

GENERAL NOTES:

1. ROLL-UP SHUTTER SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P. E. D.) HAS BEEN VERIFIED FOR CODE COMPLIANCE IN ACCORDANCE WITH THE 2004 EDITION OF THE FLORIDA BUILDING CODE. ROLL-UP SHUTTER SHALL NOT BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES (MAM-DAD/BROWARD COUNTIES). DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1609 OF THE ABOVE MENTIONED CODE. FOR A BASIC WIND STANDBY, IN ORDER TO VERIFY THAT ANCHORS ON THIS P.E.D. ARE INSTALLED, AND IN ACCORDANCE WITH ASCE 7-98 ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. ROLL-UP SHUTTER'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609.1.4 OF THE ABOVE MENTIONED CODE AS PER ASTM E-1886, E-1996 & E-330 STANDARDS. AS PER ARCHITECTURAL TESTING LAB REPORTS # 54953.01-122-44, # 54953.02-122-44 AND # 54953.03-122-44, PER ASTM E-1886, E-1996 AND E-330 STANDARDS.
2. SEE MAXIMUM DESIGN PRESSURE RATINGS ON SHEET 2.
- ANY DESIGN WIND LOAD, SLAT SPAN, SHUTTER HEIGHTS AND WIDTHS EQUAL OR SMALLER THAN MAXIMUM ALLOWABLE INDICATED IN THIS DRAWING ARE ACCEPTABLE FOR INSTALLATION.
3. ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T6 ALLOY (UNLESS OTHERWISE NOTED).
4. ALL SCREENS TO BE STAINLESS STEEL 304 OR 316 SERIES W/ 50 KSI YIELD STRENGTH AND 90 KSI TENSILE STRENGTH OR CORROSION RESISTANT COATED CARBON STEEL AS PER DN 50018 OR ASTM A 510-03.
5. BOLTS TO BE ASTM A-307 GALVANIZED OR AISI 304 SERIES STAINLESS STEEL WITH 35 KSI MINIMUM YIELD STRENGTH.
6. STORM BARS AT FLOOR AND CEILING MOUNTING INSTALLATIONS MAY BE REMOVABLE AT NON HURRICANE CONDITIONS. HOWEVER, EACH STORM BAR SHALL BEAR A PERMANENT LABEL IN A VISIBLE PLACE WITH A WARNING NOTE INSTRUCTING THE TENANT OR OWNER THAT STORM BARS MUST BE INSTALLED WITH CORRESPONDING HARDWARE DURING PERIODS OF HURRICANE WARNING AND THAT ROLL UP SHUTTERS WILL NOT OFFER HURRICANE PROTECTION UNLESS ALL STORM BARS ARE INSTALLED AS DIRECTED.
7. REMOVABLE STORM BARS SHALL BE STORED IN A CONSPICUOUS PLACE WITH EASY AND IMMEDIATE ACCESS SO THAT THEY CAN BE REACHED AND INSTALLED ANY TIME (HURRICANE CONDITIONS OR NOT) SLATS ARE ROLLED DOWN. THE EFFECT OF THE SLATS ROLLED DOWN WITHOUT STORM BARS IS, THOSE SLATS WILL SLIP OUT OF TRACK DUE TO THE DEFLECTION CAUSED BY WIND FORCES.
8. PROTEUS® FLAME RETARDANT 186, IS A POLY-PROPYLENE MANUFACTURED BY POLY HI SOLIDUR, INC., USED AT SPRING LOADED SYSTEM FOR REMOVABLE STORM BARS & COMPLETS W/ THE FOLLOWING SPECIFICATIONS:

DESIGNATION	PROPERTIES	VALUE
ASTM D-792	DENSITY	9.51 lb/ft ³ (AVERAGE)
ASTM D-638	YIELD STRENGTH	3200 psi (AVERAGE)
ASTM D-638	TENSILE BREAK	3250 psi (AVERAGE)
ASTM D-790	ELONGATION AT BREAK	800 % (AVERAGE)
ASTM D-4020	FLEXURAL MODULUS	145000 psi (AVERAGE)
UL 94	BURN RATING	0.15 ft-lb ₉₄ /inch (AVERAGE)
ASTM E-84	FLAME SPREAD INDEX	15 *F (AVERAGE)
ASTM E-84	SMOKE DEVELOPMENT INDEX	375 *F (AVERAGE)
9. ANCHORS TO WALL FOR SIDE RAILS & BOX CONNECTION SHALL BE AS FOLLOWS:
 - 5/16" TAPCON ANCHORS, AS MANUFACTURED BY ELOO TEXTRON, INC.

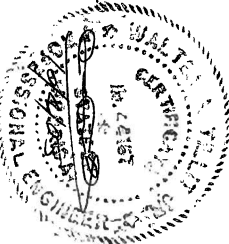
NOTES:
A.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO POURED CONCRETE IS 2". NO EMBEDMENT INTO WALL FINISH SHALL BE CONSIDERED AS PART OF THE REQUIRED EMBEDMENT.

A.2) IN CASE THAT PRECAST STONE, PRECAST CONCRETE OR BRICK PANELS, VENEER OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH COVERS. ANCHORAGE SHALL BE AS INDICATED ON NOTE A.1 ABOVE.


(B) TO EXISTING CONCRETE A.S.T.M. C-90 BLOCK WALL:
- 5/16" TAPCON ANCHORS AS MANUFACTURED BY ELOO TEXTRON, INC. NO EMBEDMENT INTO WALL FINISH SHALL BE CONSIDERED AS PART OF THE REQUIRED EMBEDMENT.

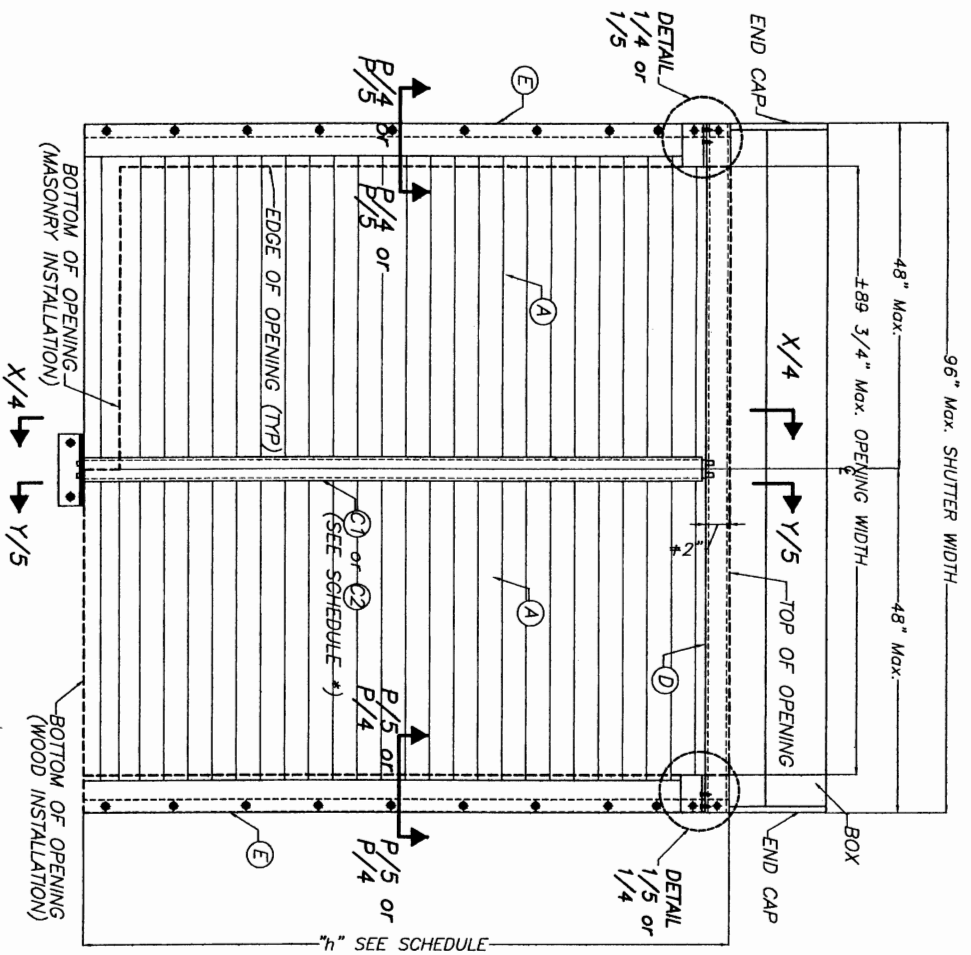
NOTES:
B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO CONCRETE BLOCK UNIT SHALL BE 1 1/4".

B.2) IN CASE THAT PRECAST STONE, PRECAST CONCRETE OR BRICK PANELS, VENEER OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH COVERS. ANCHORAGE SHALL BE AS INDICATED ON NOTE B.1 ABOVE.



- (C) TO EXISTING WOOD FRAME WALL (MIN. SPECIFIC GRAVITY = 0.36):
- #14 (1/4") WOOD SCREWS W/ 2" MIN. THREADED PENETRATION INTO WOOD BEYOND ANY WALL FINISH.
- (D) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.
- (E) ANCHORS REQUIRED FOR STORM BARS & HEADER CONNECTIONS SHALL BE AS SPECIFIED ON APPLICABLE SECTIONS SHOWN ON SHEETS 4 & 5 OF 5. WOOD SCREWS SHALL BE COMPLY W/ THE NATIONAL DESIGN SPECIFICATION FROM ATR&P.
10. THE INSTALLATION CONTRACTOR IS TO SEAL/CALK ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION. CALK AND SEAL SHUTTER TRACKS ALL AROUND FULL LENGTH.
11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE SHUTTER IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE, CONCRETE BLOCK OR WOOD FRAME BUILDINGS.
12. SHUTTER'S INSTALLATION SHALL COMPLY WITH ALL SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.
13. LIFTING MECHANISM NOT PART OF THIS APPROVAL, BUT SHALL BE CERTIFIED BY AN INDEPENDENT TESTING AGENCY.
14. (a) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT. I.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.
- (b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.E.D. PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.
- (c) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
- (d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.E.D. ENGINEER, SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
- (e) THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.
15. SHUTTER'S MANUFACTURER LABEL SHALL BE PLACED ON A READILY VISIBLE LOCATION. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:
AMERICAN SHUTTER SYSTEMS ASSOC., INC.
WEST PALM BEACH, FL
FLORIDA STATEWIDE PRODUCT APPROVED.

		ALUTECH UNITED, INC. 15 DORON STREET SEBASTIAN, FL 32958 Phone: (320)254-9100 Fax: (320)438-5100		DRAWN BY: M.C.K.
TILFIT TESTING & ENGINEERING COMPANY 650 W. 28th St., Jensen Beach, FL 33463 Phone: (561) 241-1500 WALTER A. TILFIT, P. E. Florida Lic. # 44187		ROE-40/40mm SLAT ROLL-UP SHUTTER		DATE 9/29/05
SHEET 1 OF 5		F.B.C. (Non High Velocity Hurricane Zone)		DRAWING No.

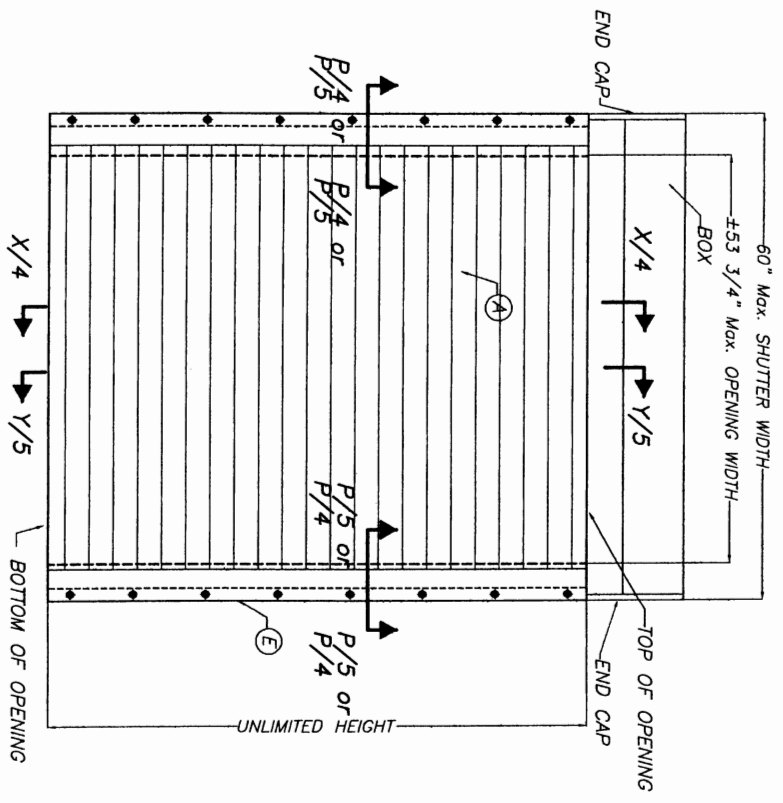


*** MULTIPLE SPAN UNITS SCHEDULE**

DESIGN LOAD (psf)	MAX. ALLOWED REQ'D. STORM BAR "h" (FT)	REQ'D. STORM BAR FRONT AND BACK
+55.0, -55.0	7'-0"	(1)
+25.0, -25.0	7'-0"	(2)
+33.0, -33.0	6'-0"	(2)

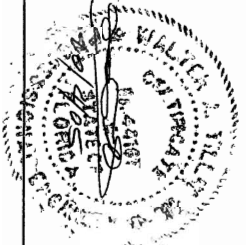
CASE I MULTIPLE SPAN UNITS (STORM BARS REQ'D.)

SCALE: N.T.S. (FRR DESIGN PRESSURE RATING SEE SCHEDULE)



CASE II SINGLE SPAN UNIT (NO STORM BARS REQ'D.)

SCALE: N.T.S. DESIGN PRESSURE RATING: +55.0, -55.0 psf



TILETEC INC.
 TULLIT TESTING & ENGINEERING COMPANY
 4300 W. 30th St., Suite 100, Miramar, Florida 33181
 Phone: (305) 854-9100 Fax: (305) 854-9101
 EB-0008719
 WALTER A. TULLIT, P. E.
 LICENSE NO. 64183

RCE-40/40mm SLAT ROLL-UP SHUTTER

ALUTECH UNITED, INC.
 15 DIXON STREET
 SEBRINGVILLE, D.E. 19875
 Phone: (302) 854-9100 Fax: (302) 438-8100

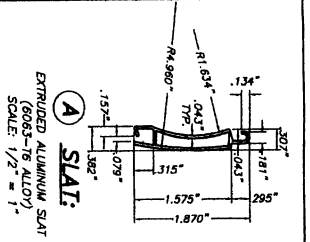
F.B.C. (Non High Velocity Hurricane Zone)

9/29/05
 M.C.V.
 DATE

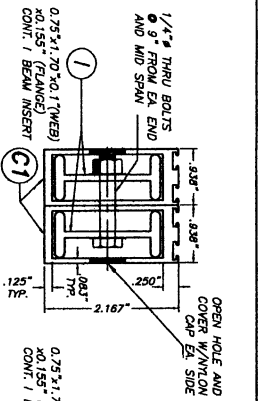
05-310
 DRAWING No

REV. NO.	DESCRIPTION	DATE
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2		

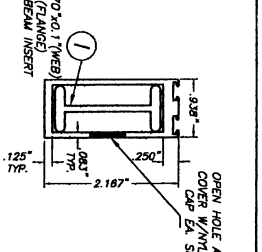
SHEET 2 OF 5



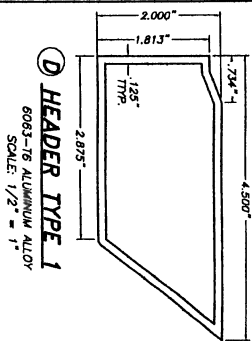
(A) SLAT:
EXTRUDED ALUMINUM SLAT
(6063-T6 ALLOY)
SCALE: 1/2" = 1"



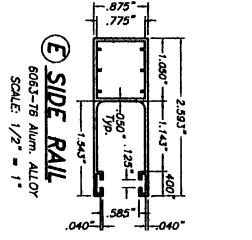
(C1) STORM BAR TYPE 1
(2) 0.31" x 1.187" x 0.083" (WEB) x 0.125" (FLANGE) (6063-T6 ALLOY) ALUMINUM TUBE WITH (2) 1 BEAM INSERTS
SCALE: 1/2" = 1"



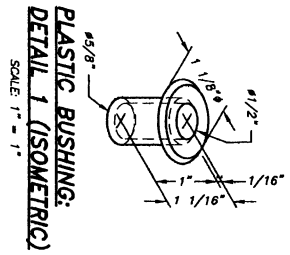
(C2) STORM BAR TYPE 2
(2) 0.31" x 1.187" x 0.083" (WEB) x 0.125" (FLANGE) (6063-T6 ALLOY) ALUMINUM TUBE WITH 1 BEAM INSERT
SCALE: 1/2" = 1"



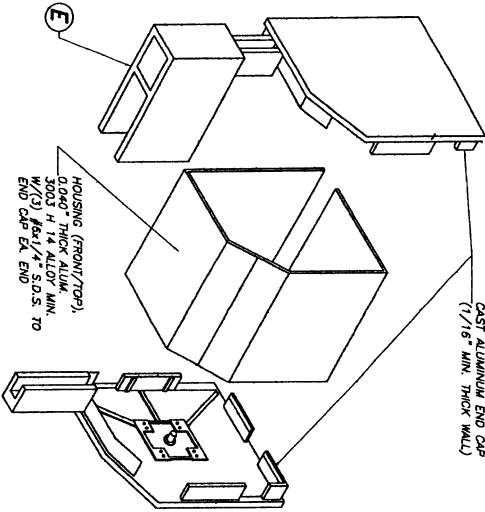
(D) HEADER TYPE 1
6063-T6 ALUMINUM ALLOY
SCALE: 1/2" = 1"



(E) SIDE RAIL
6063-T6 ALUM. ALLOY
SCALE: 1/2" = 1"



**PLASTIC BUSHING:
DETAIL 1 (ISOMETRIC)**
SCALE: 1" = 1"

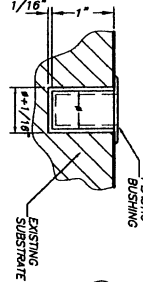


COMPONENTS

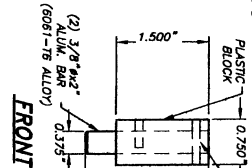
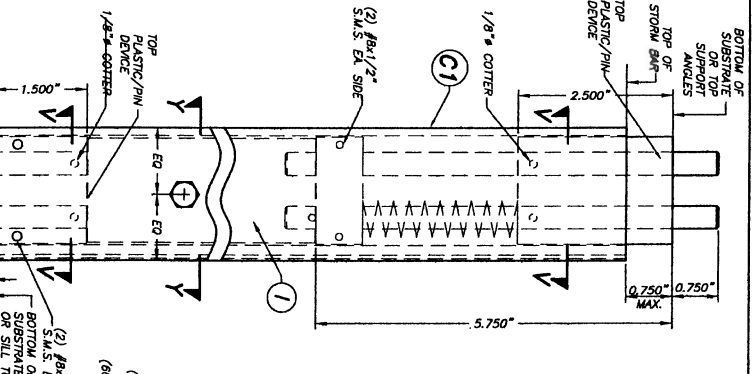
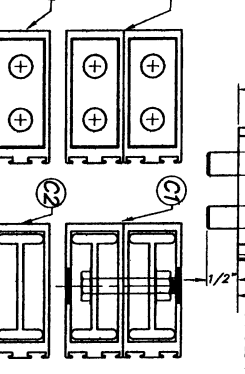
HOUSING (FRONT/TOPI)
0.060" THICK ALUM.
3003 H 14 ALLOY MIN.
W/ (2) #6x1/4" S.D.S. TO
END CAP EX END

NOTES:
(1) ENGAGEMENT HOLE DRILLED IN CONCRETE OR WOOD SUBSTRATES SHALL BE 3/8" x 1" DEEP W/ 1/16" MAX. TOLERANCE IN BOTH DIAMETER & DEPTH.
(2) ENGAGEMENT HOLE DRILLED IN CONCRETE OR WOOD SUBSTRATES SHALL BE PERMANENTLY PROTECTED BY FITTING PLASTIC BUSHING (SEE DETAIL 1) INTO HOLE. IT SHALL BE THE RESPONSIBILITY OF SHOOTER'S OWNER TO REPAIR AND REPOSITION BUSHING TO JUST & HOLD BY REMOVING IT FROM ENGAGEMENT HOLE CLEANING IT AND REPOSITIONING IT INTO HOLE AS INDICATED ON ABOVE DETAIL.

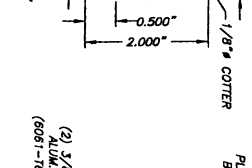
**ENGAGEMENT HOLE DETAIL
(IN CONCRETE OR WOOD)
FOR REMOVABLE STORM BARS**
SCALE: 1" = 1"



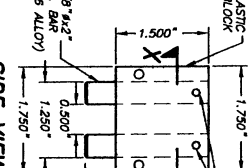
SECTIONS Y-Y
TYPICAL PLASTIC/PIN DEVICE FOR REMOVABLE STORM BARS (C1) OR (C2)



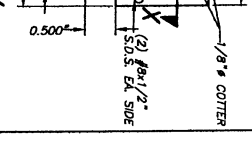
FRONT
TOP PLASTIC/PIN DEVICE (2 REQUIRED)



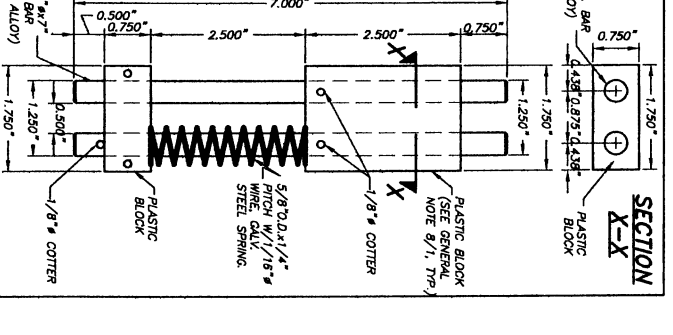
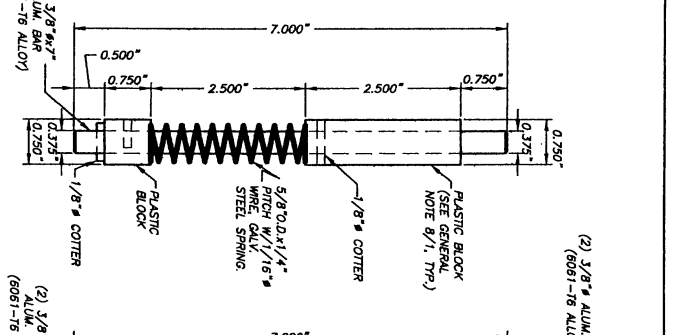
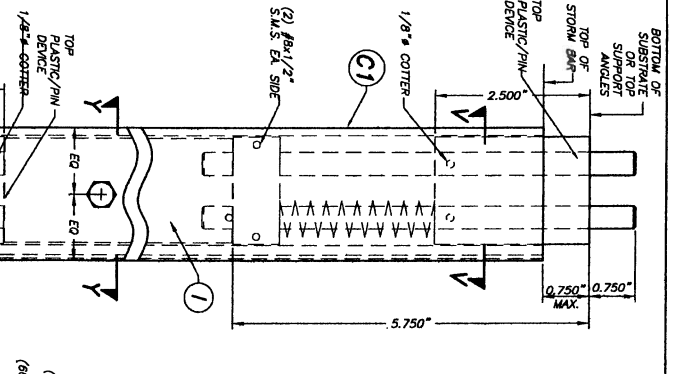
SIDE VIEW
TOP PLASTIC/PIN DEVICE (2 REQUIRED)



FRONT
BOTTOM PLASTIC/PIN DEVICE (2 REQUIRED)



SIDE VIEW
BOTTOM PLASTIC/PIN DEVICE (2 REQUIRED)



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WALTER A. TILIT, P.E.
FLORIDA Lic. # 44187

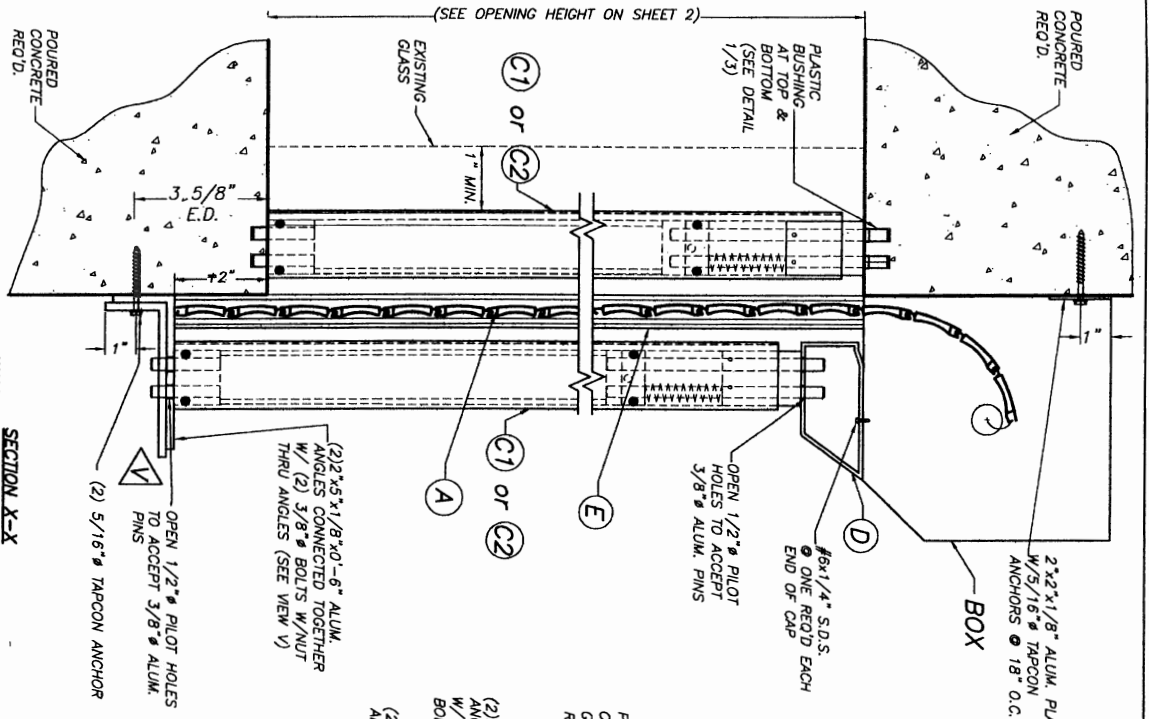
ALUTECH UNITED, INC.
15 DRON STREET
SERBIVILLE, D.C. 19875
Phone: (302) 854 9100 Fax: (302) 448 5100

REV.	DATE	BY	CHKD.
1			
2			

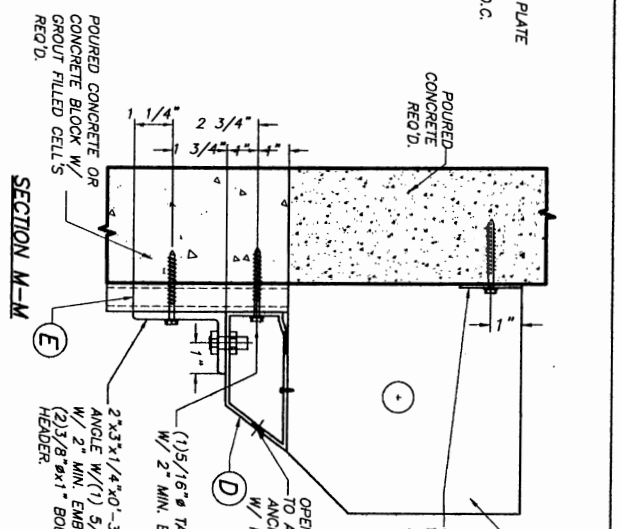
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DATE: 9/29/05
05-310
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SHEET 3 OF 5

BOTTOM PLASTIC/PIN DEVICE (2 REQUIRED)
F.B.C. (Non High Velocity Hurricane Zone)

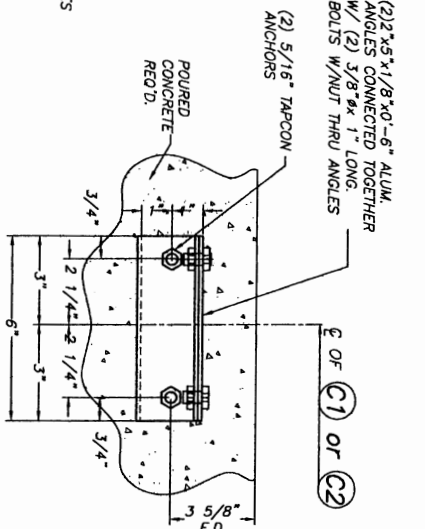
SECTION X-X



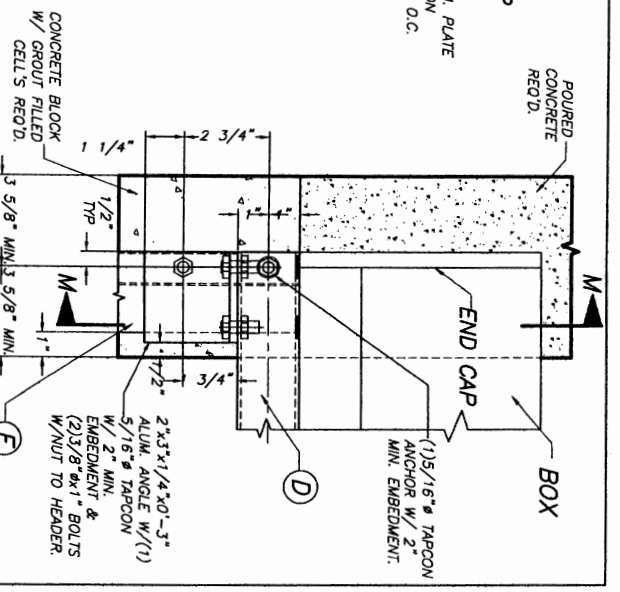
**SECTION X-X
WALL MOUNTING INSTALLATION
W/REMOVABLE STORM BARS**
SCALE: 1/2"=1"
SINGLE SPAN SECTIONS AND DETAILS ARE SIMILAR TO
ABOVE SHOWN WITHOUT STORM BARS AND HEADER TUBE



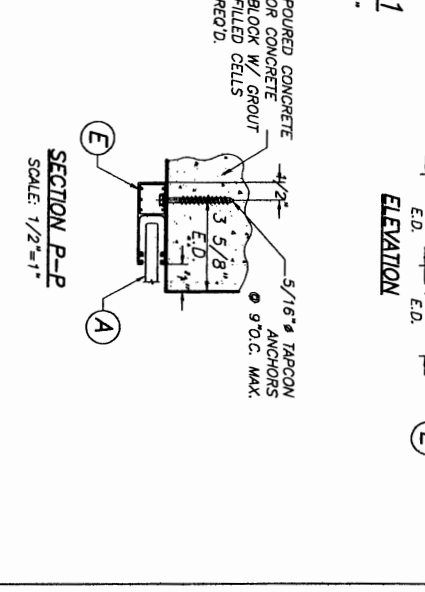
SECTION M-M
SCALE: 1/2"=1"



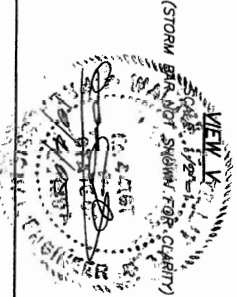
DETAIL 1
SCALE: 1/2"=1"



ELEVATION



SECTION P-P
SCALE: 1/2"=1"



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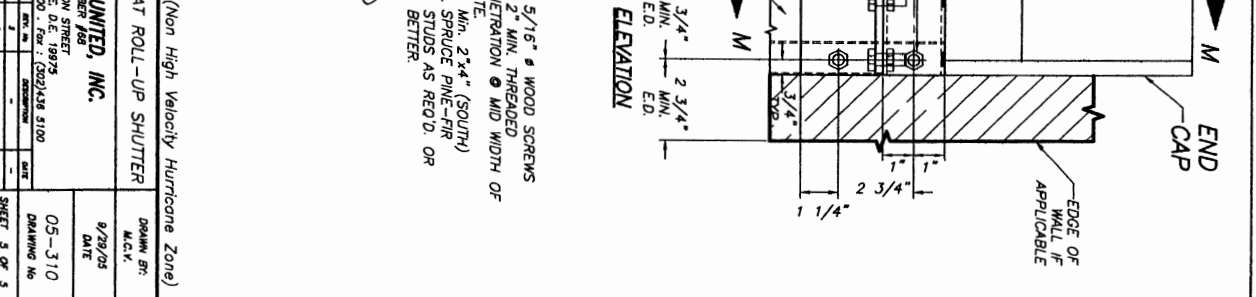
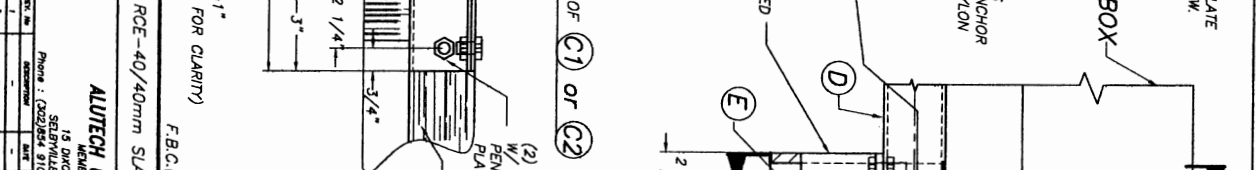
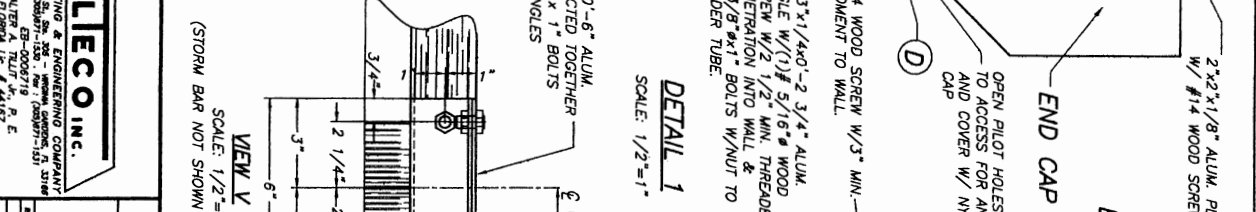
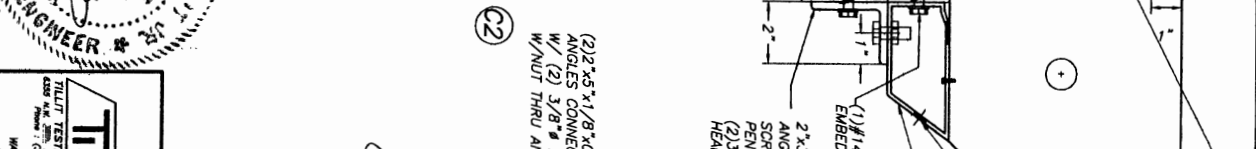
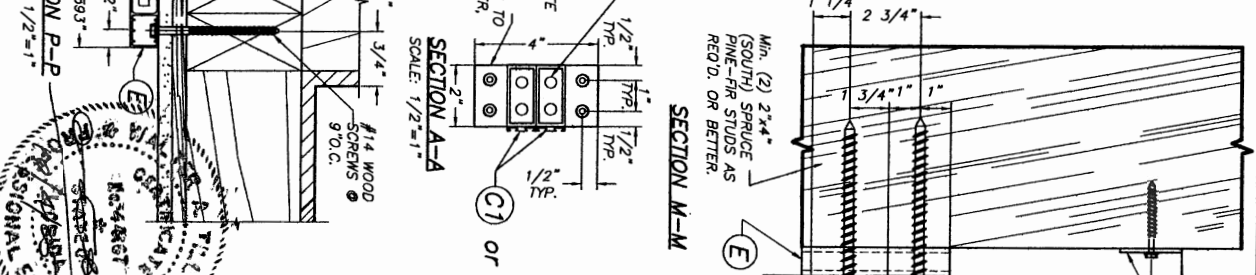
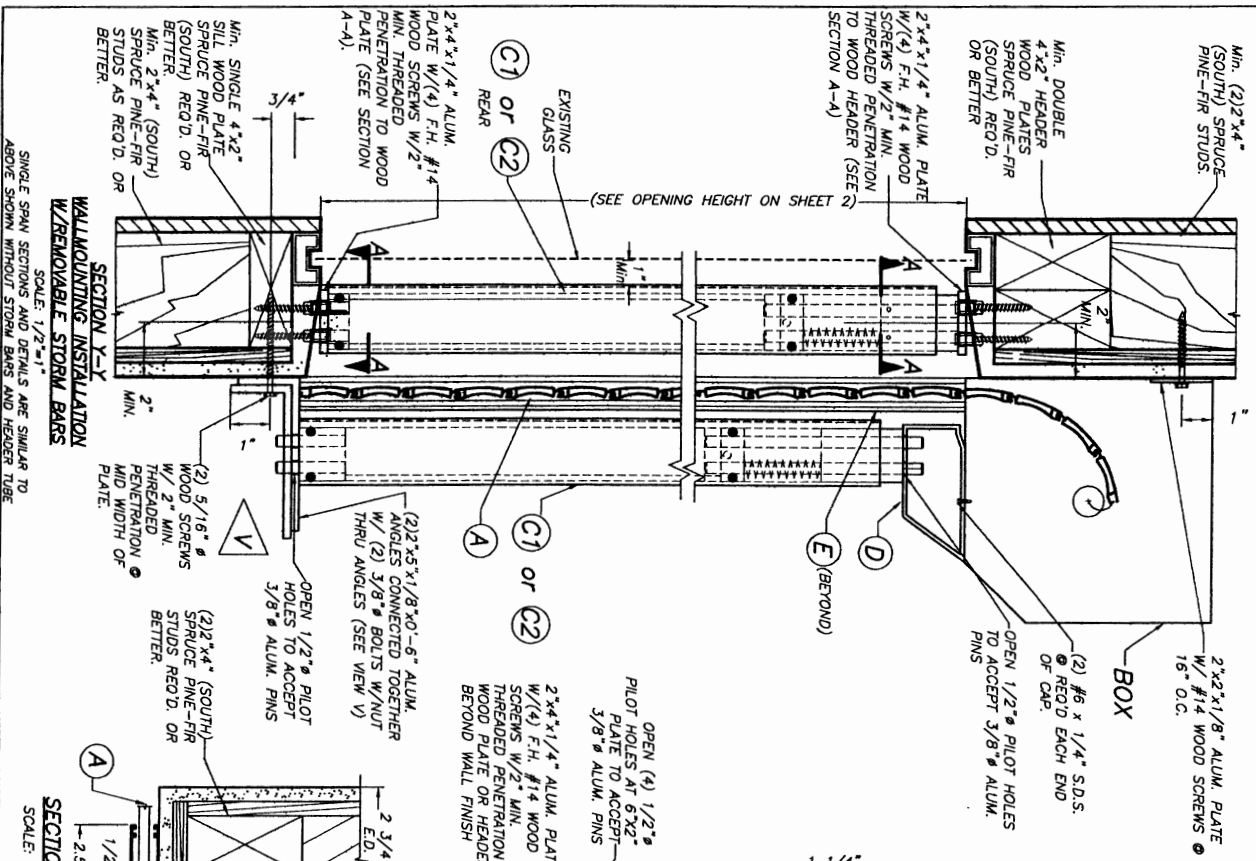
ALUTECH UNITED, INC.
15 DORR STREET
SEBASTIAN, FL 32958
Phone: (329) 454-5100 Fax: (329) 426-5100

REV.	DATE	DESCRIPTION
1		
2		
3		
4		
5		

DRAWN BY: M.C.B.
DATE: 9/29/05
05-310
DRAWING NO.
SHEET 4 OF 5

F.B.C.(Non High Velocity Hurricane Zone)

RCE-40/40mm SLAT ROLL-UP SHUTTER



TILETEC Inc.		TILT TESTING & ENGINEERING COMPANY	
15 DIXON STREET SEBASTIAN, FL 32958		408 Phone: (321) 324-9100 Fax: (321) 324-9100	
WALTER A. TILIT, P.E. License No. 12345		E.E. 0006719, P.E. License No. 12345	
RCE-40/40mm SLAT ROLL-UP SHUTTER		9/29/05	
AUTTECH UNITED, INC.		DATE	
05-310		DRAWING NO.	
SHEET 5 OF 5		DATE	