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WARNING

EXPOSED PURLINS, GIRTS AND BRACING

Wood members may break under your weight causing you to fall and be killed or seriously injured.



If you must walk on wood members, stay within 1 foot of truss or column.

Always use fall protection.

See page 6, "Erection Safety Instructions".



WARNING

You may fall from roof and be killed or seriously injured.



Panels are slippery.

Wear slip-resistant shoes.

Use fall protection.



Any panel can collapse.

Do not step on loose panels.

Do not step on or NEAR edge of panels.

Do not step within 3 feet of panel end.



Loose panels may slide out from under you.

Do not step on loose panels or stacks of panels.

Always use fall protection.

See page 6, "Erection Safety Instructions."

Erection Safety Instructions

1. Exposed purlin application

- The purlins, girts, and bracing (also called "rails, "nailers", etc.) used in the exposed purlin application may not support body weight.
- The safest erection practice is to stand on scaffolding, ladders, etc., during erection and to use appropriate fall protection.
- If during erection it becomes necessary to put some weight on a wood member, you must follow these guidelines:
 - Make sure the wood member is fully secured to the supporting member.
 - •• Always stay within one foot of the truss or column.
 - •• Distribute your weight on different wood members.
 - Never walk out onto or across a purlin, girt, or bracing member.
- During pre-erection layout of materials, check for cracks, excessive bowing, or other features that might make a wood member unsound. Dropping one end of the wood on the ground and listening for cracking, breaking, or other sounds may also indicate the wood member is unsound. Any wood member that does not appear structurally sound should not be used.

2. Panels are slippery

- All roof panels, whether painted or unpainted, are slippery to walk on. Unpainted roof panels are coated with a cleat fluid to aid in manufacturing and to protect them from rust during shipping and storage. This fluid contains a small amount of oil, which can make the panels very slippery to walk on.
- The fluid may leave a coating of oil on the soles of your work boots. This coating may cause you to slip and fall even when you are no longer working on a roof panel.
- If a bundle of panels are stored on a slight slope, the oil may run down hill on warm days & collect on one portion of the panels. This makes the oily portion of the panels even more slippery than normal.
- Dew, frost, or any other moisture on roof panels, whether painted or unpainted, greatly increases the slipperiness of the panels & extra care should be taken. The pitch of the roof (its slope) can also increase the hazard.
 - Because of these hazardous conditions, it is essential that fall protection be used at all times.
 - Always wear slip-resistant shoes.
- Never step on a single roof panel or a stack of several roof panels lying unattached to substrate framing. If you step onto a single panel lying unattached, it may slip causing you to lose your balance and fall. Even a stack of several panels lying unattached may slip if you step on it.

3. Panels can collapse

- ERP roof panels can be a safe walking surface (except for the steepness of the slope and slipperiness caused by dew, frost, moisture or oil) only when they are completely fastened or seamed to other panels on each side.
- Panels not completely fastened or seamed on each side are not safe and can collapse suddenly and without warning.
- When installing roof panels, always use fall protection.
- Follow these additional safety precautions:
 - Never step, kneel, or place weight on the raised edge corrugation of any panel.



- •• Use extra care when installing panels with creased or kinked corrugation or edges. Placing weight on any portion of such a panel may cause the panel to collapse.
- •• Do not step within three feet of panel end.
- •• When fastening a panel to an exposed purlin, stand toward the middle, away from the raised edge corrugation and directly over the purlin.
- Never use unattached roof panels as a work platform for any purpose. This is an extremely hazardous practice and should never be done.

4. General safety instructions

- These instructions and the other warnings and instructions provided are not intended to be complete and comprehensive safety instructions and may vary from applicable laws and regulations. All local, state, and OSHA safety regulations must be followed at all times. Past methods may not comply with current laws and regulations.
- Wear gloves to prevent injury while handling any metal fabricated parts.
- Always wear adequate personal protective gear, such as hard hats and eye protection.
 Stay clear of loads being moved by any lifting device. Keep hands and feet clear of moving loads and never stand under a load being lifted or moved.
- Good cooperation and coordination among crewmembers is essential for safe installation. When working together, it is important that all crew members work at the same speed and in coordination with each other.
- Maintenance of good housekeeping on the job site is recognized as being important for both safety and successful job completion.

General Information

1. Notice

- Within this product manual you will find general design and installation instructions for adequate application of the Eclipse Roof System (ERS). The installer is responsible for assuring all safety, insurance, and building code requirements are being met. Lester Buildings is not responsible for any complications which may result from improper installation or any bodily harm or damage of property that may occur while using the product.
- Some conditions or installation situations for the ERS may not be covered in this manual. For design and installation assistance, call 1-800-826-4439 ext. 5305.

2. Material Handling & Storage

- Check the condition of the product upon delivery and compare the shipment to the packing slip to ensure all is accounted for.
- Call 1-800-826-4439 extension 5263 to report any shortages.

3. Packaging

- Package is for crating and handling only.
- Crates are non-structural and should not be re-used.

4. Unloading

- The installer is responsible for unloading materials and providing necessary equipment for unloading in a safe and secure manner.
- Crates are to be supported from underneath with forks positioned far enough apart that the crate is balanced and stable, avoiding sudden movements to prevent damage.
- Bundles up to 25 feet long can be lifted by a lift truck with forks at a minimum of 5 feet apart. Bundles longer than this should be lifted with nylon slings and a spreader bar. Chains, cables, and ropes are not adequate tools for relocating bundles.

5. Handling

- Two people spaced no more than 12 feet apart are necessary to move panels.
- Fluid movements between handlers will help prevent permanent damage.

Handling Metal

1. Differing metals

- The ERS should NOT come into contact with other metals such as brass or copper and any resulting corrosion is not covered by Lester Building's warranty.
- The same preventative measures should be taken to ensure that the ERS does not come into contact with any moisture or run-off from copper materials. This will cause premature corrosion to the ERS.

2. Treated lumber

- All metal should be kept separate from any chemically treated lumber and care taken to ensure the two do not come into direct contact.
- Any corrosion resulting from direct contact with chemically treated lumber is not covered under Lester Building's warranty.

3. Oil-Canning

- Oil canning is the visible waviness in the flat areas of a metal panel.
- This is not suitable cause for rejection of the panel.

4. Expansion/Contraction

- Allow for natural expansion and contractions of panels and trim caused by fluctuations in temperature and sunlight.
- Failure to do so can result in fastener malfunctions or "oil-canning".
- See chart 9A.

5. Cutting and drilling

- Use cutting tools that leave clean edges. Saws and grinders should be avoided. Damage to the steel by abrasive cutting tools will encourage rusting and is not covered through Lester Building's warranty.
- Any loose metal debris is to be removed to avoid rust and therefore any discoloration at that location.

Thermal expansion chart		
Panel	Temp	Panel
Length	change	Elongation
(ft)	Deg F	(in)
10	100	0.075
15	100	0.113
20	100	0.15
25	100	0.188
30	100	0.225
35	100	0.263
40	100	0.3
45	100	0.338
50	100	0.375
55	100	0.413

Chart 9A

Eclipse Roof System Design

1. Slope

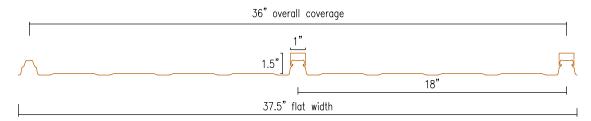
- The ERS is recommended for a 2/12 roof slope or higher and should not be used on surfaces where water is allowed to pool or is otherwise inhibited from freely flowing.
- Slopes with roof pitches .5/12 to 3/12 require lapped sealant.
- Slopes below .5/12 are not allowed.

2. Substrate & Underlayment

- A minimum of 7/16" OSB is required for 28 gauge panels.
- 26 gauge panels can be installed over open perpendicular framing with a maximum spacing of 28" o.c.
- For wind rated roof use 1/2" plywood.
- 30 lb asphalt saturated felt or an equivalent underlayment is recommended.

3. Panels

• Panel dimensions are as shown below.



Major ribs are 1" wide x 1.5" high with snap-on batten

• Panels are available in 26 gauge and 28 gauge AZ50 Galvalume with maximum recommended length of 34 feet. Panels up to 45 feet are available but are not recommended.

4. Sealant

- Sealant may be applied to perimeter edges, laps, intersections, and joints of flashings and panels. See details for applications.
- Sealant is a necessary element in preventing water from damaging the ERS.
 - •• Mastic tape is ideal for use between surfaces that are in compression, such as roof panels and flashings, and should not be used in instances where it is exposed to weather.
 - Moisture cured silicone sealants come in tubes and are versatile enough to use at any location requiring sealant.

Installation Instructions

1. Tools and Accessories

- Pop Rivet Tool
- Sheet metal snips, right and left
- Caulk gun
- Electric screw gun
- Electric sheet metal shears
- Hammer
- Tape measure
- Utility knife
- Drill bits
- Writing pens- do not use graphite pencils for marking
- Chalk line

2. Manufacturer's recommended panel attachment guide

- The Eclipse panel is a 36" wide, 18" O.C. major rib, rolled formed panel. It's 1.5" major rib provides outstanding strength and stiffness. The stiffness of the panel does not allow for adjustment and distortion during installation.
 - •• The panels must be installed on roofs that are straight and square.
 - •• The panels must be allowed to cover a minimum of 36" width.
 - Panels may be installed over purlins with a minimum of 1- 1/2" nominal width. See details for applications.
 - •• It is recommended that the panels be installed over sheathing that is a minimum of 7/16" thick with 30lbs felt paper or equivalent underlayment.
 - •• Wind rated assemblies require 15/32" plywood sheathing.
- Initial panel layout should take all aspects of the roof surface into consideration.
 - This includes vent pipes, valleys, annexes, and chimneys.
 - •• It is best practice to locate major rib of the panel in line with the ridge line of attaching roof.
 - •• Mark the roof layout for 36" panel coverage.
- Once the roof has been determined to be straight and square and the panel layout has been determined, the Eclipse roof system can be installed.
- The eave trim must be installed prior to the roof panel installation. This is the only trim that must be installed prior to the roof panel installation.

3. Panel Installation

- Lay the first panel on the roof and fasten it securely to the roof per detail JT040 (or JG010 for decking).
- Lay the next panel over the first panel with the overlap panel on top of the underlap panel. Make sure that the panel lap ribs are seated together.

- Fasten through the lap rib and the adjacent major rib per detail JT040 (or JG010 for decking).
- Continue installing the remainder of the panels in a similar fashion until the entire roof is covered. Field cut panel as needed for roof accessories.
- Periodically check the panel layout measurement to make sure the panels are running square and are providing the proper coverage. Failure to provide proper panel coverage and layout will result in distorted panels, and poor alignment causing a sawtooth effect.
- After all panels are installed, the roof battens may be installed. Special care must be taken to mark the location of any roof attachment brackets that are covered by the battens. Install battens per detail JT020 (or JG004 for decking). Follow the attached details for the installation of the finish trims. This will complete your Eclipse roof system.

Protecting & Repairing Roof

1. Protecting roof during installation:

- Damage to an ERS can be caused by workers standing on panels, equipment, tools, or construction supplies and can usually be prevented.
- To prevent damage such as paint abrasion and dents you can:
 - Remove metal shavings from panels and trim immediately that result from cutting or drilling.
 - Clean roof of debris routinely.
 - •• Remove debris from bottom of footwear before stepping on to roof.
 - •• Limit walking on installed portions of roof.

2. Protecting roof after installation:

- To ensure peak performance, routine inspections of the roof are encouraged once installation is complete.
- Maintenance suggestions are as follows:
 - Nearby tree branches should be trimmed back.
 - Anything penetrating ERS, such as pipes, should be checked for cracks or tears routinely.
 - Clean ERS of any debri such as leaves, sticks, or dirt which my affect the drainage of water or hold moisture.

3. Finishing details

- Effort should be given to avoid and protect the ERS during installation from scratches, abrasions, or bending. Touch-up paint pens are available in Lester Building's steel colors upon request. Please note that paint pens do not have the same protective qualities and should be used in moderation
- It is encouraged that experienced metal roof system installers be used for any necessary repairs.

Wind Uplift Chart

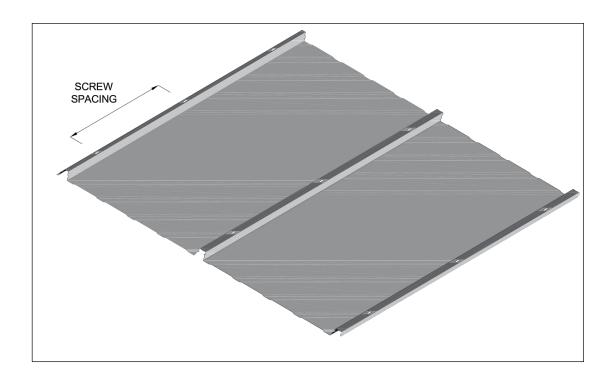
Eclipse Roof System

UL580/UL1897 Ultimate Uplift Capacity **

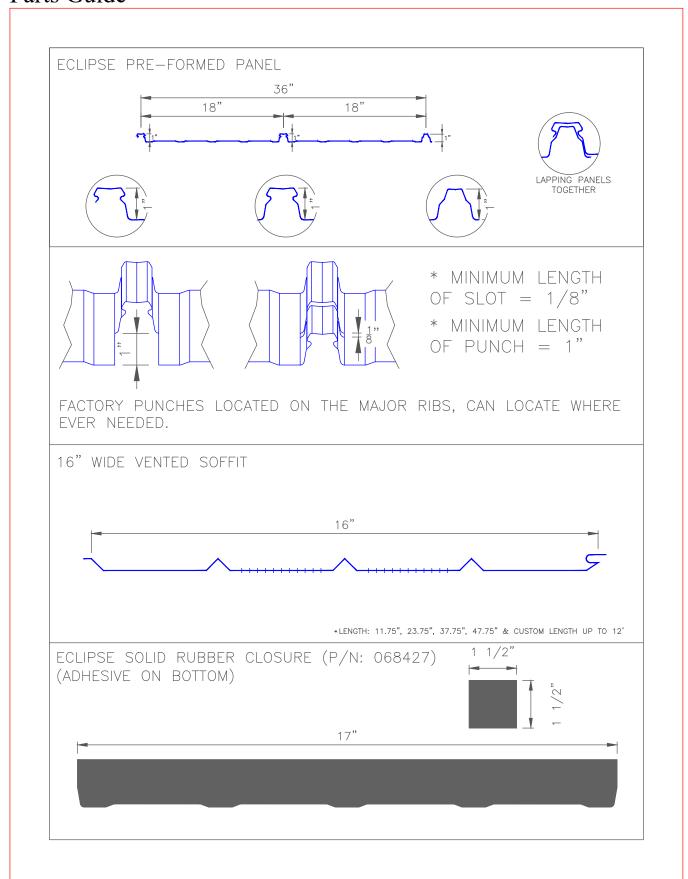
Screw Spacing	Ultimate Capacity
(Inches)	(psf)
24	60
19.2	110
16	144
12	185
10.7	199
9.6	210
8	227
6	247

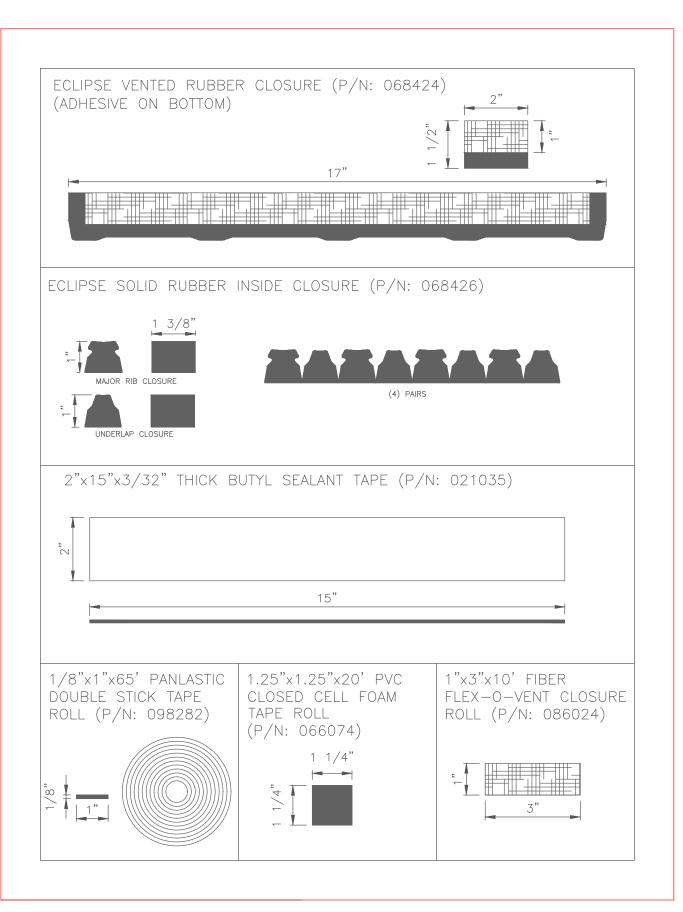
** Minimum Assembly Requirements
15/32" structural plywood fastened to 24" O.C. SPF Framing with 8d R.S. Nails @ 6" O.C.

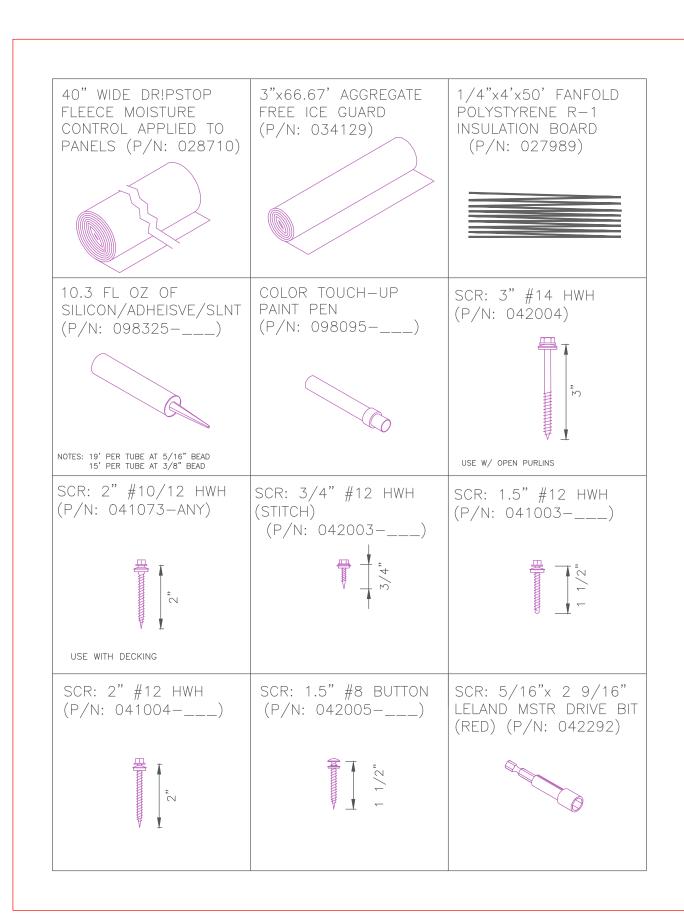
> Fasten Eclipse panels to plywood with #10-12 x 2" HWHD scews w/ 0.49" seal washer

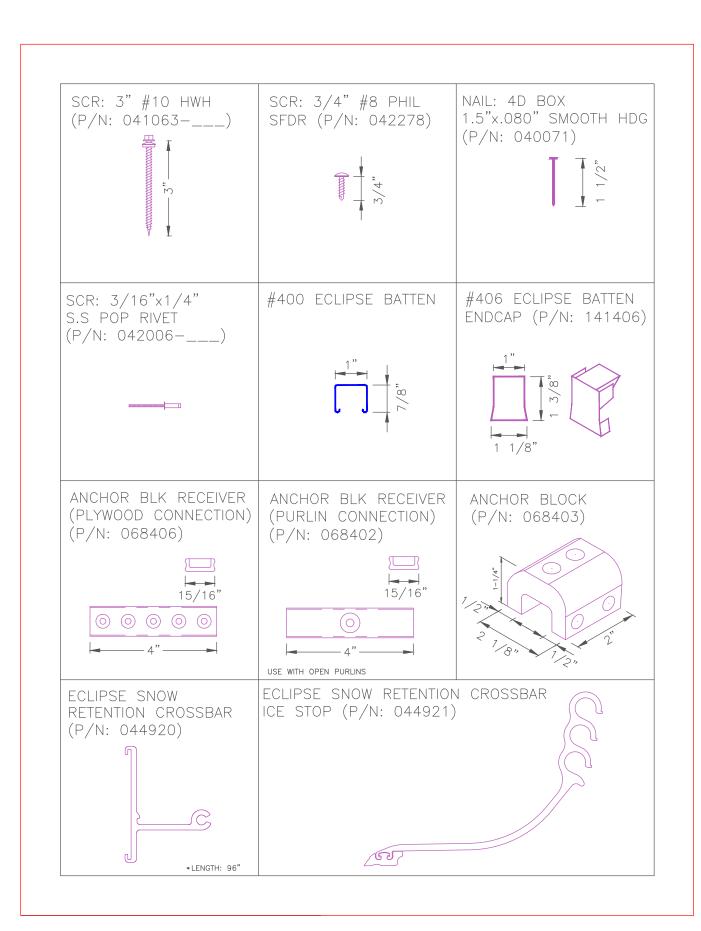


Parts Guide

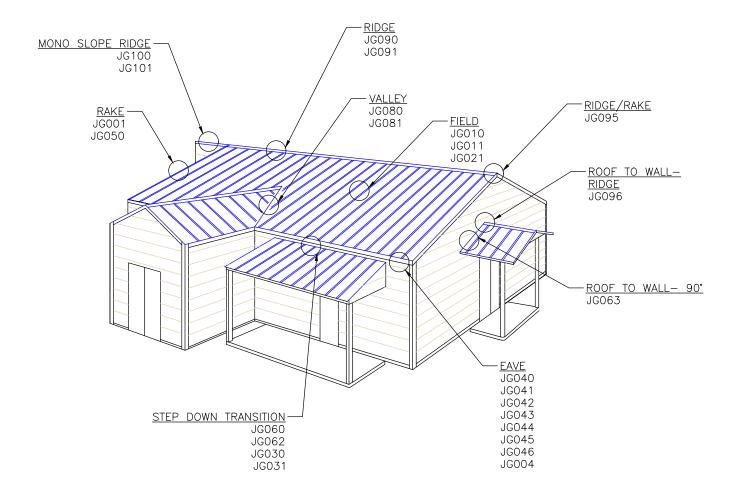








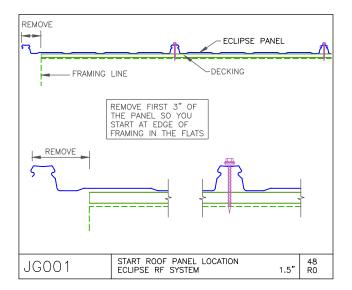
Eclipse Over Roof Deck

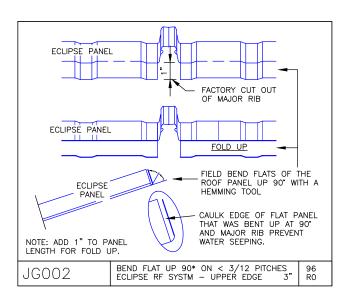


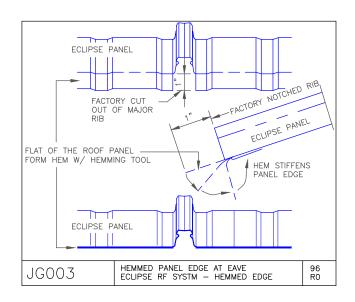
HIP DETAILS SNOW RETENTION SYSTEM DETAILS

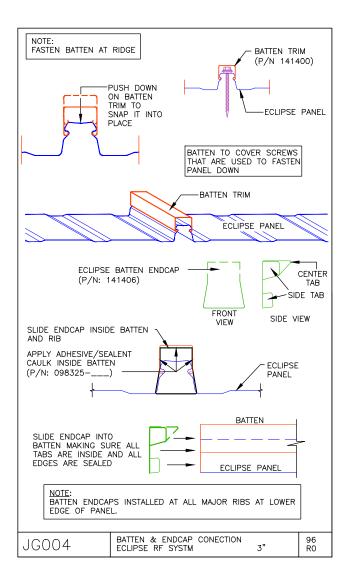
JG070-JG075 JG110, JG111

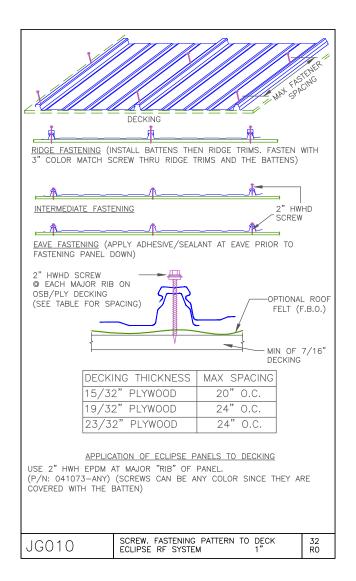
INDIVIDUAL TRIM INFORMATION IS LOCATED ON PAGES 52-59

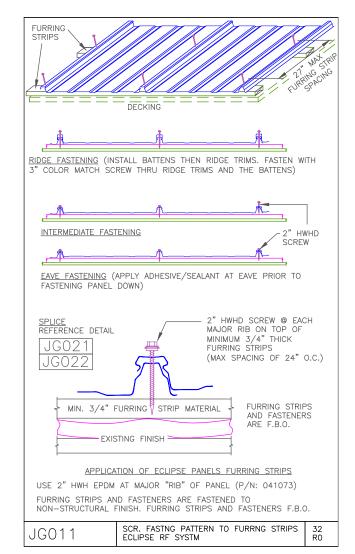


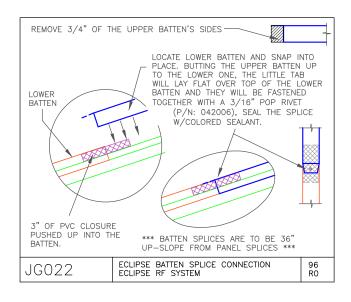


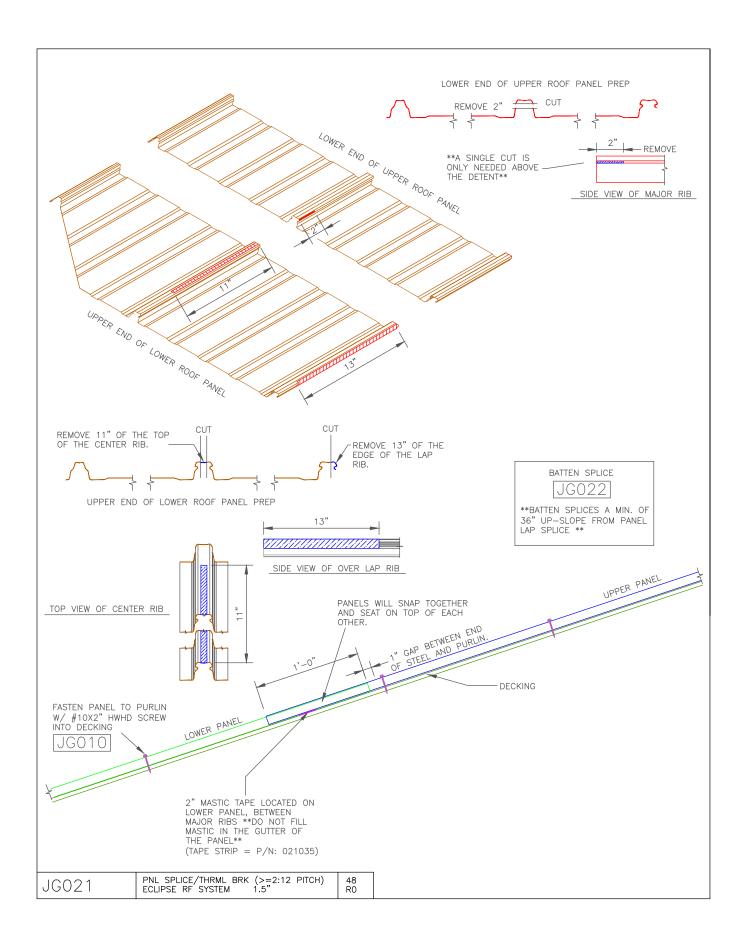


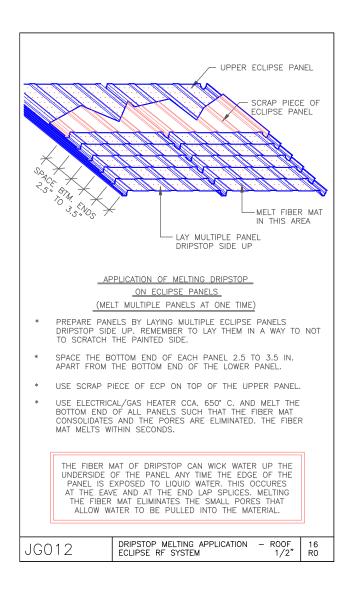


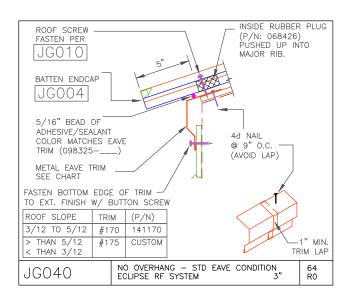


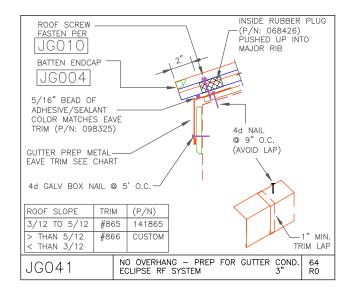


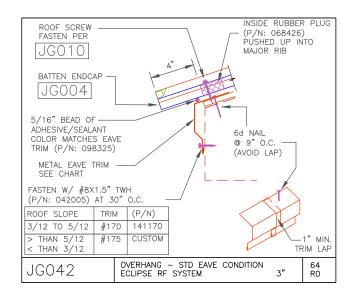


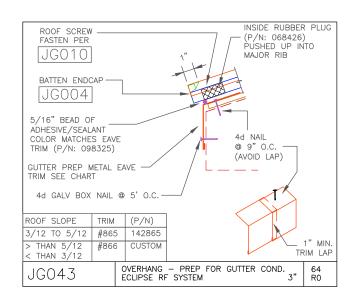


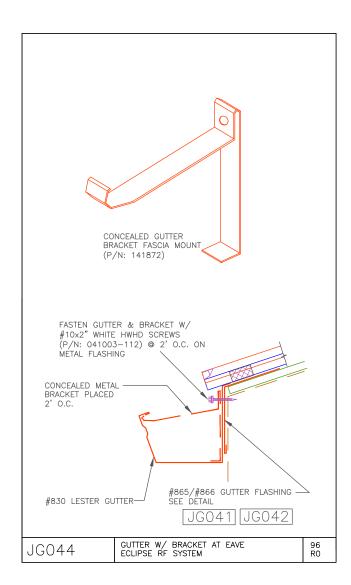


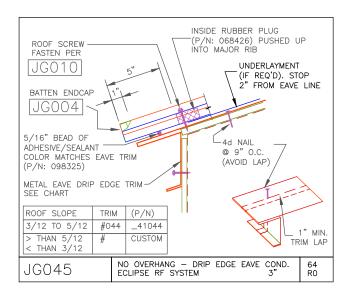


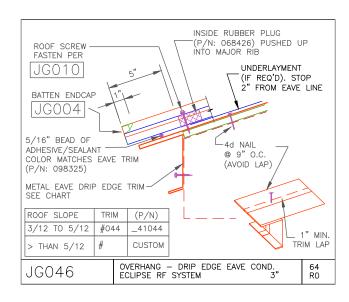


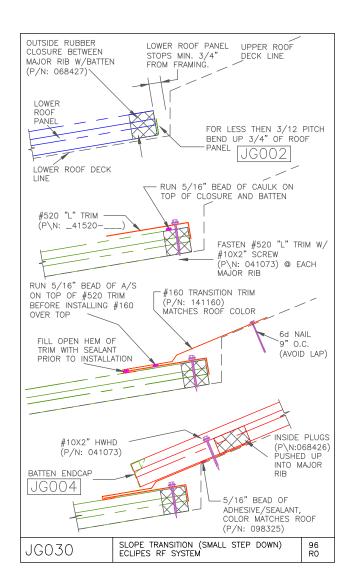


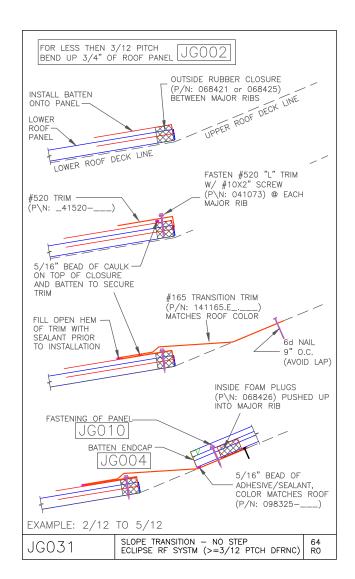


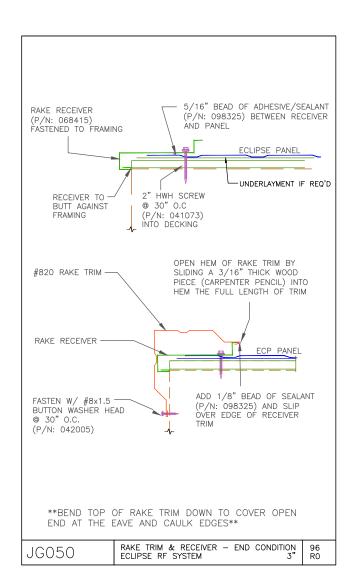


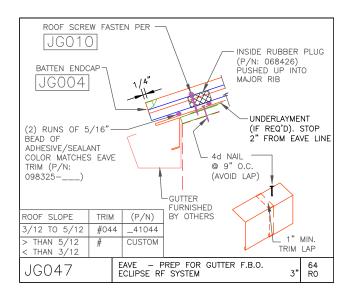


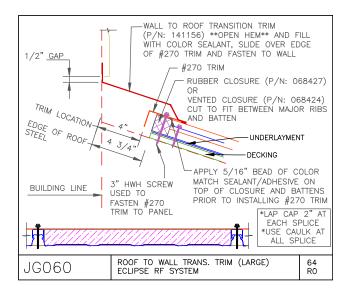


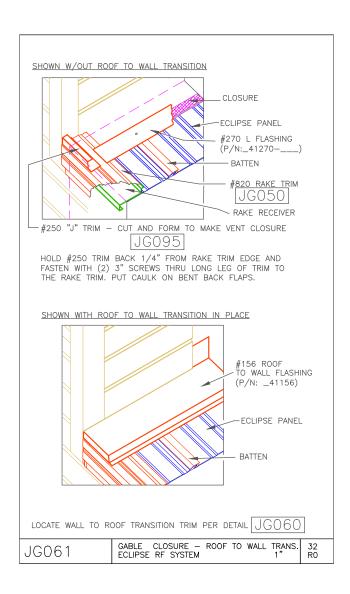


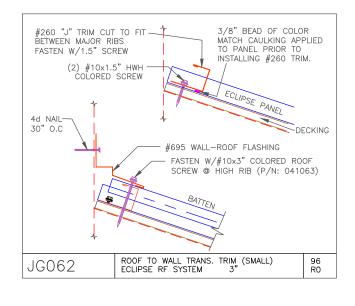


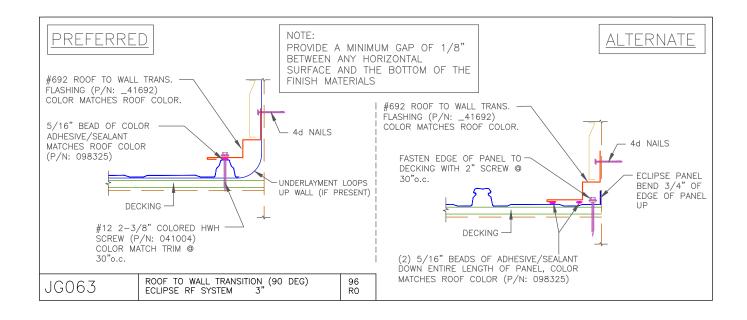


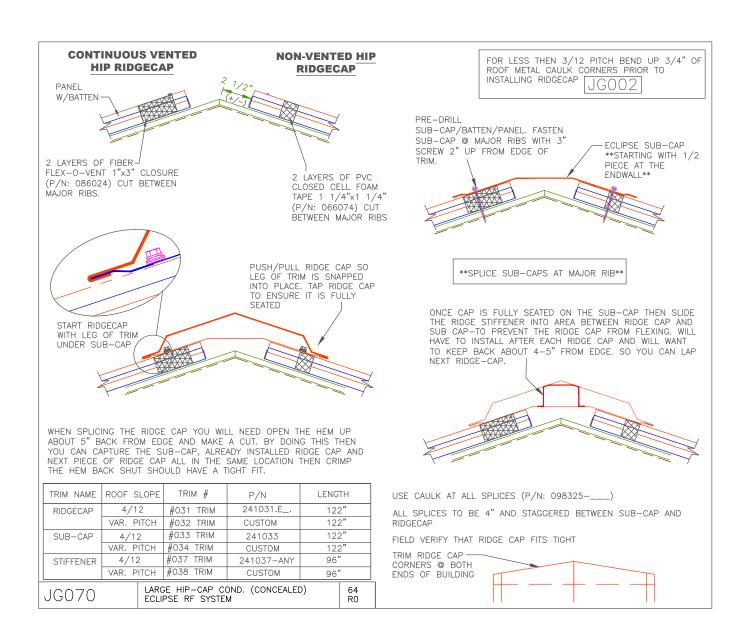


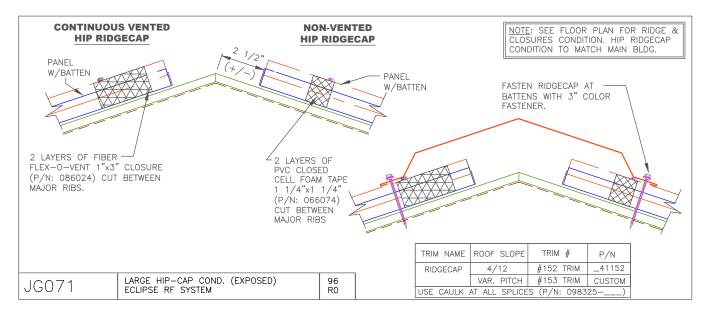


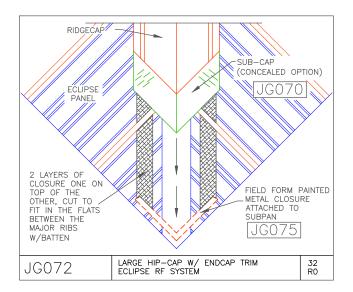


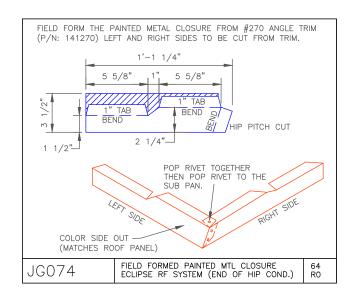


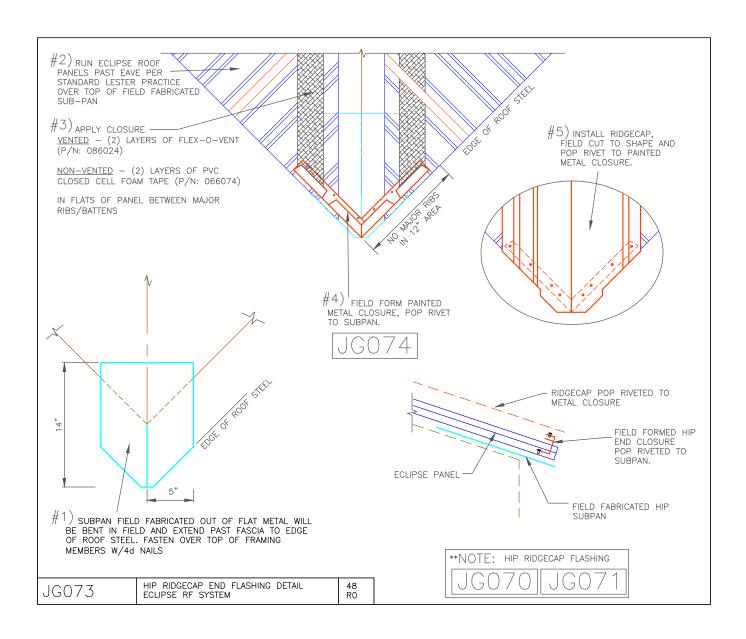


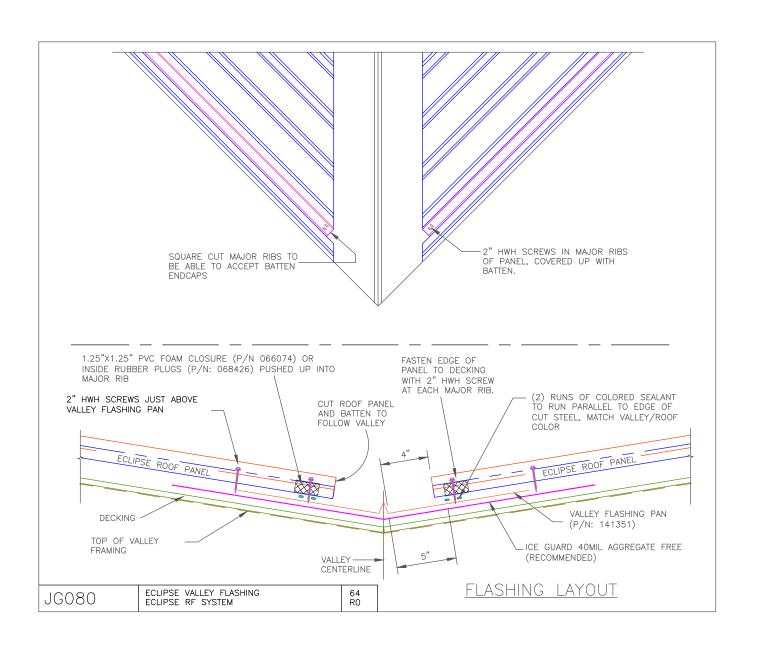


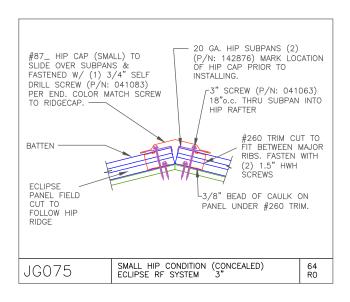


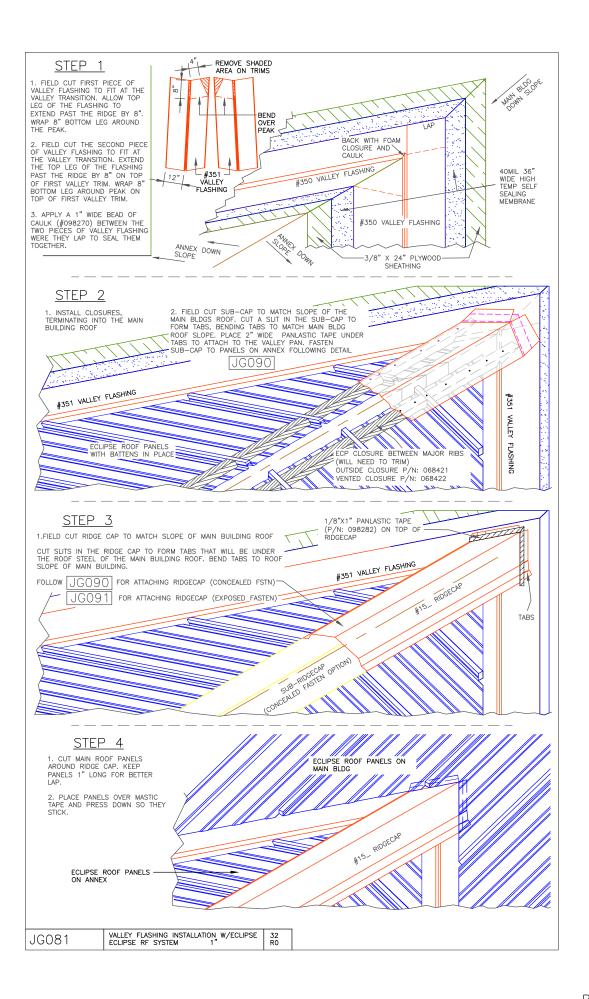


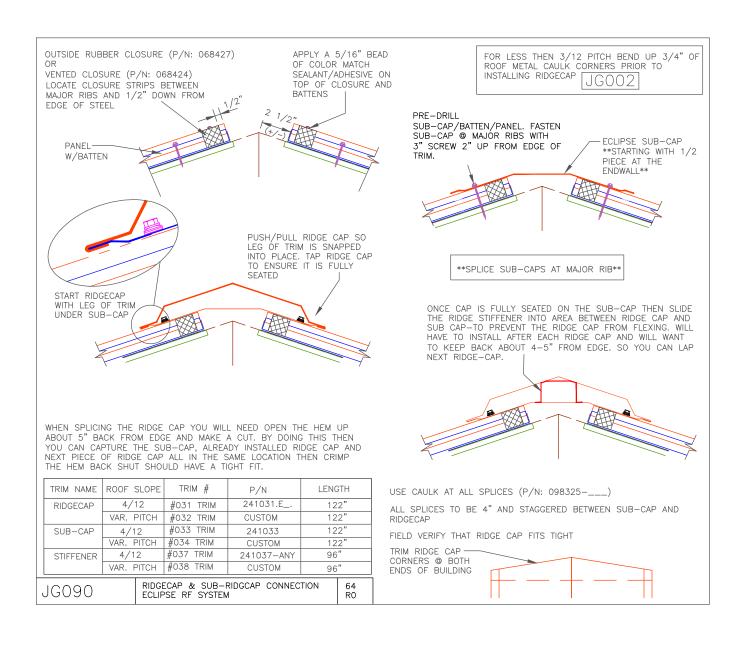


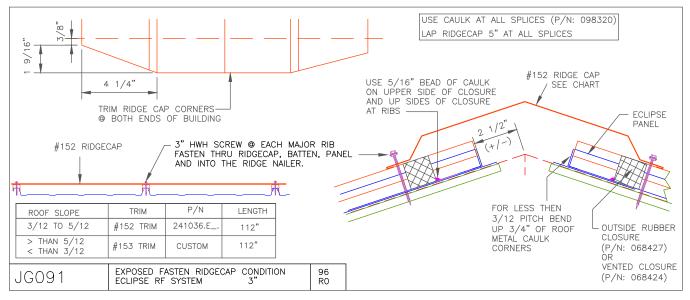


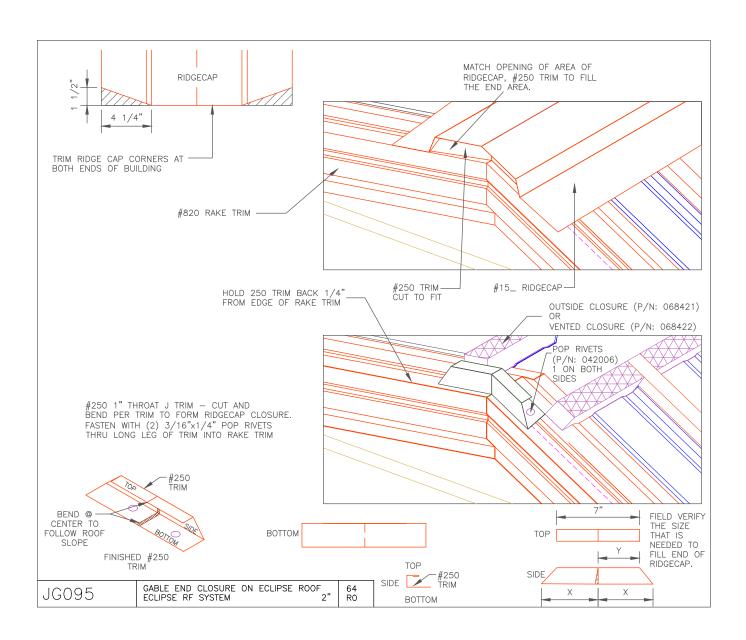


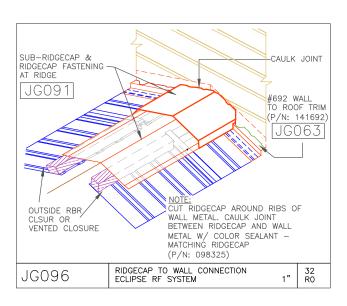


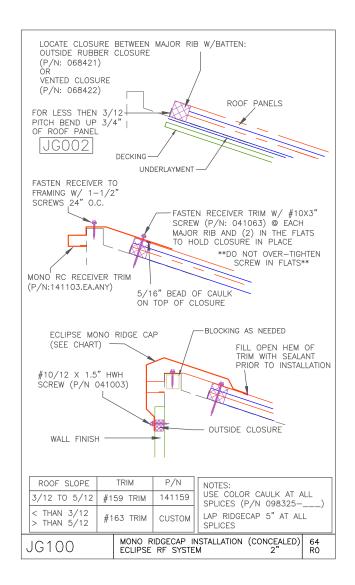


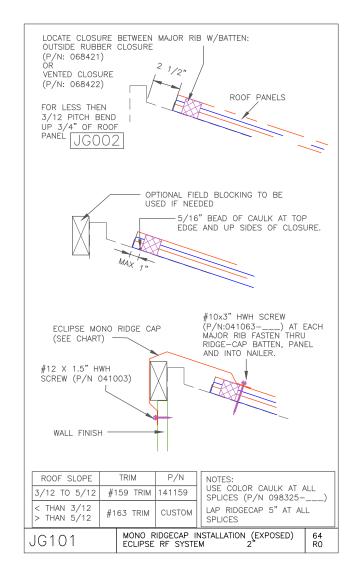




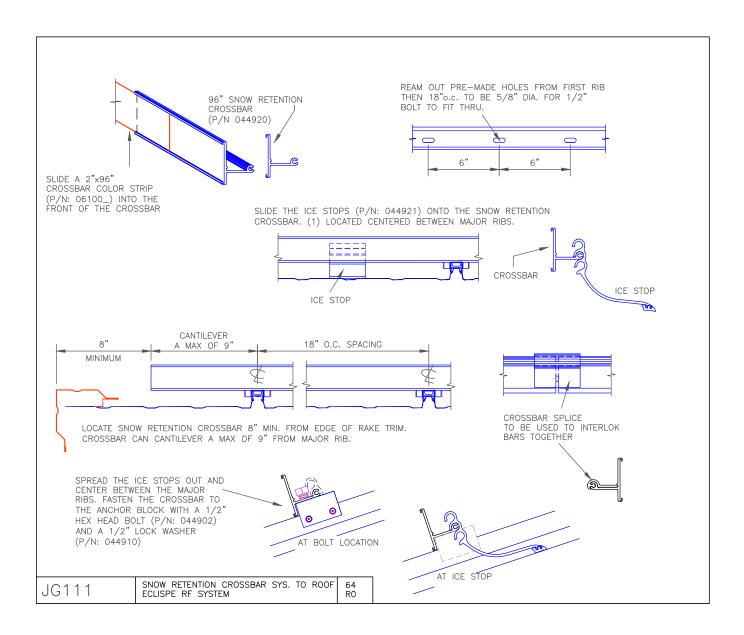




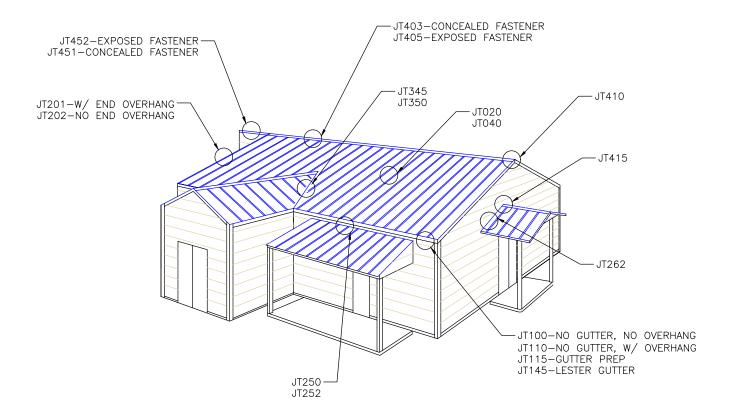




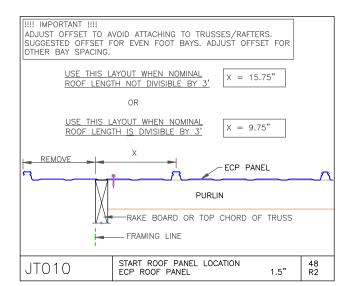
INSTALLING ANCHOR BLOCK RECEIVER 2" SCREW (P/N: 041073-ANY) ROOF BATTEN 4" ANCHOR BLOCK RECEIVER (P/N: 068406) — PLYWOOD CONNECTION OSB/PLYWOOD CON. (P/N: 141400) (FILL ALL HOLES) *** NOTE: MARK ROOF PANELS WHERE RECEIVERS ARE LOCATED PRIOR TO APPLYING BATTEN, LOCATION WILL BE HARDER TO FIND WHEN BATTEN IS ATTACHED *** 0 0 0 0 0 OSB/PLYWOOD PLYWOOD DECKING PLYWOOD **DECKING DECKING** TOP VIEW OF INSERT INSTALLING ANCHOR BLOCK ON BATTEN 2"X2" ALUMINUM ANCHOR BLOCK LOCATE ANCHOR BLOCK OVER TOP OF BATTEN AT MARKED BLOCK RECEIVERS (P/N: 068403) TIGHTEN THE SET SCREWS SO BLOCK IS TIGHT AGAINST TOP OF BATTEN LOCATIONS **o Ⅲ** → **▼** INSTALL (2) 3/8"-16 X 1/2" HEX SKT SET OVAL TIP SCREWS (P/N: 044900) ON EACH SIDE OF ANCHOR SIDE VIEW OF ANCHOR ATTACHED TO BATTEN SNOW RETENTION RECIEVER & BLOCK ECLIPSE RF SYSTEM 3" JG110

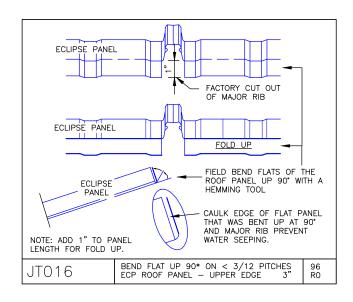


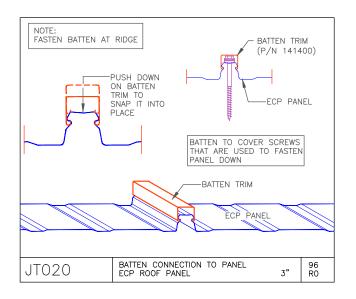
Eclipse Over Exposed Purlins

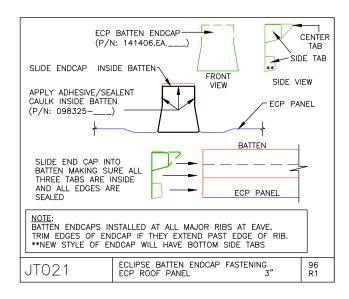


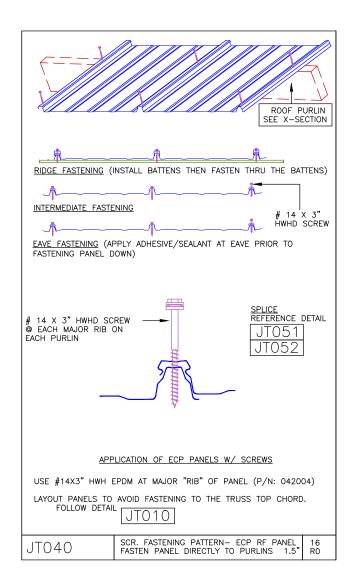
INDIVIDUAL TRIM INFORMATION IS LOCATED ON PAGES 52-59

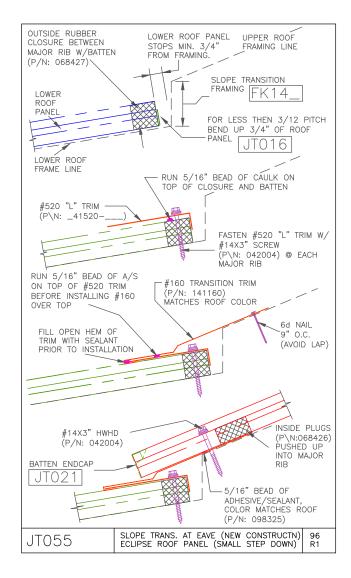


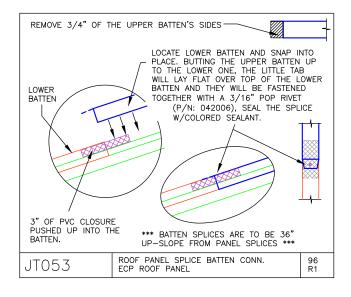


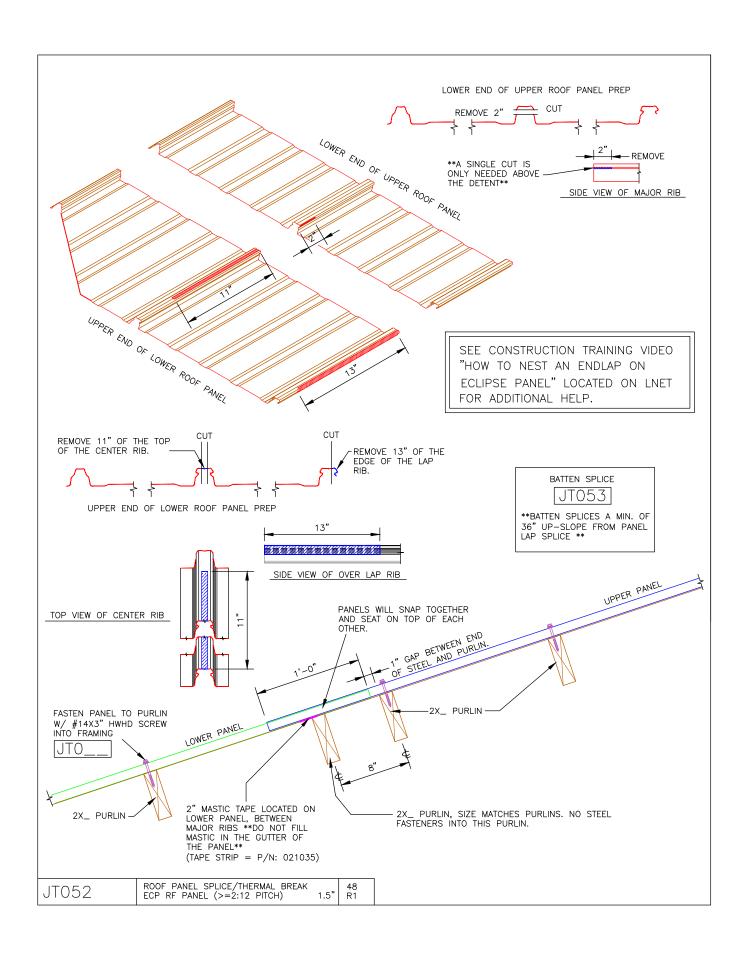


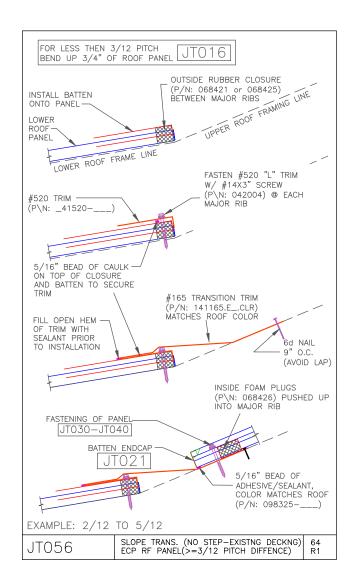


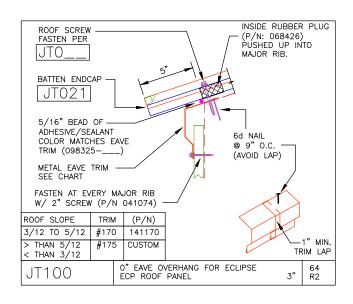


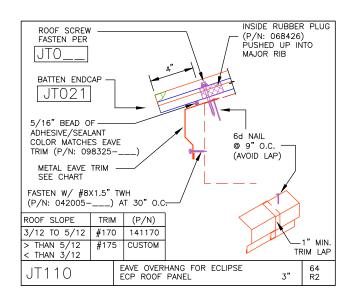


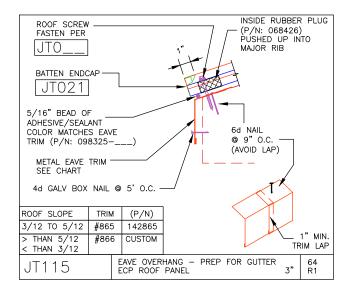


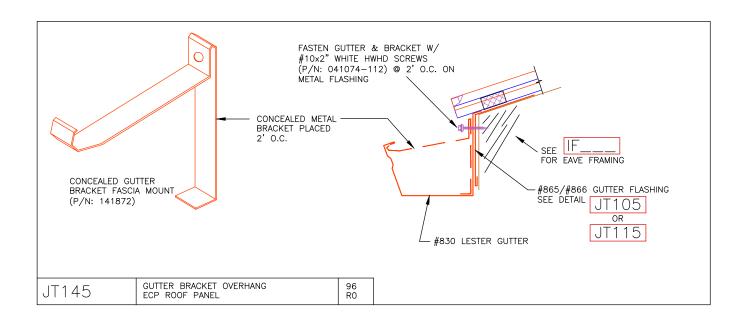


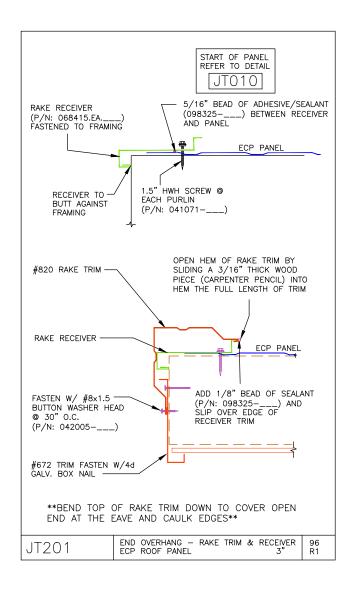


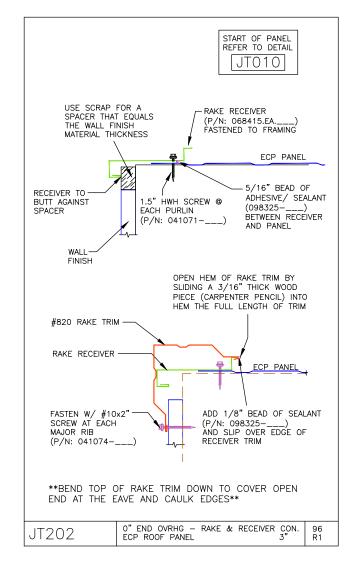


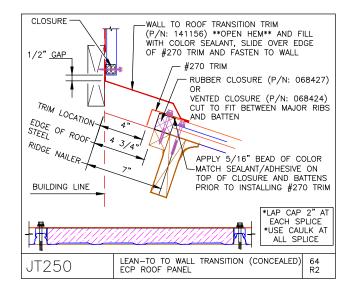


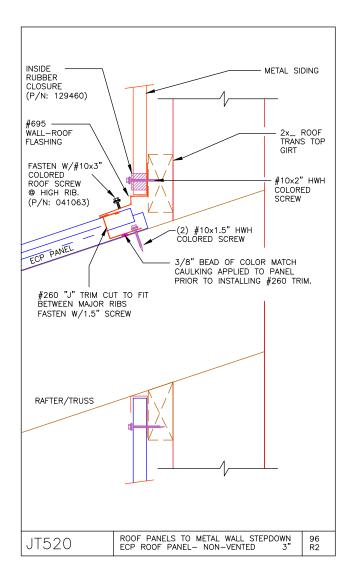


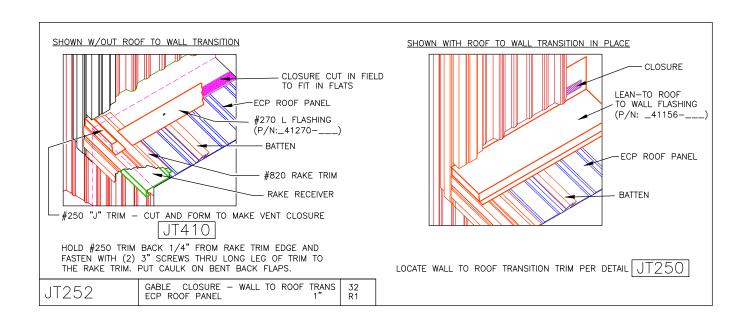


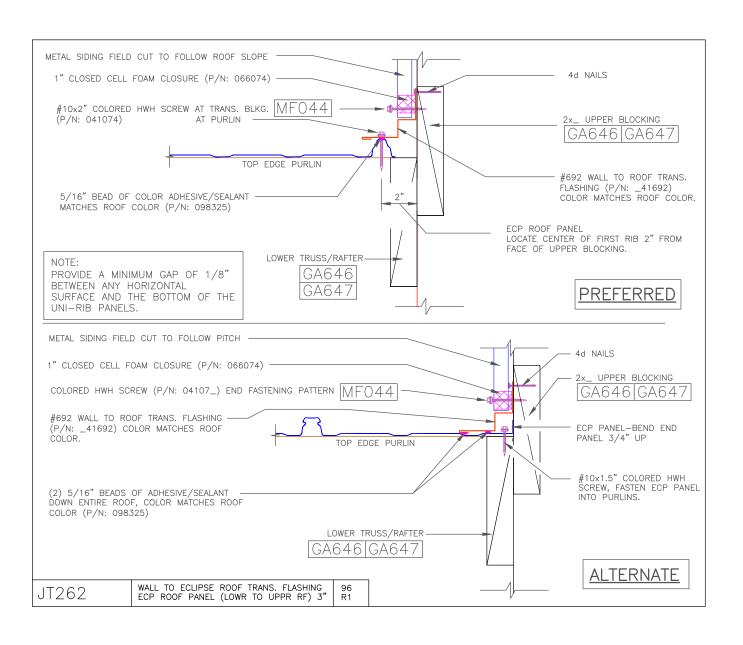


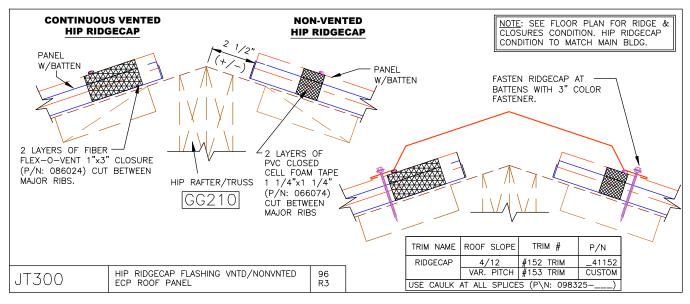


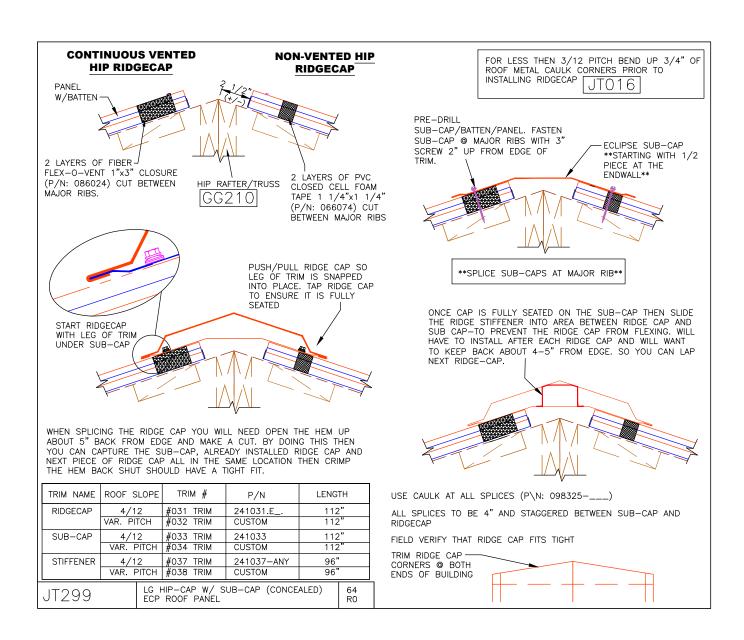


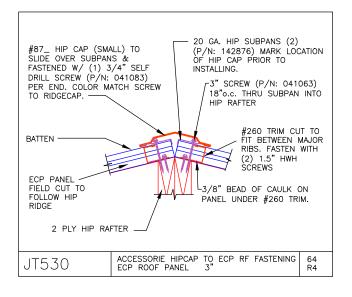


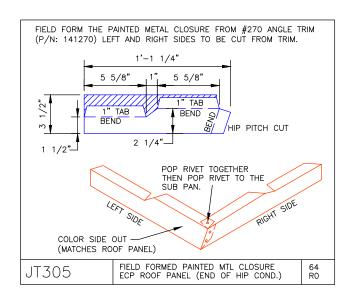


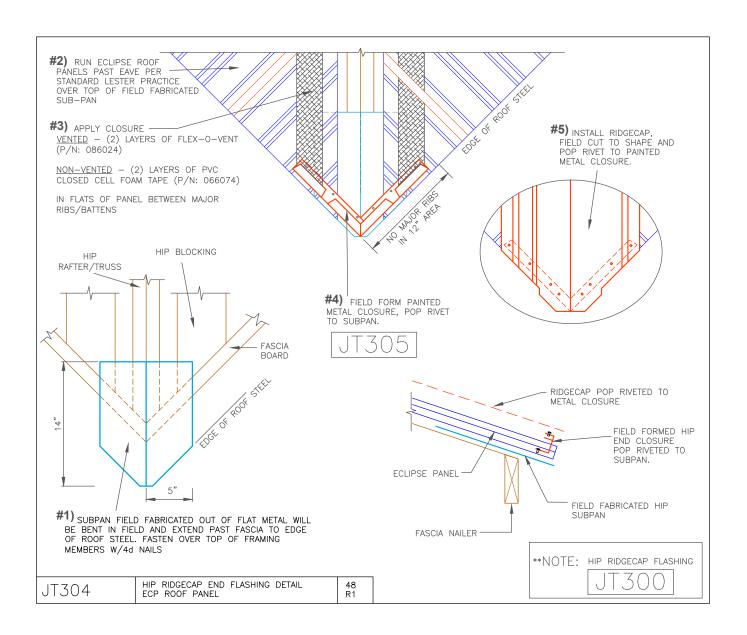


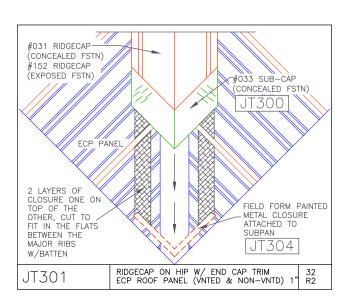


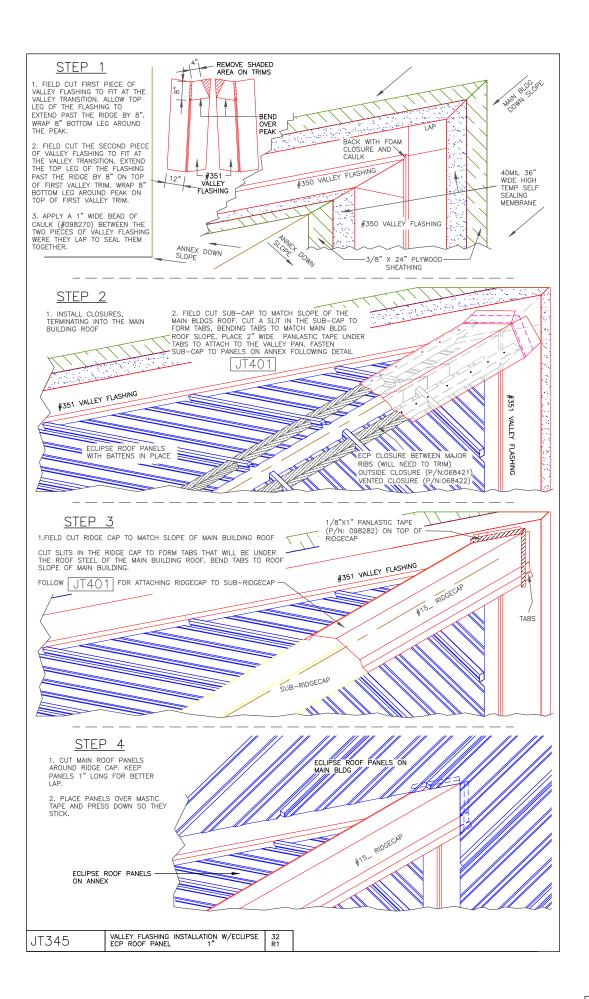


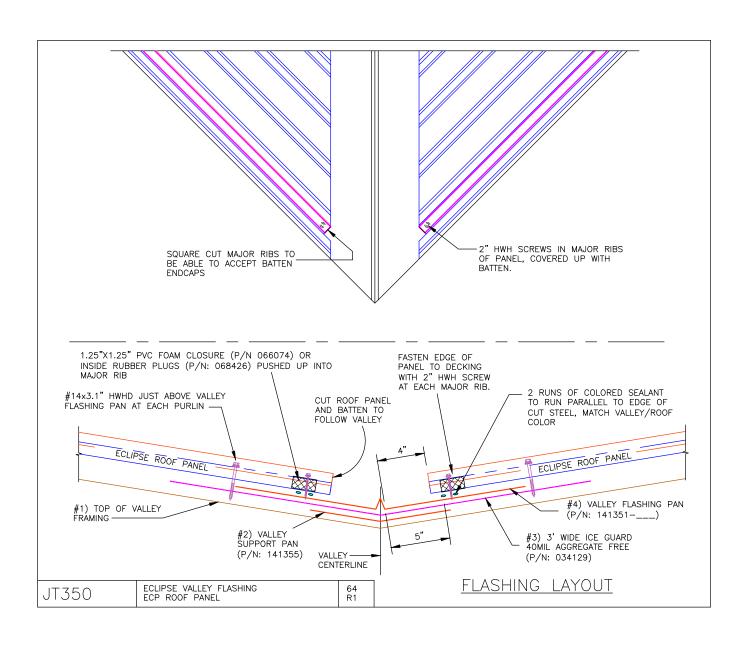


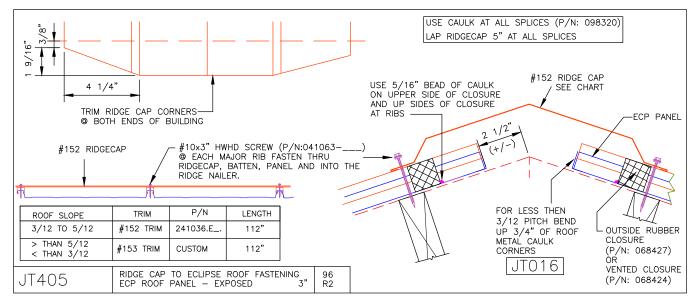


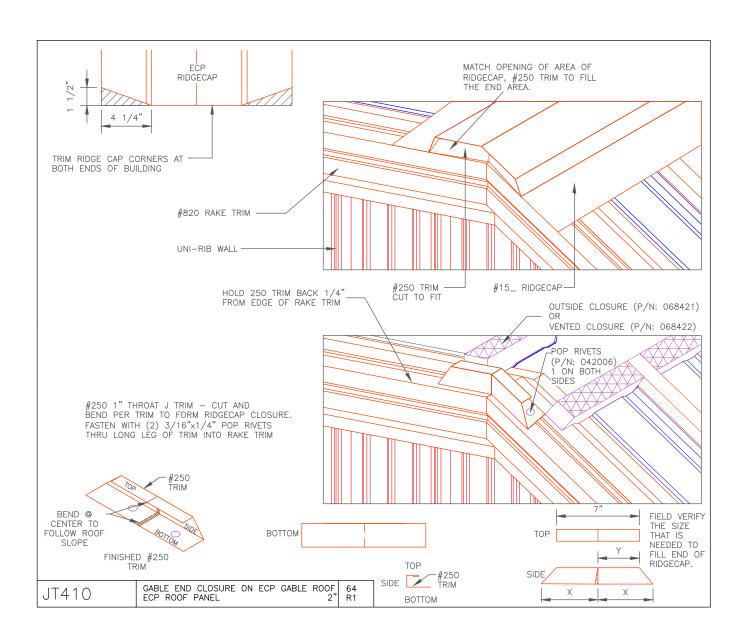


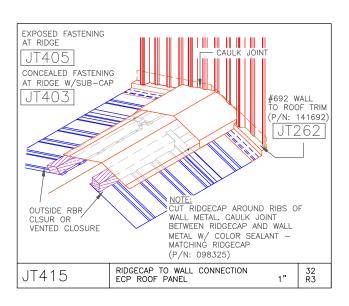


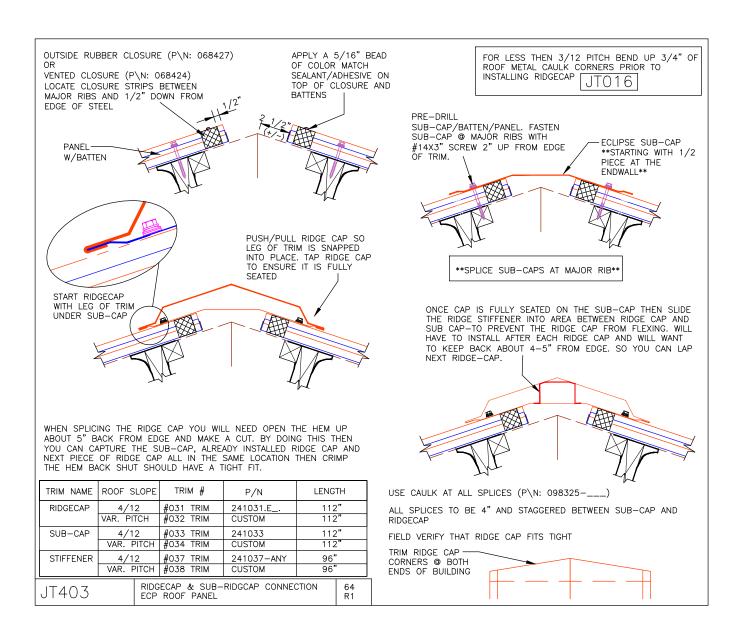


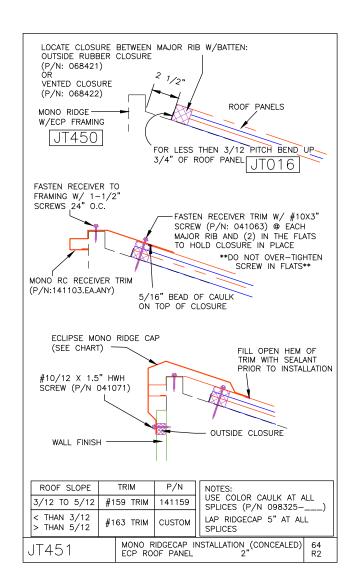


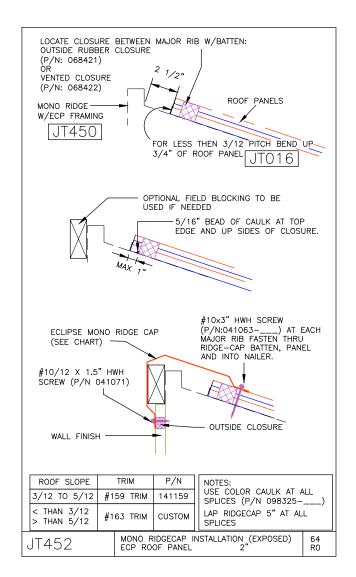


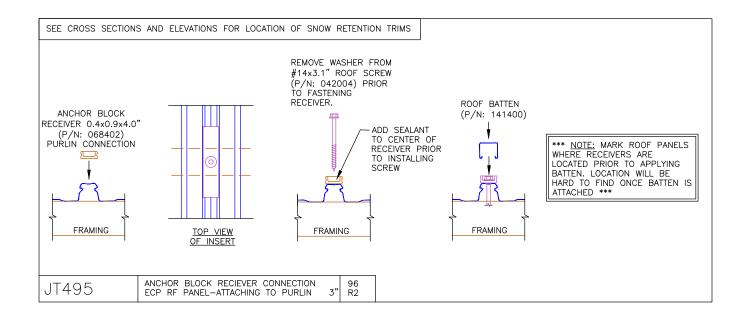


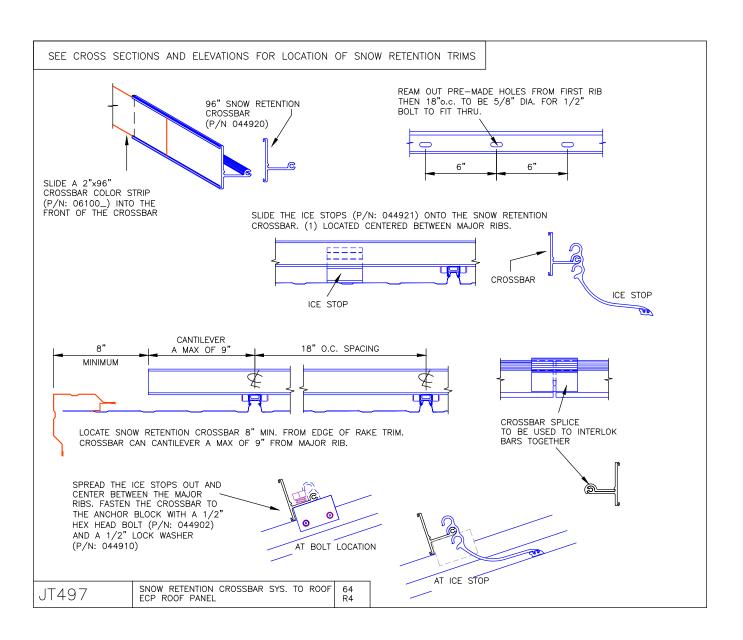


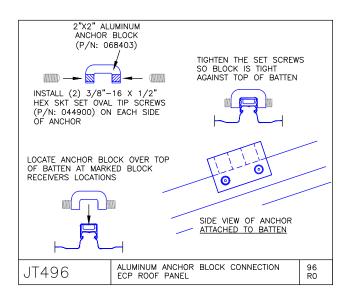












Flashing & Trim Information

