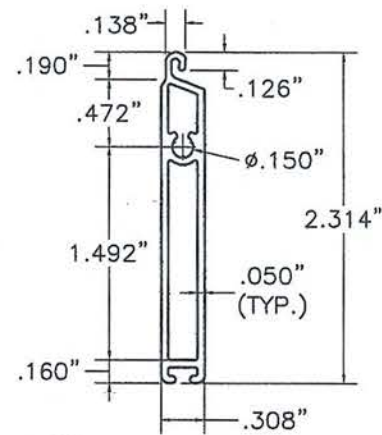
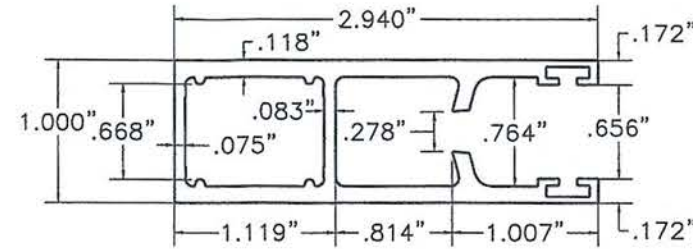


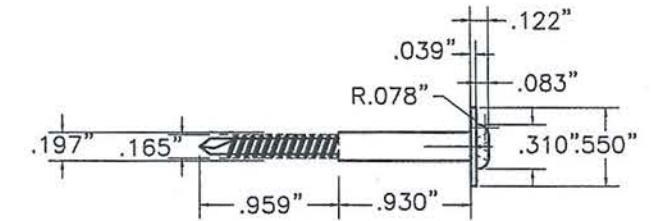
**(A) SLAT**  
6063-T6 ALUMINUM ALLOY  
SCALE: 3/4" = 1"



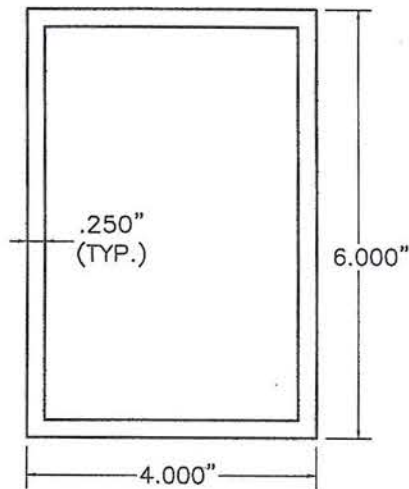
**(A1) BASE SLAT**  
6063-T6 ALUMINUM ALLOY  
SCALE: 3/4" = 1"



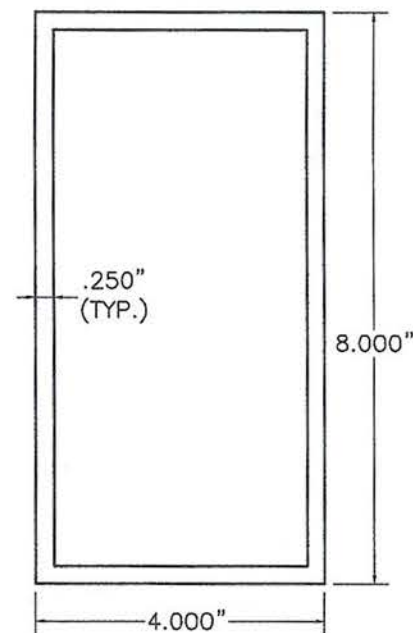
**(B) SIDE RAIL**  
6063-T5 ALUMINUM ALLOY  
SCALE: 3/4" = 1"



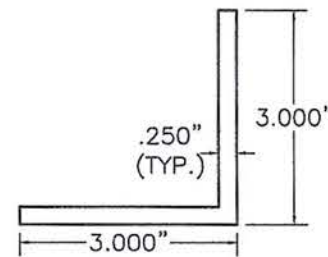
**(C) RETAIN SCREW**  
(1 EVERY OTHER SLAT INCLUDING BASE SLAT  
AND SHALL BE INSTALLED W/A 0.576" MIN. SLIP AS SHOWN ON SECTIONS)  
AISI/SAE 304 SERIES STAINLESS STEEL  
SCALE: 3/4" = 1"



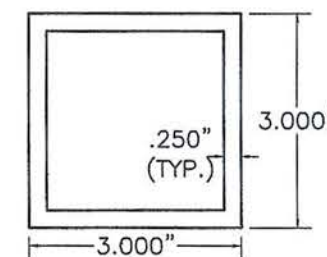
**(D) 4"x6" MULLION:**  
6063-T6 ALUMINUM ALLOY  
SCALE: 3/8" = 1"



**(D1) 4"x8"x1/4" ALTERNATE MULLION**  
6063-T6 ALUMINUM ALLOY  
SCALE: 3/8" = 1"

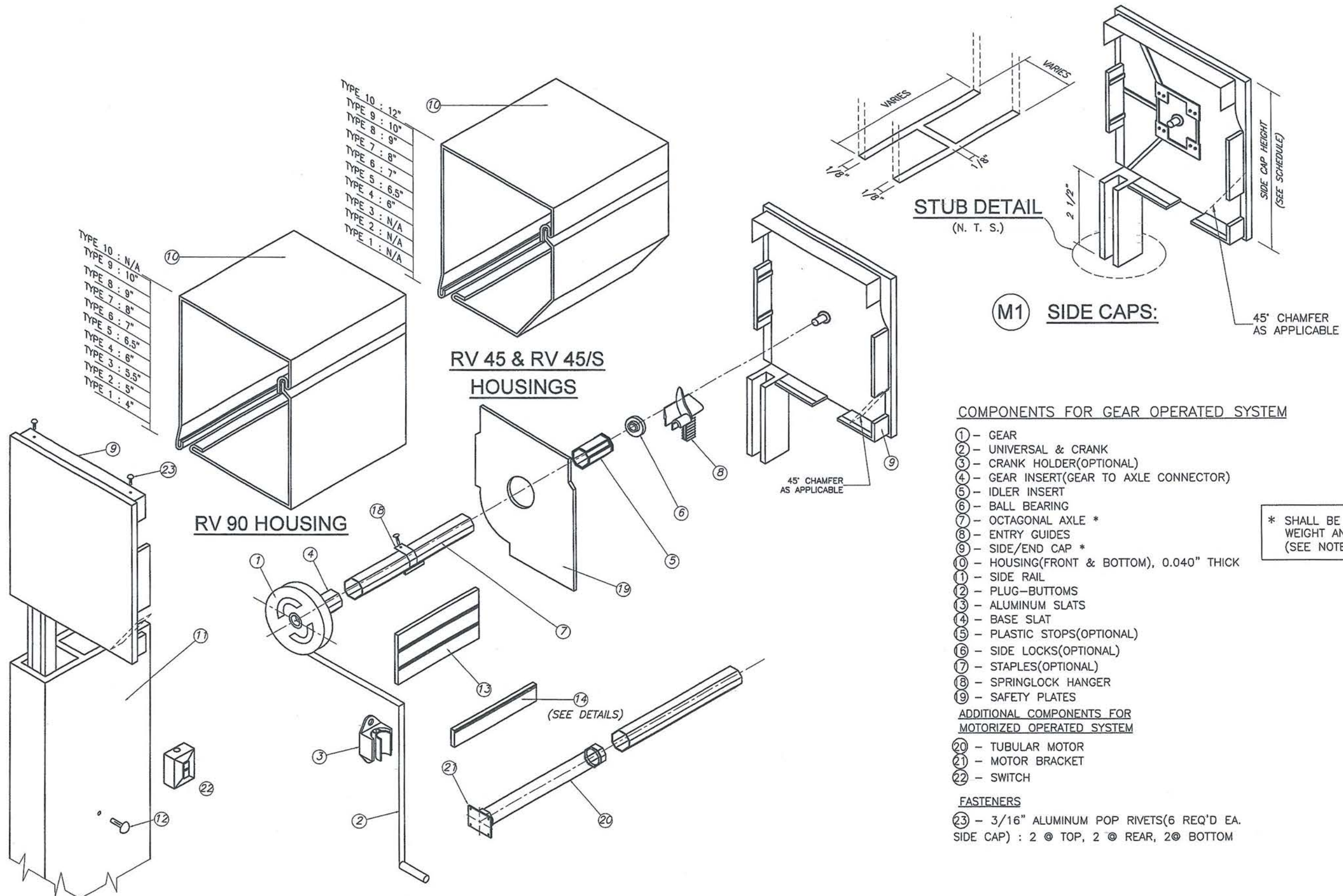


**(E) 3"x3"x1/4" INSIDE MOUNT ANGLE**  
6061-T6 ALUMINUM ALLOY  
SCALE: 3/8" = 1"



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

**COMPONENTS**



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

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

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 : 5.5"  
 TYPE 2 : 5"  
 TYPE 1 : 4"

**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

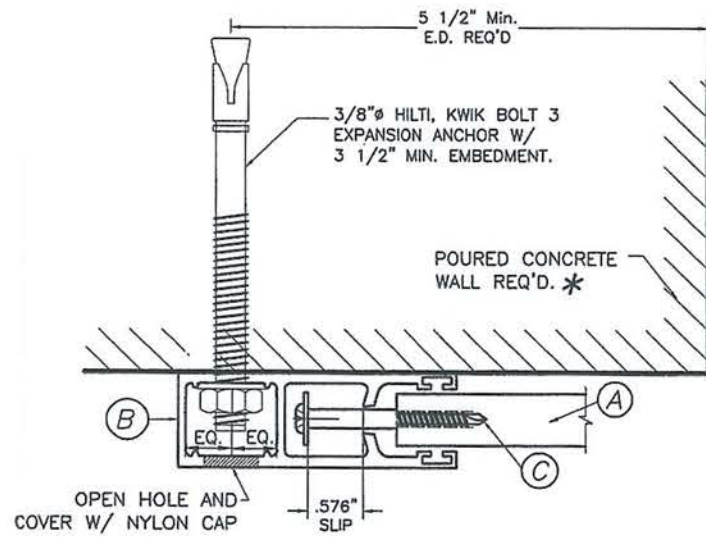
**ADDITIONAL COMPONENTS FOR  
 MOTORIZED OPERATED SYSTEM**

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

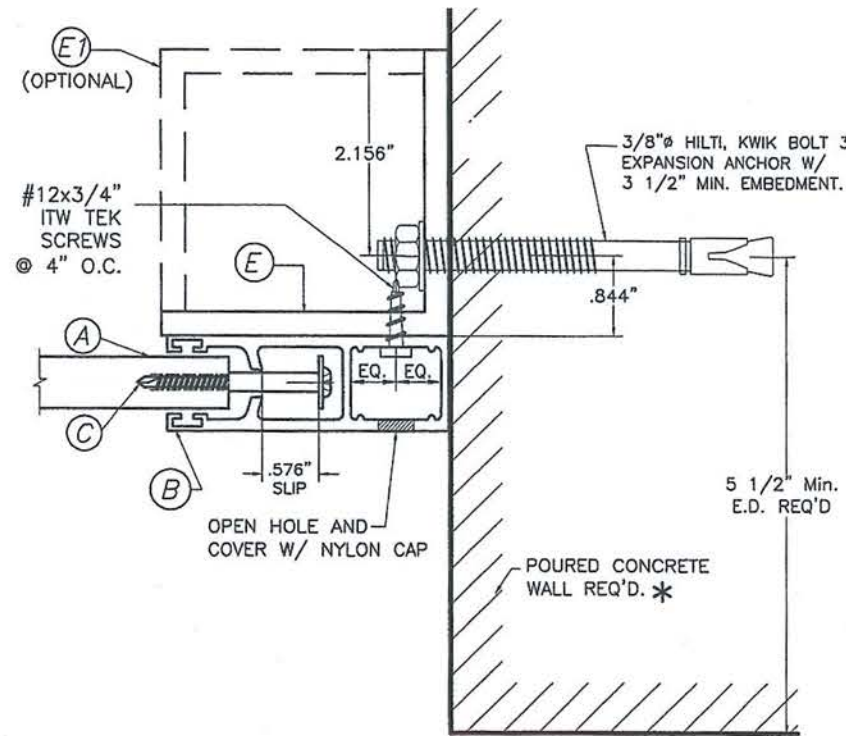
**FASTENERS**

- 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)



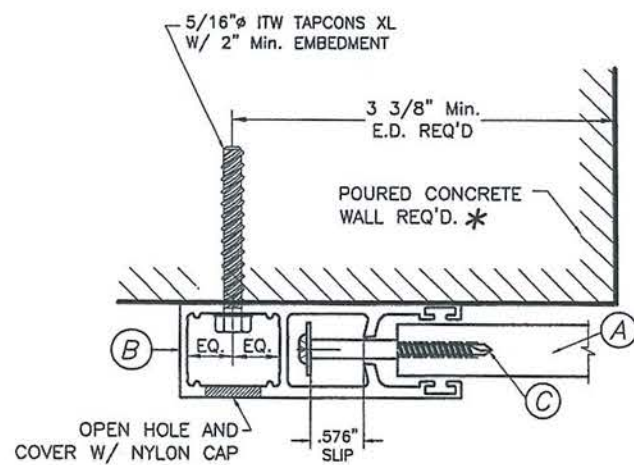
**SECTION P-P (1): WALL MOUNT**  
3/8"Ø HILTI, KWIK BOLT 3 EXPANSION ANCHOR



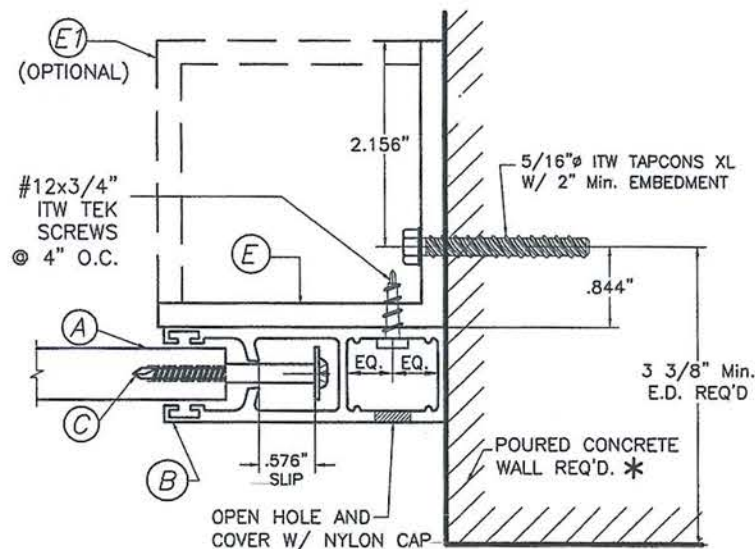
**SECTION P-P (2): INSIDE MOUNT**  
3/8"Ø HILTI, KWIK BOLT 3 EXPANSION ANCHOR

**SIDE RAIL CONNECTIONS**

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

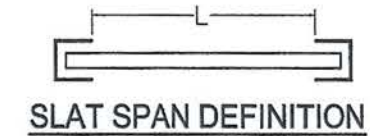
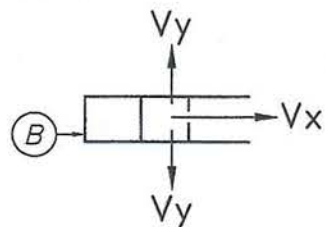


**SECTION P-P (1): WALL MOUNT**  
5/16"Ø TAPCONS XL



**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  $V_x$  AND  $V_y$  FORCES IN (lb/ft) OF SHUTTER HEIGHT AT BOTH JAMBS. (SEE SCHEDULES THIS SHEET).

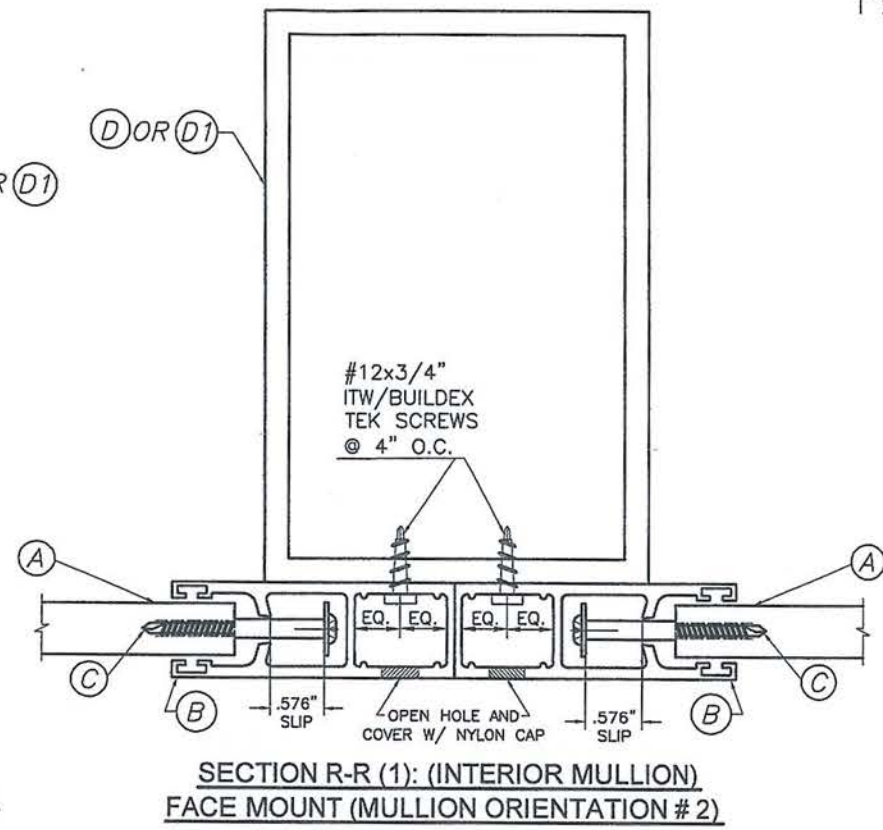
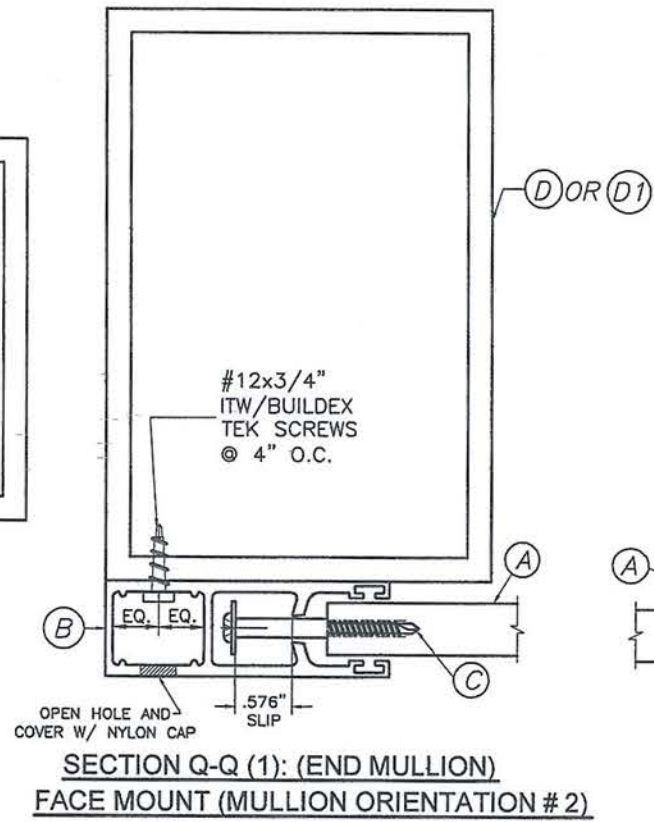
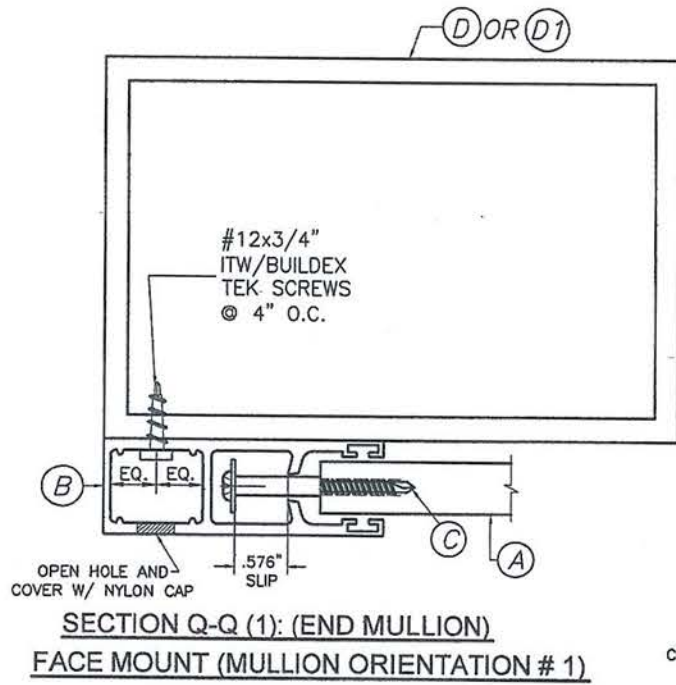


**MAXIMUM SLAT SPAN "L" (FT) & CORRESPONDING  $V_x$  &  $V_y$  REACTIONS AT JAMB & ANCHOR SPACING FOR 3/8"Ø HILTI, KWIK BOLT 3 EXPANSION ANCHOR GIVEN MAXIMUM DESIGN LOAD & REQUIRED SLIP**

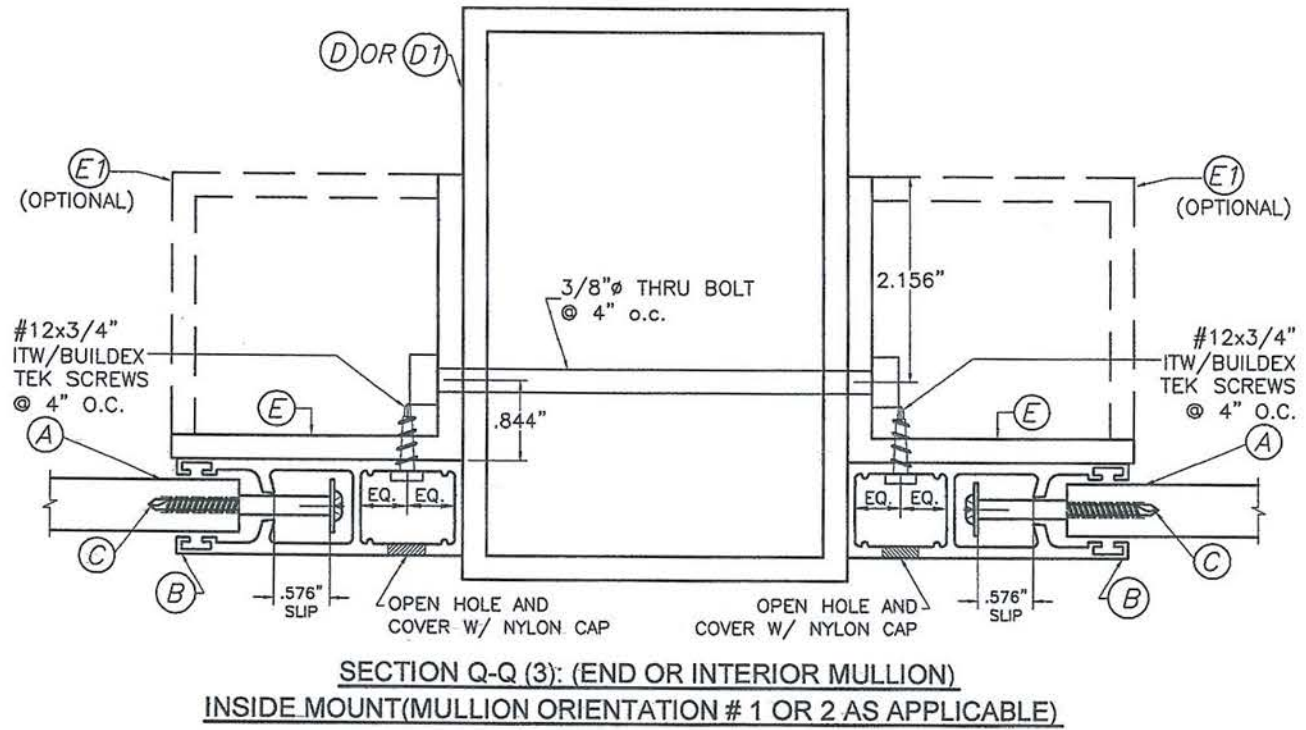
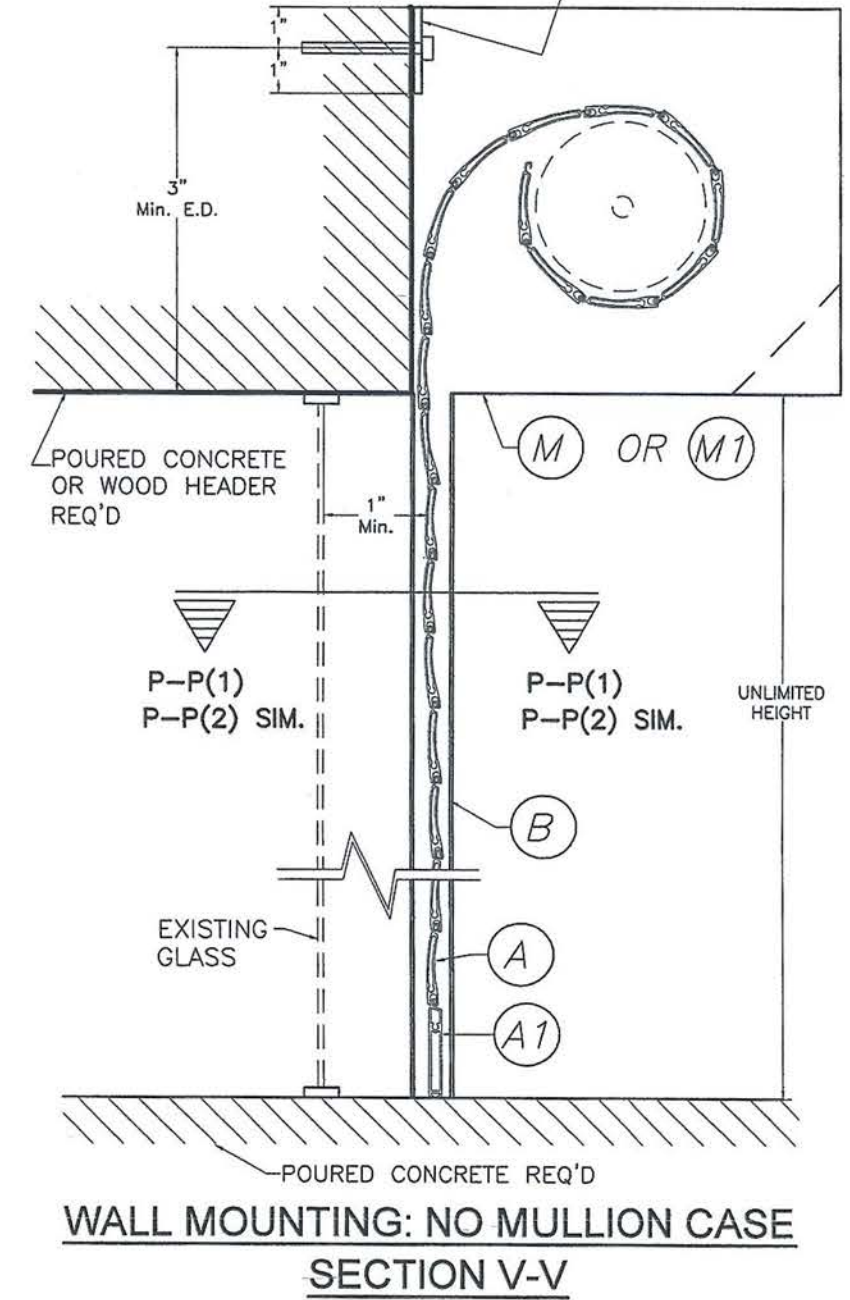
MAXIMUM DESIGN LOAD (p.s.f)	MAXIMUM SLAT SPAN "L" (FT.)	REQUIRED SLIP (in)	$V_x$ (Lb/Ft)	$V_y$ (Lb/Ft)	SIDE RAIL CONNECTION	MAX. ANCHOR SPACING (in)
+80, -80	15'-0 1/8"	0.576"	2272	600	WALL MOUNT & INSIDE MOUNT	7"

**MAXIMUM SLAT SPAN "L" (FT) & CORRESPONDING  $V_x$  &  $V_y$  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)	$V_x$ (Lb/Ft)	$V_y$ (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"

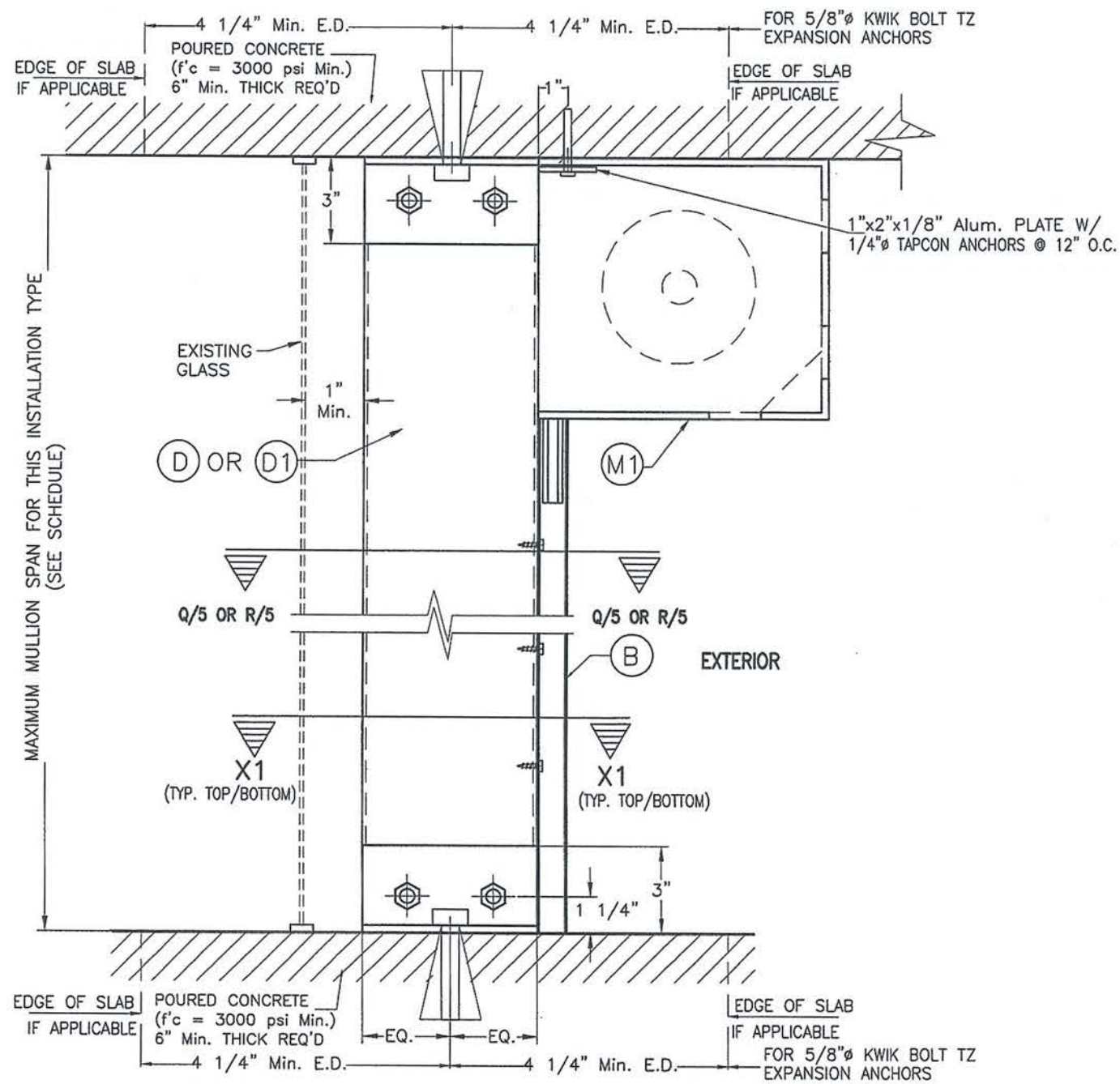


1"x2"x1/8" Alum. PLATE W/ 1/4"Øx1 3/4" TAPCONS @ 12" o.c. FOR CONCRETE OR 16" o.c. (TO EA. STUD) FOR WOOD



**SIDE RAIL CONNECTIONS TO MULLIONS**

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

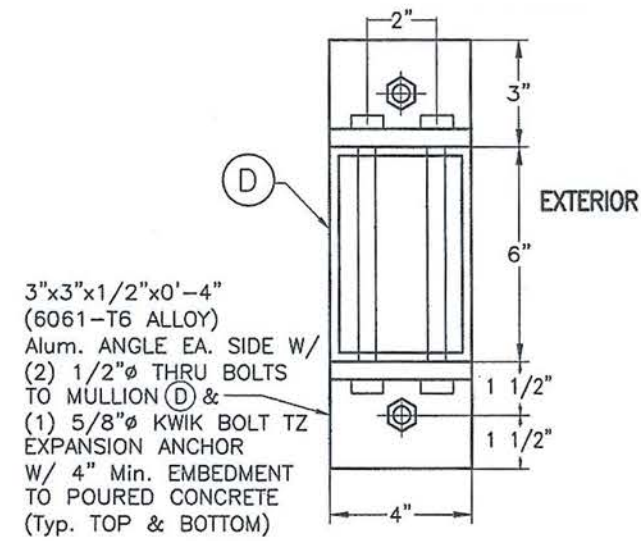


FLOOR TO CEILING / TRAPPED MOUNTING: MULLION (D) OR (D1)  
SECTION W-1

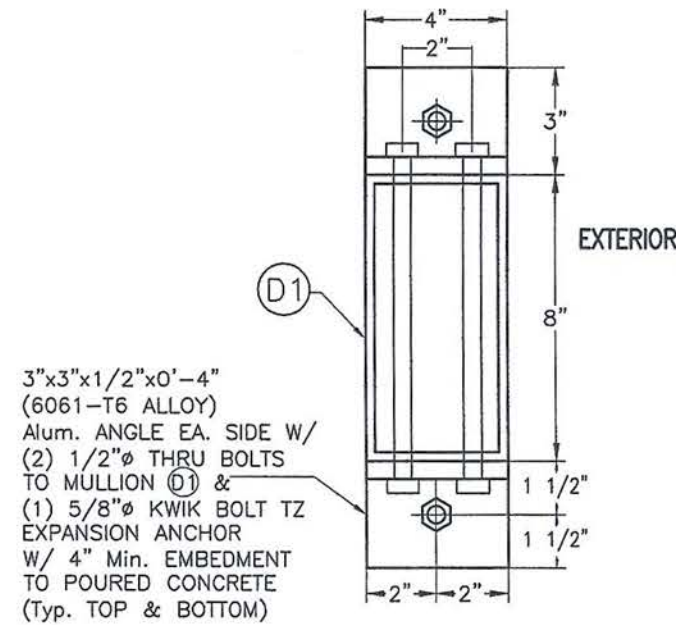
END & INTERIOR MULLION MAX. SPAN (ft) SCHEDULE  
FOR A MAXIMUM DESIGN LOAD (p.s.f.), & A GIVEN MULLION SPACING (ft) \*  
INSTALLATION INTO POURED CONCRETE

MAXIMUM DESIGN LOAD (p.s.f.)	MAXIMUM MULLION SPACING (FT)	MAXIMUM MULLION SPAN (FT): FLOOR OR TO CEILING							
		(D) 4"x6"x1/4" MULLION				(D1) 4"x8"x1/4" MULLION			
		ORIENTATION #1 (⇐)		ORIENTATION #2 (⇐)		ORIENTATION #1 (⇐)		ORIENTATION #2 (⇐)	
		END	INTERIOR	END	INTERIOR	END	INTERIOR	END	INTERIOR
+55, -55 OR LESS	15'-0 1/8"	7'-2"	8'-9"	6'-8"	10'-10"	8'-8"	9'-6"	7'-7"	12'-0"
+80, -80	15'-0 1/8"	6'-0"	7'-8"	5'-7"	9'-7"	7'-3"	8'-5"	6'-5"	11'-9"

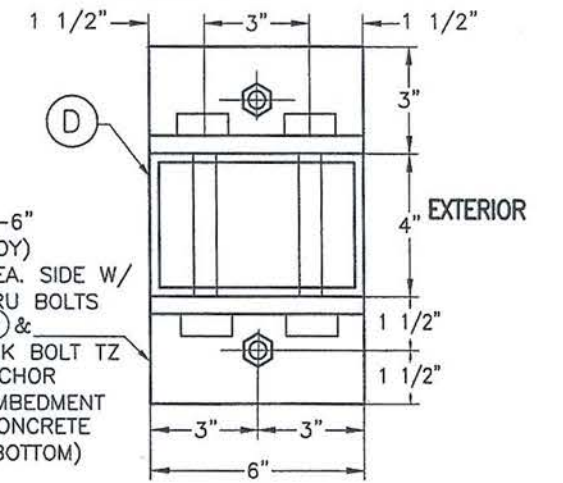
\* MAXIMUM MULLION SPACING SHALL BE SUCH THAT SLAT SPAN SHALL NOT BE EXCEEDED. SEE SHEET 5 FOR MULLION ORIENTATION DEFINITION.



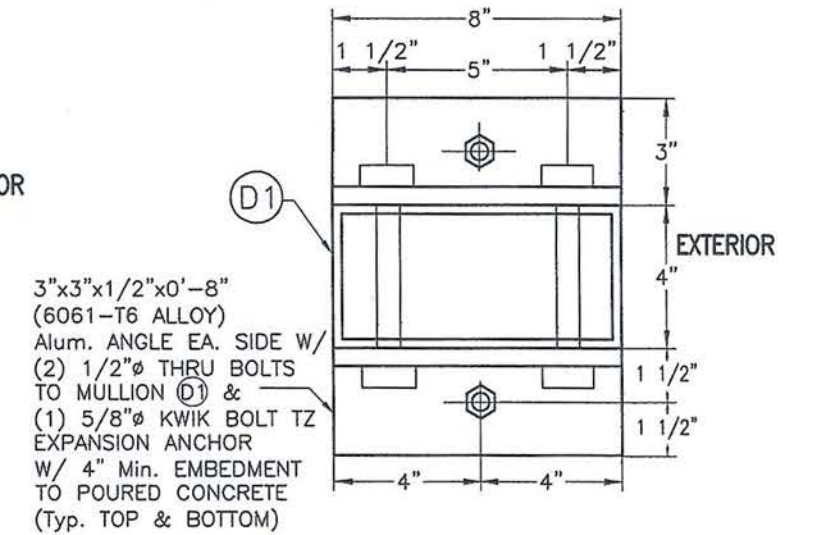
SECTION X1-X1 W/ (D) \*  
(W/ ORIENTATION # 1)



SECTION X1-X1 W/ (D1) \*  
(W/ ORIENTATION # 1)



ALTERNATIVE SECTION X1-X1 W/ (D) \*  
(W/ ORIENTATION # 2)

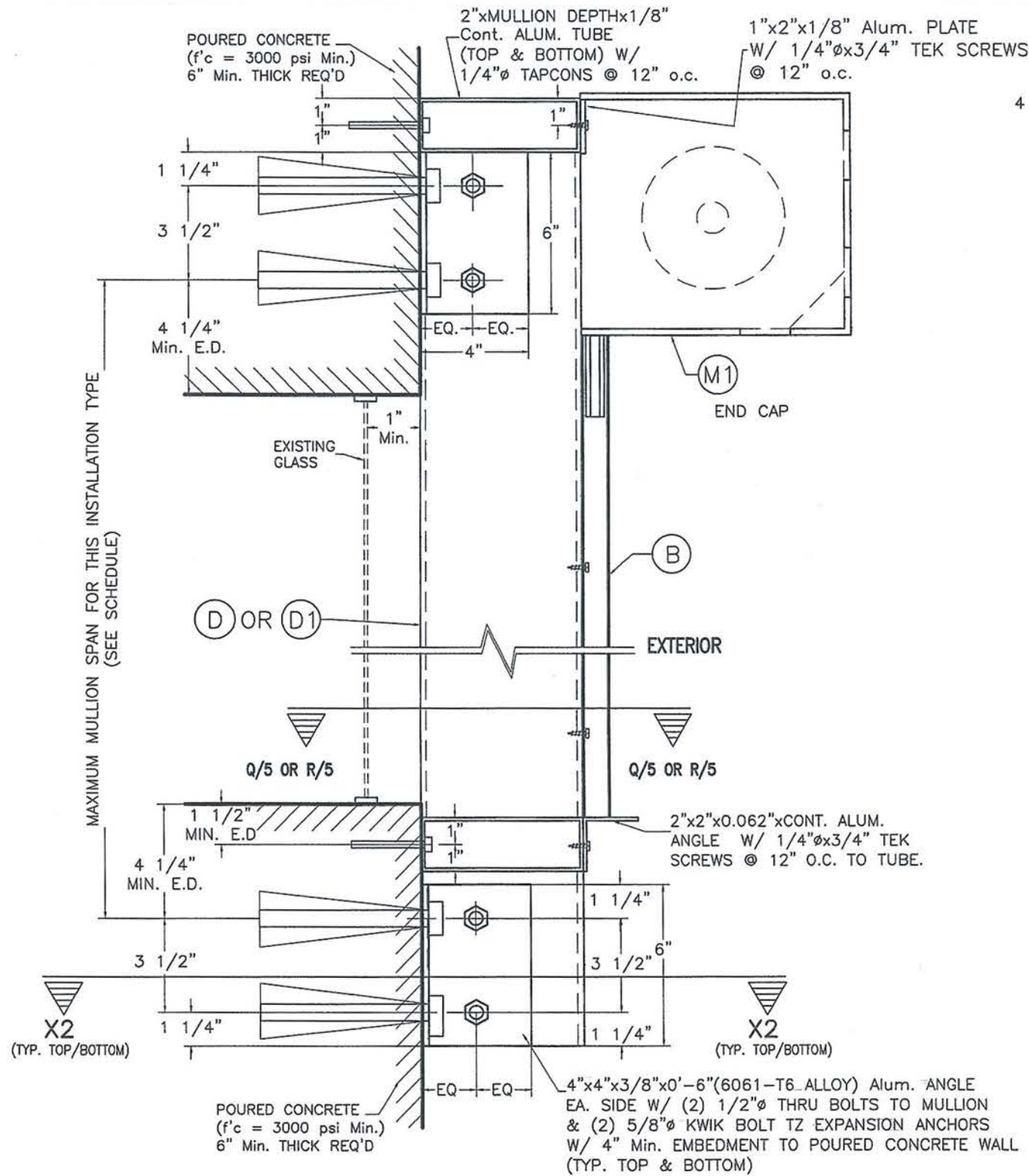


ALTERNATIVE SECTION X1-X1 W/ (D1) \*  
(W/ ORIENTATION # 2)

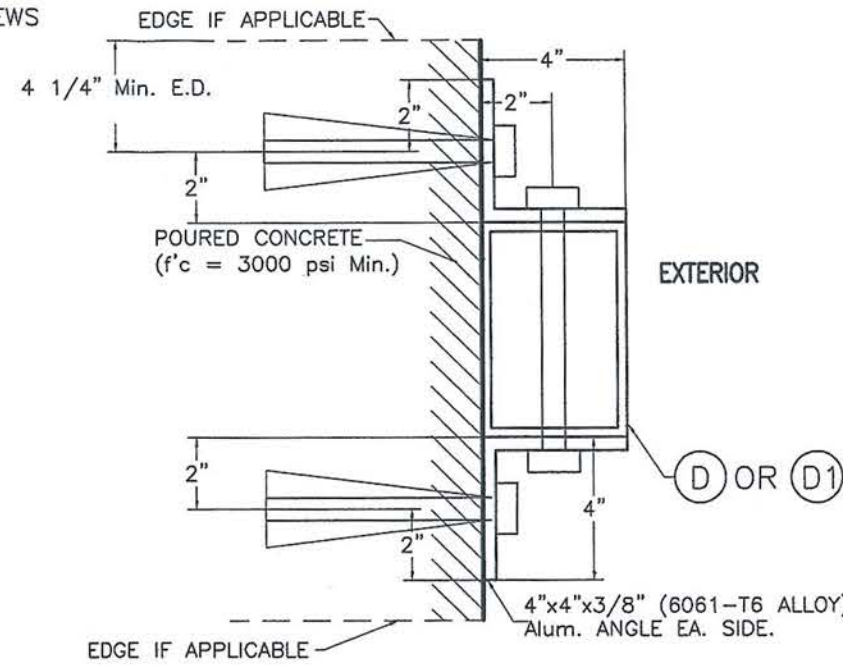
\* SIDE RAIL (B) NOT SHOWN FOR CLARITY. IT GOES ON EXTERIOR SIDE OF MULLION.

END & INTERIOR TRAPPED MOUNTED MULLION INSTALLATION

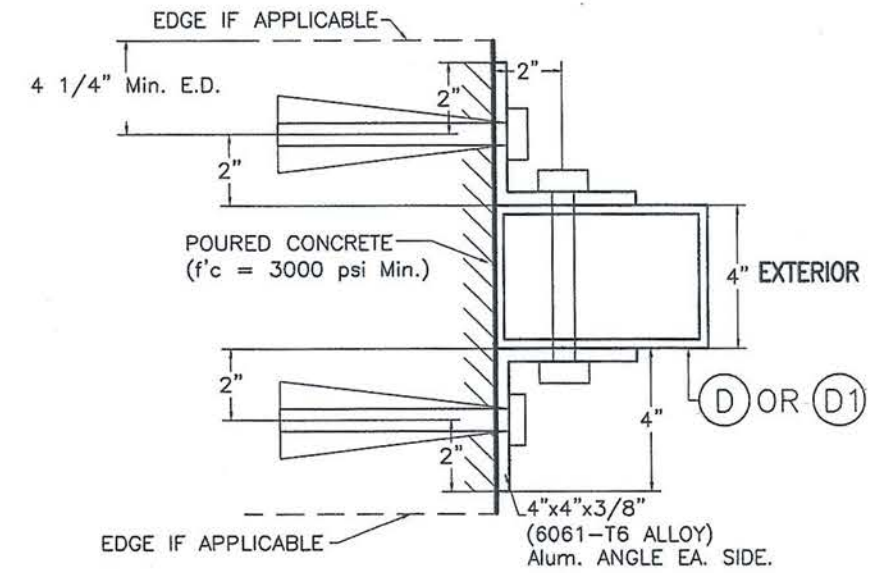
SCALE: 3/16" = 1"



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



**SECTION X2-X2 W/ (D) OR (D1) \*  
(W/ ORIENTATION # 1)**



**ALTERNATIVE SECTION X2-X2 W/ (D) OR (D1) \*  
(W/ ORIENTATION # 2)**

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

**END & INTERIOR MULLION MAX. SPAN (ft) SCHEDULE  
FOR A MAXIMUM DESIGN LOAD (p.s.f.), & A GIVEN MULLION SPACING (ft) \*  
INSTALLATION INTO POURED CONCRETE**

MAXIMUM DESIGN LOAD (p.s.f.)	MAXIMUM MULLION SPACING (FT)	MAXIMUM MULLION SPAN (FT): WALL MOUNTING							
		(D) 4"x6"x1/4" MULLION				(D1) 4"x8"x1/4" MULLION			
		ORIENTATION #1 (≡)		ORIENTATION #2 (⊏)		ORIENTATION #1 (≡)		ORIENTATION #2 (⊏)	
		END	INTERIOR	END	INTERIOR	END	INTERIOR	END	INTERIOR
+55, -55 OR LESS	15'-0 1/8"	7'-2"	8'-9"	6'-8"	10'-10"	8'-8"	9'-6"	7'-7"	12'-0"
+80, -80	15'-0 1/8"	6'-0"	7'-8"	5'-7"	9'-7"	7'-3"	8'-5"	6'-5"	11'-9"

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

**END & INTERIOR WALL MOUNTED MULLION INSTALLATION**

SCALE: 3/16" = 1"