

GENERAL DETAILS

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EA6200 - PIPE BOOT

EA6000 - ROOF PANEL HAND TOOLS / INSTALLATION VIDEOS

[Download the DWG file by clicking here.](#)

IMPORTANT!

ROOF PANEL HAND TOOLS ARE NO LONGER PURCHASED THROUGH eQuote OR STEEL STORE.
ROOF PANEL HAND TOOLS CAN BE PURCHASED THROUGH D.I. ROOF SEAMERS

SCAN THE QR CODE DIRECTLY BELOW FOR TOOL PURCHASE AND SEAMER RENTAL OR VISIT
[HTTP://DIROOFSEAMERS.COM/NBG](http://diroofseamers.com/nbg) OR CALL 1(888) 343-0456.



INSTALLATION VIDEOS ARE NOW AVAILABLE TO ACCOMPANY ERECTION DETAILS.
SCAN THE QR CODE ADJACENT TO THE TOPIC TO VIEW.

<https://vimeo.com/showcase/11423087>



EAVE
PLATE



RAKE SUPPORT
ANGLE



ROOF START
PANEL



OUTSIDE
CLOSURE



ON-SLOPE
GUTTER



SCULPTURED
RAKE TRIM

EA6000

Detailer Notes:

- 1) DETAIL TO BE INSERTED INTO EVERY JOB THAT HAS BEEN ORDERED AFTER 10/12/2023.
- 2) IF HAND TOOLS HAVE BEEN ORDERED IN BOX 6 OF THE ORDER DOCUMENT, TURN OFF CORRESPONDING LAYER.

EA6010 - SS360 GENERAL NOTES

Download the DWG file by clicking here.

DESIGN AND PERFORMANCE CRITERIA

ROOF SYSTEM
THE ROOF SYSTEM CONSISTS OF 24 GAUGE PANELS WITH A NOMINAL COVERAGE OF 2'-0" AND A PANEL SEAM THAT IS 3'-10" OR 5'-10" HANGING DOWN CLIP TYPE USED. REFER TO THE DETAILS AND SECTIONS FOR SPECIFIC PANEL CLIP TYPE.

PANEL CLIP INSTALLATION
THE ROOF SYSTEM USES CLIP TO ATTACH THE PANELS TO THE ROOF SECONDARY MEMBERS. PANEL CLIP SPACING REQUIREMENTS AS A STANDARD ARE REQUIRED AT EVERY PURLIN AND ROOF JOIST. FOR STRUCTURES NOT SUPPLYING THE MAXIMUM CLIP SPACING TO BE 5'-0" FOR PURLIN ROOFS AND 5'-4" FOR JOIST ROOFS.

PANEL CLIP FASTENING REQUIREMENTS
STANDARD CLIP FASTENERS ARE DESIGNED TO FASTEN TO A STEEL STRUCTURAL MEMBER OF .060" MINIMUM THICKNESS (16 GA.) A MINIMUM OF TWO FASTENERS ARE REQUIRED TO ENGAGE THE STRUCTURAL MEMBER AT EVERY PANEL CLIP LOCATION. IN CERTAIN INSTANCES, THREE FASTENERS MAY BE REQUIRED PER CLIP. LOOK IN THE ERECTION DRAWINGS FOR YOUR SPECIFIC FASTENER REQUIREMENTS. FASTENER PULL-OUT VALUES ARE DEPENDENT UPON FASTENER LOCATION, SIZE, BUILDING CODE AND LOADING.

ROOF TIE UNITS AND CURB SUPPORTS
THE ROOF SYSTEM IS ELEVATED ABOVE THE TOP OF THE ROOF SECONDARY STRUCTURAL MEMBERS. THE ROOF CURB SUB-FRAMING IS LEVEL WITH THE SECONDARY STRUCTURAL MEMBERS. REFER TO THE DETAILS FOR PROPER JAMB LOCATIONS AND DIMENSIONS.

THE ROOF SYSTEM IS DESIGNED AS A FLOATING SYSTEM. CURB FRAMING AND FLASHING MUST BE DESIGNED ACCORDINGLY TO ALLOW THE CURB SYSTEM TO FLOAT WITH THE ROOF DURING THERMAL EXPANSION AND CONTRACTION. ROOF CURBS SHALL NOT SPAN THE RIDGE OF A BUILDING.

INSULATION REQUIREMENTS
INSULATION IS RECOMMENDED TO BE USED IN ALL ROOF APPLICATIONS TO AVOID PROBLEMS WITH CONDENSATION FORMING ON THE UNDERSIDE OF THE SHEETING. THIS ALSO PROVIDES A BARRIER BETWEEN THE PURLING AND THE ROOF TO ELIMINATE NOISE AND POSSIBLE DAMAGE DUE TO METAL-TO-METAL CONTACT. ROOFING FUROR FROM TARE CAN BE SUPPLIED FOR USE IN LIMITED APPLICATIONS (CANDLES, ETC) WHEN INCLUDED AS PART OF THE ROOF ORDER. REFER TO THE DETAILS FOR FOAM TAP REQUIREMENTS.

PAINTED ROOF
PAINTED STANDING SEAM ROOF PANELS ARE OFTEN PROVIDED BY MBS. IN THIS CASE, GUTTER BRACKETS AND OUTSIDE CLOSURES WILL BE PANELS TO MATCH THE ROOF COLOR AS A STANDARD.

MASTIC APPLICATION
TEMPERATURE SENSITIVITY
TEMPERATURE EXTREMES MUST BE CONSIDERED DURING INSTALLATION OF THE ROOF DUE TO THE SENSITIVITY OF MASTICS. THE RECOMMENDED INSTALLATION TEMPERATURE RANGE IS 32-100 DEGREES FAHRENHEIT. AT COLDER TEMPERATURES, THE MASTIC STIFFENS RESULTING IN LOSS OF ADHESION AND COMPRESSIBILITY. AT HIGHER TEMPERATURES, THE MASTIC BECOMES TOO SOFT FOR PRACTICAL HANDLING. ON COLD BUT SUNNY DAYS, THE PANEL SURFACE MAY BECOME WARM ENOUGH TO ACCEPT THE APPLICATION OF HEATED MASTIC EVEN THOUGH THE AIR TEMPERATURE IS BELOW 50 DEGREES FAHRENHEIT.

WHEN OVERNIGHT TEMPERATURES FALL BELOW FREEZING, THE MASTIC SHOULD BE STORED IN A HEATED ROOM SO IT WILL BE WARM ENOUGH TO USE THE FOLLOWING DAY. ON HOT DAYS, THE MASTIC ANYONE SHOULD BE STORED OFF THE ROOF IN A COOL AND SHADED AREA. WHILE ON THE ROOF, MASTIC SHOULD BE KEPT SHADED UNTIL IN ACTUAL USE.

CONTAMINATION
TO AVOID PROBLEMS WITH SEALING, THE MASTIC MUST HAVE COMPLETE CONTACT WITH ADJOINING SURFACES. CONTAMINANTS SUCH AS WATER, OIL, DIRT AND DUST PREVENT SUCH CONTACT. THE PANEL AND FLASHING SURFACES MUST BE DRY AND THOROUGHLY CLEANED OF ALL CONTAMINANTS. BEFORE APPLYING TAPE MASTIC, THE MASTIC SHOULD BE CHECKED FOR CONTAMINANTS. IF THE MASTIC SURFACES ARE CONTAMINATED, IT MUST NOT BE USED.

DURING COLD WEATHER, CONDENSATION OR LIGHT MIST CAN ACCUMULATE ON THE PANEL AND FLASHING SURFACE AND NOT BE EASILY NOTICED. IT IS RECOMMENDED THAT THE MASTIC ALWAYS BE KEPT UNDER PROTECTIVE COVER AND THAT THE PANEL AND FLASHING SURFACES BE WIPED DRY IMMEDIATELY BEFORE INSTALLATION.

TAPE MASTIC IS PROVIDED WITH A PROTECTIVE PAPER TO REDUCE CONTAMINATION. INCOMPLETE REMOVAL OF THE PROTECTIVE PAPER WILL PREVENT THE MASTIC ADHESION TO THE PANEL OR FLASHING SURFACES. ALWAYS CHECK THAT THE PROTECTIVE PAPER IS COMPLETELY REMOVED. DO NOT REMOVE THE PROTECTIVE PAPER UNTIL IMMEDIATELY BEFORE THE PANEL OR FLASHING IS INSTALLED OVER THE MASTIC.

COMPRESSION
TO AVOID PROBLEMS WITH COMPRESSION AND SEAL, THE TAPE MASTIC MUST BE COMPRESSED BETWEEN THE PANEL AND FLASHING SURFACES WITH FIRM AND UNIFORM PRESSURE. IN MOST CASES, THE REQUIRED PRESSURE IS APPLIED BY THE CLAMPING ACTION OF SCREWS PULLING THE FASTENERS TOGETHER. HOWEVER, THE TAPE SEALANT'S RESISTANCE TO PRESSURE BECOMES GREATER IN COLD WEATHER.

DURING COLD WEATHER, THE FASTENERS MUST BE TIGHTENED SO ONLY TO ALLOW THE MASTIC TIME TO COMPRESS. IF THE FASTENERS ARE TIGHTENED TOO TIGHT, THE FASTENERS MAY STRIP OUT BEFORE THE MASTIC COMPRESSES. INSTEAD, IF THE PANEL OR FLASHING MAY DEFLECT IN THE IMMEDIATE AREA OF THE FASTENER, LEAVING THE REST OF THE MASTIC INADEQUATELY COMPRESSED.

INSIDE CORNERS
AT INSIDE RADII, SUCH AS WHERE THE PANEL FLAT MEETS A RIB, IS USUALLY THE MOST CRITICAL AREA TO SEAL. A CORNER MISTAKE FOR THE INSTALLER CAN BE THE MASTIC ACROSS THE INSIDE RADIUS.

WHEN THE LAPPING PANEL OR FLASHING IS PUSHED INTO PLACE, THE INSIDED MASTIC IS STRETCHED AND THINNED. THE MASTIC MAY THEN BE TOO THIN TO ADEQUATELY SEAL THIS CRITICAL AREA. WHEN TAPE MASTIC IS APPLIED AT AN INSIDE RADIUS, IT IS RECOMMENDED THAT THE MASTIC BE FOLDED BACK, THEN PUSH THE MASTIC FOLD INTO THE INSIDE RADIUS.

MASTIC LAP
FOLD MASTIC AND PUSH FOLD INTO THE RADIUS

CAUTION:
DO NOT ALLOW THE MASTIC TO BRIDGE ACROSS INSIDE RADIUS CREATING VOIDS

INCORRECT
MASTIC

CORRECT
NO VOID

ERECTOR'S RESPONSIBILITY

REGULATION
THESE SHEETS FORTH BY THE OCCUPATIONAL SAFETY AND HEALTH ACT, LOCAL, STATE, AND/OR FEDERAL AGENCIES SHOULD BE ADHERED TO AT ALL TIMES. MBS IS NOT RESPONSIBLE FOR INJURY, DAMAGE, OR FAILURE, WHICH MAY BE THE RESULT FROM FAILING TO MEET ANY OF THESE REGULATIONS.

IN COMPLIANCE WITH THE HAZARD COMMUNICATION RULE 1910-1200, MATERIAL SAFETY DATA SHEETS (MSDS) HAVE BEEN PROVIDED FOR YOUR USE AND SAFETY. THESE DATA SHEETS SHOULD BE MADE AVAILABLE TO ALL PERSONNEL THAT COME IN CONTACT WITH THESE PRODUCTS. THESE DATA SHEETS WILL GIVE YOU THE NECESSARY INFORMATION TO PROPERLY HANDLE SUCH MATERIALS AND WHAT TO DO IN CASE OF AN EMERGENCY. (THE MSDS SHEETS ARE LOCATED ONLINE AND ARE AVAILABLE UPON REQUEST).

THE ERECTOR OF THE ROOF SYSTEM IS RESPONSIBLE FOR THE SAFE EXECUTION OF THIS DETAIL. THESE INSTRUCTIONS ARE INTENDED TO DESCRIBE THE SEQUENCE AND PROPER PLACEMENT OF PARTS. THEY ARE NOT INTENDED TO PRESCRIBE COMPREHENSIVE SAFETY PROCEDURES. THE PROCEDURES IN THIS DETAIL ARE BELIEVED TO BE RELIABLE. HOWEVER, MBS SHALL NOT BE RESPONSIBLE FOR INJURY, DAMAGE, OR FAILURE DUE TO THE MISAPPLICATION OF THESE PROCEDURES, IMPROPER ERECTION TECHNIQUES, OR NEGLIGENCE.

WARNING AND WARNING ON ROOF PANELS
DO NOT PLACE BUNDLES OF PANELS ON THE ROOF STRUCTURE WITHOUT FIRST VERIFYING THE STRUCTURE WILL SAFELY SUPPORT THE CONCENTRATED WEIGHT OF THE PANELS AND THE WEIGHT OF THE INSTALLATION CREW. SOME ROOF STRUCTURES MAY NOT BE DESIGNED TO SUPPORT THE WEIGHT OF A FULL PANEL BUNDLE WITHOUT ADDITIONAL STRUCTURE SUPPORT.

DO NOT USE A ROOF PANEL AS A WORKING PLATFORM. AN UNSECURED PANEL COULD COLLAPSE UNDER THE WEIGHT OF A PERSON STANDING BETWEEN PURLINS OR AT THE PANEL END.

DO NOT WALK ON THE LAST INSTALLED PANEL RUN, AS THE UNSECURED EDGE COULD COLLAPSE UNDER A PERSON'S WEIGHT. WHEN INSTALLING CLIPS OR MAKING END LAP CONNECTIONS, ETC., STAND WHERE THE ROOF STRUCTURAL WILL SUPPORT YOUR WEIGHT.

AN APPROVED AND SAFE WALKING PLATFORM SHOULD BE USED IN HIGH TRAFFIC AREAS TO PREVENT THE ROOF PANEL FROM BEING DEFORMED, SCRATCHED, OR SCUFFED.

SAFETY EQUIPMENT
THE USE OF SAFETY EQUIPMENT FOR THE ROOF PANEL INSTALLATION IS RECOMMENDED AT ALL TIMES DURING THE INSTALLATION PHASES. HOWEVER, WHEN USING LADDERS, ENSURE THAT THE CLASP, BELT HOODS AND WIRE, CABLES ARE COVERED IN SUCH A MANNER THAT THEY WILL NOT SCRATCH THE PANEL SURFACE IF ACCIDENTALLY DRAGGED ALONG THE PANEL.

CREW SIZE
THE SIZE OF THE INDIVIDUAL ROOF PANELS SHOULD BE CONSIDERED WHEN DETERMINING CREW SIZE. IT IS RECOMMENDED THAT UNDER NORMAL CONDITIONS, THERE BE ONE PERSON FOR EVERY TEN FEET OF PANEL LENGTH, PLUS ONE.

PANEL OVERHANG
THE END OF UNSUPPORTED (CONVEYERED) PANELS AT THE EAVE OR RIDGE, STANDING ON THE COUNTERPORTION MAY RESULT IN PANEL COLLAPSE.

POINT LOADS
PANELS ARE SUPPORTED BY THE STRUCTURAL STEEL. PANELS ARE DESIGNED TO SUPPORT UNIFORM LOADS, WHICH ARE EVENLY DISTRIBUTED OVER THE PANEL SURFACES. POINT LOADS THAT OCCUR IN SMALL, OR CONCENTRATED AREAS, SUCH AS HEAVY EQUIPMENT, LADDER, OR PLATFORM FEET, ETC., MAY CAUSE PANEL DEFORMATION OR EVEN PANEL COLLAPSE.

SLICK SURFACES
PANEL SURFACES AND STRUCTURAL STEEL SURFACES ARE HARD, SMOOTH, AND NONABSORBENT, WHICH CAUSES THESE SURFACES TO BE VERY SLICK WHEN WET OR COVERED WITH SNOW OR ICE. EVEN FLOWING SAND OR HEAVY DUST CAN MAKE THESE SURFACES DIFFICULT TO WALK ON WITHOUT SLIPPING.

UNPAINTED PANEL SURFACES ARE OFTEN COATED WITH OIL TO ACCOMMODATE THE PANEL FABRICATION PROCESS. ALTHOUGH DESIGNED TO WASH AWAY OR EVAPORATE DURING NORMAL WEATHER, THE OIL ON NEW PANELS CAN BE EXTREMELY SLICK, ESPECIALLY DURING PERIODS OF LIGHT FOG AND DEW. CAUTION MUST BE EXERCISED TO PREVENT SLIPPING AND FALLING ONTO THE ROOF SURFACE OR EVEN SLIDING OFF THE ROOF. NON-SLIP FOOTWEAR IS A NECESSITY AND NON-SLIP WORKING PLATFORMS ARE RECOMMENDED.

ELECTRICAL CONDUCTANCE
METAL PANELS ARE EXCELLENT ELECTRICAL CONDUCTORS. A COMMON CAUSE OF INJURY IS THE CONTACT OF METAL PANELS WITH POWER LINES DURING HANDLING AND INSTALLATION. THE LOCATION OF ALL POWER LINES MUST BE NOTED AND, IF POSSIBLE, FLAGGED. THE INSTALLATION PROCESS MUST BE MODIFIED TO AVOID ACCIDENTAL CONTACT WITH ALL POWER LINES AND HIGH VOLTAGE SURFACES AND EQUIPMENT. ALSO, TOOLS AND POWER CORDS MUST BE PROPERLY ISOLATED AND GROUNDED AND THE USE OF APPROVED GROUNDING CABLES IS RECOMMENDED.

FALSE SECURITY OF INSULATION
BLANKET AND RIGID BOARD INSULATION BLOCK THE INSTALLERS VIEW OF THE GROUND BELOW THE ROOF. SERIOUS INJURY CAN OCCUR WHEN THE INSTALLER GETS A FALSE SENSE OF SECURITY BECAUSE HE CANNOT SEE THE GROUND AND STEPS THROUGH THE INSULATION.

SHARP EDGES
SOME EDGES OF PANELS AND FLASHING ARE RAZOR SHARP AND CAN CAUSE SEVERE CUTS IF PROPER PROTECTIVE HAND GEAR IS NOT WORN. BE CAREFUL NOT TO INJURE OTHERS WHILE MOVING PANELS AND FLASHING.

COORDINATION WITH OTHER TRADES
SUPPORTS FOR THE ROOF SYSTEM SHALL BE PROVIDED AND ARE REQUIRED AS SHOWN IN THE SECTIONS AND AS NOTED IN THESE SPECIFICATIONS. ALL NECESSARY CLEARANCE DIMENSIONS FOR PROPER ELEVATIONS RELATIVE TO THE ROOF PANELS HAVE BEEN SHOWN. THE ERECTOR SHALL BE RESPONSIBLE FOR COORDINATING THESE DIMENSIONAL REQUIREMENTS WITH OTHER TRADES ASSOCIATED WITH THE BUILDING ROOF SYSTEM.

ERECTION CASE
THE ERECTOR MUST BE SKILLED IN THE ERECTION OF METAL BUILDING SYSTEMS AND IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, FEDERAL AND STATE CONSTRUCTION AND SAFETY REGULATIONS INCLUDING OSHA REGULATIONS AS WELL AS ANY APPLICABLE REQUIREMENTS OF LOCAL, NATIONAL, OR INTERNATIONAL UNION RULES OR PRACTICES. THE ERECTOR REMAINS SOLELY RESPONSIBLE FOR THE SAFETY AND APPROPRIATENESS OF ALL TECHNIQUES AND METHODS UTILIZED BY ITS CREWS IN THE ERECTION OF THE METAL BUILDING SYSTEM AND/OR THE ROOF SYSTEM. THE ERECTOR IS ALSO RESPONSIBLE FOR SUPPLYING ANY SAFETY DEVICES SUCH AS SCAFFOLDS, RAILWAYS, NETS, ETC. WHICH MAY BE REQUIRED TO SAFELY ERECT THE METAL BUILDING SYSTEM AND/OR ROOF SYSTEM.

THE ERECTOR OF THE ROOF SYSTEM SHALL EXERCISE GREAT CARE AND ATTENTION TO THE DETAILS AS SHOWN IN THESE DRAWINGS TO ENSURE A SECURE AND PROPER FIT OF ALL COMPONENTS. MBS SHALL NOT BE RESPONSIBLE FOR SUPERVISING AND/OR COORDINATING THE ERECTION OF THE ROOF SYSTEM WITH OTHER TRADES.

DUE CONSIDERATION MUST BE GIVEN BY THE ERECTOR TO THE EFFECTS OF THERMAL EXPANSION AND CONTRACTION WHEN ERECTING A ROOF TIE TO AN EXISTING STRUCTURE TO INSURE A SAFE, SECURE, WEATHER TIGHT CONDITION. FLASHING FOR THE TIE TO EXISTING BUILDINGS IS TYPICALLY NOT INCLUDED AS PART OF THE MATERIAL PROVIDED BY MBS. REFER TO THE SECTION DETAILS FOR SPECIFIC MATERIALS PROVIDED BY MBS.

THERMAL BLOCKS

PURPOSE
THERMAL BLOCKS ARE USED IN BOTH INSULATED AND UN-INSULATED CONDITIONS. THEY PROVIDE IMPROVED THERMAL PERFORMANCE WHERE INSULATION HAS BEEN COMPRESSED AT THE SECONDARY MEMBERS UNDER THE PANEL. THEY ALSO PROVIDE SUPPORT TO THE PANEL, AND REDUCE PANEL FLUTTERING AND RUMBLE IN AN INSULATED CONDITION. IN INSULATED CONDITIONS, THERMAL BLOCKS OR FOAM SPACERS THAT HAVE ADHESIVE TO ADHERE TO THE SECONDARY MEMBER TO PREVENT THEM FROM FALLING OUT OF PLACE.

LOCATION
THERMAL BLOCKS OR FOAM SPACERS ARE TO BE USED OVER ANY SECONDARY MEMBER WITH THE EXCEPTION OF THE EAVE MEMBER WHERE THE EAVE PLATE IS LOCATED.

INSULATED ROOF

CLIP	INSULATION	THERMAL BLOCK	MIN.	MAX.
SHORT	N/A	N/A	N/A	N/A
FALL	R-13	1-1/2"	R-13	4X30"
FALL	R-21	1-1/2"	R-21	4X30"
FALL	>R-13	1"	R-13	4X30"
FALL	>R-13	1"	R-6	4X30"
SUPPER FALL	R-13	1"	R-13	4X30"
SUPER FALL	>R-13	1"	R-6	4X30"

UNINSULATED ROOF

CLIP	THERMAL BLOCK	MIN.	MAX.
SHORT	N/A	N/A	N/A
FALL	1-1/2"	1-1/2"	2X30"

NOTE: CLIP NOT SHOWN FOR CLARITY

ROOF SYSTEM COMPONENT WITH DETAILING
DEFINITION
COMPONENTS WITH DETAILING DEFINITION IS A CASE WHERE MBS IS PROVIDING THE ROOF SYSTEM TO BE USED IN CONJUNCTION WITH ANOTHER STRUCTURE. MBS REFERS TO THAT AS A "COMPONENT WITH DETAILING." THIS SHIPLY MEANS THAT MBS SHALL CALCULATE THE QUANTITIES AND LENGTHS FOR THE MATERIAL REQUIRED. MBS IS PERFORMING NO ENGINEERING STUDY OF THE EXISTING STRUCTURE. THE ENGINEER OF RECORD ON THE PROJECT SHALL BE RESPONSIBLE FOR COORDINATING THE ROOF SYSTEM WITH THE OTHER TRADES OF THE PROJECT TO INSURE A SAFE, QUALITY AND PROPER APPLICATION OF THE ROOF SYSTEM.

CAUTION
COMPONENTS DESIGNED TO ACCOMMODATE THERMAL EXPANSION AND CONTRACTION AND SHALL NOT ACT AS A DIAPHRAGM FOR RESISTING LATERAL LOAD FORCES OR PROVIDING LATERAL STABILITY TO THE ROOF STRUCTURAL MEMBERS. DUE CONSIDERATION FOR THIS MUST BE ADDRESSED BY THE PROJECT ENGINEER OF RECORD. IN ADDITION, THE ROOF SYSTEM BECAUSE IT IS DESIGNED TO FLOAT, WILL NOT SUPPORT STRUCTURAL MEMBERS. LATERALLY, WHEN REPLACING AN EXISTING SCREW DOWN ROOF, ADDITIONAL BRACING MAY BE REQUIRED TO LATERALLY SUPPORT THE MEMBERS. ENGINEERING AND MATERIAL FOR THESE USES SHALL NOT BE PROVIDED BY MBS.

BUILDING & PANEL PREPARATION
STEP 1: PLUMB AND SQUARE
THE FIRST STEP IN THE SUCCESSFUL INSTALLATION OF WALL PANELS IS TO HAVE THE PRIMARY FRAMING PLUMB AND SQUARE. FOR BEST RESULTS, IT IS RECOMMENDED THAT A TRANSIT BE USED WHEN ERECTING THE STRUCTURAL STEEL. MAKE SURE THAT THE FOUNDATION AND BUILDING STRUCTURE IS SQUARE, LEVEL, AND CORRECT TO THE CUT/OUT STEEL LINE DIMENSIONS. SEE FIGURE "A"

FIGURE "A"

FIELD CUTTING PANELS
WHEN FIELD CUTTING OR MITERING WALL PANELS, NON-ABRASIVE CUTTING TOOLS SUCH AS NIBBLERS OR TIN SNIPS SHALL BE USED. ABRASIVE CUTTING TOOLS SUCH AS MECHANICAL GRINDERS OR POWER SAWS CAN DAMAGE THE MATERIAL FINISH AND CREATE EXCESS METAL SHAVINGS THAT CAN CORRODE THE PANELS. THE USE OF NON-APPROVED CUTTING DEVICES MAY VOID THE FACTORY WARRANTY.

ANY METAL SHAVINGS THAT ARE CREATED NEED NOT BE CLEANED FROM THE PANEL TO PREVENT SCRATCHING AND/OR CORROSION. THE MANUFACTURER WILL NOT ACCEPT CLAIMS FOR DAMAGE/DETERIORATION DUE TO USE OF UNAPPROVED TOOLS.

SPECIAL CONDITION AT A STRONG-BACK EAVE BEAM
IF THIS PROJECT HAS AN EAVE BEAM WITH (2) PURLINS, AS SHOWN, **DO NOT** ATTACH ROOF CLIPS TO THE "SECOND" PURLIN.

EAVE BEAM AT LOW EAVE

SECOND PURLIN

EAVE BEAM AT HIGH EAVE

FASTENER INSTALLATION

RECOMMENDED TOOL TYPES: SEE ALSO FASTENERS SCHEDULE
4 RMP OR HIGHER RATED TOOLS DO NOT USE IMPACTING TOOLS
2000 - 2800 RPM SCREW GUN WITH TORQUE ADJUSTABLE CLUTCH MANUAL OR ELECTRIC RIVET TOOL.

DO NOT USE IMPACTING TOOLS
TO AVOID PROPER FORCE TO THE TOOL, EXTENSION CORDS SHOULD BE CHECKED FOR PROPER WIRE SIZE/CHORD LENGTH
16 GAUGE WIRE, MAXIMUM CHORD LENGTH = 180'
14 GAUGE WIRE, MAXIMUM CHORD LENGTH = 180'
12 GAUGE WIRE, MAXIMUM CHORD LENGTH = 200'

MOVING THE
SET THE NUT DRIVER AS DESCRIBED BELOW PRIOR TO INSTALLING FASTENERS TO PREVENT FASTENER WOBBLING.

SOCKET EXTENSIONS (4" OR 6") ARE RECOMMENDED TO BE USED FOR INSTALLING PANEL CLIP FASTENERS TO MAINTAIN VERTICAL FASTENER INSTALLATION.

EXCESSIVE PRESSURE CAN CAUSE DRILL POINT FAILURE. LET THE FASTENER DO THE WORK.

DO NOT OVER TIGHTEN FASTENERS AS THIS WILL LEAD TO PANEL DIMPING AND DISTORTION.

1. PUT THE TOP OF THE FASTENER INTO THE NUT DRIVER. NOTE: FOR PAINTED FASTENERS, PLACE A STRIKE OR DOUBLED LAYER OF PLASTIC BETWEEN THE FASTENER HEAD AND THE NUT DRIVER.

2. PLACE THE POINT OF THE FASTENER ONTO A HARD SURFACE AND PUSH IT AT THE TOP OF THE NUT DRIVER 2-3 TIMES.

3. THE BASE OF THE NUT DRIVER SHOULD NOW BE CONTACTING THE TOP OF THE HEAD OF THE FASTENER WITH NO GAPS.

4. BAD SET VS. GOOD SET.

CORRECT

TOO LOOSE

TOO TIGHT

SEALING MATERIAL COMPRESSED UNDER CAP OF FASTENER.

SEALING MATERIAL VISIBLE UNDER CAP OF FASTENER.

SEALING MATERIAL COMPRESSED BUT DIMPLED THE PANEL FROM.

STEP 2: FASTENERS
IF YOU STRIP H1030 OR H1050 REPLACE IT WITH H1050

IF YOU STRIP H1050 IN ENDLAP YOU MUST REBUILD THE ENDLAP.

ROOF SHEETING DIRECTION
1. THE ROOF SHEETING PLAN IS SHOWN WITH THE ROOF PANELS BEING ERECTED FROM "LEFT TO RIGHT." IF THE DESIRE IS TO ERECT THE ROOF PANELS FROM "LEFT TO RIGHT," FOLLOW THE ROOF SHEETING PLAN AS SHOWN. IF THE DESIRE IS TO ERECT THE ROOF PANELS FROM "RIGHT TO LEFT," FOLLOW THE INSTRUCTIONS SHOWN BELOW.

2. WHEN SETTING BUNDLES OF PANELS ON THE ROOF, THE "MALE RIB" MUST ALWAYS BE AWAY FROM THE END OF THE BUILDING WHERE THE SHEETING WILL BEGIN.

ORIGINAL LAYOUT (LEFT-TO-RIGHT)
"MALE RIBS"

ROTATE PANELS 180° (RIGHT-TO-LEFT)
"MALE RIBS"

SS360 GENERAL NOTES
GENERAL ROOF PANEL NOTES

EA6010

Detailer Notes:

1) THIS DETAIL REQUIRED ON EVERY TRAPEZOIDAL ROOF PROJECT.

EA6010 - SSII GENERAL NOTES
Download the DWG file by clicking here.

DESIGN AND PERFORMANCE CRITERIA

ROOF SYSTEM
THE ROOF SYSTEM CONSISTS OF 24 GAUGE PANELS WITH A NOMINAL COVERAGE OF 2'-0" AND A PANEL SEAM THAT IS 3 1/2" x 4 1/2" OR 5 1/2" HING DEPENDS ON CLIP TYPE USED. REFER TO THE DETAILS AND SECTIONS FOR SPECIFIC PANEL, CLIP TYPE.

PANEL CLIP INSTALLATION
THE ROOF SYSTEM USES CLIP TO ATTACH THE PANELS TO THE ROOF SECONDARY MEMBERS. PANEL CLIP SPACING REQUIREMENTS AS A STANDARD ARE REQUIRED AT EVERY PURLIN AND/OR ROOF JOIST. FOR STRUCTURES NOT SUPPLYING THE MAXIMUM CLIP SPACING TO BE 5'-0" FOR PURLIN ROOFS AND 5'-0" FOR JOIST ROOFS.

PANEL CLIP FASTENING REQUIREMENTS
STANDARD CLIP FASTENERS ARE DESIGNED TO FASTEN TO A STEEL STRUCTURAL MEMBER OF .060" MINIMUM THICKNESS (16 GA.) A MINIMUM OF TWO FASTENERS ARE REQUIRED TO ENGAGE THE STRUCTURAL MEMBER AT EVERY PANEL CLIP LOCATION. IN CERTAIN INSTANCES, THREE FASTENERS MAY BE REQUIRED PER CLIP. LOOK IN THE ERECTION DRAWINGS FOR YOUR SPECIFIC FASTENER REQUIREMENTS. FASTENER PULL-OUT VALUES ARE DEPENDENT UPON PROJECT LOCATION, SIZE, BUILDING CODE AND LOADING.

ROOF TIE UNITS AND CURB SUPPORTS
THE ROOF SYSTEM IS ELEVATED ABOVE THE TOP OF THE ROOF SECONDARY STRUCTURAL MEMBERS. THE ROOF CURB FRAMING IS LEVEL WITH THE SECONDARY STRUCTURAL MEMBERS. REFER TO THE DETAILS FOR PROPER JAMB LOCATIONS AND DIMENSIONS.

THE ROOF SYSTEM IS CONSIDERED AS A FLOATING SYSTEM. CURB FRAMING AND FLASHING MUST BE DESIGNED ACCORDINGLY TO ALLOW THE CURB SYSTEM TO EXPAND WITH THE ROOF DURING THERMAL EXPANSION AND CONTRACTION. ROOF CURBS SHALL NOT SPAN THE RIDGE OF A BUILDING.

INSULATION REQUIREMENTS
INSULATION IS RECOMMENDED TO BE USED IN ALL ROOF APPLICATIONS TO AVOID PROBLEMS WITH CONDENSATION FORMING ON THE UNDERSIDE OF THE SHEETING. THIS ALSO PROVIDES A BARRIER BETWEEN THE PURLING AND THE ROOF TO ELIMINATE NOISE AND POSSIBLE DAMAGE DUE TO METAL-TO-METAL CONTACT. ROOF INSULATING FOM TARE CAN BE SUPPLIED FOR USE IN LIMITED APPLICATIONS (CANALS, ETC) WHEN INCLUDED AS PART OF THE ROOF ORDER. REFER TO THE DETAILS FOR PANEL REQUIREMENTS.

PAINTED ROOF
PAINTED STANDING SEAM ROOF PANELS ARE OFTEN PROVIDED BY MBS. IN THIS CASE, GUTTER BRACKETS AND OUTSIDE CLOSURES WILL BE PANELS TO MATCH THE ROOF COLOR AS A STANDARD.

MASTIC APPLICATION
TEMPERATURE SENSITIVITY
TEMPERATURE EXTREMES MUST BE CONSIDERED DURING INSTALLATION OF THE ROOF DUE TO THE SENSITIVITY OF MASTICS. THE RECOMMENDED INSTALLATION TEMPERATURE RANGE IS 32-100 DEGREES FAHRENHEIT. AT COLDER TEMPERATURES, THE MASTIC STIFFENS RESULTING IN LOSS OF ADHESION AND COMPRESSIBILITY. AT HIGHER TEMPERATURES, THE MASTIC BECOMES TOO SOFT FOR PRACTICAL HANDLING. ON COLD BUT SUNNY DAYS, THE PANEL SURFACES MAY BECOME WARM ENOUGH TO ACCEPT THE APPLICATION OF HEATED MASTIC EVEN THOUGH THE AIR TEMPERATURE IS BELOW 50 DEGREES FAHRENHEIT.

WHEN OVERNIGHT TEMPERATURES FALL BELOW FREEZING, THE MASTIC SHOULD BE STORED IN A HEATED ROOM SO IT WILL BE WARM ENOUGH TO USE THE FOLLOWING DAY. ON HOT DAYS, THE MASTIC CONTAINERS SHOULD BE STORED OFF THE ROOF IN A COOL, SHADED AREA. WHILE ON THE ROOF, MASTIC RIBS SHOULD BE KEPT SHADDED UNTIL IN USE.

ACTUAL WEATHER
IT IS RECOMMENDED THAT THE FASTENERS BE TIGHTENED SLOWLY AND ONLY TIGHT ENOUGH THAT THE MASTIC IS IN FULL CONTACT WITH THE PANEL OR FLASHING. THEN ON THE NEXT SUNNY DAY, COMPLETE THE TIGHTENING PROCESS AFTER THE SUN WARMES THE PANEL AND FLASHING SURFACES.

CONTAMINATION
TO AVOID PROBLEMS WITH SEALING, THE MASTIC MUST HAVE COMPLETE CONTACT WITH ADJOINING SURFACES. CONTAMINANTS SUCH AS WATER, OIL, DIRT AND DUST PREVENT SUCH CONTACT. THE PANEL AND FLASHING SURFACES MUST BE DRY AND THOROUGHLY CLEANED OF ALL CONTAMINANTS. BEFORE APPLYING TAPE MASTIC, THE MASTIC SHOULD BE CHECKED FOR CONTAMINANTS. IF THE MASTIC SURFACES ARE CONTAMINATED, IT MUST NOT BE USED.

DURING COLD WEATHER
CONDENSATION OR LIGHT MIST CAN ACCUMULATE ON THE PANEL AND FLASHING SURFACE AND NOT BE EASILY NOTICED. IT IS RECOMMENDED THAT THE MASTICS ALWAYS BE KEPT UNDER PROTECTIVE COVER AND THAT THE PANEL AND FLASHING SURFACES BE WIPED DRY IMMEDIATELY BEFORE INSTALLATION.

TAPE MASTIC
TAPE MASTIC IS PROVIDED WITH A PROTECTIVE PAPER TO REDUCE CONTAMINATION. INCOMPLETE REMOVAL OF THE PROTECTIVE PAPER WILL PREVENT THE MASTIC ADHESION TO THE PANEL OR FLASHING SURFACES. ALWAYS CHECK THAT THE PROTECTIVE PAPER IS COMPLETELY REMOVED. DO NOT REMOVE THE PROTECTIVE PAPER UNTIL IMMEDIATELY BEFORE THE PANEL OR FLASHING IS INSTALLED OVER THE MASTIC.

COMPRESSION
TO AVOID PROBLEMS WITH COMPRESSION AND SEAL, THE TAPE MASTIC MUST BE COMPRESSED BETWEEN THE PANEL AND FLASHING SURFACES WITH FIRM AND UNIFORM PRESSURE. IN MOST CASES, THE REQUIRED PRESSURE IS APPLIED BY THE CLAMPING ACTION OF SCREWS PULLING THE ADJOINING SURFACES TOGETHER. HOWEVER, THE TAPE SEALANT'S RESISTANCE TO PRESSURE BECOMES GREATER IN COLD WEATHER.

DURING COLD WEATHER
THE FASTENERS MUST BE TIGHTENED ONLY TO ALLOW THE MASTIC TIME TO COMPRESS. IF THE FASTENERS ARE TIGHTENED TOO FAST, THE FASTENERS MAY STRIP OUT BEFORE THE MASTIC COMPRESSIONS COMPLETELY, OR THE PANEL OR FLASHING MAY DEFORM IN THE IMMEDIATE AREA OF THE FASTENER, LEAVING THE REST OF THE MASTIC INADEQUATELY COMPRESSED.

INSIDE CORNERS
AT INSIDE RADII, SUCH AS WHERE THE PANEL FLAT MEETS A RIB, IS USUALLY THE MOST CRITICAL AREA TO SEAL. A CORNER MISTAKE FOR THE INSTALLER CAN BE THE MASTIC ACROSS THE INSIDE RADIUS.

WHEN THE LAPPING PANEL OR FLASHING IS PUSHED INTO PLACE, THE INSIDED MASTIC IS STRETCHED AND THINNED. THE MASTIC MAY THEN BE TOO THIN TO ADEQUATELY SEAL THIS CRITICAL AREA. WHEN TAPE MASTIC IS APPLIED AT AN INSIDE RADIUS, IT IS RECOMMENDED THAT THE MASTIC BE FOLDED BACK, THEN PUSH THE MASTIC FOLD INTO THE INSIDE RADIUS.

MASTIC LAP
FOLD MASTIC AND PUSH FOLD INTO THE RADIUS

CAUTION
DO NOT ALLOW THE MASTIC TO BRIDGE ACROSS INSIDE RADIUS CREATING VOIDS

INCORRECT
MASTIC

CORRECT
NO VOID

ERECTOR'S RESPONSIBILITY

REGULATION
THESE SHEETS FORTH BY THE OCCUPATIONAL SAFETY AND HEALTH ACT, LOCAL, STATE, AND/OR FEDERAL AGENCIES SHOULD BE ADHERED TO AT ALL TIMES. MBS IS NOT RESPONSIBLE FOR INJURY, DAMAGE, OR FAILURE, WHICH MAY BE THE RESULT FROM FAILING TO MEET ANY OF THESE REGULATIONS.

IN COMPLIANCE WITH THE HAZARD COMMUNICATION RULE 1910.1200, MATERIAL SAFETY DATA SHEETS (MSDS) HAVE BEEN PROVIDED FOR YOUR USE AND SAFETY. THESE DATA SHEETS SHOULD BE MADE AVAILABLE TO ALL PERSONNEL THAT COME IN CONTACT WITH THESE PRODUCTS. THESE DATA SHEETS WILL GIVE YOU THE NECESSARY INFORMATION TO PROPERLY HANDLE SUCH MATERIALS AND WHAT TO DO IN CASE OF AN EMERGENCY. (THE MSDS SHEETS ARE LOCATED ONLINE AND ARE AVAILABLE UPON REQUEST).

THE ERECTOR OF THE ROOF SYSTEM IS RESPONSIBLE FOR THE SAFE EXECUTION OF THIS DETAIL. THESE INSTRUCTIONS ARE INTENDED TO DESCRIBE THE SEQUENCE AND PROPER PLACEMENT OF PARTS. THEY ARE NOT INTENDED TO PRESCRIBE COMPREHENSIVE SAFETY PROCEDURES. THE PROCEDURES IN THIS DETAIL ARE BELIEVED TO BE RELIABLE. HOWEVER, MBS SHALL NOT BE RESPONSIBLE FOR INJURY, DAMAGE, OR FAILURE DUE TO THE MISAPPLICATION OF THESE PROCEDURES, IMPROPER ERECTOR TECHNIQUES, OR NEGLIGENCE.

WARNING AND WARNING ON ROOF PANELS
DO NOT PLACE BUNDLES OF PANELS ON THE ROOF STRUCTURE WITHOUT FIRST VERIFYING THE STRUCTURE WILL SAFELY SUPPORT THE CONCENTRATED WEIGHT OF THE PANELS AND THE WEIGHT OF THE INSTALLATION CREW. SOME ROOF STRUCTURES MAY NOT BE DESIGNED TO SUPPORT THE WEIGHT OF A FULL PANEL BUNDLE WITHOUT ADDITIONAL STRUCTURE SUPPORT.

DO NOT USE A ROOF PANEL AS A WORKING PLATFORM. AN UNSECURED PANEL COULD COLLAPSE UNDER THE WEIGHT OF A PERSON STANDING BETWEEN PURLINS OR AT THE PANEL END.

DO NOT WALK ON THE LAST INSTALLED PANEL RUN, AS THE UNSECURED EDGE COULD COLLAPSE UNDER A PERSON'S WEIGHT. WHEN INSTALLING CLIPS OR MAKING END LAP CONNECTIONS, ETC., STAND WHERE THE ROOF STRUCTURAL WILL SUPPORT YOUR WEIGHT.

AN APPROVED AND SAFE WALKING PLATFORM SHOULD BE USED IN HIGH TRAFFIC AREAS TO PREVENT THE ROOF PANEL FROM BEING DEFORMED, SCRATCHED, OR SCUFFED.

SAFETY EQUIPMENT
THE USE OF SAFETY EQUIPMENT FOR THE ROOF PANEL INSTALLATION IS RECOMMENDED AT ALL TIMES DURING THE INSTALLATION PROCESS. HOWEVER, WHEN USING LADDERS, ENSURE THAT THE CLASP, BELT HOODS AND POWER CABLES ARE COVERED IN SUCH A MANNER THAT THEY WILL NOT SCRATCH THE PANEL SURFACE IF ACCIDENTALLY DRAGGED ALONG THE PANEL.

CREW SIZE
THE SIZE OF THE INDIVIDUAL ROOF PANELS SHOULD BE CONSIDERED WHEN DETERMINING CREW SIZE. IT IS RECOMMENDED THAT UNDER NORMAL CONDITIONS, THERE BE ONE PERSON FOR EVERY TEN FEET OF PANEL LENGTH, PLUS ONE.

PANEL OVERHANG
THE END OF UNSUPPORTED (CONVEYERED) PANELS AT THE EAVE OR RIDGE, STANDING ON THE COUNTERPORTION MAY RESULT IN PANEL COLLAPSE.

POINT LOADS
PANELS ARE SUPPORTED BY THE STRUCTURAL STEEL. PANELS ARE DESIGNED TO SUPPORT UNIFORM LOADS, WHICH ARE EVENLY DISTRIBUTED OVER THE PANEL SURFACES. POINT LOADS THAT OCCUR IN SMALL, OR CONCENTRATED AREAS, SUCH AS HEAVY EQUIPMENT, LADDER, OR PLATFORM FEET, ETC., MAY CAUSE PANEL DEFORMATION OR EVEN PANEL COLLAPSE.

SLICK SURFACES
PANEL SURFACES AND STRUCTURAL STEEL SURFACES ARE HARD, SMOOTH, AND NONABRASIVE, WHICH CAUSES THESE SURFACES TO BE VERY SLICK WHEN WET OR COVERED WITH SNOW OR ICE. EVEN BLOWING SAND OR HEAVY DUST CAN MAKE THESE SURFACES DIFFICULT TO WALK ON WITHOUT SLIPPING.

UNPAINTED PANEL SURFACES ARE OFTEN COATED WITH OIL TO ACCOMMODATE THE PANEL FABRICATION PROCESS. ALTHOUGH DESIGNED TO WASH AWAY OR EVAPORATE DURING NORMAL WEATHER, THE OIL ON NEW PANELS CAN BE EXTREMELY SLICK, ESPECIALLY DURING PERIODS OF LIGHT FOG AND ICE. CAUTION MUST BE EXERCISED TO PREVENT SLIPPING AND FALLING ONTO THE ROOF SURFACE OR EVEN BLINDING OFF THE ROOF. NON-SLIP FOOTWEAR IS A NECESSITY AND NON-SLIP WORKING PLATFORMS ARE RECOMMENDED.

ELECTRICAL CONDUCTANCE
METAL PANELS ARE EXCELLENT ELECTRICAL CONDUCTORS. A COMMON CAUSE OF INJURY IS THE CONTACT OF METAL PANELS WITH POWER LINES DURING HANDLING AND INSTALLATION. THE LOCATION OF ALL POWER LINES MUST BE NOTED AND, IF POSSIBLE, FLAGGED. THE INSTALLATION PROCESS MUST BE MODIFIED TO AVOID ACCIDENTAL CONTACT WITH ALL POWER LINES AND HIGH VOLTAGE SURFACES AND EQUIPMENT. ALSO, TOOLS AND POWER CORDS MUST BE PROPERLY ISOLATED AND GROUNDED AND THE USE OF APPROVED GROUNDING L1 CIRCUIT BREAKERS IS RECOMMENDED.

FALSE SECURITY OF INSULATION
BLANKET AND RIGID BOARD INSULATION BLOCK THE INSTALLERS VIEW OF THE GROUND BELOW THE ROOF. SERIOUS INJURY CAN OCCUR WHEN THE INSTALLER GETS A FALSE SENSE OF SECURITY BECAUSE HE CANNOT SEE THE GROUND AND STEPS THROUGH THE INSULATION.

SHARP EDGES
SIDE EDGES OF PANELS AND FLASHING ARE RAZOR SHARP AND CAN CAUSE SEVERE CUTS IF PROPER PROTECTIVE HAND GEAR IS NOT WORN. BE CAREFUL NOT TO INJURE OTHERS WHILE MOVING PANELS AND FLASHING.

COORDINATION WITH OTHER TRADES
SUPPORTS FOR THE ROOF SYSTEM SHALL BE PROVIDED AND ARE REQUIRED AS SHOWN IN THE SECTIONS AND AS NOTED IN THESE SPECIFICATIONS. ALL NECESSARY CLEARANCE DIMENSIONS FOR PROPER ELEVATIONS RELATIVE TO THE ROOF PANELS HAVE BEEN SHOWN. THE ERECTOR SHALL BE RESPONSIBLE FOR COORDINATING THESE DIMENSIONAL REQUIREMENTS WITH OTHER TRADES ASSOCIATED WITH THE BUILDING ROOF SYSTEM.

ERECTION CASE
THE ERECTOR MUST BE SKILLED IN THE ERECTION OF METAL BUILDING SYSTEMS AND IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, FEDERAL AND STATE CONSTRUCTION AND SAFETY REGULATIONS INCLUDING OSHA REGULATIONS AS WELL AS ANY APPLICABLE REQUIREMENTS OF LOCAL, NATIONAL, OR INTERNATIONAL UNION RULES OR REGULATIONS. THE ERECTOR REMAINS SOLELY RESPONSIBLE FOR THE SAFETY AND APPROPRIATENESS OF ALL TECHNIQUES AND METHODS UTILIZED BY ITS CREWS IN THE ERECTION OF THE METAL BUILDING SYSTEM AND/OR THE ROOF SYSTEM. THE ERECTOR IS ALSO RESPONSIBLE FOR SUPPLYING ANY SAFETY DEVICES SUCH AS SCAFFOLDS, RAILWAYS, NETS, ETC. WHICH MAY BE REQUIRED TO SAFELY ERECT THE METAL BUILDING SYSTEM AND/OR ROOF SYSTEM.

THE ERECTOR OF THE ROOF SYSTEM SHALL EXERCISE GREAT CARE AND ATTENTION TO THE DETAILS AS SHOWN IN THESE DRAWINGS TO ENSURE A SECURE AND PROPER FIT OF ALL COMPONENTS. MBS SHALL NOT BE RESPONSIBLE FOR SUPERVISING AND/OR COORDINATING THE ERECTION OF THE ROOF SYSTEM WITH OTHER TRADES.

DUE CONSIDERATION MUST BE GIVEN BY THE ERECTOR TO THE EFFECTS OF THERMAL EXPANSION AND CONTRACTION WHEN ERECTING A ROOF TIE TO AN EXISTING STRUCTURE TO INSURE A SAFE, SECURE, WEATHER TIGHT CONDITION. FLASHING FOR THE TIE TO EXISTING BUILDINGS IS TYPICALLY NOT INCLUDED AS PART OF THE MATERIAL PROVIDED BY MBS. REFER TO THE SECTION DETAILS FOR SPECIFIC MATERIALS PROVIDED BY MBS.

THERMAL BLOCKS

PURPOSE
THERMAL BLOCKS ARE USED IN BOTH INSULATED AND UN-INSULATED CONDITIONS. THEY PROVIDE IMPROVED THERMAL PERFORMANCE WHERE INSULATION HAS BEEN COMPRESSED AT THE SECONDARY MEMBERS UNDER THE PANEL. THEY ALSO PROVIDE SUPPORT TO THE PANEL, AND REDUCE PANEL FLUTTERING AND RUMBLE IN AN INSULATED CONDITION. IN INSULATED CONDITIONS, THERMAL BLOCKS OR FOAM SPACERS THAT HAVE ADHESIVE TO ADHERE TO THE SECONDARY MEMBER TO PREVENT THEM FROM FALLING OUT OF PLACE.

LOCATION
THERMAL BLOCKS OR FOAM SPACERS ARE TO BE USED OVER ANY SECONDARY MEMBER WITH THE EXCEPTION OF THE EAVE MEMBER WHERE THE EAVE PLATE IS LOCATED.

INSULATED ROOF

CLIP	INSULATION	THICK	THERMAL BLOCK	MIN	MAX
CLIP	N/A	N/A	N/A	N/A	N/A
SHORT	N/A	N/A	N/A	N/A	N/A
FALL	5'-13"	1'-0"	R-3.5	4'-0"	4'-0"
FALL	5'-13"	1'-0"	R-3.5	4'-0"	4'-0"
FALL	5'-13"	1'-0"	R-3.5	4'-0"	4'-0"

UNINSULATED ROOF

CLIP	THICK	MIN	MAX
CLIP	1'-0"	1'-0"	1'-0"
FALL	1'-0"	1'-0"	1'-0"

NOTE: CLIP NOT SHOWN FOR CLARITY

ROOF SYSTEM COMPONENT WITH DETAILING
DEFINITION
COMPONENTS WITH DETAILING DEFINITION IS A CASE WHERE MBS IS PROVIDING THE ROOF SYSTEM TO BE USED IN CONJUNCTION WITH ANOTHER STRUCTURE. MBS REFERS TO THAT AS A "COMPONENTS WITH DETAILING." THIS SHARP MEANS THAT MBS SHALL CALCULATE THE QUANTITIES AND LENGTHS FOR THE MATERIAL REQUIRED. MBS IS PERFORMING NO ENGINEERING STUDY OF THE EXISTING STRUCTURE. THE ENGINEER OF RECORD ON THE PROJECT SHALL BE RESPONSIBLE FOR COORDINATING THE ROOF SYSTEM WITH THE OTHER TRADES OF THE PROJECT TO INSURE A SAFE, QUALITY AND PROPER APPLICATION OF THE ROOF SYSTEM.

WARNING
COMPONENTS ARE DESIGNED TO ACCOMMODATE THERMAL EXPANSION AND CONTRACTION AND SHALL NOT ACT AS A DIAPHRAGM FOR RESISTING LATERAL LOADS OR PROVIDING LATERAL STABILITY TO THE ROOF STRUCTURAL MEMBERS. DUE CONSIDERATION FOR THIS MUST BE ADDRESSED BY THE PROJECT ENGINEER OF RECORD. IN ADDITION, THE ROOF SYSTEM BECAUSE IT IS DESIGNED TO FLOAT, WILL NOT SUPPORT STRUCTURAL MEMBERS. LATERALLY, WHEN REPLACING AN EXISTING SCREW DOWN ROOF, ADDITIONAL BRACING MAY BE REQUIRED TO LATERALLY SUPPORT THE MEMBERS. ENGINEERING AND MATERIAL FOR THESE USES SHALL NOT BE PROVIDED BY MBS.

BUILDING & PANEL PREPARATION
STEP 1: FLUSH AND SQUARE
THE FIRST STEP IN THE SUCCESSFUL INSTALLATION OF WALL PANELS IS TO HAVE THE PRIMARY FRAMING PLUMB AND SQUARE. FOR BEST RESULTS, IT IS RECOMMENDED THAT A TRANSIT BE USED WHEN ERECTING THE STRUCTURAL STEEL. MAKE SURE THAT THE FOUNDATION AND BUILDING STRUCTURE IS SQUARE, LEVEL, AND CORRECT TO THE CUT-OUT STEEL LINE DIMENSIONS. SEE FIGURE "K".

FIGURE "A"

FIELD CUTTING PANELS
WHEN FIELD CUTTING OR MITERING WALL PANELS, NON-ABRASIVE CUTTING TOOLS SUCH AS MILLERBLADES OR TIN SNIPS SHALL BE USED. ABRASIVE CUTTING TOOLS SUCH AS MECHANICAL GRINDERS OR POWER SAWS CAN DAMAGE THE MATERIAL FINISH AND CREATE EXCESS METAL SHAVINGS THAT CAN CORRODE THE PANELS. THE USE OF NON-APPROVED CUTTING DEVICES MAY VOID THE FACTORY WARRANTY.

ANY METAL SHAVINGS THAT ARE CREATED NEED TO BE CLEANED FROM THE PANEL TO PREVENT SCRATCHING AND/OR CORROSION. THE MANUFACTURER WILL NOT ACCEPT CLAIMS FOR DAMAGE/DETERIORATION DUE TO USE OF UNAPPROVED TOOLS.

SPECIAL CONDITION AT A STRONG-BACK EAVE BEAM
IF THIS PROJECT HAS AN EAVE BEAM WITH (2) PURLINS, AS SHOWN, **DO NOT** ATTACH ROOF CLIPS TO THE "SECOND" PURLIN.

FASTENER INSTALLATION

RECOMMENDED TOOL TYPES: SEE ALSO FASTENERS SCHEDULE
4 AMP OR HIGHER RATED TOOLS DO NOT USE IMPACTING TOOLS
2000 - 2800 RPM SCREW GUN WITH TORQUE ADJUSTABLE CLUTCH MANUAL OR ELECTRIC RIVET TOOL.

DO NOT USE IMPACTING TOOLS
TO AVOID PROPER TIGHTNESS TO THE TOOL, EXTENSION CORDS SHOULD BE CHECKED FOR PROPER WIRE SIZE/CHORD LENGTH
16 GAUGE WIRE, MAXIMUM CHORD LENGTH = 180'
14 GAUGE WIRE, MAXIMUM CHORD LENGTH = 200'
12 GAUGE WIRE, MAXIMUM CHORD LENGTH = 300'

MOVING THE
SET THE NUT DRIVER AS DESCRIBED BELOW PRIOR TO INSTALLING FASTENERS TO PREVENT FASTENER WOBBLING.

EXCESSIVE EXTENSIONS (4" OR 6") ARE RECOMMENDED TO BE USED FOR INSTALLING PANEL CLIP FASTENERS TO MAINTAIN VERTICAL FASTENER INSTALLATION.

EXCESSIVE PRESSURE CAN CAUSE DRILL POINT FAILURE. LET THE FASTENER DO THE WORK.

DO NOT OVER TIGHTEN FASTENERS AS THIS WILL LEAD TO PANEL DIMPING AND DISTORTION.

1. PUT THE TOP OF THE FASTENER INTO THE NUT DRIVER. NOTE: FOR PAINTED FASTENERS, PLACE A STRIKE OR DOUBLED LAYER OF PLASTIC BETWEEN THE FASTENER HEAD AND THE NUT DRIVER.

2. PLACE THE POINT OF THE FASTENER ONTO A HARD SURFACE AND PUSH IT INTO THE NUT DRIVER 2-3 TIMES.

3. THE BASE OF THE NUT DRIVER SHOULD NOW BE CONTACTING THE TOP OF THE HEAD OF THE FASTENER WITH NO GAPS.

4. BAD SET VS. GOOD SET.

CORRECT
SEALING MATERIAL COMPRESSED UNDER CAP OF FASTENER.

TOO LOOSE
SEALING MATERIAL VISIBLE UNDER CAP OF FASTENER.

TOO TIGHT
SEALING MATERIAL COMPRESSED BUT DIMPLED THE PANEL FROM.

STEP 2: FASTENERS
IF YOU STRIP H1030 OR H1050 REPLACE IT WITH H1050
IF YOU STRIP H1050 IN ENDLAP YOU MUST REBUILD THE ENDLAP.

ROOF SHEETING DIRECTION
1. THE ROOF SHEETING PLAN IS SHOWN WITH THE ROOF PANELS BEING ERECTED FROM "LEFT TO RIGHT". IF THE DESIRE IS TO ERECT THE ROOF PANELS FROM "LEFT TO RIGHT", FOLLOW THE ROOF SHEETING PLAN AS SHOWN. IF THE DESIRE IS TO ERECT THE ROOF PANELS FROM "RIGHT TO LEFT", FOLLOW THE INSTRUCTIONS SHOWN BELOW.

2. WHEN SETTING BUNDLES OF PANELS ON THE ROOF, THE "MALE RIB" MUST ALWAYS BE AWAY FROM THE END OF THE BUILDING WHERE THE SHEETING WILL BEGIN.

ORIGINAL LAYOUT (LEFT-TO-RIGHT)
"MALE RIBS" →

ROTATE PANELS 180° (RIGHT-TO-LEFT)
→ "MALE RIBS"

SSII GENERAL NOTES
GENERAL ROOF PANEL NOTES

EA6010

Detailer Notes:

1) THIS DETAIL REQUIRED ON EVERY TRAPEZOIDAL ROOF PROJECT.

EA6011 - SSII BASIC PANEL INSTALLATION
Download the DWG file by clicking here.

BASIC INSTALLATION SEQUENCE

THE FOLLOWING STEPS OUTLINE THE BASIC INSTALLATION OF THE ROOF SYSTEM. REFERENCE THE SPECIFIC DETAILS WITHIN THE DETAIL DRAWING SET FOR CONDITIONS SPECIFIC TO THIS PROJECT.

START PANEL PREPARATION

THE ROOF SYSTEM IS DESIGNED TO BE ELEVATED AND FLOAT ABOVE THE ROOF SUPPORT MEMBERS. BEGIN AT THE LOWER RAKE CORNER BY INSTALLING THE EAVE PLATE. (REFERENCE EAVE PLATE INSTALLATION BELOW)

AFTER EAVE PLATE HAS BEEN INSTALLED, STITCH THE FIRST ROLL OF ROOF INSULATION FROM RIDGE / HIGH EAVE TO LOW EAVE. (1)
INSTALL THE RAKE CLIPS AND RAKE ANGLE TO SUPPORT / SECURE THE START PANEL. (REFERENCE RAKE ANGLE / RAKE CLIP PREPARATION TO THE RIGHT)

FELD CUT AND INSTALL START PANEL
THE START PANEL IS SUPPLIED AS A FULL SHEET AND WILL NEED TO BE CUT. REFER TO THE ROOF SHEETING PLAN FOR START / FINISH DIMENSIONS AND RAKE DETAILS TO DETERMINE PROPER PANEL CUT. INSTALL THE START PANEL LOW EAVE PANEL FIRST IF PANEL RUN IS LONG ENOUGH TO REQUIRE ENLAPMENTS BY SECURING THE PANEL TO THE EAVE PLATE AND RAKE ANGLE. (REFERENCE LOW EAVE AND RAKE DETAILS). INSTALL PANEL CLIPS ON LEADING EDGE OF PANEL, AS SHOWN IN THE PANEL CLIP DETAIL. CONTINUE TO INSTALL UPSLOPE START PANEL IF ENLAPMENTS ARE REQUIRED. REFERENCE THE BACKUP PLATE DETAIL AND ENLAP DETAIL FOR ATTACHMENT OF START PANEL(S) AT RAKE ANGLE.

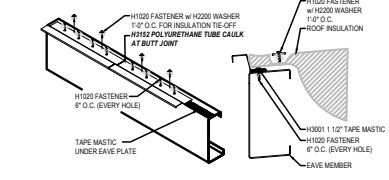
INTERMEDIATE PANEL & MODULARITY
THE INTERMEDIATE PANELS (FULL PANELS) SHOULD BE INSTALLED BY ROLLING THE PANEL INTO PLACE ENSURING THE SEAM IS FULLY ENGAGED. SECURE THE PANELS WITH PANEL CLIPS AND THE LOW EAVE ACROSS THE ROOF. IT IS RECOMMENDED TO INSTALL THE OUTSIDE CLOSURE AT THE HIGH EAVE / RIDGE AS THE ROOF PROGRESSES. THIS WILL HELP MAINTAIN MODULARITY. (REFERENCE HIGH EAVE / RIDGE DETAILS)

FINISH PANEL
THE FINISH PANEL IS SIMILAR TO THE START PANEL INSTALLATION. THE RAKE ANGLE CLIPS AND RAKE ANGLE NEEDS TO BE INSTALLED ON TOP OF THE PANEL PRIOR TO INSTALLING THE FINISH PANEL. THE FINISH PANEL SHOULD BE FELD CUT AND ROLLED INTO PLACE AND SECURED TO THE RAKE ANGLE SIMILAR TO THE START PANEL.

TRIM INSTALLATION
TRIM INSTALLATION CAN BE DONE AFTER THE ROOF PANELS ALL HAVE BEEN INSTALLED OR CAN BE INSTALLED AS ENOUGH PANELS HAVE BEEN INSTALLED FOR ATTACHMENT OF TRIMS. (REFERENCE TRIM DETAILS)

EAVE PLATE INSTALLATION

PLACE TAPE MASTIC ON TOP OF EAVE MEMBER PRIOR TO INSTALLING EAVE PLATE. INSTALL EAVE PLATE BY FASTENING EVERY HOLE TO EAVE MEMBER (IF O.C.) PRIOR TO INSULATION BEING INSTALLED. SECURE INSULATION WITH FASTENERS & INSULATION RETAINER WASHERS. NOTE: IF NO ROOF INSULATION IS USED, SECURE EAVE PLATE IN EVERY HOLE (IF O.C.)

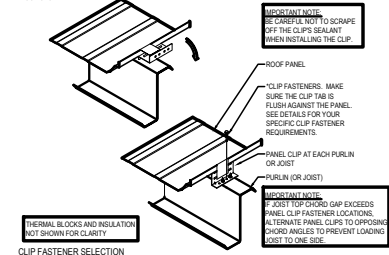


NOTE: H1020(H1019 (PURLIN/JOST)) FASTENER w/ H2000 WASHER 1" O.C. FOR INSULATION TIE-OFF PROVIDED AT HIGH SIDE / RIDGE

SP101	BASIC EAVE / GUTTER	TP101	TALL EAVE / GUTTER	TP101R	SUPER TALL EAVE / GUTTER
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PANEL CLIP INSTALLATION

BEFORE INSTALLING THE PANEL CLIP, FEEL FOR THE SUPPORT MEMBER BELOW THE INSULATION. ALIGN CLIP CENTERED OVER THE SUPPORT MEMBER AND ROLL CLIP OVER THE MALE HOOK OF THE PANEL. FASTEN CLIP WITH FASTENERS AS SPECIFIED IN THE DETAILS BASED ON THE SUPPORT MEMBER AND INSULATION UTILIZES FOR THE ROOF SYSTEM.

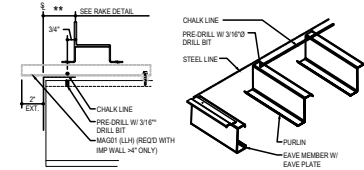


CLIP FASTENER SELECTION	STANDARD CLIPS	PERIMETER CLIPS
DESCRIPTION	DESCRIPTION	DESCRIPTION
H1020 FOR INSULATION < R-19 AND < R-30	SPC-1 SHORT CLIP W/ 2 FASTENERS	SPC-2 TALL CLIP W/ 2 FASTENERS
H1020 FOR INSULATION > R-19 AND > R-30		

RAKE ANGLE / RAKE CLIP PREPARATION

PRIOR TO INSTALLING THE ROOF INSULATION, THE SECONDARY MEMBER WILL NEED TO BE PRE-DRILLED FOR THE RAKE CLIPS. PRE-DRILLING WILL MAKE INSTALLATION OF THE RAKE AND CLIPS MUCH EASIER AFTER INSULATION IS IN PLACE. DO NOT INSTALL RAKE CLIPS UNTIL INSULATION (IF REQUIRED) IS INSTALLED. **RAKE CLIP IS INSTALLED ON TOP OF THE INSULATION.**

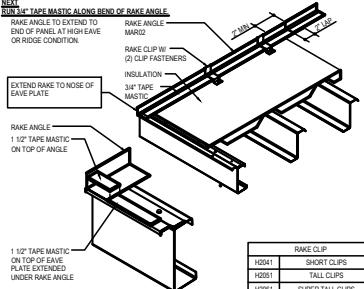
SNAP A CHALK LINE AS SHOWN BELOW FROM HIGH EAVE / RIDGE TO LOW EAVE. DRILL 3/16" Ø HOLE CENTERED ON SECONDARY MEMBER. THIS HELPS TO ALIGN ON THE START PANEL.
TO ALLOW FOR RAKE CLIP ATTACHMENT, ATTACH WITH (1) H1020 / H1019 TO PURLIN / JOST PRIOR TO RAKE CLIP INSTALLATION.



RAKE ANGLE / RAKE CLIP INSTALLATION

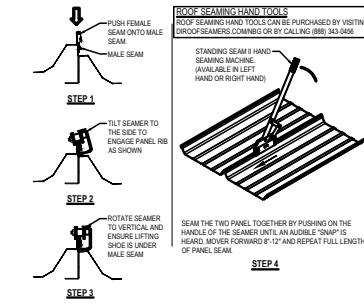
AFTER INSULATION IS IN PLACE AND PRIOR TO INSTALLING THE RAKE CLIPS AND RAKE ANGLE APPLY 1 1/2" TAPE MASTIC ON TOP OF THE EAVE PLATE BUT ONLY REMOVE PAPER BACKING WHERE THE RAKE ANGLE WILL REST. THIS WILL SEAL BETWEEN THE EAVE PLATE AND THE RAKE ANGLE.
SLIDE RAKE CLIPS ONTO RAKE ANGLE PRIOR TO SECURING THE RAKE CLIPS TO THE SECONDARY MEMBER. PLACE THE RAKE CLIPS AND ANGLE OVER THE INSULATION USING A SMALL DRIFT PIN TO LOCATE THE PRE-DRILLED HOLE. INSTALL FASTENER THROUGH OPPOSITE CLIP HOLE INTO SECONDARY MEMBER. REMOVE DRIFT PIN AND INSTALL SECOND FASTENER TO SECURE CLIP. NOTE: (2) SCREWS ARE REQUIRED IN EVERY CLIP. DO NOT CUT INSULATION OUT FROM AROUND THE CLIP.

PLACE ADDITIONAL PIECE OF 1 1/2" TAPE MASTIC ON TOP OF RAKE ANGLE AND MARRY INTO EAVE PLATE MASTIC.



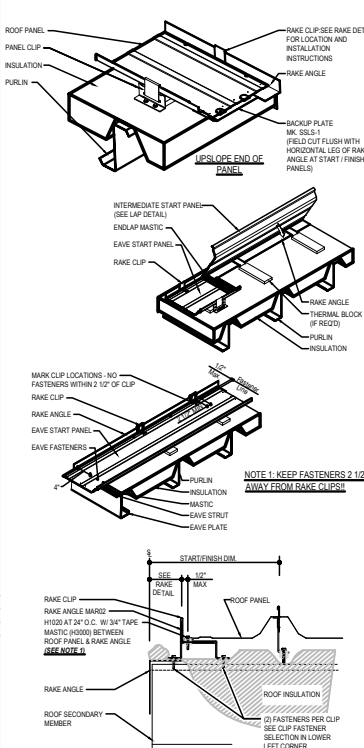
PANEL INSTALLATION

THE PANEL IS DESIGNED TO INTERLOCK AND HOOK TOGETHER AT THE SEAM. IN ORDER TO HOOK THE PANEL LAY PANEL WITH FEMALE RIB OVER TOP OF THE MALE RIB. PUSH THE FEMALE SEAM ONTO THE MALE SEAM TO SNAP INTO PLACE. USE THE SEAMER TO SNAP THE FULL LENGTH OF THE SEAM INTO PLACE AS SHOWN BELOW.



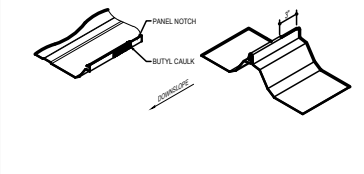
BACKUP PLATE INSTALLATION

THE BACKUP PLATE PROVIDES SUPPORT AT THE ENLAP AND HIGH SIDE OF THE PANEL TO ALLOW FOR COMPRESSION OF SEALANTS. THE BACK UP PLATE HAS NOTCHES THAT SLIDE ONTO THE PANEL TO LOCATE AND HOLD THE BACKUP PLATE IN PLACE. AT THE RAKE CONDITION, THE BACKUP PLATE IS TO BE FELD CUT FLUSH WITH THE HORIZONTAL LEG OF THE RAKE ANGLE. DO NOT EXTEND BACKUP PLATE ON TOP OF RAKE ANGLE.



PANEL HIGH EAVE PREPARATION

BEFORE INSTALLING ADJACENT PANELS, APPLY 1 1/2" BUTYL CAULK ON THE MALE RIB FROM THE PANEL NOTCH DOWNWARDS AS SHOWN TO SEAL PANEL SEAM. THE FEMALE RIB WILL NEED TO BE FELD NOTCHED TO MATCH THE MALE RIB TO ALLOW THE OUTSIDE CLOSURE TO FIT PROPERLY. IT IS RECOMMENDED FOR THE NOTCH TO BE DONE BEFORE THE PANEL IS ROLLED INTO PLACE FOR EASE BUT CAN BE DONE AFTER. AFTER THE PANEL IS ROLLED INTO PLACE AND FELD NOTCHED, SLIDE THE BACKUP PLATE ONTO THE PANEL.



OUTSIDE CLOSURE MASTIC INSTALLATION

START & FINISH PANEL NOTE: OUTSIDE CLOSURE CANNOT BE INSTALLED IN THE START / FINISH PANEL UNTIL THE RAKE TRIM IS INSTALLED.

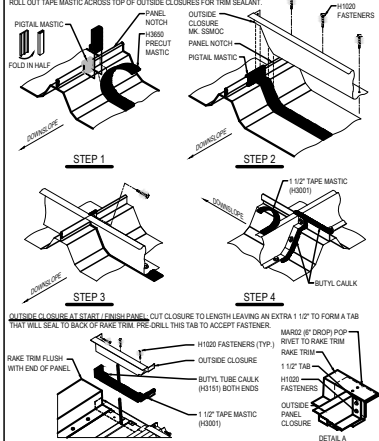
MODULARITY NOTE: OUTSIDE CLOSURE MUST BE INSTALLED AS ROOF PROGRESSES. AS NEXT PANEL IS INSTALLED, CLOSURE MUST BE INSTALLED IN THE PREVIOUS PANEL RUN.

STEP 1. APPLY THE PRECUT MASTIC ACROSS THE PANEL WITH THE BOTTOM OF THE MASTIC IN LINE WITH THE NOTCH. PRESS THE MASTIC INTO THE CORNERS OF THE TRAPEZOID TO ENSURE THERE ARE NO GAPS. CUT A 7" PIECE OF THE PRECUT MASTIC TO PLACE A PISTAL AROUND THE PANEL RIB WHERE THE NOTCH IS LOCATED. FOLD THE TAIL AS SHOWN AND PRESS INTO VOID UNDER SEAM. MARRY PISTAL TO PRECUT AND SEAL END OF PANEL SEAM.

STEP 2. ALIGN THE OUTSIDE CLOSURE WITH THE NOTCH AND SEAT INTO THE PRECUT MASTIC. ATTACH THE OUTSIDE CLOSURE THROUGH THE PREPUNCHED HOLES THROUGH THE PANEL AND INTO THE BACKUP PLATE.

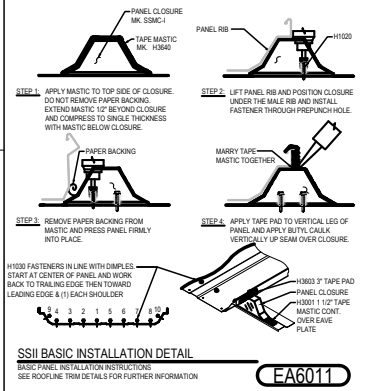
STEP 3. INSTALL FASTENER THROUGH RIB INTO ADJACENT OUTSIDE CLOSURE TO DRAW THEM TOGETHER.

STEP 4. PRIOR TO INSTALLING TRIM, APPLY BUTYL CAULK DOWN PROFILE OF TRAPEZOID AND 1" MIN ONTO PANEL. FOR TRIM, APPLY BUTYL CAULK FULL LENGTH OF NOTCH AND ACROSS JOINT OF ADJACENT OUTSIDE CLOSURES. ROLL OUT TAPE MASTIC ACROSS TOP OF OUTSIDE CLOSURES FOR TRIM SEALANT.



INSIDE CLOSURE INSTALLATION

IT IS CRITICAL TO ENSURE THAT THE TAPE MASTIC OVER THE CLOSURE DOES NOT LEAVE GAPS AT THE CORNERS AND THAT THE BUTYL CAULK IN PANEL RIB JOINS THE TAPE MASTIC OVER THE CLOSURE.



Detailer Notes:

- 1) THIS DETAIL REQUIRED ON EVERY TRAPEZOIDAL ROOF PROJECT.
- 2) TURN ON THE CORRECT LAYER BASED ON THE SPECIFIC TRAPEZOIDAL PANEL PROFILE AND TURN OFF THE PANEL PROFILES NOT USED.

EA6012 - SS360 MODULARITY GUIDANCE

Download the DWG file by clicking here.

SPECIAL ATTENTION MUST BE GIVEN TO INSULATION SAG AND RECOMMEND PRE-DRILLING TO LOCATE CLIPS. MODULARITY TOOLS ARE AVAILABLE TO AID IN MODULARITY.

ENSURE THE INSULATION IS PERMITTED TO SAG AT MID-SPAN BETWEEN ROOF SECONDARY MEMBERS AND EXPANDED TO THE FULL THICKNESS WHILE STILL KEEPING CONTACT WITH BOTTOM OF PANEL.

DO NOT PULL THE INSULATION TAUT AS THIS WILL SIGNIFICANTLY REDUCE THE THERMAL PERFORMANCE OF THE ROOF SYSTEM AND COULD CAUSE ROOF PANEL MODULARITY ISSUES.

SINGLE OR MULT LAYERS OF FIBERGLASS BLANKET INSULATION, PULLED TOO TIGHT

SINGLE OR MULT LAYERS OF FIBERGLASS BLANKET INSULATION, EXPANDED TO FULL THICKNESS

PRE-DRILL ONE PILOT HOLE FOR ROOF PANEL CLIPS AT MID-SPAN, HIGH SIDE OR RIDGE AND PANEL END LAPS, IF ANY.

INSTALL NEXT VOID CLOSURE AT BUILDING EAVE.

ROOF PANEL CLIP

RAKE ANGLE

START PANEL

VOID CLOSURE

MEASURE OVER 2" FROM CENTER OF INSTALLED VOID CLOSURE AND MARK ON EAVE PLATE TAPE MANTIC. INSTALL NEXT VOID CLOSURE AS SHOWN.

USE MODULARITY CLAMP(S) TO HOLD PANEL TRAPEZOID AT 4 3/4" WIDE ALONG FULL LENGTH OF PANEL SEAM. (SEE SECTION A)

USE MODULARITY TOOLS TO HOLD PANEL CLIPS IN PLACE. PRIOR TO FASTENING, TO MAINTAIN A CONSTANT 24" WIDE PANEL COVERAGE.

DO NOT ADJUST THE PANEL WIDTH BY MORE THAN ± 1/8" ON ANY PANEL.

SS360 MODULARITY CLAMP

24" COVERAGE

STRETCHING PANEL COVERAGE

SHRINKING PANEL COVERAGE

CORRECT PANEL MODULARITY

ADJUSTING PANEL MODULARITY

PANEL MODULARITY SEQUENCE

THE PROCEDURES AND SEQUENCE SHOWN ARE RECOMMENDED TO AID IN MAINTAINING PANEL MODULARITY. THE TOOLS SHOWN ARE NOT REQUIRED BUT RECOMMENDED TO AID INSTALLATION.

STAGE #1

1. AFTER INSTALLING START PANEL PRE-DRILL CLIP HOLES 2'-0" O.C. AND MARK EAVE PLATE 1'-0" O.C. TO LOCATE CENTER OF VOID CLOSURES AND CENTER OF PANEL FLAT.
2. ROLL FIRST FULL PANEL IN PLACE AND ALIGN CENTER OF PANEL FLAT TO SQUARE AS SHOWN BELOW.
3. APPLY THE LOW EAVE CLAMP AS SHOWN TO DRAW PANEL TIGHT TO CLOSURE.
4. INSTALL THE EAVE FASTENERS STARTING AT CENTER OF PANEL AND WORK BACK TO TRAILING RIB. THEN FROM CENTER OF PANEL TOWARD LEADING RIB.
5. AS PANEL INSTALLATION PROGRESSES, INSTALL MORE CLAMPS UPLOPE AS SHOWN.
6. ADD ADJUST OR LEAVE CLAMPS OFF TO MAINTAIN PANEL MODULARITY AS NECESSARY.
7. LEAVE CLAMPS ON FIRST FULL SEAM.

START PANEL

SS360 MODULARITY CLAMP

FULL PANEL

LOW EAVE

LOW EAVE NOTE: TO AID IN LOW EAVE PANEL MODULARITY, PRE-INSTALL PANEL VOID CLOSURES AT 24" O.C.

FASTENER SEQUENCE: THE SQUARE TAILOR CENTER OF PANEL AND FASTEN FROM CENTER OUT

1'-0" 2'-0" 4'-0" 6'-0" OF VOID CLOSURE

STAGE #2

1. INSTALL THE NEXT LOW EAVE PANEL AND ADD CLAMP.
2. REPEAT STEPS 2 THROUGH 6 FROM STAGE #1 NOTES.
3. LEAVE CLAMPS ON FIRST AND SECOND FULL SEAM.
4. INSTALL THE OUTSIDE CLOSURE IN THE FIRST FULL PANEL.
- 4.1. DO NOT INSTALL OUTSIDE CLOSURE IN THE LEADING PANEL.

START PANEL OUTSIDE CLOSURE CANNOT BE INSTALLED UNTIL RAKE TRIM IS INSTALLED

OUTSIDE CLOSURE CAN BE INSTALLED AT THIS STEP (SEE BASIC PANEL INSTALLATION DETAIL)

DO NOT INSTALL OUTSIDE CLOSURE IN LEADING PANEL

LOW EAVE

LOW EAVE NOTE: TO AID IN LOW EAVE PANEL MODULARITY, PRE-INSTALL PANEL VOID CLOSURES AT 24" O.C.

ROOF SEAMING HAND TOOLS
ROOF SEAMING HAND TOOLS CAN BE PURCHASED BY VISITING WWW.SSEAMERS.COM/80 OR BY CALLING (888) 343-0456

STAGE #3

1. KEEP CLAMPS IN PLACE ON THE FIRST TWO SEAMS WITH THE EXCEPTION OF THE LOW EAVE CLAMP.
2. INSTALL THE NEXT LOW EAVE PANEL AND LEAP FROG CLAMP AS SHOWN.
3. REPEAT STEPS 2 THROUGH 5 FROM STAGE #1 NOTES.

START PANEL

SS360 MODULARITY CLAMP

FULL PANEL

LOW EAVE

LOW EAVE NOTE: TO AID IN LOW EAVE PANEL MODULARITY, PRE-INSTALL PANEL VOID CLOSURES AT 24" O.C.

START PANEL OUTSIDE CLOSURE CANNOT BE INSTALLED UNTIL RAKE TRIM IS INSTALLED

PREVIOUSLY INSTALLED OUTSIDE CLOSURE

OUTSIDE CLOSURE CAN BE INSTALLED AT THIS STEP (SEE BASIC PANEL INSTALLATION DETAIL)

DO NOT INSTALL OUTSIDE CLOSURE IN LEADING PANEL

STAGE #4

1. KEEP CLAMPS IN PLACE ON THE FIRST TWO SEAMS WITH THE EXCEPTION OF THE LOW EAVE CLAMP.
2. INSTALL THE NEXT LOW EAVE PANEL AND LEAP FROG THE CLAMP AS SHOWN.
3. INSTALL EAVE PLATE FASTENERS.
4. AS PANEL INSTALLATION PROGRESSES, LEAP FROG CLAMPS FROM THREE SEAMS BACK ONTO PANEL SEAM AS SHOWN.
5. MAINTAIN TWO RINGS OF CLAMPS ON PREVIOUS SEAMS AS PANEL INSTALLATION CONTINUES.
6. REPEAT ALL STEPS / STAGES OF THIS METHOD THROUGHOUT THE ROOF PANEL ERECTION.

START PANEL

SS360 MODULARITY CLAMP

FULL PANEL

LOW EAVE

LOW EAVE NOTE: TO AID IN LOW EAVE PANEL MODULARITY, PRE-INSTALL PANEL VOID CLOSURES AT 24" O.C.

ROOF SEAMING HAND TOOLS
ROOF SEAMING HAND TOOLS CAN BE PURCHASED BY VISITING WWW.SSEAMERS.COM/80 OR BY CALLING (888) 343-0456

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MODULARITY GUIDANCE

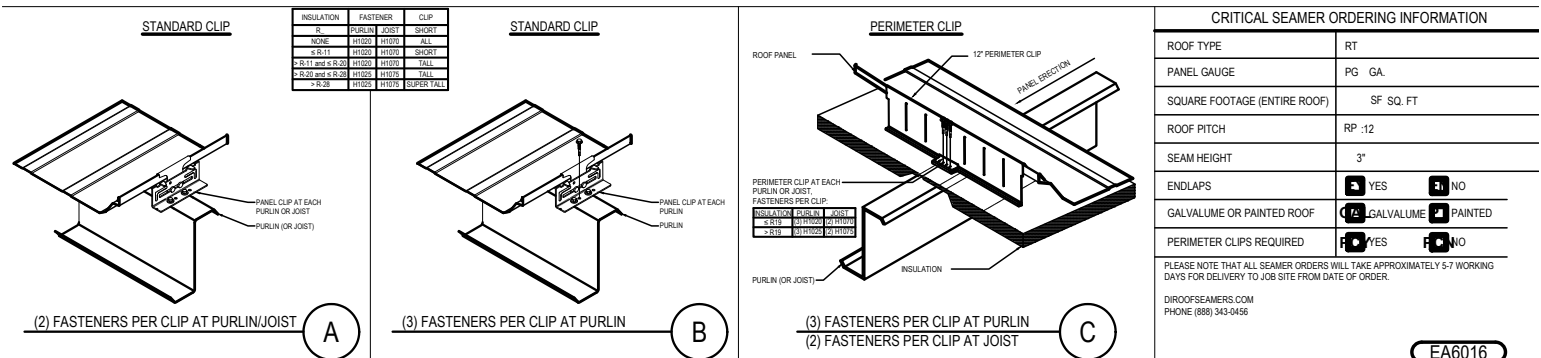
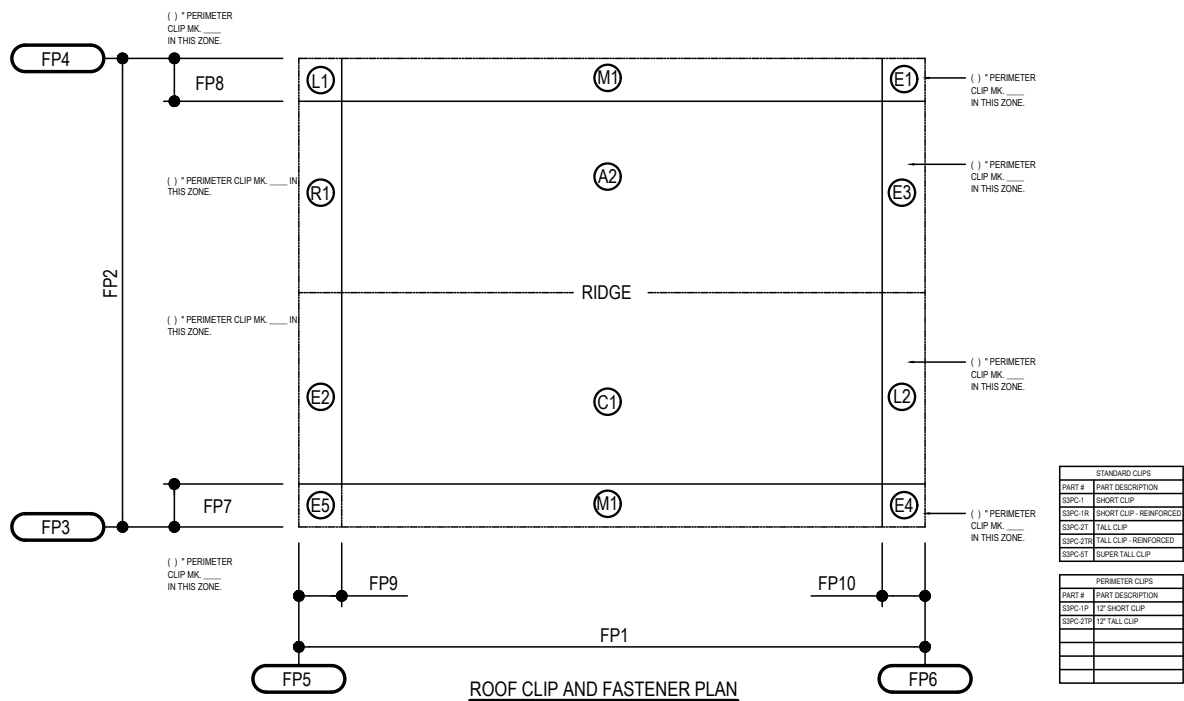
SPECIAL ATTENTION TO ABOVE STEPS TO MAINTAIN PROPER PANEL MODULARITY AND THERMAL PERFORMANCE IS CRITICAL. FAILURE TO DO SO WILL RESULT IN UNSIGHTLY PANEL APPEARANCE.

EA6012

Detailer Notes:

1) THIS DETAIL REQUIRED ON EVERY TRAPEZOIDAL ROOF PROJECT.

EA6016 - SS360 ROOF CLIP PLAN
[Download the DWG file by clicking here.](#)

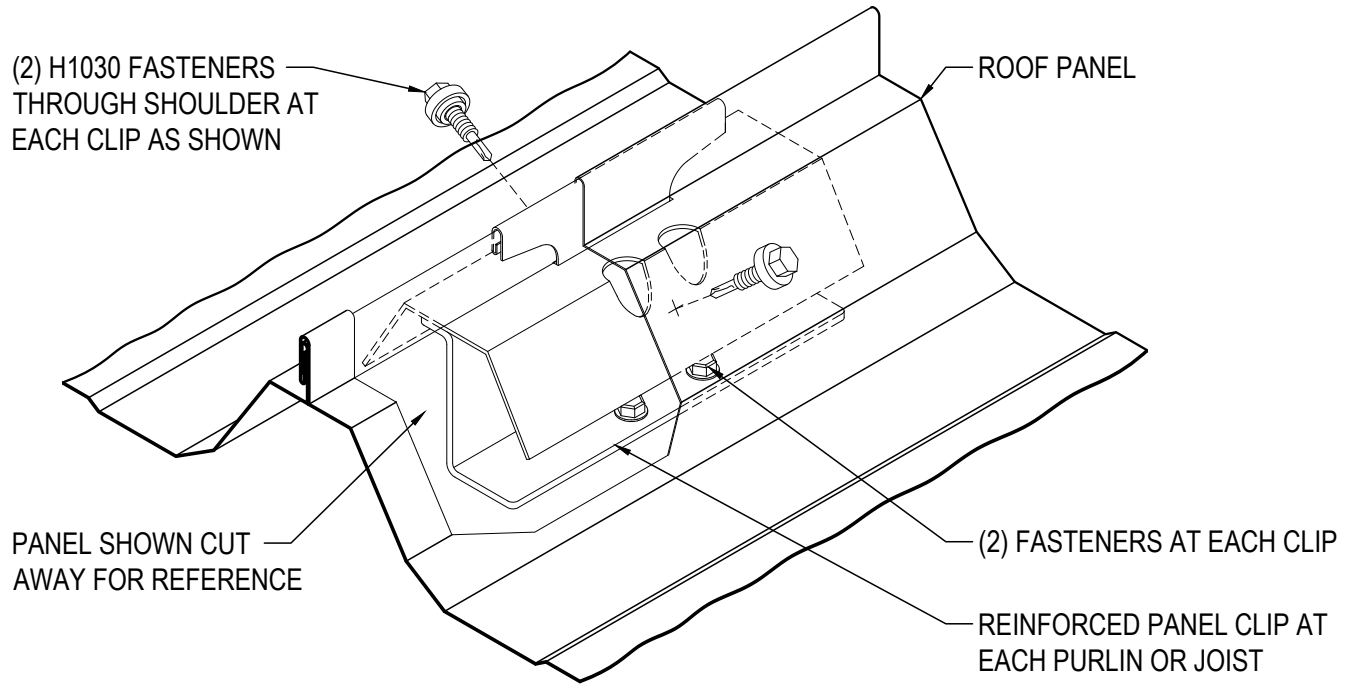


Detailer Notes:

- THIS DETAIL IS REQUIRED ON EVERY TRAPEZOIDAL ROOF PROJECT.
- DETAILER NOTE: ATTRIBUTES WITH "SP" TAG DO NOT NEED TO BE FILLED OUT.

EA6018 - SS360 REINFORCED PANEL CLIP

[Download the DWG file by clicking here.](#)



CLIP FASTENER SELECTION

PURLIN APPLICATION

H1020 FOR INSULATION \leq R-20

H1025 FOR INSULATION $>$ R-20 AND \leq R-28

JOIST APPLICATION

H1070 FOR INSULATION \leq R-20

H1075 FOR INSULATION $>$ R-20 AND \leq R-28

IMPORTANT NOTE:

IF JOIST TOP CHORD GAP EXCEEDS PANEL CLIP FASTENER LOCATIONS, ALTERNATE PANEL CLIPS TO OPPOSING CHORD ANGLES TO PREVENT LOADING JOIST TO ONE SIDE.

THERMAL BLOCKS AND INSULATION NOT SHOWN FOR CLARITY

REINFORCED CLIPS	
PART #	PART DESCRIPTION
S3PC-1R	SHORT CLIP - REINFORCED
S3PC-2TR	TALL CLIP - REINFORCED

SS360 REINFORCED PANEL CLIP

FACTORY MUTUAL APPROVED

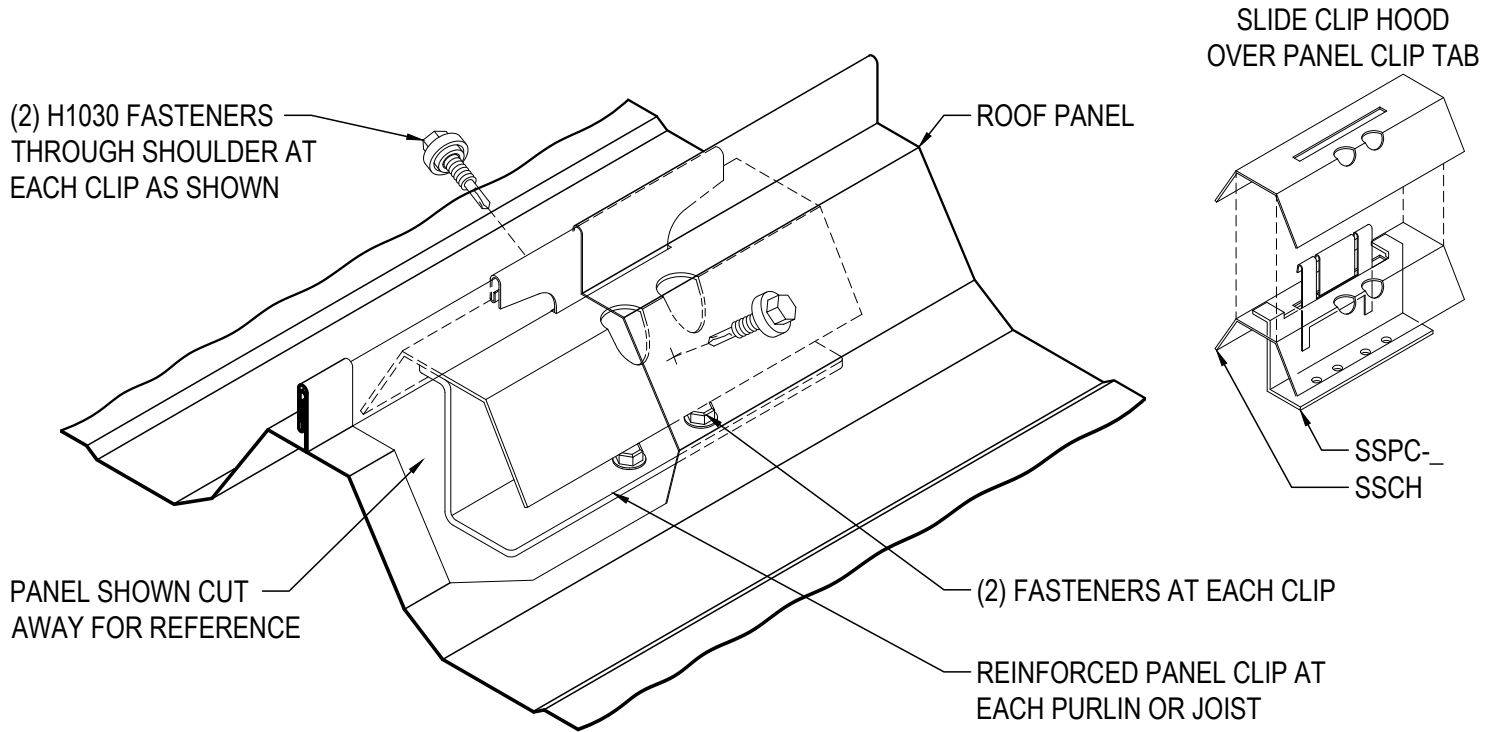
EA6018

Detailer Notes:

1) THIS DETAIL REQUIRED ONLY ON FM RATED PROJECTS WITH 24GA PANEL. IF 22GA PANEL IS USED THE REINFORCED CLIP IS NOT REQUIRED. REFERENCE THE PRAC MANUAL.

EA6019 - SSII REINFORCED PANEL CLIP

[Download the DWG file by clicking here.](#)



CLIP FASTENER SELECTION

PURLIN APPLICATION

H1020 FOR INSULATION \leq R-20

H1025 FOR INSULATION $>$ R-20 AND \leq R-28

JOIST APPLICATION

H1070 FOR INSULATION \leq R-20

H1075 FOR INSULATION $>$ R-20 AND \leq R-28

IMPORTANT NOTE:

IF JOIST TOP CHORD GAP EXCEEDS PANEL CLIP FASTENER LOCATIONS, ALTERNATE PANEL CLIPS TO OPPOSING CHORD ANGLES TO PREVENT LOADING JOIST TO ONE SIDE.

Thermal blocks and insulation not shown for clarity

STANDARD CLIPS	
PART #	PART DESCRIPTION
SSPC-1	SHORT CLIP
SSPC-2T	TALL CLIP

SSII REINFORCED PANEL CLIP

REINFORCED CLIP REQUIRED AS SHOWN ON PLAN

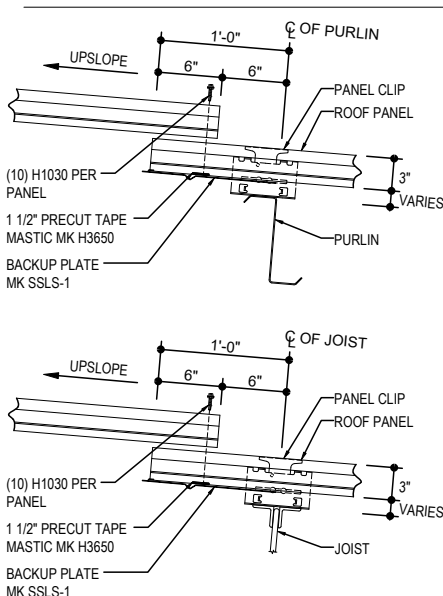
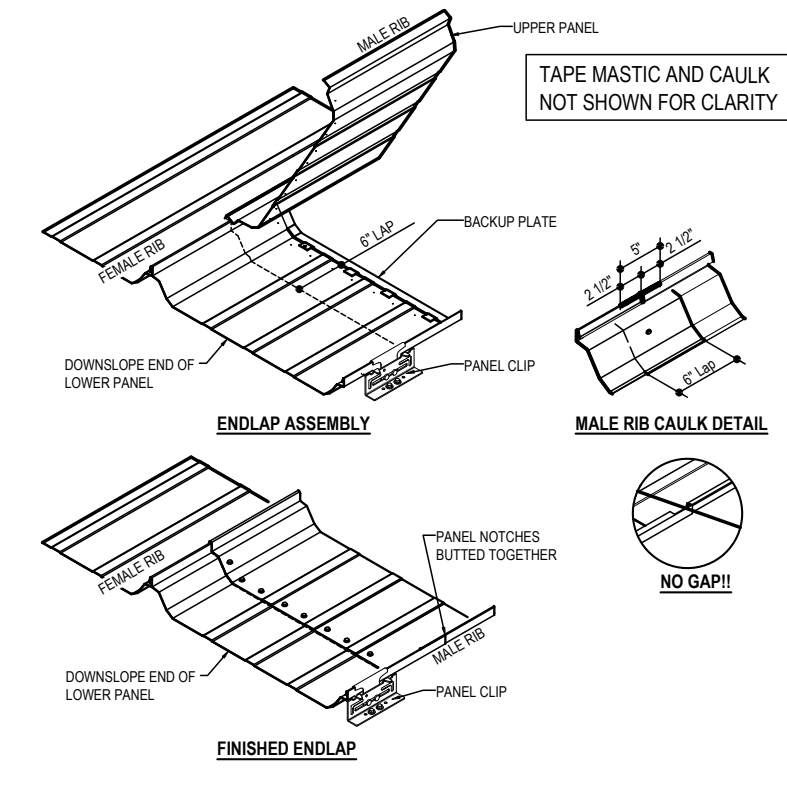
EA6019

Detailer Notes:

- 1) THIS DETAIL REQUIRED ONLY PER DESIGN.

EA6020 - SS360 PANEL ENDLAP

[Download the DWG file by clicking here.](#)



ERECTION NOTES:
 PROPER PLACEMENT OF ENDLAP MASTIC IS CRITICAL TO
 WEATHER-TIGHTNESS OF ROOF AND ENDLAPS. WIPE DRY AND
 CLEAN THE PANEL SURFACES.

MARK LOWER PANEL AT 4 1/2" FOR TOP OF MASTIC AND 6" FOR LAP LOCATION. (DO NOT USE PENCIL) SLIDE BACKUP PLATE ONTO LOWER PANEL.

APPLY PRECUT TAPE MASTIC, START AT CORNER OF MALE RIB AND FINISH AT TOP OF FEMALE RIB. LEAVE PAPER BACKING ON MASTIC UNTIL UPPER PANEL HAS BEEN PLACED. MASTIC WILL NOT COVER DIMPLES OF LOWER PANEL.

APPLY BUTYL CAULK UPSLOPE OF TAPE MASTIC IN RIB LOCATIONS AS SHOWN. (BOTH MALE AND FEMALE RIBS)

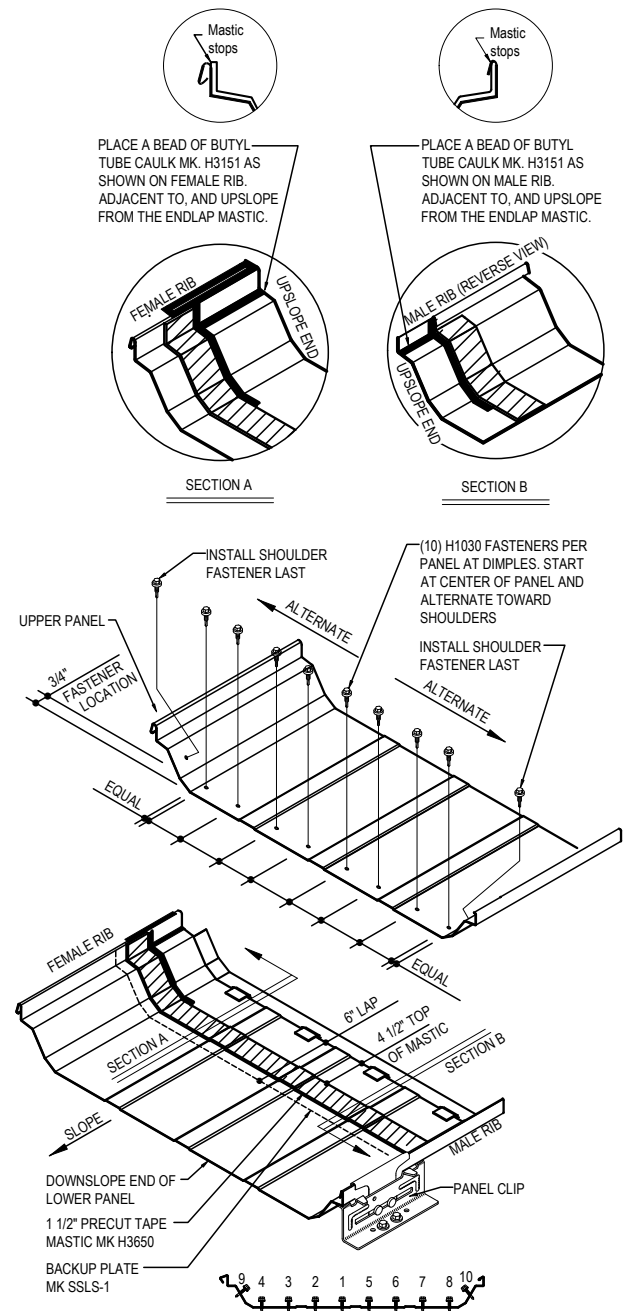
AFTER ALL SEALANTS ARE IN PLACE, HOOK THE UPPER PANEL ONTO PREVIOUS PANEL, ALIGNING PANEL ALONG THE 6" LAP MARK ON LOWER PANEL. BOW THE PAN OF THE UPPER PANEL UP AND TUCK THE MALE RIB UNDER THE HOOK OF THE LOWER PANEL. **NOTE: THE NOTCHES MUST BUILT TIGHT TO AVOID A POTENTIAL LEAK. NO GAP!** PEEL PAPER BACKING OFF MASTIC AND FASTEN ENDLAP AS SHOWN. FASTENERS MUST PASS THROUGH MASTIC.

**PRIOR TO INSTALLING NEXT LOWER PANEL, CAULK THE MALE
LEG ENDLAP NOTCH AREA WITH BUTYL CAULK AS SHOWN
ABOVE.**

REPEAT PROCESS SUBSEQUENT ENDLAPS.

PANEL ENDLAP DETAIL

ENDLAP DETAIL WITH STRAIGHT OR STAGGERED ENDLAPS
(SEE ROOF SHEETING PLAN)
NOTE: INSULATION AND THERMAL BLOCKS NOT SHOWN FOR CLARITY

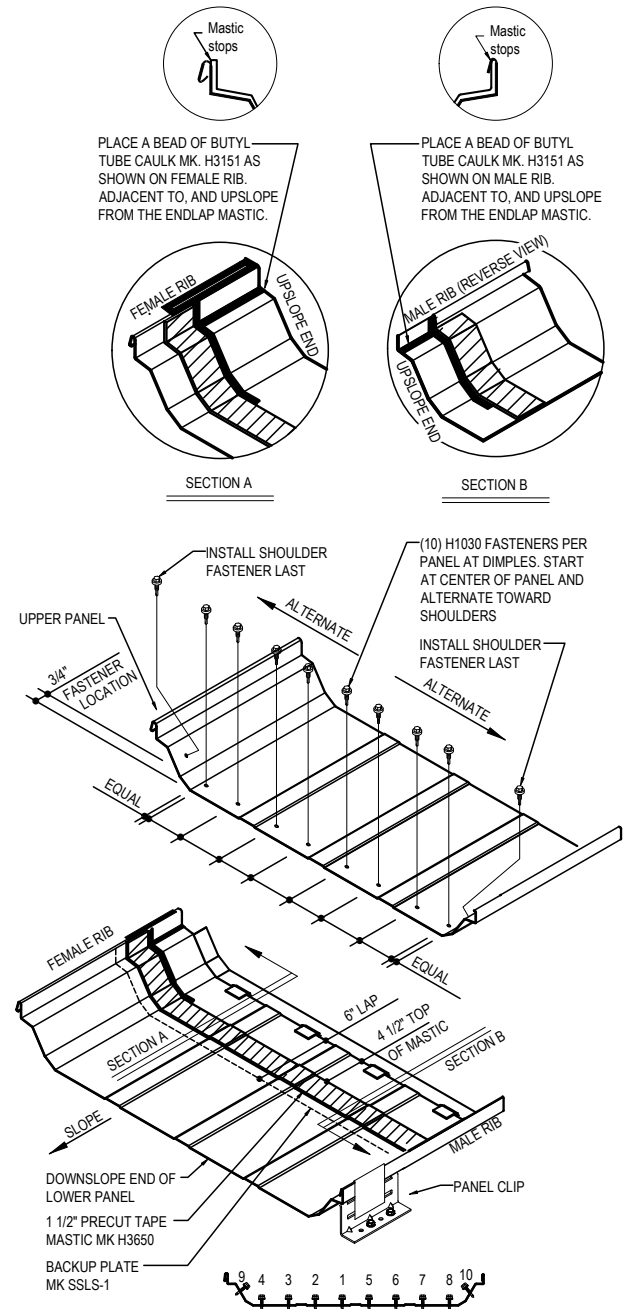
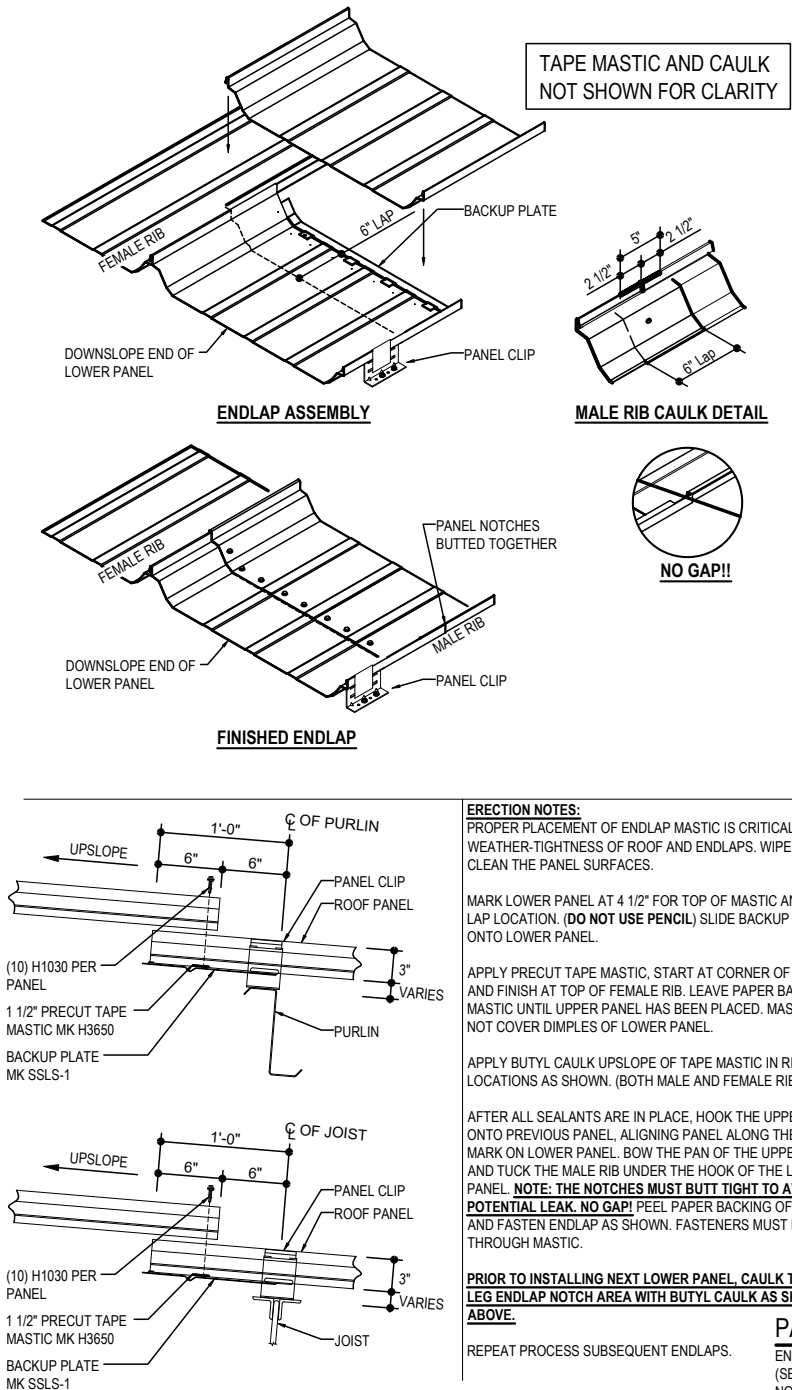


Detailer Notes:

- 1) THIS DETAIL IS REQUIRED ON EVERY PROJECT WITH TRAPEZOIDAL ROOF PANEL WITH ENDLAPS.
2) TURN ON THE CORRECT LAYER BASED ON THE SPECIFIC TRAPEZOIDAL PANEL PROFILE AND TURN OFF THE PANEL PROFILES NOT USED.
3) THIS STANDARD DETAIL IS APPROVED FOR MIAMI-DADE USE. ALTERATIONS TO THIS DETAIL MAY IMPACT APPROVAL.

EA6020 - SSII PANEL ENDLAP

[Download the DWG file by clicking here.](#)



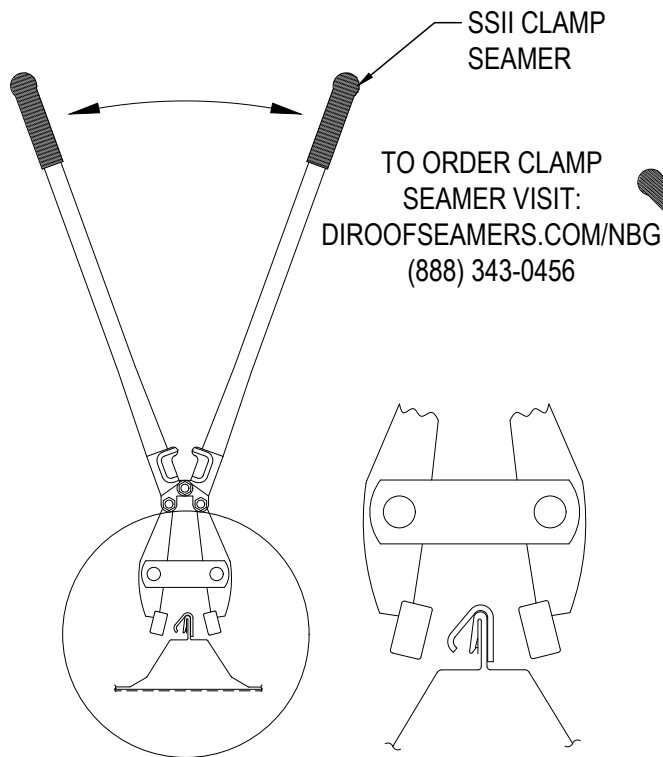
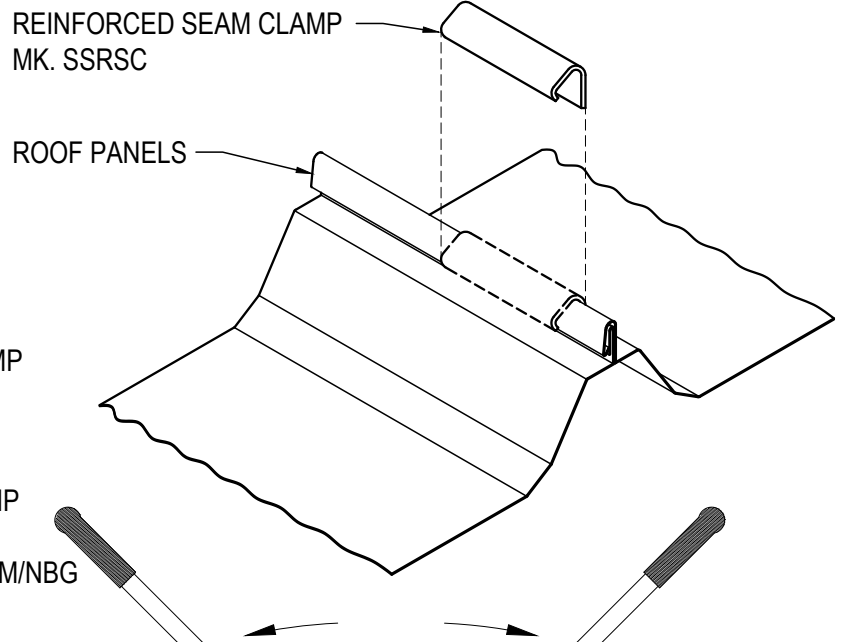
Detailer Notes:

- 1) THIS DETAIL IS REQUIRED ON EVERY PROJECT WITH TRAPEZOIDAL ROOF PANEL WITH ENDLAPS.
- 2) TURN ON THE CORRECT LAYER BASED ON THE SPECIFIC TRAPEZOIDAL PANEL PROFILE AND TURN OFF THE PANEL PROFILES NOT USED.

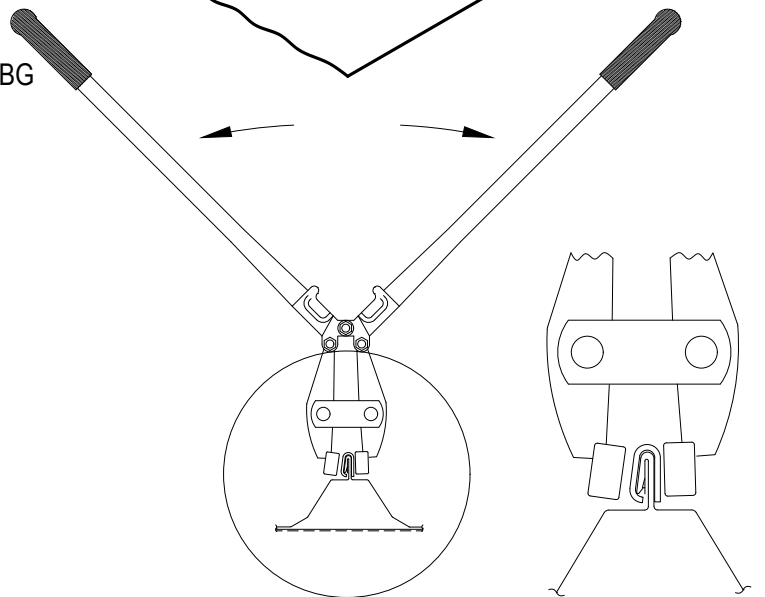
EA6029 - SSII REINFORCED SEAM CLAMP

[Download the DWG file by clicking here.](#)

AFTER PANELS HAVE BEEN COMPLETELY INSTALLED AND SNAPPED TOGETHER, INSTALL REINFORCING CLAMP AT DESIGNATED LOCATIONS. USE THE CLAMP SEAMER AS SHOWN TO CRIMP THE CLAMP ONTO THE PANEL SEAM.



STEP 1
POSITION SEAMER OVER CLAMP



STEP 2
OPEN HANDLES TO CRIMP CLAMP TO SEAM

SSII REINFORCED SEAM CLAMP

REINFORCED SEAM CLAMP REQUIRED AS SHOWN ON PLAN

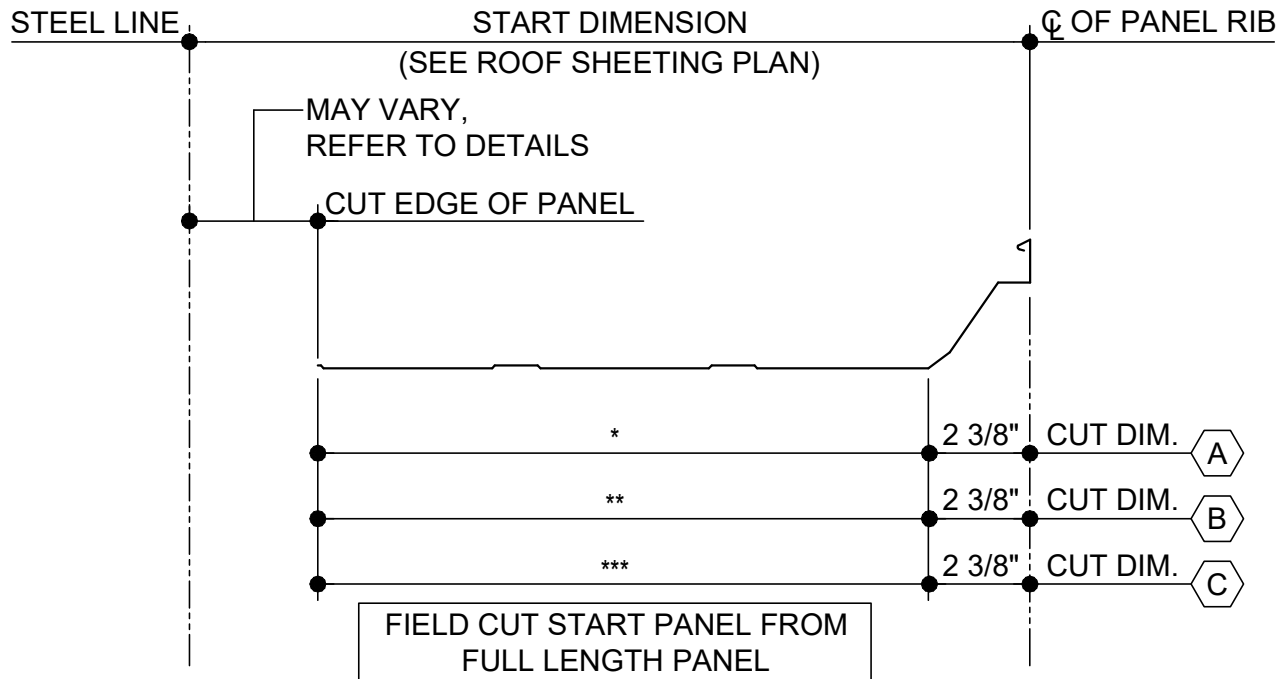
EA6029

Detailer Notes:

- 1) THIS DETAIL REQUIRED ONLY PER DESIGN.

EA6035 - SS360 START PANEL CUT DIMENSION DETAIL

[Download the DWG file by clicking here.](#)



START PANEL CUT DIMENSION DETAIL

- WHEN FIELD CUTTING OR MITERING ROOF PANELS, NON-ABRASIVE CUTTING TOOLS SUCH AS NIBBLERS OR TIN-SNIPS SHALL BE USED.
- ABRASIVE CUTTING TOOLS SUCH AS MECHANICAL GRINDERS, SAWS, SHEARS OR SCISSORS CAN DAMAGE THE PANEL FINISH AND CREATE EXCESS METAL SHAVINGS THAT CAN CORRODE THE PANELS.
- THE USE OF NON-APPROVED CUTTING DEVICES MAY VOID YOUR FACTORY WARRANTY.

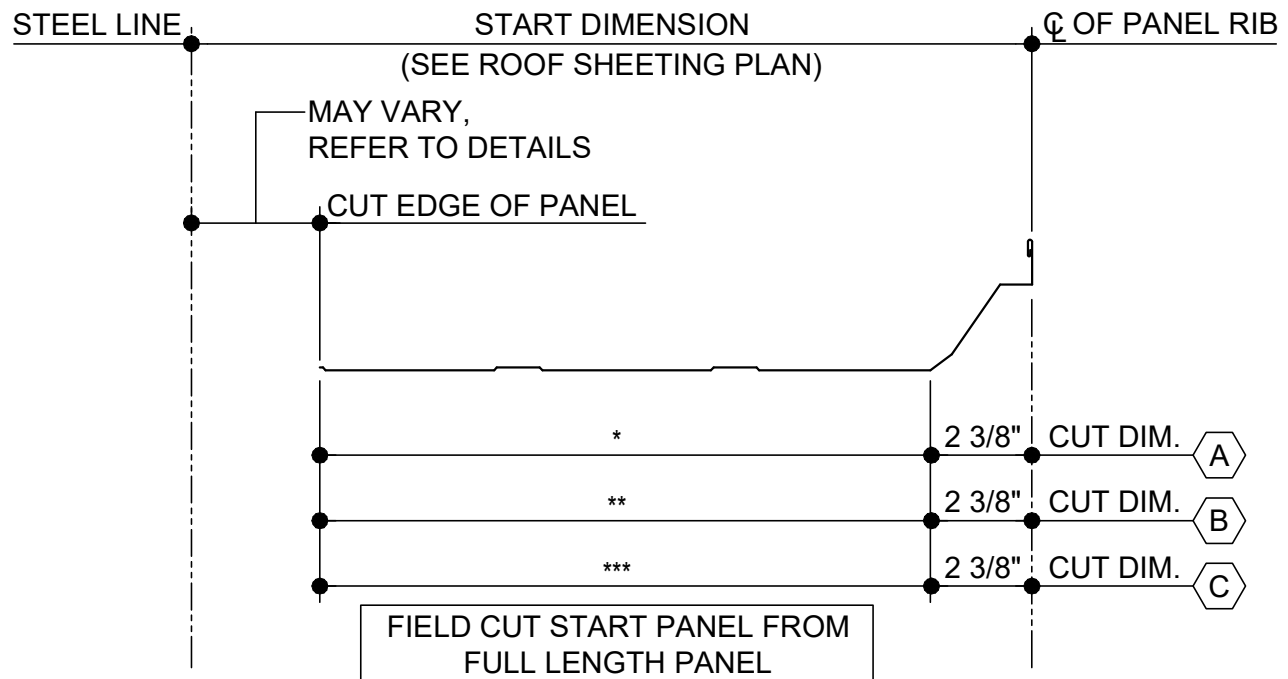
EA6035

Detailer Notes:

- 1) THIS DETAIL REQUIRED ON EVERY TRAPEZOIDAL ROOF PROJECT
- 2) THIS DETAIL SHOULD BE PLACED ON THE ROOF SHEETING PLAN

EA6035 - SSII START PANEL CUT DIMENSION DETAIL

[Download the DWG file by clicking here.](#)



START PANEL CUT DIMENSION DETAIL

- WHEN FIELD CUTTING OR MITERING ROOF PANELS, NON-ABRASIVE CUTTING TOOLS SUCH AS NIBBLERS OR TIN-SNIPS SHALL BE USED.
- ABRASIVE CUTTING TOOLS SUCH AS MECHANICAL GRINDERS, SAWS, SHEARS OR SCISSORS CAN DAMAGE THE PANEL FINISH AND CREATE EXCESS METAL SHAVINGS THAT CAN CORRODE THE PANELS.
- THE USE OF NON-APPROVED CUTTING DEVICES MAY VOID YOUR FACTORY WARRANTY.

EA6035

Detailer Notes:

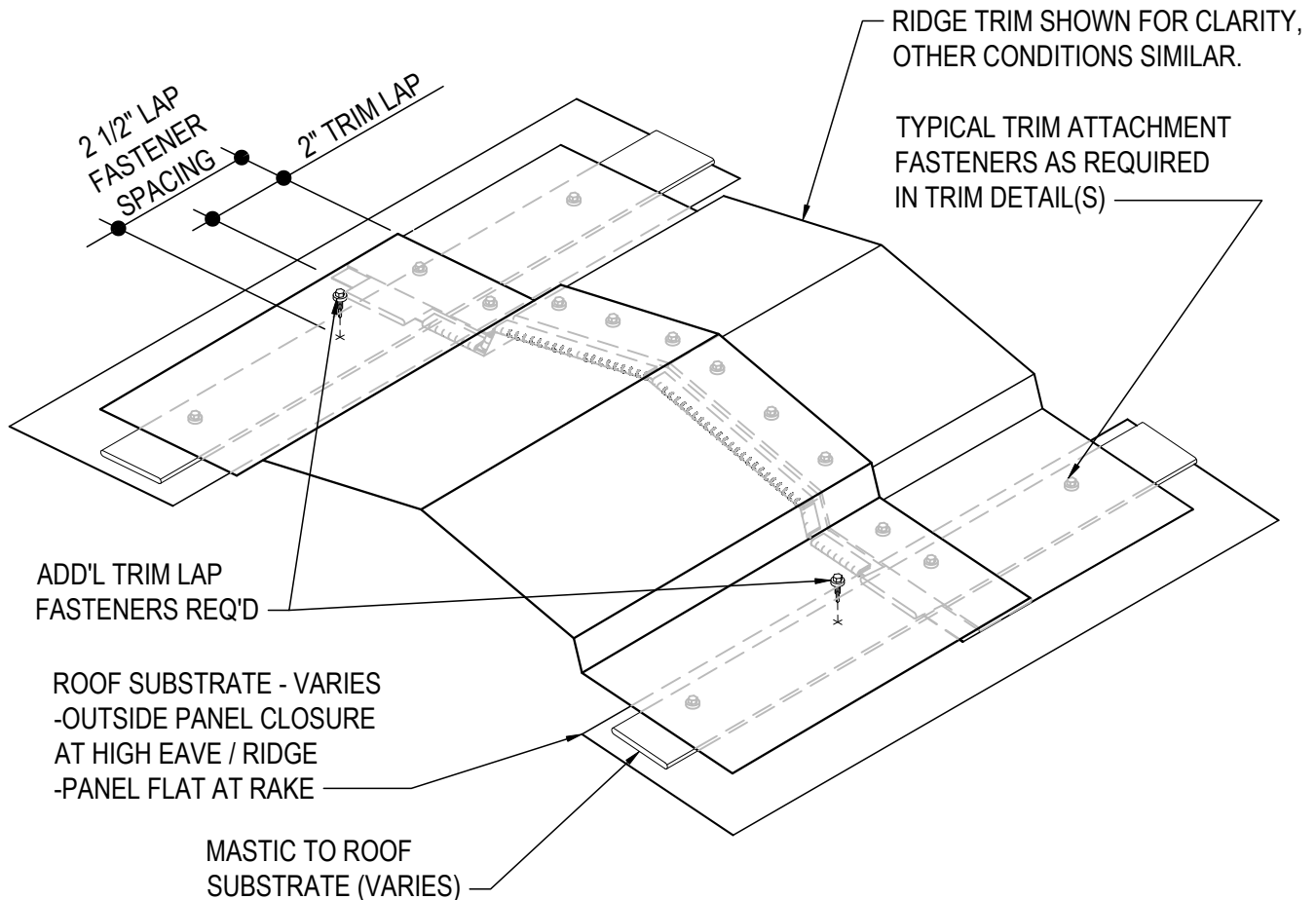
- 1) THIS DETAIL REQUIRED ON EVERY TRAPEZOIDAL ROOF PROJECT
- 2) THIS DETAIL SHOULD BE PLACED ON THE ROOF SHEETING PLAN

EA6076 - TRIM LAP COMPRESSION FASTENER

[Download the DWG file by clicking here.](#)

NOTE:

REFERENCE TRIM CONDITION DETAIL FOR
REQUIRED SEALANT AND FASTENERS



TRIM LAP COMPRESSION FASTENER

THE ADDITIONAL FASTENER IS REQUIRED AT TRIM LAPS TO AID IN ELIMINATING GAPS AND COMPRESSING SEALANTS WHERE THE MULTIPLE LAYERS OF FLASHING COME TOGETHER.

EA6076

Detailer Notes:

- 1) THIS DETAIL IS TO BE PROVIDED ON ALL PROJECTS WHERE THERE IS LAPPED ROOF LINE TRIM.
- 2) THIS DETAIL IS DUPLICATE OF DA0076, EA3076, EA8076 AND FA2076. DUPLICATE DETAILS ARE TO ENSURE THAT THEY ARE PLACED IN ORDER IN ERECTION DRAWINGS.

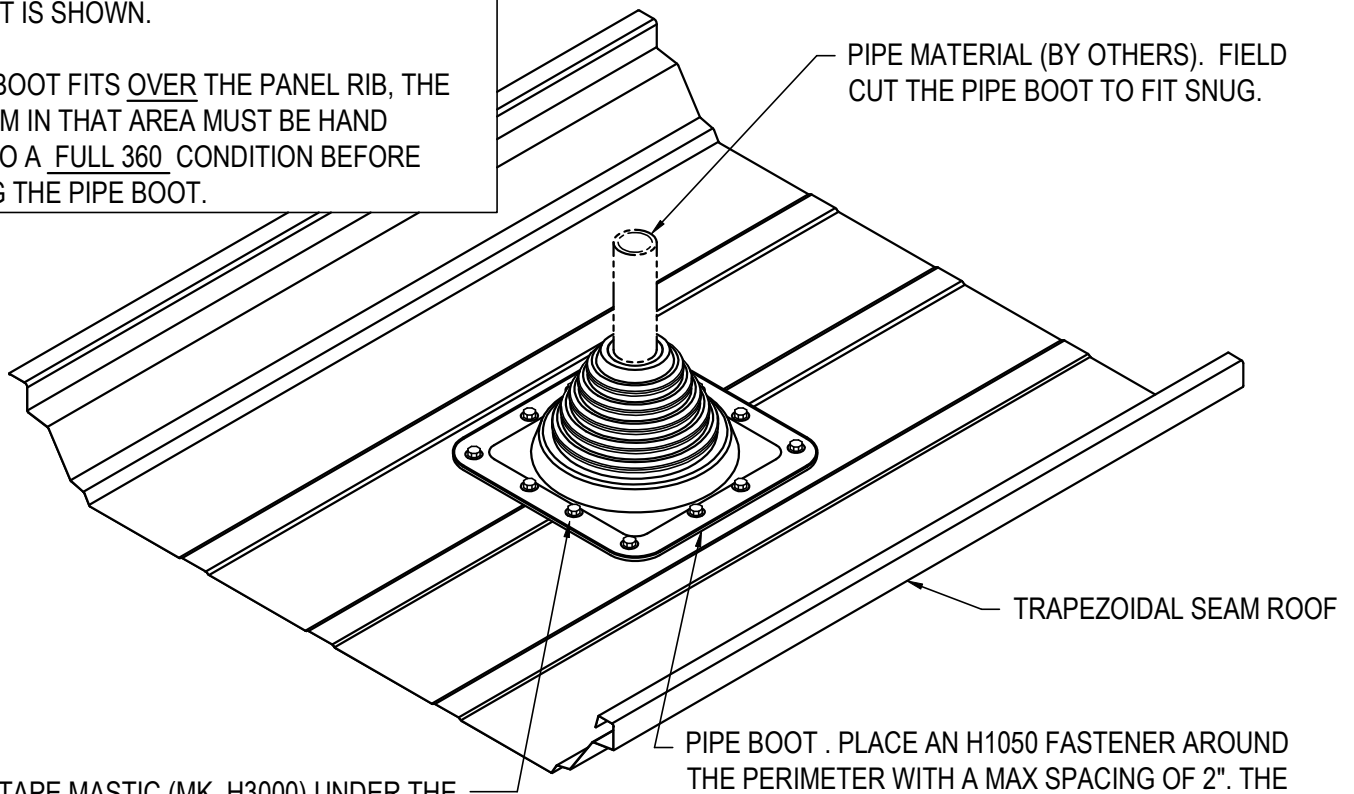
EA6200 - PIPE BOOT

[Download the DWG file by clicking here.](#)

NOTES:

1.) IF PIPE BOOT FITS BETWEEN THE MAJOR RIBS, IT IS RECOMMENDED TO ROTATE THE PIPE BOOT 45° FROM WHAT IS SHOWN.

2.) IF PIPE BOOT FITS OVER THE PANEL RIB, THE PANEL SEAM IN THAT AREA MUST BE HAND CRIMPED TO A FULL 360 CONDITION BEFORE INSTALLING THE PIPE BOOT.



PLACE 3/4" TAPE MASTIC (MK. H3000) UNDER THE FULL PERIMETER OF THE PIPE BOOT. CAULK AROUND THE PERIMETER WITH TUBE CAULK (MK. H3152) TO CREATE A WEATHERTIGHT SEAL.

PIPE BOOT . PLACE AN H1050 FASTENER AROUND THE PERIMETER WITH A MAX SPACING OF 2". THE FASTENERS MUST PENETRATE THE TAPE MASTIC TO CREATE AN EFFECTIVE SEAL. (PIPE BOOT BASE MAY BE SQUARE AS SHOWN OR ROUND).

PIPE BOOT DETAIL

PIPE BOOT PART NUMBERS

- (#3) H3500 1/4"-5" DIAMETER
- (#5) H3510 4 1/4"-7 1/2" DIAMETER
- (#8) H3520 7"-13" DIAMETER

EA6200

Detailer Notes:

- 1) N/A