

# ACCORDION SHUTTER

## WITH ALUMINUM OR POLYCARBONATE BLADES

### ALLOWABLE SPAN SCHEDULE

SLAT SPAN	MAXIMUM ALLOWABLE DESIGN PRESSURES							
	STANDARD BLADES ONLY		LIGHTWEIGHT BLADES OR LIGHTWEIGHT/WINDOW BLADE COMBINATION*		WINDOW BLADES OR STANDARD/WINDOW BLADE COMBINATION*		SHUTTER WITH STANDARD BLADES AND ONE SINGLE WINDOW BLADE**	
72"	+ 152.5 PSF	- 152.5 PSF	+ 75.0 PSF	- 75.0 PSF	+ 93.6 PSF	- 93.6 PSF	+ 42.4 PSF	- 62.4 PSF
90"	+ 117.8 PSF	- 117.8 PSF	+ 75.0 PSF	- 75.0 PSF	+ 93.6 PSF	- 93.6 PSF	+ 42.4 PSF	- 62.4 PSF
108"	+ 100.5 PSF	- 100.5 PSF	+ 75.0 PSF	- 75.0 PSF	+ 93.6 PSF	- 93.6 PSF	+ 42.4 PSF	- 62.4 PSF
126"	+ 61.2 PSF	- 76.2 PSF					+ 42.4 PSF	- 62.4 PSF
144"	+ 42.4 PSF	- 62.4 PSF					+ 42.4 PSF	- 62.4 PSF
162"	+ 25.5 PSF	- 41.6 PSF					+ 25.5 PSF	- 41.6 PSF

### SPAN SCHEDULE NOTES:

1. PRESSURES SHOWN IN "ALLOWABLE SPAN SCHEDULE" ARE MAXIMUM ALLOWABLE DESIGN PRESSURES AT EACH RESPECTIVE SHUTTER SPAN.
2. \* APPLICABLE FOR INSTALLATIONS UTILIZING ONE OR MORE WINDOW BLADES.
3. \*\* ONLY APPLICABLE FOR INSTALLATIONS WITH ONE SINGLE WINDOW BLADE SLAT, AND THE REMAINDER OF BLADES STANDARD.

### MINIMUM GLASS SEPARATION

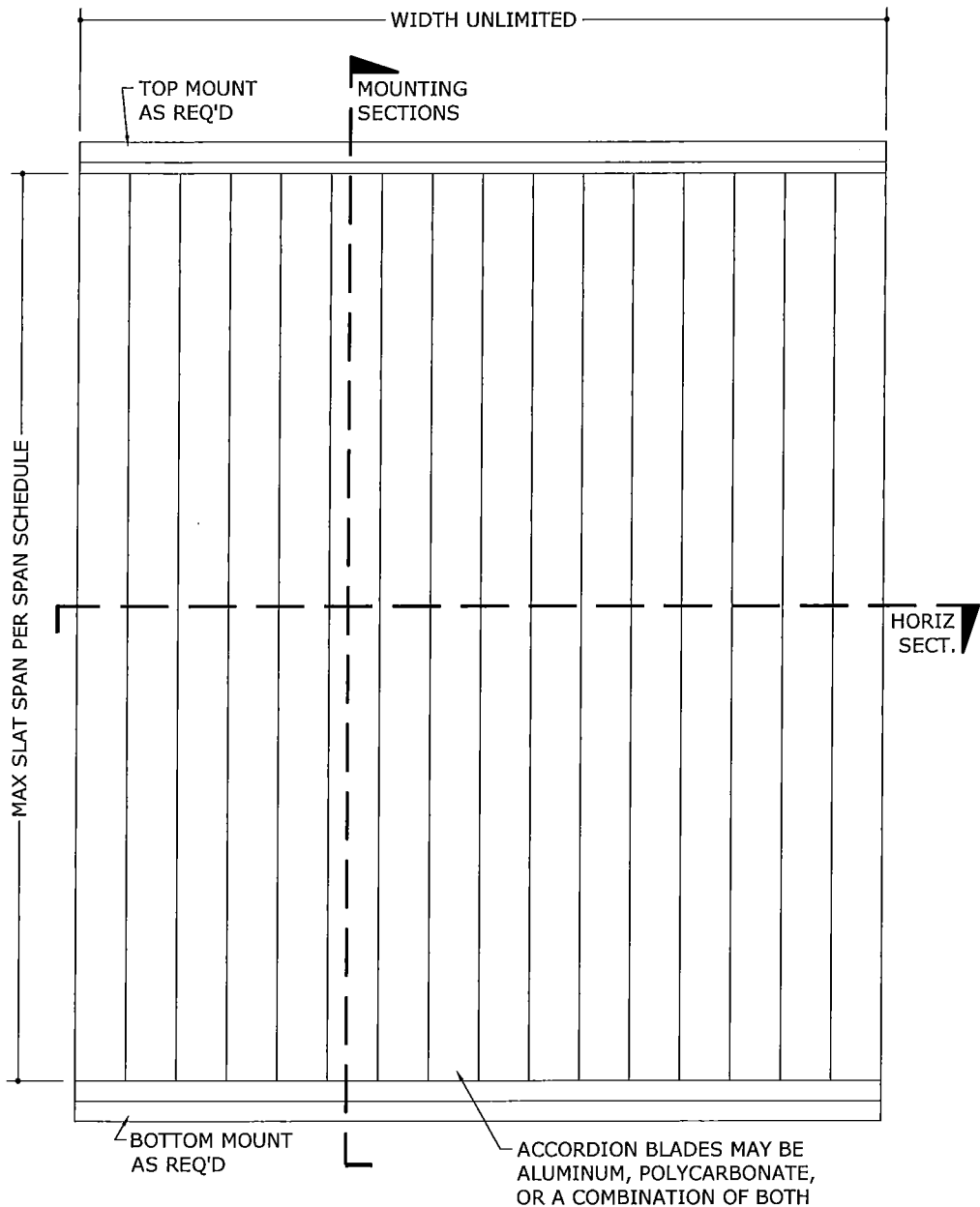
SPAN LESS THAN:	STANDARD BLADES ONLY		LIGHTWEIGHT BLADES OR LIGHTWEIGHT/WINDOW BLADE COMBINATION*		WINDOW BLADES OR STANDARD/WINDOW BLADE COMBINATION*		SHUTTER WITH STANDARD BLADES AND ONE SINGLE WINDOW BLADE**	
	INSTALLATIONS 30' ABOVE GRADE OR LESS	INSTALLATIONS MORE THAN 30' ABOVE GRADE	INSTALLATIONS 30' ABOVE GRADE OR LESS	INSTALLATIONS MORE THAN 30' ABOVE GRADE	INSTALLATIONS 30' ABOVE GRADE OR LESS	INSTALLATIONS MORE THAN 30' ABOVE GRADE	INSTALLATIONS 30' ABOVE GRADE OR LESS	INSTALLATIONS MORE THAN 30' ABOVE GRADE
72"	1.88"	1.88"	2.60"	2.50"	2.63"	2.63"	4.50"	3.00"
90"	2.13"	2.13"	2.60"	2.50"	2.63"	2.63"	4.50"	3.00"
108"	2.88"	2.78"	2.60"	2.50"	2.63"	2.63"	4.50"	3.00"
126"	3.63"	3.00"					4.50"	3.00"
144"	4.50"	3.00"					4.50"	3.00"
162"	4.50"	3.00"					4.50"	3.00"

### GLASS SEPARATION SCHEDULE NOTES:

1. SEPARATION FROM GLAZING SHALL BE MEASURED FROM THE PROTECTED FENESTRATION PRODUCT TO THE NEAREST POINT ON THE INTERIOR SIDE OF THE SHUTTER, WHICH MAY BE THE BLADE, CENTERMATE, OR LOCKING DEVICE.
2. \* APPLICABLE FOR INSTALLATIONS UTILIZING ONE OR MORE WINDOW BLADES.
3. \*\* ONLY APPLICABLE FOR INSTALLATIONS WITH ONE SINGLE WINDOW BLADE SLAT, AND THE REMAINDER OF BLADES ALUMINUM.
4. GLASS SEPARATION IS REQUIRED ONLY WITHIN THE HVHZ, ASTM WIND ZONE 4, OR ESSENTIAL FACILITIES.

### GENERAL NOTES

1. THE SYSTEM DESCRIBED HEREIN HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE 2010 EDITION OF THE FLORIDA BUILDING CODE, FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE, PER TAS 201 / 202 / 203 AND ASTM E 330 / E 1886 / E 1996.
2. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR Cd=1.6 HAS BEEN USED FOR WOOD ANCHOR DESIGN.
3. POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED PER SEPARATE ENGINEERING IN ACCORDANCE WITH THE GOVERNING CODE. PRESSURE REQUIREMENTS AS DETERMINED IN ACCORDANCE WITH ASCE 7-10 AND CHAPTER 1609 OF THE 2010 FLORIDA BUILDING CODE SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.
4. DESIGN PRESSURES NOTED HEREIN ARE BASED ON MAXIMUM TESTED PRESSURES DIVIDED BY A 1.5 SAFETY FACTOR.
5. ALL POLYCARBONATE PANELS SHALL BE EXTRUDED WITH THICKNESS t=0.090" AND SHALL BE FABRICATED FROM 100% SABIC INNOVATIVE PLASTICS THERMOPLASTIC POLYMER LEXAN SHEET #XL10 2UV (UV STABILIZED), AS APPROVED UNDER MIAMI-DADE COUNTY NOTICE OF ACCEPTANCE #08-0305.02.
6. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
7. PERMIT HOLDER SHALL VERIFY THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND SUPERIMPOSED LOADS. WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.
8. ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, UNLESS NOTED OTHERWISE.
9. EACH SHUTTER ASSEMBLY SHALL BE PERMANENTLY LABELED WITH THE FOLLOWING MINIMUM INFORMATION:  
 IMPACT TECHNOLOGY, INC.  
 HIALEAH, FL  
 TAS 201, 202, 203  
 MISSILE LEVEL D - ASTM E330, E1886, E1996  
 FBC APPROVED  
 THIS IS THE MINIMUM LABEL INFORMATION, ACTUAL PRODUCT LABELS SHALL COMPLY WITH ALL REQUIREMENTS OF THE FLORIDA BUILDING CODE, INCLUDING THE PROVISIONS FOR THE HIGH VELOCITY HURRICANE ZONE (HVHZ).
10. TOP & BOTTOM DETAILS SHOWN MAY BE INTERCHANGED AS FIELD CONDITIONS DICTATE.
11. ALL BOLTS & WASHERS SHALL BE ZINC COATED STEEL, GALVANIZED STEEL, OR STAINLESS STEEL WITH A MINIMUM TENSILE YIELD STRENGTH OF 60 KSI. ALL 3/16"Ø OR 1/4"Ø POP RIVETS SHALL BE 5056-H32 ALUMINUM ALLOY OR STRONGER.
12. ALL STEEL IN CONTACT WITH ALUMINUM SHALL BE PAINTED OR PLATED.
13. WALL HEADERS #10, 13, 38 AND 39 AS SHOWN HEREIN MAY BE MOUNTED ON THE INTERIOR OR EXTERIOR OF AN OPENING.



1 TYPICAL ELEVATION  
1 N.T.S. EXTERIOR ELEV

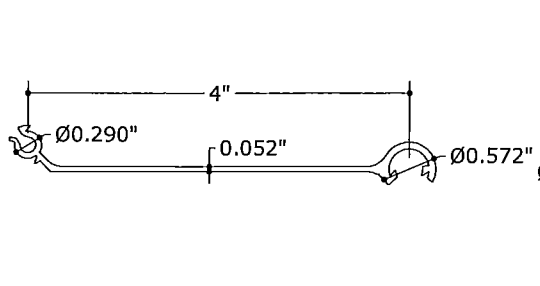
FRANK L. BENNARDO, P.E.  
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 LICENSE  
 No. 02/22/2012  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 EXPRESS  
 #1067  
 #3342  
 160 SW 12th AVENUE, #1067  
 DEERFIELD BEACH, FL 33442  
 Ph: (954) 354-0660 Fax: (954) 354-0668  
 WWW.ENGEXP.COM  
 CERT. OF AUTH. #9885  
 A FRANK L. BENNARDO, P.E., INC., INNOVATION

IMPACT TECHNOLOGY, INC.  
 7860 WEST 25TH AVENUE  
 HIALEAH, FL 33016  
 PHONE: 305 - 558 - 7739  
 ACCORDION SHUTTER  
 WITH ALUMINUM OR POLYCARBONATE BLADES  
 FLORIDA STATEWIDE PRODUCT APPROVAL

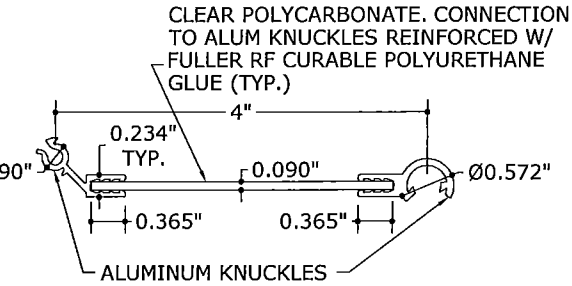
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WIND ZONE 1-3 GLASS SEP	KL	FLB	05/12/10
REV. PER CLIENT REQUEST	KL	FLB	6/22/11
2010 FBC	KL	FLB	02/14/12

09-ITI-0001  
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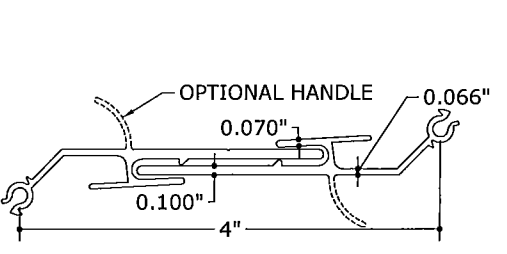
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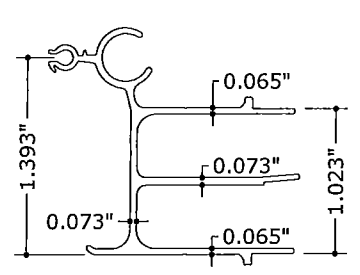
**1 STANDARD BLADE**  
N.T.S. 6063-T6



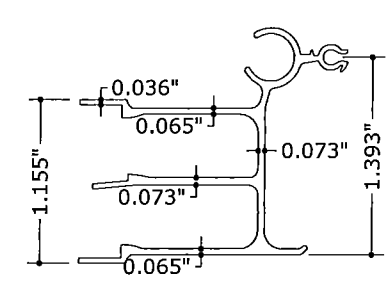
**2 WINDOW BLADE**  
N.T.S. 6063-T6/POLYCARBONATE



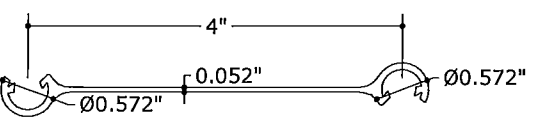
**3 HERMAPHRODITIC CENTERMATE**  
N.T.S. 6063-T6



**4 MALE CENTERMATE**  
N.T.S. 6063-T6



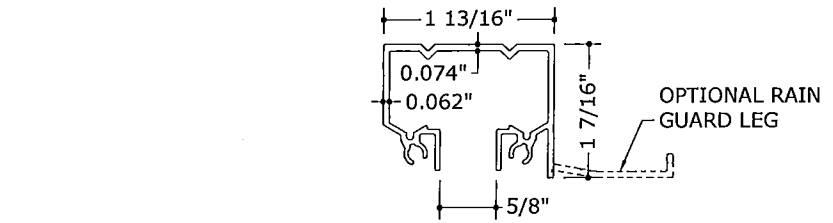
**5 FEMALE CENTERMATE**  
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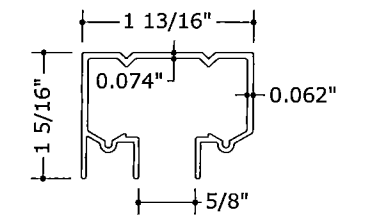
**6 BLADE ADAPTER**  
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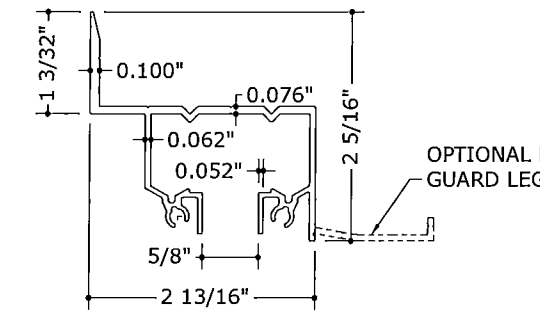
**8 FLAT STARTER BLADE**  
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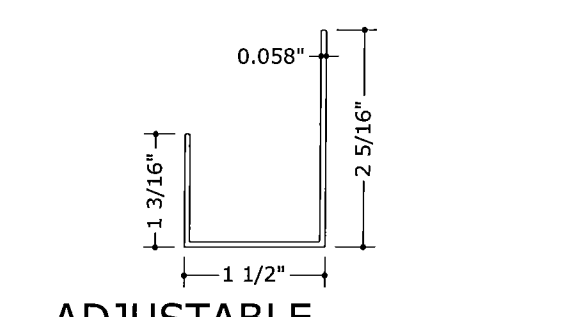
**9 CEILING HEADER**  
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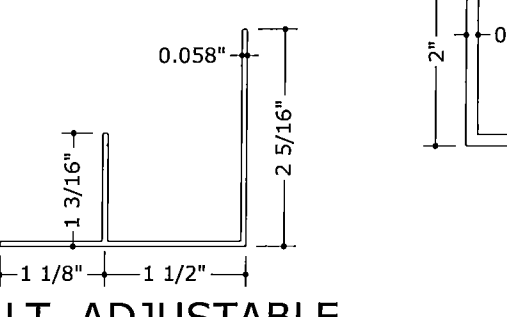
**37 ALT. CEILING HEADER**  
N.T.S. 6063-T6



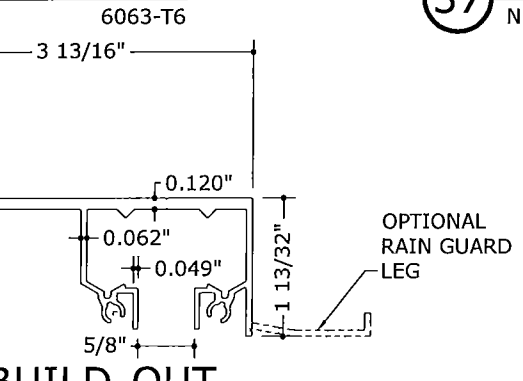
**10 WALL HEADER**  
N.T.S. 6063-T6



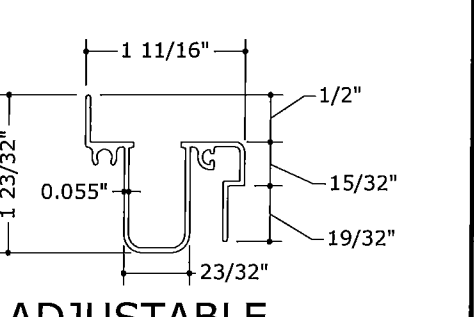
**11 ADJUSTABLE SILL TRACK BOTTOM**  
N.T.S. 6063-T6



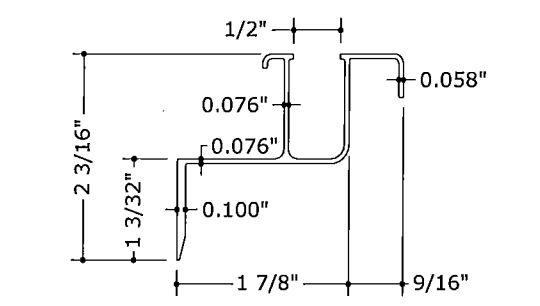
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N.T.S. 6063-T6



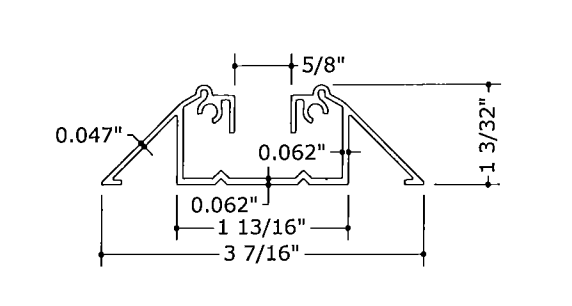
**13 BUILD-OUT WALL HEADER**  
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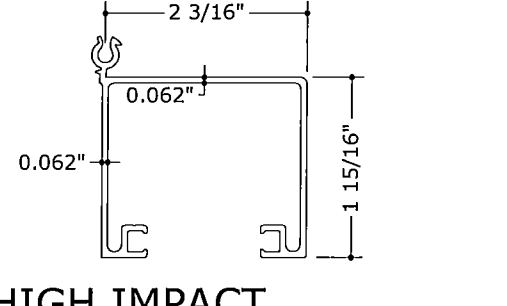
**14 ADJUSTABLE SILL TRACK TOP**  
N.T.S. 6063-T6



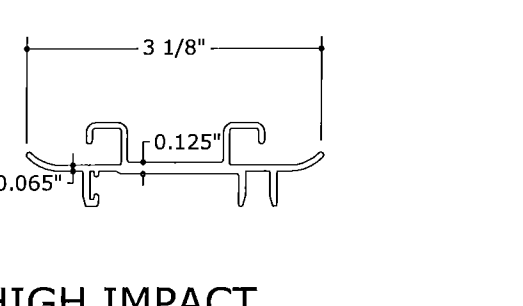
**15 WALL SILL TRACK**  
N.T.S. 6063-T6



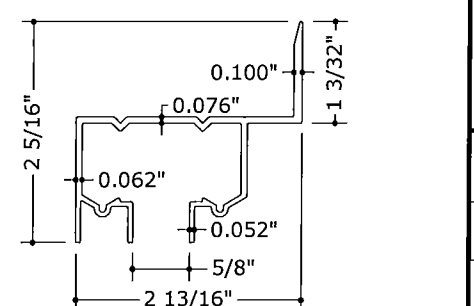
**16 WALKOVER TRACK**  
N.T.S. 6063-T6



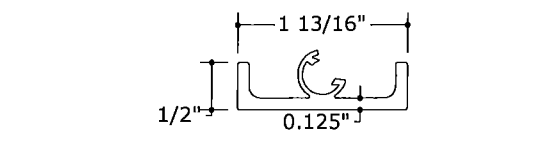
**29 HIGH IMPACT CENTERMATE**  
N.T.S. 6063-T6



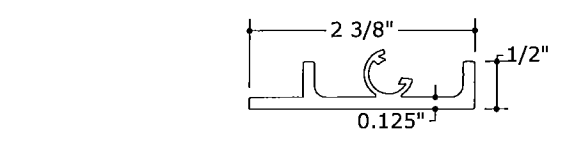
**30 HIGH IMPACT CENTERMATE INSERT**  
N.T.S. 6063-T6



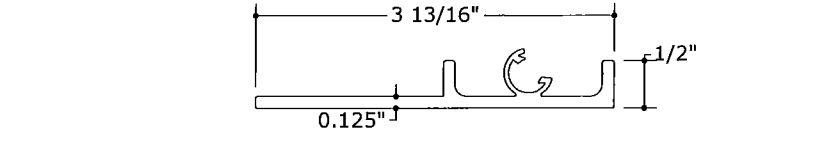
**38 ALT. WALL HEADER**  
N.T.S. 6063-T6



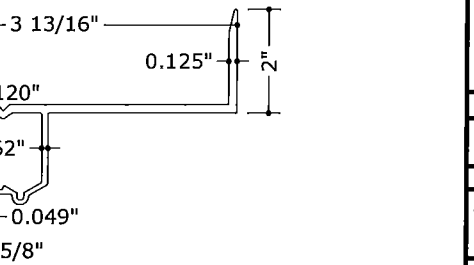
**31 CEILING SIDE MOUNT**  
N.T.S. 6063-T6



**32 HEADER SIDE MOUNT**  
N.T.S. 6063-T6



**33 BUILD-OUT HEADER SIDE MOUNT**  
N.T.S. 6063-T6



**39 ALT. BUILD-OUT WALL HEADER**  
N.T.S. 6063-T6

**FRANK L. BENNARDO**  
PROFESSIONAL ENGINEER  
LICENSE # 0212292492  
STATE OF FLORIDA  
ENGINEERING EXPRESS, INC.  
160 SW 12th Avenue, Suite 2016  
Deerfield Beach, FL 33442  
Ph: (954) 354-0660 Fax: (954) 354-0643  
WWW.ENGP.COM  
CERT OF AUTH #8885  
A FRANK L. BENNARDO, P.E., INC. INNOVATION

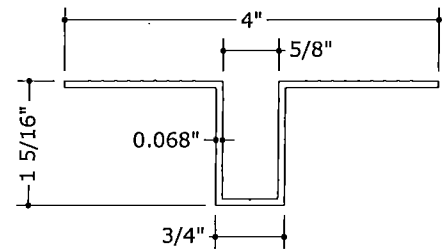
**IMPACT TECHNOLOGY, INC.**  
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DRWN	CHKD	DATE
KL	FLB	05/03/09
KL	FLB	12/22/09
KL	FLB	05/12/10
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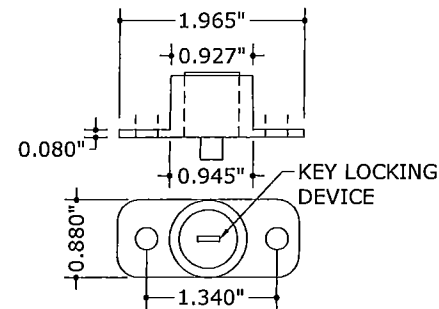
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WIND ZONE 1-3 GLASS SEP  
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2010 FBC

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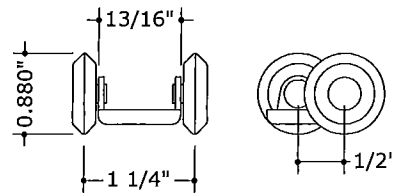
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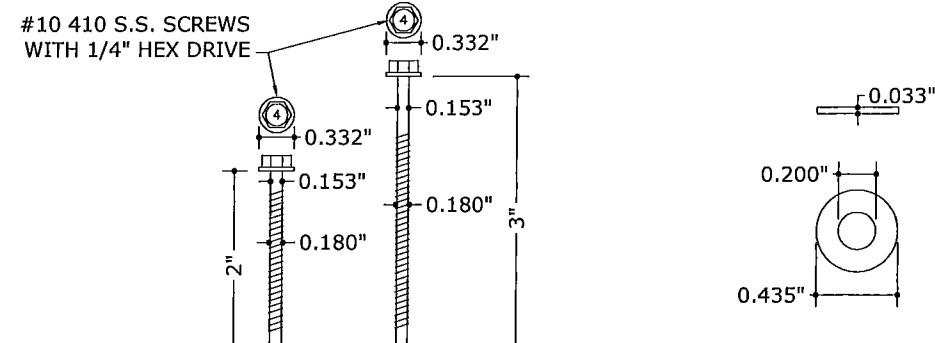
**17** RECESSED TRACK  
N.T.S. 6063-T5



**18** PUSH-BUTTON LOCK  
N.T.S. 6063-T5

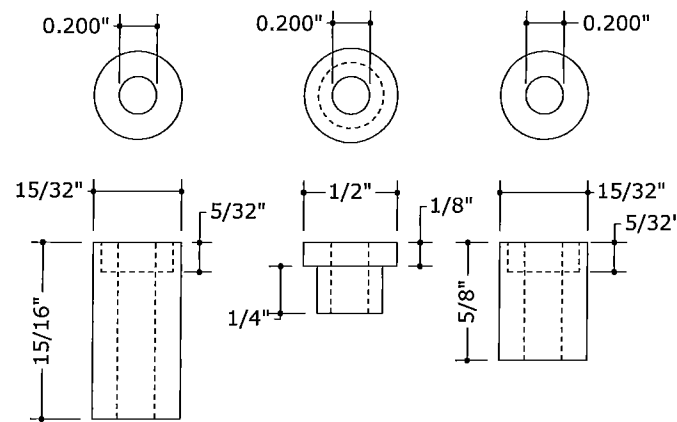


**19** WHEEL CARRIAGE  
N.T.S. NYLON/STAINLESS STEEL

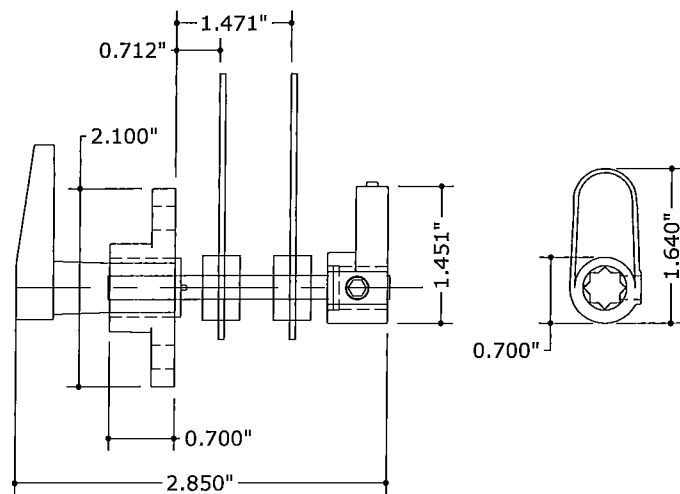


**20** KNUCKLE SCREWS  
N.T.S. STAINLESS STEEL

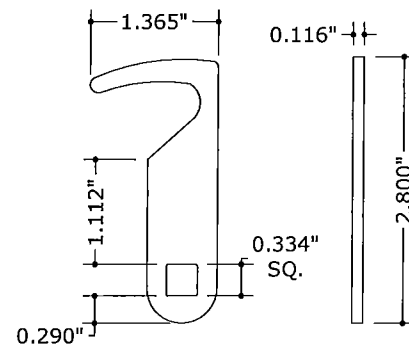
**21** WASHER  
N.T.S. STAINLESS STEEL



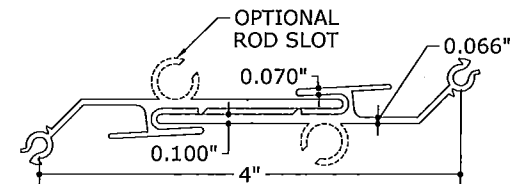
**22** NYLON BUSHINGS  
N.T.S. NYLON



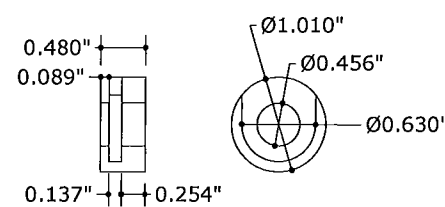
**23** LOCK ASSEMBLY  
N.T.S. ZINC ALLOY/STAINLESS STEEL



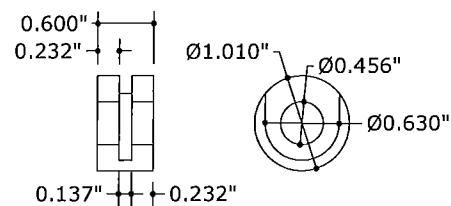
**24** LOCKING ARM  
N.T.S. 410 STAINLESS STEEL



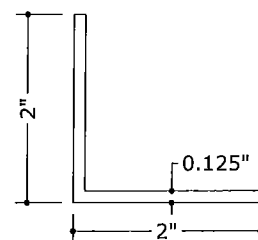
**40** ALT. HERMAPHRODITIC CENTERMATE  
N.T.S. 6063-T6



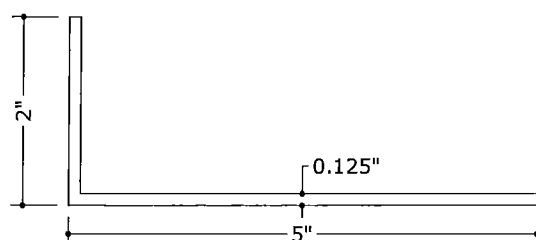
**25** LEFT LOCKING ARM BUSHING  
N.T.S. NYLON



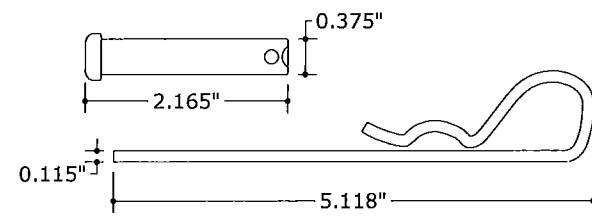
**26** RIGHT LOCKING ARM BUSHING  
N.T.S. NYLON



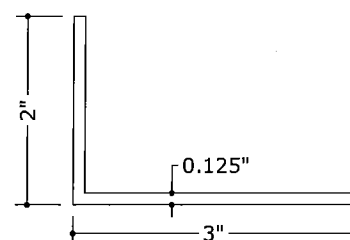
**35** 2"x2"x0.125" ANGLE  
N.T.S. 6063-T6



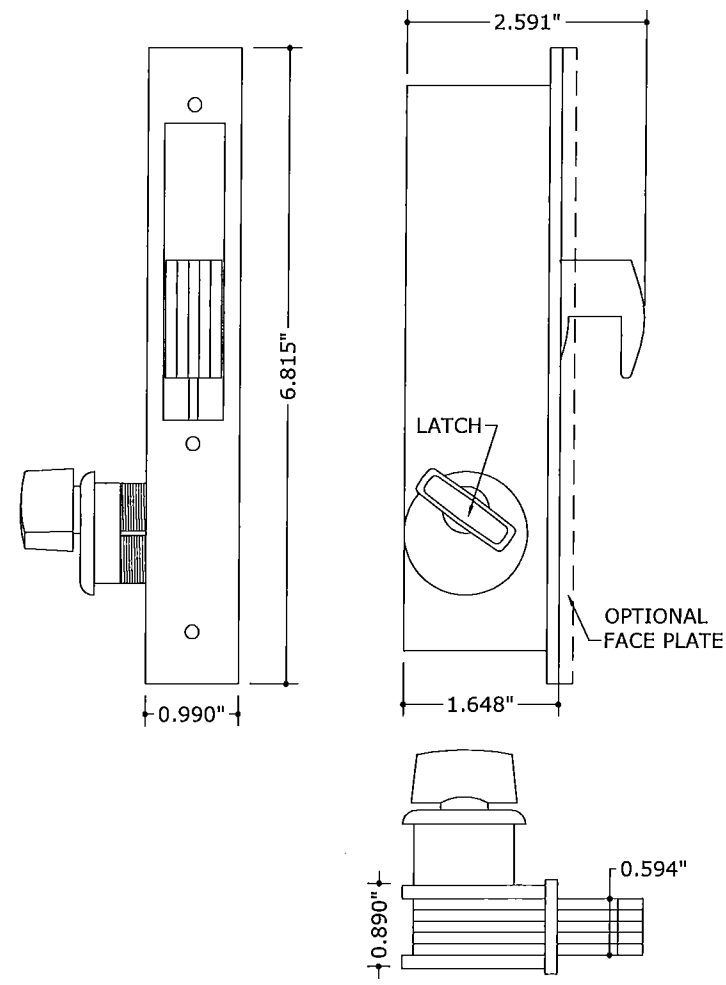
**27** 2"x5"x0.125" ANGLE  
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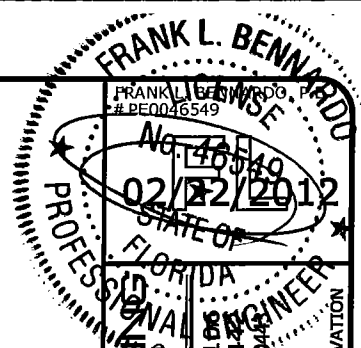
**28** CLEVIS AND PIN  
N.T.S. CADMIUM PLATED STEEL



**36** 2"x3"x0.125" ANGLE  
N.T.S. 6063-T6



**34** HOOK BOLT DEAD LOCK  
N.T.S. ALUMINUM



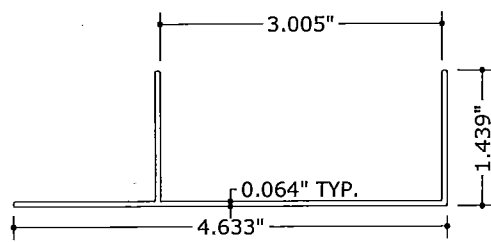
**ENGINEERING EXPRESS**  
FRANK L. BENNARDO, P.E.  
#PE0046549  
160 SW 12th AVENUE, #1106  
DEERFIELD BEACH, FL 33442  
PH: (954) 354-0660 FAX: (954) 354-0644  
WWW.ENGEXP.COM  
CERT OF AUTH #8885  
A FRANK L. BENNARDO, P.E., INC. INNOVATION

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7860 WEST 25TH AVENUE  
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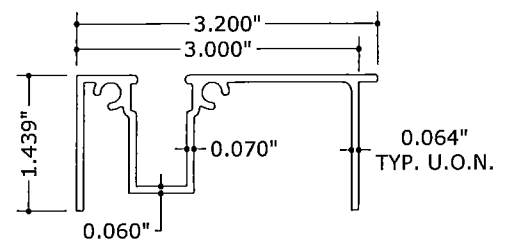
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WIND ZONE 1-3 GLASS SEP	KL	FLB	05/12/10
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**09-ITI-0001**  
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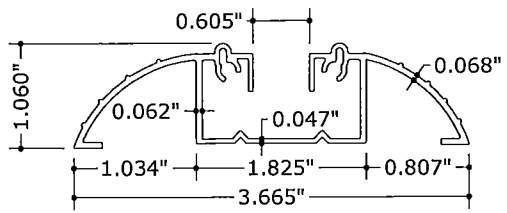
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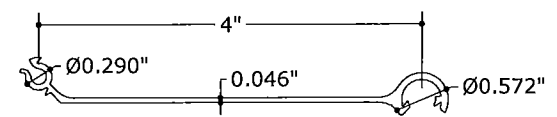
**41** ALT. ADJUSTABLE SILL TRACK BOTTOM  
N.T.S. 6063-T6



**42** ALT. ADJUSTABLE SILL TRACK TOP  
N.T.S. 6063-T6



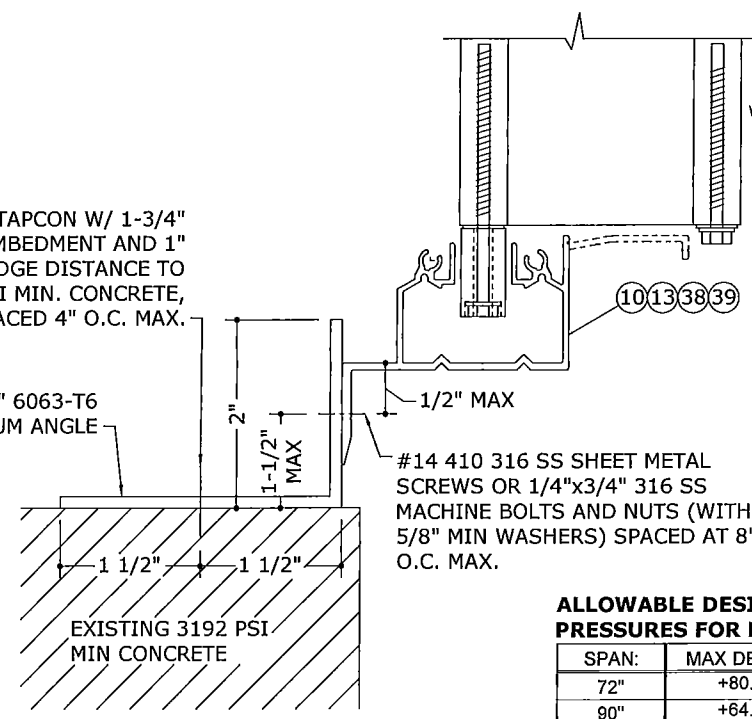
**43** ALT. WALKOVER TRACK  
N.T.S. 6063-T6



**44** LIGHTWEIGHT BLADE  
N.T.S. 6063-T6

1/4" ITW TAPCON W/ 1-3/4" MIN. EMBEDMENT AND 1" MIN. EDGE DISTANCE TO 3192 PSI MIN. CONCRETE, SPACED 4" O.C. MAX.

2"x3"x0.125" 6063-T6 ALUMINUM ANGLE

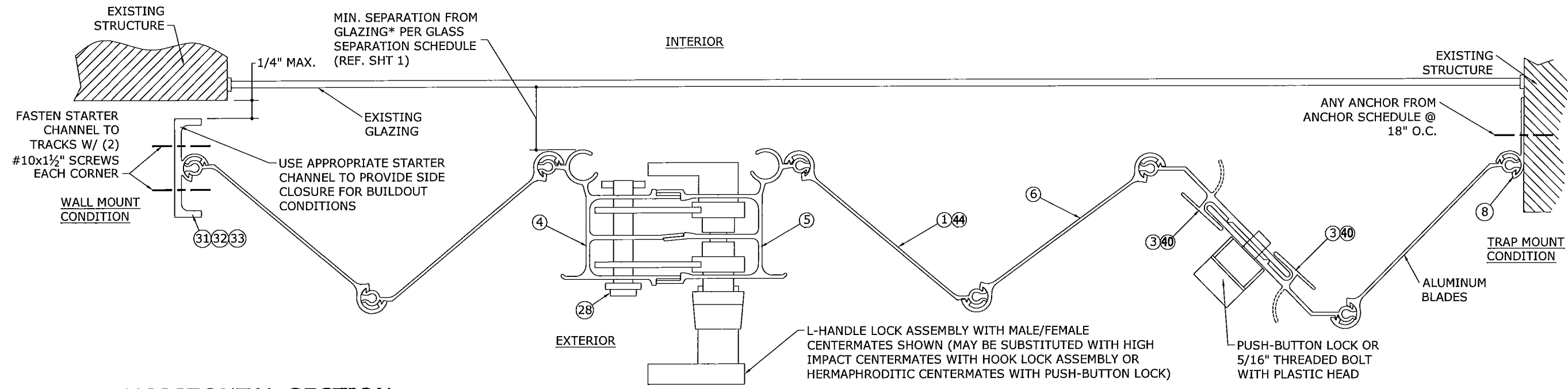


NOTE: MAXIMUM ALLOWABLE SPANS AND DESIGN PRESSURES FOR THIS MOUNTING CONDITION PER TABLE BELOW.

**ALLOWABLE DESIGN PRESSURES FOR DETAIL 1/4:**

SPAN:	MAX DESIGN PRESSURE:
72"	+80.3 psf / -80.3 psf
90"	+64.2 psf / -64.2 psf
108"	+53.5 psf / -53.5 psf
126"	+45.9 psf / -45.9 psf
144"	+40.1 psf / -40.1 psf

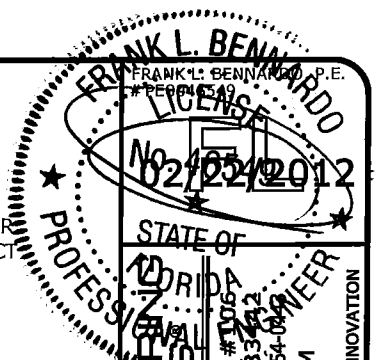
**1** BUILD-UP WALL MOUNT  
N.T.S. VERT SECTION



**2** HORIZONTAL SECTION W/ FLOATING STACK  
N.T.S. HORIZ SECTION

**\*NOTE:** SEPARATION FROM GLAZING SHALL BE MEASURED FROM THE PROTECTED FENESTRATION PRODUCT TO THE NEAREST POINT ON THE INTERIOR SIDE OF THE SHUTTER, WHICH MAY BE THE BLADE, CENTERMATE, OR LOCKING DEVICE.

ACCORDION SHUTTER SYSTEM PER PRODUCT APPROVAL



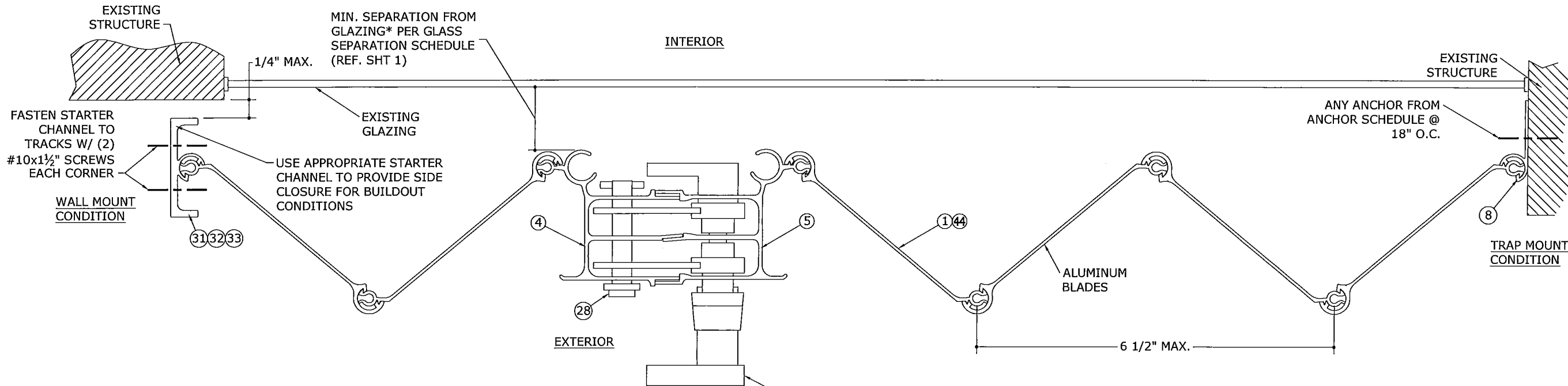
**IMPACT TECHNOLOGY, INC.**  
7860 WEST 25TH AVENUE  
HIALEAH, FL 33016  
PHONE: 305 - 558 - 7739

**IMPACT TECHNOLOGY, INC.**  
7860 WEST 25TH AVENUE  
HIALEAH, FL 33016  
PHONE: 305 - 558 - 7739

REMARKS	DRWN	CHKD	DATE
INITIAL SUBMITTAL	KL	FLB	05/03/09
REV. PER NEW TESTING	KL	FLB	12/22/09
WIND ZONE 1-3 GLASS SEP	KL	FLB	05/12/10
REV PER CLIENT REQUEST	KL	FLB	6/22/11
2010 FBC	KL	FLB	02/14/12

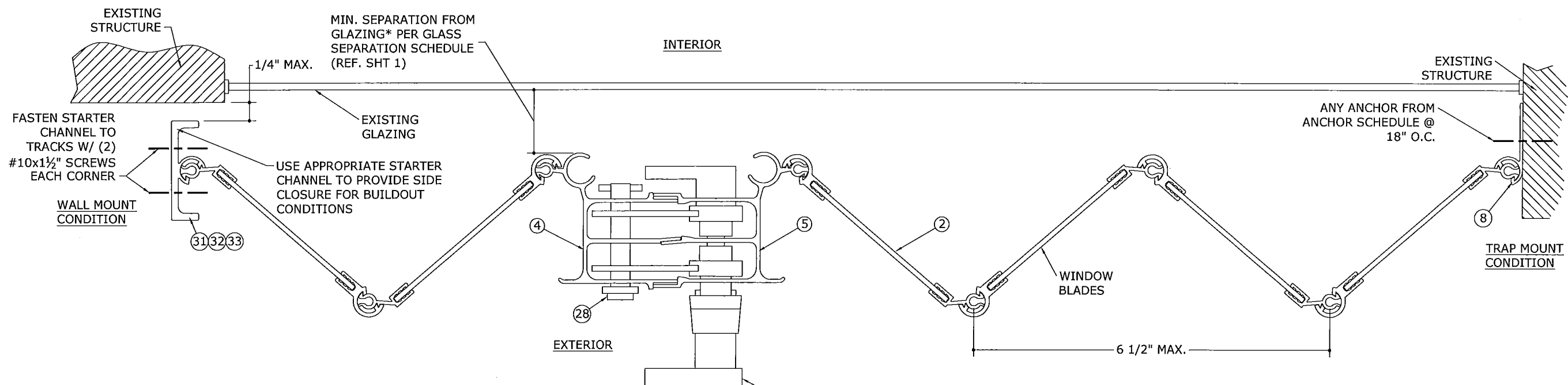
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PAGE DESCRIPTION:

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**1**  
**5** HORIZONTAL SECTION W/ ALUMINUM BLADES  
N.T.S. HORIZ SECTION

**\*NOTE:** SEPARATION FROM GLAZING SHALL BE MEASURED FROM THE PROTECTED FENESTRATION PRODUCT TO THE NEAREST POINT ON THE INTERIOR SIDE OF THE SHUTTER, WHICH MAY BE THE BLADE, CENTERMATE, OR LOCKING DEVICE.



**2**  
**5** HORIZONTAL SECTION W/ WINDOW BLADES  
N.T.S. HORIZ SECTION

L-HANDLE LOCK ASSEMBLY WITH MALE/FEMALE CENTERMATES SHOWN (MAY BE SUBSTITUTED WITH HIGH IMPACT CENTERMATES WITH HOOK LOCK ASSEMBLY OR HERMAPHRODITIC CENTERMATES WITH PUSH-BUTTON LOCK)

**FRANK L. BENNARD**  
PROFESSIONAL ENGINEER  
No. 122520  
STATE OF FLORIDA  
ENGINEERING EXPERTS, INC.  
160 SW 12th Avenue, #106  
Deerfield Beach, FL 33442  
Ph: (954) 354-0660 Fax: (954) 354-8443  
WWW.ENGEXP.COM  
CERT. OF AUTH. #9885  
A FRANK L. BENNARD, P.E., INC. INNOVATION

**IMPACT TECHNOLOGY, INC.**  
7860 WEST 25TH AVENUE  
HIALEAH, FL 33016  
PHONE: 305 - 558 - 7739  
ACCORDION SHUTTER  
WITH ALUMINUM OR POLYCARBONATE BLADES  
FLORIDA STATEWIDE PRODUCT APPROVAL

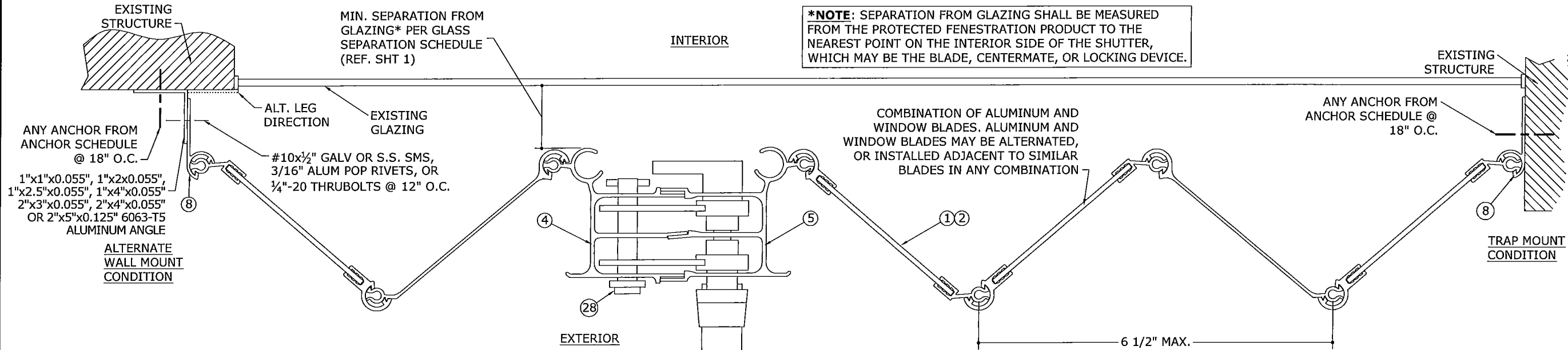
REMARKS	DRWN	CHKD	DATE
INITIAL SUBMITTAL	KL	FLB	05/03/09
REV. PER NEW TESTING	KL	FLB	12/22/09
WIND ZONE 1-3 GLASS SEP	KL	FLB	05/12/10
REV PER CLIENT REQUEST	KL	FLB	6/22/11
2010 FBC	KL	FLB	02/14/12

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**5**

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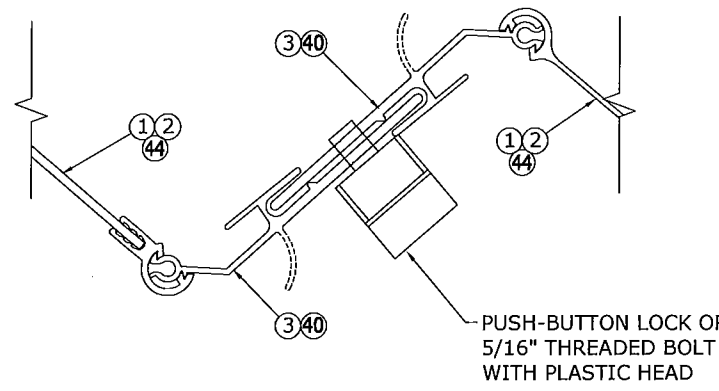
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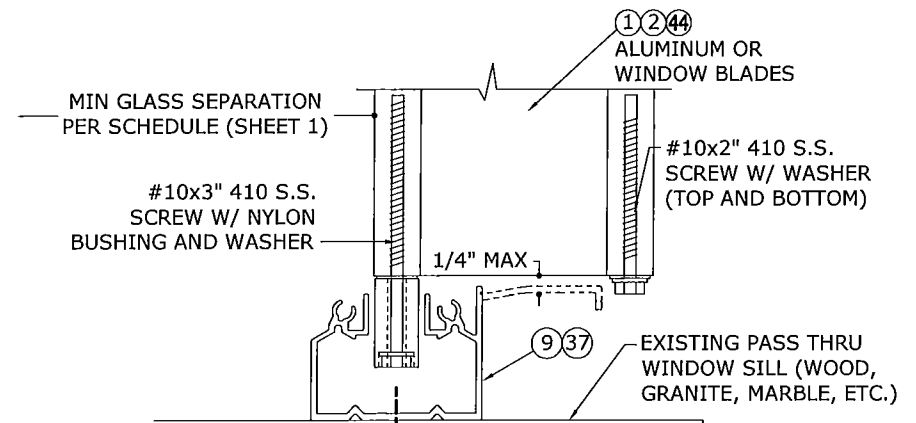
**1**  
**6** HORIZONTAL SECTION W/ COMBINATION BLADES  
N.T.S. HORIZ SECTION

NOTE: LOCKS MAY BE MOUNTED ON INTERIOR OR EXTERIOR SIDE OF SHUTTER.

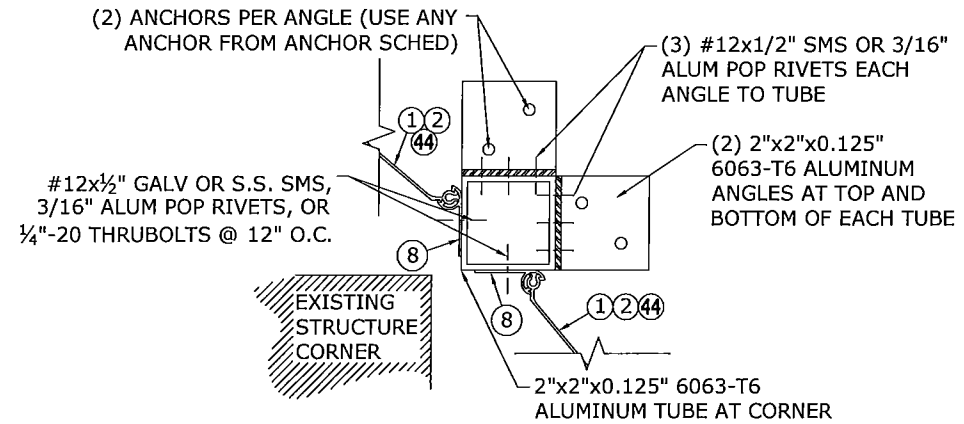
L-HANDLE LOCK ASSEMBLY WITH MALE/FEMALE CENTERMATES SHOWN (MAY BE SUBSTITUTED WITH HIGH IMPACT CENTERMATES WITH HOOK LOCK ASSEMBLY OR HERMAPHRODITIC CENTERMATES WITH PUSH-BUTTON LOCK)



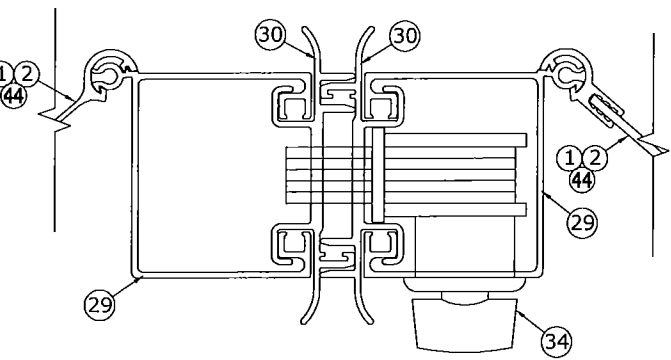
**2**  
**6** ALT. HERMAPHRODITIC CENTERMATE  
N.T.S. HORIZ SECTION



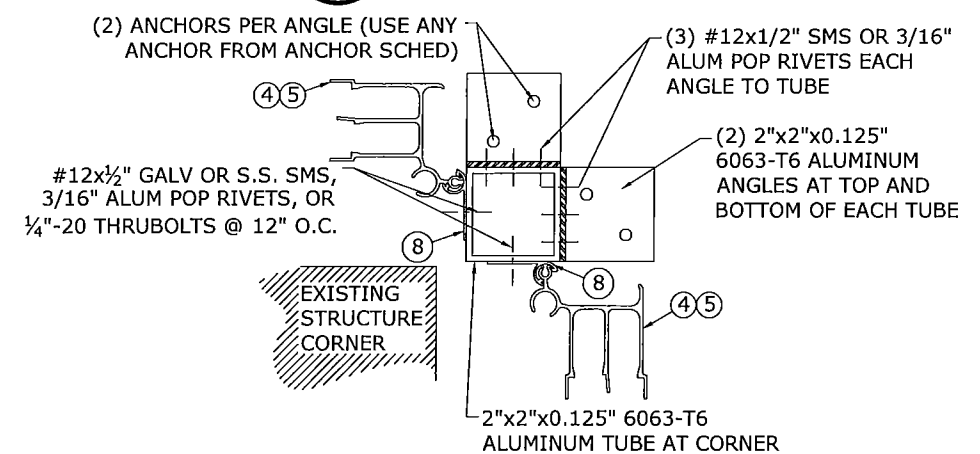
**4**  
**6** PASS THRU WINDOW DETAIL  
N.T.S. VERT SECTION



**5**  
**6** STANDARD CORNER CLOSURE  
N.T.S. HORIZ SECTION



**3**  
**6** ALT. HIGH IMPACT CENTERMATE  
N.T.S. HORIZ SECTION



**6**  
**6** ALTERNATE CORNER CLOSURE  
N.T.S. HORIZ SECTION

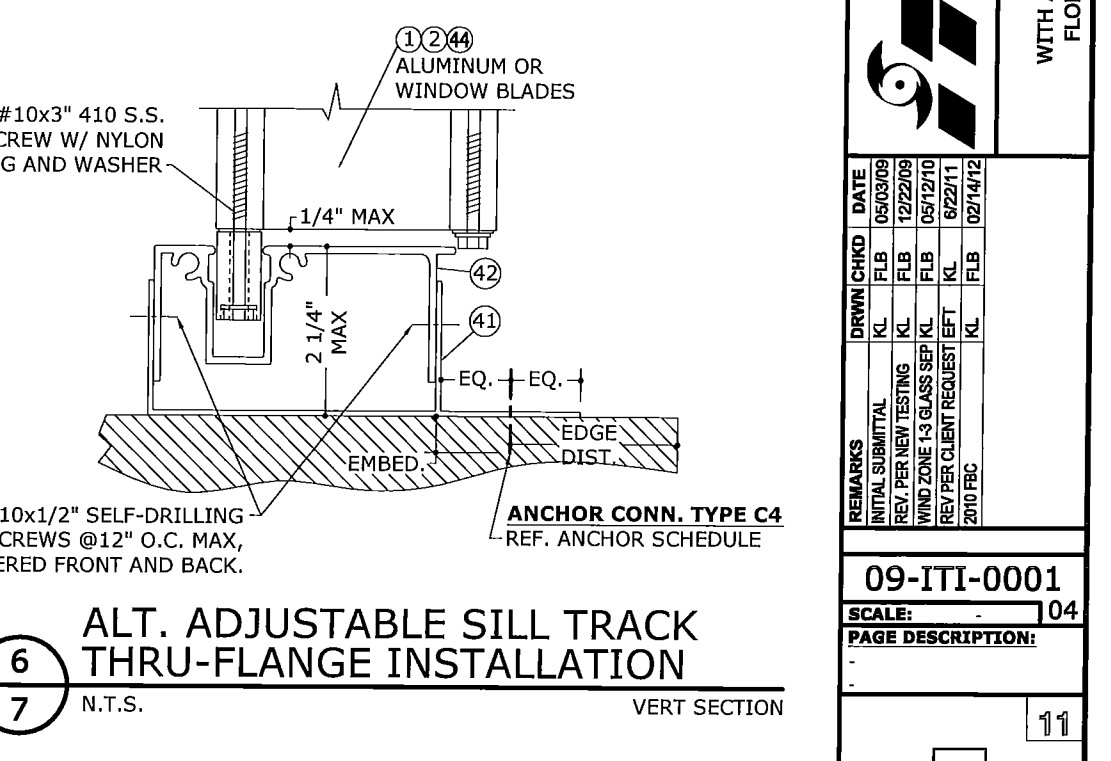
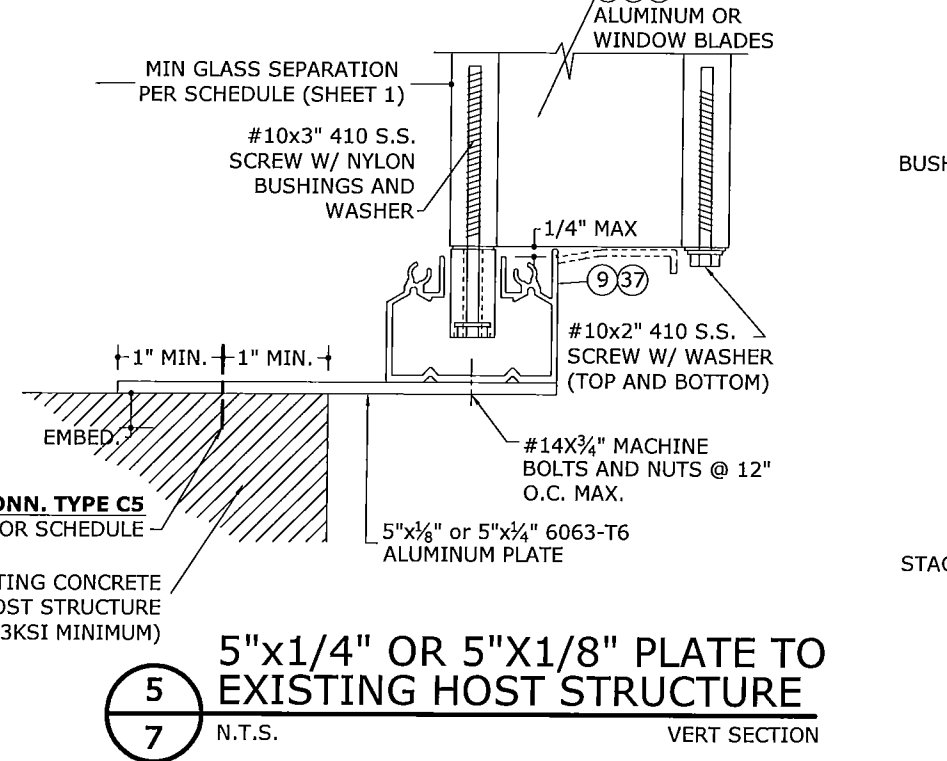
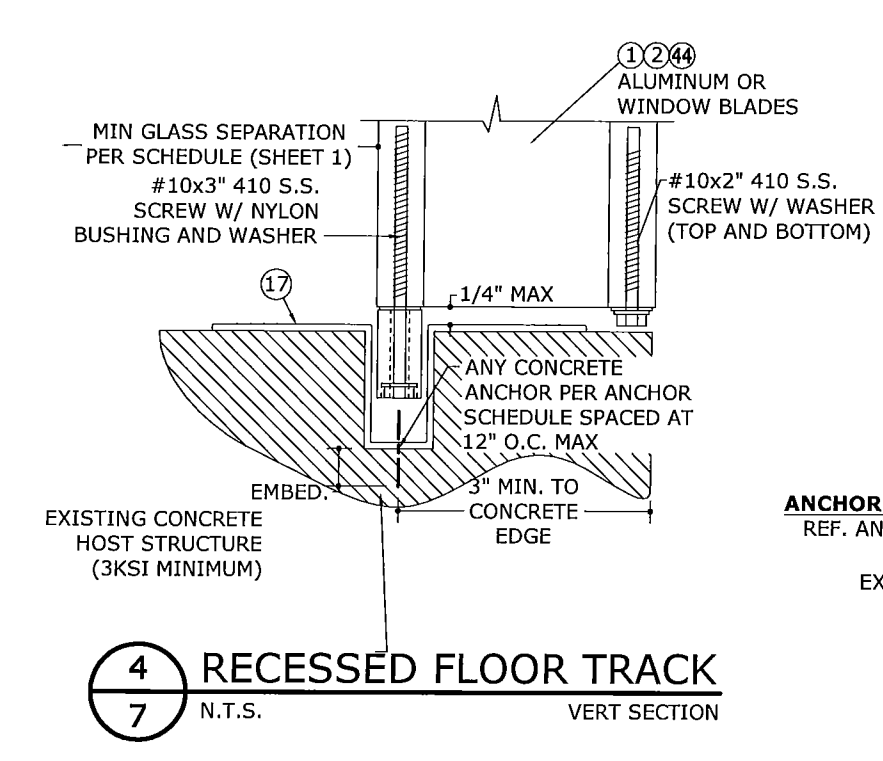
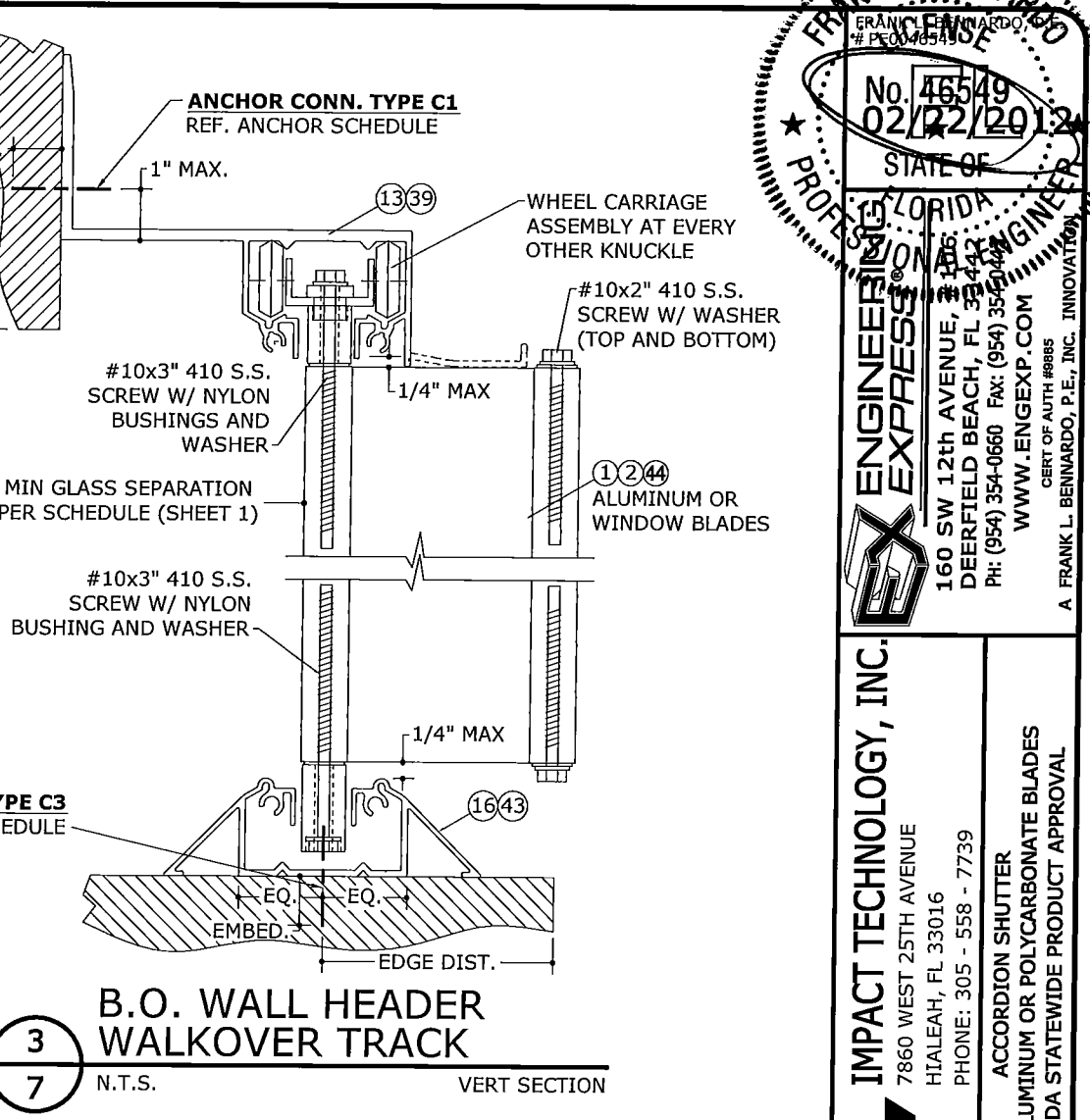
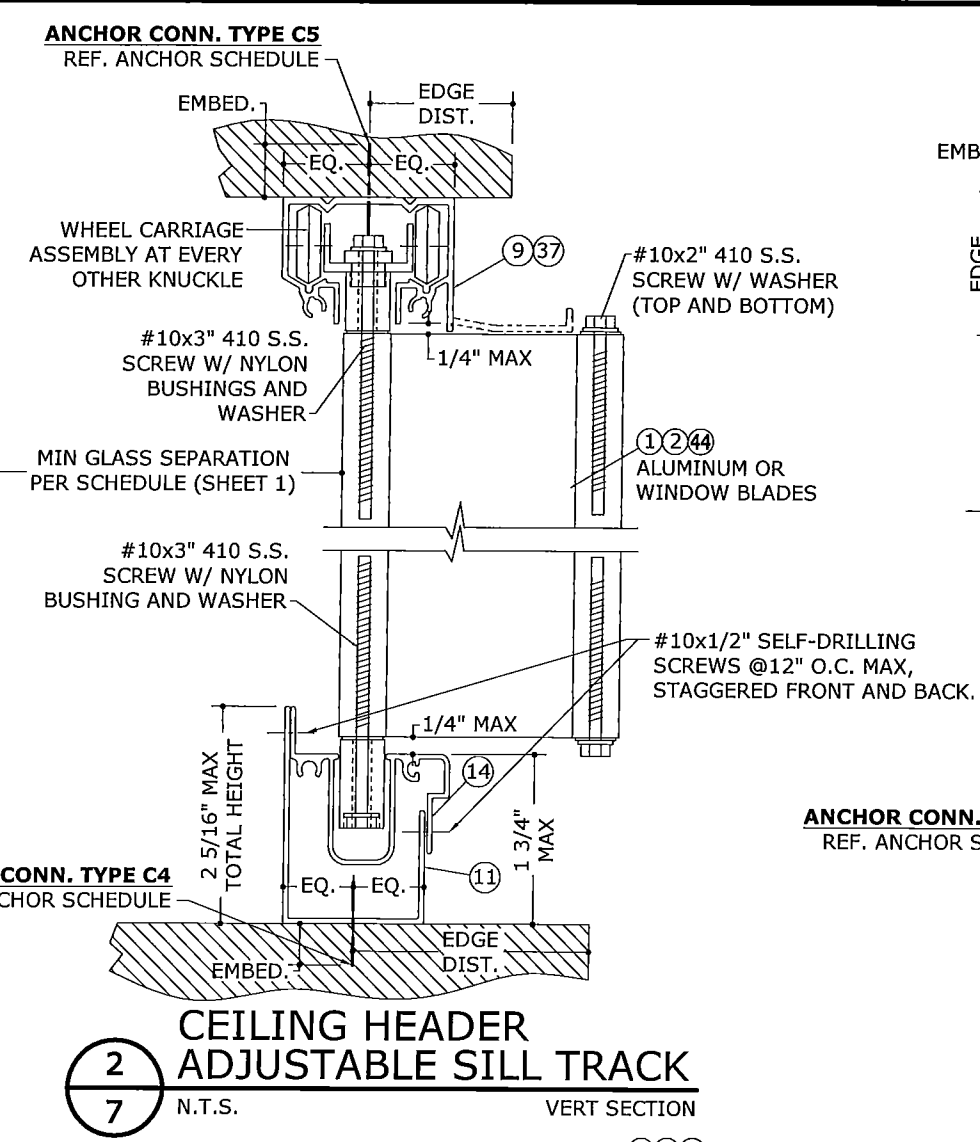
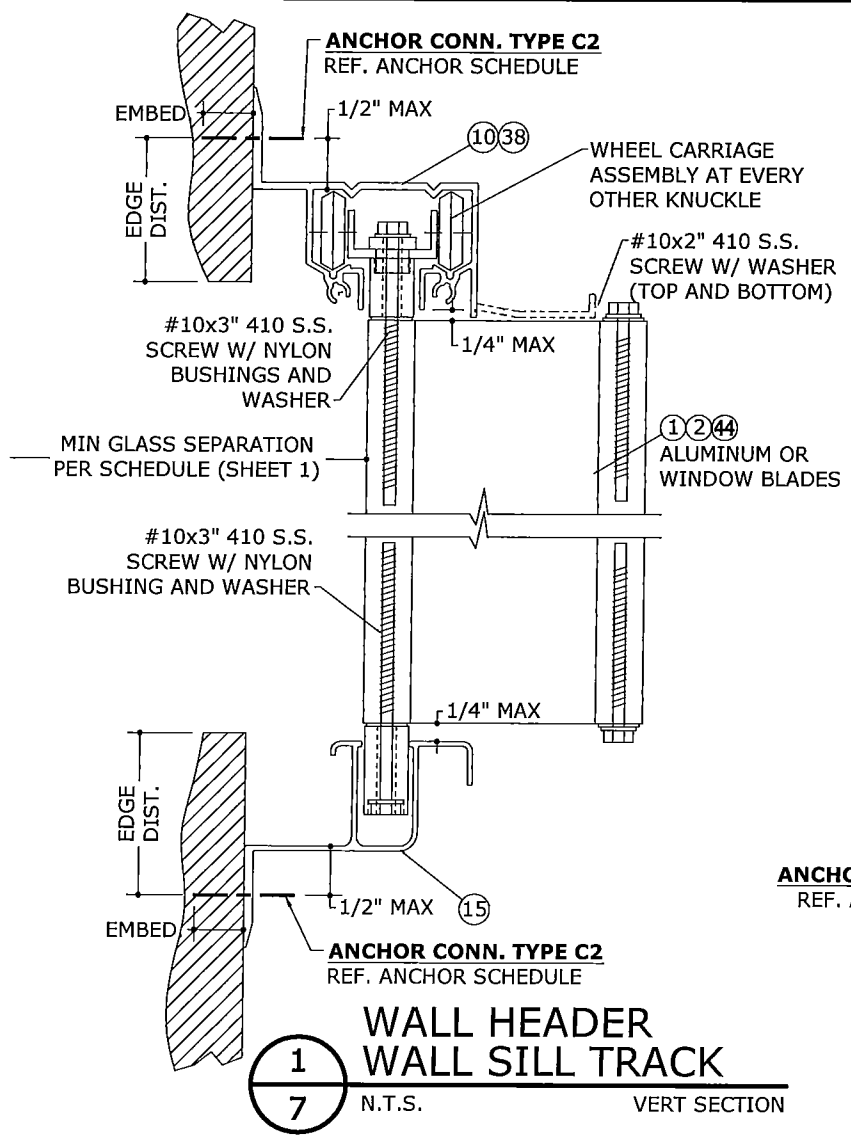
**FRANK L. BENNARD, P.E.**  
Professional Engineer  
No. 46549  
02/22/2012  
STATE OF FLORIDA  
ENGINEERING EXPRESS  
160 SW 12th Avenue, #106  
Deerfield Beach, FL 33444  
Ph: (954) 354-0660 Fax: (954) 354-0660  
WWW.ENGEXP.COM  
CERT OF AUTH #9885  
A FRANK L. BENNARD, P.E., INC. INNOVATION

**IMPACT TECHNOLOGY, INC.**  
7860 WEST 25TH AVENUE  
HIALEAH, FL 33016  
PHONE: 305 - 558 - 7739  
ACCORDION SHUTTER  
WITH ALUMINUM OR POLYCARBONATE BLADES  
FLORIDA STATEWIDE PRODUCT APPROVAL

REMARKS	DRWN	CHKD	DATE
INITIAL SUBMITTAL	KL	FLB	05/03/09
REV PER NEW TESTING	KL	FLB	12/22/09
WIND ZONE 1-3 GLASS SEP	KL	FLB	05/12/10
REV PER CLIENT REQUEST	EFT	KL	6/22/11
2010 FBC	KL	FLB	02/14/12

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PAGE DESCRIPTION:  
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**FRANK L. BENNARDO**  
PROFESSIONAL ENGINEER

No. 46549  
02/22/2012  
STATE OF FLORIDA

**ENGINEERING EXPRESS**  
160 SW 12th AVENUE, #106  
DEERFIELD BEACH, FL 33442  
Ph: (954) 354-0660 FAX: (954) 354-0660  
WWW.ENGEXP.COM  
CERT. OF AUTH. #8885  
A FRANK L. BENNARDO, P.E., INC. INNOVATION

**IMPACT TECHNOLOGY, INC.**

7860 WEST 25TH AVENUE  
HTALEAH, FL 33016  
PHONE: 305 - 558 - 7739

ACCORDION SHUTTER  
WITH ALUMINUM OR POLYCARBONATE BLADES  
FLORIDA STATEWIDE PRODUCT APPROVAL

REMARKS	DRWN	CHKD	DATE
INITIAL SUBMITTAL	KL	FLB	05/03/09
REV. PER NEW TESTING	KL	FLB	12/22/09
WIND ZONE 1-3 GLASS SEP	KL	FLB	05/12/10
REV. PER CLIENT REQUEST EFT	KL	FLB	6/22/11
2010 FBC	KL	FLB	02/14/12

**09-ITI-0001**

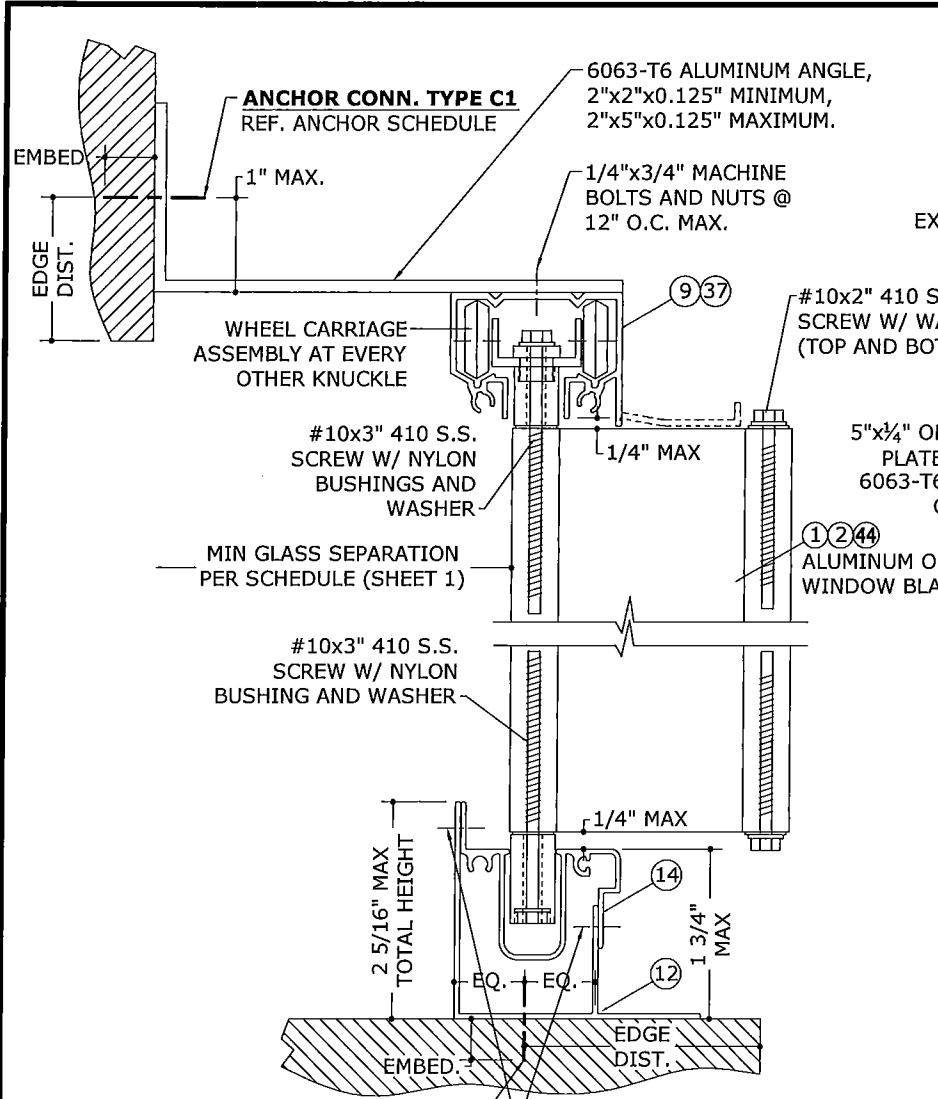
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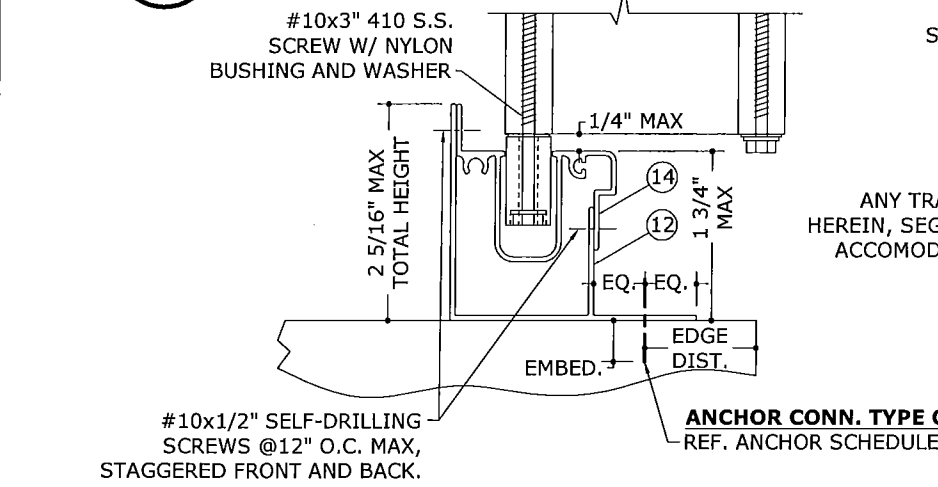
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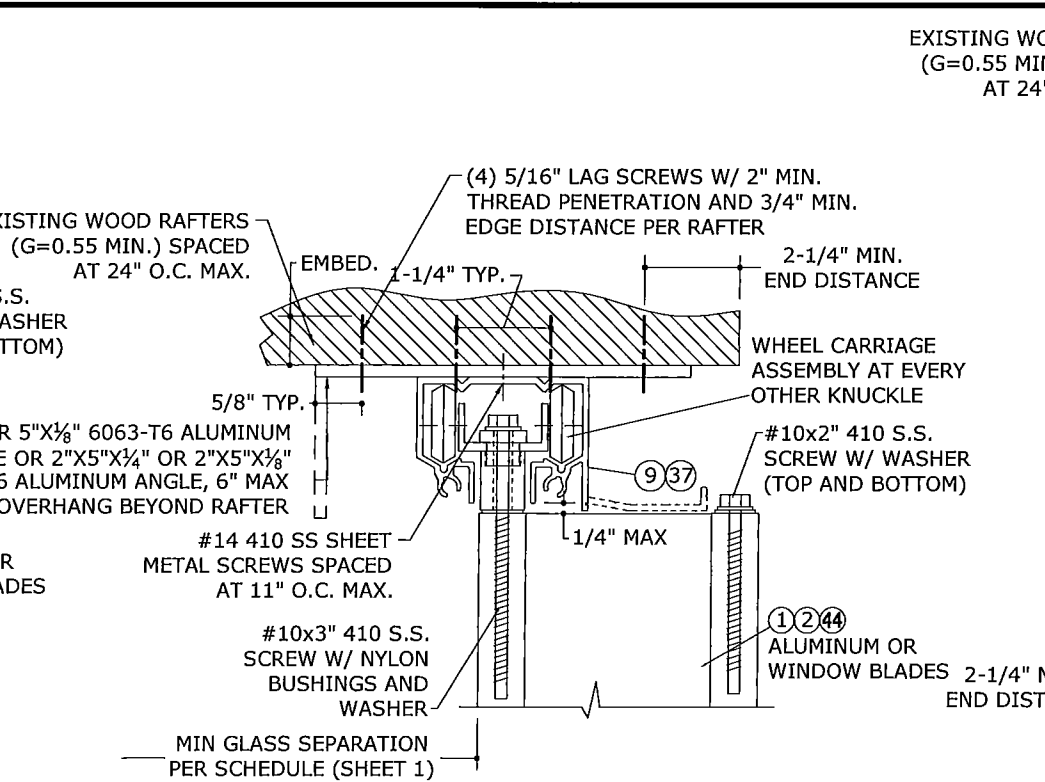
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**1** 2"x5" ANGLE W/ CEILING HEADER  
ALT. ADJUSTABLE SILL TRACK  
N.T.S. VERT SECTION



**4** ALT. ADJUSTABLE SILL TRACK  
THRU-FLANGE INSTALLATION  
N.T.S. VERT SECTION



NOTE: MAXIMUM ALLOWABLE SPANS AND DESIGN PRESSURES FOR THIS MOUNTING CONDITION PER TABLE BELOW.

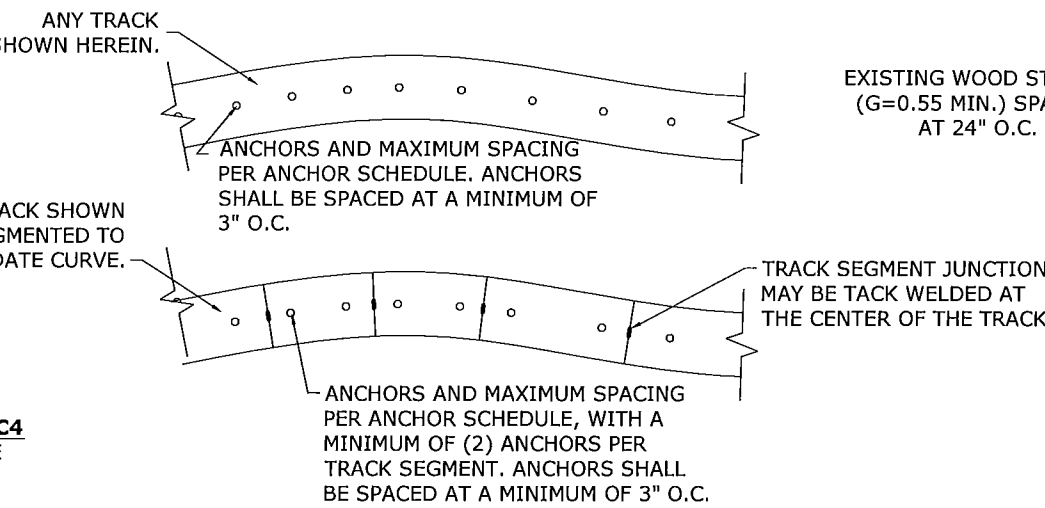
**ALLOWABLE DESIGN PRESSURES FOR DETAIL 2/8 WITH 1/4" ALUMINUM PLATE/ANGLE:**

SPAN:	MAX DESIGN PRESSURE:
72"	+124.8 psf / -124.8 psf
90"	+99.8 psf / -99.8 psf
108"	+83.2 psf / -83.2 psf
126"	+61.2 psf / -71.3 psf
144"	+42.4 psf / -62.4 psf

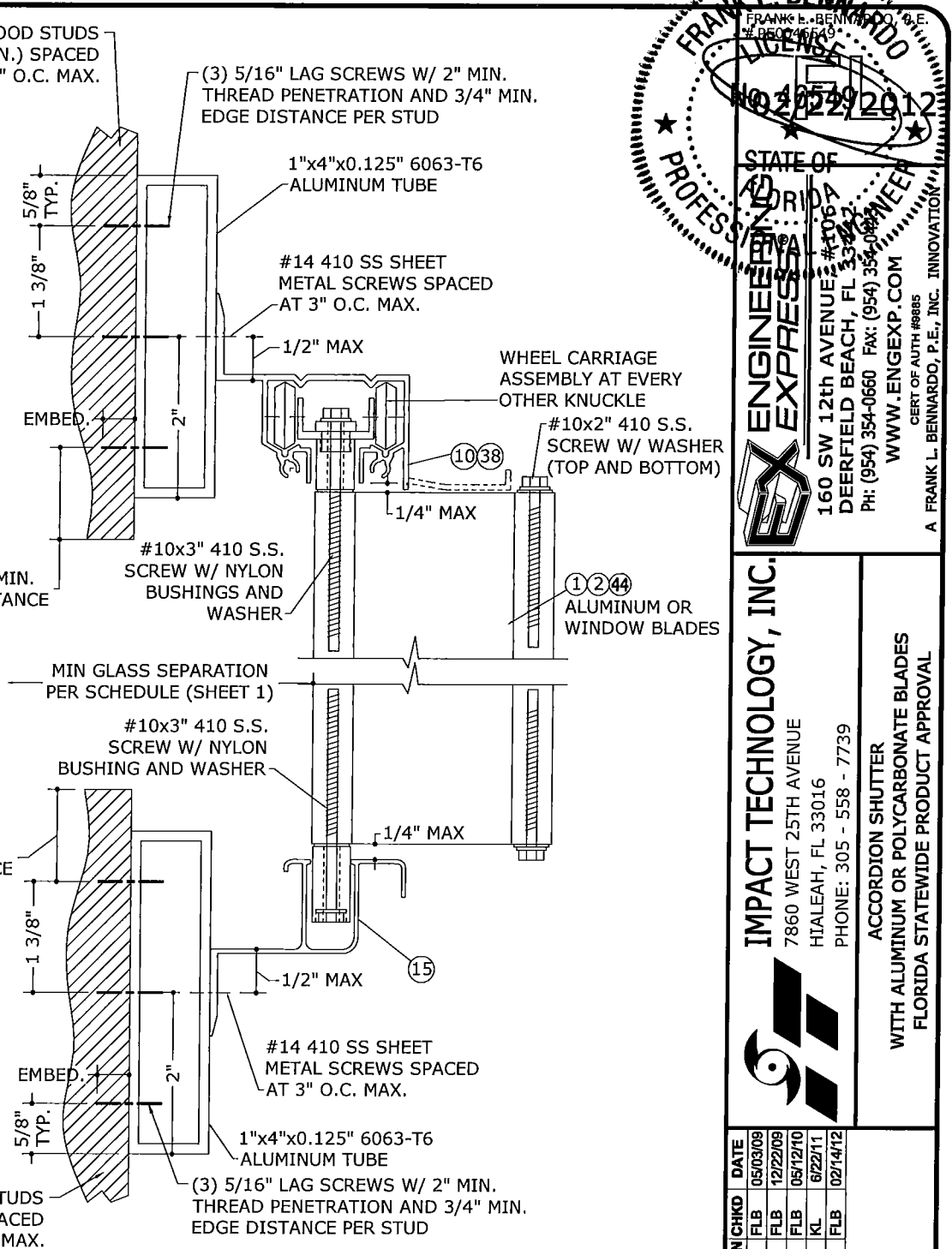
**ALLOWABLE DESIGN PRESSURES FOR DETAIL 2/8 WITH 1/8" ALUMINUM PLATE/ANGLE:**

SPAN:	MAX DESIGN PRESSURE:
72"	+71.7 psf / -71.7 psf
90"	+57.3 psf / -57.3 psf
108"	+47.8 psf / -47.8 psf
126"	+40.9 psf / -40.9 psf
144"	+35.8 psf / -35.8 psf

**2** 5"x1/4" OR 5"x1/8" PLATE TO EXISTING RAFTERS  
N.T.S. VERT SECTION



**5** OPTIONAL CURVED TRACK W/ & W/O SEGMENTED SECTIONS  
N.T.S. PLAN VIEW



NOTE: MAXIMUM ALLOWABLE SPANS AND DESIGN PRESSURES FOR THIS MOUNTING CONDITION PER TABLE BELOW.

**ALLOWABLE DESIGN PRESSURES FOR DETAIL 3/8:**

SPAN:	MAX DESIGN PRESSURE:
72"	+111.5 psf / -111.5 psf
90"	+89.2 psf / -89.2 psf
108"	+74.3 psf / -74.3 psf
126"	+61.2 psf / -63.7 psf
144"	+42.4 psf / -55.7 psf

**3** 1"x4"x0.125" TUBE TO EXISTING WALL STUDS  
N.T.S. VERT SECTION

**FRANK L. BERNARDO**  
PROFESSIONAL ENGINEER  
STATE OF FLORIDA  
LICENSE # 103292012  
WWW.ENGEXP.COM  
160 SW 12th Avenue, #1067A  
Deerfield Beach, FL 33442  
Ph: (954) 354-0660 Fax: (954) 354-0662  
A FRANK L. BERNARDO, P.E., INC. INNOVATION

**IMPACT TECHNOLOGY, INC.**  
8786 WEST 25TH AVENUE  
HIALEAH, FL 33016  
PHONE: 305 - 558 - 7739

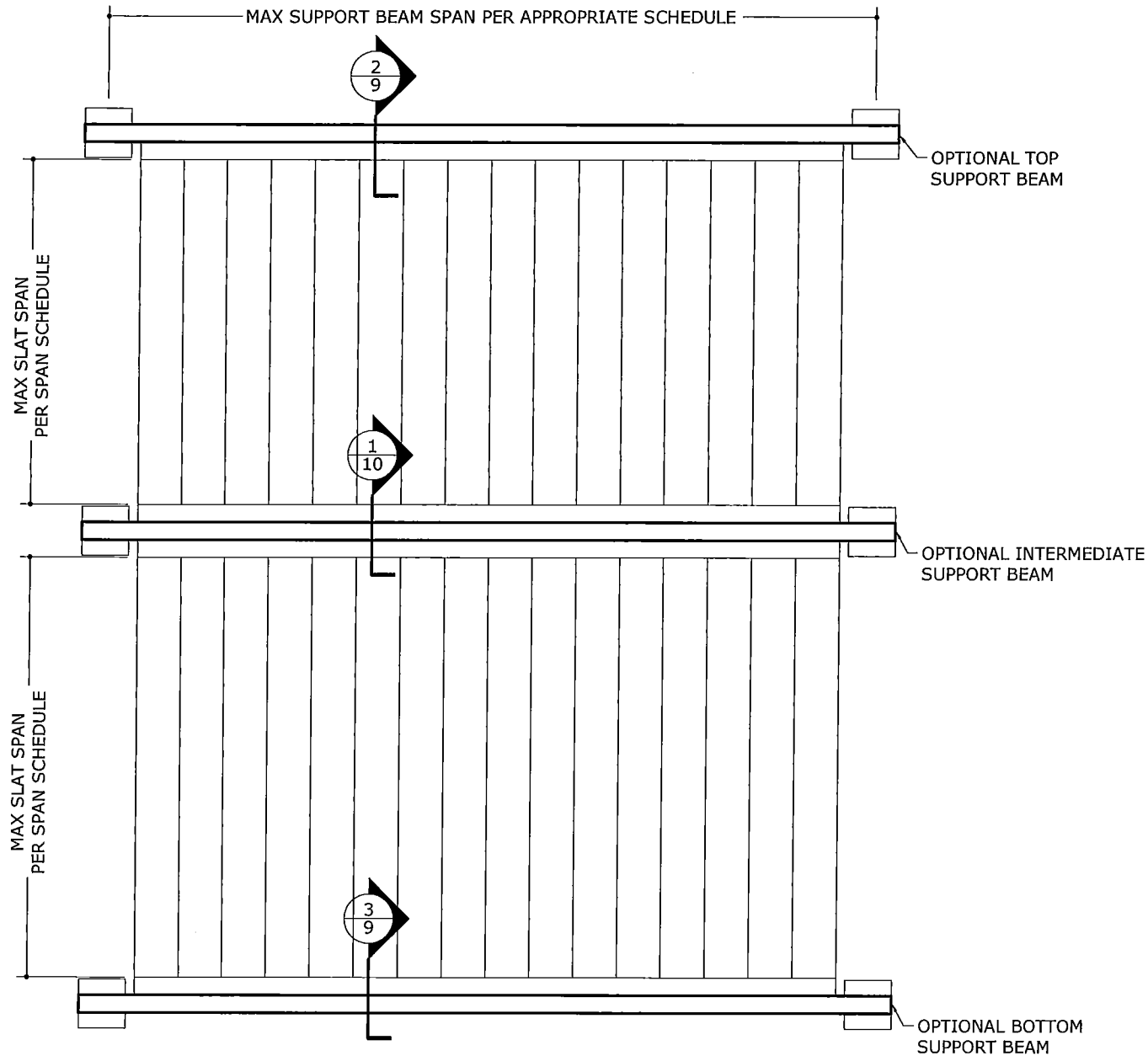
**ACCORDION SHUTTER**  
WITH ALUMINUM OR POLYCARBONATE BLADES  
FLORIDA STATEWIDE PRODUCT APPROVAL

REMARKS	DRWN	CHKD	DATE
INITIAL SUBMITTAL	KL	FLB	05/03/09
REV. PER NEW TESTING	KL	FLB	12/22/09
WIND ZONE 1-3 GLASS SEP	KL	FLB	05/12/10
REV PER CLIENT REQUEST	KL	FLB	6/22/11
2010 FBC	KL	FLB	02/14/12

**09-ITI-0001**  
SCALE: 1/4" = 1'-0"  
PAGE DESCRIPTION: 04  
11



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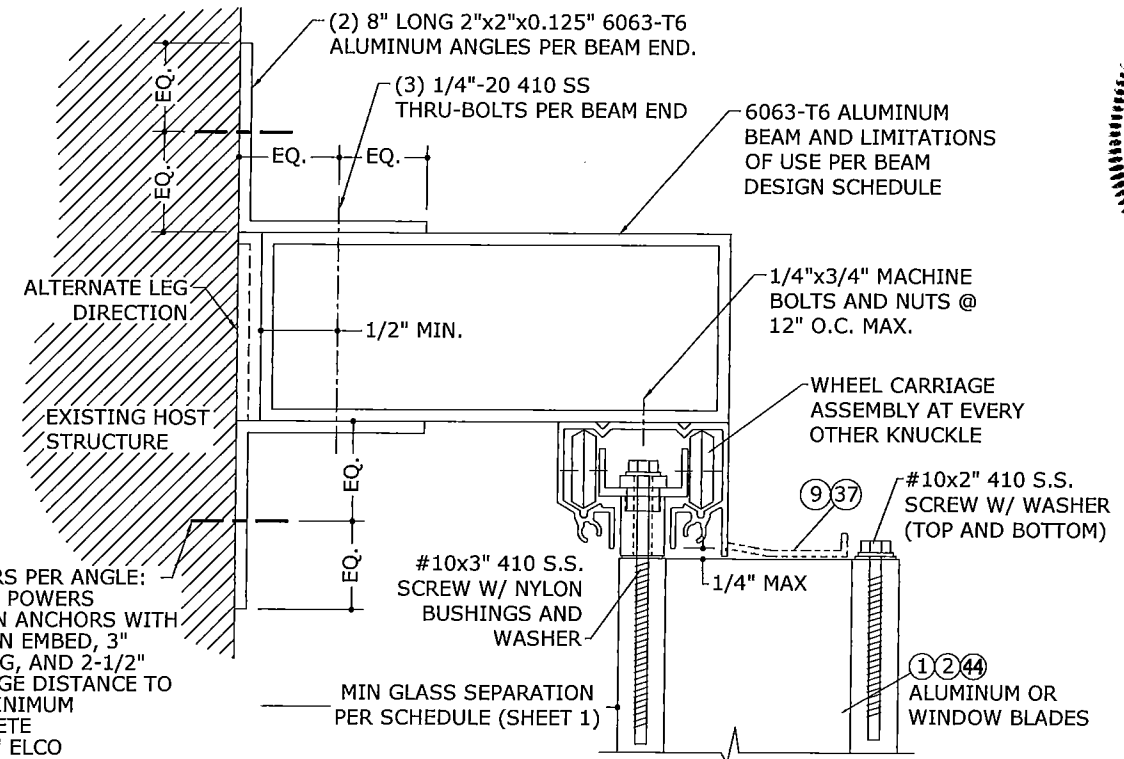


**1**  
9 ELEVATION WITH STORM BARS  
N.T.S. EXTERIOR ELEV

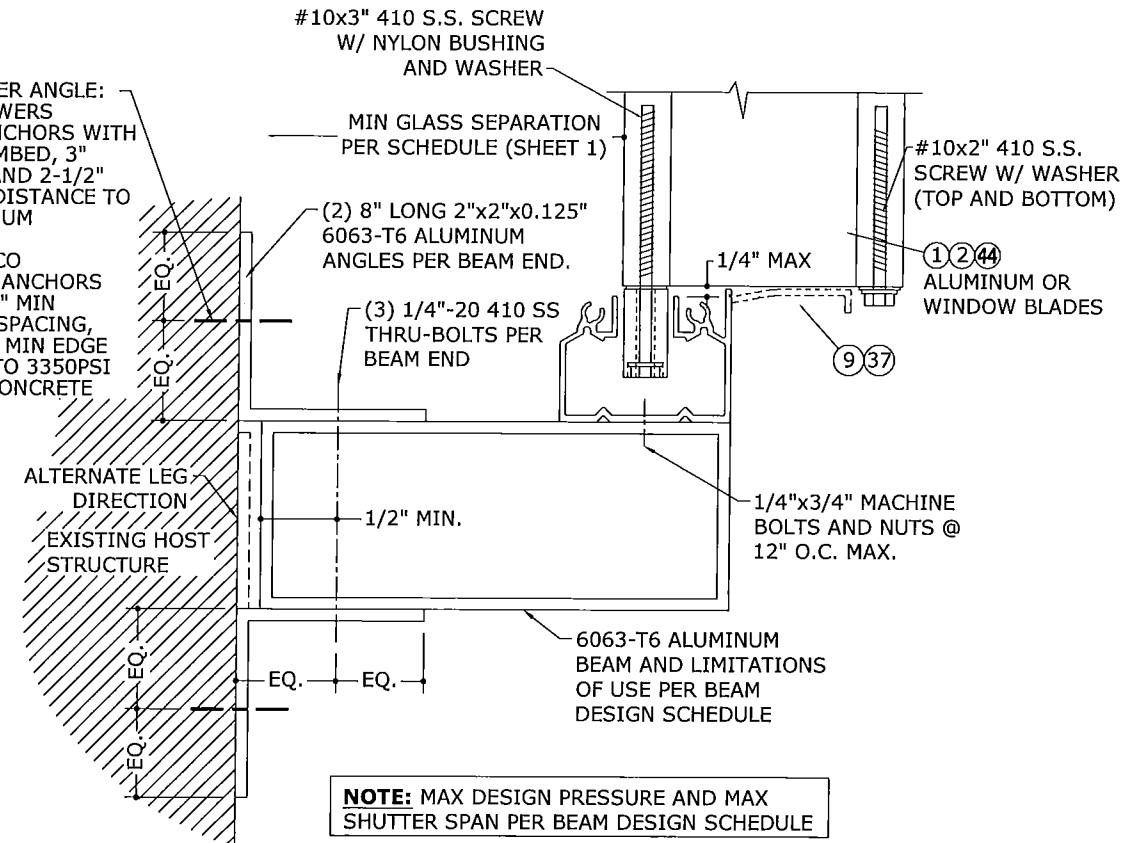
BEAM SIZE	SHUTTER SPAN	BEAM SPAN	ALLOWABLE DESIGN PRESSURE		
			TOP BEAM	BOTTOM BEAM	INTERMEDIATE BEAM
			2"x5"x0.125"	5'-0"	9'-5"
2"x8"x0.072"/0.224"	8'-0"	8'-1"	73.0 PSF	73.0 PSF	36.0 PSF
	10'-0"	7'-6"	73.0 PSF	73.0 PSF	36.0 PSF
	5'-0"	14'-0"	68.4 PSF	81.0 PSF	34.2 PSF
2"x9"x0.072"/0.224"	8'-0"	11'-6"	61.8 PSF	83.1 PSF	30.9 PSF
	10'-0"	10'-4"	61.1 PSF	82.3 PSF	30.5 PSF
	5'-0"	15'-5"	59.4 PSF	80.5 PSF	29.7 PSF
2"x8"x0.072"/0.224"	8'-0"	12'-5"	56.3 PSF	80.4 PSF	28.2 PSF
	10'-0"	11'-2"	55.5 PSF	79.6 PSF	27.7 PSF

- (3) ANCHORS PER ANGLE:
- 1/4"-20" POWERS CALK-IN ANCHORS WITH 7/8" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3KSI MINIMUM CONCRETE
  - OR 1/4" ELCO CRETEFLEX ANCHORS WITH 1-3/4" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3350PSI MINIMUM CONCRETE

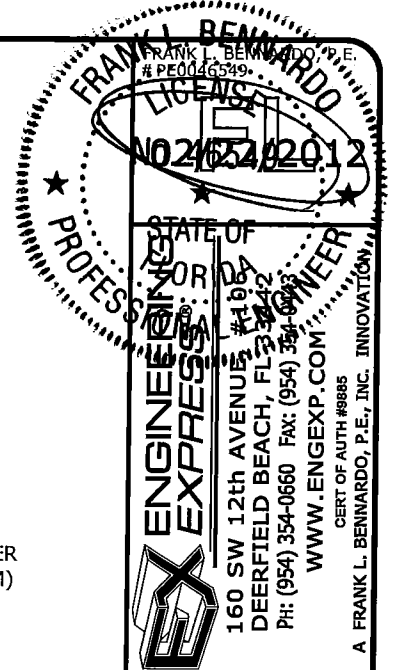
- (3) ANCHORS PER ANGLE:
- 1/4"-20" POWERS CALK-IN ANCHORS WITH 7/8" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3KSI MINIMUM CONCRETE
  - OR 1/4" ELCO CRETEFLEX ANCHORS WITH 1-3/4" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3350PSI MINIMUM CONCRETE



**2**  
9 TOP SUPPORT BEAM  
N.T.S. VERT SECTION



**3**  
9 BOTTOM SUPPORT BEAM  
N.T.S. VERT SECTION



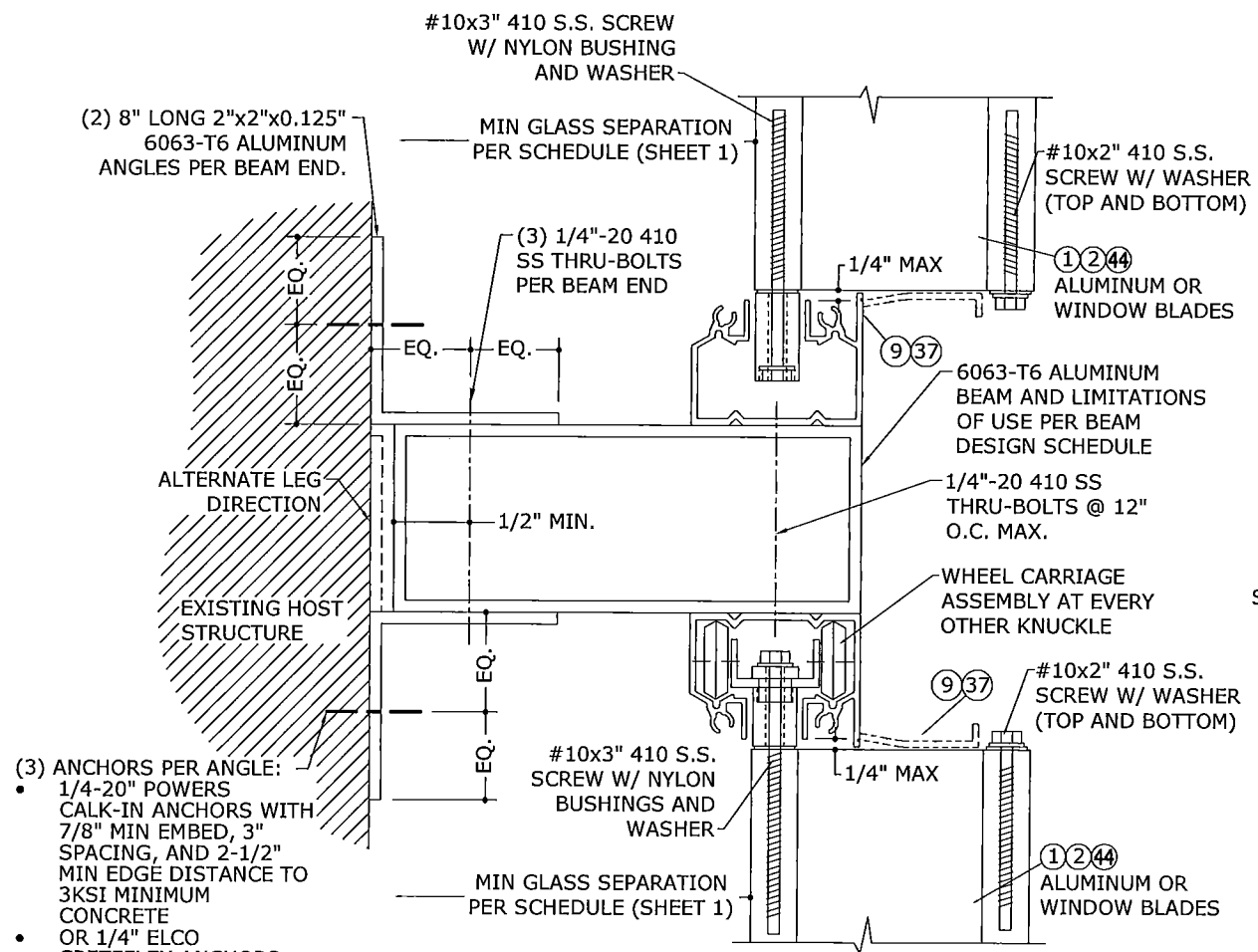
**IMPACT TECHNOLOGY, INC.**  
7860 WEST 25TH AVENUE  
HTALEAH, FL 33016  
PHONE: 305 - 558 - 7739

**ACCORDION SHUTTER**  
WITH ALUMINUM OR POLYCARBONATE BLADES  
FLORIDA STATEWIDE PRODUCT APPROVAL

REMARKS	DRWN	CHKD	DATE
INITIAL SUBMITTAL	KL	FLB	05/09/09
REV PER NEW TESTING	KL	FLB	12/22/09
WIND ZONE 1-3 GLASS SEP	KL	FLB	06/12/10
REV PER CLIENT REQUEST	EFT	KL	6/22/11
2010 FBC	KL	FLB	02/14/12

**09-ITI-0001**  
SCALE: - 04  
PAGE DESCRIPTION:  
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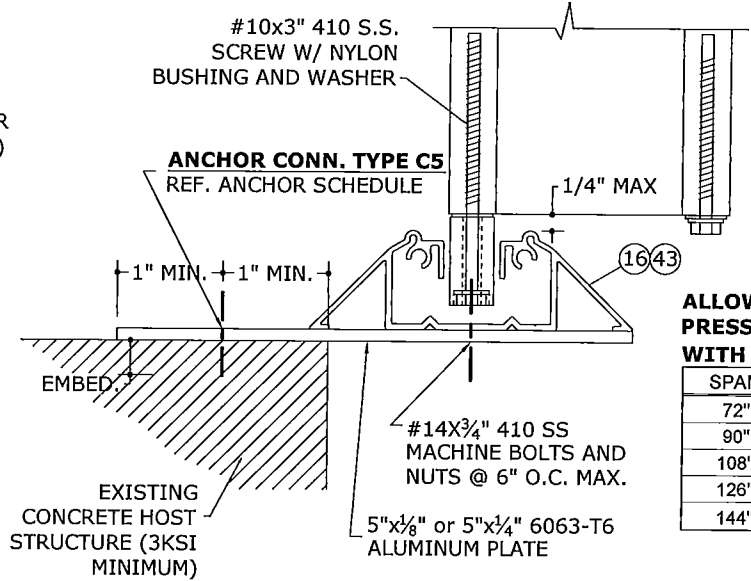
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- (3) ANCHORS PER ANGLE:
- 1/4"-20" POWERS CALK-IN ANCHORS WITH 7/8" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3KSI MINIMUM CONCRETE
  - OR 1/4" ELCO CRETEFLEX ANCHORS WITH 1-3/4" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3350PSI MINIMUM CONCRETE

**1** INTERMEDIATE SUPPORT BEAM  
10 N.T.S. VERT SECTION

BEAM SIZE	SHUTTER SPAN	BEAM SPAN	ALLOWABLE DESIGN PRESSURE		
			TOP BEAM	BOTTOM BEAM	INTERMEDIATE BEAM
2"x5"x0.125"	5'-0"	9'-5"	74.0 PSF	74.0 PSF	37.0 PSF
	8'-0"	8'-1"	73.0 PSF	73.0 PSF	36.0 PSF
	10'-0"	7'-6"	73.0 PSF	73.0 PSF	36.0 PSF
2"x8"x0.072"/0.224"	5'-0"	14'-0"	68.4 PSF	81.0 PSF	34.2 PSF
	8'-0"	11'-6"	61.8 PSF	83.1 PSF	30.9 PSF
	10'-0"	10'-4"	61.1 PSF	82.3 PSF	30.5 PSF
2"x9"x0.072"/0.224"	5'-0"	15'-5"	59.4 PSF	80.5 PSF	29.7 PSF
	8'-0"	12'-5"	56.3 PSF	80.4 PSF	28.2 PSF
	10'-0"	11'-2"	55.5 PSF	79.6 PSF	27.7 PSF



**2** 5"x1/4" OR 5"x1/8" PLATE TO EXISTING HOST STRUCTURE  
10 N.T.S. VERT SECTION

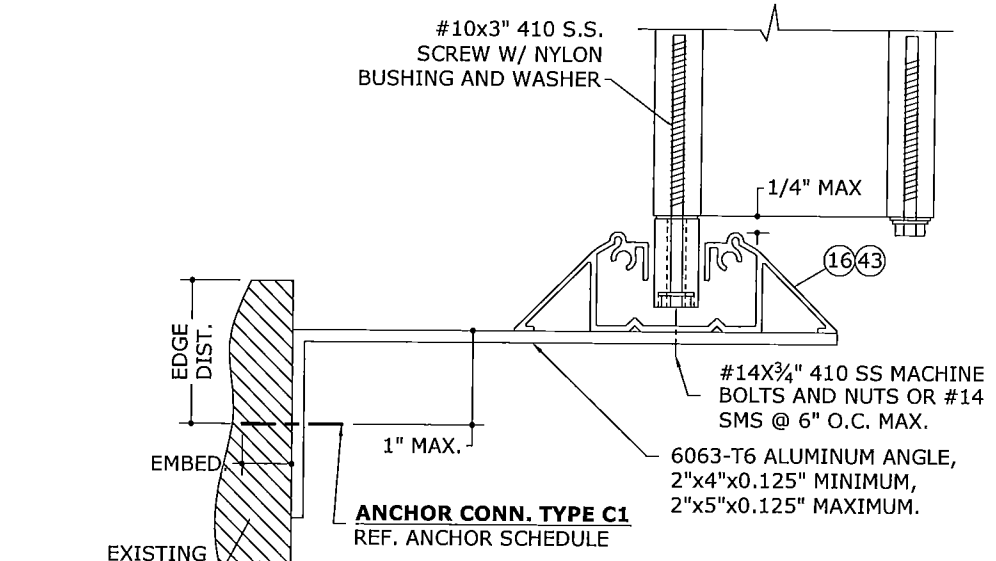
NOTE: MAXIMUM ALLOWABLE SPANS AND DESIGN PRESSURES FOR ALUMINUM PLATE MOUNTING CONDITION PER TABLE BELOW.

**ALLOWABLE DESIGN PRESSURES FOR DETAIL 2/10 WITH 3/4" ALUMINUM PLATE:**

SPAN:	MAX DESIGN PRESSURE:
72"	+140.7 psf / -140.7 psf
90"	+112.6 psf / -112.6 psf
108"	+93.8 psf / -93.8 psf
126"	+61.2 psf / -76.2 psf
144"	+42.4 psf / -62.4 psf

**ALLOWABLE DESIGN PRESSURES FOR DETAIL 2/10 WITH 1/8" ALUMINUM PLATE:**

SPAN:	MAX DESIGN PRESSURE:
72"	+65.7 psf / -65.7 psf
90"	+52.5 psf / -52.5 psf
108"	+43.8 psf / -43.8 psf
126"	+37.5 psf / -37.5 psf
144"	+32.8 psf / -32.8 psf

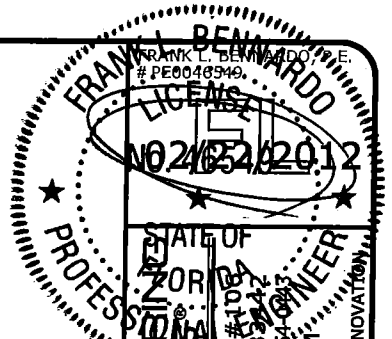


**3** 2"x5" ANGLE W/ WALKOVER TRACK  
10 N.T.S. VERT SECTION

NOTE: MAXIMUM ALLOWABLE SPANS AND DESIGN PRESSURES FOR ALUMINUM ANGLE MOUNTING CONDITION PER TABLE BELOW.

**ALLOWABLE DESIGN PRESSURES FOR DETAIL 3/10 WITH 1/8" ALUMINUM ANGLE:**

SPAN:	MAX DESIGN PRESSURE:
72"	+77.1 psf / -77.1 psf
90"	+61.7 psf / -61.7 psf
108"	+53.4 psf / -53.4 psf
126"	+44.0 psf / -44.0 psf
144"	+38.5 psf / -38.5 psf



**IMPACT TECHNOLOGY, INC.**  
7860 WEST 25TH AVENUE  
HTALEAH, FL 33016  
PHONE: 305 - 558 - 7739

ACCORDION SHUTTER  
WITH ALUMINUM OR POLYCARBONATE BLADES  
FLORIDA STATEWIDE PRODUCT APPROVAL

REMARKS	DRWN	CHKD	DATE
INITIAL SUBMITTAL	KL	FLB	05/03/09
REV. PER NEW TESTING	KL	FLB	12/22/09
WIND ZONE 1-3 GLASS SEP	KL	FLB	05/12/10
REV. PER CLIENT REQUEST	EFT	IKL	6/22/11
2010 FBC	KL	FLB	02/14/12

09-ITI-0001  
SCALE: 1/4" = 1'-0"  
PAGE DESCRIPTION: 04  
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ANCHOR SCHEDULE

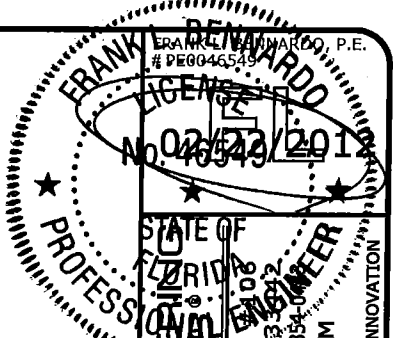
F:\01 Project Files\Impact Technology (ITI)\2009\09-ITI-0001 Impact Technology Assoc - Accordion Shutter - Accordion Shutter.dwg

02/22/2012 - 3:36pm

Table with columns: HOST STRUCT., ANCHOR, LOAD (psf), and various span lengths (C1-C5) under categories: 2.5" MIN EDGE DISTANCE and 3/4" MIN EDGE DISTANCE.

ANCHOR NOTES:

- 1. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
2. TAPCONS MAY BE CARBON STEEL OR STAINLESS STEEL AND SHALL BE MANUFACTURED BY ITW.
3. ENSURE MINIMUM 2.5" EDGE DISTANCE FOR ALL ANCHORS TO CONCRETE & TO HOLLOW BLOCK.
4. WHERE ANCHORS FASTEN TO NARROW FACE OF STUD FRAMING, ANCHOR SHALL BE LOCATED IN CENTER OF NOMINAL 2x (MIN) WOOD STUD (i.e. 3/4" EDGE DISTANCE IS ACCEPTABLE FOR ANCHORS TO WOOD FRAMING).
5. WOOD HOST STRUCTURE SHALL BE "SOUTHERN PINE" G=0.55 OR GREATER DENSITY.
6. MINIMUM EMBEDMENT SHALL BE AS NOTED IN ANCHOR SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
7. 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.
8. WHERE EXISTING STRUCTURE IS WOOD FRAMING, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT INTO PLYWOOD.
9. WOOD BUCKS (BY OTHERS) SHALL BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE EXISTING STRUCTURE.
10. MACHINE SCREWS SHALL HAVE MINIMUM OF 1/2" ENGAGEMENT OF THREADS IN BASE ANCHOR AND MAY HAVE EITHER A PAN HEAD, TRUSS HEAD, OR WAFFER HEAD ("SIDEWALK BOLT") U.N.O.
11. [Hatched] DESIGNATES ANCHOR CONDITIONS WHICH ARE NOT ACCEPTABLE FOR USE.
12. \* DESIGNATES ANCHORS WHICH ARE REMOVABLE.



FRANK L. BENNARDO, P.E.
No. 024543
STATE OF FLORIDA
PROFESSIONAL ENGINEER
EXPRESS
160 SW 12th AVENUE, Suite 3106
DEERFIELD BEACH, FL 33442
Ph: (954) 354-0660 FAX: (954) 354-0667
WWW.ENGEXP.COM
CERT. OF AUTH. #8885
A FRANK L. BENNARDO, P.E., INC. INNOVATION

IMPACT TECHNOLOGY, INC.
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HTALEAH, FL 33016
PHONE: 305 - 558 - 7739
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Table with columns: REMARKS, DRWN, CHKD, DATE. Includes entries for Initial Submittal, Rev. per New Testing, and Rev. per Client Request.

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SCALE: 1/8" = 1'-0" 04
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