ACCESSORIES TABLE OF CONTENTS

8.0.1

PRODUCT & ENGINEERING MANUAL

PRODUCT & ENGINEERING MANUAL

FRAMED OPENING FEATURES

The following guidelines are Valley Steel Building Systems standards and may be adjusted on a per job basis.

- All exposed framing is prime painted.
- Certain loading conditions require the use of hot-rolled structural channel. In such cases, pre-drilling for panel fasteners is required.
- All overhead door framed openings are field located, unless located on plans at quote and order entry.
- Jambs are extended to the next standard girt elevation or eave strut for door track attachment.
- Standard jamb design allows for the support of roll-up doors up to a total door weight of 2000#.
- When vertical lift doors are specified, jamb extensions are provided up to twice the door height or eave strut.
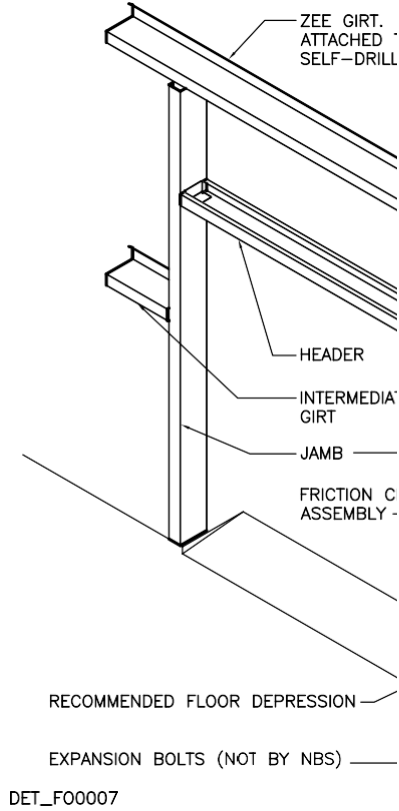
ZEE GIRT.
ATTACHED
SELF—DRILL

HEADER

INTERMEDIAT
GIRT

JAMB

FRICTION C
ASSEMBLY -

RECOMMENDED FLOOR DEPRESSION

EXPANSION BOLTS (NOT BY NBS)

DET_F00007

BYPASS
1'-2"

CORNER
1'-4" 1'-4"

INSET
1'-4"

SIDEWALL AT EAVE
2'-0" MIN

PORTAL COLUMN
1'-0"

ADJACENT OPENINGS
1'-0"

ENDWALL
3'-0" MIN

PORTAL RAFTER
1'-4"

VERTICAL LIFT-HIGH LIFT DOORS
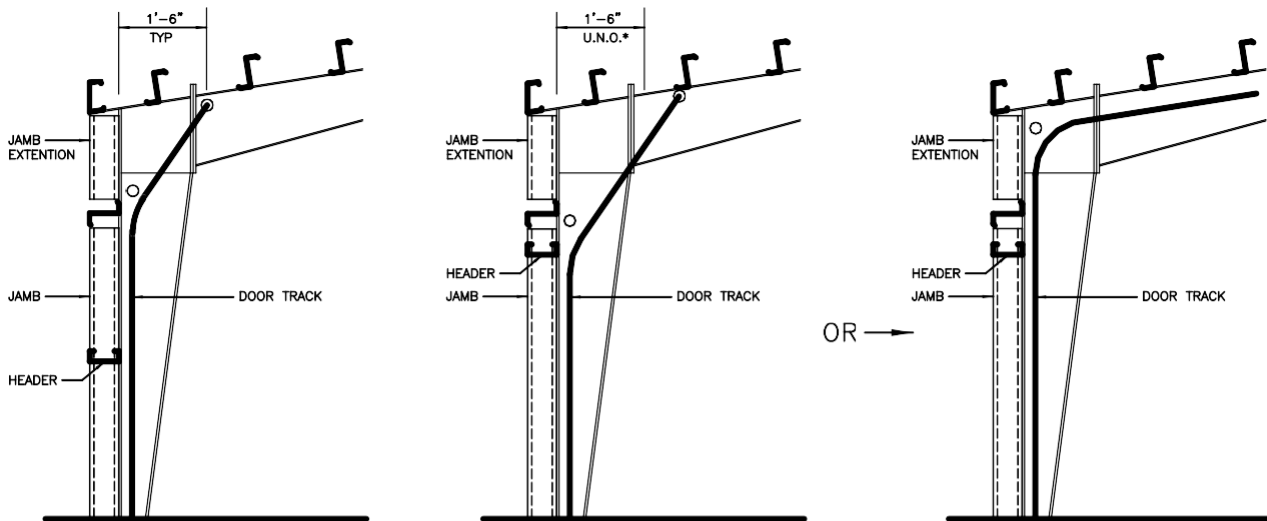
WHEN DOOR HEIGHT IS LESS THAN HALF THE EAVE HEIGHT, THE DOOR HUGS THE WALL. JAMB EXTENTIONS ARE AN ACCEPTABLE SOLUTION TO SUPPORT THE DOOR TRACK.

WHEN DOOR HEIGHT IS GREATER THAN HALF THE EAVE HEIGHT, THE TRACK WILL HUG THE WALL AS HIGH AS POSSIBLE AND THEN FOLLOW THE ROOF.

* AS A RULE OF THUMB, KEEP 1'-6" CLEARANCE UNO.

② VERTICAL LIFT (HIGH LIFT) DOORS

DOOR JAMBS MUST EXTEND 2 X DOOR HEIGHT + 12" TO EAVE — WHICH EVER IS LESS
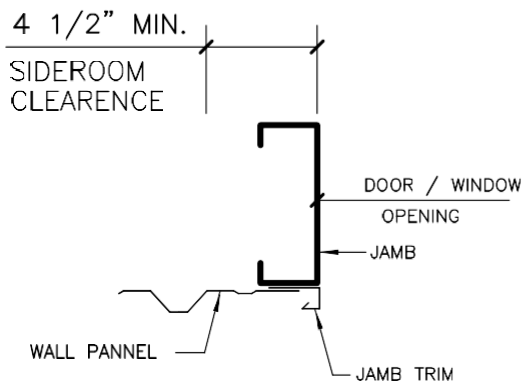
SIDEROOM IS VERY IMPORTANT. THIS IS THE ROOM NEEDED FOR THE HOISTS, TRACKS, AND/OR TORSION SPRING SUPPORT.

TROUBLE SHOOTING AREAS

- FULL FRAME ENDWALLS — HEAD AND SIDE CLEARANCE UNDER FRAME.
- PORTAL FRAMES — HEAD CLEARANCE
- CRANE BEAMS — HEAD CLEARANCE
- MEZZANINE — HEAD, SIDE AND BACK CLEARANCE
- LINER PANEL DETAILS
- FLANGE BRACES

DET_FO0010

WALKDOOR INFORMATION

For additional information about Valley Steel Building Systems standard walk doors, see the Valley Steel Building Systems website at the below link.

NBS Walk Doors

PRE-ASSEMBLED WALK DOOR FEATURES

These features will vary per division.

- All doors are ADA compliant, with glass openings per ADA Standards.
- Foam insulated specifically designed for metal building use.
- Pre-assembled and self-framing for ease of installation. No framed opening required if Valley Steel standard girt spacing is utilized.
- Doors are finished paint or primed paint in white or brown.
- Doors are shipped in wood crates for protection.
- Hinges are ball bearing in powder coated or stainless steel.
- 14 Ga. Heavy Duty 8" Sub Jambs
- Doors leafs are made of 20-gage or 18 gage material.
- Aluminum threshold.
- Top, Bottom and Intermediate Clips
- Weather stripping and kerf weather seal is included.
- Premium sweep

PRE-ASSEMBLED WALK DOOR PRODUCT DESCRIPTION

1. Valley Steel has solid doors available in the following sizes: 3070, 4070, and 6070.
2. The following optional accessories are available:

- Rim Panic Devise
- Lever locks
- Mortise locks with lever
- Deadbolt Cylinders
- Half Glass with tempered, laminated, or insulated glass
- Narrow Lite with tempered, laminated, or insulated glass
- Vision Lite with tempered, laminated, or insulated glass • Heavy Duty Closer
- Security Latch guard
- Crash chain
- Jamb extension
- Swing options (LHR, RHR, LHRA, RHRA)

3. Walk doors are typically keyed alike per project unless specified otherwise.

4. Walk doors are shipped as self-framing if 7'-6" standard girt spacing is utilized.

5. Wind Rated option is available.

Because of unknown variables, Valley Steel **does not** offer fire rated doors or doors to fit in masonry. However these options are available through our door supplier. Please contact your Valley Steel plant for more information.

LAST
DATE:

KNOCK DOWN (FIELD ASSEMBLED) WALKDOORS

Field Assembled walk doors are available from all divisions. Contact your District Sales Manager or the Estimating team for availability.

KNOCK DOWN WALK DOOR FEATURES

These features will vary per division.

- All doors are ADA compliant, with glass openings per ADA Standards.
- Foam insulated specifically designed for metal building use.
- The walk door is shipped knocked down for field assembly.
- Doors are finished paint or primed paint in white or brown.
- Doors leafs are made of 20-gage or 18 gage material.
- Weather stripping and kerf weather seal is included.
- The package is shipped in full cardboard carton.
- All doors have Grade 2 lever locks as standard.

- Hinges are ball bearing in powder coated or stainless steel • 14 Ga. Heavy Duty 8" Sub Jambs
- Aluminum threshold.
- Premium sweep
- Screw package

KNOCK DOWN WALK DOOR PRODUCT DESCRIPTION

1. Valley Steel has solid doors available in the following sizes: 3070, 4070, and 6070.
2. The following optional accessories are available:

   - Rim Panic Devise
   - Lever locks
   - Mortise locks with lever
   - Deadbolt Cylinders

- Half Glass with tempered, laminated, or insulated glass
- Narrow Lite with tempered, laminated, or insulated glass
- Vision Lite with tempered, laminated, or insulated glass
- Heavy Duty Closer
- Security Latch guard
- Crash chain
- Jamb extension
- Swing options (LHR, RHR, LHRA, RHRA)
- Screw package

3. Doors are typically keyed alike per project unless specified otherwise.

4. Wind Rated option is available.

Because of unknown variables, Valley Steel **does not** offer fire rated doors or doors to fit in masonry. However these options are available through our door supplier. Please contact your Valley Steel plant for more information.

LAST
DATE:

STANDARD WINDOW INFORMATION

STANDARD WINDOW FEATURES

- The standard Valley Steel Building Systems window offering is an extruded aluminum frame unit designed specifically for metal building use.
- Each window comes completely assembled for ease of installation.
- Each window is self-flashing. The head and sill trim is factory attached to the window frame. Universal jamb pieces are "snapped" in place without the use of fasteners and work well with all Valley Steel standard wall panel profiles.
- Each window frame features a non-thermal break aluminum frame with ⅛" DSB non-insulated glass or ¾" insulated glass.
- Each window finish is prime-painted and finished with choices of brown, white, or mill finished anodized.
- All windows are boxed per project and stood up on pallets for shipping.

STANDARD WINDOW PRODUCT DESCRIPTION

1. Valley Steel standard windows are available in the following sizes:

Horizontal Slider	Fixed	Fixed / Project-In
3030	2060	3040
4030	4040	
4040	5040	
5030		
6030		

2. Special window sizes and other types are available from Valley Steel on special order and for additional cost with a potential longer delivery.

   NOTE: In locations requiring wind borne debris protection this product requires an impact-resistant covering meeting the requirements of Section

1609.1.2 of the IBC. The covering is not included by the Metal Building Manufacturer.

DAYLIGHTING WITH PRISMATIC SKYLIGHTS

CURB MOUNTED PRISMATIC SKYLIGHTS

- Valley Steel Curb Mounted Prismatic Skylights are perfect for new construction or retrofit applications with any Valley Steel roof system.

- Valley Steel Curb Mounted Prismatic Skylights are an economical method to allow natural lighting into the building, thus reducing the need for electric light.

- Valley Steel Curb Mounted Prismatic Skylights are designed without the need for secondary framing between the purlin/joist members, but allows for expansion and contraction while resisting uplift. This secondary framing elimination results in significant savings not only in material but also engineering, detailing and construction labor.

- Valley Steel Curb Mounted Prismatic Skylights have a curb height of 7", have mitered and fully welded corners, a fully welded in place water cricket and a 1" splash lip on entire curb perimeter. Curbs are insulated as a standard and are built to be parallel with the roof slope.

- Valley Steel Curb Mounted Prismatic Skylights are available in (4) standard sizes: 4896, 6072, 24120 and 4848. Additional sizes available upon request.

- Valley Steel Curb Mounted Prismatic Skylights are provided with pre-punched holes around the perimeter of the curb to ensure proper fastener spacing and to have optimum weather tightness, with the curb side fasteners being internal which again improves weatherability and aesthetics.

- Valley Steel Curb Mounted Prismatic Skylights offer an integrated safety/security fame with each unit.

- For more in-depth information regarding the Valley Steel Curb Mounted Prismatic Skylights visit this location www.valleysteelinc.com

TRANSLUCENT PANEL INFORMATION

AC0105PE – VALLEY STEEL CFR™ STANDING SEAM ROOF TRANSLUCENT PANEL FEATURES

- The Valley Steel CFR™ translucent panel units are available in Polar White. These units are completely factory assembled and are available as either insulated or non-insulated.

- The Valley Steel CFR™ translucent panel units is an economical method to allow natural lighting into the building and is **available** for Underwriters Laboratory (UL) rated roof systems. Whenever possible, it is recommended that Valley Steel translucent wall panels be used in lieu of Valley Steel CFR™ translucent panel units.

- The Valley Steel CFR™ panel and translucent panel unit is designed so that the unit laps and seams directly into the roof, without the need for field cutting.

- The Valley Steel CFR™ translucent panel unit is designed for secondary spacing of 5'-0", 5'-6", and 6'-0".

  NOTE: UL rating is available for 5'-0" purlin spacing only. The UL rating is achieved by simply hand-crimping the full length of the Valley Steel CFR™ translucent panel unit. No extra framing or materials are required.

- Valley Steel CFR™ translucent panel units **can** be placed end to end. However, Valley Steel CFR™ translucent panel units **cannot** run continuously from eave to eave or be placed at the eave of a building. Valley Steel CFR™ translucent panel

units also **cannot** be placed directly beside each other and it is recommended that at least
(4) CFR panels occur between Valley Steel CFR™ translucent panel unit locations and in from each end wall.

- This Valley Steel CFR™ translucent panel unit cannot be used as an erection platform.

- The Valley Steel CFR™ panels above, between and below the Valley Steel CFR™ translucent panel unit must bear on a minimum of (3) purlins, preferably (4). Always indicate Valley Steel CFR™ translucent panel unit locations on the order documents.

- Buildings with less than 60'-0 panel runs typically have (1) Valley Steel CFR™ translucent panel unit per run.

- The span capacities of Valley Steel CFR™ translucent panel units are identical to the spans of Valley Steel CFR™ panels without translucent panels. See **PE Section 5.0 CFR™ STANDING SEAM ROOF SYSTEM** for panel spans.

TRANSLUCENT PANEL

END INSUL. TRIM

INSULATION FRAME IS TEMPORARILY PLACED ON TOP OF INSULATION, TO PROPERLY LOCATE AND REMOVE THE FIBERGLASS.

SIDE TRIM
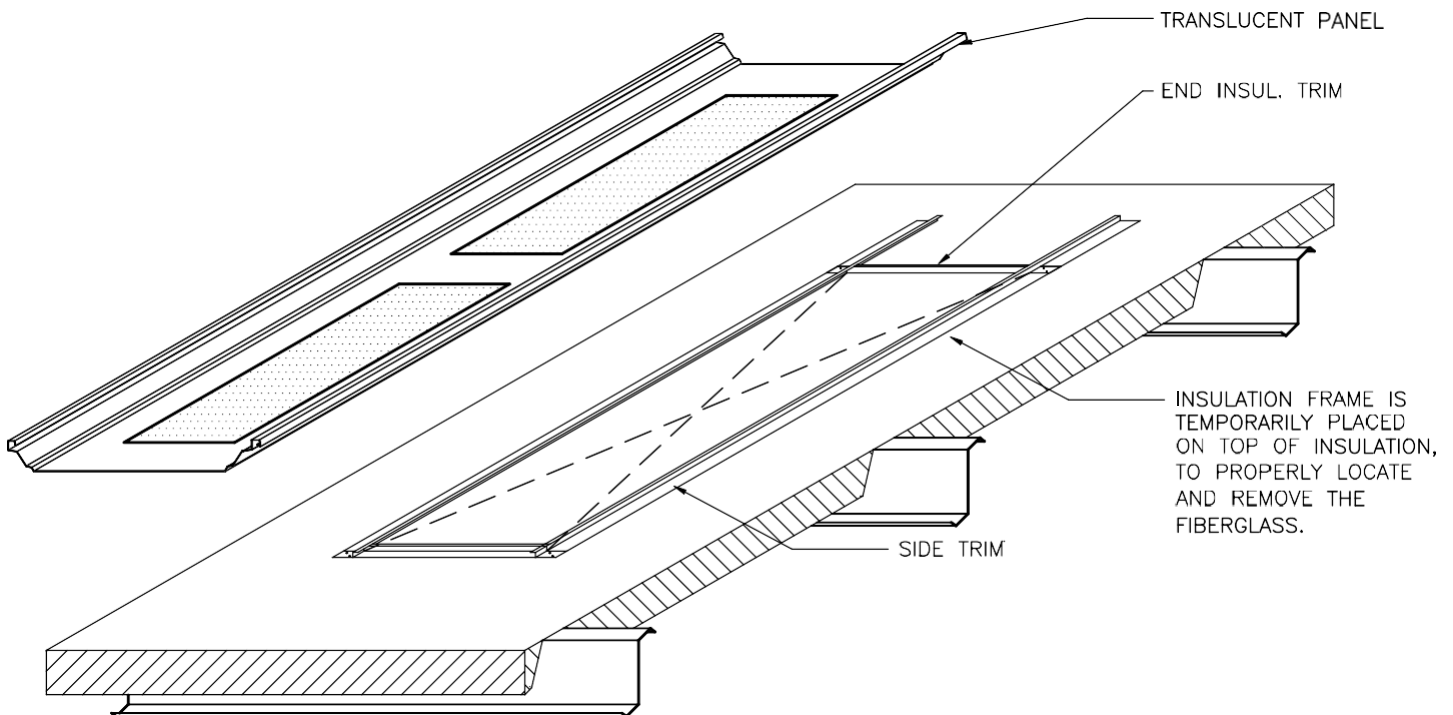
AC0090PE – VALLEY STEEL CLASSIC ROOF™ TRANSLUCENT PANEL INFORMATION

- Whenever possible, it is recommended that Valley Steel translucent wall panels be used in lieu of Valley Steel Classic Roof™ translucent panels.

- Valley Steel Classic Roof™ translucent panels are an economical method to allow natural lighting into the building.

- Valley Steel Classic Roof™ translucent panels are field installed with self-drilling screws. Tape mastic is used at the panel perimeter.

- Valley Steel Classic Roof™ translucent panels are available in 10'-8" & 11'-8" standard nominal lengths.

- Valley Steel Classic Roof™ translucent panels shall not be placed side-to-side or end- to-end. A minimum of (4) full panel runs is recommended between Valley Steel Classic Roof™ translucent panel locations. Valley Steel Classic Roof™ panels above and below Valley Steel Classic Roof™ translucent panels shall attach to a minimum of (3) purlins, preferably (4). Always indicate Valley Steel Classic Roof™ translucent panel locations on the order documents.

- Valley Steel Classic Roof™ translucent panels shall not be placed at the eave of the building.

- Buildings with less than 60'-0 panel run can typically only have (1) Valley Steel Classic Roof™ translucent panel per run.

- Contact the engineering team for applicable Valley Steel Classic Roof™ translucent

panel spans.

NEVER STEP, STAND,
OR APPLY WEIGHT TO
TRANSLUCENT PANELS.
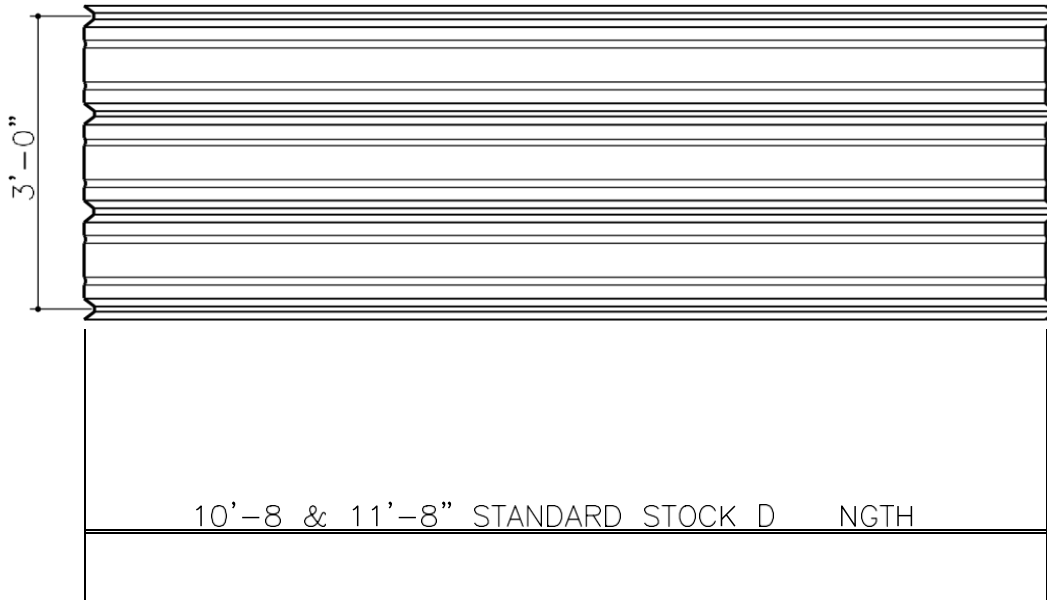
3'-0"

10'-8 & 11'-8" STANDARD STOCK D   NGTH

AC0095PE – VALLEY STEEL CLASSIC ROOF™ STANDARD TRANSLUCENT PANEL LOCATIONS

REVISION

02/16/15

NAME IF

LAST DETAIL

APPLICABLE

DATE: 8.0.17

BY: CHK:

AK   EGB   **AC0095PE.DWG**

INDICATES BUILDING WIDTH

40'-0"   CENTERLINE OF RIDGE

50'-0"   CENTERLINE OF RIDGE

60'-0"   CENTERLINE OF RIDGE

CENTERLINE OF RIDGE

INDICATES TYPICAL METAL PANEL RUN

70'-0"   CENTERLINE OF RIDGE

80'-0"   CENTERLINE OF RIDGE

INDICATES TRANSLUCENT PANEL

90'-0"   CENTERLINE OF RIDGE

100'-0"   CENTERLINE OF RIDGE

INDICATES METAL PANEL RUN AT TRANSLUCENT PANEL LOCATIONS

110'-0"   CENTERLINE OF RIDGE

120'-0"

TRANSLUCENT PANELS REQUIRE 5'-0 PURLIN SPACING.

TRANSLUCENT PANELS MUST BE **SEPARATED** END FOR END BY **A TWO-SPAN** METAL PANEL.

TRANSLUCENT PANELS ARE NOT DESIGNED TO SUPPORT **THE** WEIGHT OF **A** PERSON ON **THE** ROOF.

TRANSLUCENT PANEL LOCATIONS FOR CLASSIC ROOF

LAST DETAIL   APPLICABLE

DATE: 8.0.18

BY: CHK:

AC0100PE – WALL TRANSLUCENT PANEL INFORMATION

- Valley Steel translucent wall panels are an economical method to allow natural lighting into the building and are available in Valley Steel Classic Wall™, Valley Steel Reverse Classic Wall™, and Valley Steel Accent Wall™ profiles.

- Valley Steel translucent wall panels are field installed with self-drilling screws and ⅜" grommet seal fasteners (field drilling required).

AAJ   MDK

AC0100PE.DWG

- Valley Steel translucent wall panels are available in 5'-0" & 10'-0" nominal lengths as a standard.

- Always indicate Valley Steel translucent wall panel locations on the order documents as well as noting any other special requirements.

- As a standard, the panel at the end of any wall with Valley Steel translucent wall panel will be a full height metal panel for corner trim attachment.

- Contact the engineering team for applicable Valley Steel translucent wall panel spans.

3'-0"

5'-4 & 10'-8" STANDARD STOCKED LENGTH
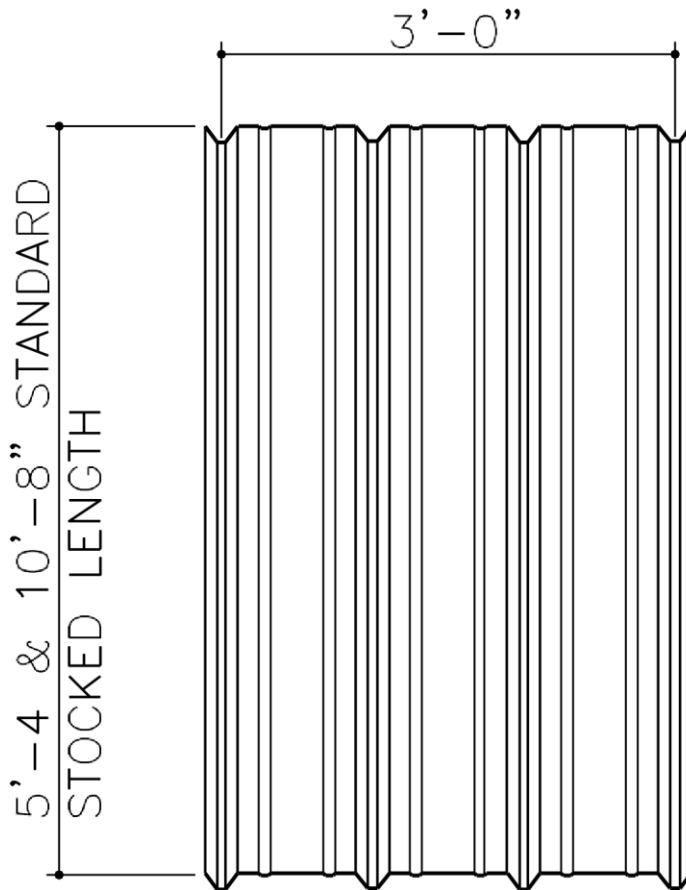
NOTE: CLASSIC PROFILE SHOWN. WALL LITES ARE ALSO AVAILABLE IN ACCENT PROFILE.

ROOF CURB INFORMATION

AC0050PE – FLOATING CURB (NON-STRUCTURAL)

The below curb is for use with Valley Steel CFR™ roof, Valley Steel VR16 II™ roof, and Valley Steel Classic Roof™ systems.

REVISION

03/12/15

NAME IF

LAST DETAIL

8.0.21

APPLICABLE

DATE:

BY: CHK:

AAJ   MDK   **AC0100PE.DWG**

CFR ROOF SHOWN
ALSO AVAILABLE WITH CLASSIC
ROOF AND VR16II

DIVERTER ANGLE USED ON HIGH SIDE
OF CURB (NOT VISIBLE)

INSULATION

RIB COVER

2-1/2" WIDE TAPE MASTIC BETWEEN
PANEL AND CURB TYPICAL AT PERIMETER
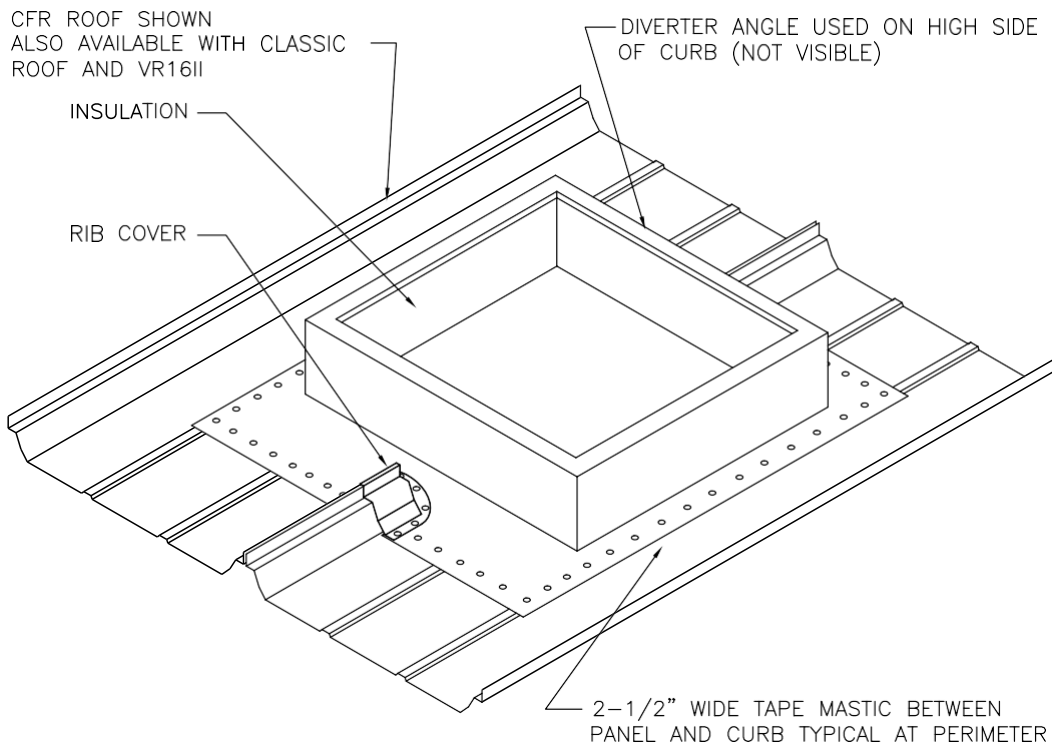
NOTES:

1. Use self-drilling screws at 4" o.c. at curb perimeter through center of 2 ½" tape mastic.

2. For sub-framing, see details in **Roof-Top Unit Sub Framing** section.

3. To be used for RTU's < 6000# with Valley Steel CFR™ roof systems with fixed clips and all floating clip roof systems < 750#

   To be used for all RTU's < 6000# with Valley Steel Classic Roof™ system.

4. Available unpainted only. May be field painted to match roof color if desired.

LAST DETAIL   APPLICABLE

DATE: **8.0.22**
BY: CHK:

AC0060PE – FLOATING CURB (STRUCTURAL)

The below structural floating curb is for use with Valley Steel CFR™ and Valley Steel VR16 II™ roof systems.
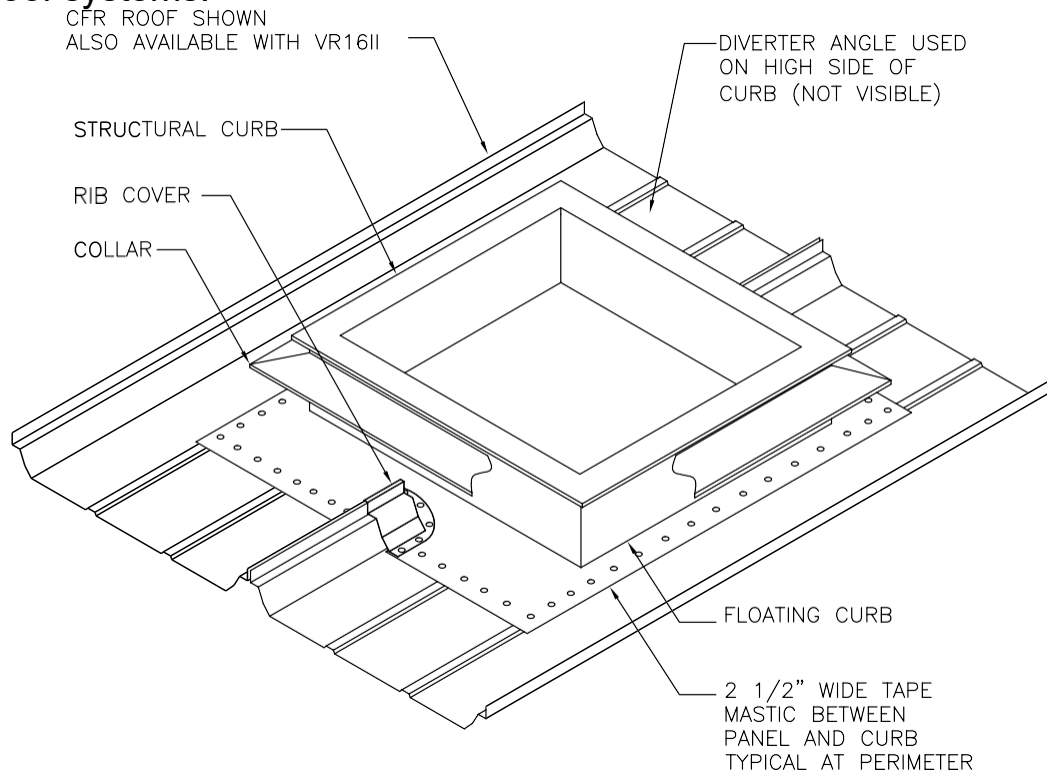
NOTES:

1. Inner Structural curb is attached to sub-framing. Floating curb is attached to roof panels <u>only</u>.
2. Opening size varies. Include the roof top unit manufacturer & model number on order documents.
3. Structural supports required for curb (Not shown).

4. Ridge mounted curbs are not available.

5. The curb can be installed <u>after</u> the roof panel is completely installed.

6. Installation of curb is recommended <u>during</u> Valley Steel Composite CFR roof panel installation.

7. For sub-framing, see details in **<u>Roof-Top Unit Sub Framing</u>** section.

8. To be used on all roof systems, except Valley Steel Classic Roof™, for RTU's > 750# and < 6000#.

9. Available unpainted only. May be field painted to match roof color if desired.

ROOF-TOP UNIT SUB-FRAMING INFORMATION

Sub-framing is always required for roof top units (RTU) when curbs are used. The type of sub-framing depends upon the weight of the roof top unit supported.

1. For Valley Steel roof systems with RTU weights >750# with floating (non-structural) curbs, the sub-framing detail shown <u>here</u> applies.

2. For Valley Steel CFR™ and Valley Steel VR16 II™ roof systems with RTU weights > 750# and <1200# with structural curbs, the sub-framing detail shown <u>here</u> applies.

3. For Valley Steel roof systems with RTU weights > 1200# and <6000# where purlins are allowed to run through the opening, the sub-framing detail shown <u>here</u> applies.

4. For Valley Steel roof systems with RTU weights > 1200# and <6000# where purlins are not allowed to run through the opening (i.e. purlins are "cut"), the sub-framing detail shown <u>here</u> applies.

NOTES:

- The Valley Steel roof system is located above the roof secondary structural members depending on the size of the clips (short or tall). The roof curb sub-framing must be located at the same height as the secondary members to avoid potential leak problems. Refer to the details for proper dimensions. Short clips require ½" of differential elevation, while tall clips require 1 ½" of differential elevation.

- The Valley Steel CFR™ roof system is designed as a floating system. Curb framing and flashing must be designed accordingly to allow the curb system to float with the Valley Steel CFR™ roof system during thermal expansion and contraction. Curbs cannot span the ridge of the building.

- Typically, purlin runs are not interrupted by RTU openings. If purlins are required to stop at each side of the opening, indicate this on all quote request and order documents.

- When possible roof top units should not be placed closer than 15'-0 from any roof edge.

BY: AAJ CHK: MDK

ROOF TOP UNITS LESS THAN 750 POUNDS

AC0181PE – RTU STANDARD SUB-FRAMING FOR FLOATING CURB < 750#

CONTINUOUS PURLIN

CURB OPENING

SUPPORT ANGLE
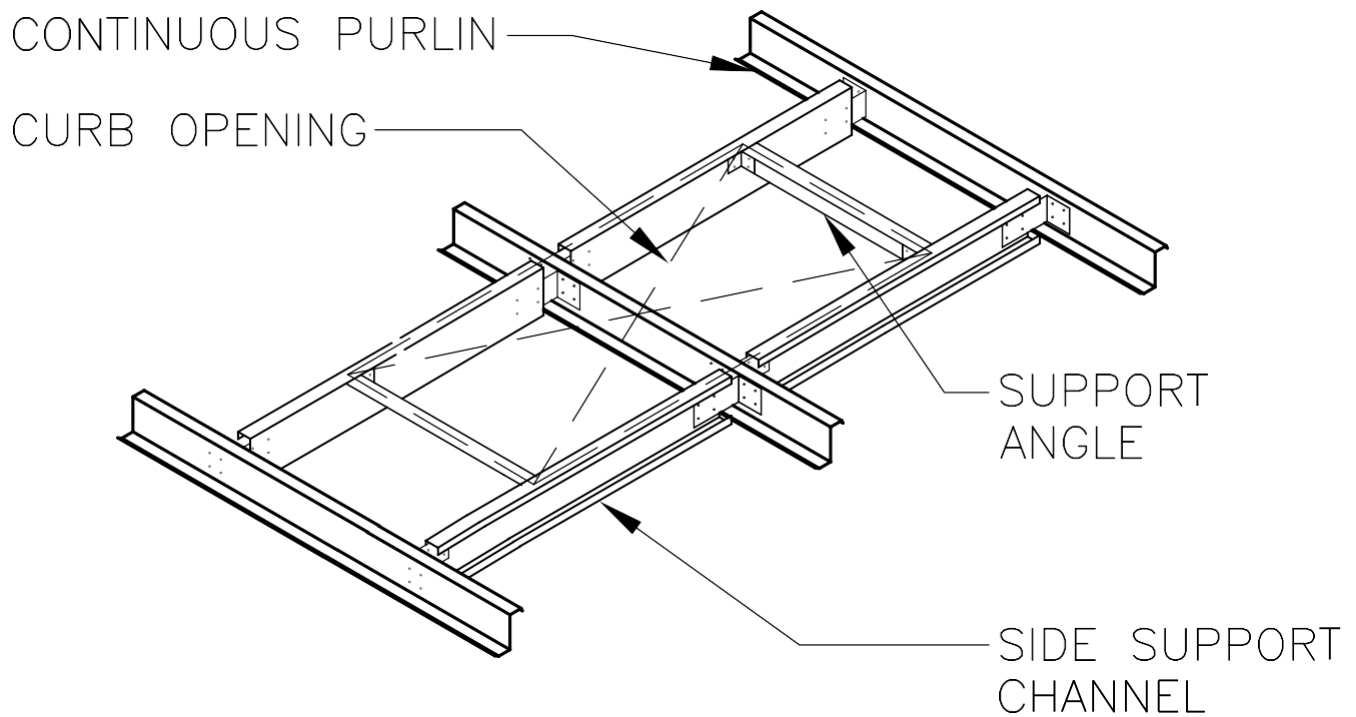
SIDE SUPPORT CHANNEL

NOTES:
- TEK SCREW CONNECTION SHOWN.
- CURB ANGLE CHANGES TO CHANNEL WHEN WIDTH IS > 5'-0".

DETAIL NAME IF APPLICABLE

AC0181PE.DWG 8.0.19

ROOF TOP UNITS OVER 750 POUNDS & LESS THAN 1200 POUNDS

AC0161PE – FLOATING/STRUCTURAL CURB >750# < 1200#

CONTINUOUS PURLIN

CURB OPENING

SUPPORT ANGLE

SIDE CURB SUPPORT CHANNEL
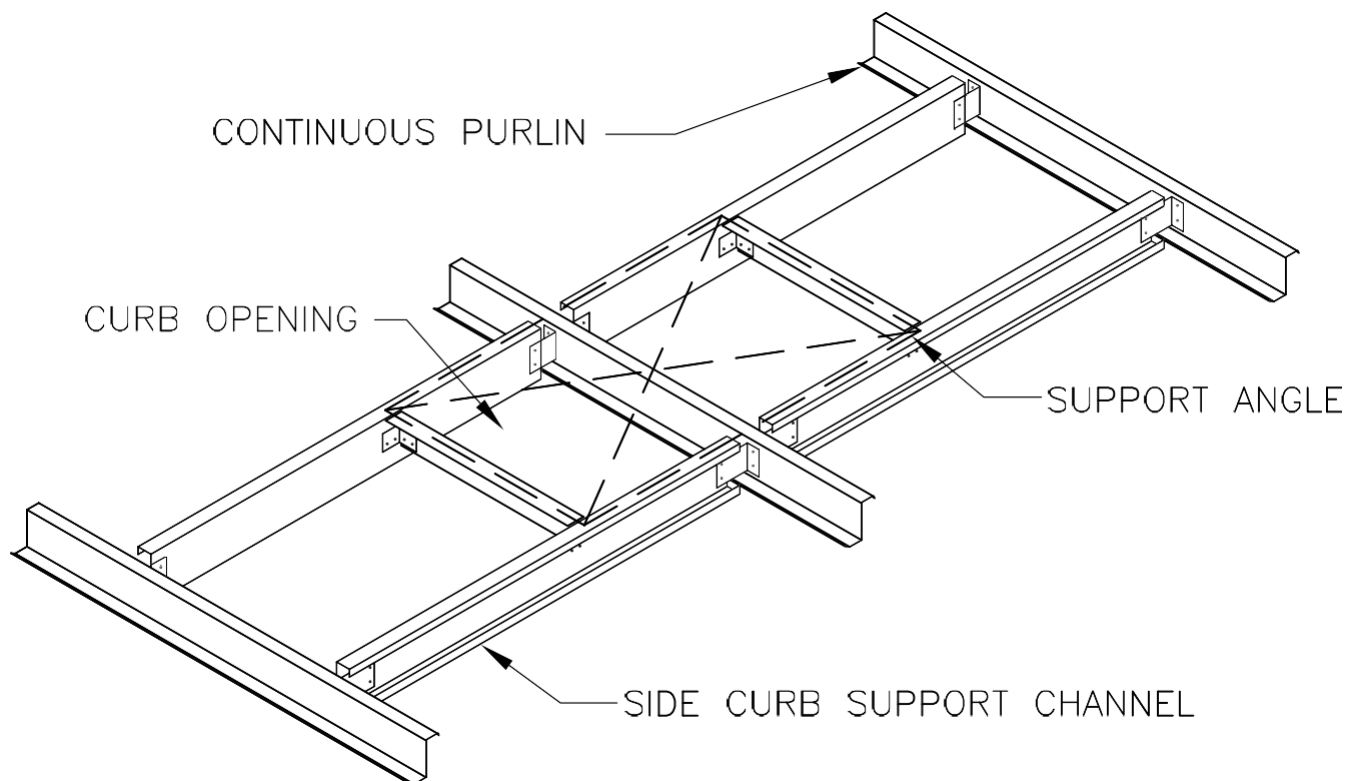
NOTES:
- BOLTED CONNECTION SHOWN.
- SIDE CURB SUPPORT CHANNEL MAY BE CONTINUOUS (PURLINS CUT).
- CURB ANGLE CHANGES TO CHANNEL WHEN WIDTH IS > 5'-0".

LAST REVISION DETAIL   APPLICABLE
DATE: 09/28/2009 **8.0.28**
BY: EJB CHK: EGB

NAME IF

AC0161PE.DWG

ROOF TOP UNITS OVER 1200 POUNDS & LESS THAN 6000 POUNDS

BK0123PE – PURLINS RUN THROUGH OPENING
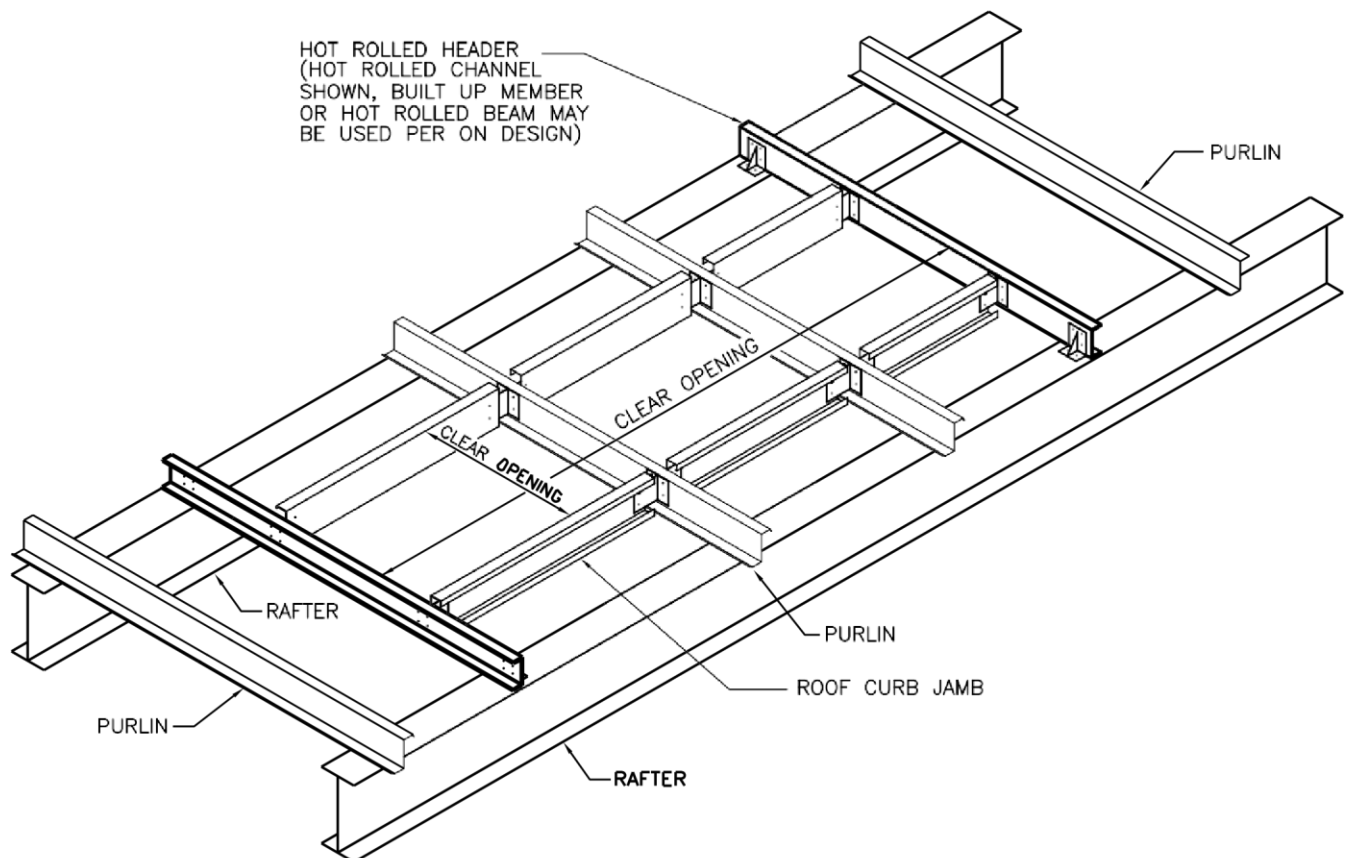
ERECTOR NOTE:
LOADS FROM THE RTU'S HAVE BEEN APPLIED TO THE FRAMES BASED ON THE RTU LOCATIONS SHOWN ON THESE ERECTION DRAWINGS. N.B.S. MUST BE CONSULTED PRIOR TO MOVING THE RTU'S FROM THESE GIVEN LOCATIONS. IF RTU'S ARE MOVED, NEW MATERIALS MAY NEED TO BE PURCHASED.

NAME IF

BK0123PE.DWG

BK0125PE – PURLINS CUT

HOT ROLLED HEADER
(HOT ROLLED CHANNEL
SHOWN, BUILT UP MEMBER
OR HOT ROLLED BEAM MAY
BE USED PER ON DESIGN)

CONTINUOUS PURLIN

CLEAR OPENING

CLEAR OPENING

CLEAR OPENING

RAFTER

FACTORY–CUT PURLIN(S)

CONTINUOUS PURLIN

ERECTOR NOTE:
LOADS FROM THE RTU'S HAVE BEEN APPLIED TO THE FRAMES BASED ON THE RTU LOCATIONS
SHOWN ON THESE ERECTION DRAWINGS. N.B.S. MUST BE CONSULTED PRIOR TO MOVING THE RTU'S
FROM THESE GIVEN LOCATIONS. IF RTU'S ARE MOVED, NEW MATERIALS MAY NEED TO BE PURCHASED.

NAME IF

BK0125PE.DWG

RIDGE VENT INFORMATION

RIDGE VENT STANDARD OPTIONS:

VALLEY STEEL CLASSIC ROOF™

1. 9" and 12" ridge vents are available as single units or continuous units.
2. Low Profile ridge vents are available as single units or continuous units.

VALLEY STEEL CFR™ ROOF

1. 9" and 12" ridge vents are available as single units or continuous units.
2. Low Profile ridge vents are available as single units or continuous units.

9" & 12" THROAT RIDGE VENT FEATURES

- Ridge vents come completely assembled for ease of installation.
- Standard available finishes may vary per plant. Contact the Estimating Department from which the project will ship for availability.
- The ridge vent can be used with both Valley Steel Classic Roof™ and Valley Steel CFR™ roof systems.
- Nominal ridge vent length is 10'-0".
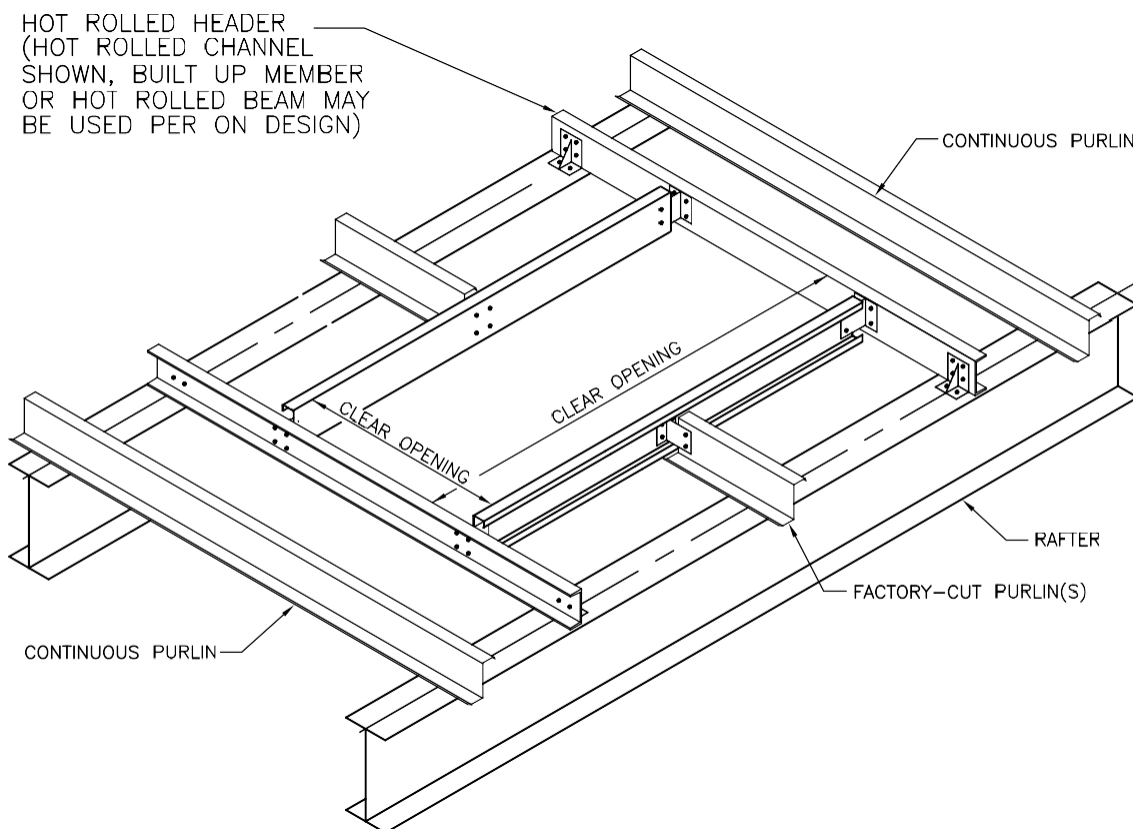- Ridge vents should not be placed closer than 5'-0 to the endwall steel line. For example: a 90'-0 long building with ridge vents required the entire length, should have no more than (8) units.
- Ridge vents can be ordered as continuous or single units.
- Ridge vents have flat skirts for both Valley Steel Classic Roof™ and Valley Steel CFR™ roof systems.

RIDGE VENT PRODUCT DESCRIPTION

- Valley Steel ridge vents are available in the following sizes: 9" throat and 12" throat.
- The following are the standard ridge vent systems available:
- Single unit w/ screen & damper
- Single unit w/screen (no damper)
- Continuous unit w/screen & damper
- Continuous unit w/ screen (no damper)
- The following vent closer comes **STANDARD** for each single ridge vent system:
    a. Lockerpull type operator with 10' of chain that hangs down from the middle of the unit.
- Below is a list of **OPTIONAL** closer accessories for the continuous ridge vent system.
    a. Lever (6 units max. 40' of 3/16" bare galvanized cable)
    b. Boat winch (8 units max. for units with 9" throat 60' of 3/16" bare galvanized cable)
    c. Boat winch (6 units max. for units with 12" throat units max. 60' of 3/16" bare galvanized cable)
- A cable extension package is available to be used in conjunction with the lever or boat winch closer.

PRODUCT & ENGINEERING MANUAL

9" & 12" THROAT RIDGE VENT DATA SPECIFICATIONS

Ridge vents supplied by Valley Steel are of a low profile design to provide gravity type ventilation. Bird screen is provided as a standard. Each unit contains flashing for either single or continuous run installation where specified on the sketch of the Order Document.

Vents are available in 9" or 12" throats in standard white or Galvalume® finish. Other colors are available at additional costs. Consult Valley Steel for price and delivery impacts of colored vents.

Ridge vents are available for both Valley Steel CFR™ roof and Valley Steel Classic Roof™ systems. Skirts are flat by design and are attached to the major ribs (or End Dam on the Valley Steel CFR™ roof system) by self-drilling screws. Because gravity ridge vents are designed to allow free airflow, some penetration of water during blowing rains is to be expected.

Exterior parts are 26 Gage Painted or Galvalume®. Interior parts are G90 galvanized steel. Substructure consists of 10 Gage saddle straps with interior baffles of 24 Gage steel. Lifter arms and damper slides are 18 Gage.

Manual operation is through activation of a pull bar, which is attached internally to bell cranked type lifter arms connected to the damper with Teflon coated pins through the damper slides. Dampers are spring loaded to remain in the open position until pull bar is operated and locked in the closed position and dampers operate in a vertical manner.

AIR MOVEMENT CAPACITIES FOR VALLEY STEEL RIDGE VENTS

Capacities Listed Below are Cubic Feet per Minute per 9" x 10'-0" Long Vent

Height									
	Temperature Difference								
	5°	**10°**	**15°**	**20°**	**25°**	**30°**	**35°**	**40°**	**45°**
10'	999	1,323	1,566	1,728	1,890	2,052	2,187	2,322	2,565
15'	1,134	1,620	1,917	2,160	2,322	2,484	2,673	2,835	2,943
20'	1,431	1,890	2,187	2,484	2,673	2,889	3,078	3,294	3,402
25'	1,566	2,079	2,403	2,700	2,916	3,186	3,375	3,591	3,753
30'	1,701	2,241	2,619	2,916	3,159	3,456	3,672	3,915	4,050
35'	1,782	2,349	2,754	3,078	3,348	3,645	3,888	4,077	4,266
40'	1,890	2,511	2,916	3,294	3,510	3,807	4,050	4,347	4,536
45'	1,998	2,592	3,024	3,456	3,726	3,996	4,293	4,536	4,725
50'	2,079	2,727	3,186	3,591	3,888	4,212	4,509	4,725	4,941
55'	2,160	2,862	3,321	3,753	4,050	4,428	4,644	4,941	5,184
60'	2,241	2,943	3,456	3,888	4,185	4,563	4,833	5,130	5,400
65'	2,295	3,024	3,564	3,996	4,347	4,698	4,995	5,319	5,562
70'	2,376	3,159	3,672	4,131	4,509	4,833	5,103	5,454	5,697

| **75'** | 2,430 | 3,213 | 3,753 | 4,239 | 4,563 | 4,941 | 5,292 | 5,562 | 5,859 |
| **80'** | 2,511 | 3,294 | 3,834 | 4,347 | 4,644 | 5,022 | 5,400 | 5,697 | 5,940 |

Numbers based upon air intake area 1 1/2 times ventilator throat area, assumes 5 mph wind speed.

Height = vertical rise from inlets near floor to ventilator.

Temperature = estimated temperature difference between middle of air intake near floor & ventilator with dampers open.

To calculate data for 12" vents, multiply capacities listed above by 1.3334.

REVISION
07/11/06
RJF   EGB

VALLEY STEEL
CONSTRUCTION INC.

REVISION

02/06/15

NAME IF

LAST DETAIL

DATE: **8.0.37**

BY: CHK:

APPLICABLE

AK   EGB   **AC0115PE.DWG** **AC0115PE – RIDGE VENT DETAIL**

ERECTOR NOTE:
REFER TO THE RIDGE VENT SUPPLIERS INSTRUCTIONS FOR PROPER RIDGE VENT INSTALLATION

RIDGE VENT (10' SECTIONS)

*RIDGE VENT EXTENSION (SHIPPED LOOSE)

H1050 (5) PER CFR PANEL (SAME SPACING AS RIDGE CAP)

1 1/2" TAPE MASTIC MK. H3001 CONTINUOUS ACROSS THE TOP OF THE END DAMS

BACK–UP PLATE

END DAM

CFR PANEL

Ⅽ RIDGE

RIDGE PURLIN (TYPICAL)

SECTION "A"

1 1/2" TAPE MASTIC MK. H3001 CONTINUOUS ACROSS THE TOP OF THE RIDGE VENT SUPPORTS

BUTT RIDGE VENT SUPPORTS TOGETHER AT SPLICES AND SEAL WITH TUBE CAULK (MK. H3152)

RIDGE VENT SUPPORT:
MK. RVS09 AT 9" VENTS
MK. RVS12 AT 12" VENTS
FASTEN TO END DAMS AT 6" O.C. WITH H1020 FASTENERS (NOT SHOWN)

REVISION

12/29/17

NAME IF

LAST <u>DETAIL</u>
DATE: **8.0.38**
BY: EGB CHK:

APPLICABLE

SDF   **AC0120PE.DWG** <u>AC0120PE – 9" RIDGE VENT DETAIL (VALLEY STEEL CFR™ ROOF)</u>

VALLEY STEEL CONSTRUCTION INC.

CENTERLINE OF RIDGE 5 1/4" END OF ROOF PANEL

1'-4"

CENTERLINE OF PURLIN

ERECTOR NOTE:
H1020 SCREWS AND H2200 INSULATION WASHERS HAVE BEEN SUPPLIED AT 12"O.C. FOR INSULATION ATTACHMENT AT THE RIDGE.
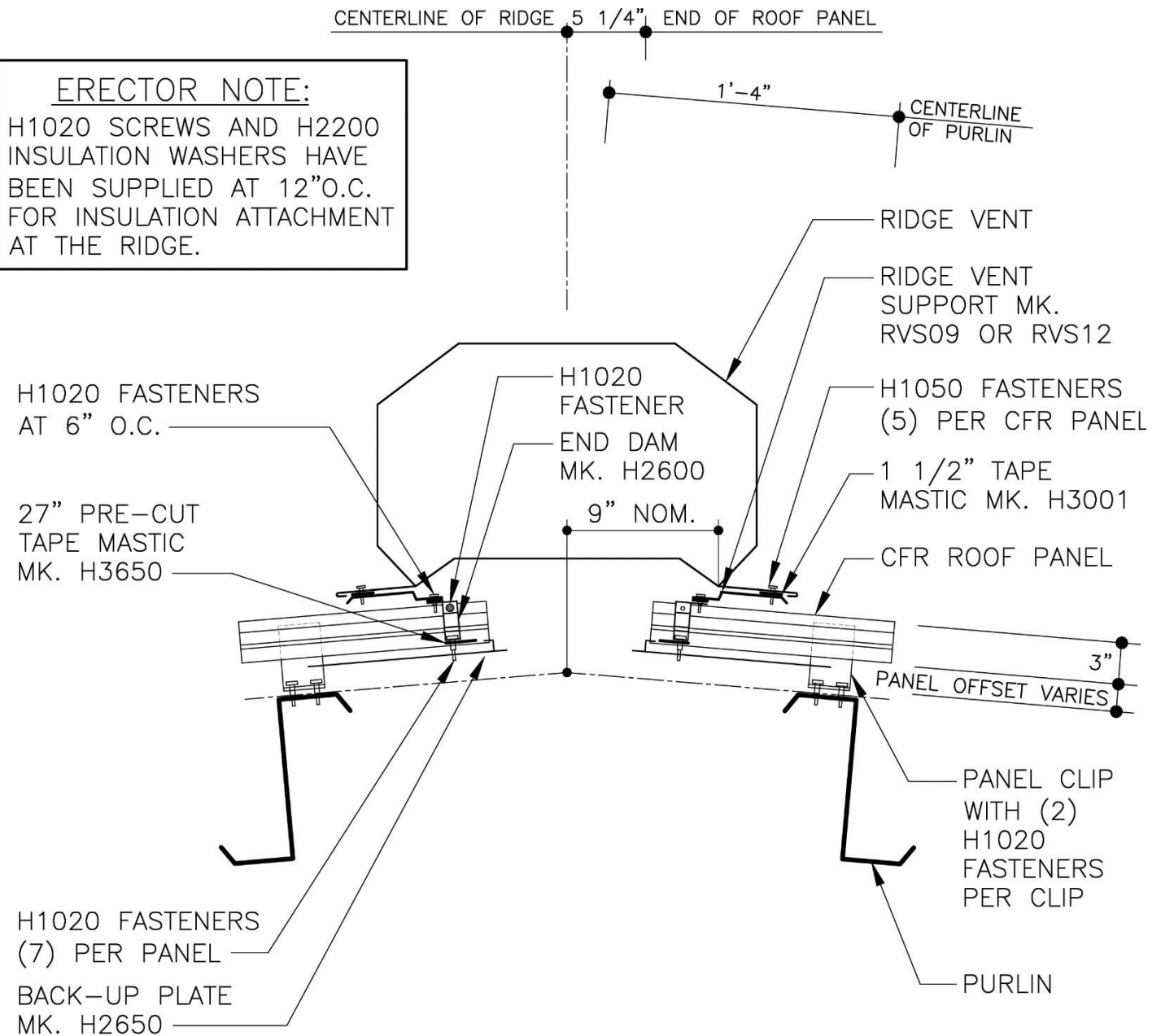
RIDGE VENT

RIDGE VENT SUPPORT MK. RVS09 OR RVS12

H1050 FASTENERS (5) PER CFR PANEL

H1020 FASTENERS AT 6" O.C.

H1020 FASTENER

END DAM MK. H2600

9" NOM.

1 1/2" TAPE MASTIC MK. H3001

27" PRE-CUT TAPE MASTIC MK. H3650

CFR ROOF PANEL

3"

PANEL OFFSET VARIES

PANEL CLIP WITH (2) H1020 FASTENERS PER CLIP

H1020 FASTENERS (7) PER PANEL

PURLIN

BACK-UP PLATE MK. H2650

LAST DETAIL   APPLICABLE
8.0.40

DATE:
BY: EGB CHK:

REVISION

09/07/11

NAME IF

LAST DETAIL

8.0.41

APPLICABLE

DATE:

BY: CHK:

RT   EGB

AC0140PE.DWG **AC0140PE – RIDGE VENT DETAIL (VALLEY STEEL CLASSIC ROOF™)**

SYMMETRICAL ABOUT

RIDGE VENT

H1050 (12" O.C.)

5 1/4"

OUTSIDE PANEL CLOSURE MK. H3400 PLACE 3/4" TAPE MASTIC TOP & BOTTOM MK. H3000

ROOF PANEL

H1030 (SEE CLASSIC ROOF ERECTION NOTES FOR SPACING)

PURLIN
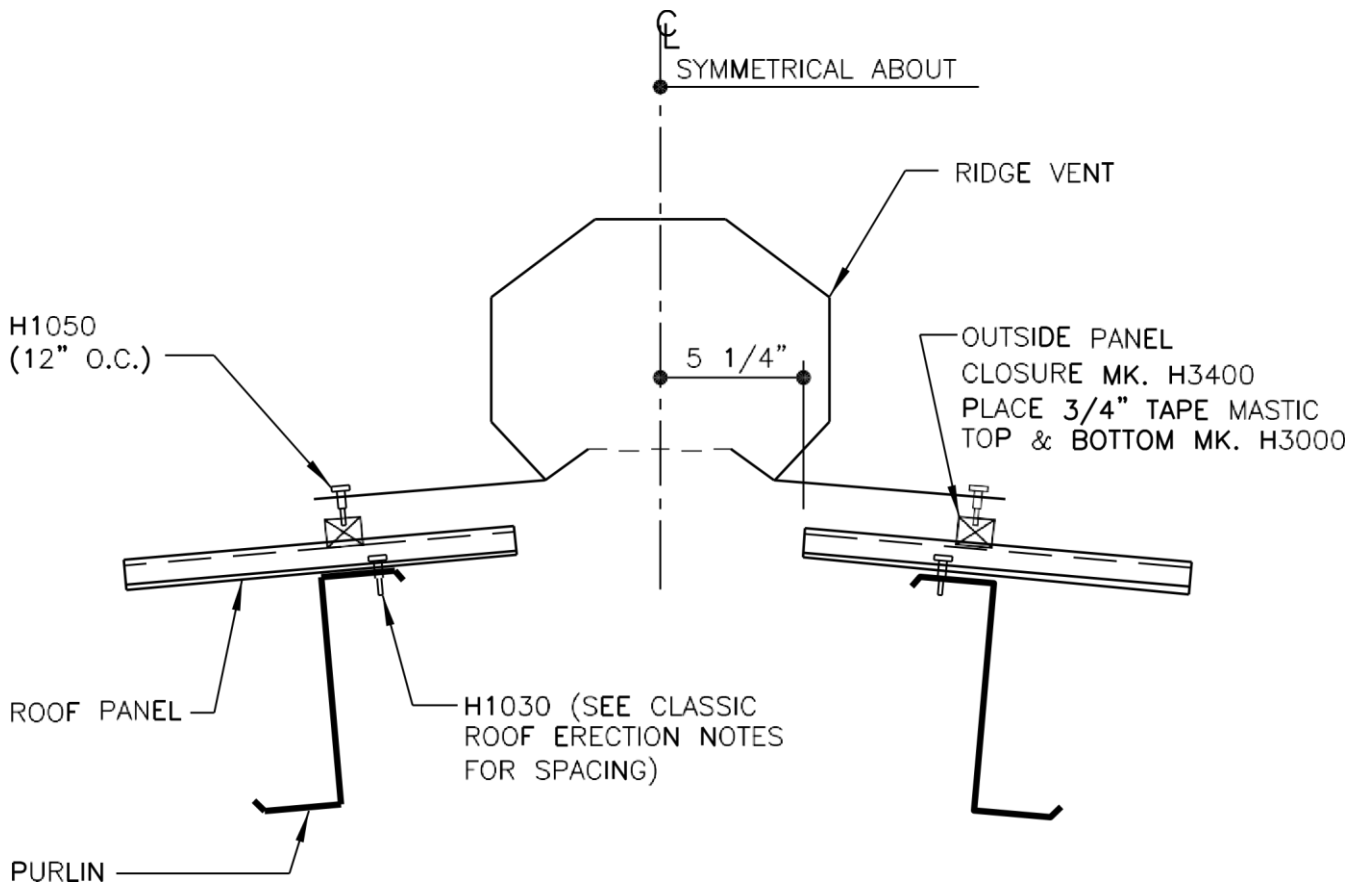
LOW PROFILE RIDGE VENT INFORMATION

LOW PROFILE RIDGE VENT FEATURES:

- Ridge vent system is low profiled, erector friendly and architecturally pleasing.
- Ridge vent system is not elevated above the roof as traditional vents are.
- Allows the use of Valley Steel standard metal peak boxes installed in the same manner.
- Nominal ridge vent length is 10'-0.
- Ridge vents can be ordered as single units or continuous units.

Continuous Unit Definitions:

1. Vents, vent splice kits, ridge cap and (2) end caps <u>per run</u> are supplied by the ridge vent vendor.
2. Mastics and fasteners supplied by Valley Steel Building Systems.

Single Unit Definitions:

1. Vents, ridge cap and (2) end caps <u>per unit</u> are supplied by the ridge vent vendor
2. Mastics and fasteners supplied by Valley Steel Building Systems.

GENERAL INFORMATION

- Units may be installed in combination, meaning a portion of the vent system be continuous with a different portion of the vent system being single units. In these cases, the un-vented areas will be linked together with ridge cap supplied by the ridge vent vendor.
- Standard colors for the Low Profile Ridge Vents and Ridge cap are: PW & GM. Other finishes are available and may vary per plant. Contact the Estimating Department for cost and availability.

- Ridge cap for the low profile ridge vents are made in standard 20'-0" lengths. The 20"-0" lengths are available in PW & GM colors. Ridge Cap lengths may vary for colors other than PW & GM. Contact the Ridge vent supplier for length/color availability.
- Ridge vents should not be placed closer than 5'-0 to the end wall steel line. The transition from the vent to the rake trim will be made with ridge cap supplied from ridge vent vendor. (ridge cap profile to match ridge vent profile) Example: a 90'-0 long building with ridge vents required the entire length, should have no more than (8) units.

- As a standard, the low profile ridge vent system utilizes the standard panel set-back of: 5 ¼" up to 6:12 roof slope. *Above* 6:12 roof slope, detailing will need to determine the correct panel set-back dimension.

LOW PROFILE RIDGE VENT PRODUCT DESCRIPTION:

- The Low Profile Ridge Vent is a product currently produced from Metallic Products. This system features the Cor-A Vent® ventilation core. All other steel components are made with 24 gage metal. When required, this system will take the place of the standard NBS ridge cap detail. The unit(s) are fastened to the end dams utilizing standard self-drilling fasteners. The top hood is bent on a 4:12, with the bottom flanges bent to match the roof slope.

LOW PROFILE RIDGE VENT
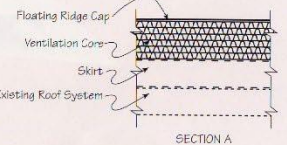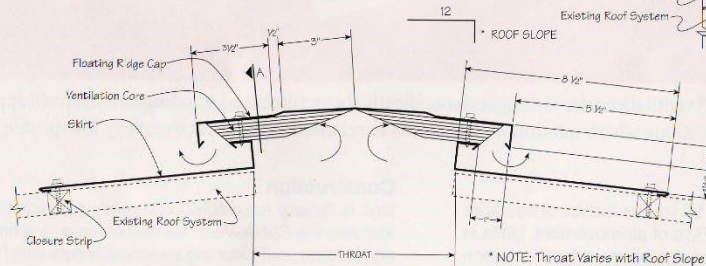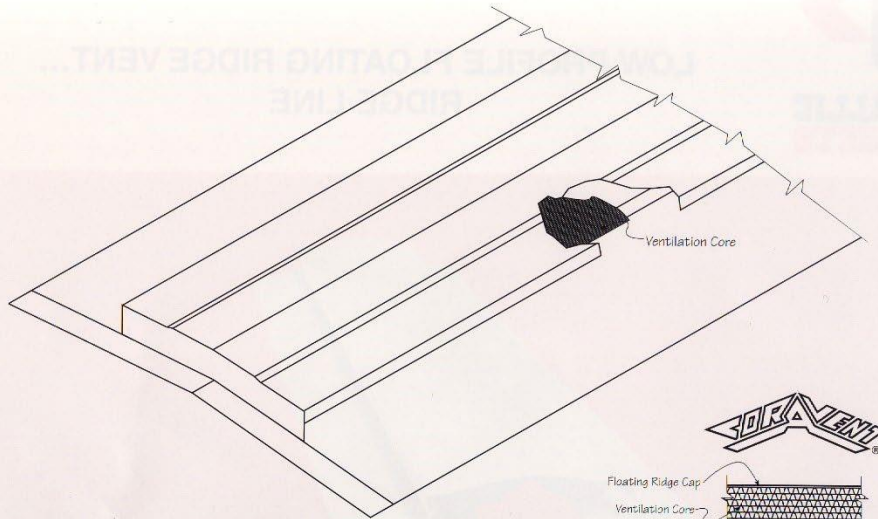
AIR MOVEMENT CAPACITIES FOR LOW PROFILE RIDGE VENT

DIMENSIONS AND TECHNICAL DATA

Ventilation Core

Floating Ridge Cap
Ventilation Core
Skirt
Existing Roof System

SECTION A

Floating Ridge Cap
Ventilation Core
Skirt
Closure Strip
Existing Roof System

12
* ROOF SLOPE

8 ½"
5 ½"

THROAT

* NOTE: Throat Varies with Roof Slope

TABLE A
Air Movement per Lineal Foot Factors

HEIGHT IN FEET	Temperature Difference					
	5°	10°	15°	20°	25°	30°
10	16.65A	22.05A	26.10A	28.80A	31.50A	34.20A
15	18.90A	27.00A	31.95A	36.00A	38.70A	41.40B
20	23.85A	31.50A	36.45A	41.40A	44.50B	48.15B
25	26.10A	34.65A	40.05A	45.00B	48.60B	53.10C
30	28.35A	37.35A	43.65B	48.60B	52.65B	57.60C
35	29.70A	39.15B	45.90B	51.30B	55.80C	60.75C
40	31.50B	41.85B	48.60B	54.90C	58.50C	63.45C
45	33.30B	43.20B	50.40C	57.60C	62.10C	66.60C
50	34.65B	45.45B	53.10C	59.85C	64.80C	70.20D

Note: If material is furnished by customer, the following must be supplied for each 10' section:
Painted Screws
1 Sheet for Metal Roof, 2 for Shingle
15 Self-Tapping Screws ¼" x 1½"
Type A W/Washers

TABLE B
Wind Velocity Factors

WIND M.P.H.	Factors			
	A	B	C	D
3	1.14	1.09	1.05	1.02
5	1.25	1.18	1.13	1.09
7	1.41	1.29	1.22	1.16
9	1.62	1.43	1.33	1.25
11	1.82	1.57	1.43	1.32

TOTAL CFM = (Table A) X (Table B) X Length

TABLE C
Throat Size (Determined by Roof Pitch)

Pitch	Throat Size	Pitch	Throat Size
1:12	6½"	7:12	4⅛"
2:12	6⅛"	8:12	3½"
3:12	5⅝"	9:12	3"
4:12	5¼"	10:12	2½"
5:12	4⅞"	11:12	2⅛"
6:12	4⅝"	12:12	1¾"

METALLIC PRODUCTS · Houston, Texas 77040
(713) 856-9696 · Fax (713) 856-9686 · Toll Free (800) 356-7746

VENTED RIDGE & HIP INFORMATION (VALLEY STEEL VR16 II™ ROOF)

VENTED RIDGE/HIP SYSTEM FEATURES

- Vent system is low profiled, erector friendly and architecturally pleasing.
- Ridge vent system is not elevated above the roof as traditional vents are.
- Can be placed on a ridge or hip roof.
- Ridge vent system can be placed the entire length of the ridge/hip or partial length (continuous recommended)
- Vented and non-vented sections of the system look the same on the surface.
- Standard parts accommodate up 12:12 roof slopes.
- Valley Steel standard metal peak boxes installed the same as with other roof systems.
- Ridge vent system is not recommended for slopes less than 2:12.
- Maximum panel run is 80'-0".
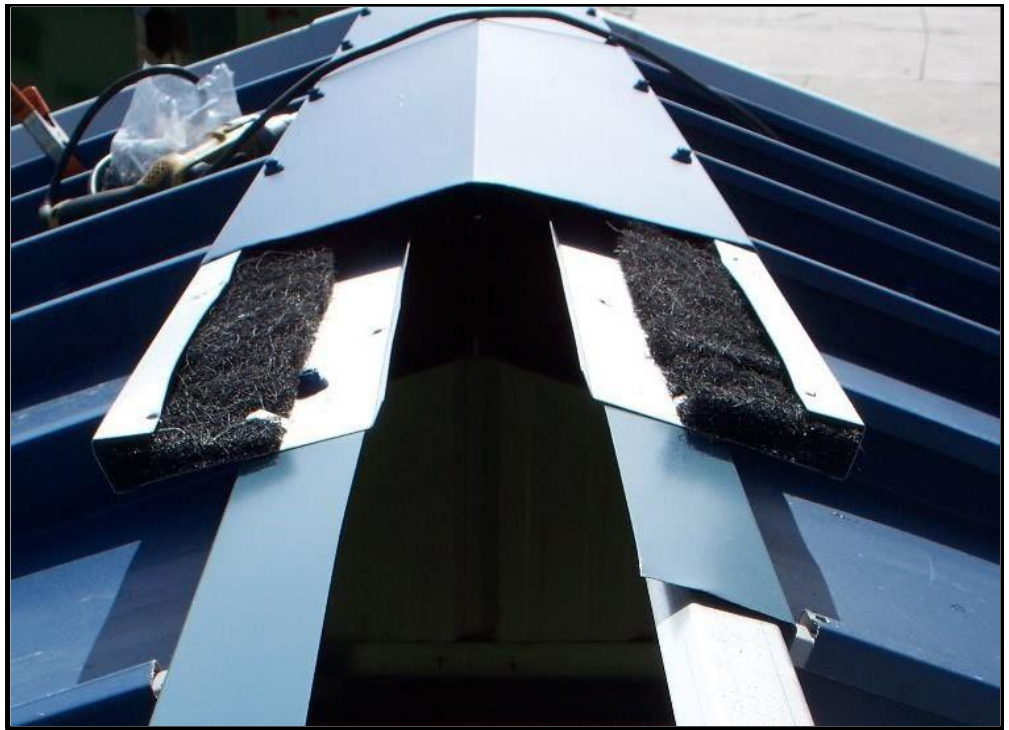
VENTED RIDGE/HIP SYSTEM DESCRIPTION

- This system is comprised of 1) a vented material called PreVent made by Metallic Products, 2) standard cover flash, 3) fasteners and, 4) ridge cap. The PreVent is 24 gage GM metal 'J' shape with ½" x 2" louvers.
- For installation, place the 10' PreVent sections on top of the zee closure and fasten in place with standard fasteners, repeating for both sides. Install the ridge cap as work progresses by placing the ridge cap over the PreVent and fastening into the PreVent. See photos of the product and the different stages of installation below.

8.0.47

PRODUCT & ENGINEERING MANUAL

- The fiber media contained in the Prevent is comprised of a non-woven, fire retardant, natural fiber mixture bonded with latex and will withstand extreme heat and cold conditions. The filter media is bacteriostatic and will not support the growth of mold, mildew or bacteria, and is very effective in resisting the entrance of wind driven rain or snow.

END PICTURE OF PROGRESSIONAL ASSEMBLY

8.0.48

VALLEY STEEL
CONSTRUCTION INC.

PREVENT
PRODUCT

PRODUCT & ENGINEERING MANUAL

AIR MOVEMENT CAPACITIES FOR VENTED RIDGE/HIP SYSTEM (VALLEY STEEL VR16 II™ ROOF)

8.0.49

BY: EGB CHK: AES

PREVENT
Nucor Building Systems

Filter Media
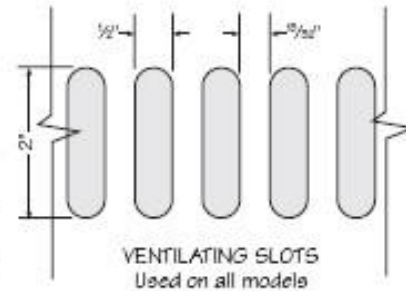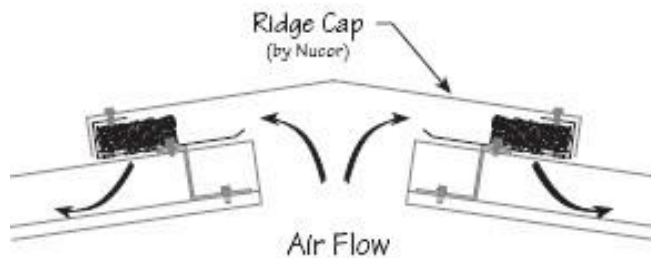
1"

4½"

½"
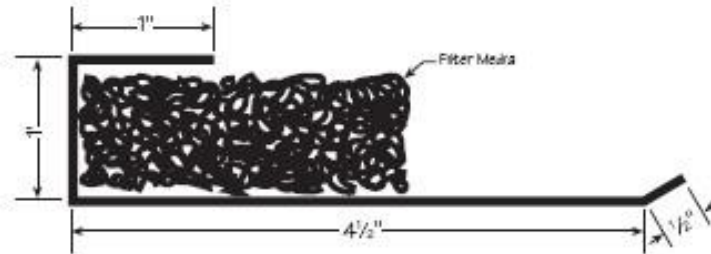
MODEL NU24-1-1
24 Ga. Galvalume
10'-0" Lengths
6 lbs Each
6.25 in² NFA per 10'-0
Filter media is bacteriostatic: Will not support growth of mold, mildew or bacteria.

RIDGE VENT APPLICATION

Ridge Cap
(by Nucor)

Air Flow

½"   ⁹/₃₂"

2"

VENTILATING SLOTS
Used on all models

CFM Chart (per 10'-0' run of ridge vent)

Stack Height	Temperature Differential							
	5°	10°	15°	20°	25°	30°	35°	40°
5	170	188	203	215	225	235	244	252
10	188	215	235	252	266	280	292	304
15	203	235	260	280	298	315	330	345
20	215	252	280	304	325	345	362	398
25	225	266	298	325	350	370	390	408
30	235	280	315	345	370	394	415	435
35	244	292	330	392	390	415	438	460
40	252	304	345	398	408	435	460	483

Assumes 5 mph wind speed

8.0.50

BY: EGB CHK: AES

AC0150PE –VENTED RIDGE / HIP DETAIL (VALLEY STEEL VR16 II™ ROOF)

INSULATION NOT SHOWN FOR CLARITY

RIDGE/HIP CAP RGH__

#14x1 FASTENERS @ 8" ON CENTER

PREVENT H4800

ZEE CLOSURE MK. TRCZ (CONTINUOUS)

ROOF PANEL

PANEL CLIP

PANEL CLIP FASTENERS

3" (TYP.)

CL SYMMETRICAL ABOUT

#12x1 1/4" AT 8" O.C.

TAPE MASTIC H3001 (CONTINUOUS)

3" TAPE PAD MK. 3 TP **VERTICALLY UP** AND OVER MALE RIB AT END OF PANEL

TUBE CAULK ALONG MALE RIB, 8" LONG (MK. H3151)

2"

PANEL OFFSET

SECONDARY MEMBER

VR16 II VENTED RIDGE/HIP DETAIL

8.0.51

BY: EGB CHK: AES

LAST REVISION
DATE: 08/10/09

DETAIL NAME IF APPLICABLE

AC0150PE.DWG

8.0.52