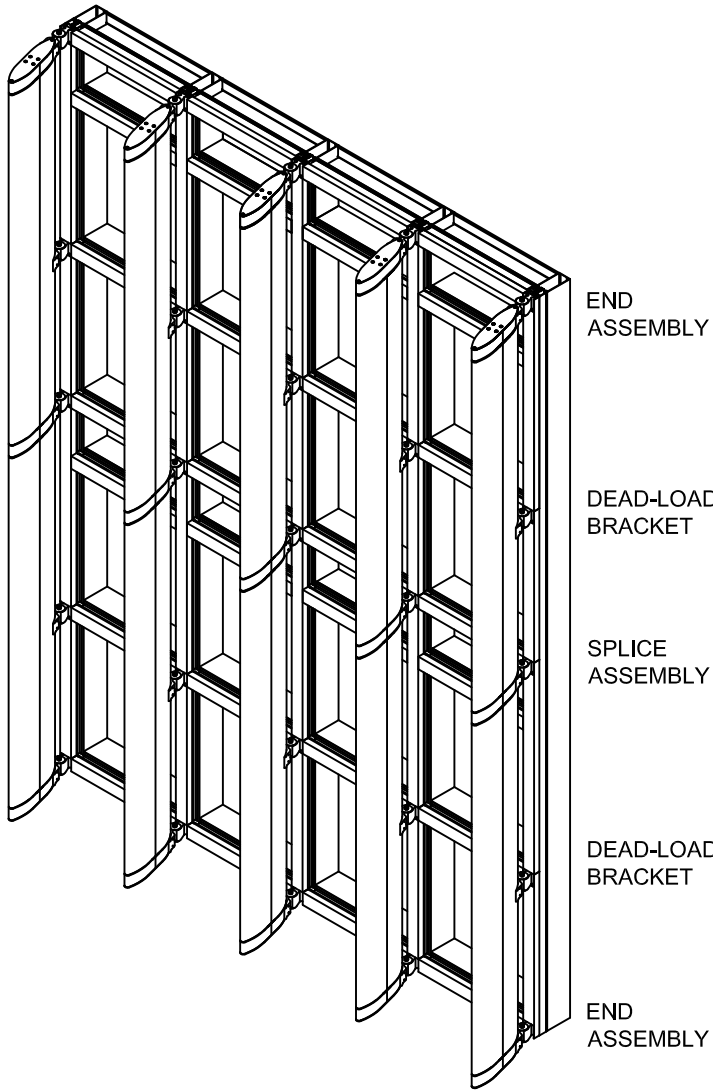


THE FOLLOWING INSTRUCTIONS ARE FOR THE INSTALLATION OF THE KAWNEER VERSOLEIL SINGLE BLADE SUNSHADE. USE THESE INSTRUCTIONS IN CONJUNCTION WITH 1600UT SYSTEM 1 CURTAIN WALL INSTALLATION INSTRUCTIONS (171910).

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.

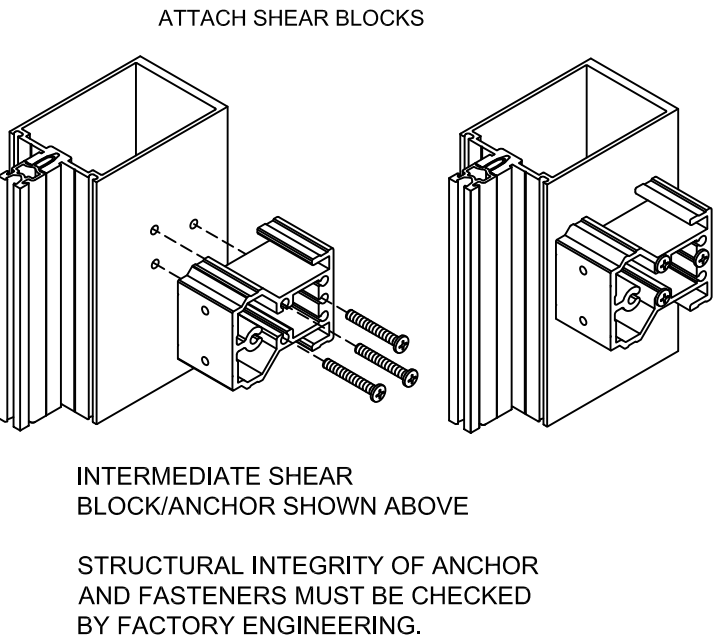
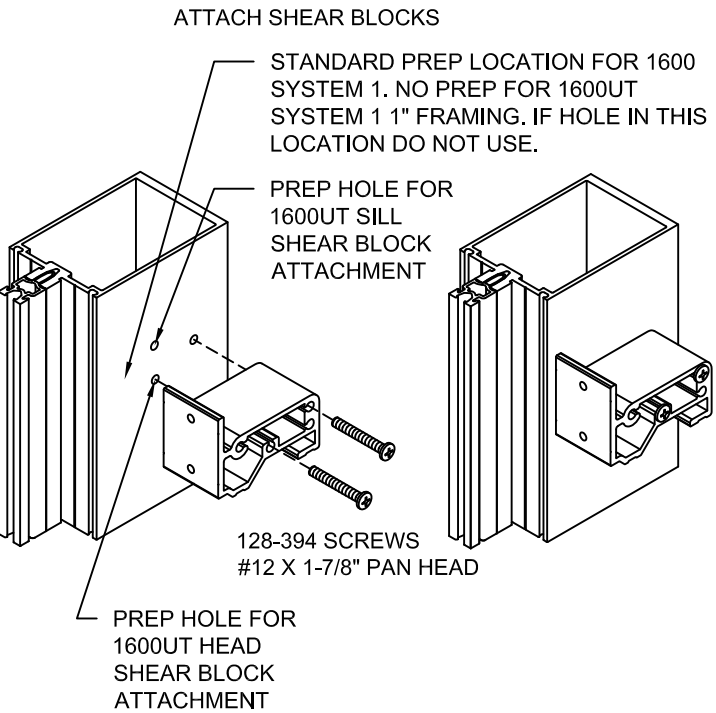
ELEVATION FRONT VIEW OF SINGLE BLADE SUNSHADE



**SPECIAL FRAME REQUIREMENTS FOR 1" GLAZING ASSEMBLY ONLY**

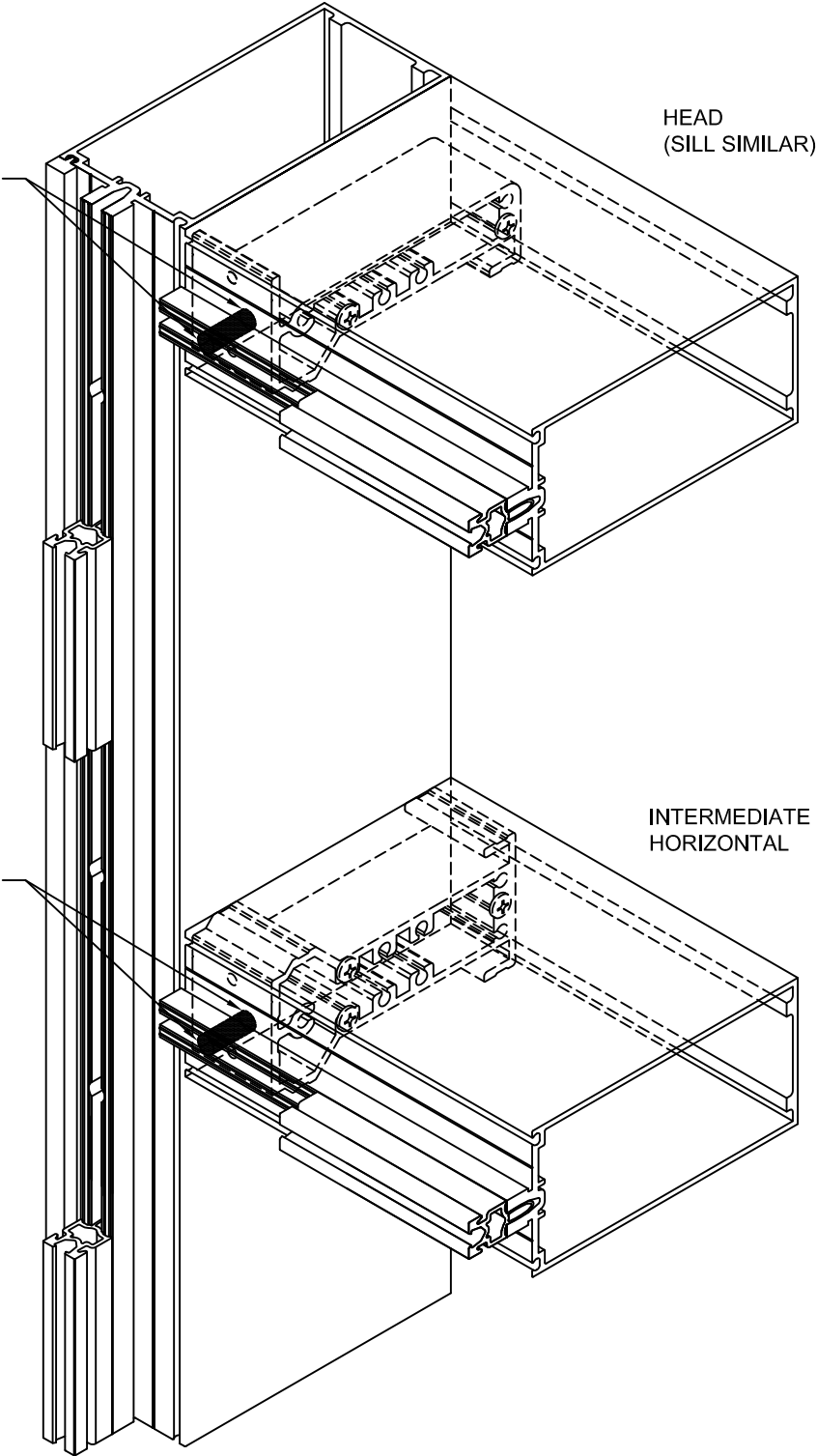
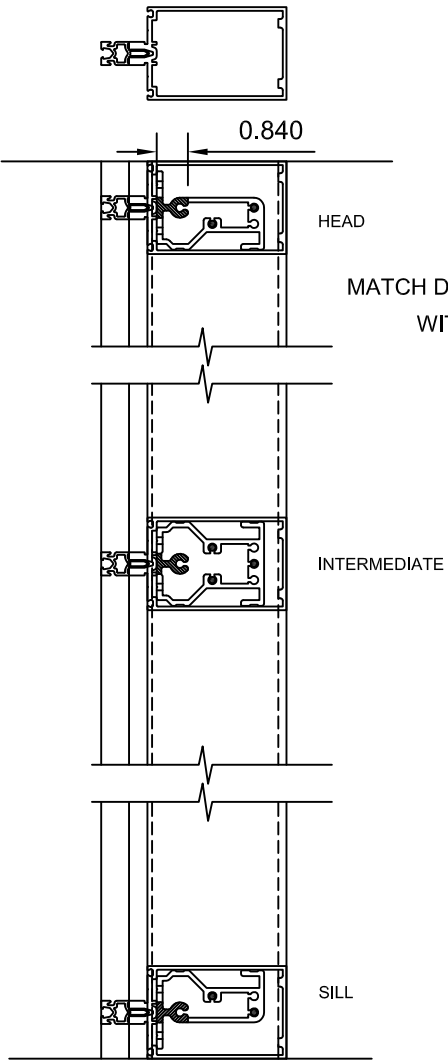
1600UT 1" FRAMING SHEAR BLOCKS REQUIRE DIFFERENT PREPS TO THE VERTICAL MULLIONS THAN THE STANDARD SHEAR BLOCKS. VERTICAL MULLIONS MUST BE PREPPED ACCORDINGLY PRIOR TO ASSEMBLY OF THE FRAMING ELEMENTS. HEAD SHEAR BLOCK/ANCHOR SHOWN BELOW, SILL SHEAR BLOCK/ANCHOR SIMILAR. PREP HOLE LOCATIONS DIFFER FROM STANDARD 1600 SYSTEM 1. DO NOT USE THE STANDARD FRONT HOLE (IF PRESENT) AS IT INTERFERES WITH THE VERSOLEIL VERTICAL SINGLE BLADE ATTACHMENT SCREWS. SEE APPROVED SHOP DRAWINGS FOR DETAILS.

**FRAME ASSEMBLY - 1" FRAME**



**SHEAR BLOCK PREP**

AFTER HORIZONTALS HAVE BEEN INSTALLED SHEAR BLOCKS ARE TO BE MATCH DRILLED USING 5/16" DRILL (0.312" DIA.) AT ALL VERTICAL MOUNTING BRACKET LOCATIONS. ALIGN DRILL WITH EXISTING 0.312 HOLE IN HORIZONTAL. DRILL THROUGH SCREW SPLINE APPROXIMATELY 0.84" INTO THE SHEAR BLOCK.



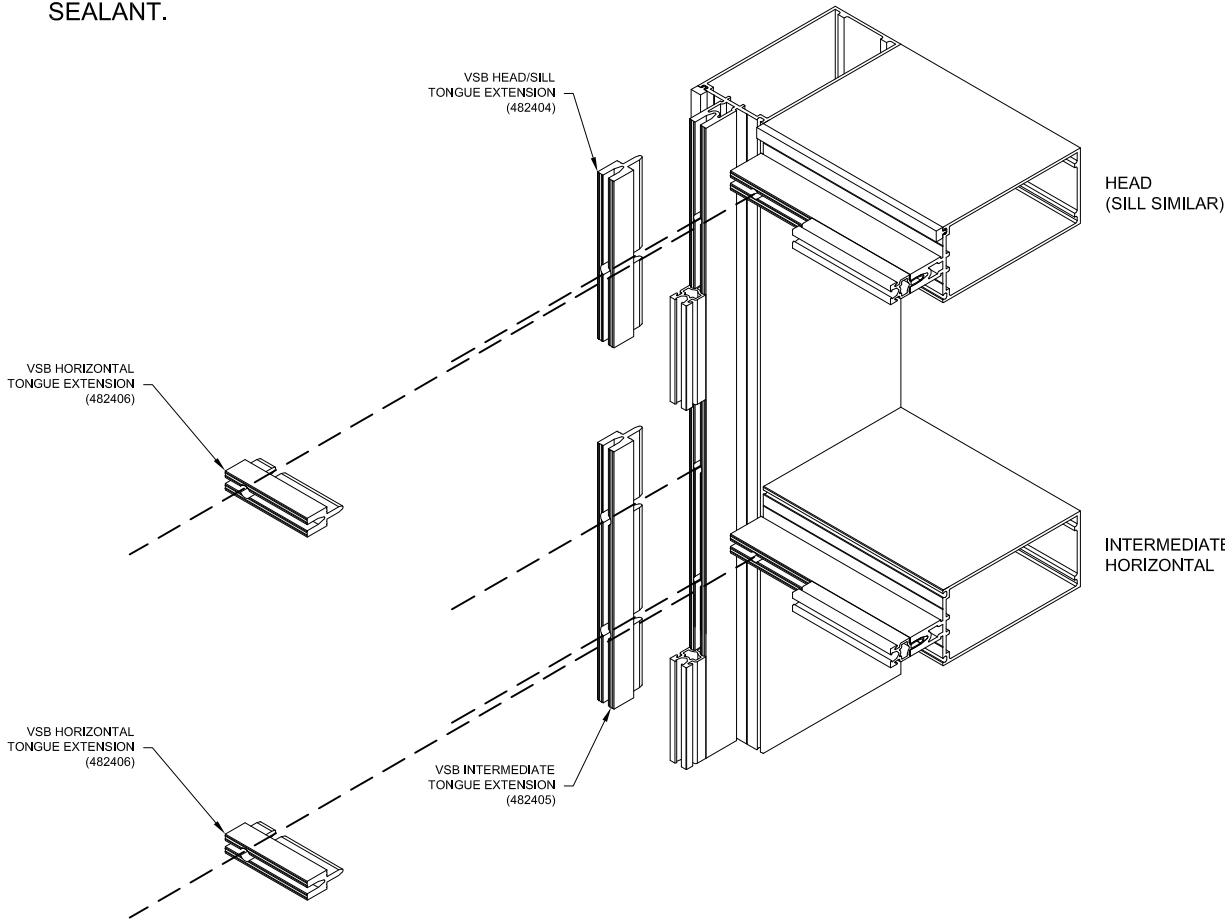
VERSOLEIL VERTICAL  
SINGLE BLADE  
1600UT SYSTEM 1  
INSTALLATION INSTRUCTIONS

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.

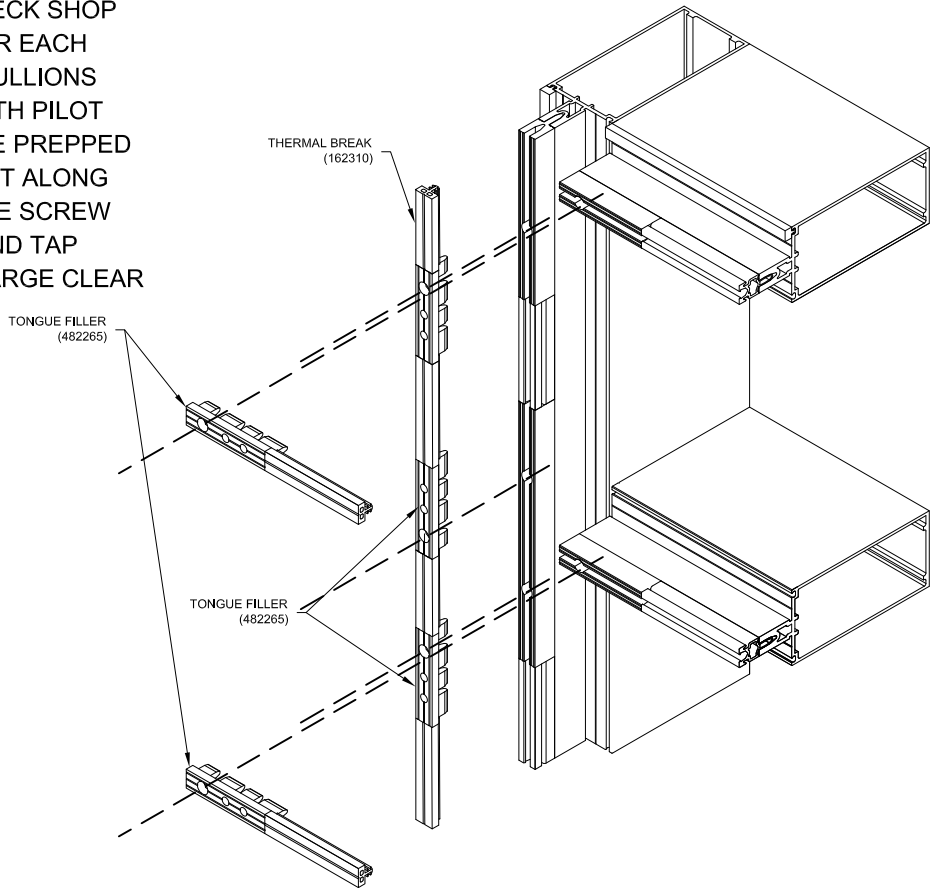
INSTALL TONGUE EXTENSIONS

VERTICAL SUNSHADES REQUIRE THE USE OF TWO TONGUE EXTENSIONS (482405, 482406) AT EACH INTERMEDIATE HORIZONTAL LOCATION AND TWO TONGUE EXTENSIONS (482404, 482406) AT EVERY HEAD/SILL LOCATION. CHECK SHOP DRAWINGS FOR POSITION OF BRACKETS. FOR EACH LOCATION OF A MOUNTING BRACKET, THE THERMAL SEPARATOR (171300) HAS BEEN REMOVED AND 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 EXTENSION LOCATION AND TAP TONGUE EXTENSIONS INTO PLACE. ALIGN THE CLEAR HOLES OF THE TONGUE EXTENSIONS WITH THE PILOT HOLES IN THE MULLIONS AND HORIZONTALS. ADJUST TONGUE EXTENSION UNTIL HOLES ARE IN PROPER ALIGNMENT. TOOL EXCESS SEALANT.



INSTALL TONGUE FILLERS/THERMAL BREAKS

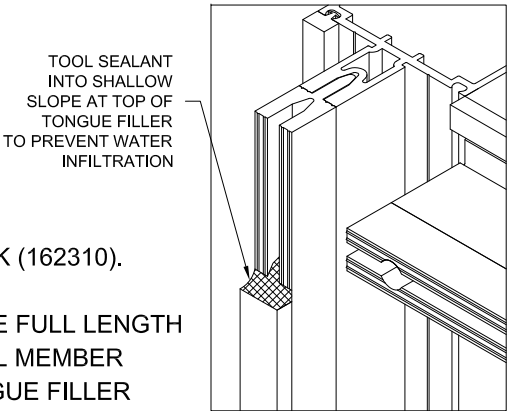
VERTICAL SUNSHADES REQUIRE THE USE OF THREE TONGUE FILLERS (482265) AT EACH INTERMEDIATE HORIZONTAL LOCATION AND TWO TONGUE FILLERS (482265) AT EVERY HEAD/SILL LOCATION. CHECK SHOP DRAWINGS FOR POSITION OF BRACKETS. FOR EACH LOCATION OF A MOUNTING BRACKET, THE MULLIONS AND HORIZONTALS HAVE BEEN PREPPED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



RUN A BEAD OF SEALANT ACROSS THE TOP OF THE TONGUE FILLER. 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.

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



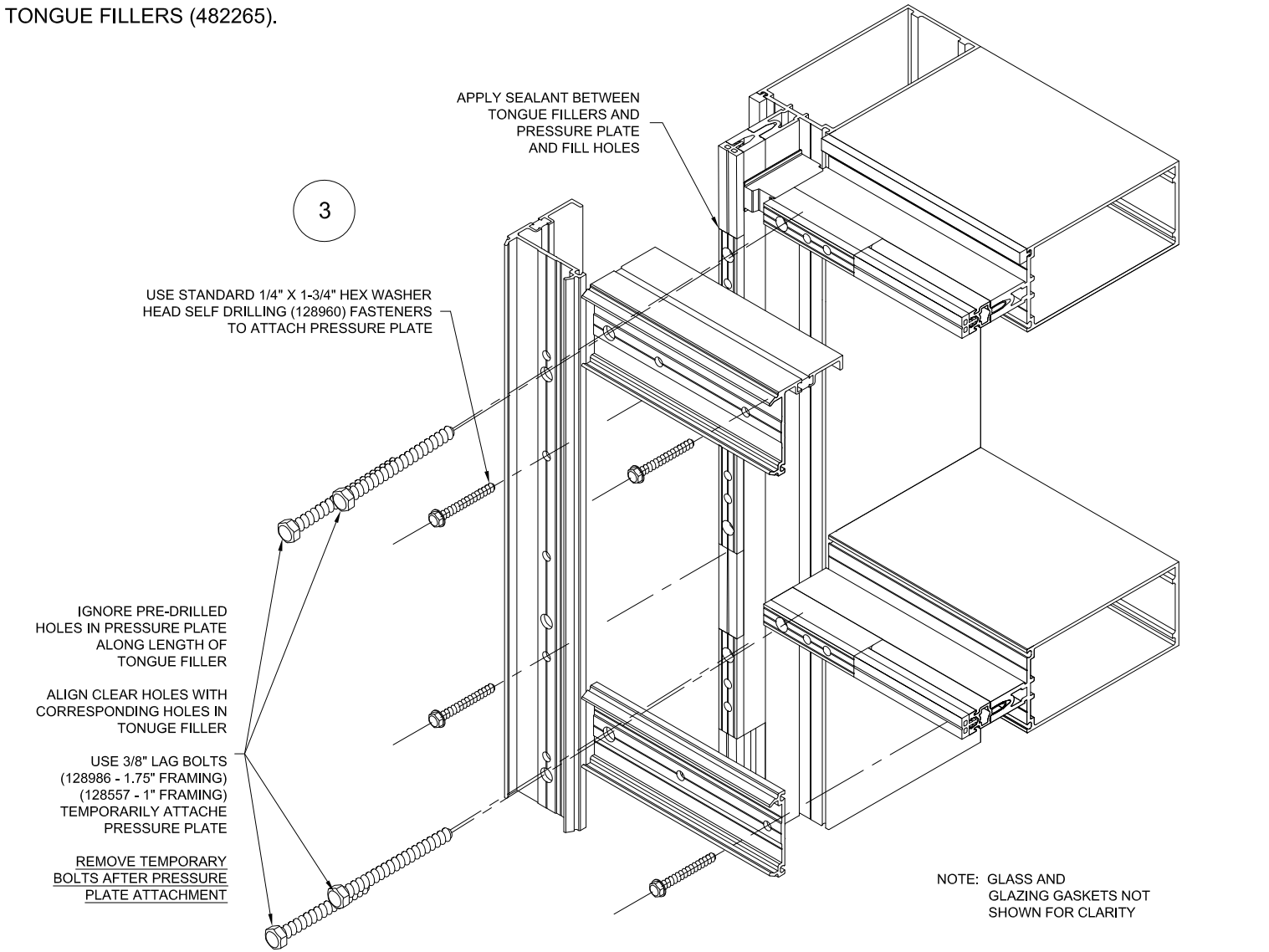
INSTALL EXTERIOR PRESSURE PLATES

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 (128986 - 1.75" FRAMING, 128557 - 1" FRAMING) 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 1-3/4" HEX WASHER HEAD SELF DRILLING SCREWS (128960). 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.

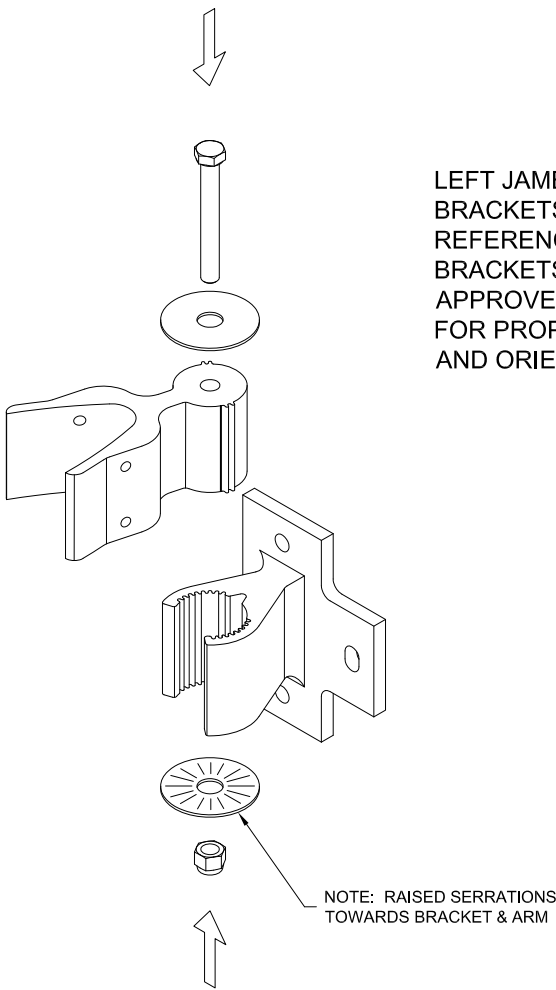
BRACKET ASSEMBLY

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

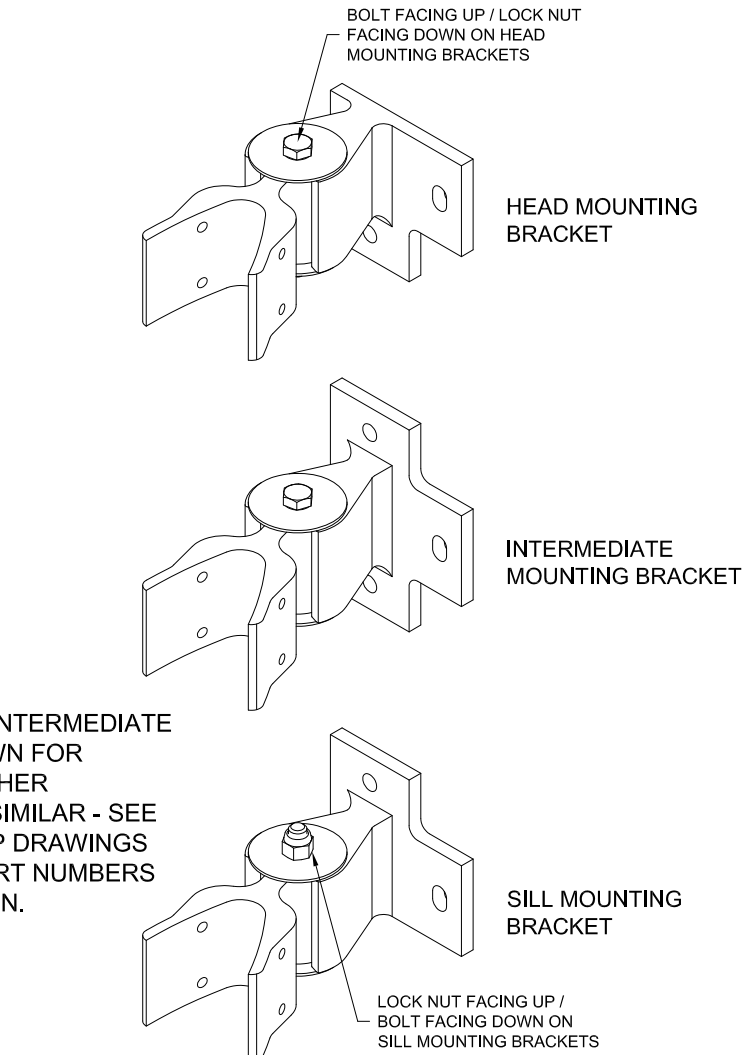
NOTE THAT VERTICAL SINGLE BLADE SUNSHADE INSTALLATION AT OUTSIDE DOUBLE CORNER MULLION IS SIMILAR TO INSTALLATION AT JAMB/INTERMEDIATE MULLIONS.

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.



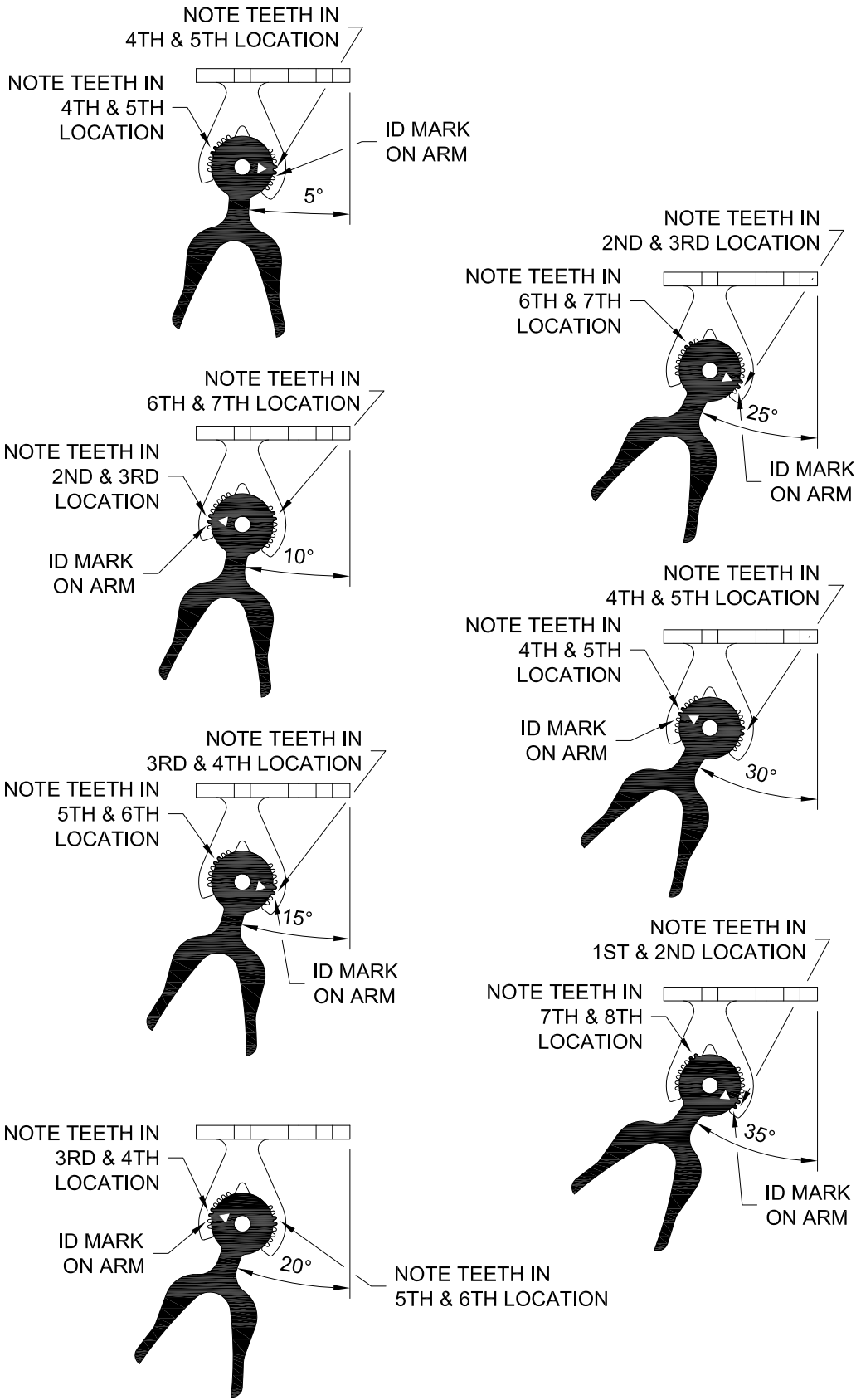
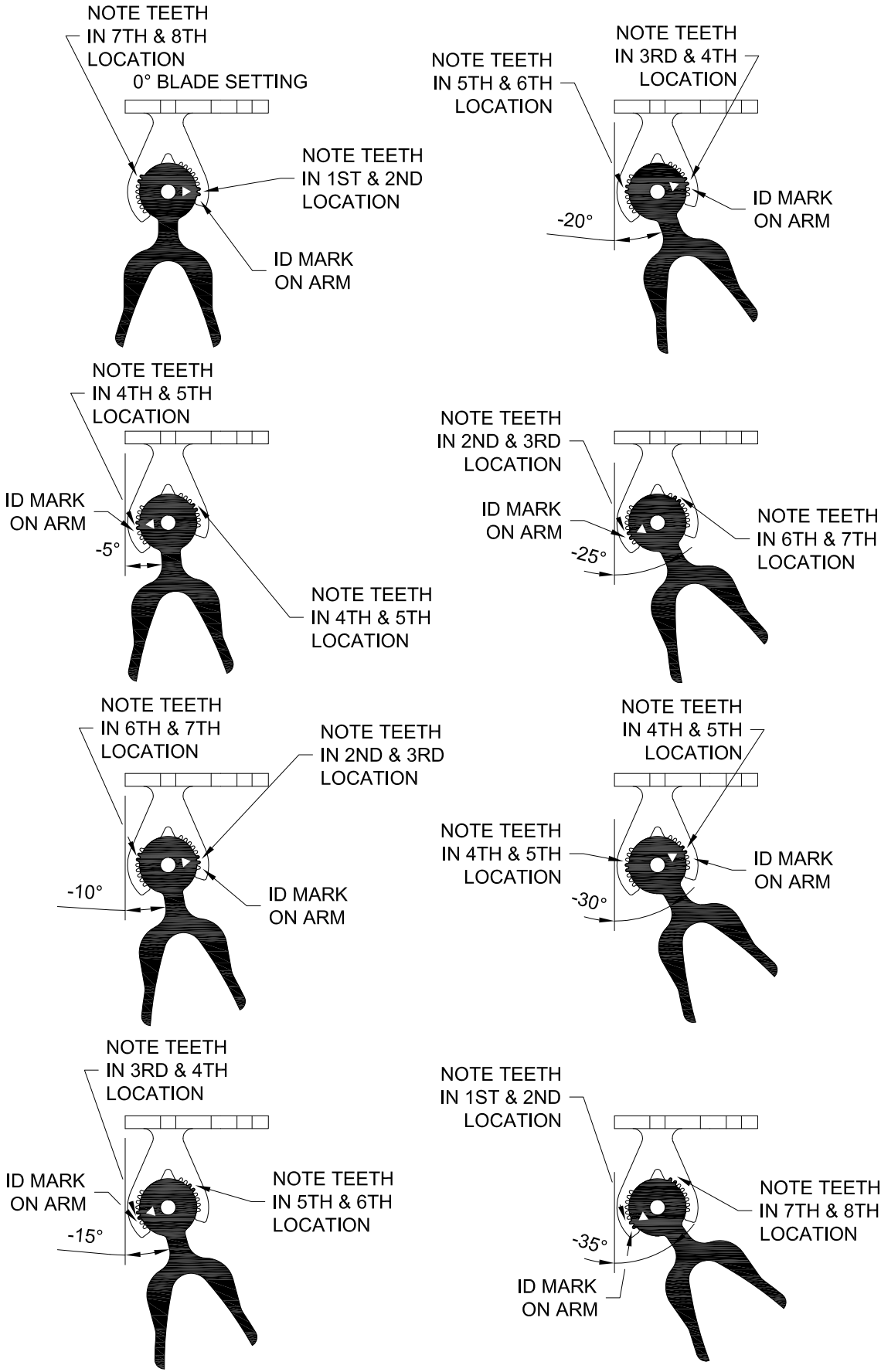
\* - MOUNTING BRACKET PART NUMBERS VARY DEPENDING ON LOCATION AND ANGLE OF VERTICAL SINGLE BLADE SUNSHADE, CHECK APPROVED SHOP DRAWINGS FOR PROPER PART NUMBERS AND ORIENTATION.



VERSOLEIL VERTICAL  
SINGLE BLADE  
1600UT SYSTEM 1  
INSTALLATION INSTRUCTIONS

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.

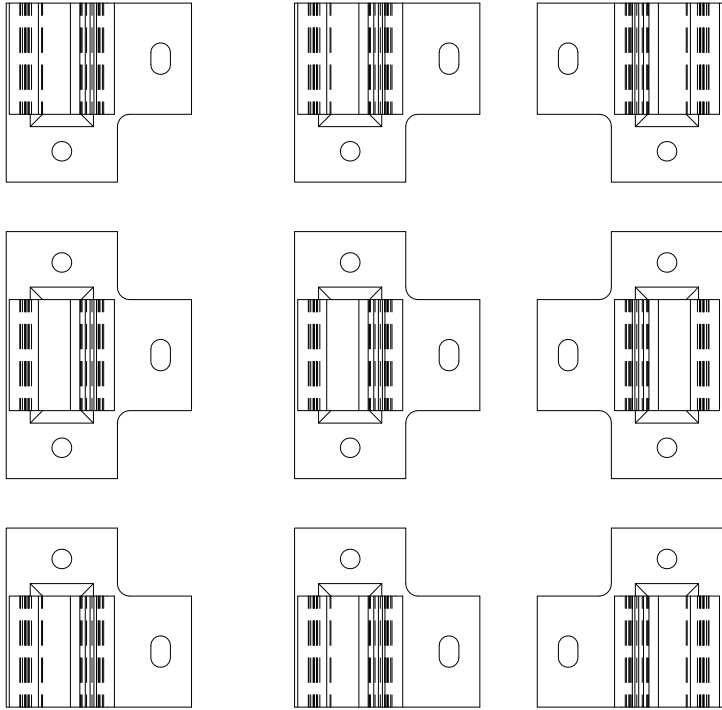


NOTE: ALL BRACKETS SHOWN ARE FOR LH OR INTERMEDIATE VERTICAL APPLICATION. IF RH IS NEEDED BRACKETS ARE DIFFERENT AND BASE SHOWN IS FLIPPED. LOCATION OF TEETH REMAINS CONSISTENT. REFER TO APPROVED SHOP DRAWINGS FOR APPROPRIATE BRACKET PART NUMBERS AND ORIENTATION

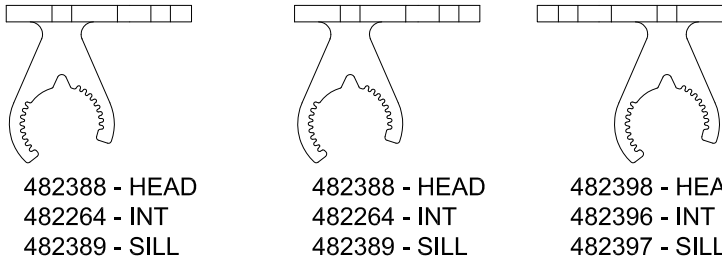
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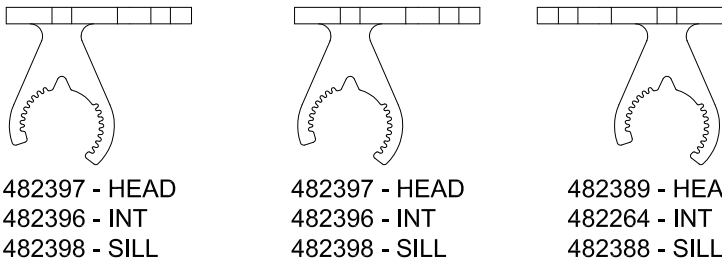
FRONT VIEW OF MOUNTING BRACKETS  
LEFT JAMB INTERMEDIATE RIGHT JAMB



TOP VIEW OF MOUNTING BRACKETS  
0 TO -35°



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



VERSOLEIL VERTICAL  
SINGLE BLADE  
1600UT SYSTEM 1  
INSTALLATION INSTRUCTIONS

STEP 2 - ATTACH MOUNTING BRACKETS / SPACERS

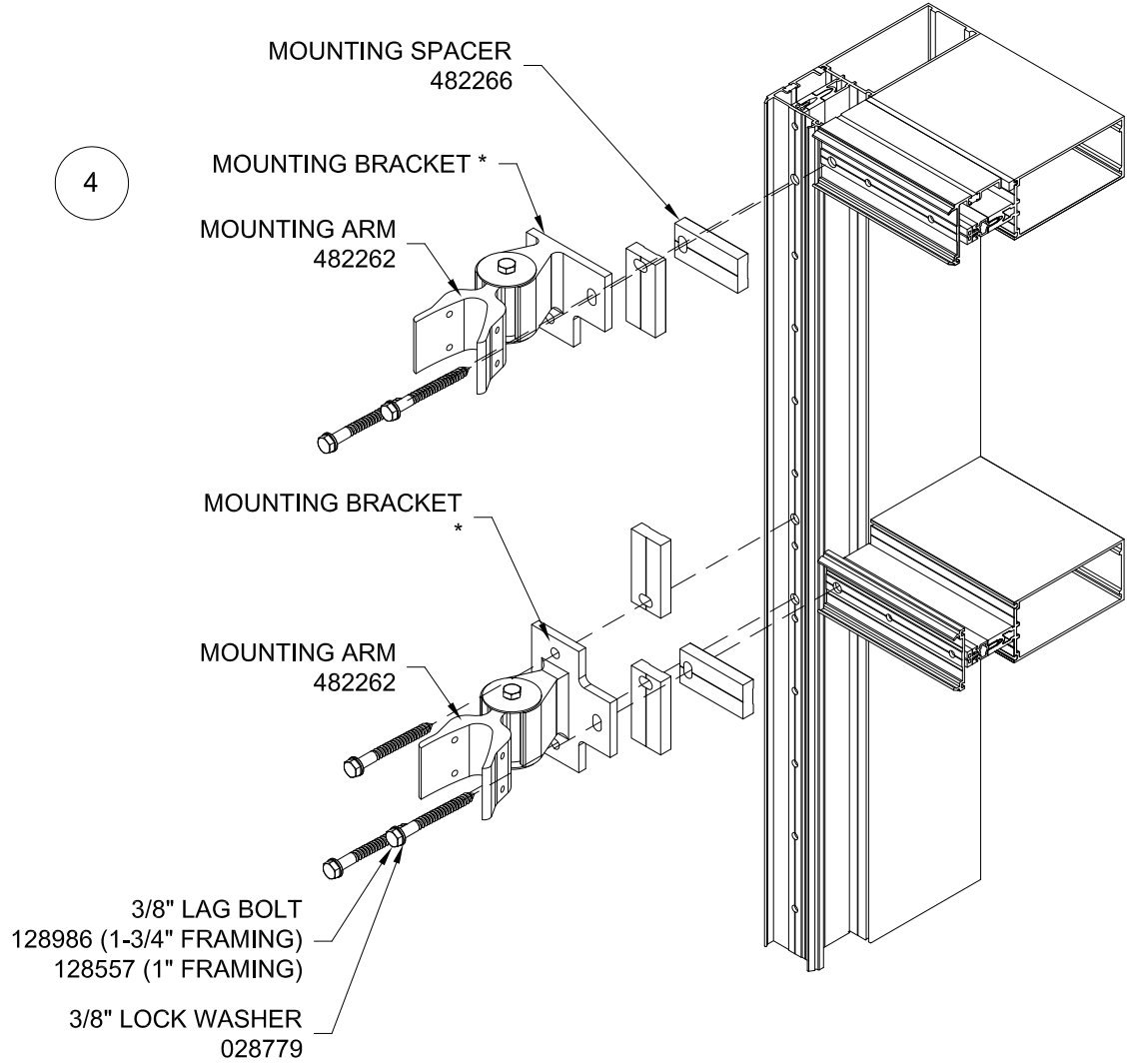
AT INTERMEDIATE HORIZONTAL:

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 3-1/4" LAG BOLTS (128986) 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" X3-1/4" LAG BOLTS (128986) AND LOCK WASHERS (028779). SEE DETAIL 4.

THE THREAD FORMING ACTION OF THE 3/8" X 3-1/4" 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

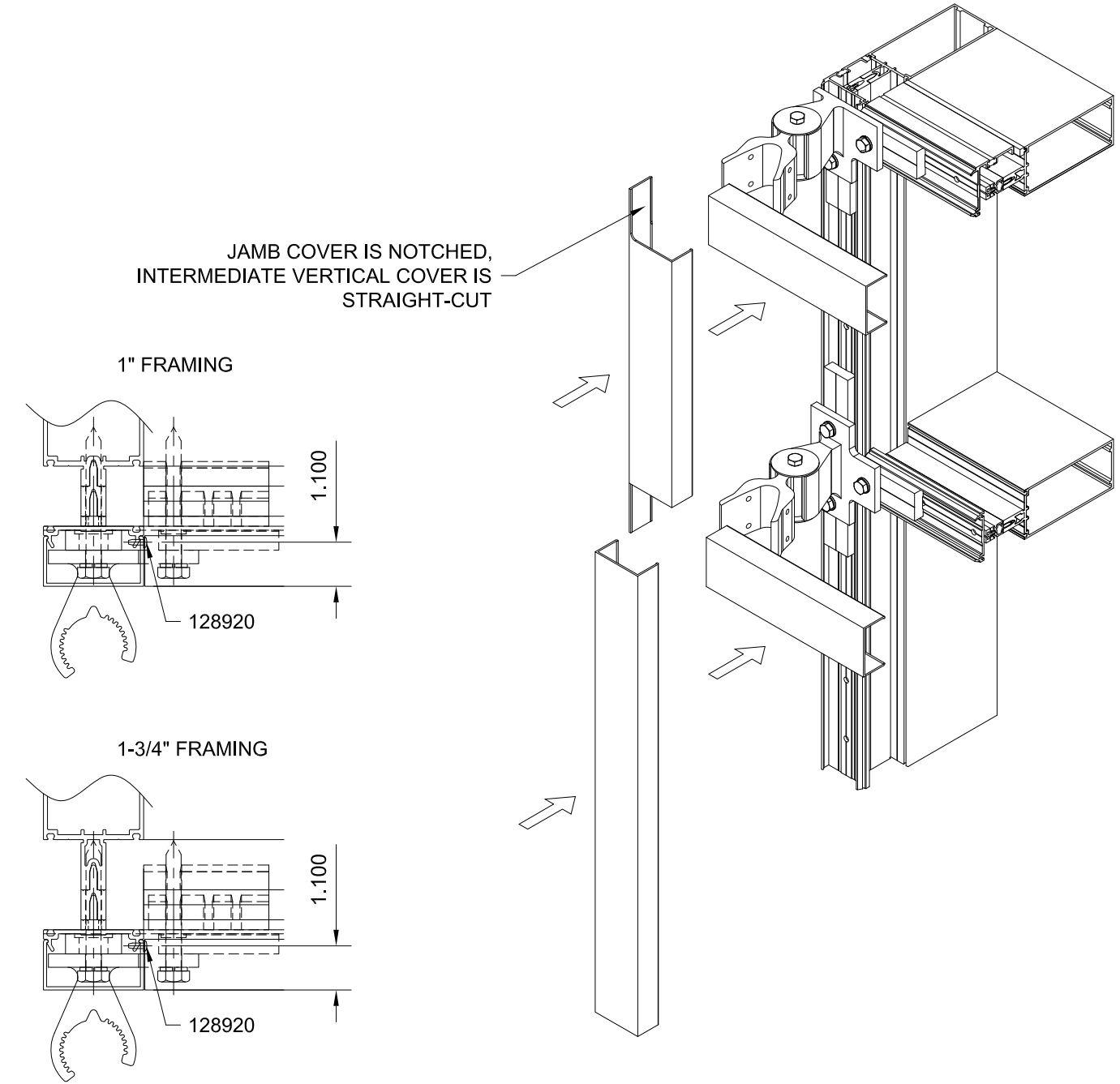
USING A STANDARD 9/16" SOCKET WRENCH, TIGHTEN TO A "SNUG" CONDITION. BE SURE THE SPRING TYPE LOCK WASHERS ARE COMPRESSED. THEN TIGHTEN APPROXIMATELY 1/2 TURN MORE.

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).



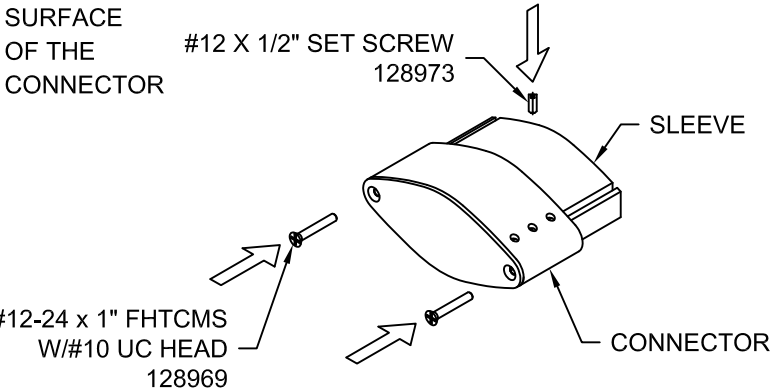
VERSOLEIL VERTICAL  
SINGLE BLADE  
1600UT SYSTEM 1  
INSTALLATION INSTRUCTIONS

BLADE, END & SPLICE ASSEMBLIES

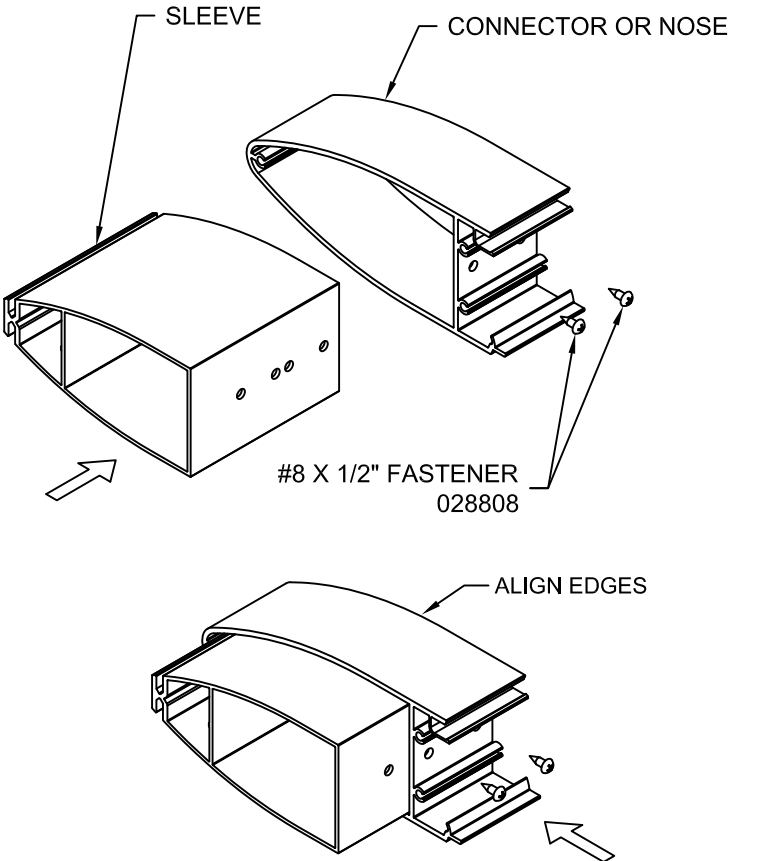
STEP 4 - END ASSEMBLY

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)

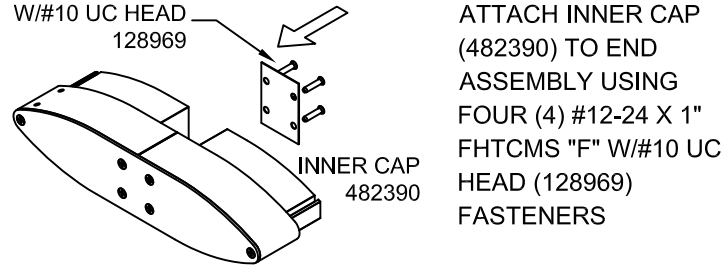
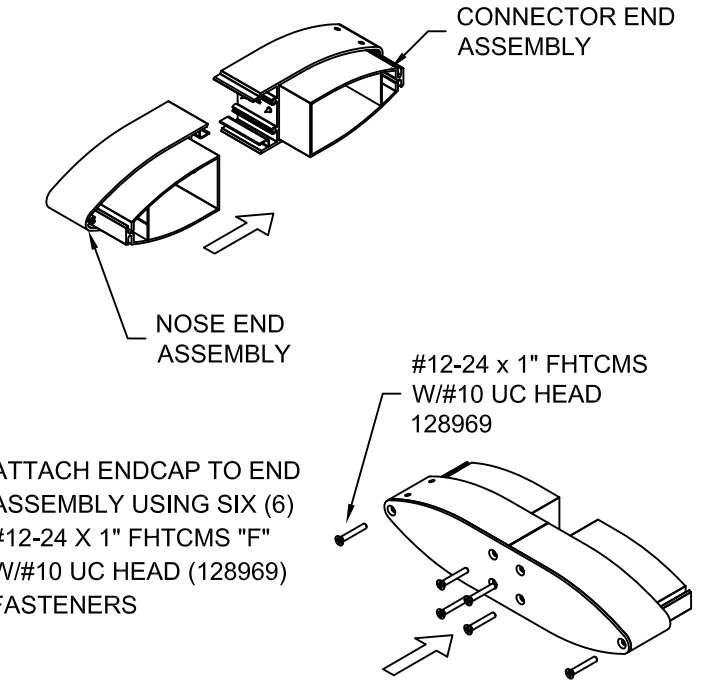
NOTE: SLIDE SLEEVE INTO CONNECTOR AND FASTEN WITH ONE (1) #12 X 1/2" SET SCREW (128973) AT CENTER HOLE. SET SCREW MUST NOT EXTEND BEYOND THE TOP SURFACE OF THE CONNECTOR



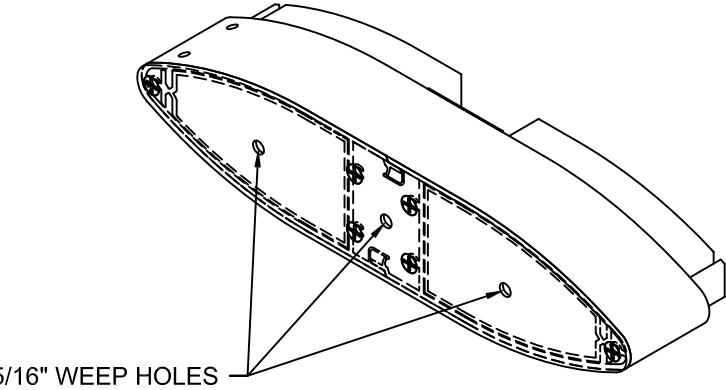
SLIDE SLEEVE INTO CONNECTOR OR NOSE, ALIGN MOUNTING HOLES AND SLEEVE EDGE WITH CONNECTOR OR NOSE EDGE. ATTACH USING TWO (2) #8 X 1/2" FASTENERS (028808).



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



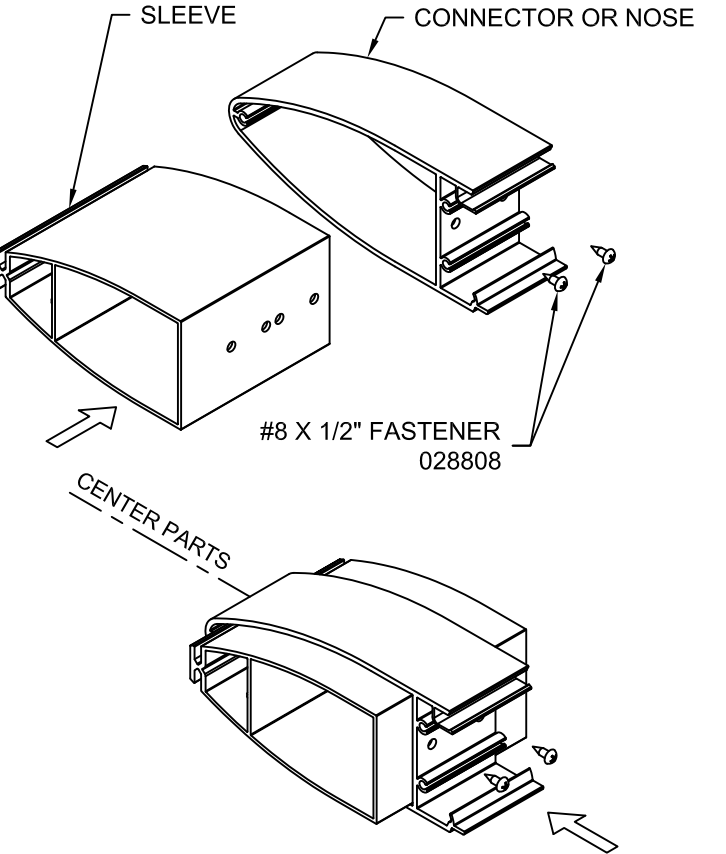
NOTE THAT END ASSEMBLY CAN BE USED AT LEFT JAMB OR RIGHT JAMB (BY ROTATING ASSEMBLY OVER)



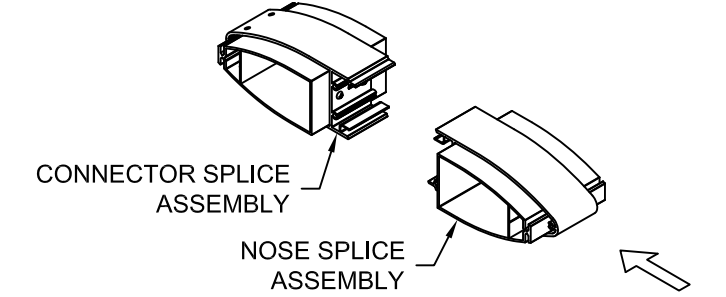
5/16" WEEP HOLES  
DRILL THREE (3) Ø5/16" WEEP HOLES IN THE ENDCAP OF THE BOTTOM END ASSEMBLY (ONE IN EACH "CHAMBER") TO DRAIN WATER WITHIN THE VERTICAL BLADES, LOCATED AS SHOWN. FOR ONE PIECE BOTTOM END ASSEMBLY, DRILL ONE (1) Ø5/16" WEEP HOLE AT CENTER OF ENDCAP.

STEP 5 - SPLICE ASSEMBLY

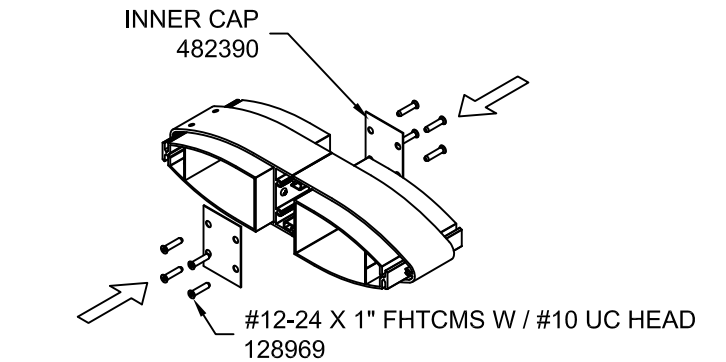
SLIDE SLEEVE INTO CONNECTOR OR NOSE. ALIGN SLEEVE CENTER ON CONNECTOR OR NOSE CENTER. ATTACH USING TWO (2) #8 X 1/2" FASTENERS (028808).



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

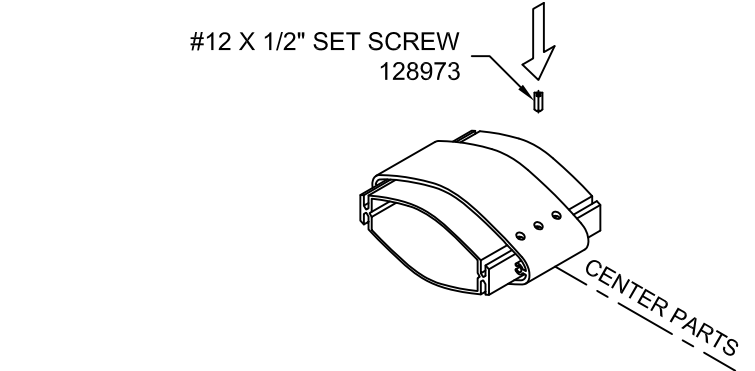


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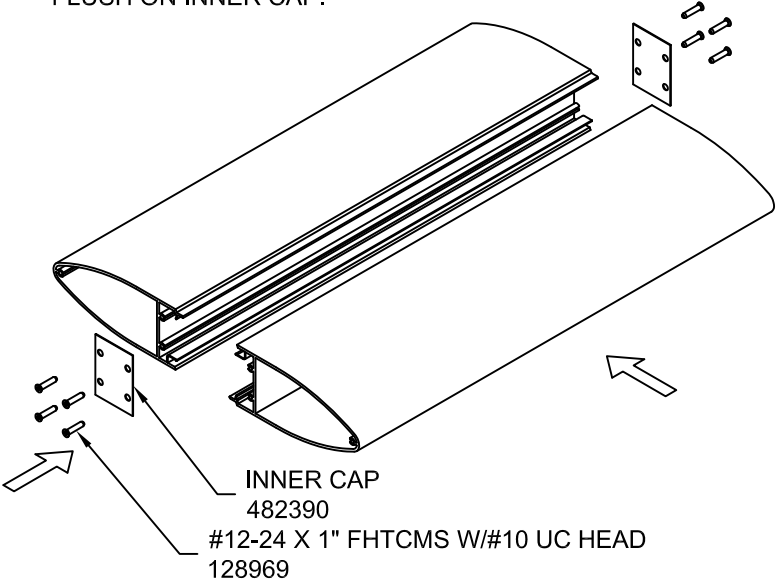
FOR ONE-PIECE-BLADE SPLICE ASSEMBLIES, CENTER SLEEVE IN CONNECTOR AND FASTEN WITH ONE (1) #12 X 1/2" SET SCREW (128973) AT CENTER HOLE.

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.

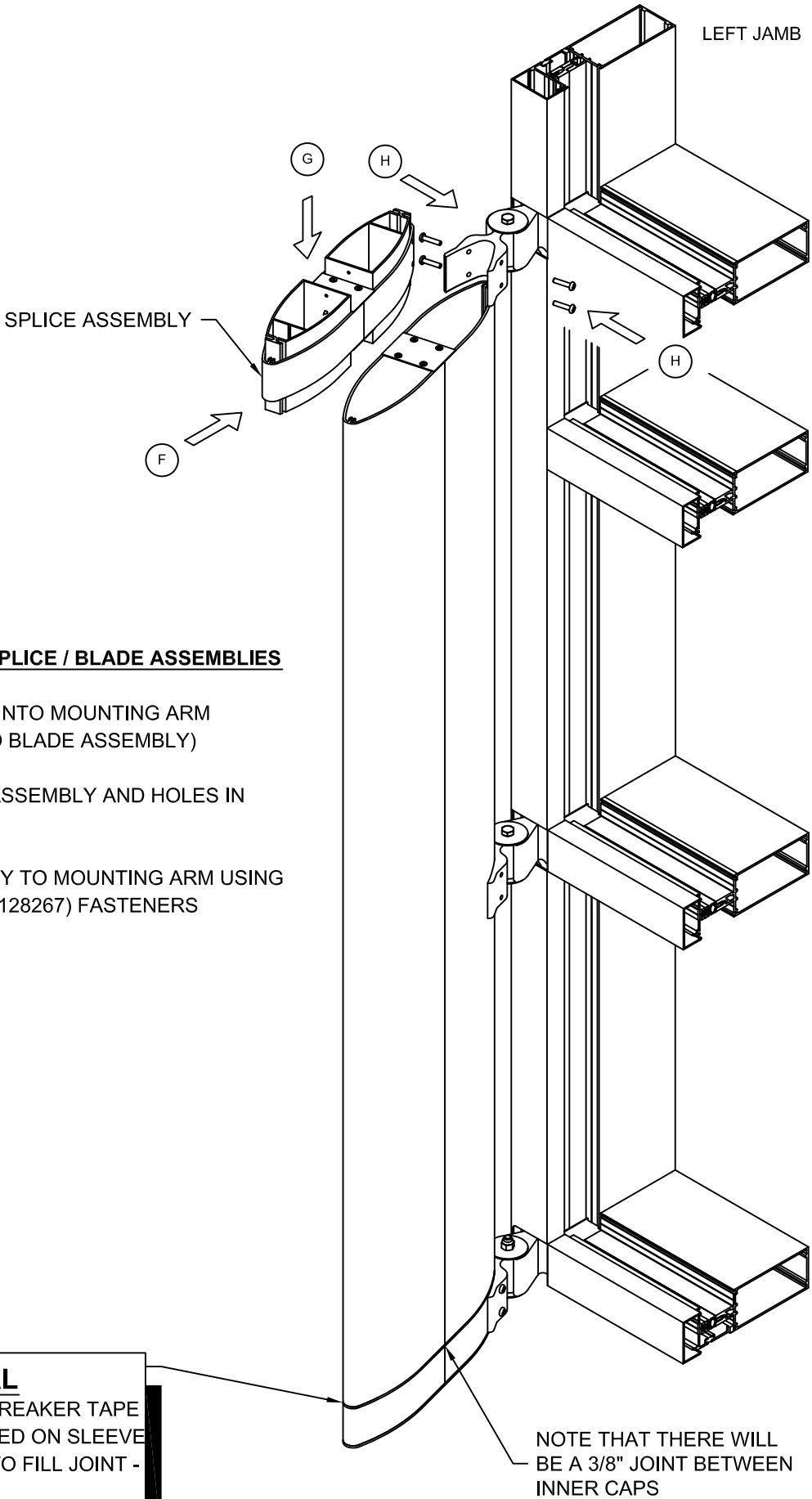


VERSOLEIL VERTICAL  
SINGLE BLADE  
1600UT SYSTEM 1  
INSTALLATION INSTRUCTIONS



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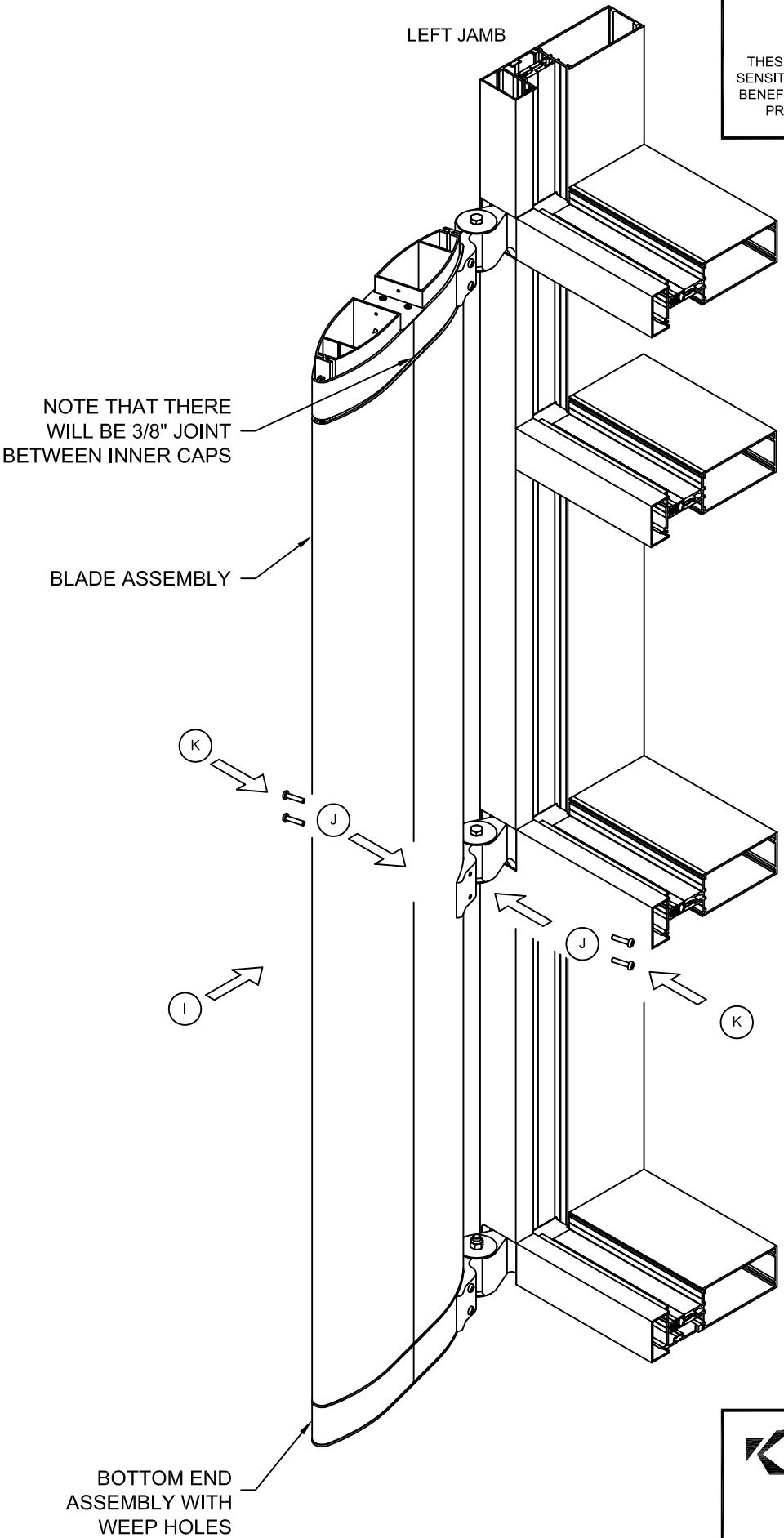


**STEP 7 - INSTALLING END / SPLICE / BLADE ASSEMBLIES**

- 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



**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  
1600UT SYSTEM 1  
INSTALLATION INSTRUCTIONS

**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

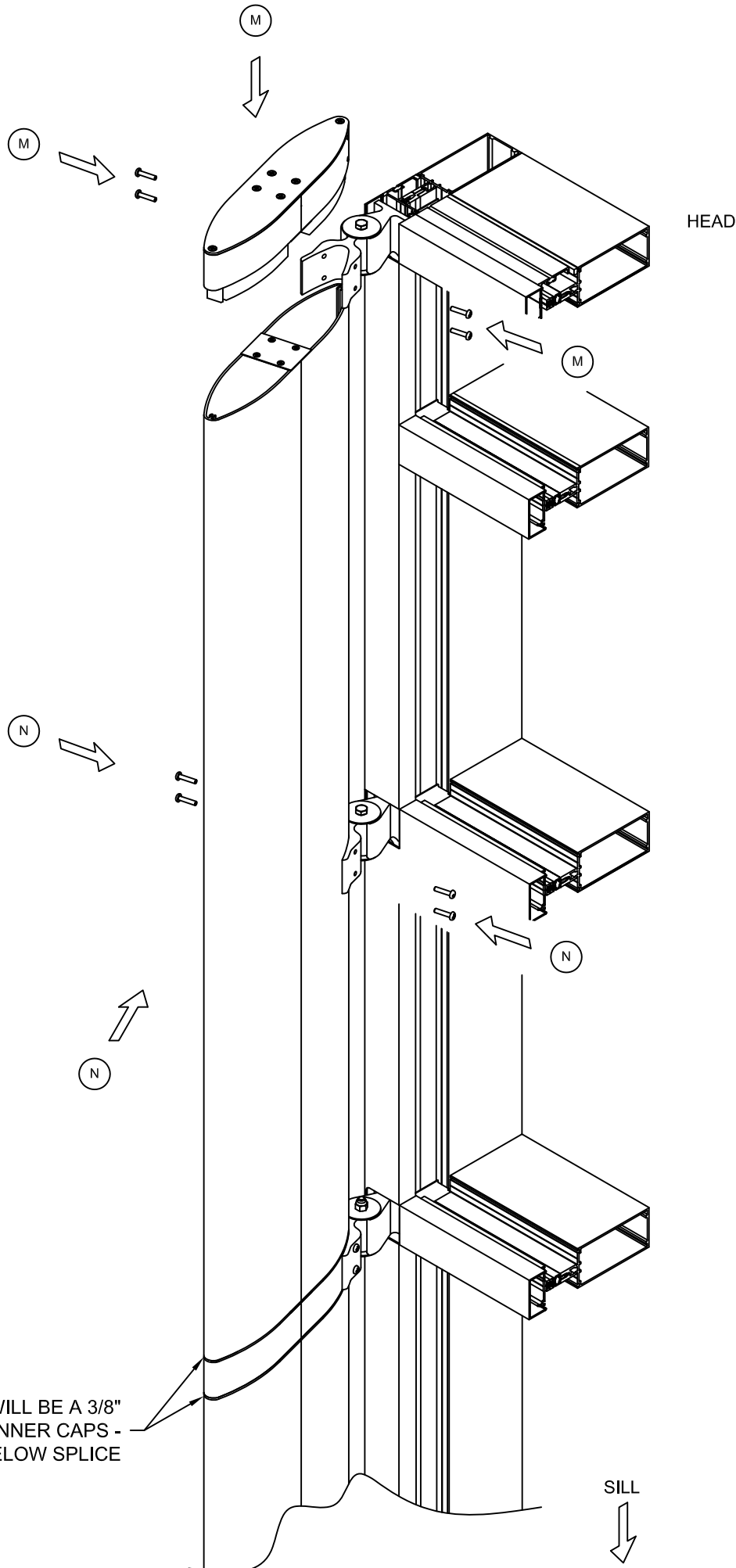
N) ENSURE LAST BLADE ASSEMBLY IS SEATED FIRMLY AGAINST MOUNTING ARM, MATCH DRILL FOUR (4) Ø0.185 (#13 DRILL) HOLES INTO BLADE ASSEMBLY AT MOUNTING ARMS (TWO IN TOP AND TWO IN BOTTOM) AND FASTEN USING FOUR (4) #12 X 1" PHTF "AB" (128267) FASTENERS

**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



VERSOLEIL VERTICAL  
SINGLE BLADE  
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