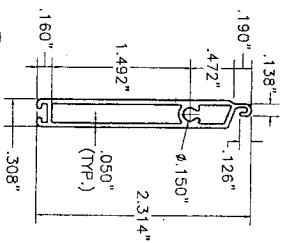
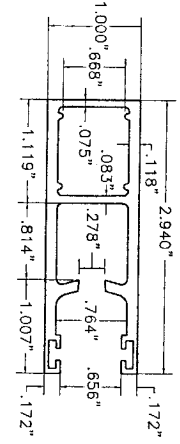


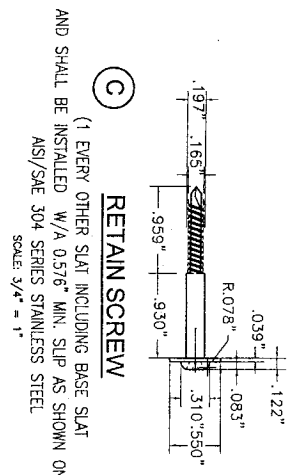
(A) SLAT
6061-T6 ALUMINUM ALLOY
SCALE: 3/4" = 1"



(A1) BASE SLAT
6061-T6 ALUMINUM ALLOY
SCALE: 3/4" = 1"

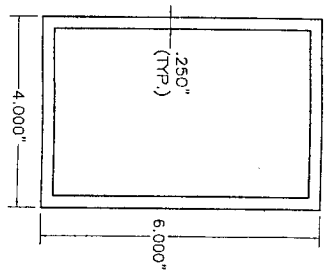


(B) SIDE RAIL
6061-T6 ALUMINUM ALLOY
SCALE: 3/4" = 1"

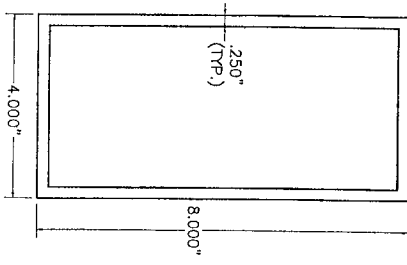


(C) RETAIN SCREW

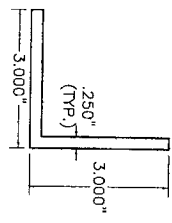
AND SHALL BE INSTALLED W/A 0.576" MIN. SLIP AS SHOWN ON SECTIONS)
AISI/SAE 304 SERIES STAINLESS STEEL
SCALE: 3/4" = 1"



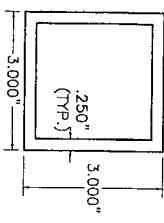
(D) 4"X6" MULLION:
6063-T6 ALUMINUM ALLOY
SCALE: 3/8" = 1"



(D1) 4"X8"X1/4" ALTERNATE MULLION
6063-T6 ALUMINUM ALLOY
SCALE: 3/8" = 1"

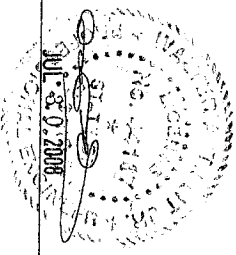


(E) 3"X3"X1/4" INSIDE MOUNT ANGLE
6061-T6 ALUMINUM ALLOY
SCALE: 3/8" = 1"



(E1) 3"X3"X1/4" ALTERNATE INSIDE MOUNT TUBE
6061-T6 ALUMINUM ALLOY
SCALE: 3/8" = 1"

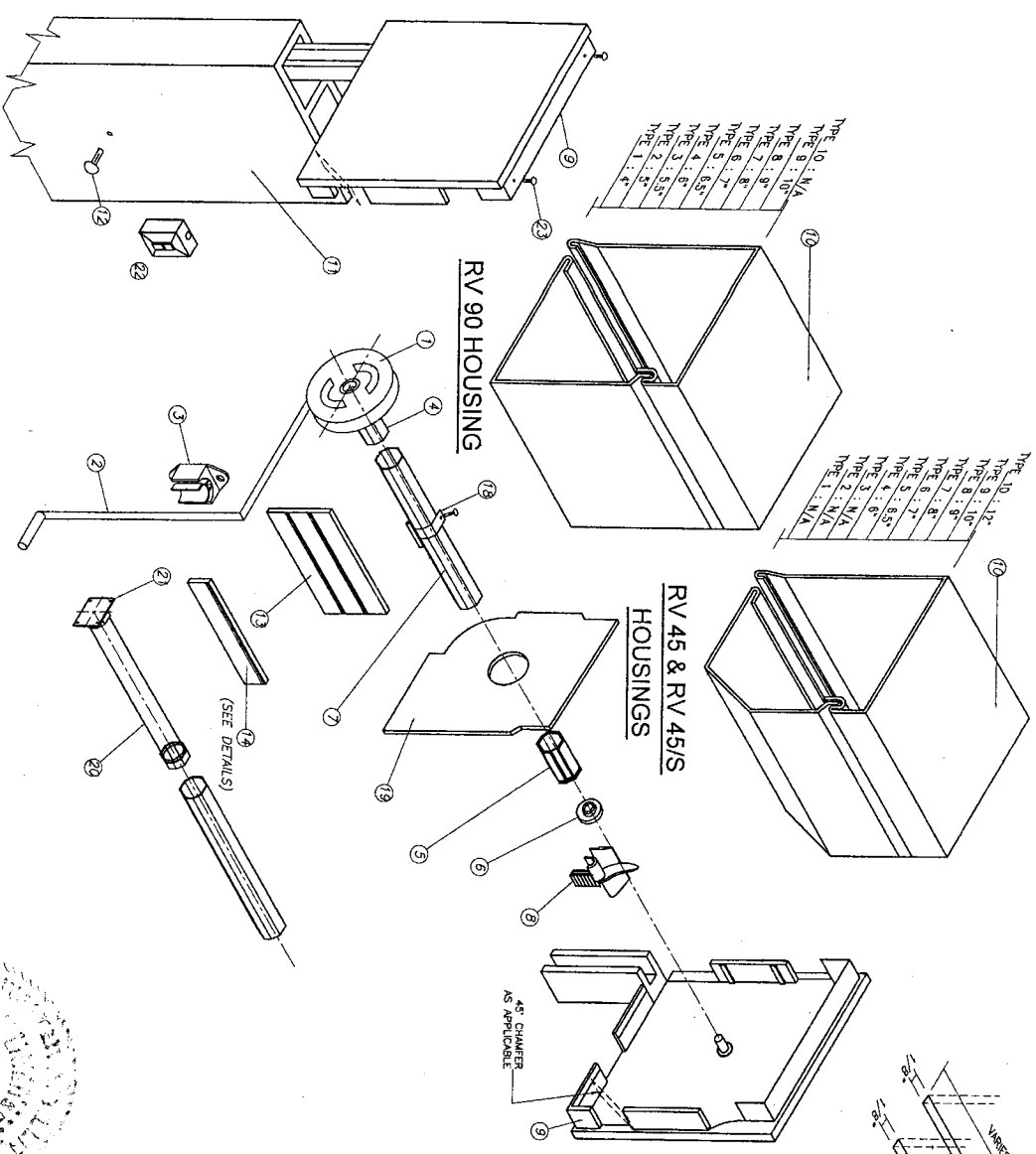
COMPONENTS



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TILTIT TESTING & ENGINEERING COMPANY
4335 N.W. 24th St., 2nd Floor, Virginia Gardens, Ft. Lauderdale, FL 33314
Phone: 1-800-353-1144, Fax: (302) 438-5100
E-mail: tilteco@ttilteco.com
WALTER A. TILLET, P.E.
WALTER A. TILLET, P.E.
FLORIDA, LIC. # 44187

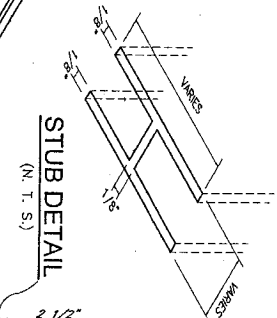
BARRACUDA II END RETENTION ROLL-UP SHUTTER SYSTEM		15 DIXON STREET SELBYVILLE, DE 19975		ALUTECH UNITED INC.	
PHONE: (800) 233-1144, FAX: (302) 438-5100		DATE: 7/23/08		DATE: 4/24/08	
DRAWING NO. 08-126		SHEET 2 OF 7		DRAWING NO.	

Florida Building Code (N.H./H.Z.)

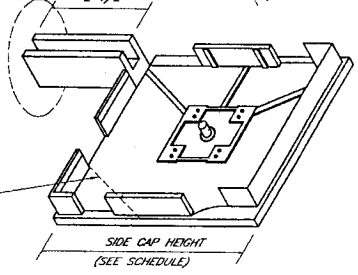


(M) BOX COMPONENTS AND ASSEMBLY DETAIL

END CAP SYSTEM
(SEE NOTE 10 ON SHEET 1)



(M1) SIDE CAPS:



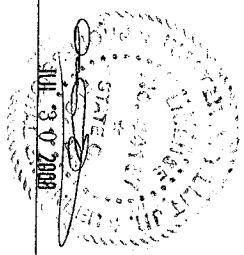
COMPONENTS FOR GEAR OPERATED SYSTEM

- ① - GEAR
 - ② - UNIVERSAL & CRANK
 - ③ - CRANK HOLDER(OPTIONAL)
 - ④ - GEAR INSERT(GEAR TO AXLE CONNECTOR)
 - ⑤ - IDLER INSERT
 - ⑥ - BALL BEARING
 - ⑦ - OCTAGONAL AXLE *
 - ⑧ - ENTRY GUIDES
 - ⑨ - SIDE/END CAP *
 - ⑩ - HOUSING(FRONT & BOTTOM), 0.040" THICK
 - ⑪ - SIDE RAIL
 - ⑫ - PLUG-BUTTONS
 - ⑬ - ALUMINUM SLATS
 - ⑭ - BASE SLAT
 - ⑮ - PLASTIC STOP(S)(OPTIONAL)
 - ⑯ - SIDE LOCK(S)(OPTIONAL)
 - ⑰ - STAPLES(OPTIONAL)
 - ⑱ - SPRING-LOCK HANGER
 - ⑲ - SAFETY PLATES
- ADDITIONAL COMPONENTS FOR
MOTORIZED OPERATED SYSTEM
- ⑳ - TUBULAR MOTOR
 - ㉑ - MOTOR BRACKET
 - ㉒ - SWITCH

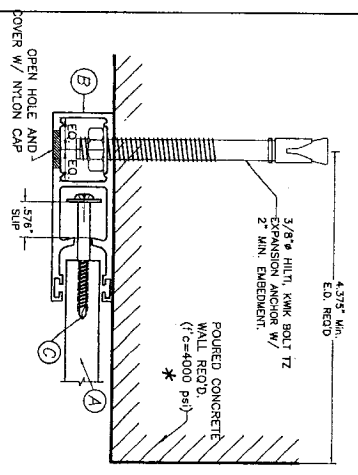
FASTENERS

- ㉓ - 3/16" ALUMINUM POP RIVETS(6 REQ'D EA.
- SIDE CAP) : 2 ㉔ TOP, 2 ㉕ REAR, 2 ㉖ BOTTOM

* SHALL BE CAPABLE TO SUSTAIN SLAT'S WEIGHT AND ASSURE LIFTING MECHANISM (SEE NOTE 10/1)



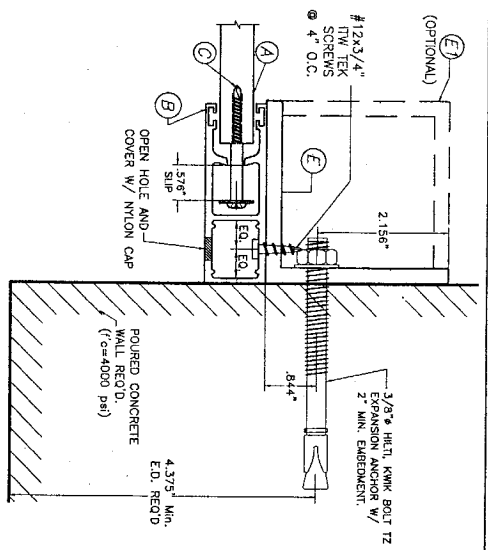
<p>© 2008 TILTECO INC.</p> <p>TILTECO INC.</p> <p>TILITE TESTING & ENGINEERING COMPANY 6455 N.W. 39th St., Ste. 203, Virginia Gardens, FL 33166 Phone: (888) 971-1331, Fax: (888) 971-1331 www.tiliteco.com Tiliteco, Inc. is an Equal Opportunity Employer EEO-0089719 WALTER A. TILITE Jr., P.E. FLORIDA Lic. # 44167</p>		<p>Florida Building Code (N.H./V.H.Z.)</p> <p>BARRACUDA II END RETENTION ROLL-UP SHUTTER SYSTEM</p> <p>ALUTECH UNITED INC.</p> <p>15 DIVON STREET SELBYVILLE, DE 19975 PHONE: (800) 233-1144, FAX: (302) 438-5100</p>		<p>DATE</p> <p>4/24/08</p>	
REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1		08/08/08	1		
SHEET 3 OF 7				DRAWING NO. 08-126	



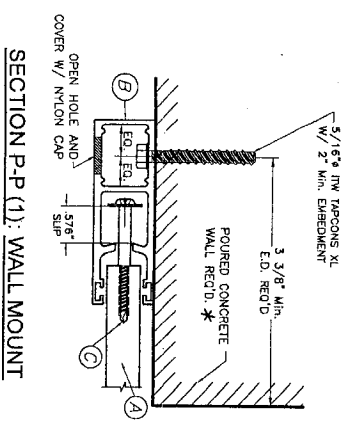
SECTION P-P (1): WALL MOUNT
3/8"Ø HILTI, KWIK BOLT TZ EXPANSION ANCHOR

SIDE RAIL CONNECTIONS

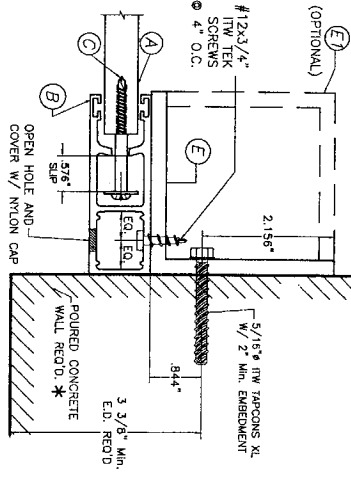
TO POURED CONCRETE
SCALE: 3/8" = 1"



SECTION P-P (2): INSIDE MOUNT
3/8"Ø HILTI, KWIK BOLT TZ EXPANSION ANCHOR

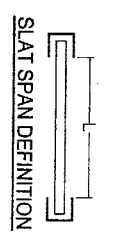
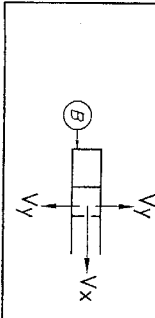


SECTION P-P (1): WALL MOUNT
5/16"Ø TAPCONS XL



SECTION P-P (2): INSIDE MOUNT
5/16"Ø TAPCONS XL

* NOTE:
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT EXISTING STRUCTURE IS DESIGNED TO SUPPORT Vx AND Vy=FORCES IN (lb/ft) OF SHUTTER HEIGHT AT BOTH JAMBS. (SEE SCHEDULES THIS SHEET).

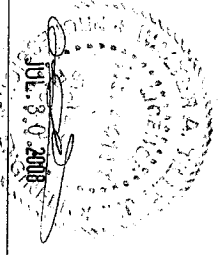


MAXIMUM SLAT SPAN "L" (FT.) & CORRESPONDING Vx & Vy REACTIONS AT JAMB & ANCHOR SPACING FOR 3/8"Ø HILTI, KWIK BOLT TZ EXPANSION ANCHOR GIVEN
MAXIMUM DESIGN LOAD & REQUIRED SLIP

MAXIMUM DESIGN LOAD (p.s.f.)	MAXIMUM SLAT SPAN "L" (FT.)	REQUIRED SLIP (in)	Vx (lb/ft)	Vy (lb/ft)	SIDE RAIL CONNECTION	MAX. ANCHOR SPACING (in)
+80, -80	15'-0" 1/8"	0.576"	2272	600	WALL MOUNT	7"
+73.6, -73.6	15'-0" 1/8"	0.576"	2272	600	INSIDE MOUNT	6"

MAXIMUM SLAT SPAN "L" (FT.) & CORRESPONDING Vx & Vy REACTIONS AT JAMB & ANCHOR SPACING FOR 5/16"Ø ITW TAPCONS XL ANCHOR GIVEN MAXIMUM DESIGN LOAD & REQUIRED SLIP

MAXIMUM DESIGN LOAD (P.S.F.)	MAXIMUM SLAT SPAN "L" (FT.)	REQUIRED SLIP (in)	Vx (lb/ft)	Vy (lb/ft)	SIDE RAIL CONNECTION	MAX. ANCHOR SPACING (in)
+55, -55	15'-0" 1/8"	0.576"	1605	413	WALL MOUNT	5"
+45, -45	15'-0" 1/8"	0.576"	1330	338	INSIDE MOUNT	5"



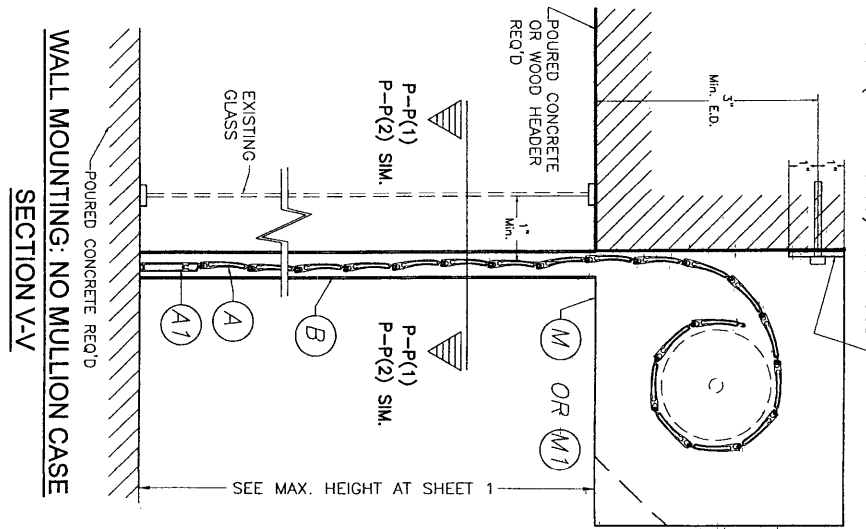
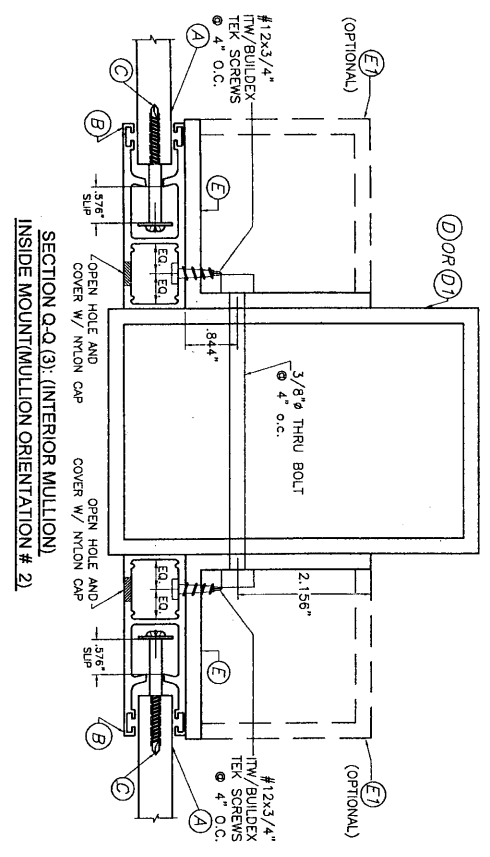
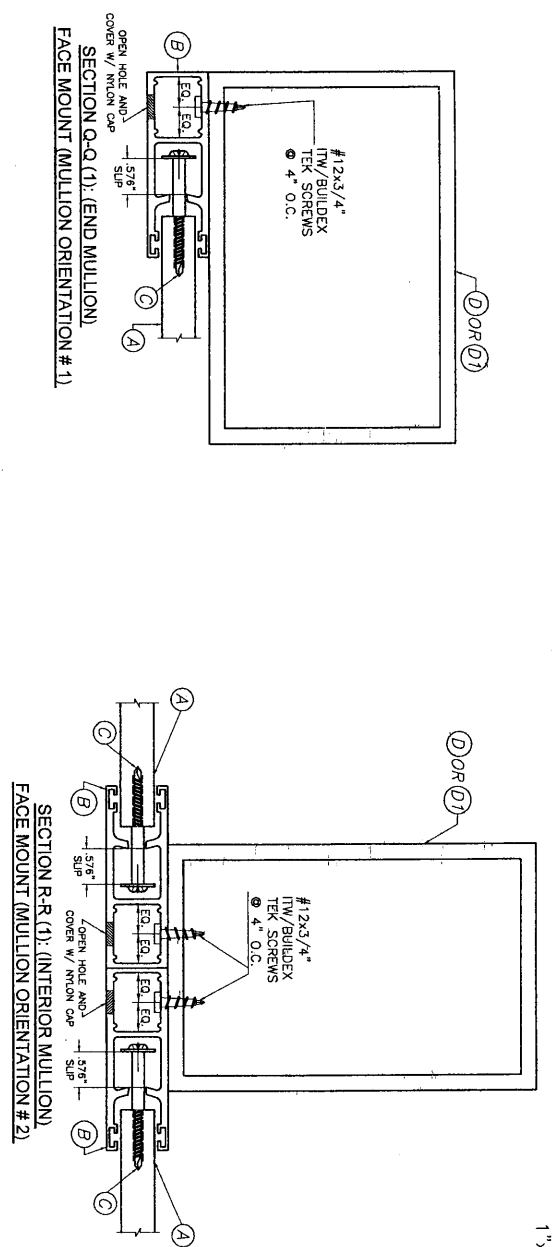
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TILTECO INC.
 TILTI TESTING & ENGINEERING COMPANY
 15 DIXON STREET
 SEBASTIAN, FL 32959
 PHONE: (888) 233-1144, FAX: (320) 438-5100
 4/24/08
 BARRACUDA II END RETENTION ROLL-UP SHUTTER SYSTEM
 ALUTECH UNITED INC.
 08-126
 DRAWING No

Florida Building Code (N.H.V.H.Z.)

NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION
1	GENERAL	7/12/06	1	
2			2	

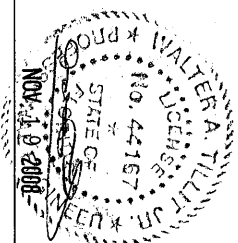
SHEET 4 OF 7

1" x 2" x 1/8" Alum. PLATE W/ 1/4" x 3/4" TAPCONS @ 12" o.c. FOR CONCRETE OR 16" o.c. (TO EA. STUD) FOR WOOD



SIDE RAIL CONNECTIONS TO MULLIONS

(SEE SLAT SPAN SCHEDULE)
SCALE: 3/8" = 1"



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TILTECO INC.

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e-mail: tilteco@tilteco.com
FLORIDA License No. 44167

Florida Building Code (N.H.V.H.Z.)

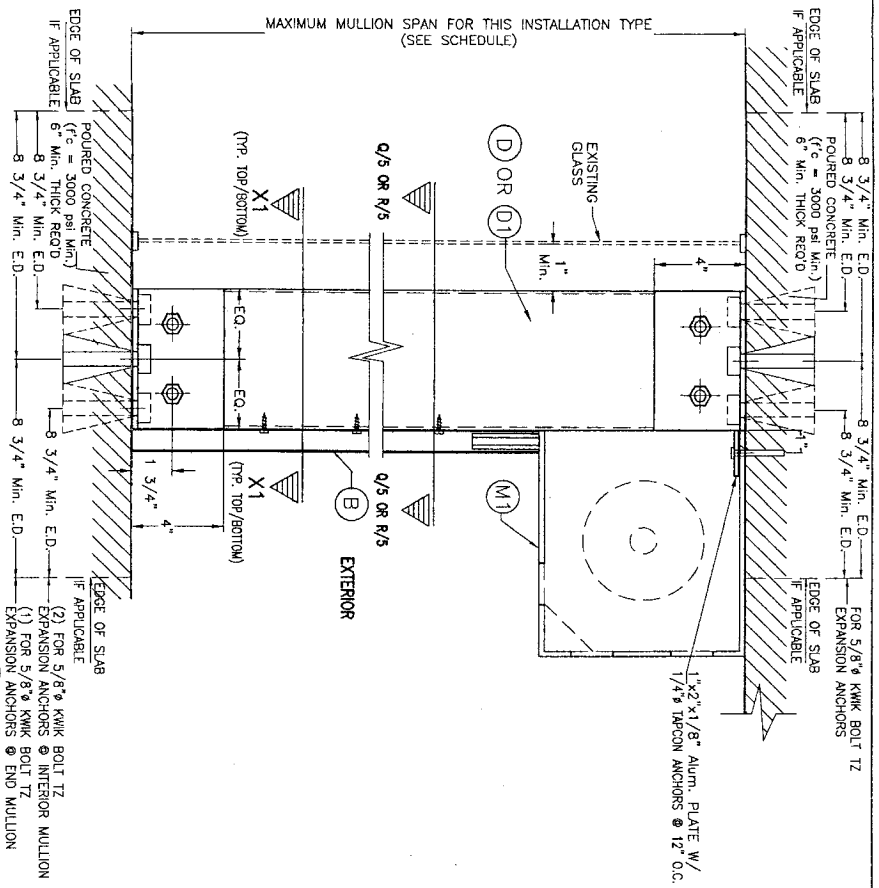
BARACUDA II END RETENTION ROLL-UP SHUTTER SYSTEM

ALUTECH UNITED INC.

14 BIRON STREET
SELEWILLE, DE 19975
PHONE: (800) 233-1144 FAX: (302) 438-5100

REV. NO.	DATE	REV. NO.	DATE
1	03/08	4	07/09
2	04/08	5	07/09
3	07/08	6	07/09

4/24/08 DATE
08-126 DRAWING NO
SHEET 5 OF 7



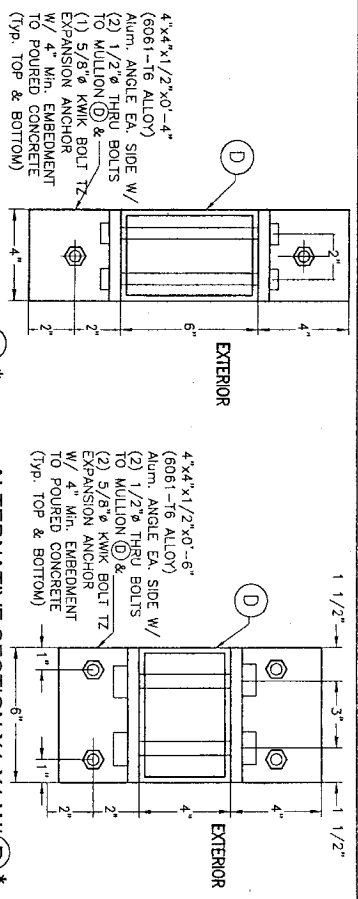
FLOOR TO CEILING / TRAPPED MOUNTING: MULLION (D) OR (D1)

SECTION W-1

END & INTERIOR MULLION MAX. SPAN (ft) SCHEDULE FOR A MAXIMUM DESIGN LOAD (p.s.f.) & A GIVEN MULLION SPACING (ft) *

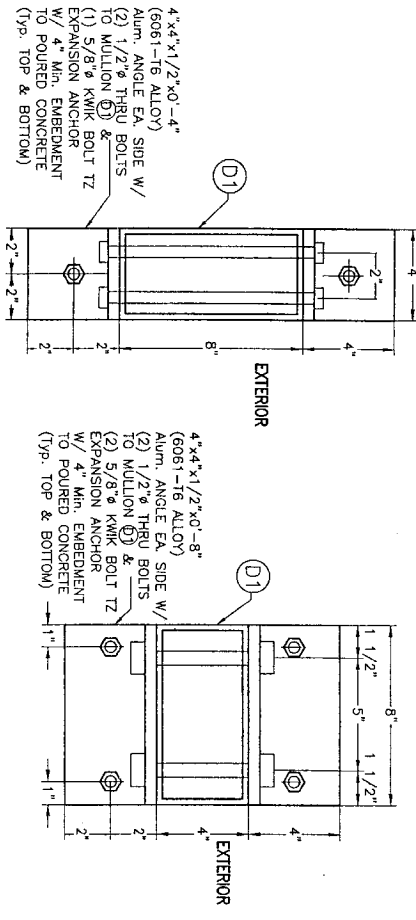
MAXIMUM DESIGN LOAD (p.s.f.)	MAXIMUM MULLION SPACING (FT)	MAXIMUM MULLION SPAN (FT): FLOOR OR TO CEILING	
		ORIENTATION #1 (D)	ORIENTATION #2 (D1)
+55, -55 OR LESS	15'-0" / 1/8"	7'-2"	10'-10"
+80, -80	15'-0" / 1/8"	6'-0"	9'-7"

* MAXIMUM MULLION SPACING SHALL BE SUCH THAT SLAT SPAN SHALL NOT BE EXCEEDED. SEE SHEET 5 FOR MULLION ORIENTATION DEFINITION.



SECTION X1-X1 W/ (D) *
(W/ ORIENTATION # 1)
VALID ONLY FOR END MULLIONS

ALTERNATIVE SECTION X1-X1 W/ (D) *
(W/ ORIENTATION # 2)
VALID ONLY FOR INTERIOR MULLIONS

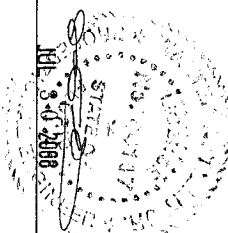


SECTION X1-X1 W/ (D1) *
(W/ ORIENTATION # 1)
VALID ONLY FOR END MULLIONS

ALTERNATIVE SECTION X1-X1 W/ (D1) *
(W/ ORIENTATION # 2)
VALID ONLY FOR INTERIOR MULLIONS

END & INTERIOR TRAPPED MOUNTED MULLION INSTALLATION

SCALE: 3/16" = 1"

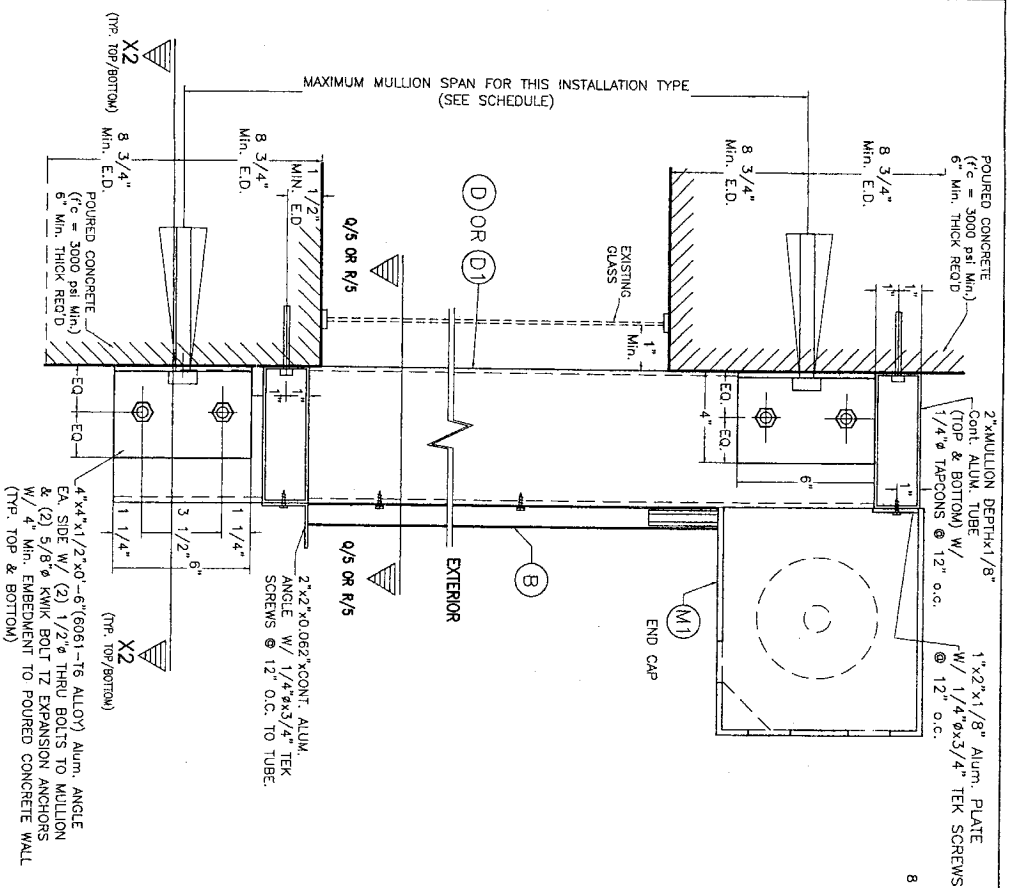


TILTECO INC.
TILIT TESTING & ENGINEERING COMPANY
6035 N.W. 35th St., Suite 200, Virginia Gardens, Ft. Lauderdale, FL 33316
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E-mail: tiliteco@tiliteco.com
WALTER A. TILIT, Jr., P.E.
TILTECO INC. # 44187

Florida Building Code (N.H.V.H.2.)
BARRACUDA II END RETENTION ROLL-UP SHUTTER SYSTEM
ALUTECH UNITED INC.
15 Dixon Street
Selkirkville, DE 19875
Phone: (609) 233-1144, Fax: (302) 436-5100

REV. NO.	DATE	DESCRIPTION
1	4/23/08	
2	1/7/2009	

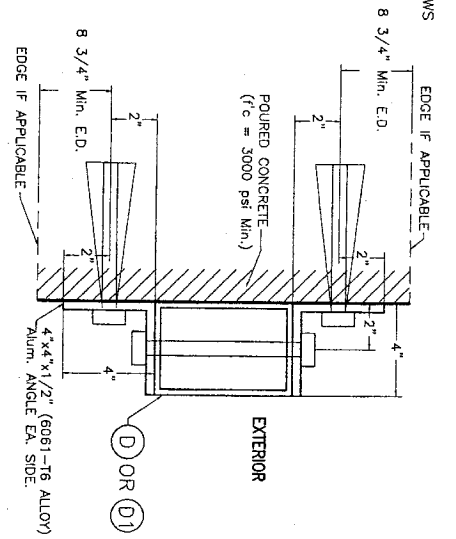
08-176
DRAWING NO.
SHEET 6 OF 7



**WALL MOUNTING: MULLION (D) OR (D1)
POURED CONCRETE WALL
SECTION W-2**

SCALE: 3/16" = 1"

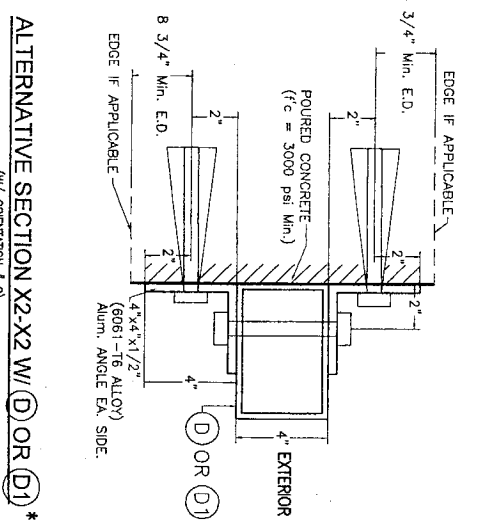
END & INTERIOR WALL MOUNTED MULLION INSTALLATION



SECTION X2-X2 W/ (D) OR (D1) *

(W/ ORIENTATION # 1)
VALID ONLY FOR END MULLIONS

* SIDE RAIL (B) NOT SHOWN FOR CLARITY.
IF GOES ON EXTERIOR SIDE OF MULLION.



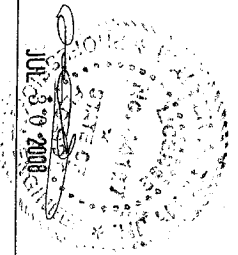
ALTERNATIVE SECTION X2-X2 W/ (D) OR (D1) *

(W/ ORIENTATION # 2)
VALID ONLY FOR INTERIOR MULLIONS

**END & INTERIOR MULLION MAX. SPAN (FT) SCHEDULE
FOR A MAXIMUM DESIGN LOAD (P.S.F.) & A GIVEN MULLION SPACING (FT) ***

MAXIMUM DESIGN LOAD (P.S.F.)	MAXIMUM MULLION SPACING (FT)	MAXIMUM MULLION SPAN (FT): WALL MOUNTING			
		(1) 4"x6"x1/4" MULLION	(2) 4"x8"x1/4" MULLION	(3) 4"x8"x1/4" MULLION	(4) 4"x8"x1/4" MULLION
+55, -55 OR LESS	15'-0" / 1/8"	7'-2"	10'-10"	8'-8"	12'-0"
+80, -80	15'-0" / 1/8"	6'-0"	9'-7"	7'-3"	11'-9"

* MAXIMUM MULLION SPACING SHALL BE SUCH THAT SLAT SPAN SHALL NOT BE EXCEEDED.
SEE SHEET 5 FOR MULLION ORIENTATION DEFINITION.



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TILT TESTING & ENGINEERING COMPANY
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WALTER A. TILIT #1, SE
11505A, LIB # 41167

Florida Building Code (N.H.V.H.2.)
BARRACUDA II END RETENTION
ROLL-UP SHUTTER SYSTEM
AUTECH UNITED INC.
15 DIXON STREET
SEBASTIAN, DE 32975
PHONE: (800) 233-1144, FAX: (302) 438-9100

REV. NO.	DESCRIPTION	DATE	BY	CHK.
1	OLD DWG OR-012	1/2/2008	3	
2	REVISION	1/13/2008	4	

4/24/08
DATE
OR-126
DRAWING NO
SHEET 7 OF 7