



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)

Titan Glass & Aluminum, LLC
260 Crandon Blvd., Ste 32 #207
Key Biscayne, Florida 33149

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: Aluminum Glazed Railing

APPROVAL DOCUMENT: Drawing No. 09-09, titled " Aluminum Glass Railing System ", sheets 1 through 6 of 6, prepared by Al-Farooq Corporation, dated December 23, 2009, last revision #B dated September 15, 2010 signed and sealed by Javad Ahmad, P.E., bearing the Miami-Dade County Product Control Approval 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 Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, Hialeah, FL 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. The structural adequacy of the supporting structures is not part of this approval & shall be reviewed by the corresponding Building Dept.

This NOA consists of this page 1, evidence submitted page E-1 as well as approval document mentioned above. The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



Helmy A. Makar
11/24/2010

NOA No. 10-0419.06
Expiration Date: 11/24/2015
Approval Date: 11/24/2010
Page 1

Titan Glass & Aluminum, LLC

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. 09-09, titled " aluminum Glass Railing System ", sheets 1 through 6 of 6, prepared by Al-Farooq Corporation, dated December 23, 2009, last revision #B dated September 15, 2010 signed and sealed by Javad Ahmad, P.E.*

B. TESTS

1. *Test Report No. HETI-09-2578, by Hurricane Engineering & Testing, Inc., dated July 30, 2009, signed and sealed by Candido F. Font, P.E.*
2. *Test Report No. HETI-09-2558, by Hurricane Engineering & Testing, Inc., dated November 23, 2009, signed and sealed by Candido F. Font, P.E.*
3. *Test Report No. HETI-09-2564B, by Hurricane Engineering & Testing, Inc., dated July 30, 2009, signed and sealed by Candido F. Font, P.E.*
4. *Test Report No. HETI-09-2564C, by Hurricane Engineering & Testing, Inc., dated July 30, 2009, signed and sealed by Candido F. Font, P.E.*
5. *Test Report No. HETI-09-2564D, by Hurricane Engineering & Testing, Inc., dated July 30, 2009, signed and sealed by Candido F. Font, P.E.*
6. *Test Report No. 5888, by Fenestration Testing Laboratory, Inc., dated March 26, 2009, signed and sealed by Carlos S. Rionda, P.E.*
7. *Test Report No. 5814, by Fenestration Testing Laboratory, Inc., dated March 02, 2009, signed and sealed by Carlos S. Rionda, P.E.*
8. *Test Report No. HETI-09-2592A, by Hurricane Engineering & Testing, Inc., dated November 05, 2009, signed and sealed by Candido F. Font, P.E.*
9. *Test Report No. HETI-09-2592B, by Hurricane Engineering & Testing, Inc., dated November 05, 2009, signed and sealed by Candido F. Font, P.E.*
10. *Test Report No. HETI-09-2592C, by Hurricane Engineering & Testing, Inc., dated November 05, 2009, signed and sealed by Candido F. Font, P.E.*
11. *Test Report No. HETI-09-2519A, by Hurricane Engineering & Testing, Inc., dated May 23, 2009, signed and sealed by Candido F. Font, P.E.*
12. *Test Report No. HETI-09-2519B, by Hurricane Engineering & Testing, Inc., dated May 23, 2009, signed and sealed by Candido F. Font, P.E.*

C. CALCULATIONS

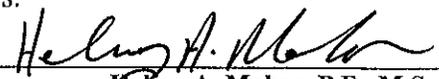
1. *Calculation titled " Aluminum and Glass Balcony Railing " in accordance with the Florida Building Code 2007 Edition High Velocity Hurricane Zone ", sheets 1 through 98 of 98, dated January 21, 2010, by Al-Farooq Corporation, signed and sealed by Arshad Vigar, P.E.*

D. QUALITY ASSURANCE

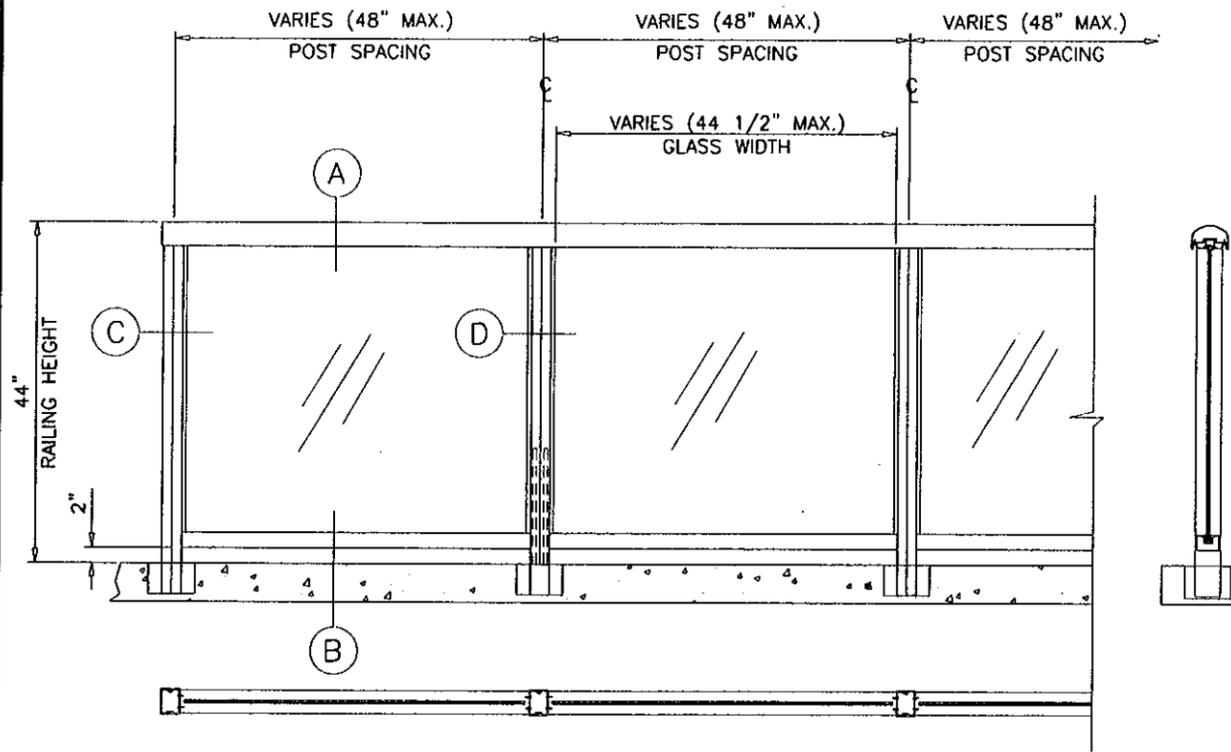
1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

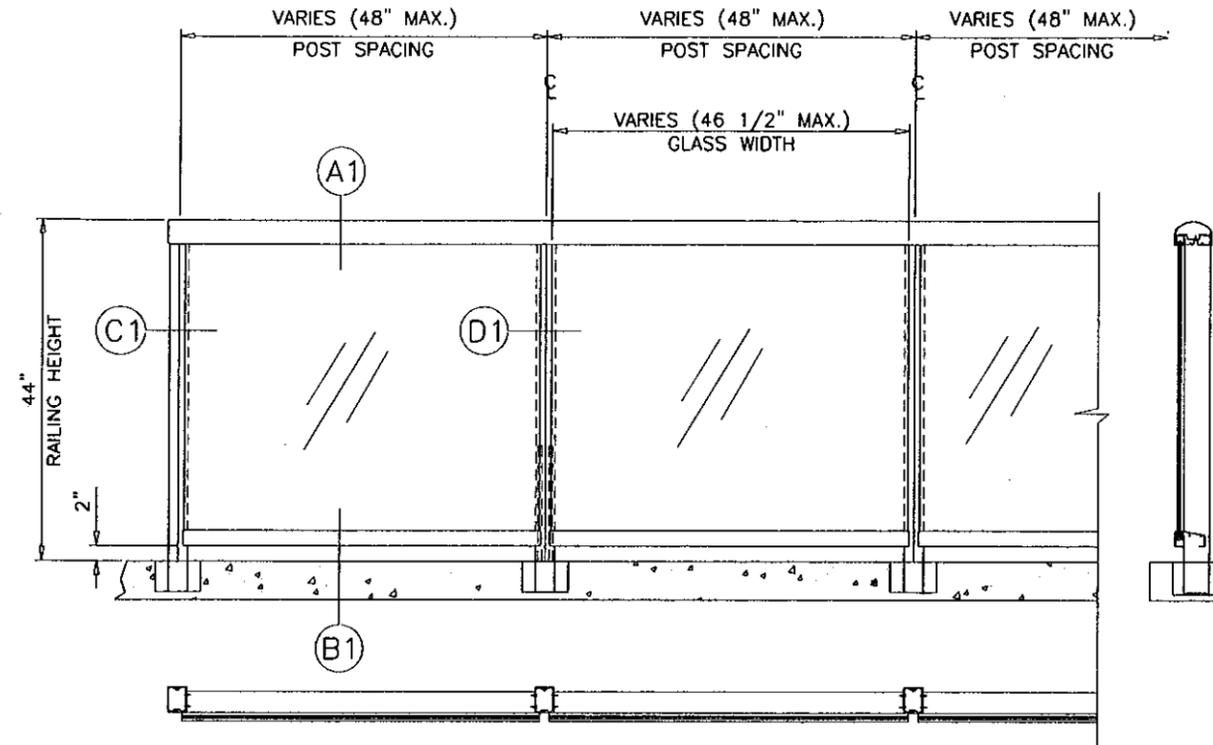
1. *Report from Quikrete Cement & Concrete Products.*



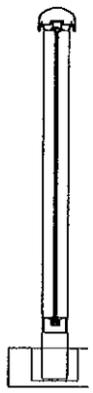
Helmy A. Makar, P.E., M.S.
Senior Product Control Examiner
NOA No. 10-0419.06
Expiration Date: 11/24/2015
Approval Date: 11/24/2010



TYPICAL ELEVATION
CENTERED GLASS



TYPICAL ELEVATION
NON-CENTERED GLASS



ALUMINUM GLASS RAILING SYSTEM

THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 2007 EDITION INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).

DESIGN CRITERIA FOR ALUMINUM, MINIMUM MECHANICAL PROPERTIES, AND SAFETY FACTORS ARE IN ACCORDANCE WITH THE "ALUMINUM CONSTRUCTION MANUAL" LATEST EDITION.

ALUMINUM ALLOYS: ALL EXTRUSIONS SHALL BE ALLOY AS SHOWN.

ALL FASTENERS TO BE NON-MAGNETIC ST. STEEL.

ANCHORING OR LOADING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.

MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF 2007 FLORIDA BLDG. CODE SECTION 2003.8.4.

Approved as complying with the
Florida Building Code
Date 11/24/2010
NOA# 10-0419-06
Miami Dade Product Control
Division
By [Signature]

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538
[Signature]
NOV 11 2010

afc

AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
12335 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL. (305) 264-8100 FAX. (305) 262-6978
RAILING \09 - 09TGA

ALUMINUM GLASS RAILING SYSTEM
TITAN GLASS & ALUMINUM, LLC.
260 CRANDON BLVD. STE 32
KEY BISCAYNE, FL. 33149
TEL. (305) 888-0911

no	date	by	description
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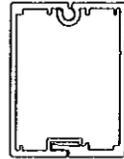
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scale: 1/2"=1'-0"
dr. by: HAMID
chk. by:

drawing no.
09-09

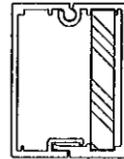
sheet 1 of 6

POST PERFORMANCE CHART
DESIGN LOAD CAPACITY-PSF (RAILING HEIGHT = 44 IN.)

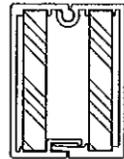
POST SPACING	POST WITHOUT REINFORCING	POST WITH ONE ALUM BAR	POST WITH TWO ALUM BARS	SMALL CORNER POST W/O REINF.	SMALL CORNER POST W/ REINF.	LARGE CORNER POST
36"	136.0	146.0	146.0	100.0	146.0	125.0
42"	117.0	146.0	146.0	90.0	135.0	110.0
48"	105.0	140.0	146.0	80.0	120.0	100.0



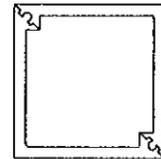
POST WITHOUT REINFORCING



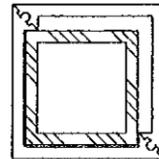
POST WITH ONE ALUM BAR



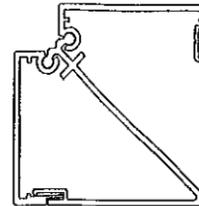
POST WITH TWO ALUM BARS



SMALL CORNER POST W/O REINF.



SMALL CORNER POST WITH REINF.



LARGE CORNER POST

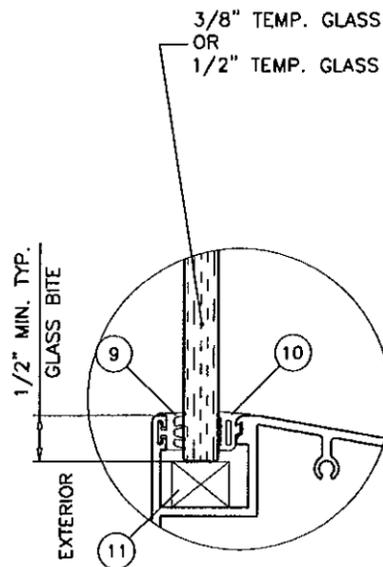
POST EMBEDMENT CHART
(RAILING HEIGHT = 44 IN.)

CONCRETE	HOLE DIA.	POST EMBED	POST SPACING	LOAD CAPACITY
3000 PSI	5 IN.	4 IN.	36 IN.	80.0 PSF
			42 IN.	70.0 PSF
			48 IN.	60.0 PSF
	6 IN.	4 IN.	36 IN.	100.0 PSF
			42 IN.	80.0 PSF
			48 IN.	75.0 PSF
4000 PSI	5 IN.	4 IN.	36 IN.	110.0 PSF
			42 IN.	95.0 PSF
			48 IN.	80.0 PSF
	6 IN.	4 IN.	36 IN.	130.0 PSF
			42 IN.	110.0 PSF
			48 IN.	100.0 PSF
5000 PSI	5 IN.	4 IN.	36 IN.	135.0 PSF
			42 IN.	115.0 PSF
			48 IN.	100.0 PSF
	6 IN.	4-1/4 IN.	36 IN.	146.0 PSF
			42 IN.	135.0 PSF
			48 IN.	120.0 PSF

INSTRUCTIONS:

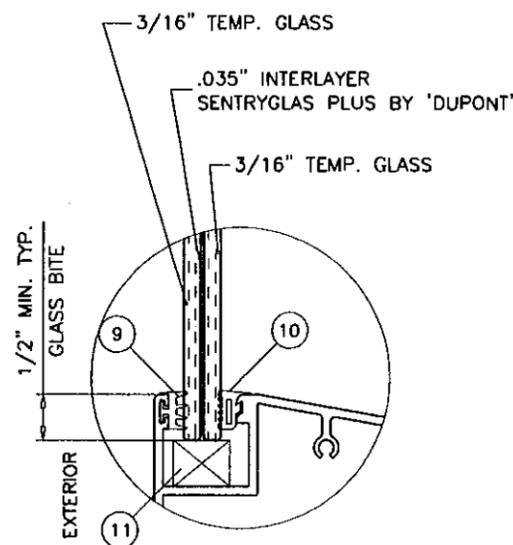
USE CHARTS AS FOLLOWS.

- STEP 1** DETERMINE DESIGN WIND LOAD REQUIREMENTS BASED ON WIND VELOCITY, BLDG. HEIGHT, WIND ZONE USING APPLICABLE ASCE 7 STANDARD.
- STEP 2** USE POST PERFORMANCE CHART TO VERIFY POST CAPACITY FOR THE REQUIRED DESIGN LOAD.
- STEP 3** CHECK GLASS CAPACITY FOR THE REQUIRED DESIGN LOAD FROM GLASS OPTION DETAILS.
- STEP 4** USE POST EMBEDMENT CHART TO CHECK POST SPACING AND REQUIRED EMBEDMENT.
- STEP 5** THE LOWER VALUE RESULTING FROM STEPS 2 AND 3 SHALL APPLY TO ENTIRE SYSTEM.



MONOLITHIC GLASS

MAX. DESIGN LOAD RATING = ±146.0 PSF



7/16" LAM. GLASS

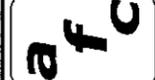
MAX. DESIGN LOAD RATING = ±128.0 PSF

GLASS OPTIONS

Approved as complying with the Florida Building Code
Date 11/24/2010
NOA# 0-0419.06
Miami Dade Product Control
Division
By *Helmy A. Matar*

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538

JA
NOV 11 2010



AL-FAROOQ CORPORATION
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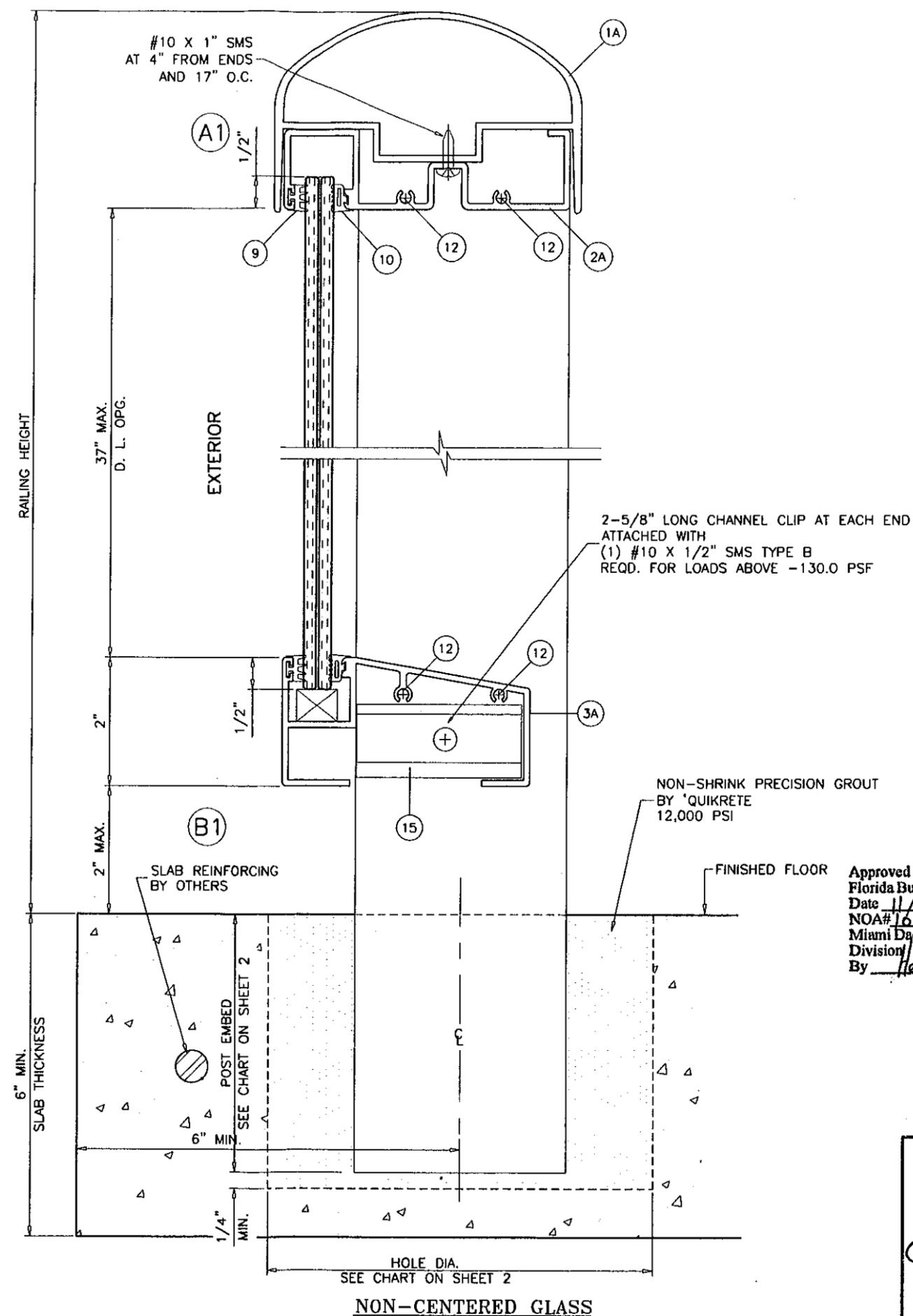
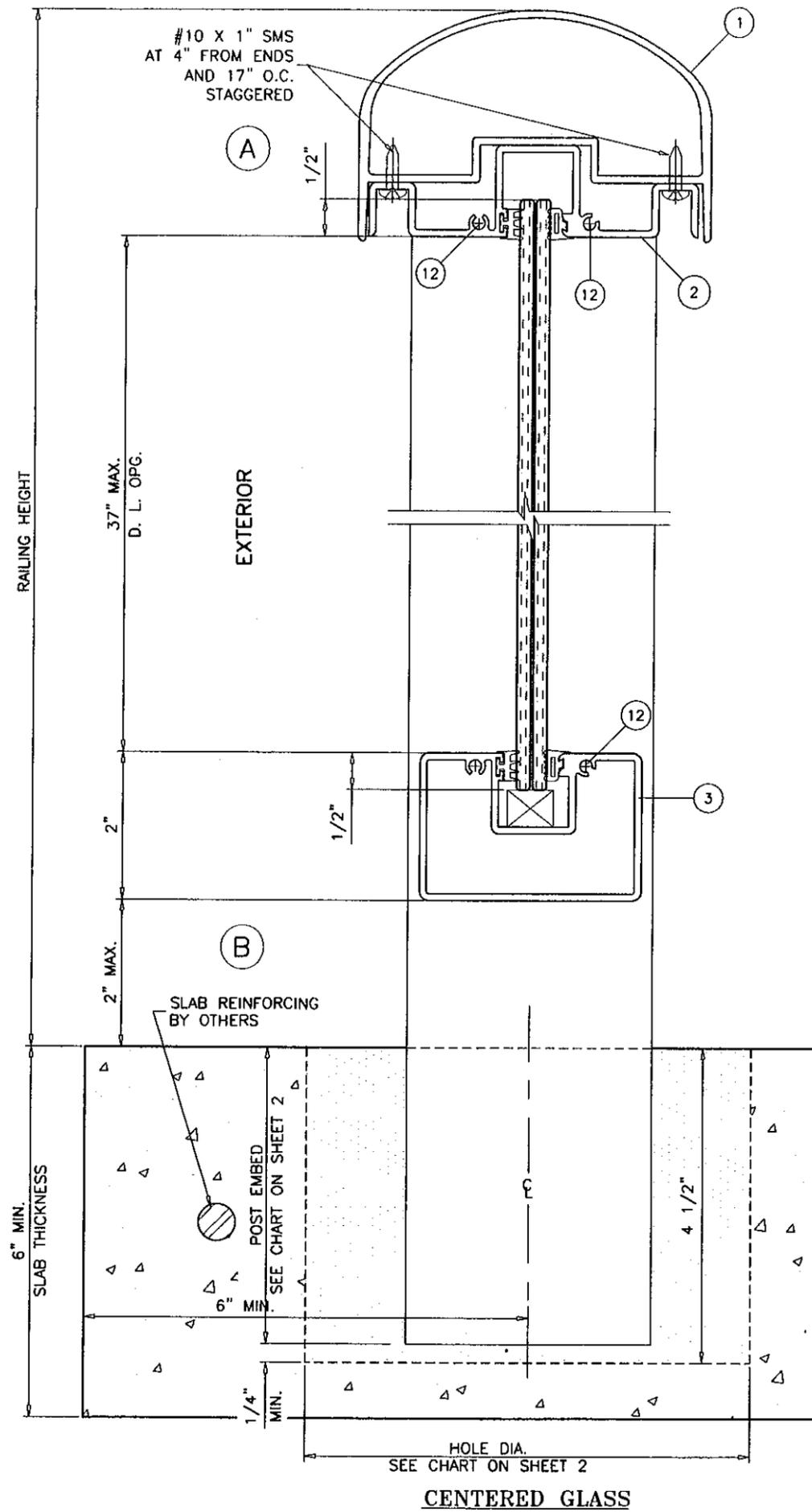
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date: 12-23-09
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
09-09

sheet 2 of 6

RAILING\09-09TGA



Approved as complying with the
Florida Building Code
Date 11/24/2010
NOA# 16-0219-06
Miami Dade Product Control
Division
By *Heung A. Nelson*

Engr: JAVAD AHMAD
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C.A.N. 3538
JAVAD AHMAD
NOV 11 2010

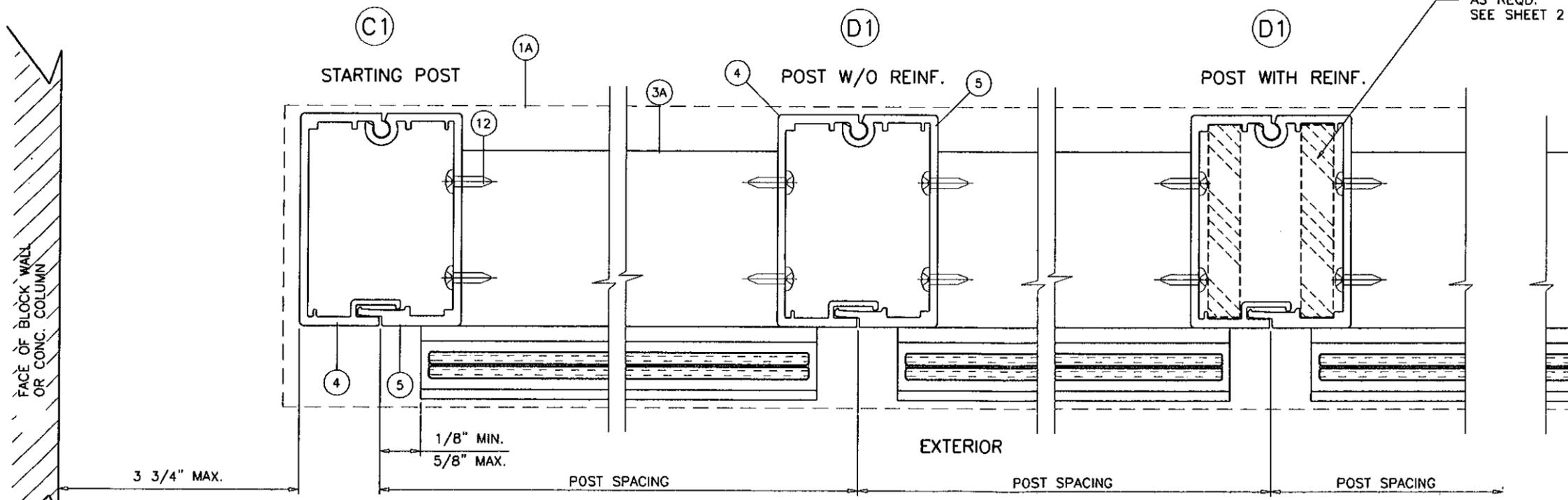
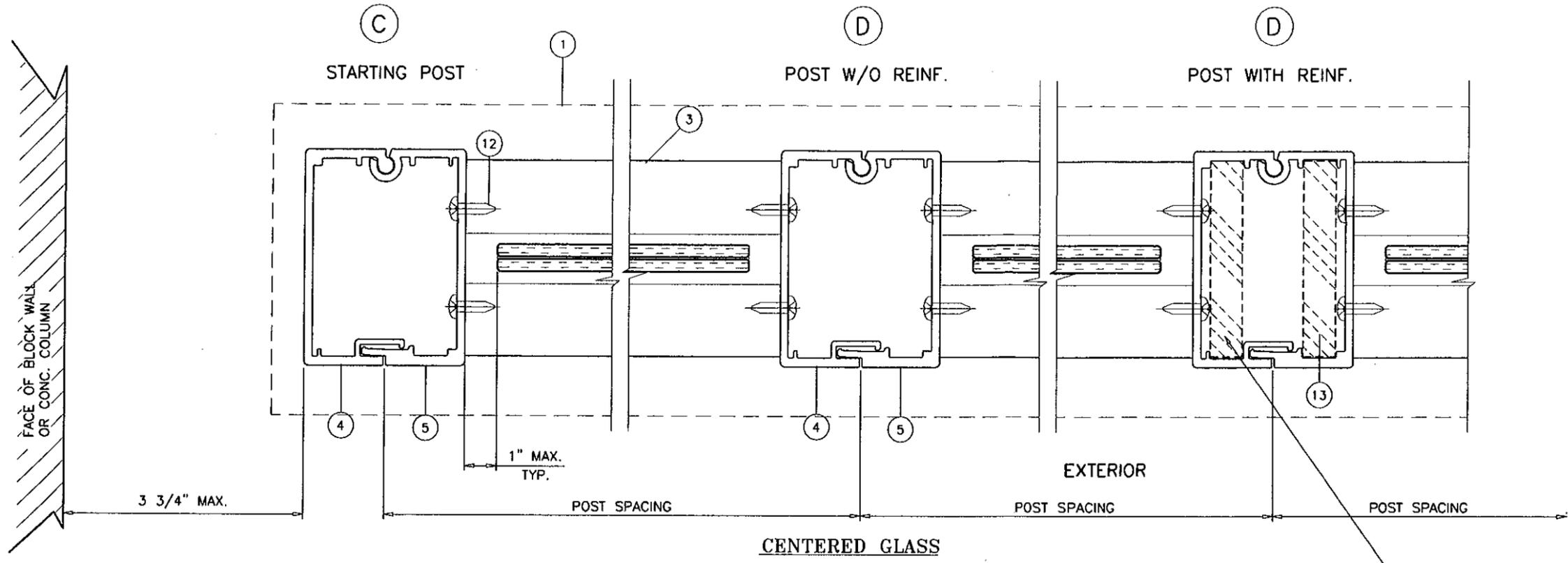
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AL-FAROOQ CORPORATION
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RAILING\09-09TGA

ALUMINUM GLASS RAILING SYSTEM
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TEL. (305) 888-0911

no	date	description	REV. PER BCCO COMMENTS
A	08.02.10		REV. PER BCCO COMMENTS
B	09.15.10		REV. PER BCCO COMMENTS

date: 12-23-09
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
09-09
sheet 3 of 6



15" LONG POST REINFORCING
AS REQD.
SEE SHEET 2 FOR CAPACITY

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538

J.A.
NOV 11 2010

Approved as complying with the
Florida Building Code
Date 11/24/2010
NOA# 10-6419.06
Miami Dade Product Control
Division
By *Helmy A. Helmy*

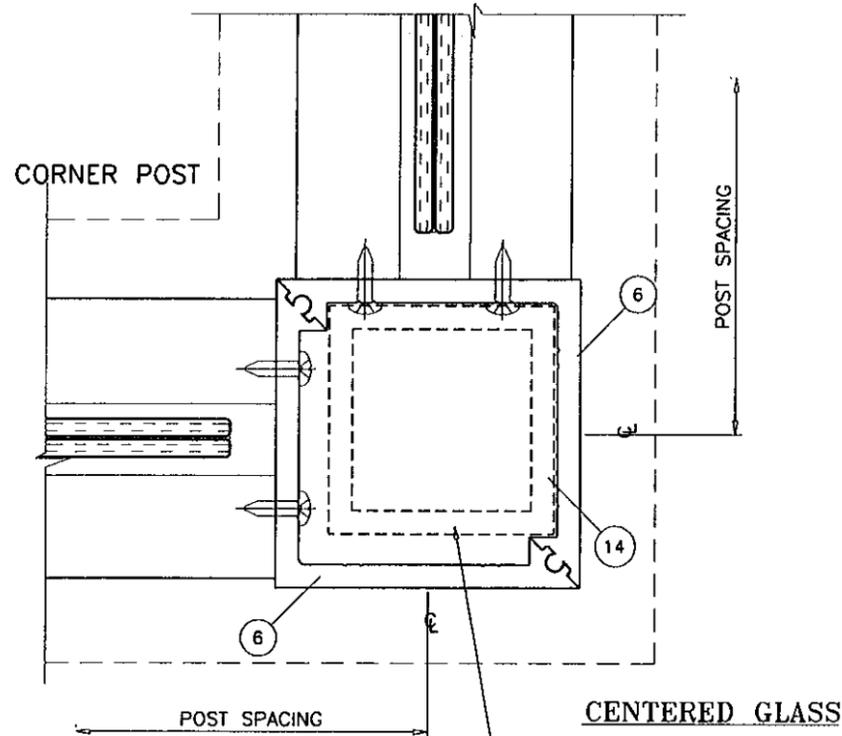
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RAILING\09-09TGA

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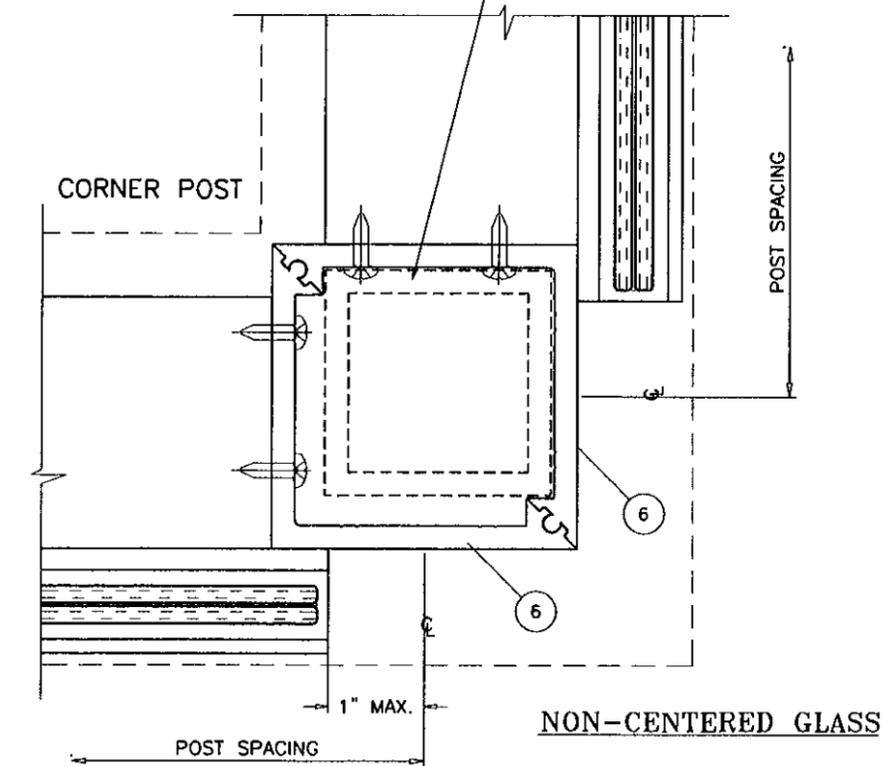
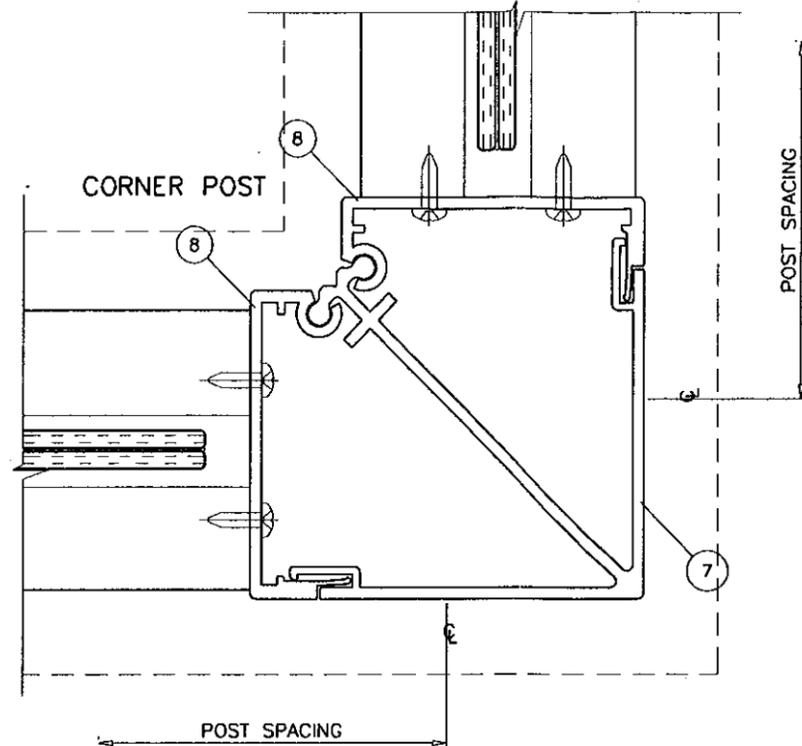
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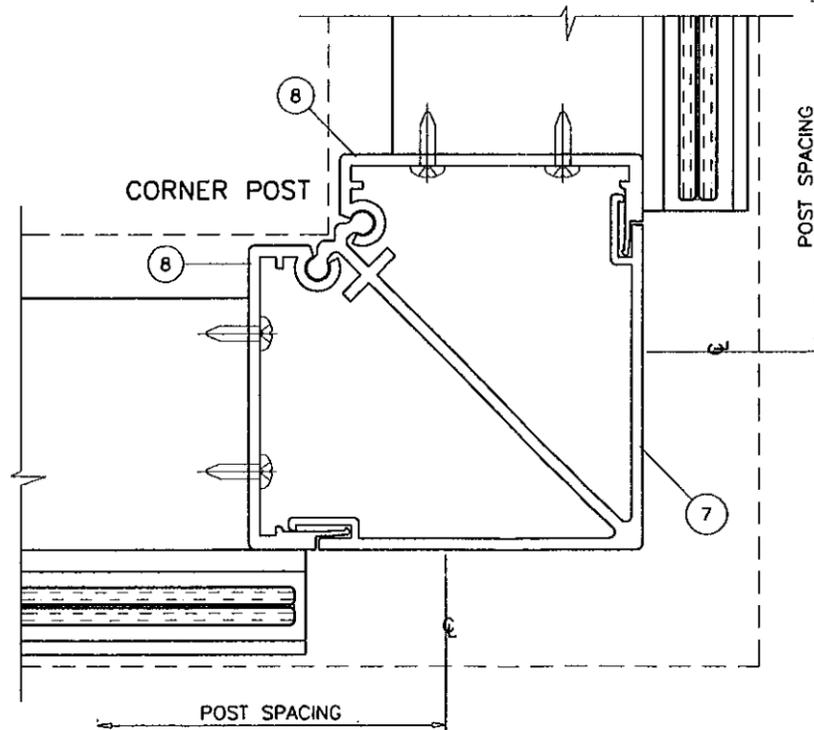
drawing no.
09-09
sheet 4 of 6



CENTERED GLASS



NON-CENTERED GLASS



15" LONG POST REINFORCING
AS REQD.
SEE SHEET 2 FOR CAPACITY

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NOA# 10-0419.06
Miami Dade Product Control
Division
By Helmy A. Mub

Engr: JAVAD AHMAD
CIVIL
FLA. PE. # 70592
C.A.N. 3538
J.A. Ahmad
NOV 11 2010

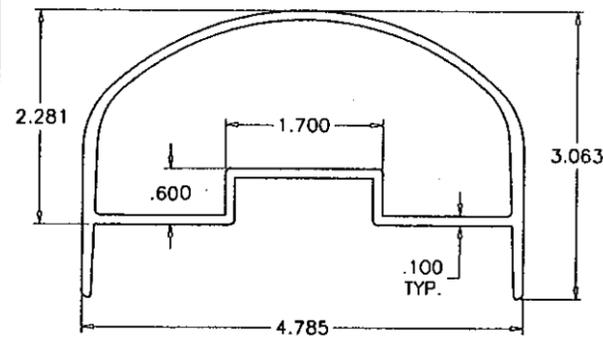
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AL-FAROOQ CORPORATION
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RAILING\09-09TGA

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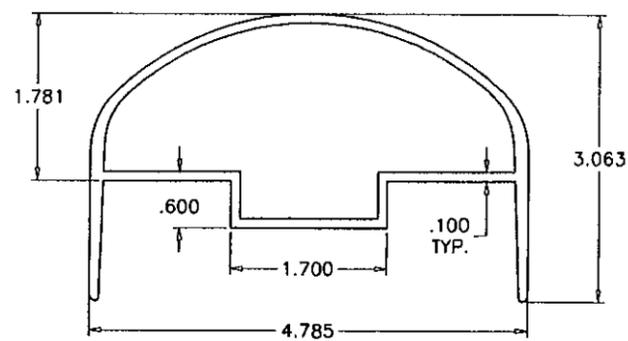
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chk. by:

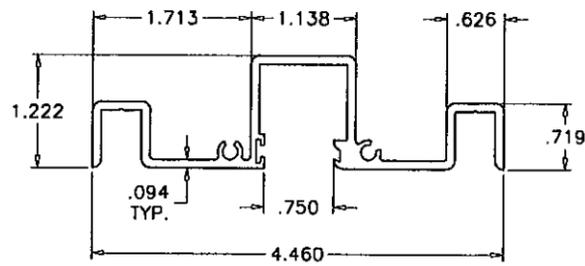
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09-09
sheet 5 of 6



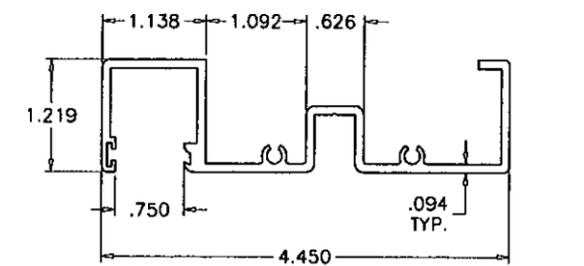
① TOP RAIL (CENTERED GLASS)



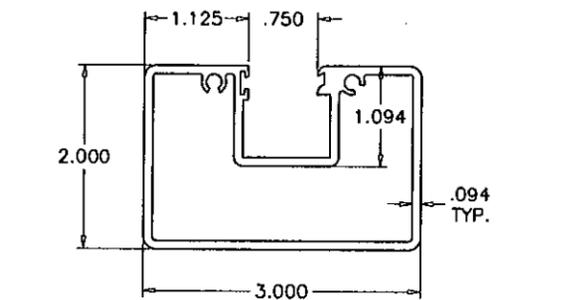
①A TOP RAIL (NON-CENTERED GLASS)



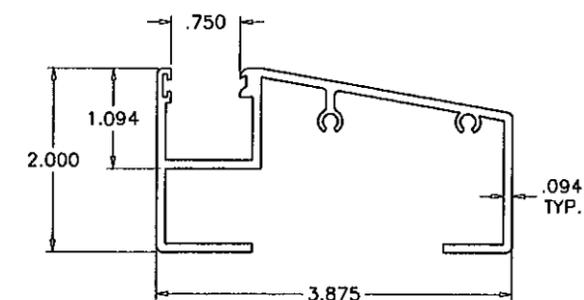
② TOP RAIL CHANNEL (CENTERED GLASS)



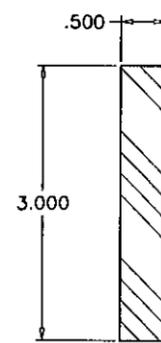
②A TOP RAIL CHANNEL (NON-CENTERED GLASS)



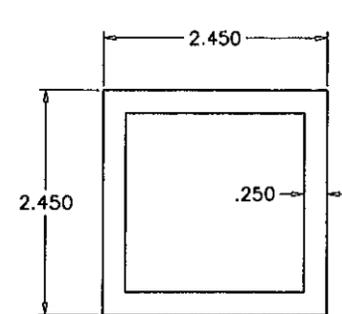
③ BOTTOM RAIL (CENTERED GLASS)



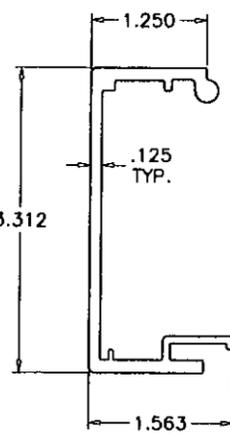
③A BOTTOM RAIL (NON-CENTERED GLASS)



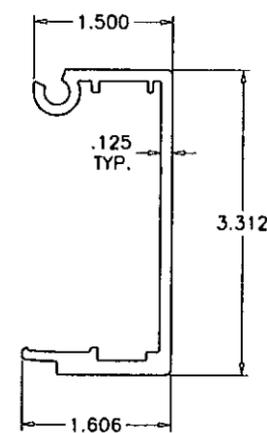
⑬ POST REINF.



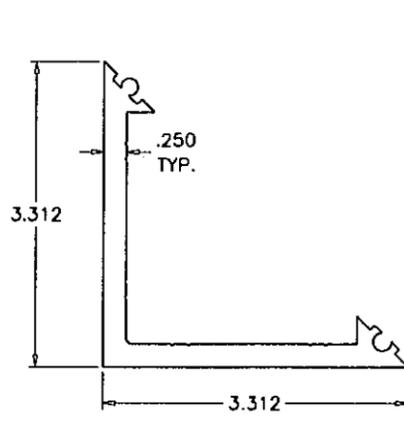
⑭ CORNER POST REINF.



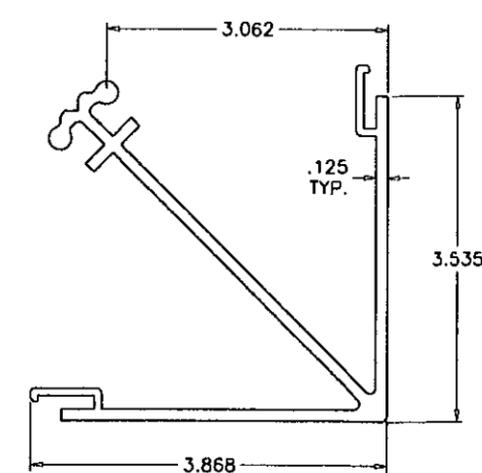
④ MALE POST



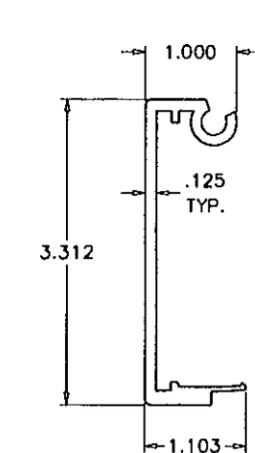
⑤ FEMALE POST



⑥ SMALL CORNER POST



⑦ LARGE CORNER POST



⑦ CORNER POST CLOSURE

ITEM	PART #	DESCRIPTION	MATERIAL	MANF./SUPPLIER/REMARKS
1	TGR-10	TOP RAIL CAP (CENTERED GLASS)	6063-T6	-
1A	TGR-105	TOP RAIL CAP (NON-CENTERED GLASS)	6063-T6	-
2	TGR-13	TOP RAIL CHANNEL (CENTERED GLASS)	6063-T6	-
2A	TGR-106	TOP RAIL CHANNEL (NON-CENTERED GLASS)	6063-T6	-
3	TGR-14	BOTTOM RAIL (CENTERED GLASS)	6063-T6	-
3A	TGR-107	BOTTOM RAIL (NON-CENTERED GLASS)	6063-T6	-
4	TGR-101	MALE POST	6061-T6	-
5	TGR-102	FEMALE POST	6061-T6	-
6	TGR-15	SMALL CORNER POST	6061-T6	-
7	TGR-104	LARGE CORNER POST	6061-T6	-
8	TGR-103	CORNER POST CLOSURE	6061-T6	-
9	TGR-108	EXTERIOR GLAZING VINYL	NEOPRENE	-
10	TGR-109	INTERIOR GLAZING VINYL	NEOPRENE	-
11	-	SETTING BLOCKS (1/2" X 5/8" X 3" LONG)	NEOPRENE	2 PER LITE AT 4" FROM ENDS
12	#10 X 1"	ASSEMBLY SCREWS	ST/ST	PH SMS/SDS
13	-	POST REINFORCING BAR	6061-T6	-
14	-	CORNER POST REINFORCING TUBE	6061-T6	-

Engr: JAVAD AHMAD
CIVIL
FLA. PE # 70592
C.A.N. 3538
NOV 11 2010

Approved as complying with the
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Date 11/24/2010
NOA# 10-0419-06
Miami Dade Product Control
Division
By *Helmy Adnan*

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AL-FAROOQ CORPORATION
ENGINEERS & PRODUCT DEVELOPMENT
1235 S.W. 87 AVE
MIAMI, FLORIDA 33174
TEL (305) 264-8100 FAX (305) 262-6978

ALUMINUM GLASS RAILING SYSTEM
TITAN GLASS & ALUMINUM, LLC.
260 CRANDON BLVD. STE 32
KEY BISCAYNE, FL. 33149
TEL (305) 888-0911

no	date	description
A	08.02.10	NO CHANGE THIS SHEET

date: 12-23-09
scale: 1/2" = 1"
dr. by: HAMID
chk. by:

drawing no.
09-09

sheet 6 of 6

RAILING\09-09TGA