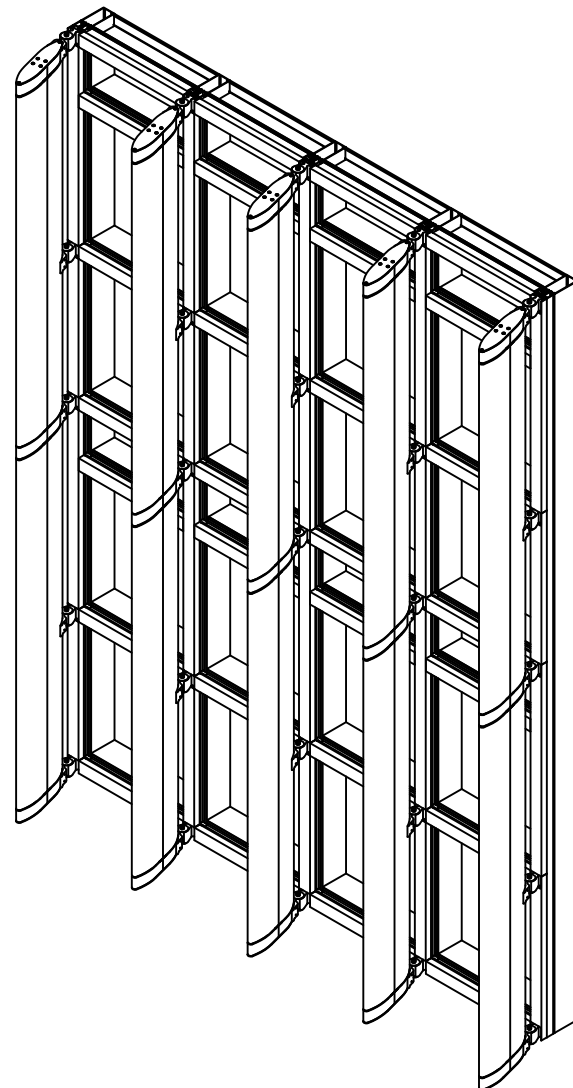


THE FOLLOWING INSTRUCTIONS ARE FOR THE INSTALLATION OF THE KAWNEER VERSOLEIL SINGLE BLADE SUNSHADE. USE THESE INSTRUCTIONS IN CONJUNCTION WITH 1600 SYSTEM 1 CURTAIN WALL INSTALLATION INSTRUCTIONS (162970) OR 1600 CAPTURED SCREW SPLINE CURTAIN WALL INSTALLATION INSTRUCTIONS (169970).

THE TERMS "INSIDE" AND "OUTSIDE" ARE USED EXTENSIVELY IN THESE INSTRUCTIONS. THESE TERMS DO NOT REFER TO THE INTERIOR AND EXTERIOR OF THE BUILDING. THE TERMS REFER TO THE RELATIVE POSITION OF WORK PERFORMED ON THE SUNSHADE FROM AN ELEVATION PERSPECTIVE. SIMILARLY, THE TERMS "RIGHT" AND "LEFT" ARE USED.

NOTE: A 3/4" PERIMETER JOINT IS REQUIRED FOR BOLT HEAD CLEARANCE AND BLADE INSTALLATION WHEN AN OVERHEAD SOFFIT CONDITION EXTENDS BEYOND THE BRACKET.

ELEVATION FRONT VIEW OF SINGLE BLADE SUNSHADE



END ASSEMBLY

DEAD-LOAD BRACKET

SPLICE ASSEMBLY

DEAD-LOAD BRACKET

END ASSEMBLY

**FRAME ASSEMBLY**

VERTICAL MULLIONS AND HORIZONTAL MEMBERS WILL BE LABELED DESIGNATING POSITION AND ORIENTATION. THESE DESIGNATIONS MUST BE IDENTIFIED AND MATCHED TO SHOP DRAWINGS BEFORE PROCEEDING WITH ANY ASSEMBLY. FAILURE TO PROPERLY ORIENT OR POSITION THE VERTICAL MULLIONS AND HORIZONTAL MEMBERS WILL PROHIBIT INSTALLATION OF THE SUNSHADE.

**INSTALL 162310 THERMAL BREAK**

SUNSHADES REQUIRE THE USE OF THREE TONGUE FILLERS (482265) AT EACH INTERMEDIATE HORIZONTAL LOCATION AND TWO TONGUE FILLERS (482265) AT EVERY HEAD/SILL LOCATION. CHECK SHOP DRAWINGS FOR POSITION OF BRACKETS. FOR EACH LOCATION OF A MOUNTING BRACKET, THE MULLIONS AND HORIZONTALS HAVE BEEN PREPPED WITH PILOT HOLES. RUN A BEAD OF SEALANT ALONG THE TONGUE FACE AND INTO THE SCREW BOSS AT EACH TONGUE FILLER LOCATION AND TAP TONGUE FILLER INTO PLACE. ALIGN THE LARGE CLEAR HOLE OF THE TONGUE FILLERS WITH THE PILOT HOLES IN THE MULLIONS AND HORIZONTALS. ADJUST TONGUE FILLER UNTIL HOLES ARE IN PROPER ALIGNMENT. TOOL EXCESS SEALANT.

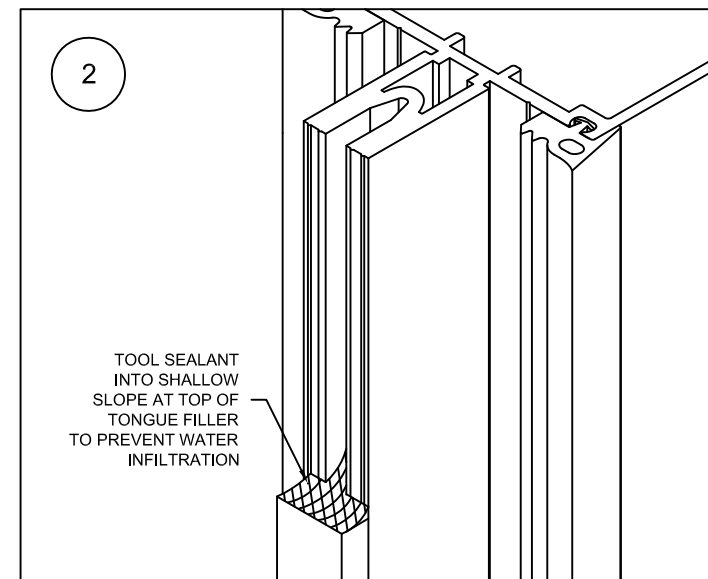
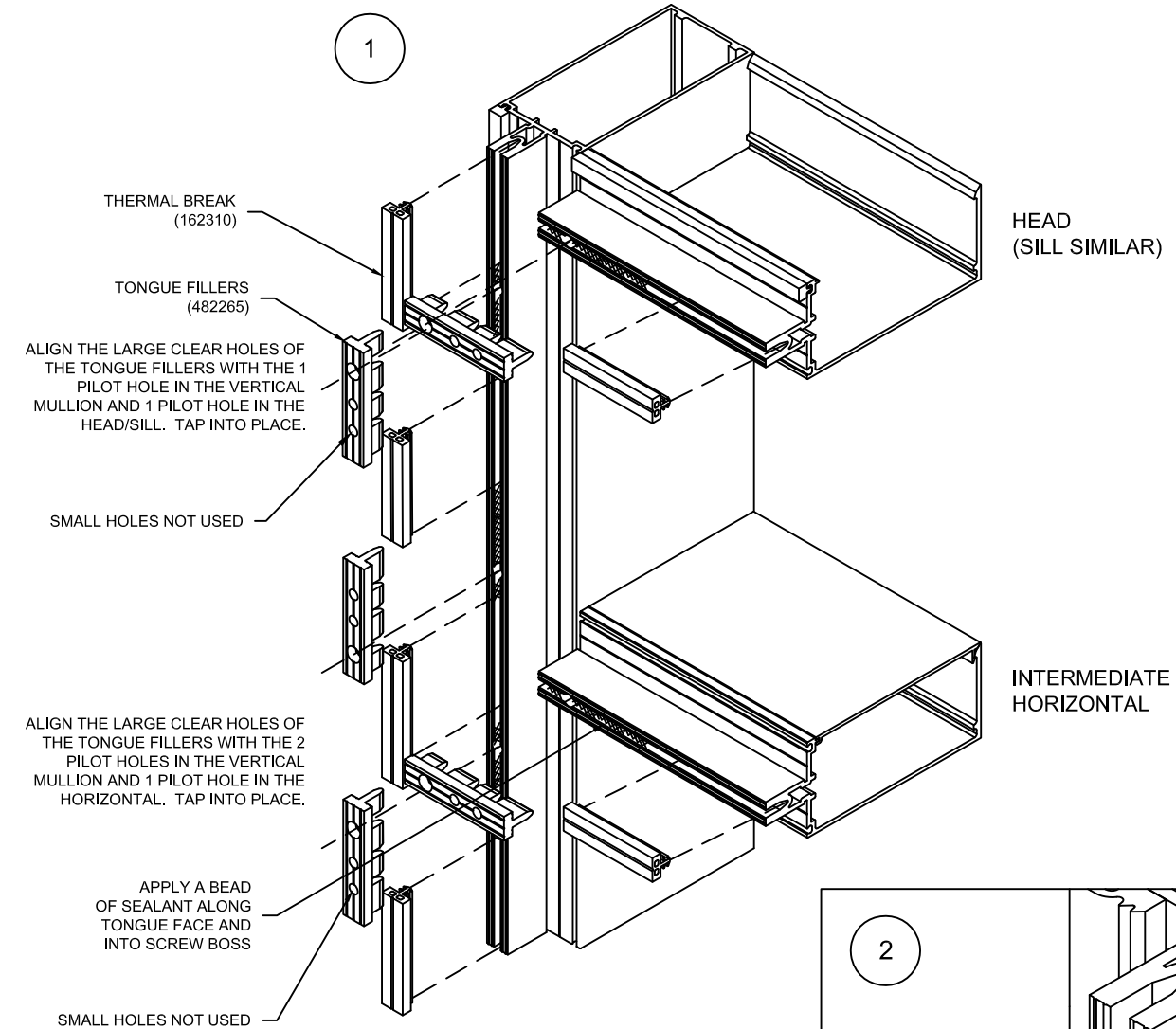
SEE DETAIL 1.

RUN A BEAD OF SEALANT ACROSS THE TOP OF THE TONGUE FILLER. SEE DETAIL 2. TOOL SEALANT INTO A SHALLOW SLOPE TO PREVENT POSSIBLE WATER INFILTRATION. BE SURE TO FILL THE GAP BETWEEN THE "NOSE" OF THE TONGUE FILLER AND THE GROOVE OF THE TONGUE. DO NOT ALLOW SEALANT TO CURE PRIOR TO INSTALLING THERMAL BREAK (162310).

INSERT THERMAL BREAK (162310) ALONG THE FULL LENGTH OF THE VERTICAL MULLION AND HORIZONTAL MEMBER TONGUE WITH THE EXCEPTION OF THE TONGUE FILLER LOCATIONS. SEAL BETWEEN TONGUE FILLER AND THERMAL BREAK AND TOOL SEALANT.

SEE DETAIL 1.

TRIM FLUSH AT TOP AND BOTTOM OF TONGUE FILLER. DO NOT OVERLAP.



VERSOLEIL VERTICAL SINGLE BLADE 1600 SYSTEM 1 / 1600 SS INSTALLATION INSTRUCTIONS

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**NOTE: BOLT AND LOCK NUT MUST BE TIGHTENED TO AN INITIAL TORQUE OF 200 IN-LBS (17 FT-LBS).**

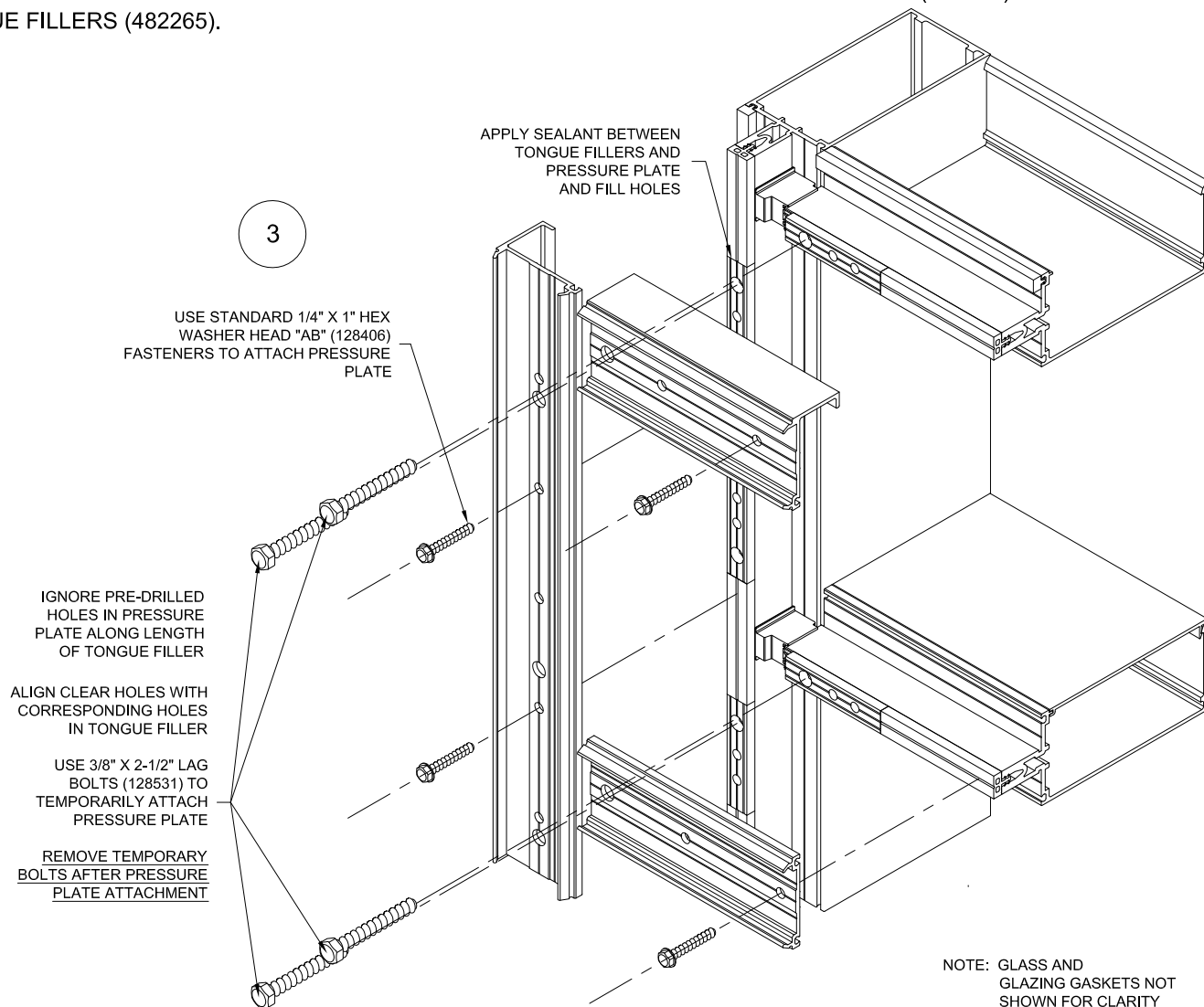
**INSTALL EXTERIOR PRESSURE PLATES**

PRESSURE PLATES WILL BE PREPPED FOR THE SUNSHADES PRIOR TO SHIPMENT TO THE JOB SITE. THE PREP WILL CONSIST OF THREE (3) CLEAR HOLES PER SUNSHADE MOUNTING BRACKET AT INTERMEDIATE HORIZONTAL LOCATIONS AND TWO (2) CLEAR HOLES AT HEAD/SILL LOCATIONS. CLEAR HOLES IN PRESSURE PLATE MUST BE ALIGNED WITH CORRESPONDING CLEAR HOLES IN TONGUE FILLER. SEE DETAIL 3.

APPLY SEALANT BETWEEN TONGUE FILLERS, JOINT PLUGS AND PRESSURE PLATES PRIOR TO PRESSURE PLATE INSTALLATION.

TO ENSURE ALIGNMENT, INSERT TWO (2) 3/8" LAG BOLTS (128531) THROUGH THE CENTER OF THE CLEAR HOLES IN BOTH THE TOP AND BOTTOM POSITION ON THE VERTICAL PRESSURE PLATE AND ONE (1) THROUGH THE CENTER OF THE CLEAR HOLE IN THE HORIZONTAL PRESSURE PLATE, AS TEMPORARIES (FINGER TIGHTEN).

INSTALL PRESSURE PLATES USING STANDARD 1/4" X 1" HEX WASHER HEAD TYPE AB SCREWS (128406). USE ONLY PRE-DRILLED HOLES IN PRESSURE PLATE AND APPLY ONLY THROUGH THERMAL BREAK (162310). DO NOT SCREW INTO TONGUE FILLERS (482265).



**EXTERIOR COVERS**

BEFORE INSTALLING THE EXTERIOR COVERS, ALL SUNSHADE MOUNTING SPACERS AND MOUNTING BRACKETS MUST BE INSTALLED.

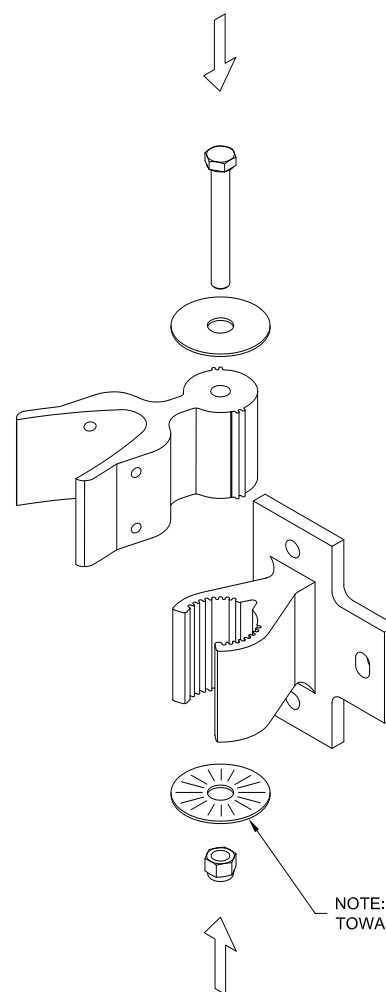
**BRACKET ASSEMBLY**

NOTE THAT THE VERTICAL SINGLE BLADE SUNSHADE CANNOT BE INSTALLED ON OUTSIDE SINGLE CORNER MULLION APPLICATIONS OR INSIDE CORNER LOCATIONS.

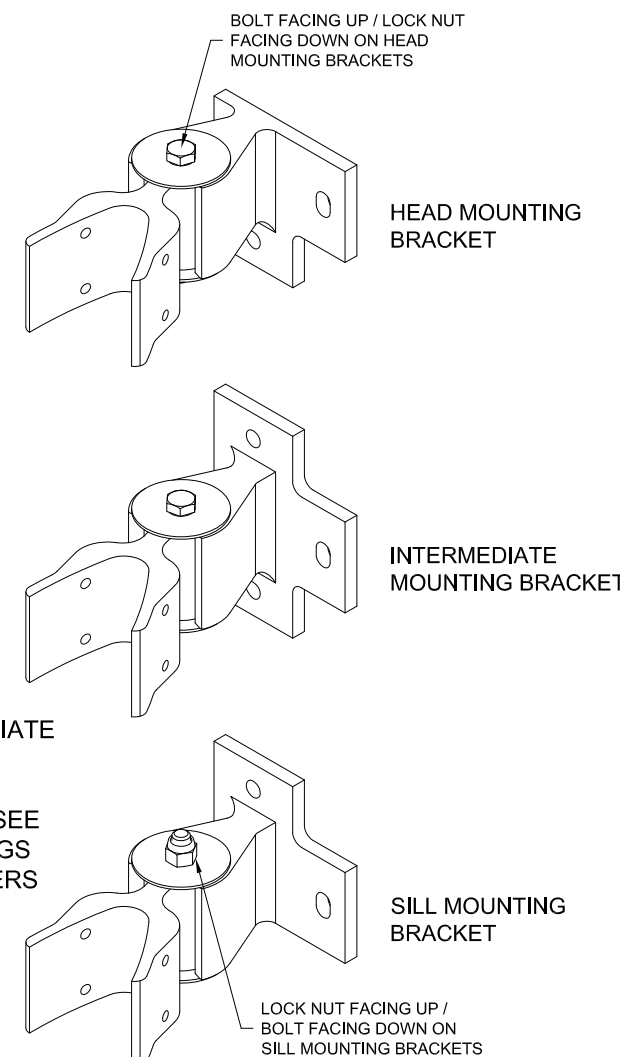
NOTE THAT VERTICAL SINGLE BLADE SUNSHADE INSTALLATION AT OUTSIDE DOUBLE CORNER MULLION IS SIMILAR TO INSTALLATION AT JAMB/INTERMEDIATE MULLIONS.

**STEP 1 - ASSEMBLING MOUNTING BRACKETS & ARMS**

ALIGN THE MOUNTING ARM (482262) AND THE MOUNTING BRACKET\* AT SPECIFIED ANGLE (REFERENCE BRACKET ANGLES ON NEXT PAGE). SLIDE MOUNTING ARM INTO MOUNTING BRACKET AND FASTEN TOGETHER USING 3/8"-16 X 3" HHMS (128916), 3/8" LOCK NUT (128392), AND TWO (2) SERRATED WASHERS (128979) - NOTE: RAISED SERRATIONS ON WASHERS SHOULD BE FACING THE BRACKET AND ARM.



LEFT JAMB AND INTERMEDIATE BRACKETS SHOWN FOR REFERENCE. OTHER BRACKETS ARE SIMILAR - SEE APPROVED SHOP DRAWINGS FOR PROPER PART NUMBERS AND ORIENTATION.

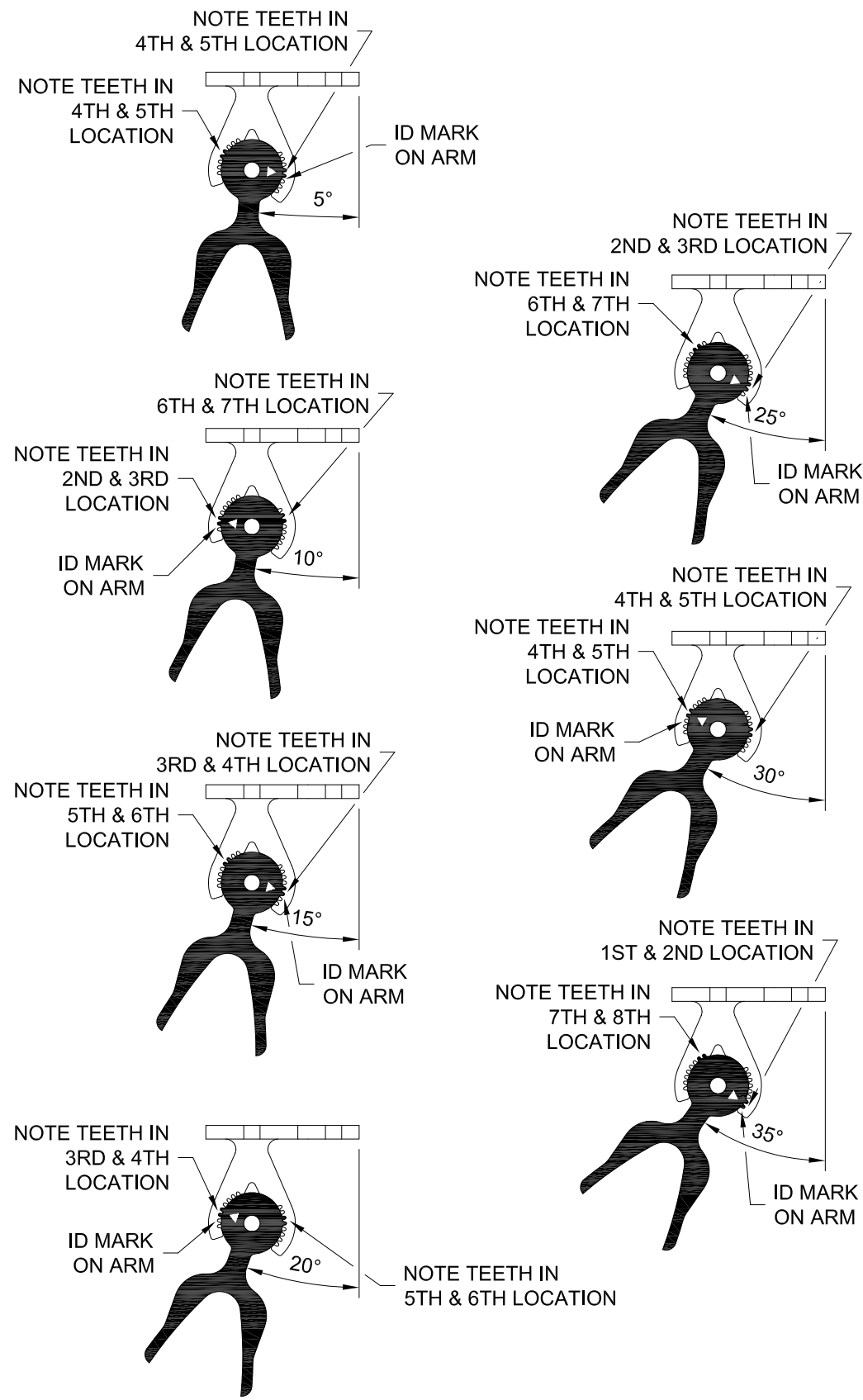
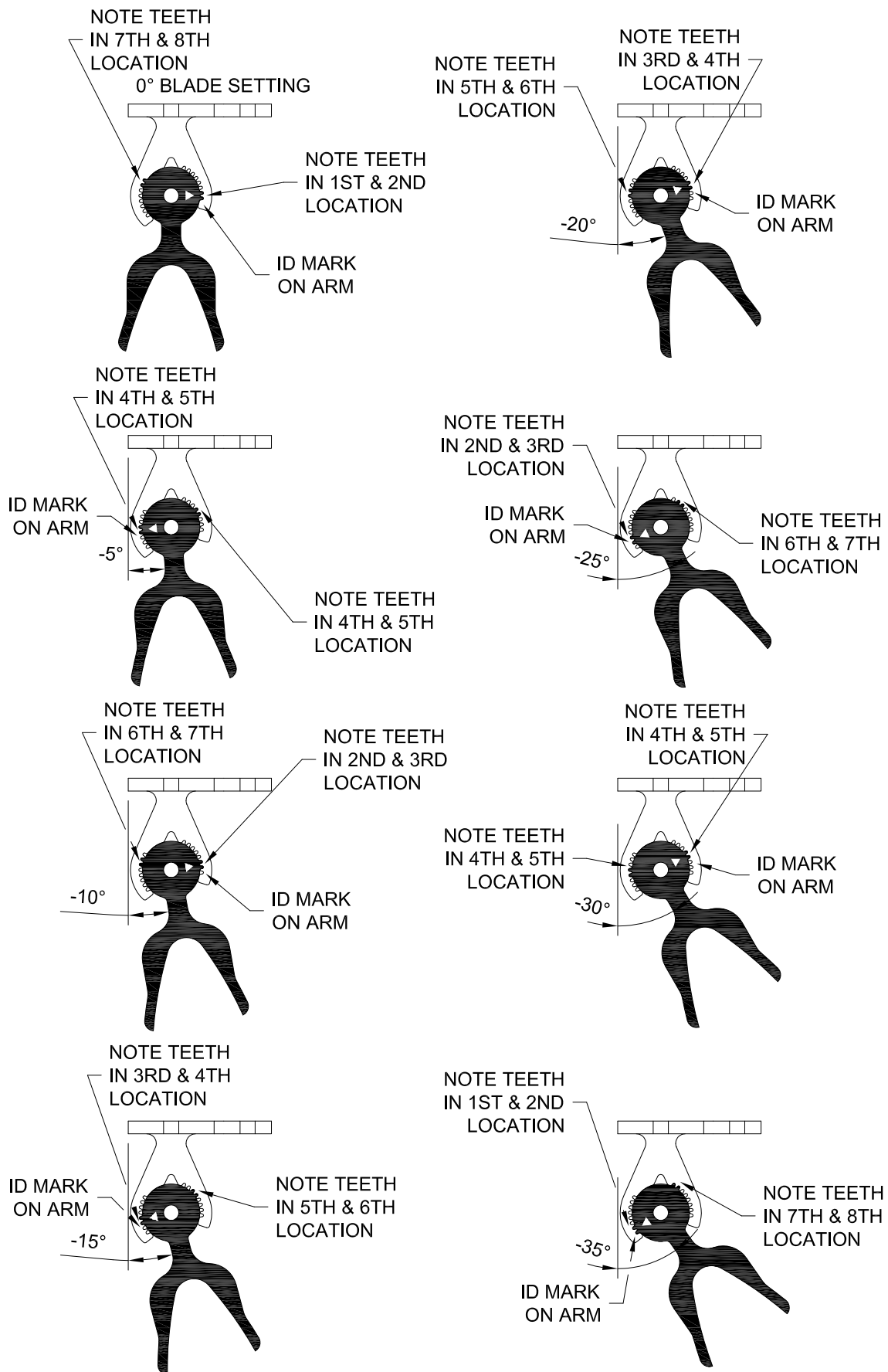


\* - MOUNTING BRACKET PART NUMBERS VARY DEPENDING ON LOCATION AND ANGLE OF VERTICAL SINGLE BLADE SUNSHADE, CHECK APPROVED SHOP DRAWINGS FOR PROPER PART NUMBERS AND ORIENTATION.

**KAWNEER** VERSOLEIL VERTICAL SINGLE BLADE  
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BRACKET ANGLES SHOWN BELOW.

CRITICAL NOTE: THE MOUNTING BRACKET AND ARM IS NOT SYMMETRICAL. PLEASE NOTE THE ID MARK LOCATION ON ARM AND ORIENTATION OF BRACKET.



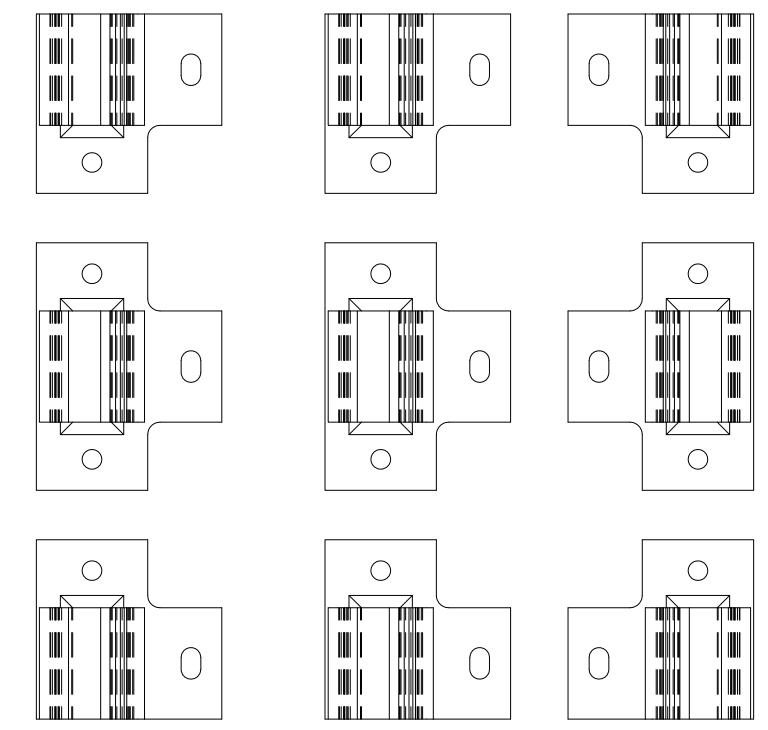
NOTE: ALL BRACKETS SHOWN ARE FOR LH OR INTERMEDIATE VERTICAL APPLICATION. IF RH IS NEEDED BRACKETS ARE DIFFERENT AND BASE SHOWN IS FLIPPED. LOCATION OF TEETH REMAINS CONSISTENT. REFER TO APPROVED SHOP DRAWINGS FOR APPROPRIATE BRACKET PART NUMBERS AND ORIENTATION

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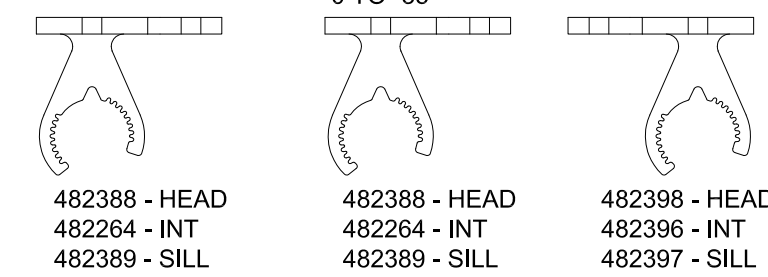
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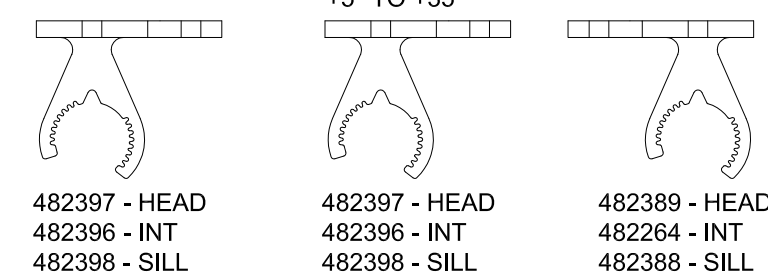
FRONT VIEW OF MOUNTING BRACKETS  
LEFT JAMB      INTERMEDIATE      RIGHT JAMB



TOP VIEW OF MOUNTING BRACKETS  
0 TO -35°



TOP VIEW OF MOUNTING BRACKETS  
+5° TO +35°



**KAWNEER**      **VERSOLEIL VERTICAL SINGLE BLADE**  
1600 SYSTEM 1 / 1600 SS  
INSTALLATION INSTRUCTIONS

**STEP 2 - ATTACH MOUNTING BRACKETS / SPACERS**

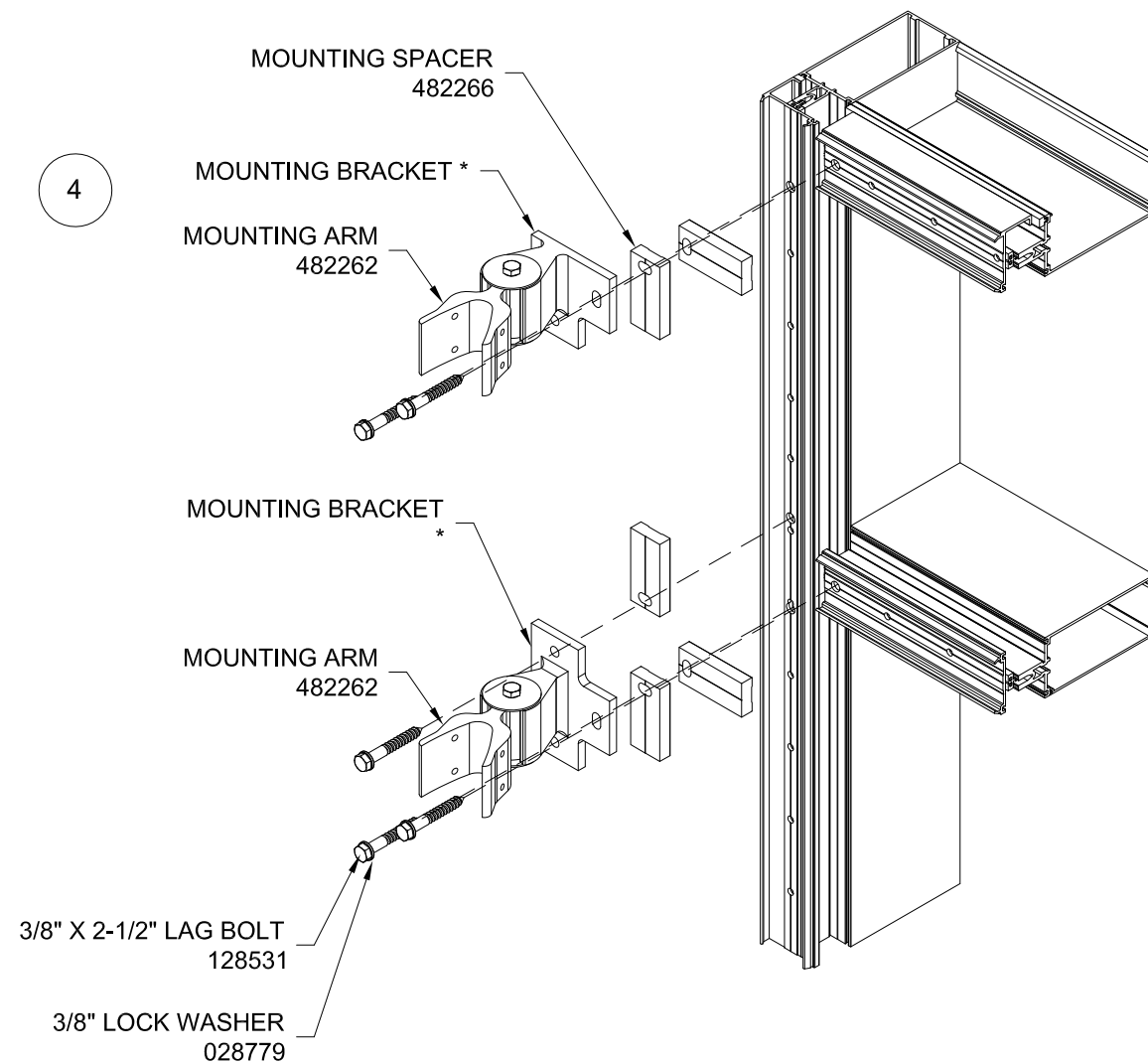
AT INTERMEDIATE HORIZONTAL:

ALIGN THE CLEAR HOLES IN THE MOUNTING SPACER (482266), AND MOUNTING BRACKET\* WITH THE CLEAR HOLES IN THE VERTICAL AND HORIZONTAL PRESSURE PLATES AND ATTACH WITH THREE (3) 3/8" X 2-1/2" LAG BOLTS (128531) AND LOCK WASHERS (028779). SEE DETAIL 4.

AT HEAD/SILL:

ALIGN THE CLEAR HOLES IN THE MOUNTING SPACER (482266) AND MOUNTING BRACKET\* WITH THE CLEAR HOLES IN THE VERTICAL AND HORIZONTAL PRESSURE PLATES AND ATTACH WITH TWO (2) 3/8" X 2-1/2" LAG BOLTS (128531) AND LOCK WASHERS (028779). SEE DETAIL 4.

THE THREAD FORMING ACTION OF THE 3/8" X 2-1/2" SCREWS WILL CAUSE ADDITIONAL RESISTANCE AND REQUIRE EXTRA FORCE TO SEAT. APPLY A WAX LUBRICANT TO THE THREADS BEFORE PROCEEDING.



**NOTE: DO NOT INCREASE HOLE SIZE TO FACILITATE INSTALLATION**

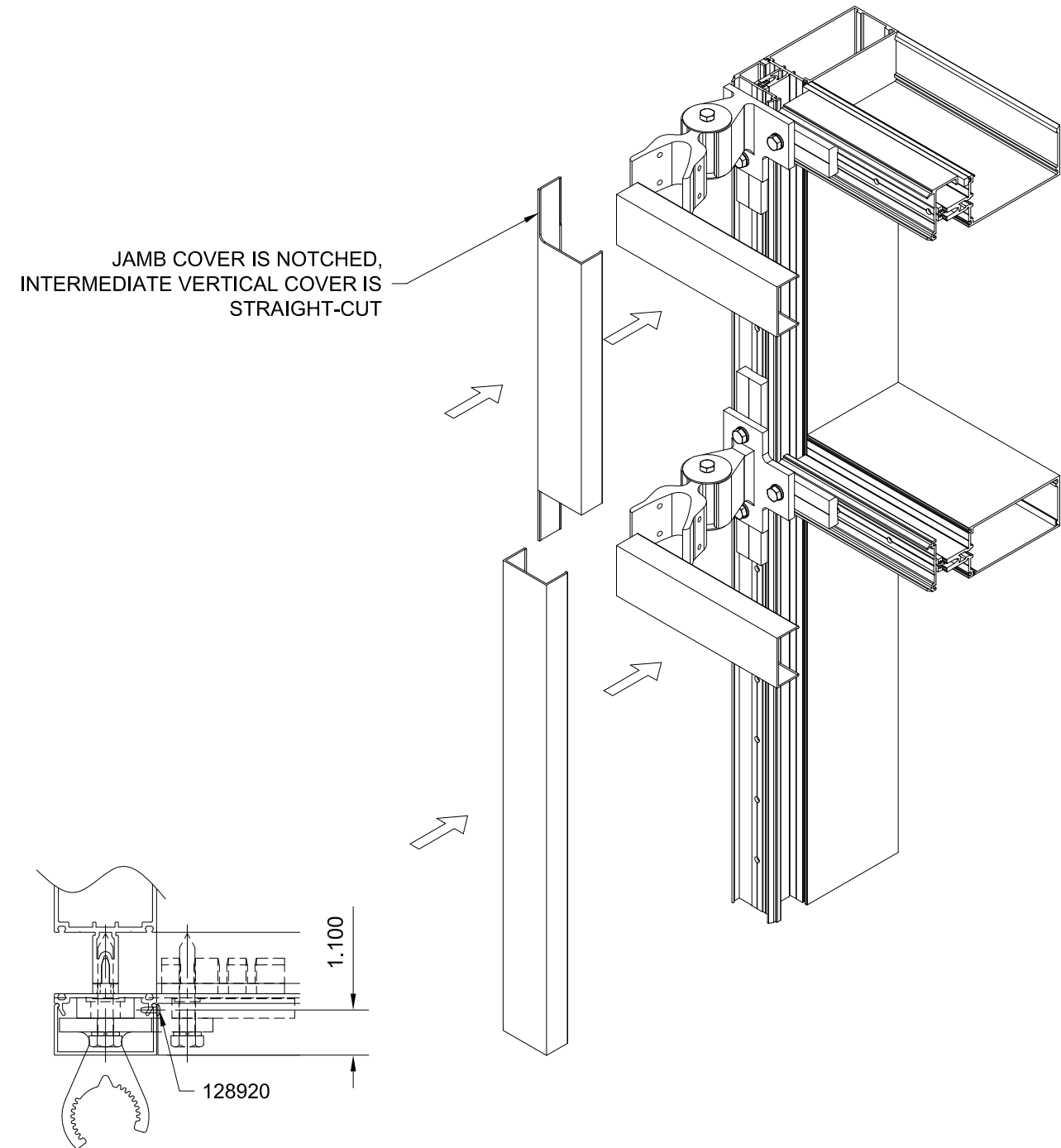
USING A STANDARD 9/16" SOCKET WRENCH, TIGHTEN TO A "SNUG" CONDITION. BE SURE THE SPRING TYPE LOCK WASHERS ARE COMPRESSED. THEN TIGHTEN APPROXIMATELY 1/2 TURN MORE.

ATTACH ALL MOUNTING BRACKETS BEFORE PROCEEDING TO STEP 3.

\* - MOUNTING BRACKET PART NUMBERS VARY DEPENDING ON LOCATION AND ANGLE OF VERTICAL SINGLE BLADE SUNSHADE, CHECK APPROVED SHOP DRAWINGS FOR PROPER PART NUMBERS AND ORIENTATION.

**STEP 3 - INSTALLING PRESSURE PLATE COVERS**

PRESSURE PLATE COVERS SHOULD BE INSTALLED AFTER THE MOUNTING BRACKETS / MOUNTING SPACERS ARE INSTALLED.



NOTE: PIN VERTICAL COVER AT THE SILL AND NEXT HORIZONTAL COVER ABOVE A VERTICAL EXPANSION SPLICE ONLY. DRILL A Ø0.106 (#36 DRILL) HOLE THROUGH COVER AND PRESSURE PLATE LEG AND FASTEN WITH A #6 X 3/8" PHTF "B" FASTENER (128920).

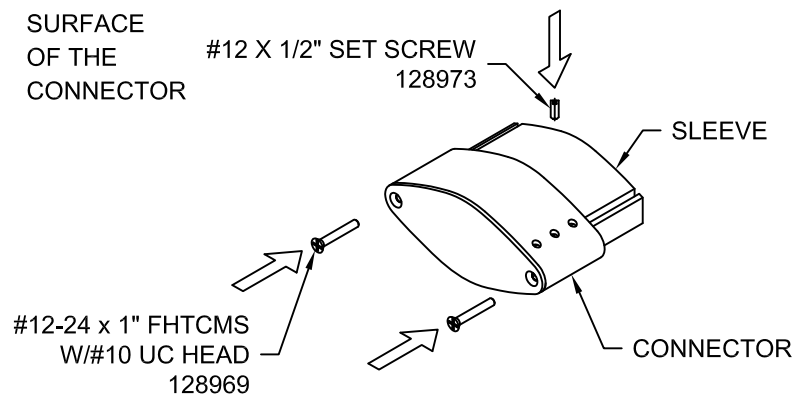
**KAWNEER** VERSOLEIL VERTICAL SINGLE BLADE  
1600 SYSTEM 1 / 1600 SS  
INSTALLATION INSTRUCTIONS

# BLADE, END & SPLICE ASSEMBLIES

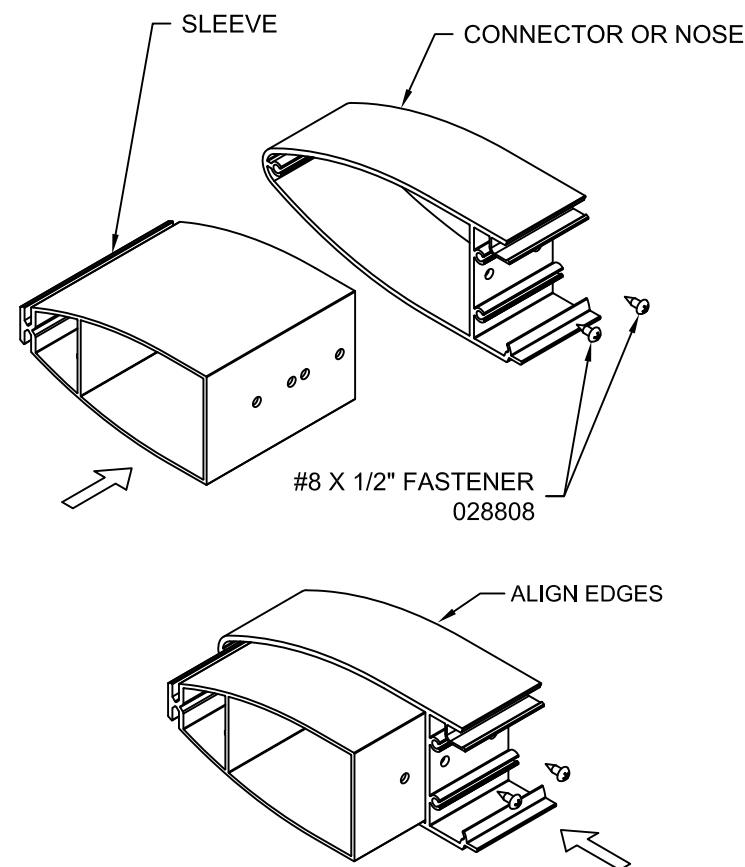
## STEP 4 - END ASSEMBLY

FOR ONE-PIECE-BLADE END ASSEMBLIES, ATTACH ENDCAP TO CONNECTOR USING TWO (2) #12-24 X 1" FHTCMS "F" W/#10 UC HEAD FASTENERS (128969)

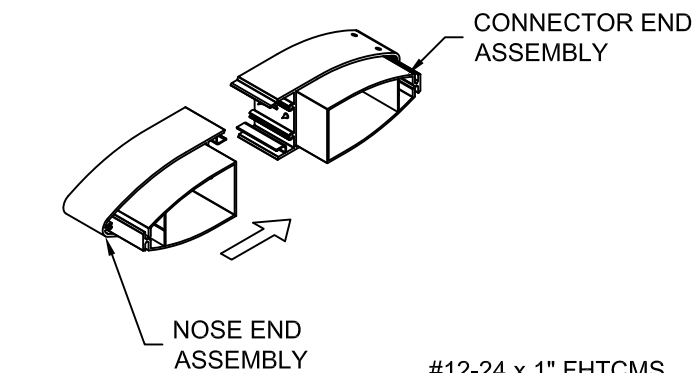
NOTE: SLIDE SLEEVE INTO CONNECTOR AND FASTEN WITH ONE (1) #12 X 1/2" SET SCREW (128973) AT CENTER HOLE. SET SCREW MUST NOT EXTEND BEYOND THE TOP SURFACE OF THE CONNECTOR



SLIDE SLEEVE INTO CONNECTOR OR NOSE, ALIGN MOUNTING HOLES AND SLEEVE EDGE WITH CONNECTOR OR NOSE EDGE. ATTACH USING TWO (2) #8 X 1/2" FASTENERS (028808).

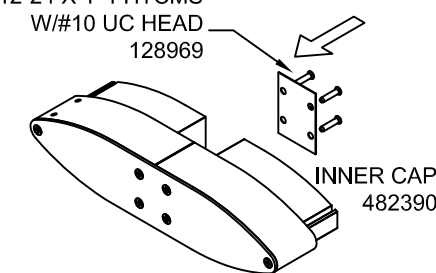


## SNAP CONNECTOR END ASSEMBLY (WITH HOLES) AND NOSE END ASSEMBLY TOGETHER



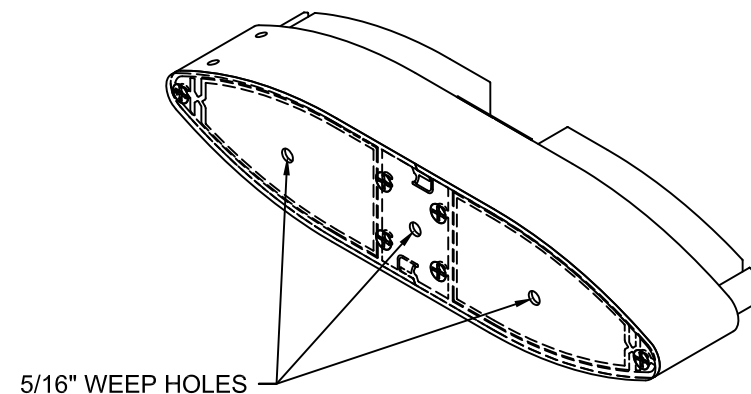
ATTACH ENDCAP TO END ASSEMBLY USING SIX (6) #12-24 X 1" FHTCMS "F" W/#10 UC HEAD (128969) FASTENERS

#12-24 X 1" FHTCMS W/#10 UC HEAD 128969



ATTACH INNER CAP (482390) TO END ASSEMBLY USING FOUR (4) #12-24 X 1" FHTCMS "F" W/#10 UC HEAD (128969) FASTENERS

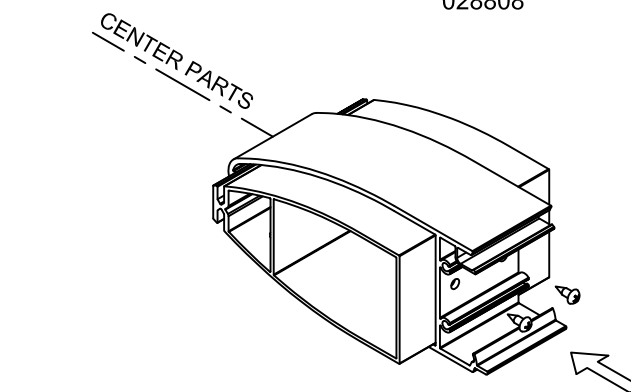
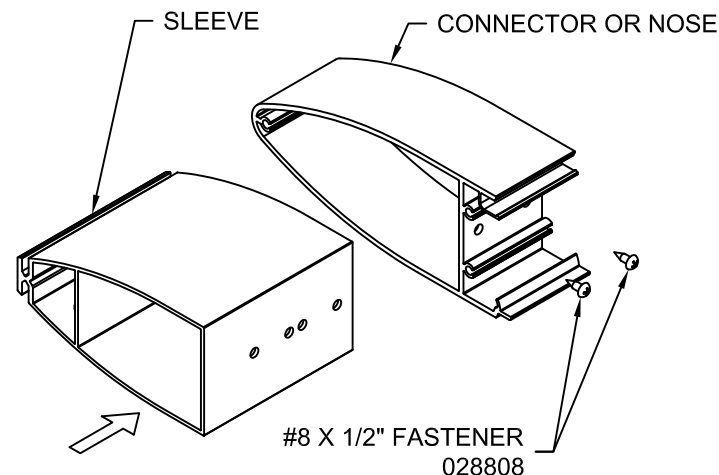
NOTE THAT END ASSEMBLY CAN BE USED AT LEFT JAMB OR RIGHT JAMB (BY ROTATING ASSEMBLY OVER)



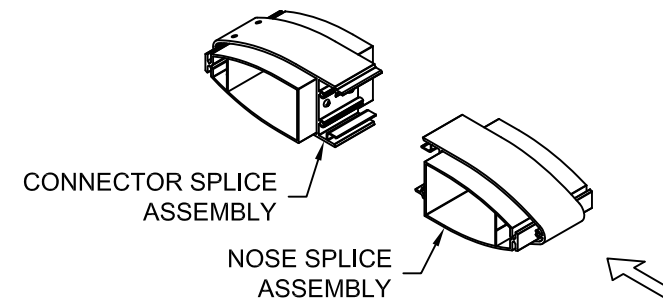
5/16" WEEP HOLES  
DRILL THREE (3) Ø5/16" WEEP HOLES IN THE ENDCAP OF THE BOTTOM END ASSEMBLY (ONE IN EACH "CHAMBER") TO DRAIN WATER WITHIN THE VERTICAL BLADES, LOCATED AS SHOWN. FOR ONE PIECE BOTTOM END ASSEMBLY, DRILL ONE (1) Ø5/16" WEEP HOLE AT CENTER OF ENDCAP.

## STEP 5 - SPLICE ASSEMBLY

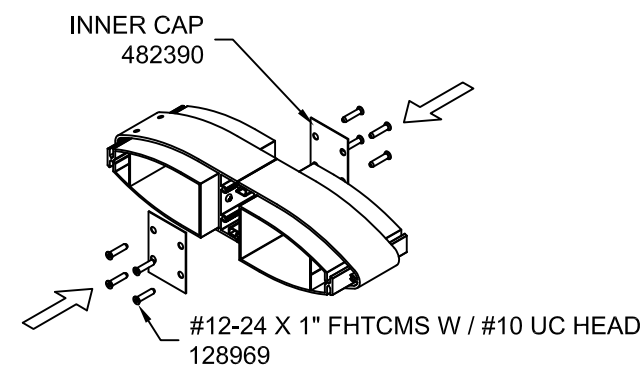
SLIDE SLEEVE INTO CONNECTOR OR NOSE. ALIGN SLEEVE CENTER ON CONNECTOR OR NOSE CENTER. ATTACH USING TWO (2) #8 X 1/2" FASTENERS (028808).



SNAP CONNECTOR SPLICE ASSEMBLY (WITH HOLES) AND NOSE SPLICE ASSEMBLY TOGETHER



ATTACH INNER CAP (482390) TO SPLICE ASSEMBLY ON EACH SIDE USING FOUR (4) #12-24 X 1" FHTCMS W/#10 UC HEAD (128969) FASTENERS



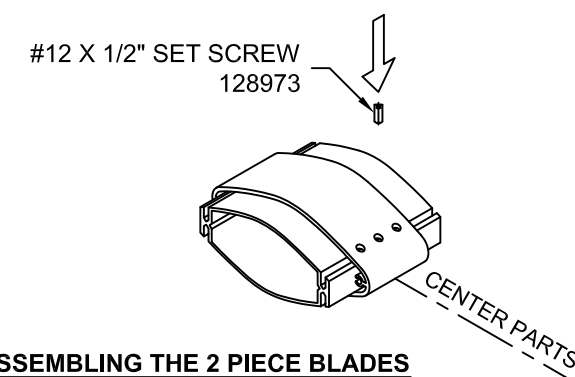
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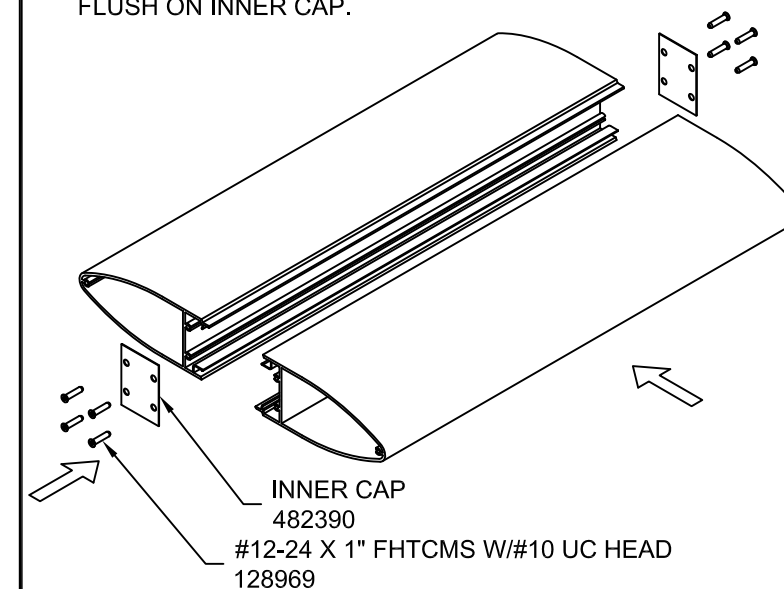
FOR ONE-PIECE-BLADE SPLICE ASSEMBLIES, CENTER SLEEVE IN CONNECTOR AND FASTEN WITH ONE (1) #12 X 1/2" SET SCREW (128973) AT CENTER HOLE.

NOTE: SET SCREW MUST NOT EXTEND BEYOND THE TOP SURFACE OF THE CONNECTOR.



## STEP 6 - ASSEMBLING THE 2 PIECE BLADES

SNAP TWO (2) BLADE PIECES TOGETHER (BLADES TO BE CUT TO LENGTH BEFORE ASSEMBLY). THEN ATTACH INNER CAP (482390) TO BLADE ASSEMBLY ON EACH SIDE USING FOUR (4) #12-24 X 1" FHTCMS W/#10 UC HEAD (128969) FASTENERS.. SCREW HEADS WILL NOT SIT FLUSH ON INNER CAP.



VERSOLEIL VERTICAL SINGLE BLADE  
1600 SYSTEM 1 / 1600 SS  
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# MOUNTING THE SUNSHADES

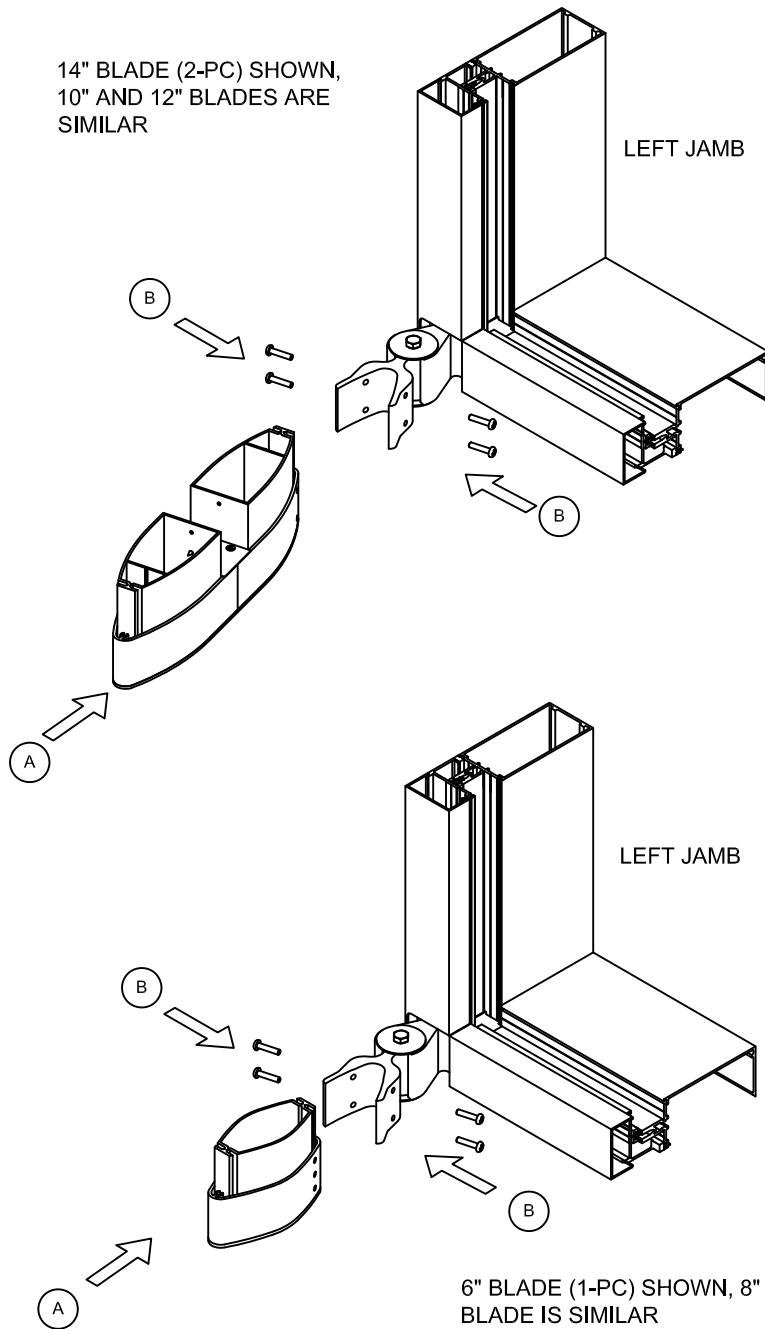
## STEP 7 - INSTALLING END / SPLICE / BLADE ASSEMBLIES

A) SLIDE BOTTOM END ASSEMBLY INTO MOUNTING ARM, ALIGNING MOUNTING HOLES IN BLADE AND MOUNTING HOLES IN MOUNTING ARM

B) FASTEN END ASSEMBLY TO MOUNTING ARM USING FOUR (4) #12 X 1" PHTF "AB" (128267) FASTENERS

LEFT JAMB SHOWN, INTERMEDIATE VERTICAL SIMILAR, RIGHT JAMB OPPOSITE

14" BLADE (2-PC) SHOWN, 10" AND 12" BLADES ARE SIMILAR

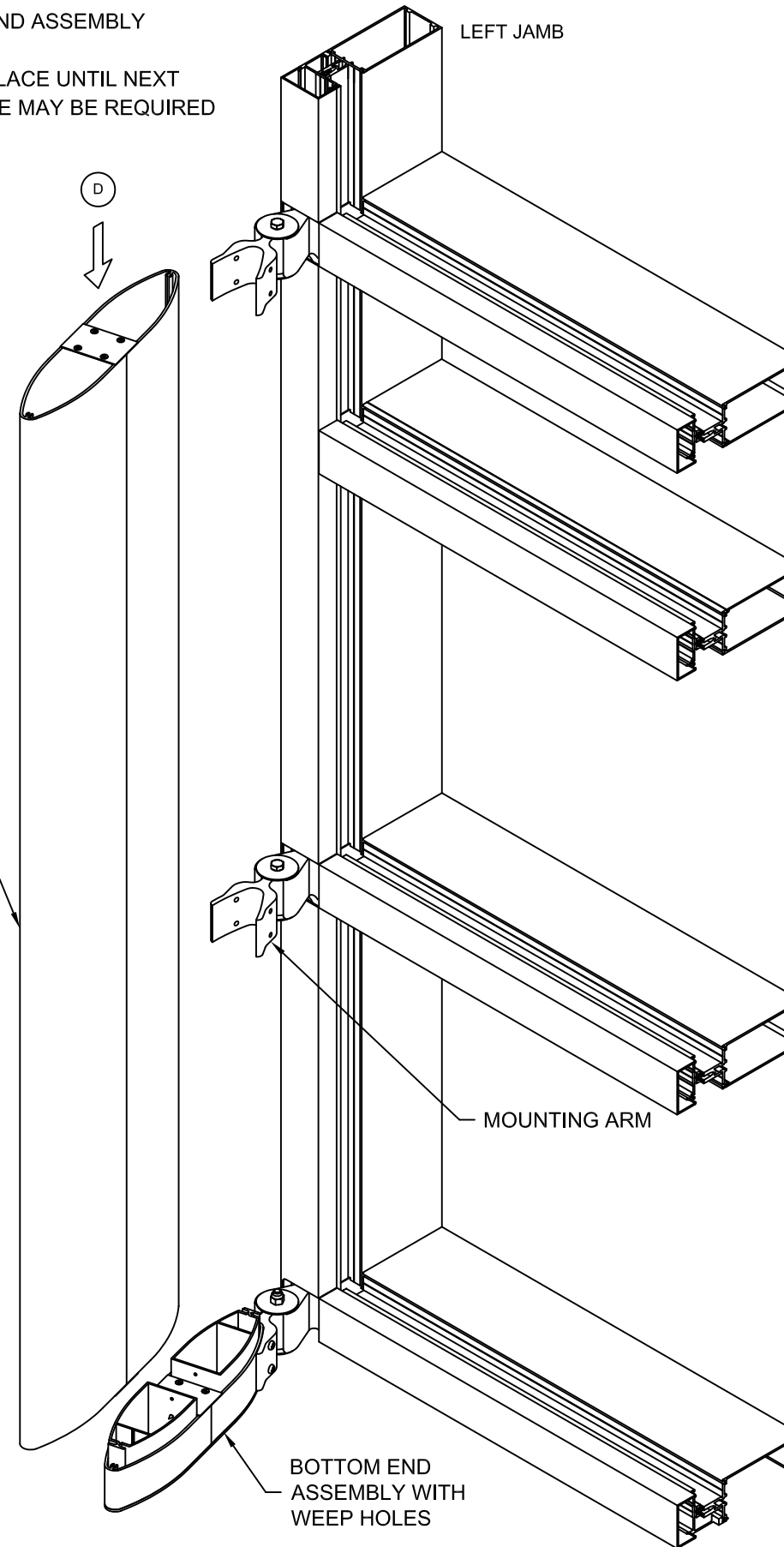


C) SLIDE BLADE (ASSEMBLY, IF TWO-PIECE) INTO MOUNTING ARMS

D) SLIDE BLADE OVER SLEEVE IN END ASSEMBLY

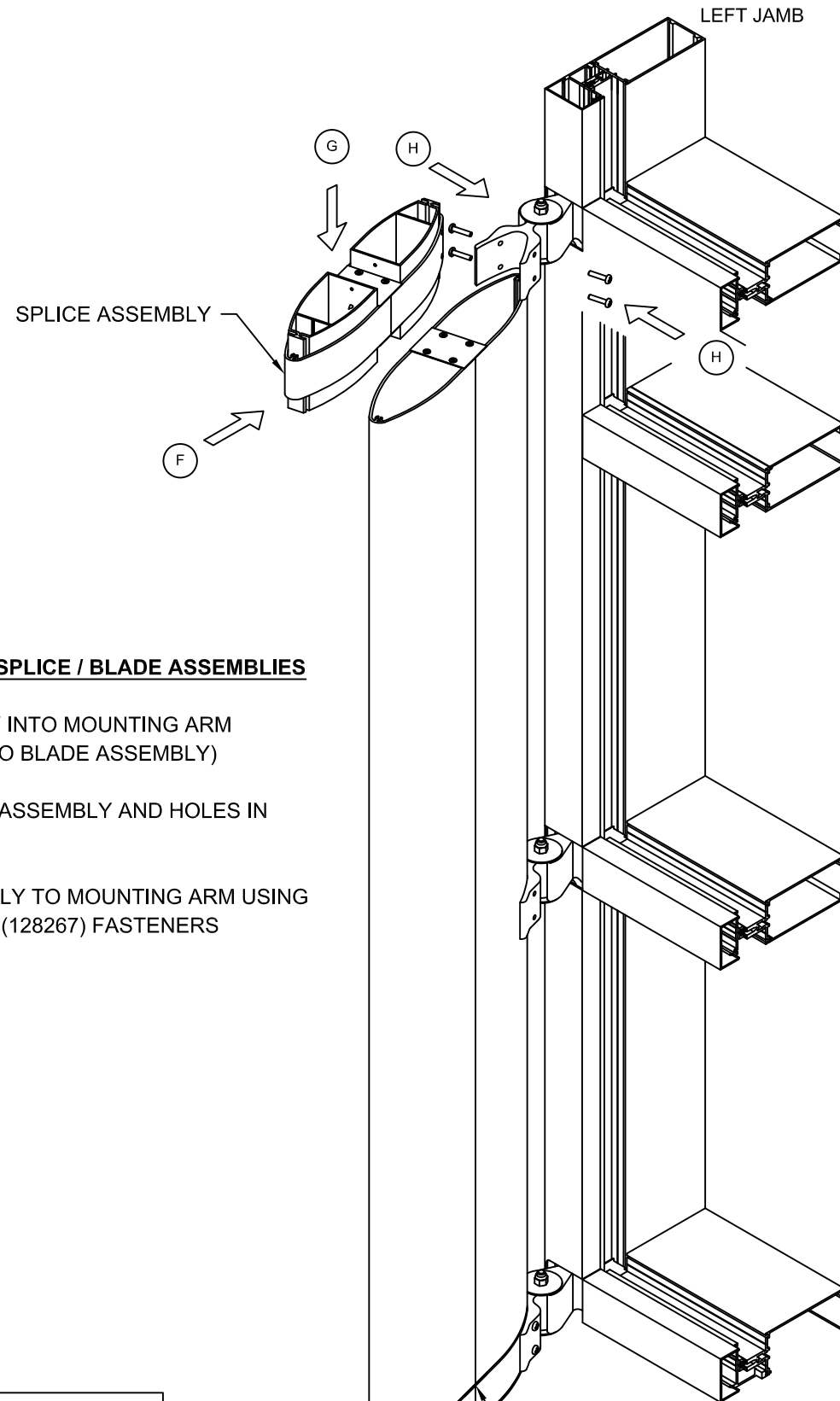
E) TEMPORARILY HOLD BLADE IN PLACE UNTIL NEXT STEP (F) IS COMPLETE. ASSISTANCE MAY BE REQUIRED

BLADE ASSEMBLY



LEFT JAMB SHOWN, INTERMEDIATE VERTICAL SIMILAR, RIGHT JAMB OPPOSITE

WHERE FRAMING IS SPLICED, ALLOW ADDITIONAL SPACE AT JOINT FOR FRAMING MOVEMENT, NOT TO EXCEED 1/2"



**STEP 7 - INSTALLING END / SPLICE / BLADE ASSEMBLIES**

F) SLIDE SPLICE ASSEMBLY INTO MOUNTING ARM  
(SLEEVE SHOULD SLIDE INTO BLADE ASSEMBLY)

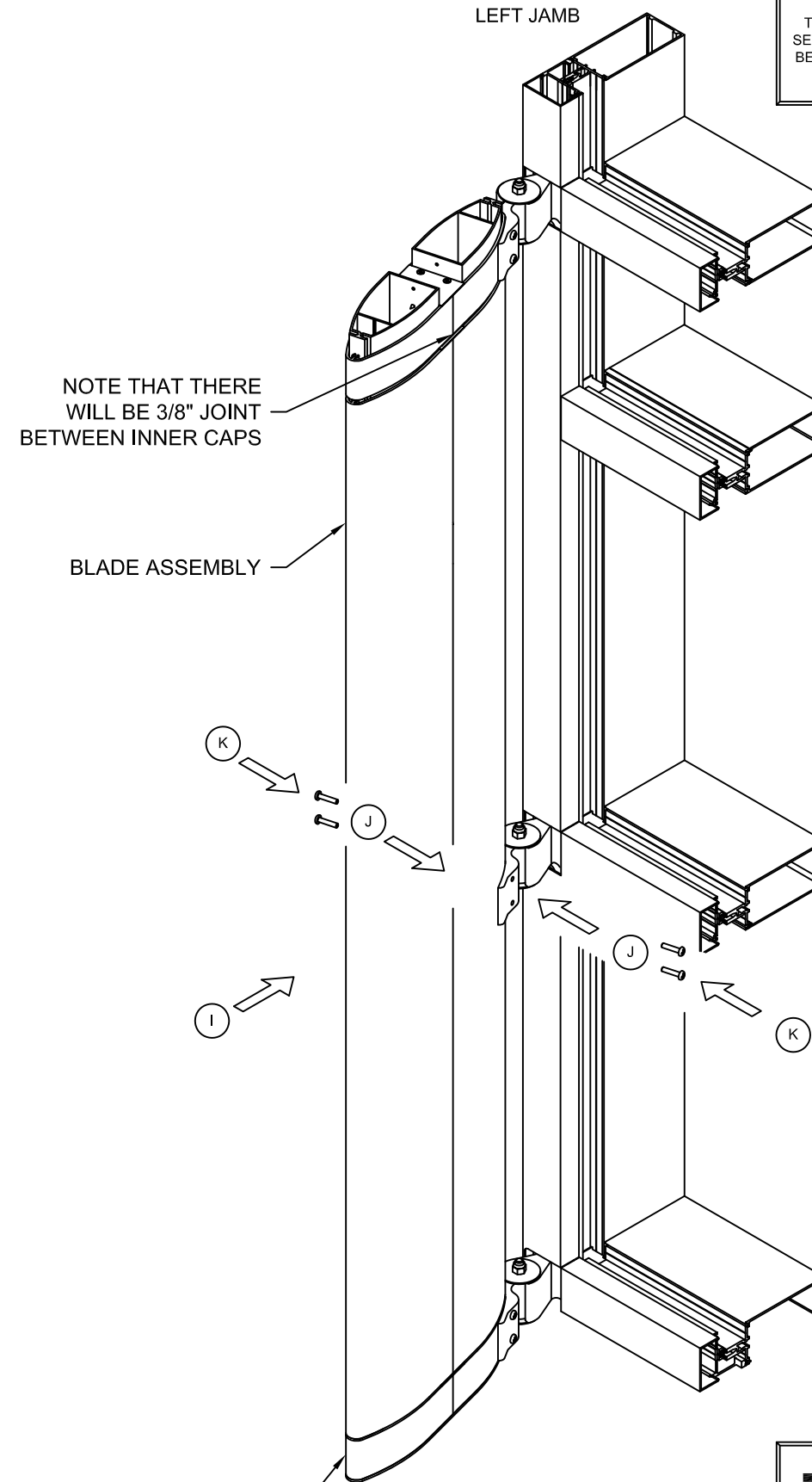
G) ALIGN HOLES IN SPLICE ASSEMBLY AND HOLES IN MOUNTING ARM

H) FASTEN SPLICE ASSEMBLY TO MOUNTING ARM USING FOUR (4) #12 X 1" PHTF "AB" (128267) FASTENERS

**NOTE: OPTIONAL**

IF REQUIRED, BOND BREAKER TAPE MAY BE PRE-INSTALLED ON SLEEVE AND SEALANT USED TO FILL JOINT - BY OTHERS

NOTE THAT THERE WILL BE A 3/8" JOINT BETWEEN INNER CAPS



NOTE THAT THERE WILL BE 3/8" JOINT BETWEEN INNER CAPS

BLADE ASSEMBLY

K

I

BOTTOM END ASSEMBLY WITH WEEP HOLES

**STEP 7 - INSTALLING END / SPLICE / BLADE ASSEMBLIES**

I) ENSURE BLADE IS SEATED FIRMLY AGAINST MOUNTING ARM

J) MATCH DRILL FOUR (4) Ø0.185 (#13 DRILL) HOLES INTO BLADE ASSEMBLY AT MOUNTING ARMS (TWO IN TOP AND TWO IN BOTTOM - DEPENDING ON THE ANGLE THAT THE BLADES ARE SET, A SMALL 90° DRILL MAY BE NEEDED)

K) FASTEN BLADE ASSEMBLY TO MOUNTING ARM USING FOUR (4) #12 X 1" PHTF "AB" (128267) FASTENERS

WHERE FRAMING IS SPLICED, ALLOW ADDITIONAL SPACE AT JOINT FOR FRAMING MOVEMENT, NOT TO EXCEED 1/2"

LEFT JAMB SHOWN, INTERMEDIATE VERTICAL SIMILAR, RIGHT JAMB OPPOSITE



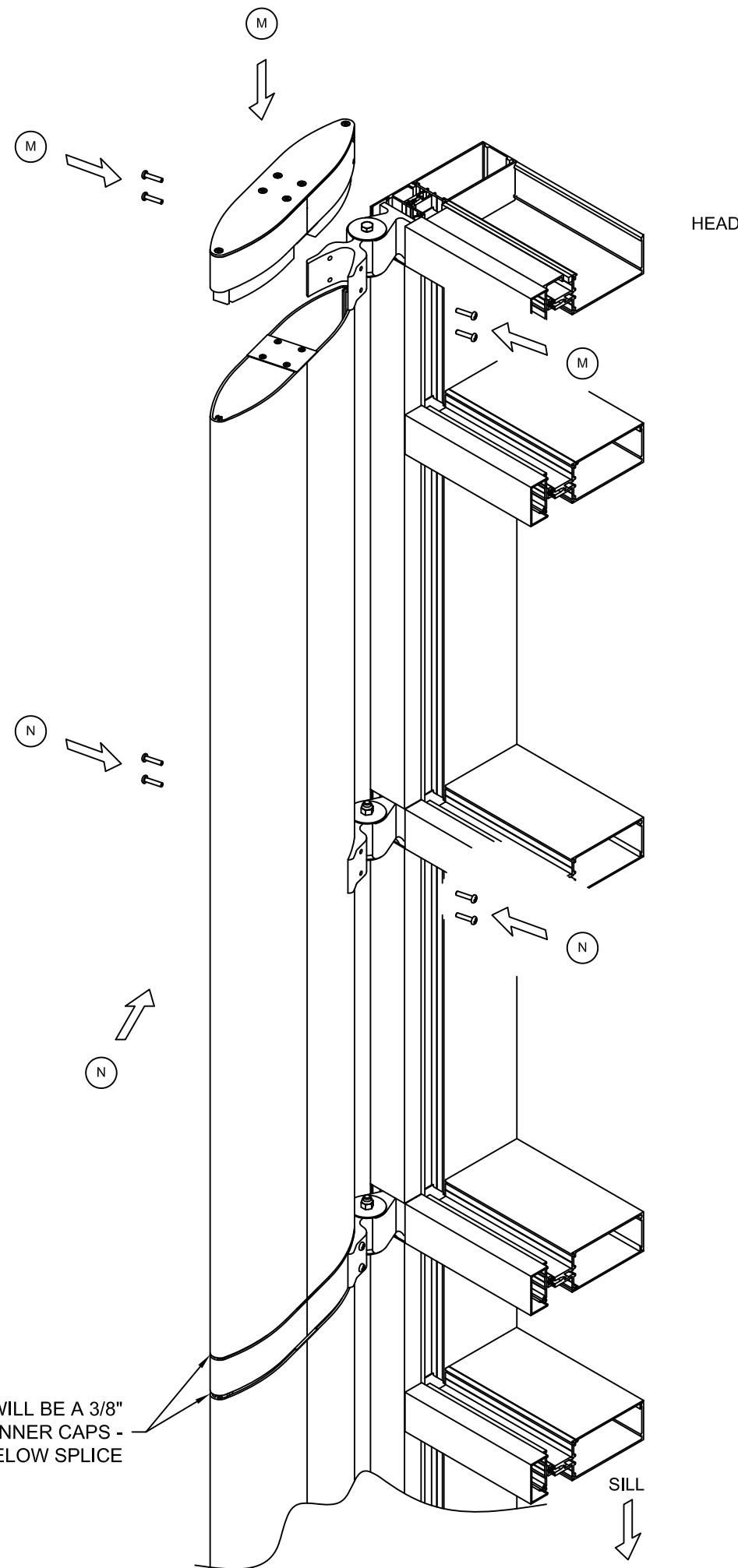
VERSOLEIL VERTICAL SINGLE BLADE  
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**STEP 7 - INSTALLING END / SPLICE / BLADE ASSEMBLIES**

CONTINUE TO INSTALL BLADE SECTIONS IN A SIMILAR FASHION AS PREVIOUSLY DESCRIBED.

M) SLIDE END ASSEMBLY INTO MOUNTING ARM (SLEEVE SHOULD SLIDE INTO BLADE ASSEMBLY) AND ALIGN MOUNTING HOLES IN END ASSEMBLY WITH THE MOUNTING HOLES IN THE MOUNTING ARM AND FASTEN USING FOUR (4) #12 X 1" PHTF "AB" (128267) FASTENERS

N) ENSURE LAST BLADE ASSEMBLY IS SEATED FIRMLY AGAINST MOUNTING ARM, MATCH DRILL FOUR (4) Ø0.185 (#13 DRILL) HOLES INTO BLADE ASSEMBLY AT MOUNTING ARMS (TWO IN TOP AND TWO IN BOTTOM) AND FASTEN USING FOUR (4) #12 X 1" PHTF "AB" (128267) FASTENERS



**NOTE:**  
END ASSEMBLY MAY NEED TO BE PRE-INSTALLED INTO BLADE ASSEMBLY IF THERE IS AN OVERHANG PRESENT.  
VERIFICATION THAT THERE IS ENOUGH ROOM BETWEEN OVERHANG AND END ASSEMBLY FOR SLIP-JOINT WITH SLEEVE IS REQUIRED.

NOTE THAT THERE WILL BE A 3/8" JOINT BETWEEN INNER CAPS - ABOVE AND BELOW SPLICE

WHERE FRAMING IS SPLICED, ALLOW ADDITIONAL SPACE AT JOINT FOR FRAMING MOVEMENT, NOT TO EXCEED 1/2"

LEFT JAMB SHOWN, INTERMEDIATE VERTICAL SIMILAR, RIGHT JAMB OPPOSITE