 REQUIRED)

JAMB MID-SPAN ANCHOR CLUSTER. SEE "JAMB MID-SPAN ANCHOR CLUSTER REQUIREMENTS NOTE ON THIS SHEET FOR REQUIREMENTS.

FOR MAX. D.L.O. WIDTH, SEE GLASS D.L.O. SIZE/PRESSURE TABLE ON SHEET 1.

FOR MAX. D.L.O. WIDTH, SEE GLASS D.L.O. SIZE/PRESSURE TABLE ON SHEET 1.

FOR MAX. D.L.O. WIDTH, SEE GLASS D.L.O. SIZE/PRESSURE TABLE ON SHEET 1.

TYP. FRAME ANCHOR WHERE SHOWN. SEE "FRAME ANCHOR REQUIREMENTS TABLE" ON SHEET 1 FOR REQUIREMENTS.

MIDDLE ANCHOR IS NOT REQUIRED AT ANY BAY WHEN D.L.O. WIDTH IS 36" OR LESS.

GLASS CENTERLINE

FOR MAX. LOAD WIDTH, SEE INTERMEDIATE MULLION & ANCHOR PRESSURE TABLES

GLASS CENTERLINE

FOR MAX. LOAD WIDTH, SEE SIDE JAMB MULLION & ANCHOR PRESSURE TABLES

JAMB MID-SPAN ANCHOR CLUSTER. SEE "JAMB MID-SPAN ANCHOR CLUSTER REQUIREMENTS NOTE ON THIS SHEET FOR REQUIREMENTS.

MULLION PRESSURE TABLE NOTES:

1. THE LESSER OF THE PRESSURES SHOWN IN THESE TABLES AND THOSE IN THE D.L.O. AND ANCHOR TABLES SHALL CONTROL AS THE OVERALL UNIT ALLOWABLE PRESSURE.
2. EACH MULLION SHALL BE EVALUATED SEPARATELY WHEN CONDITIONS VARY FROM MULLION TO MULLION OR WORSE CASE MULLION CONDITION MAY BE USED FOR EVALUATION OF ALL MULLIONS.

JAMB MID-SPAN ANCHOR CLUSTER REQUIREMENTS:

1. A CLUSTER OF 4 ANCHORS ARE REQUIRED AT THE MID-SPAN OF ANY JAMB WHEN THE FRAME HEIGHT EXCEEDS 108" (NOT REQUIRED WHEN FRAME HEIGHT IS 108" OR LESS).
2. WHEN A HORIZONTAL MEMBER INTERSECTS THE JAMB AT OR VERY NEAR ITS MID-SPAN, THE ANCHORS SHALL BE SPREAD AS REQUIRED TO AVOID INTERFERENCE WITH THE HORIZONTAL MEMBER (SEE RIGHT SIDE OF ELEVATION FOR EXAMPLE).

EXTERIOR ELEVATION:

MULTIPLE FIXED PANEL STORE FRONT ASSEMBLY

SCALE: 1/2"=1'-0"

ELEVATION NOTES:

1. HORIZONTAL STACKING & OVERALL UNIT WIDTH IS UNLIMITED PROVIDING D.L.O. DOES NOT EXCEED 60" WIDE AT EACH PANEL.
2. NUMBER OF GLASS PANEL SECTIONS VERTICALLY IS UNLIMITED BUT MUST FIT INSIDE MAXIMUM FRAME HEIGHT SPECIFIED.
3. EACH HORIZONTALLY STACKED PANEL SECTION MAY CONSIST OF ONE INDIVIDUAL GLASS PANEL OR BE BROKEN UP WITH HORIZONTAL FRAME MEMBERS PROVIDING THE CONDITIONS STATED HERE-IN ARE NOT EXCEEDED.

SIDE JAMB MULLION ALLOWABLE PRESSURE TABLE

MAXIMUM FRAME HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)
144	32.5	52.5
	29.5	57.8
	26.5	64.4
	23.5	70.0
132	32.5	57.3
	29.5	63.1
	26.5	70.0
120	32.5	63.0
	29.5	69.4
	28.5	70.0
114	32.5	66.3
	30.5	70.0
108	32.5	70.0

INTERMEDIATE MULLION ALLOWABLE PRESSURE TABLE

MAXIMUM FRAME HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)
144	62.5	29.5
	56.5	32.7
	50.5	36.5
	44.5	41.5
	38.5	47.9
132	32.5	56.8
	26.5	69.6
	62.5	38.3
	56.5	42.4
	50.5	47.4
120	44.5	53.8
	38.5	62.2
	33.5	70.0
	62.5	51.0
114	56.5	56.4
	50.5	63.2
	44.5	70.0
	62.5	59.5
108	56.5	65.8
	52.5	70.0
	62.5	70.0

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 07/14/06	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE: IR501 ALUMINUM STORE FRONT SYSTEM - LARGE & SMALL MISSILE IMPACT			
CONSULTANTS		MANUFACTURER	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		KAWNEER COMPANY, INC.	
7480 150TH COURT NORTH		555 GUTHRIE COURT	
PALM BEACH GARDENS, FL 33418		NORCROSS, GA 30092	
PHONE: 561-744-3424		770-449-5555	
CERTIFICATION		MAR 08 2021	
WARREN W. SCHAEFER, P.E.		P.E. NO. 44135	
DRAWING NO. 1461		REV. F	
SHEET NO. 2		OF 10	

INTERMEDIATE MULLION END ANCHOR QUANTITY/PRESSURE TABLE (ANCHORS A, C & D)									
MAXIMUM FRAME HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE MULLION PRESSURE (+/- PSF) VS. QUANTITY OF ANCHORS			MAXIMUM FRAME HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE MULLION PRESSURE (+/- PSF) VS. QUANTITY OF ANCHORS		
		QTY = 4	QTY = 6	QTY = 8			QTY = 4	QTY = 6	QTY = 8
144	62.5	30.1	45.1	52.5	108	35.5	70.0	70.0	70.0
	56.5	33.3	49.9	58.1	102	62.5	42.5	63.7	70.0
	50.5	37.2	55.8	65.0		56.5	47.0	70.0	70.0
	44.5	42.2	63.4	70.0		50.5	52.6	70.0	70.0
	38.5	48.8	70.0	70.0		44.5	59.6	70.0	70.0
	32.5	57.8	70.0	70.0		38.5	68.9	70.0	70.0
	26.5	70.0	70.0	70.0		37.5	70.0	70.0	70.0
132	62.5	32.8	49.2	57.3	96	62.5	45.1	67.7	70.0
	56.5	36.3	54.4	63.3		56.5	49.9	70.0	70.0
	50.5	40.6	60.9	70.0		50.5	55.8	70.0	70.0
	44.5	46.1	69.1	70.0		44.5	63.4	70.0	70.0
	38.5	53.3	70.0	70.0		40.5	69.6	70.0	70.0
	32.5	63.1	70.0	70.0		90	62.5	48.1	70.0
	28.5	70.0	70.0	70.0	56.5		53.2	70.0	70.0
120	62.5	36.1	54.1	63.0	50.5		59.6	70.0	70.0
	56.5	39.9	59.9	69.7	44.5		67.6	70.0	70.0
	50.5	44.7	67.0	70.0	42.5		70.0	70.0	70.0
	44.5	50.7	70.0	70.0	84	62.5	51.6	70.0	70.0
	38.5	58.6	70.0	70.0		56.5	57.0	70.0	70.0
	32.5	69.4	70.0	70.0		50.5	63.8	70.0	70.0
114	62.5	38.0	57.0	66.3		45.5	70.0	70.0	70.0
	56.5	42.0	63.0	70.0	78	62.5	55.5	70.0	70.0
	50.5	47.0	70.0	70.0		56.5	61.4	70.0	70.0
	44.5	53.4	70.0	70.0		50.5	68.7	70.0	70.0
	38.5	61.7	70.0	70.0		49.5	70.0	70.0	70.0
	33.5	70.0	70.0	70.0		72	62.5	60.2	70.0
108	62.5	40.1	60.2	70.0	56.5		66.5	70.0	70.0
	56.5	44.4	66.5	70.0	53.5		70.0	70.0	70.0
	50.5	49.6	70.0	70.0	66	62.5	65.6	70.0	70.0
	44.5	56.3	70.0	70.0		58.5	70.0	70.0	70.0
	38.5	65.1	70.0	70.0	60	62.5	70.0	70.0	70.0

1. SEE ANCHOR REQUIREMENTS TABLE ON SHEET 1 FOR DESCRIPTION OF ANCHORS.
2. THE LESSER OF THE PRESSURES SHOWN IN THESE TABLES AND THOSE IN THE D.L.O. AND MULLION TABLES SHALL CONTROL AS THE OVERALL UNIT ALLOWABLE PRESSURE.
3. SIDE JAMB END ANCHOR/PRESSURE TABLES LIMIT FRAME HEIGHT TO 108". WHEN OVER 108", A MID-SPAN ANCHOR CLUSTER WILL EXIST AND THE ANCHOR QUANTITY REQUIRED AT EACH END IS 2 REGARDLESS OF WHAT ANCHOR TYPE IS USED.
4. EACH MULLION SHALL BE EVALUATED SEPARATELY WHEN CONDITIONS VARY FROM MULLION TO MULLION OR WORSE CASE MULLION CONDITION MAY BE USED FOR EVALUATION OF ALL MULLIONS.

JAMB MULLION END ANCHOR QUANTITY/PRESSURE TABLE (ANCHORS A, C & D)									
MAXIMUM FRAME HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE MULLION PRESSURE (+/- PSF) VS. QUANTITY OF ANCHORS			MAXIMUM FRAME HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE MULLION PRESSURE (+/- PSF) VS. QUANTITY OF ANCHORS		
		QTY = 2	QTY = 3	QTY = 4			QTY = 2	QTY = 3	QTY = 4
108	32.5	38.6	57.8	70.0	90	26.5	56.8	70.0	70.0
	29.5	42.5	63.7	70.0		23.5	64.0	70.0	70.0
	26.5	47.3	70.0	70.0		21.5	70.0	70.0	70.0
	23.5	53.3	70.0	70.0	84	32.5	49.6	70.0	70.0
	20.5	61.1	70.0	70.0		29.5	54.6	70.0	70.0
	17.5	70.0	70.0	70.0		26.5	60.8	70.0	70.0
32.5	40.8	61.2	70.0	23.5		68.6	70.0	70.0	
102	29.5	45.0	67.5	70.0	78	22.5	70.0	70.0	70.0
	26.5	50.1	70.0	70.0		32.5	53.4	70.0	70.0
	23.5	56.5	70.0	70.0		29.5	58.8	70.0	70.0
	20.5	64.7	70.0	70.0		26.5	65.5	70.0	70.0
	18.5	70.0	70.0	70.0		24.5	70.0	70.0	70.0
	32.5	43.4	65.1	70.0		72	32.5	57.8	70.0
29.5	47.8	70.0	70.0	29.5	63.7		70.0	70.0	
26.5	53.2	70.0	70.0	26.5	70.0		70.0	70.0	
96	23.5	60.0	70.0	70.0	66	32.5	63.1	70.0	70.0
	20.5	68.8	70.0	70.0		29.5	69.5	70.0	70.0
	19.5	70.0	70.0	70.0		26.5	70.0	70.0	70.0
	90	32.5	46.3	69.4	70.0	60	32.5	69.4	70.0
29.5		51.0	70.0	70.0	31.5		70.0	70.0	70.0

MAXIMUM FRAME HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE MULLION PRESSURE (+/- PSF) VS. QUANTITY OF ANCHORS
		QTY = 4
144	62.5	52.5
	56.5	58.1
	50.5	65.0
	46.5	70.0
132	62.5	57.3
	56.5	63.3
	50.5	69.7
120	62.5	63.0
	56.5	69.7
	55.5	70.0
114	62.5	66.3
	58.5	70.0
108	62.5	70.0

MAXIMUM FRAME HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE MULLION PRESSURE (+/- PSF) VS. QUANTITY OF ANCHHORS
		QTY = 2
108	32.5	70.0

DRAWING NO.	REV.
1461	F
SHEET NO.	
3 OF 10	

CERTIFICATION

MAR 08 2021

WARREN W. SCHAEFFER, P.E.
P.E. NO. 44135

DRAWING TITLE

IR501 ALUMINUM STORE FRONT SYSTEM -- LARGE & SMALL MISSILE IMPACT

CONSULTANTS

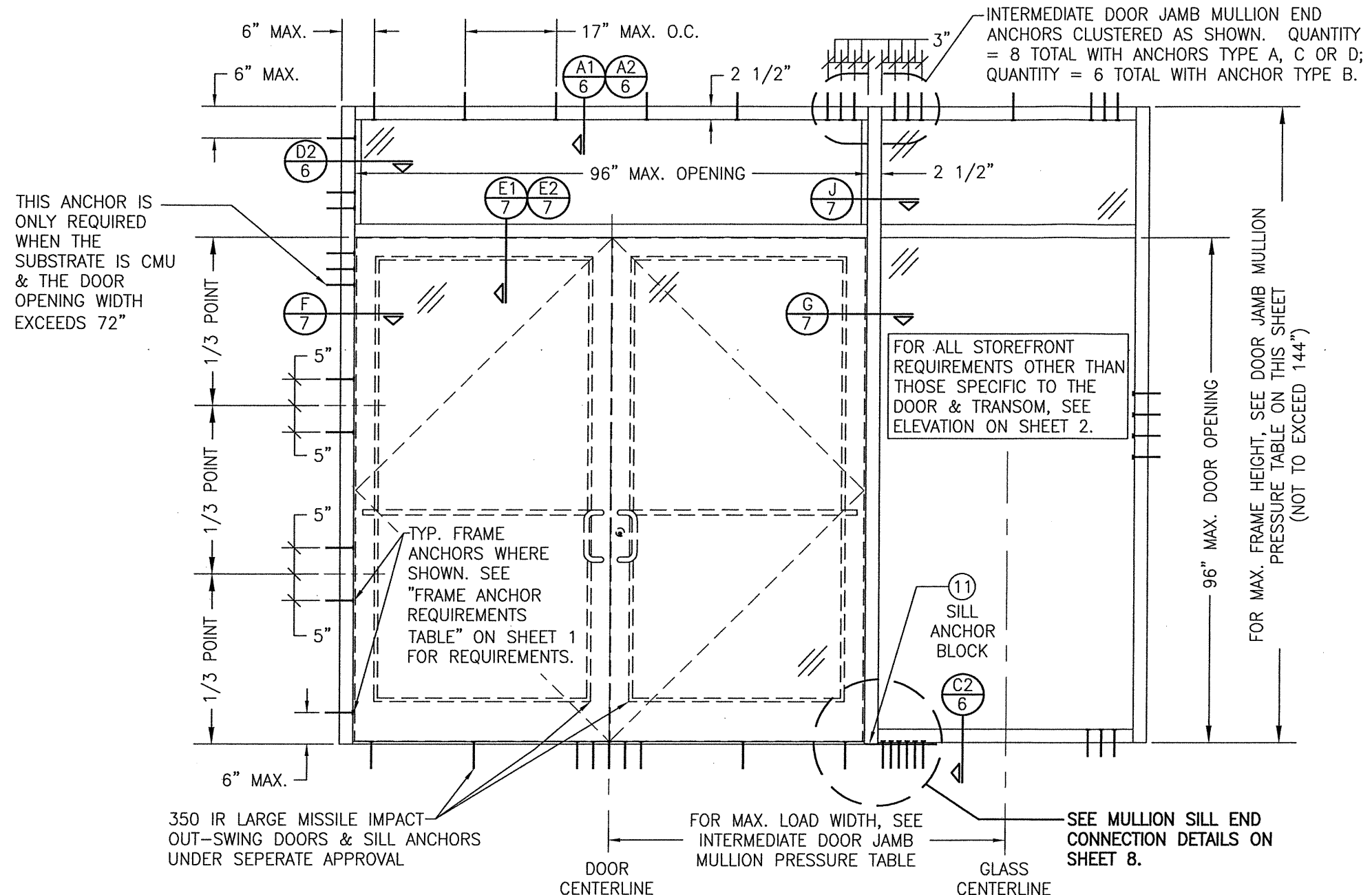
W. W. SCHAEFFER ENGINEERING
& CONSULTING, P.A. (CA 6809)

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PHONE: 561-744-3424

MANUFACTURER

KAWNEER COMPANY, INC.
555 GUTHRIDGE COURT
NORCROSS, GA 30092
770-449-5555

DRAWN BY:	CHECKED BY:
W.R.M.	W.W.S.
PLOT: 1=24	DATE: 07/14/06
NO.	REVISION DESCRIPTION
BY	DATE



EXTERIOR ELEVATION
STORE FRONT ASSEMBLY WITH DOORS & TRANSOM

SCALE: 1/2"=1'-0"

SINGLE SIDELIGHT SHOWN, MULTIPLE SIDELIGHT CONDITION ALSO APPLIES WITH SIDELIGHT AT ONE OR BOTH SIDES.

DOUBLE DOOR CONDITION SHOWN, SINGLE DOOR CONDITION ALSO APPLIES.

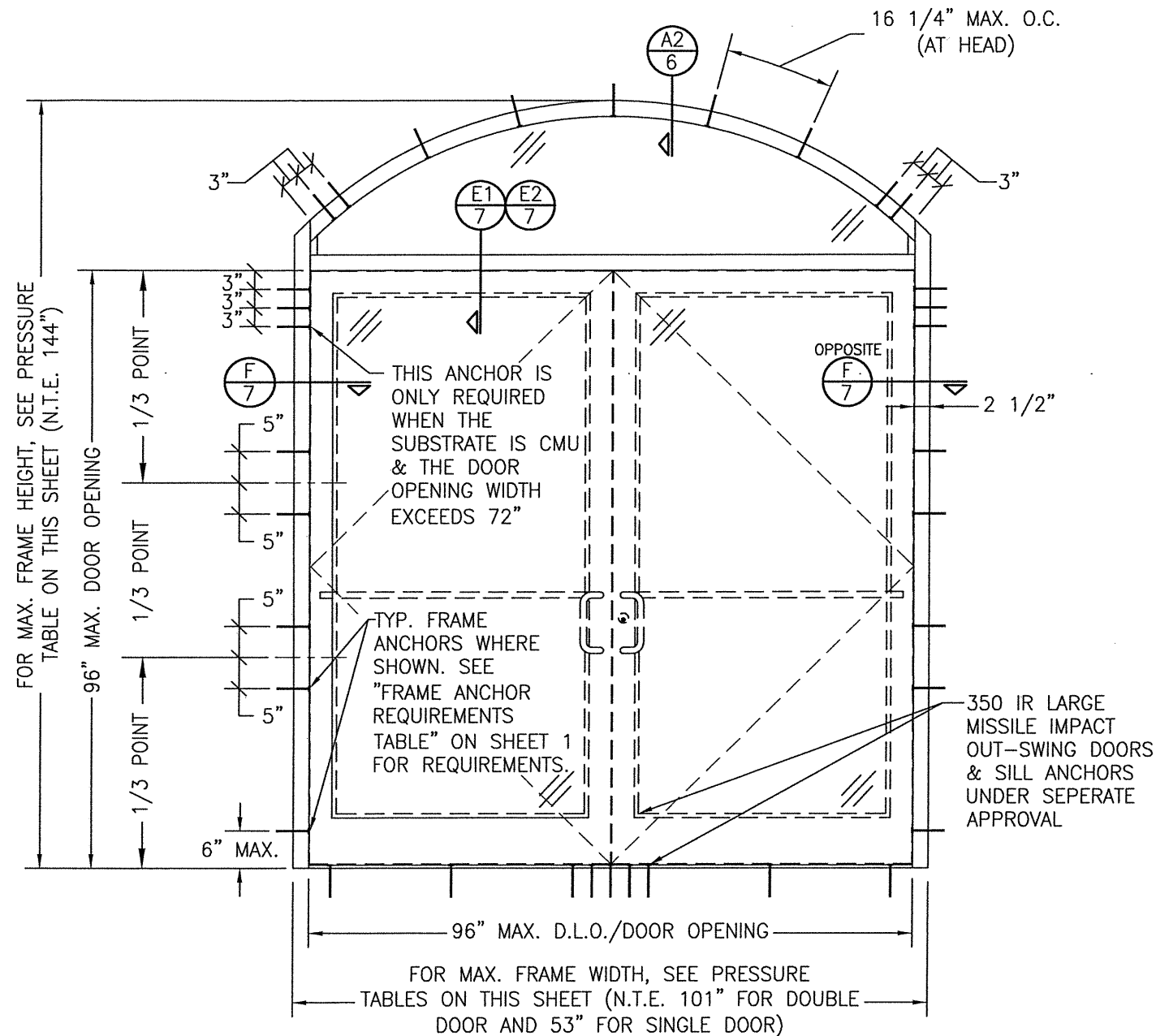
HORIZONTAL STACKING & OVERALL UNIT WIDTH IS UNLIMITED. NUMBER OF VERTICAL PANELS IS UNLIMITED BUT MUST FIT INSIDE MAXIMUM FRAME HEIGHT SPECIFIED.

INTERMEDIATE DOOR JAMB
MULLION ALLOWABLE
PRESSURE TABLE

MAXIMUM FRAME HEIGHT (IN.)	MAXIMUM LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (+/- PSF)
144	81.75	34.9
	75.75	37.6
	69.75	40.9
	63.75	44.7
	57.75	49.3
	51.75	55.1
	45.75	62.3
132	43.75	65.0
	81.75	45.3
	75.75	48.8
	69.75	53.0
	63.75	58.0
120	57.75	64.1
	56.75	65.0
	81.75	60.2
114	75.75	65.0
	81.75	63.4
111	78.75	65.0
	75.75	65.0

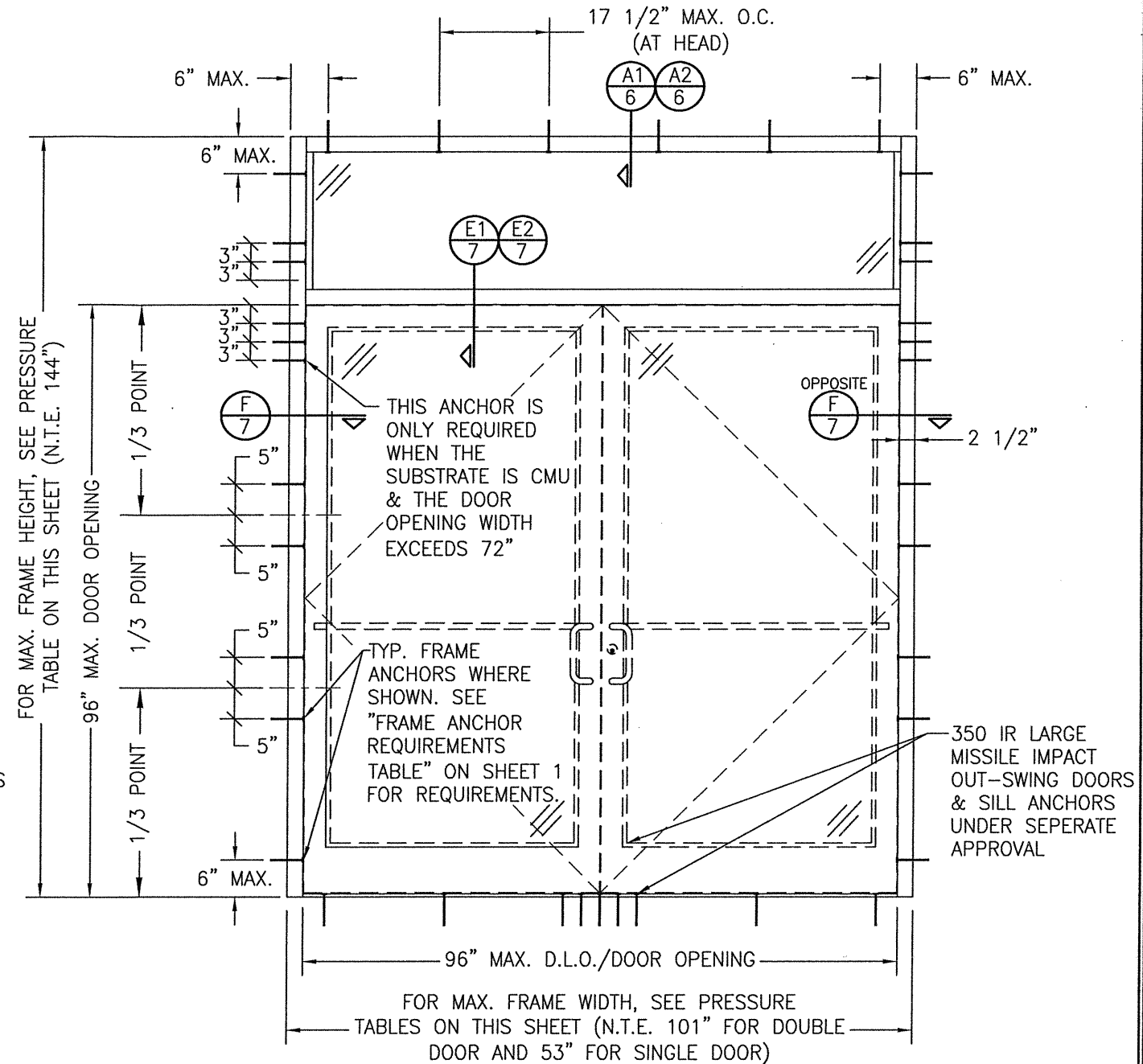
1. THE LESSER OF THE PRESSURES SHOWN IN THIS TABLE AND THOSE IN THE D.L.O. AND STORE FRONT MULLION & END ANCHOR TABLES SHALL CONTROL AS THE OVERALL UNIT ALLOWABLE PRESSURE.

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 07/14/06	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE: IR501 ALUMINUM STORE FRONT SYSTEM - LARGE & SMALL MISSILE IMPACT		MANUFACTURER: KAWNEER COMPANY, INC. 555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555	
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		P.E. NO. 44135	
CERTIFICATION: MAR 08 2021		WARREN W. SCHAEFER, P.E.	
DRAWING NO. 1461		REV. F	
SHEET NO. 4		OF 10	



EXTERIOR ELEVATION
STORE FRONT FRAMING WITH DOORS & EYEBROW TRANSOM
 (DOUBLE DOOR CONDITION SHOWN, SINGLE DOOR CONDITION ALSO APPLIES)
 SCALE: 1/2"=1'-0"

ALLOWABLE PRESSURE (DOUBLE DOOR WITH TRANSOM)		
MAXIMUM FRAME WIDTH (IN.)	MAXIMUM FRAME HEIGHT (IN.)	ALLOWABLE PRESSURE (+/- PSF)
101	123 1/4	65.0
95	131	65.0
89	139 3/4	65.0
86	144	65.0

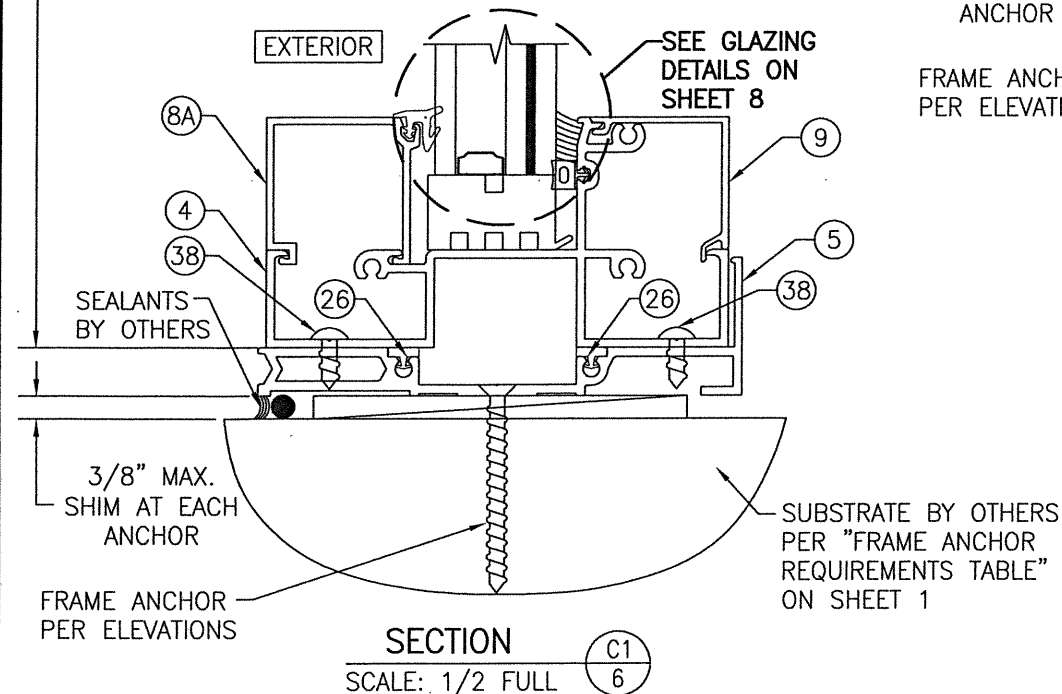
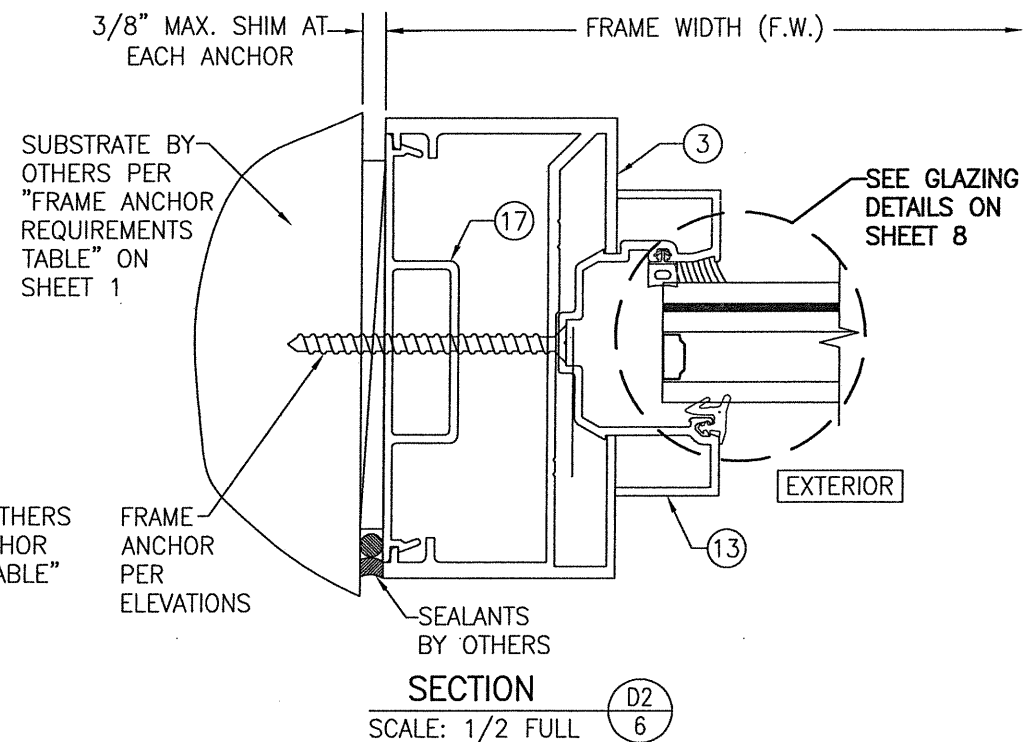
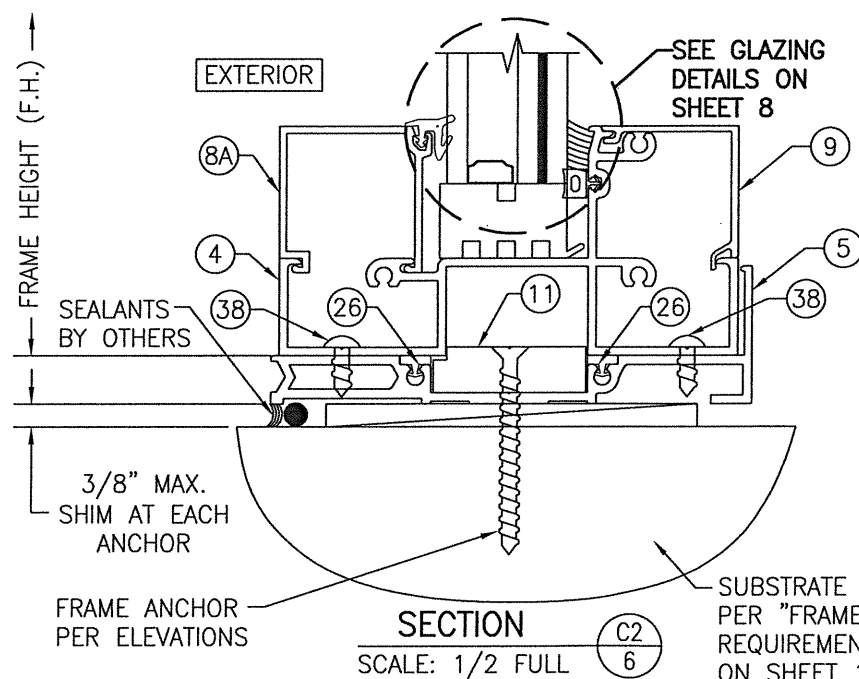
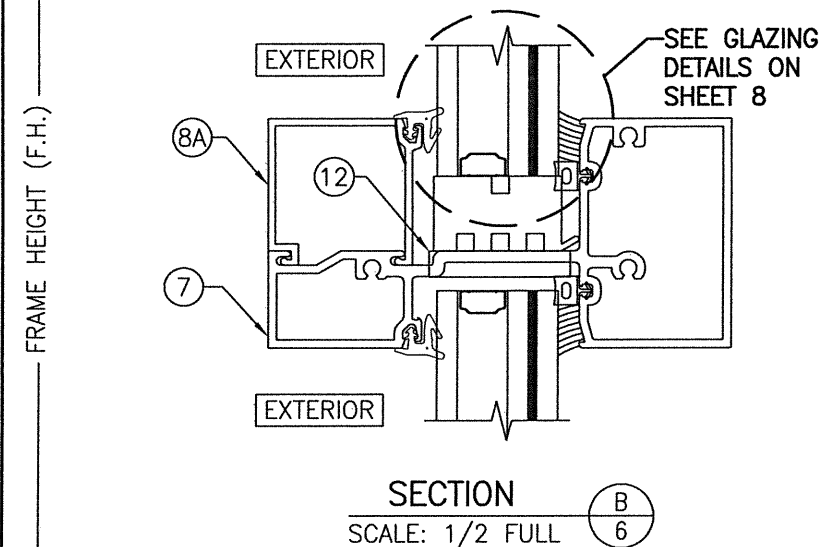
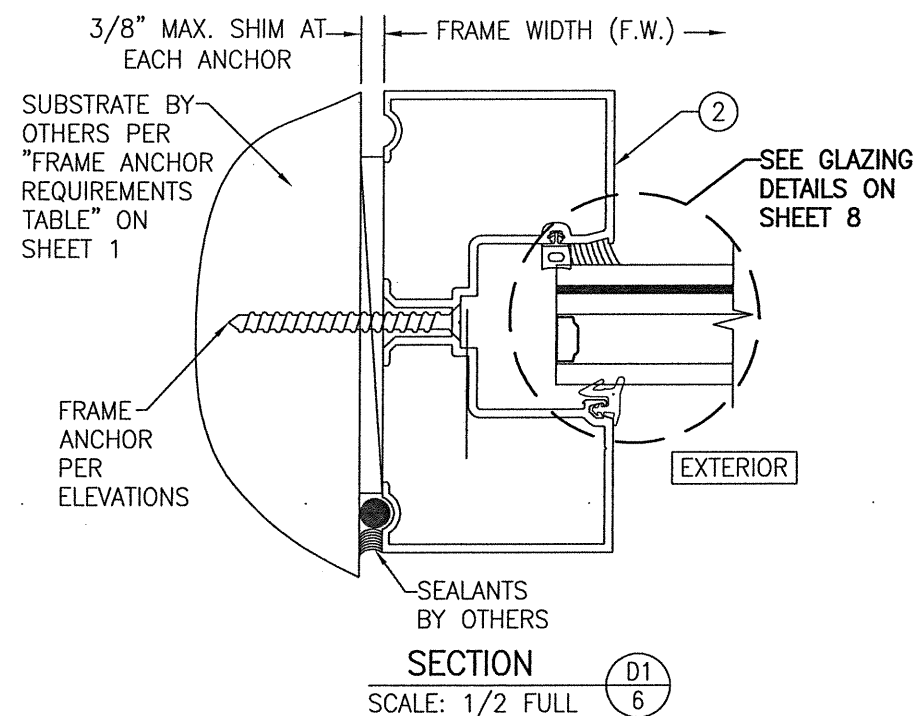
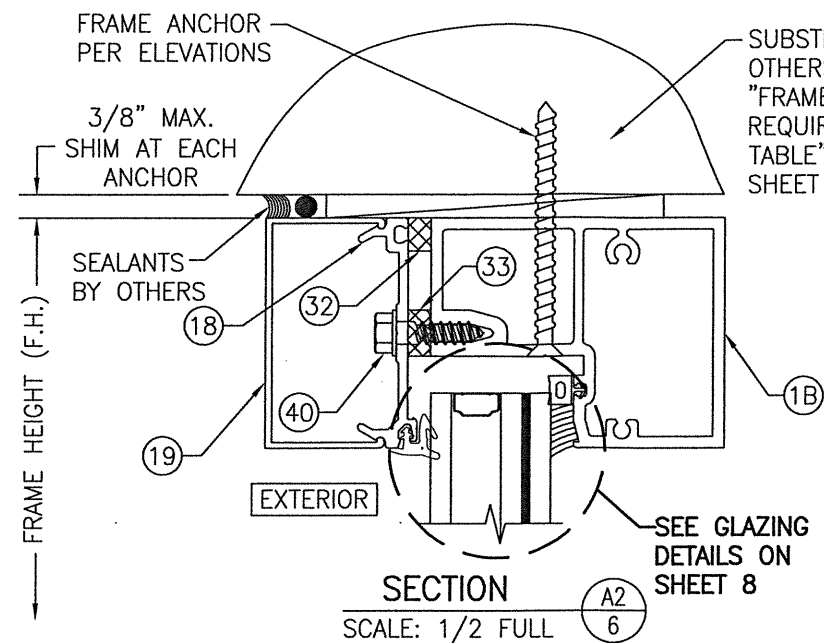
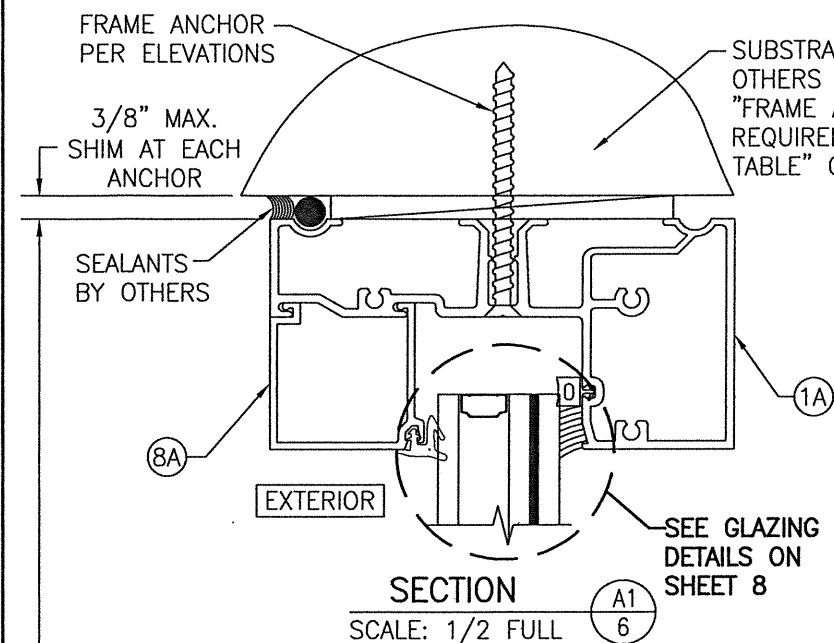


EXTERIOR ELEVATION
STORE FRONT FRAMING WITH DOORS & RECTANGULAR TRANSOM
 (DOUBLE DOOR CONDITION SHOWN, SINGLE DOOR CONDITION ALSO APPLIES)
 SCALE: 1/2"=1'-0"

ALLOWABLE PRESSURE (SINGLE DOOR WITH TRANSOM)		
MAXIMUM FRAME WIDTH (IN.)	MAXIMUM FRAME HEIGHT (IN.)	ALLOWABLE PRESSURE (+/- PSF)
53	144	65.0

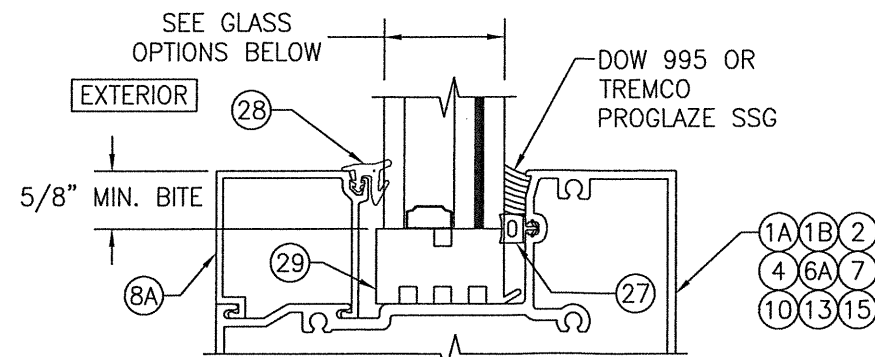
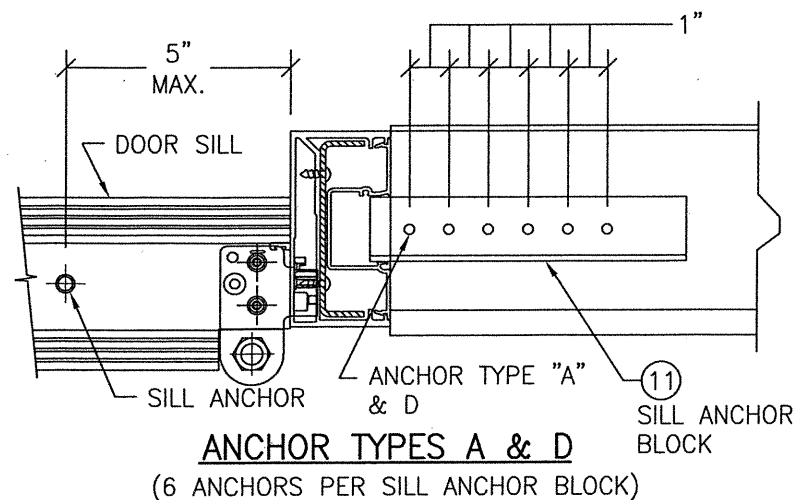
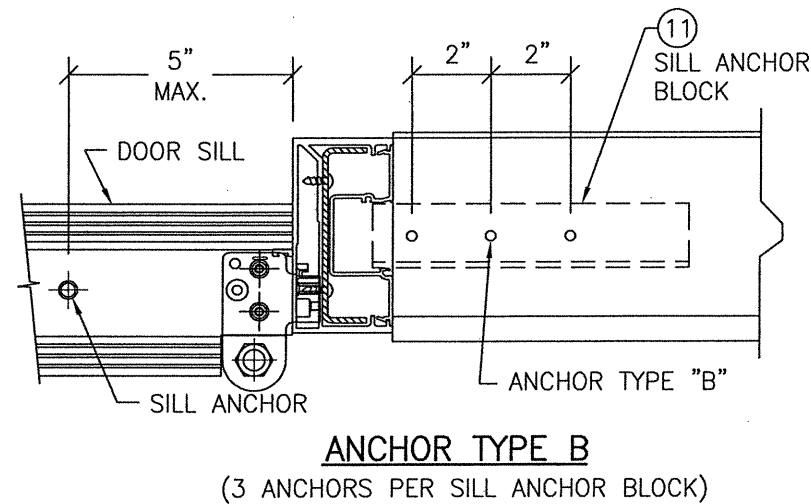
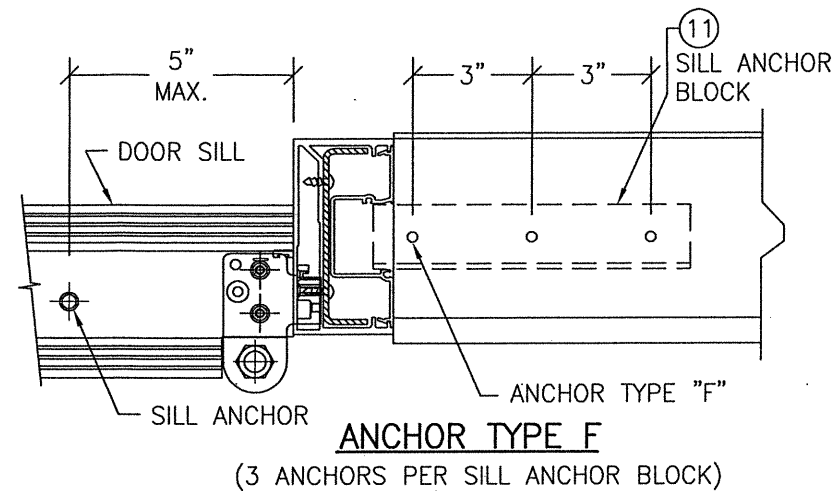
NOTE: THE LESSER OF THE ALLOWABLE PRESSURE SHOWN IN THESE TABLES AND THAT IN THE DOOR APPROVAL SHALL CONTROL.

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1-24		DATE: 07/14/06	
NO.	REVISION	DESCRIPTION	DATE
DRAWING TITLE: IR501 ALUMINUM STORE FRONT SYSTEM - LARGE & SMALL MISSILE IMPACT CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424 MANUFACTURER: KAWNEER COMPANY, INC. 555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555			
CERTIFICATION MAR 08 2021 WARREN W. SCHAEFER, P.E. P.E. NO. 44135		DRAWING NO. 1461 REV. F SHEET NO. 5 OF 10	



DRAWING TITLE		IR501 ALUMINUM STORE FRONT SYSTEM – LARGE & SMALL	
MISSILE IMPACT			
CONSULTANTS		MANUFACTURER	
W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)		KAWNEER COMPANY, INC.	
7480 150TH COURT NORTH		555 GUTHRIDGE COURT	
PALM BEACH GARDENS, FL 33418		NORCROSS, GA 30092	
PHONE: 561-744-3424		770-449-5555	
CERTIFICATION			
MAR 08 2021			
WARREN W. SCHAEFER, P.E.		P.E.	
P.E. NO. 44135		F	
DRAWING NO. 1461		REV. F	
SHEET NO. 6 OF 10			

DOOR JAMB MULLION END CONNECTION DETAILS AT SILL

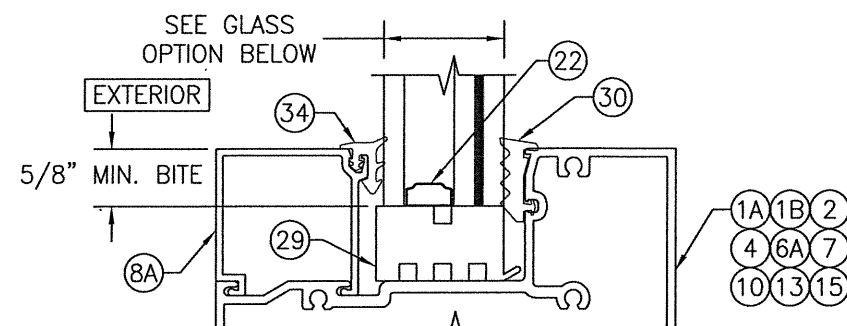


TYP. GLAZING DETAIL (LMI WET GLAZED; SINGLE GLAZING BEAD CONDITION)

GLASS OPTIONS (LMI WET GLAZED):

OPTION 1: 1 5/16" THICK LAMINATED GLASS (1/4" HT. ST./1/2" AIR SPACER/1/4" HT. ST./0.09 EASTMAN CHEM. CO. SAFLEX/1/4" HT. ST.)

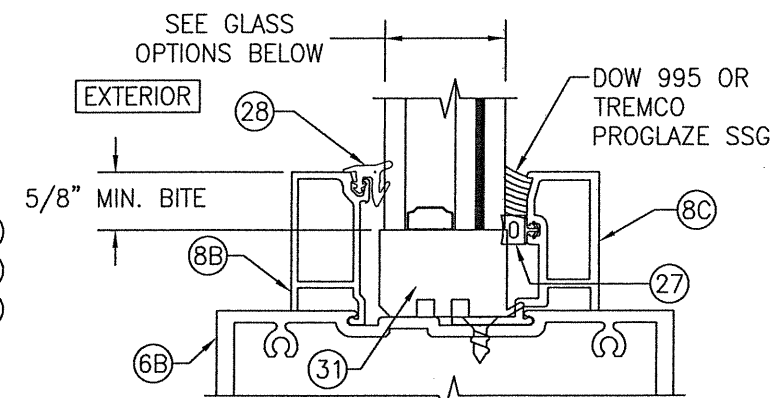
OPTION 2: 1 5/16" THICK LAMINATED GLASS (1/4" TEMPERED/1/2" AIR SPACER/1/4" HT. ST./0.09 KURARAY BUTICITE PVB/1/4" HT. ST.)



TYP. GLAZING DETAIL (LMI DRY GLAZED; SINGLE GLAZING BEAD CONDITION)

GLASS OPTION (LMI DRY GLAZED):

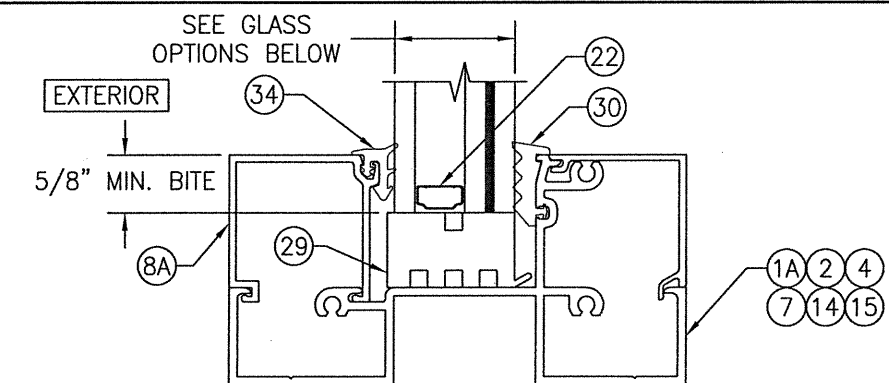
OPTION 3: 1 5/16" THICK LAMINATED GLASS (1/4" HT. ST./1/2" AIR SPACER/1/4" HT. ST./0.09 KURARAY SG/1/4" HT. ST.)



TYP. GLAZING DETAIL (LMI WET GLAZED; DOUBLE GLAZING BEAD CONDITION)

GLASS OPTIONS (LMI WET GLAZED):

OPTION 2: 1 5/16" THICK LAMINATED GLASS (1/4" TEMPERED/1/2" AIR SPACER/1/4" HT. ST./0.09 KURARAY BUTICITE PVB/1/4" HT. ST.)



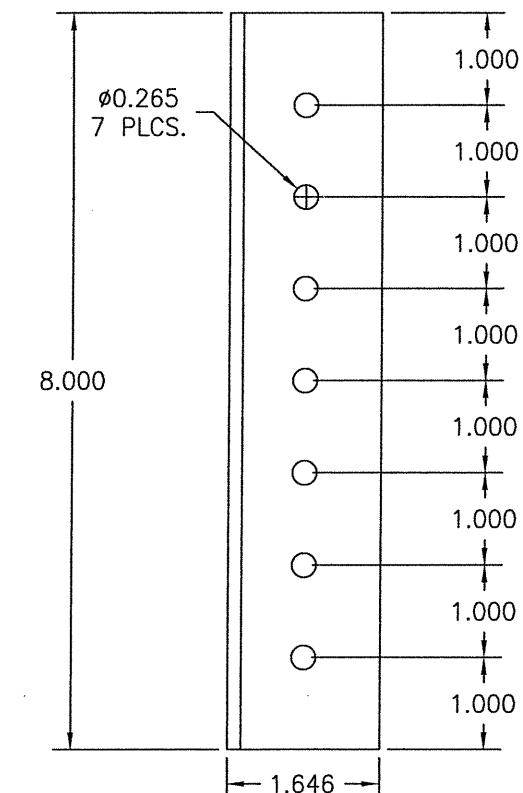
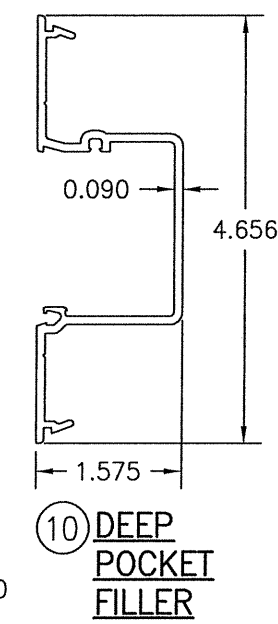
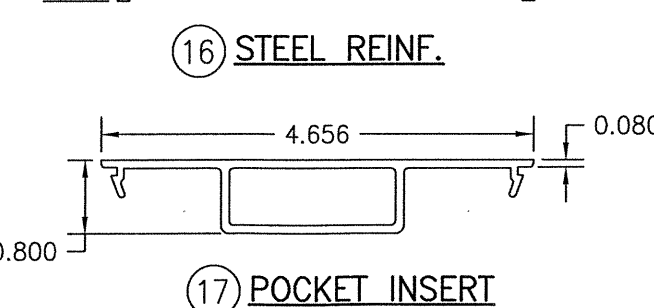
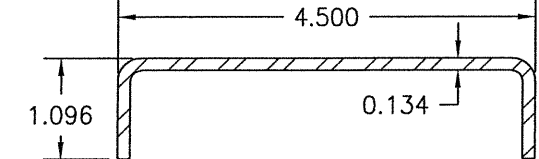
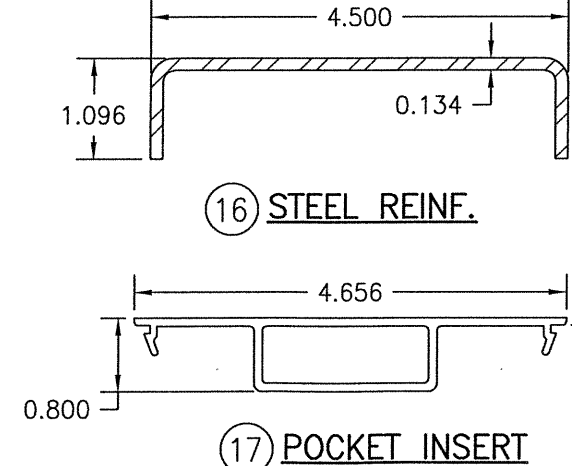
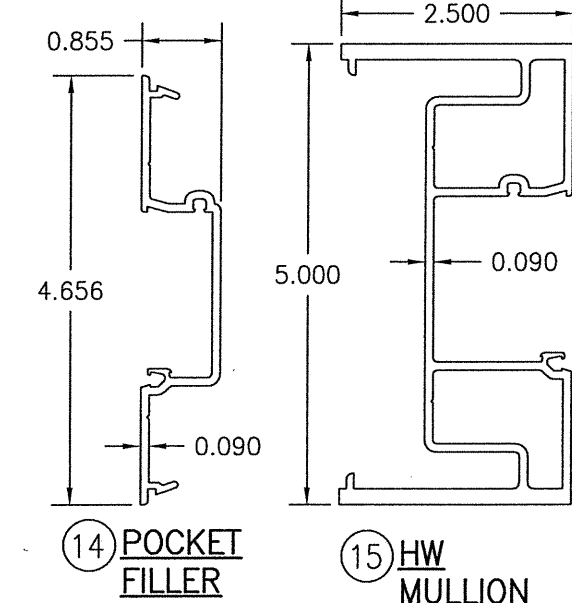
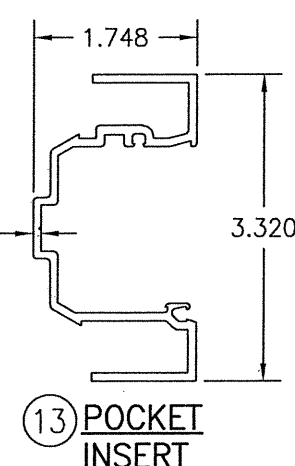
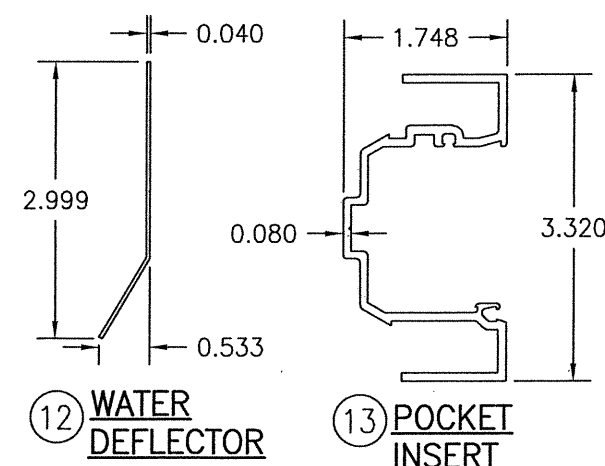
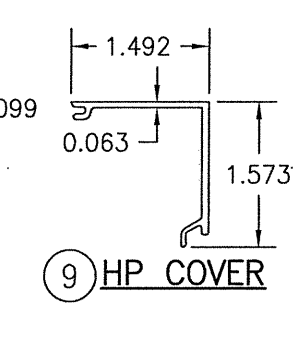
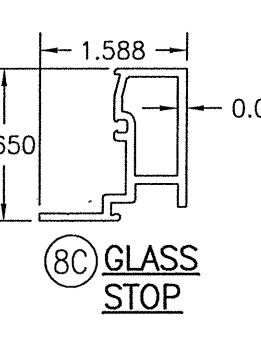
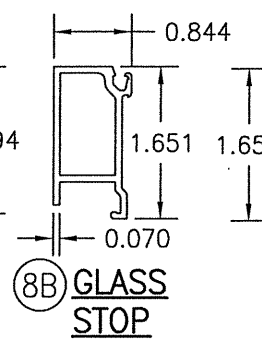
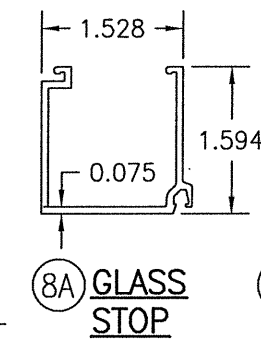
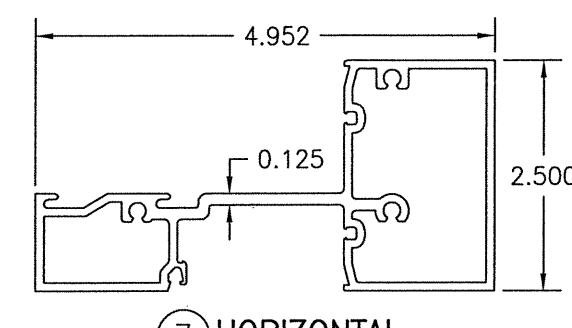
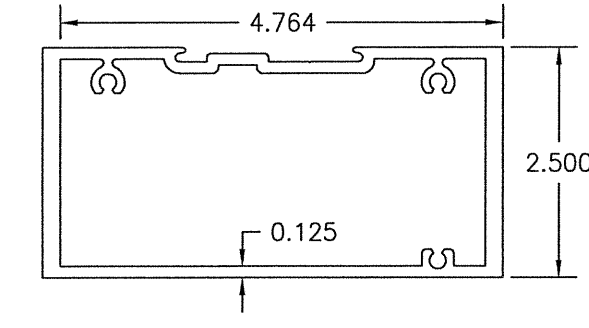
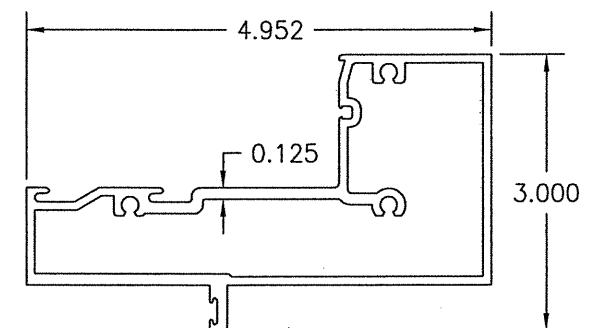
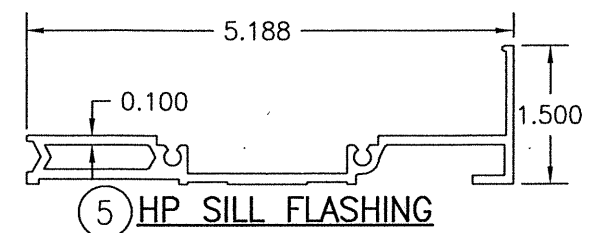
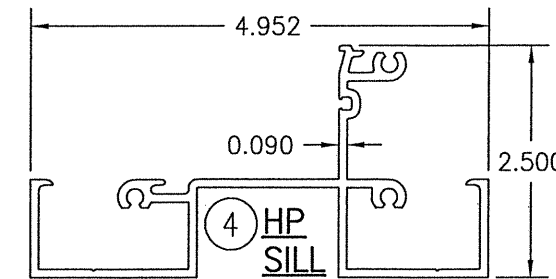
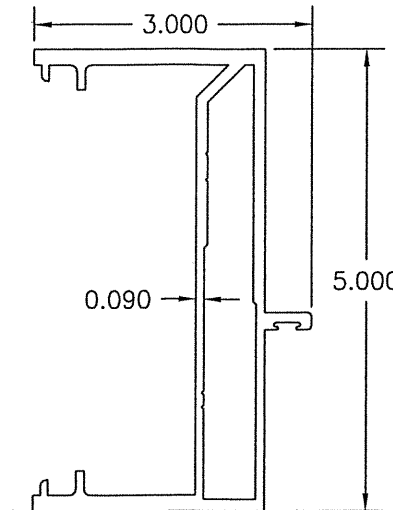
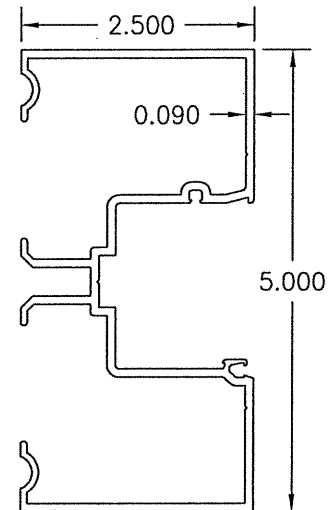
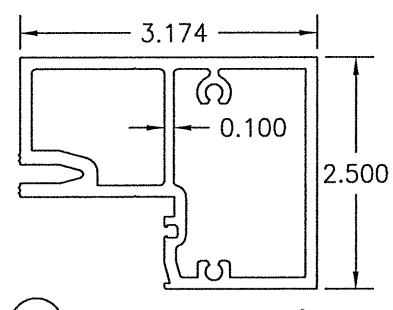
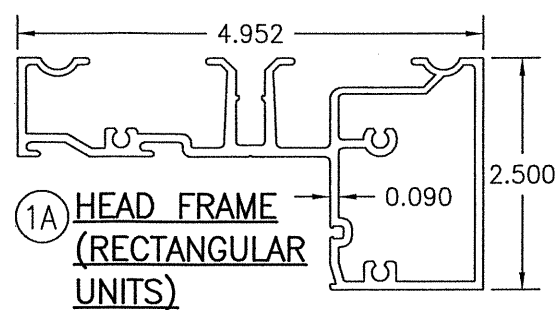
TYP. GLAZING DETAIL (SMI DRY GLAZED CONDITION)

GLASS OPTIONS (SMI DRY GLAZED):

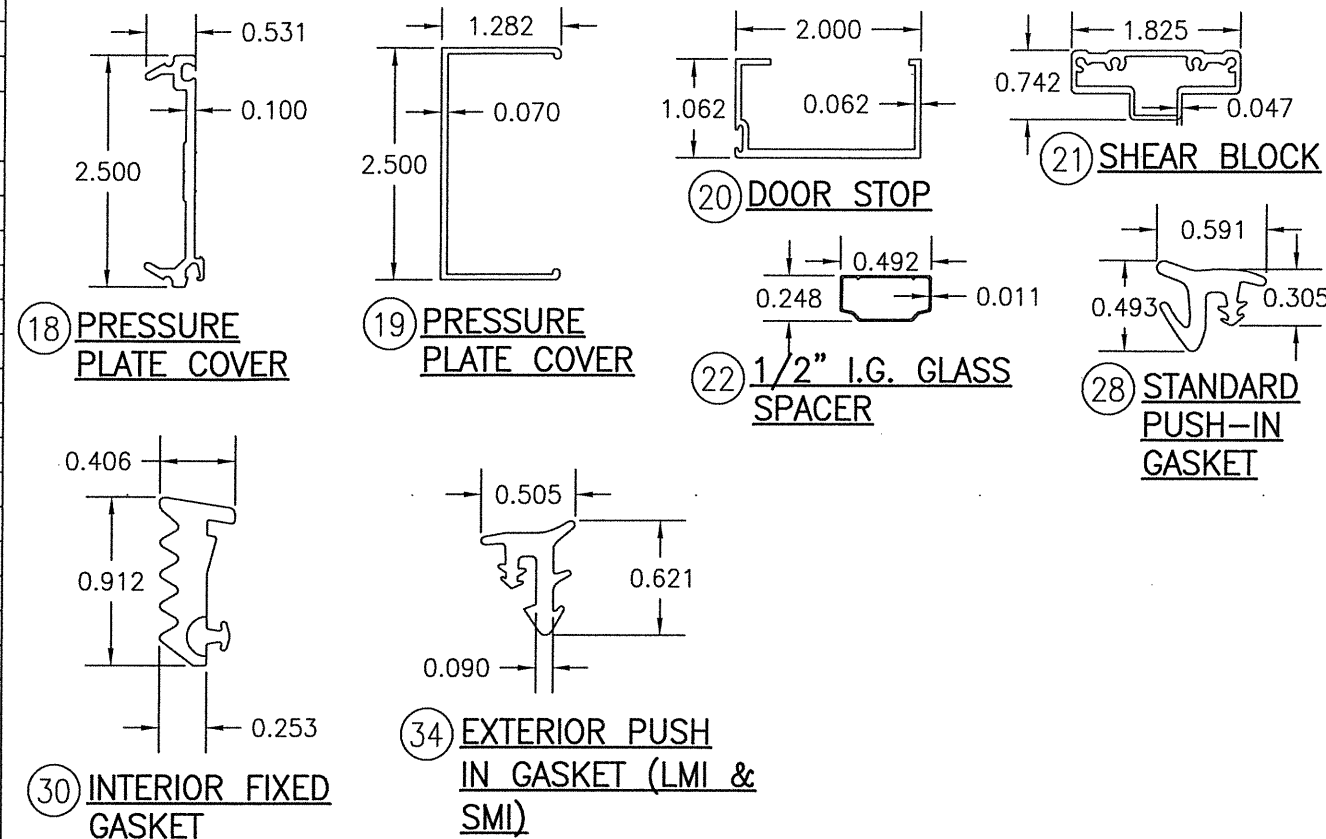
OPTION 4: 1 5/16" THICK LAMINATED GLASS (1/4" TEMPERED/1/2" AIR SPACER/1/4" HT. ST./0.06 EASTMAN CHEM. CO. SAFLEX/1/4" HT. ST.)

OPTION 5: 1 5/16" THICK LAMINATED GLASS BY (1/4" TEMPERED/1/2" AIR SPACER/1/4" HT. ST./0.06 KURARAY BUTICITE PVB/1/4" HT. ST.)

DRAWN BY: W.R.M.	CHECKED BY: W.W.S.
PLOT: 1=2	DATE: 07/14/06
NO.	REVISION DESCRIPTION
DATE	BY
DRAWING TITLE IR501 ALUMINUM STORE FRONT SYSTEM - LARGE & SMALL MISSILE IMPACT	
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809)	MANUFACTURER KAWNEER COMPANY, INC. 555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555
CERTIFICATION MAR 08 2021	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. 1461	REV. F
SHEET NO. 8	OF 10

[illegible]

ITEM #	PART #	ITEM DESCRIPTION	MANUFACTURER/NOTES
PARTS			
1A	575-103	HEAD FRAME (RECTANGULAR UNITS)	6063-T6 ALUMINUM
1B	575-163	HEAD FRAME (RADIUS & RECTANGULAR UNITS)	6063-T6 ALUMINUM
2	575-101	JAMB	6063-T6 ALUMINUM
3	575-051	DOOR JAMB	6063-T6 ALUMINUM
4	575-158	HP SILL	6063-T6 ALUMINUM
5	575-157	HP SILL FLASHING	6063-T6 ALUMINUM
6A	575-122	TRANSOM BAR WITH FIN	6063-T6 ALUMINUM
6B	575-162	C.O.C. TRANSOM BAR	6063-T6 ALUMINUM
7	575-115	HORIZONTAL	6063-T6 ALUMINUM
8A	575-104	GLASS STOP	6063-T6 ALUMINUM
8B	575-160	GLASS STOP	6063-T6 ALUMINUM
8C	575-161	GLASS STOP	6063-T6 ALUMINUM
9	575-159	HP COVER	6063-T6 ALUMINUM
10	575-135	DEEP POCKET FILLER	6063-T6 ALUMINUM
11	575-297	SILL ANCHOR BLOCK (AT DOOR JAMB)	6063-T6 ALUMINUM
12	451-105	WATER DEFLECTOR	6063-T6 ALUMINUM
13	575-133	POCKET INSERT	6063-T6 ALUMINUM
14	575-102	POCKET FILLER	6063-T6 ALUMINUM
15	575-116	HW MULLION	6063-T6 ALUMINUM
16	575-310	STEEL REINF.	A36 STEEL
17	575-052	POCKET INSERT	6063-T6 ALUMINUM
18	575-065	PRESSURE PLATE	6063-T6 ALUMINUM
19	575-164	PRESSURE PLATE COVER	6063-T6 ALUMINUM
20	041-045	DOOR STOP	6063-T6 ALUMINUM
21	450-140	SHEAR BLOCK	6063-T6 ALUMINUM
22	-	1/2" I.G. GLASS SPACER	3005 OR 3105 ALUMINUM
SEALS AND SEALANTS			
25	027-078	DOOR BULB WEATHERING	ALCRYN
26	127-120	SILL TO FLASHING GASKET	CCN SPONGE
27	127-191	SLIDE IN SPACER	SANTOPRENE
28	027-074	STANDARD PUSH IN GASKET	EPDM (DUROMETER = 70 +/-5)
29	127-070	SETTING BLOCK	EPDM (DUROMETER = 85 +/-5)
30	127-249	INTERIOR FIXED GASKET	EPDM (DUROMETER = SPONGE) BY SEMPERIT
31	127-138	SETTING BLOCK	EPDM (DUROMETER = 85 +/-5)
32	027-916	GASKET	EPDM (DUROMETER = 70)
33	163-303	THERMAL SEPARATOR	EPDM (DUROMETER = 70)
34	127-127	EXTERIOR PUSH IN GASKET	EPDM (DUROMETER = 70) BY TREMCO
FASTENERS			
38	128-396	NO. 12 X 7/16" S.S. PHTF SCREW	2" FROM ENDS & MAX. 18" O.C.
39	128-271	NO. 12 X 5/8" S.S. PHTF SCREW	4" FROM ENDS (2 ROWS)
40	128-406	1/4" X 1" S.S. HWHTF SCREW	3" FROM ENDS & MAX. 9" O.C.
41	128-910	NO. 10 X 1/2" S.S. FHTF SCREW	3" FROM ENDS & MAX. 18" O.C.
42	028-336	NO. 10 X 1 5/8" S.S. FHTF SCREW	1" FROM ENDS; 4 GROUPED AT MID-SPAN; 16" MAX. BETWEEN



SETTING BLOCKS TO BE MINIMUM
1 NEAR EACH CORNER OF GLASS
AT THE BASE PER THE FBC

DRAWN BY: W.R.M.		CHECKED BY: W.W.S.	
PLOT: 1=2		DATE: 07/14/06	
DATE	BY	REVISION DESCRIPTION	NO.
DRAWING TITLE: IR501 ALUMINUM STORE FRONT SYSTEM - LARGE & SMALL MISSILE IMPACT		MANUFACTURER: KAWNEER COMPANY, INC. 555 GUTHRIE COURT NORCROSS, GA 30092 770-449-5555	
CONSULTANTS: W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. (CA 6809) 7480 150TH COURT NORTH PALM BEACH GARDENS, FL 33418 PHONE: 561-744-3424		P.E. NO. 44135	
CERTIFICATION: MAR 08 2021		WARREN W. SCHAEFER, P.E.	
DRAWING NO. 1461		REV. F	
SHEET NO. 10 OF 10			