



MIAMI-DADE COUNTY
BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

www.miamidade.gov

NOTICE OF ACCEPTANCE (NOA)

Impact Shutter Technology, Inc.
7860 West 25th Avenue
Hialeah, Florida 33016

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Accordion Shutter with Aluminum or Polycarbonate Blades

APPROVAL DOCUMENT: Drawing No. 08-ITI-0002, titled "Accordion Shutter with Alum. or Polycarbonate Blades", sheets 1 through 10 of 10, prepared by Engineering Express, dated 09/23/08, last revision dated 11/04/09, signed and sealed by Frank L. Bennardo, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the approval date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: Large and Small Missile Impact

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA #08-0310.03 and consists of this page 1, evidence submitted pages E-1 & E-2 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



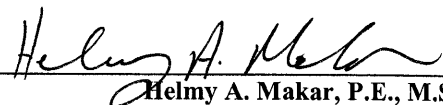
Helmy A. Makar
 12/09/2009

NOA No. 09-1110.01
Expiration Date:10/16/2013
Approval Date:12/09/2009
Page 1

Impact Shutter Technology, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

- 1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #08-0310.03**
- A. DRAWINGS:**
 1. *Drawing No. 08-ITI-0002, titled "Accordion Shutter with Alum. or Polycarbonate Blades", sheets 1 through 8 of 8, prepared by Engineering Express, dated September 23, 2008, signed and sealed by Frank L. Bennardo, P.E., on September 23, 2008.*
- B. TESTS**
 1. *See Association's generic approval under 08-0599.*
- C. CALCULATIONS**
 1. *See Association's generic approval under 08-0599.*
- D. QUALITY ASSURANCE**
 1. *By Miami-Dade County Building Code Compliance Office.*
- E. MATERIAL CERTIFICATIONS**
 1. *See Association's generic approval under 08-0599.*
- F. STATEMENTS**
 1. *Release letter issued by Impact Technology Association, Inc., dated September 23, 2008, certifying this product to meet the criteria of product tested and approved, and allowing Impact Shutter Technology, Inc. to use the test results approved under Miami-Dade County Approval No. 08-0599, signed by Tanya Tarantino.*
 2. *Acknowledgment letter by Impact Shutter Technology, Inc., dated September 23, 2008, signed by Tanya Tarantino.*
 3. *Letter by Engineering Express, dated September 23, 2008, certifying that the drawing (No. 08-ITI-0002) prepared for Impact Shutter Technology, Inc., signed and sealed by Mr. Frank L. Bennardo, P.E., is engineering wise identical to Impact Technology Association, Inc., generic drawing (No. 08-ITI-0001).*



Helmy A. Makar, P.E., M.S.
Senior Product Control Examiner
NOA No. 09-1110.01
Expiration Date: 10/16/2013
Approval Date: 12/09/2009

Impact Shutter Technology, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS:

1. *Drawing No. 08-ITI-0002, titled "Accordion Shutter with Alum. or Polycarbonate Blades", sheets 1 through 10 of 10, prepared by Engineering Express, dated 09/23/08, last revision dated 11/04/09, signed and sealed by Frank L. Bennardo, P.E.*

B. TESTS

1. *See Association's generic approval under 09-1337.*

C. CALCULATIONS

1. *See Association's generic approval under 09-1337.*

D. QUALITY ASSURANCE

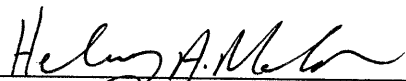
1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *See Association's generic approval under 09-1337.*

F. STATEMENTS

1. *Release letter issued by Impact Technology Association, Inc., dated September 23, 2008, certifying this product to meet the criteria of product tested and approved, and allowing Impact Shutter Technology, Inc. to use the test results approved under Miami-Dade County Approval No. 08-0599, signed by Tanya Tarantino.*
2. *Acknowledgment letter by Impact Shutter Technology, Inc., dated September 23, 2008, signed by Tanya Tarantino.*
3. *Letter by Engineering Express, dated November 04, 2009, certifying that the drawing (No. 08-ITI-0002) prepared for Impact Shutter Technology, Inc., signed and sealed by Mr. Frank L. Bennardo, P.E., is engineering wise identical to Impact Technology Association, Inc., generic drawing (No. 08-ITI-0001).*



Helmy A. Makar, P.E., M.S.
Senior Product Control Examiner
NOA No. 09-1110.01
Expiration Date: 10/16/2013
Approval Date: 12/09/2009

ACCORDION SHUTTER

WITH ALUMINUM OR POLYCARBONATE BLADES

FRANK L. BENNARDO, P.E.
PE0046549

11/04/2009

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
A FRANK L. BENNARDO, P.E., INC. INNOVATION

IMPACT SHUTTER TECHNOLOGY, INC.
7860 W 25TH AVENUE
HIALEAH, FL 33016
305 - 558 - 7739
ACCORDION SHUTTER
WITH ALUMINUM OR POLYCARBONATE BLADES
MIAMI-DADE NOTICE OF ACCEPTANCE

ALLOWABLE SPAN SCHEDULE

| SLAT SPAN | MAXIMUM ALLOWABLE DESIGN PRESSURES | | | | | |
|-----------|------------------------------------|-------------|---|------------|--|------------|
| | ALUMINUM BLADES ONLY | | WINDOW BLADES OR ALUMINUM/WINDOW BLADE COMBINATION* | | SHUTTER WITH ALUMINUM BLADES AND ONE SINGLE WINDOW BLADE** | |
| 72" | + 152.5 PSF | - 152.5 PSF | | | | |
| 90" | + 117.8 PSF | - 117.8 PSF | | | | |
| 108" | + 100.5 PSF | - 100.5 PSF | + 93.6 PSF | - 93.6 PSF | | |
| 126" | + 61.2 PSF | - 76.2 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 |

PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 09-1110.01
Expiration Date 10/16/2013
By *Helmut A. Nelson*
Miami Dade Product Control
Division

SPAN SCHEDULE NOTES:

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

MINIMUM GLASS SEPARATION

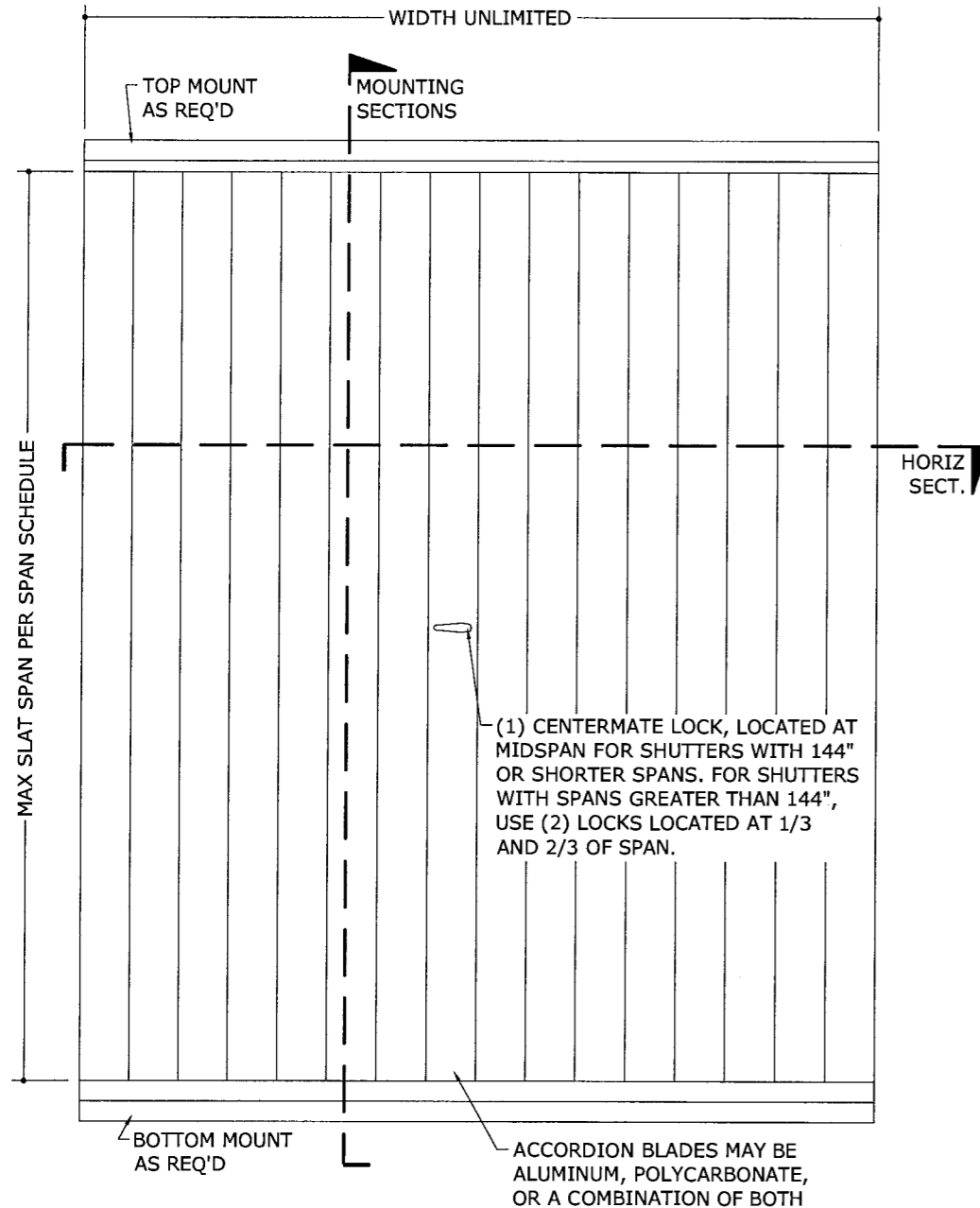
| SPAN LESS THAN: | ALUMINUM BLADES ONLY | | WINDOW BLADES OR ALUMINUM/WINDOW BLADE COMBINATION* | | SHUTTER WITH ALUMINUM BLADES AND ONE SINGLE WINDOW BLADE** | |
|-----------------|---------------------------------------|---|---|---|--|---|
| | INSTALLATIONS 30' ABOVE GRADE OR LESS | INSTALLATIONS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

GLASS SEPARATION SCHEDULE NOTES:

- * APPLICABLE FOR INSTALLATIONS UTILIZING ONE OR MORE WINDOW BLADES.
- ** ONLY APPLICABLE FOR INSTALLATIONS WITH ONE SINGLE WINDOW BLADE SLAT, AND THE REMAINDER OF BLADES ALUMINUM.

GENERAL NOTES

- THE SYSTEM DESCRIBED HEREIN HAS BEEN DESIGNED AND TESTED IN ACCORDANCE WITH THE 2007 EDITION OF THE FLORIDA BUILDING CODE, FOR USE WITHIN AND OUTSIDE THE HIGH VELOCITY HURRICANE ZONE, PER TAS 201 / 202 / 203.
- NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM. WIND LOAD DURATION FACTOR $C_d=1.6$ HAS BEEN USED FOR WOOD ANCHOR DESIGN.
- POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE.
- 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..
- 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.
- 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.
- ALL EXTRUSIONS SHALL BE 6063-T6 ALUMINUM ALLOY, UNLESS NOTED OTHERWISE.
- EACH SHUTTER ASSEMBLY SHALL BE PERMANENTLY LABELED AS FOLLOWS:
IMPACT TECHNOLOGY, INC.
MIAMI-DADE PRODUCT CONTROL APPROVED
- TOP & BOTTOM DETAILS SHOWN MAY BE INTERCHANGED AS FIELD CONDITIONS DICTATE.
- 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.
- ALL STEEL IN CONTACT WITH ALUMINUM SHALL BE PAINTED OR PLATED.



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

F:\01 Project Files\Impact Technology (ITI)\2008\08-ITI-0002 Impact Shutter Asm Member08-ITI-0002_04a Alum, Polycarb Accordion Shutter.dwg

11/04/2009 - 2:44pm keith

| REMARKS | DATE | DRWN | CHKD | DATE |
|-----------------------|----------|------|------|------|
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| REV. FOR UPDATED ASSN | 11/04/09 | KL | FLB | |

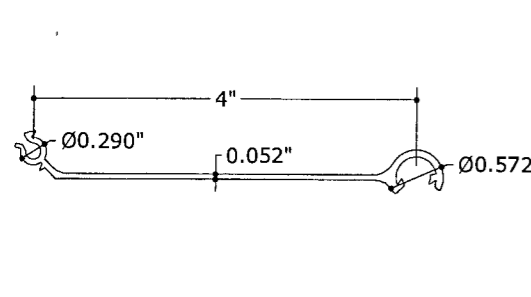
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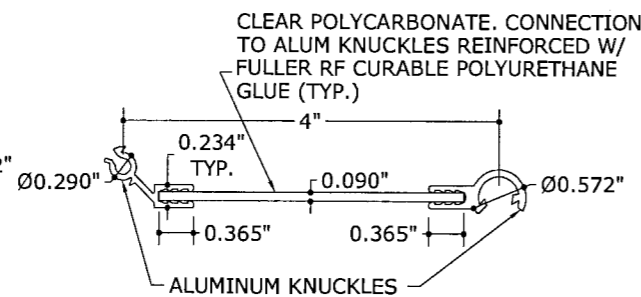
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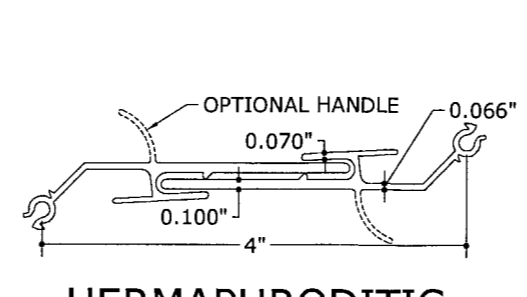
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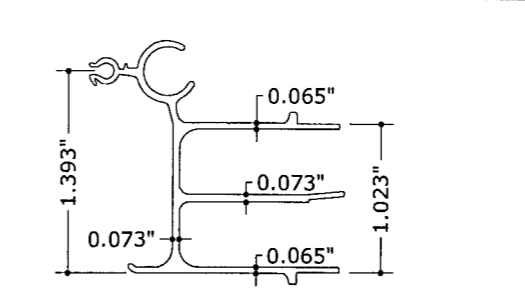
1 ALUMINUM BLADE
N.T.S. 6063-T6



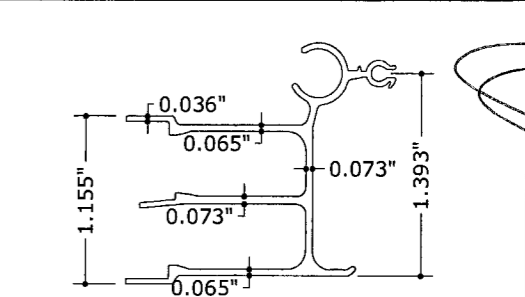
2 WINDOW BLADE
N.T.S. 6063-T6/POLYCARBONATE



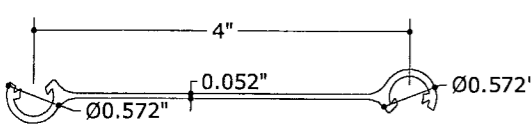
3 HERMAPHRODITIC CENTERMATE
N.T.S. 6063-T6



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



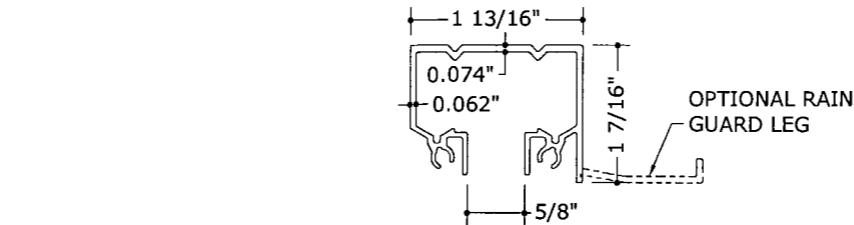
5 FEMALE CENTERMATE
N.T.S. 6063-T6



6 BLADE ADAPTER
N.T.S. 6063-T6

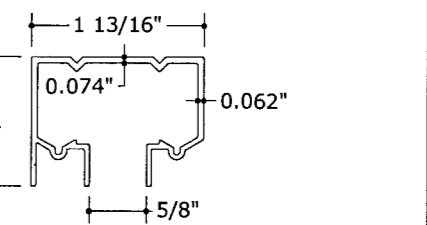


8 FLAT STARTER BLADE
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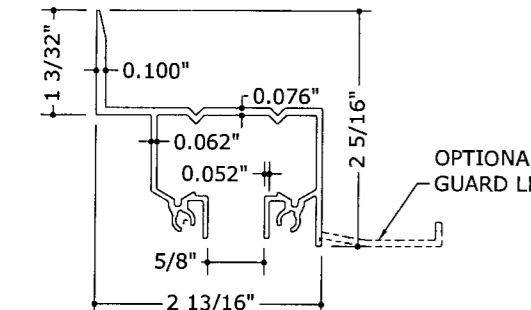


9 CEILING HEADER
N.T.S. 6063-T6

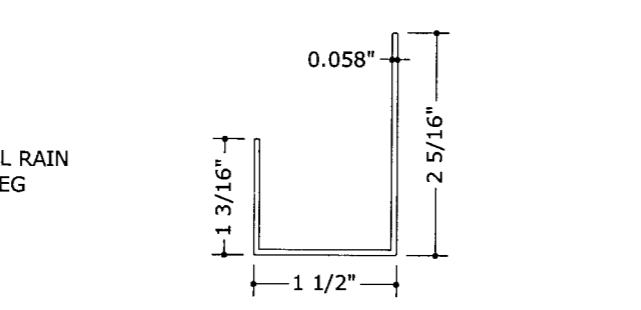
PRODUCT REVISED as complying with the Florida Building Code
Acceptance No. 09-1110.01
Expiration Date 10/16/2013
By *Healy Adelson*
Miami Dade Product Control Division



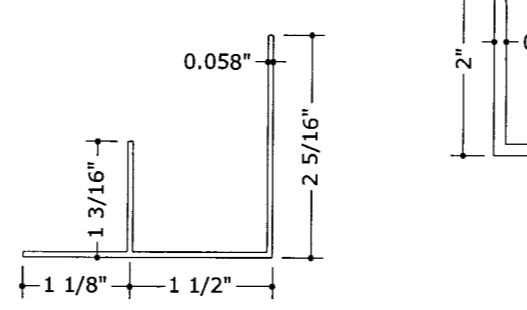
37 ALT. CEILING HEADER
N.T.S. 6063-T6



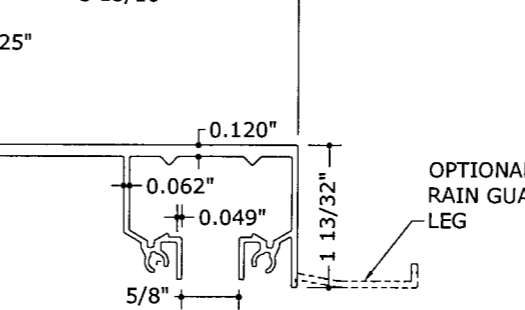
10 WALL HEADER
N.T.S. 6063-T6



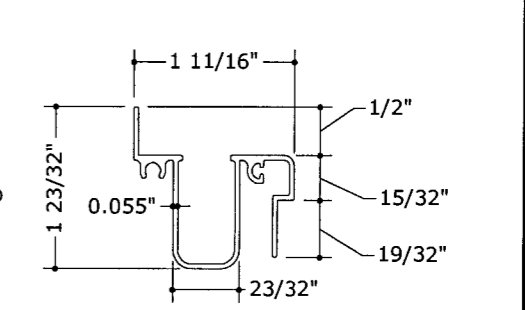
11 ADJUSTABLE SILL TRACK BOTTOM
N.T.S. 6063-T6



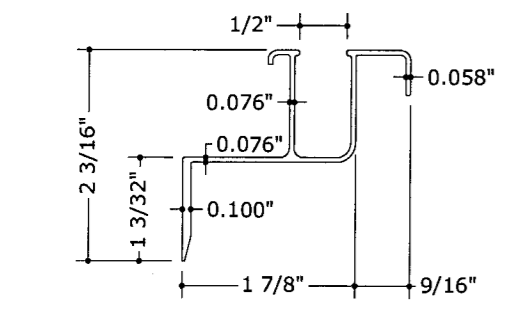
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N.T.S. 6063-T6



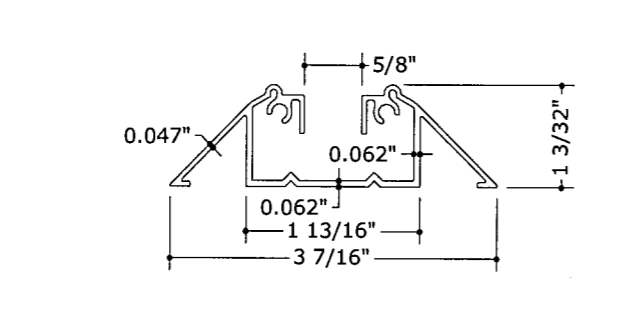
13 BUILD-OUT WALL HEADER
N.T.S. 6063-T6



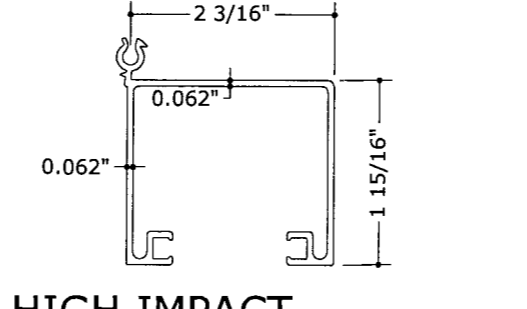
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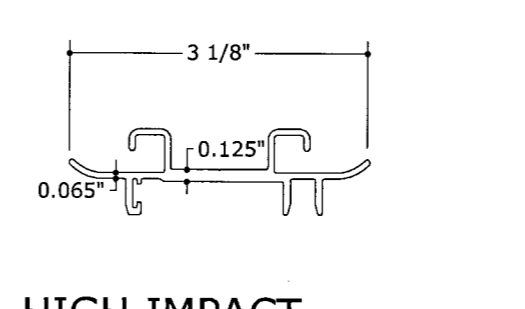
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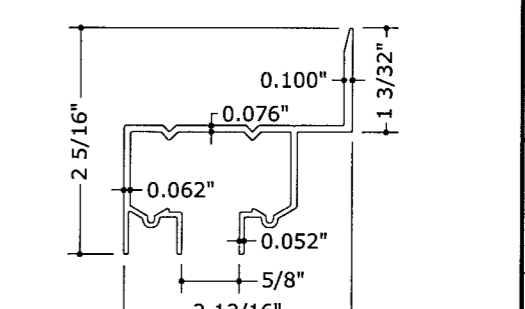
16 WALKOVER TRACK
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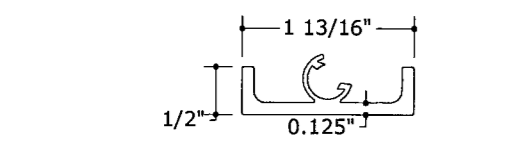
29 HIGH IMPACT CENTERMATE
N.T.S. 6063-T6



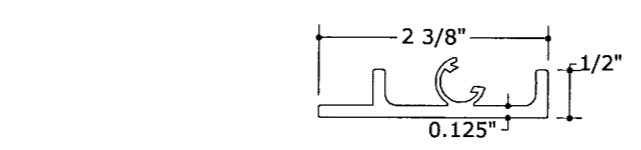
30 HIGH IMPACT CENTERMATE INSERT
N.T.S. 6063-T6



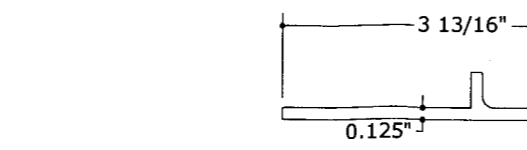
38 ALT. WALL HEADER
N.T.S. 6063-T6



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, P.E.
PE0046549

11/04/2009

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 #888
A FRANK L. BENNARDO, P.E., INC. INNOVATION

IMPACT SHUTTER TECHNOLOGY, INC.

7860 W 25TH AVENUE
HIALEAH, FL 33016
305 - 558 - 7739

ACCORDION SHUTTER
WITH ALUMINUM OR POLYCARBONATE BLADES
MIAMI-DADE NOTICE OF ACCEPTANCE

| REMARKS | DRWN | CHKD | DATE |
|-----------------------|------|------|----------|
| INIT ISSUE | KL | CL | 09/23/08 |
| REV. FOR UPDATED ASSN | KL | FLB | 11/04/09 |
| | | | |
| | | | |

08-ITI-0002

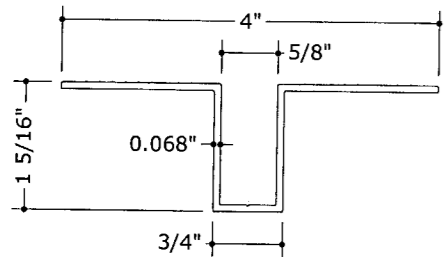
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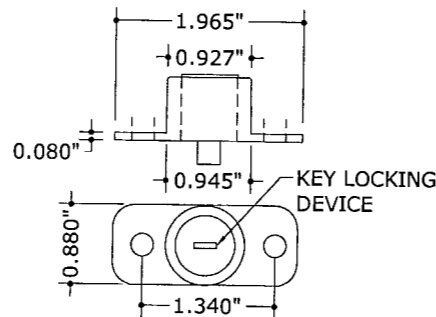
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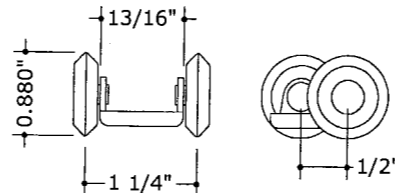
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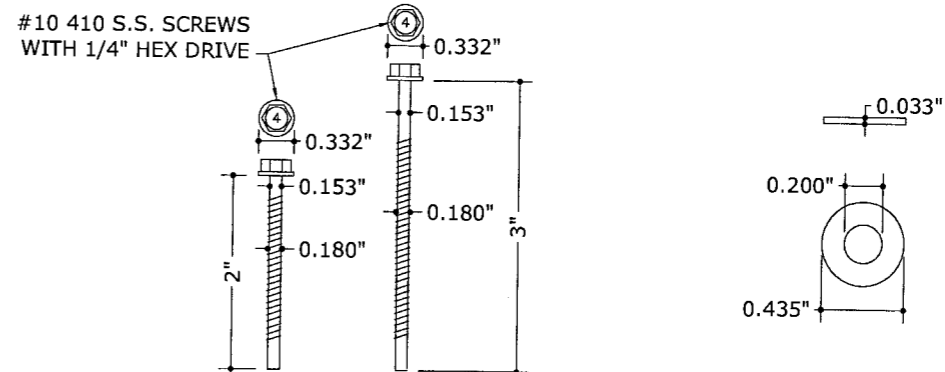
17 RECESSED TRACK
N.T.S. 6063-T5



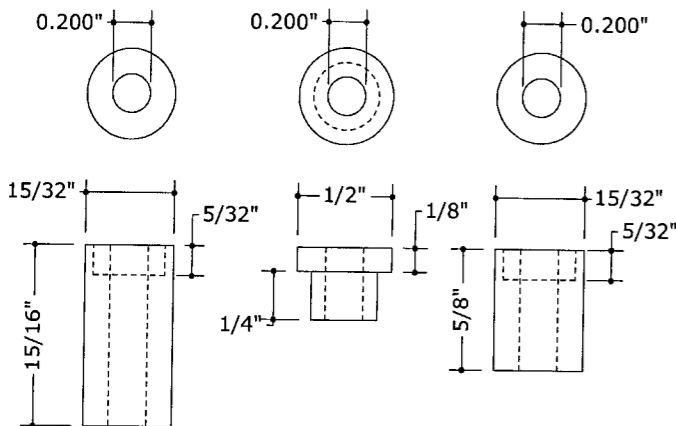
18 PUSH-BUTTON LOCK
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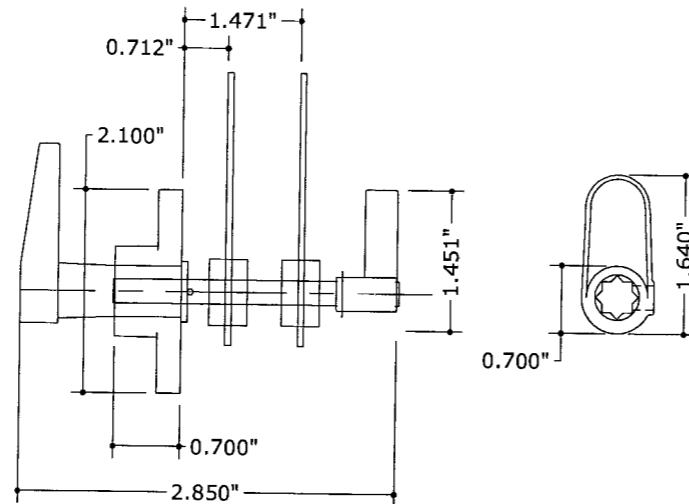
19 WHEEL CARRIAGE
N.T.S. NYLON/STAINLESS STEEL



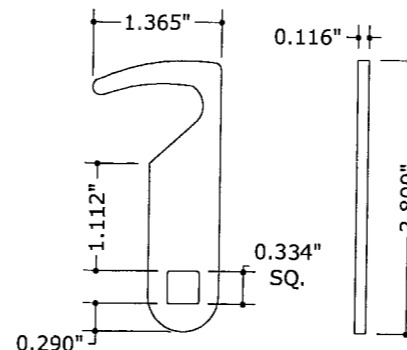
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21 WASHER N.T.S. STAINLESS STEEL



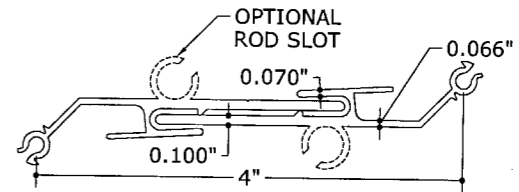
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N.T.S. NYLON



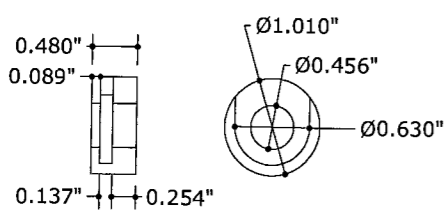
23 LOCK ASSEMBLY
N.T.S. ZINC ALLOY/STAINLESS STEEL



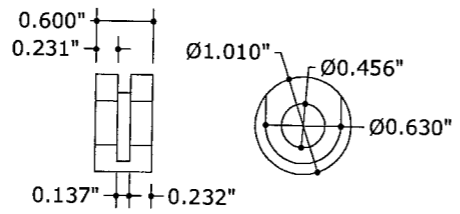
24 LOCKING ARM
N.T.S. 410 STAINLESS STEEL



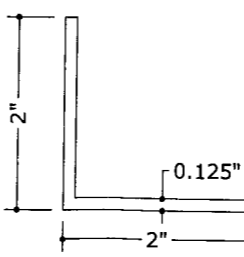
40 ALT. HERMAPHRODITIC CENTERMATE
N.T.S. 6063-T6



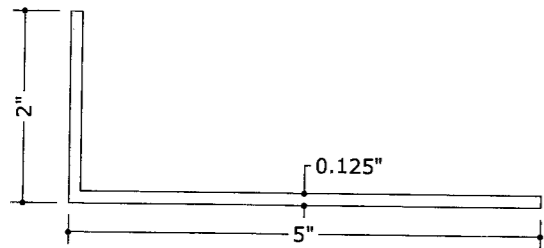
25 LEFT LOCKING ARM BUSHING
N.T.S. NYLON



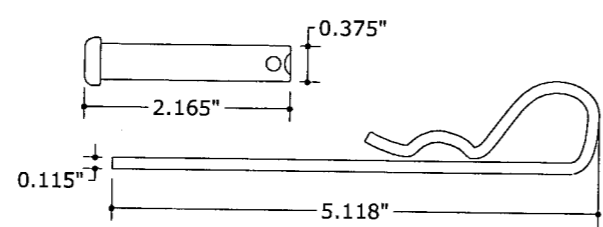
26 RIGHT LOCKING ARM BUSHING
N.T.S. NYLON



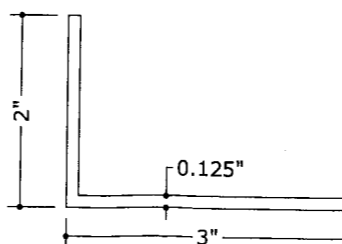
35 2"x2"x0.125" ANGLE
N.T.S. 6063-T6



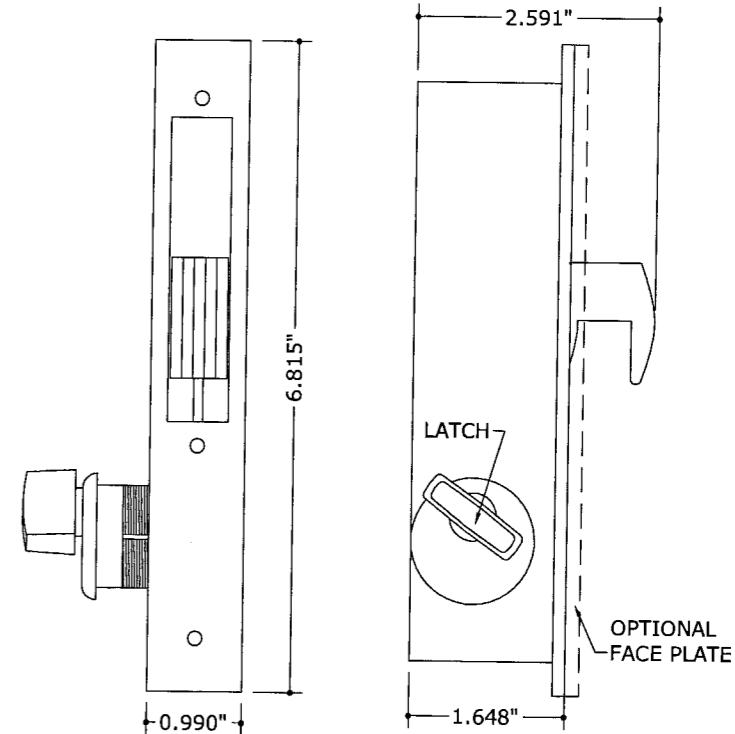
27 2"x5"x0.125" ANGLE
N.T.S. 6063-T6



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

PRODUCT REVISED
as complying with the Florida
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Acceptance No. 09-1110.01
Expiration Date 10/16/2013
By: *Helmy A. Matar*
Miami Data Product Control
Division

FRANK L. BENNARDO, P.E.
PE0046549

11/04/2009

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305 - 558 - 7739
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PAGE DESCRIPTION:

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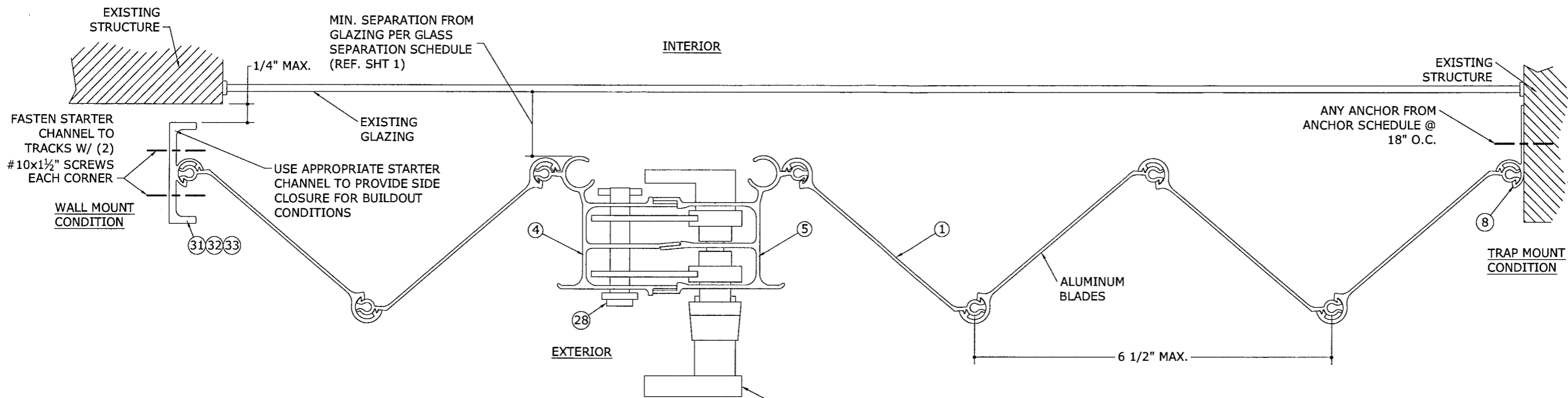
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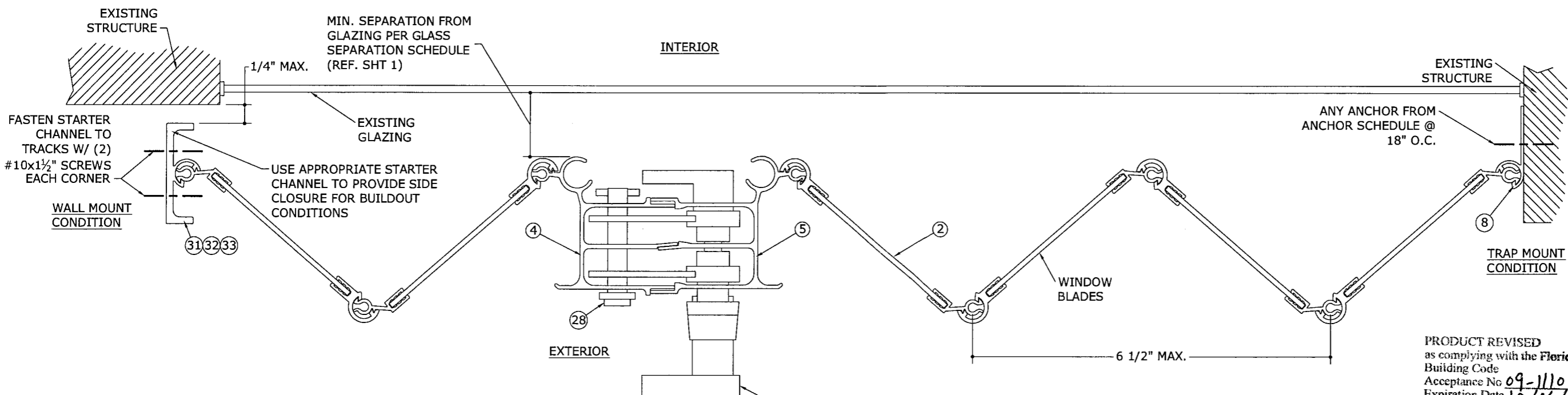
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4 10



1 HORIZONTAL SECTION W/ ALUMINUM BLADES
4 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)



2 HORIZONTAL SECTION W/ WINDOW BLADES
4 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)

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Acceptance No 09-1110-01
Expiration Date 10/16/2013
By *Helmut A. Miller*
Miami Dade Product Control Division

11/04/2009



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| REV. FOR UPDATED ASSN | 11/04/09 | KL | KL |

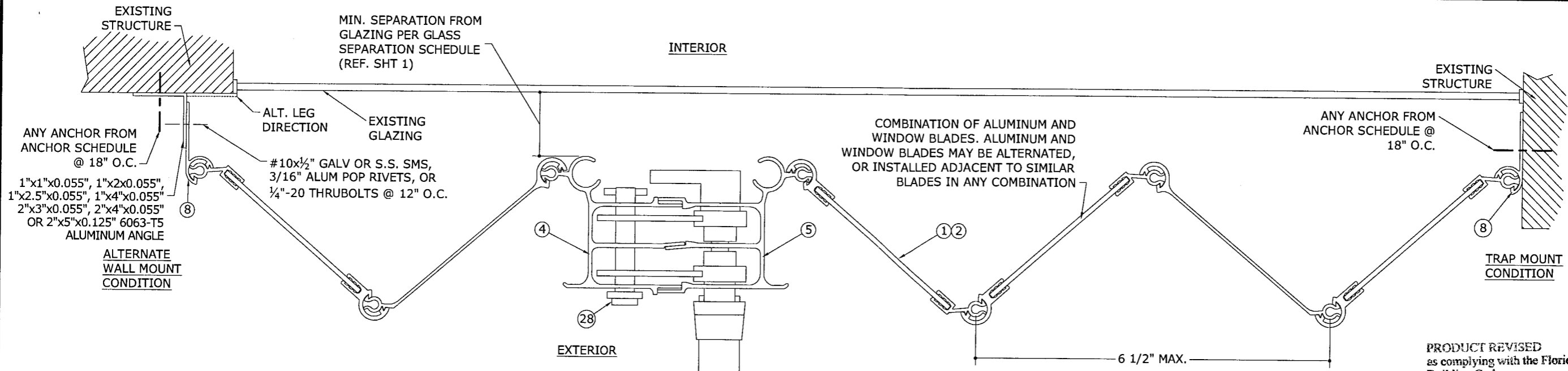
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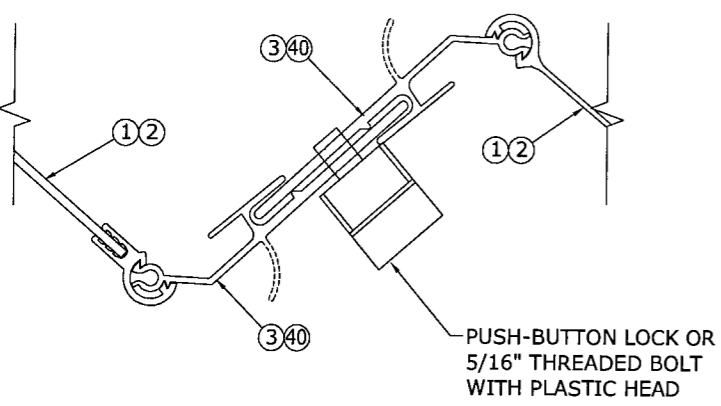
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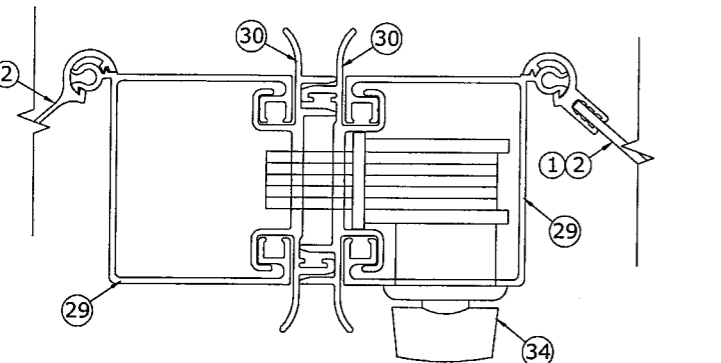


1
5 N.T.S. HORIZ SECTION
HORIZONTAL SECTION W/ COMBINATION BLADES

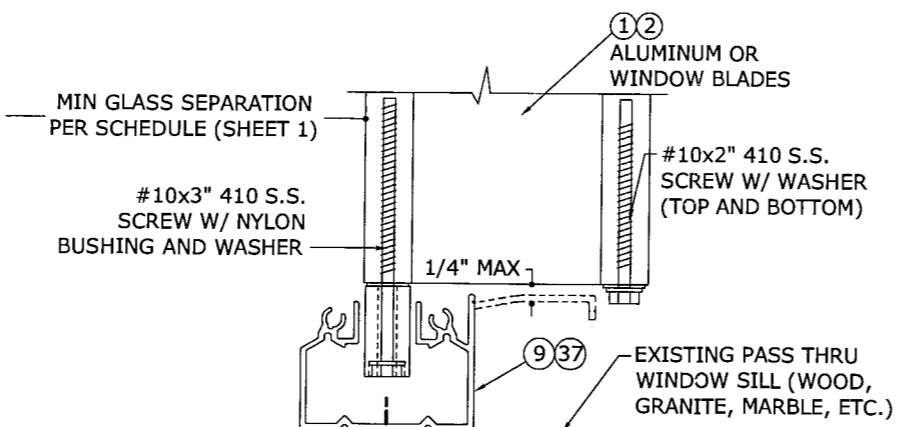
NOTE: LOCKS MAY BE MOUNTED ON INTERIOR OR EXTERIOR SIDE OF SHUTTER.



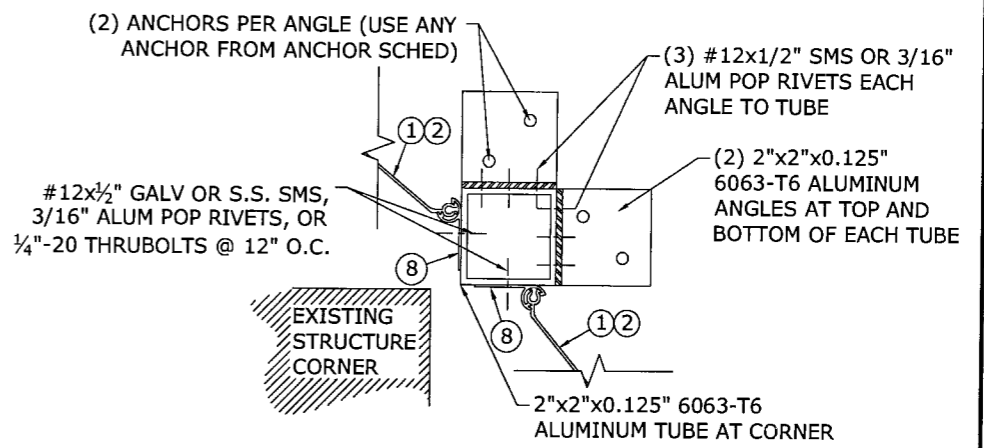
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5 N.T.S. HORIZ SECTION
ALT. HERMAPHRODITIC CENTERMATE



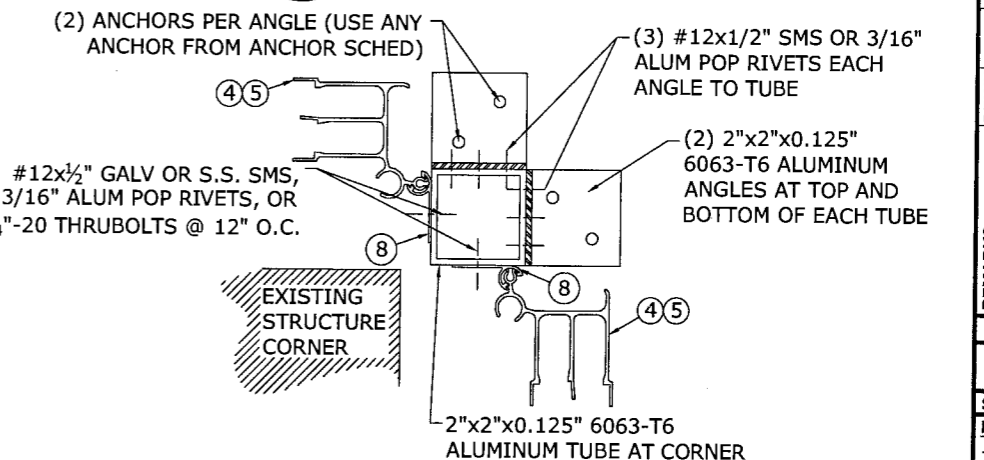
3
5 N.T.S. HORIZ SECTION
ALT. HIGH IMPACT CENTERMATE



4
5 N.T.S. VERT SECTION
PASS THRU WINDOW DETAIL



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



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

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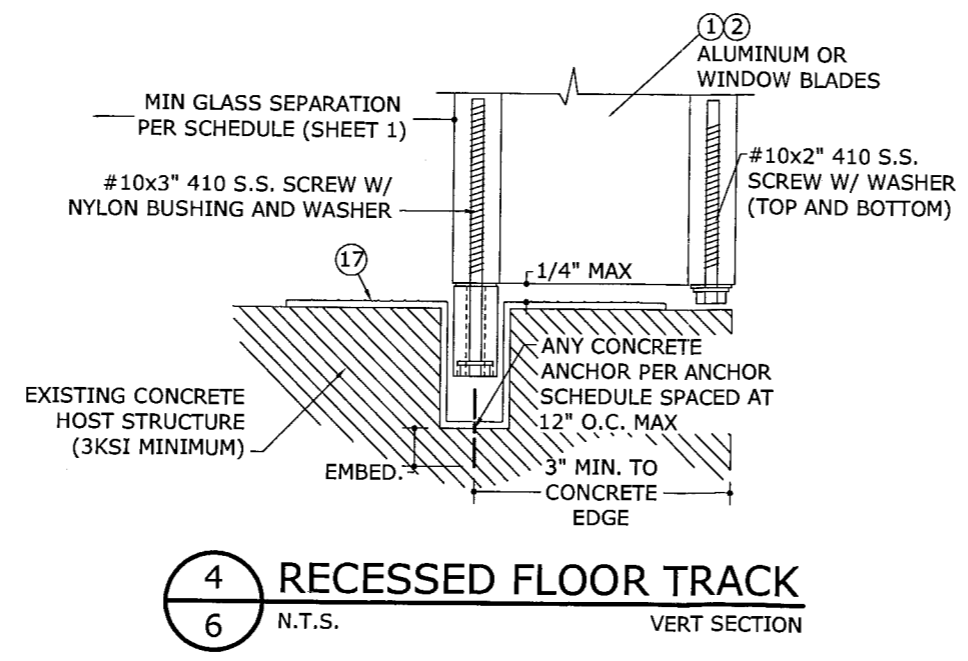
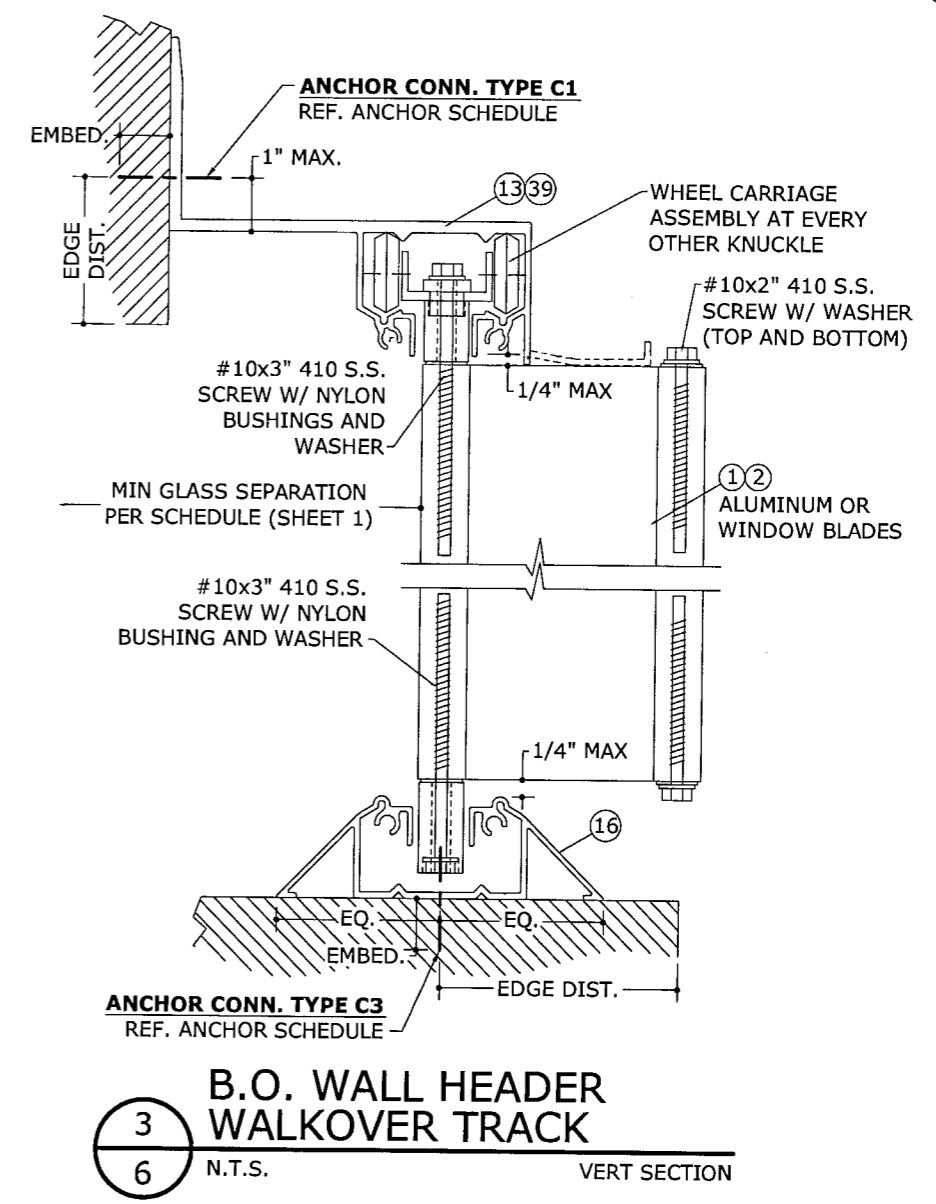
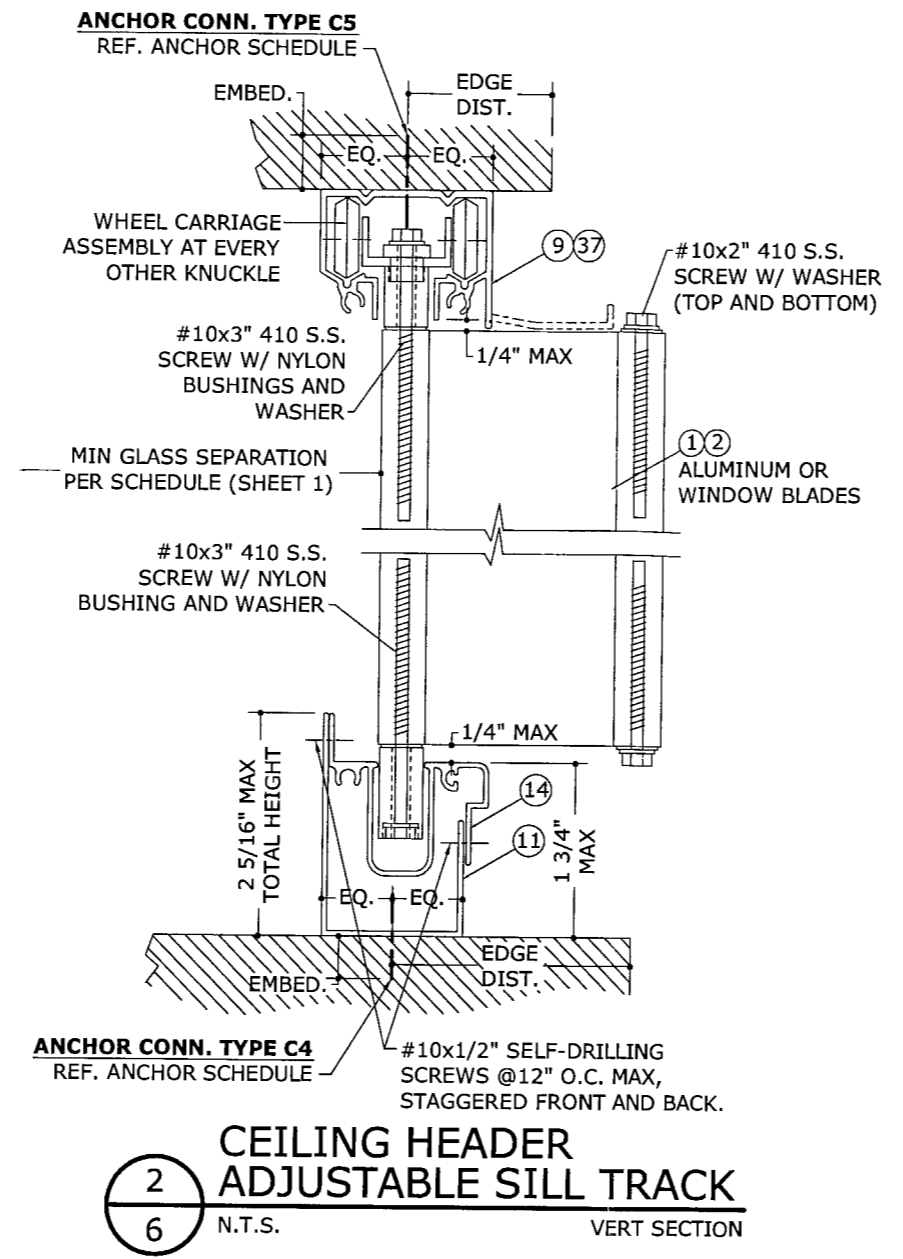
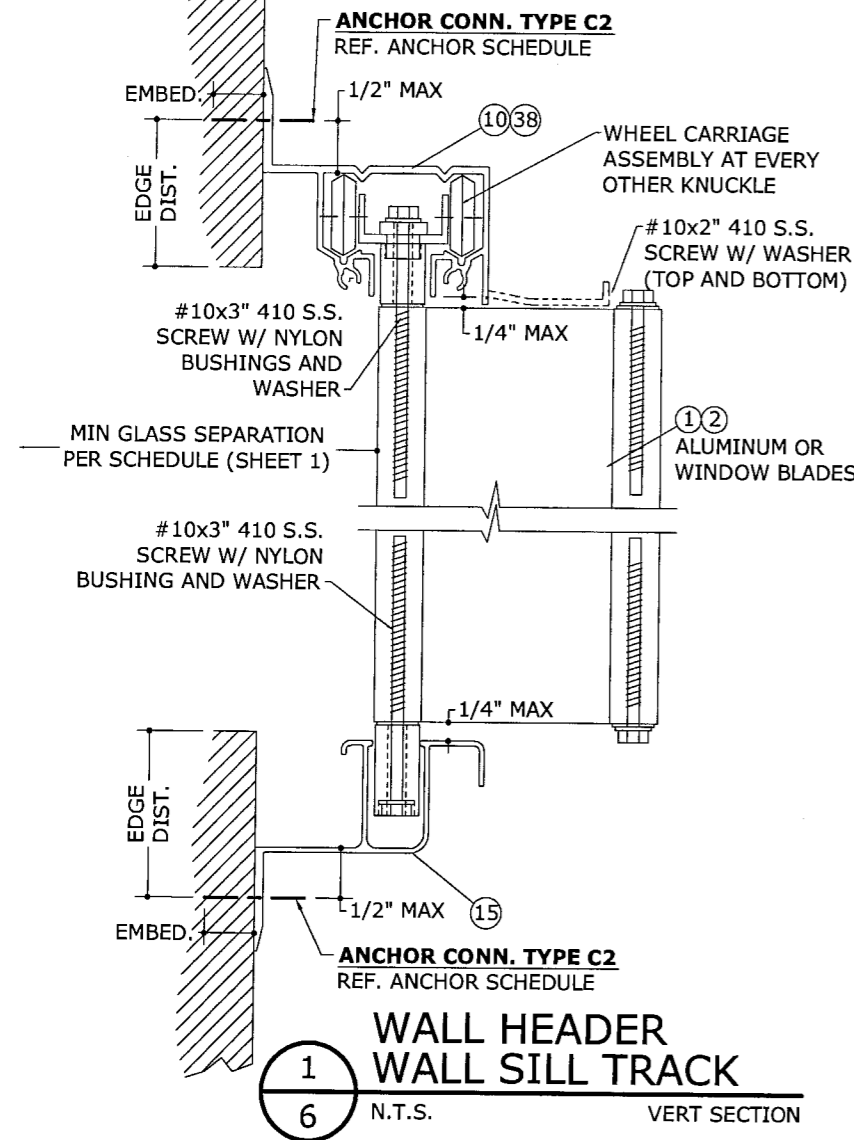
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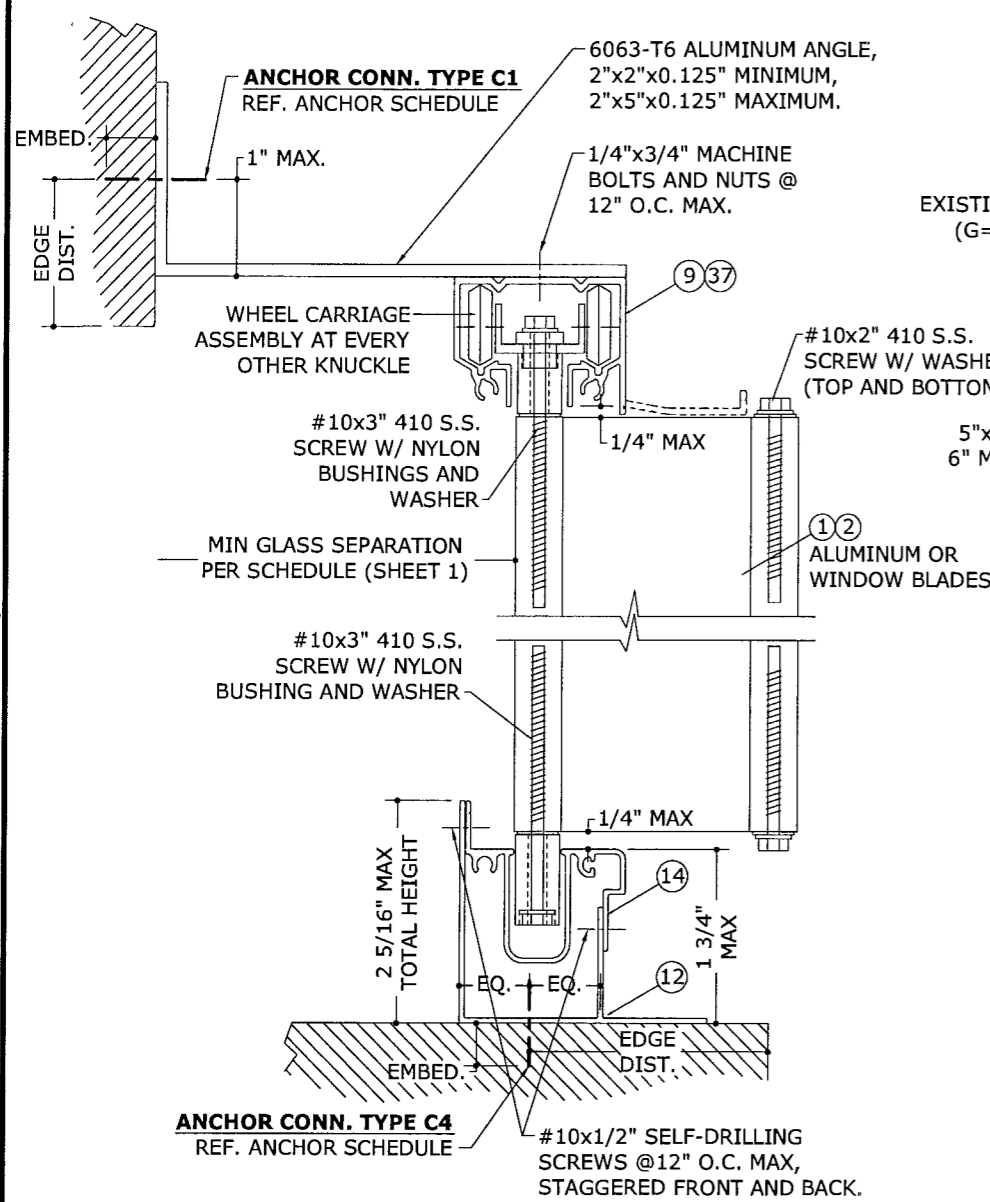
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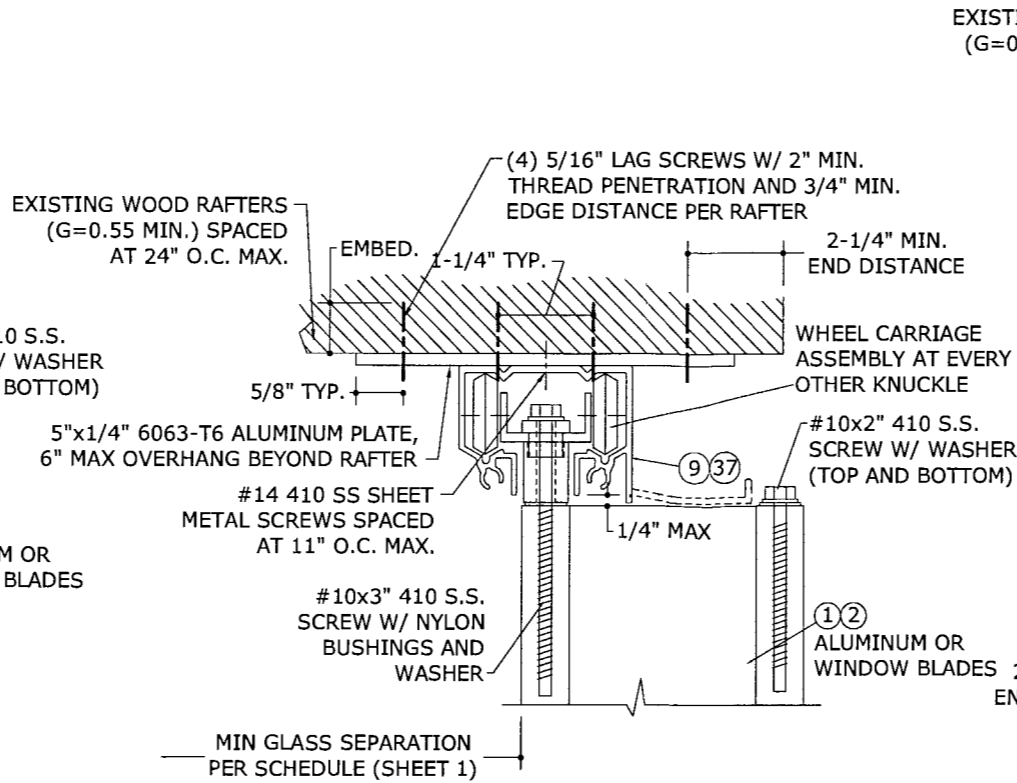
PRODUCT REVISED
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Building Code
Acceptance No 09-1110.01
Expiration Date 10/16/2013
By *Helmut H. Weber*
Miami Dade Product Control
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11/04/2009 - 2:45pm keithl



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

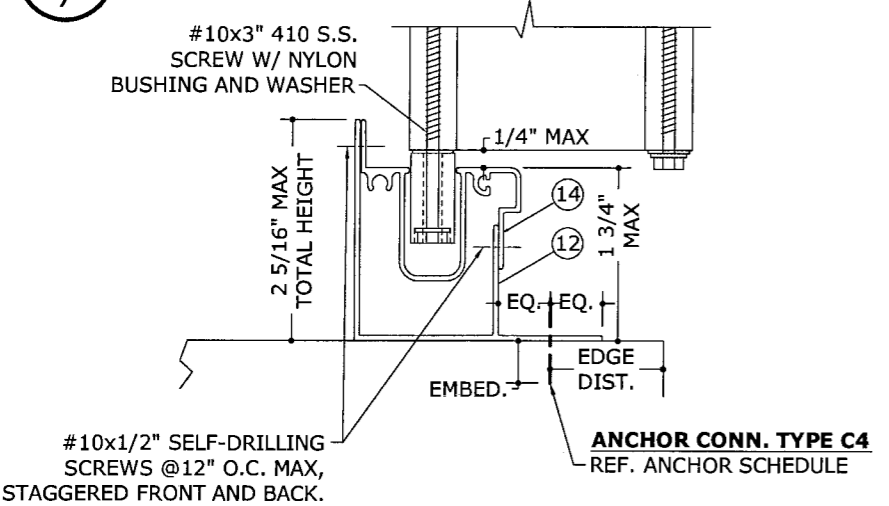


NOTE: MAXIMUM ALLOWABLE SPANS AND DESIGN PRESSURES FOR THIS MOUNTING CONDITION PER TABLE BELOW.

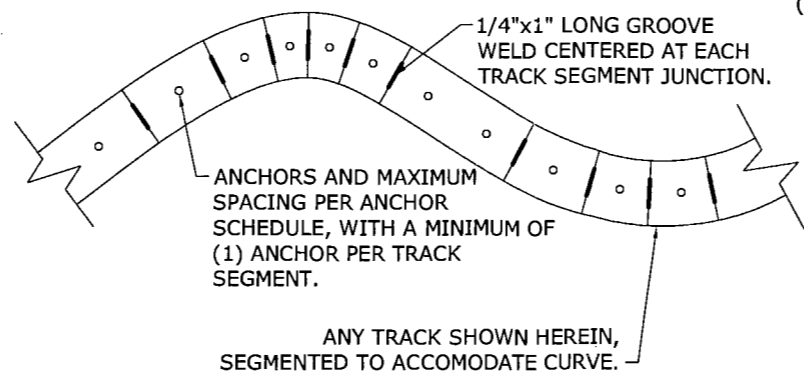
ALLOWABLE DESIGN PRESSURES FOR DETAIL 2/7:

| 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 |

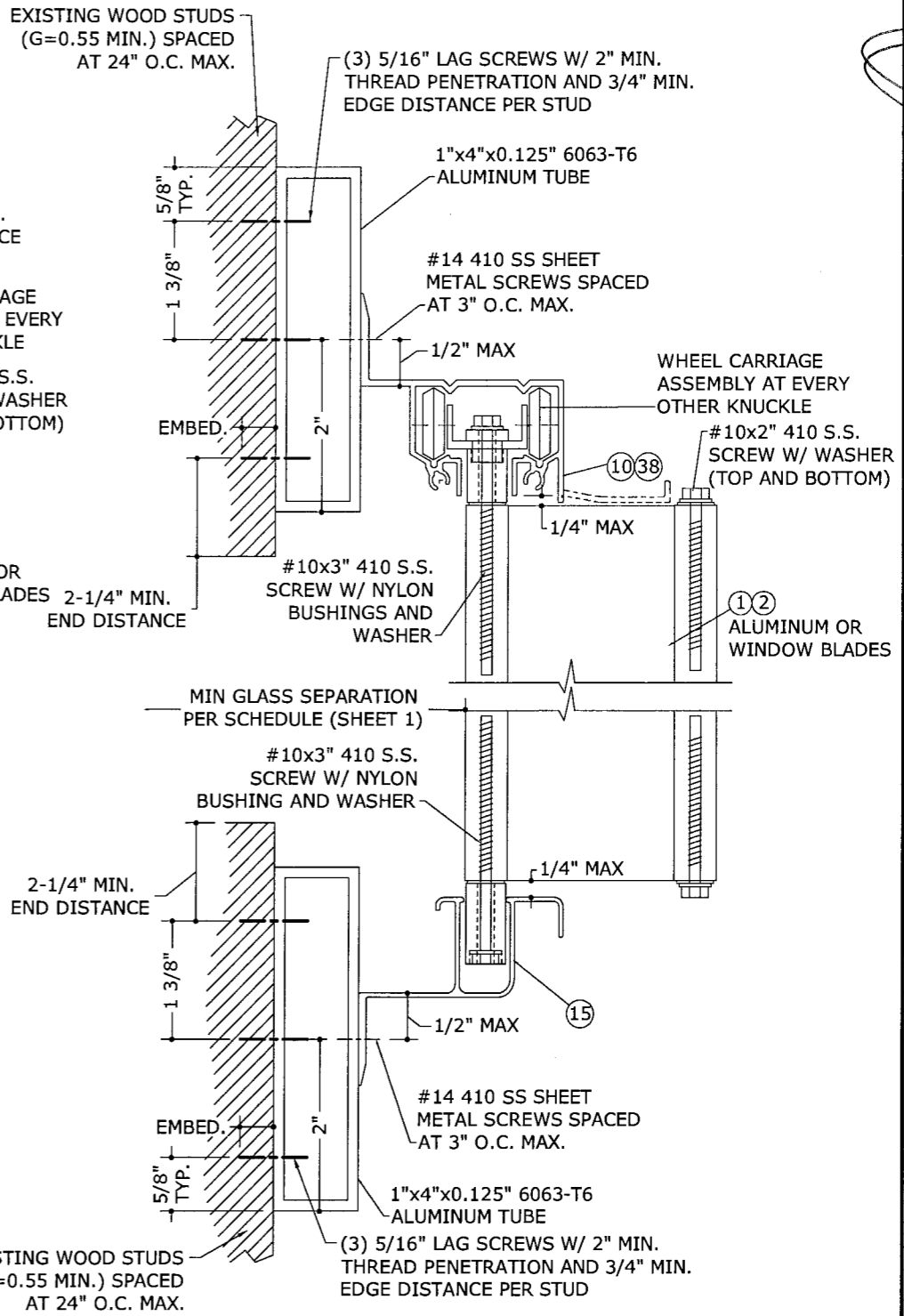
2
5"x1/4" PLATE TO EXISTING RAFTERS
7 N.T.S. VERT SECTION



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



5
OPTIONAL CURVED TRACK WITH SEGMENTED SECTIONS
7 N.T.S. PLAN VIEW



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

ALLOWABLE DESIGN PRESSURES FOR DETAIL 3/7:

| 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
7 N.T.S. VERT SECTION

PRODUCT REVISED as complying with the Florida Building Code
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By *Helene A. Miller*
Miami Data Product Control Division

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PE0046549

11/04/2009

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305 - 558 - 7739

ACCORDION SHUTTER
WITH ALUMINUM OR POLYCARBONATE BLADES
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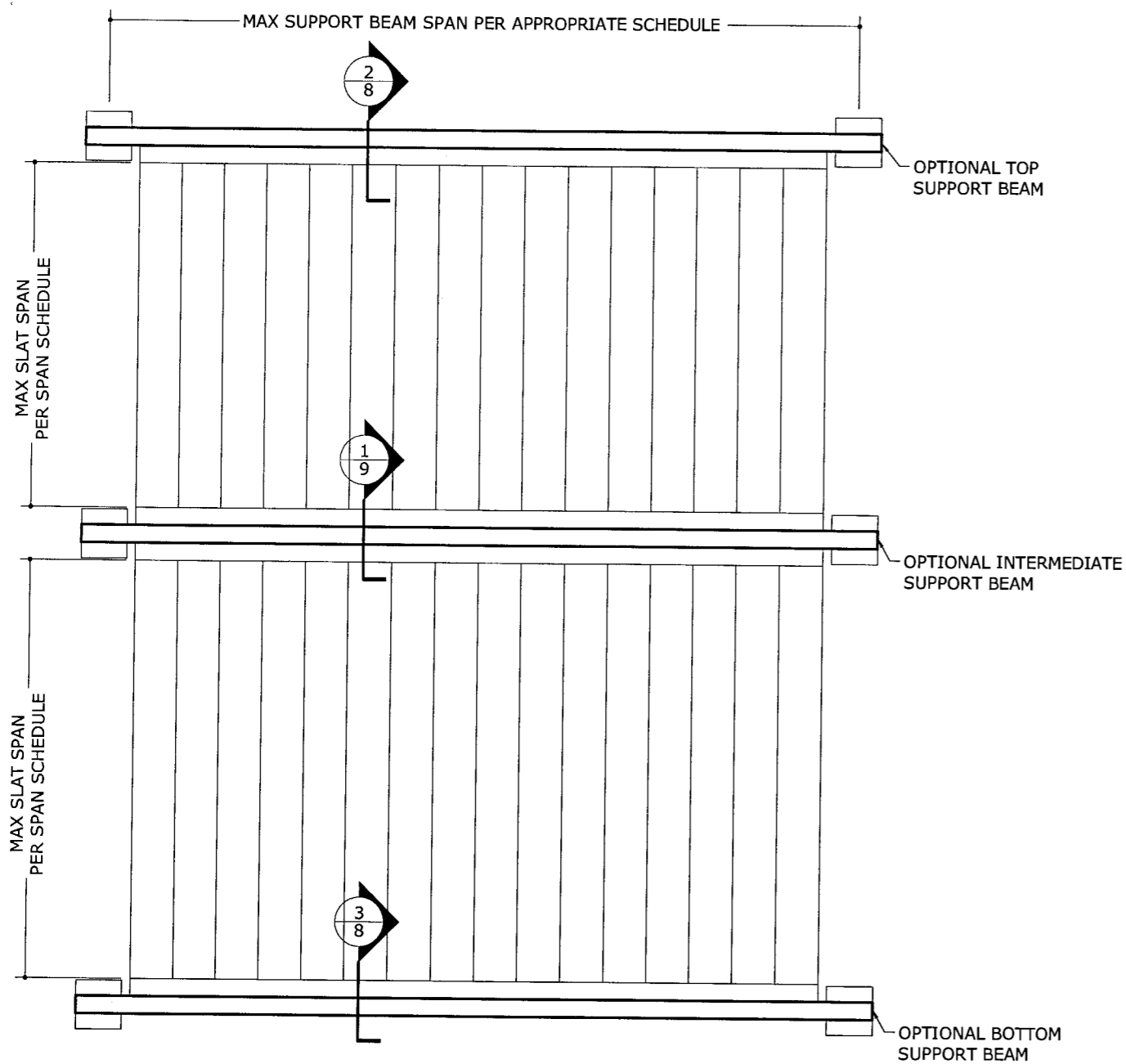
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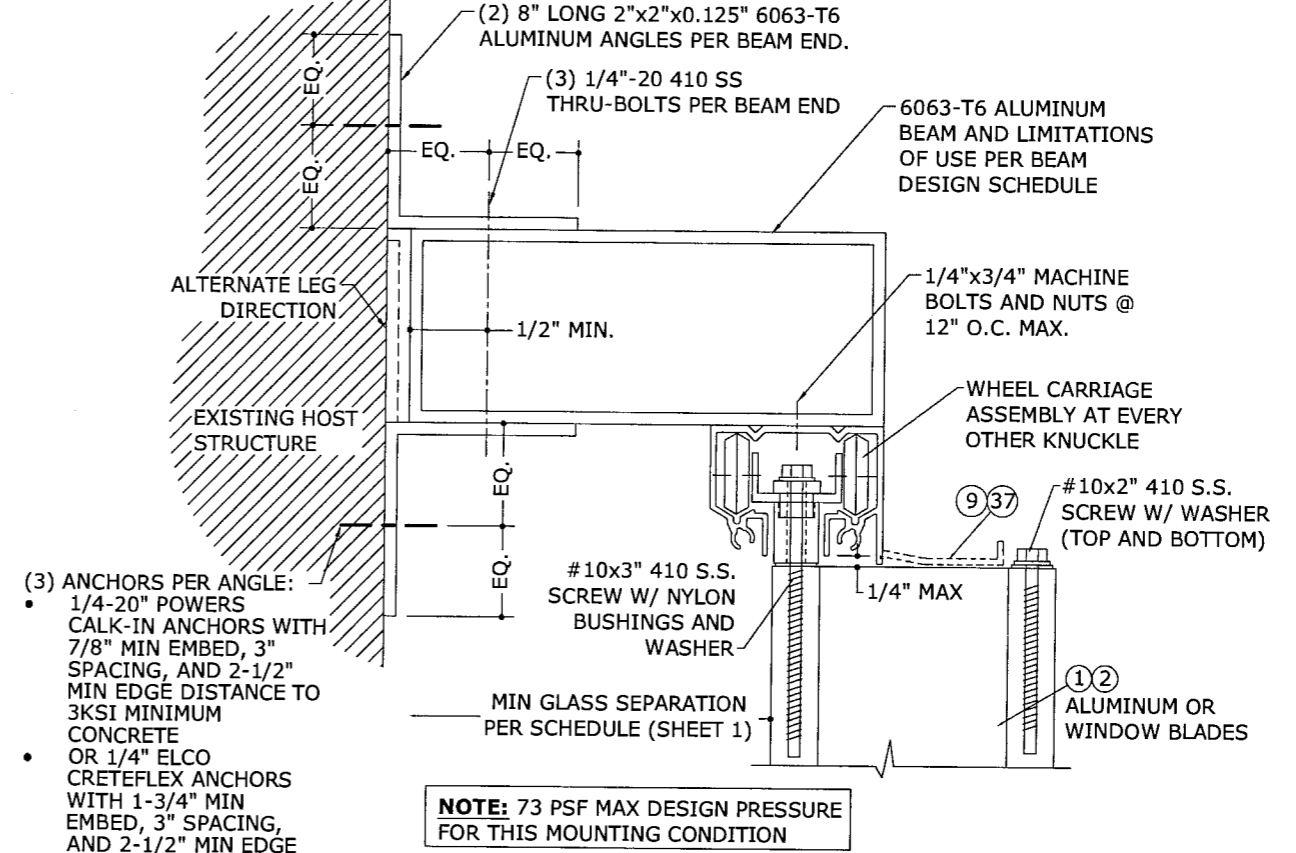
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1 ELEVATION WITH STORM BARS
8 N.T.S. EXTERIOR ELEV

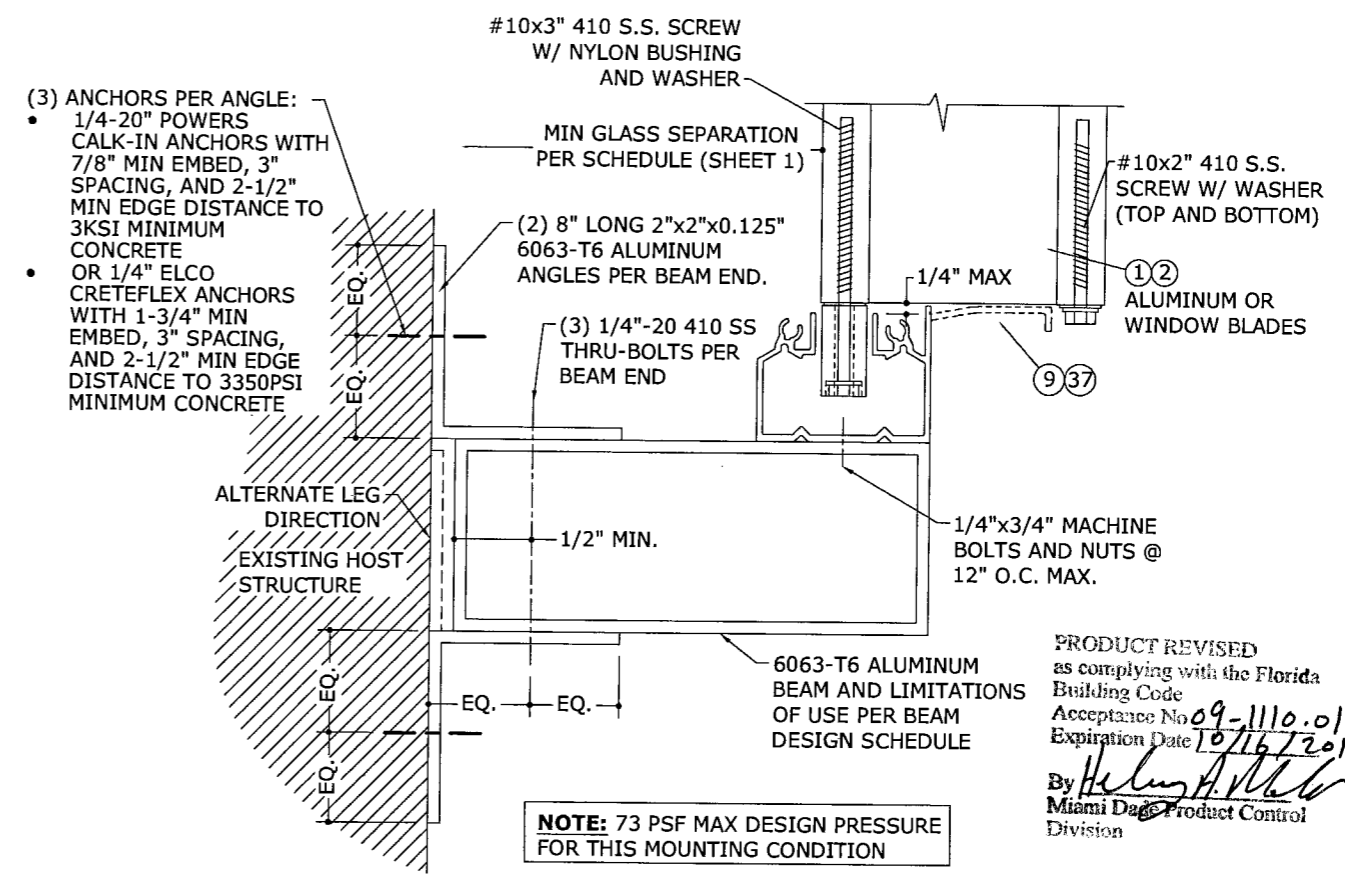
| BEAM DESIGN SCHEDULE | | |
|----------------------|--------------|-----------|
| BEAM SIZE | SHUTTER SPAN | BEAM SPAN |
| 2"x5"x0.125" | 5'-0" | 9'-5" |
| | 8'-0" | 8'-1" |
| | 10'-0" | 7'-6" |
| 2"x8"x0.072"/0.224" | 5'-0" | 14'-0" |
| | 8'-0" | 11'-6" |
| | 10'-0" | 10'-4" |
| 2"x9"x0.072"/0.224" | 5'-0" | 15'-5" |
| | 8'-0" | 12'-5" |
| | 10'-0" | 11'-2" |



- (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

NOTE: 73 PSF MAX DESIGN PRESSURE FOR THIS MOUNTING CONDITION

2 TOP SUPPORT BEAM
8 N.T.S. VERT SECTION



- (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

NOTE: 73 PSF MAX DESIGN PRESSURE FOR THIS MOUNTING CONDITION

3 BOTTOM SUPPORT BEAM
8 N.T.S. VERT SECTION

PRODUCT REVISED as complying with the Florida Building Code Acceptance No 09-1110.01 Expiration Date 10/16/2013
By *Heather A. Miller*
Miami Dade Product Control Division

FRANK L. BENNARDO, P.E.
#PE0046549
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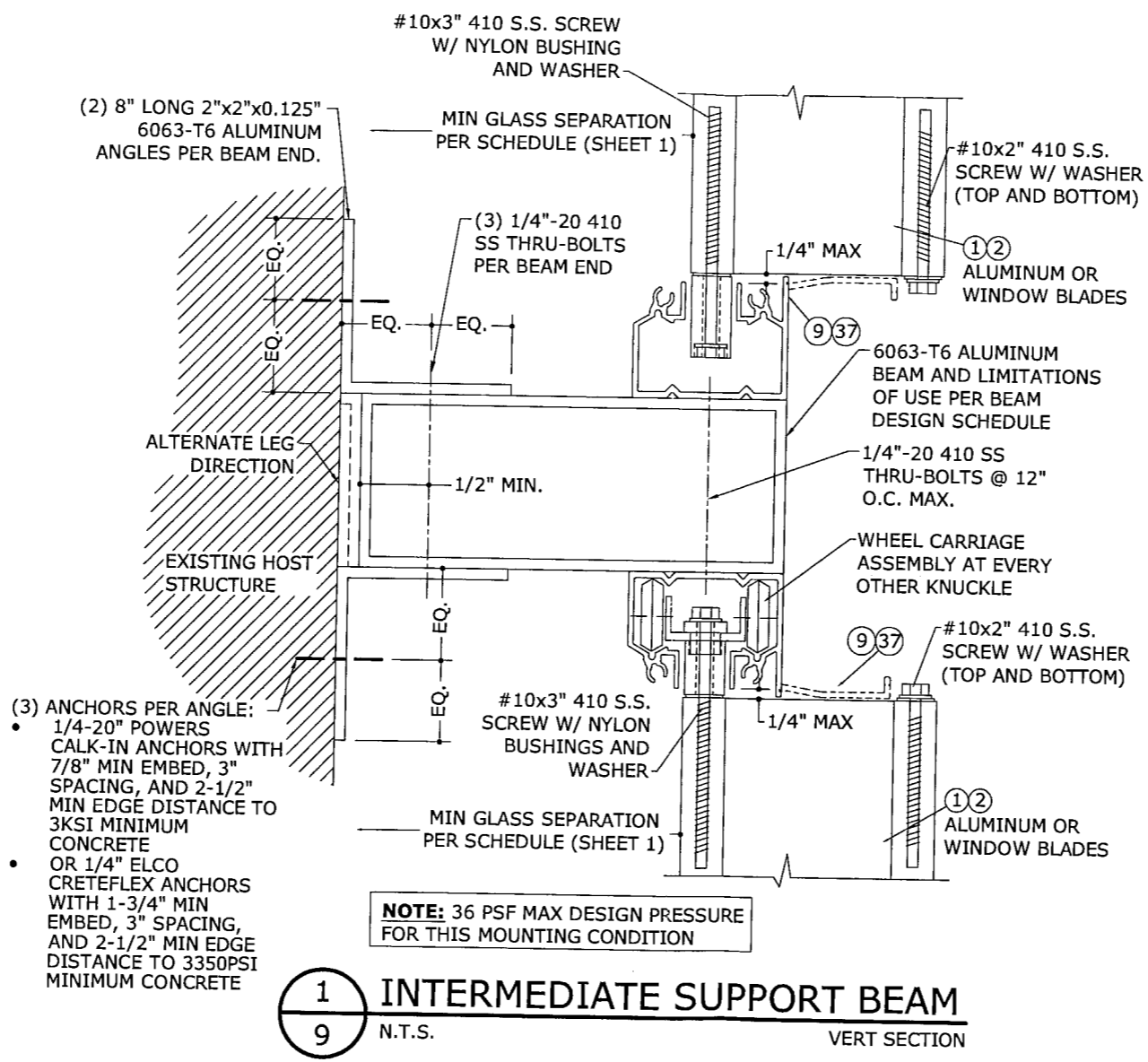
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- (3) ANCHORS PER ANGLE:
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 - OR 1/4" ELCO CRETEFLEX ANCHORS WITH 1-3/4" MIN EMBED, 3" SPACING, AND 2-1/2" MIN EDGE DISTANCE TO 3350PSI MINIMUM CONCRETE

NOTE: 36 PSF MAX DESIGN PRESSURE FOR THIS MOUNTING CONDITION

1 INTERMEDIATE SUPPORT BEAM
9 N.T.S. VERT SECTION

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 Miami Dade Product Control Division

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ANCHOR SCHEDULE

FRANK L. BENNARDO, P.E.
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| | 09/23/08 | KL | CL | | | | | | |
| | 11/04/09 | KL | FLB | | | | | | |

08-ITI-0002
SCALE: 1/4"
PAGE DESCRIPTION:
10

10

| HOST STRUCT. | ANCHOR | LOAD (psf) | 2.5" MIN EDGE DISTANCE | | | | | | | | | | | | | | | | | | | | | |
|--|---|------------|------------------------|-------|-------|-------|-------|-------------------|-------|-------|------|-------|--------------------|-------|-------|------|-------|--------------------|------|-------|------|-------|-------|------|
| | | | Spans Up To 6'-0" | | | | | Spans Up To 9'-0" | | | | | Spans Up To 12'-0" | | | | | Spans Up To 13'-6" | | | | | | |
| | | | C1 | C2 | C3 | C4 | C5 | C1 | C2 | C3 | C4 | C5 | C1 | C2 | C3 | C4 | C5 | C1 | C2 | C3 | C4 | C5 | | |
| CONCRETE | 1/4" ITW TAPCON WITH 1-3/4" EMBED (3192psi MIN CONC) | 47 | 12.0" | 12.0" | 12.0" | 11.7" | 12.0" | 12.0" | 12.0" | 12.0" | 7.4" | 12.0" | 11.2" | 8.9" | 11.8" | 5.5" | 9.0" | 9.5" | 7.6" | 10.6" | 4.8" | 8.0" | | |
| | | 60 | 12.0" | 12.0" | 12.0" | 12.0" | 12.0" | 12.0" | 12.0" | 12.0" | 9.5" | 12.0" | 9.4" | 7.9" | 6.4" | 9.4" | 4.2" | 7.0" | 6.8" | 5.5" | 8.4" | 3.7" | 6.2" | |
| | | 72 | 12.0" | 12.0" | 12.0" | 7.3" | 11.9" | 9.2" | 7.8" | 10.3" | 4.7" | 7.8" | 6.2" | 5.1" | 7.9" | 3.5" | 5.8" | 5.8" | 4.7" | 7.4" | 3.3" | 5.5" | 5.5" | |
| | | 120 | 7.9" | 6.4" | 9.4" | 4.2" | 7.0" | 5.8" | 4.7" | 7.4" | 3.3" | 5.5" | 5.8" | 4.7" | 7.4" | 3.3" | 5.5" | 5.8" | 4.7" | 7.4" | 3.3" | 5.5" | 5.5" | |
| | | 152 | 5.8" | 4.7" | 7.5" | 3.3" | 5.5" | 5.8" | 4.7" | 7.4" | 3.3" | 5.5" | 5.8" | 4.7" | 7.4" | 3.3" | 5.5" | 5.8" | 4.7" | 7.4" | 3.3" | 5.5" | 5.5" | |
| | 1/4" ELCO PANELMATE (FEMALE, MALE) W/ 1-3/4" MIN EMBED (3350psi MIN CONC) | 47 | 12.0" | 12.0" | 12.0" | 11.8" | 12.0" | 12.0" | 12.0" | 12.0" | 7.5" | 12.0" | 11.2" | 8.9" | 12.0" | 5.5" | 9.2" | 9.4" | 7.5" | 10.9" | 4.9" | 8.1" | 8.1" | |
| | | 60 | 12.0" | 12.0" | 12.0" | 9.0" | 12.0" | 11.9" | 9.5" | 12.0" | 5.8" | 9.6" | 7.9" | 6.4" | 9.6" | 4.3" | 7.1" | 6.7" | 5.5" | 8.6" | 3.8" | 6.3" | 6.3" | |
| | | 72 | 12.0" | 12.0" | 12.0" | 7.3" | 12.0" | 9.1" | 7.3" | 10.7" | 4.8" | 8.0" | 6.2" | 5.0" | 8.1" | 3.5" | 5.9" | 5.8" | 4.7" | 7.7" | 3.3" | 5.6" | 5.6" | |
| | | 120 | 7.9" | 6.4" | 9.6" | 4.3" | 7.1" | 5.8" | 4.7" | 7.7" | 3.3" | 5.6" | 5.8" | 4.7" | 7.7" | 3.3" | 5.6" | 5.8" | 4.7" | 7.7" | 3.3" | 5.6" | 5.6" | |
| | | 152 | 5.8" | 4.7" | 7.7" | 3.3" | 5.6" | 5.8" | 4.7" | 7.7" | 3.3" | 5.6" | 5.8" | 4.7" | 7.7" | 3.3" | 5.6" | 5.8" | 4.7" | 7.7" | 3.3" | 5.6" | 5.6" | |
| | 1/4 ELCO CRETEFLEX W/ 1-3/4" MIN EMBED (3350psi MIN CONC) | 47 | 12.0" | 12.0" | 12.0" | 12.0" | 12.0" | 12.0" | 12.0" | 12.0" | 9.6" | 12.0" | 12.0" | 10.2" | 12.0" | 7.0" | 12.0" | 10.8" | 8.7" | 12.0" | 6.2" | 11.1" | 11.1" | |
| | | 60 | 12.0" | 12.0" | 12.0" | 11.4" | 12.0" | 12.0" | 10.9" | 12.0" | 7.3" | 12.0" | 9.1" | 7.3" | 12.0" | 5.4" | 9.7" | 7.8" | 6.3" | 12.0" | 4.8" | 8.6" | 8.6" | |
| | | 72 | 12.0" | 12.0" | 12.0" | 9.4" | 12.0" | 10.5" | 8.4" | 12.0" | 6.0" | 10.8" | 7.1" | 5.8" | 11.8" | 4.5" | 8.1" | 6.6" | 5.4" | 11.2" | 4.2" | 7.6" | 7.6" | |
| | | 120 | 9.1" | 7.3" | 12.0" | 5.4" | 9.7" | 6.6" | 5.4" | 11.2" | 4.2" | 7.6" | 6.6" | 5.4" | 11.2" | 4.2" | 7.6" | 6.6" | 5.4" | 11.2" | 4.2" | 7.6" | 7.6" | |
| | | 152 | 6.7" | 5.4" | 11.2" | 4.2" | 7.6" | 6.6" | 5.4" | 11.2" | 4.2" | 7.6" | 6.6" | 5.4" | 11.2" | 4.2" | 7.6" | 6.6" | 5.4" | 11.2" | 4.2" | 7.6" | 7.6" | |
| | 1/4-20 POWERS CALK-IN WITH 7/8" MIN EMBED (3000psi MIN CONC) | 47 | 12.0" | 12.0" | 12.0" | 9.2" | 12.0" | 12.0" | 12.0" | 11.1" | 5.9" | 9.1" | 9.7" | 7.7" | 8.5" | 4.3" | 6.7" | 8.2" | 6.6" | 7.6" | 3.8" | 6.0" | 6.0" | |
| | | 60 | 12.0" | 12.0" | 12.0" | 7.0" | 10.7" | 10.4" | 8.2" | 8.8" | 4.5" | 7.1" | 6.9" | 5.5" | 6.7" | 3.3" | 5.3" | 5.9" | 4.8" | 6.0" | 3.0" | 4.7" | 4.7" | |
| | | 72 | 12.0" | 11.7" | 10.9" | 5.7" | 8.9" | 7.9" | 6.4" | 7.4" | 3.7" | 5.8" | 5.4" | 4.4" | 5.6" | 4.4" | 5.0" | 4.1" | 5.3" | 4.1" | 5.0" | 4.1" | 4.1" | |
| | | 120 | 6.9" | 5.5" | 6.7" | 3.3" | 5.3" | 5.0" | 4.1" | 5.3" | 4.1" | 5.0" | 4.1" | 5.3" | 4.1" | 5.0" | 4.1" | 5.3" | 4.1" | 5.0" | 4.1" | 5.3" | 4.1" | |
| | | 152 | 5.0" | 4.1" | 5.3" | 4.1" | 5.0" | 4.1" | 5.3" | 4.1" | 5.0" | 4.1" | 5.3" | 4.1" | 5.0" | 4.1" | 5.3" | 4.1" | 5.0" | 4.1" | 5.3" | 4.1" | 5.0" | 4.1" |
| 1/4 ELCO PANELMATE INSERT WITH 1-5/8" MIN EMBED (3000psi MIN CONC) | 47 | 12.0" | 12.0" | 12.0" | 7.7" | 12.0" | 11.3" | 8.8" | 10.6" | 4.9" | 8.2" | 7.1" | 5.6" | 8.1" | 3.6" | 6.1" | 5.9" | 4.8" | 7.3" | 3.2" | 5.4" | 5.4" | | |
| | 60 | 12.0" | 11.7" | 12.0" | 5.8" | 9.7" | 7.5" | 6.0" | 8.5" | 3.8" | 6.3" | 5.0" | 4.0" | 6.5" | 4.7" | 4.3" | 3.5" | 5.8" | 4.2" | 4.2" | 3.7" | 3.7" | | |
| | 72 | 10.9" | 8.5" | 10.4" | 4.8" | 8.0" | 5.8" | 4.6" | 7.1" | 3.1" | 5.3" | 3.9" | 3.2" | 5.4" | 3.9" | 3.6" | 3.0" | 5.1" | 3.7" | 3.0" | 5.1" | 3.7" | | |
| | 120 | 5.0" | 4.0" | 6.5" | 4.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.7" | | |
| | 152 | 3.7" | 3.0" | 5.2" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.7" | | |
| HOLLOW BLOCK | 1/4" ITW TAPCON WITH 1-1/4" EMBED | 47 | 12.0" | 9.3" | 10.8" | 4.3" | 8.1" | 5.3" | 4.1" | 7.6" | 5.2" | 3.3" | 5.9" | 3.9" | 5.3" | 3.4" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | | |
| | | 60 | 7.2" | 5.4" | 8.8" | 3.2" | 6.2" | 3.5" | 6.1" | 4.0" | 4.0" | 4.0" | 4.7" | 3.0" | 4.2" | 4.2" | 4.2" | 4.2" | 4.2" | 4.2" | 4.2" | 4.2" | | |
| | | 72 | 5.1" | 3.9" | 7.5" | 5.1" | 5.1" | 5.1" | 5.2" | 5.2" | 5.2" | 5.2" | 5.2" | 5.2" | 5.2" | 5.2" | 5.2" | 5.2" | 5.2" | 5.2" | 5.2" | 5.2" | 5.2" | |
| | | 120 | 4.7" | 4.7" | 4.7" | 3.0" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | |
| | | 152 | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" |
| | 1/4" ELCO PANELMATE (FEMALE, MALE) W/ 1-1/4" MIN EMBED | 47 | 12.0" | 12.0" | 12.0" | 6.3" | 10.6" | 9.0" | 7.0" | 9.2" | 4.0" | 6.9" | 5.6" | 4.5" | 7.1" | 5.1" | 4.7" | 3.8" | 6.3" | 4.5" | 4.5" | 4.5" | 4.5" | |
| | | 60 | 12.0" | 9.3" | 10.6" | 4.8" | 8.2" | 6.0" | 4.8" | 7.3" | 3.1" | 5.4" | 4.0" | 3.2" | 5.6" | 4.0" | 4.0" | 5.0" | 5.0" | 5.0" | 5.0" | 5.0" | 5.0" | |
| | | 72 | 8.7" | 6.7" | 9.0" | 3.9" | 6.8" | 4.6" | 3.7" | 6.2" | 4.5" | 4.5" | 4.7" | 4.7" | 4.7" | 4.7" | 4.7" | 4.7" | 4.7" | 4.7" | 4.7" | 4.7" | 4.7" | |
| | | 120 | 4.0" | 3.2" | 5.6" | 4.0" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | |
| | | 152 | 4.5" | 4.5" | 4.5" | 3.1" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" | 4.5" |
| | 1/4 ELCO CRETEFLEX W/ 1-1/4" MIN EMBED | 47 | 12.0" | 12.0" | 12.0" | 7.4" | 12.0" | 10.0" | 7.8" | 11.5" | 4.7" | 8.4" | 6.2" | 5.0" | 8.8" | 3.4" | 6.2" | 5.3" | 4.2" | 7.9" | 3.0" | 5.5" | 5.5" | |
| | | 60 | 12.0" | 10.3" | 12.0" | 5.6" | 10.0" | 6.7" | 5.3" | 9.2" | 3.6" | 6.5" | 4.4" | 3.6" | 7.0" | 4.8" | 3.8" | 3.1" | 6.3" | 4.3" | 4.3" | 4.3" | 4.3" | |
| | | 72 | 9.6" | 7.5" | 11.3" | 4.6" | 8.2" | 5.1" | 4.1" | 7.8" | 3.0" | 5.4" | 3.5" | 3.2" | 5.9" | 4.0" | 3.2" | 3.1" | 6.3" | 3.1" | 6.3" | 3.1" | 6.3" | |
| | | 120 | 4.4" | 3.6" | 7.0" | 4.8" | 3.2" | 5.6" | 3.2" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | |
| | | 152 | 3.2" | 5.6" | 3.8" | 3.2" | 5.6" | 3.8" | 3.2" | 3.8" | 3.2" | 3.8" | 3.2" | 3.8" | 3.2" | 3.8" | 3.2" | 3.8" | 3.2" | 3.8" | 3.2" | 3.8" | 3.2" | 3.8" |
| | 1/4-20 POWERS CALK-IN WITH 7/8" MIN EMBED | 47 | 12.0" | 11.5" | 11.2" | 4.9" | 8.7" | 6.5" | 5.1" | 7.9" | 3.1" | 5.7" | 4.1" | 3.2" | 6.0" | 4.2" | 3.4" | 5.4" | 4.3" | 5.4" | 3.7" | 3.7" | 3.7" | |
| | | 60 | 8.9" | 6.7" | 9.1" | 3.7" | 6.7" | 4.3" | 3.4" | 6.3" | 4.4" | 4.4" | 4.8" | 4.8" | 4.8" | 4.8" | 4.8" | 4.8" | 4.8" | 4.8" | 4.8" | 4.8" | 4.8" | |
| | | 72 | 6.3" | 4.9" | 7.7" | 3.1" | 5.5" | 3.3" | 5.3" | 3.6" | 3.6" | 3.6" | 3.6" | 3.6" | 3.6" | 3.6" | 3.6" | 3.6" | 3.6" | 3.6" | 3.6" | 3.6" | 3.6" | |
| | | 120 | 4.8" | 3.9" | 3.9" | 3.3" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" |
| | | 152 | 3.9" | 3.9" | 3.9" | 3.3" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" | 3.8" |
| 1/4 ELCO PANELMATE INSERT WITH 1-1/4" MIN EMBED | 47 | 12.0" | 12.0" | 12.0" | 7.7" | 12.0" | 11.3" | 8.8" | 10.6" | 4.9" | 8.2" | 7.1" | 5.6" | 8.1" | 3.6" | 6.1" | 5.9" | 4.8" | 7.3" | 3.2" | 5.4" | 5.4" | | |
| | 60 | 12.0" | 11.7" | 12.0" | 5.8" | 9.7" | 7.5" | 6.0" | 8.5" | 3.8" | 6.3" | 5.0" | 4.0" | 6.5" | 4.7" | 4.3" | 3.5" | 5.8" | 4.2" | 4.2" | 3.7" | 3.7" | | |
| | 72 | 10.9" | 8.5" | 10.4" | 4.8" | 8.0" | 5.8" | 4.6" | 7.1" | 3.1" | 5.3" | 3.9" | 3.2" | 5.4" | 3.9" | 3.6" | 3.0" | 5.1" | 3.7" | 3.0" | 5.1" | 3.7" | | |
| | 120 | 5.0" | 4.0" | 6.5" | 4.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.7" | | |
| | 152 | 3.7" | 3.0" | 5.2" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.6" | 3.0" | 5.1" | 3.7" | 3.7" | | |
| WOOD | 1/4" ITW TAPCON OR #14 WOOD SCREW W/ 1-1/2" EMBED | 47 | 12.0" | 12.0" | 10.4" | 7.1" | 9.4" | 12.0" | 12.0" | 7.1" | 4.6" | 6.2" | 10.3" | 8.2" | 5.3" | 3.4" | 4.6" | 8.7" | 6.9" | 4.8" | 3.0" | 4.1" | | |
| | | 60 | 12.0" | 12.0" | 8.2" | 5.5" | 7.3" | 11.0" | 8.7" | 5.6" | 3.6" | 4.8" | 7.3" | 5.9" | 4.2" | 2.6" | 3.6" | 6.2" | 5.0" | 3.8" | 2.3" | 3.2" | | |
| | | 72 | 12.0" | 12.0" | 6.9" | 4.5" | 6.1" | 8.4" | 6.7" | 4.7" | 2.9" | 4.0" | 5.7" | 4.6" | 3.5" | 2.2" | 3.0" | 5.3" | 4.3" | 3.3" | 2.1" | 2.8" | | |
| | | 120 | 7.3" | 5.9" | 4.2" | 2.6" | 3.6" | 5.3" | 4.3" | 3.3" | 2.1" | 2.8" | 5.3" | 4.3" | 3.3" | 2.1" | 2.8" | 5.3" | 4.3" | 3.3" | 2.1" | 2.8" | | |
| | | 152 | 5.3" | 4.3" | 3.3" | 2.1" | 2.8" | 5.3" | 4.3" | 3.3" | 2.1" | 2.8" | 5.3" | 4.3" | 3.3" | 2.1" | 2.8" | 5.3" | 4.3" | 3.3" | 2.1" | 2.8" | | |
| | 1/4" ELCO PANELMATE (FEMALE, MALE) W/ 1-7/8" MIN EMBED | 47 | 12.0" | 12.0" | 12.0" | 11.5" | 12.0" | 12.0" | 12.0" | 12.0" | 7.4" | 10.9" | 12.0" | 10.8" | 9.9" | 5.5" | 8.1" | 11.4" | 9.1" | 8.8" | 4.8" | 7.2" | 7.2" | |
| | | 60 | 12.0" | 12.0" | 12.0" | 8.8" | 12.0" | 11.5" | 10.3" | 5.7" | 8.5" | 9.5" | 7.7" | 7.8" | 4.2" | 6.3" | 8.2" | 6.6" | 7.0" | 3.7" | 5.6" | 5.6" | | |
| | | 72 | 12.0" | 12.0" | 12.0" | 7.3" | 10.7" | 11.0" | 8.9" | 8.6" | 4.7" | 7.0" | 7.5" | 6.1" | 6.5" | 3.5" | 5.3" | 7.0" | 5.7" | 6.2" | 3.3" | 5.0" | 5.0" | |
| | | 120 | 9.5" | | | | | | | | | | | | | | | | | | | | | |