



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208
T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/economy

ES Windows, LLC
3550 NW 49th Street
Miami, FL 33142

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section 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 Section (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. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section 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 Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series "EL400" Aluminum Sliding Glass Door - L.M.I.

APPROVAL DOCUMENT: Drawing No. **W16-73 Rev B**, titled "ES-EL400 Alum. Sliding Glass Door (L.M.I.)", sheets 1 through 23 of 23, dated 11/28/16 and last revised on DEC 30, 2020, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and revision date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

Limitations:

1. See Elevations in sheets **1, 2, 3, 4** and anchors requirements. See Header anchor capacity charts in sheet **6** and Glass capacity VS size in sheet **5**. Overall Lower Design Pressure (DP) controls for entire the assembly.
2. See sheets **7** thru **13** for various configurations, tracks, pockets, non-pockets and allowable frame area.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, **Baranquilla, Columbia, S.A.**, series, 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 # **16-0617.02** consists of this page 1 and evidence pages E-1, E-2 and E-3, as well as approval document mentioned above.

The submitted documentation was reviewed by **Ishaq I. Chanda, P.E.**



Ishaq I. Chanda

NOA No. 20-1118.06
Expiration Date: July 20, 2022
Approval Date: January 07, 2020
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. Evidence submitted under previous approval.
- A. **DRAWINGS**
 1. Manufacturer's die drawings and sections.
 2. Drawing No. **W16-73**, titled "ES-EL400 Alum.Sliding Glass Door (L.M.I.)", sheets 1 through 23 of 23, dated 11/28/16, with revision A dated 07/12/17, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.
- B. **TESTS**
 1. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202-94
2) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94
3) Water Resistance Test, per FBC, TAS 202-94
4) Forced Entry Test, per FBC, and TAS 202-94
5) Large Missile Impact Test per FBC, TAS 201-94
6) Cyclic Wind Pressure Loading per FBC, TAS 203-94
along with marked-up drawings and installation diagram of an aluminum sliding glass door, prepared by Blackwater Testing, Inc., Test Report No. **BT-ESW-17-009**, dated 06/15/17, signed and sealed by Constantin Bortes, P.E. with Letter of Clarification issued on 07/13/17, signed and sealed by Constantin Bortes, P.E.
- C. **CALCULATIONS**
 1. Anchor verification calculations and structural analysis, complying with **FBC-5th Edition (2014) and FBC-6th Edition (2017)**, dated 06/20/17 and revised on 07/13/17, prepared by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.
 2. Glazing complies with **ASTM E1300-09**.
- D. **QUALITY ASSURANCE**
 1. Miami-Dade Department of Regulatory and Economic Resources (RER)
- E. **MATERIAL CERTIFICATIONS**
 1. Notice of Acceptance No. **16-1117.01** issued to **Kuraray America, Inc.** for their "**Trosifol® Ultraclear, Clear and Color PVB Glass Interlayers**", expiring on 07/08/19.
 2. Notice of Acceptance No. **14-0916.11** issued to **Kuraray America, Inc.** for their "**Sentry Glass® (Clear and White) Glass Interlayer**", expiring on 07/04/18.
 3. Notice of Acceptance No. **15-1201.11** issued to **Eastman Chemical Co. (MA)** for their "**Saflex Clear and Color Glass Interlayers**" dated 03/17/16, expiring on 05/21/21.
 4. Notice of Acceptance No. **14-0423.15** issued to **Eastman Chemical Co. (MA)** for their "**Saflex CP – Saflex and Saflex HP Composite Glass Interlayers with PET Core**" dated 06/19/14, expiring on 11/11/18.
- F. **STATEMENTS**
 1. Statement letter of conformance, complying with **FBC-5th Edition (2014) and FBC-6th Edition (2017)** dated 07/12/17, issued by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.

Ishaq I. Chanda Ishaq I. Chanda, P.E.

Product Control Unit Supervisor

NOA No. 20-1118.06

Expiration Date: July 20, 2022

Approval Date: January 07, 2020

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

F. STATEMENTS (continue)

2. Statement letter of no financial interest, dated 07/12/17, issued by Al-Farooq Corporation, signed and sealed by Javad Ahmad, P.E.
3. Distributor Agreement, signed by Carlos Garcia and by Evelyn Daes.
4. Laboratory compliance statement for Test Report No. **BT-ESW-17-009**, issued by Blackwater Testing, Inc., dated 06/15/17, signed and sealed by Dennis Duffy, CEO.
5. Proposal No. **16-1478** issued by the Product Control Section, dated 11/17/16, signed by Ishaq I. Chanda, P.E.

2. New Evidence submitted

A. DRAWINGS

1. Drawing No. **W16-73 Rev B**, titled “ES-EL400 Alum. Sliding Glass Door (L.M.I.)”, sheets 1 through 23 of 23, dated 11/28/16 and last revised on Dec 30, 2020, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.

B. TESTS

1. None.

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with **FBC-7th Edition (2020)**, dated 11/18/20, prepared by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
2. Glazing complies with **ASTME1300-09 &-16**.

E. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER)

E. MATERIAL CERTIFICATIONS

1. Notice of Acceptance No. **19-0305.02** issued to **Kuraray America, Inc.** for their “**Trosifol® Ultraclear, Clear and Color PVB Glass Interlayers**”, expiring on 07/08/24.
2. Notice of Acceptance No. **17-0808.02** issued to **Kuraray America, Inc.** for their “**SentryGlas® (Clear and White) Glass Interlayers**”, expiring on 07/04/23.
3. Notice of Acceptance No. **15-1201.11** issued to **Eastman Chemical Co. (MA)** for their “**Saflex Clear and Color Glass Interlayers**”, expiring on 05/21/21.
4. Notice of Acceptance No. **18-0301.06** issued to **Eastman Chemical Co. (MA)** for their “**Saflex CP – Saflex and Saflex HP Composite Glass Interlayers with PET Core**”, expiring on 11/11/23.

F. STATEMENTS

1. Statement letter of conformance, complying with **FBC-7th Edition (2020)** and No financial interest, dated 11/18/20, issued by Al-Farooq Corporation, signed and sealed by Jalal Farooq, P.E.
2. Test Lab Compliance statement, as part of test report. *Ishaq I. Chanda*

Ishaq I. Chanda, P.E.
Product Control Unit Supervisor
NOA No. 20-1118.06
Expiration Date: July 20, 2022
Approval Date: January 07, 2020

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

G. OTHER

1. This NOA **revises NOA No. 16-0617.02** and updates to FBC 2020 (7th Edition) expiring 07/20/22.
2. Distribution agreement between Energia Solar, S.A.-ES Windows and ES Windows, LLC, dtd 08/03/15, signed by Ms. Carla Garcia (MGR) and Andres Chamorro (Gen. MGR) respectively (original copy in various ES approved NOA(s) files.

Ishaq I. Chanda

Ishaq I. Chanda, P.E.
Product Control Unit Supervisor
NOA No. 20-1118.06
Expiration Date: July 20, 2022
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PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-1118.06
Expiration Date 07/20/2022
By Ishag I. Chank
Miami-Dade Product Control

DAYLITE OPENING WIDTH:
PANEL WIDTH - 5.688"
DAYLITE OPENING HEIGHT:
PANEL HEIGHT - 5.813"
PANEL HEIGHT = DOOR FRAME HEIGHT - 1.250"

THESE DOORS ARE RATED FOR LARGE & SMALL MISSILE IMPACT.
SHUTTERS ARE NOT REQUIRED.

SERIES ES-EL400
ALUMINUM SLIDING GLASS DOOR

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE 2020 (7TH EDITION) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

1BY OR 2BY WOOD BUCKS & BUCK FASTENERS BY OTHERS, MUST BE DESIGNED AND INSTALLED ADEQUATELY TO TRANSFER APPLIED PRODUCT LOADS TO THE BUILDING STRUCTURE.

ANCHORS SHALL BE CORROSION RESISTANT, SPACED AS SHOWN ON DETAILS AND INSTALLED PER MANUF'S INSTRUCTIONS. SPECIFIED EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.

A LOAD DURATION INCREASE IS USED IN DESIGN OF ANCHORS INTO WOOD ONLY.

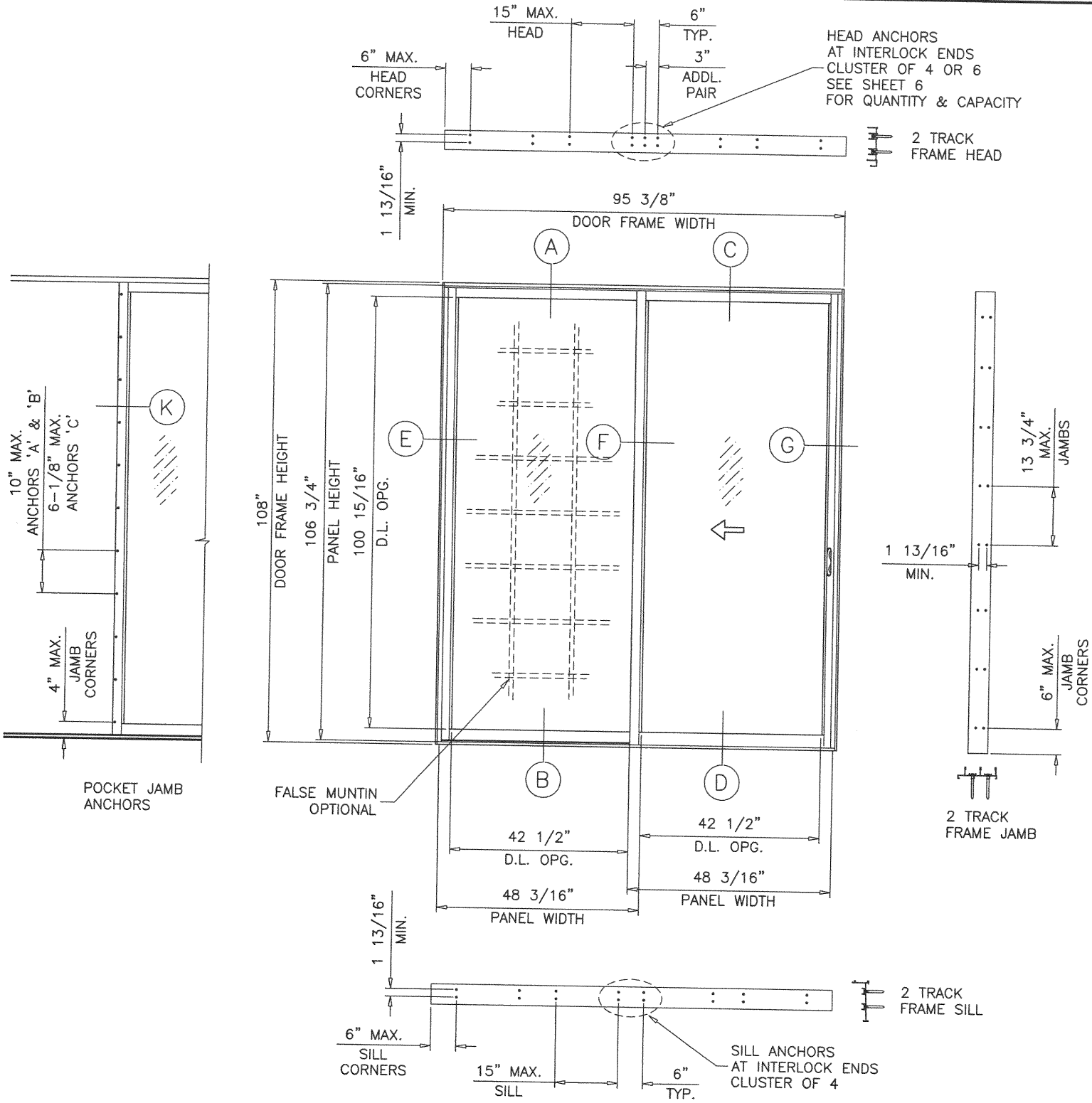
ALL SHIMS TO BE HIGH IMPACT, NON-METALLIC AND NON-COMPRESSIBLE.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF THE 2020 FLORIDA BLDG. CODE & ADOPTED STANDARDS.

THIS PRODUCT APPROVAL IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, i.e. LIFE SAFETY OF THIS PRODUCT, ADEQUACY OF STRUCTURE RECEIVING THIS PRODUCT AND SEALING AROUND OPENING FOR WATER INFILTRATION RESISTANCE ETC.

CONDITIONS NOT SHOWN IN THIS DRAWING ARE TO BE ANALYZED SEPARATELY, AND TO BE REVIEWED BY BUILDING OFFICIAL.

DESIGN LOADS SHOWN ARE BASED ON 'ALLOWABLE STRESS DESIGN (ASD)'.

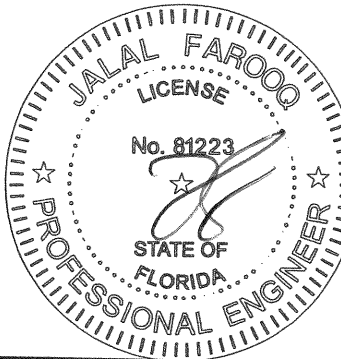


INSTRUCTIONS:
USE CHARTS AS FOLLOWS

- STEP 1** DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.
- STEP 2** DETERMINE DOOR CAPACITY FROM TABLE ON SHEET 5 FOR THE REINFORCING OPTION USED.
- STEP 3** USING CHARTS ON SHEET 6 SELECT ANCHOR OPTION WITH DESIGN RATING MORE THAN DESIGN LOAD SPECIFIED IN STEP 1 ABOVE.
- STEP 5** THE LOWEST VALUE RESULTING FROM STEPS 2 AND 3 SHALL APPLY TO ENTIRE SYSTEM.

TYPICAL ELEVATION
OX

DEC 30 2020



AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
(C.A.N. 3538)

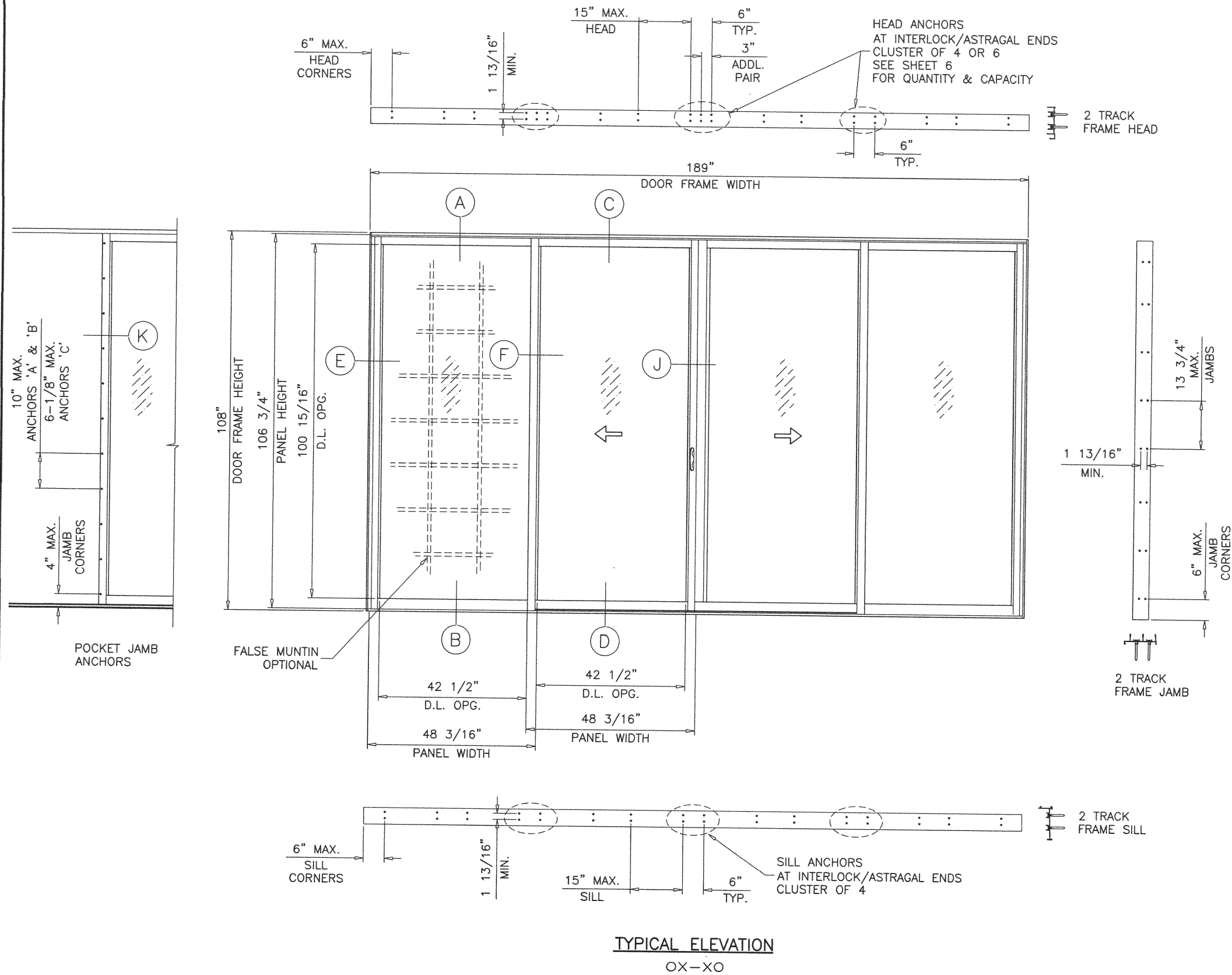
ES-EL400 ALUM SLIDING GLASS DOOR (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

no.	date	by	description
A	07.12.17	REV. PER	REV. COMMENTS
B	11.09.20	UPDATED TO	2020 FBC

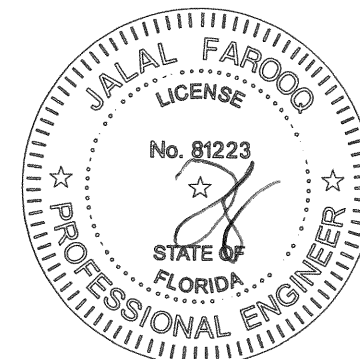
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dr. by:	TARIQ
chk. by:	

drawing no.
W16-73
sheet 1 of 23

COMP-ANL\W16-73ES



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as complying with the Florida
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NOA-No. 20-1118.06
Expiration Date 07/20/2022
By Ishag I. Chank
Miami-Dade Product Control

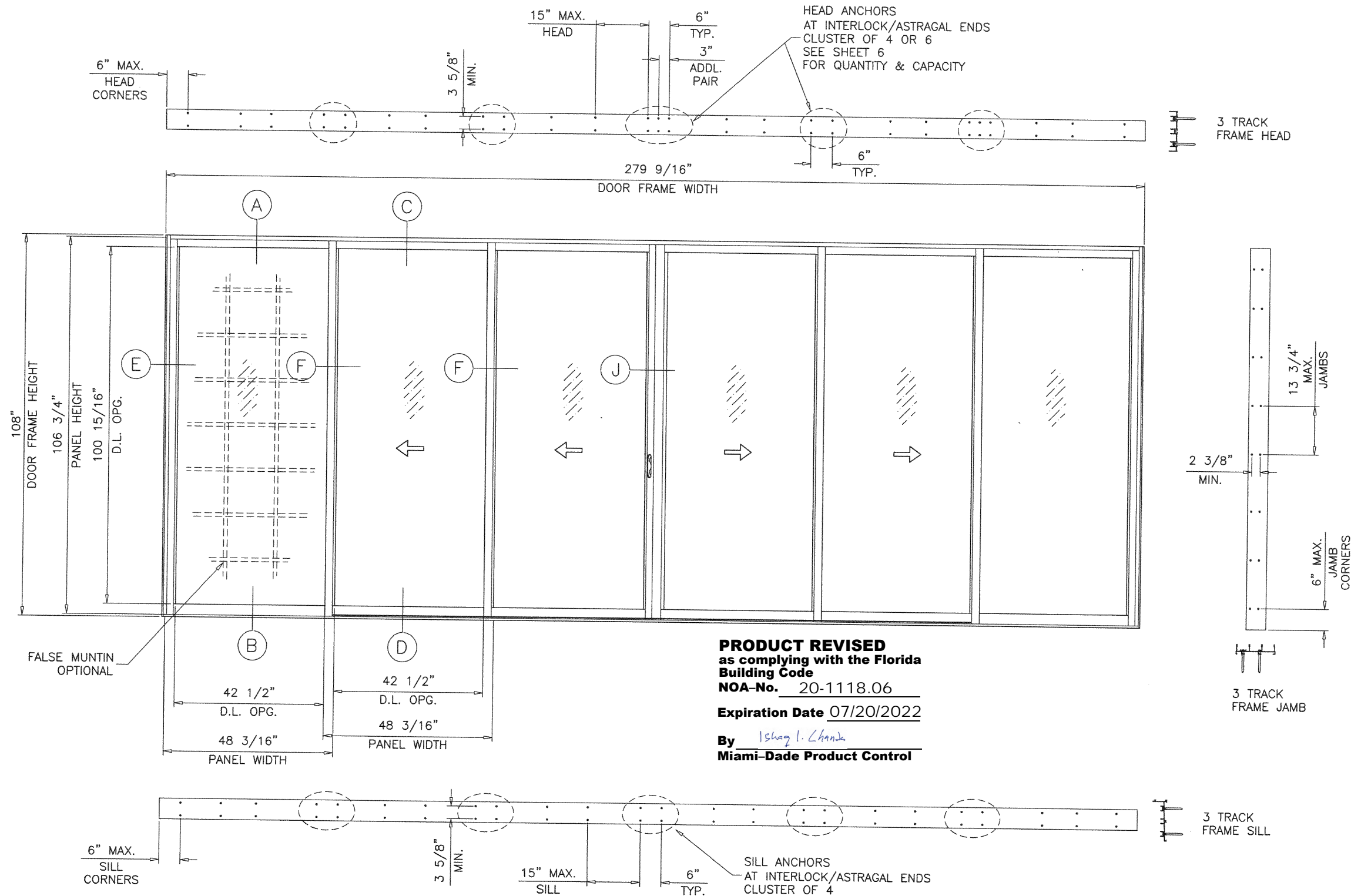
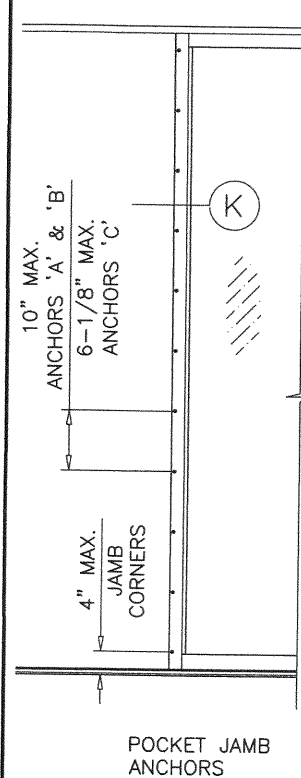


DEC 30 2020

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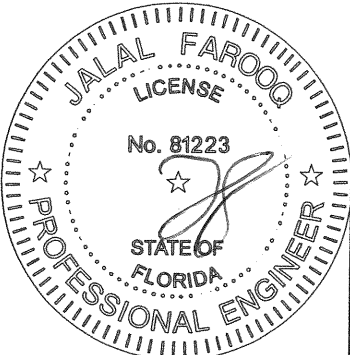
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chk. by:					
drawing no.	W16-73	sheet	2 of 23		



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By Ishag I. Chande
Miami-Dade Product Control

TYPICAL ELEVATION
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DEC 30 2020

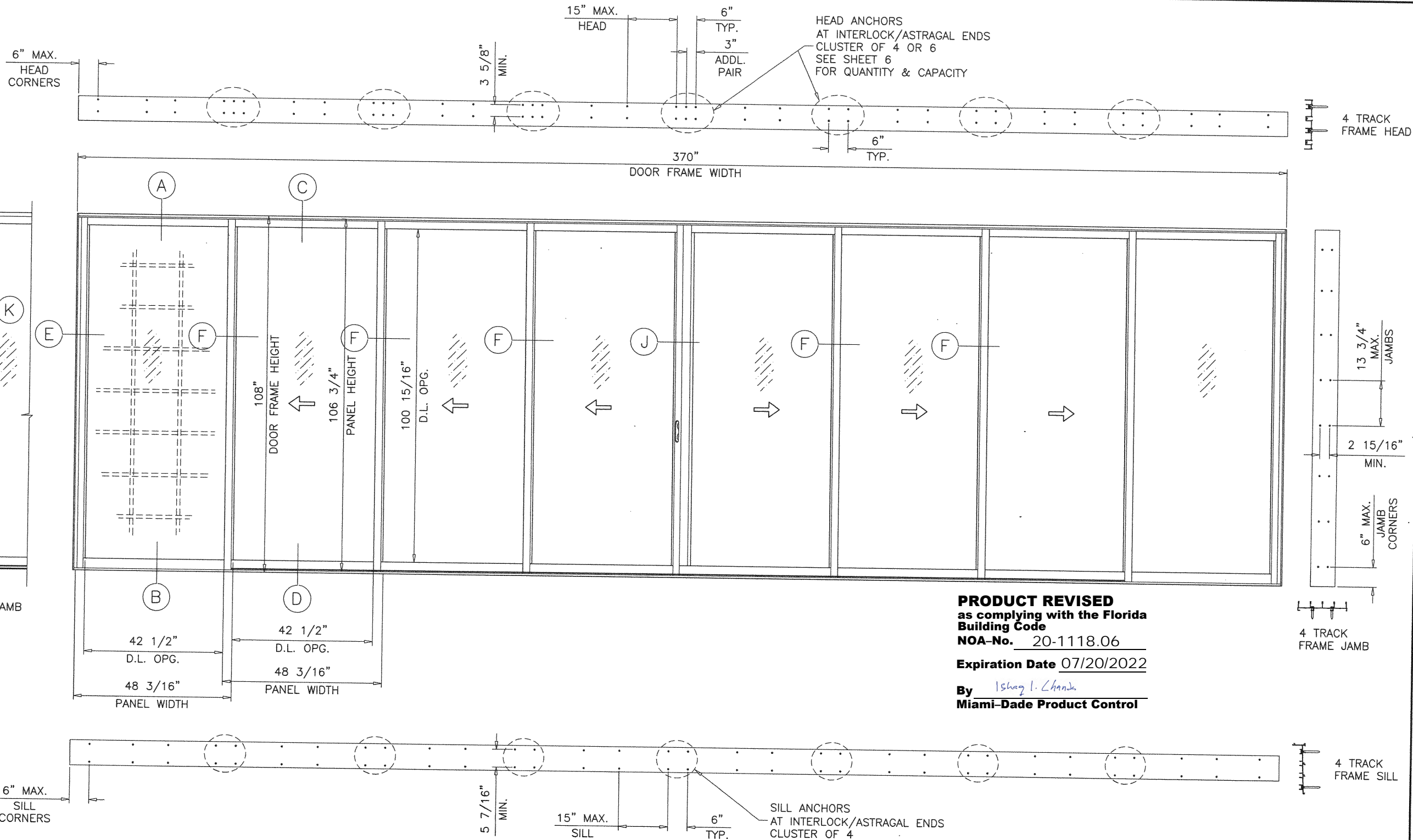


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COMP-ANL W16-73ES

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chk. by:					
drawing no.		W16-73			
sheet		3 of 23			



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date: 11-28-16

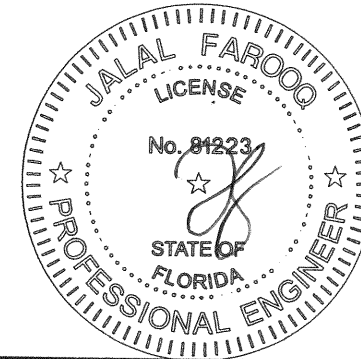
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dr. by: TARIQ

chk. by:

drawing no.
W16-73

sheet 4 of 23



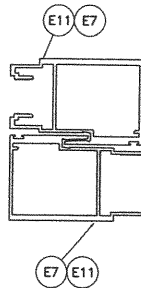
DEC 30 2020

DESIGN LOAD CAPACITY - PSF					
AVERAGE PANEL WIDTH INCHES	DOOR FRAME HEIGHT INCHES	INTERLOCK & ASTRAGAL STILES WITHOUT REINF.		INTERLOCK & ASTRAGAL STILES WITH REINF.	
		EXT.(+)	INT.(-)	EXT.(+)	INT.(-)
30	82	60.0	60.0	80.0	80.0
36		60.0	60.0	80.0	80.0
42		60.0	60.0	80.0	80.0
47-1/4		60.0	60.0	80.0	80.0
48		59.1	59.1	78.8	78.8
54		52.5	52.5	70.0	70.0
60		-	-	47.3	47.3
30	84	60.0	60.0	80.0	80.0
36		60.0	60.0	80.0	80.0
42		60.0	60.0	80.0	80.0
47-1/4		60.0	60.0	80.0	80.0
48		59.1	59.1	78.8	78.8
54		52.5	52.5	70.0	70.0
60		-	-	47.3	47.3
30	90	60.0	60.0	80.0	80.0
36		60.0	60.0	80.0	80.0
42		60.0	60.0	80.0	80.0
47-1/4		60.0	60.0	80.0	80.0
48		59.1	59.1	78.8	78.8
54		-	-	52.5	52.5
30	96	60.0	60.0	80.0	80.0
36		60.0	60.0	80.0	80.0
42		60.0	60.0	80.0	80.0
47-1/4		60.0	60.0	80.0	80.0
48		-	-	59.1	59.1
54		-	-	52.5	52.5
30	102	-	-	60.0	60.0
36		-	-	60.0	60.0
42		-	-	60.0	60.0
47-1/4		-	-	60.0	60.0
48		-	-	59.1	59.1
54		-	-	52.5	52.5
30	108	-	-	60.0	60.0
36		-	-	60.0	60.0
42		-	-	60.0	60.0
47-1/4		-	-	60.0	60.0
48		-	-	59.1	59.1
54		-	-	52.5	52.5

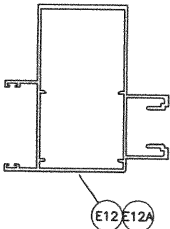
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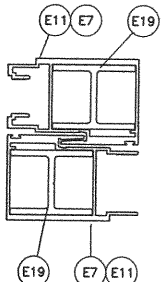
By Ishag I. Chande
Miami-Dade Product Control



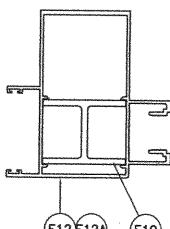
INTERLOCKS
W/O REINF.



ASTRAGAL
W/O REINF.



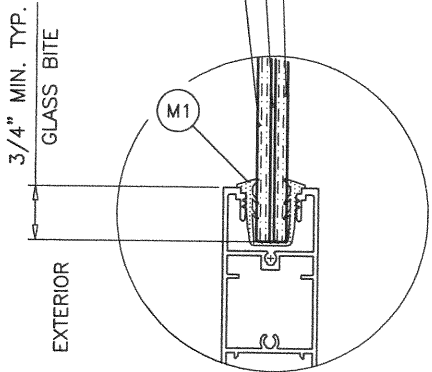
INTERLOCKS
WITH REINF.



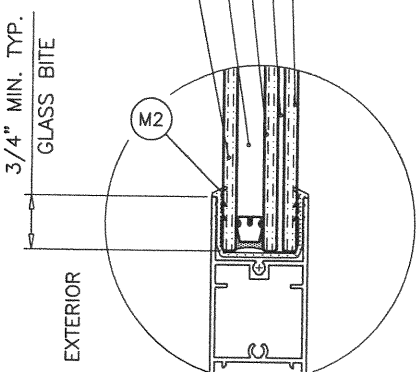
ASTRAGAL
WITH REINF.

AVERAGE PANEL WIDTH = $\frac{\text{DOOR FRAME WIDTH}}{\text{NUMBER OF PANELS}}$

DOOR HEIGHT AND WIDTH SIZE MUST COMPLY
EGRESS REQUIREMENTS PER FBC AS REQUIRED.



GLASS TYPE 'A'
7/16" OVERALL LAM. GLASS



GLASS TYPE 'A1'
1" OVERALL INSUL. LAM. GLASS

GLAZING OPTIONS

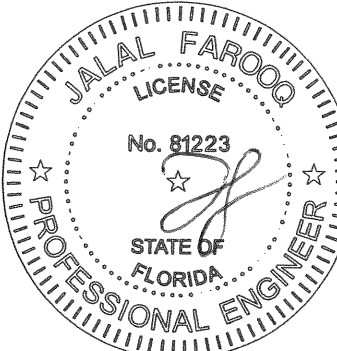
NOTE:
GLASS CAPACITIES ON THIS SHEET ARE
BASED ON ASTM E1300-09 (3 SEC. GUSTS)
AND FLORIDA BUILDING COMMISSION
DECLARATORY STATEMENT DCA05-DEC-219

SEE CHART ABOVE FOR DESIGN LOAD CAPACITY OF
DESIRED GLASS SIZE AND REINFORCING TYPES.

SEE CHART ON SHEET 6 FOR HEAD ANCHOR CAPACITY.

LOWER DESIGN PRESSURES FROM DESIGN LOAD CHART
OR HEAD ANCHOR CHART WILL APPLY TO ENTIRE SYSTEM.

3/8" AIR SPACE CONSISTING OF:
SPACER:
'HELIMA' LOW PROFILE ALUMINUM SPACER
BY 'LINGERMANN GMBH'
AROUND THE PERIMETER OF THE GLASS.
PERIMETER SEALANT:
SILICONE
DOWSIL 791
GE 2000



DEC 30 2020

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL W16-73ES

ES-EL400 ALUM SLIDING GLASS DOOR (L.M.I.)

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revisions:	no	date	description	by
	A	07.12.17	REV. PER RER COMMENTS	
	B	11.09.20	UPDATED TO 2020 FBC	

date:	11-28-16
scale:	3/8" = 1"
dr. by:	TARIQ
chk. by:	

drawing no.
W16-73

sheet 5 of 23

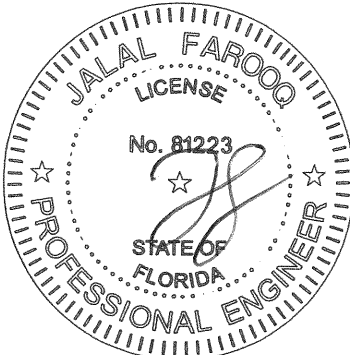
HEAD ANCHOR LOAD CAPACITY - PSF									
AVERAGE PANEL WIDTH INCHES	DOOR FRAME HEIGHT INCHES	ANCHOR TYPES 'A' & 'B'						ANCHOR TYPE 'C'	
		1/4" MAX. SHIM		3/8" MAX. SHIM		1/2" MAX. SHIM		3/8" MAX. SHIM	
		4 ANCHORS AT MTG. STILE ENDS	6 ANCHORS AT MTG. STILE ENDS	4 ANCHORS AT MTG. STILE ENDS	6 ANCHORS AT MTG. STILE ENDS	4 ANCHORS AT MTG. STILE ENDS	6 ANCHORS AT MTG. STILE ENDS	4 ANCHORS AT MTG. STILE ENDS	6 ANCHORS AT MTG. STILE ENDS
		EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)	EXT. (+) INT. (-)
30	82	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
36		80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
42		80.0	80.0	80.0	80.0	71.5	80.0	80.0	80.0
47-1/4		80.0	80.0	80.0	80.0	63.6	80.0	80.0	80.0
48		80.0	80.0	80.0	80.0	62.6	80.0	80.0	80.0
54		80.0	80.0	71.6	80.0	55.6	74.2	72.7	80.0
60		72.7	80.0	64.4	80.0	50.1	66.8	65.4	80.0
30	84	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
36		80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
42		80.0	80.0	80.0	80.0	69.8	80.0	80.0	80.0
47-1/4		80.0	80.0	79.8	80.0	62.1	80.0	80.0	80.0
48		80.0	80.0	78.6	80.0	61.1	80.0	79.8	80.0
54		78.9	80.0	69.9	80.0	54.3	72.4	71.0	80.0
60		71.0	80.0	62.9	80.0	48.9	65.2	63.9	80.0
30	90	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
36		80.0	80.0	80.0	80.0	76.1	80.0	80.0	80.0
42		80.0	80.0	80.0	80.0	65.2	80.0	80.0	80.0
47-1/4		80.0	80.0	74.5	80.0	57.9	77.3	75.7	80.0
48		80.0	80.0	73.4	80.0	57.0	76.1	74.5	80.0
54		73.6	80.0	65.2	80.0	50.7	67.6	66.2	80.0
30	96	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
36		80.0	80.0	80.0	80.0	71.3	80.0	80.0	80.0
42		80.0	80.0	78.6	80.0	61.1	80.0	79.8	80.0
47-1/4		78.9	80.0	69.9	80.0	54.3	72.4	71.0	80.0
48		60.0	60.0	60.0	60.0	53.5	60.0	60.0	60.0
30	102	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
36		60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
42		60.0	60.0	60.0	60.0	57.5	60.0	60.0	60.0
47-1/4		60.0	60.0	60.0	60.0	51.1	60.0	60.0	60.0
48		60.0	60.0	60.0	60.0	50.3	60.0	60.0	60.0
30	108	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
36		60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
42		60.0	60.0	60.0	60.0	54.3	60.0	60.0	60.0
47-1/4		60.0	60.0	60.0	60.0	48.3	60.0	60.0	60.0

SEE CHART ON SHEET 5 FOR DESIGN LOAD CAPACITY OF
DESIRED GLASS SIZE AND REINFORCING TYPES.

SEE CHART ABOVE FOR HEAD ANCHOR CAPACITY.

LOWER DESIGN PRESSURES FROM DESIGN LOAD CHART
OR HEAD ANCHOR CHART WILL APPLY TO ENTIRE SYSTEM.

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-1118.06
Expiration Date 07/20/2022
By Ishaq I. Chande
Miami-Dade Product Control



DEC 30 2020

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 262-6978 FAX. (305) 262-6978
(C.A.N. 3538)

ES-EL400 ALUM SLIDING GLASS DOOR (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:

no	date	by	description
A	07.12.17		REV. PER RER COMMENTS
B	11.09.20		UPDATED TO 2020 FBC

date: 11-28-16

scale: -

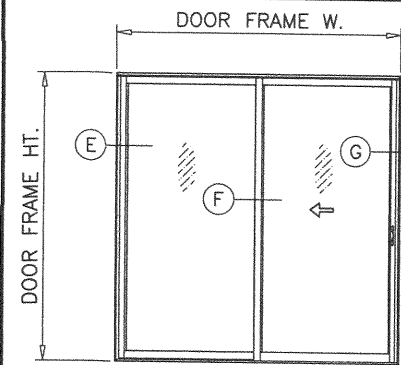
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chk. by:

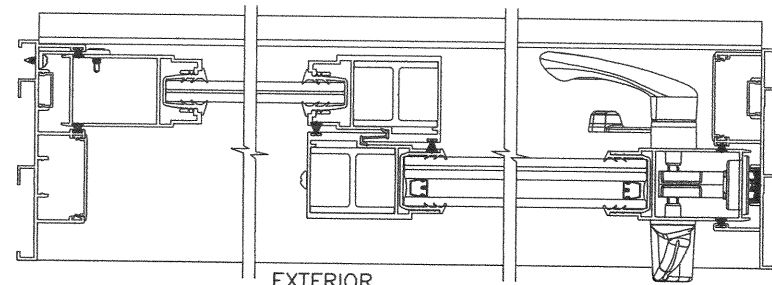
drawing no.

W16-73

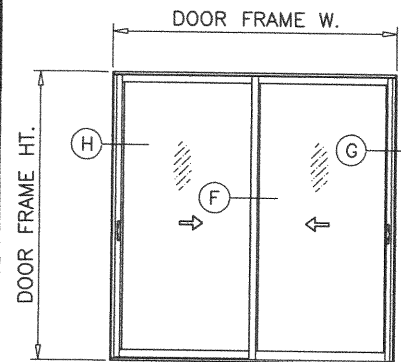
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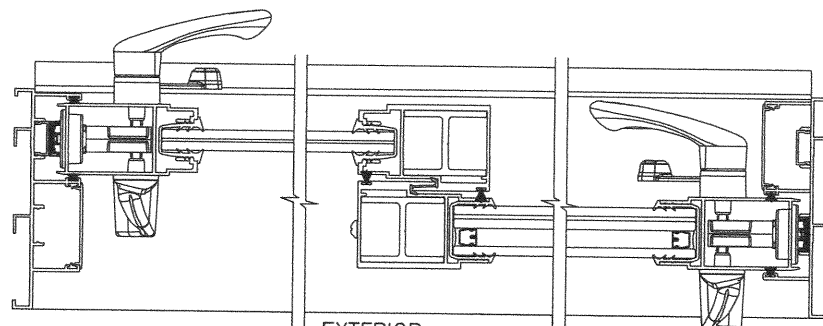
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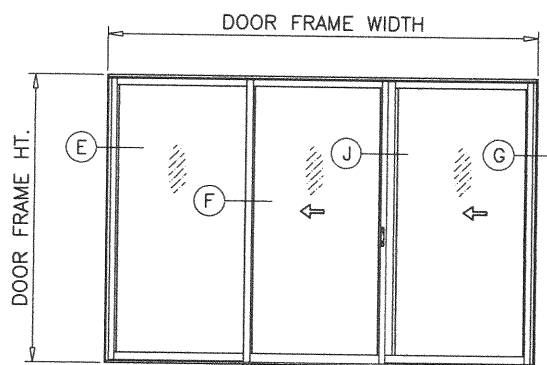
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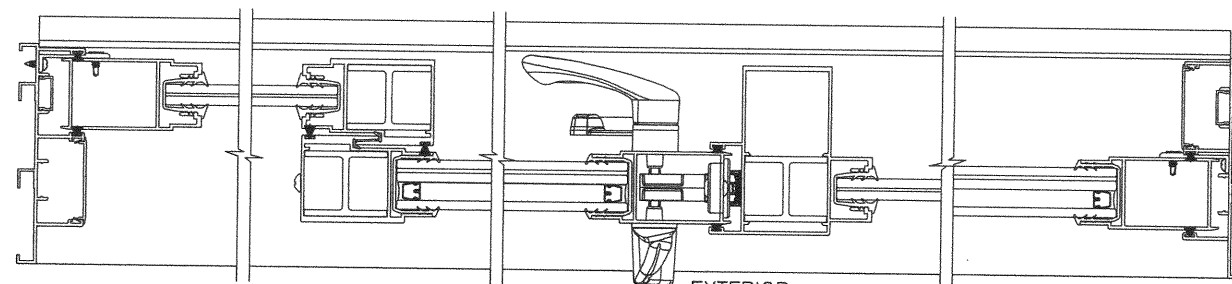
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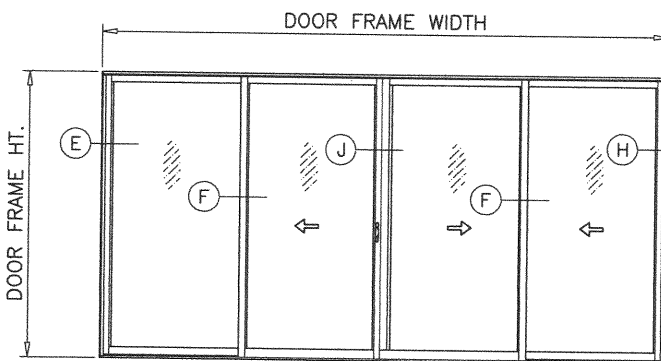
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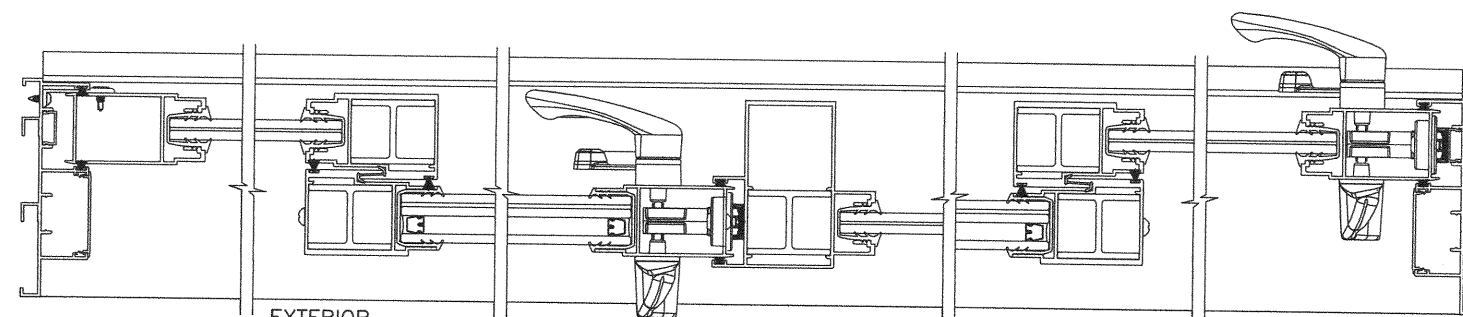
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EXTERIOR



OX-XX (SHOWN)
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OX-XO
XX-XX



EXTERIOR

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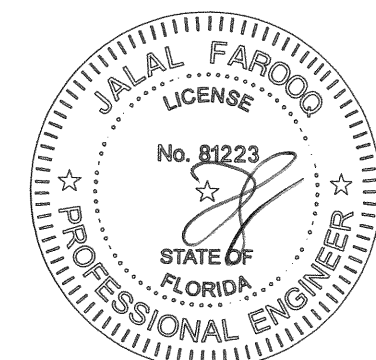
1. CONFIGURATIONS SHOWN FOR ILLUSTRATION PURPOSES ONLY.
2. FOR APPLICABLE DESIGN PRESSURES SEE SHEET 5.
3. FOR ANCHOR DETAILS SEE SHEETS 14 THRU 19.

PRODUCT REVISED
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Building Code

NOA-No. 20-1118.06

Expiration Date 07/20/2022

By Ishag I. Chank
Miami-Dade Product Control



DEC 30 2020

APPROVED CONFIGURATIONS
NON-POCKETED DOORS
TWO (2) TRACKS

af c
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL W16-73ES

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revisions:

no.	date	by	description
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B	11.09.20		UPDATED TO 2020 FBC

date: 11-28-16

scale: -

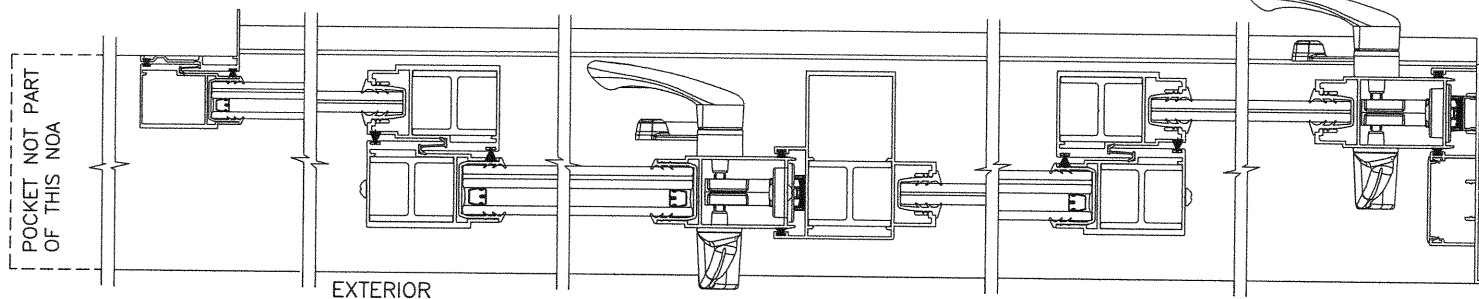
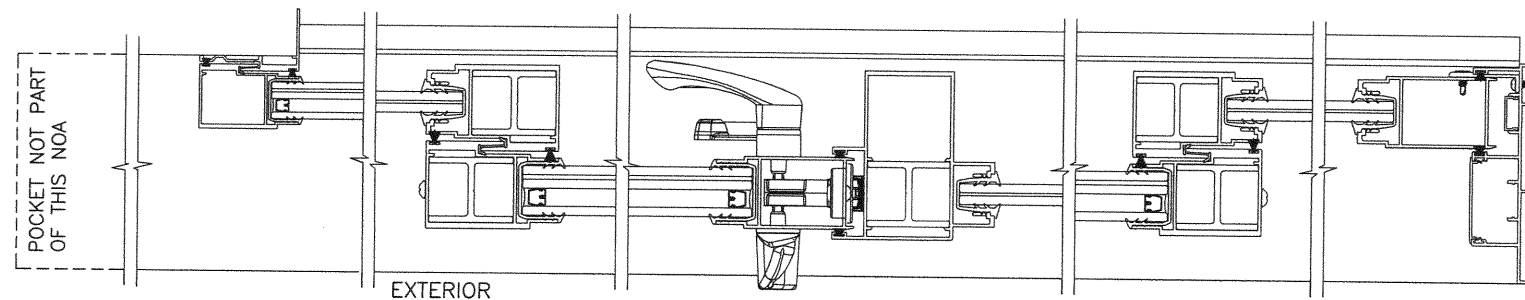
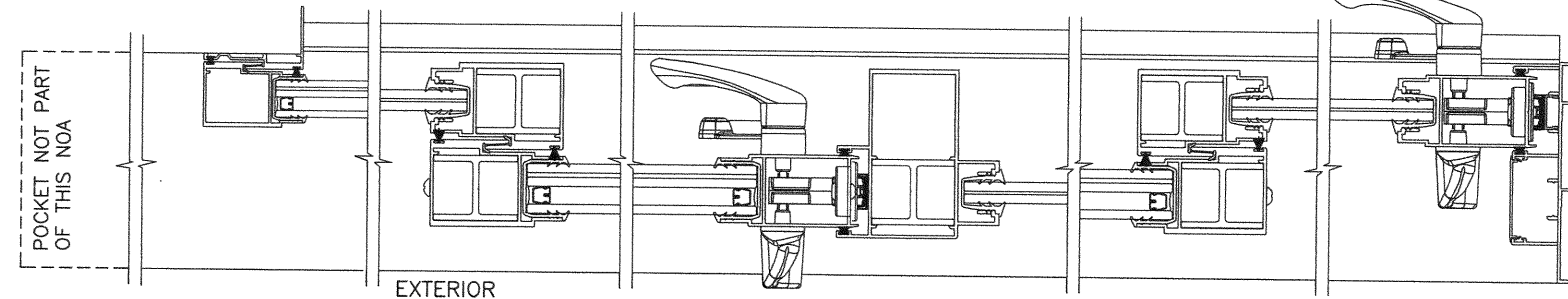
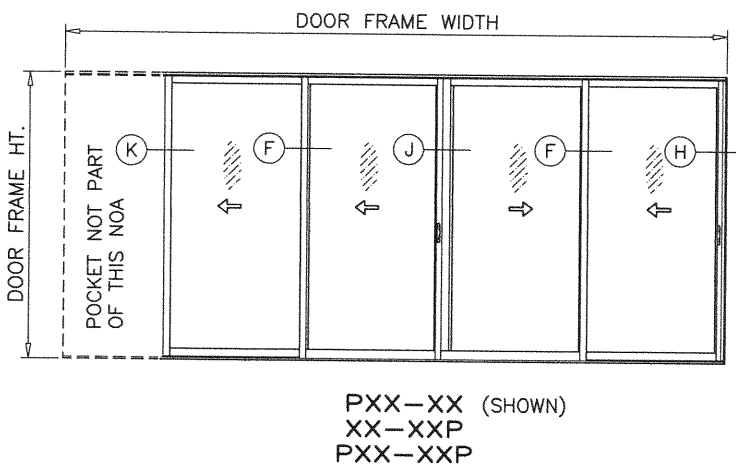
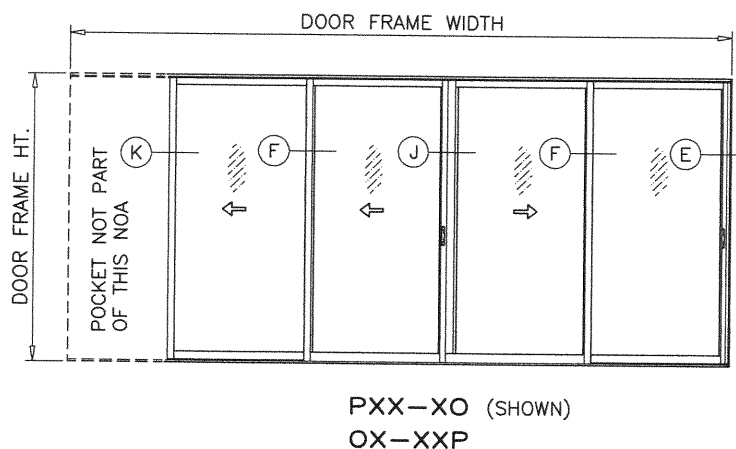
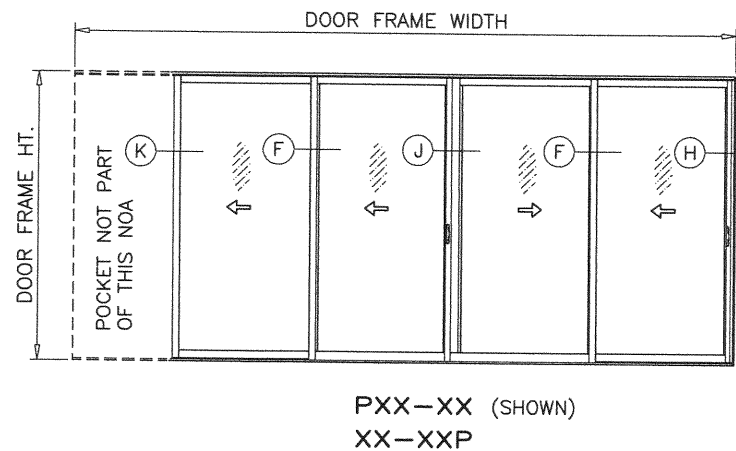
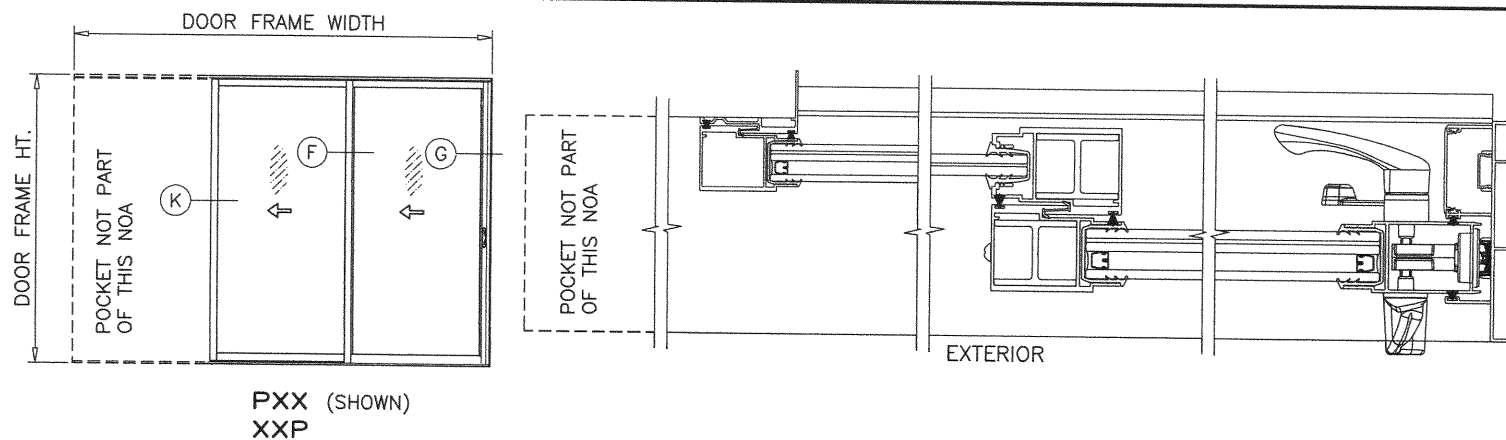
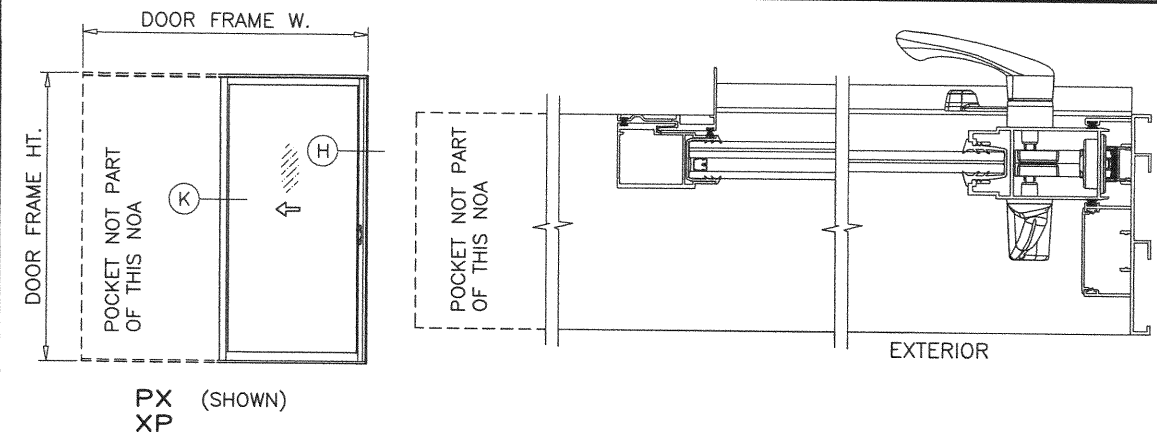
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chk. by:

drawing no.

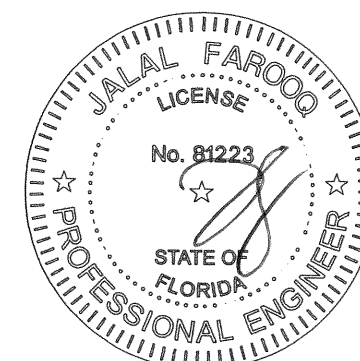
W16-73

sheet 7 of 23



- NOTE:
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By Ishag I. Chande
Miami-Dade Product Control



DEC 30 2020

APPROVED CONFIGURATIONS
POCKETED DOORS
TWO (2) TRACKS

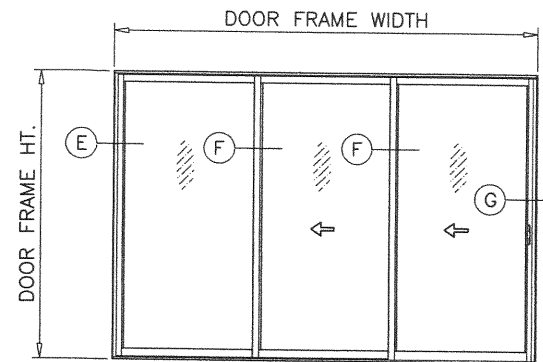
AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
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(C.A.N. 3538)

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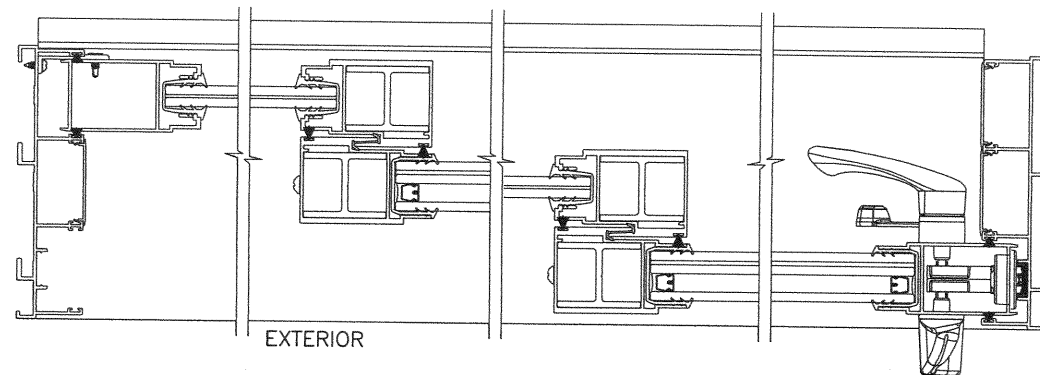
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:		no	date	by	description
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		B	11.09.20		UPDATED TO 2020 FBC
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dr. by:	TARIQ				
chk. by:					
drawing no.	W16-73				
sheet	8 of 23				

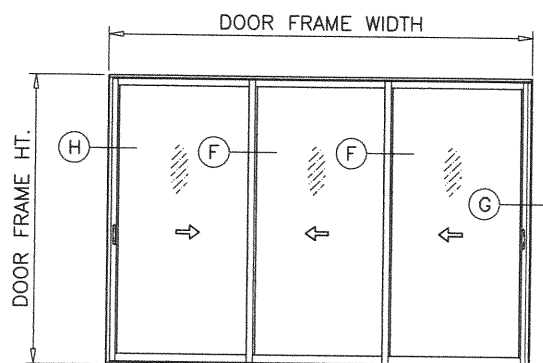
COMP-ANL W16-73ES



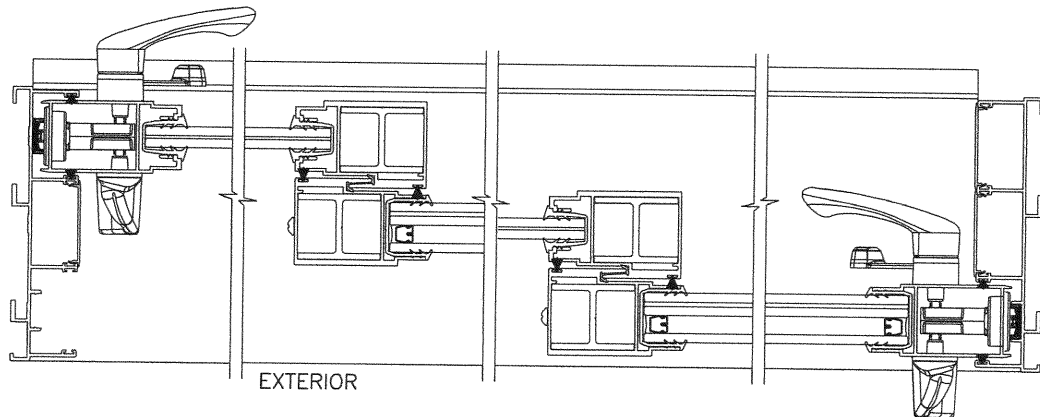
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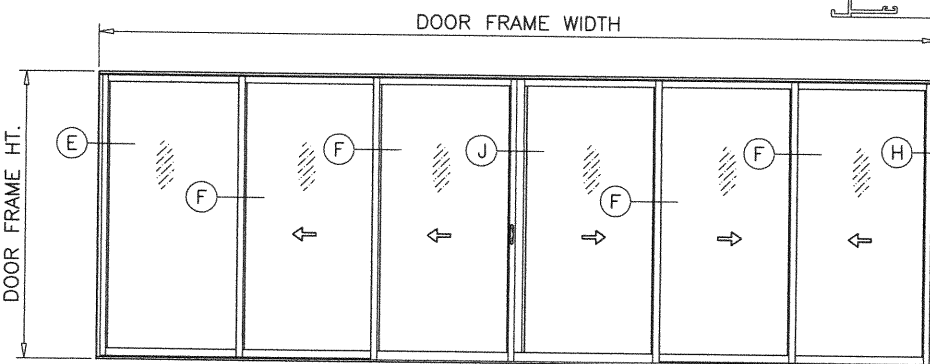
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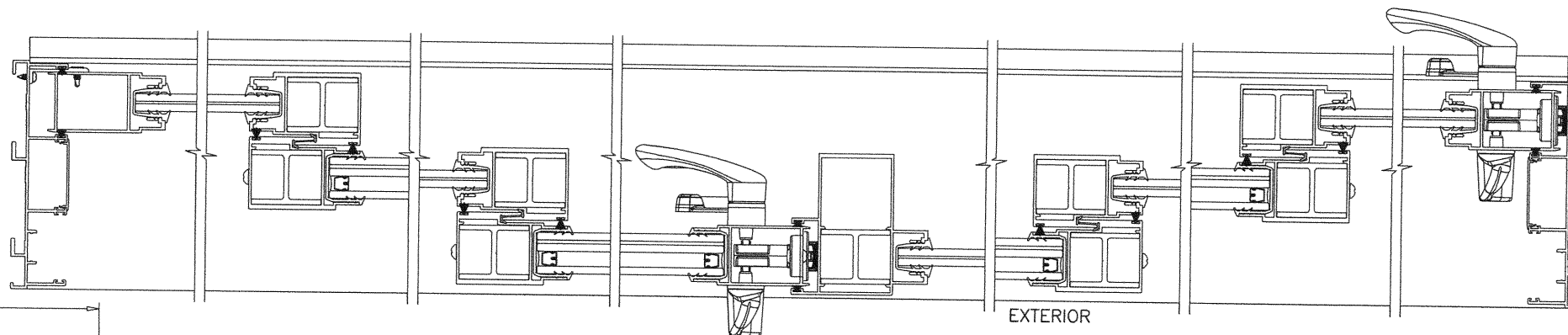
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XXX-XXX



EXTERIOR

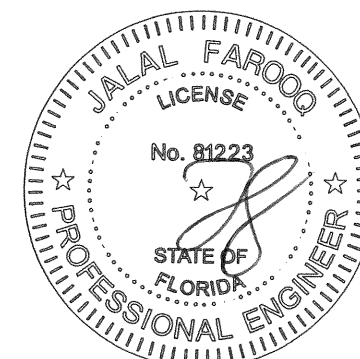
NOTE:

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3. FOR ANCHOR DETAILS SEE SHEETS 14 THRU 19.

PRODUCT REVISED
as complying with the Florida
Building Code
NOA-No. 20-1118.06

Expiration Date 07/20/2022

By *Ishaq I. Chande*
Miami-Dade Product Control



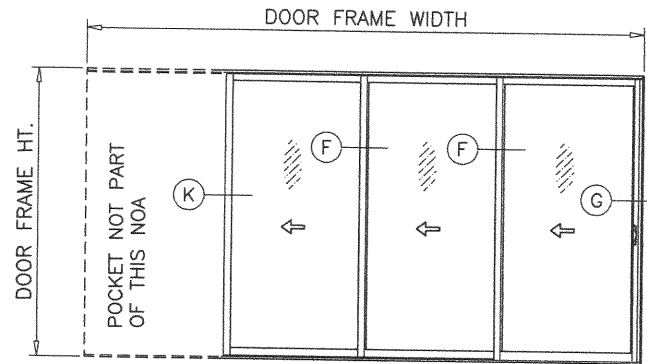
DEC 30 2020

APPROVED CONFIGURATIONS
NON-POCKETED DOORS
THREE (3) TRACKS

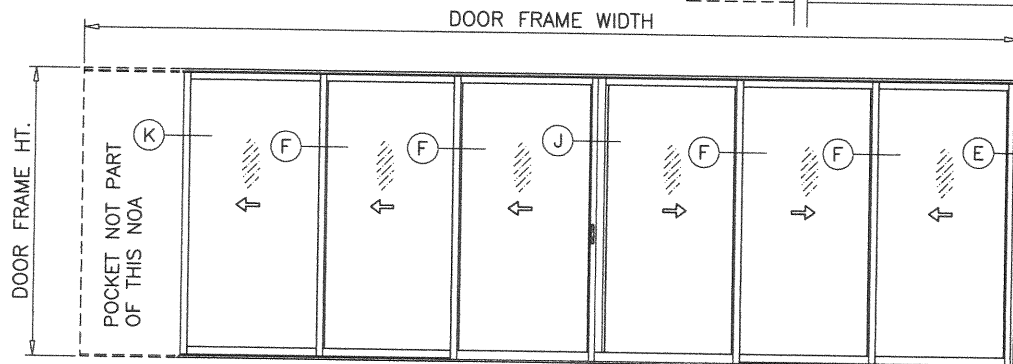
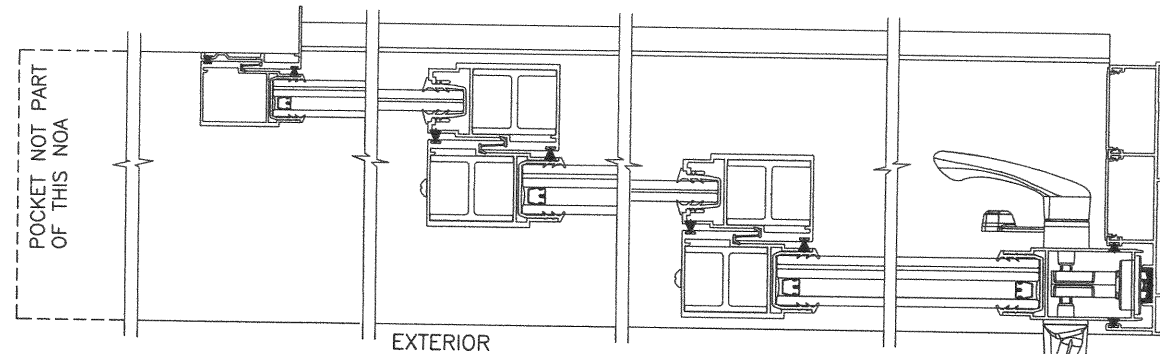
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AL-FAROOQ CORPORATION
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9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
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COMP-ANL W16-73ES

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MIAMI, FL. 33142
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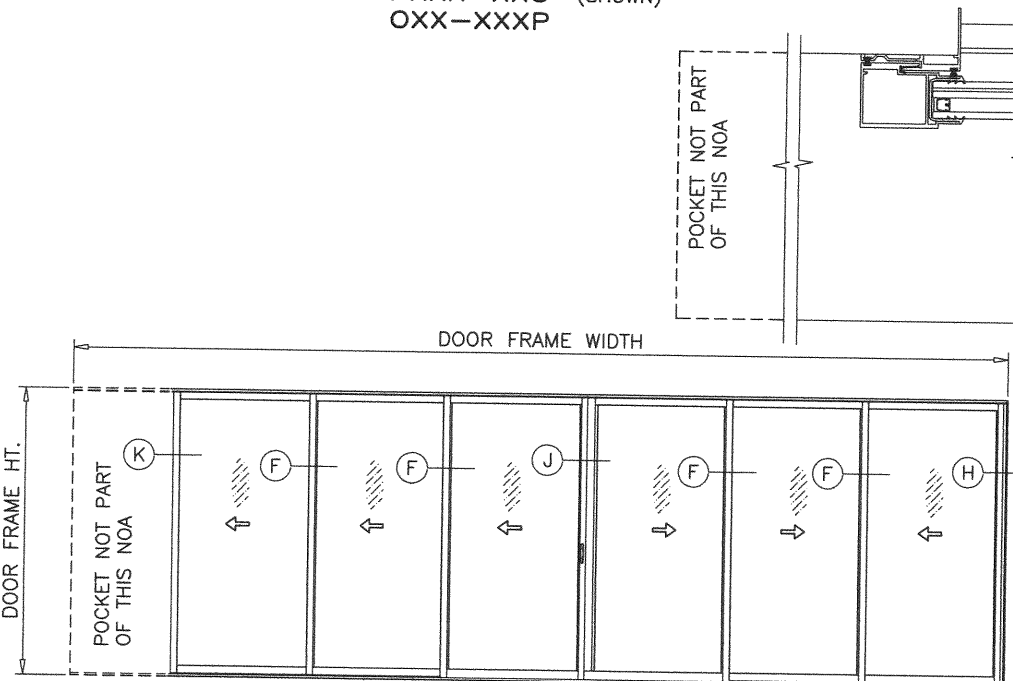
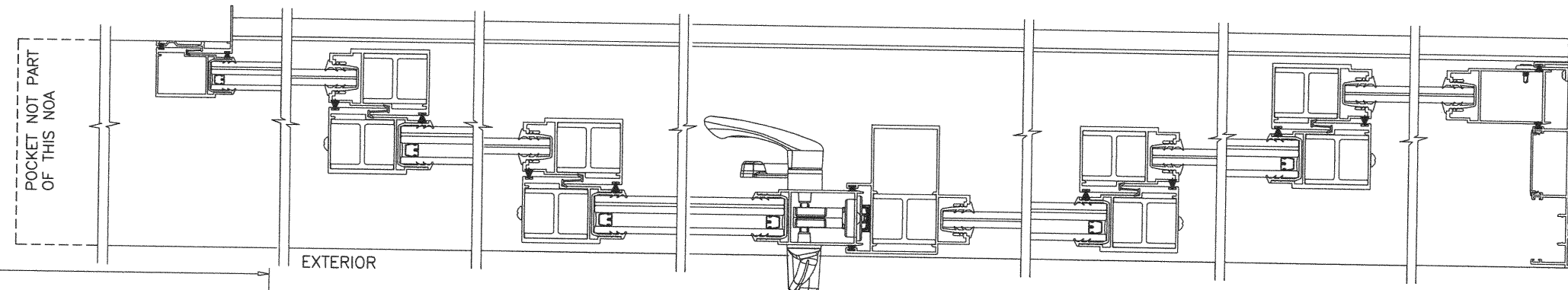
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dr. by: TARIQ			
chk. by:			
drawing no.			
W16-73			
sheet 9 of 23			



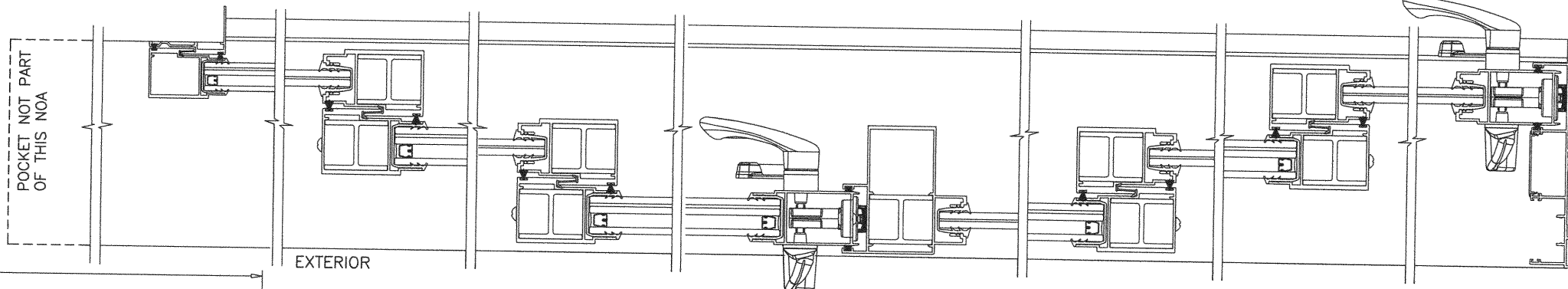
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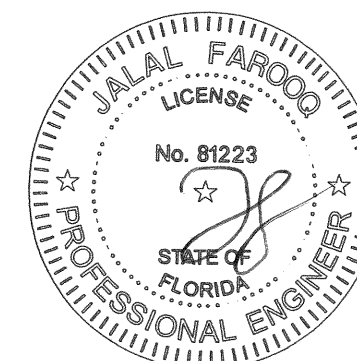


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PRODUCT REVISED
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Building Code
NOA-No. 20-1118.06
Expiration Date 07/20/2022
By Ishag I. Chank
Miami-Dade Product Control

DEC 30 2020

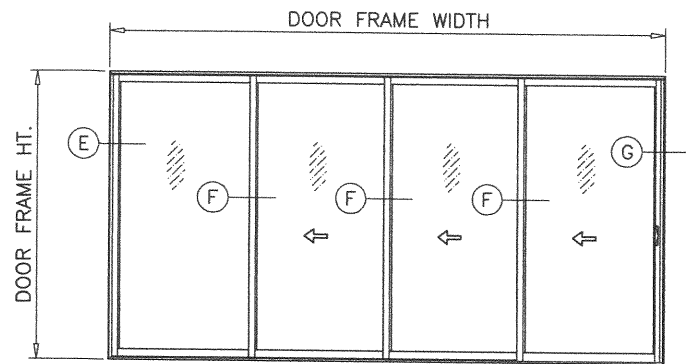


APPROVED CONFIGURATIONS
POCKETED DOORS
THREE (3) TRACKS

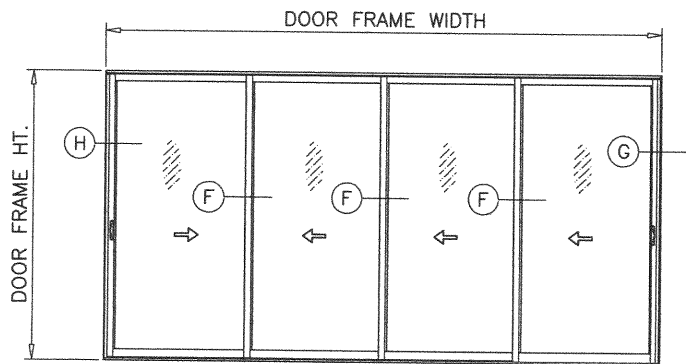
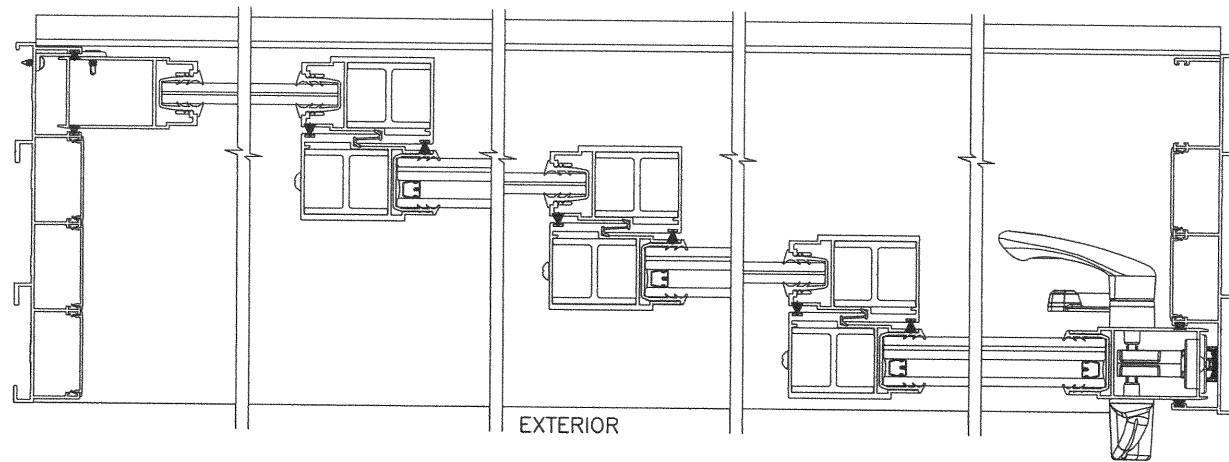
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AL-FAROOQ CORPORATION
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9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
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COMP-ANL W16-73ES

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E.S. WINDOWS, LLC
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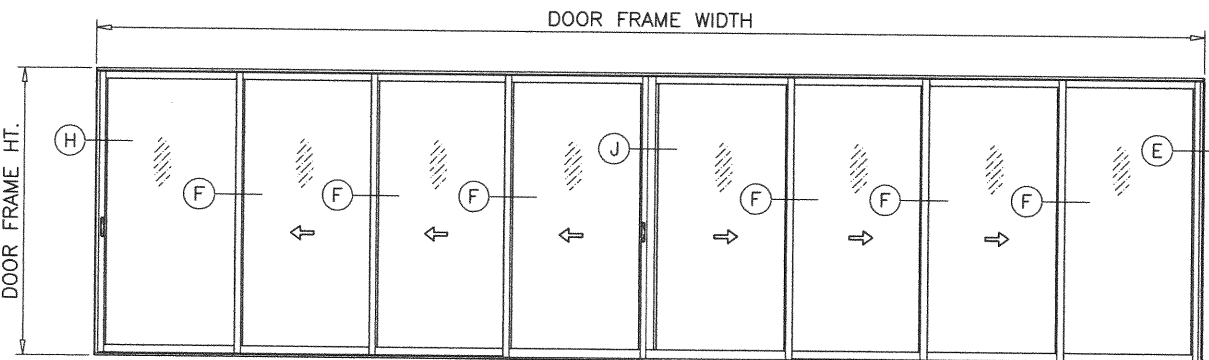
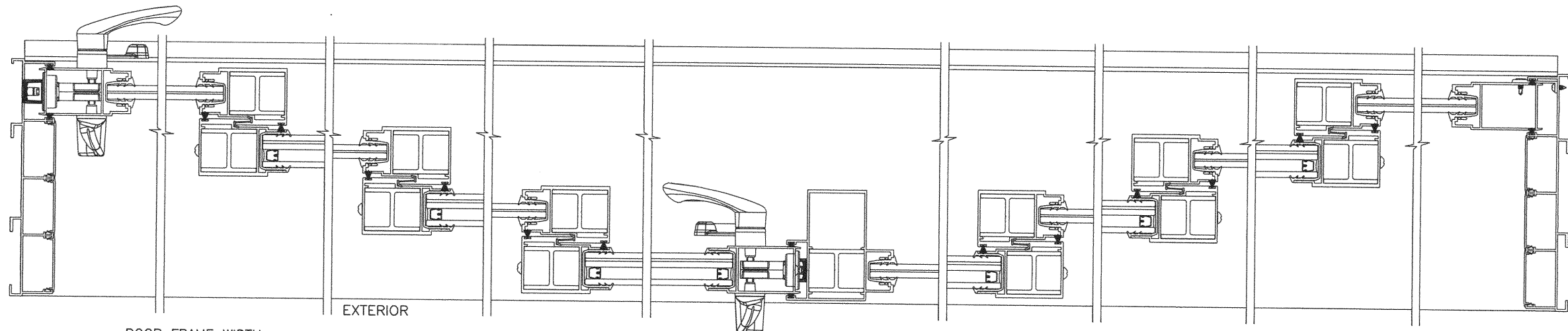
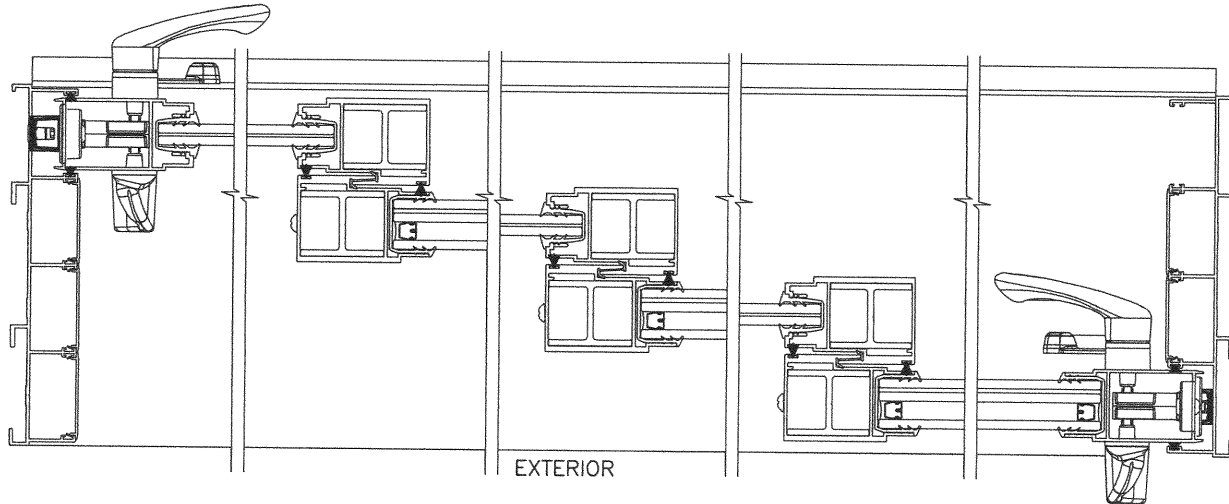
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drawing no. W16-73			
sheet 10 of 23			



XXXX (SHOWN)
XXXXO



XXXX (SHOWN)



XXXX-XXXXO (SHOWN)
XXXX-XXXX
XXXX-XXXXO
XXXX-XXXX

APPROVED CONFIGURATIONS
NON-POCKETED DOORS
FOUR (4) TRACKS

NOTE:

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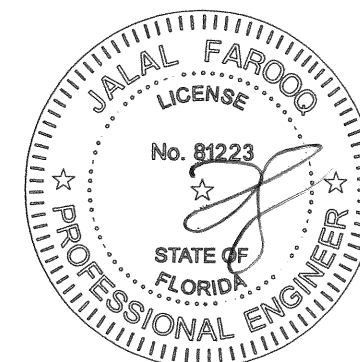
PRODUCT REVISED
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NOA-No. 20-1118.06

Expiration Date 07/20/2022

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Miami-Dade Product Control

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no	date	by	description
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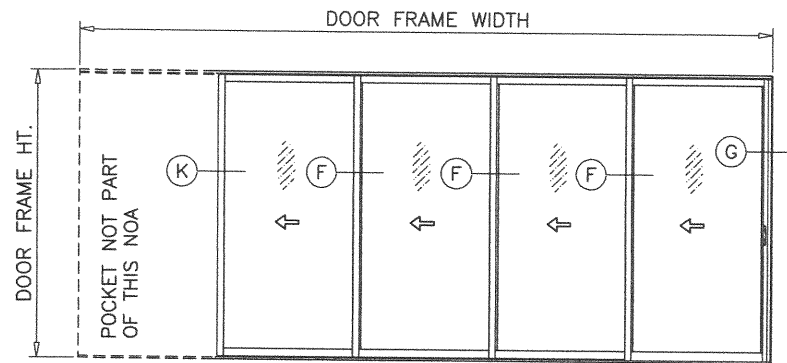
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chk. by:	

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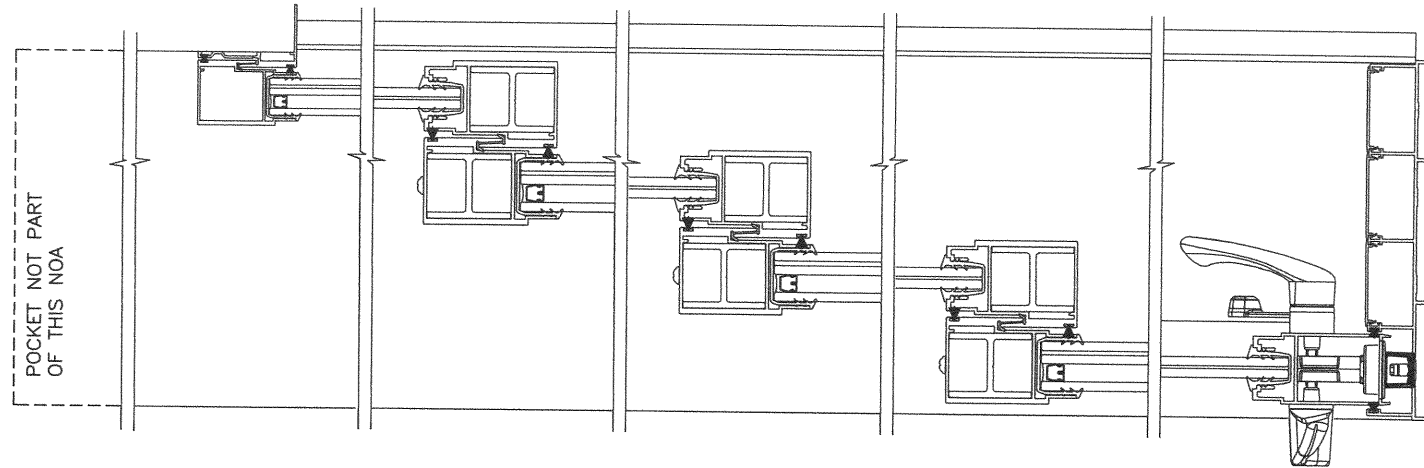
W16-73

sheet 11 of 23

COMP-ANL W16-73ES



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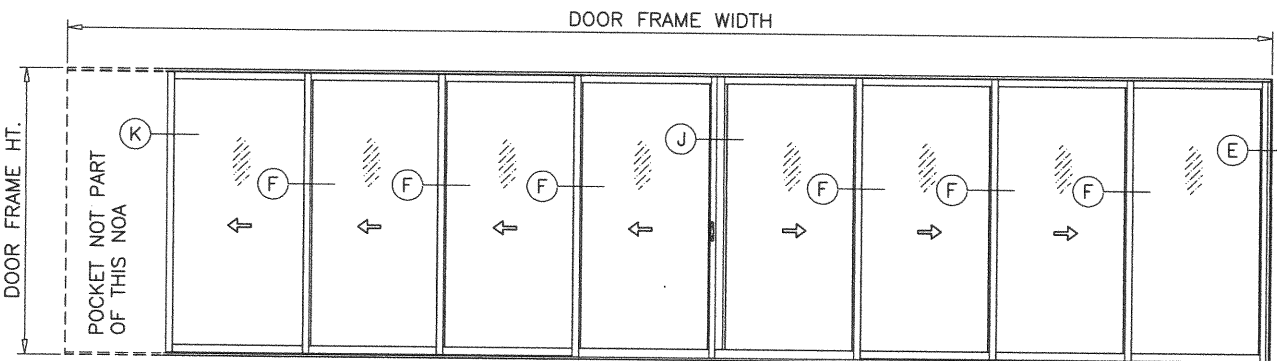
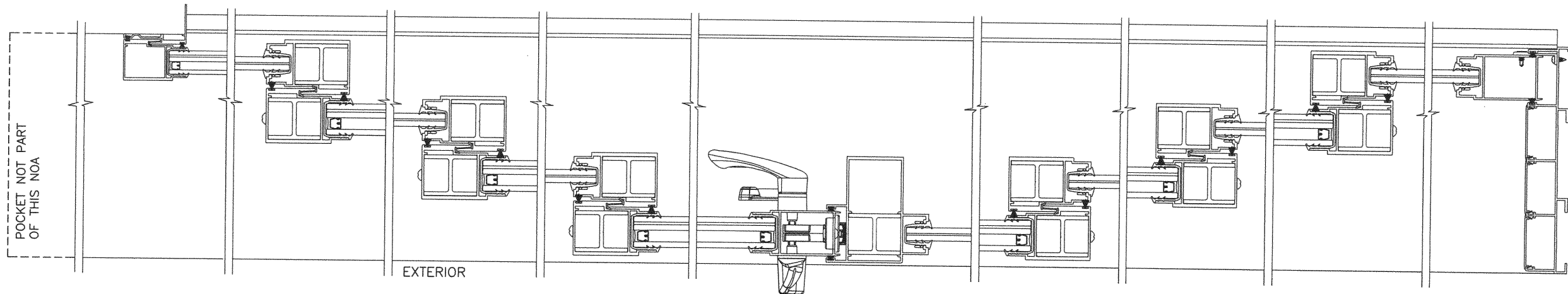
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By *Ishag I. Chande*
Miami-Dade Product Control

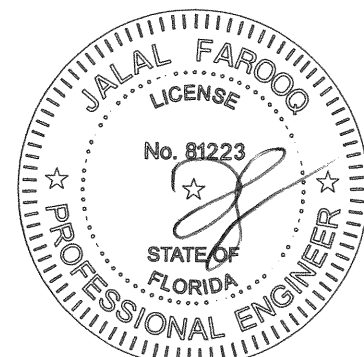
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PXXXX-XXXO (SHOWN)
OXXX-XXXXP

APPROVED CONFIGURATIONS
POCKETED DOORS
FOUR (4) TRACKS



DEC 30 2020

AL-FAROOQ CORPORATION
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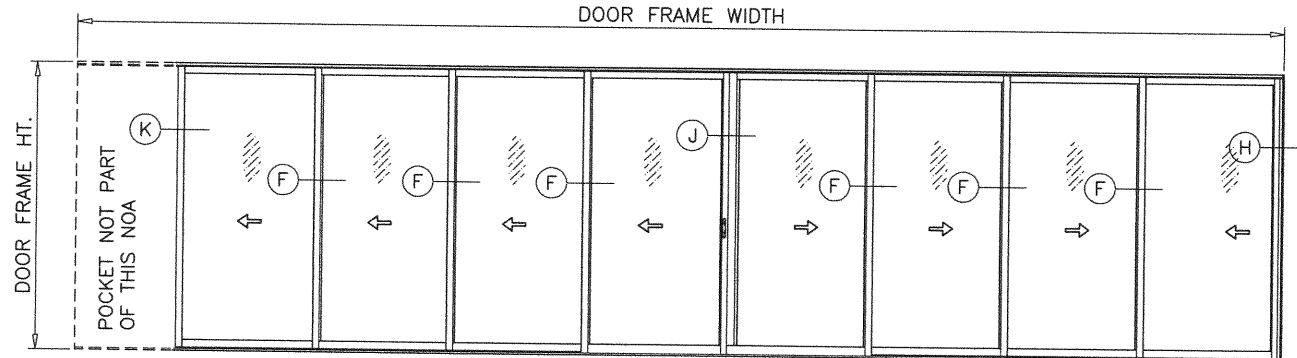
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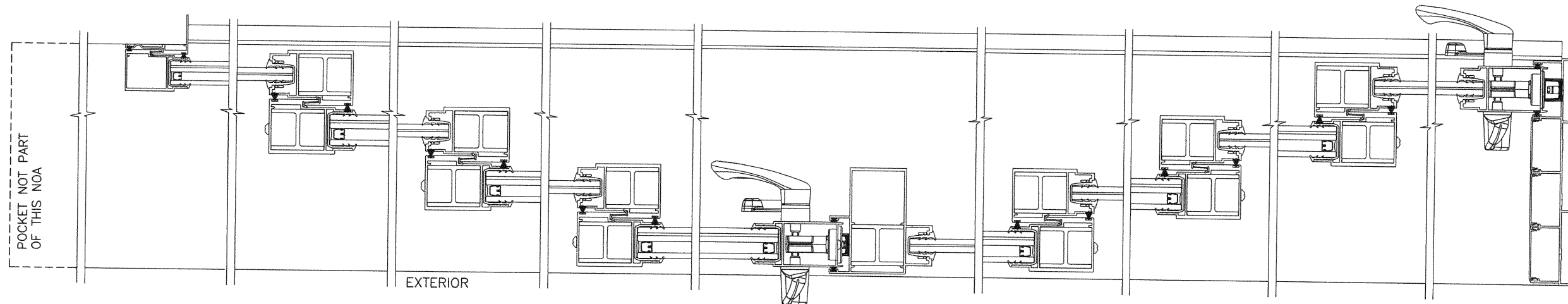
drawing no.
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COMP-ANL W16-73ES



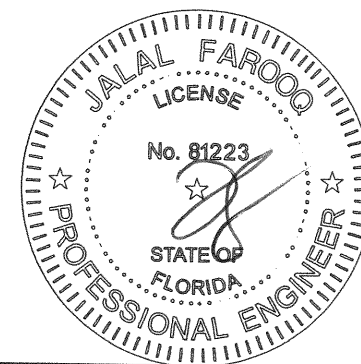
PXXXX-XXXX (SHOWN)
XXXX-XXXXP
PXXXX-XXXXP



APPROVED CONFIGURATIONS
POCKETED DOORS
FOUR (4) TRACKS

NOTE:

1. CONFIGURATIONS SHOWN FOR ILLUSTRATION PURPOSES ONLY.
2. FOR APPLICABLE DESIGN PRESSURES AND REINFORCEMENTS REQUIREMENTS SEE SHEET 5.
3. FOR ANCHOR DETAILS SEE SHEETS 14 THRU 19.



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PRODUCT REVISED
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ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
(C.A.N. 3538)

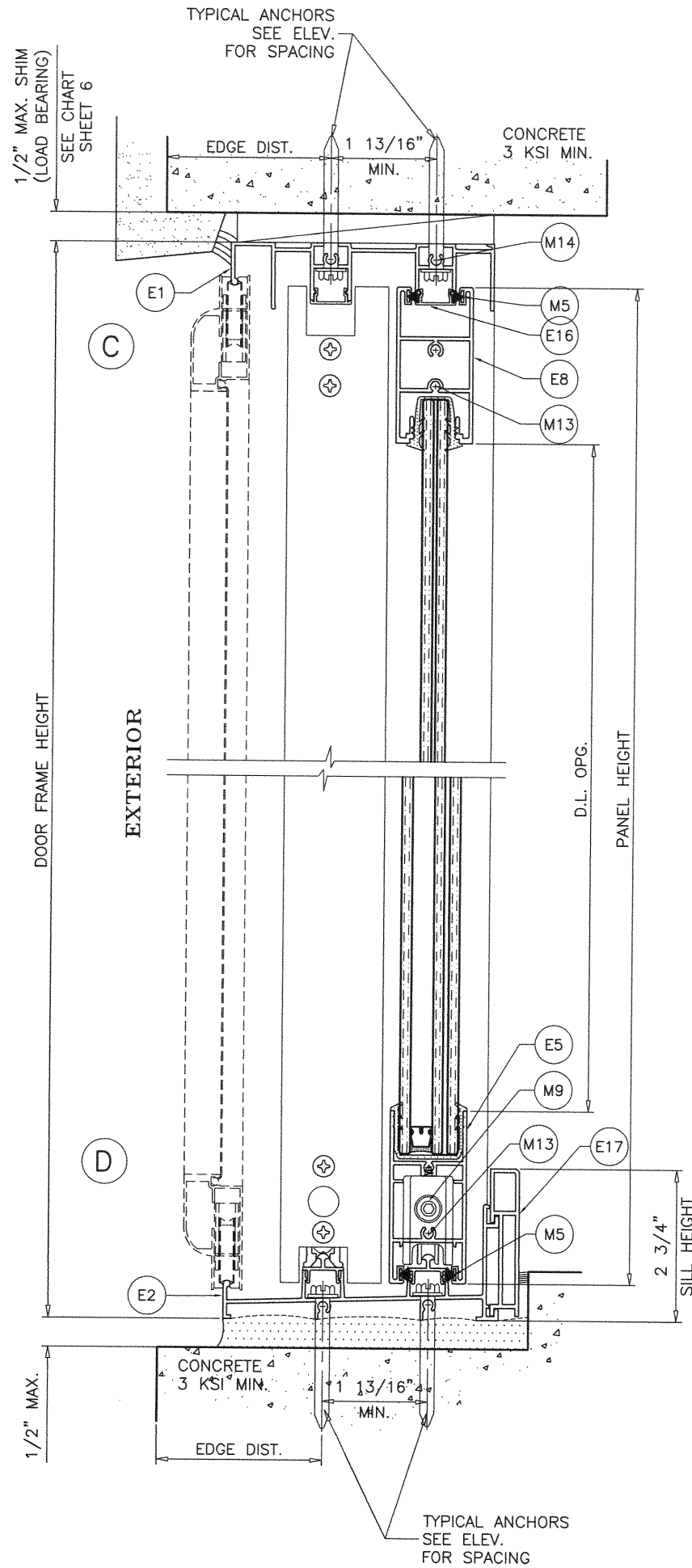
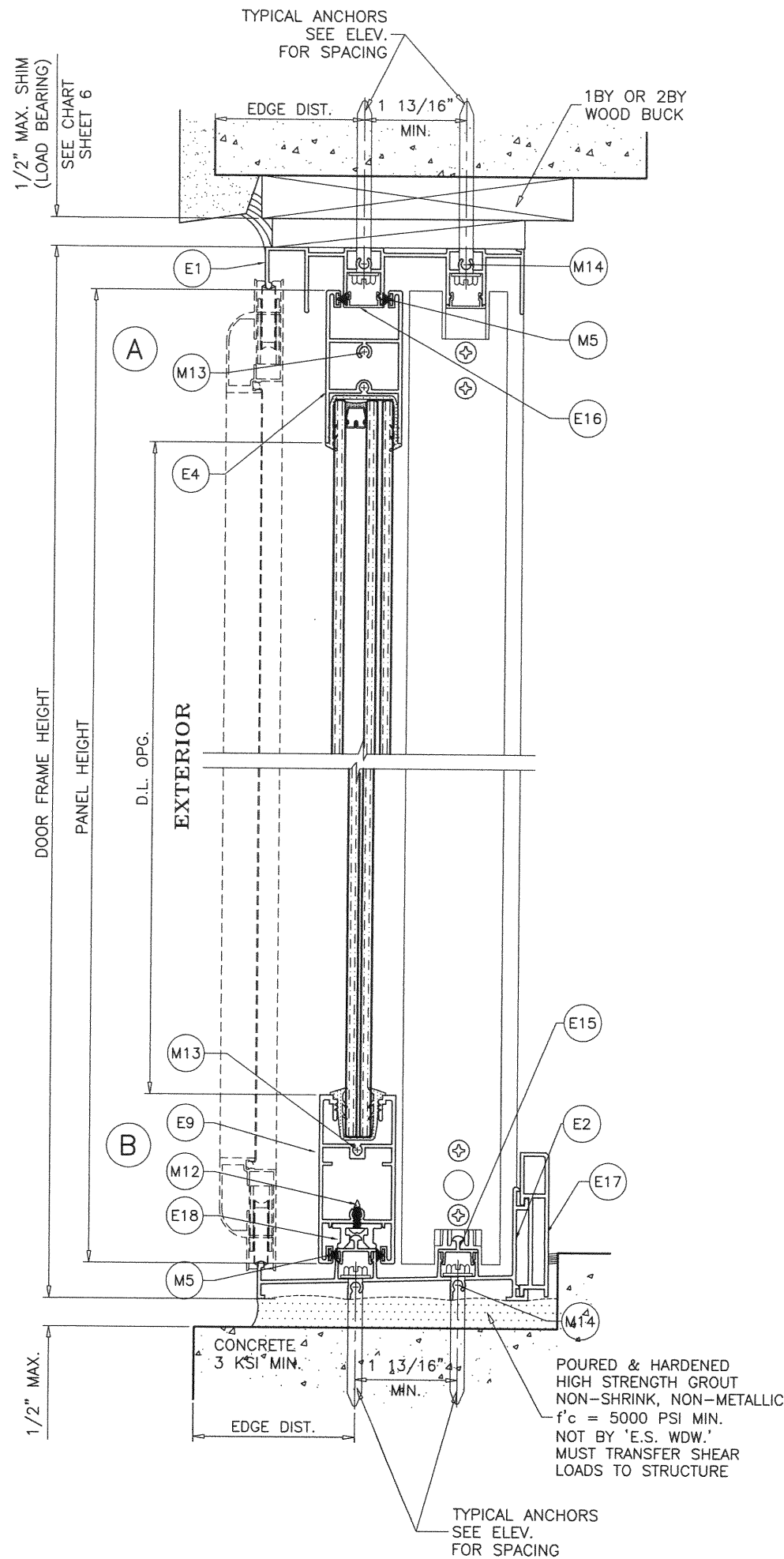
ES-EL400 ALUM SLIDING GLASS DOOR (L.M.I.)
E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

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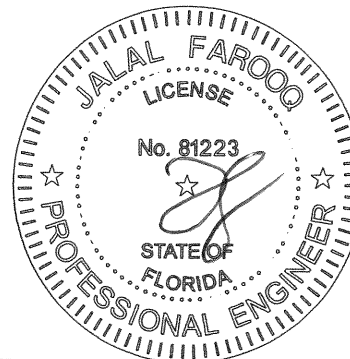
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sheet 13 of 23

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scale: 3/8" = 1"
dr. by: TARIQ
chk. by:

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TYPICAL ANCHORS: SEE ELEV. FOR SPACING

AT HEAD

- TYPE 'A'— 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
INTO WOOD STRUCTURES
2" MIN. PENETRATION INTO WOOD
THRU 1BY BUCKS INTO CONCRETE
1-3/4" MIN. EMBED INTO CONCRETE, 1-1/2" MIN. EDGE DIST.
THRU 2BY BUCKS INTO CONCRETE
1-1/2" MIN. EMBED INTO CONCRETE, 1-1/2" MIN. EDGE DIST.
- TYPE 'B'— 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO CONCRETE
2" MIN. EMBED INTO CONCRETE, 1-1/2" MIN. EDGE DIST.
- TYPE 'C'— 1/4" DIA. TEKS OR SELF DRILLING SCREWS (GRADE 5 CRS)
INTO F.B.C. APPROVED MULLIONS
OR
INTO METAL STRUCTURES
(3) THREADS MIN. PENETRATION BEYOND SUBSTRATE
ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)
STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

AT SILL

- TYPE 'B'— 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO CONCRETE
1-3/4" MIN. EMBED INTO CONCRETE

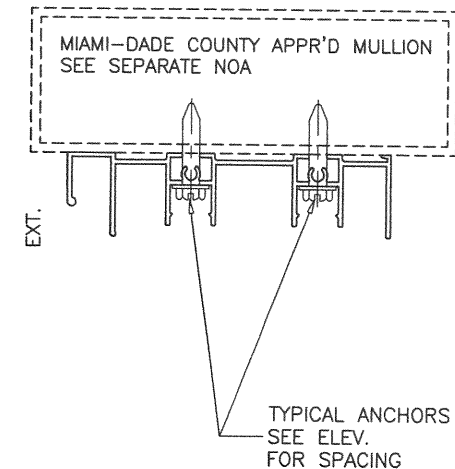
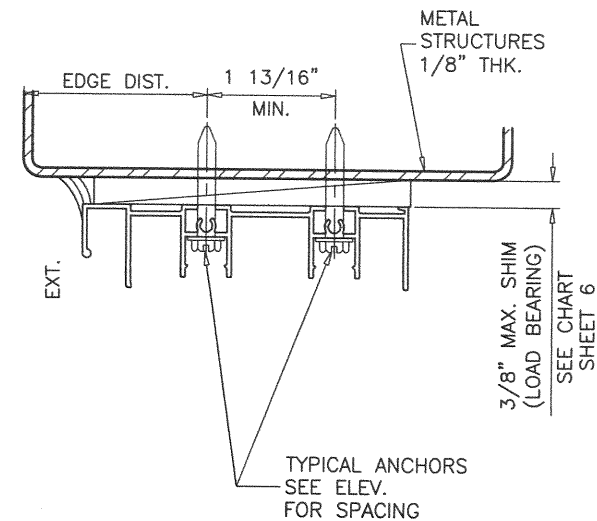
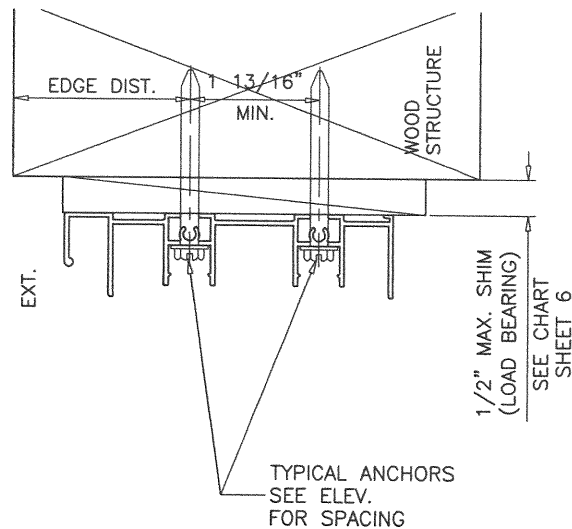
AT JAMBS

- TYPE 'A'— 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
INTO WOOD STRUCTURES
2" MIN. PENETRATION INTO WOOD
THRU 1BY OR 2BY BUCKS INTO CONC. OR FILLED BLOCK
1-1/4" MIN. EMBED INTO CONCRETE
1-1/2" MIN. EMBED INTO FILLED BLOCKS
- TYPE 'B'— 1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO CONCRETE OR GROUT FILLED BLOCKS
2" MIN. EMBED INTO CONCRETE
2" MIN. EMBED INTO GROUT FILLED BLOCKS
- TYPE 'C'— 1/4" DIA. TEKS OR SELF DRILLING SCREWS (GRADE 5 CRS)
INTO F.B.C. APPROVED MULLIONS
OR
INTO METAL STRUCTURES
(3) THREADS MIN. PENETRATION BEYOND SUBSTRATE
ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)
STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

ANCHOR EDGE DISTANCES

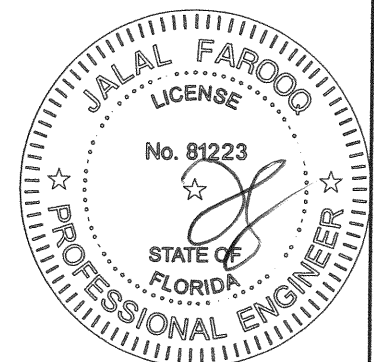
INTO CONCRETE AND MASONRY = 2-1/2" MIN. (UNLESS SPECIFIED OTHERWISE)
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

WOOD AT HEAD OR JAMBS SG = 0.55 MIN.
CONCRETE AT HEAD, SILL OR JAMBS f'c = 3000 PSI MIN.
C-90 GROUT FILLED BLOCK AT JAMBS f'm = 2000 PSI MIN.



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1BY OR 2BY WOOD BUCKS AND METAL STRUCTURE NOT BY 'E.S. WDW.'
MUST SUSTAIN LOADS IMPOSED BY GLAZING SYSTEM
AND TRANSFER THEM TO THE BUILDING STRUCTURE.



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AL-FAROOQ CORPORATION
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9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173 (C.A.N. 3538)
TEL. (305) 264-8100 FAX. (305) 262-6978
COMP-ANL W16-73ES

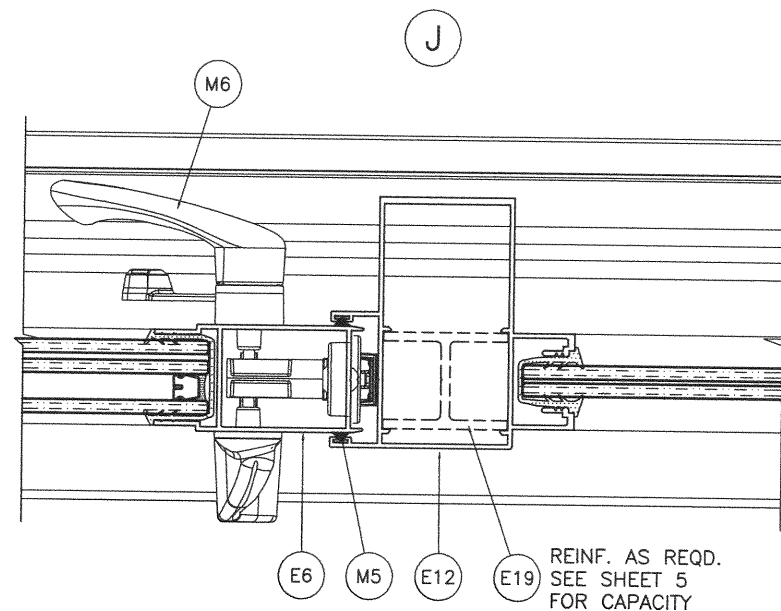
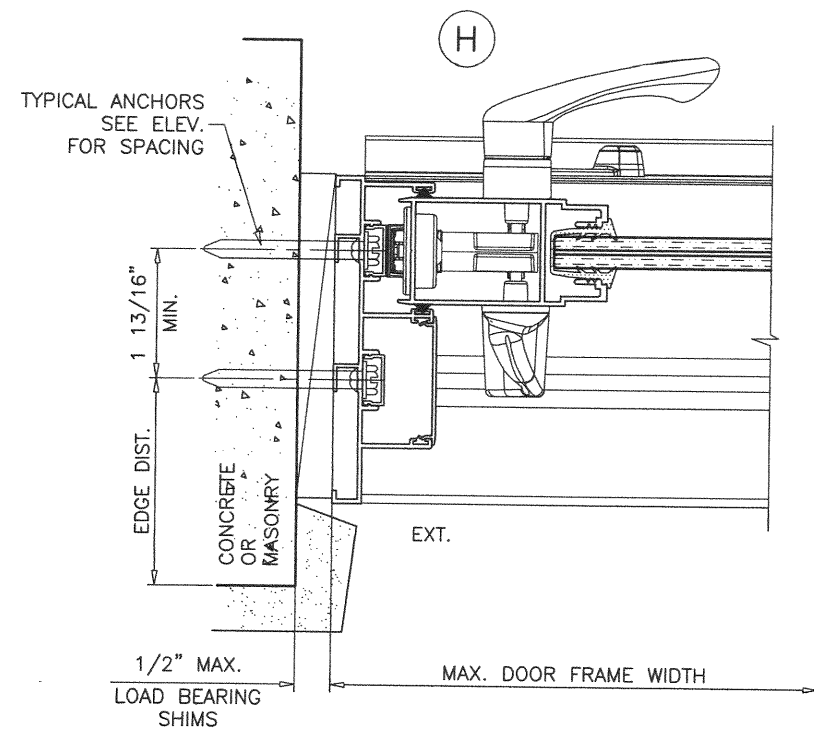
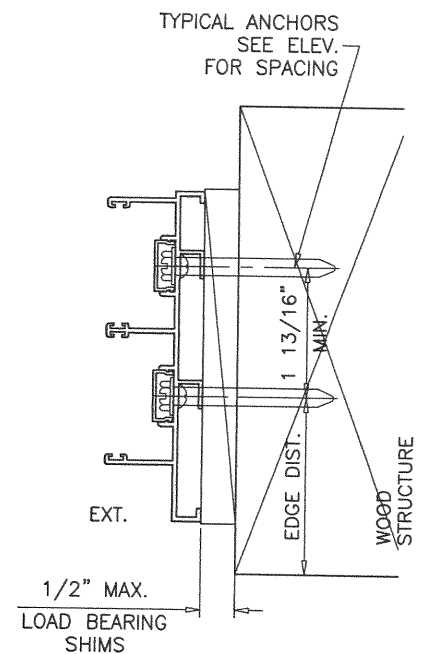
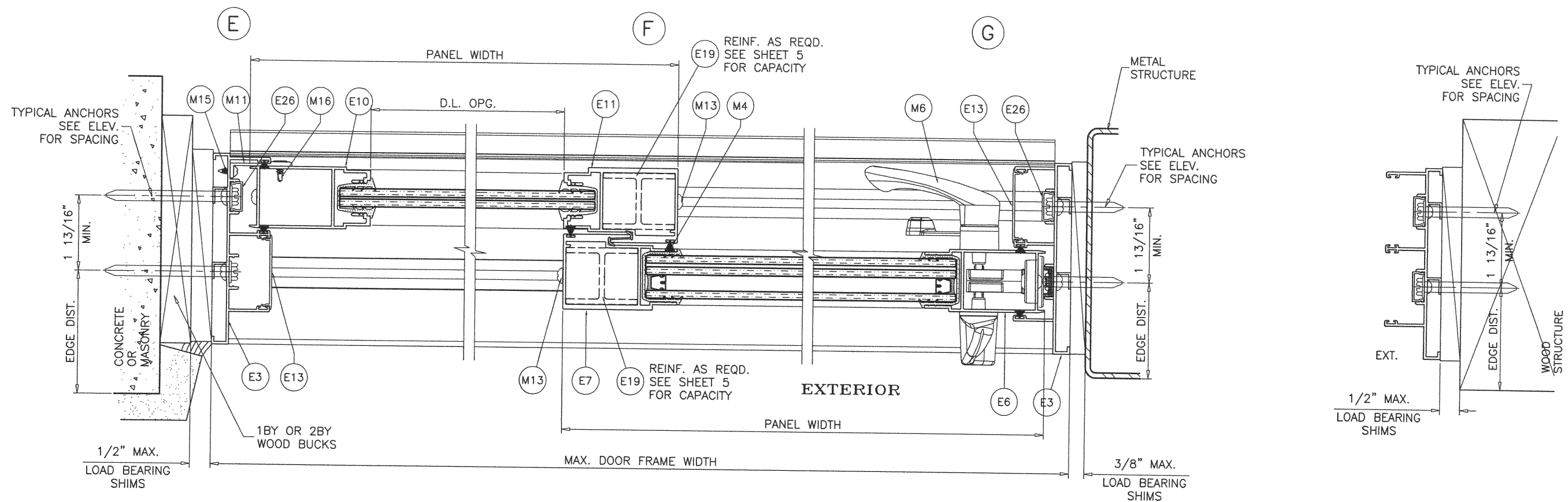
ES-EL400 ALUM SLIDING GLASS DOOR (L.M.I.)

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MIAMI, FL. 33142
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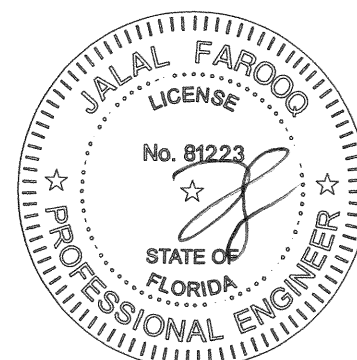
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Miami-Dade Product Control



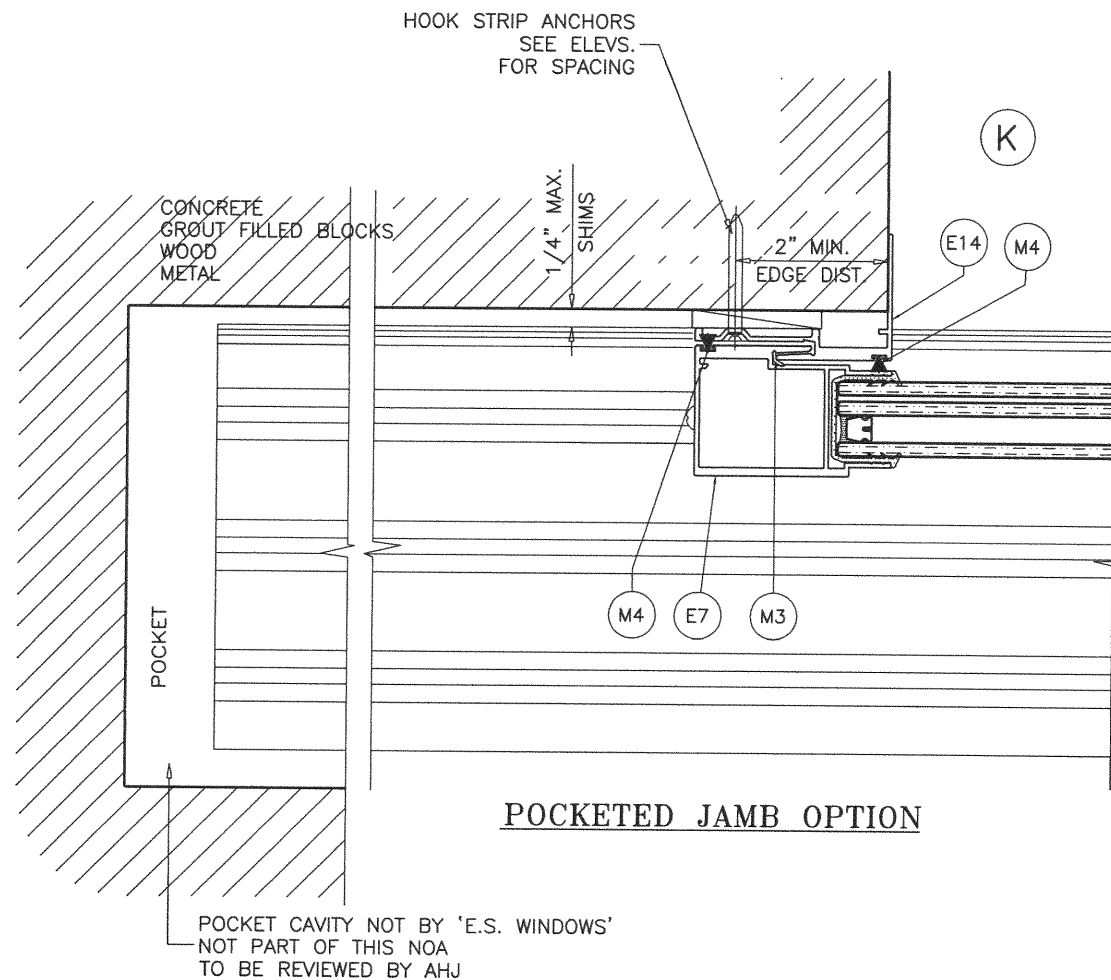
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chk. by:			
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POCKETED JAMB OPTION

POCKET CAVITY NOT BY 'E.S. WINDOWS'
NOT PART OF THIS NOA
TO BE REVIEWED BY AHJ

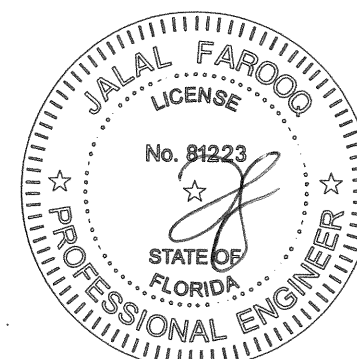
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Miami-Dade Product Control

HOOK STRIP ANCHORS: SEE ELEV. FOR SPACING
1/4" DIA. ULTRACON+ BY 'DEWALT' (Fu=164 KSI, Fy=148 KSI)
DIRECTLY INTO CONCRETE OR GROUT FILLED BLOCKS
1-3/4" MIN. EMBED INTO CONCRETE
1-3/4" MIN. EMBED INTO GROUT FILLED BLOCKS

#14 SMS (GRADE 2 CRS)
INTO 2BY WOOD BUCKS OR WOOD STRUCTURES
1-1/2" MIN. PENETRATION INTO WOOD
#14 SMS OR SELF DRILLING SCREWS (GRADE 2 CRS)
INTO METAL STRUCTURES
(3) THREADS MIN. PENETRATION BEYOND SUBSTRATE
ALUMINUM: 1/8" THK. MIN. (6063-T5 MIN.)
STEEL: 1/8" THK. MIN. (Fy = 36 KSI MIN.)
(STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL EDGE DISTANCE
INTO CONCRETE AND MASONRY = 2" MIN.
INTO WOOD STRUCTURE = 1" MIN.
INTO METAL STRUCTURE = 3/4" MIN.

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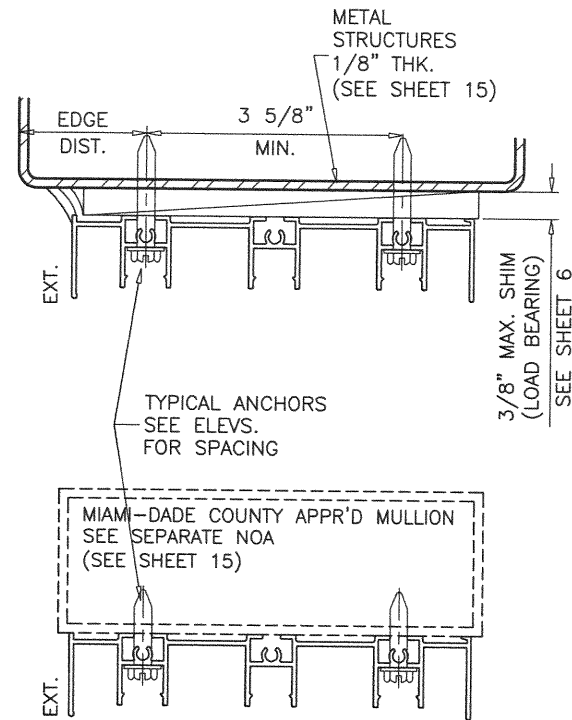
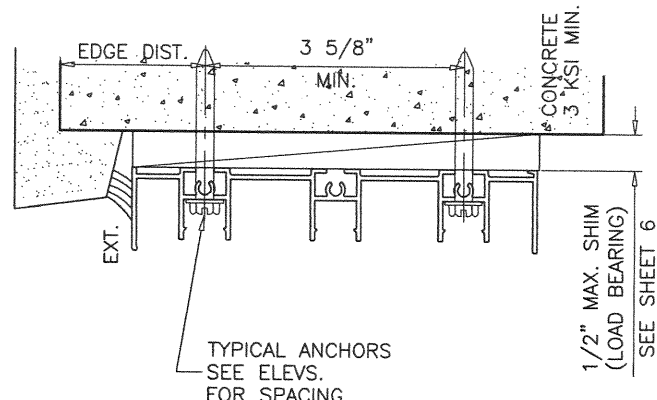
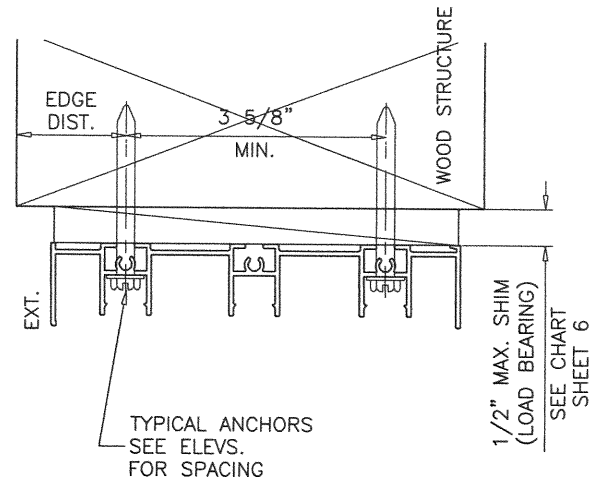
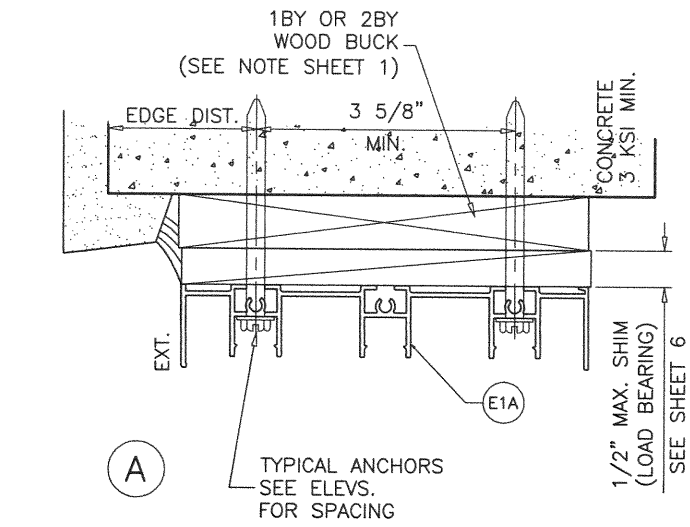


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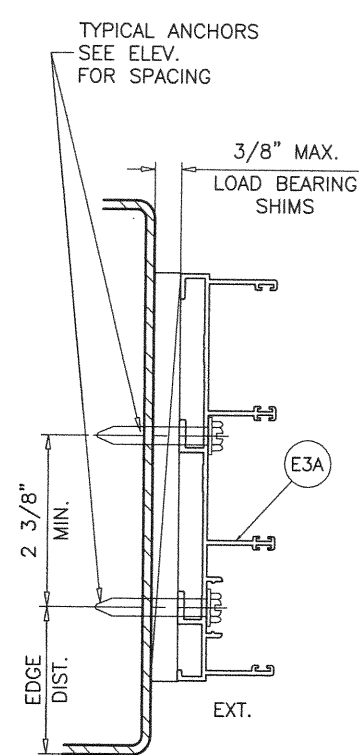
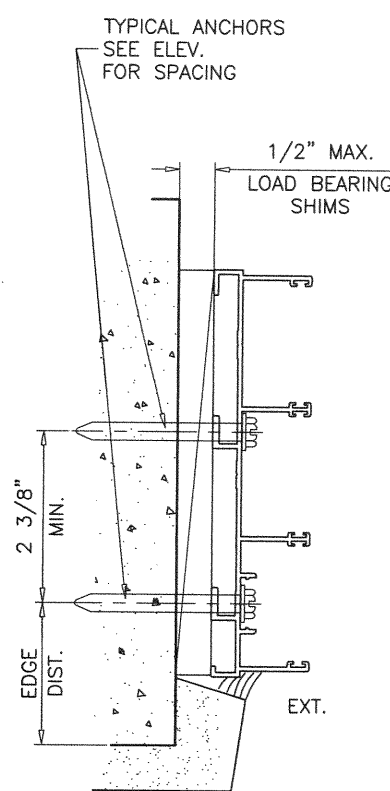
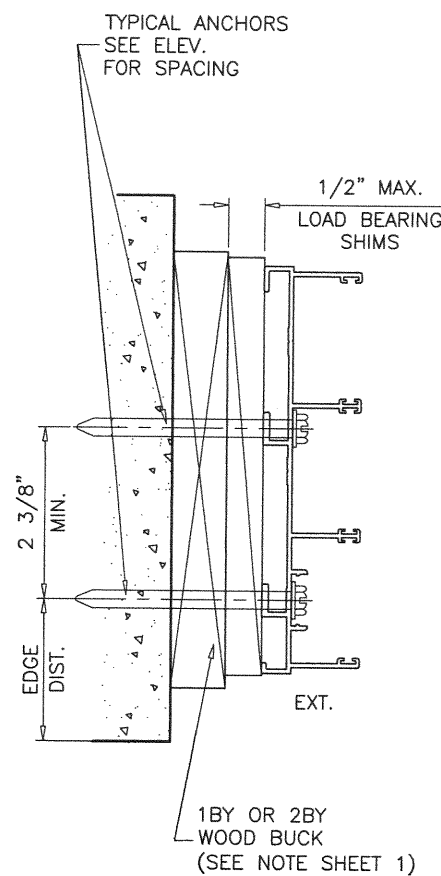
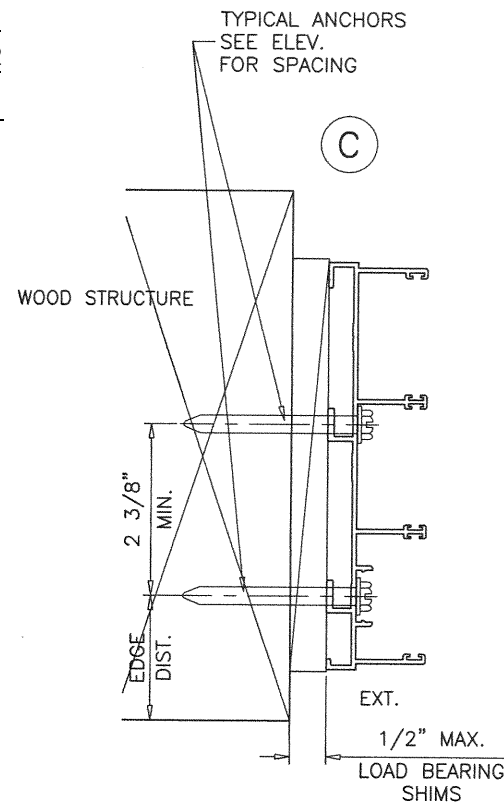
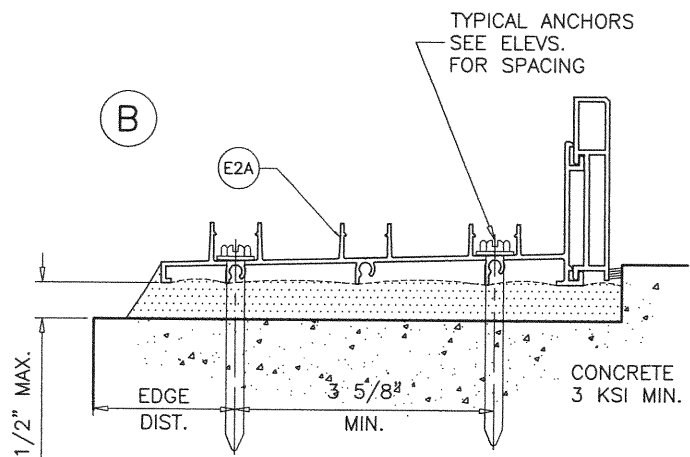
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			sheet	17 of 23		

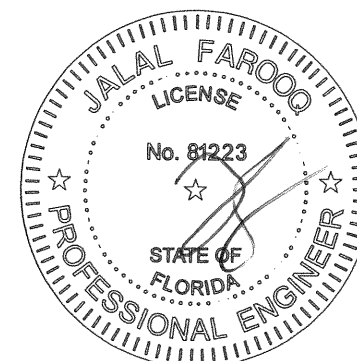


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3 TRACK FRAMES
ANCHOR LOCATIONS

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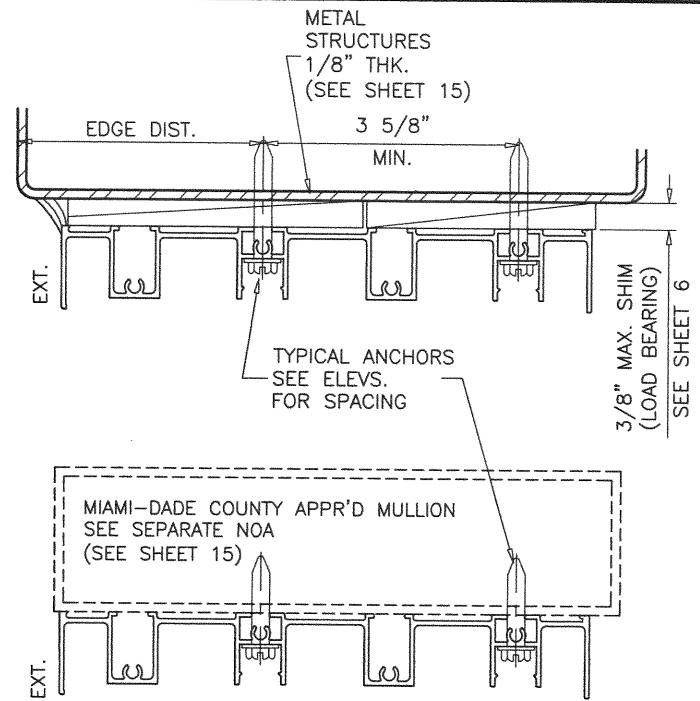
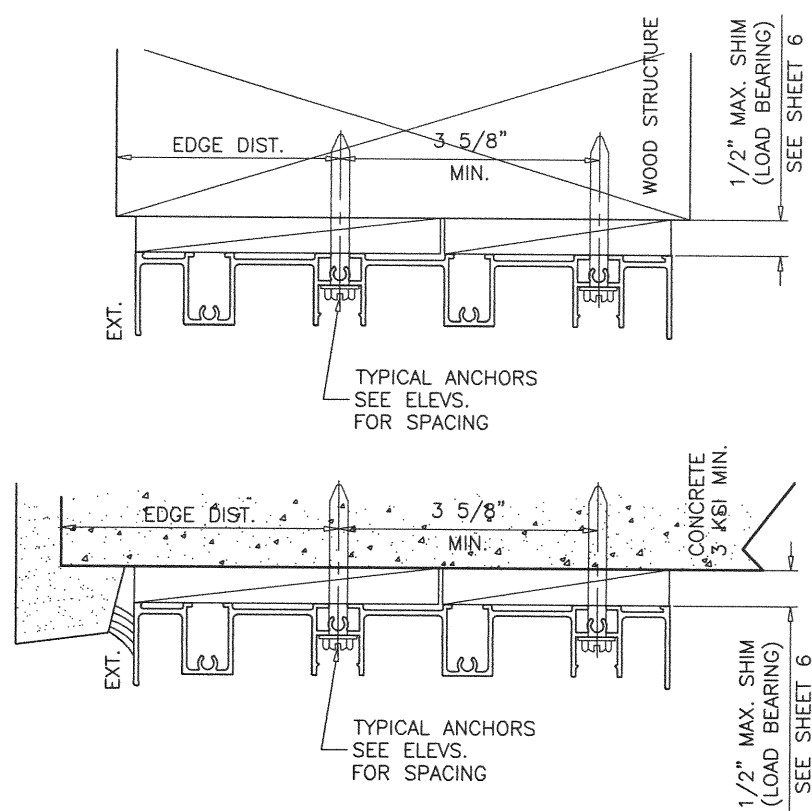
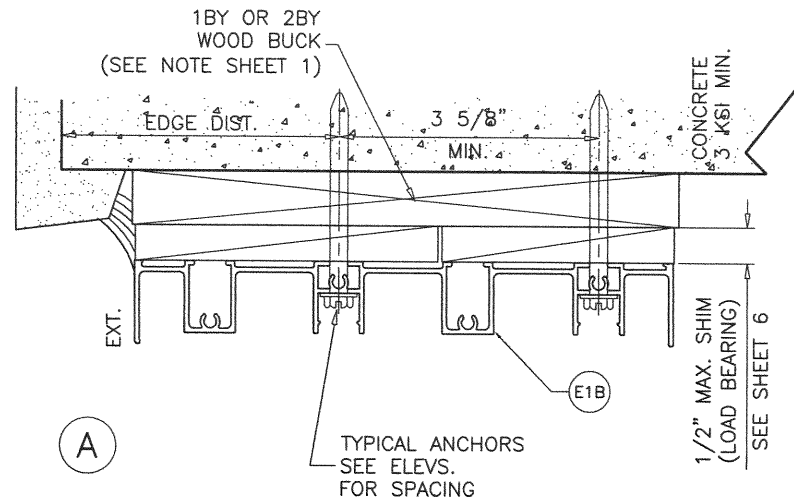
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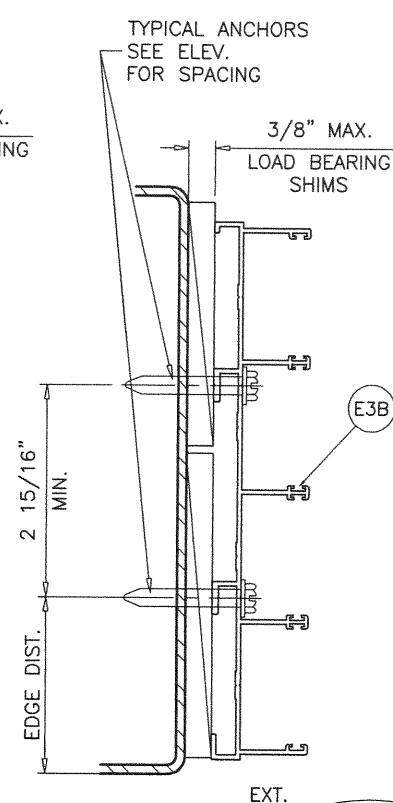
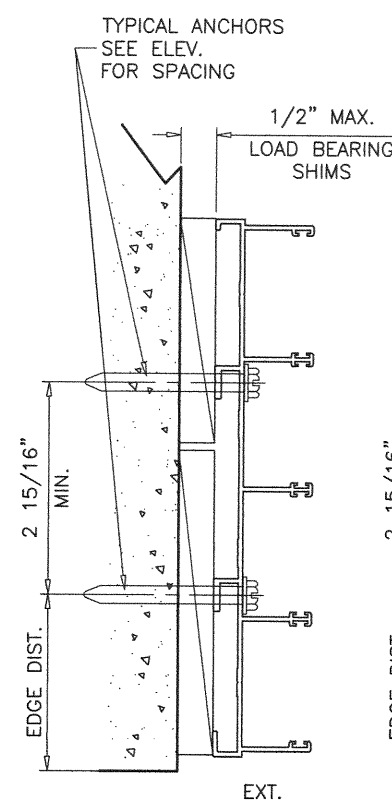
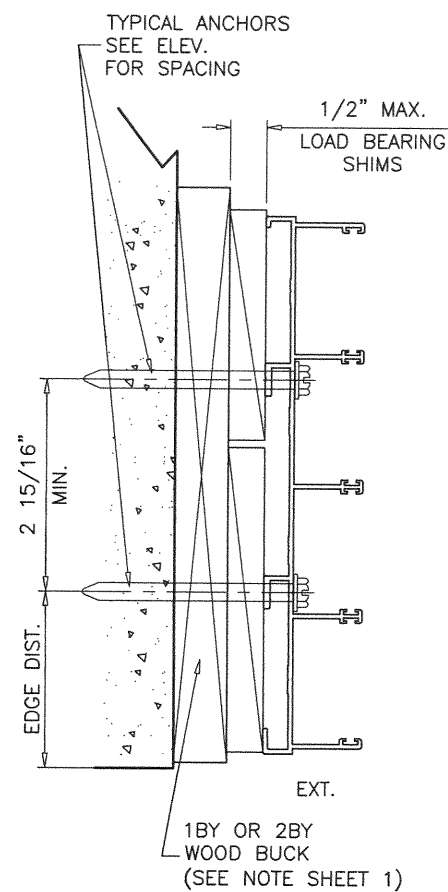
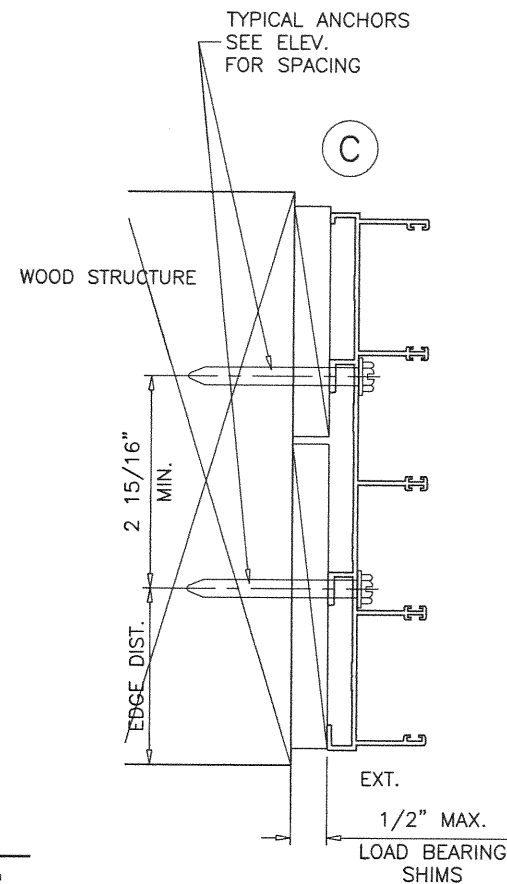
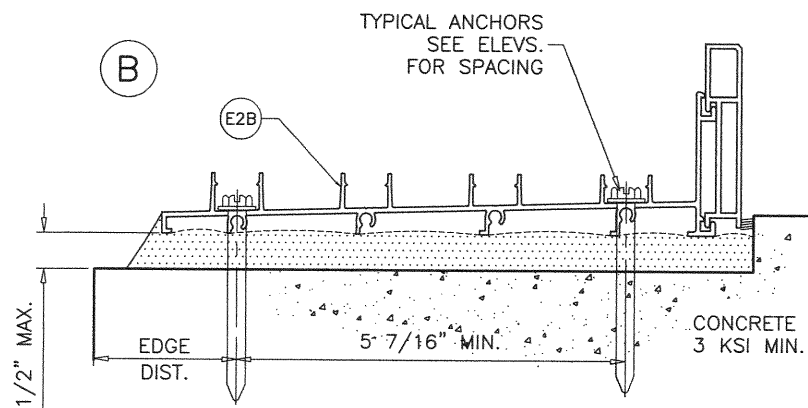
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chk. by:		drawing no.	W16-73	sheet	18 of 23

COMP-ANL W16-73ES

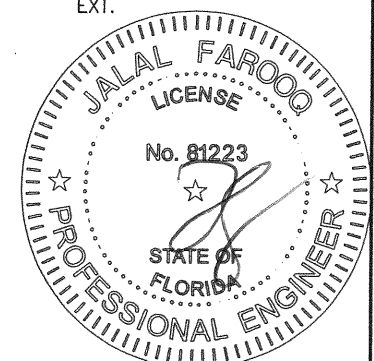


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4 TRACK FRAMES
ANCHOR LOCATIONS

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dr. by: TARIQ

chk. by:

drawing no. **W16-73**

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ITEM #	PART #	REQD.	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
E1	ES-EL400-001	1	FRAME HEAD (2 TRACK)	6063-T6	-
E1A	ES-EL400-201	AS REQD.	FRAME HEAD (3 TRACK)	6063-T6	-
E1B	ES-EL400-205	AS REQD.	FRAME HEAD (4 TRACK)	6063-T6	-
E2	ES-EL400-002	1	FRAME SILL (2 TRACK)	6063-T6	-
E2A	ES-EL400-202	AS REQD.	FRAME SILL (3 TRACK)	6063-T6	-
E2B	ES-EL400-206	AS REQD.	FRAME SILL (4 TRACK)	6063-T6	-
E3	ES-EL400-003	2	FRAME JAMB (2 TRACK)	6063-T6	-
E3A	ES-EL400-203	AS REQD.	FRAME JAMB (3 TRACK)	6063-T6	-
E3B	ES-EL400-207	AS REQD.	FRAME JAMB (4 TRACK)	6063-T6	-
E4	ES-EL400-004	1/ PANEL	TOP RAIL (INSUL. LAM. GLASS)	6063-T6	-
E5	ES-EL400-005	1/ PANEL	BOTTOM RAIL (INSUL. LAM. GLASS)	6063-T6	-
E6	ES-EL400-006	AS REQD.	JAMB STILE (INSUL. LAM. GLASS)	6063-T6	-
E7	ES-EL400-007	AS REQD.	INTERLOCK STILE (INSUL. LAM. GLASS)	6063-T6	-
E8	ES-EL400-009	1/ PANEL	TOP RAIL (LAM. GLASS)	6063-T6	-
E9	ES-EL400-010	1/ PANEL	BOTTOM RAIL (LAM. GLASS)	6063-T6	-
E10	ES-EL400-011	AS REQD.	JAMB STILE (LAM. GLASS)	6063-T6	-
E11	ES-EL400-012	AS REQD.	INTERLOCK STILE (LAM. GLASS)	6063-T6	-
E12	ES-EL400-013	AS REQD.	ASTRAGAL STILE (LAM. GLASS)	6063-T6	-
E12A	ES-EL400-008	AS REQD.	ASTRAGAL STILE (INSUL. LAM. GLASS)	6063-T6	-
E13	ES-EL400-014	AS REQD.	JAMB COVER	6063-T5	-
E14	ES-EL400-015	AS REQD.	POCKET JAMB	6063-T6	-
E15	ES-EL400-016	AS REQD.	SILL TRACK	6063-T6	-
E16	ES-EL400-017	AS REQD.	HEAD COVER	6063-T5	-
E17	ES-EL400-018	AS REQD.	SILL RISER	6063-T6	-
E18	ES-EL400-020	AS REQD.	FIXED PANEL BOTTOM GUIDE	6063-T6	-
E19	ES-EL400-021	AS REQD.	INTERLOCK REINFORCEMENT	6005-T5	-
E26	ES-6011	AS REQD.	SCREW COVER	6063-T6	-
M1	ES-EL400-G01	4/ PANEL	GLAZING GASKET (LAM. GLASS)	SILICONE	DUROMETER 70±3 SHORE A
M2	ES-EL400-G02	4/ PANEL	GLAZING GASKET (INSUL. LAM. GLASS)	SILICONE	DUROMETER 70±3 SHORE A
M3	ES2020-G04	AS REQD.	INTERLOCK BUMPER	PVC	DUROMETER 60±5 SHORE D
M4	W33271NK	AS REQD.	PILE W'STRIPPING (INTERLOCK)	WOOL	-
M5	W33181NK	AS REQD.	PILE W'STRIPPING	WOOL	-
M6	PS01-0014	AS REQD.	DOOR HANDLE	DIE CAST ALUM	TWO POINT HANDLE
M7	PS01-1015	AS REQD.	STRIKE FOR MORTISE LOCK	ST. STEEL	-
M8	PS01-1036	AS REQD.	MORTISE 2 POINT LOCK	ST. STEEL	-
M9	GT-R34/3-01-A	2/ PANEL	ROLLER ASSEMBLY	ZAMAK	-
M10	6844.1	AS REQD.	BUMPER	ALUM/NYLON	-
M11	ES-EL400-FPI SL	AS REQD.	FIX. PANEL CLIP	ST. STEEL	-
M12	#8 X 3/4"	AS REQD.	KEEPER FASTENERS	ST. STEEL	P.H. SMS
M13	#10 X 1-1/4"	AS REQD.	PANEL ASSEMBLY FASTENERS	ST. STEEL	P.H. SMS
M14	#12 X 1-1/2"	AS REQD.	FRAME ASSEMBLY FASTENERS	ST. STEEL	P.H. SMS
M15	#6 X 3/8"	AS REQD.	FIX. PANEL CLIP FASTENERS	ST. STEEL	P.H. SMS
M16	#8 X 1/2"	AS REQD.	FIX. PANEL CLIP FASTENERS	ST. STEEL	F.H. SMS
M18	#10 X 1/2"	AS REQD.	ROLLER FASTENERS	ST. STEEL	P.H. SMS
M19	#10 X 1"	AS REQD.	LOCK INSTALLATION FASTENERS	ST. STEEL	F.H. SMS
M20	#8 X 1/2"	AS REQD.	HANDLE INSTALLATION FASTENERS	ST. STEEL	F.H. SMS

SEALANT:

ALL JOINTS AND FRAME CONNECTIONS SEALED WITH WHITE/ALUMINUM COLORED SILICONE.

PRODUCT REVISED
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Expiration Date 07/20/2022

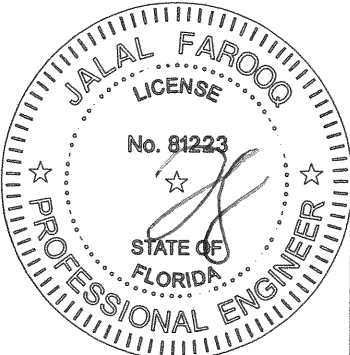
By Ishag I. Chande
Miami-Dade Product Control

LOCK:

SURFACE MOUNT METALLIC HANDLE AT 44" FROM BOTTOM
FASTENED TO LOCK STILE WITH
(2) #8 X 1/2" FH SMS (M20)

SURFACE MOUNT METALLIC 3 PLY DUAL HOOK LOCK
44" FROM BOTTOM
FASTENED TO LOCK STILE WITH
(2) #10 X 1" FH SMS

SURFACE MOUNT METALLIC KEEPER AT 44" FROM BOTTOM
FASTENED TO FRAME JAMB AND ASTRAGAL STILE WITH
(3) #8 X 3/4" PH SMS (M12)



DEC 30 2020

af c

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
9360 SUNSET DRIVE, SUITE 220
MIAMI, FLORIDA 33173
TEL. (305) 264-8100 FAX. (305) 262-6978
(C.A.N. 3538)

COMP-ANL\W16-73ES

ES-EL400 ALUM SLIDING GLASS DOOR (L.M.I.)

E.S. WINDOWS, LLC
3550 N.W. 49 STREET
MIAMI, FL. 33142
TEL. (305) 638-5151 FAX. (305) 638-5158

revisions:

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B	11.09.20		UPDATED TO 2020 FBC

date: 11-28-16

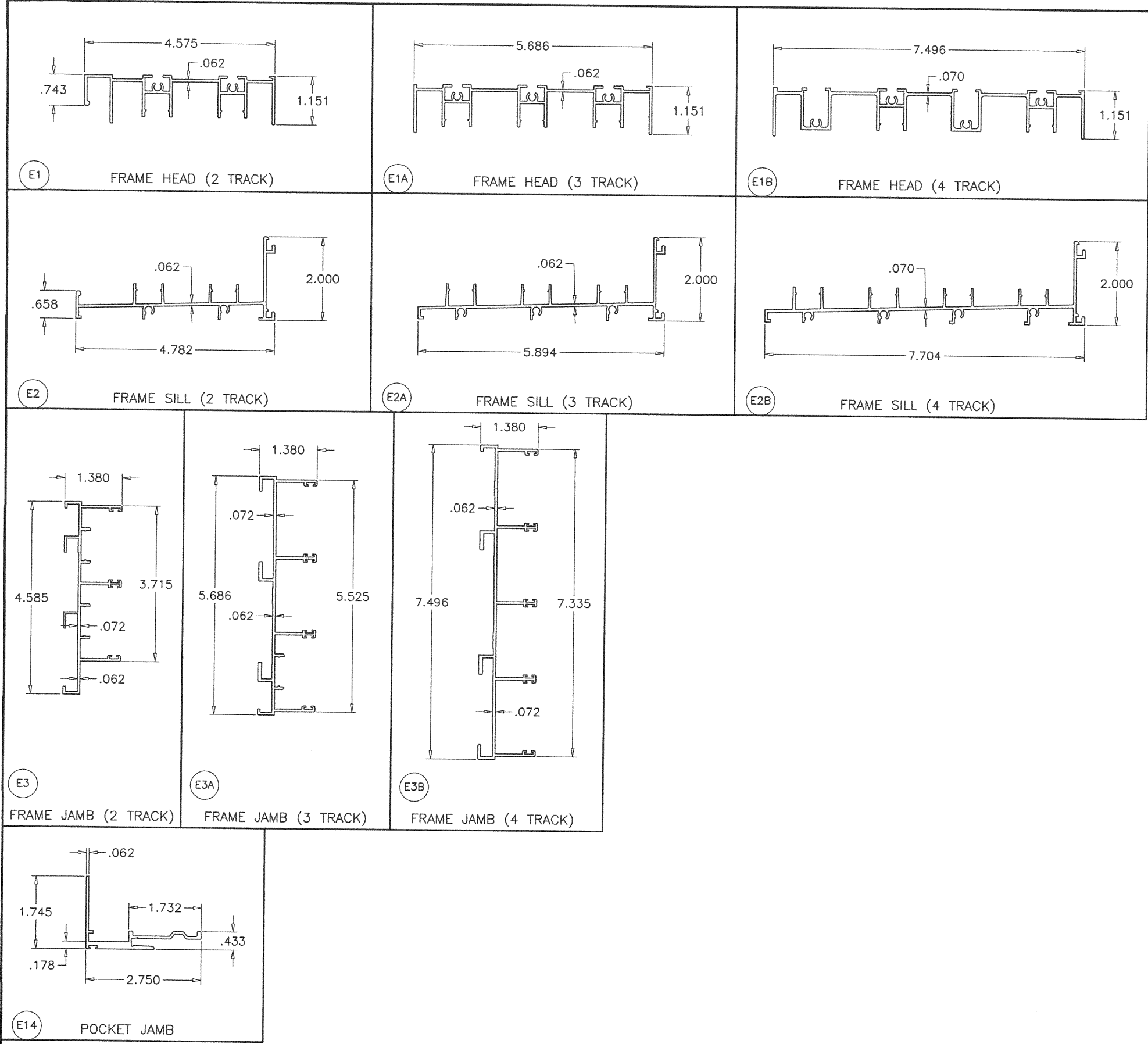
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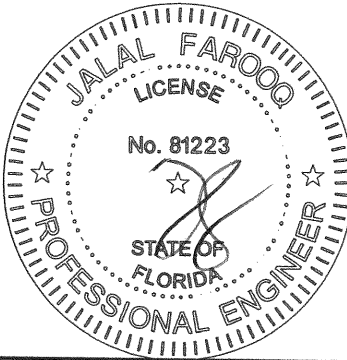
chk. by:

drawing no.
W16-73

sheet 20 of 23



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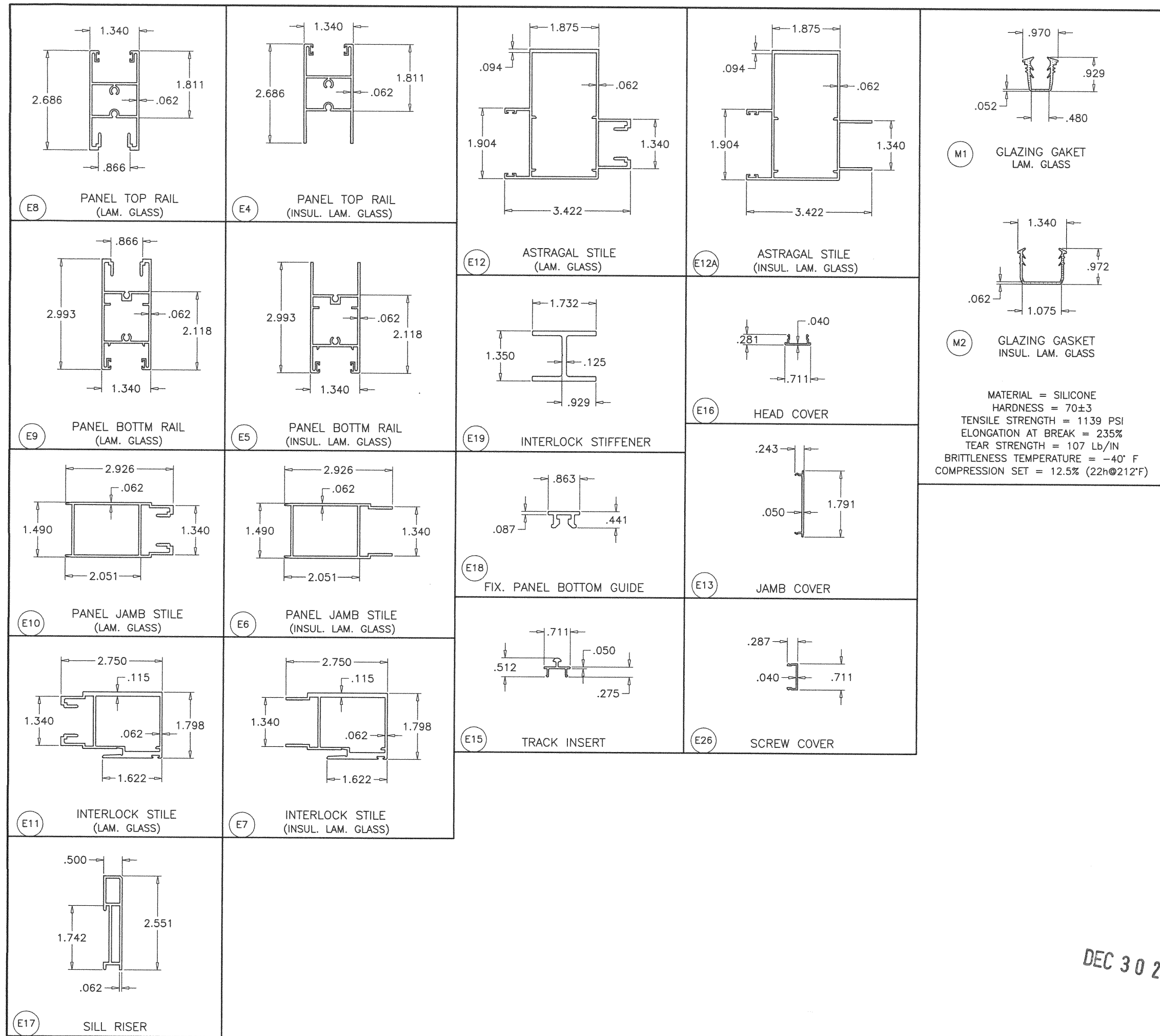
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 MIAMI, FLORIDA 33173
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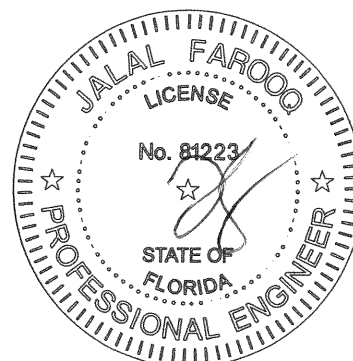
E.S. WINDOWS, LLC
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revisions:	
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drawing no. W16-73			
sheet 21 of 23			



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af c
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 MIAMI, FLORIDA 33173
 TEL. (305) 264-8100 FAX. (305) 262-6978
 COMP-ANL W16-73ES

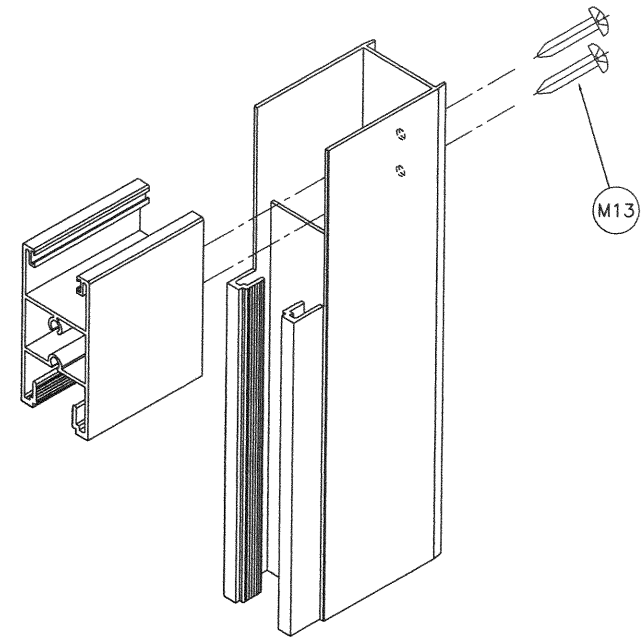
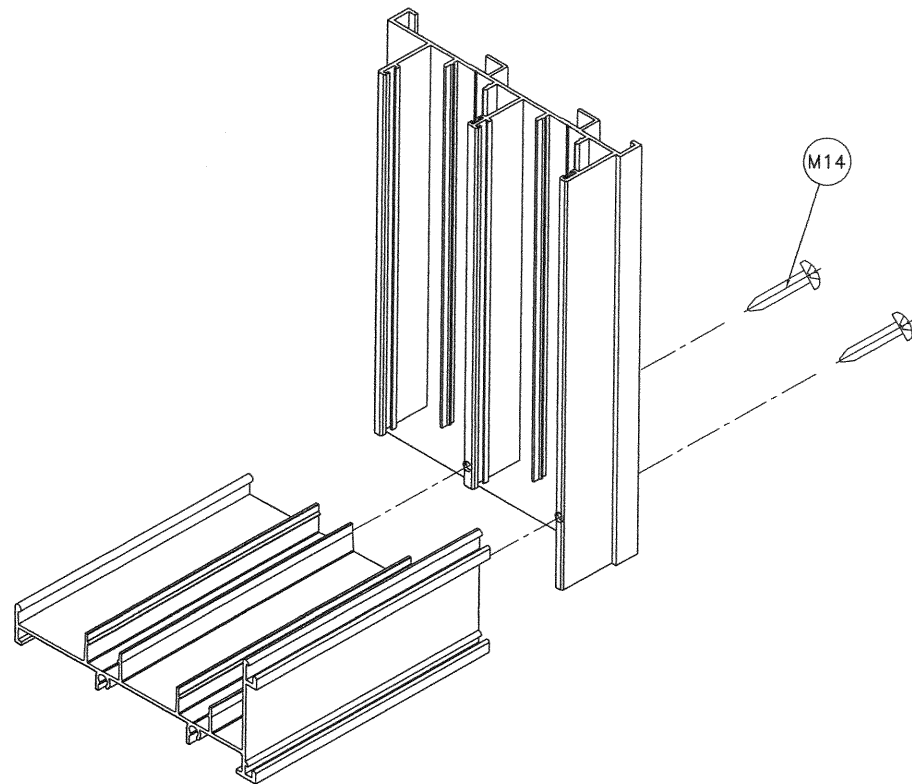
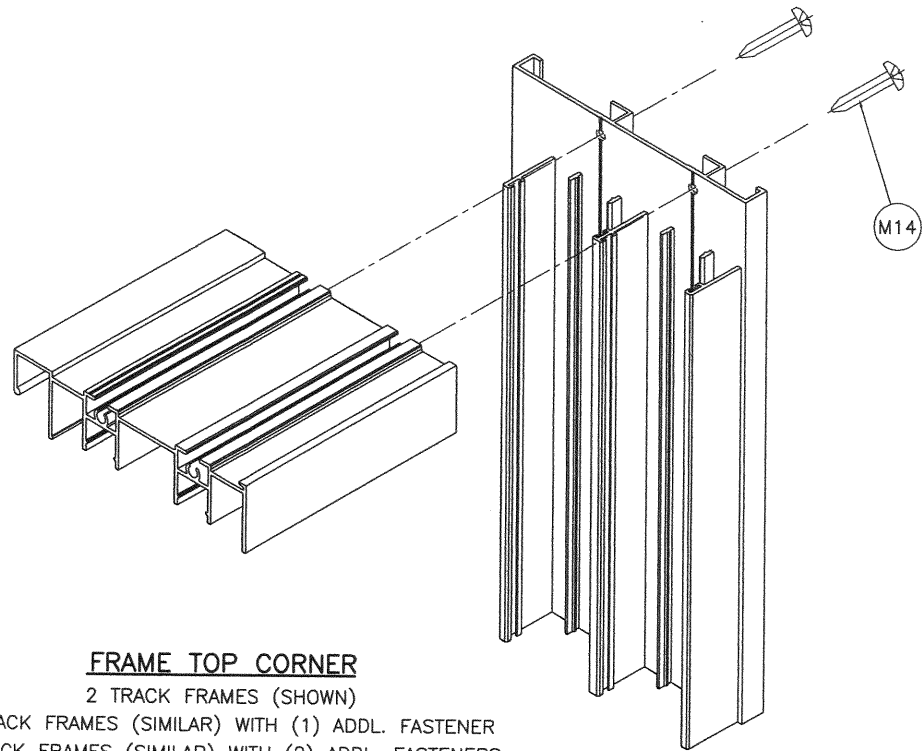
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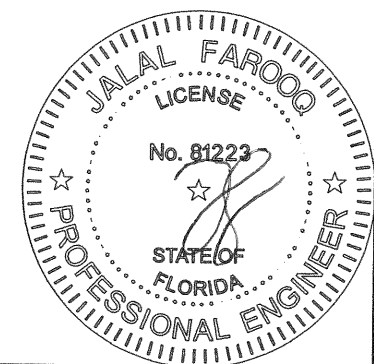
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 chk. by:

drawing no. **W16-73**
 sheet 22 of 23



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af c AL-FAROOQ CORPORATION ENGINEERS & PRODUCT DEVELOPMENT 9360 SUNSET DRIVE, SUITE 220 MIAMI, FLORIDA 33173 (C.A.N. 3538) TEL. (305) 264-8100 FAX. (305) 262-6978 COMP-ANL W16-73ES													
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drawing no. W16-73 sheet 23 of 23													