

**GENERAL NOTES:**

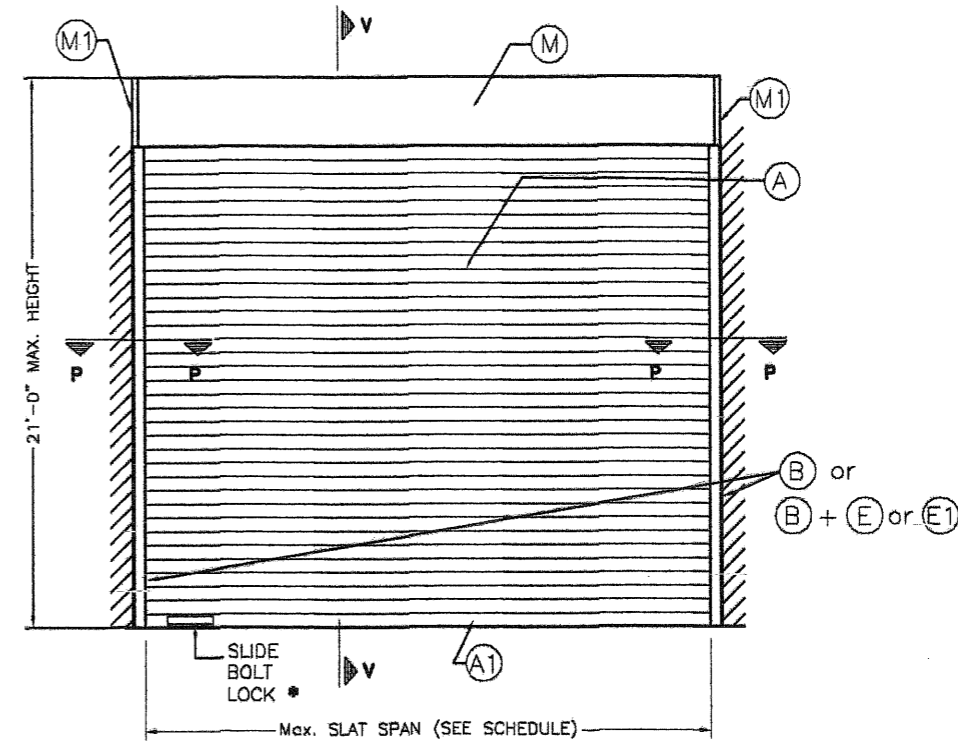
1. ROLL-UP DOOR SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2010 EDITION OF THE FLORIDA BUILDING CODE.  
DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 OF THE ABOVE MENTIONED CODE, FOR A BASIC WIND SPEED AS REQUIRED BY THE JURISDICTION WHERE THESE SHUTTERS WILL BE INSTALLED FOR A DIRECTIONALITY FACTOR  $K_d=0.85$ , USING ASCE 7-10 FOR INSTALLATIONS UNDER 2010 FBC AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON SHEET 4.  
IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-10 SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATINGS INDICATED ON SHEET 4.  
IN ORDER TO VERIFY THAT COMPONENTS AND ANCHORS ON THIS P.E.D. AS TESTED WERE NOT OVER STRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS.  
ROLL-UP DOOR'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1626 OF THE ABOVE MENTIONED CODE AS PER ARCHITECTURAL TESTING, INC. REPORT # 78796.01-109-18, PER TAS-201, TAS-202 & TAS-203 PROTOCOLS. THIS PRODUCT IS MANUFACTURED AND ERECTED TO EASILY ENCLOSE AN AREA, PROVIDING PROTECTION FROM HURRICANE FORCE WINDS WITHIN THE LIMITATIONS INCLUDED IN THIS P.E.D.
2. ALL ALUMINUM EXTRUSIONS SHALL BE MADE OF ALLOYS AND TEMPERS, AS INDICATED ON SHEET 2 OF THIS DRAWING.
3. EVERY OTHER SLAT (INCLUDING BASE SLAT) SHALL INCLUDE ONE RETAIN SCREW (C), AISI 304 SERIES STAINLESS STEEL (SEE SHEET 2).
4. ALL SCREWS (EXCEPT COMPONENT # (C)) TO BE STAINLESS STEEL 304 OR 316 AISI SERIES OR ITW BUILDEX CORROSION RESISTANT COATED CARBON STEEL TEK SCREWS, AS PER DIN 50018 & SHALL COMPLY W/ FLORIDA BUILDING CODE SECTION 2411.3.3.4.
5. BOLTS TO BE ASTM A-307 GALVANIZED STEEL OR AISI 304 SERIES STAINLESS STEEL, WITH 35 ksi MINIMUM YIELD STRENGTH.
6. ANCHORS TO WALL FOR SIDE RAILS CONNECTION SHALL BE AS FOLLOWS:
  - (A) TO EXISTING POURED CONCRETE (MIN.  $f'_c = 2899$  psi)  
- 5/16" TAPCON XL ANCHORS, AS MANUFACTURED BY ITW/BUILDEX, INC.

NOTES:

  - A.1) MINIMUM EMBEDMENT OF XL TAPCON ANCHORS INTO POURED CONCRETE 2 1/4". NO EMBEDMENT INTO STUCCO 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, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN SUBSTRATE BEHIND SUCH PANELS. MINIMUM EMBEDMENT SHALL BE AS INDICATED ON NOTE A.1 ABOVE.
  - (B) TO EXISTING POURED CONCRETE (MIN.  $f'_c = 4000$  psi):  
- 3/8" KWIK BOLT 3 EXPANSION ANCHOR, AS MANUFACTURED BY HILTI, INC.

NOTES:

  - B.1) MINIMUM EMBEDMENT OF KWIK BOLT 3 ANCHORS INTO POURED CONCRETE 3 1/2". NO EMBEDMENT INTO STUCCO SHALL BE CONSIDERED AS PART OF THE REQUIRED EMBEDMENT.
  - B.2) IN CASE THAT PRECAST STONE, PRECAST CONCRETE OR BRICK PANELS, VENEER OR PAVERS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN SUBSTRATE BEHIND SUCH PANELS. MINIMUM EMBEDMENT SHALL BE AS INDICATED ON NOTE B.1 ABOVE.
  - (C) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE DOOR IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE.  
THIS DOOR SHALL ONLY BE ATTACHED TO POURED CONCRETE BUILDINGS.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THAT THE EXISTING STRUCTURE IS DESIGNED TO SUPPORT  $V_x$  AND  $V_y$  FORCES AT BOTH JAMBS. SEE SHEET 4 FOR  $V_x$  &  $V_y$  VALUES.
9. THE INSTALLATION CONTRACTOR IS TO SEAL/CAULK ALL DOOR COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION.
10. ROLL-UP MECHANISM NOT PART OF THIS APPROVAL, BUT SHALL BE CERTIFIED BY AN INDEPENDENT TESTING AGENCY.
11. ROLL-UP DOOR INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.
12. (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.
13. SHUTTER MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT DOOR. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABELING TO COMPLY WITH SECTION 1715.5.3.4 OF THE FLORIDA BUILDING CODE.



**TYPICAL SINGLE UNIT ELEVATION**

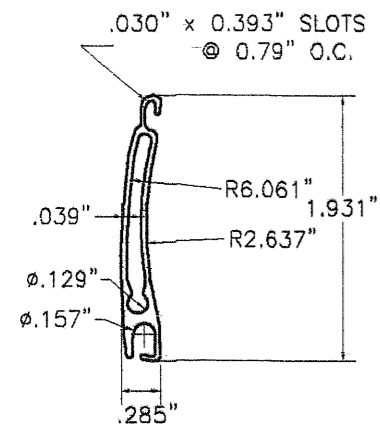
**TYPICAL DOOR ELEVATION (EXTERIOR OR INTERIOR)**

NOTE: SEE SHEETS 2 & 3 FOR COMPONENTS NOMENCLATURE.

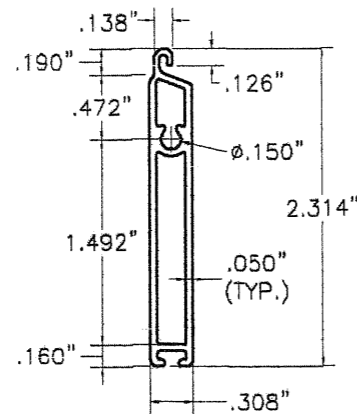
\* Typ. EA. END, INTERIOR, OPTIONAL, ONLY FOR SECURITY PURPOSES.

**NOTES:**

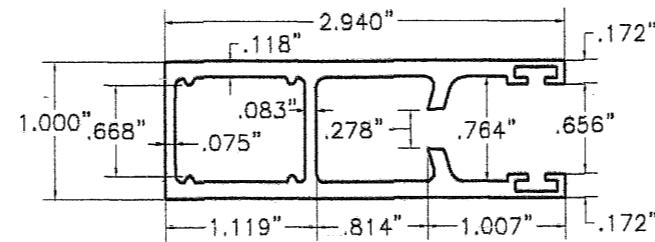
1. SEE SHEETS 2 & 3 FOR COMPONENTS NOMENCLATURE.
2. SEE SECTIONS ON SHEETS 4 & 5.
3. SEE SCHEDULES ON SHEET 4.



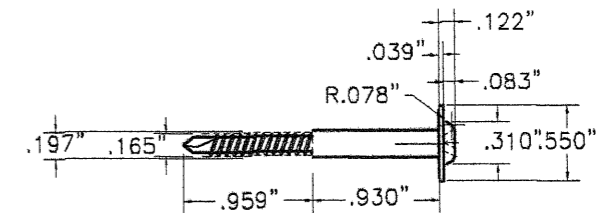
**(A) SLAT**  
6063-T6 ALUMINUM ALLOY  
SCALE: 3/4" = 1"



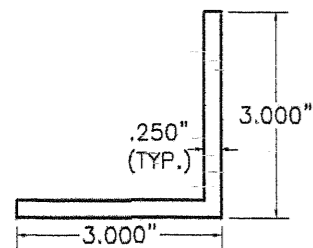
**(A1) BASE SLAT**  
6063-T6 ALUMINUM ALLOY  
SCALE: 3/4" = 1"



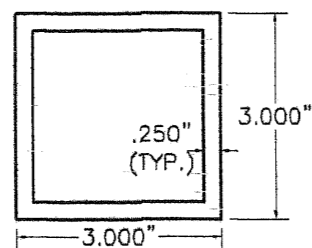
**(B) SIDE RAIL**  
6063-T5 ALUMINUM ALLOY  
SCALE: 3/4" = 1"



**(C) RETAIN SCREW**  
(1 EVERY OTHER SLAT INCLUDING BASE SLAT  
AND SHALL BE INSTALLED W/A 0.576" MIN. SLIP AS SHOWN ON SECTIONS)  
AISI/SAE 304 SERIES STAINLESS STEEL  
SCALE: 3/4" = 1"



**(E) 3"x3"x1/4" INSIDE MOUNT ANGLE**  
6061-T6 ALUMINUM ALLOY  
SCALE: 3/8" = 1"

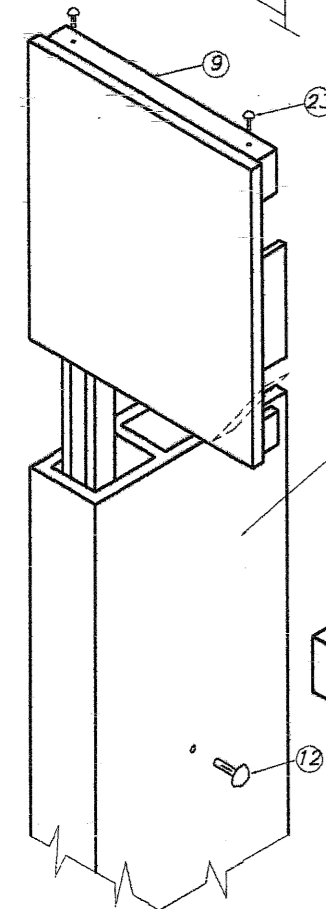


**(E1) 3"x3"x1/4" ALTERNATE INSIDE MOUNT TUBE**  
6061-T6 ALUMINUM ALLOY  
SCALE: 3/8" = 1"

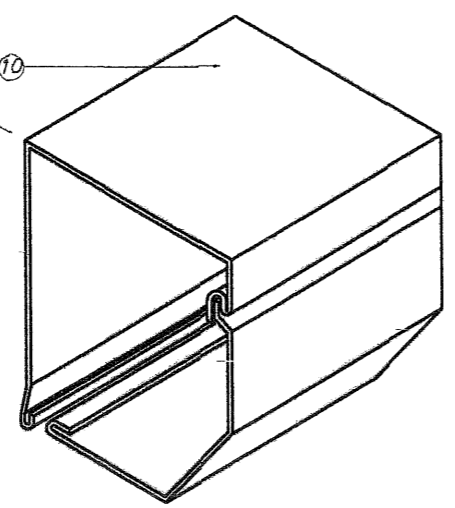
# COMPONENTS

TYPE 10 :	N/A
TYPE 9 :	10"
TYPE 8 :	9"
TYPE 7 :	8"
TYPE 6 :	7"
TYPE 5 :	6.5"
TYPE 4 :	6"
TYPE 3 :	N/A
TYPE 2 :	N/A
TYPE 1 :	4"

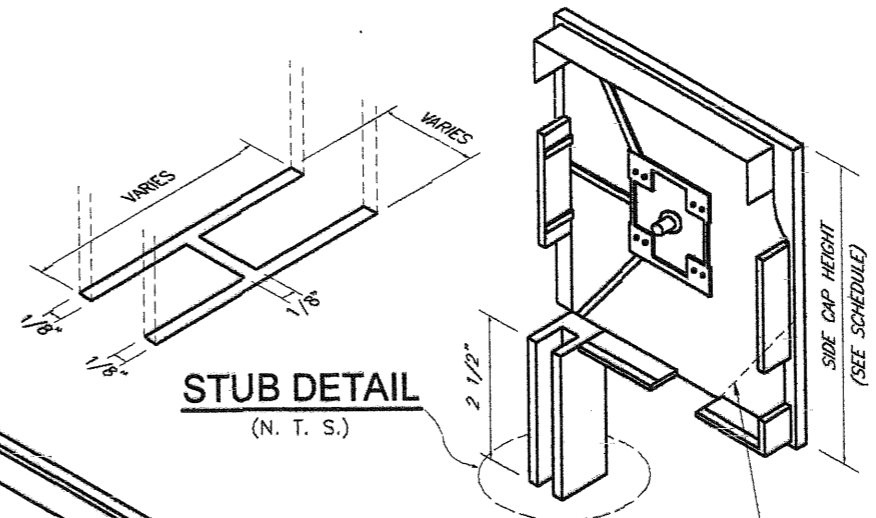
TYPE 10 :	12"
TYPE 9 :	10"
TYPE 8 :	9"
TYPE 7 :	8"
TYPE 6 :	7"
TYPE 5 :	6.5"
TYPE 4 :	6"
TYPE 3 :	N/A
TYPE 2 :	N/A
TYPE 1 :	N/A



**RV 90 HOUSING**



**RV 45 & RV 45/S HOUSINGS**



**M1 SIDE CAPS:**

45° CHAMFER AS APPLICABLE

**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 STOPS(OPTIONAL)
- ⑯ - SIDE LOCKS(OPTIONAL)
- ⑰ - STAPLES(OPTIONAL)
- ⑱ - SPRINGLOCK HANGER
- ⑲ - SAFETY PLATES

**ADDITIONAL COMPONENTS FOR MOTORIZED OPERATED SYSTEM**

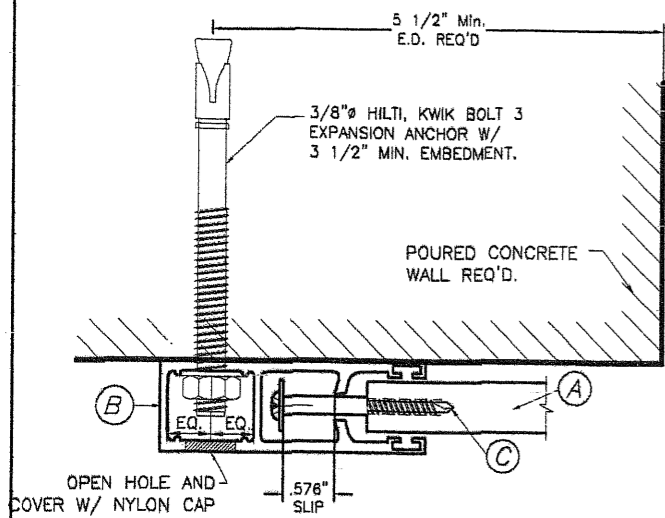
- ⑳ - TUBULAR MOTOR
- ㉑ - MOTOR BRACKET
- ㉒ - SWITCH

**FASTENERS**

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

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

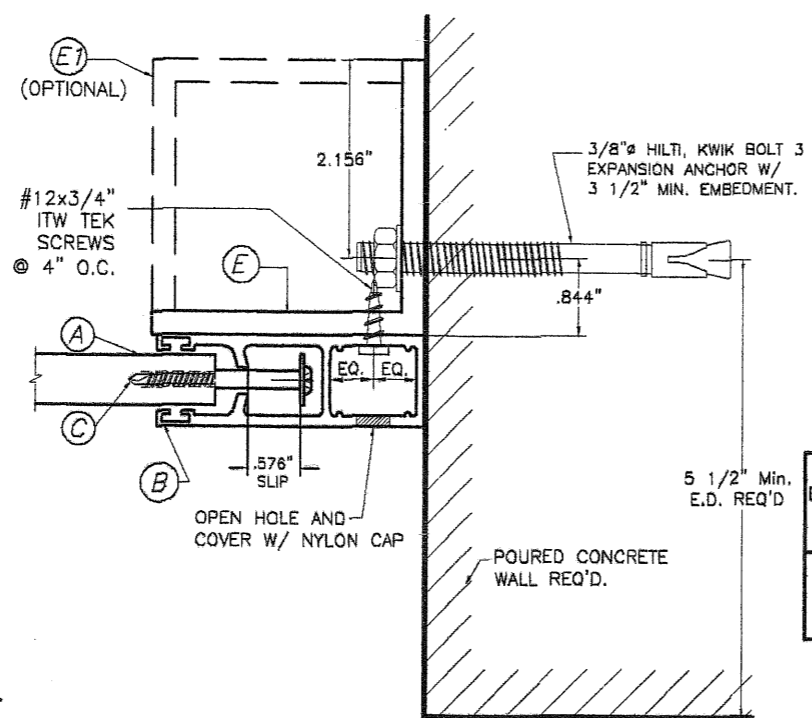
**M BOX COMPONENTS AND ASSEMBLY DETAIL**  
**END CAP SYSTEM**  
 (SEE NOTE 10 ON SHEET 1)



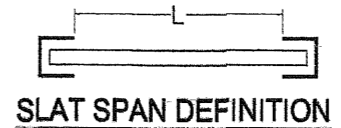
**SECTION P-P (1): WALL MOUNT**  
 3/8"Ø HILTI, KWIK BOLT 3 EXPANSION ANCHOR

**SIDE RAIL CONNECTIONS**

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



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



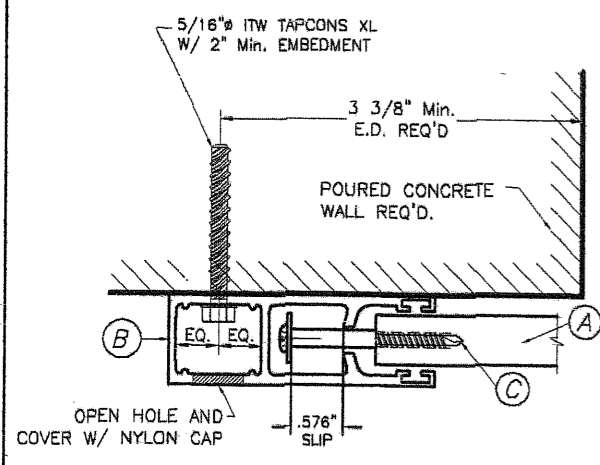
**MAXIMUM SLAT SPAN "L" (FT) & CORRESPONDING V<sub>x</sub> & V<sub>y</sub> REACTIONS AT JAMB & ANCHOR SPACING FOR 3/8"Ø HILTI, KWIK BOLT 3 EXPANSION ANCHOR GIVEN MAXIMUM A.S.D. DESIGN PRESSURE RATING & REQUIRED SLIP**

MAX. A.S.D. DESIGN PRESSURE RATING (P.S.F)	MAXIMUM SLAT SPAN "L" (FT.)	REQUIRED SLIP (in)	V <sub>x</sub> (Lb/Ft)	V <sub>y</sub> (Lb/Ft)	SIDE RAIL CONNECTION	ANCHOR SPACING (in)	SEPARATION ◇
+62, -62	15'-0 1/8"	0.576"	1794	465	WALL MOUNT & INSIDE MOUNT	8"	8 7/8"

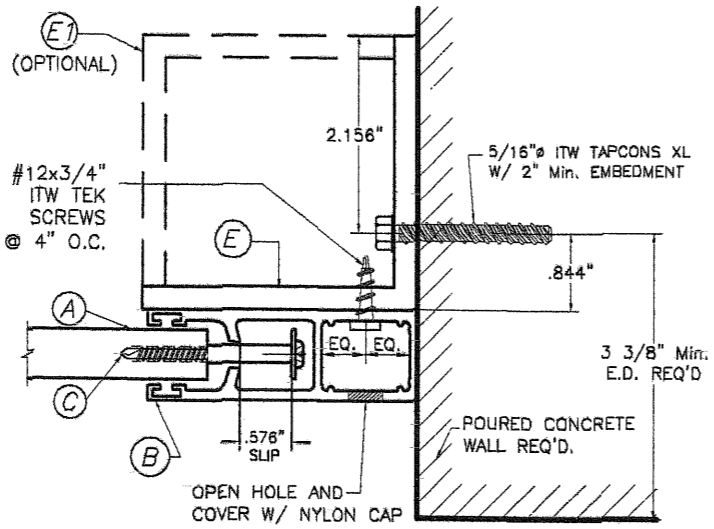
**MAXIMUM SLAT SPAN "L" (FT) & CORRESPONDING V<sub>x</sub> & V<sub>y</sub> REACTIONS AT JAMB & ANCHOR SPACING FOR 5/16"Ø ITW TAPCONS XL ANCHOR GIVEN MAXIMUM A.S.D. DESIGN PRESSURE RATING & REQUIRED SLIP**

MAX. A.S.D. DESIGN PRESSURE RATING (P.S.F)	MAXIMUM SLAT SPAN "L" (FT.)	REQUIRED SLIP (in)	V <sub>x</sub> (Lb/Ft)	V <sub>y</sub> (Lb/Ft)	SIDE RAIL CONNECTION	ANCHOR SPACING (in)	SEPARATION ◇
+42.3, -42.3	15'-0 1/8"	0.576"	1254	317	WALL MOUNT & INSIDE MOUNT	5"	8 7/8"

◇ 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.

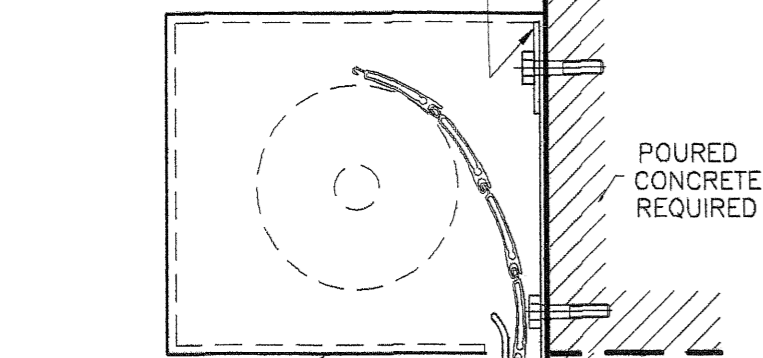


**SECTION P-P (1): WALL MOUNT**  
 5/16"Ø TAPCONS XL



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

1"x2"x1/8" Alum. PLATE  
W/ 1/4"Ø TAPCON ANCHORS @ 12" o.c.



(M) OR (M1)

POURED  
CONCRETE  
REQUIRED

3/8"Ø HILTI, KWIK BOLT 3 EXPANSION ANCHOR  
OR 5/16"Ø ITW TAPCON XL ANCHORS  
(SEE SCHEDULES ON SHEET 4)

POURED CONCRETE  
WALL REQ'D.

(A)

(B)

(A1)

1.000"

2.000"  
Min.

1"x2"x.062" CONT.  
Alum. ANGLE

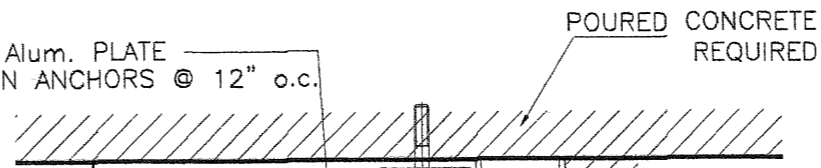
POURED CONCRETE  
REQUIRED

1/4"Ø TAPCON ANCHORS  
@ 12" o.c.

**SECTION P-P (1)**

N. T. S.

1"x2"x1/8" Alum. PLATE  
W/ 1/4"Ø TAPCON ANCHORS @ 12" o.c.



(M) OR (M1)

POURED CONCRETE  
WALL REQ'D.

3/8"Ø HILTI, KWIK BOLT 3 EXPANSION ANCHOR  
OR 5/16"Ø ITW TAPCON XL ANCHORS  
(SEE SCHEDULES ON SHEET 4)

(E) OR (E1)

(A)

(B)

(A1)

**SECTION P-P (2)**

POURED CONCRETE  
REQUIRED