



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

**NOTICE OF ACCEPTANCE (NOA)**

[www.buildingcodeonline.com](http://www.buildingcodeonline.com)

**KML Windows, Inc.**  
**23 Buchanan Court**  
**London, Ontario, Canada N5Z 4P9**

**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 Florida Building Code, including the High Velocity Hurricane Zone.

**DESCRIPTION: Steel Tube Clipped Mullion – L.M.I.**

**APPROVAL DOCUMENT:** Drawing No. **1003E**, titled "Clipped Impact & Non-Impact Steel Tube Mullions", sheets 1 through 5 of 5, dated 10/13/00, with revision A1 dated 08/01/05, prepared by W. W. Schaefer Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E., bearing the Miami-Dade County Product Control Renewal stamp with the Notice of Acceptance number and expiration 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, city, state and 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 **renews NOA # 05-0815.06** and consists of this page 1 and evidence page E-1, as well as approval document mentioned above.

The submitted documentation was reviewed by **Manuel Perez, P.E.**

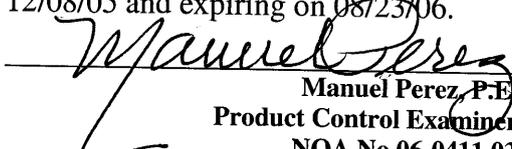


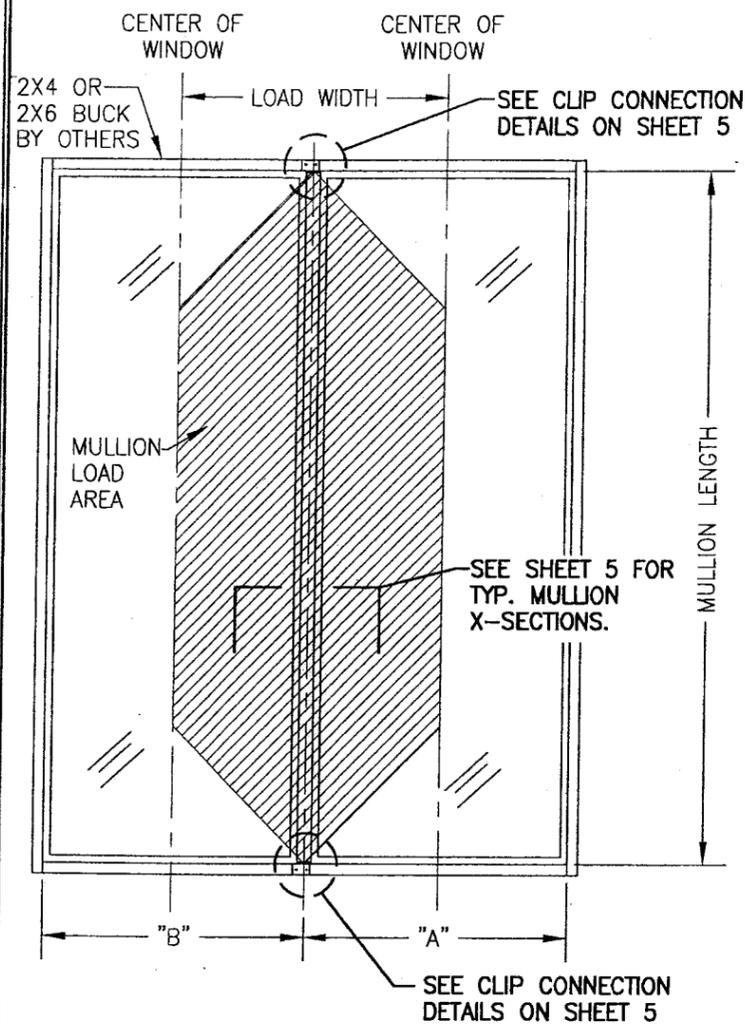
**NOA No 06-0411.03**  
**Expiration Date: August 23, 2011**  
**Approval Date: August 24, 2006**  
**Page 1**

**Ingersoll-Rand**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

- A. DRAWINGS**
1. Manufacturer's die drawings and sections.
  2. Drawing No **1003E**, Sheets 1 through 5 of 5, titled "Clipped Impact & Non-Impact Steel Tube Mullions", dated 10/13/00 with revision A1 dated 06/01/05, prepared by W. W. Schaefer Engineering Consulting, P.A., signed and sealed by Warren W. Schaefer, 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) Large Missile Impact Test per FBC, TAS 201-94  
5) Cyclic Wind Pressure Loading per FBC, TAS 203-94  
along with installation diagram of two fixed window mullied units, prepared by Intertek Testing Services, Test Report No. **ITS J99022770-231-09**, dated 10/31/00, signed and sealed by Douglas Keith Tucker, P.E.  
*(Submitted under NOA# 00-1129.03)*
- C. CALCULATIONS**
1. Verification Engineering Structural & Anchor Calculations, complying with FBC 2004 dated 04/19/06, prepared by W. W. Schaefer, Engineering & Consulting, P.A., signed and sealed by Warren W. Schaefer, P.E.
  2. Engineering Structural & Anchor Calculations, dated 10/17/00, prepared by W. W. Schaefer, Engineering & Consulting & P.A., signed and sealed by Warren W. Schaefer, P.E.  
*(Submitted under NOA# 00-1129.03)*
- D. QUALITY ASSURANCE**
1. Miami Dade Building Code Compliance Office (BCCO).
- E. MATERIAL CERTIFICATIONS**
1. None.
- F. STATEMENTS**
1. Statement letter of conformance, dated October 19, 2000, signed and sealed by Warren W. Schaefer, P.E. *(Submitted under NOA# 00-1129.03)*
  2. Statement letter of no financial interest, dated October 19, 2000, signed and sealed by Warren W. Schaefer, P.E. *(Submitted under NOA# 00-1129.03)*
- G. OTHER**
1. Notice of Acceptance No. **05-0815.06**, issued to KML Windows, Inc. for their Steel Tube Clipped Mullion - Impact, approved on 12/08/05 and expiring on 08/23/06.

  
Manuel Perez, P.E.  
Product Control Examiner  
NOA No 06-0411.03  
Expiration Date: August 23, 2011  
Approval Date: August 24, 2006



**FIXED WINDOW TO FIXED WINDOW**  
LOAD WIDTH = (A + B)/2

NOTE: "FIXED WINDOW" MAY BE A SASH GLAZED FIXED OR A DIRECT GLAZED FIXED WINDOW.

NOTE: MULLION MAY BE HORIZONTAL OR VERTICAL

**GENERAL NOTES (ALL DRAWING SHEETS):**

1. THESE MULLION SYSTEMS HAVE BEEN TESTED, ANALYZED AND APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN ON THESE DRAWINGS.
2. BUCKING, OPENINGS & BUCKING FASTENERS MUST BE DESIGNED & INSTALLED TO WITHSTAND WIND LOADS AS DETERMINED FOR EA. APPLICATION
3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & MAY NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS.
4. THESE MULLION SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE 2004 FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
5. THIS PRODUCT HAS BEEN TESTED IN ACCORDANCE WITH DADE COUNTY PROTOCOLS TAS-201, TAS-202 & TAS-203 FOR LARGE MISSILE IMPACT, STRUCTURAL & CYCLIC TESTING.
6. PRODUCTS APPROVED WITH THESE MULLIONS ARE:
  - a) IMPACT & NON-IMPACT FRENCH DOORS
  - b) IMPACT & NON-IMPACT CASEMENT WINDOWS
  - c) IMPACT & NON-IMPACT SASH GLAZED FIXED WINDOWS
  - d) IMPACT & NON-IMPACT DIRECT GLAZED FIXED WINDOWS

FIXED WINDOW TO FIXED WINDOW TABLE				
LENGTH (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURES (PSF)		
		MULLION "A"	MULLION "B"	MULLION "C"
		(+/-)	(+/-)	(+/-)
60	24	100.0	100.0	100.0
	30	100.0	100.0	100.0
	36	100.0	100.0	100.0
	42	100.0	100.0	100.0
	48	100.0	100.0	100.0
	54	100.0	100.0	100.0
	60	100.0	100.0	100.0
	66	100.0	100.0	100.0
72	24	100.0	100.0	100.0
	30	100.0	100.0	100.0
	36	100.0	100.0	100.0
	42	100.0	100.0	100.0
	48	100.0	100.0	100.0
	54	100.0	100.0	100.0
	60	100.0	100.0	100.0
	66	100.0	100.0	100.0
84	24	100.0	100.0	100.0
	30	100.0	100.0	100.0
	36	100.0	100.0	100.0
	42	100.0	100.0	100.0
	48	100.0	100.0	100.0
	54	100.0	100.0	100.0
	60	100.0	100.0	100.0
	66	100.0	100.0	100.0
96	24	100.0	100.0	100.0
	30	100.0	100.0	100.0
	36	100.0	100.0	100.0
	42	100.0	100.0	100.0
	48	100.0	100.0	100.0
	54	100.0	100.0	100.0
	60	96.0	96.0	96.0
	66	91.4	91.4	91.4
72	88.0	88.0	88.0	

NOTE: INDIVIDUAL UNIT SIZES ARE LIMITED BY THEIR OWN INDIVIDUAL "NOTICE OF ACCEPTANCE"

FIXED WINDOW TO FIXED WINDOW TABLE				
LENGTH (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURES (PSF)		
		MULLION "A"	MULLION "B"	MULLION "C"
		(+/-)	(+/-)	(+/-)
108	24	100.0	100.0	100.0
	30	100.0	100.0	100.0
	36	100.0	100.0	100.0
	42	100.0	100.0	100.0
	48	94.3	94.3	94.3
	54	86.9	86.9	86.9
	60	81.2	81.2	81.2
	66	76.8	76.8	76.8
120	24	100.0	100.0	100.0
	30	100.0	100.0	100.0
	36	100.0	100.0	100.0
	42	91.4	91.4	91.4
	48	82.5	82.5	82.5
	54	73.9	75.7	75.7
	60	66.5	70.4	70.4
	66	60.5	66.2	66.2
132	24	100.0	100.0	100.0
	30	99.9	100.0	100.0
	36	83.3	92.6	92.6
	42	71.4	81.5	81.5
	48	62.5	73.3	73.3
	54	55.5	67.0	67.0
	60	50.0	60.6	62.1
	66	45.4	55.0	58.2
144	24	96.2	100.0	100.0
	30	77.0	93.3	98.2
	36	64.1	77.7	83.8
	42	55.0	66.6	73.6
	48	48.1	58.3	66.0
	54	42.8	51.8	60.2
	60	38.5	46.6	55.6
	66	35.0	42.4	51.9
72	32.1	38.9	48.9	

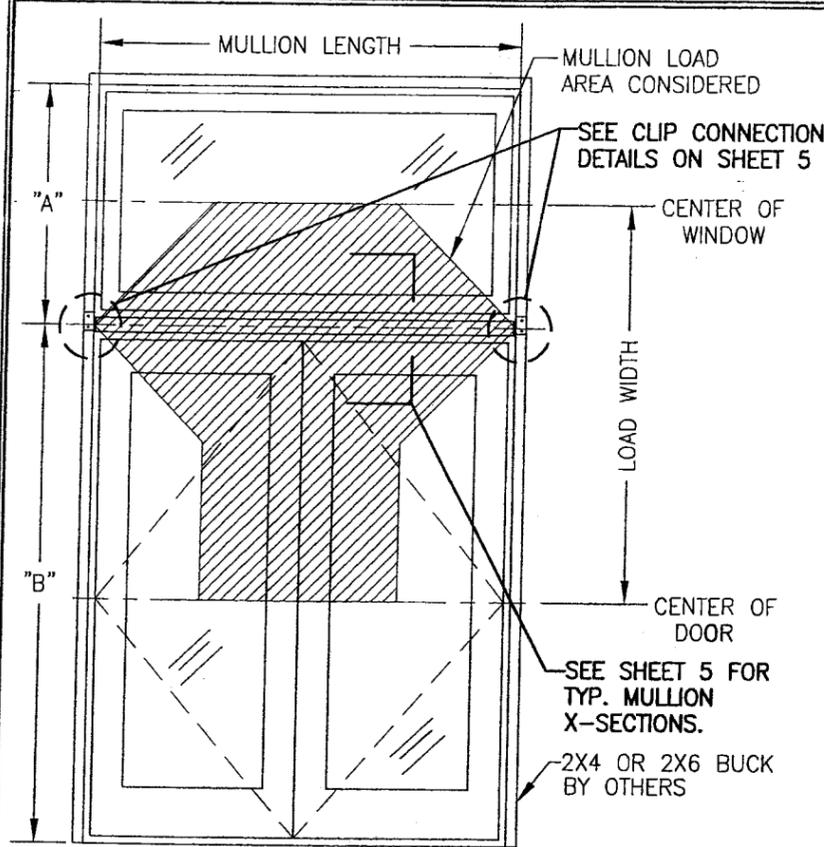
MULLION "A" = 4"x2"x3/16" STEEL TUBE  
MULLION "B" = 4"x2"x1/4" STEEL TUBE  
MULLION "C" = 5"x2"x1/4" STEEL TUBE

7. ALL BUCKING MUST BE RIPPED TO FIT DEPTH REQUIRED BY THE MULLION END CLIPS. (SEE DETAILS ON SHEET 5)
8. ALLOWABLE PRESSURE ON THE MULLED UNIT SHALL BE CONTROLLED BY THE LESSER ALLOWABLE PRESSURE OF THE MULLION OR THE INDIVIDUAL DOOR/WINDOW UNITS.
9. FOR WINDOW OR DOOR FRAME TO BUCK ATTACHMENT, SEE THE RESPECTIVE PRODUCT APPROVAL DRAWINGS FOR THE WINDOW/DOOR.
10. MULLION LENGTHS ARE RESTRICTED BY THOSE SHOWN IN THE TABLES.

**PRODUCT RENEWED**  
as complying with the Florida Building Code  
Acceptance No. 06-0411.03  
Expiration Date AUG 23, 2011  
By *Warren W. Schaeffer*  
Miami Dade Product Control Division

**PRODUCT REVISED**  
as complying with the Florida Building Code  
Acceptance No. 05-0815.06  
Expiration Date 08/23/06  
By *Warren W. Schaeffer*  
Miami Dade Product Control Division

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 10/13/00	
NO.	REVISION DESCRIPTION	DATE	BY
A1	UPDATE GENERAL NOTES TO 2004 CODE COMPLIANT	08/01/05	WWS
<b>CLIPPED IMPACT &amp; NON-IMPACT STEEL TUBE MULLIONS</b> MANUFACTURER: <b>KML WINDOWS, INC.</b> 23 BUCHANAN COURT LONDON, ONTARIO, CANADA N5Z4P9 519-681-7012			
CONSULTANTS: <b>W. W. SCHAEFFER ENGINEERING &amp; CONSULTING, P.A.</b> 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903			
DRAWING TITLE		CERTIFICATION	
CLIPPED IMPACT & NON-IMPACT STEEL TUBE MULLIONS		AUG 01 2005	
DRAWING NO. 1003E		REV. A	
SHEET NO. 1		OF 5	



**DOUBLE DOOR WITH TRANSOM**  
LOAD WIDTH = (A + B)/2

NOTE: "TRANSOM" MAY BE A SASH GLAZED FIXED WINDOW, DIRECT GLAZED FIXED WINDOW OR A FIXED DOOR PANEL.

DOUBLE DOOR WITH TRANSOM		
LENGTH (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)
		MULLION "A" (+/-)
48	48	100.0
	54	100.0
	60	100.0
	66	100.0
	72	100.0
54	48	100.0
	54	100.0
	60	100.0
	66	100.0
60	72	100.0
	48	100.0
	54	100.0
	60	100.0
	66	100.0
66	72	100.0
	78	100.0
	48	100.0
	54	100.0
	60	100.0
	66	100.0
72	72	100.0
	78	100.0
	84	96.7
	48	100.0
	54	100.0
	60	100.0
	66	100.0
78	72	96.7
	78	89.3
	84	82.9
	48	100.0
	54	100.0
	60	100.0
84	66	98.0
	72	89.8
	78	82.9
	84	77.0

MULLION "A" = MIN. 4"x2"x3/16" STEEL TUBE

NOTE: INDIVIDUAL UNIT SIZES ARE LIMITED BY THEIR OWN INDIVIDUAL "NOTICE OF ACCEPTANCE"

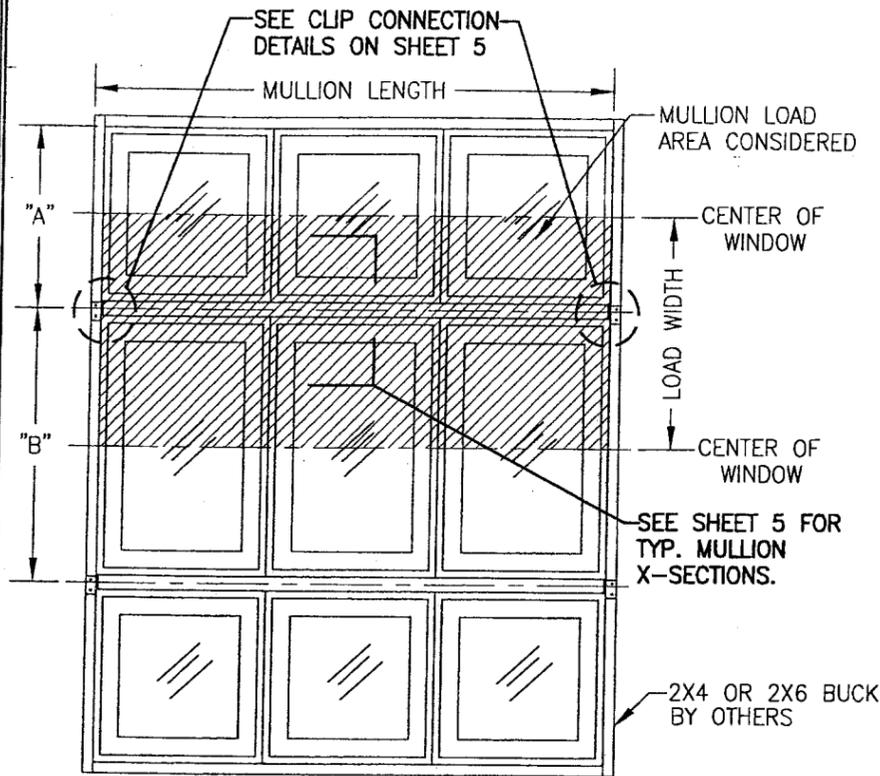
**PRODUCT RENEWED**  
as complying with the Florida Building Code  
Acceptance No. 06-0411.03  
Expiration Date AUG. 23, 2011

**PRODUCT REVISED**  
as complying with the Florida Building Code  
Acceptance No. 05-0815.06  
Expiration Date 08/23/06

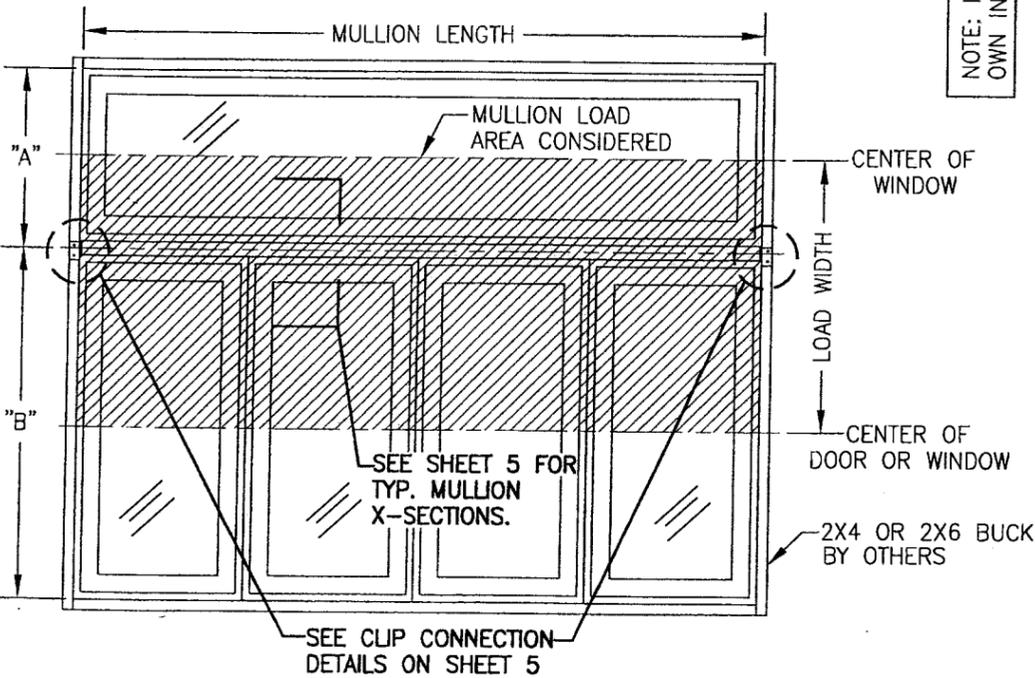
By Warren W. Schaefer  
Miami Dade Product Control Division

By Warren W. Schaefer  
Miami Dade Product Control Division

DRAWN BY: W.W.S.		CHECKED BY: W.W.S.	
PLOT: 1=24		DATE: 10/13/00	
NO.	REVISION DESCRIPTION	DATE	BY
DRAWING TITLE: CLIPPED IMPACT & NON-IMPACT STEEL TUBE MULLIONS			
CONSULTANTS W. W. SCHAEFER ENGINEERING & CONSULTING, P.A. 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903		MANUFACTURER KML WINDOWS, INC. 23 BUCHANAN COURT LONDON, ONTARIO, CANADA N5Z4P9 519-681-7012	
CERTIFICATION AUG 23 2005 WARREN W. SCHAEFER, P.E. P.E. NO. 44135			
DRAWING NO. 1003E		REV. A	
SHEET NO. 2 OF 5			



**MULTIPLE WINDOWS (HORIZONTAL MULLION)**  
 LOAD WIDTH = (A + B)/2  
 MULLIONS MAY BE HORIZONTAL OR VERTICAL



**MULTIPLE WINDOWS/DOORS WITH TRANSOM**  
 LOAD WIDTH = (A + B)/2  
 TRANSOM MAY BE SINGLE OR MULTIPLE WINDOWS

NOTE: INDIVIDUAL UNIT SIZES ARE LIMITED BY THEIR OWN INDIVIDUAL "NOTICE OF ACCEPTANCE"

MULTIPLE WINDOWS/DOORS			
LENGTH (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURES (PSF)	
		MULLION "A"	MULLION "B"
		(+/-)	(+/-)
36	48	100.0	100.0
	54	100.0	100.0
	60	100.0	100.0
	66	100.0	100.0
	72	100.0	100.0
	78	100.0	100.0
48	36	100.0	100.0
	42	100.0	100.0
	48	100.0	100.0
	54	100.0	100.0
	60	100.0	100.0
	66	100.0	100.0
60	72	100.0	100.0
	78	100.0	100.0
	30	100.0	100.0
	36	100.0	100.0
	42	100.0	100.0
	48	100.0	100.0
72	54	100.0	100.0
	60	100.0	100.0
	66	96.0	96.0
	72	88.0	88.0
	78	81.2	81.2
	84	73.3	73.3
84	24	100.0	100.0
	30	100.0	100.0
	36	100.0	100.0
	42	100.0	100.0
	48	100.0	100.0
	54	97.8	97.8
96	60	88.0	88.0
	66	80.0	80.0
	72	73.3	73.3
	78	67.7	67.7
	84	60.0	60.0
	90	55.0	55.0
108	24	100.0	100.0
	30	100.0	100.0
	36	100.0	100.0
	42	100.0	100.0
	48	94.3	94.3
	54	83.8	83.8
120	60	75.4	75.4
	66	68.6	68.6
	72	62.9	62.9
	78	58.0	58.0
	84	50.8	50.8
	90	45.1	45.1
132	24	100.0	100.0
	30	100.0	100.0
	36	100.0	100.0
	42	100.0	100.0
	48	97.8	97.8
	54	94.3	94.3
144	60	82.5	82.5
	66	73.3	73.3
	72	66.0	66.0
	78	60.0	60.0
	84	55.0	55.0
	90	50.8	50.8

MULTIPLE WINDOWS/DOORS			
LENGTH (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURES (PSF)	
		MULLION "A"	MULLION "B"
		(+/-)	(+/-)
108	24	100.0	100.0
	30	100.0	100.0
	36	97.8	97.8
	42	83.8	83.8
	48	73.3	73.3
	54	65.2	65.2
120	60	58.7	58.7
	66	53.3	53.3
	72	48.9	48.9
	78	45.1	45.1
	84	40.6	40.6
	90	36.9	36.9
132	24	100.0	100.0
	30	100.0	100.0
	36	88.0	88.0
	42	75.4	75.4
	48	66.0	66.0
	54	58.7	58.7
144	60	52.8	52.8
	66	48.0	48.0
	72	44.0	44.0
	78	40.6	40.6
	84	36.9	36.9
	90	33.8	33.8

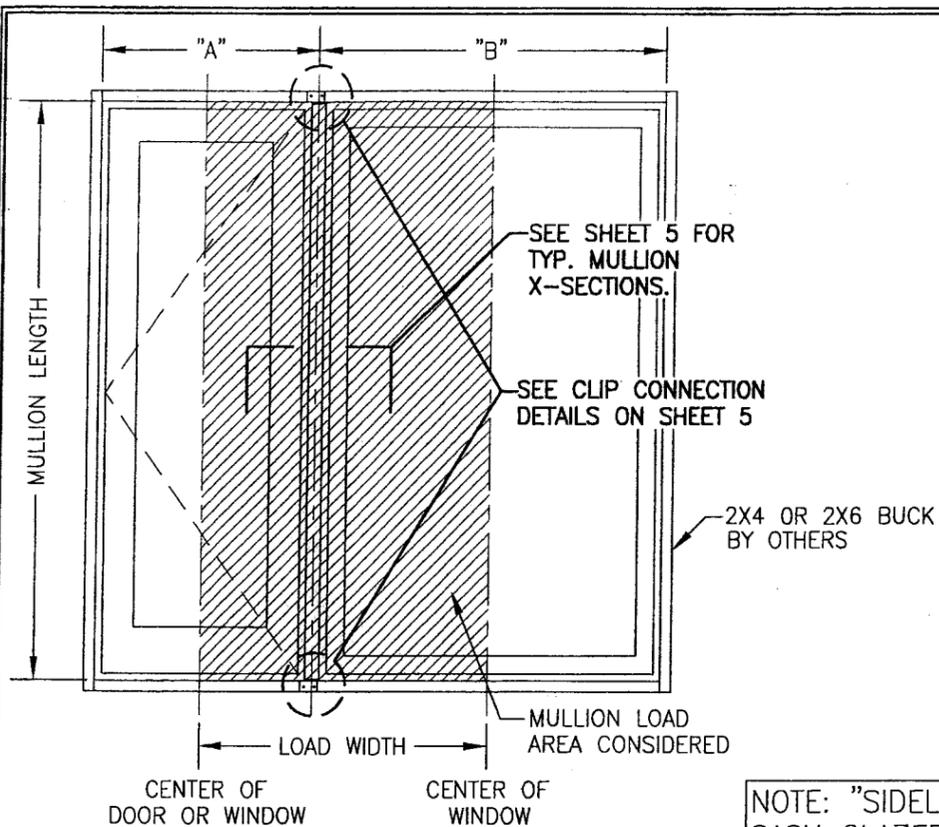
MULLION "A" = 4"x2"x3/16" STEEL TUBE  
 MULLION "B" = 4"x2"x1/4" STEEL TUBE

**PRODUCT RENEWED**  
 as complying with the Florida Building Code  
 Acceptance No. 06-0411.03  
 Expiration Date AUG. 23, 2011

**PRODUCT REVISED**  
 as complying with the Florida Building Code  
 Acceptance No. 05-0815.06  
 Expiration Date 08/23/06

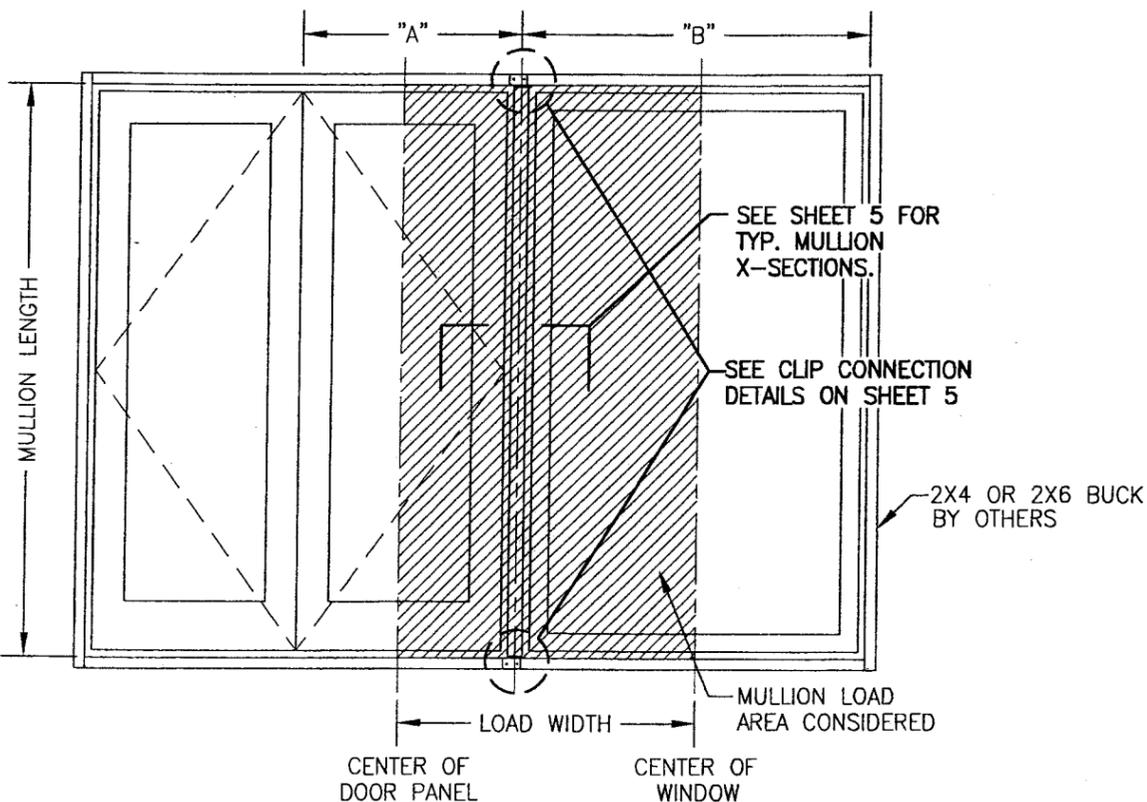
By *Manuel Perez* Miami Dade Product Control Division  
 By *Warren W. Schaefer* Miami Dade Product Control Division

DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1-24	DATE: 10/13/00
DATE	BY
REVISION DESCRIPTION	NO.
DRAWING TITLE <b>CLIPPED IMPACT &amp; NON-IMPACT STEEL TUBE MULLIONS</b>	
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b> 8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	MANUFACTURER <b>KML WINDOWS, INC.</b> 23 BUCHANAN COURT LONDON, ONTARIO, CANADA N5Z4P9 519-681-7012
CERTIFICATION <b>AUG 01 2005</b>	WARREN W. SCHAEFER, P.E. P.E. NO. 44135
DRAWING NO. <b>1003E</b>	REV. <b>A</b>
SHEET NO. <b>3</b>	OF <b>5</b>



**SINGLE DOOR OR CASEMENT WITH SIDELIGHT**  
LOAD WIDTH = (A + B)/2

NOTE: "SIDELIGHT" MAY BE A SASH GLAZED FIXED WINDOW, A DIRECT GLAZED FIXED WINDOW, OR A FIXED DOOR PANEL.



**DOUBLE DOOR WITH SIDELIGHT**  
LOAD WIDTH = (A + B)/2

DOOR WITH SIDELIGHT		
LENGTH (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)
		MULLION "A" (+/-)
48	36	100.0
	42	100.0
	48	100.0
	54	100.0
	60	100.0
54	30	100.0
	36	100.0
	42	100.0
	48	100.0
	54	100.0
60	30	100.0
	36	100.0
	42	100.0
	48	100.0
	54	100.0
66	24	100.0
	30	100.0
	36	100.0
	42	100.0
	48	100.0
72	24	100.0
	30	100.0
	36	100.0
	42	100.0
	48	100.0
78	24	100.0
	30	100.0
	36	100.0
	42	100.0
	48	100.0
80	24	100.0
	30	100.0
	36	100.0
	42	100.0
	48	99.0
84	24	100.0
	30	100.0
	36	100.0
	42	94.3
	48	83.8
96	24	100.0
	30	100.0
	36	100.0
	42	94.3
	48	82.5
108	24	100.0
	30	100.0
	36	100.0
	42	94.3
	48	73.3
120	24	100.0
	30	100.0
	36	100.0
	42	94.3
	48	66.0

DOOR WITH SIDELIGHT		
LENGTH (IN.)	LOAD WIDTH (IN.)	ALLOWABLE PRESSURE (PSF)
		MULLION "A" (+/-)
48	24	100.0
	30	100.0
	36	100.0
	42	100.0
	48	94.3
54	24	100.0
	30	100.0
	36	100.0
	42	94.3
	48	82.5
60	24	100.0
	30	100.0
	36	100.0
	42	94.3
	48	73.3
66	24	100.0
	30	100.0
	36	100.0
	42	94.3
	48	66.0

MULLION "A" = MIN. 4"x2"x3/16" STEEL TUBE

NOTE: INDIVIDUAL UNIT SIZES ARE LIMITED BY THEIR OWN INDIVIDUAL "NOTICE OF ACCEPTANCE"

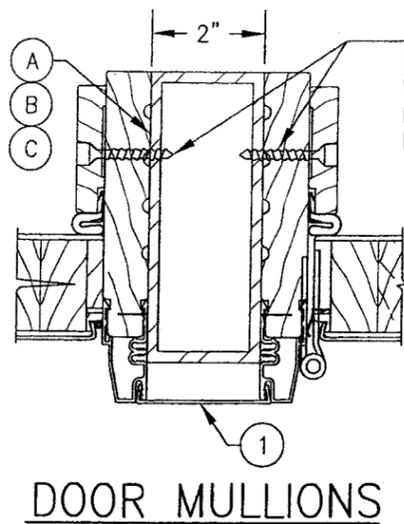
PRODUCT RENEWED as complying with the Florida Building Code  
Acceptance No. 06-0411.03  
Expiration Date AUG. 23, 2011

By *Manuel Perez*  
Miami Dade Product Control Division

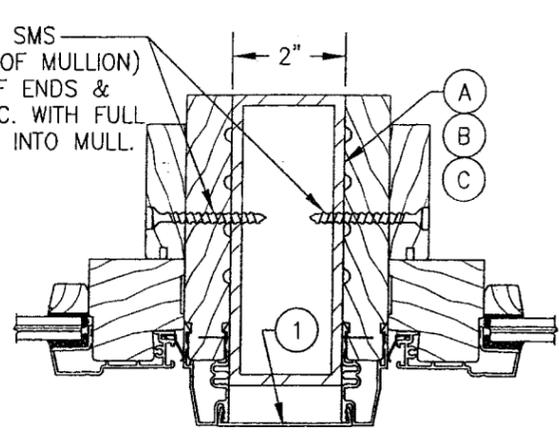
PRODUCT REVISED as complying with the Florida Building Code  
Acceptance No. 05-0815.06  
Expiration Date 08/23/06

By *Michael Hall*  
Miami Dade Product Control Division

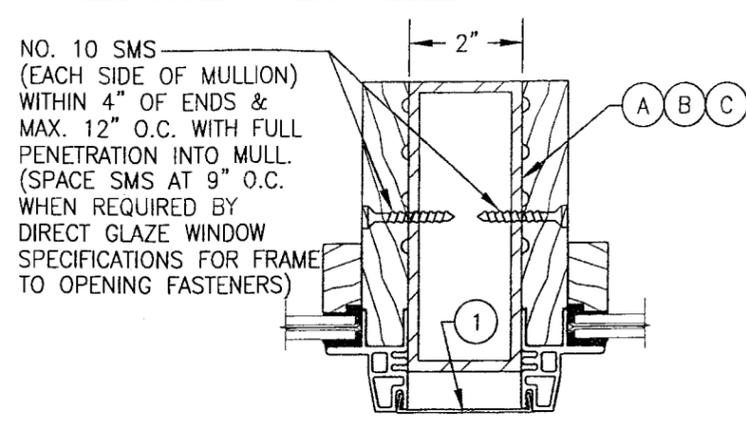
DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1=24	DATE: 10/13/00
DATE	BY
REVISION DESCRIPTION	NO.
DRAWING TITLE <b>CLIPPED IMPACT &amp; NON-IMPACT STEEL TUBE MULLIONS</b>	
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b>	MANUFACTURER <b>KML WINDOWS, INC.</b>
8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	23 BUCHANAN COURT LONDON, ONTARIO, CANADA N5Z4P9 519-681-7012
CERTIFICATION <b>AUG 01 2005</b>	REV. <b>A</b>
WARREN W. SCHAEFER P.E. NO. 44155	SHEET NO. <b>4 OF 5</b>



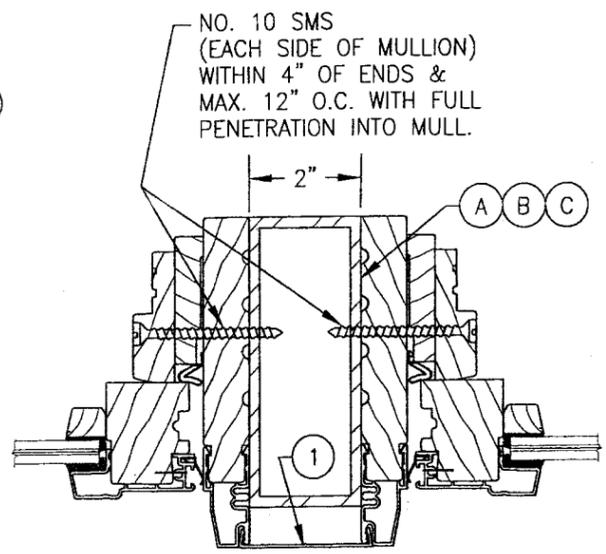
**DOOR MULLIONS**



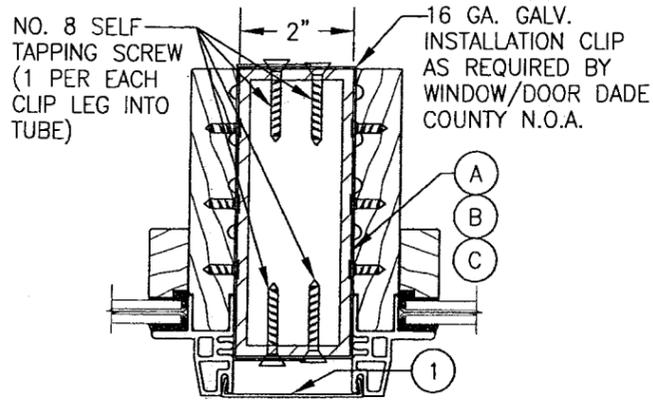
**SASH GLAZED FIXED WINDOW MULLIONS**



**DIRECT GLAZED WINDOW MULLIONS**

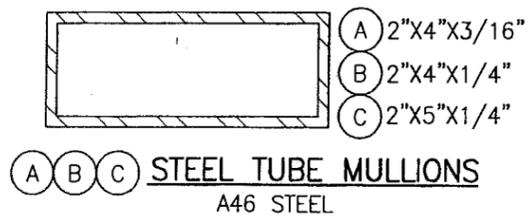


**CASEMENT WINDOW MULLIONS**

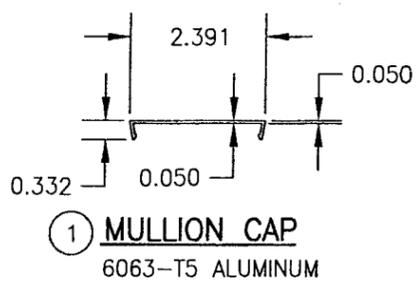


**OPTIONAL JAMB TO MULLION INSTALLATION CLIP CONNECTION**

TYP. FOR ALL PRODUCTS APPROVED WITH CLIP INSTALLATION.



**STEEL TUBE MULLIONS**  
A46 STEEL

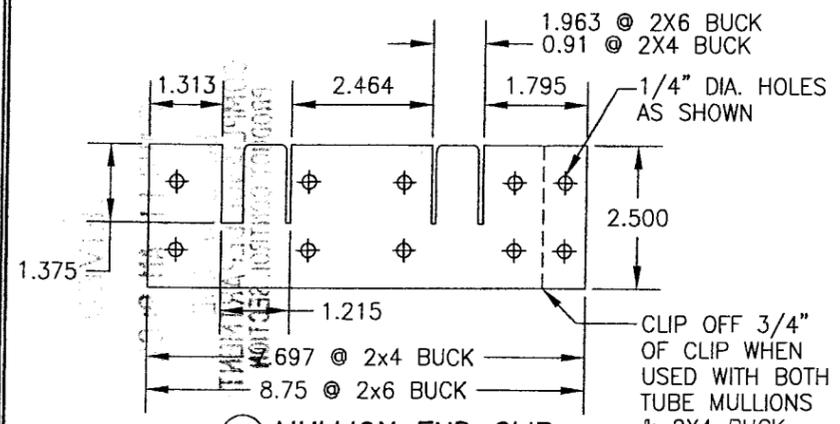


**MULLION CAP**  
6063-T5 ALUMINUM

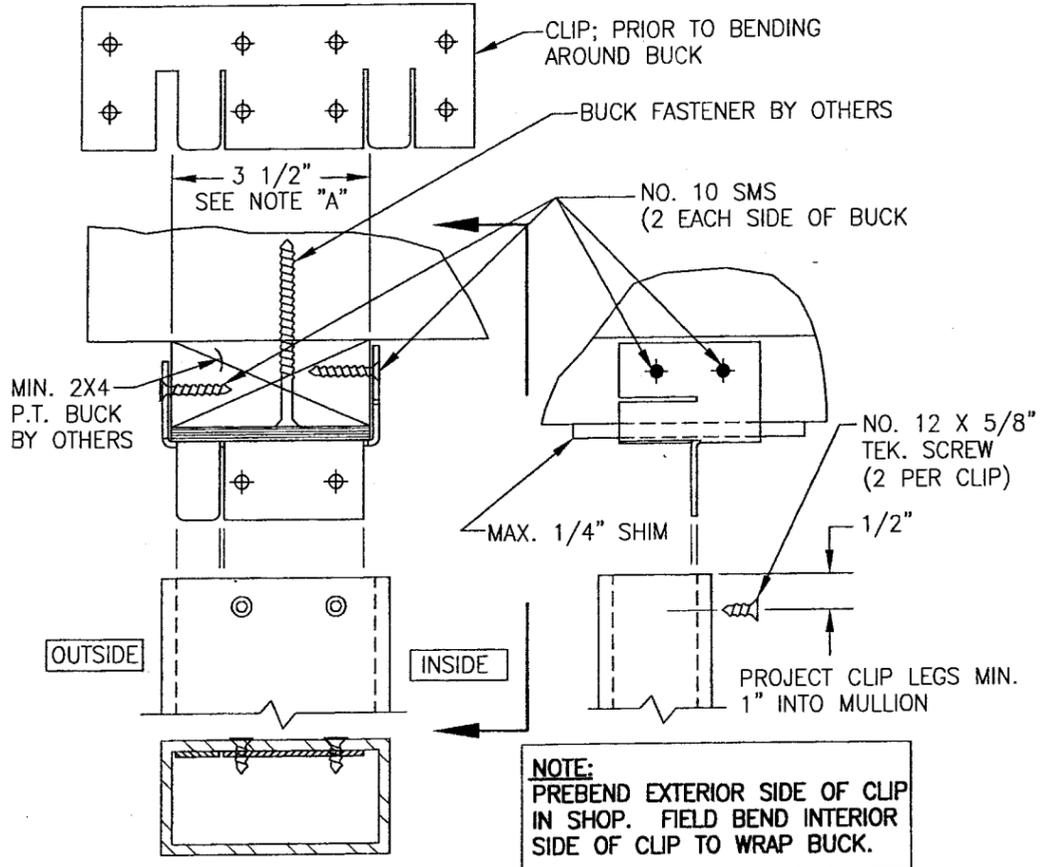
**WHEN ONE PRODUCT IS MULLED TO ANOTHER PRODUCT, THE JAMBS SHALL BE FASTENED TO THE MULLION AS SHOWN IN THE PRODUCT MULLION DETAILS ON THIS SHEET.**

**NOTE:** ANY ADDITIONAL FASTENERS REQUIRED BY THE INDIVIDUAL DOOR OR WINDOW N.O.A. (EX: STRIKE OR HINGE FASTENERS TO BUCK) SHALL BE REPLACED WITH AN EQUAL SIZE TEK SCREW FOR PENETRATION INTO THE MULLION.

**NOTE "A":** WHEN CLIP IS USED WITH THE TUBE MULLIONS, THE 7.697" LONG CLIP MAY BE USED WITH A 2X4 BUCK PROVIDING 3/4" IS CUT OFF INSIDE END OF CLIP PER THE CLIP DETAIL ON SHEET 5. THE 8.75" LONG CLIP MAY BE USED WITH A FULL 2X6 BUCK WITHOUT CUTTING CLIP.



**MULLION END CLIP**  
A36 MIN. GALV. STEEL  
THICKNESS = 12 GAGE



**MULLION END CONNECTION DETAIL**

**NOTE:** THIS CONNECTION IS ALSO APPLICABLE FOR A TUBE TO TUBE CONNECTION EXCEPT THAT THE NO. 10 SMS INTO THE BUCK SHALL BE NO. 10 TEK SCREWS INTO THE TUBE.

**NOTE:** PREBEND EXTERIOR SIDE OF CLIP IN SHOP. FIELD BEND INTERIOR SIDE OF CLIP TO WRAP BUCK.

**PRODUCT RENEWED**  
as complying with the Florida Building Code  
Acceptance No. 06-0411.03  
Expiration Date AUG. 23, 2011  
By Manuel Serez  
Miami Made Product Control Division

**PRODUCT REVISED**  
as complying with the Florida Building Code  
Acceptance No. 05-0815.06  
Expiration Date 08/23/06  
By Manuel Serez  
Miami Made Product Control Division

DRAWN BY: W.W.S.	CHECKED BY: W.W.S.
PLOT: 1=3	DATE: 10/13/00
DATE	
BY	
REVISION DESCRIPTION	
NO.	
DRAWING TITLE <b>CLIPPED IMPACT &amp; NON-IMPACT STEEL TUBE MULLIONS</b>	
CONSULTANTS <b>W. W. SCHAEFER ENGINEERING &amp; CONSULTING, P.A.</b>	MANUFACTURER <b>KML WINDOWS, INC.</b>
8895 N. MILITARY TRAIL, SUITE C-204 PALM BEACH GARDENS, FL 33410 PHONE: 561-775-4902 FAX: 561-775-4903	23 BUCHANAN COURT LONDON, ONTARIO, CANADA N5Z4P9 519-681-7012
CERTIFICATION <b>AUG 21 2005</b>	WARREN W. SCHAEFER, P.E. P.E. NO. 44133
DRAWING NO. <b>1003E</b>	REV. <b>A</b>
SHEET NO. <b>5</b>	OF <b>5</b>