



# Florida Product Approvals

## ROOF HUGGER, LLC

142 Whitaker Road  
Lutz, Florida 33549  
Phone: (800) 771-1711  
Fax: (877) 202-2254  
Website: [www.roofhugger.com](http://www.roofhugger.com)  
Email: [sales@roofhugger.com](mailto:sales@roofhugger.com)

**ROOF HUGGER** is the leading manufacturer of structural pre-notched sub-purlins for existing sloped metal roofs. As an innovator in "Metal-over-Sloped" reroofing systems, Roof Hugger has made numerous product and technological contributions to the industry and continues to due extensive testing to offer the latest technology for retrofitting over existing sloped metal roofs. Roof Hugger is a Member Company of LSI Group, Inc. – Logansport, IN.

The following are the current approvals using many recognized national metal roof manufacturer panel systems. Roof Hugger is continually testing additional assemblies with additional metal roof manufacturers. For up-to-date information, please contact us or visit our website.

### APPROVALS WITH NEW THRU-FASTENED/SCREW-DOWN METAL ROOFING – 2015 Master 9352-R3

#### Product Approval – FL 9352.2

This product approval is for buildings with an existing 12" O.C. "PBR" panel 26 Ga. or heavier through-fastened roof with a new roof panel 12" O.C. "PBR" 26 Ga. as provided by MBCI of Houston, TX (Panels with equivalent properties are acceptable). The Product Approval includes a table indicating several retrofit framing options and sub-frame spacing's. Each assembly having varying capacities from -40 PSF to -140 PSF at the noted deflection levels.

SYSTEM NO. **	MAXIMUM ALLOWABLE UPLIFT PRESSURES (PSF)*			
	ALLOWABLE TEST VALUE	CONTROLLED BY PANEL DEFLECTIONS		
		L/120	L/180	L/240
1	40.0	40.0	40.0	38.8
2	65.0	65.0	45.7	33.8
3	110.0	110.0	110.0	110.0
4	140.0	140.0	140.0	116.7

\*Design Pressure includes a Safety Factor = 2.0  
\*\* See [www.roofhugger.com](http://www.roofhugger.com) for System 1-4 details

#### Product Approval – FL 9352.3

This product approval is for buildings with an existing 12" O.C. "PBR" panel 26 Ga. or heavier through-fastened roof with a new roof panel 12" O.C. "PBR" 24 Ga. as provided by MBCI of Houston, TX (Panels with equivalent properties are acceptable). The Product Approval includes a table indicating several retrofit framing options and sub-frame spacing's. Each assembly having varying capacities from -40 PSF to -145 PSF at the noted deflection levels.

SYSTEM NO. **	MAXIMUM ALLOWABLE UPLIFT PRESSURES (PSF)*			
	ALLOWABLE TEST VALUE	CONTROLLED BY PANEL DEFLECTIONS		
		L/120	L/180	L/240
1	35.0	35.0	31.44	26.42
2	60.0	60.0	60.00	58.14
3	116.0	116.0	111.77	85.14
4	145.0	145.0	120.41	92.24

\*Design Pressure includes a Safety Factor = 2.0  
\*\* See [www.roofhugger.com](http://www.roofhugger.com) for System 1-4 details

#### Product Approval – FL 9352.4

This product approval is for buildings with an existing 12" O.C. "PBR" panel 26 Ga. or heavier through-fastened roof with a new roof panel 12" O.C. "PBR" 22 Ga. as provided by MBCI of Houston, TX (Panels with equivalent properties are acceptable). The Product Approval includes a table indicating several retrofit framing options and sub-frame spacing's. Each assembly having varying capacities from -48.1 PSF to -124.9 PSF at the noted deflection levels.

SYSTEM NO. **	MAXIMUM ALLOWABLE UPLIFT PRESSURES (PSF)*			
	ALLOWABLE TEST VALUE	CONTROLLED BY PANEL DEFLECTIONS		
		L/120	L/180	L/240
1	48.1	48.1	46.0	35.2
2	88.5	58.1	40.6	32.7
3	124.9	124.9	124.9	124.9

\*Design Pressure includes a Safety Factor = 2.0  
\*\* See [www.roofhugger.com](http://www.roofhugger.com) for System 1-3 details

### APPROVALS WITH NEW STANDING SEAM METAL ROOFING

#### Product Approval - FL 9352.1

This product approval is for buildings with an existing 12" O.C. "PBR" panel 26 Ga. Or heavier through-fastened roof with a new 238-T 18" O.C., 22 Ga., vertical rib standing seam roof as provided by McElroy Metals of Bossier City, LA. The Product approval includes a table indicating several retrofit framing options and sub-frame spacing's. Each assembly having varying capacities from -55 PSF to -125 PSF at differing sub-purlin spacing's.

SYSTEM NO. **	MAXIMUM ALLOWABLE UPLIFT PRESSURES (PSF)*			
	ALLOWABLE TEST VALUE	CONTROLLED BY PANEL DEFLECTIONS		
		L/120	L/180	L/240
1	40.0	40.0	40.0	38.8
2	65.0	65.0	45.7	33.8
3	110.0	110.0	110.0	110.0
4	140.0	140.0	140.0	116.7

\*Design Pressure includes a Safety Factor = 2.0  
\*\* See [www.roofhugger.com](http://www.roofhugger.com) for System 1-4 details

Design Uplift Pressures  
Table "A"

238T Panel Clip:	16 Ga Fixed Clip	24 Ga. Continuous Clip	22 Ga. Continuous Clip
Maximum Design Pressure:*	-55.0 PSF	-100.0 PSF	-125.0 PSF
Roof Hugger:	Standard Model C	Standard Model C	Standard Model C
Roof Hugger Spacing:	5'-0" O.C.	5'-0" O.C.	5'-0" O.C.
Roof Hugger # of Fasteners:	(2) per foot	(2) per foot	(4) per foot

\*Design Pressure includes a Safety Factor = 2.0

### Product Approval - FL 9352.5

This product approval is for buildings with an existing 12" O.C. "PBR" panel 26 GA. or heavier through-fastened roof with a new 16" SuperLok, vertical rib standing seam roof as provided by MBCI of Houston, TX. The Product Approval includes a table indicating several retrofit framing options and sub-frame spacing's. Each assembly having varying capacities from -47.5 PSF to -80 PSF at differing sub-purlin spacing's.

NEGATIVE DESIGN LOADS (PSF)*		
ROOF HUGGER SPACING	E-1592 LOAD	ALLOWABLE DESIGN LOAD
2.50 FT	160.0	80.0
5.00 FT	95.0	47.5

\*Design Pressure includes a Safety Factor = 2.0

### Product Approval - FL 17626

This product approval is for buildings with an existing 12" O.C. "PBR" panel 26 GA. or heavier through-fastened roof with a new 24 ga. 18" x 2" vertical rib 238-T standing seam roof as provided by McElroy of Bosier City, LA. The Product Approval includes a table indicating several retrofit framing options and sub-frame spacing's. Each assembly having varying capacities from -123.5 PSF to -161 PSF at differing sub-purlin spacing's over structural steel decking.

Design Uplift Pressures  
Table "A"

Maximum Design Pressure:*	-123.5 psf	-161.0 psf
Roof Hugger Spacing	4'-0" O.C.	2'-0" O.C.
Roof Hugger # of Fasteners	(3) #14-13 per 16"	(3) #14-13 per 16"

\*Design Pressure includes a Safety Factor = 2.0

### NOTES FOR LISTED APPROVALS:

All Existing Purlin Spacing = 5'-0" O.C. max  
All New PBR Panel is 36" wide with 1 1/4" tall rib

- 26 GA = 80 KSI
- 24 GA = 50 KSI

Hats = Special Hugger Sub-rafters

### ROOF HUGGER COMPOSITION & MATERIALS

Roof Hugger Sub-Purlin System's base materials is G-90 galvanized finished steel sheet per ASTM A-446 or A-570 with 50 ksi minimum yield strength. Material thickness as specified to meet design loads in 16 and 14 gauges.

### PROFILES AND CHARACTERISTICS

The profile used for Florida Product Approval is the Roof Hugger standard roll-formed Type "C" model, manufactured to accommodate existing ribbed metal roofing with maximum 1 1/2" high major ribs spaced at 12" on center. In addition, other standard types include Hugger profiles manufactured to accommodate the following popular panel types:

12" to 24" O.C. Trapezoidal Rib SSR  
12" to 20" O.C. Vertical Rib SSR  
6"-10" O.C. Ribbed Panel  
2.5", 2.67", 2.75" and 4.2" Corrugated  
7.2" Industrial Rib

All Roof Hugger Sub-purlins are zee shaped steel members with 1.06" minimum bottom flange and 2.0" minimum top flange plus a .25" minimum lip. The web depth varies based on the existing panel profile dimension or desired

insulation thickness. The die-stamped web window that allows nesting over the existing roof system ribs also may vary per job application and requirements. All are shipped in 10'-0" to 12'-0" lengths, plus or minus, to fit existing panel rib or seam modules.

Roof Hugger Sub-purlins are intended to attach directly above and into the existing building secondary support members. These members are most commonly zee shaped purlins, steel bar joist or other types of framing. When these members exceed the maximum spacing as dictated by the new roof panel system, the Roof Hugger Sub-purlins must employ "sub-rafter" hats and/or "struts" that span over the existing purlin. By doing this, the Roof Hugger Sub-Purlins can be installed at mid-span conditions (between existing purlins).

### OTHER ROOF HUGGER TESTING

Many other metal roof panel manufacturers have tested their systems in accordance with ASTM E-1592 Standard Test Method for Structural Performance of Metal Roof and Siding Systems by Uniform Static Air Pressure Difference. Please visit our website for the most current reports on these tests.

### BUILDING CODES

Current data on building code requirements and product compliance may be obtained from ROOF HUGGER technical support specialists. Installation must comply with the requirements of Chapters 15, 16 and 22 of the FBC 2017 Code.

### FLORIDA PRODUCT APPROVAL LIMITATIONS AND CONDITIONS OF USE FOR NON-HIGH VELOCITY HURRICANE ZONES (NON-HVHZ)

DESIGN PROCEDURE: Based on the dimensions of the structure, appropriate loads are determined using Chapter 16 of the Florida Building Code (FBC) for roof cladding wind loads. These component wind loads for roof cladding are compared to the allowable negative/positive pressures listed in the load table. The design professional shall select the appropriate erection details to reference in his/her drawings for proper fastener attachment to the structure and analyze the panel fasteners for pullout and pullover. Support framing must be in compliance with FBC Chapter 22 for steel and Chapter 16 for structural loading.

### OTHER CONDITIONS:

Minimum Roof Slope Limitation: 1/2:12

Existing Purlin Spacing: Maximum 5'-0" O.C. designed by a Florida P.E.

Existing Roof Panel: Based on 26 GA R-Panel or PBR, 80 KSI with 12" O.C. x 1 1/4" tall ribs and 36" coverage

Substrate Attachment: Designed by a Florida P.E.

Fire Barrier: Class B fire exposure rating in accordance with FBC Section 1505.3

Underlayment: Vinyl or reflective foil faced fiberglass batt insulations that have a flame spread rating of no more than 25 and a smoke development rating of not more than 450 assumed under the existing roof

Shear Diaphragm: Shear diaphragm values were outside the scope of the Approval reports

### INSTALLATION REQUIREMENTS:

Please contact Roof Hugger to obtain specific FL Product Approval erection details.

### FLORIDA PRODUCT APPROVAL LISTINGS:

[https://www.floridabuilding.org/pr/pr\\_app\\_srch.aspx](https://www.floridabuilding.org/pr/pr_app_srch.aspx)

Patented Retrofit Sub-Framing Solutions  
Copyright © - 1/2020

# **Roof Hugger Florida Product Approvals (FPA): Master Approval 2014, 9352.1 – 9352.4 -R3 Descriptions and Testing Data**

The State of Florida allows for pre-approval of products commonly used for construction within the State. Since there are countless combinations of new and existing roof panels with different purlin spacing when it comes to retrofitting old buildings, it is impossible to pre-approve all of them.

Standard non-approved Metal-over-Metal retrofit roof assemblies differ than those with Florida Product Approval (FPA). The non-approved assemblies can be used but before submitting for a building permit, they will require specific project engineering. The design will determine the sub-framing system and the correct new roof panel required to satisfy the design loads that the system needs for code compliance.

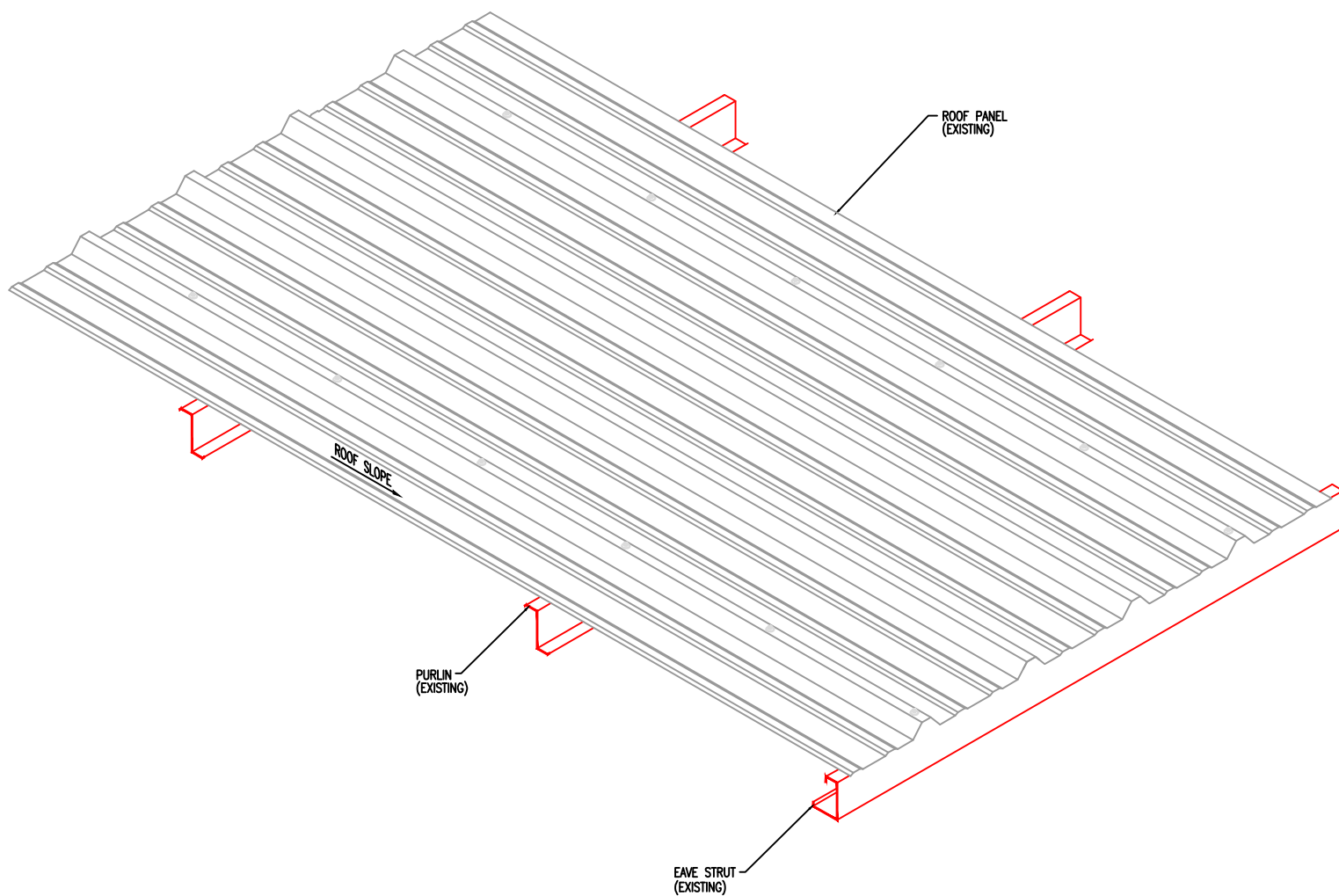
Several more common Roof Hugger assemblies have been submitted and approved by the State of Florida. Those approvals are listed below. Should there be any question as to the appropriate use of these listed approvals, please feel free to contact Roof Hugger, Inc. If specific project engineering is needed, contact Roof Hugger, Inc. 800-771-1711 or Force Engineering and Testing, Inc., 281-540-6603 Mr. Terry Wolfe for the cost of these services.

**Florida Master Approval 2014, 9352.1 – 9352.4 -R3 includes testing of nine (9) Roof Hugger sub-framing systems with and without sub-rafter installed for roof edge and corner wind load uplift conditions using both new thru-fastened and standing seam metal roofing. FPA Approvals below are not shown in order, but by System number beginning with thru-fastened roof assemblies and ending with standing seam roofs.**

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 1-

## NOTES:

1. EXISTING ROOF PANEL LAYOUT.

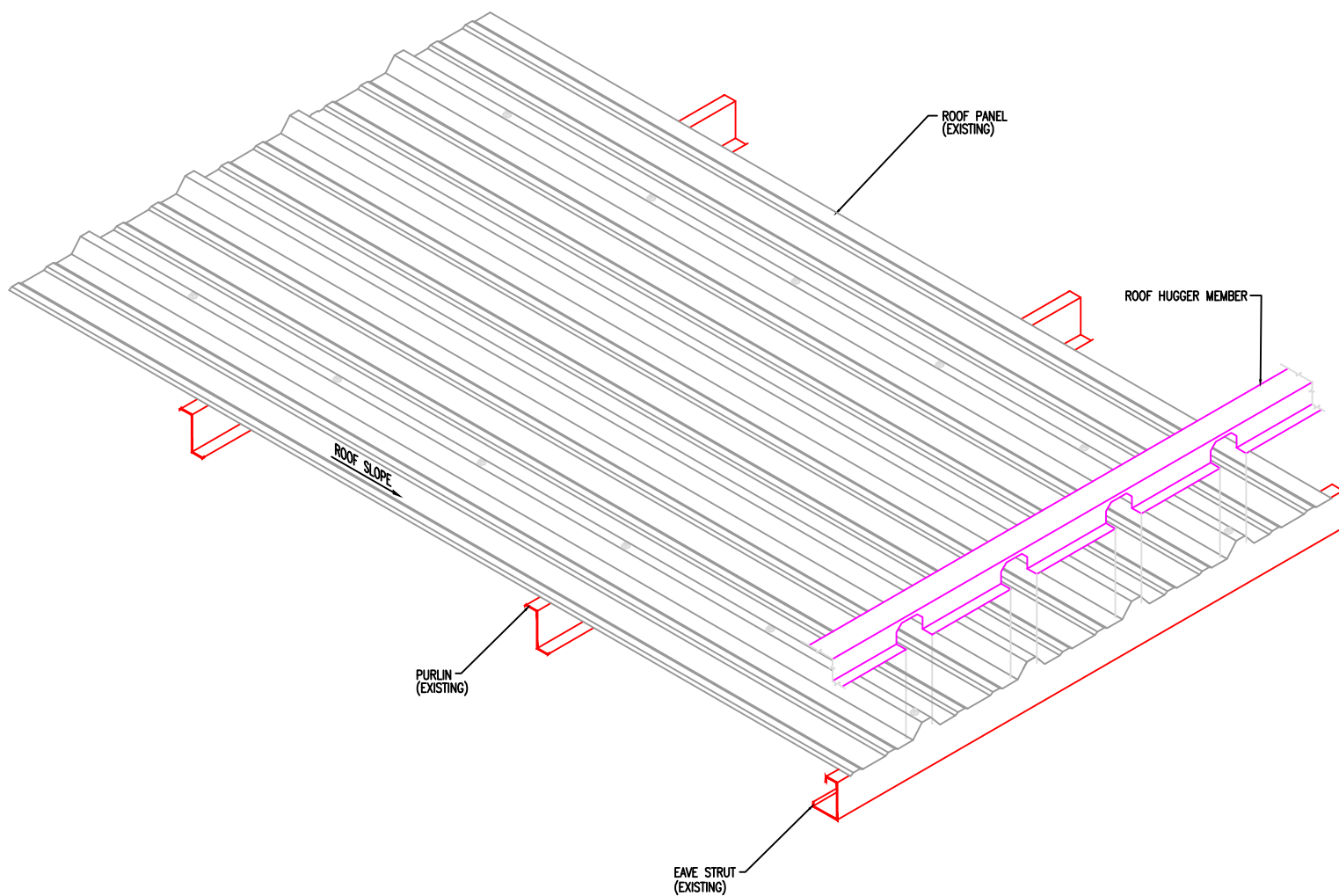


STEP 1

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 1-

## NOTES:

1. INSTALL ROOF HUGGER MEMBER OVER EXISTING EAVE STRUT. CENTER PANEL RIB IN ROOF HUGGER CUT-OUT.

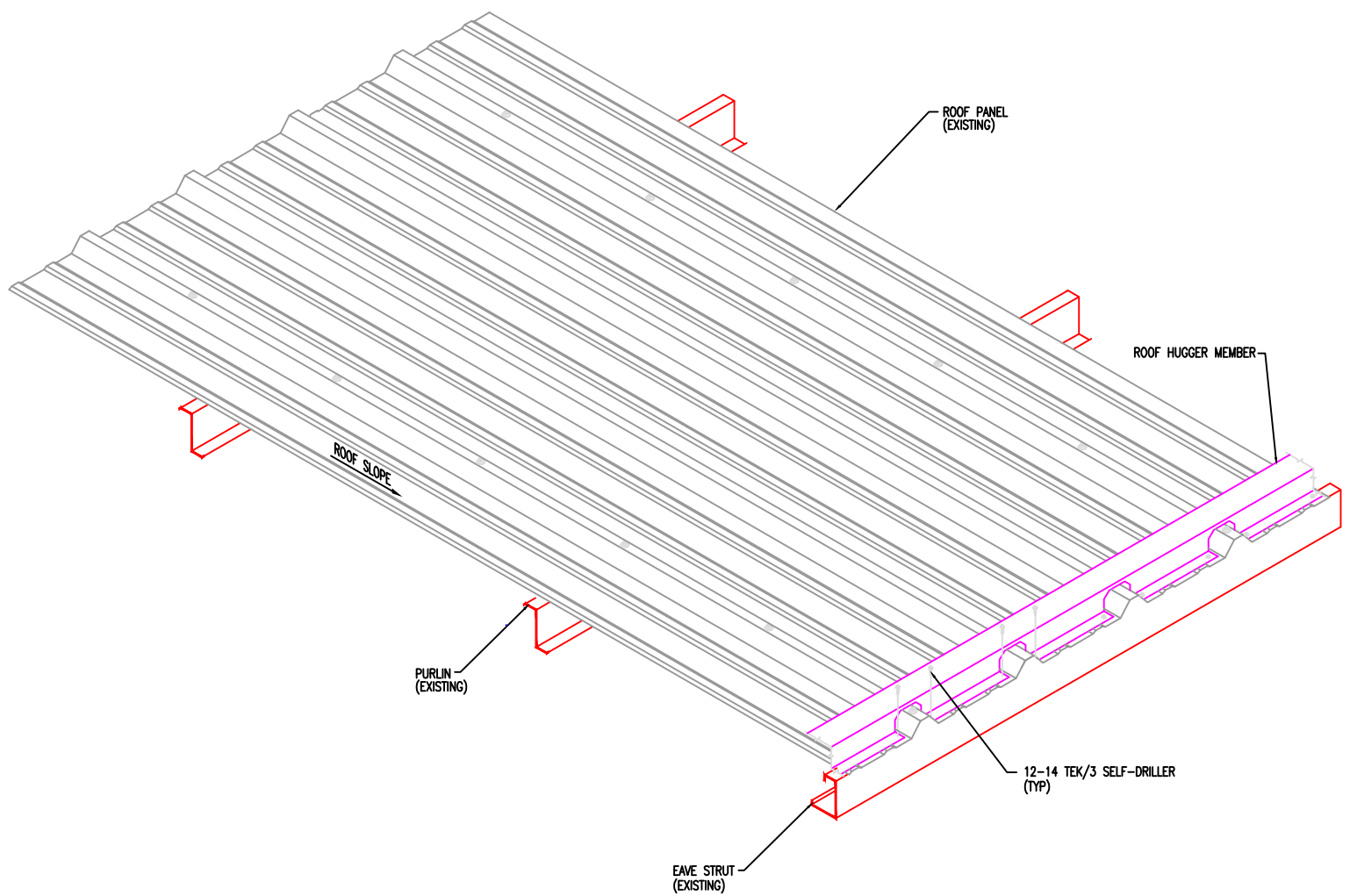


## STEP 2

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 1-

## NOTES:

1. SECURE ROOF HUGGER MEMBER TO EXISTING EAVE STRUT WITH 12-14 TEK/3 SELF-DRILLERS W/O WASHER (2 PER TAB)

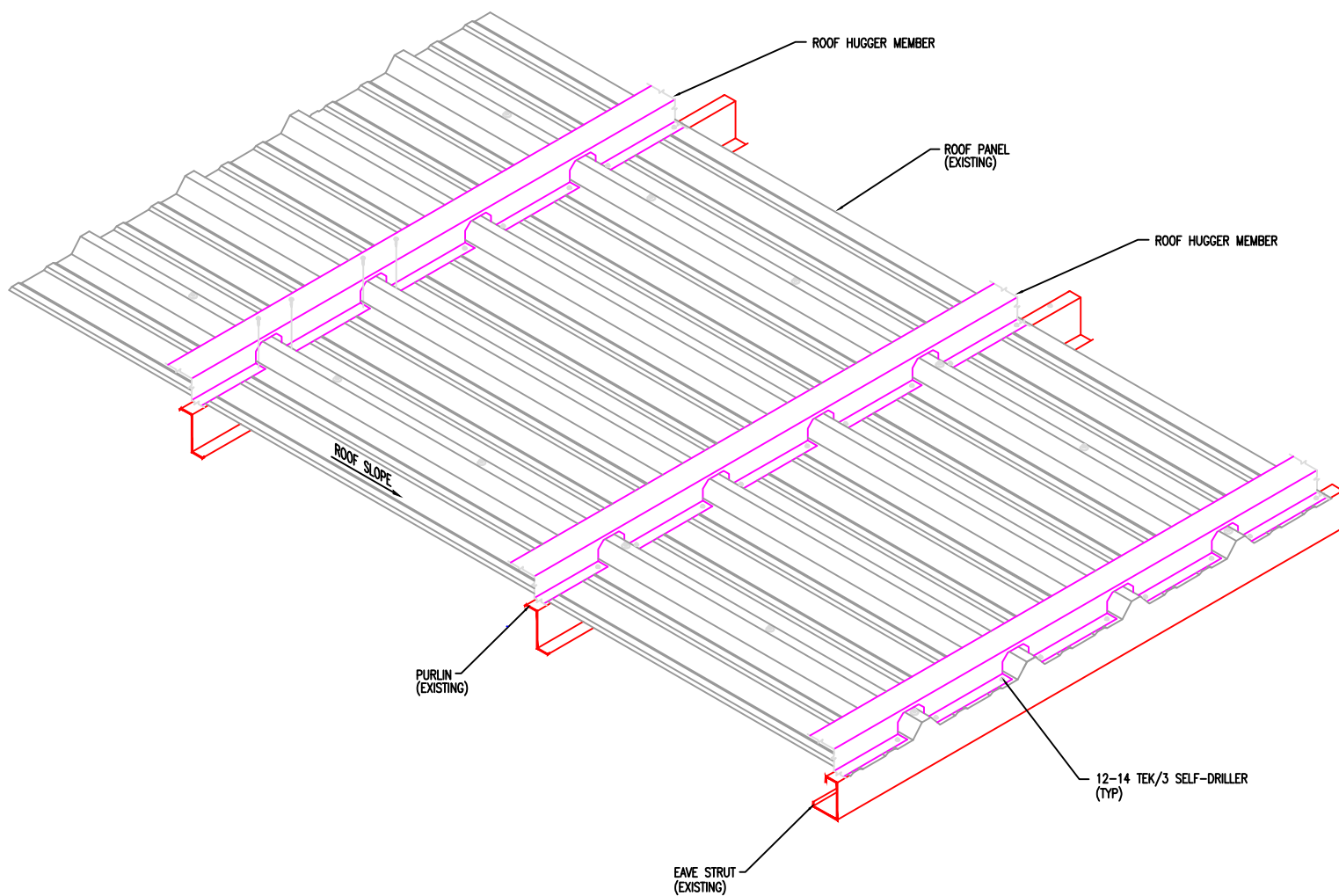


## STEP 3

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 1-

## NOTES:

1. INSTALL SUBSEQUENT ROOF HUGGER MEMBERS AT EACH EXISTING PURLIN

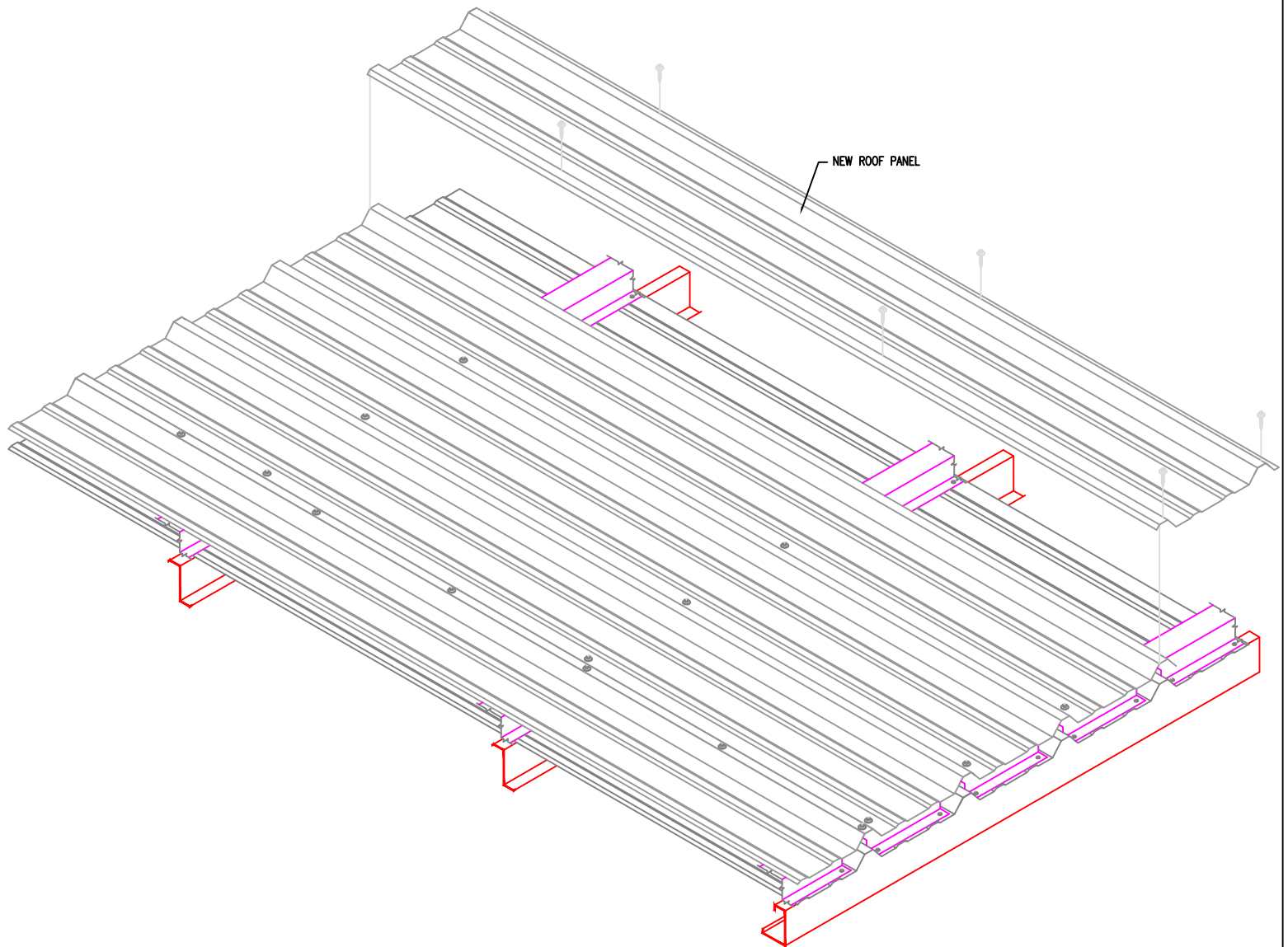


## STEP 4

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 1-

## NOTES:

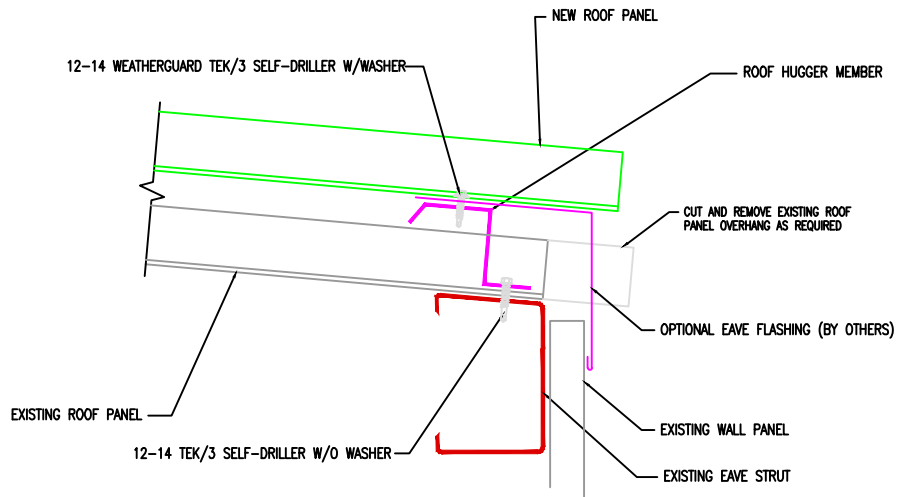
1. INSTALL NEW ROOF PANELS



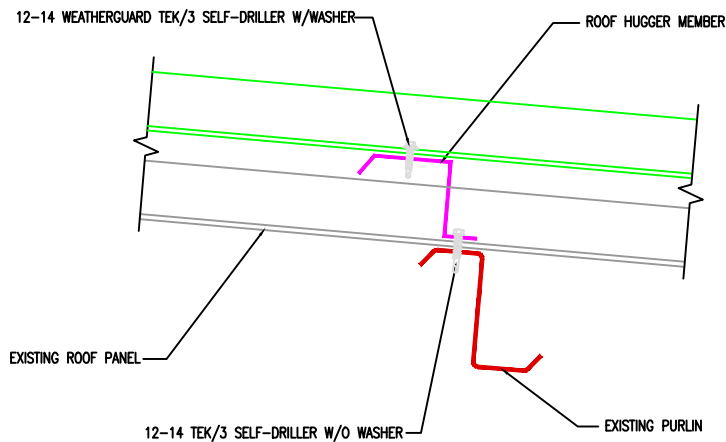
STEP 5



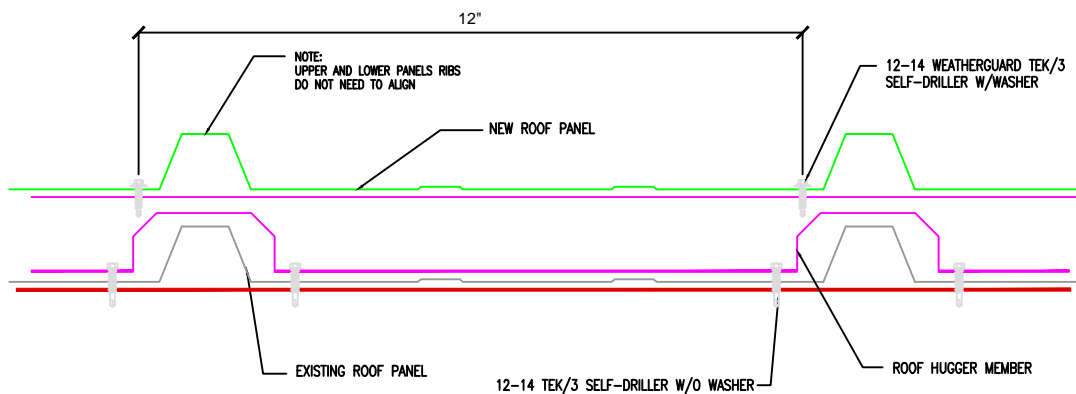
# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 1-



## CONNECTION AT EAVE



## CONNECTION AT PURLIN

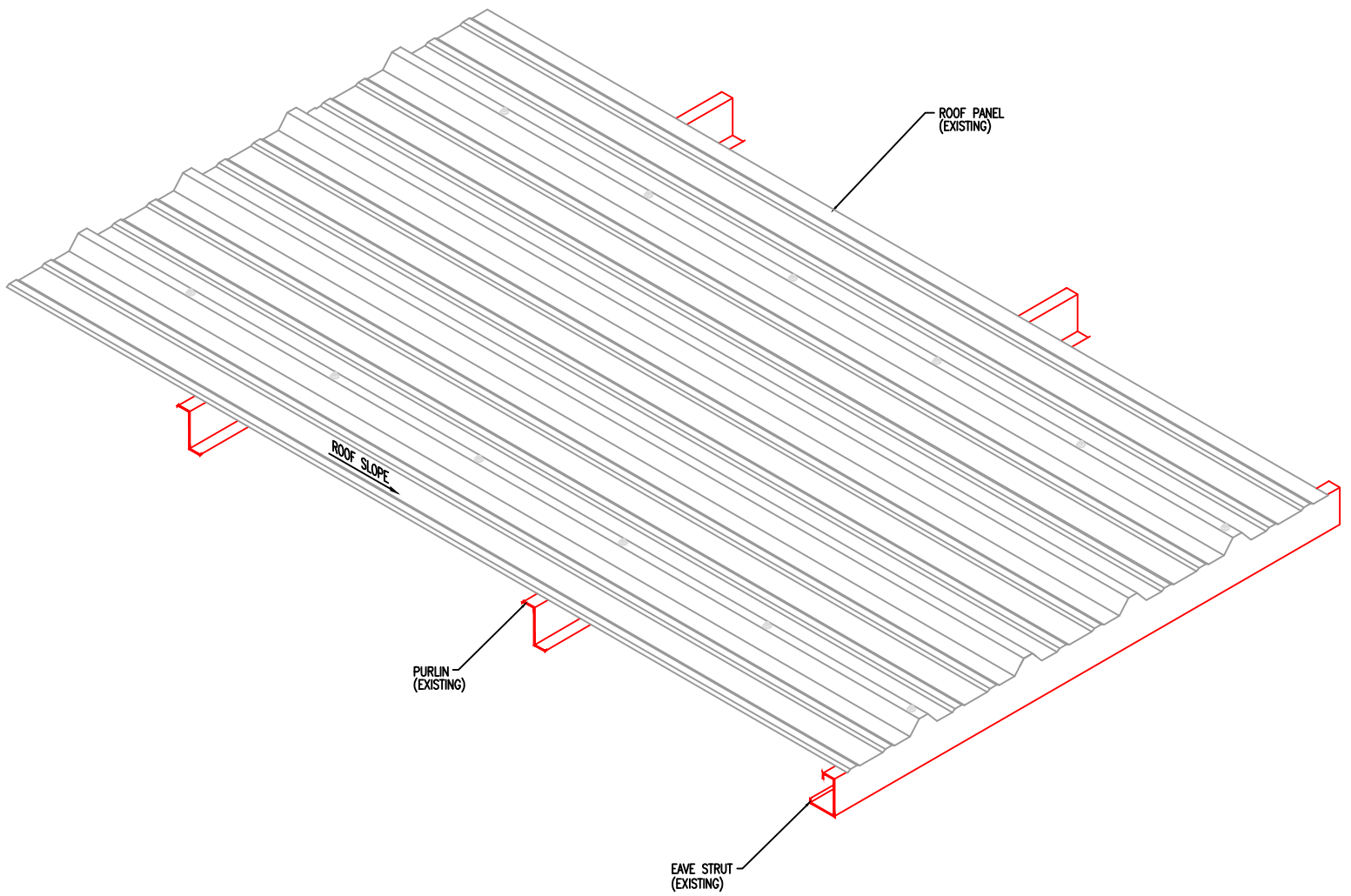


## CROSS SECTION

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 2-

## NOTES:

1. EXISTING ROOF PANEL LAYOUT.

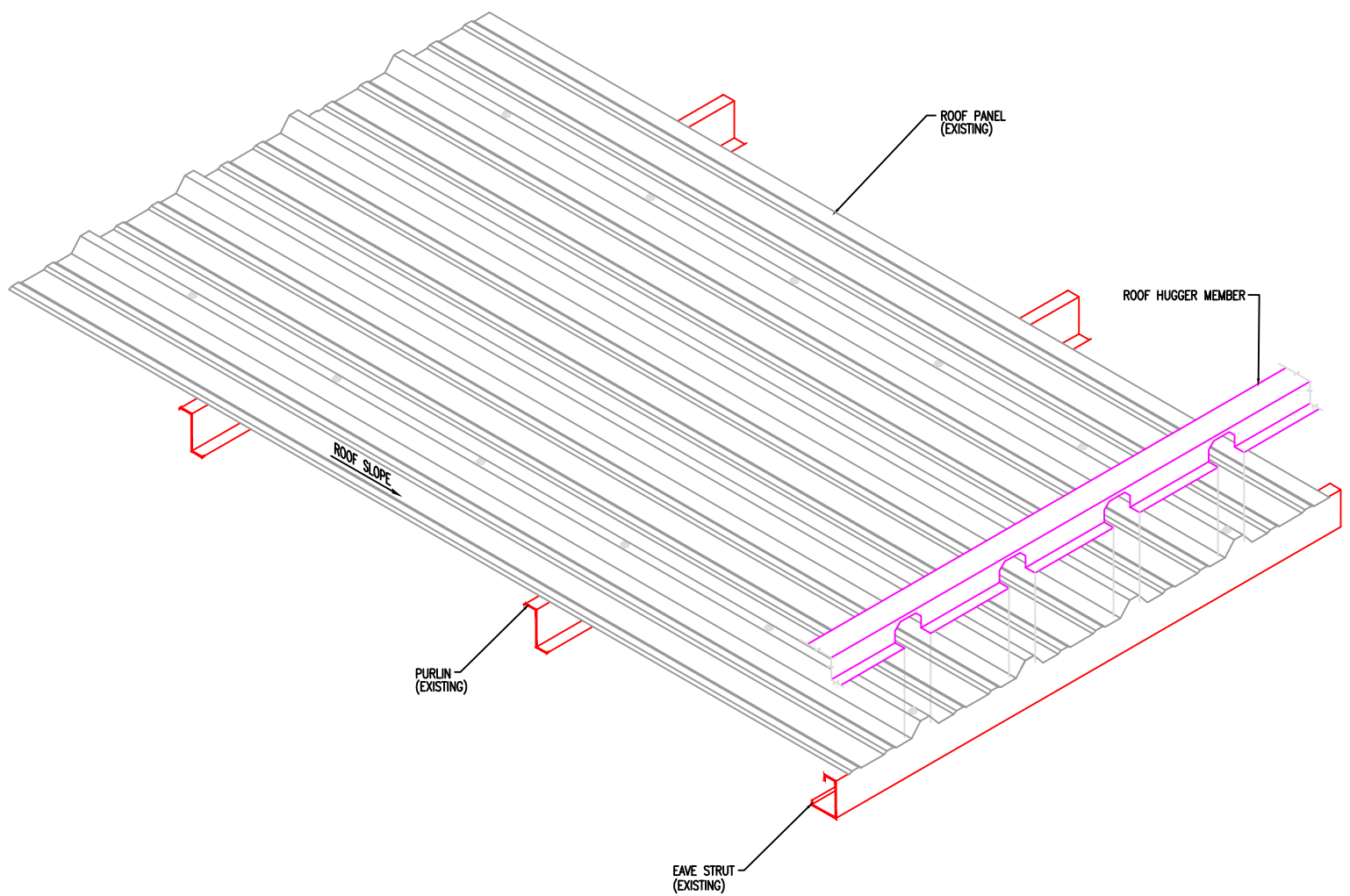


STEP 1

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 2-

## NOTES:

1. INSTALL ROOF HUGGER MEMBER OVER EXISTING EAVE STRUT. CENTER PANEL RIB IN ROOF HUGGER CUT-OUT.

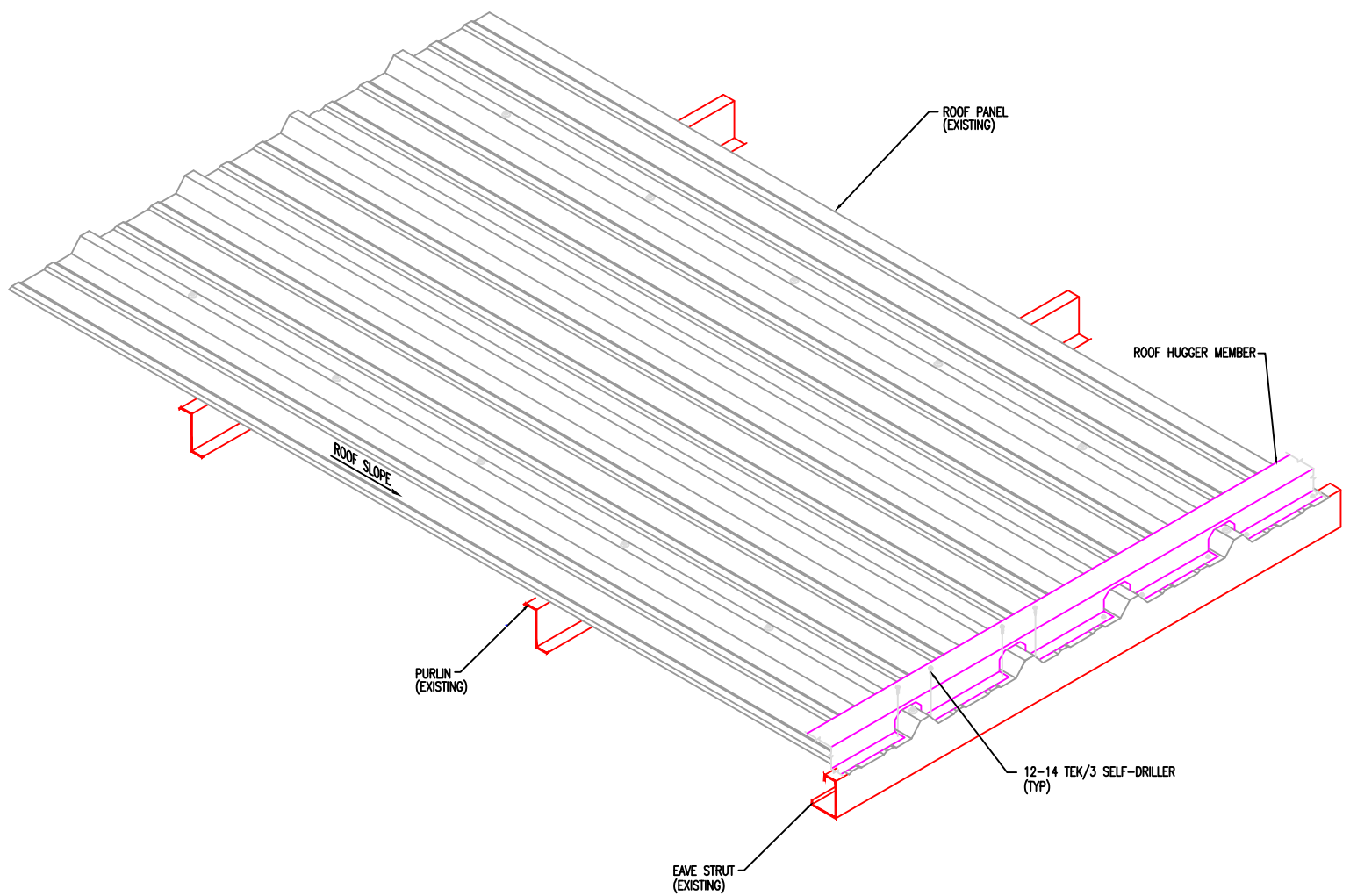


STEP 2

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 2-

## NOTES:

1. SECURE ROOF HUGGER MEMBER TO EXISTING EAVE STRUT WITH 12-14 TEK/3 SELF-DRILLERS W/O WASHER (2 PER TAB)

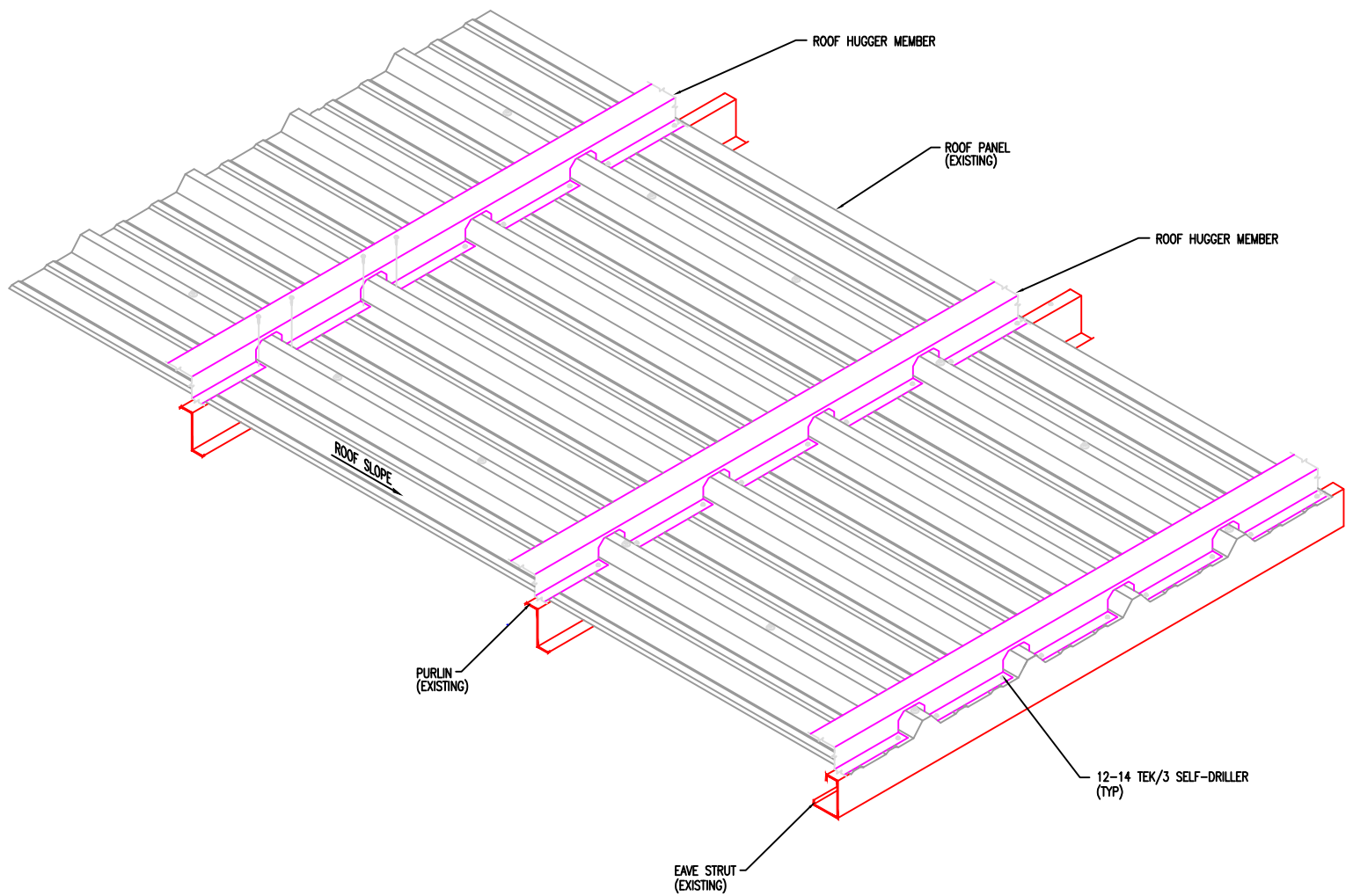


## STEP 3

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 2-

## NOTES:

1. INSTALL SUBSEQUENT ROOF HUGGER MEMBERS AT EACH EXISTING PURLIN

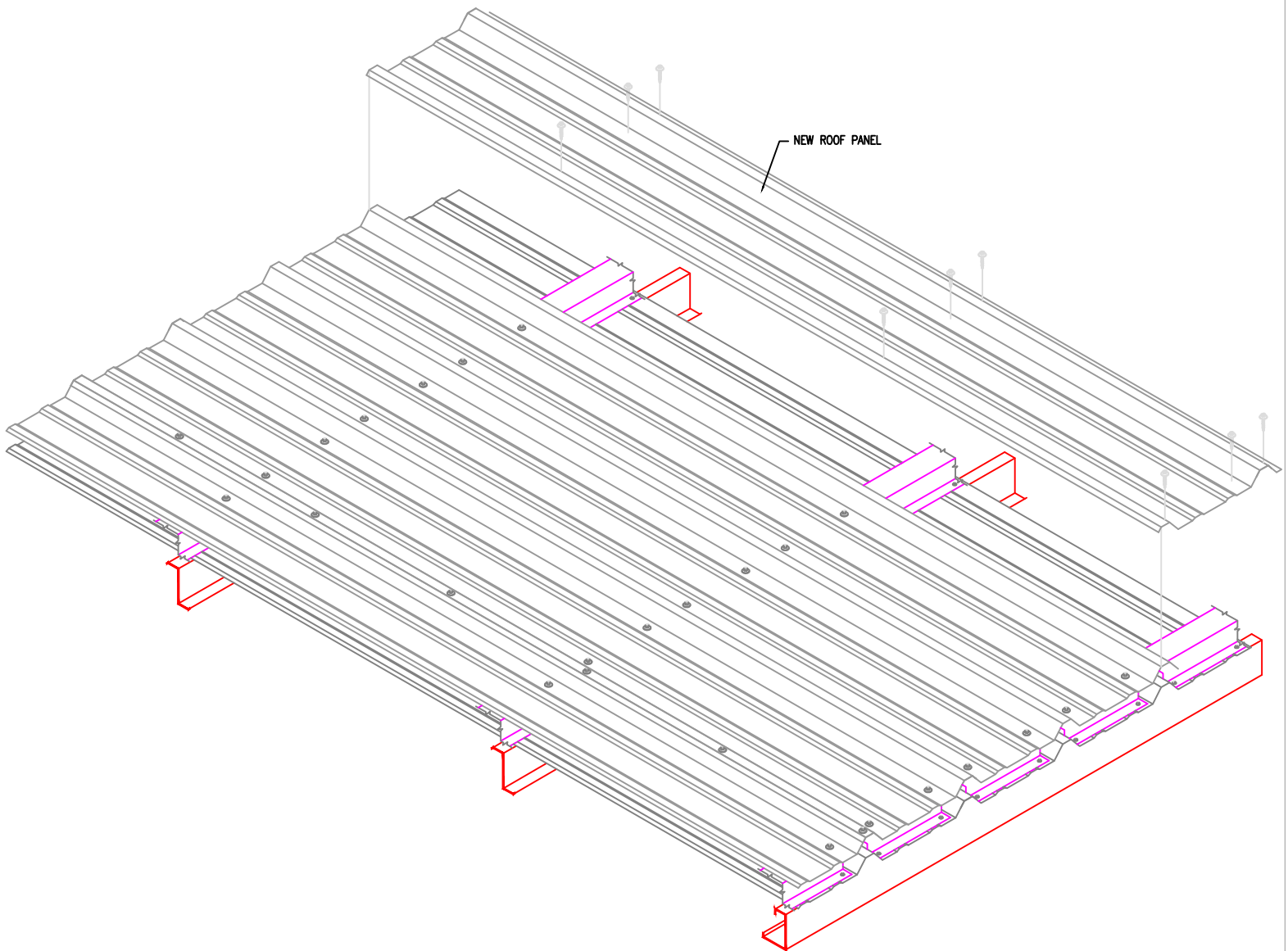


## STEP 4

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 2-

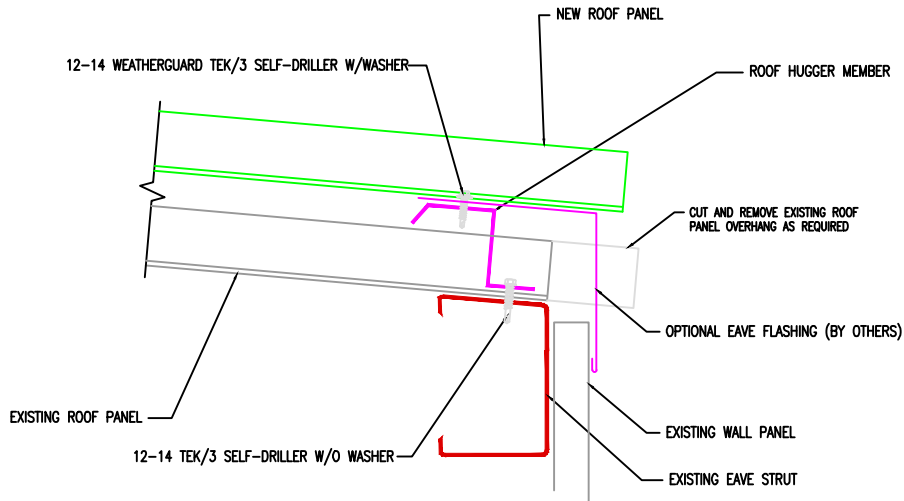
## NOTES:

1. INSTALL NEW ROOF PANELS

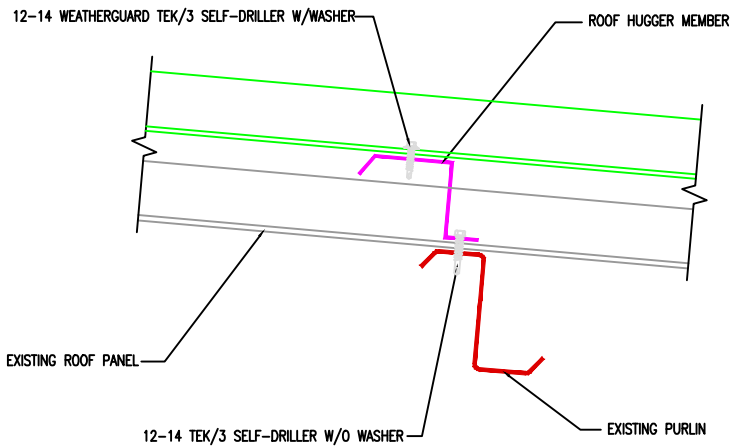


STEP 5

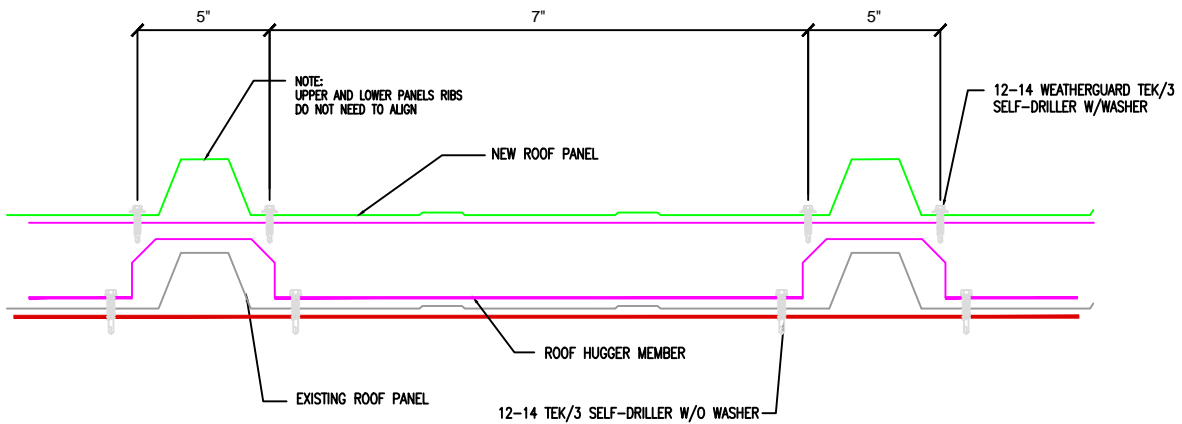
# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 2-



## CONNECTION AT EAVE



## CONNECTION AT PURLIN

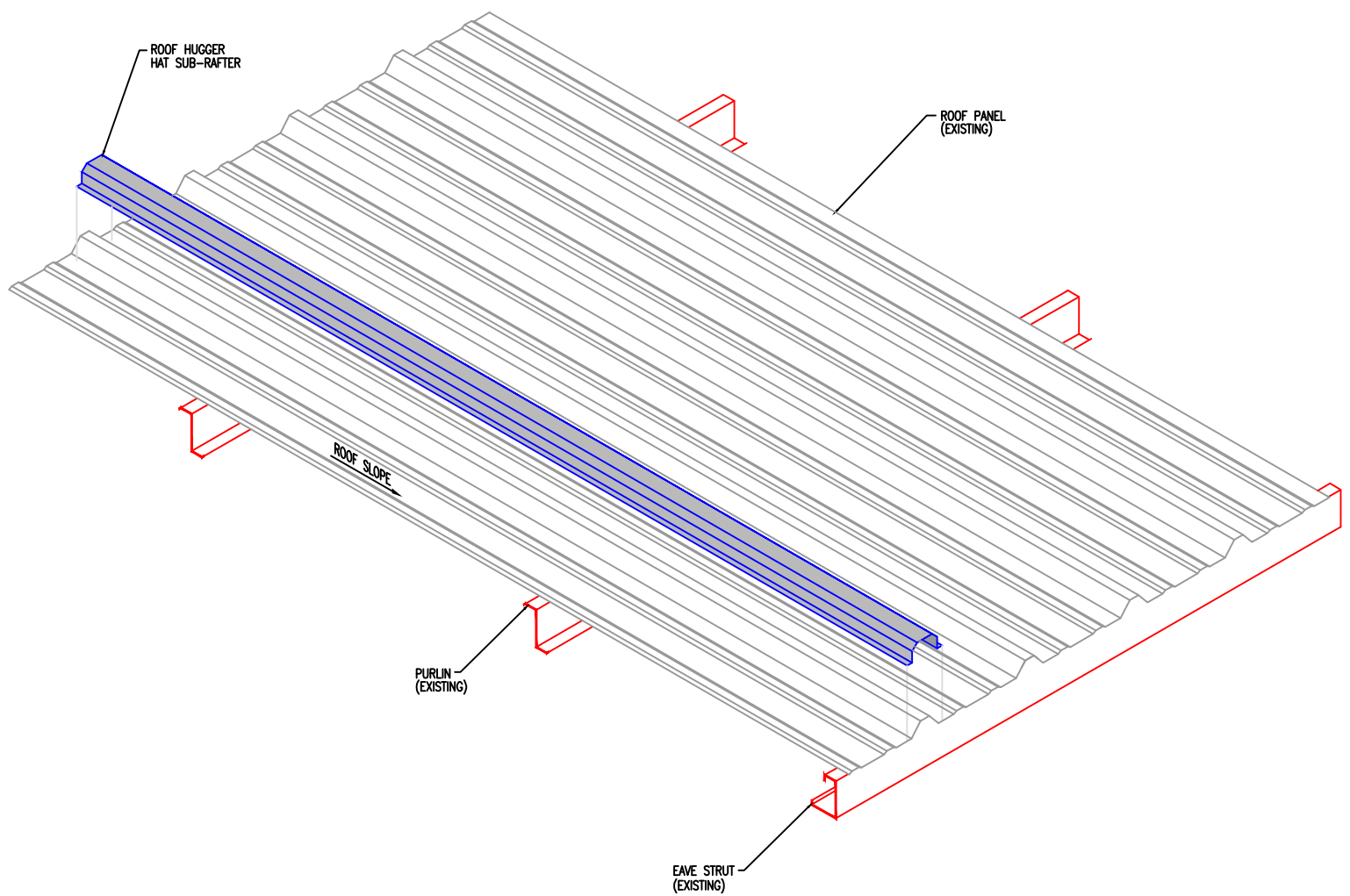


## CROSS SECTION

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 3-

## NOTES:

1. EXISTING ROOF PANEL LAYOUT.



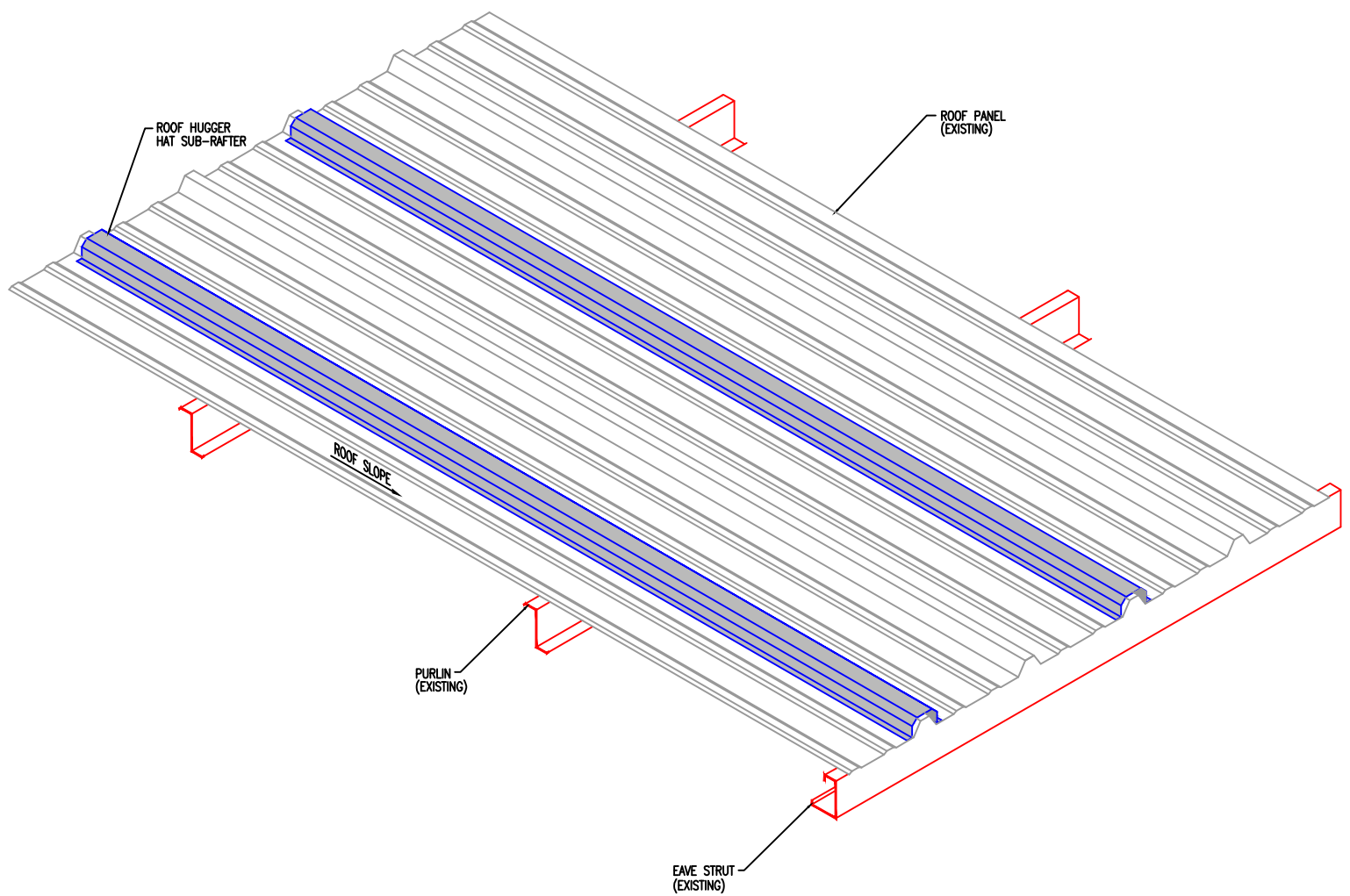
**STEP 1**



# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 3-

## NOTES:

1. LOOSELY PLACE HAT SUB-RAFTERS 2'-0" O.C. FOR LENGTH OF ROOF HUGGER OR WIDTH OF EDGE ZONE, WHICH EVER IS LESS.

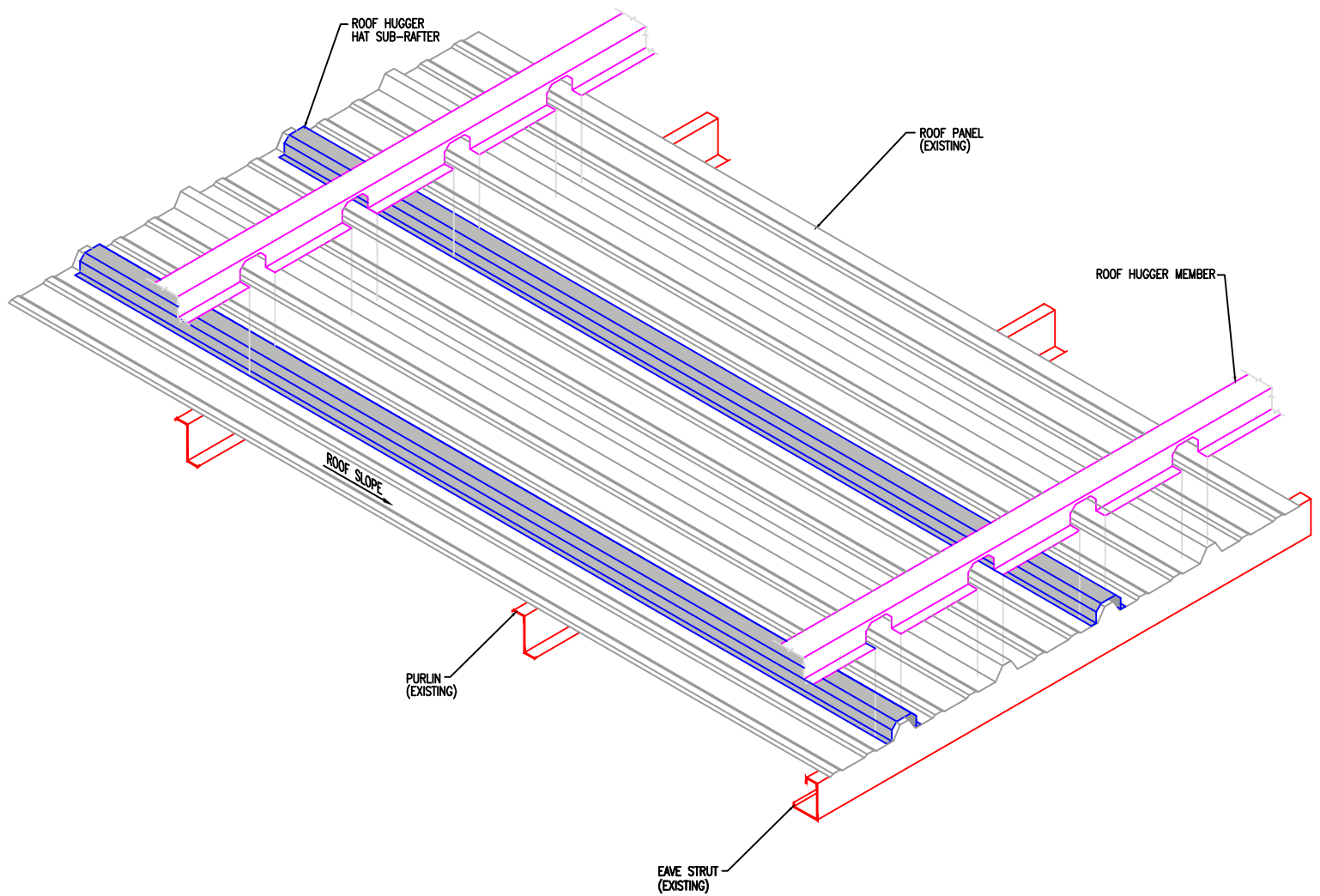


## STEP 2

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 3-

## NOTES:

1. PRESS A MINIMUM OF 2 ROOF HUGGER MEMBERS OVER HAT SUB-RAFTERS TO SECURE SUB-RAFTER MODULE.

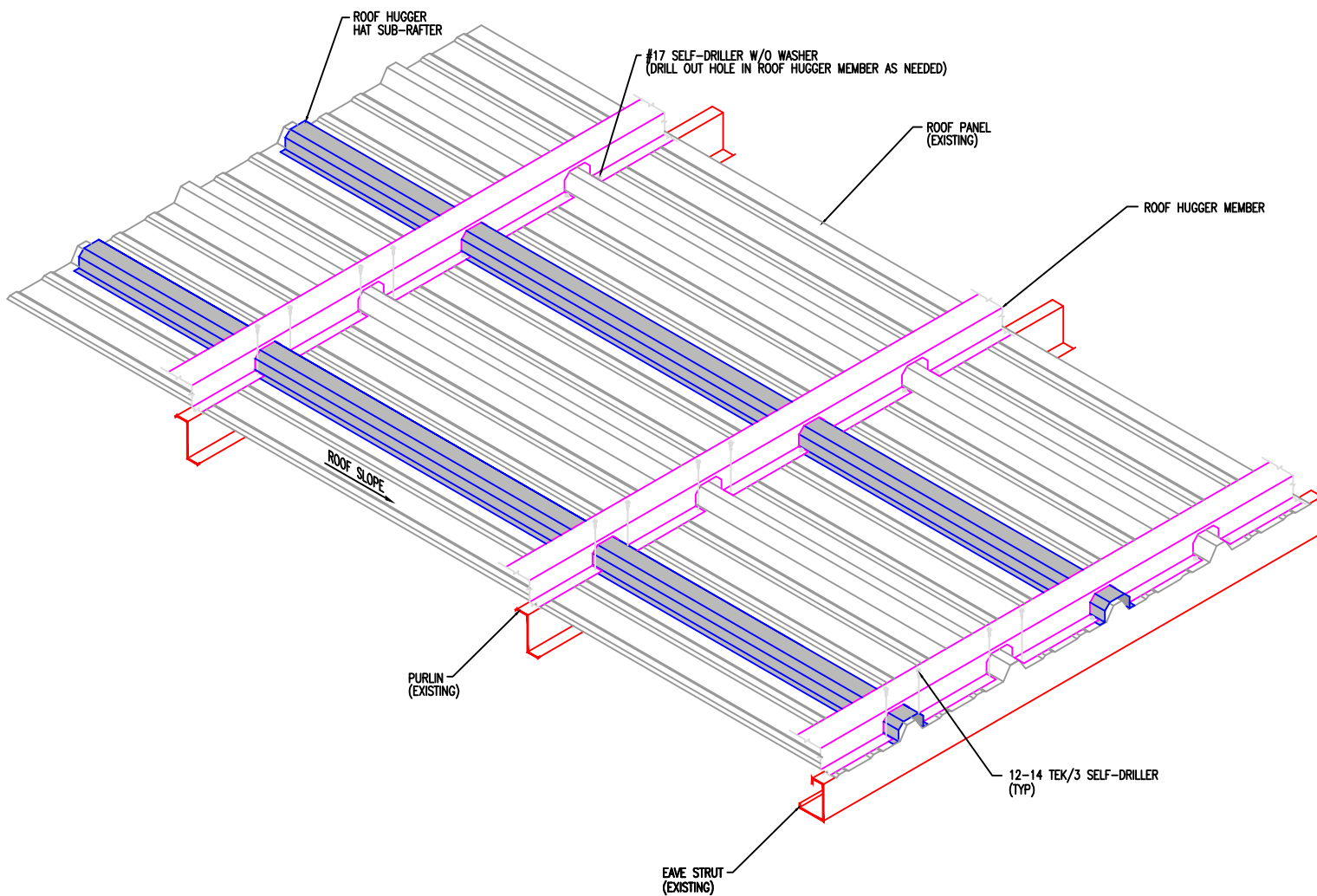


## STEP 3

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 3-

## NOTES:

1. ATTACH ROOF HUGGERS THROUGH SUB-RAFTER INTO EXISTING EAVE STRUT/PURLIN - PRE-DRILL HAT SUB-RAFTER IF NEEDED.
2. SECURE ROOF HUGGER MEMBER TO HAT SUB-RAFTER WITH 12-14 TEK/3 SELF-DRILLER W/O WASHER (1 PER SIDE) AND INSTALL #17 SELF-DRILLERS INTO EXISTING PANELS (1 EACH SIDE OF MAJOR RIBS. (DRILL OUT HOLE IN ROOF HUGGER MEMBER AS NEEDED).

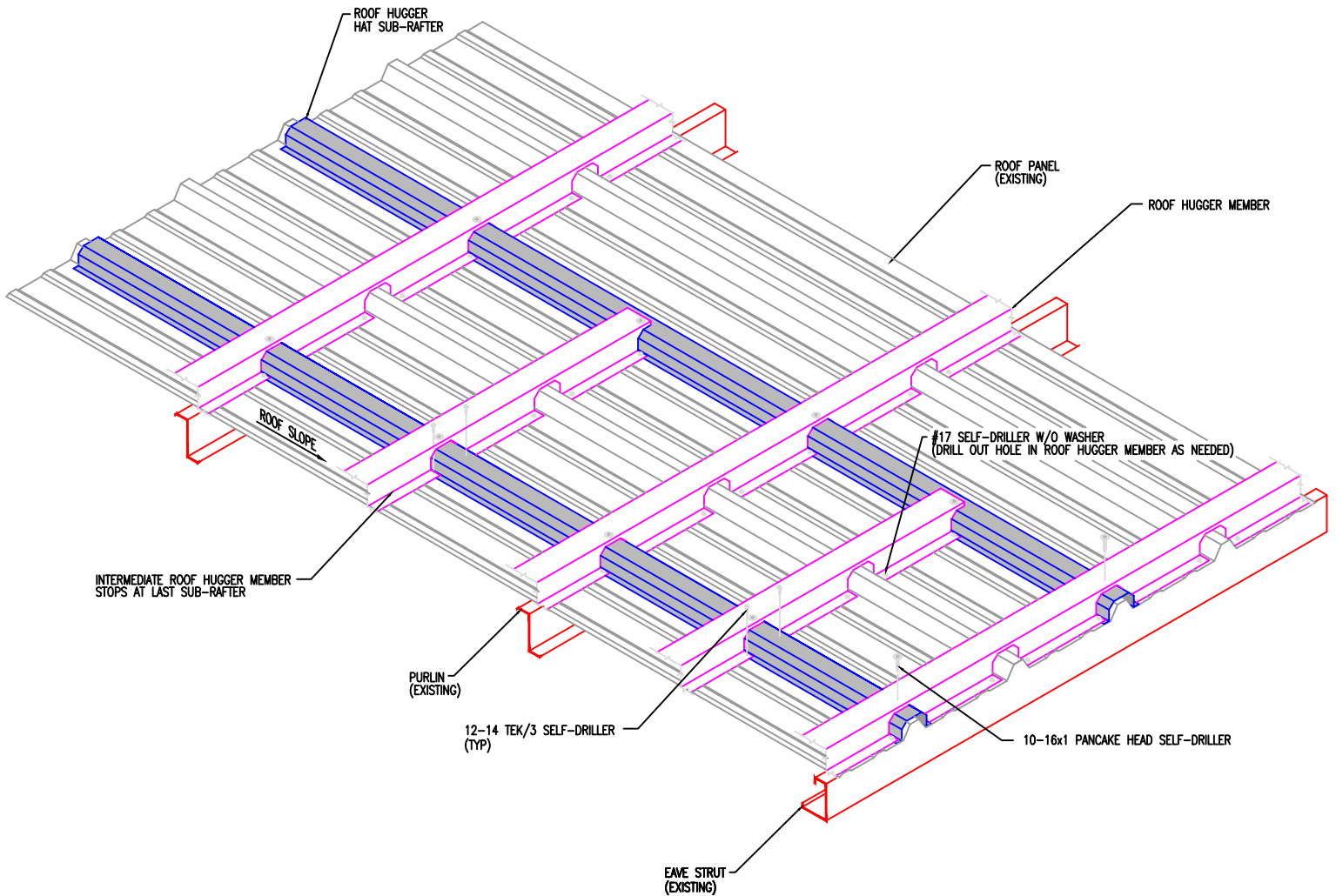


## STEP 4

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 3-

## NOTES:

1. INSTALL SUBSEQUENT INTERMEDIATE ROOF HUGGER MEMBERS BETWEEN PURLINS
2. SECURE ROOF HUGGER MEMBER TO HAT SUB-RAFTER WITH 12-14 TEK/3 SELF-DRILLER W/O WASHER (1 PER SIDE) AND INSTALL #17 SELF-DRILLERS INTO EXISTING PANELS (1 EACH SIDE OF MAJOR RIBS. (DRILL OUT HOLE IN ROOF HUGGER MEMBER AS NEEDED).
3. ATTACHED TOP FLANGE OF ROOF HUGGER MEMBER TO ROOF HUGGER SUB-RAFTER WITH 10-16x1 PANCAKE HEAD FASTENER (1 PER INTERSECTION).

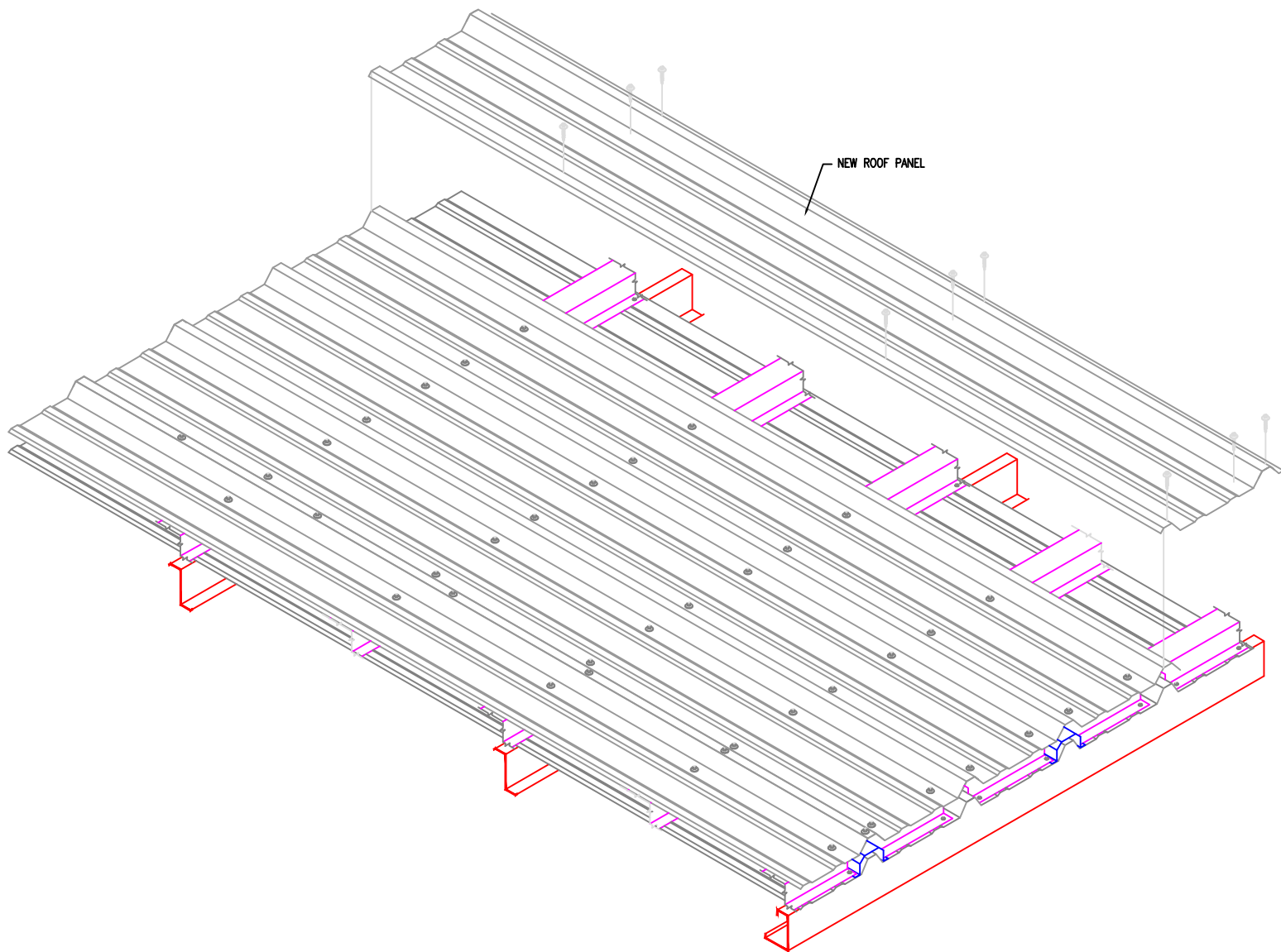


## STEP 5

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 3-

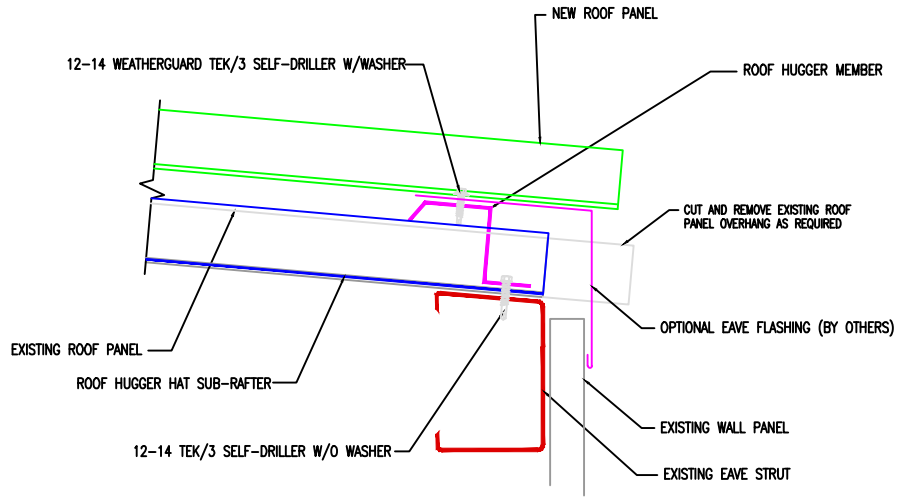
## NOTES:

1. INSTALL NEW ROOF PANELS

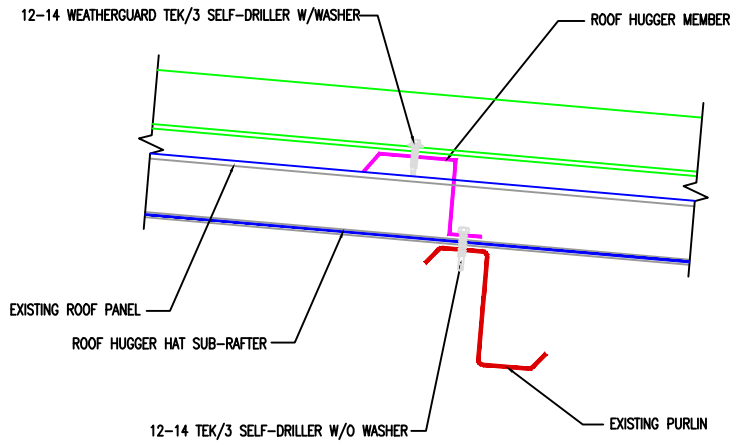


STEP 6

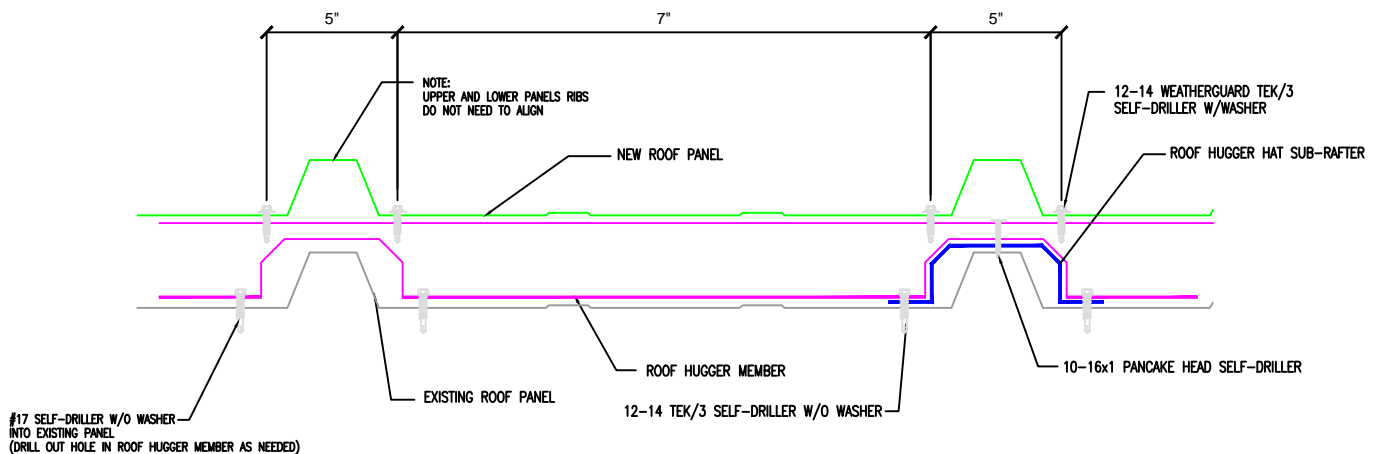
# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 3-



## CONNECTION AT EAVE



## CONNECTION AT PURLIN

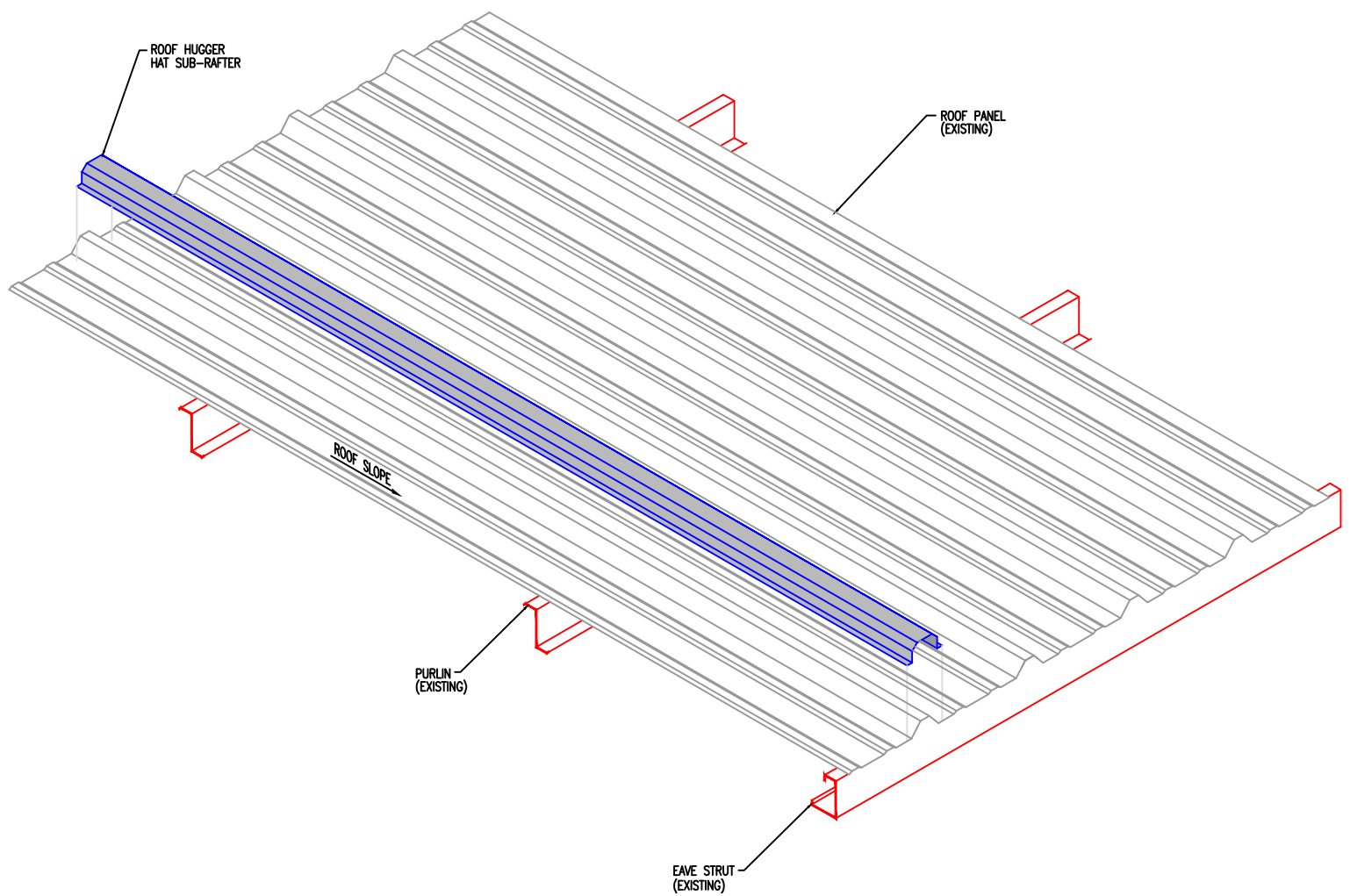


## CROSS SECTION-MEMBER BETWEEN PURLINS

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 4-

## NOTES:

1. EXISTING ROOF PANEL LAYOUT.

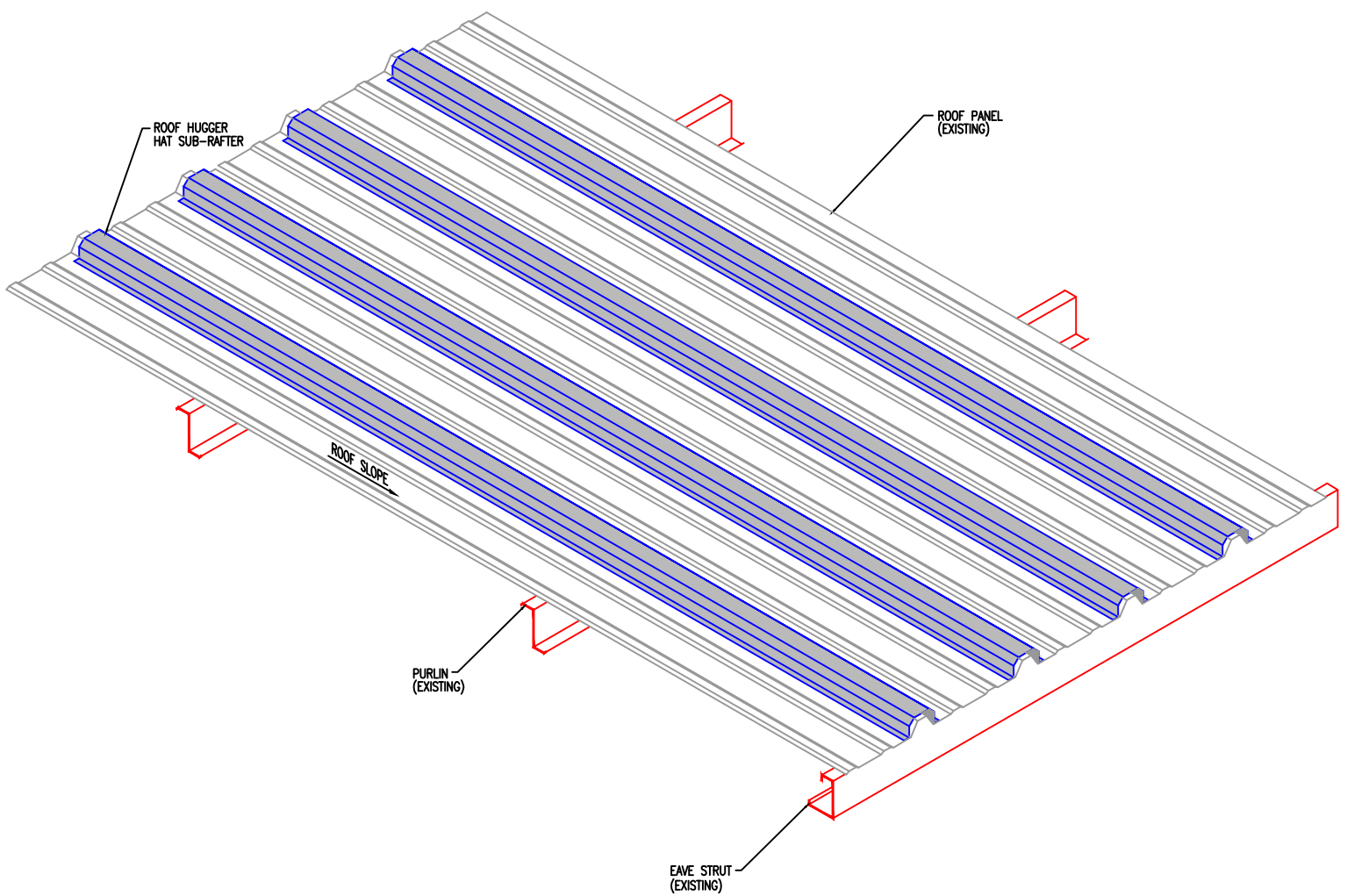


**STEP 1**

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 4-

## NOTES:

1. LOOSELY PLACE HAT SUB-RAFTERS 1'-0" O.C. FOR LENGTH OF ROOF HUGGER OR WIDTH OF EDGE ZONE, WHICH EVER IS LESS.



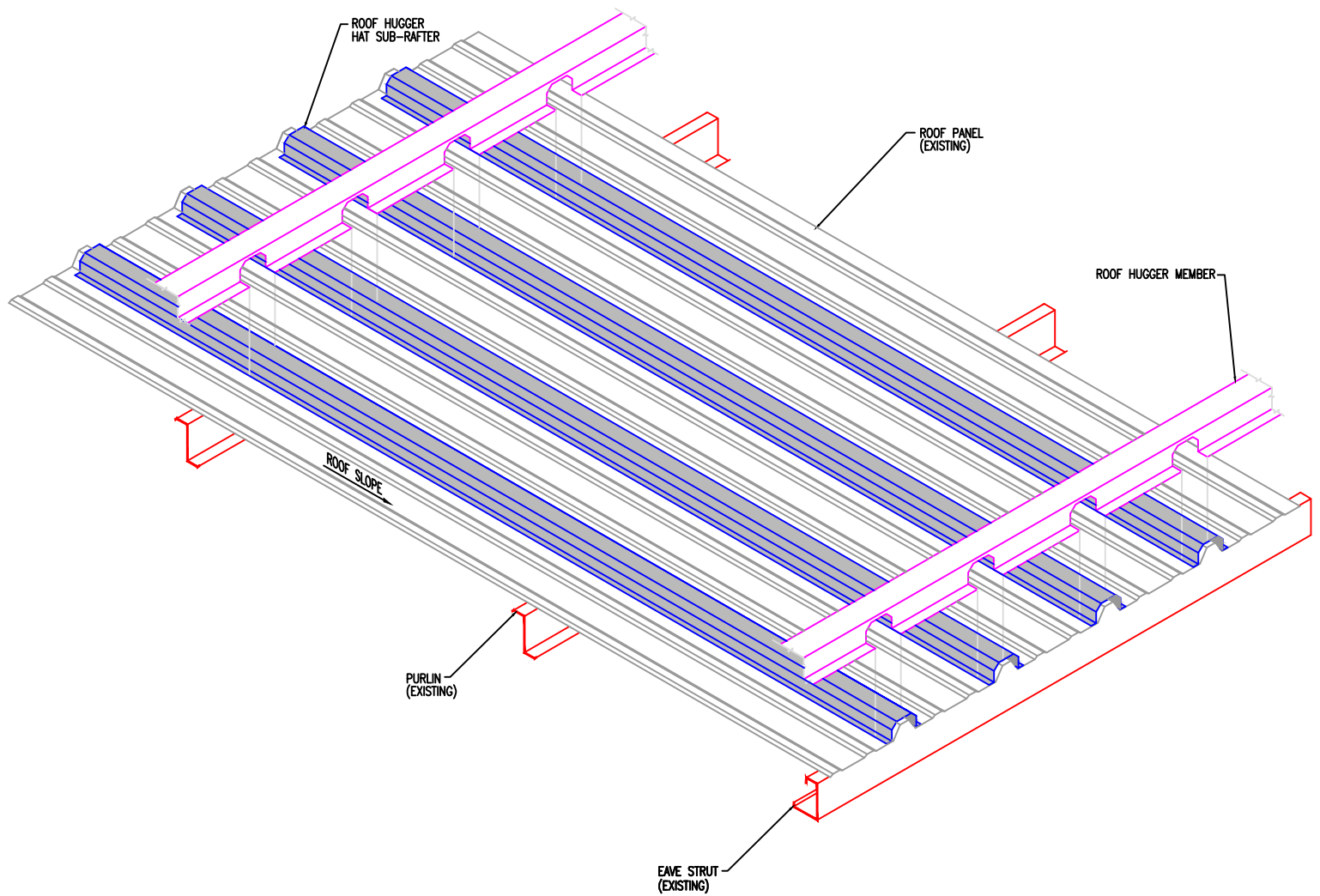
## STEP 2



# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 4-

## NOTES:

1. PRESS A MINIMUM OF 2 ROOF HUGGER MEMBERS OVER HAT SUB-RAFTERS.

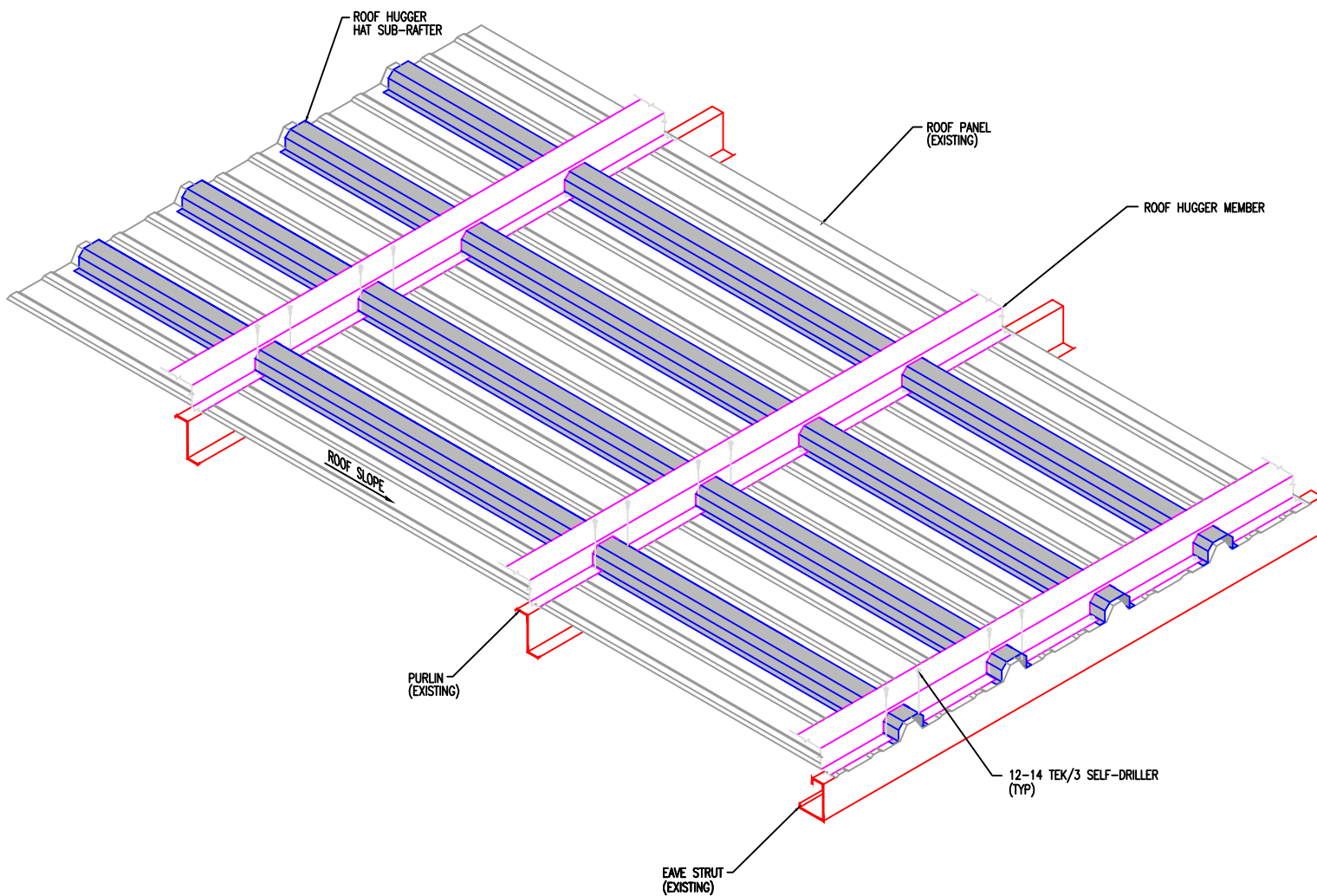


**STEP 3**

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 4-

## NOTES:

1. ATTACH ROOF HUGGERS THROUGH SUB-RAFTER INTO EXISTING EAVE STRUT/PURLIN - PRE-DRILL HAT SUB-RAFTER IF NEEDED.
2. SECURE ROOF HUGGER MEMBER TO EAVE STRUT/PURLINS WITH 12-14 TEK/3 SELF-DRILLER W/O WASHER (2 PER TAB).

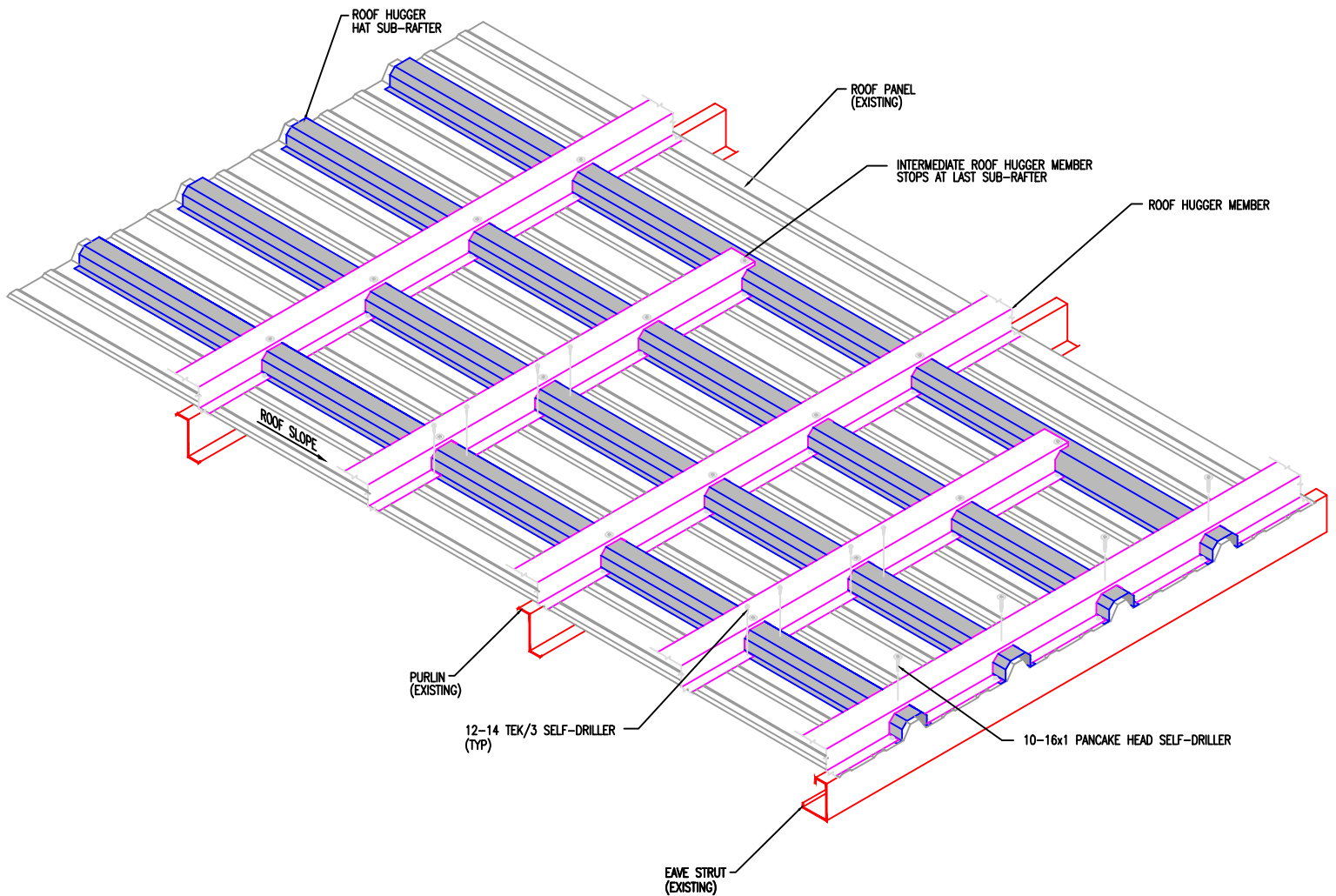


## STEP 4

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 4-

## NOTES:

1. INSTALL SUBSEQUENT INTERMEDIATE ROOF HUGGER MEMBERS BETWEEN PURLINS
2. SECURE ROOF HUGGER MEMBER TO HAT SUB-RAFTER WITH 12-14 TEK/3 SELF-DRILLER W/O WASHER (2 PER TAB).
3. ATTACHED TOP FLANGE OF ROOF HUGGER MEMBER TO ROOF HUGGER SUB-RAFTER WITH 10-16x1 PANCAKE HEAD FASTENER (1 PER INTERSECTION).

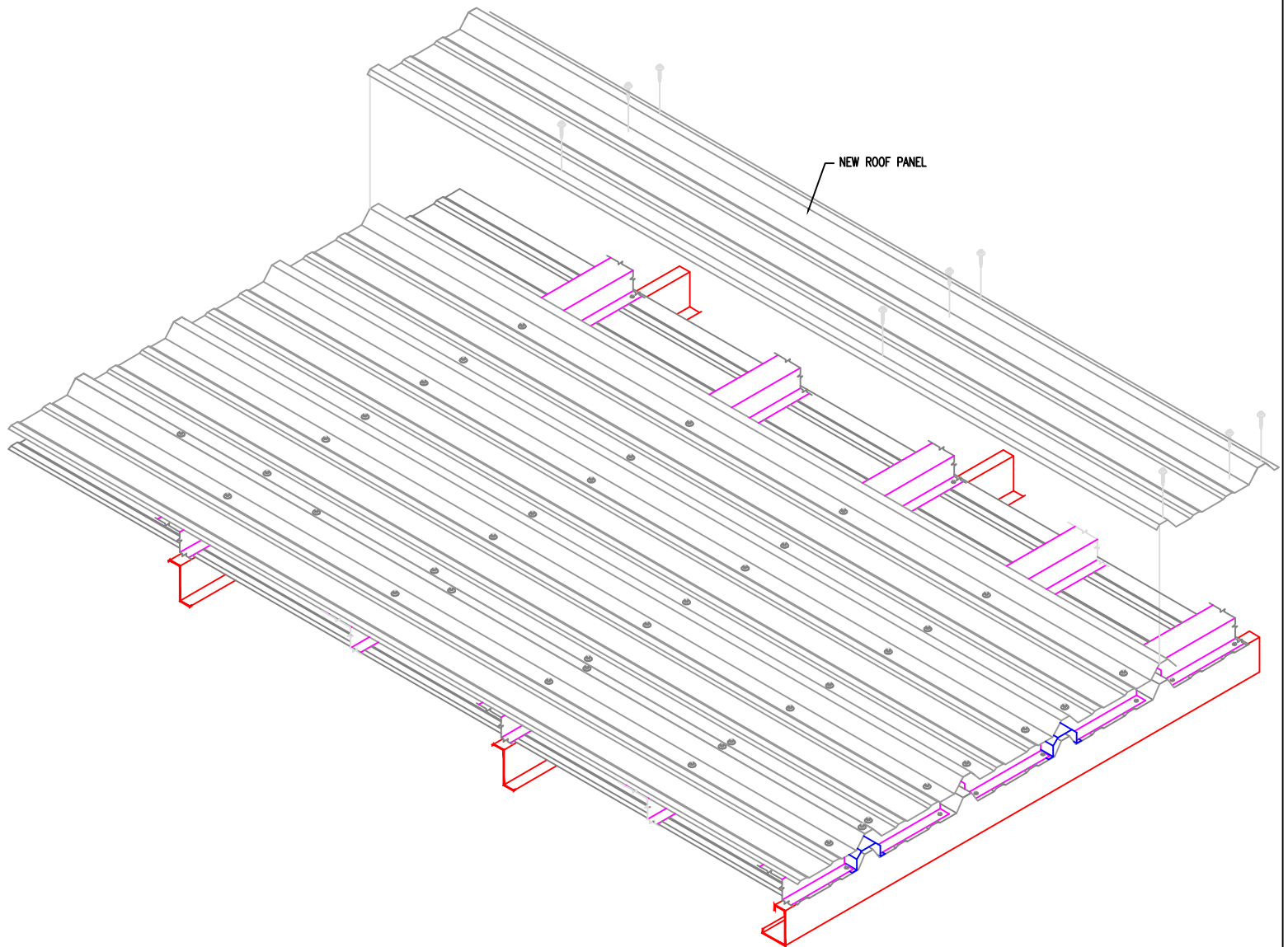


## STEP 5

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 4-

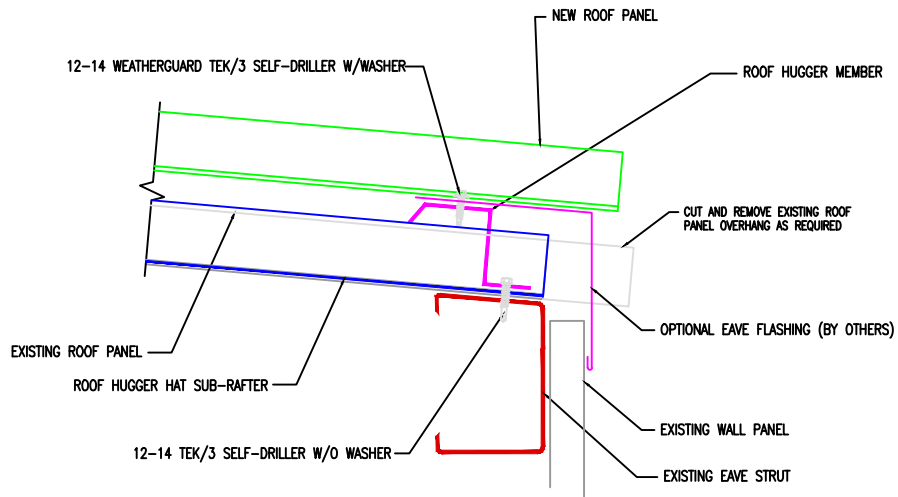
## NOTES:

1. INSTALL NEW ROOF PANELS

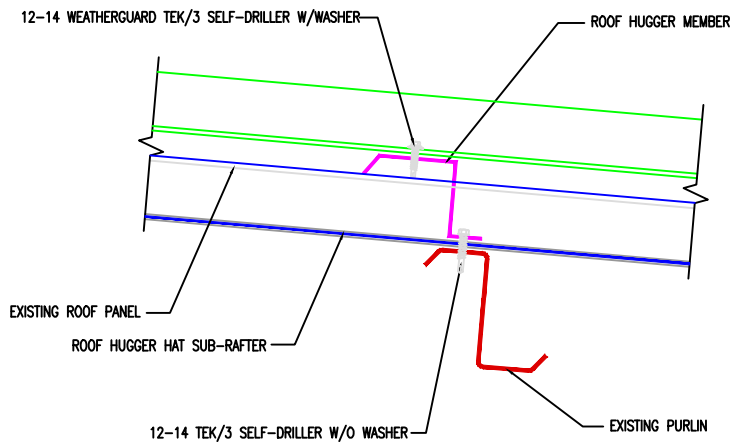


STEP 6

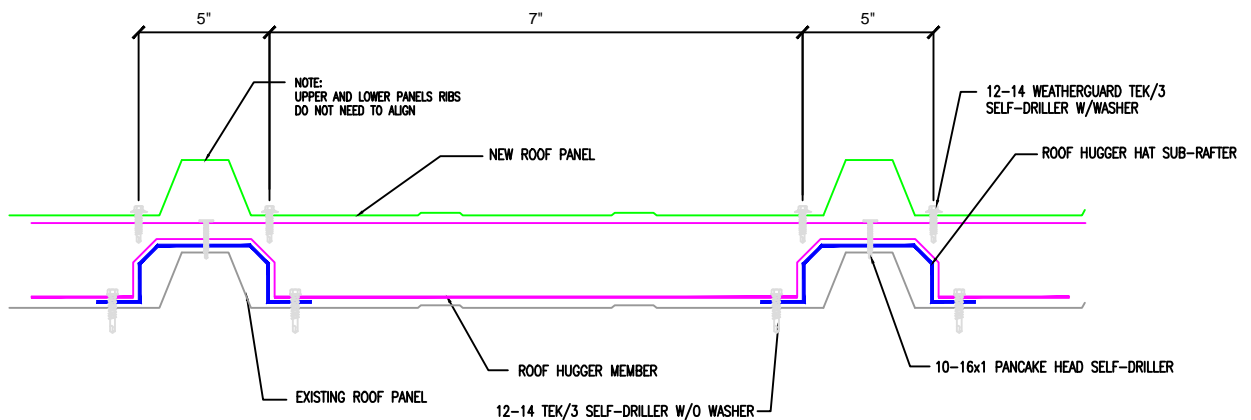
# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 4-



## CONNECTION AT EAVE



## CONNECTION AT PURLIN

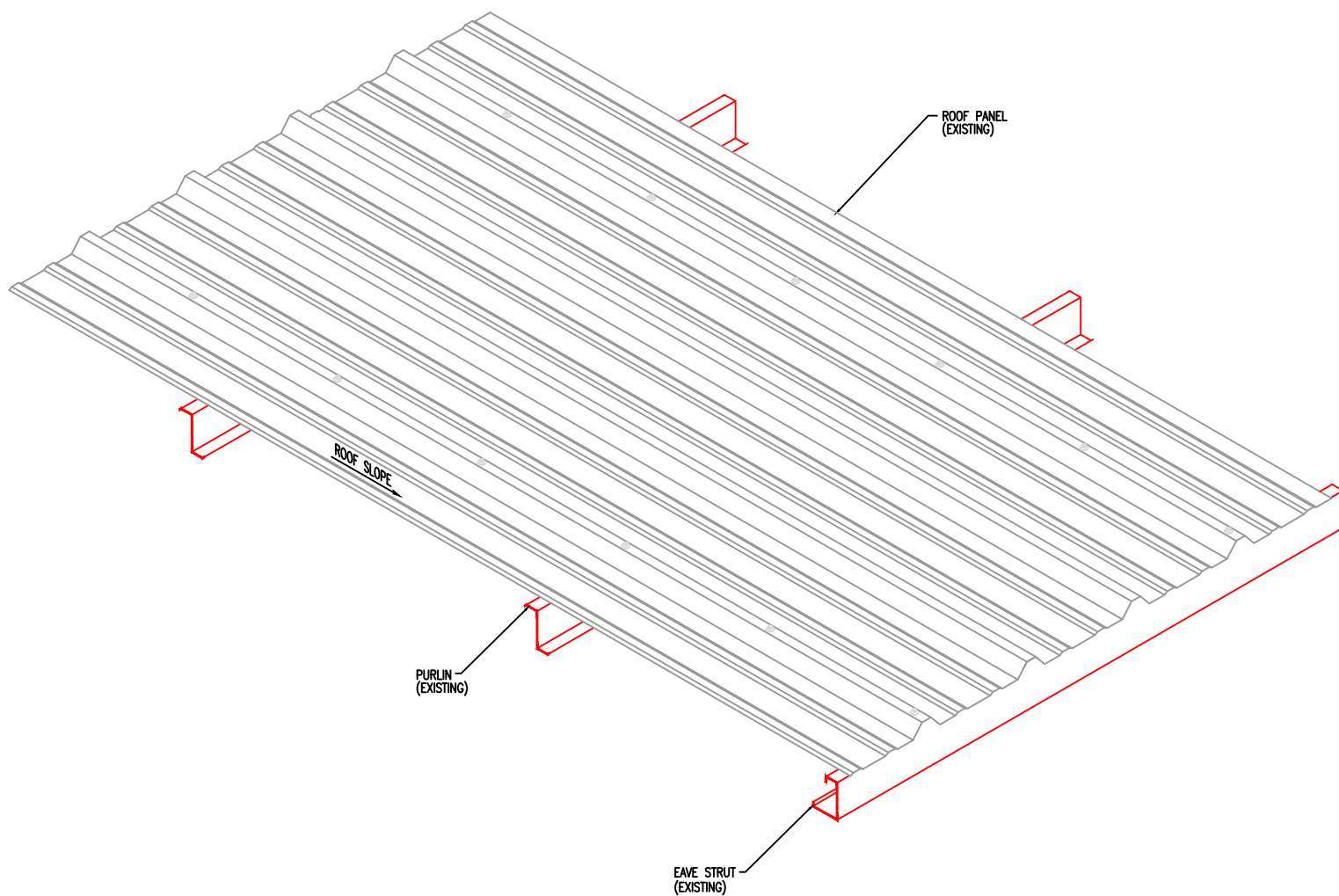


## CROSS SECTION-MEMBER BETWEEN PURLINS

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 5-

## NOTES:

1. EXISTING ROOF PANEL LAYOUT.

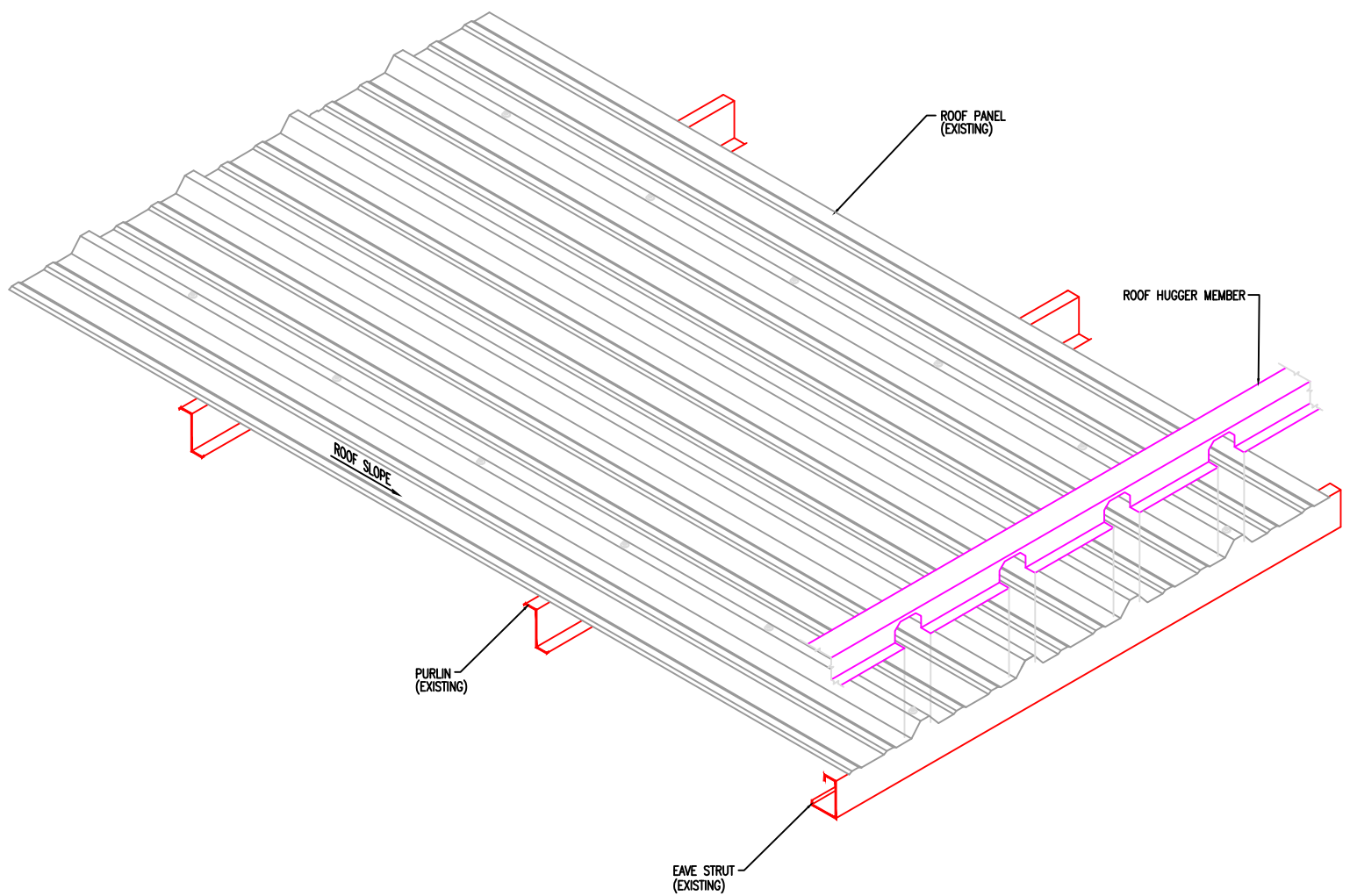


STEP 1

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 5-

## NOTES:

1. INSTALL ROOF HUGGER MEMBER OVER EXISTING EAVE STRUT. CENTER PANEL RIB IN ROOF HUGGER CUT-OUT.

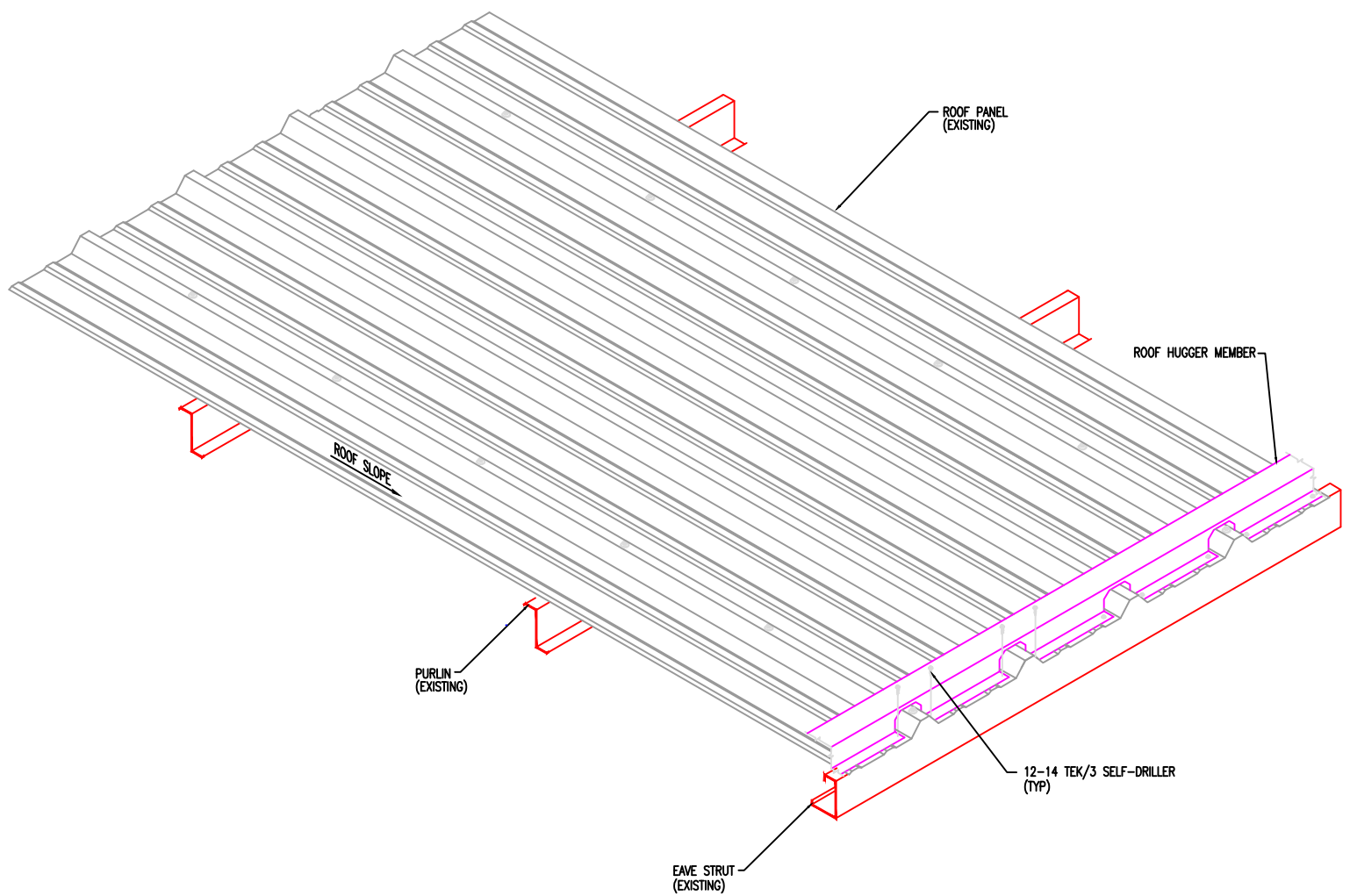


## STEP 2

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 5-

## NOTES:

1. SECURE ROOF HUGGER MEMBER TO EXISTING EAVE STRUT WITH 12-14 TEK/3 SELF-DRILLERS W/O WASHER (2 PER TAB)



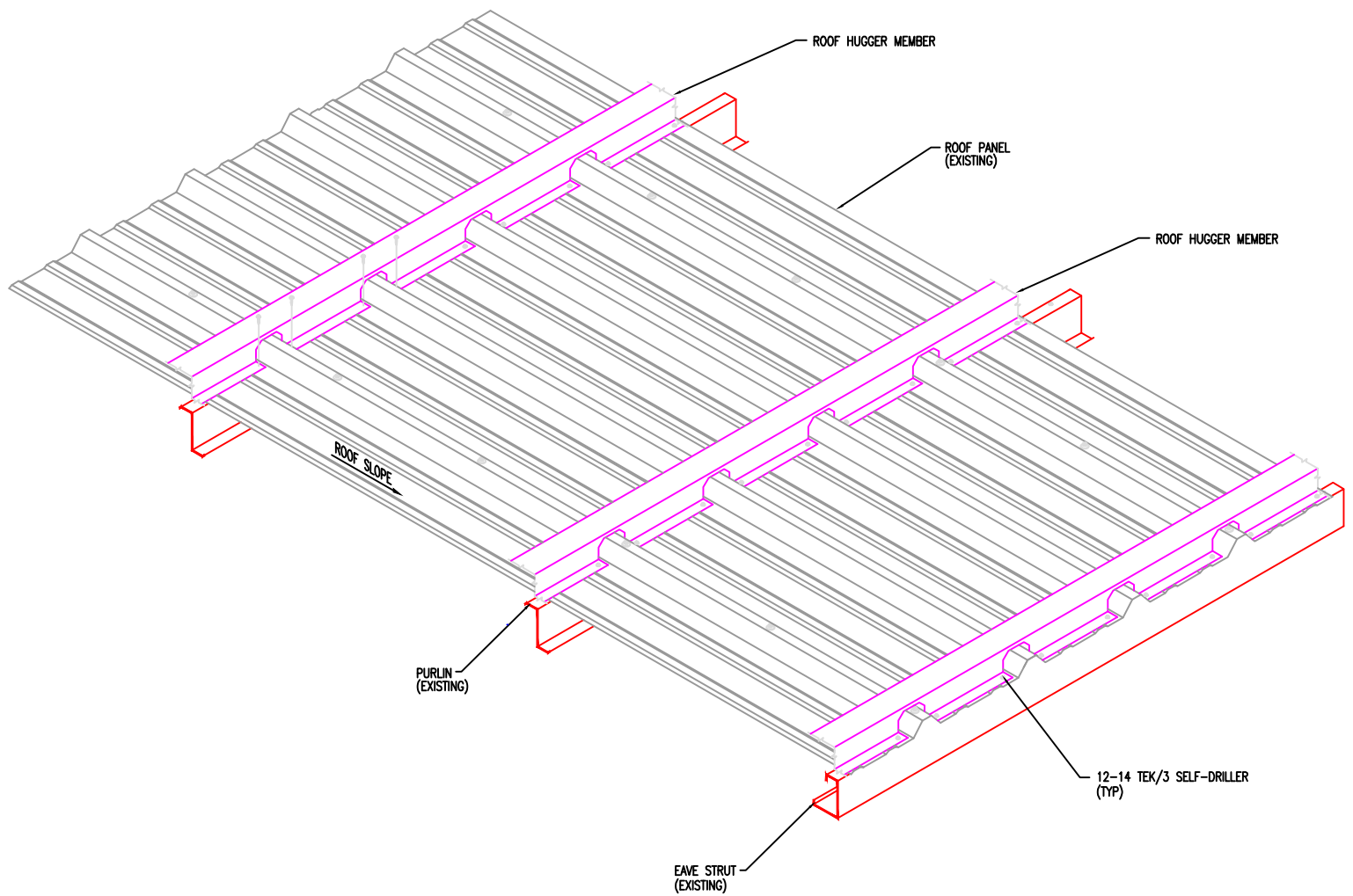
## STEP 3



# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 5-

## NOTES:

1. INSTALL SUBSEQUENT ROOF HUGGER MEMBERS AT EACH EXISTING PURLIN

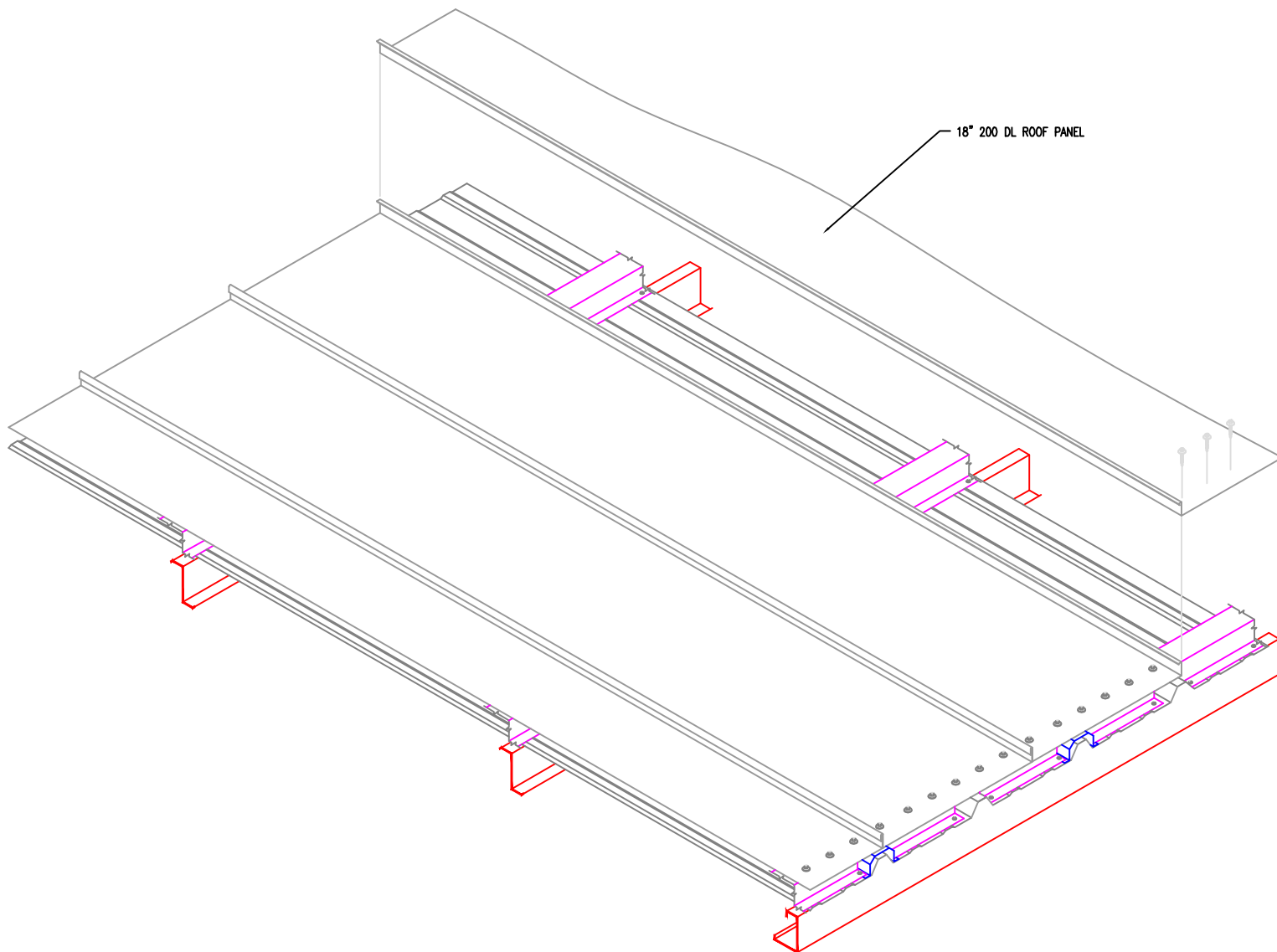


## STEP 4

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 5-

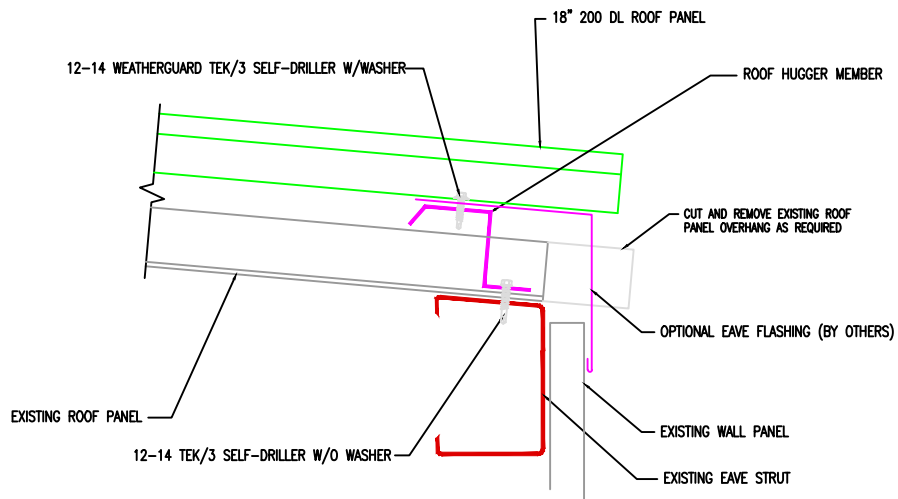
## NOTES:

1. INSTALL NEW ROOF PANELS

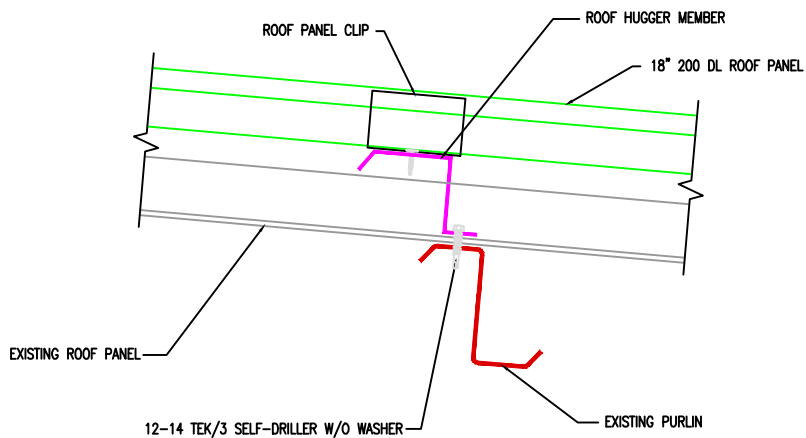


STEP 5

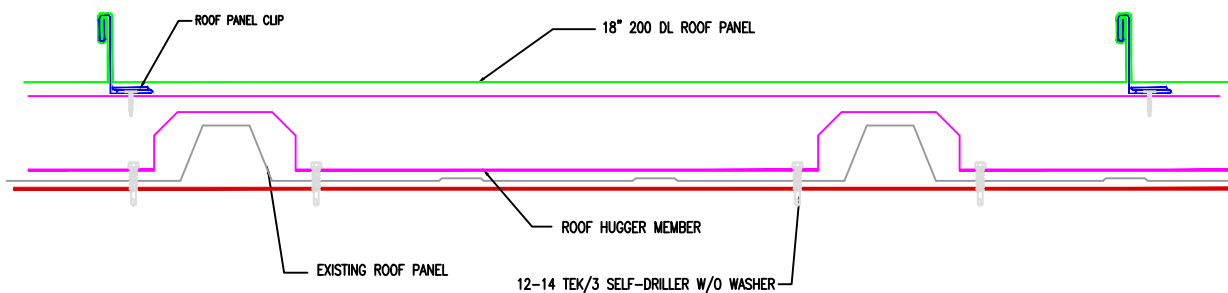
# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 5-



## CONNECTION AT EAVE



## CONNECTION AT PURLIN

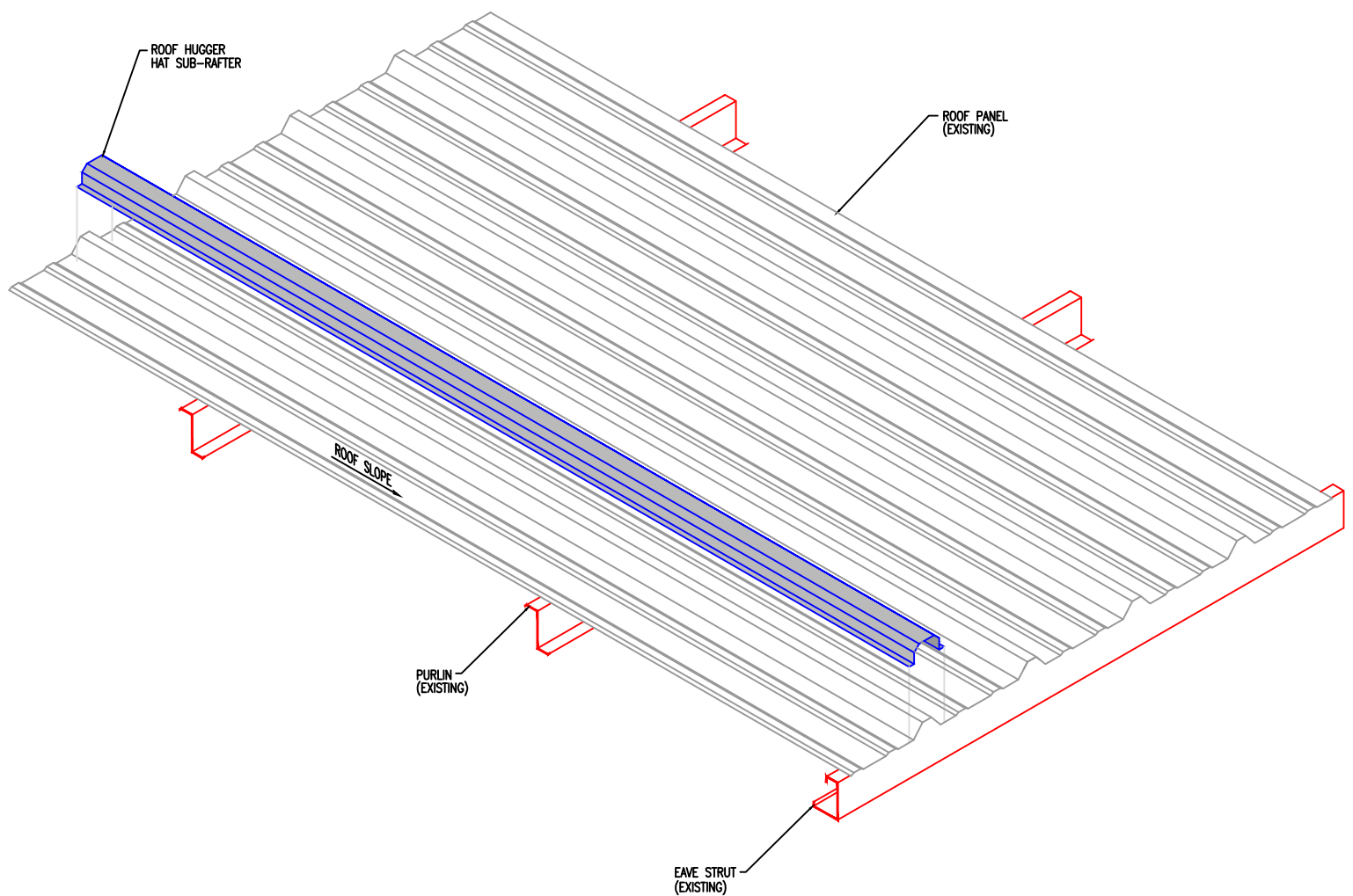


## CROSS SECTION

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 6-

## NOTES:

1. EXISTING ROOF PANEL LAYOUT.

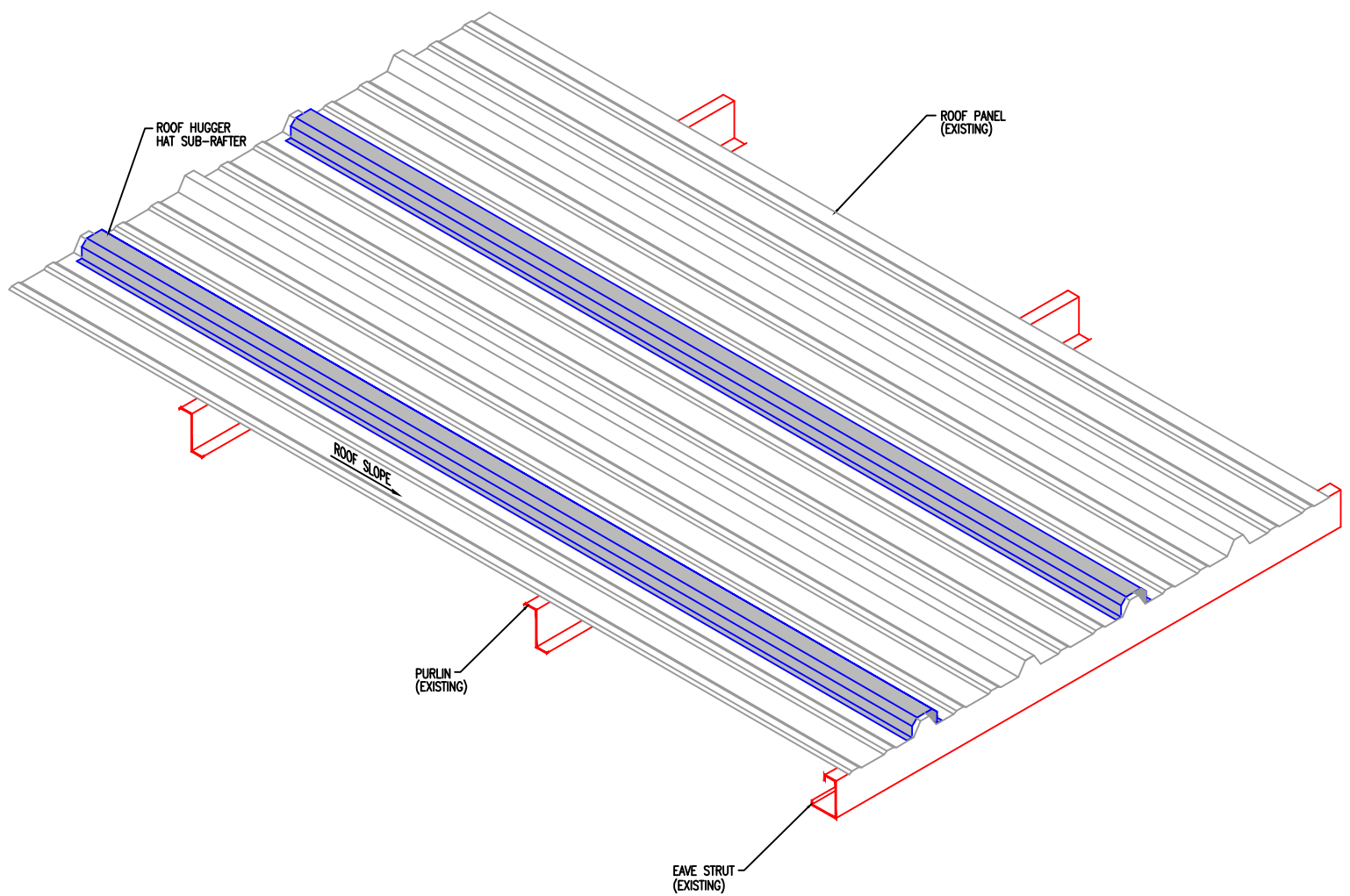


STEP 1

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 6-

## NOTES:

1. LOOSELY PLACE HAT SUB-RAFTERS 2'-0" O.C. FOR LENGTH OF ROOF HUGGER OR WIDTH OF EDGE ZONE, WHICH EVER IS LESS.

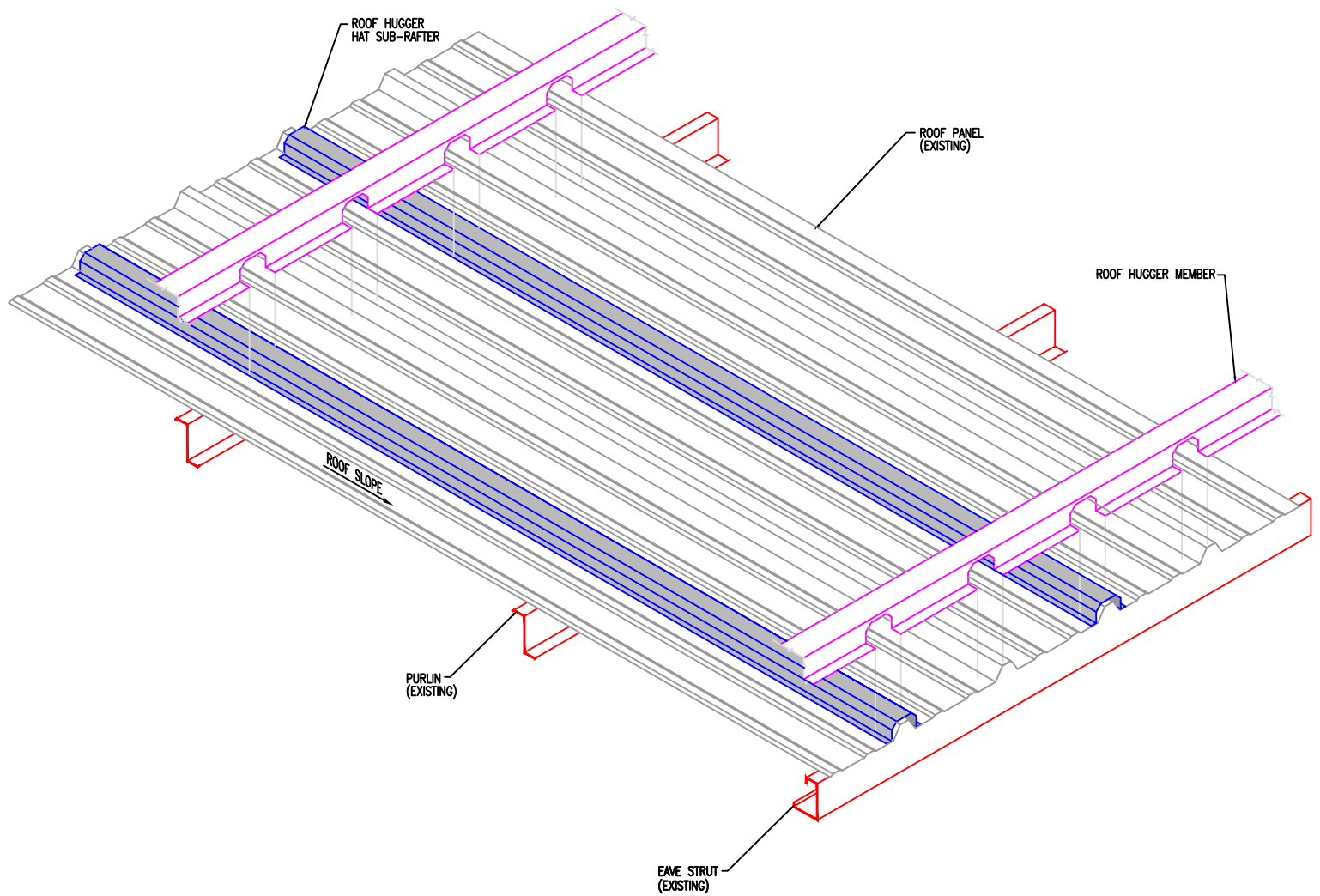


## STEP 2

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 6-

## NOTES:

1. PRESS A MINIMUM OF 2 ROOF HUGGER MEMBERS OVER HAT SUB-RAFTERS.

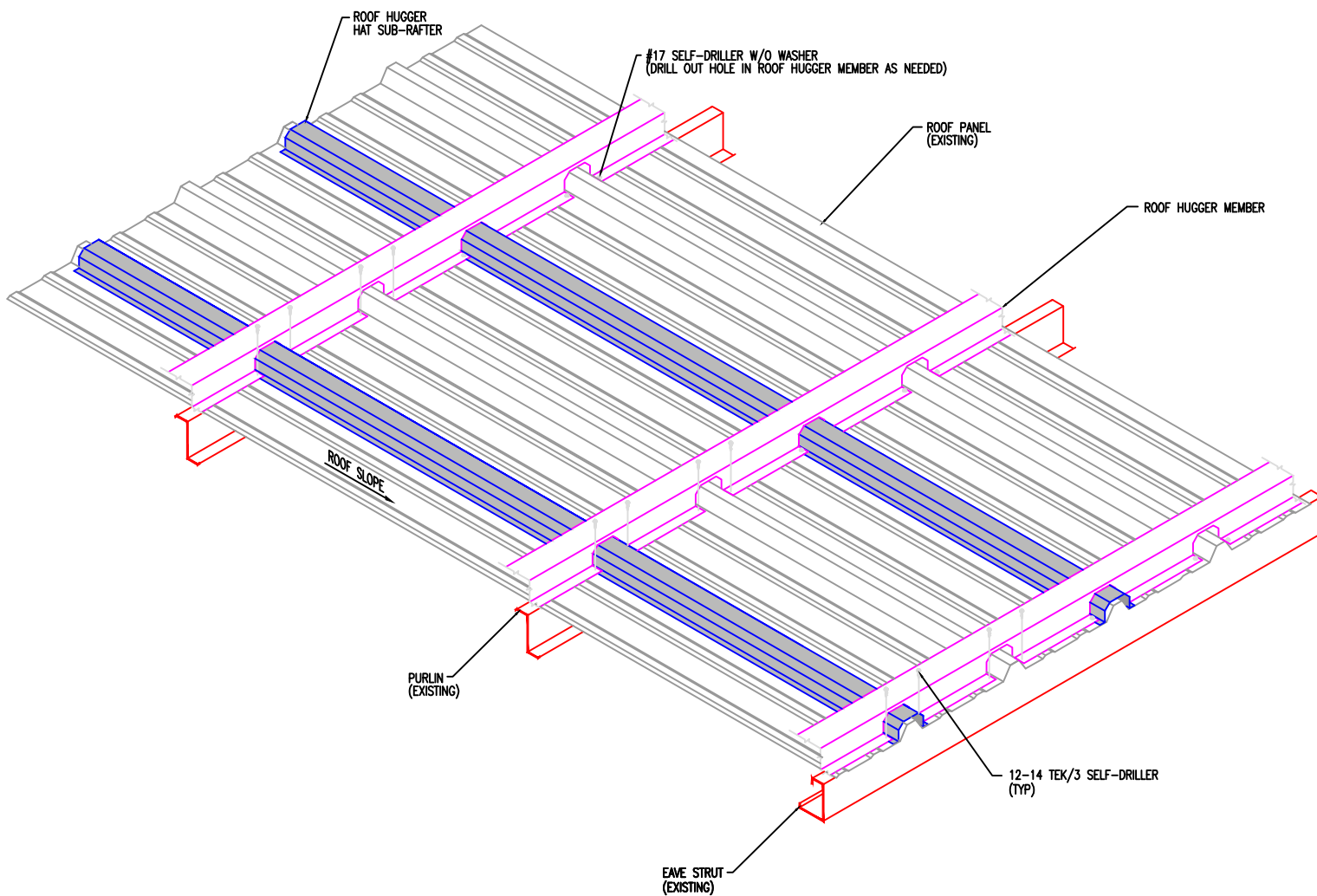


## STEP 3

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 6-

## NOTES:

1. ATTACH ROOF HUGGERS THROUGH SUB-RAFTER INTO EXISTING EAVE STRUT/PURLIN - PRE-DRILL HAT SUB-RAFTER IF NEEDED.
2. SECURE ROOF HUGGER MEMBER TO HAT SUB-RAFTER WITH 12-14 TEK/3 SELF-DRILLER W/O WASHER (1 PER SIDE) AND INSTALL #17 SELF-DRILLERS INTO EXISTING PANELS (1 EACH SIDE OF MAJOR RIBS. (DRILL OUT HOLE IN ROOF HUGGER MEMBER AS NEEDED).

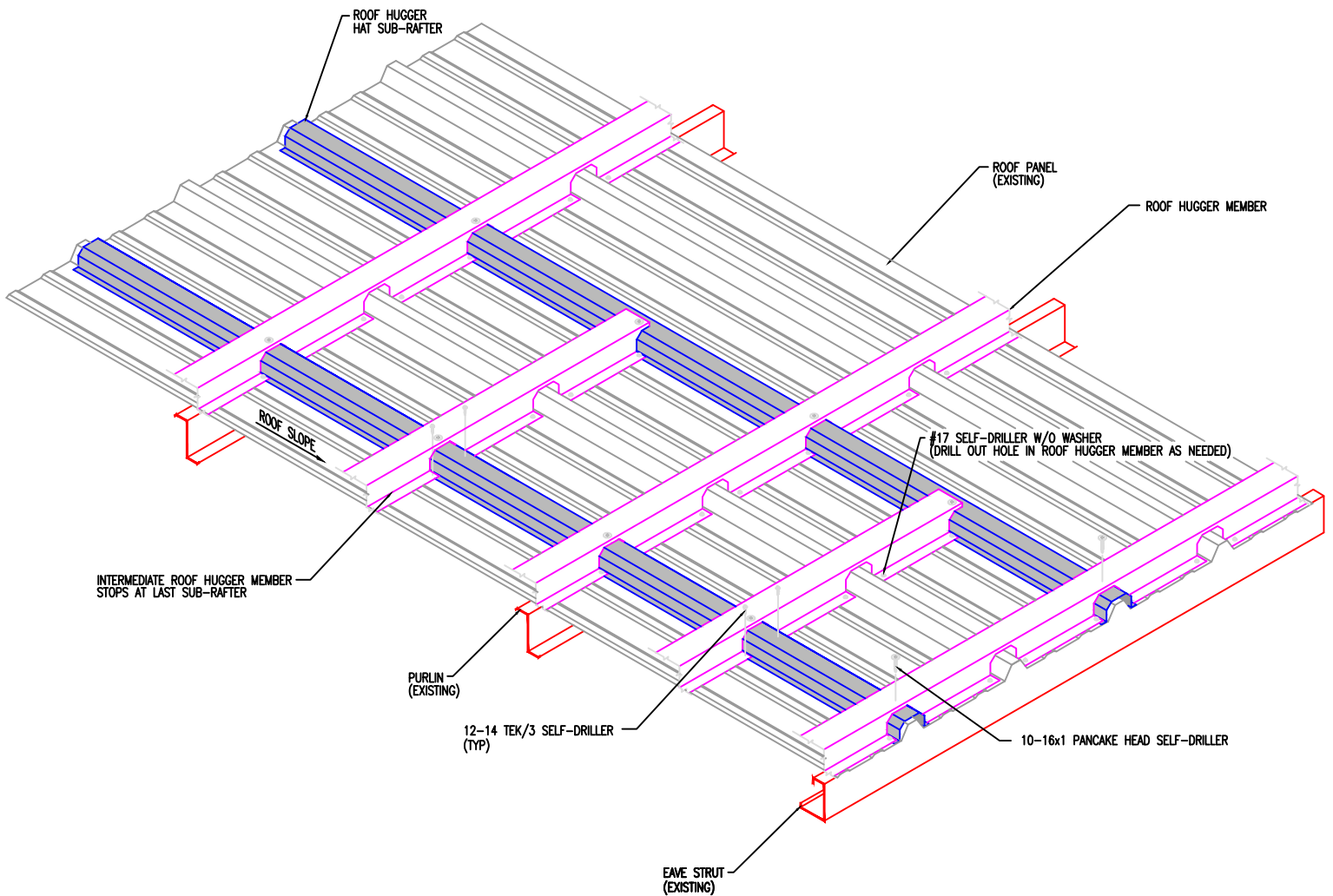


## STEP 4

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 6-

## NOTES:

1. INSTALL SUBSEQUENT INTERMEDIATE ROOF HUGGER MEMBERS BETWEEN PURLINS
2. SECURE ROOF HUGGER MEMBER TO HAT SUB-RAFTER WITH 12-14 TEK/3 SELF-DRILLER W/O WASHER (1 PER SIDE) AND INSTALL #17 SELF-DRILLERS INTO EXISTING PANELS (1 EACH SIDE OF MAJOR RIBS. (DRILL OUT HOLE IN ROOF HUGGER MEMBER AS NEEDED).
3. ATTACHED TOP FLANGE OF ROOF HUGGER MEMBER TO ROOF HUGGER SUB-RAFTER WITH 10-16x1 PANCAKE HEAD FASTENER (1 PER INTERSECTION).



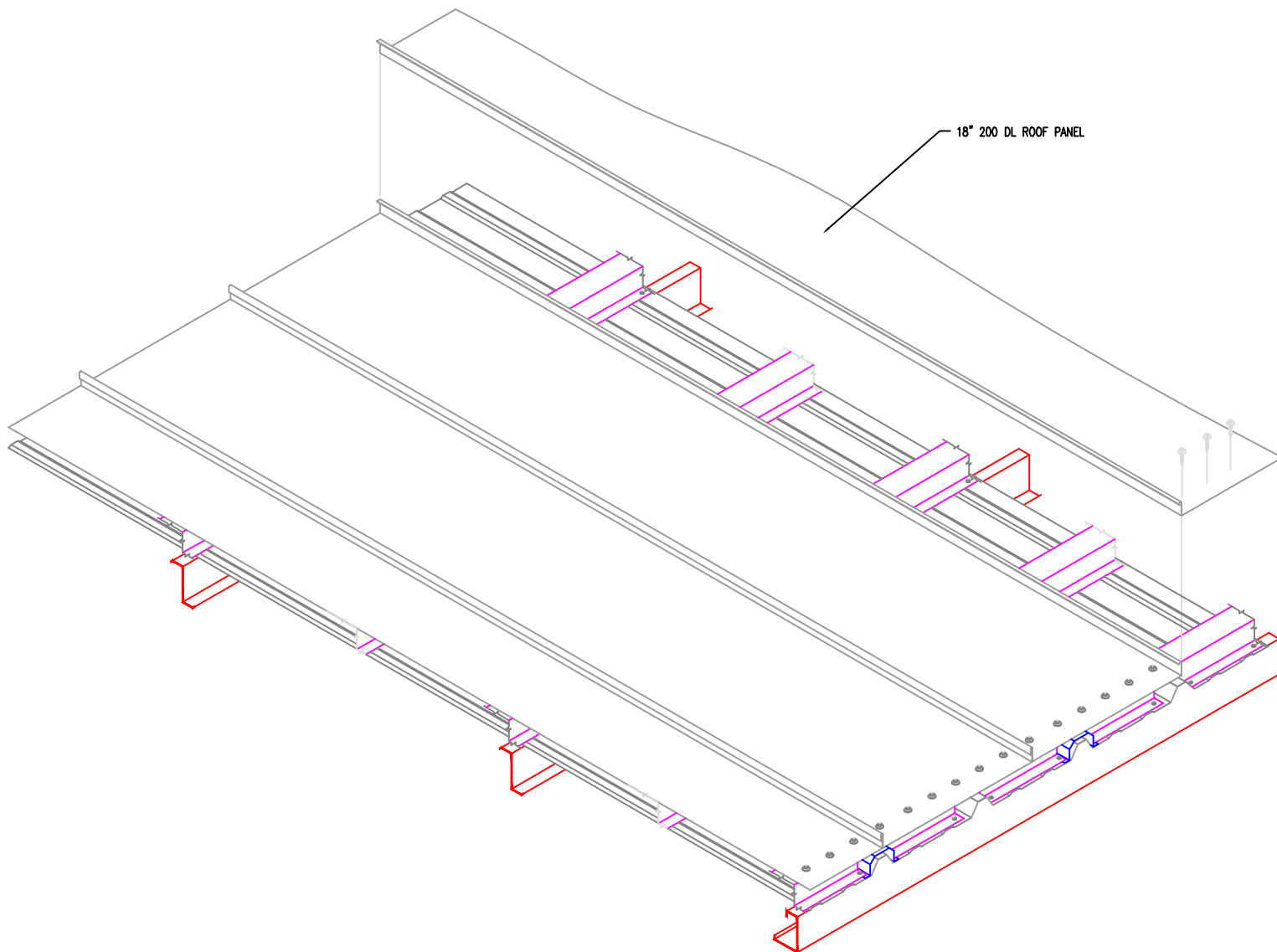
## STEP 5



# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 6-

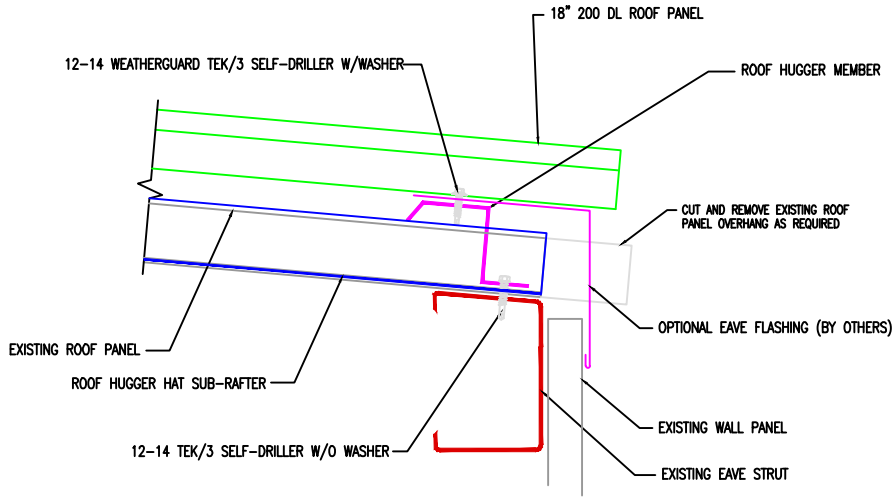
## NOTES:

1. INSTALL NEW ROOF PANELS

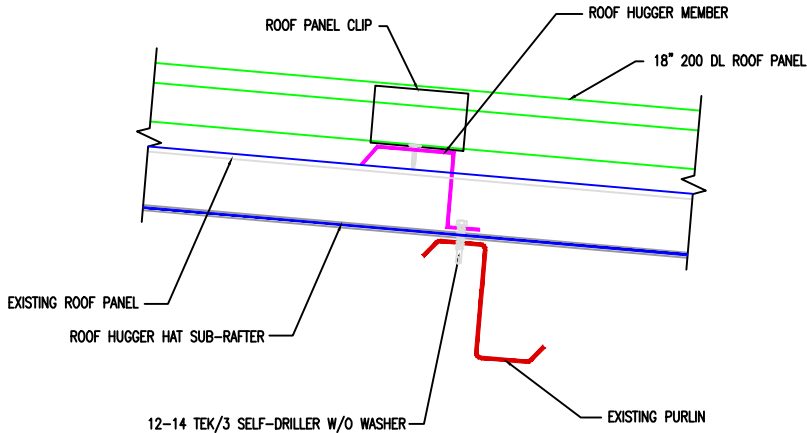


STEP 6

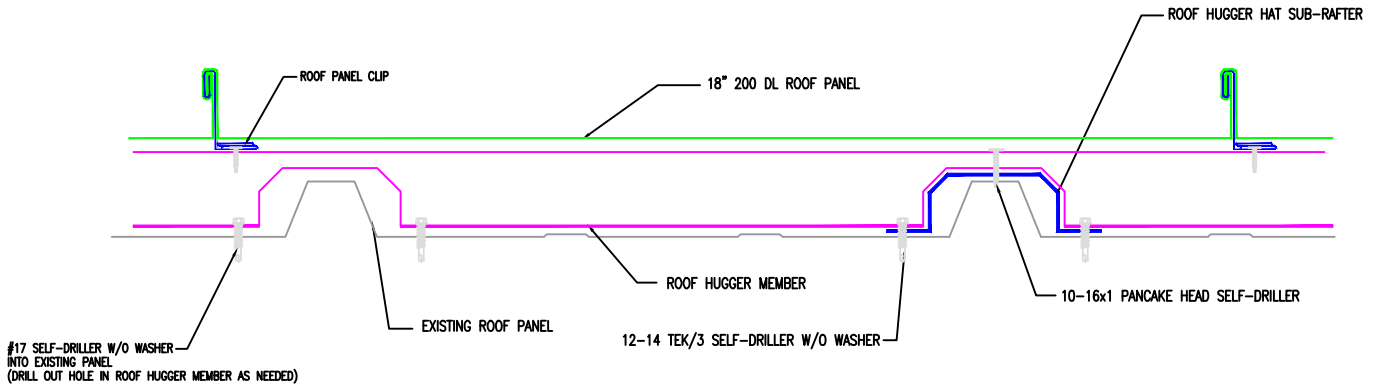
# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 6-



## CONNECTION AT EAVE



## CONNECTION AT PURLIN

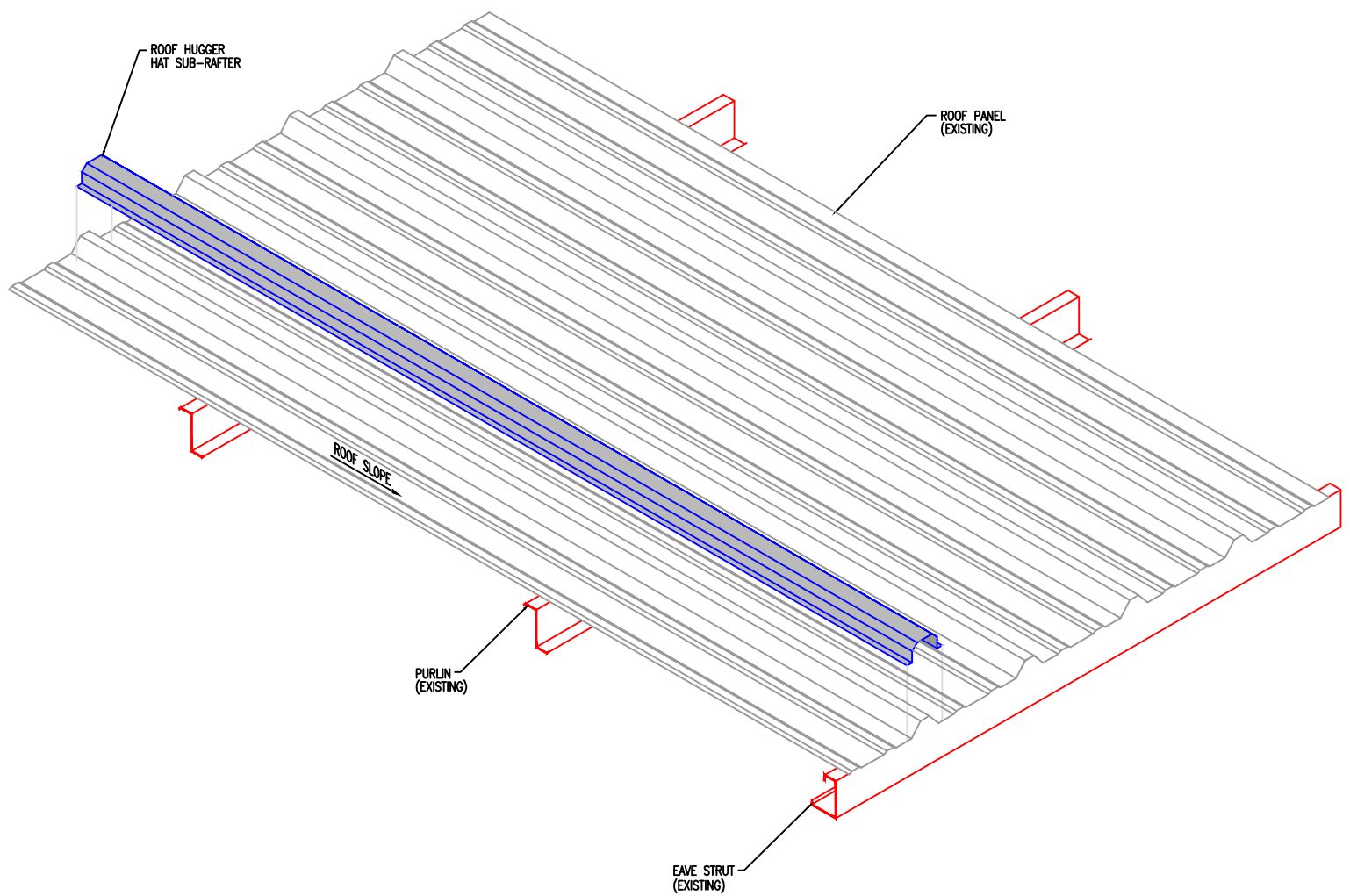


## CROSS SECTION-MEMBER BETWEEN PURLINS

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 7-

## NOTES:

1. EXISTING ROOF PANEL LAYOUT.

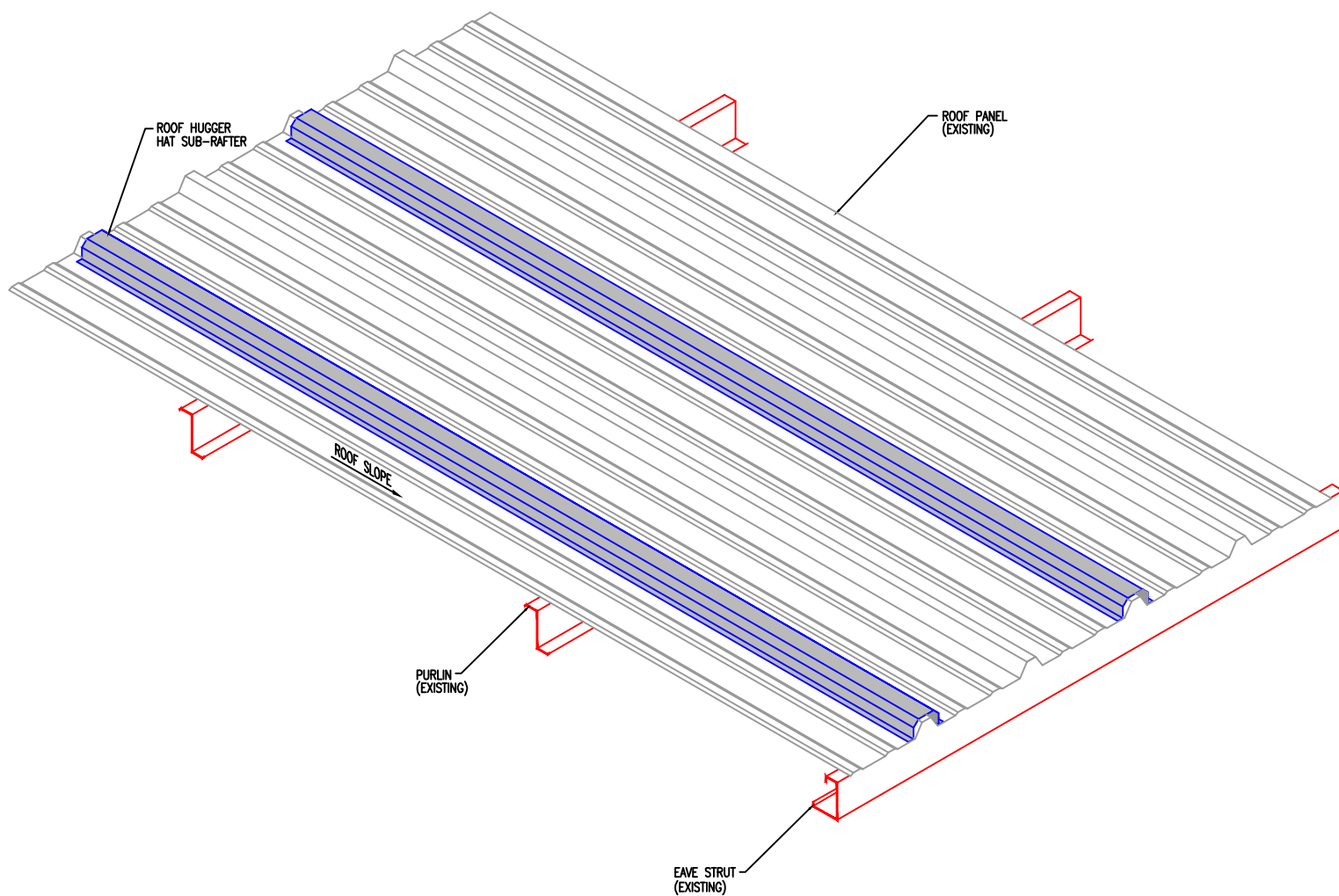


STEP 1

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 7-

## NOTES:

1. LOOSELY PLACE HAT SUB-RAFTERS 2'-0" O.C. FOR LENGTH OF ROOF HUGGER OR WIDTH OF EDGE ZONE, WHICH EVER IS LESS.

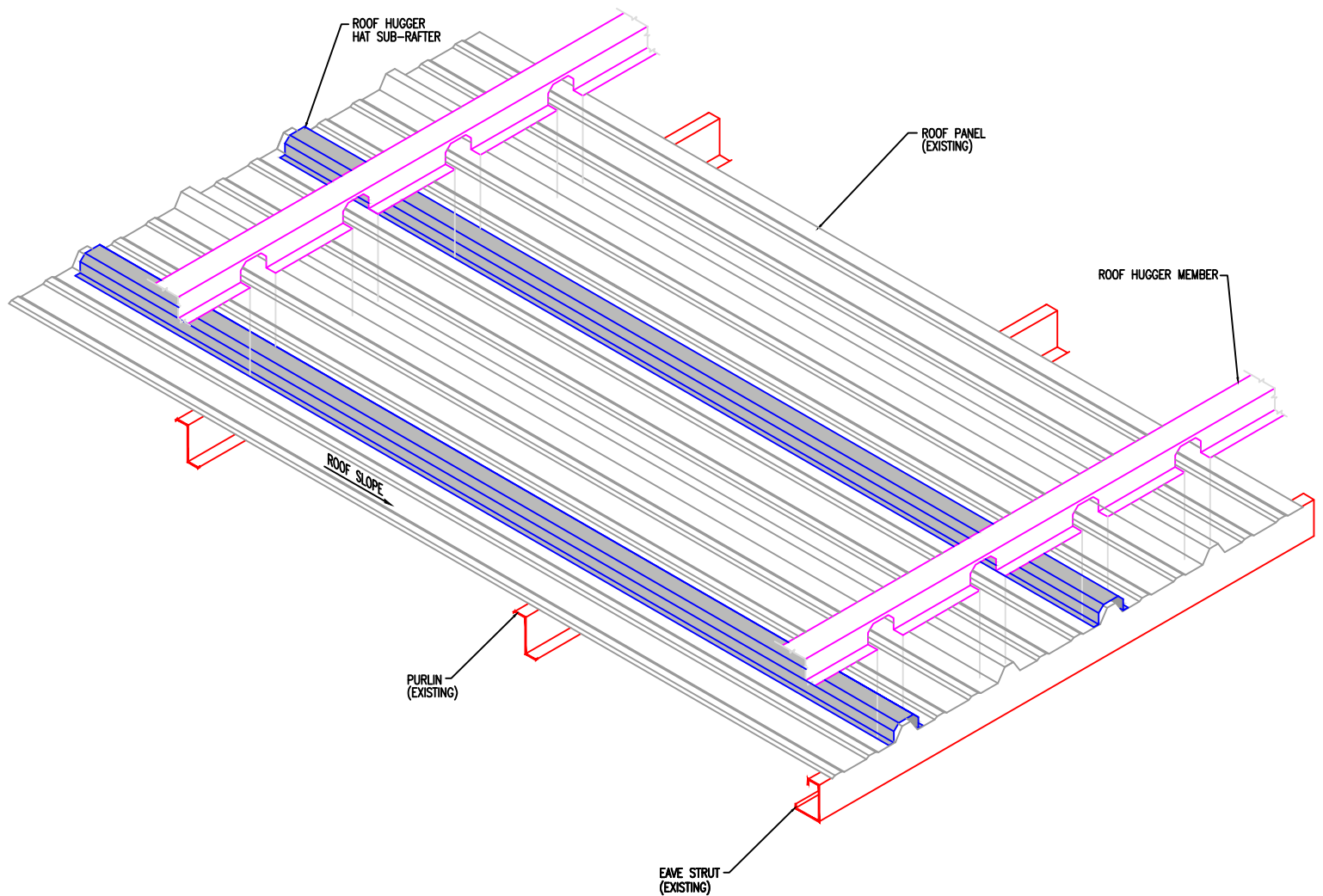


## STEP 2

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 7-

## NOTES:

1. PRESS A MINIMUM OF 2 ROOF HUGGER MEMBERS OVER HAT SUB-RAFTERS.

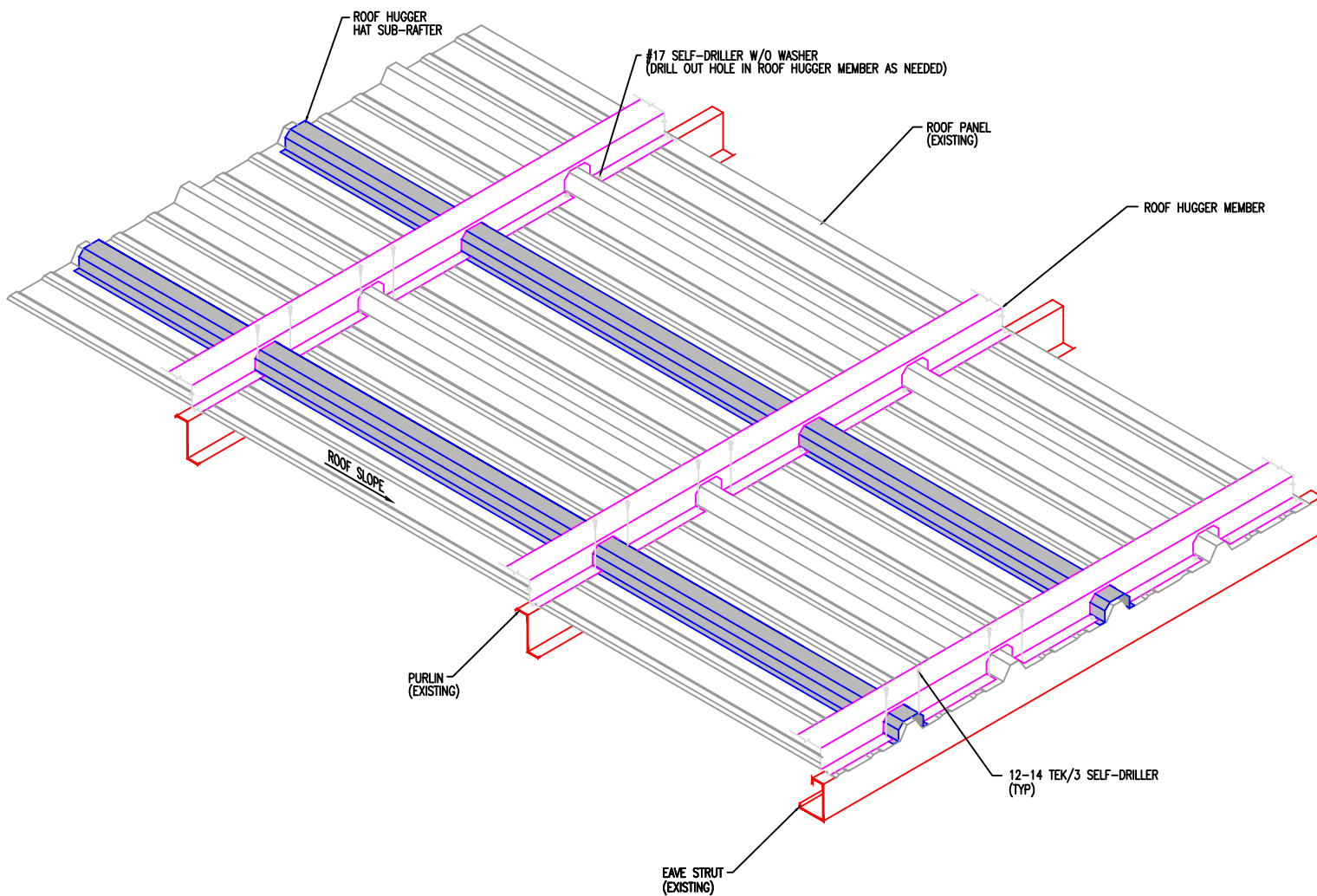


## STEP 3

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 7-

## NOTES:

1. ATTACH ROOF HUGGERS THROUGH SUB-RAFTER INTO EXISTING EAVE STRUT/PURLIN - PRE-DRILL HAT SUB-RAFTER IF NEEDED.
2. SECURE ROOF HUGGER MEMBER TO EAVE STRUT/PURLINS WITH 12-14 TEK/3 SELF-DRILLER W/O WASHER (2 PER TAB).

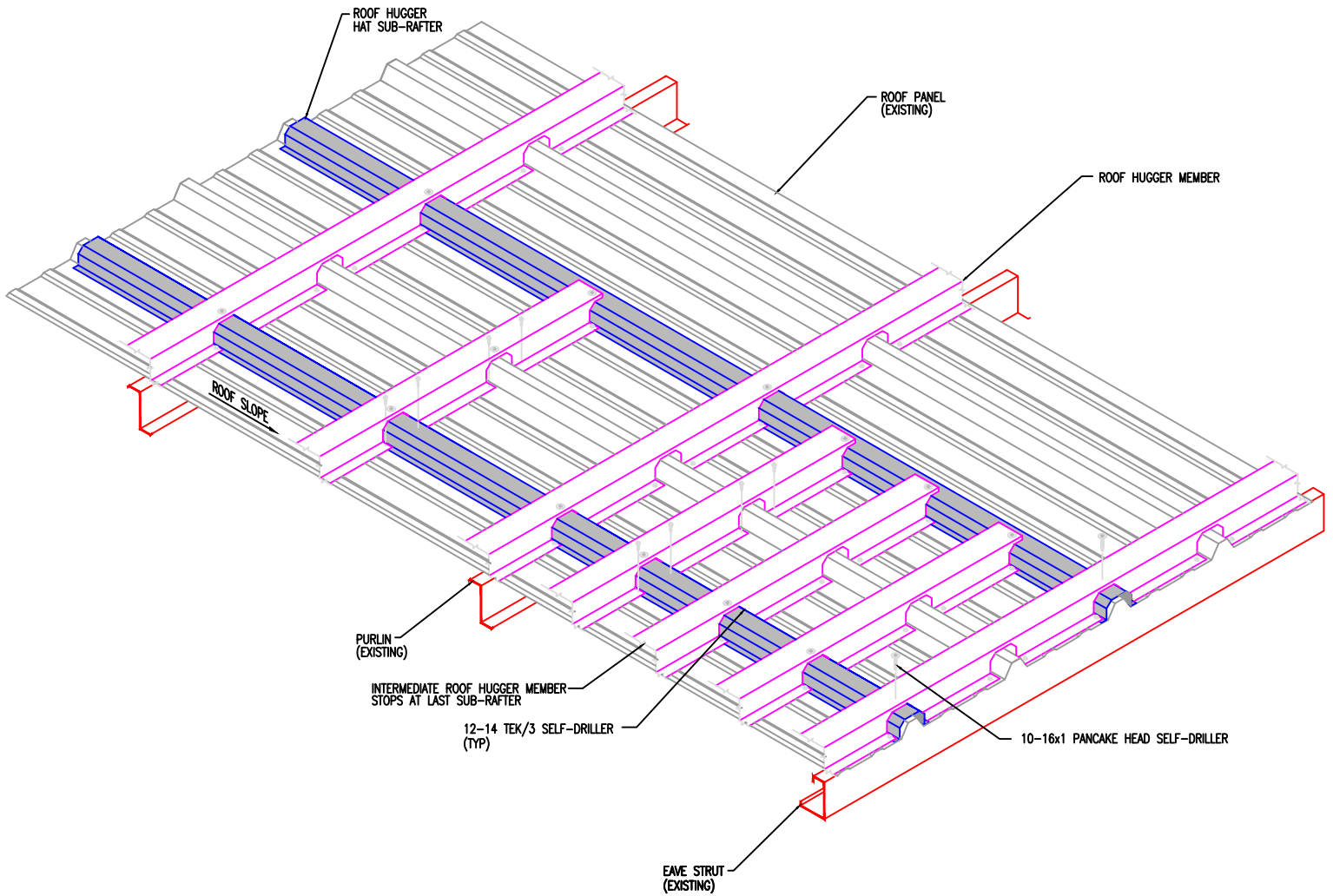


## STEP 4

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 7-

## NOTES:

1. INSTALL SUBSEQUENT INTERMEDIATE ROOF HUGGER MEMBERS BETWEEN PURLINS
2. SECURE ROOF HUGGER MEMBER TO HAT SUB-RAFTER WITH 12-14 TEK/3 SELF-DRILLER W/O WASHER (2 PER TAB).
3. ATTACHED TOP FLANGE OF ROOF HUGGER MEMBER TO ROOF HUGGER SUB-RAFTER WITH 10-16x1 PANCAKE HEAD FASTENER (1 PER INTERSECTION).

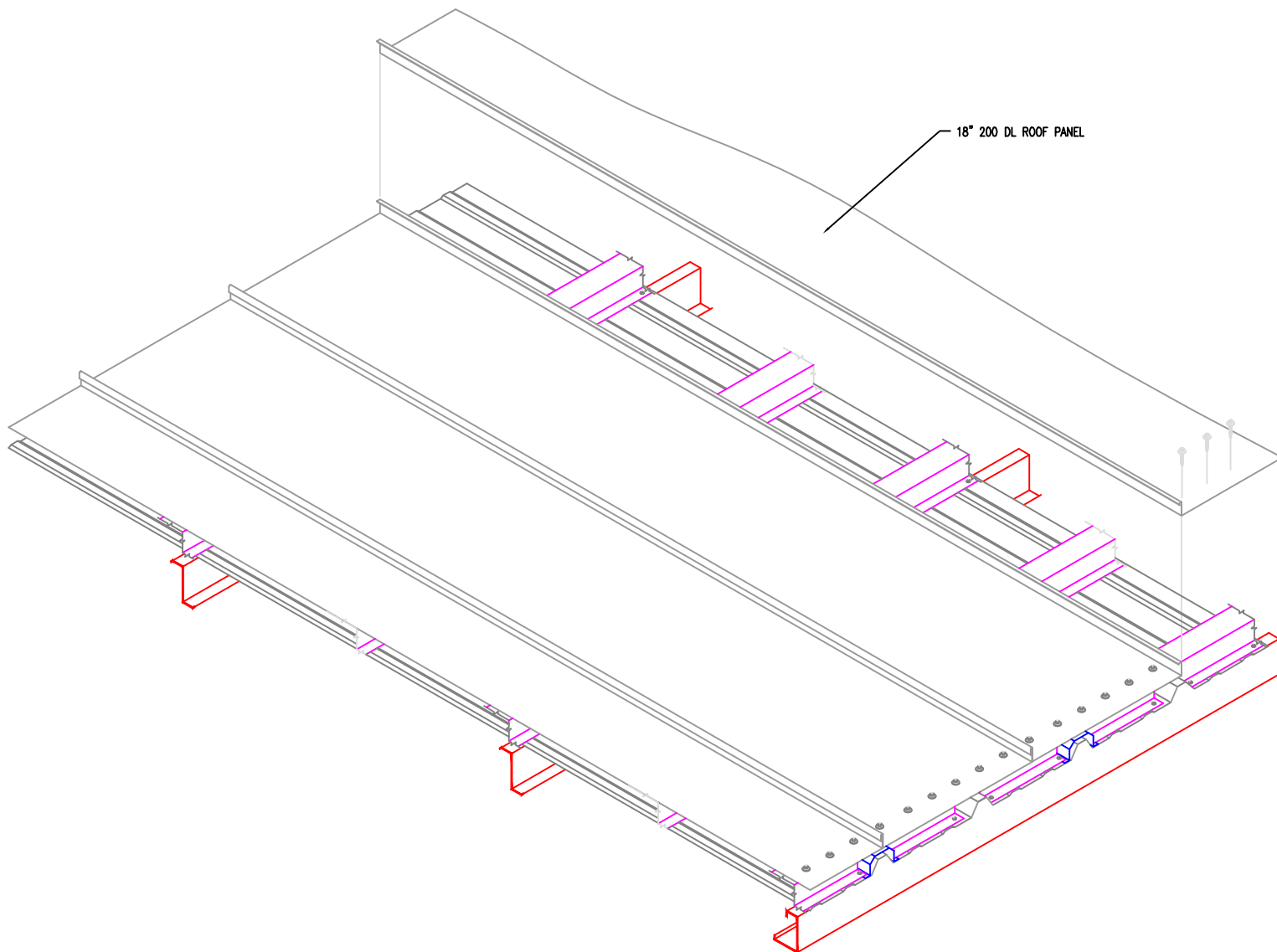


## STEP 5

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 7-

## NOTES:

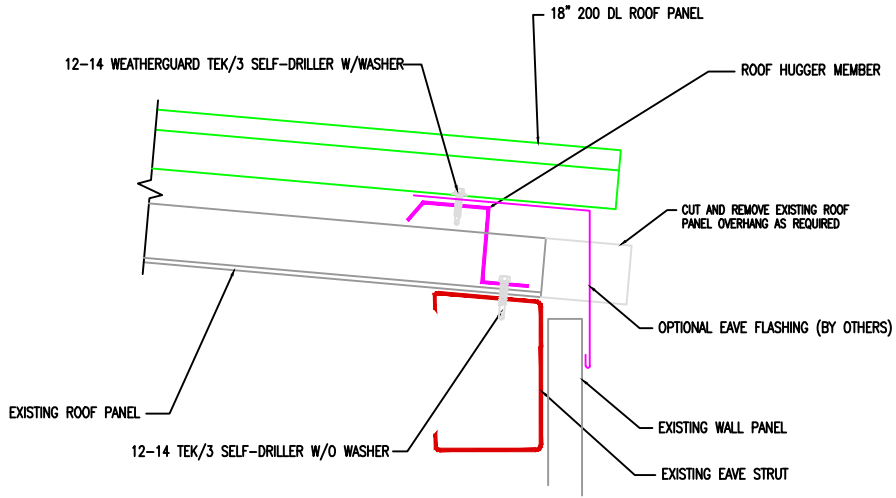
1. INSTALL NEW ROOF PANELS



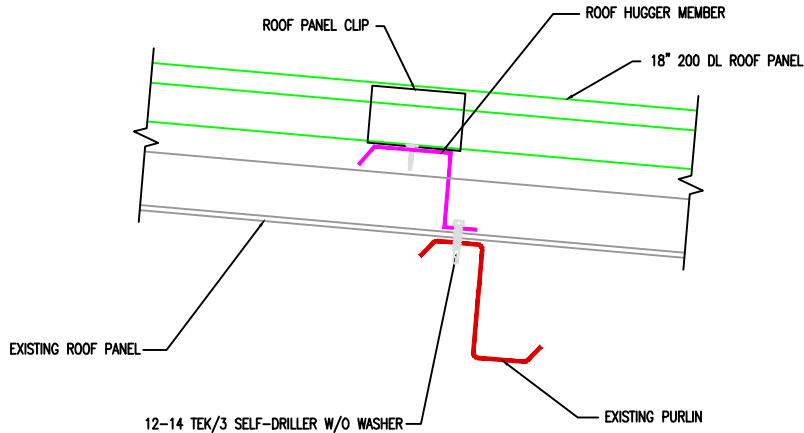
STEP 6



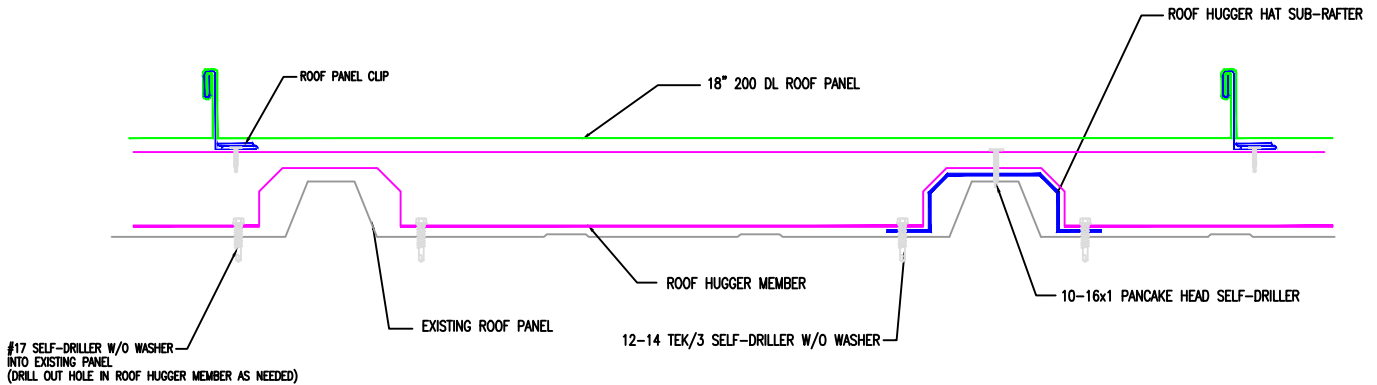
# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 7-



## CONNECTION AT EAVE



## CONNECTION AT PURLIN

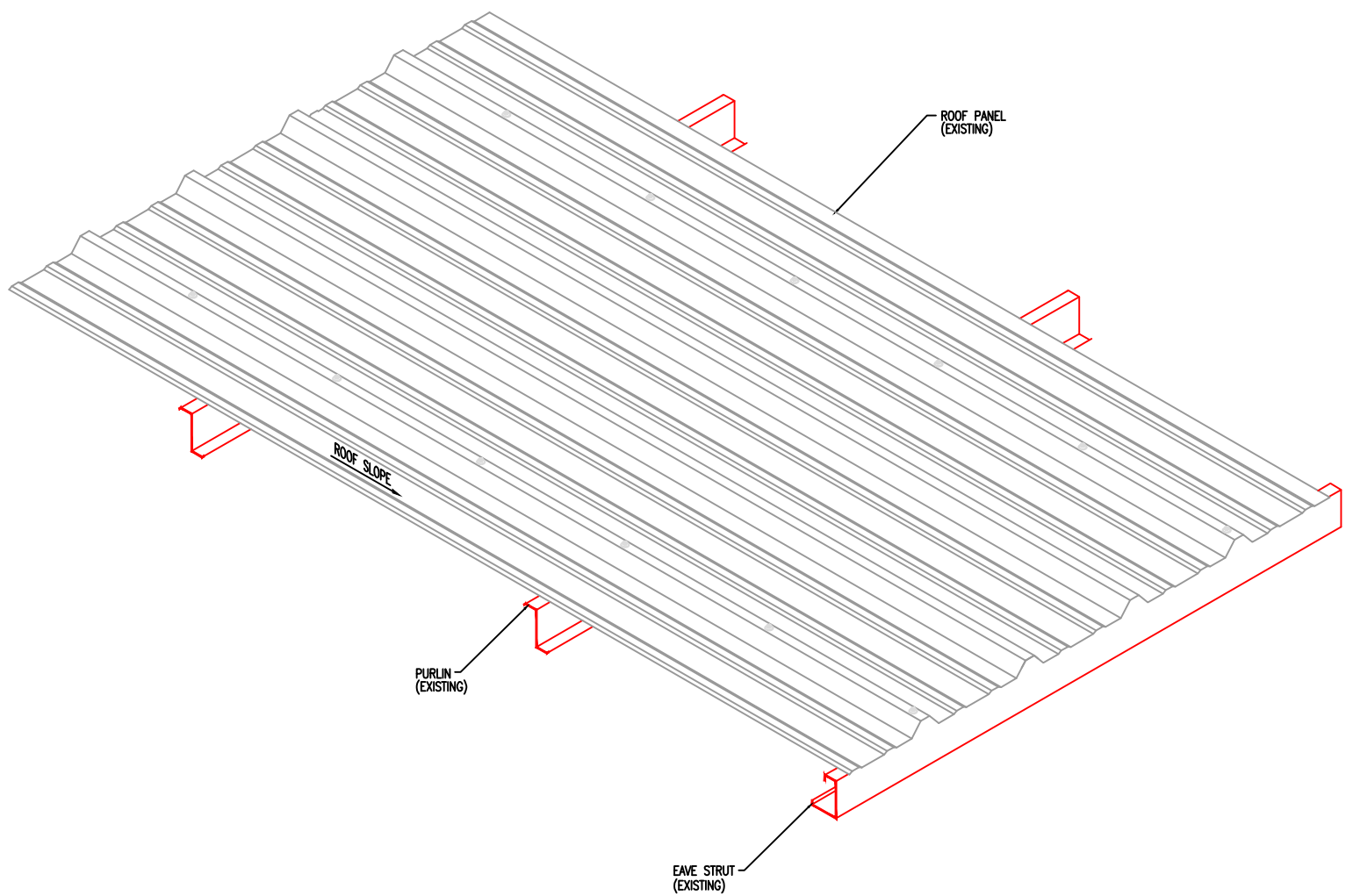


## CROSS SECTION-MEMBER BETWEEN PURLINS

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 8-

## NOTES:

1. EXISTING ROOF PANEL LAYOUT.

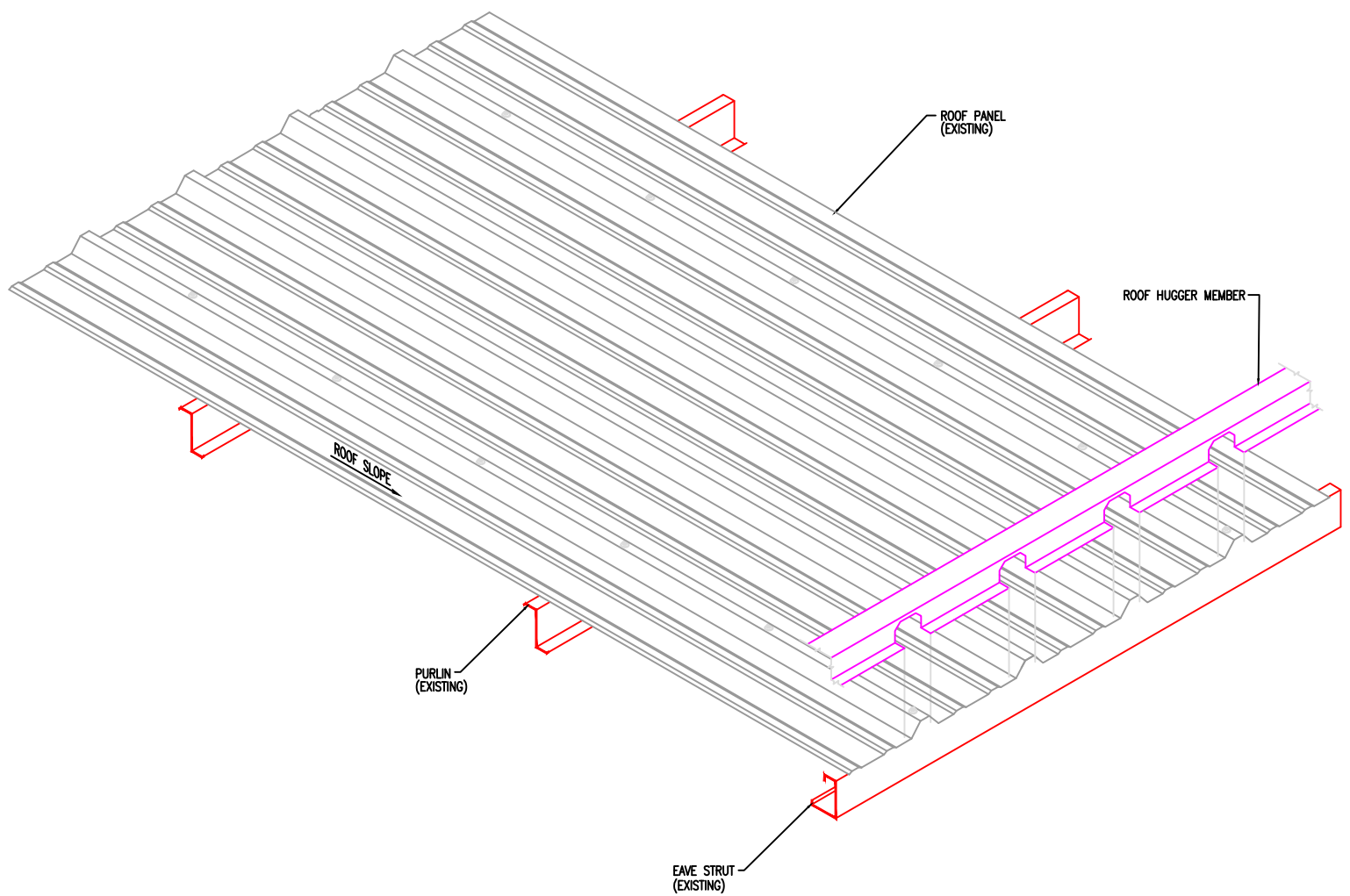


STEP 1

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 8-

## NOTES:

1. INSTALL ROOF HUGGER MEMBER OVER EXISTING EAVE STRUT. CENTER PANEL RIB IN ROOF HUGGER CUT-OUT.

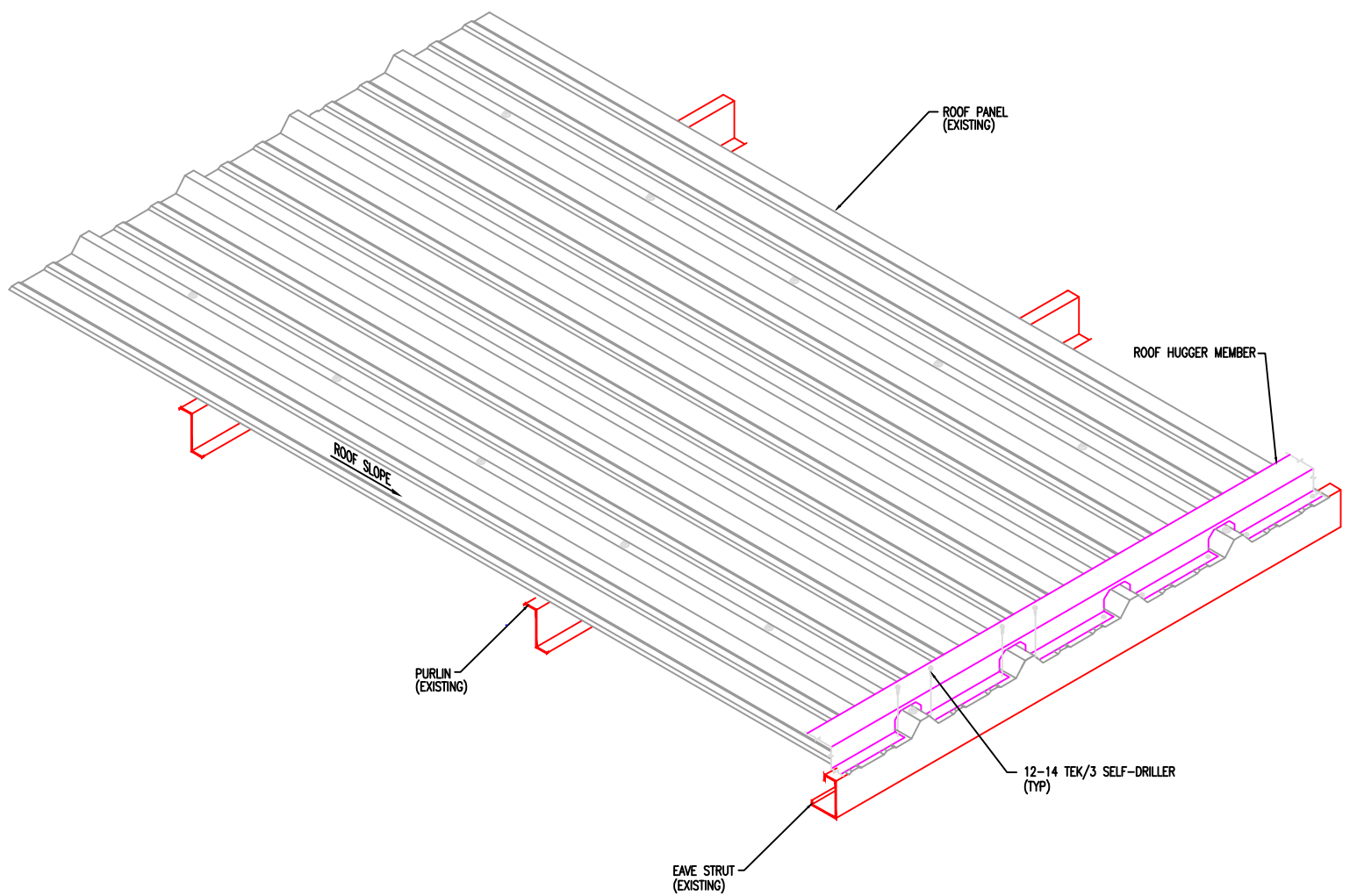


## STEP 2

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 8-

## NOTES:

1. SECURE ROOF HUGGER MEMBER TO EXISTING EAVE STRUT WITH 12-14 TEK/3 SELF-DRILLERS W/O WASHER (2 PER TAB)

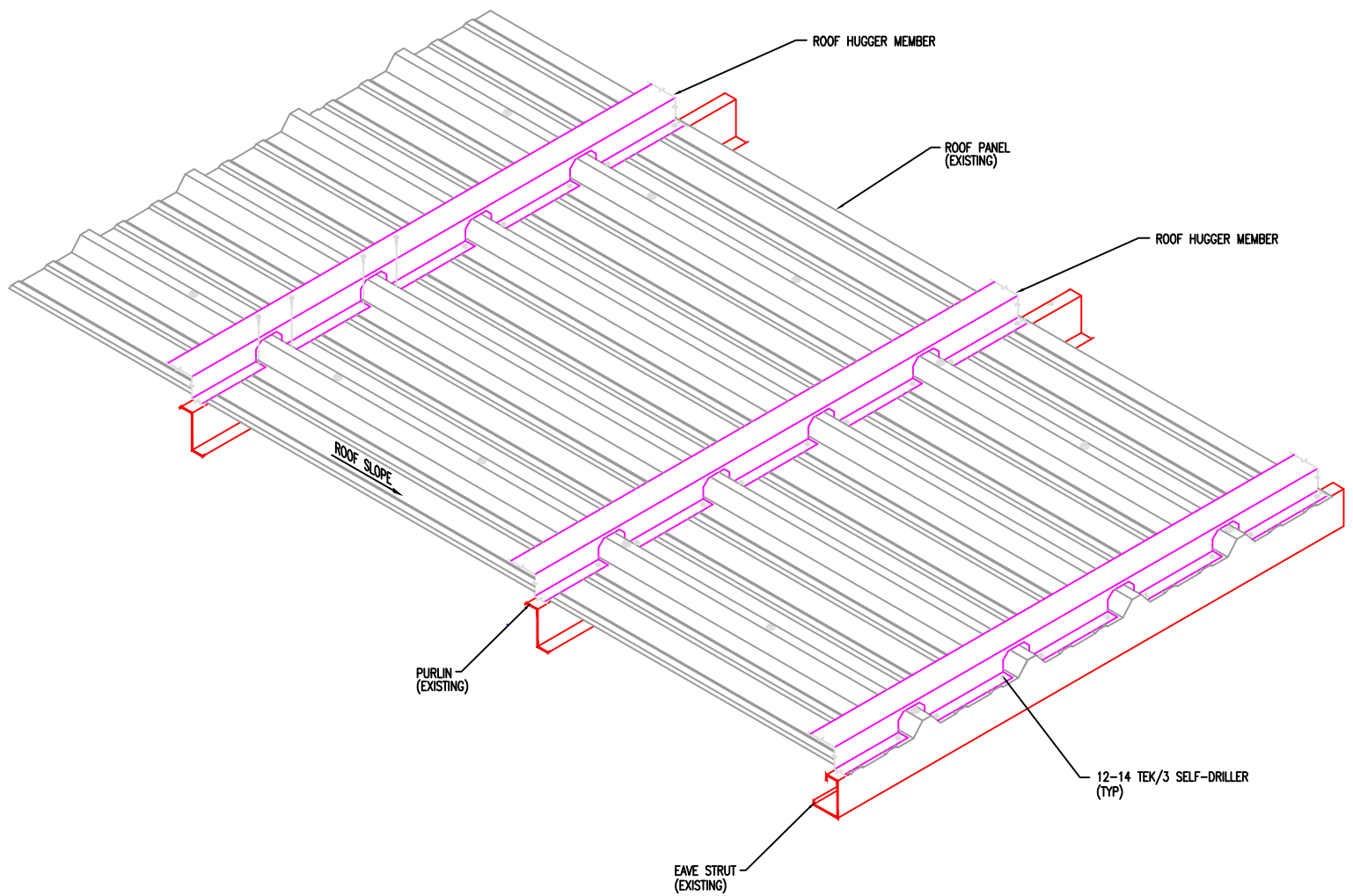


## STEP 3

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 8-

## NOTES:

1. INSTALL SUBSEQUENT ROOF HUGGER MEMBERS AT EACH EXISTING PURLIN

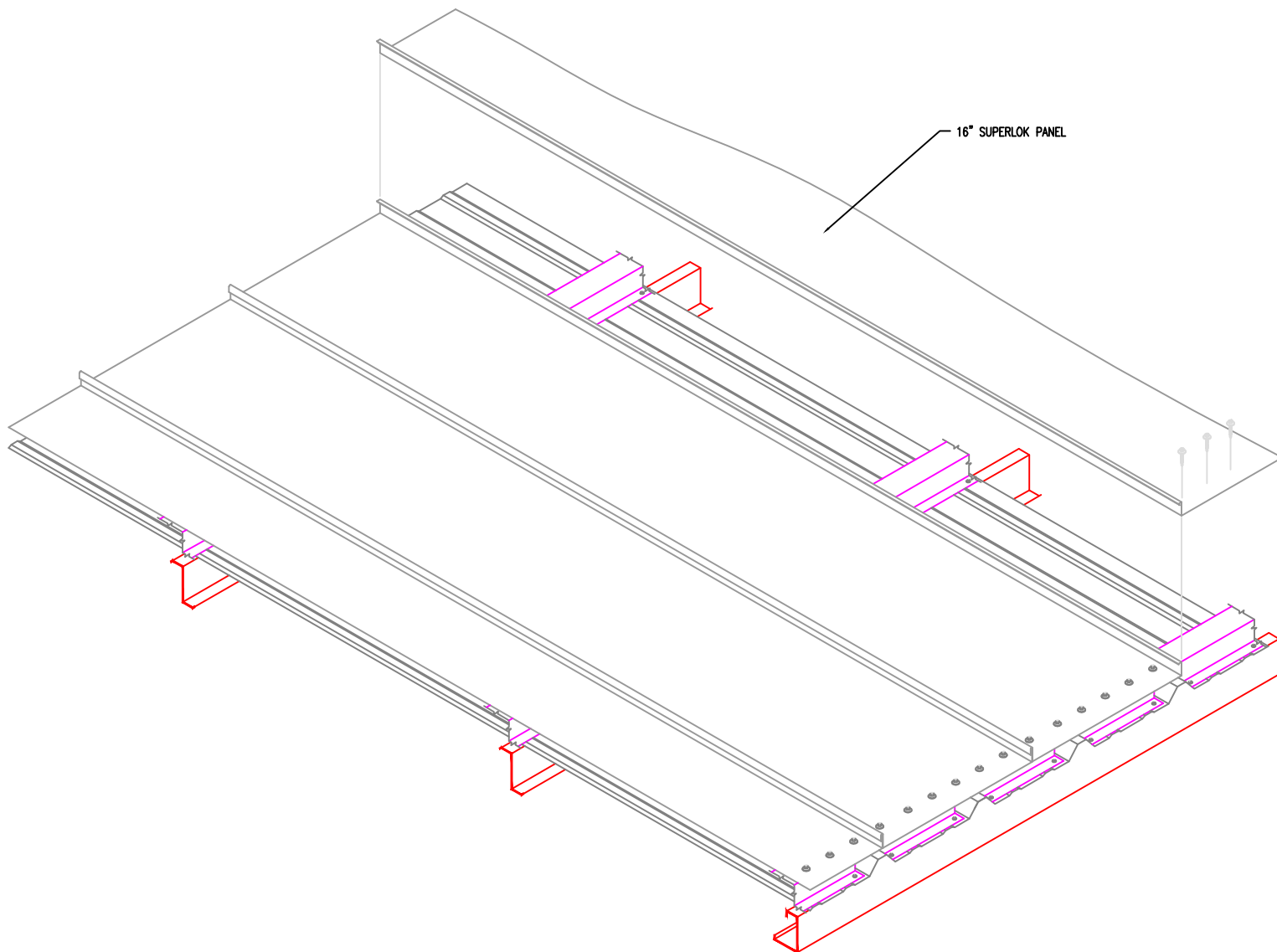


## STEP 4

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 8-

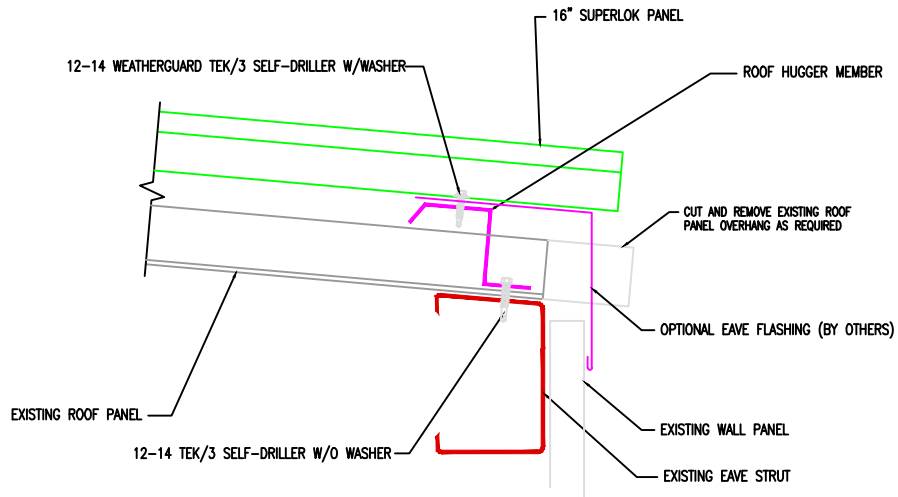
## NOTES:

1. INSTALL NEW ROOF PANELS

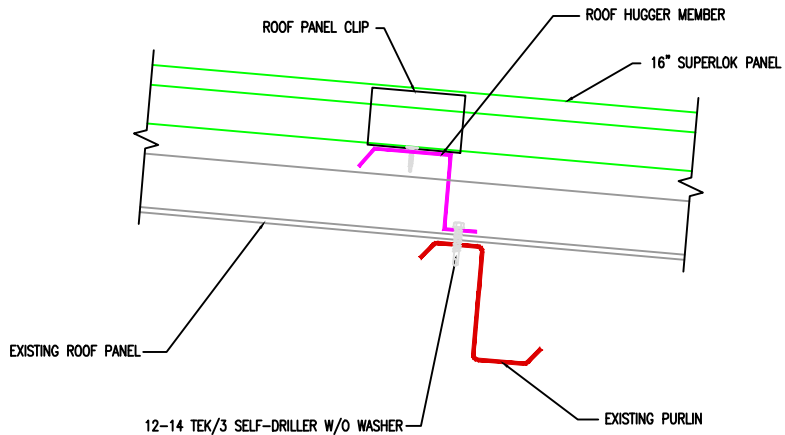


STEP 5

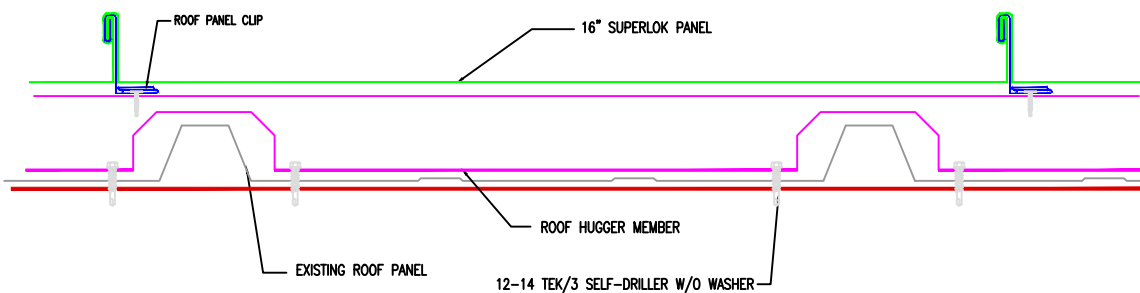
# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 8-



## CONNECTION AT EAVE



## CONNECTION AT PURLIN

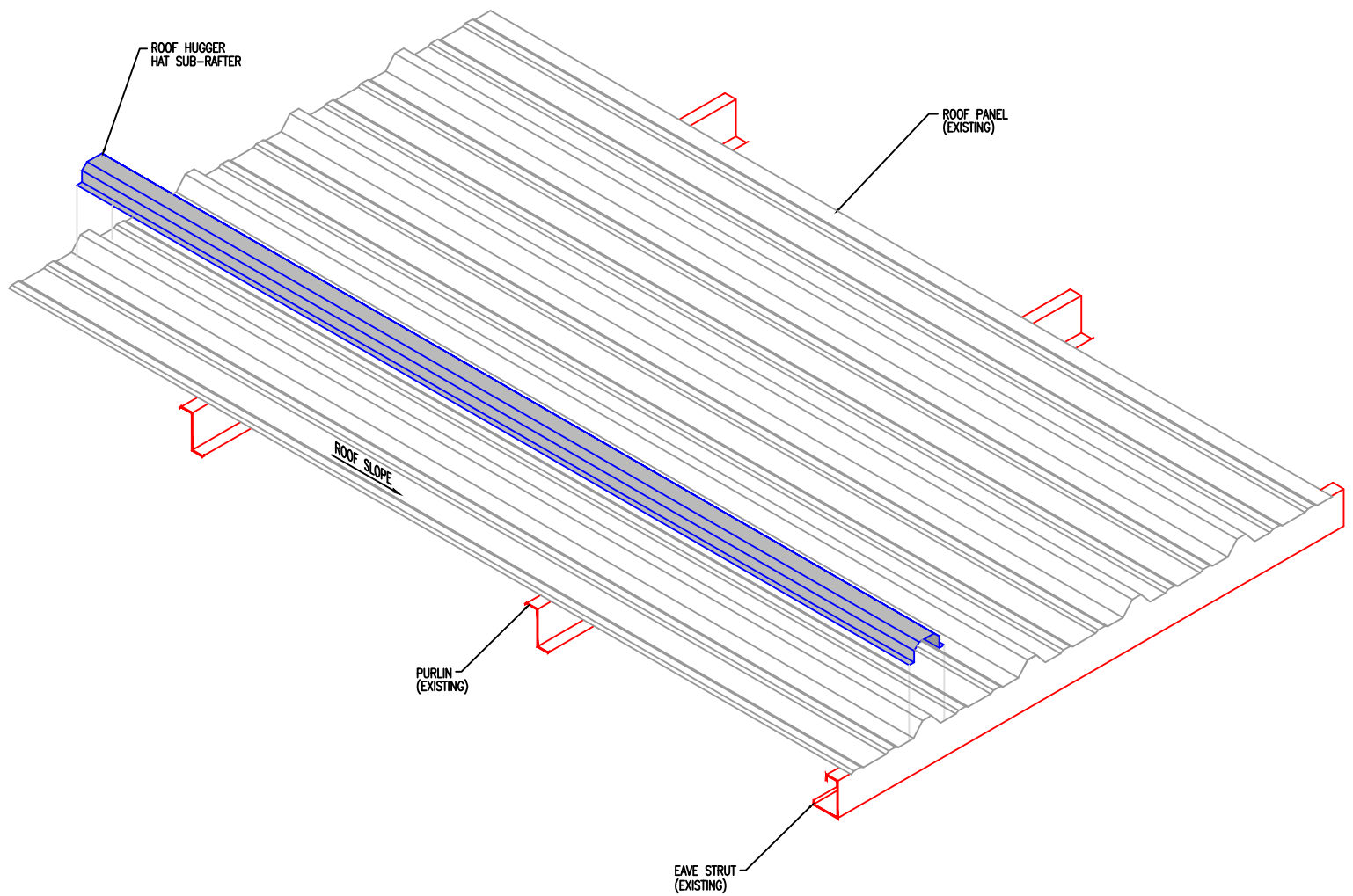


## CROSS SECTION

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 9-

## NOTES:

1. EXISTING ROOF PANEL LAYOUT.



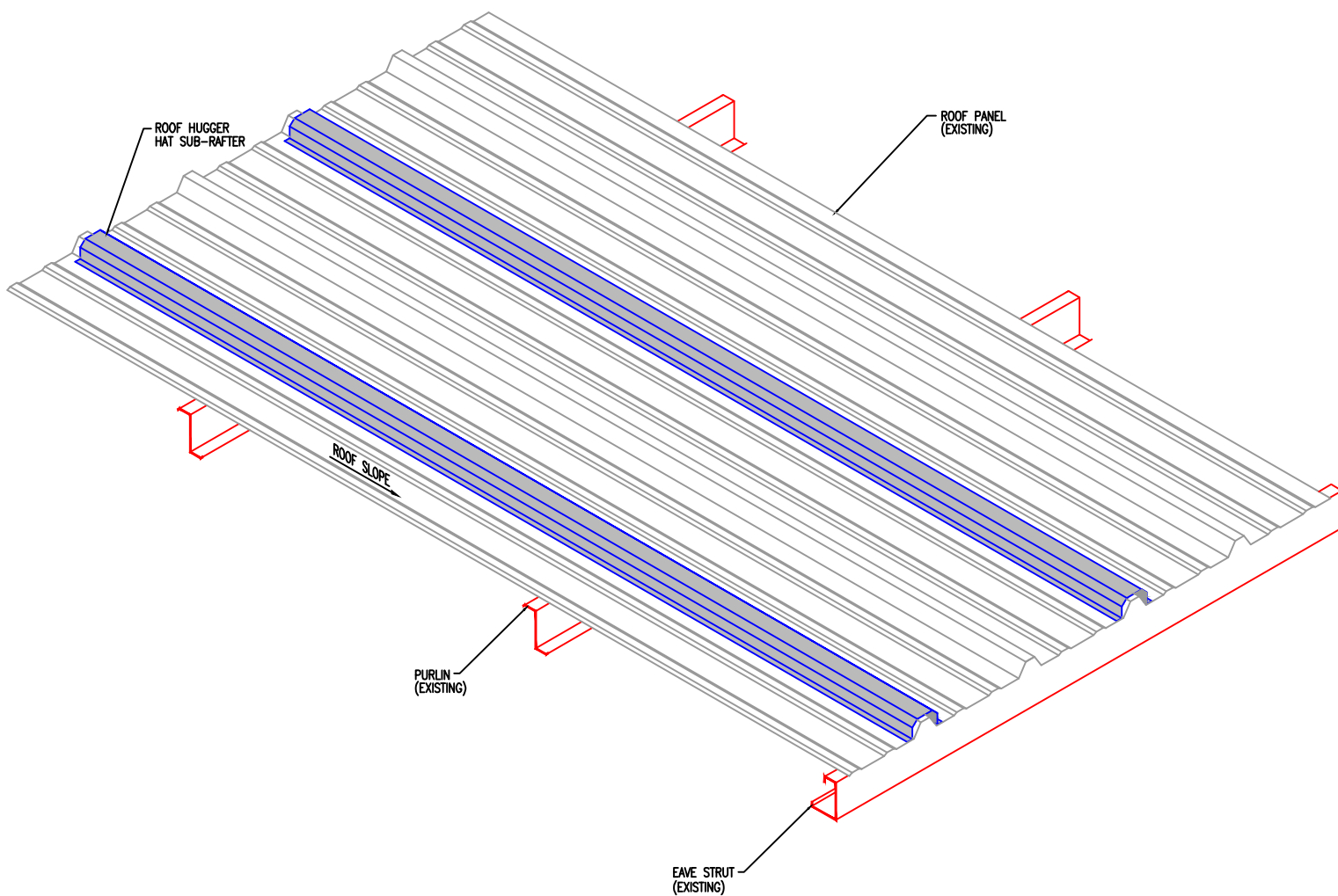
**STEP 1**



# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 9-

## NOTES:

1. LOOSELY PLACE HAT SUB-RAFTERS 2'-0" O.C. FOR LENGTH OF ROOF HUGGER OR WIDTH OF EDGE ZONE, WHICH EVER IS LESS.

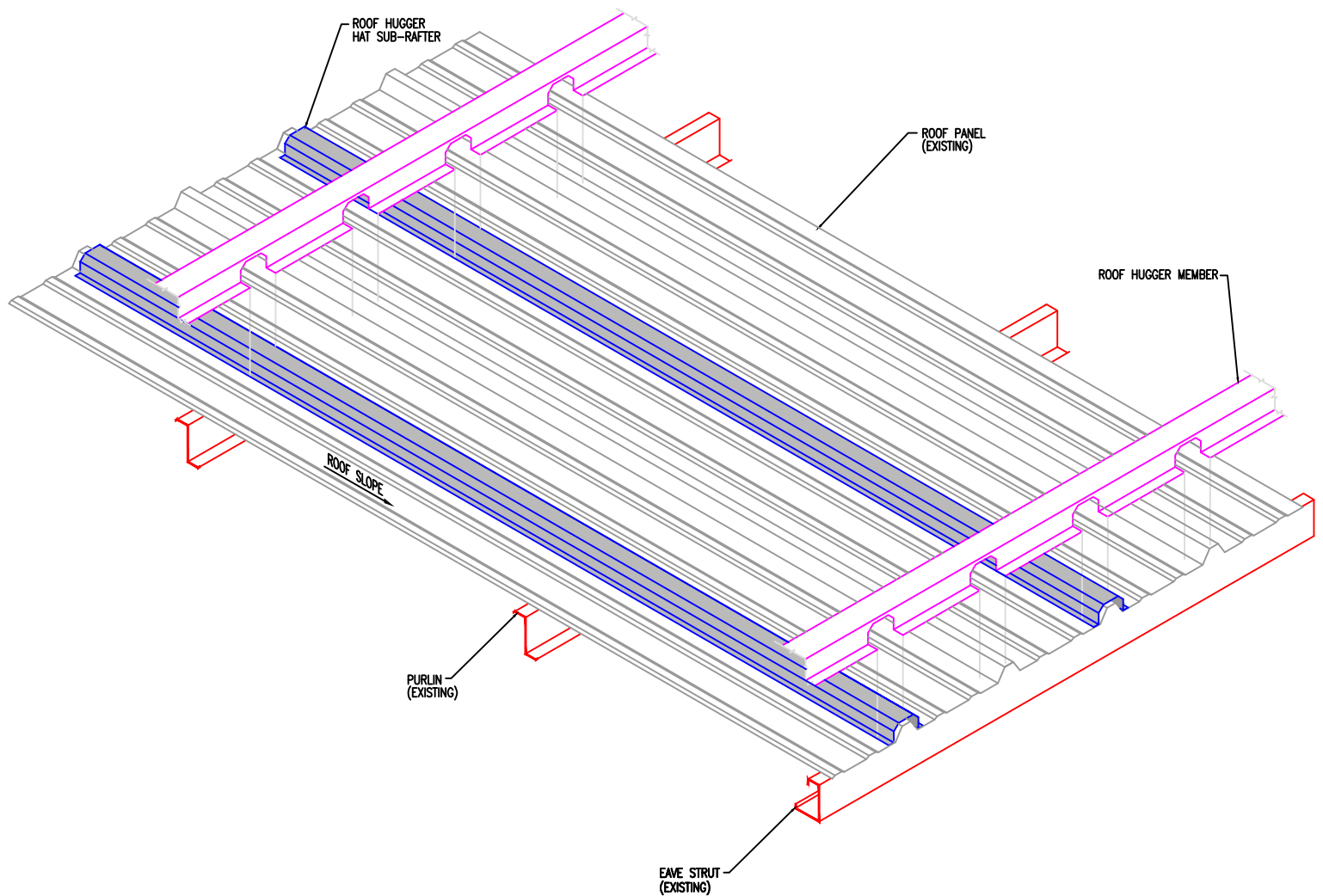


## STEP 2

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 9-

## NOTES:

1. PRESS A MINIMUM OF 2 ROOF HUGGER MEMBERS OVER HAT SUB-RAFTERS.

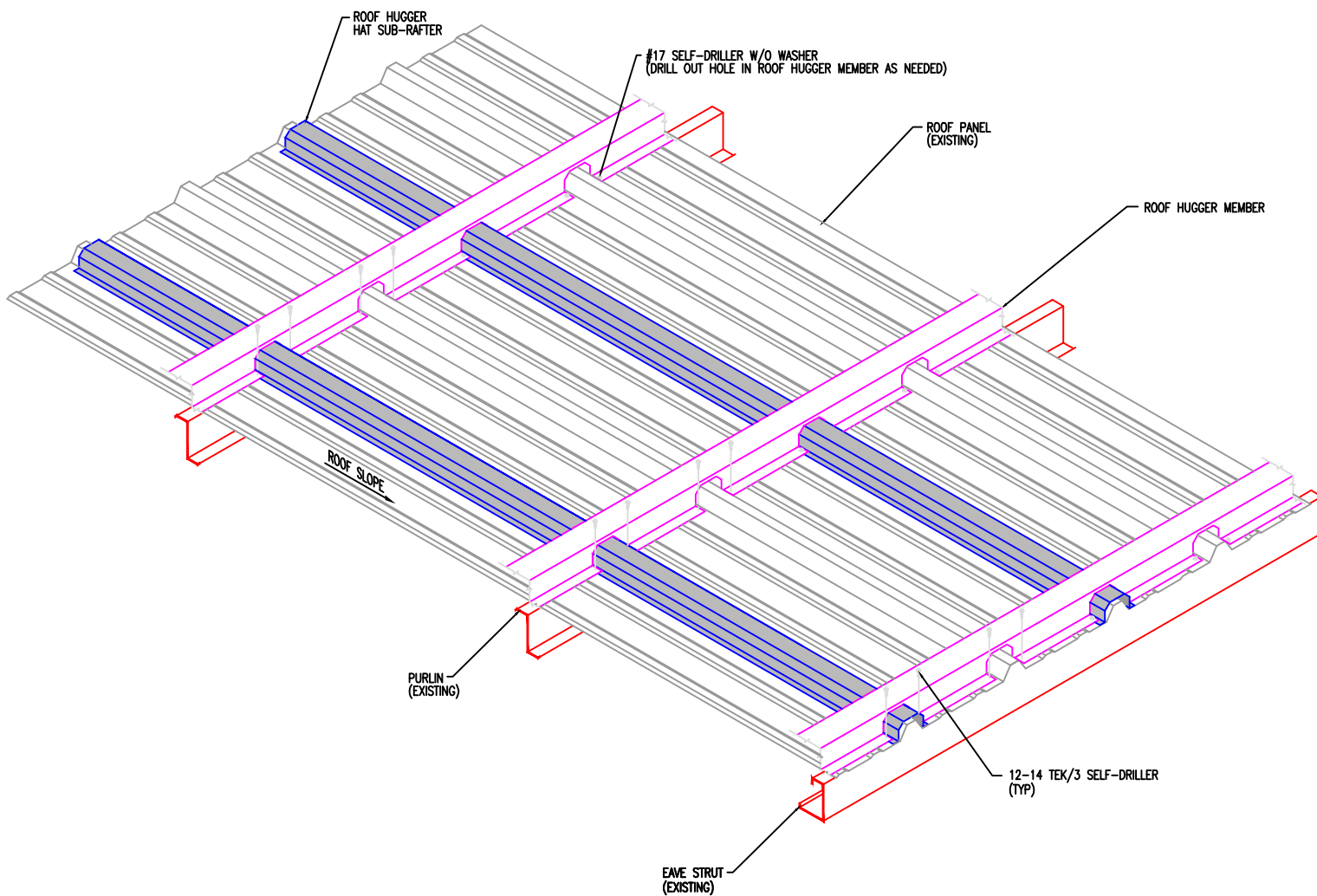


## STEP 3

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 9-

## NOTES:

1. ATTACH ROOF HUGGERS THROUGH SUB-RAFTER INTO EXISTING EAVE STRUT/PURLIN - PRE-DRILL HAT SUB-RAFTER IF NEEDED.
2. SECURE ROOF HUGGER MEMBER TO HAT SUB-RAFTER WITH 12-14 TEK/3 SELF-DRILLER W/O WASHER (1 PER SIDE) AND INSTALL #17 SELF-DRILLERS INTO EXISTING PANELS (1 EACH SIDE OF MAJOR RIBS. (DRILL OUT HOLE IN ROOF HUGGER MEMBER AS NEEDED).

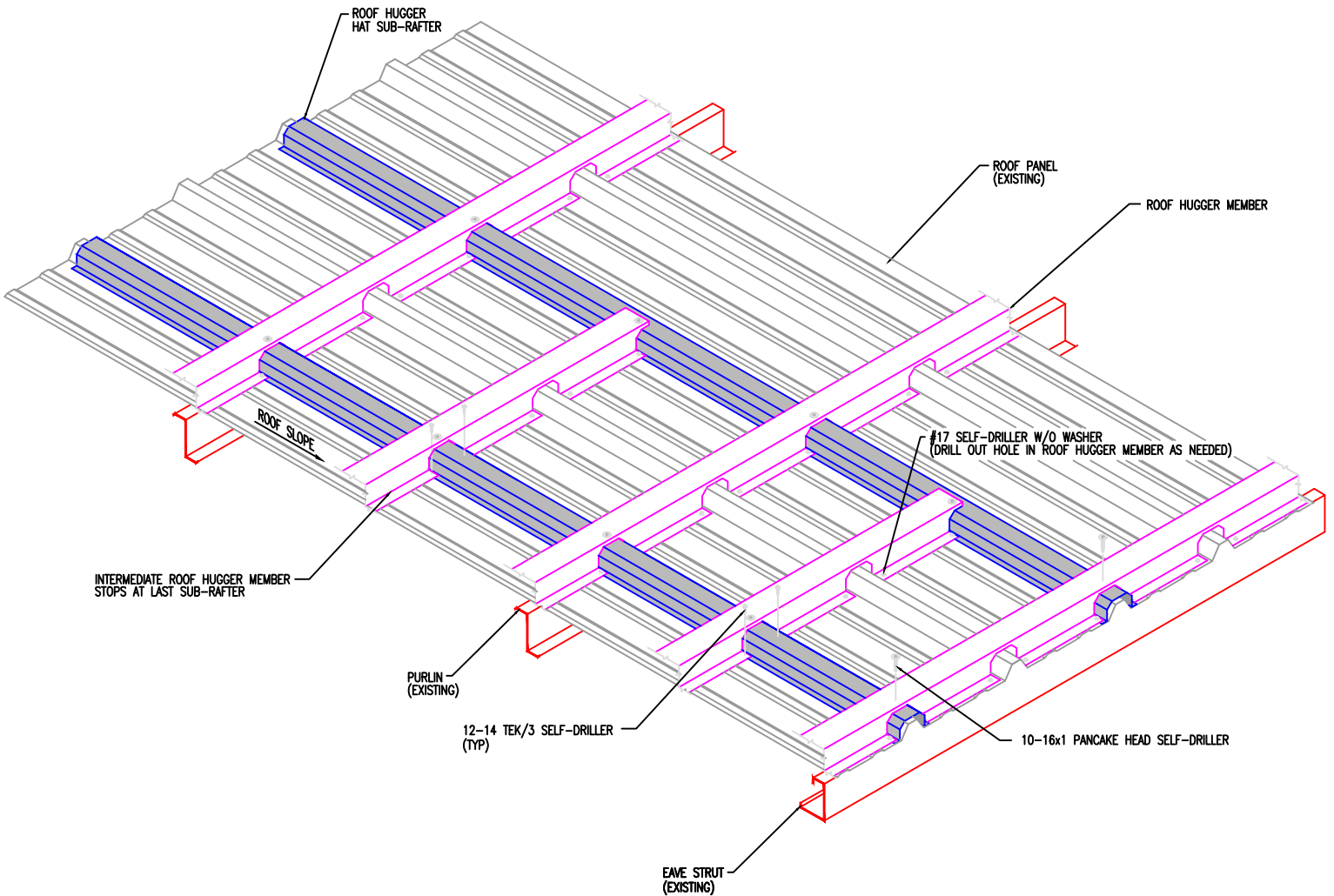


## STEP 4

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 9-

## NOTES:

1. INSTALL SUBSEQUENT INTERMEDIATE ROOF HUGGER MEMBERS BETWEEN PURLINS
2. SECURE ROOF HUGGER MEMBER TO HAT SUB-RAFTER WITH 12-14 TEK/3 SELF-DRILLER W/O WASHER (1 PER SIDE) AND INSTALL #17 SELF-DRILLERS INTO EXISTING PANELS (1 EACH SIDE OF MAJOR RIBS. (DRILL OUT HOLE IN ROOF HUGGER MEMBER AS NEEDED).
3. ATTACHED TOP FLANGE OF ROOF HUGGER MEMBER TO ROOF HUGGER SUB-RAFTER WITH 10-16x1 PANCAKE HEAD FASTENER (1 PER INTERSECTION).

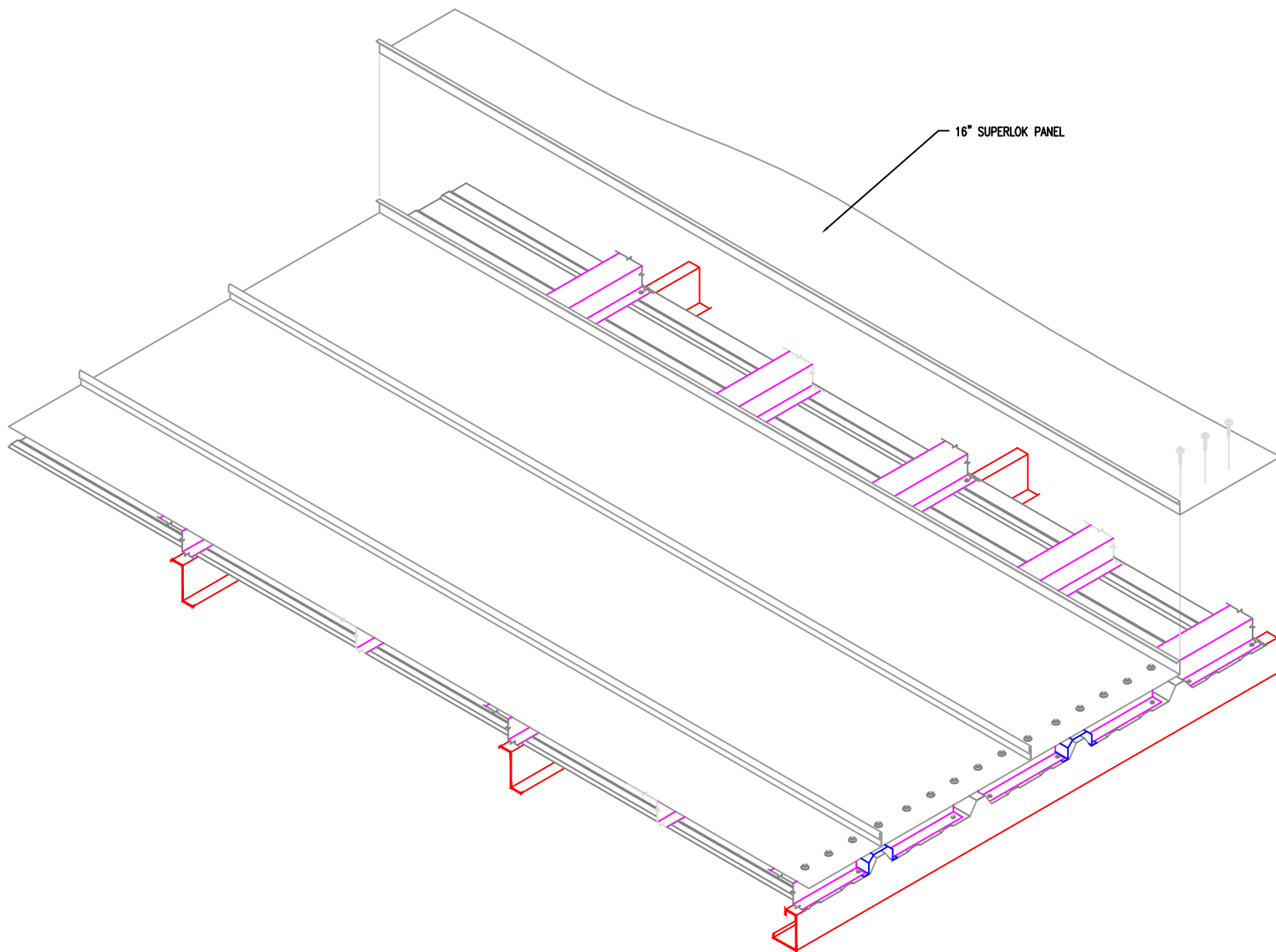


## STEP 5

# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 9-

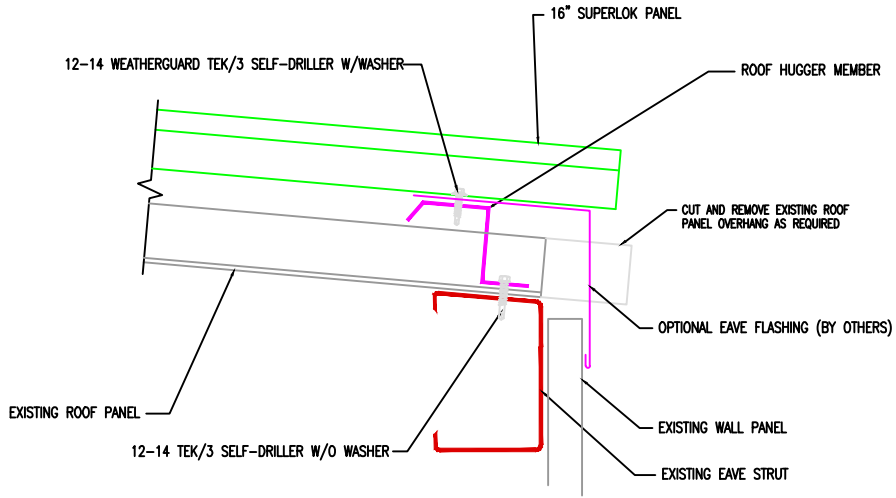
## NOTES:

1. INSTALL NEW ROOF PANELS

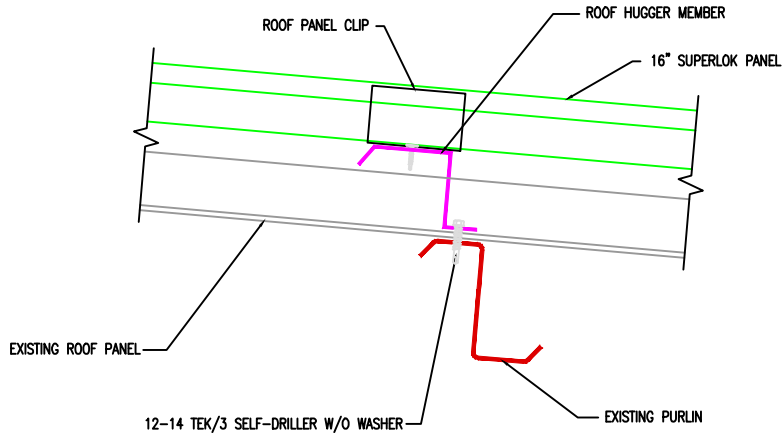


STEP 6

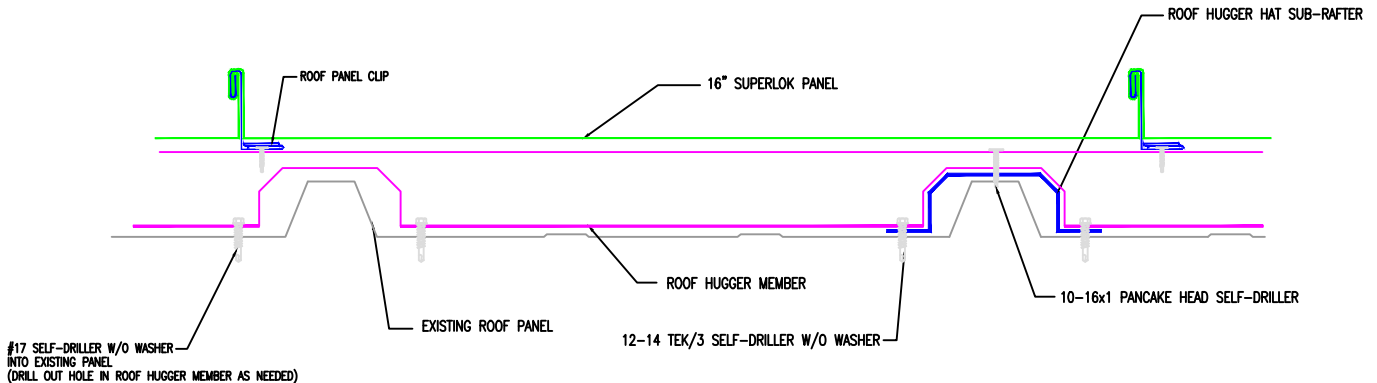
# ROOF HUGGER INSTALLATION GUIDE -SYSTEM 9-



## CONNECTION AT EAVE



## CONNECTION AT PURLIN



## CROSS SECTION-MEMBER BETWEEN PURLINS