NUCOR® BUILDINGS GROUP

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GENERAL DETAILS

NUCOR BUILDINGS GROUP

GENERAL DETAILS

R-PANEL ROOF

DA0000 - R-PANEL ROOF GENERAL NOTES

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DESIGN AND PERFORMANCE CRITERIA

ROOF SYSTEM
THE ROOF SYSTEM CONSISTS OF 24/26 GAUGE PANELS WITH A NOMINAL COVERAGE OF 3'-0" AND A PANEL RIBS THAT ARE 1 1/4" HIGH AND THROUGH FASTENED ON THE FLAT OF PANEL INTO SECONDARY MEMBERS.

STRUCTURAL FASTENER SPACING REQUIREMENTS
THE ROOF SYSTEM USES STRUCTURAL FASTENERS TO ATTACH THE PANELS TO THE ROOF SECONDARY MEMBERS. STRUCTURAL FASTENER SPACING REQUIREMENTS ARE SHOWN IN A SEPARATE DETAIL SPECIFIC TO THIS PROJECT.

SIDE LAP FASTENER SPACING REQUIREMENTS
SIDE LAP FASTENERS ARE REQUIRED AT THE SIDELAP OF THE PANELS. THE SPACING OF THESE FASTENERS VARIES BY DESIGN OF SPECIFIC PROJECT REQUIREMENTS AND MAY VARY IN DIFFERENT AREAS OF THE ROOF. REFERENCE THE SIDE LAP FASTENER SPACING DETAIL FOR PROJECT SPECIFIC REQUIREMENTS.

ROOF TOP UNITS AND CURB SUPPORTS
THE ROOF CURBS SUPPLIED BY MBS ARE DESIGNED TO BE INSTALLED AFTER THE ROOF PANEL IS INSTALLED. REFERENCE ROOF CURB INSTALLATION DETAILS IF PROJECT HAS CURBS SUPPLIED BY MBS.

IF CURBS ARE NOT SUPPLIED BY MBS, CARE SHOULD BE TAKEN TO ENSURE WATER TIGHTNESS AND PROPER INSTALLATION ARE ACHIEVED. MBS IS NOT RESPONSIBLE FOR INSTALLATION DETAILS OR METHODS RELATED TO CURBS NOT SUPPLIED BY MBS.

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 BUFFER BETWEEN THE PURLINS AND THE ROOF TO ELIMINATE NOISE AND POSSIBLE DAMAGE DUE TO METAL-TO-METAL CONTACT.

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

MASTIC APPLICATION

TEMPERATURE EXTREMES
TEMPERATURE EXTREMES MUST BE CONSIDERED DURING INSTALLATION OF THE ROOF DUE TO THE SENSITIVITY OF MASTICS. THE RECOMMENDED INSTALLATION TEMPERATURE RANGE IS 20-120 DEGREES FAHRENHEIT. AT COLDER TEMPERATURES, THE MASTIC STIFFENS RESULTING IN LOSS OF ADHESION AND COMPRESSIBILITY. AT HOTTER 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 20 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 CARTONS SHOULD BE STORED OFF THE ROOF IN A COOL AND SHADED AREA. WHILE ON THE ROOF, MASTIC ROLLS SHOULD BE KEPT SHADED UNTIL ACTUAL USE.

IN VERY COLD 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 WARMS THE PANEL AND FLASHING SURFACES.

CONTAMINATION
TO ASSURE PROPER ADHESION AND 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 COOL 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.

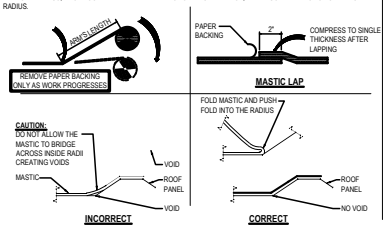
TAPE MASTIC IS PROVIDED WITH A PROTECTIVE PAPER TO REDUCE CONTAMINATION. INCOMPLETE REMOVAL OF THE PROTECTIVE PAPER WILL PREVENT THE MASTIC ADHESION TO THE PANEL OR FLASHING SURFACES. ALWAYS CHECK THAT THE PROTECTIVE PAPER IS COMPLETELY REMOVED. DO NOT REMOVE THE PROTECTIVE PAPER UNTIL IMMEDIATELY BEFORE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

COMPRESSION
TO ASSURE PROPER 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 SLOWLY TO ALLOW THE MASTIC TIME TO COMPRESS. IF THE FASTENERS ARE TIGHTENED TOO FAST, THE FASTENERS MAY STRIP OUT BEFORE THE MASTIC COMPRESSES ADEQUATELY, OR THE PANEL OR FLASHING MAY DEFORM IN THE IMMEDIATE AREA OF THE FASTENER, LEAVING THE REST OF THE MASTIC INSUFFICIENTLY COMPRESSED.

INSIDE CORNERS
AN INSIDE RADIUS, SUCH AS WHERE THE PANEL FLAT MEETS A RIB, IS USUALLY THE MOST CRITICAL AREA TO SEAL. A COMMON MISTAKE FOR THE INSTALLER IS TO BRIDGE THE MASTIC ACROSS THE INSIDE RADIUS.

WHEN THE LAPPING PANEL OR FLASHING IS PUSHED INTO PLACE, THE BRIDGED 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 RADIUS.



ERECTORS RESPONSIBILITY

REGULATIONS
REGULATIONS SET 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

WALKING AND WORKING 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 PANELS 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 LANYARDS, ENSURE THAT THE CLASP, BELT HOOKS 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 LENGTH 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
DO NOT STAND ON THE END OF UNSUPPORTED (CANTILEVERED) PANELS AT THE EAVE OR RIDGE. STANDING ON THE CANTILEVER PORTION MAY RESULT IN PANEL COLLAPSE.

POINT LOADS
WHEN PROPERLY 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 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 RAIN 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 ROUTED TO AVOID ACCIDENTAL CONTACT WITH ALL POWER LINES AND HIGH VOLTAGE SERVICES AND EQUIPMENT. ALL TOOLS AND POWER CORDS MUST BE PROPERLY INSULATED AND GROUNDED AND THE USE OF APPROVED GROUND FAULT CIRCUIT BREAKERS IS RECOMMENDED.

FALSE SECURITY OF INSULATION
BLANKET AND RIGID BOARD INSULATION BLOCK THE INSTALLER'S 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 ON 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 CARE
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, RUNWAYS, 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 ON THESE DRAWINGS TO INSURE 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-IN TO AN EXISTING STRUCTURE TO INSURE A SAFE, SECURE, WEATHERTIGHT CONDITION. FLASHING FOR TIE-INS TO EXISTING BUILDINGS IS TYPICALLY NOT INCLUDED AS PART OF THE MATERIAL PROVIDED BY MBS. REFER TO THE SECTIONS/DETAILS FOR SPECIFIC MATERIALS PROVIDED BY MBS.

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 SIMPLY 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.

DIAPHRAGM
THE ROOF IS DESIGNED TO 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 BASED ON PANEL CAPACITY INFORMATION AND FASTENING PATTERN. WHEN REPLACING AN EXISTING SCREWDOWN 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 ROOF 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 OUT-TO-OUT STEEL LINE DIMENSIONS.
SEE FIGURE "A"

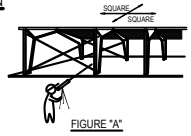


FIGURE "A"

STEP 2: PRE-DRILL PANEL LAP
STACK PANELS WITH ENDS FLUSH ON A LEVEL PLACE ON THE GROUND IN PILES NOT EXCEEDING 10 PANELS. THEN PLACE SMALL WOODEN BLOCKS UNDER SIDE-LAPPING EDGE OF STACK OF PANELS TO HOLD THEM AT CORRECT HEIGHT AND POSITION WHILE DRILLING FASTENER HOLES. HOLD PANELS TIGHTLY TOGETHER AT EACH END WITH CLAMPING PLIERS. CAREFULLY MARK POSITIONS FOR SIDE-LAP FASTENERS ON TOP OF HIGH RIB. DRILL HOLES FOR "STITCH" FASTENER (USE #1 - 7/32" - 15/64" DRILL BIT) ON TOP SHEET OF SIDE-LAP. BE SURE PANELS ARE WELL NESTED BEFORE DRILLING.
SEE FIGURE "B"

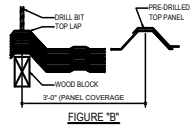
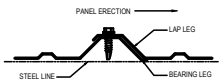


FIGURE "B"

PANEL ORIENTATION AND ALIGNMENT

NOTE THE ORIENTATION OF THE PROFILE AND BEARING LEG FOR THE LEADING EDGE OF THE PANEL. PANELS SHOULD BE INSTALLED AS SHOWN BELOW TO HELP MAINTAIN PANEL MODULARITY / COVERAGE FOR THE LENGTH OF THE ROOF.



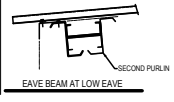
FIELD CUTTING PANELS

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 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.

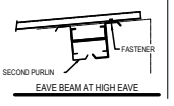
ANY METAL SHAVINGS THAT ARE CREATED NEED TO BE CLEANED FROM THE PANEL TO PREVENT SCRATCHING AND/OR CORROSION. THE MANUFACTURER WILL NOT ACCEPT CLAIMS FOR DAMAGE/DETERIORATION DUE TO USE OF UNAPPROVED TOOLS.

SPECIAL CONDITION AT A STRONG-BACK EAVE BEAM

IF THIS PROJECT HAS AN EAVE BEAM WITH (2) PURLINS, AS SHOWN, DO NOT ATTACH ROOF PANEL TO THE "SECOND" PURLIN.



EAVE BEAM AT LOW EAVE



EAVE BEAM AT HIGH EAVE

FASTENER INSTALLATION

RECOMMENDED TOOL TYPES: SEE ALSO FASTENER SCHEDULE
4 AMP OR HIGHER RATED TOOLS (DO NOT USE IMPACTING TOOLS)
2000 - 2500 RPM SCREW GUN WITH TORQUE ADJUSTABLE CLUTCH
MANUAL OR ELECTRIC RIVET TOOL

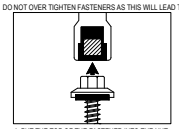
DO NOT USE IMPACTING TOOLS
TO ASSURE PROPER VOLTAGE TO THE TOOL, EXTENSION CORDS SHOULD BE CHECKED FOR PROPER WIRE SIZE/CHORD LENGTH.
16 GAGE WIRE, MAXIMUM CHORD LENGTH = 100'
14 GAGE WIRE, MAXIMUM CHORD LENGTH = 200'
12 GAGE WIRE, MAXIMUM CHORD LENGTH = 300'

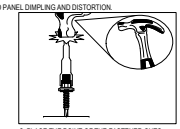
DRIVING TIPS
SET THE NUT DRIVER AS DESCRIBED BELOW PRIOR TO INSTALLING FASTENERS TO PREVENT FASTENER WOBBLE...

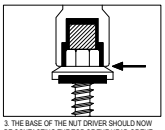
SOCKET EXTENSIONS (4" OR 6") ARE RECOMMENDED TO BE USED FOR INSTALLING PANEL CLIP FASTENERS TO MAINTAIN VERTICAL FASTENER INSTALLATION.

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

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


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

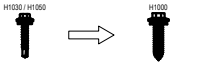

2. PLACE THE POINT OF THE FASTENER ONTO A HARD SURFACE AND FIRMLY HIT THE TOP OF THE NUT DRIVER 2-3 TIMES.


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.

SEALING MATERIAL COMPRESSED UNDER CAP OF FASTENER.
SEALING MATERIAL VISIBLE UNDER CAP OF FASTENER.
SEALING MATERIAL COMPRESSED BUT DIMPLED THE PANEL / TRIM.

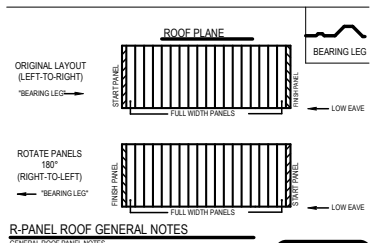
STRIP A FASTENER?
IF YOU STRIP H1030 OR H1050 REPLACE IT WITH H1000
IF YOU STRIP H1000 IN ENDLAP YOU MUST REBUILD THE ENDLAP



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 "BEARING LEG" MUST ALWAYS BE AWAY FROM THE END OF THE BUILDING WHERE THE SHEETING WILL BEGIN.



R-PANEL ROOF GENERAL NOTES
GENERAL ROOF PANEL NOTES

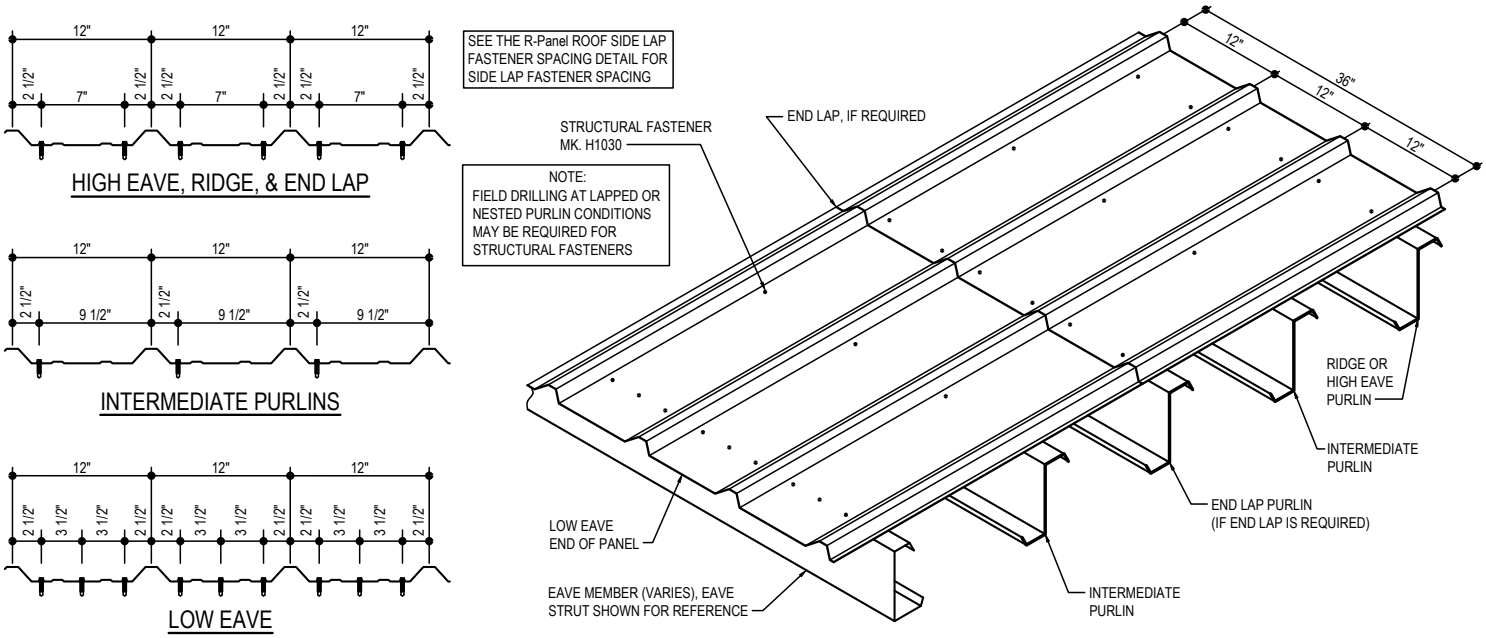
DA0000

Detailer Notes:

1) THIS DETAIL REQUIRED ON EVERY R-PANEL ROOF PROJECT.

DA0001 - STRUCTURAL FASTENER SPACING (STANDARD)

Download the DWG file by clicking here.



R-Panel ROOF STRUCTURAL FASTENER SPACING (STANDARD)

DA0001

Detailer Notes:

1) THIS DETAIL IS ALWAYS REQUIRED (NO FM REQUIREMENTS) (IF FM REQ'D, USE DA0007).
2) DETAILS DA0002 THROUGH DA0006 ARE SIDE LAP FASTENER DETAILS. IF ENGINEER DOES NOT SPECIFY SPECIAL SIDE LAP FASTENER SPACING, USE DA0002. IF SPECIAL SIDE LAP FASTENER SPACING IS REQUIRED, CHOOSE FROM DA0003 THROUGH DA0006.

DA0002 - SIDE LAP FASTENER SPACING (STANDARD)

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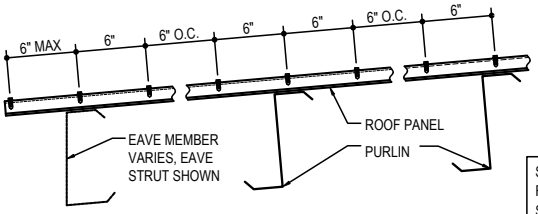
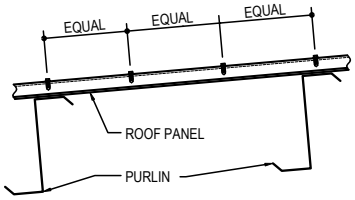


FIRST TWO LOW EAVE SPANS

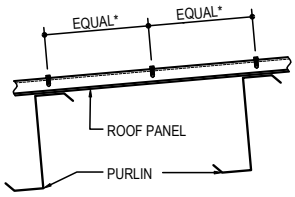
(EACH SUPPORT AND 6" ON CENTER BETWEEN SUPPORTS)

SEE THE R-Panel ROOF STRUCTURAL FASTENER SPACING DETAIL FOR STRUCTURAL FASTENER SPACING



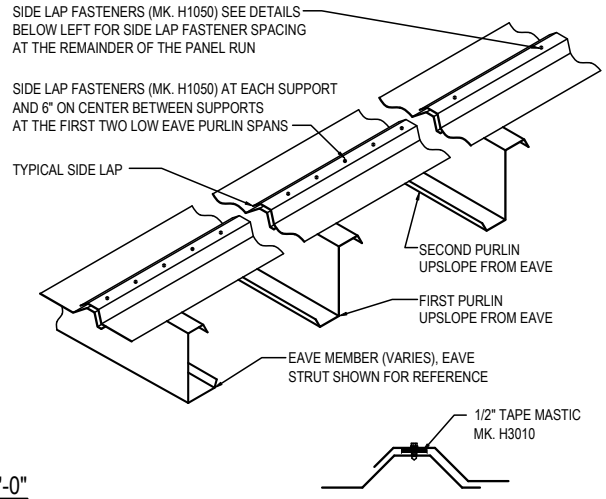
SPANS GREATER THAN 5'-0"

(EACH SUPPORT AND 1/3 POINTS BETWEEN SUPPORTS)



SPANS LESS THAN OR EQUAL TO 5'-0"

NON-UL 90	EACH SUPPORT AND MIDPOINT BETWEEN SUPPORTS.
UL 90	EACH SUPPORT AND SPACED EQUALLY BETWEEN SUPPORTS. NOT TO EXCEED 18" (1'-6").



SIDE LAP MASTIC DETAIL

(AT FULL LENGTH OF ALL SIDE LAPS)

R-Panel ROOF SIDE LAP FASTENER SPACING (STANDARD)

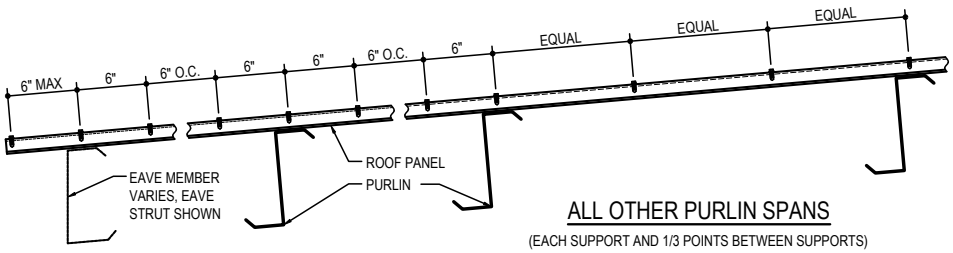
DA0002

Detailer Notes:

1) THIS IS THE STANDARD SIDE LAP FASTENER DETAIL.
2) IF THE ENGINEER DOES NOT SPECIFY SPECIAL SIDE LAP FASTENER SPACING, USE THIS DETAIL. IF SPECIAL SIDE LAP FASTENER SPACING IS REQUIRED, CHOOSE FROM DA0003 THROUGH DA0006.

DA0003 - SIDE LAP FASTENER SPACING (1/3 POINTS)

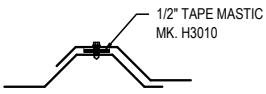
Download the DWG file by clicking here.



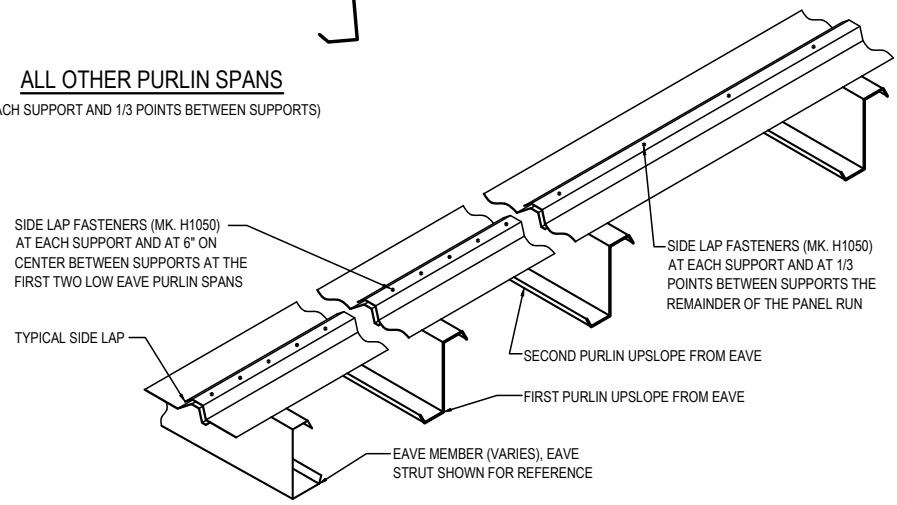
FIRST TWO LOW EAVE SPANS
(EACH SUPPORT AND 6" ON CENTER BETWEEN SUPPORTS)

ALL OTHER PURLIN SPANS
(EACH SUPPORT AND 1/3 POINTS BETWEEN SUPPORTS)

SEE THE R-Panel ROOF STRUCTURAL FASTENER SPACING DETAIL FOR STRUCTURAL FASTENER SPACING



SIDE LAP MASTIC DETAIL
(AT FULL LENGTH OF ALL SIDE LAPS)



R-Panel ROOF SIDE LAP FASTENER SPACING (1/3 POINTS)

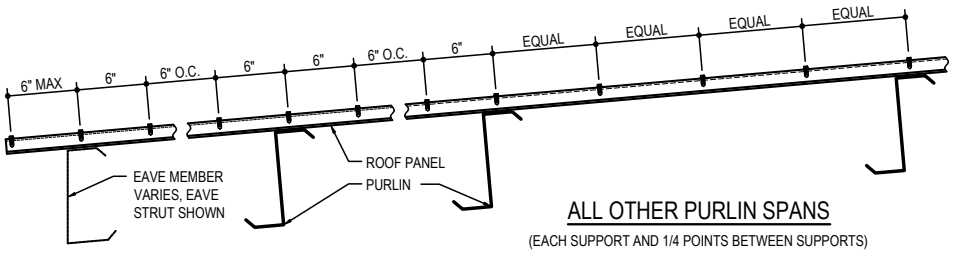
DA0003

Detailer Notes:

1) N/A

DA0004 - SIDE LAP FASTENER SPACING (1/4 POINTS)

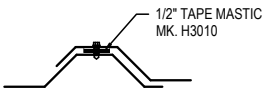
Download the DWG file by clicking here.



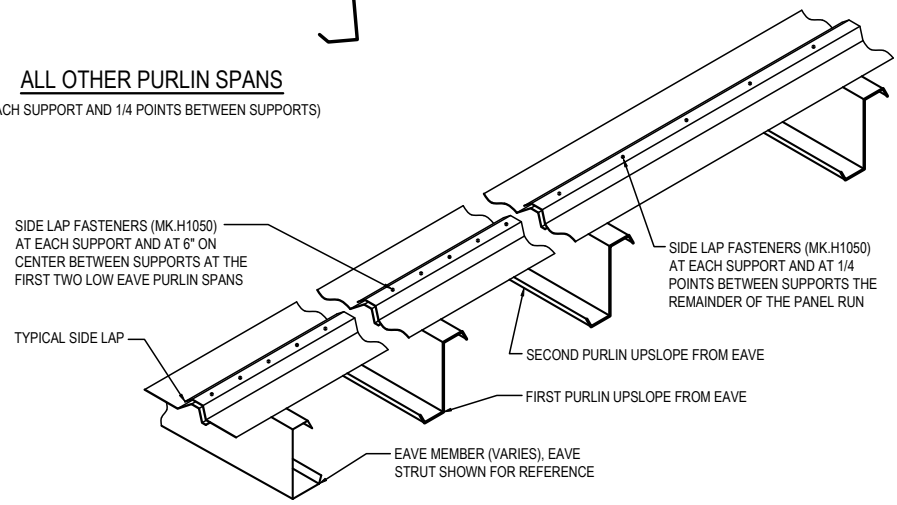
FIRST TWO LOW EAVE SPANS
(EACH SUPPORT AND 6" ON CENTER BETWEEN SUPPORTS)

ALL OTHER PURLIN SPANS
(EACH SUPPORT AND 1/4 POINTS BETWEEN SUPPORTS)

SEE THE R-Panel ROOF STRUCTURAL FASTENER SPACING DETAIL FOR STRUCTURAL FASTENER SPACING



SIDE LAP MASTIC DETAIL
(AT FULL LENGTH OF ALL SIDE LAPS)



R-Panel ROOF SIDE LAP FASTENER SPACING (1/4 POINTS)

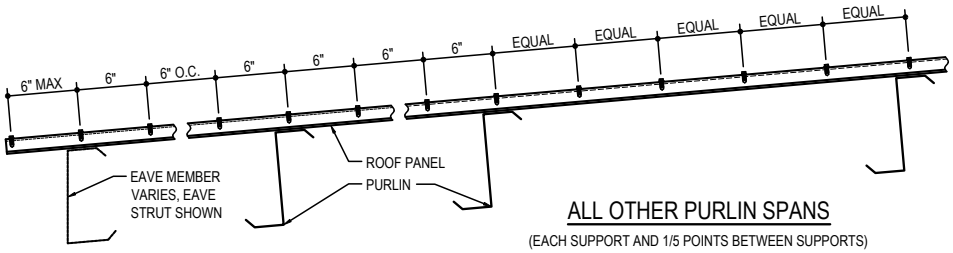
DA0004

Detailer Notes:

1) N/A

DA0005 - SIDE LAP FASTENER SPACING (1/5 POINTS)

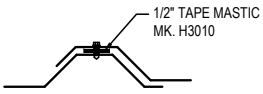
Download the DWG file by clicking here.



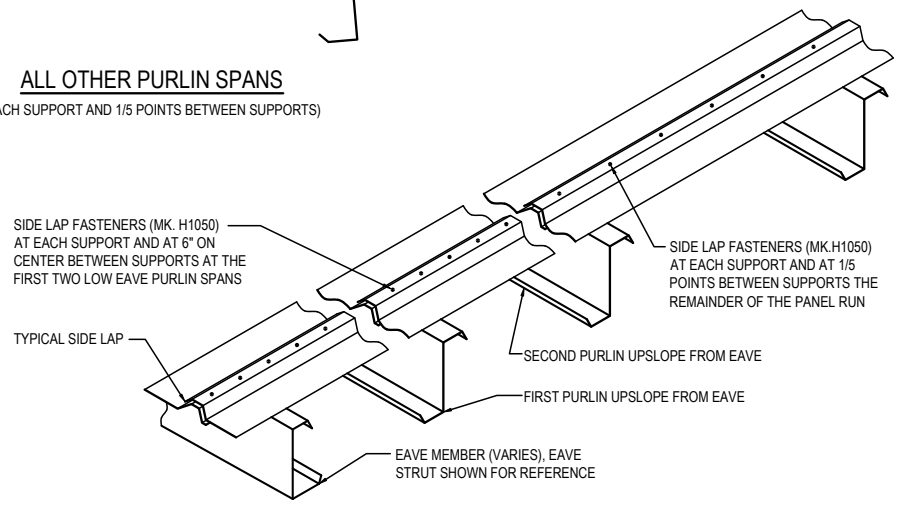
FIRST TWO LOW EAVE SPANS
(EACH SUPPORT AND 6" ON CENTER BETWEEN SUPPORTS)

ALL OTHER PURLIN SPANS
(EACH SUPPORT AND 1/5 POINTS BETWEEN SUPPORTS)

SEE THE R-Panel ROOF STRUCTURAL FASTENER SPACING DETAIL FOR STRUCTURAL FASTENER SPACING



SIDE LAP MASTIC DETAIL
(AT FULL LENGTH OF ALL SIDE LAPS)



R-Panel ROOF SIDE LAP FASTENER SPACING (1/5 POINTS)

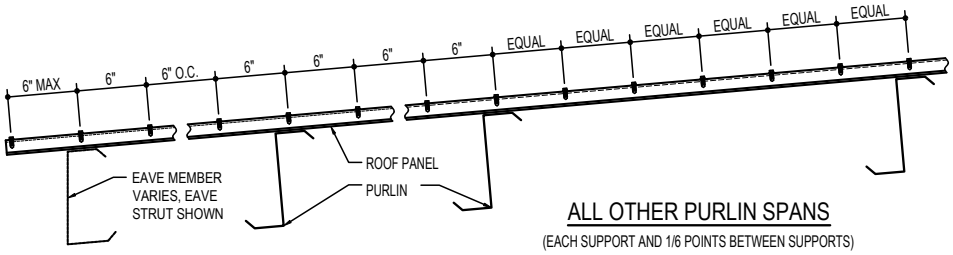
DA0005

Detailer Notes:

1) N/A

DA0006 - SIDE LAP FASTENER SPACING (1/6 POINTS)

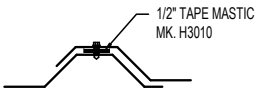
Download the DWG file by clicking here.



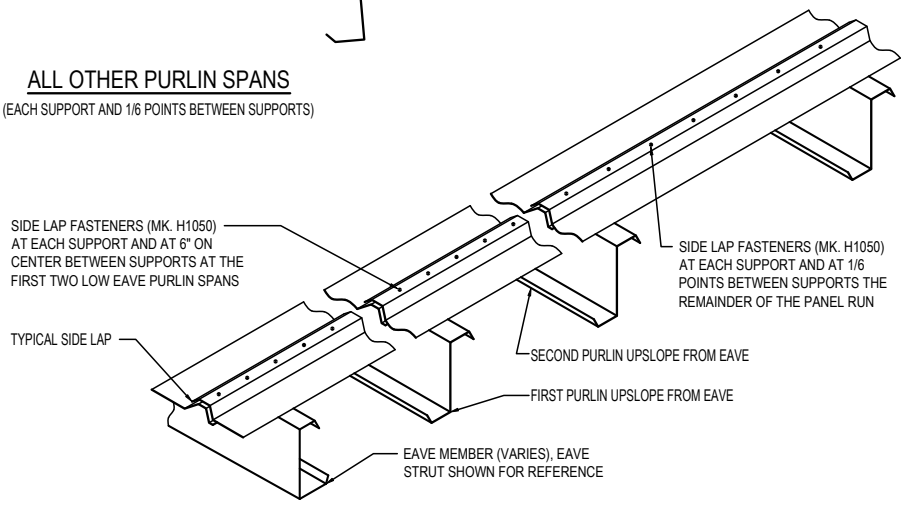
FIRST TWO LOW EAVE SPANS
(EACH SUPPORT AND 6" ON CENTER BETWEEN SUPPORTS)

ALL OTHER PURLIN SPANS
(EACH SUPPORT AND 1/6 POINTS BETWEEN SUPPORTS)

SEE THE R-PanelL ROOF STRUCTURAL FASTENER SPACING DETAIL FOR STRUCTURAL FASTENER SPACING



SIDE LAP MASTIC DETAIL
(AT FULL LENGTH OF ALL SIDE LAPS)



R-Panel ROOF SIDE LAP FASTENER SPACING (1/6 POINTS)

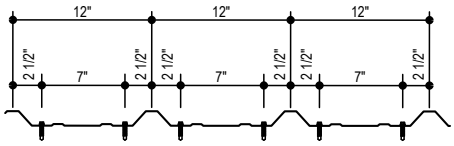
DA0006

Detailer Notes:

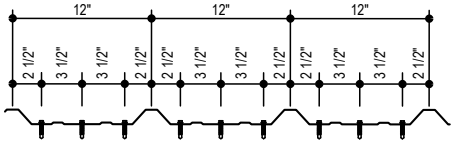
1) N/A

DA0007 - STRUCTURAL FASTENER SPACING (FM)

Download the DWG file by clicking here.



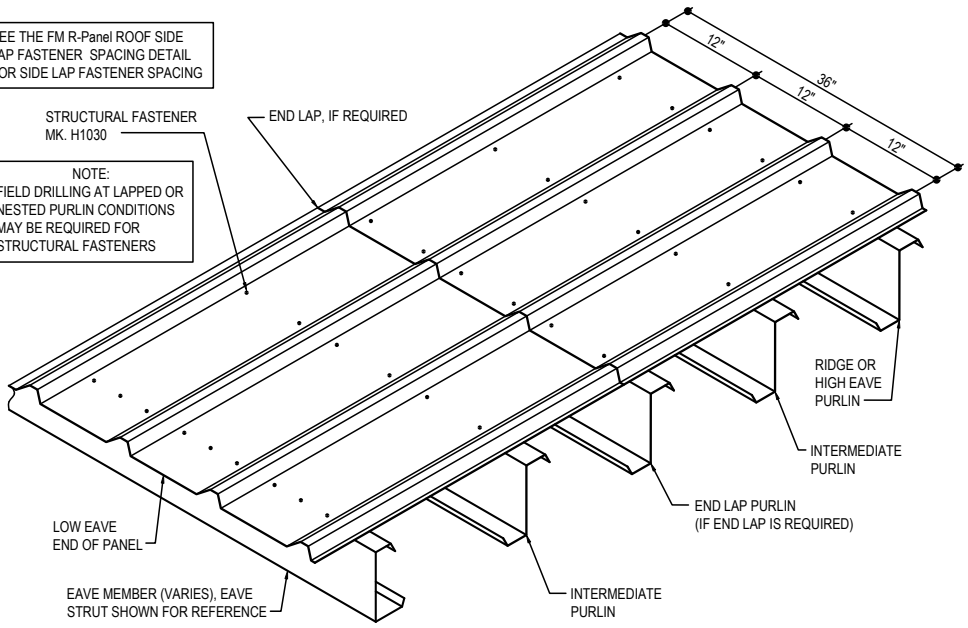
HIGH EAVE, RIDGE, END LAP & INTERMEDIATE PURLINS



LOW EAVE

SEE THE FM R-Panel ROOF SIDE LAP FASTENER SPACING DETAIL FOR SIDE LAP FASTENER SPACING

NOTE:
FIELD DRILLING AT LAPPED OR NESTED PURLIN CONDITIONS MAY BE REQUIRED FOR STRUCTURAL FASTENERS



R-Panel ROOF STRUCTURAL FASTENER SPACING (FM)

FASTEN INSULATION WITH H1020 FASTENER & H2200 INSULATION WASHER 12" O.C. AT LOW SIDE AND HIGH SIDE MEMBERS. FASTEN AT AT HIGH RIB LOCATIONS.

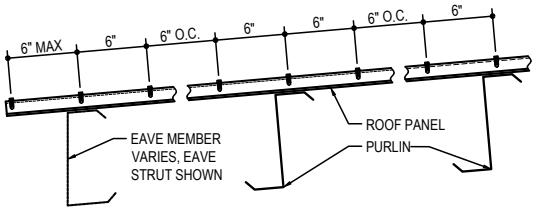
DA0007

Detailer Notes:

1) THIS DETAIL CAN ALSO BE USED FOR HIGH WIND CONDITIONS.

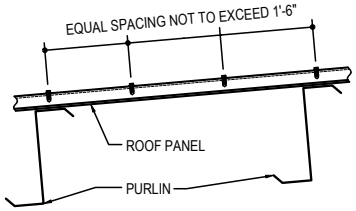
DA0008 - SIDE LAP FASTENER SPACING (FM)

Download the DWG file by clicking here.

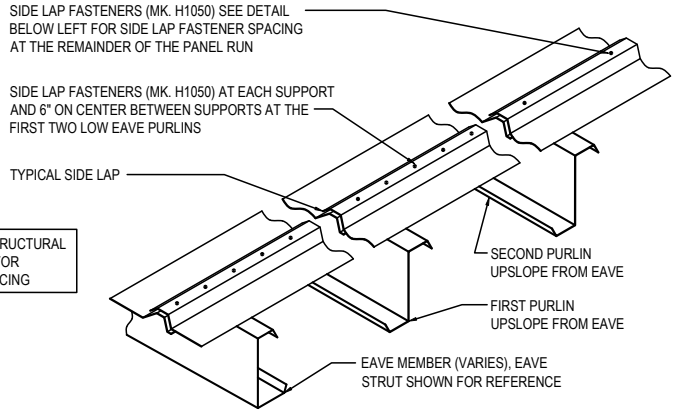


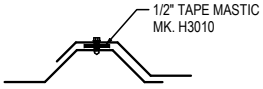
FIRST TWO LOW EAVE SPANS
(EACH SUPPORT AND 6" ON CENTER BETWEEN SUPPORTS)

SEE THE FM R-Panel ROOF STRUCTURAL FASTENER SPACING DETAIL FOR STRUCTURAL FASTENER SPACING



MAX. SPAN = 5'-0"





SIDE LAP MASTIC DETAIL
(AT FULL LENGTH OF ALL SIDE LAPS)

R-Panel ROOF SIDE LAP FASTENER SPACING (FM)

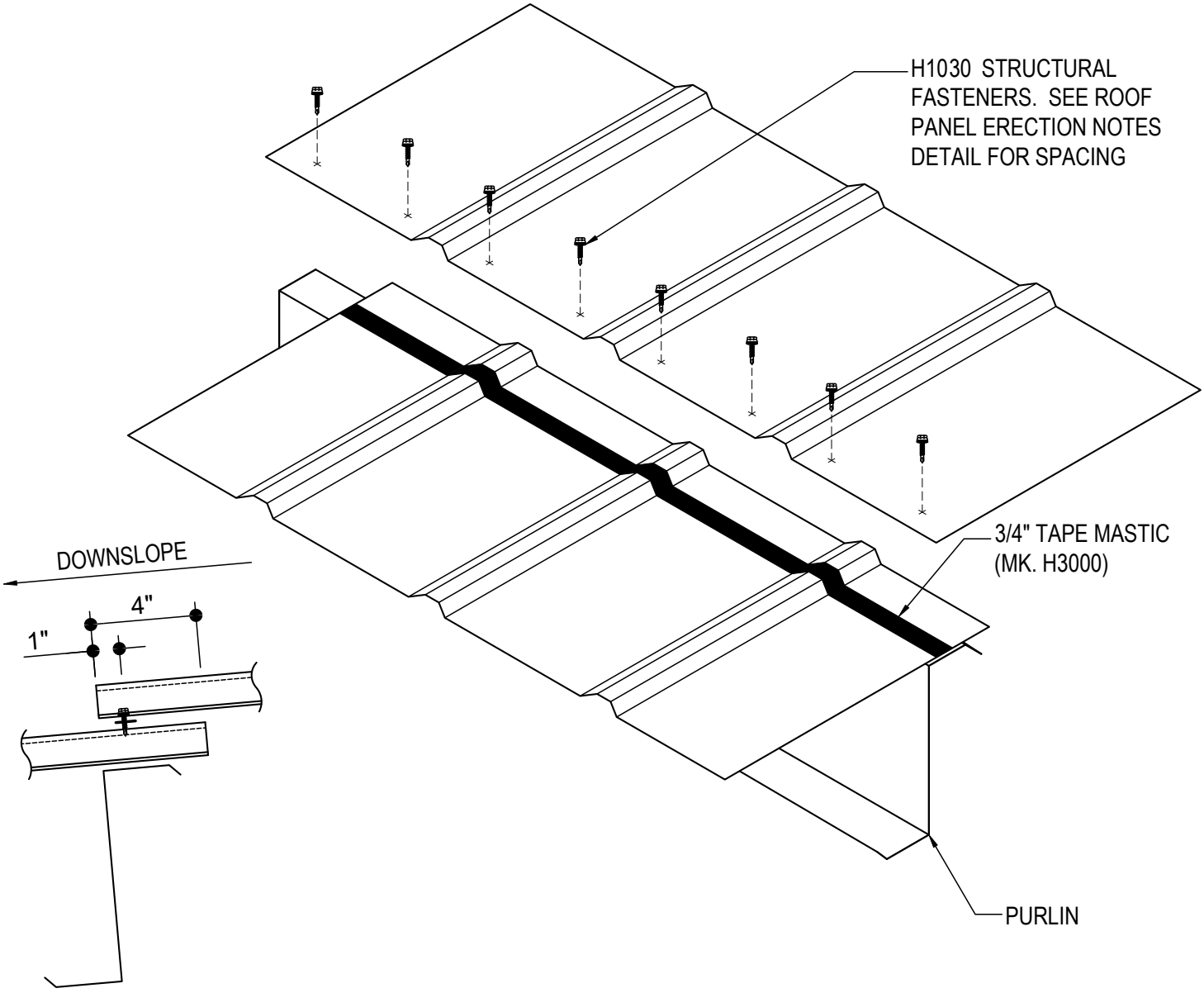
DA0008

Detailer Notes:

1) N/A

DA0071 - PANEL ENDLAP

Download the DWG file by clicking here.



PANEL ENDLAP

R-PANEL ROOF

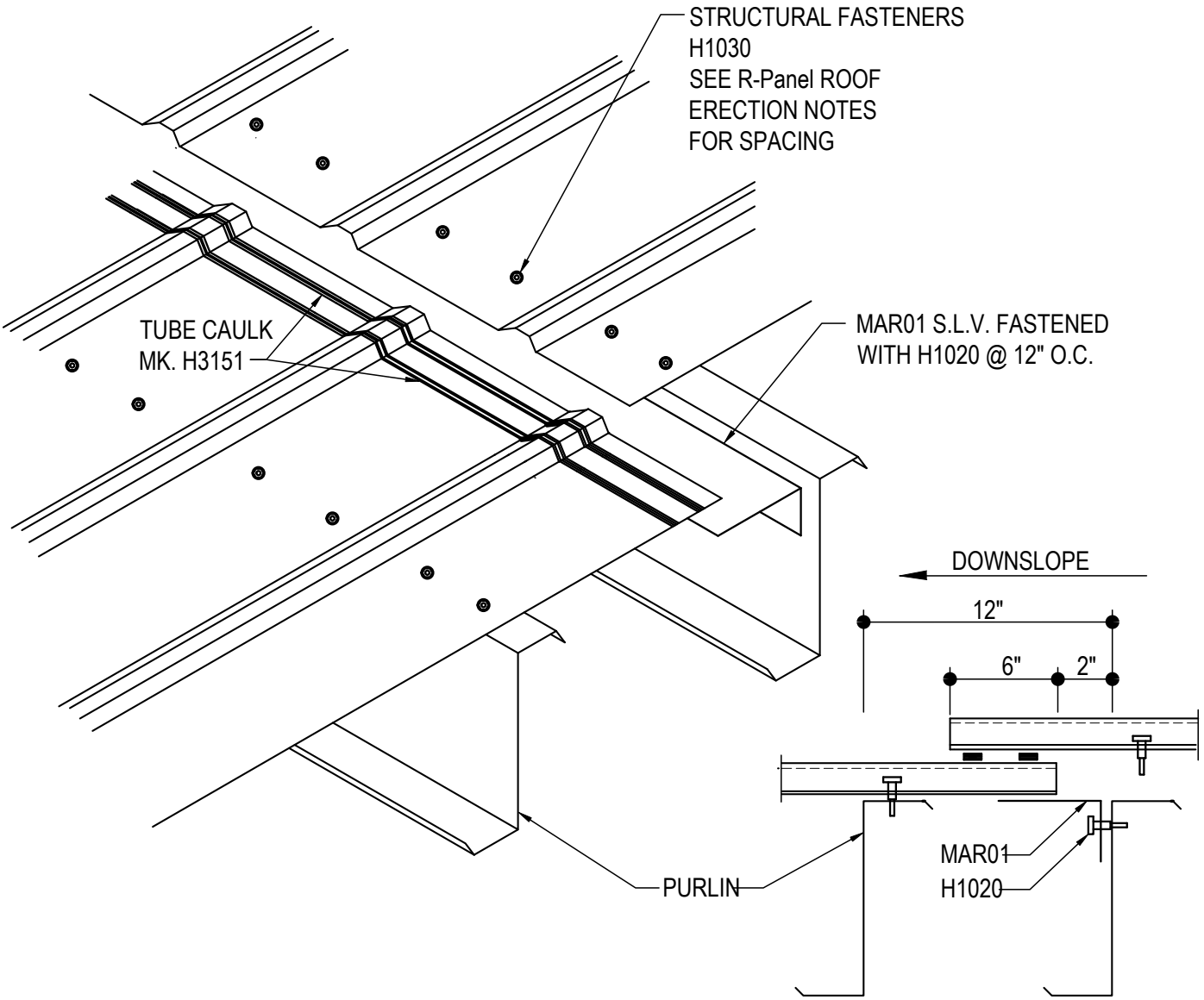
DA0071

Detailer Notes:

1) N/A

DA0100 - R-PANEL EXPANSION JOINT

Download the DWG file by clicking here.



R-Panel EXPANSION JOINT

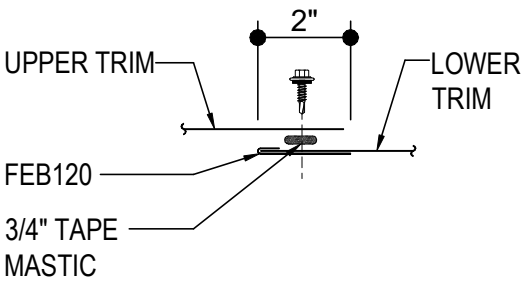
DA0100

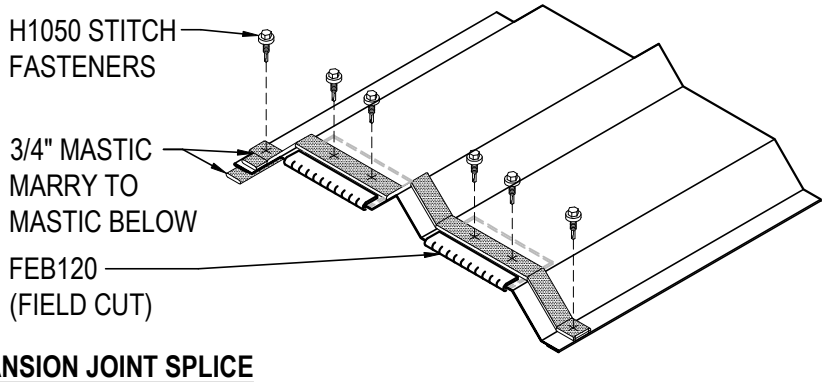
Detailer Notes:

1) YOU WILL ALSO NEED THE RAKE TRIM EXPANSION JOINT DETAIL IF YOU HAVE THE ABOVE CONDITION (SEE DETAIL DA0110).

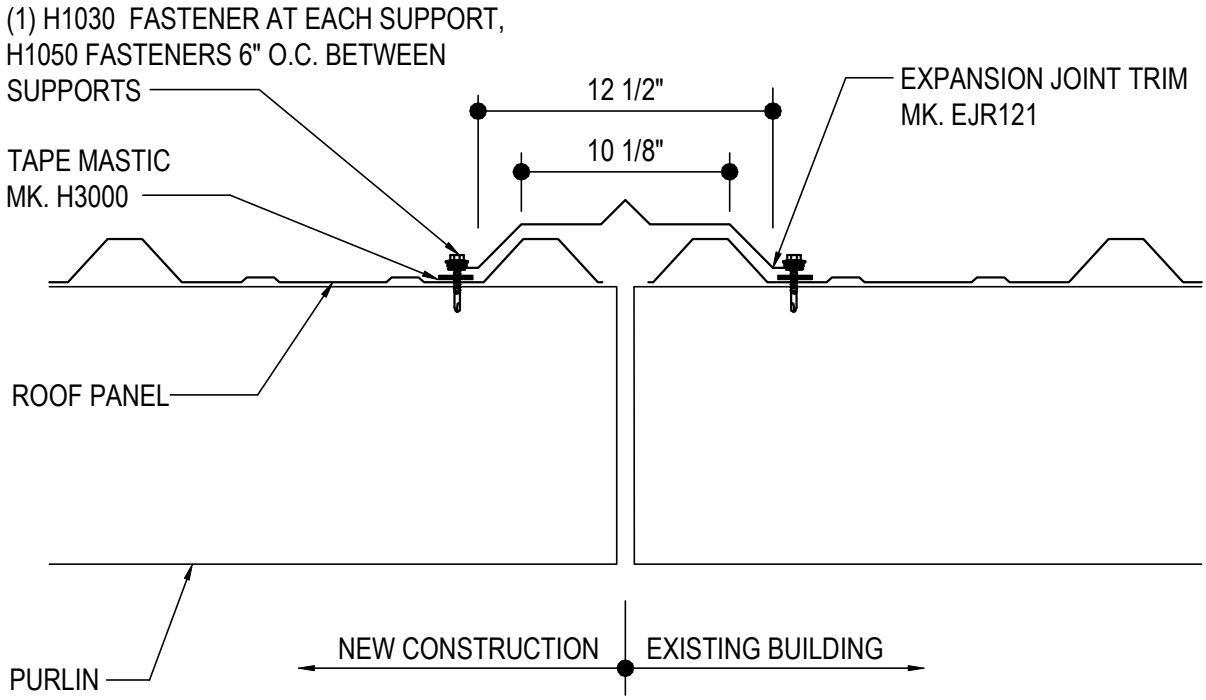
DA0105 - TRANSVERSE EXPANSION JOINT

Download the DWG file by clicking here.





EXPANSION JOINT SPLICE



TRANSVERSE EXPANSION JOINT

R-Panel ROOF AT EXPANSION FRAME
REFER TO THE SHEETING PLAN FOR CENTERLINE OF RIB START PANEL DIMENSIONS

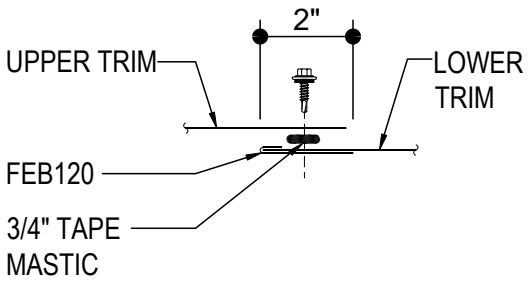
DA0105

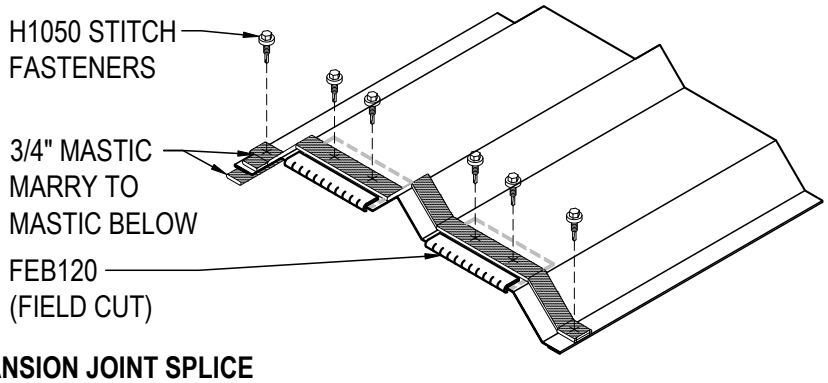
Detailer Notes:

1)THIS DETAIL IS ONLY INTENDED TO BE USED WHEN SECONDARY FRAMING DOES NOT TIE TOGETHER OR WHEN THE SECONDARY MEMBERS ARE DESIGNED TO MOVE INDEPENDENTLY. LAY OUT PANELS AS REQUIRED TO ACCOMMODATE. PANELS CANNOT LAP TOGETHER AS SHOWN.

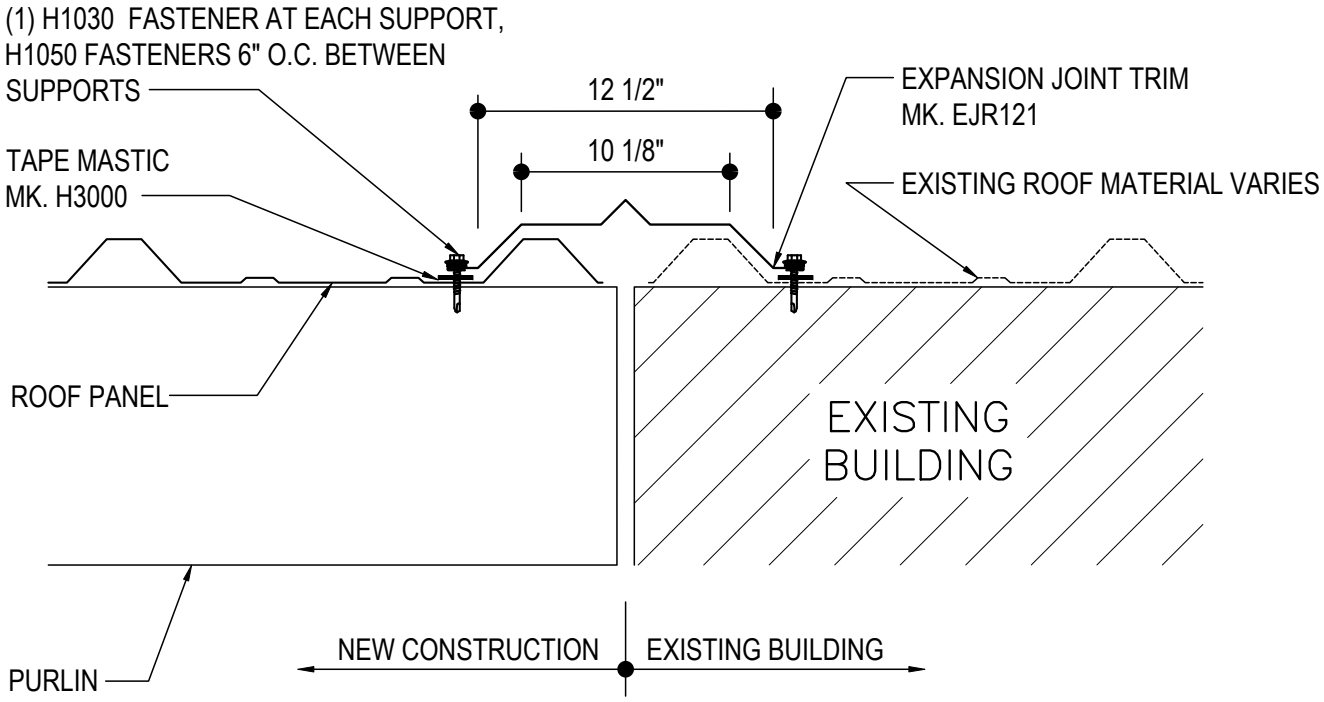
DA0106 - TRANSVERSE EXPANSION JOINT

Download the DWG file by clicking here.





EXPANSION JOINT SPLICE



TRANSVERSE EXPANSION JOINT

R-Panel ROOF AT EXISTING BUILDING
REFER TO THE SHEETING PLAN FOR CENTERLINE OF RIB START PANEL DIMENSIONS

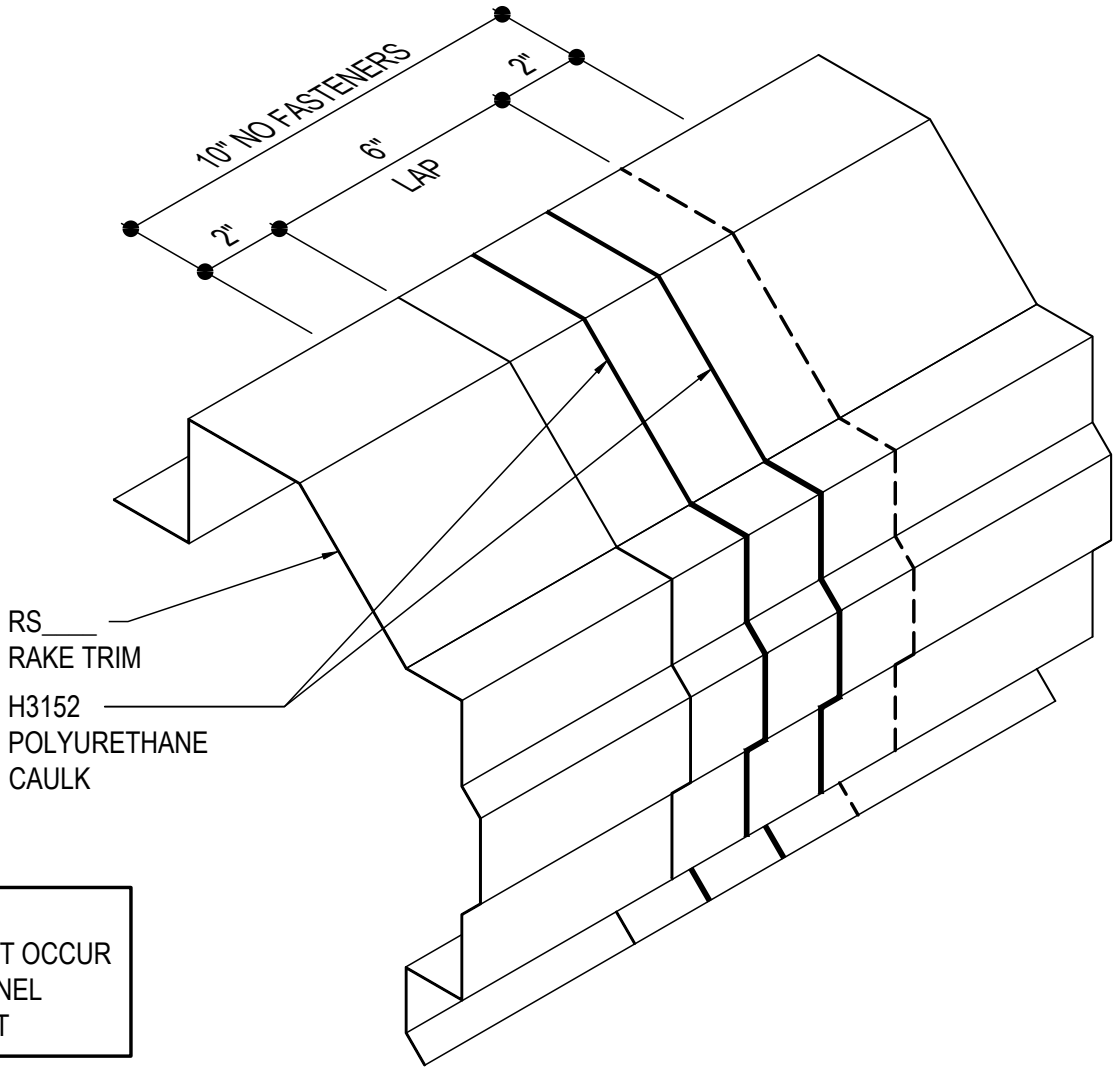
DA0106

Detailer Notes:

1) N/A

DA0110 - RAKE TRIM EXPANSION AT ROOF PANEL EXPANSION

Download the DWG file by clicking here.



ERECTOR NOTE:
THIS DETAIL MUST OCCUR AT THE ROOF PANEL EXPANSION JOINT

RAKE TRIM EXPANSION JOINT AT ROOF PANEL EXPANSION JOINT

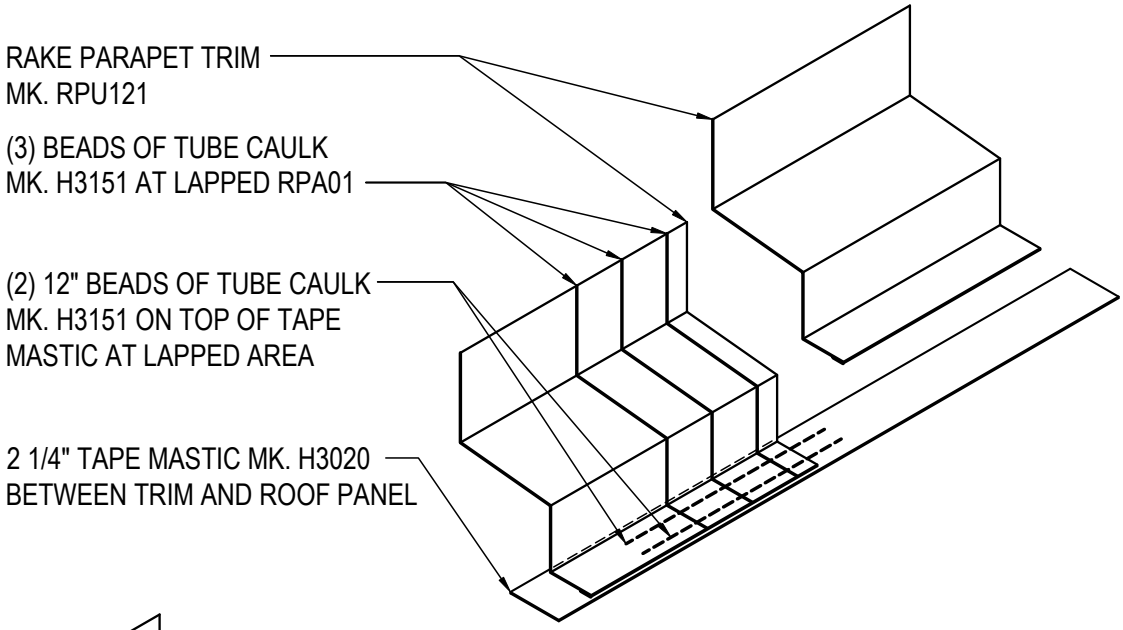
DA0110

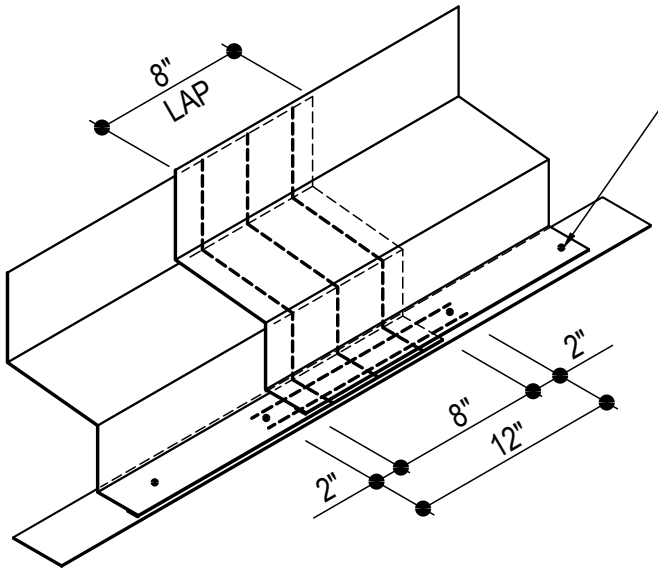
Detailer Notes:

1) THIS DETAIL IS REQUIRED WHEN YOU HAVE AN EXPANSION JOINT IN THE ROOF PANELS (REFER TO DETAIL DA0100 FOR THE PANEL EXPANSION JOINT DETAILS).
2) DETAIL IS REQUIRED WHEN THE ROOF PANEL RUN EXCEEDS 120'-0".
3) THIS TRIM EXPANSION JOINT MUST OCCUR AT THE ROOF PANEL EXPANSION JOINT.

DA0115 - RAKE PARAPET EXPANSION JOINT

Download the DWG file by clicking here.





IMPORTANT NOTE

DO NOT USE FASTENERS IN THE LAPPED AREA. KEEP FASTENERS A MINIMUM OF 2" AWAY FROM LAPPED AREA AS SHOWN.

THE TRIM LAP MUST OCCUR AT THE PANEL EXPANSION JOINT

RAKE PARAPET EXPANSION JOINT

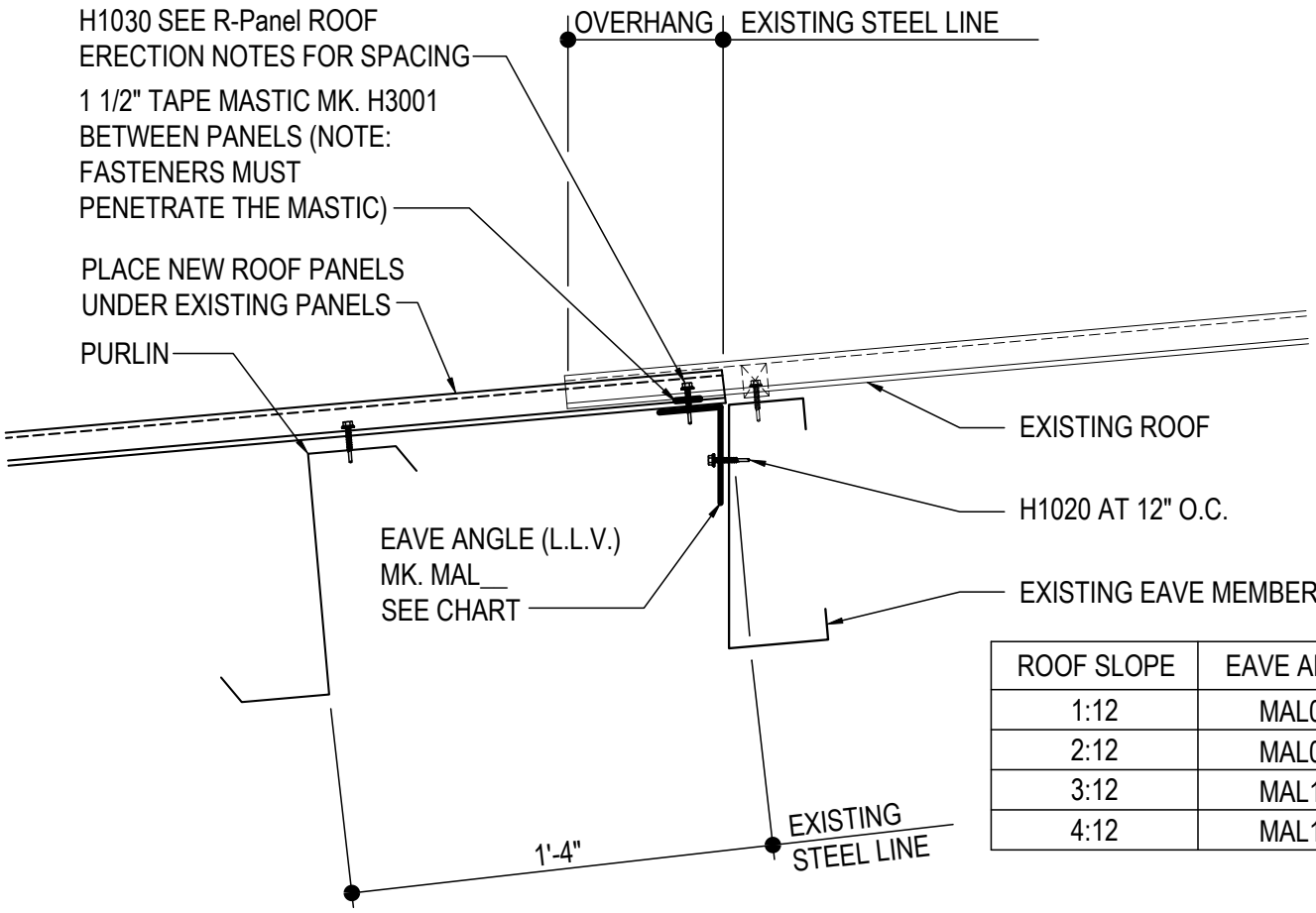
DA0115

Detailer Notes:

1) N/A

DA0140 - TIE-IN TO EXISTING R-PANEL ROOF (W/O WALL PANEL)

Download the DWG file by clicking here.



ROOF SLOPE	EAVE ANGLE
1:12	MAL08
2:12	MAL09
3:12	MAL10
4:12	MAL11

R-Panel ROOF TIE-IN

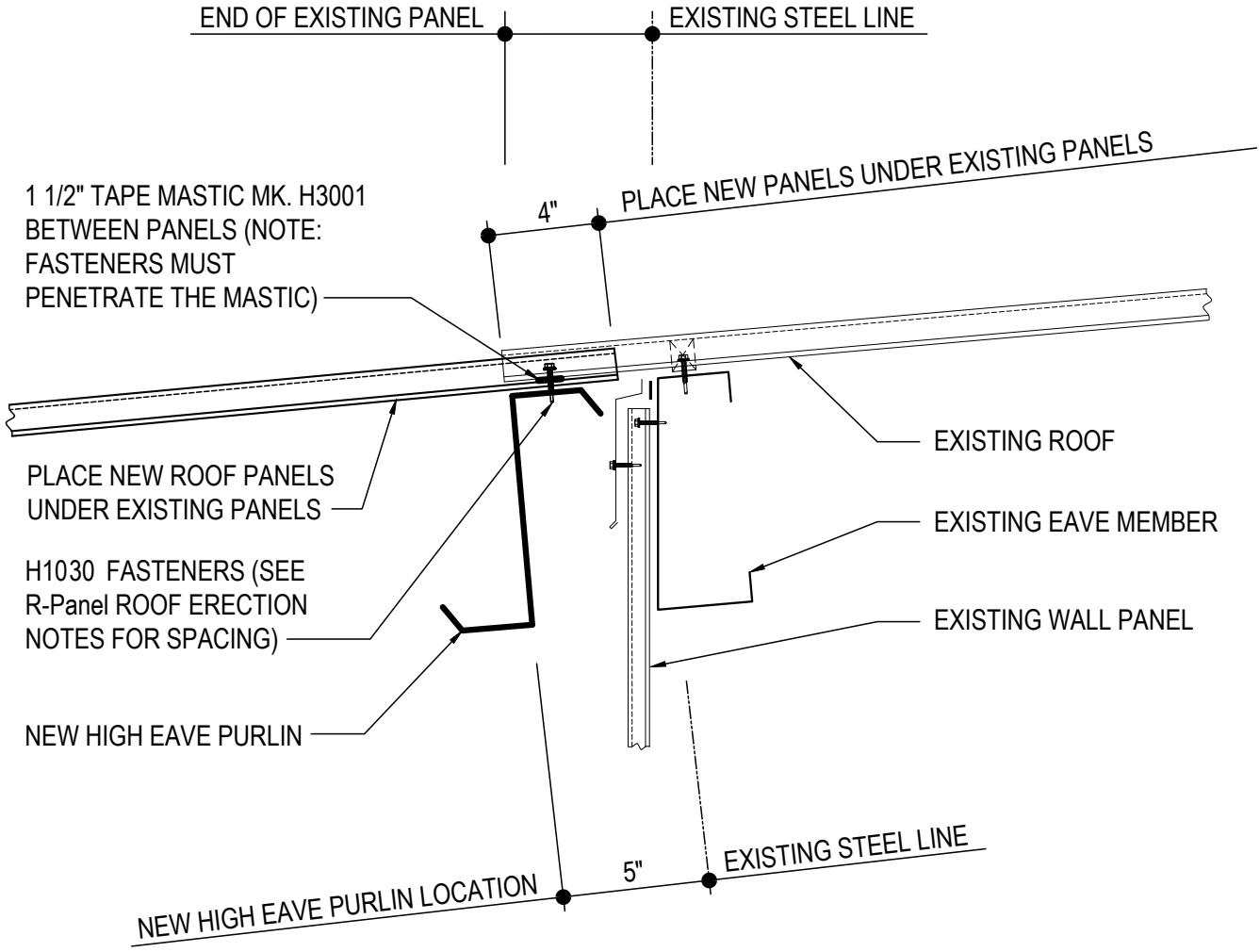
DA0140

Detailer Notes:

1) ALSO SEE DETAIL DA0150 FOR ANOTHER OPTION FOR THIS CONDITION.

DA0150 - TIE-IN TO EXISTING R-PANEL ROOF (W/ WALL PANEL)

Download the DWG file by clicking here.



R-Panel ROOF TIE-IN DETAIL

AT EXISTING BUILDING LOW EAVE

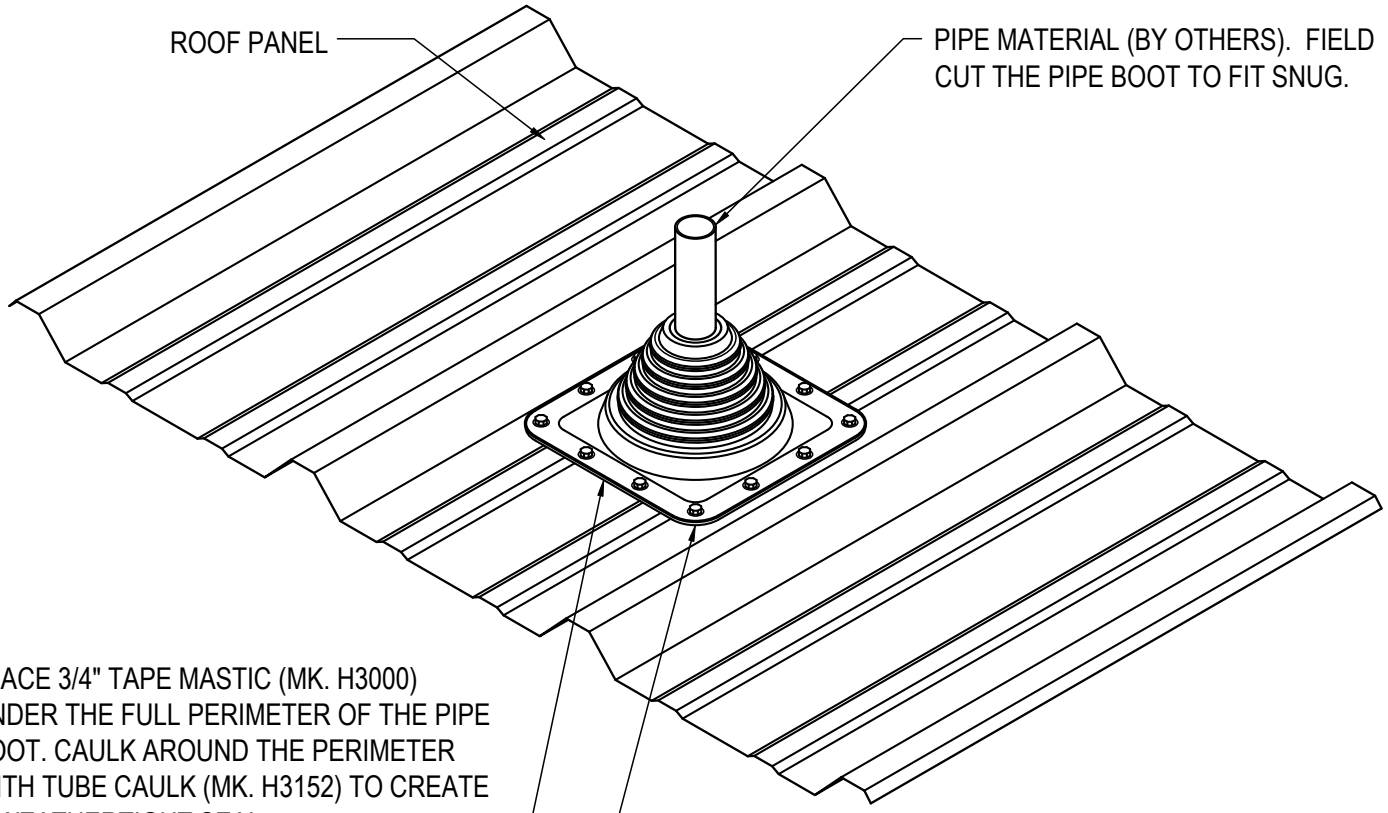
DA0150

Detailer Notes:

1) N/A

DA0200 - PIPE BOOT

Download the DWG file by clicking here.



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

DA0200

Detailer Notes:

1) N/A