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

THE FOLLOWING INSTRUCTIONS ARE FOR THE INSTALLATION OF THE KAWNEER VERSOLEIL SINGLE BLADE SUNSHADE. USE THESE INSTRUCTIONS IN CONJUNCTION WITH 1600 SYSTEM 5 CURTAIN WALL INSTALLATION INSTRUCTIONS (166972).

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 THE BUILDING CONDITION EXTENDS BEYOND THE BRACKET.

### PREPARING THE VERTICAL MULLIONS BEFORE HANGING THE SUNSHADES

COMPLETE ALL STEPS AS OUTLINED IN THE STANDARD 1600 SYSTEM 5 INSTALLATION INSTRUCTION (166972). PLEASE NOTE THE FOLLOWING MODIFICATIONS. IF NO MODIFICATIONS ARE LISTED BELOW, FOLLOW THE STANDARD 1600 SYSTEM 5 INSTALLATION INSTRUCTIONS.

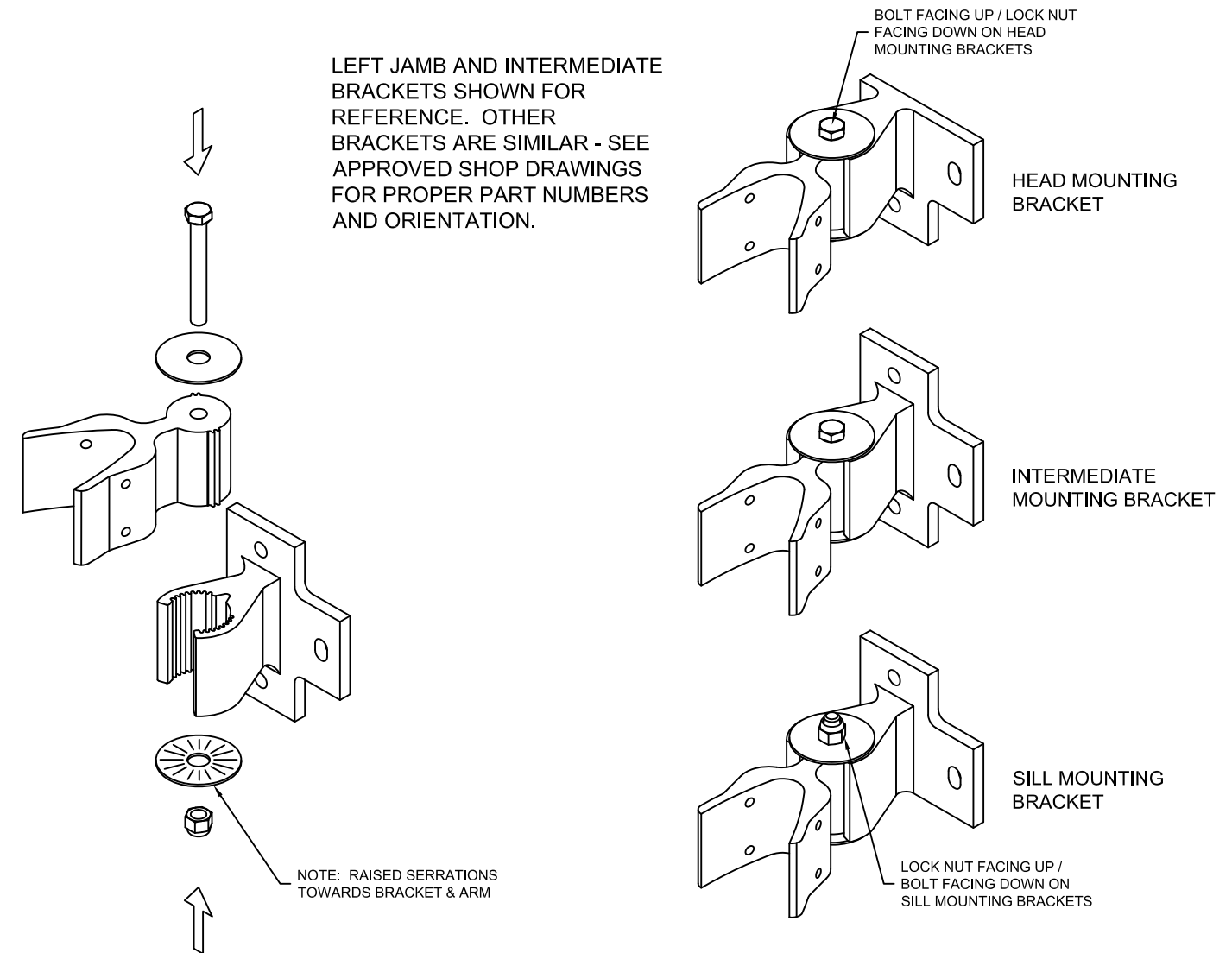
### BRACKET ASSEMBLY

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

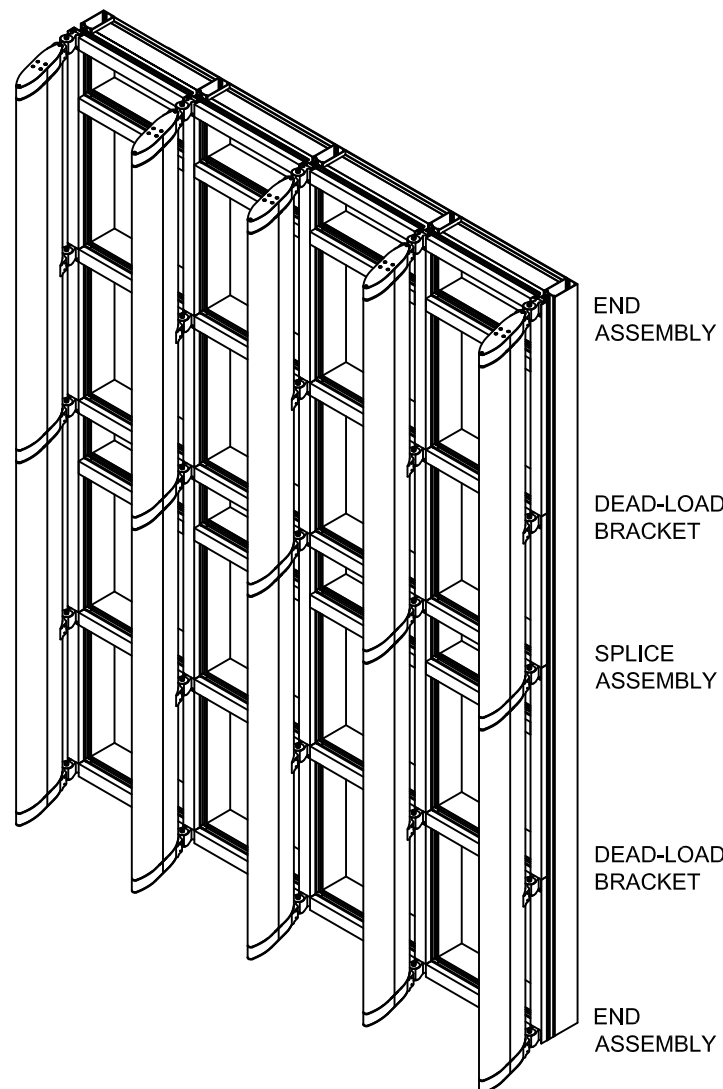
### STEP 1 - ASSEMBLING MOUNTING BRACKETS & ARMS

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.



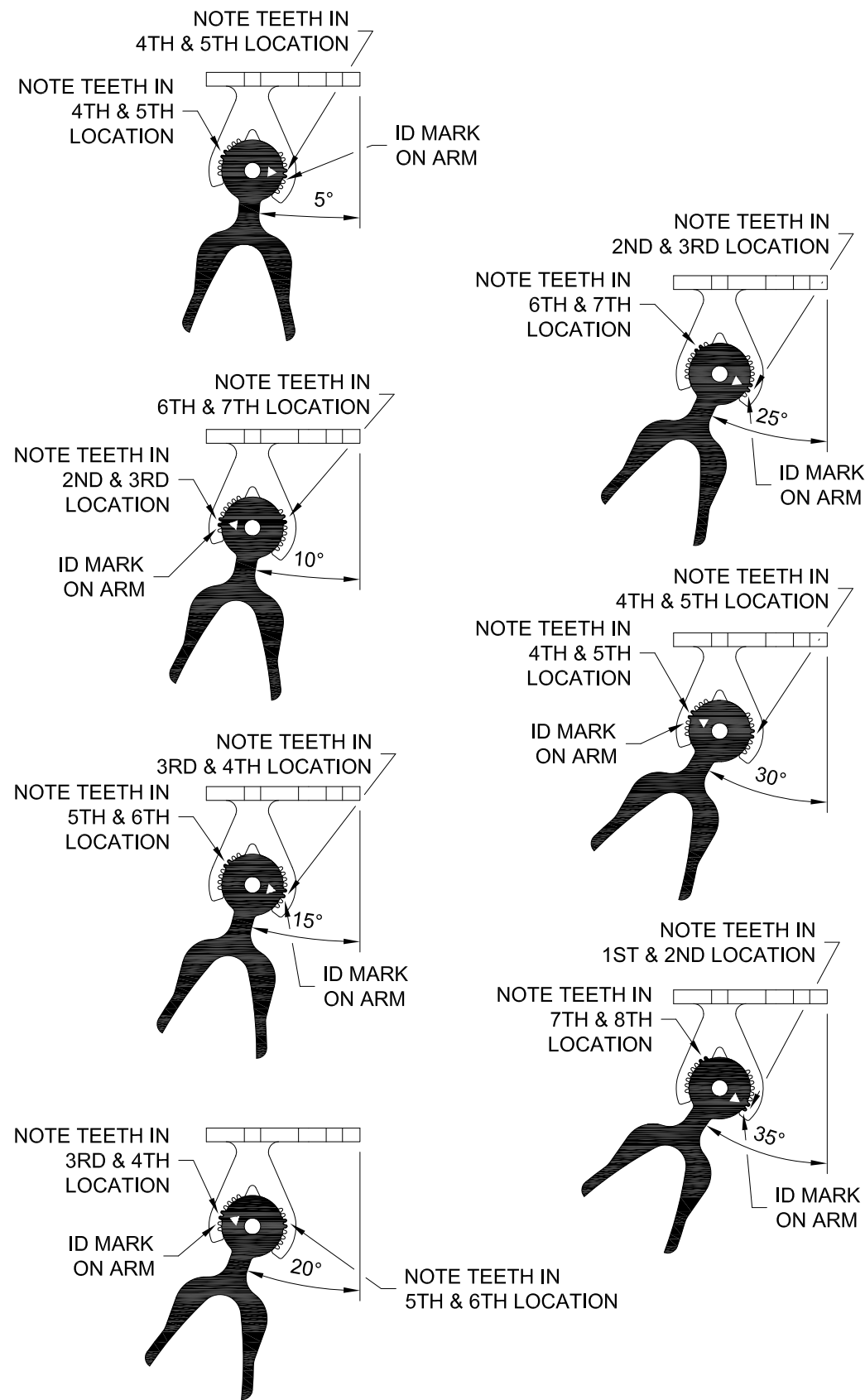
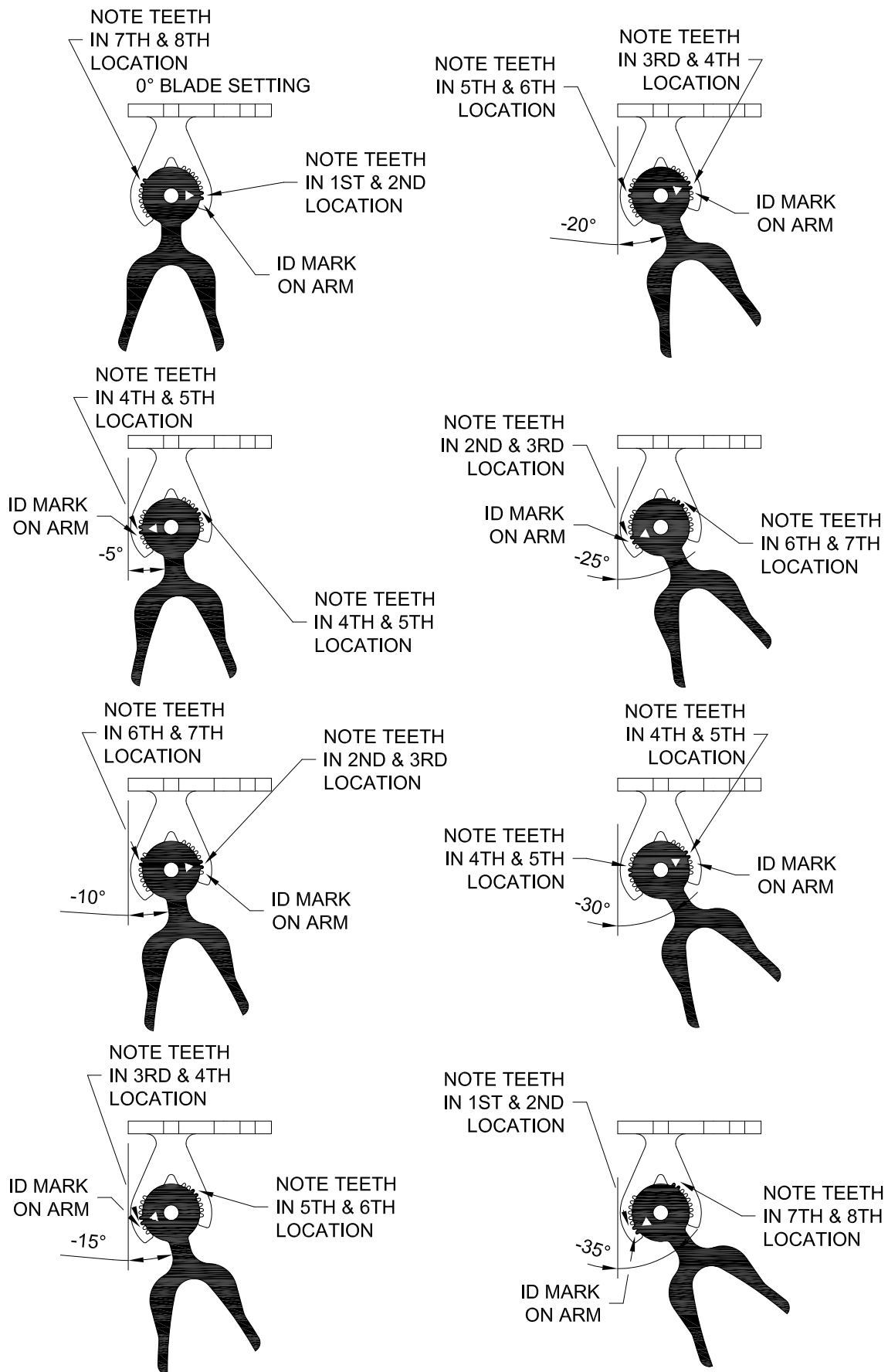
ELEVATION FRONT VIEW OF SINGLE BLADE SUNSHADE



\* - 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.

BRACKET ANGLES SHOWN BELOW.

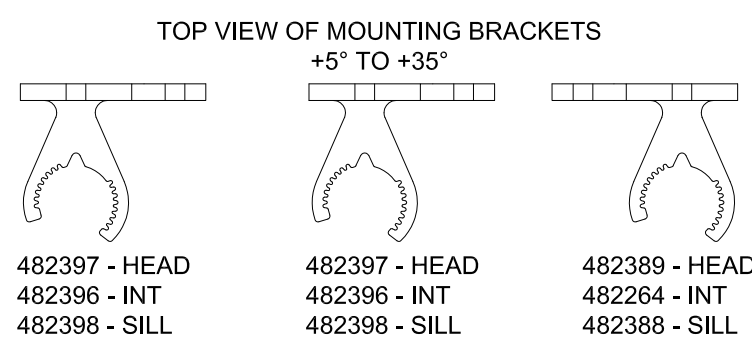
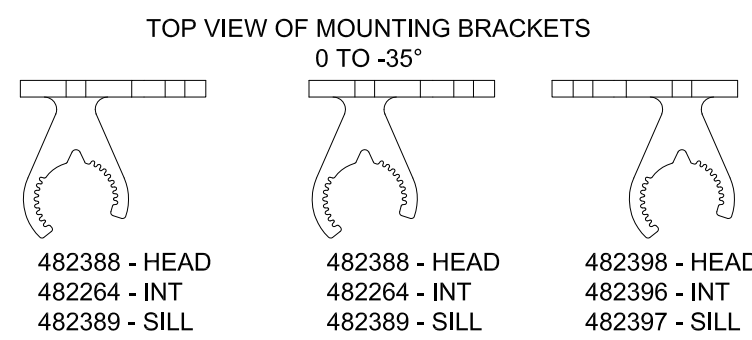
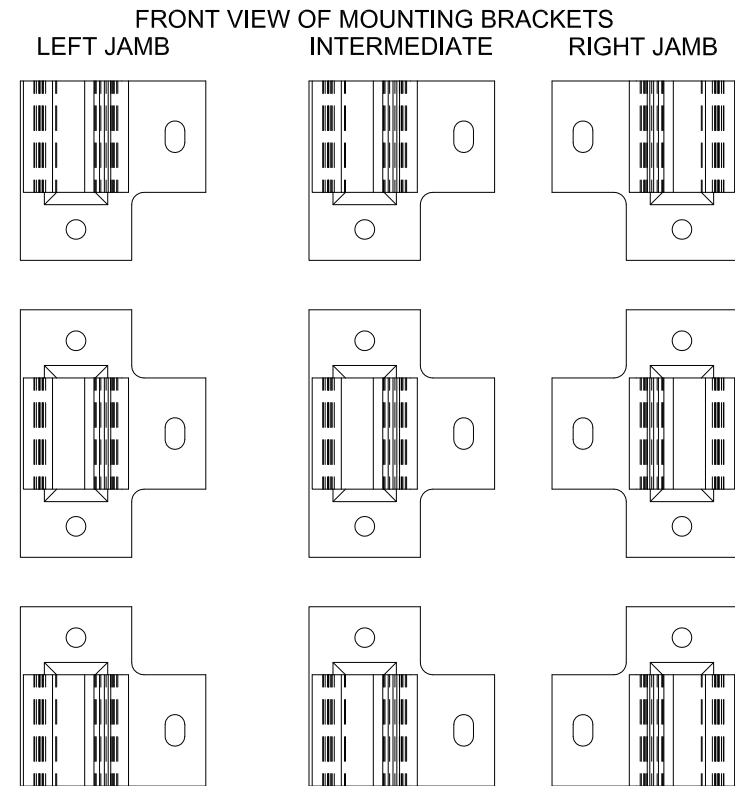
CRITICAL NOTE: THE MOUNTING BRACKET AND ARM IS NOT SYMMETRICAL. PLEASE NOTE THE ID MARK LOCATION ON ARM AND ORIENTATION OF BRACKET.



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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**KAWNEER** VERSOLEIL VERTICAL SINGLE BLADE 1600 SYSTEM 5 INSTALLATION INSTRUCTIONS

**MODIFY STEP - FRAME ASSEMBLY**

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

**STEP 2 - ATTACH BRACKETS/SPACERS AND DEEP COVER PINNING CLIPS**

INSTALL DEEP COVER PINNING CLIP (166315) AT THE SILL AND NEXT HORIZONTAL COVER ABOVE A VERTICAL EXPANSION SPLICE ONLY. CRIMP INTO PLACE AT CLIP BOTTOM.

INSTALL ALL THERMAL CLIPS (165301) PRIOR TO APPLYING BRACKETS.

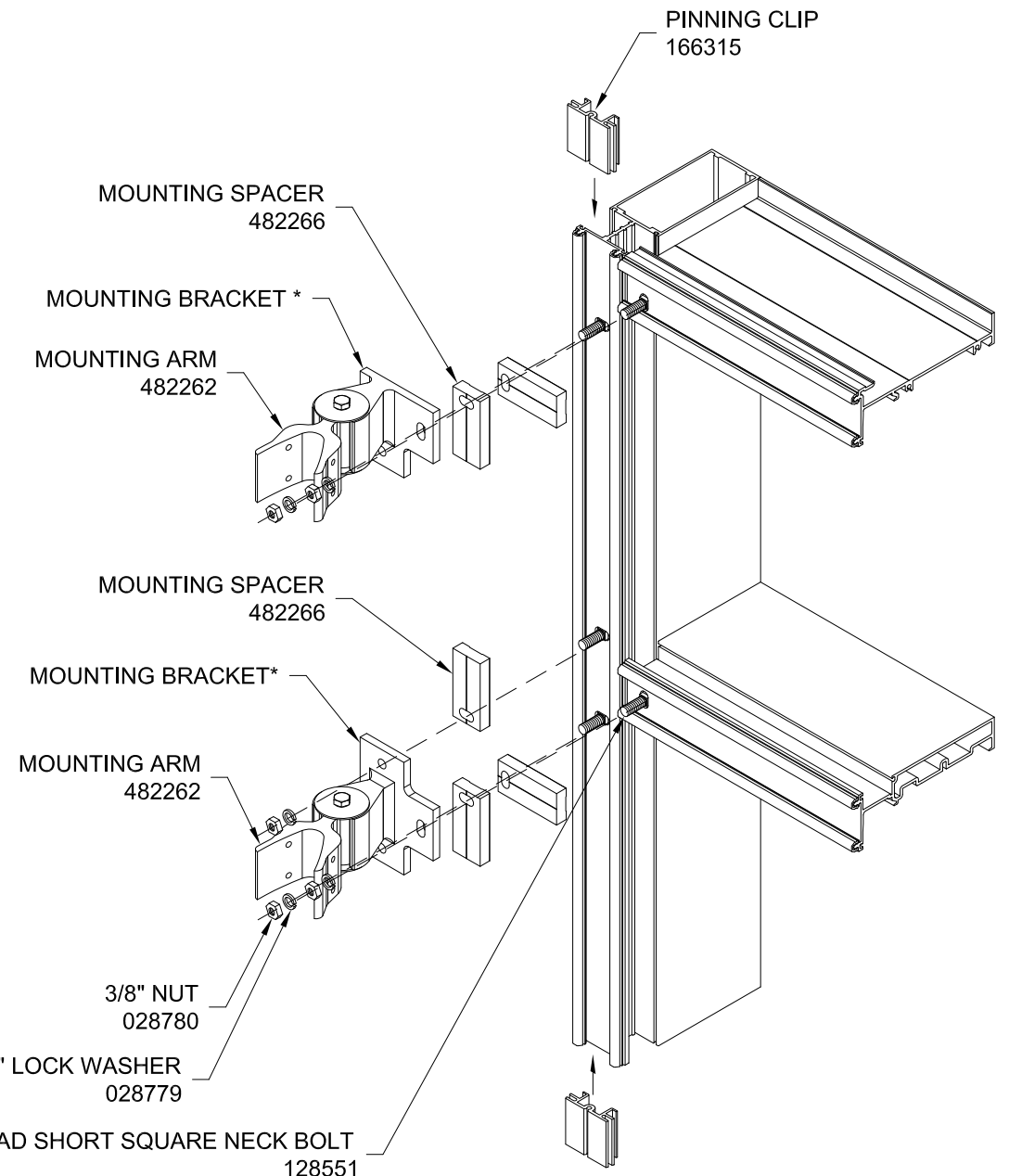
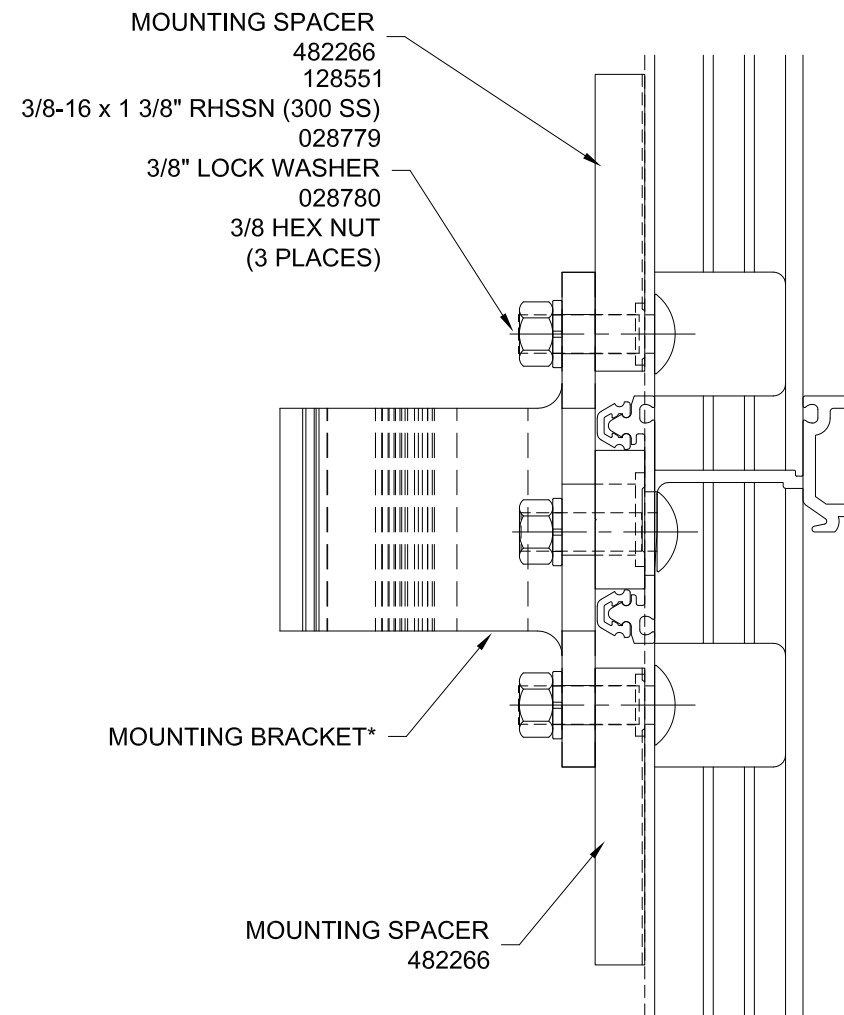
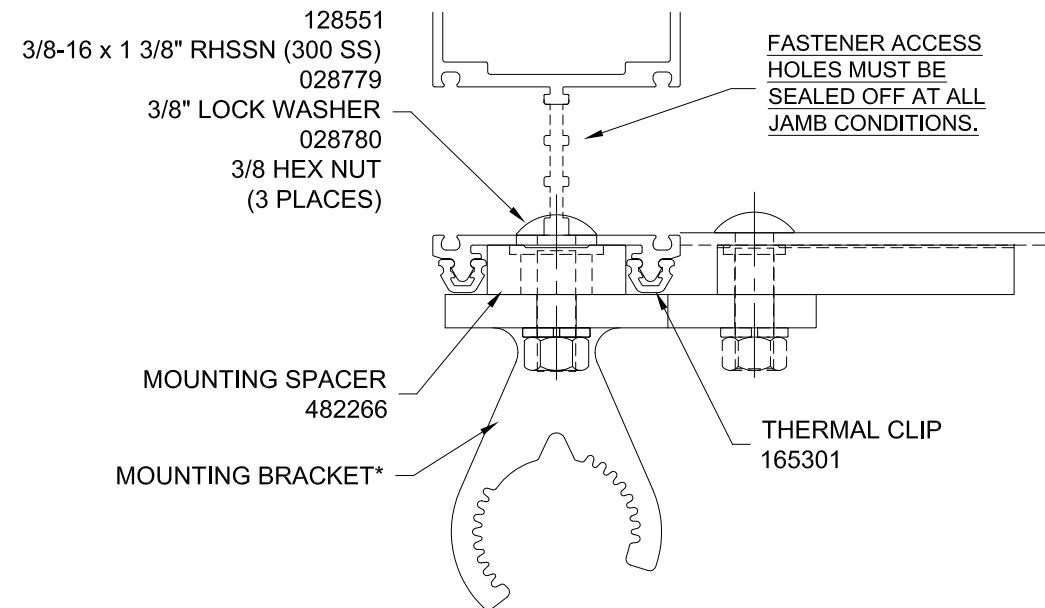
AT INTERMEDIATE HORIZONTALS, INSERT THREE (3) 3/8-20 x 1 3/8" ROUND HEAD SHORT SQUARE NECK BOLTS (128551) THROUGH THE SLOTS FROM INSIDE THE GLAZING POCKET. SEAT THE SQUARE NECK OF THE BOLT IN THE SLOT. ALIGN THE SLOT IN THE SPACER, COUNTER BORE SIDE TOWARDS THE INTERIOR, AND APPLY SPACERS (482266). NEXT APPLY THE MOUNTING BRACKET\*. ATTACH ALL TOGETHER WITH THREE (3) LOCK WASHERS (028779) AND 3/8" NUTS (028780) AS SHOWN.

AT HEAD/SILL HORIZONTALS, INSERT TWO (2) 3/8-20 x 1 3/8" ROUND HEAD SHORT SQUARE NECK BOLTS (128551) THROUGH THE SLOTS FROM INSIDE THE GLAZING POCKET. SEAT THE SQUARE NECK OF THE BOLT IN THE SLOT. ALIGN THE SLOT IN THE SPACER, COUNTER BORE SIDE TOWARDS THE INTERIOR, AND APPLY SPACERS (482266). NEXT APPLY THE MOUNTING BRACKET\*. ATTACH ALL TOGETHER WITH TWO (2) LOCK WASHERS (028779) AND 3/8" NUTS (028780) AS SHOWN.

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.

SEAL FASTENER ACCESS HOLES AT JAMBS BY APPLYING TAPE TO ONE SIDE OF "TONGUE" AND APPLYING SEALANT TO OTHER, TOOLING SEALANT ONTO "TONGUE" TO PROVIDE WATER-TIGHT SEAL.

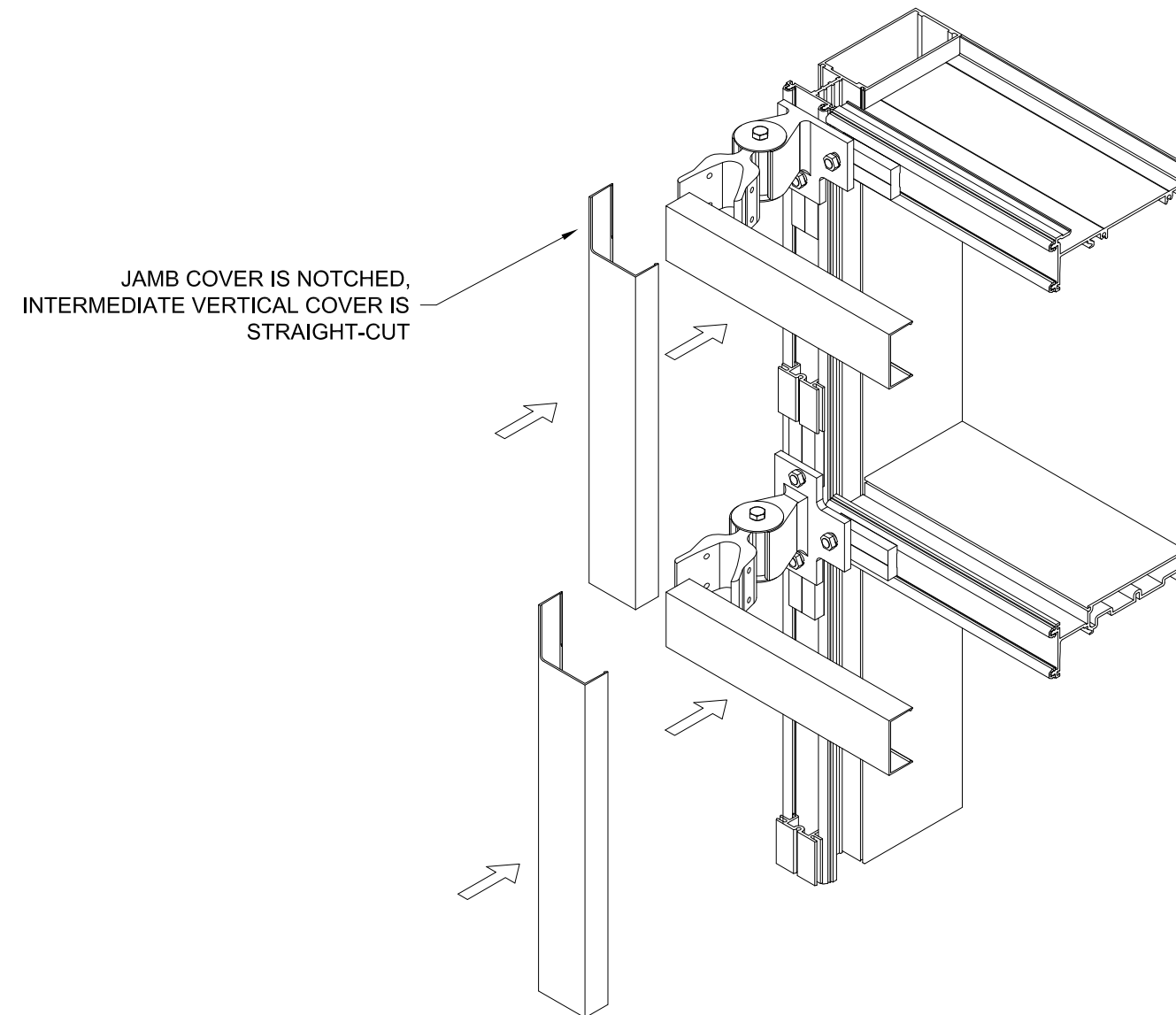


\* - MOUNTING BRACKET PART NUMBERS VARY DEPENDING ON LOCATION AND ANGLE OF VERTICAL SINGLE BLADE SUNSHADE, CHECK APPROVED SHOP DRAWINGS FOR PROPER PART NUMBERS AND ORIENTATION.

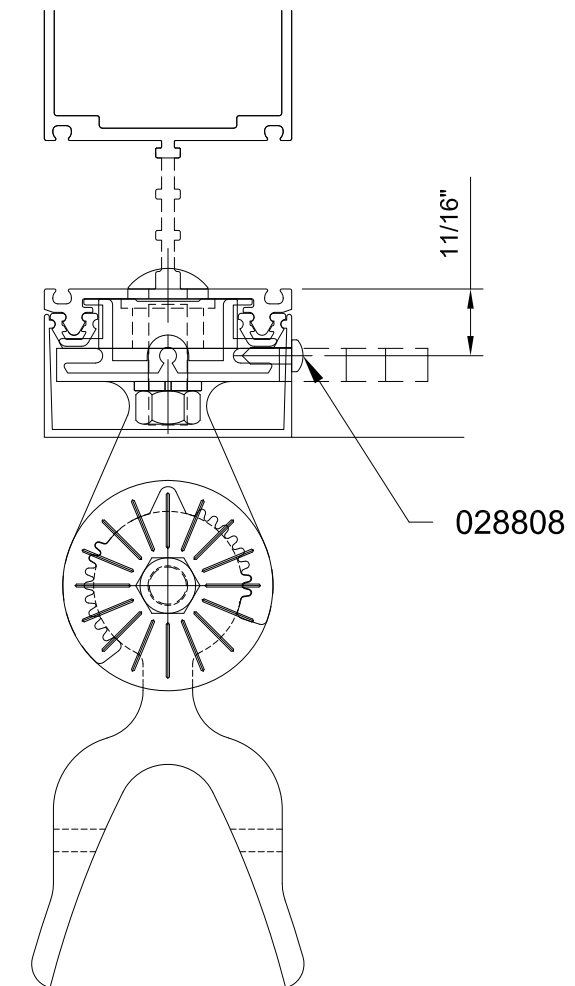
	VERSOLEIL VERTICAL SINGLE BLADE 1600 SYSTEM 5 INSTALLATION INSTRUCTIONS
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**STEP 3 - INSTALLING COVERS**

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



PIN BOTH SIDES OF THE VERTICAL COVERS. DRILL A .177" DIAMETER HOLE (#16 DRILL) AT PINNING CLIP LOCATIONS - AT SILL AND NEXT HORIZONTAL COVER ABOVE A VERTICAL EXPANSION SPLICE, 11/16" FROM THE INSIDE SURFACE OF THE PRESSURE PLATE. INSTALL #8 x 1/2" PAN HEAD SCREWS (028808) THROUGH COVER AND INTO PINNING CLIP (166315) AS SHOWN. SNUG PINNING SCREW INTO PLACE AND DO NOT OVER TIGHTEN.



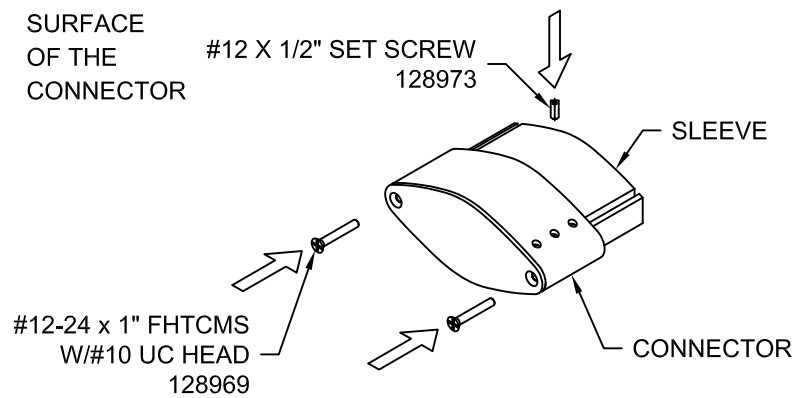
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SINGLE BLADE  
1600 SYSTEM 5  
INSTALLATION INSTRUCTIONS

# BLADE, END & SPLICE ASSEMBLIES

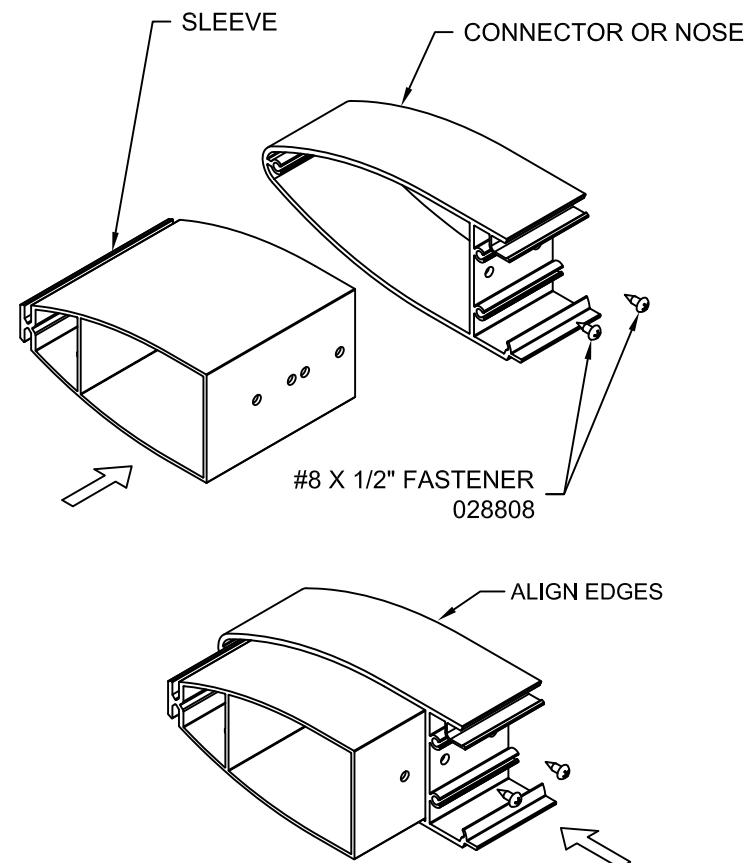
## STEP 4 - END ASSEMBLY

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)

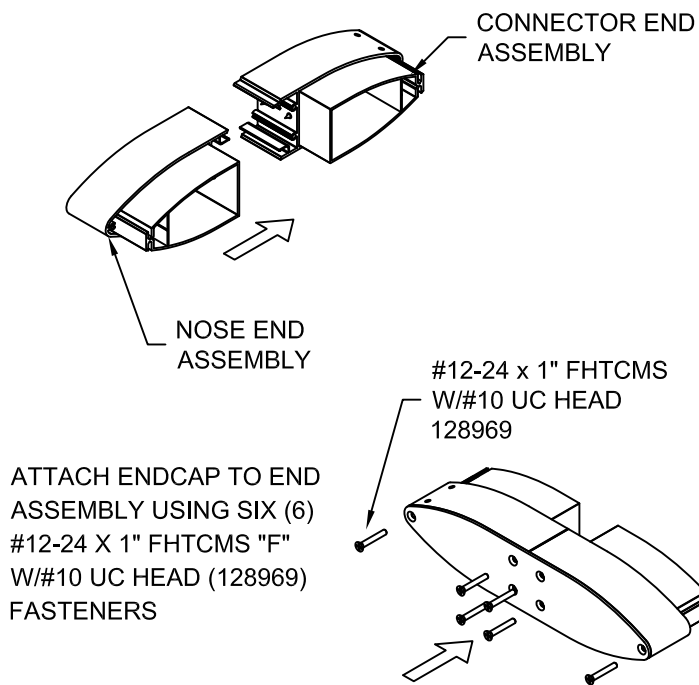
NOTE: SLIDE SLEEVE INTO CONNECTOR AND FASTEN WITH ONE (1) #12 X 1/2" SET SCREW (128973) AT CENTER HOLE. SET SCREW MUST NOT EXTEND BEYOND THE TOP SURFACE OF THE CONNECTOR



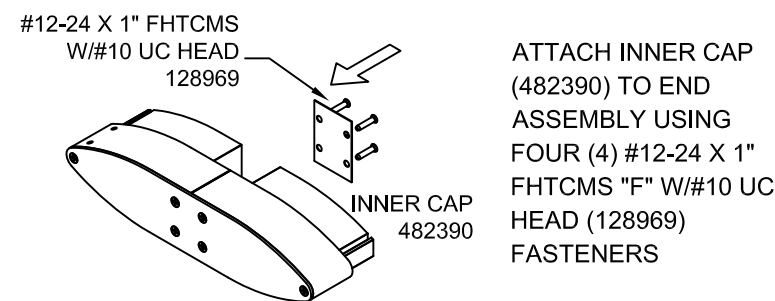
SLIDE SLEEVE INTO CONNECTOR OR NOSE, ALIGN MOUNTING HOLES AND SLEEVE EDGE WITH CONNECTOR OR NOSE EDGE. ATTACH USING TWO (2) #8 X 1/2" FASTENERS (028808).



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

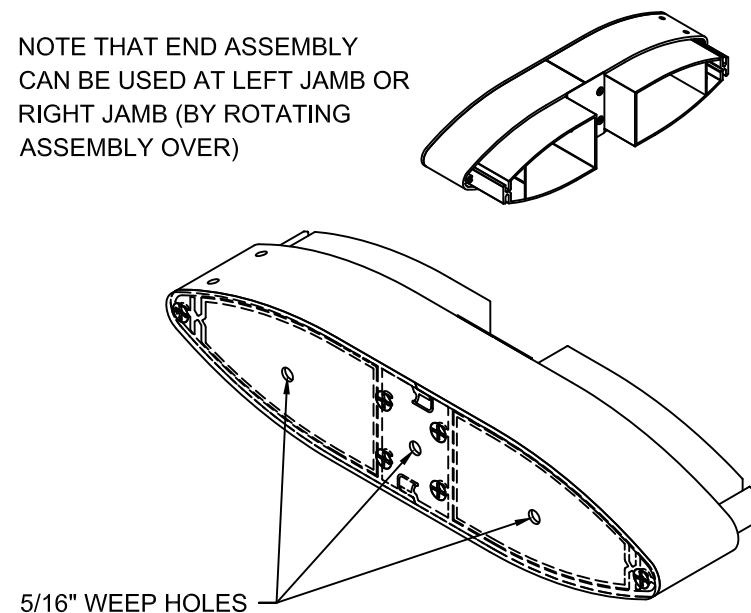


ATTACH ENDCAP TO END ASSEMBLY USING SIX (6) #12-24 X 1" FHTCMS "F" W/#10 UC HEAD (128969) FASTENERS



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

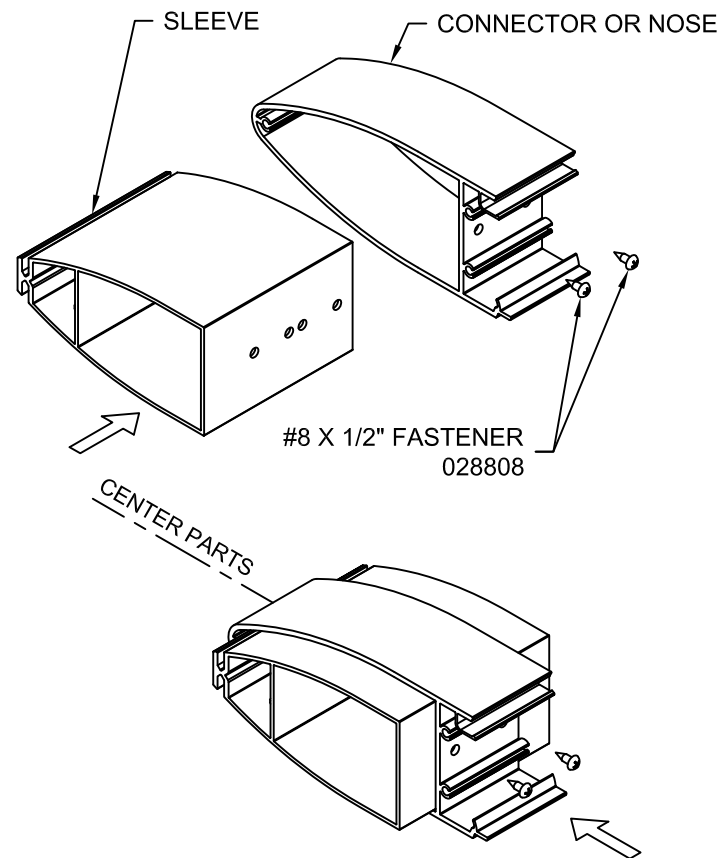
NOTE THAT END ASSEMBLY CAN BE USED AT LEFT JAMB OR RIGHT JAMB (BY ROTATING ASSEMBLY OVER)



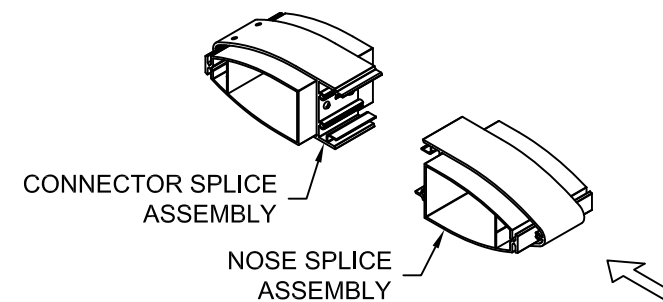
5/16" WEEP HOLES  
DRILL THREE (3) Ø5/16" WEEP HOLES IN THE ENDCAP OF THE BOTTOM END ASSEMBLY (ONE IN EACH "CHAMBER") TO DRAIN WATER WITHIN THE VERTICAL BLADES, LOCATED AS SHOWN. FOR ONE PIECE BOTTOM END ASSEMBLY, DRILL ONE (1) Ø5/16" WEEP HOLE AT CENTER OF ENDCAP.

## STEP 5 - SPLICE ASSEMBLY

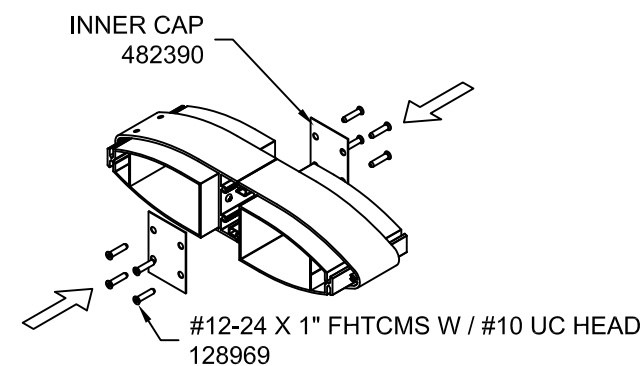
SLIDE SLEEVE INTO CONNECTOR OR NOSE. ALIGN SLEEVE CENTER ON CONNECTOR OR NOSE CENTER. ATTACH USING TWO (2) #8 X 1/2" FASTENERS (028808).



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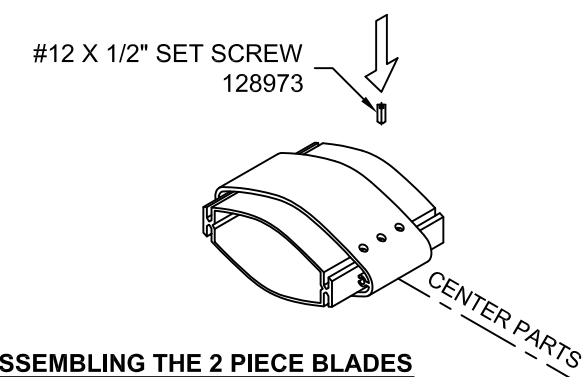
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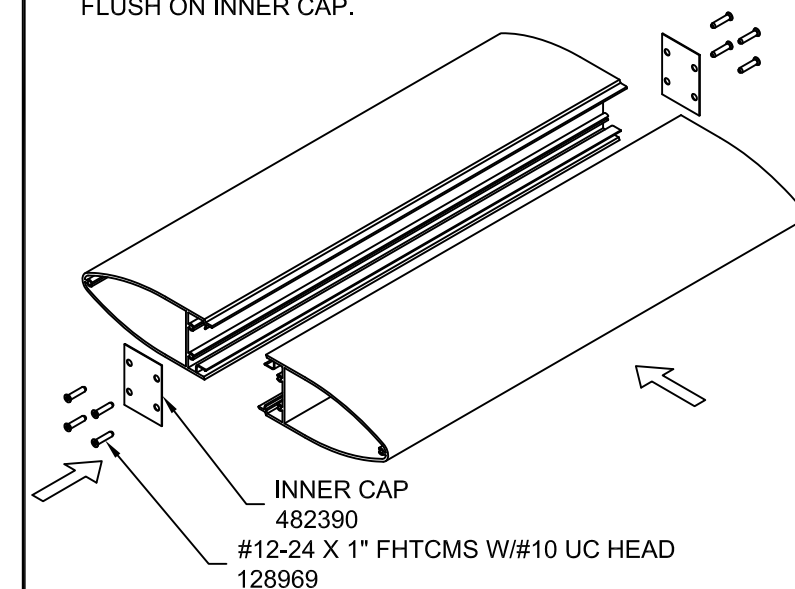
FOR ONE-PIECE-BLADE SPLICE ASSEMBLIES, CENTER SLEEVE IN CONNECTOR AND FASTEN WITH ONE (1) #12 X 1/2" SET SCREW (128973) AT CENTER HOLE.

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.



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# MOUNTING THE SUNSHADES

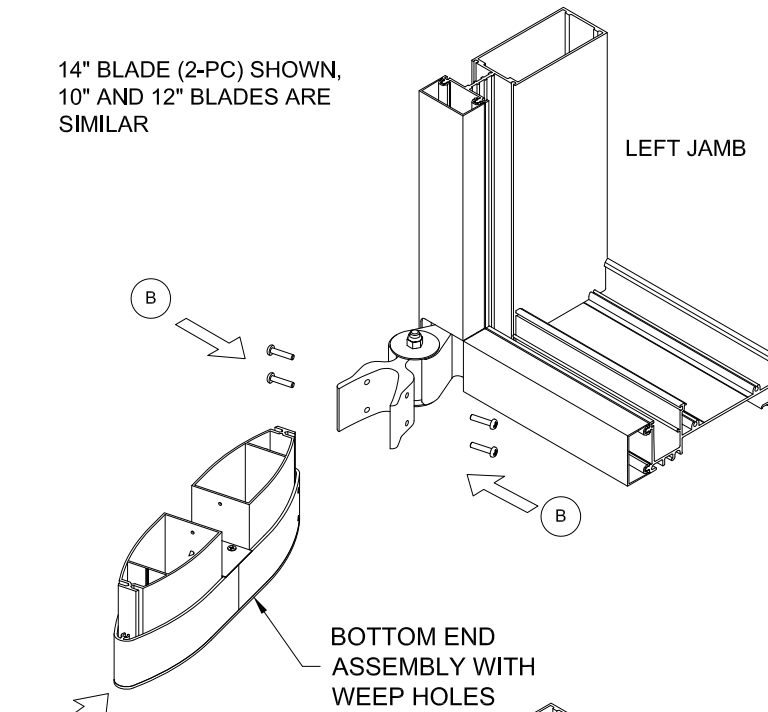
## STEP 7 - INSTALLING END / SPLICE / BLADE ASSEMBLIES

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

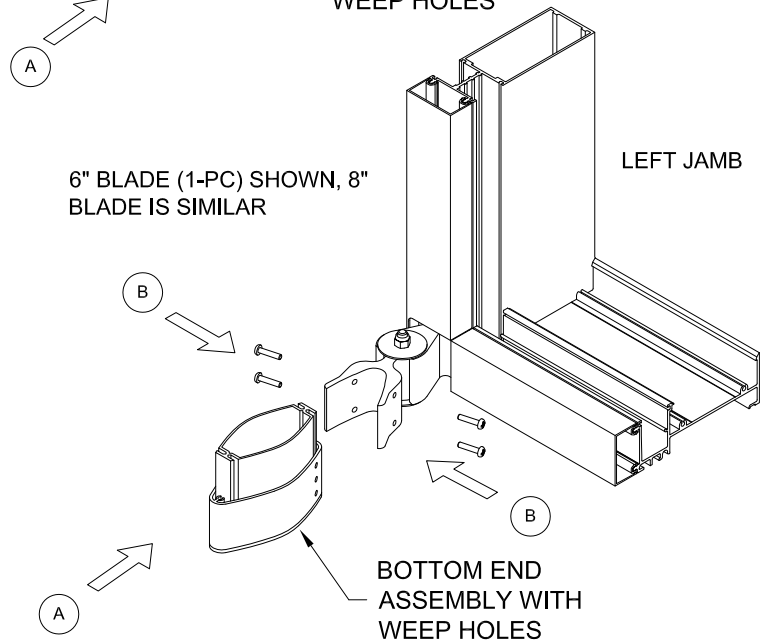
B) FASTEN END ASSEMBLY TO MOUNTING ARM USING FOUR (4) #12 X 1" PHTF "AB" (128267) FASTENERS

LEFT JAMB SHOWN, INTERMEDIATE VERTICAL SIMILAR, RIGHT JAMB OPPOSITE

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



6" BLADE (1-PC) SHOWN, 8" BLADE IS SIMILAR



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

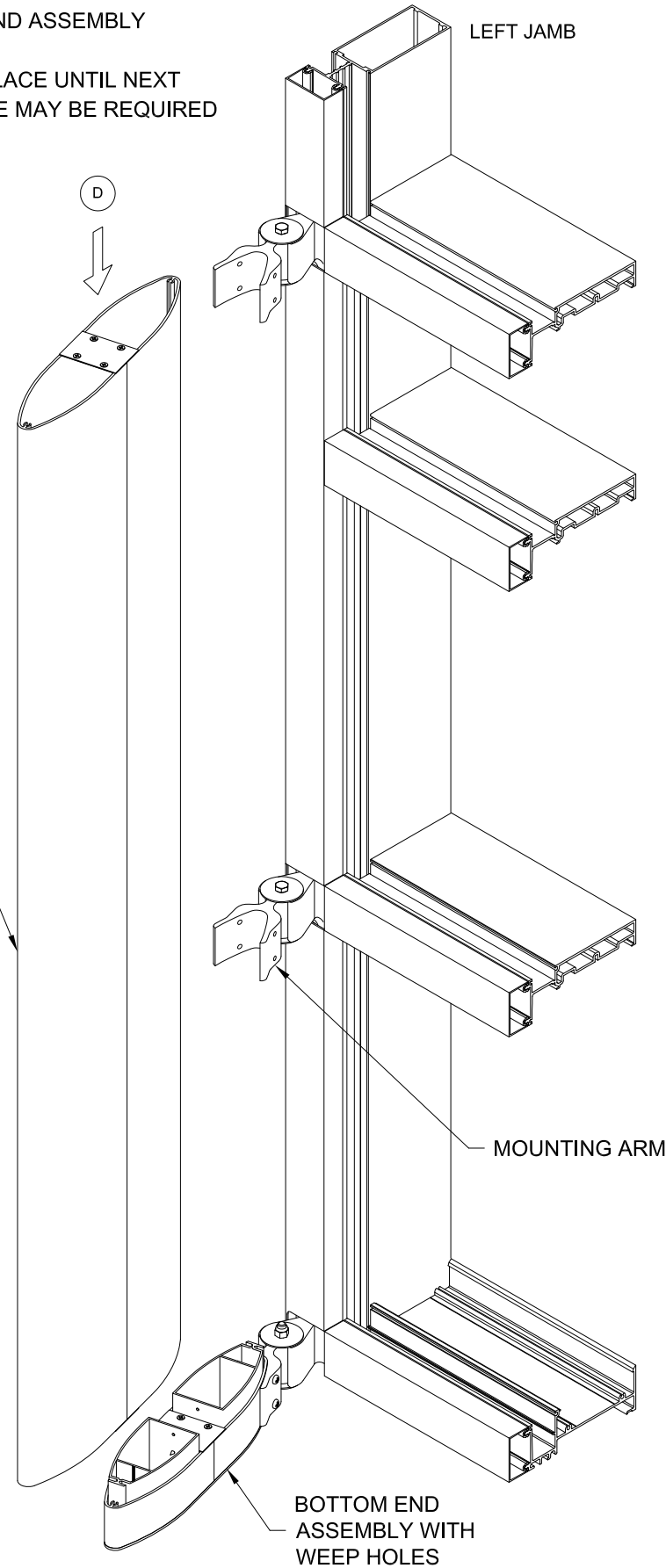
D) SLIDE BLADE OVER SLEEVE IN END ASSEMBLY

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

BLADE ASSEMBLY

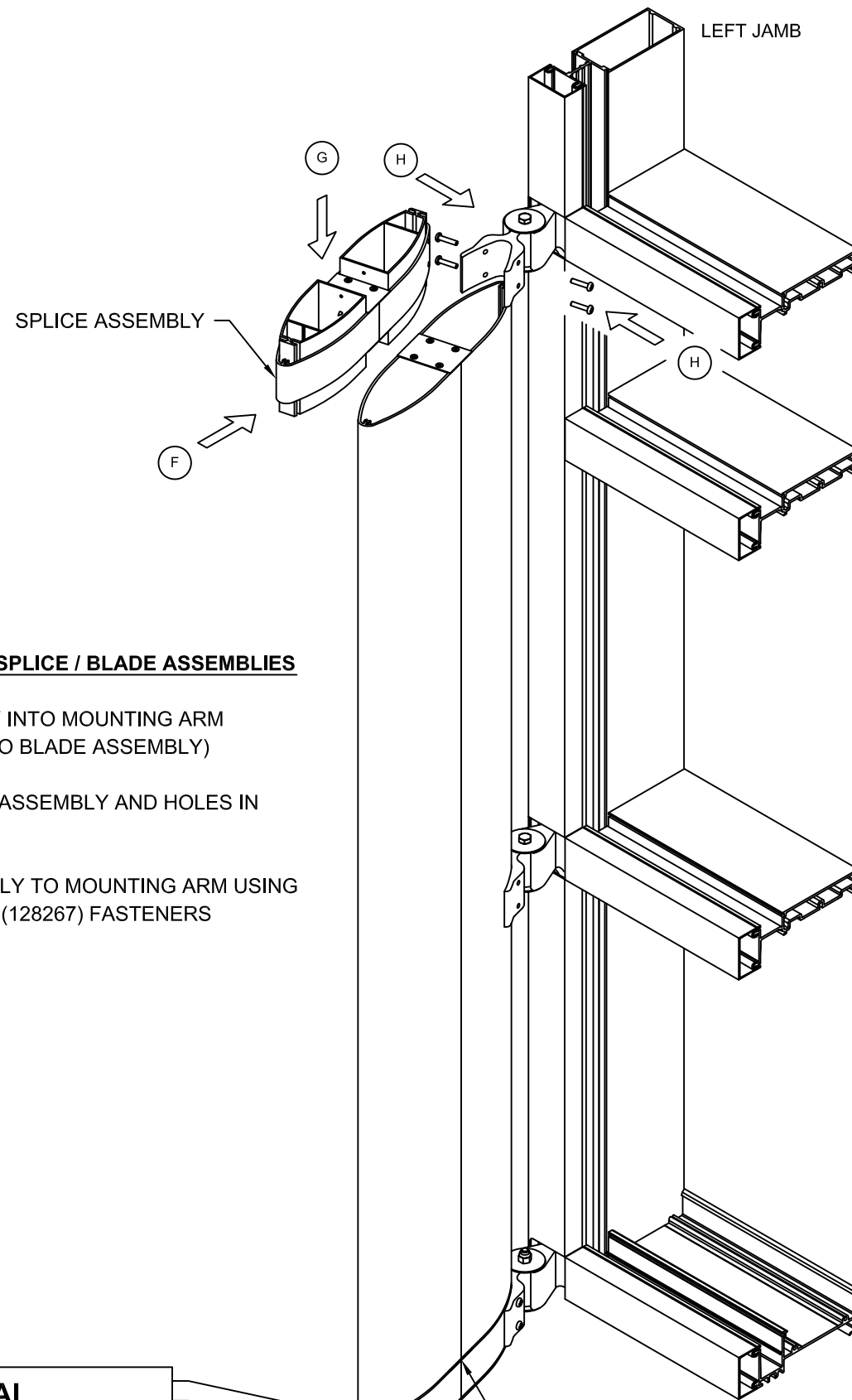
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LEFT JAMB SHOWN, INTERMEDIATE VERTICAL SIMILAR, RIGHT JAMB OPPOSITE

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



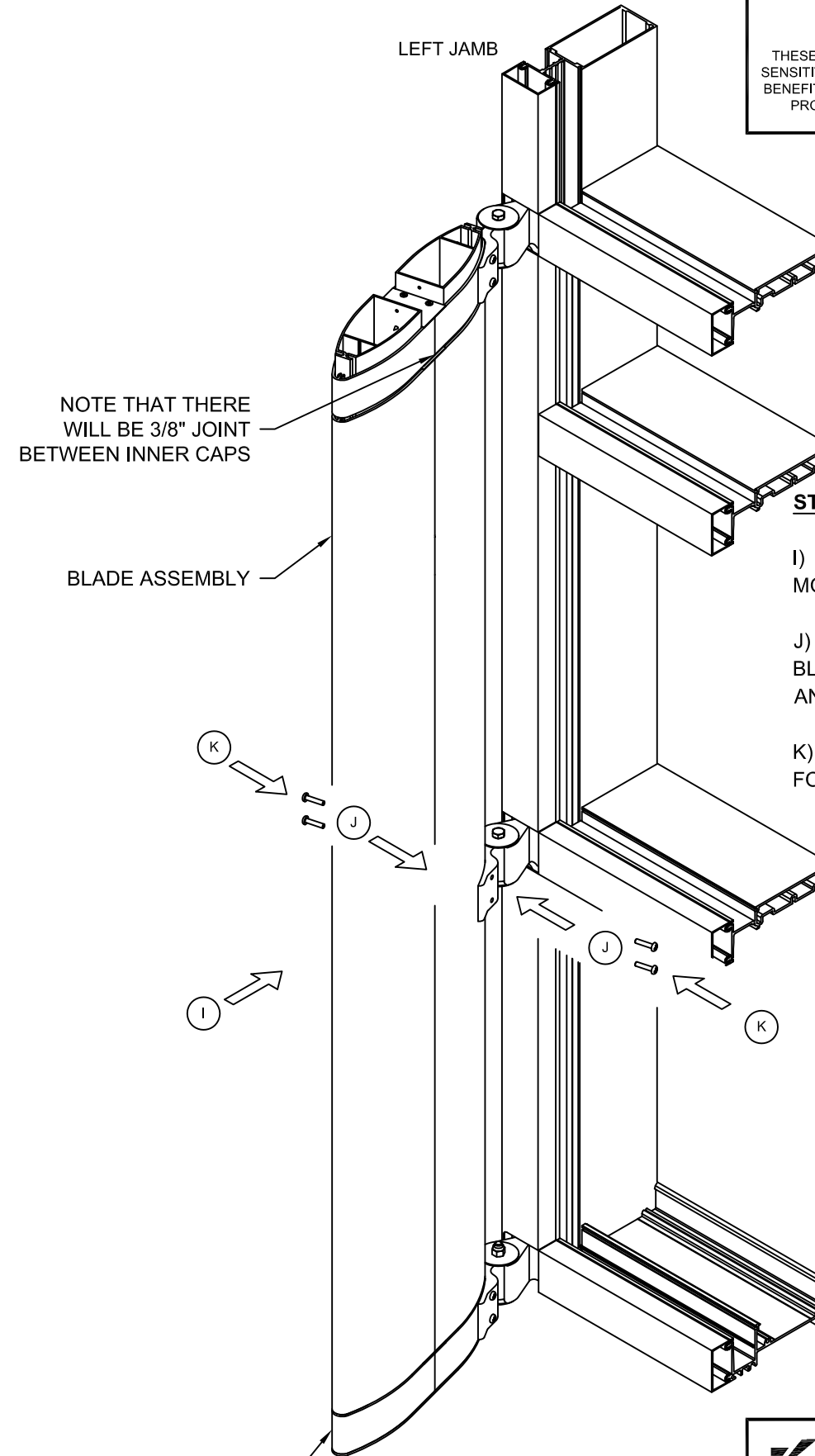
**STEP 7 - INSTALLING END / SPLICE / BLADE ASSEMBLIES**

- 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

**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)
- 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

BOTTOM END ASSEMBLY WITH WEEP HOLES



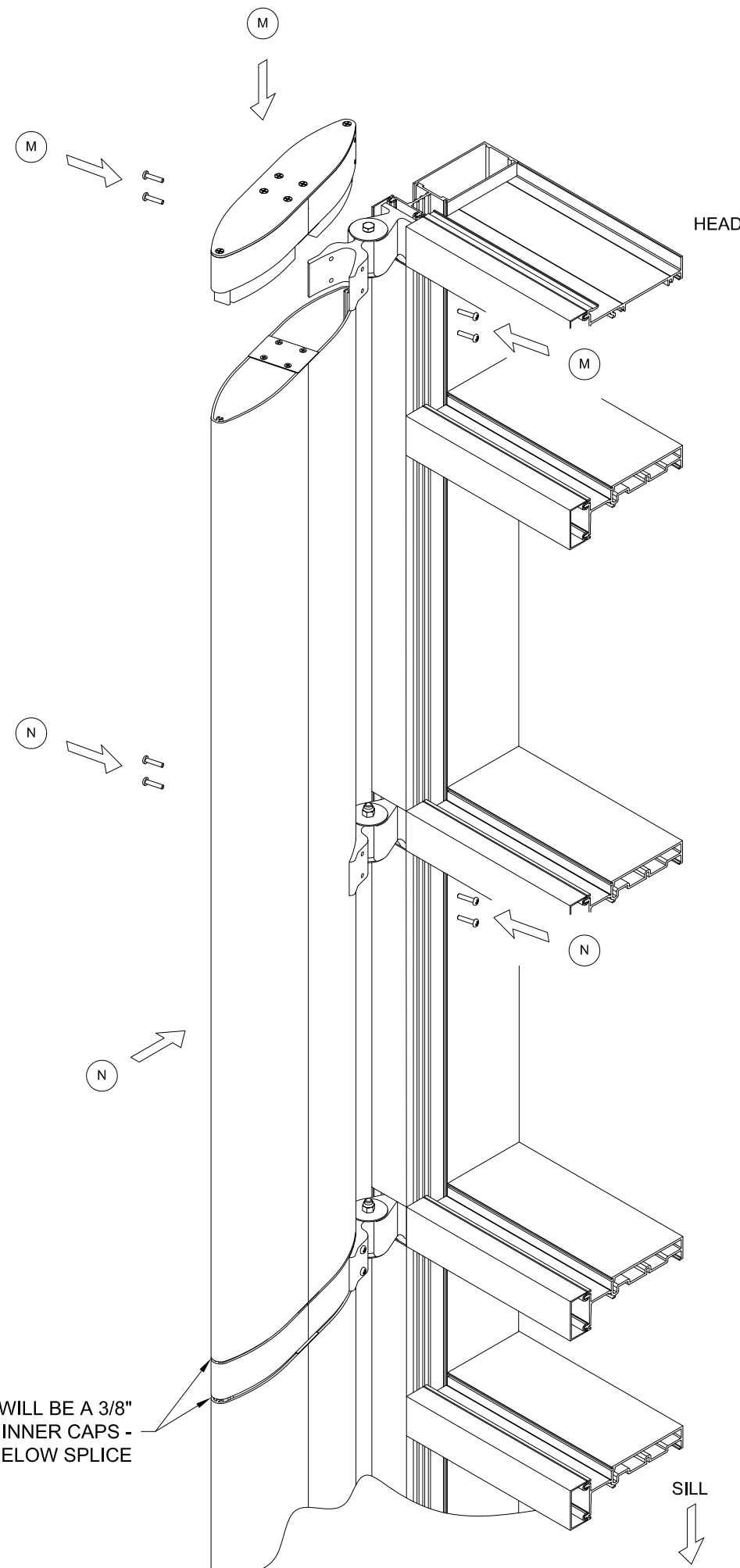
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SINGLE BLADE  
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**STEP 7 - INSTALLING END / SPLICE / BLADE ASSEMBLIES**

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