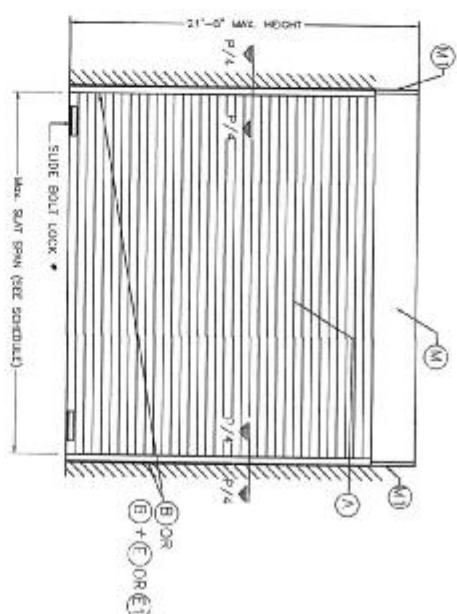


**GENERAL NOTES:**

1. ROLL-UP DOOR SHOWN ON THIS PRODUCT APPROVAL DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2017 (6th EDITION) OF THE FLORIDA BUILDING CODE. DESIGN AND LOADS SHALL BE DETERMINED AS PER SECTION 1601 OF THE ABOVE MENTIONED CODE. DESIGN AND LOADS SHALL BE DETERMINED BY THE SUBSTITUTION ENGINEER. THESE SHUTTERS WILL BE RETIRED FOR A BASIC WIND SPEED AS REQUIRED BY THE SUBSTITUTION ENGINEER UNDER 2017 FBC 6. FOR A PERFORMANCE FACTOR REQUIRED USING ASCE 7-10 FOR INSTALLATIONS UNDER 2017 FBC 6, AN SHALL NOT EXCEED THE WORKING (ASCE) DESIGN PRESSURE VALUES INDICATED ON SHEET 6. IN ORDER TO VERIFY THE ABOVE CONDITIONS, ULTIMATE DESIGN AND LOADS DETERMINED PER ASCE 7-10 SHALL BE APPLIED TO ASCE 7-10 DESIGN WIND LOADS BY MULTIPLYING THEM BY ONE IN ORDER TO DETERMINE THESE WIND (ASCE) DESIGN PRESSURE VALUES INDICATED ON SHEET 6. IN ORDER TO VERIFY THAT COMPONENTS AND ANCHORS ON THIS P.E.D. AS TESTED WERE NOT OVER STRESSED, A 1.2X INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. A DURATION FACTOR  $D=1.40$  WAS USED FOR VERIFICATION OF SECTION 1601 OF THE ABOVE MENTIONED CODE AS PER ARCHITECTURAL TESTING, INC. REPORTS # 044431-103-18 & 044431-103-19. THESE TESTS WERE CONDUCTED IN ACCORDANCE WITH THE PROTOCOLS TO MANUFACTURE AND PREPARE TO EXACTLY IMITATE AN AREA PROVIDING PROTECTION FROM IMPROBABLE FORCE WINDS WITHIN THE LIMITATIONS INDICATED IN THIS P.E.D.
  2. ALL ALUMINUM EXTRUSIONS SHALL BE MADE OF ALLOY 6061 AND THICKNESS, AS INDICATED ON SHEET 2 OF THIS DRAWING.
  3. EVERY OTHER SCREW (INCLUDING SHEET PILES) SHALL INCLUDE ONE RETURN SCREW (C). A81 304 SERIES STAINLESS STEEL (SEE SHEET 2).
  4. ALL SCREWS (EXCEPT COMPONENT # 2) TO BE STAINLESS STEEL 304 OR 316 A81 SERIES OR THE BULKHEAD CORROSION RESISTANT COATED CARBON STEEL TRX SCREWS, AS PER LHM SCREWS & SHALL COMPLY W/ COMPANY W/ FLORIDA BUILDING CODE SECTION 2411.3.3.4.
  5. BOLTS TO BE ASTM A-307 GALVANIZED STEEL OR A57 304 SERIES STAINLESS STEEL, WITH 2X MINIMUM YIELD STRENGTH.
  6. ANCHORS TO WALL FOR SIDE RAILS CONNECTION SHALL BE AS FOLLOWS:
    - (A) TO EXISTING Poured CONCRETE WALL (C = 2000 PSI) OR GROUT FILLED CELL ASTM C-80 CONCRETE BLOCK:
      - 5/16" W/ WOOD X ANCHORS, AS MANUFACTURED BY INVOLUCER, INC.
    - (B) TO EXISTING WOOD FRAME WALL: MIN. SPECIFIC GRAVITY: G = 0.40 OR G = 0.55 (SEE SCHEDULE).
      - 1/4" x 4.0'S WOOD SCREWS.
- NOTES:
- A.1) MINIMUM PARTICLES OF ANCHORS INTO Poured CONCRETE OR GROUT FILLED CELL CONCRETE BLOCK IS 2 1/4" NO DETERMINER INTO STUDS SHALL BE CONSIDERED AS PART OF THE REQUIRED OVERLAP.
  - A.2) IN CASE THAT PRECAST STONE, PRECAST CONCRETE OR BRICK PAVELS, SLABS OR PARTS BE POURED ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE REINFORCING BARS. MINIMUM EMBEDMENT SHALL BE AS INDICATED BY NOTE A.1 ABOVE.
- (B) TO EXISTING WOOD FRAME WALL: MIN. SPECIFIC GRAVITY: G = 0.40 OR G = 0.55 (SEE SCHEDULE).  
- 1/4" x 4.0'S WOOD SCREWS.
- NOTES:
- B.1) MINIMUM THEORETICAL PENETRATION OF ANCHORS INTO WOOD STUDS SHALL BE 3".
  - B.2) ANCHORAGE SHALL BE PERFORMED BEYOND ANY FINISH MATERIAL AT WALL, LINT BRICK VENER, STUCCO OR ANY OTHER FINISH ANCHORAGE SHALL BE AS INDICATED ON NOTE B.1.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE DOOR IS TO BE ATTACHED TO ENSURE PROPER ANCHORAGE. THIS DOOR SHALL ONLY BE ATTACHED TO Poured CONCRETE, GROUT FILLED CELL CONCRETE BLOCK, AND WOOD FRAME ALLOWING. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE FINISH STRUCTURE IS DESIGNED TO SUPPORT W AND VY FORCES AT BOTH WOODS SEE SHEET 6 OF FOR W & VY VALUES.
  8. THE INSTALLATION CONTRACTOR IS TO SEAL/CAULK ALL DOOR COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/WATER INTRUSION.
  9. ROLL-UP MECHANISM NOT PART OF THIS APPROVAL, BUT SHALL BE CERTIFIED BY AN INDEPENDENT TESTING AGENCY.
  10. ROLL-UP DOOR INSTALLATION SHALL COMPLY WITH SPEEDS INDICATED IN THE DRAWING PLUS AIR BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.
  11. (a) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERAL AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, I.E. WHERE THE SITE CONDITIONS DIFFER FROM THE FIELD. CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.E.D. PROVIDED HERE/DOES NOT DERIVE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SCHEDULE AT THIS IS THE CONTRACTOR'S RESPONSIBILITY.
  12. (a) THIS P.E.D. PREPARED BY THIS ENGINEER IS GENERAL AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT, I.E. WHERE THE SITE CONDITIONS DIFFER FROM THE FIELD. CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.E.D. PROVIDED HERE/DOES NOT DERIVE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SCHEDULE AT THIS IS THE CONTRACTOR'S RESPONSIBILITY.
  - (b) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
  - (c) THIS P.E.D. WILL BE CONSIDERED INVALID IF ALTERED BY ANY MEANS.
  - (d) SITE SPECIFIC PROJECTS SHALL BE PROVIDED BY A REGISTERED STRUCTURAL 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. DRAWINGS OR RECORD, NOTING AS A DELETED DRAWING TO THE P.E.D. ENGINEER SHALL SIGNER TO THIS LATER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
  - (e) THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SIGN AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.
13. SHUTTER MANUFACTURERS LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT DOOR, ONE LABEL SHALL BE PLACED FOR EACH DRAWING, LABELING TO COMPLY WITH SECTION 2402.2.1(1) OF THE FLORIDA BUILDING CODE.



**TYPICAL DOOR ELEVATION (EXTERIOR OR INTERIOR)**

\* TYPE EA, END, INTERIOR, OPTIONAL, ONLY FOR SECURITY PURPOSES.

- LEGEND:
- 1. SEE SHEETS 2 & 3 FOR COMPONENTS NOMENCLATURE
  - 2. SEE SECTIONS ON SHEETS 4 & 5
  - 3. SEE SCHEDULES ON SHEET 6



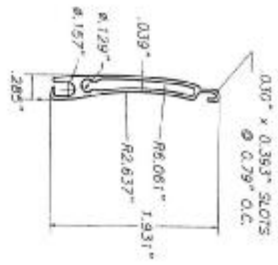
**TILECO INC.**  
 2017 TILECO, INC.  
 TILE TESTING & ENGINEERING COMPANY  
 1500 W. PALM BLVD., SUITE 1000, WEST PALM BEACH, FL 33411  
 PHONE: (561) 833-1144 FAX: (561) 833-1144  
 WWW.TILECO.COM

**ALUTECH UNITED INC.**  
 15 0300 STREET  
 ESTABLISHED IN 1972  
 PHONE: (850) 233-1144 FAX: (850) 438-5160  
 WWW.ALUTECHUNITED.COM

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)  
 BARRACUDA I END RETENTION ROLL-UP DOOR SYSTEM

DRAWING NO. L.C.  
 DATE: 07/28/17  
 SHEET 1 OF 6

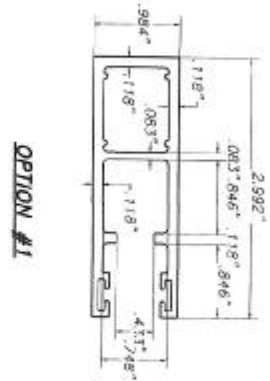
DATE	DESCRIPTION	BY	CHECKED
07/28/17	ISSUED FOR PERMIT	WALTER A. TILLITT, JR.	WALTER A. TILLITT, JR.



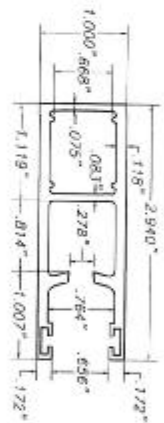
**A** SLAT  
6061-T6 ALUMINUM ALLOY  
SCALE: 3/8" = 1"



**E** 3x3x1/4" INSIDE MOUNT ANGLE  
6061-T6 ALUMINUM ALLOY  
SCALE: 3/8" = 1"



**OPTION #1**

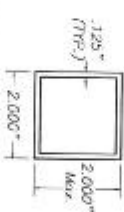


**OPTION #2**

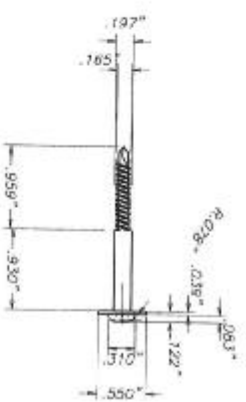
**B** SIDE RAIL  
6061-T6 ALUMINUM ALLOY  
SCALE: 3/8" = 1"



**E1** 3x3x1/4" OPTIONAL INSIDE MOUNT TUBE  
6061-T6 ALUMINUM ALLOY  
SCALE: 3/8" = 1"

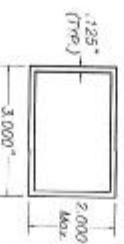


**G** BUILD-OUT TUBE  
6061-T6 ALUMINUM ALLOY  
SCALE: 3/8" = 1"



**C** RETAIN SCREW

(1) EVERY OTHER SLAT INCLUDING BASE SLAT AND SHALL BE INSTALLED W/ A 0.375\"/>



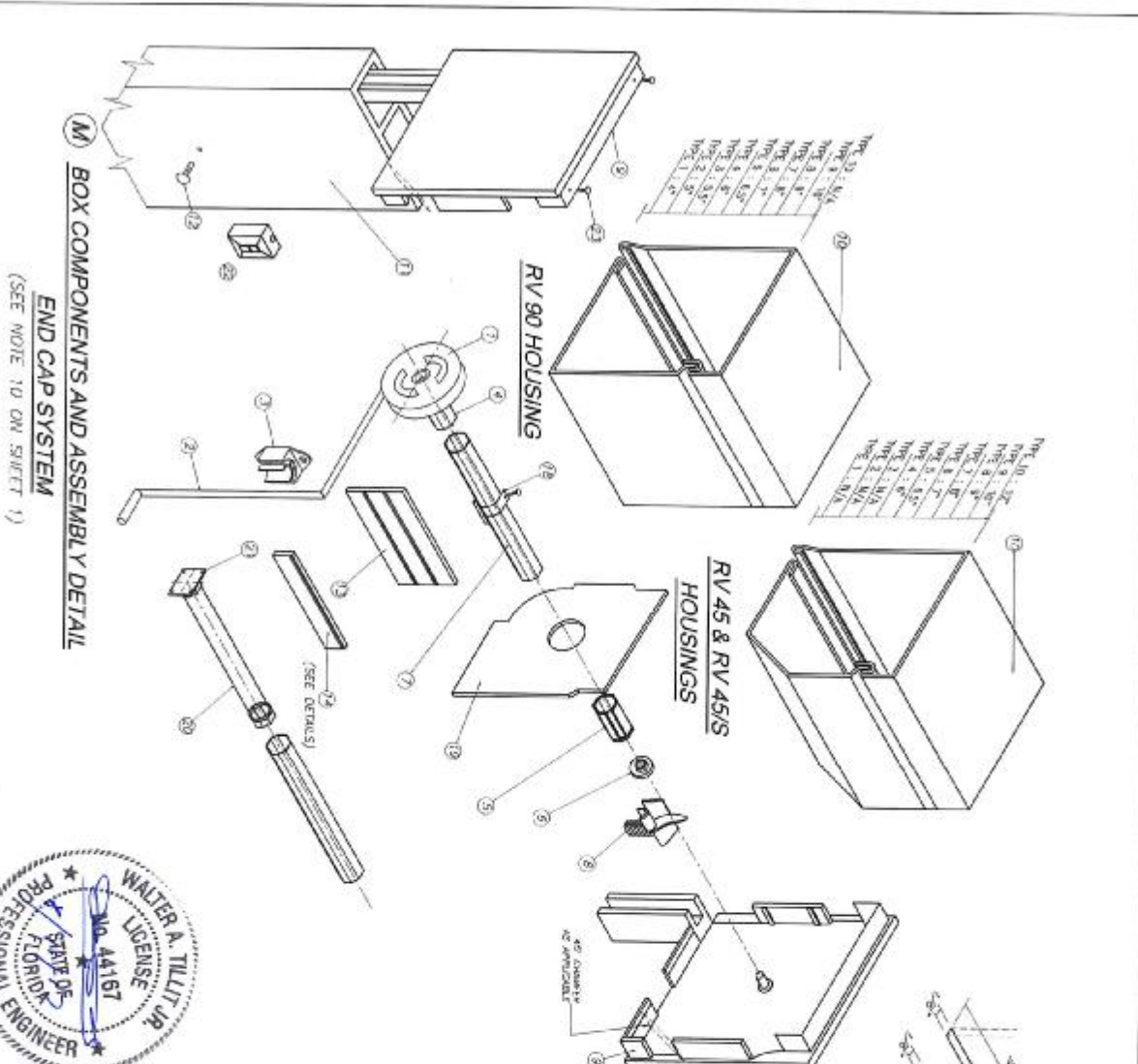
**G1** ALTERNATE BUILD-OUT TUBE  
(SEE SHEET 6 FOR RECOMMENDATIONS TO AVOID STRESSING)  
6061-T6 ALUMINUM ALLOY  
SCALE: 3/8" = 1"

**COMPONENTS**

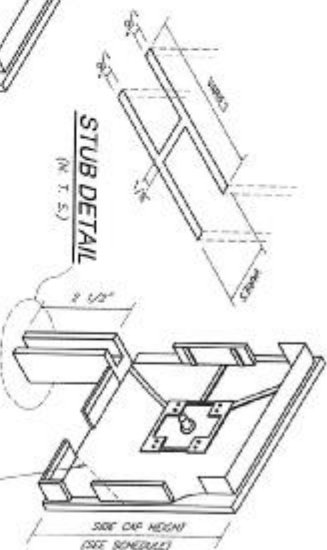


**TILTECO INC.**  
45017 N.W. 2022, INC.  
TILT TESTING & ENGINEERING COMPANY  
1000 N.W. 103rd Ave., Fort Lauderdale, FL 33309  
Phone: (954) 457-1111  
www.tiltco.com

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)		DOOR #7
BARRACUDA I END RETENTION ROLL-UP DOOR SYSTEM		LC
ALUTECH UNITED INC.		03/28/17
14 0000 00001		DATE
SCHEMATIC OF REVISION		17-110
NO. 1	REVISION	REVISION BY
2	1	DATE
3	2	DATE
4	3	DATE
SHEET 2 OF 6		



**M BOX COMPONENTS AND ASSEMBLY DETAIL**  
**END CAP SYSTEM**  
 (SEE NOTE 10 ON SHEET 1)



- COMPONENTS FOR GEAR OPERATED SYSTEM**
- 1 - GEAR
  - 2 - OMMONEST & CRANK
  - 3 - CRANK ROLLER(OPTIONAL)
  - 4 - GEAR MOUNT(GEAR TO AXLE CONNECTOR)
  - 5 - ROLLER WEBST
  - 6 - BALL BEARING
  - 7 - OCTAGONAL AXLE \*
  - 8 - ENTRY GUIDES
  - 9 - SIDE/END CAP \*
  - 10 - HOUSING(TOP & BOTTOM) 2x4x7 THICK
  - 11 - SLAT RAIL
  - 12 - PLUG-BUTTOMS
  - 13 - ALUMINUM SLATS
  - 14 - BASE SLAT
  - 15 - PLASTIC STOP(OPTIONAL)
  - 16 - SIDE LOCK(OPTIONAL)
  - 17 - STRAPES(OPTIONAL)
  - 18 - SPRINGLOK HANGER
  - 19 - SAFETY FLUTES
- ADDITIONAL COMPONENTS FOR MOTORISED OPERATED SYSTEM**
- 20 - TUBULAR MOTOR
  - 21 - MOTOR BRACKET
  - 22 - SWITCH
- FASTENERS**
- 23 - 3/16" ALUMINUM POP RIVETS; REQ'D FA
  - 24 - SIDE CAPS : 2 @ TOP, 2 @ REAR, 2@ BOTTOM

\* SHALL BE COMPABLE TO SUPPORT SLATS WEIGHT AND ASSURE UPDING MECHANISM (SEE NOTE 9/1)

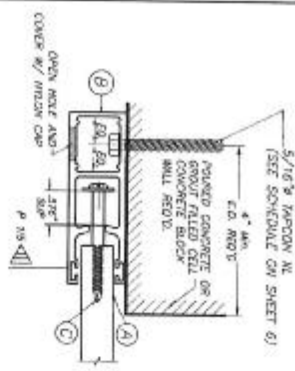
63217 TILTEC, INC.

**TILECO INC.**  
 TILTEC TESTING & ENGINEERING COMPANY  
 14200 W. BAYVIEW BLVD. SUITE 100  
 MIAMI, FL 33147  
 PHONE: (305) 231-1144 FAX: (305) 438-6102  
 TILTEC TESTING & ENGINEERING COMPANY  
 14200 W. BAYVIEW BLVD. SUITE 100  
 MIAMI, FL 33147  
 PHONE: (305) 231-1144 FAX: (305) 438-6102

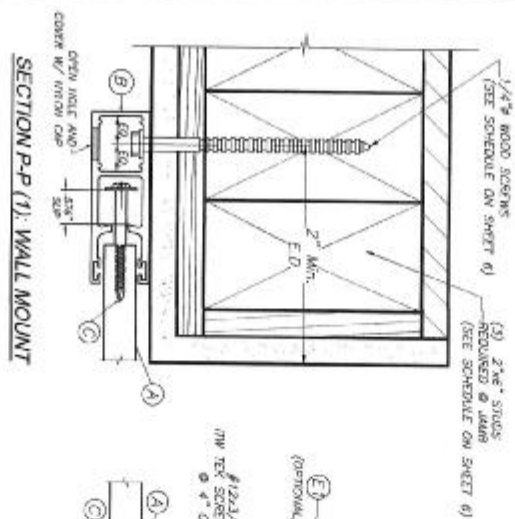
**ALUTECH UNITED INC.**  
 14200 W. BAYVIEW BLVD. SUITE 100  
 MIAMI, FL 33147  
 PHONE: (305) 231-1144 FAX: (305) 438-6102

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)  
 BARRACUDA I END RETENTION ROLL-UP DOOR SYSTEM

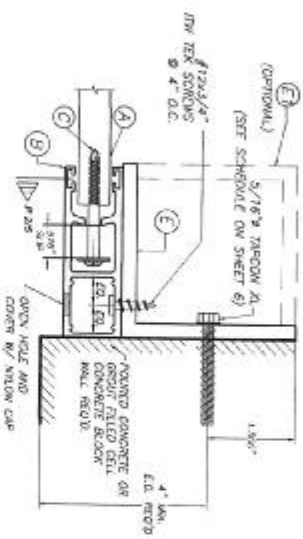
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 DRAWING NO: 17-110  
 SHEET 2 OF 6



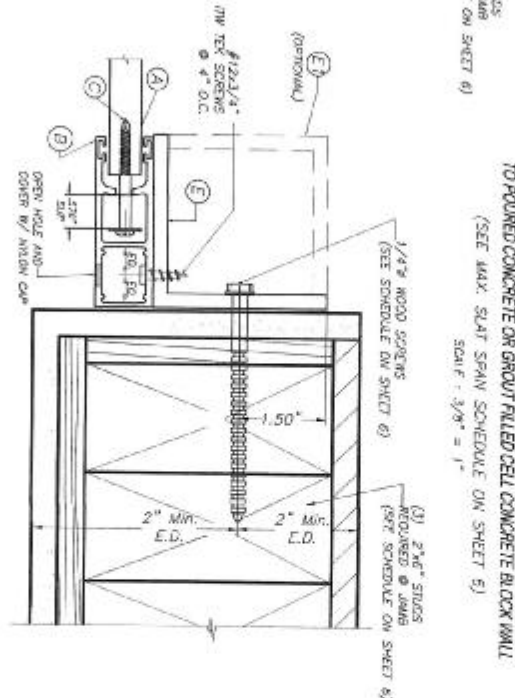
SECTION P-P (1): WALL MOUNT



SECTION P-P (1): WALL MOUNT



SECTION P-P (2): INSIDE MOUNT



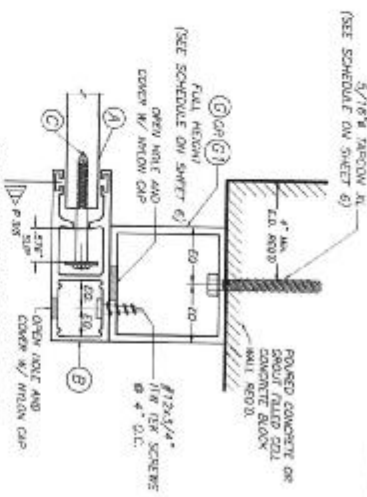
SECTION P-P (2): INSIDE MOUNT

**SIDE RAIL CONNECTIONS**

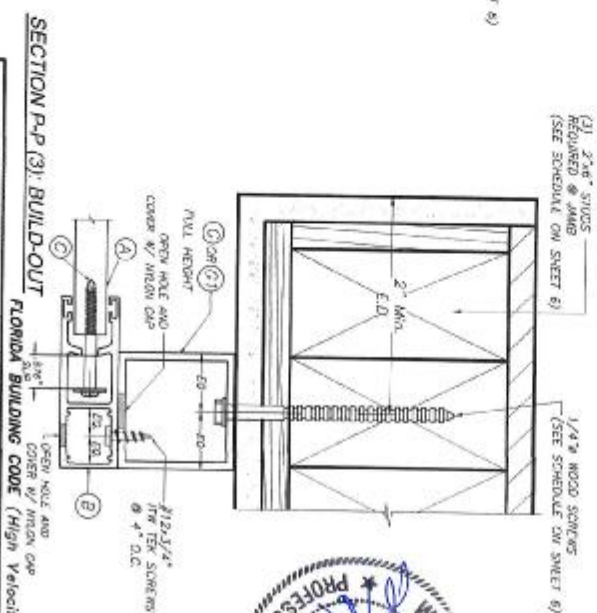
TO Poured CONCRETE OR GROUT FILLED CELL CONCRETE BLOCK WALL  
 (SEE MAX. SLAT SPAN SCHEDULE ON SHEET 5)  
 SLAT F: 3/8" = 1"

**SIDE RAIL CONNECTIONS**

TO WOOD FRAME WALL  
 (SEE MAX. SLAT SPAN SCHEDULE ON SHEET 5)  
 SCALE: 1/8" = 1"



SECTION P-P (3): BUILD-OUT



SECTION P-P (3): BUILD-OUT



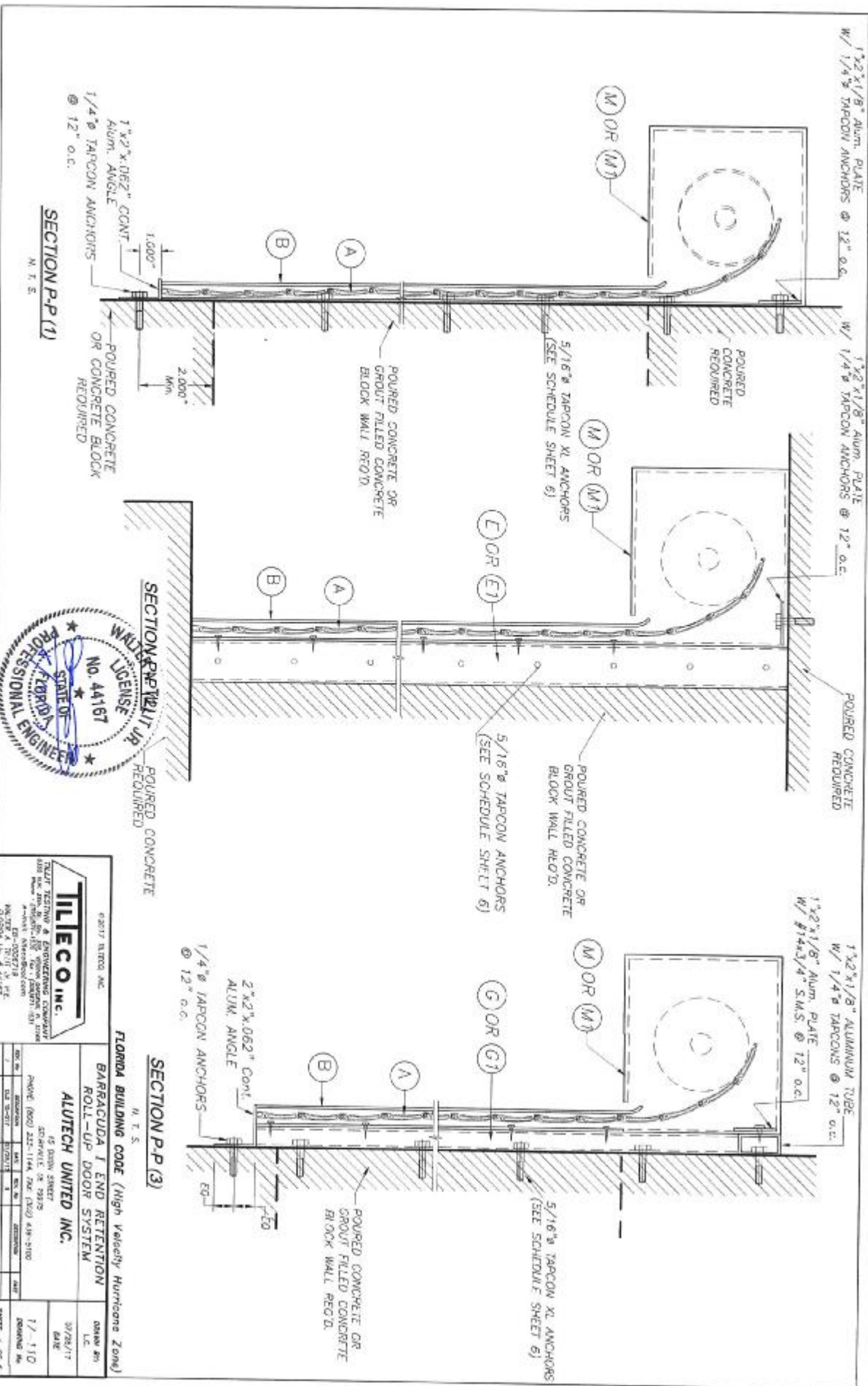
**TILECO inc.**  
 TILE TRAINING & ENGINEERING COMPANY  
 4700 W. UNIVERSITY BLVD., SUITE 100  
 AUSTIN, TEXAS 78746  
 (512) 453-5117  
 FAX: (512) 453-5118  
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**FLORIDA BUILDING CODE (High Velocity Hurricane Zone)**  
**BARBACUDA I END RETENTION**  
**ROLL-UP DOOR SYSTEM**  
**AUTECH UNITED INC.**  
 5100 STEVENSON BLVD.  
 SUITE 100  
 AUSTIN, TEXAS 78746  
 PHONE: (512) 223-1114, FAX: (512) 426-5100  
 WWW.AUTECHUNITED.COM

REV. NO.	DATE	BY	CHKD.
1	07/28/17		

17-110  
 DRAWING NO.

SHEET 4 OF 4



**TILECO INC.**  
 6237 BIRDA AVE.  
 TALLahasSEE, FL 32309  
 (904) 222-1144 FAX (904) 438-5100  
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**ALUTECH UNITED INC.**  
 15 03TH STREET  
 DEERFIELD, IL 60015  
 PHONE (800) 222-1144 FAX (800) 438-5100  
 www.alutech.com

DATE	3/28/17
BY	MLC
SCALE	1" = 1'-0"
SHEET	5 OF 6

**SECTION P-P (1)**  
 N.T.S.

**SECTION P-P (2)**  
 N.T.S.

**SECTION P-P (3)**  
 N.T.S.

**FLORIDA BUILDING CODE (High Velocity Hurricane Zone)**  
**BARBACUDA I END RETENTION ROLL-UP DOOR SYSTEM**

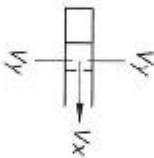
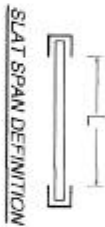
**MAXIMUM SLAT SPAN "L" (ft) SCHEDULE.**

MAX. A.S.D. DESIGN PRESSURE RATING (p.s.f.)	REQUIRED SUBSTRATE	MAX. SPAN "L" (FT.)	REMARKS	SEPARATION *
+45, -45	POURED CONCRETE OR GROUT FILLED CONC. BLOCK.	12'-0"	SEE NOTE 8 ON SHEET 1	8"
	WOOD	12'-0"	SEE NOTE 8 ON SHEET 1	8"
+50, -50	POURED CONCRETE OR GROUT FILLED CONC. BLOCK.	7'-0"	SEE NOTE 8 ON SHEET 1	9 1/2"
	WOOD	7'-0"	SEE NOTE 8 ON SHEET 1	9 1/2"

\* IN CASE PRODUCT IS USED AS AN HURRICANE ABATEMENT SYSTEM TO PROTECT THE BUILDING ENVELOPE, IT MUST BE INSTALLED AWAY FROM THE BUILDING COMPONENT TO BE PROTECTED NO LESS THAN MINIMUM SEPARATION INDICATED ON SCHEDULE.

**Vx & Vy REACTIONS AT JAMB.**

MAX. A.S.D. DESIGN PRESSURE RATING (p.s.f.)	MAX. SLAT SPAN	REQ'D SLIP (in)	Vx (lb/ft)	Vy (lb/ft)
+45.0, -45.0	6'-0"	0.576"	255	135
	7'-0"	0.578"	365	158
	12'-0"	0.576"	971	270
+50.0, -50.0	6'-0"	0.576"	297	150
	7'-0"	0.576"	436	175
	12'-0"	N/A	N/A	N/A



**MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO CONCRETE OR GROUT FILLED CONCRETE BLOCK.**

MAX. A.S.D. DESIGN PRESSURE RATING (p.s.f.)	SPAN L (ft)	WALL MOUNTING		TRAPPED MOUNTING		BUILD-OUT MOUNTING	
		POURED FILLED CONCRETE BLOCK	GROUT FILLED CONCRETE BLOCK	POURED FILLED CONCRETE BLOCK	GROUT FILLED CONCRETE BLOCK	POURED FILLED CONCRETE BLOCK	GROUT FILLED CONCRETE BLOCK
+45, -45	≤ 6'-0"	4"	4"	4"	4"	4"	4"
	> 6'-0" TO 7'-0"	4"	4"	4"	4"	4"	4"
+50, -50	≤ 6'-0"	4"	4"	4"	4"	4"	4"
	> 6'-0" TO 7'-0"	4"	4"	4"	4"	4"	4"

◇ REQUIRES INSTALLATION TO BE PERFORMED ONLY W/ (3) (2"x3"x1/8") B.O. TUBE.

**MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO WOOD FRAME BUILDINGS.**

MAX. A.S.D. DESIGN PRESSURE RATING (p.s.f.)	SPAN L (ft)	WALL MOUNTING		TRAPPED MOUNTING		BUILD-OUT MOUNTING	
		G=0-48	G=0-55	G=0-46	G=0-48	G=0-48	G=0-55
+45, -45	≤ 6'-0"	4"	4"	4"	4"	4"	4"
	> 6'-0" TO 7'-0"	4"	4"	4"	4"	4"	4"
+50, -50	≤ 6'-0"	4"	4"	4"	4"	4"	4"
	> 6'-0" TO 7'-0"	4"	4"	4"	4"	4"	4"

◇ ALTERNATIVELY, MAX. SPACING MAY BE 3" O.C. IF B.O. TUBE (3) (2"x3"x1/8") IS USED IN UED OF (3) (2"x2"x1/8").



6867 N.W. 20th, W.E.  
**TILECO INC.**  
 TILE TILE TILE & ANCHORING COMPANY  
 1401 N.W. 7th Street, Ft. Lauderdale, FL 33304-2511  
 Phone: (954) 562-2779 Fax: (954) 562-2511  
 FLORENCE, AL 37058

**FLORIDA BUILDING CODE (High Velocity Hurricane Zone)**  
**BARRACUDA I END RETENTION ROLL-UP DOOR SYSTEM**  
**ALUTECH UNITED INC.**  
 15 DUNDY STREET  
 SEBRING, FL 34758  
 Phone: (888) 222-1144, Fax: (202) 438-5100

REV.	DATE	DESCRIPTION	BY	CHK.
1	02/11/17	ISSUE FOR PERMIT		

07/26/17 DATE  
 17-110 DRAWING NO.

06/06/17 REV. 1