

CONSTRUCTION DETAILS

TABLE OF CONTENTS

INTRODUCTION

FOREWORD

CT-01	Edge Flashing
CT-01A	Edge Flashing - Alternate
CT-01B	Edge Flashing - Gutter
CT-02	Edge Flashing - BUR, Gravel Stop
CT-03	Curb Flashing
CT-04	Curb Equipment Flashing
CT-05	Wood Area Divider Flashing
CT-06	Base Flashing and Wall Covering on Wood Parapet Wall
CT-06A	Base Flashing and Wall Covering on Concrete/Masonry Parapet Wall
CT-07	Base Flashing on Concrete/Masonry Wall with Metal Counterflashing
CT-08	Base Flashing and Wall Covering on Steel or Stucco Wall with "Z" Bar
CT-09	Base Flashing on Parapet Wall, Inside Corner
CT-10	Base Flashing on Parapet Wall, Outside Corner
CT-11	Through-Wall Scupper Flashing
CT-12	Drain Flashing
CT-13	Pipe Flashing - Lead or Sheet Metal
CT-13A	Pipe Flashing - Lead or Sheet Metal - Surface Mounted (Retrofit)
CT-14	Pipe Flashing - Lead or Sheet Metal - BUR Only
CT-15	Penetration Pan (Pitch Pan) Flashing
CT-16	Multi-Piping through Roof Deck Flashing
CT-17	Mechanical Equipment Stand Flashing
CT-18	Pipe Roller Support Flashing
CT-19	Low Profile Flexible Expansion Joint Flashing
CT-19A	Raised Flexible Expansion Joint Flashing
CT-19B	Roof to Wall Expansion Joint Flashing
CT-20	Roof Vent Flashing
CT-21	Seismic Strap Flashing
CT-22	End Lap Detail
CT-23	Steep to Low-Slope Roof Transition Flashing
CT-24	Mansard Roof Transition Flashing
CT-25	Termination Bar Flashing

CONSTRUCTION DETAILS

TABLE OF CONTENTS (Continued)

CT-26	Hot Pipe Flashing
CT-27	Structural Member Thru Roof Deck Flashing
CT-28	Lightning Terminal Flashing
CT-29	Back Nailing - Insulated or Non-Nailable Substrates
CT-29A	Back Nailing - Nailable Substrates
CT-30	Vapor Retarder
CT-30A	Vapor Retarder - Alternate
CTL-01A	SmartFlash® - One ply Base Flashing with Cut-in Reglet
CTL-01B	SmartFlash - One ply Base Flashing with Counterflashing
CTL-03	SmartFlash - Parapet Wall with Metal Coping Cap
CTL-15	SmartFlash - Field-Fabricated Outside Corner Flashing
CTL-16	SmartFlash - Field-Fabricated Inside Corner Flashing
CTL-17	SmartFlash - Door Sill Flashing
CTL-18	SmartFlash - Tie-In to Modified Bitumen/BUR Membrane
CTL-18A	SmartFlash - Tie-In to EPDM Membrane
CTL-19	SmartFlash - Tie-In to Modified Bitumen/BUR Membrane with Cut-in Reglet
CTL-20	SmartFlash - Tie-In to Modified Bitumen/BUR Membrane
CTL-21	SmartFlash - Field-Fabricated Pipe Penetration Flashing
CTL-23	SmartFlash - Irregular Penetration Angle Flashing
CTL-24	SmartFlash - Wide Flange Flashing
CTL-25	SmartFlash - Irregular Penetration Uni-Strut Channel Flashing
CTL-27	SmartFlash - Curb/Pad Encapsulation Flashing
CTL-28	SmartFlash - One ply Curb Flashing
Appendix	
Appendix 1 - Insulation Fastening Guide	
Appendix 2 - Flashing Specifications	
Appendix 3 - Product and System Selection Guide	

Published Construction Details in this manual are intended for guidance only. NRCA, WSRCA, and MRCA construction details also meet CertainTeed warranty requirements.

INTRODUCTION

CONSTRUCTION DETAILS

Roofs are frequently interrupted by the intersection of adjoining roof sections adjacent walls, or penetrations such as skylights, mechanical equipment curbs and plumbing soil-pipe stacks. This creates opportunities for leakage. Special steps must be taken at these locations for weather protection.

The components used to control water entry at these locations are usually called flashings. The way in which the individual roofing, flashing and counterflashing components interface and are configured is called a detail.

Tight control of details is essential to long-term roof performance, whatever the type of roof construction. The low-slope membrane roofing and flashing details discussed in this manual are considered general details, not specifically designed for any particular low-slope roof assembly. The details show the general components that are commonly used and the sequence in which these components may be put together to provide weatherproof flashing for the condition shown. Contractors and designers should be aware that these general details may need to be altered to suit the specific flashing conditions on any particular roofing project. The project designer is responsible for the design of the actual, specific details for any given project.

The designer should consider CT's requirements and guidelines when beginning a project. The following should also be considered:

1. METAL FLASHING COMPONENTS

Because metals have different thermal expansion and contraction characteristics than most roof membrane materials, when possible, it is advisable to isolate metal flashings from the roof membrane and membrane flashing. Embedding (sandwiching) metal flashing flanges into the roof membrane or membrane flashing, at certain flashing details, can result in differential movement that can fatigue the membrane materials and may later cause tears, splits or cracks in the membrane flashing or roof membrane. For this reason, the solid securement of all flashing accessories to wood nailers is essential.

2. WOOD NAILERS AND BLOCKING

Wood nailers and blocking at roof edges and other points of termination are among the many details shown in this manual. Among other advantages, the nailers provide protection for the edge of the insulation and also provide a substrate on which the terminating roofing and membrane flashing materials can be anchored. The nailers must be securely attached to the roof deck and/or structural framing system. In the design of the specific details for a project, the designer should design and clearly indicate the manner in which wood nailers and/or blocking are to be incorporated into the detail conditions. The designer should also specify the means of attachment, as well as the fastening schedule for wood nailers and/or blocking.

3. UNDERWRITERS LABORATORIES OR FACTORY MUTUAL REQUIREMENTS

The designer should consult Factory Mutual Research Corporation (FMRC) or Underwriters Laboratories (UL) publications if the building owner's insurance carrier or project specifier requires compliance with FMRC or UL requirements for specific roof deck, insulation, membrane and attachment criteria.

4. ROOFTOP EQUIPMENT AND RELATED FLASHING

Although not recommended by CertainTeed, the roof is often used as the location for ventilating, heating and air-conditioning equipment. The building owner may encounter weatherproofing-related problems with mechanical equipment because of the design of that equipment and the lack of clearly defined responsibility for its installation and weatherproofing by all involved contractors, materials suppliers and manufacturers.

Heating, ventilating and air-conditioning housings and equipment can be attributed to one or more of the following weatherproofing problems and/or deficiencies:

- Poor design of the curb, for the HVAC equipment, intended to accept the membrane flashing.
- Improper design of the equipment's exterior shell or housing that is exposed to the weather, letting water enter the building directly through the unit.

INTRODUCTION

CONSTRUCTION DETAILS

- Not providing adequate means to attach membrane base flashings or lack of adequate counterflashing to overlap and protect the membrane base flashing.
- Improper design of the structural framing or the roof deck intended to support the weight of the ventilating, heating and air-conditioning unit, which usually results in excessive roof deflection and resulting ponding water.
- Poor flashing of the penetration(s), such as the conduits, pipes and drain lines that extend through the roof to operate the HVAC equipment.
- The absence of service walkways around mechanical equipment.

5. GENERAL APPLICATION GUIDELINES

The base flashing is the bituminous flashing that provides the transition from the completed field membrane to a surface that is in a different plane than the field of the roof, such as a parapet wall or curb. The base flashings should always extend a minimum of 8" above the roof surface and 4" out onto the field membrane. The base flashing should not extend more than 24" above the roof surface. Base flashings should be secured at the top edge with the appropriate mechanical fasteners spaced 9" o.c. maximum to prevent sliding or sagging. Prior to the installation of the base flashing, the completed field membrane should be terminated 2" above the top of the cant at vertical transitions. All base flashings require additional treatment (counterflashing) at their vertical termination to ensure proper performance. Some of these treatments include metal counterflashing, metal cap, stone coping and additional reinforced bituminous treatment.

Allow for differential movement in the flashing system, particularly when the roof deck is not supported by the adjoining wall.

Cant strips should be used at right angle intersections to avoid stress to the base flashing and provide a solid backing. The cant strip should have a face that measures a minimum of 3". All masonry and/or concrete surfaces to receive base flashing should be primed with CertainTeed FlintPrime® Asphalt Primer and allowed to dry thoroughly prior to the application of the flashing.

Flintlastic® SBS base flashings can generally be applied using either hot asphalt or CertainTeed FlintBond® Modified Bitumen Trowel Grade Adhesive. Do not use conventional cut-back asphalt flashing cement to apply Flintlastic SBS base flashings. When hot asphalt is used to attach the base flashings, only ASTM D312 Type III and Type IV asphalts are acceptable. The asphalt should have a minimum temperature at the point of application of 400°F or be at the EVT, whichever is higher. In cold weather (below 40°F), special precautions must be taken to ensure that the asphalt reaches the flashing area at the proper temperature.

Flintlastic APP base flashings are designed for torch application. Smooth Flintlastic APP base flashings require coating with FlintCoat® or an acceptable roof coating.

6. FLINTLASTIC SA SELF-ADHERING SBS MODIFIED BITUMEN ROLL ROOFING

Flintlastic SA roofing membrane is a premium, self-adhering SBS modified bitumen roll roofing material suitable for use in accordance with CertainTeed specifications for most low-slope roof system applications. It is a self-adhered equivalent to CertainTeed's Flintlastic hot asphalt applied and cold adhesive applied SBS systems. The construction details in this section, as designated for Flintlastic SBS systems, are applicable for Flintlastic SA installations when the following general guidelines are followed:

- Use FlintPrime SA Primer where priming is required.
- Set all sheet metal flashings or fixtures in a bed of FlintBond Modified Bitumen Trowel Grade Adhesive and cant, caulk or seal the completed detail as diagramed. Seal all edge flashings with a bead of FlintBond Caulk Grade.
- All Flintlastic SA modified bitumen roll roofing materials are set in a bed of FlintBond Modified Bitumen Trowel Grade Adhesive whenever installed over, or coming in contact with, granuled surfaces such as at base flashings and wall coverings or at end laps, etc.
- Do not mix Flintlastic SA materials with other types of membrane materials. Flintlastic SA membranes are specifically designed to be applied together as a system.
- Smooth and secure each ply of Flintlastic SA materials with a weighted roller as each is installed.

INTRODUCTION

CONSTRUCTION DETAILS

7. SMARTFLASH® FLUID APPLIED FLASHING MEMBRANES

CertainTeed SmartFlash flashing membranes are two component, UV-stable, fluid-applied polyester reinforced membranes for use with non-standard details when design or field condition does not allow sufficient clearances for traditional Flintlastic® bituminous flashings. SmartFlash is designed to adhere over APP, SBS and traditional BUR membranes to provide extreme bond strength and seamless performance properties to a variety of common deck, wall and penetration surfaces. Its application is ideal for flashing difficult architectural configurations in areas of limited access and is resilient and unaffected by ponding water and ice conditions. SmartFlash membranes are ideally suited for new construction, retrofit and roof maintenance purposes. The applicator shall adhere to the following general guidelines:

- Application of SmartFlash is recommended while air temperatures are between 40 and 85 degrees Fahrenheit providing the substrate is 5 degrees above the dew point.

Application is a four-step process:

- Preparation and cleaning of substrate.
- Application of SmartFlash primer suitable for the substrate.
- Application of the SmartFlash membrane.
- Application of the surfacing material (if an optional surfacing is desired).

Substrate preparation:

- All surfaces must be free from gross irregularities, loose, unsound or foreign material such as dirt, ice, snow, water, grease, oil, release agents, curing agents, lacquers, or any other condition that would be detrimental to adhesion of the SmartFlash primer and substrate.
- Masonry/Structural Concrete – Areas of soft or scaling surfaces, recessed or faulty mortar joints or walls with broken, damaged or leaking coping shall be repaired prior to priming.
- Steel/Metal – Clean and prepare metal surfaces to near white metal with power tools. Notch steel surfaces to provide a rust stop. In addition to cleaning, all metal surfaces shall be abraded (ground) to provide a rough open surface. (A wire brush finish is not acceptable). Wipe prepared metal surface with MEK or other acceptable solvent cleaner prior to priming.

- Wood/Plywood – Shall be APA rated for exterior use. Strip plywood joints with 4" wide strips of SmartFlash membrane. Cover knot holes or cracks with strips of SmartFlash membrane.
- Existing asphaltic bituminous membranes – Smooth surface membranes with applied roof coatings shall have all loose coating removed and an adhesion test performed to confirm acceptable adhesion. Granule surfaced membranes shall have all loose granules removed from the surface by power brooming and vacuuming. Gravel surfaced membranes shall have all gravel spudded and removed and the roof surface thoroughly cleaned with all ridges and high points removed.

Application Recommendations:

- Pre-cut SmartFlash Fleece reinforcement for each penetration, bag, and place at each flashing/penetration location prior to mixing SmartFlash resin components.
- Mix only that amount of primer components A and B that can be applied in 15 minutes. Do not break down work packs into smaller quantities; mix the entire work pack.
- Exposure of SmartFlash primer in excess of eight (8) days or premature exposure to moisture may require removal and application of new SmartFlash primer.
- Mix only that amount of SmartFlash resin components A and B that can be used in 30 minutes. Do not break down work packs into smaller quantities; mix the entire work pack.
- Refer to the CertainTeed SmartFlash Application Manual for complete application steps and details.

The SmartFlash construction details featured in this section are provided as guidelines and may be modified to suit the specific flashing conditions on any given project. The design of the actual detail remains the responsibility of the designer.

FOREWORD

CONSTRUCTION DETAILS

This Construction Details Section has been assembled to provide technical information regarding the installation and design of quality low-slope membrane roofing and flashing details.

Contractors and designers should be aware that these details may need to be modified to suit the specific flashing conditions on any given roofing project. The design of the actual details for any project is the responsibility of the project designer.

Some design details, criteria and application techniques may vary based on climatic conditions, and each geographical area may utilize “area practices” that are sound and time-proven.

CertainTeed recommends that any roof assembly be designed only after a number of criteria have been carefully considered, including:

- Building and roof life expectancy
- Type of roof deck
- Code requirements
- Climate
- Exterior and interior temperature and humidity conditions
- Slope and drainage
- Thermal requirements
- Fire, wind and impact resistance

Criteria like these play an important role in the ultimate success or failure of every roof assembly. They should be considered by the designer in order to determine the applicable specification, the correct components of the roof assembly and the construction details to be used.

Anchor Sheet

Attach with appropriate fasteners spaced a minimum 9" o.c. in the laps with two additional rows spaced 18" o.c. in the field, staggered OR as required by code.

Fasten starting fasteners 6" in from the edge of the roof to avoid edge metal fastener overlap.

Flashing Collar

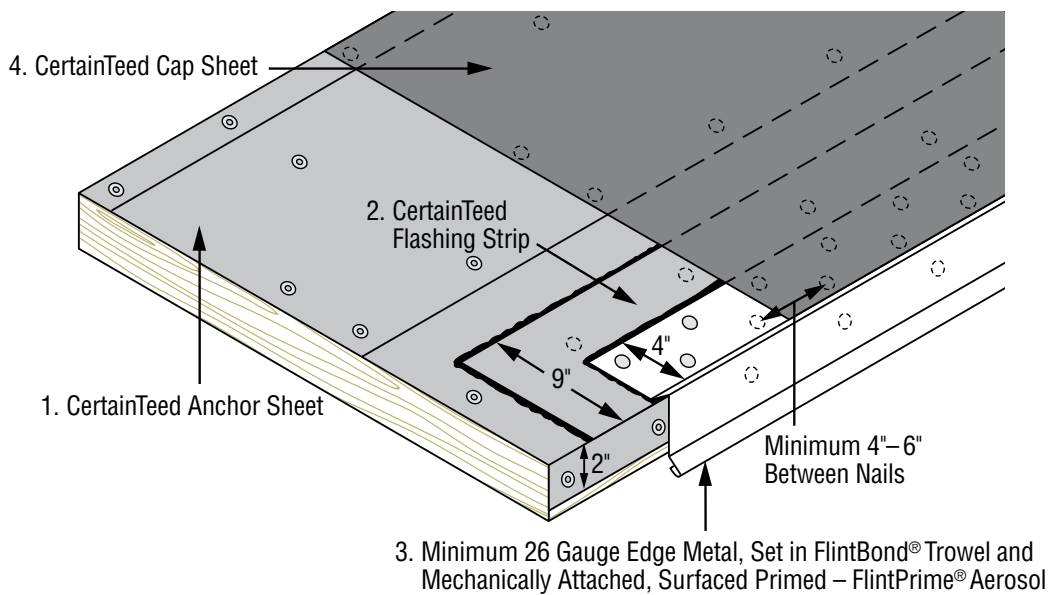
Fully adhere (self-adhered, torch, cold process or hot asphalt). **If self-adhered** apply FlintBond® Caulk to edge; **If torch-welded** ensure 1/4" bleed out at edge; **If using cold process** set in FlintBond Trowel with 1/4" bleed out at edge; **if using hot asphalt** ensure 1/4" bleed out at edge.

Edge Metal

Mechanically attach a minimum two staggered rows, 6" o.c. or as required by building code; endlaps should receive two nails. Edge Metal shall have a minimum 3/4" rise for gravel surfaced membranes and a 3/8" rise for smooth or mineral surfaced membranes.

Cap Sheet

Fully adhere (self-adhered, torch, cold process or hot asphalt). **If self-adhered**, in cold weather¹ where Flintlastic® SA Cap (FR) Sheet overlaps Edge Metal surface, hot air weld² with bead of FlintBond Caulk at edge.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2" per pass.

Anchor Sheet or Base Ply

Mechanically attach or fully adhere (self-adhered, torch, cold process or hot asphalt) Proper attachment is defined by specified system, product selection and deck type.

Edge Metal

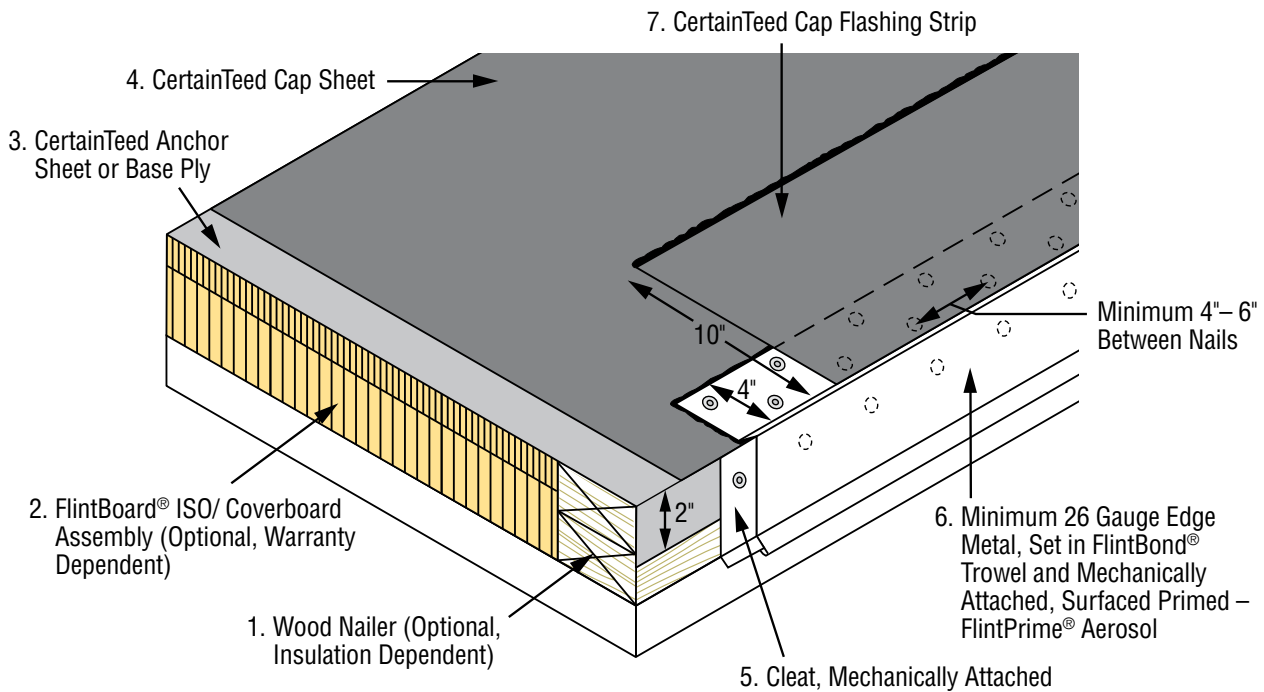
Mechanically attach a minimum two staggered rows, 6" o.c. or as required by building code; endlaps should receive two nails. Edge Metal shall have a minimum 3/4" rise for gravel surfaced membranes and a 3/8" rise for smooth or mineral surfaced membranes.

Cap Sheet

Fully adhere in accordance with the approved, published product application method.

Cap Sheet Flashing Strip

Treat the granulated surface of Cap Sheet where granule overlap occurs: **If self-adhered or cold process** apply FlintBond® Trowel to entire lapped surface or (in cold weather¹) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** ensure 1/4" bleed out.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2" per pass.

Anchor Sheet or Base Ply, Field

Mechanically attach or Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment of the base layer is defined by specified system, product selection and deck type. Ensure base sheet is extended below wood nailer blocking.

Flashing Collar

Fully adhere (self-adhered, torch, cold process or hot asphalt). **If self-adhered** apply FlintBond® Caulk to edge; **If torch-welded** ensure 1/4" bleed out at edge; **If using cold process** set in FlintBond Trowel with 1/4" bleed out at edge; **if using hot asphalt** ensure 1/4" bleed out at edge.

Gutter System

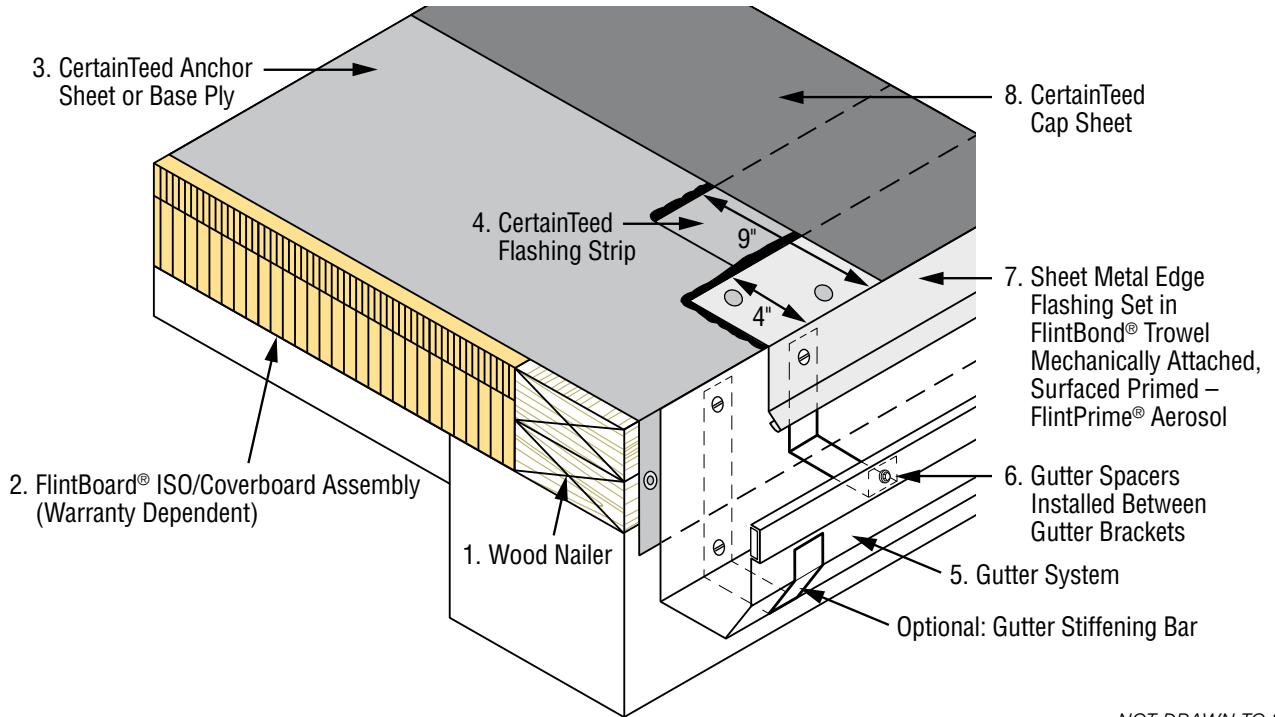
Refer to the Architectural Metal Flashing section of the NRCA Roofing Manual for securement options.

Edge Metal

Set in FlintBond Trowel. Mechanically attach a minimum two staggered rows, 6" o.c. or as required by building code; endlaps should receive two nails. Prime surface with FlintPrime® Aerosol.

Cap Sheet

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. **If self-adhered**, in cold weather¹ hot air weld² with bead of FlintBond Caulk at edge.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the metal surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 300°F-500°F (setting 2-3), apply heat to the overlap interface while bonding Cap with rolling pressure onto the Metal. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke.

Anchor Sheet or Base Ply

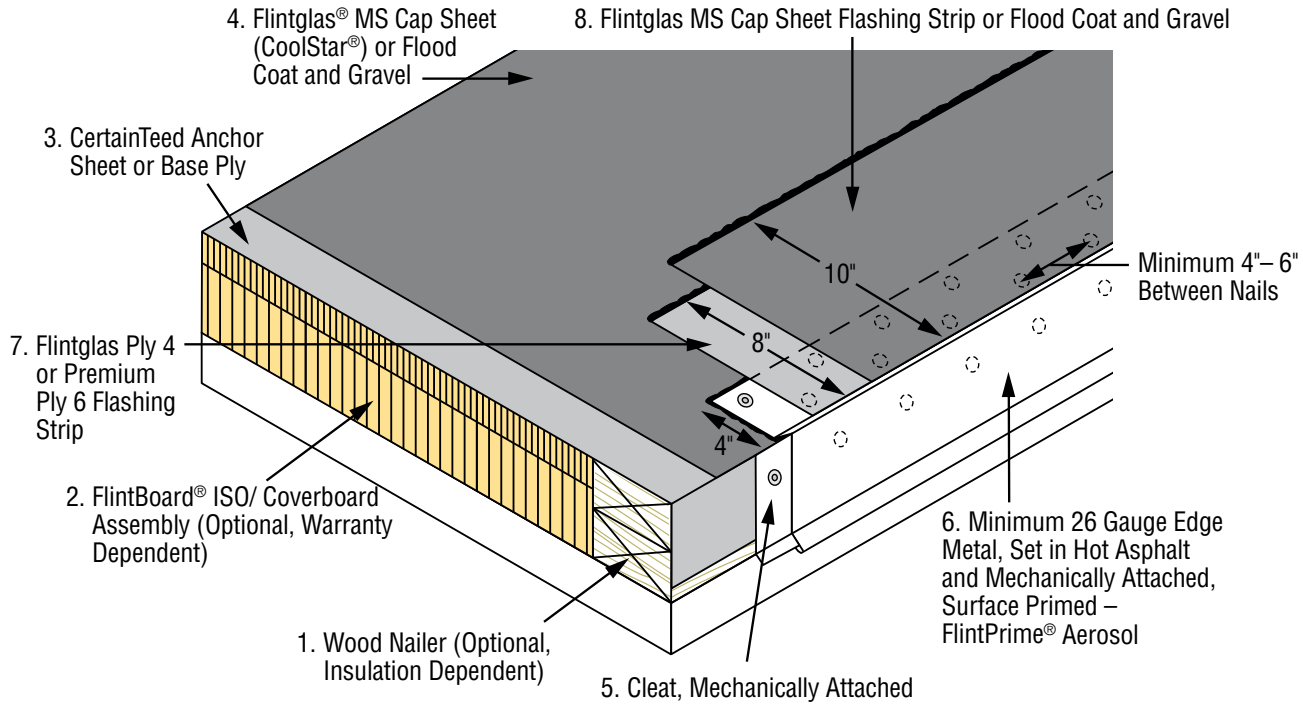
Mechanically attach or fully adhere (self-adhered, torch, or hot asphalt). Proper attachment of the base layer is defined by specified system, product selection and deck type.

Flashing Strips

Apply with hot asphalt and ensure 1/4" bleed out.

Edge Metal

Mechanically attach a minimum two staggered rows, 6" o.c. or as required by building code; endlaps should receive two nails. Edge Metal shall have a minimum 3/4" rise for gravel surfaced membranes and a 3/8" rise for smooth or mineral surfaced membranes.



NOT DRAWN TO SCALE

Anchor Sheet or Base Ply, Field

Mechanically attach or fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment of the base layer is defined by specified system, product selection and deck type.

Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection.

Cap Sheet Flashing Strip

Treat the granulated surface of Cap Sheet, Field, where the Flashing Strip overlap occurs: **If self-adhered or using cold process** apply FlintBond® Trowel to entire lapped surface with 1/4" bleed out or (in cold weather¹) hot air weld² with

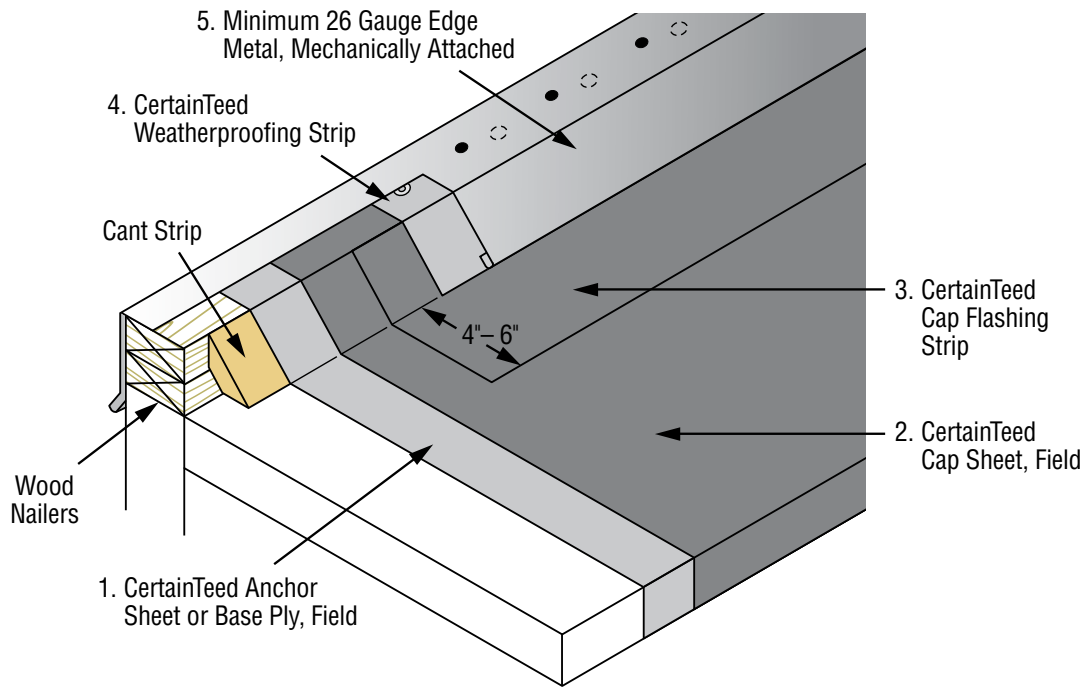
bead of FlintBond Caulk at edge; **If torch-welded (cap only²)** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.

Weatherproofing Strip

Self-adhere WinterGuard® Metal, WinterGuard® HT or Flintlastic® PlyBase/MidPly and mechanically attach top edge according to building code.

Edge Metal

Mechanically attach as required by building code; space fasteners so as not to overlap weatherproofing fasteners.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2" per pass.

Anchor Sheet or Base Ply, Field

Mechanically attach or fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment of the base layer is defined by specified system, product selection and deck type.

Cap Sheet, Field

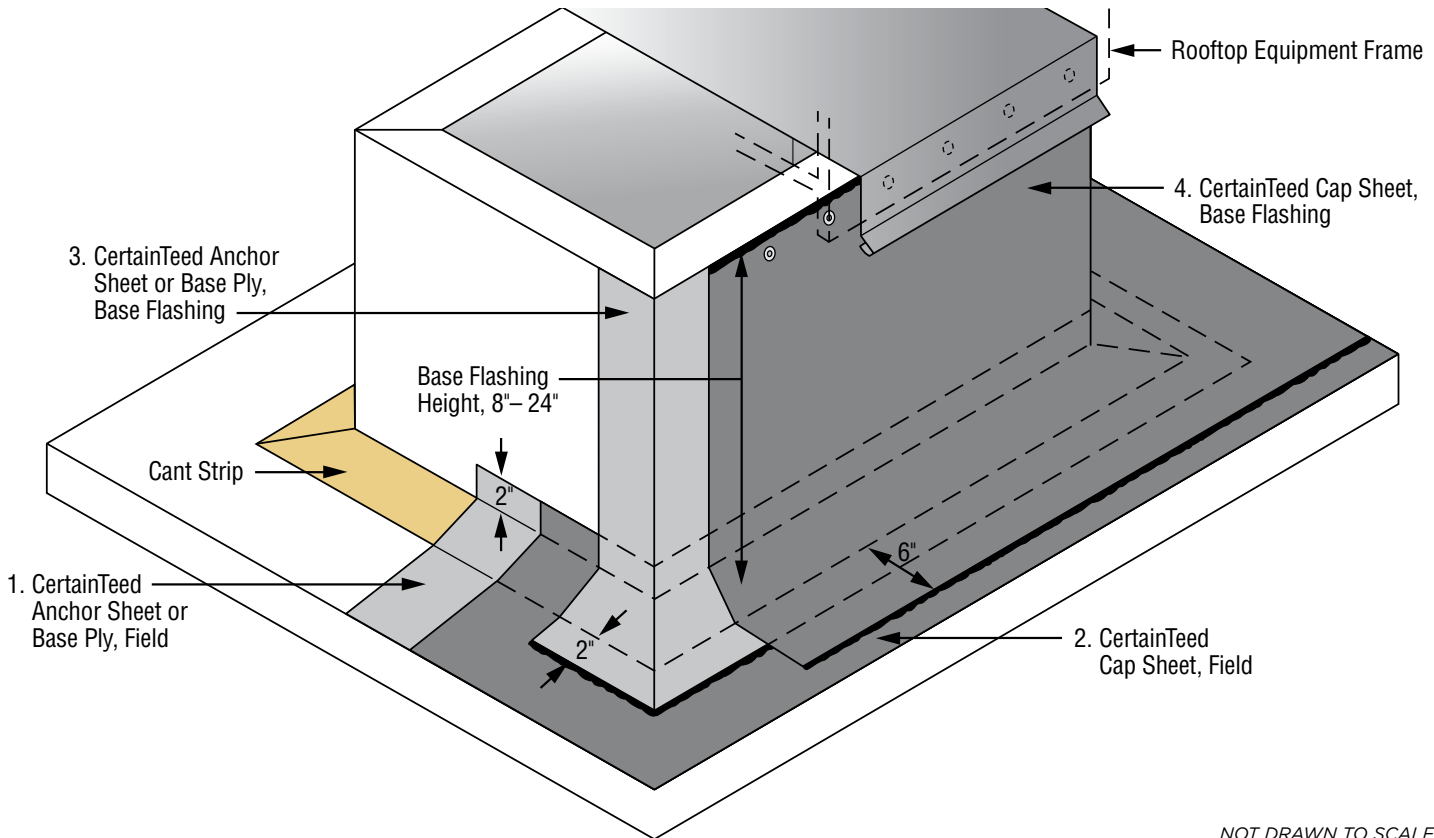
Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

Base Flashing

VERTICAL ATTACHMENT: Mechanically attach Anchor 12" o.c. or self-adhere Base Ply; Fully adhere Cap (self-adhered,

torch-weld, cold process or hot asphalt; Gang fasten Base and Cap at top edge 9" o.c. with tin discs; Ensure 1/4" bleed out on top edge or apply FlintBond® Caulk.

FIELD ATTACHMENT: Treat the granulated surface of Cap Sheet, Field, where the Base Flashing overlap occurs: **If self-adhered or using cold process** apply FlintBond Trowel to entire lapped surface with 1/4" bleed out or (in cold weather) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.



NOT DRAWN TO SCALE

Premium Application

Add a CertainTeed Modified Bitumen Base Ply behind the Cap Sheet, Counterflashing. Extend it a minimum of 4" out onto the Cap Sheet, Field. Extend the Cap Sheet, Counterflashing out onto the Cap Sheet, Field a minimum of 4" beyond the underlying additional ply.

Anchor Sheet or Base Ply, Field

Mechanically attach or fully adhere (self-adhered, torch, cold-process or hot asphalt). Proper attachment of the base layer is defined by specified system, product selection and deck type.

Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

Base Flashing

WALL ATTACHMENT: Mechanically attach Anchor 12" o.c. or self-adhere Base Ply; Fully adhere Cap (self-adhered, torch-weld, cold process or hot asphalt; Gang fasten Base and Cap at top edge 9" o.c. with tin discs; Ensure 1.4" bleed out on top edge or apply FlintBond® Caulk.

FIELD ATTACHMENT: Treat the granulated surface of Cap Sheet, Field, where the Base Flashing overlap occurs:

If self-adhered or using cold process apply FlintBond Trowel to entire lapped surface with 1/4" bleed out or (in cold weather²) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded** (cap only³) heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.

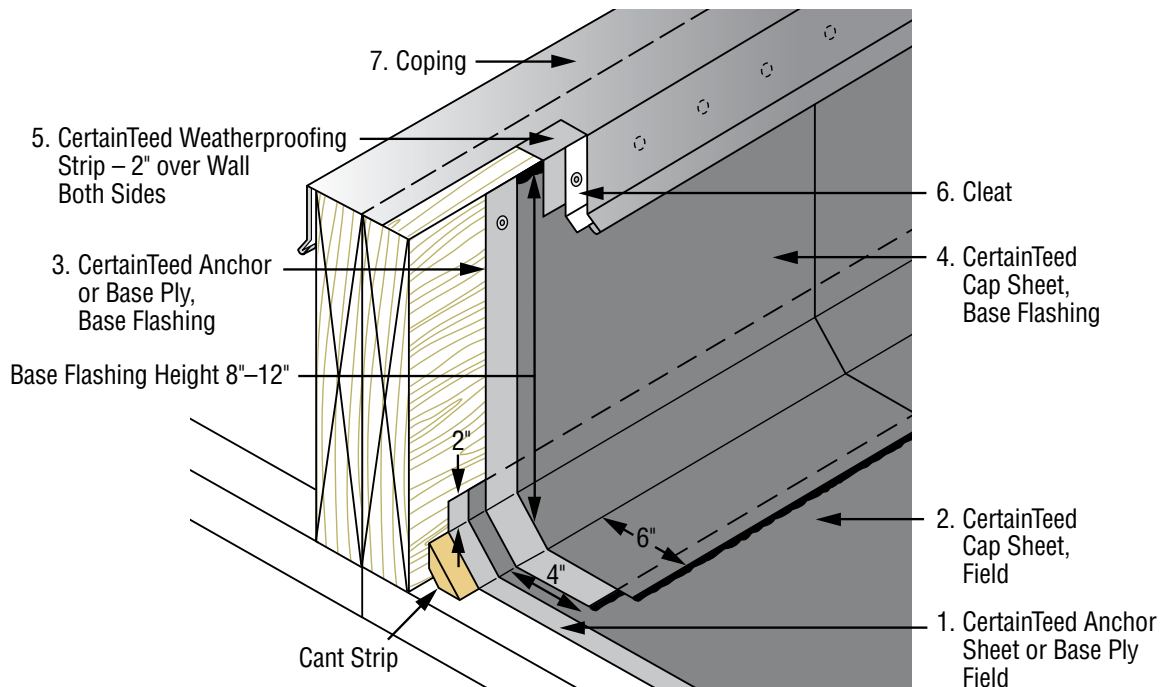
Weatherproofing Strip

Self-adhere WinterGuard® Metal, WinterGuard® HT or Flintlastic® PlyBase/MidPly. Turn down over wall 2" both sides (to be gang fastened when cleat is attached).

Metal Cleat

Mechanically attach 9" o.c. through tin discs.

CertainTeed recommends strapping all Base Flashing and Counterflashing rolls, running the width of the roll up or perpendicular to the vertical surface.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2" per pass.

³When potential fire hazards can be mitigated CertainTeed considers it acceptable to direct torch provided low output (50,000 BTU or less) equipment is used; when potential fire hazards cannot be mitigated indirect torching methods should be utilized.

Anchor Sheet or Base Ply, Field

Mechanically attach or fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment of the base layer is defined by specified system, product selection and deck type.

Cap Sheet Field

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

Base Flashing

WALL ATTACHMENT: Mechanically attach Anchor 12" o.c. or self-adhere Base Ply, turn down 2" over outside edge of wall (to be gang fastened when cleat is attached); Fully adhere Cap (self-adhered, torch-weld, cold process or hot asphalt); Gang fasten Base and Cap at top edge 9" o.c. with tin discs; Ensure 1.4" bleed out on top edge or apply FlintBond® Caulk.

FIELD ATTACHMENT: Treat the granulated surface of Cap Sheet, Field, where the Base Flashing overlap occurs: **If self-adhered or using cold process** apply FlintBond Trowel to entire lapped surface with 1/4" bleed out or (in cold weather¹) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded (cap only³)** heat sink/scrape the

granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.

Cap Sheet Counterflashing

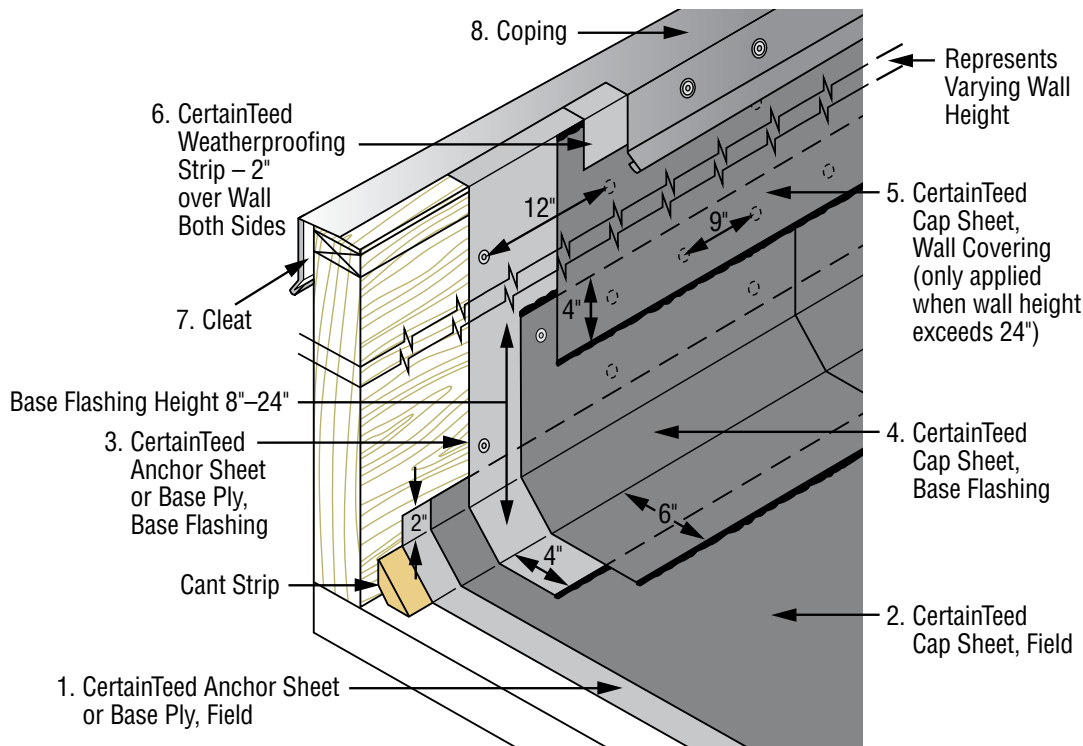
NOTE: This layer is only applied when wall height exceeds 24". **If self-adhered** apply FlintBond Caulk to top edge; **If torch-welded** ensure 1/4" bleed out at top edge; **If using cold process** set in FlintBond Trowel with 1/4" bleed out at top edge; **if using hot asphalt** apply hot asphalt or set in FlintBond Trowel with 1/4" bleed out at top edge. **BASE FLASHING OVERLAP:** Follow application method as noted for Base Flashing, FIELD OVERLAP.

Weatherproofing Strip

Self-adhere WinterGuard® Metal, WinterGuard® HT or Flintlastic® PlyBase/MidPly. Turn down over wall 2" both sides, or 1" beyond the wood nailer (to be gang fastened when cleat is attached).

NOTE: For walls 24" or less in height, vertical termination of Base Flashing will match/replace vertical termination of Wall Covering as shown below.

CertainTeed recommends strapping all Base Flashing and Counterflashing rolls, running the width of the roll up or perpendicular to the vertical surface.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2" per pass.

³When potential fire hazards can be mitigated CertainTeed considers it acceptable to direct torch provided low output (50,000 BTU or less) equipment is used; when potential fire hazards cannot be mitigated indirect torching methods should be utilized.

Base Ply and Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt) base and cap layer. Proper attachment is defined by specified system, product selection and deck type. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

Base Flashing

WALL ATTACHMENT: Mechanically attach Anchor 12" o.c. or self-adhere Base Ply, turn down 2" over outside edge of wall (to be gang fastened when cleat is attached); Fully adhere Cap (self-adhered, torch-weld, cold process or hot asphalt); Gang fasten Base and Cap at top edge 9" o.c. with tin discs; Ensure 1.4" bleed out on top edge or apply FlintBond® Caulk.

FIELD OVERLAP: Treat the granulated surface of Cap Sheet, Field, where Base Flashing overlap occurs: **If self-adhered** apply FlintBond Trowel to entire lapped surface or (in cold weather¹) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **If using cold process** apply

FlintBond Trowel with 1/4" bleed out; **if using hot asphalt** ensure 1/4" bleed out.

Cap Sheet Counterflashing

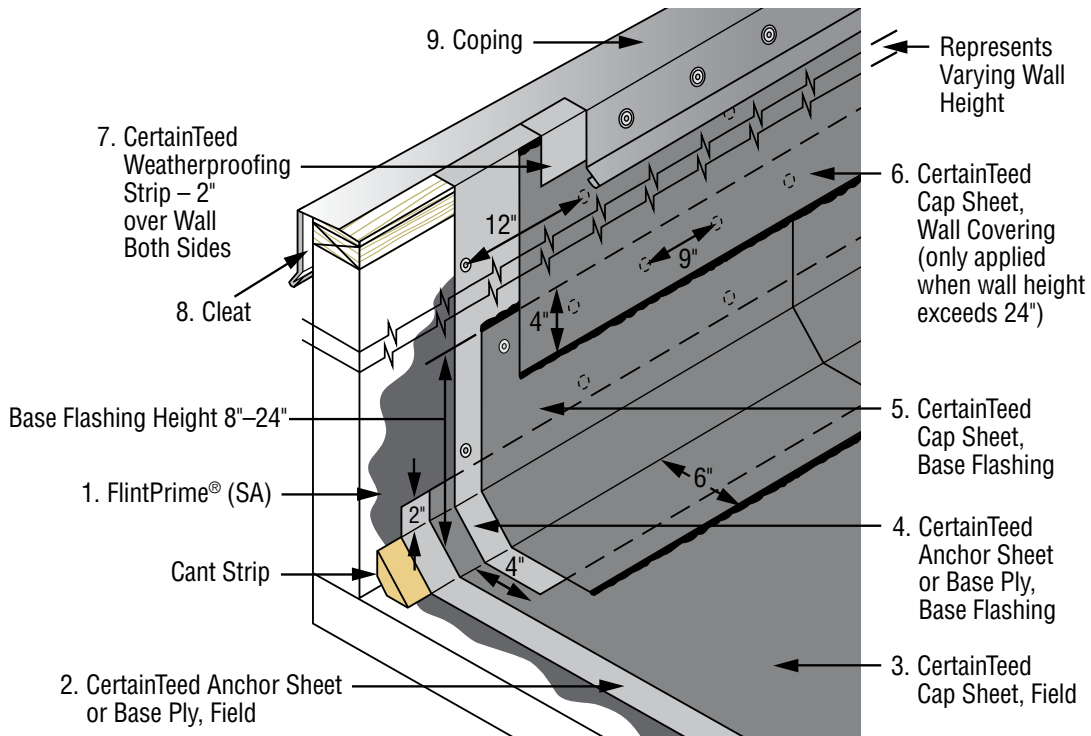
NOTE: This layer is only applied when wall height exceeds 24". **If self-adhered** apply FlintBond Caulk to top edge; **If torch-welded** ensure 1/4" bleed out at top edge; **If using cold process** set in FlintBond Trowel with 1/4" bleed out at top edge; **if using hot asphalt** apply hot asphalt or set in FlintBond Trowel with 1/4" bleed out at top edge.

BASE FLASHING OVERLAP: Follow application method as noted for Cap Sheet Base Flashing, FIELD OVERLAP.

Weatherproofing Strip

Self-adhere WinterGuard® Metal, WinterGuard® HT or Flintlastic® PlyBase/MidPly. Turn down over wall 2" both sides, or 1" beyond the wood nailer (to be gang fastened when cleat is attached).

CertainTeed recommends strapping all Base Flashing and Counterflashing rolls, running the width of the roll up or perpendicular to the vertical surface.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2" per pass.

Base Ply and Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt) base and cap layer. Proper attachment is defined by specified system, product selection and deck type. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

Base Flashing

WALL ATTACHMENT: Mechanically attach top edge to wall, 9" o.c. through tin discs with concrete fasteners; **if self-adhered** apply FlintBond® Caulk to top edge; **if torch-welded** ensure 1/4" bleed out at top edge; **if using cold process** set in FlintBond Trowel with 1/4" bleed out at top edge; **if using hot asphalt** ensure 1/4" bleed out at top edge.

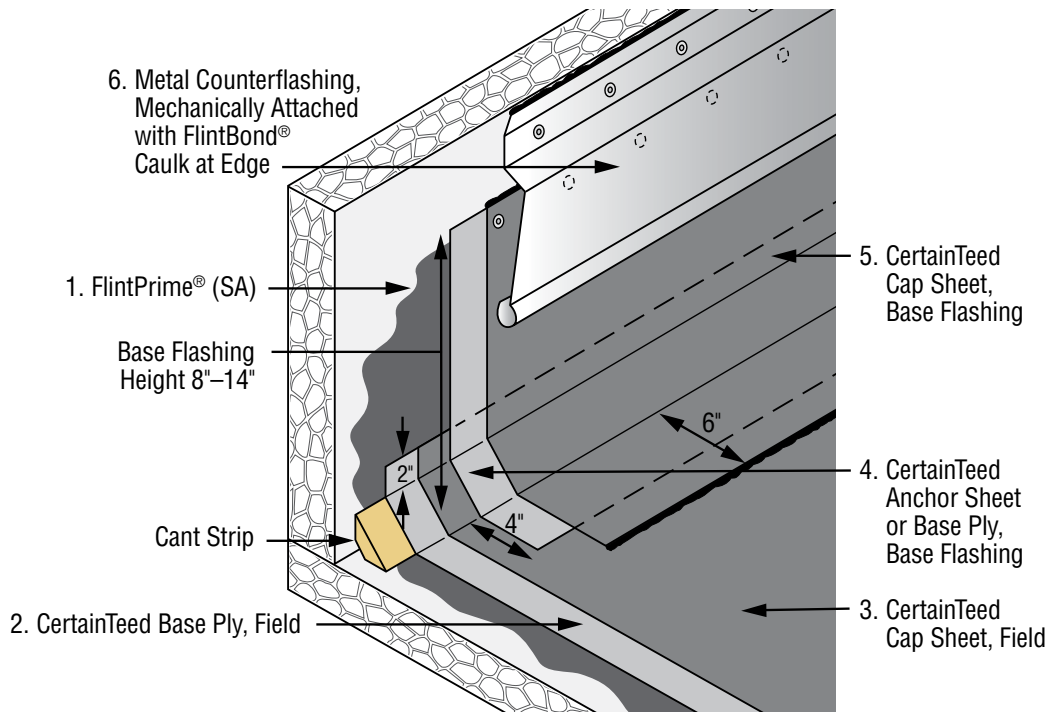
FIELD OVERLAP: Treat the granulated surface of Cap Sheet, Field, where Base Flashing overlap occurs:

If self-adhered apply FlintBond Trowel to entire lapped surface or (in cold weather¹) hot air weld² with bead of FlintBond Caulk at edge; **if torch-welded** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using cold process** apply FlintBond Trowel with 1/4" bleed out; **if using hot asphalt** ensure 1/4" bleed out.

Metal Counterflashing

Mechanically attach a minimum 6" o.c. or as required by building code.

CertainTeed recommends strapping all Base Flashing and Counterflashing rolls, running the width of the roll up or perpendicular to the vertical surface.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2" per pass.

Plywood Backing

Install plywood backing with appropriate thickness to create wall surface that vertically aligns with plaster or hardboard (stucco) siding.

Anchor Sheet or Base Ply, Field

Mechanically attach or fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment of the base layer is defined by specified system, product selection and deck type.

Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

Base Flashing

WALL ATTACHMENT: Mechanically attach Anchor 12" o.c. or self-adhere Base Ply; Fully adhere Cap (self-adhered, torch-weld, cold process or hot asphalt; Gang fasten Base and Cap at top edge 9" o.c. with tin discs; Ensure 1.4" bleed out on top edge or apply FlintBond® Caulk.

FIELD ATTACHMENT: Treat the granulated surface of Cap Sheet, Field, where the Base Flashing overlap occurs: **If self-adhered or using cold process** apply FlintBond Trowel to entire lapped surface with 1/4" bleed out or (in cold weather¹) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded (cap only³)** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.

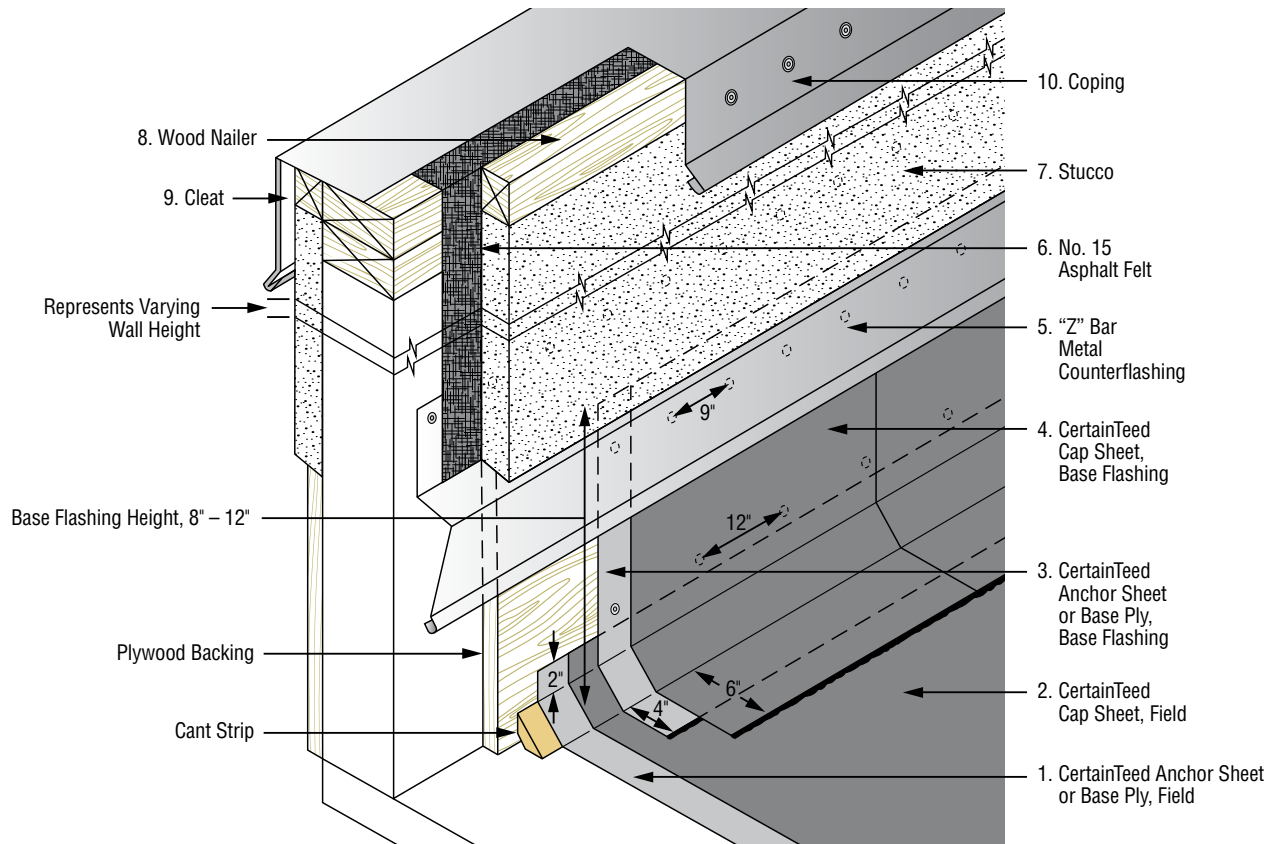
"Z" Bar Counterflashing

Fit top flange into channel behind plaster or hardboard (stucco) siding.

#15 Asphalt Felt

Loose lay, turn over outside edge 2". Gang fasten with Cleat both sides.

CertainTeed recommends strapping all Base Flashing and Counterflashing rolls, running the width of the roll up or perpendicular to the vertical surface.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2" per pass.

³When potential fire hazards can be mitigated CertainTeed considers it acceptable to direct torch provided low output (50,000 BTU or less) equipment is used; when potential fire hazards cannot be mitigated indirect torching methods should be utilized.

NOTE: This detail is intended to illustrate inside corner cuts and application. See appropriate parapet wall detail for Base Flashing application instructions.

Base & Cap Field Corner Cuts

In order to allow a flat fit into the corner, make a cut from the bottom point of the cant strip out through the top edge of the roll; the cut will be parallel to the length of the roll. Repeat with a second cut from the top point of the cant strip.

Base Sheet Base Flashing Corner Cuts

Base Sheet Base Flashing folds over the outer edge of the wall, top inner corner of the wall, and bottom inner corner of the wall onto the field. Several cuts are necessary to allow for a flat fit. Cut the membrane to the required length: The total length of the sheet equals 2 (2" turn over) + width of top of wall + wall height + length of cant strip surface + 4 (4" into the field).

- Lay sheet with selvage edge perpendicular to the parapet wall so 2" of the roll extends beyond the top outer edges. First, make a 45° cut from the outer corner of the wall through the outer corner of the roll.

This will allow you to turn the roll down over the top edges of the wall.

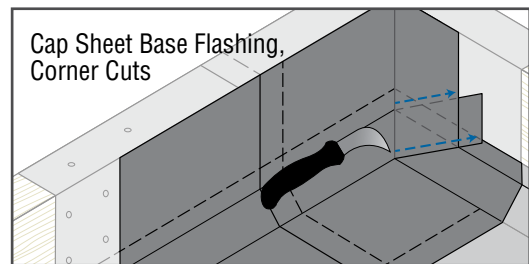
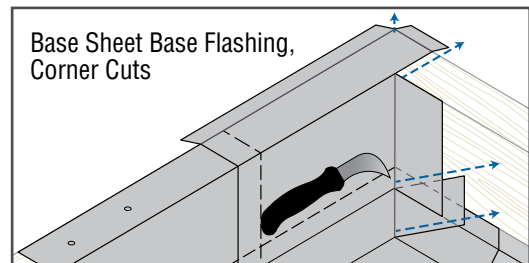
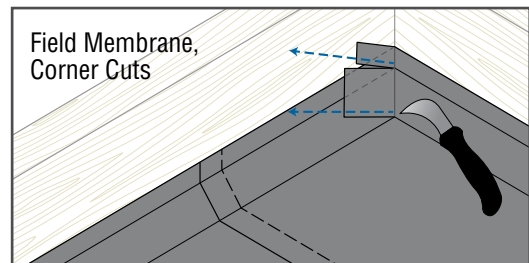
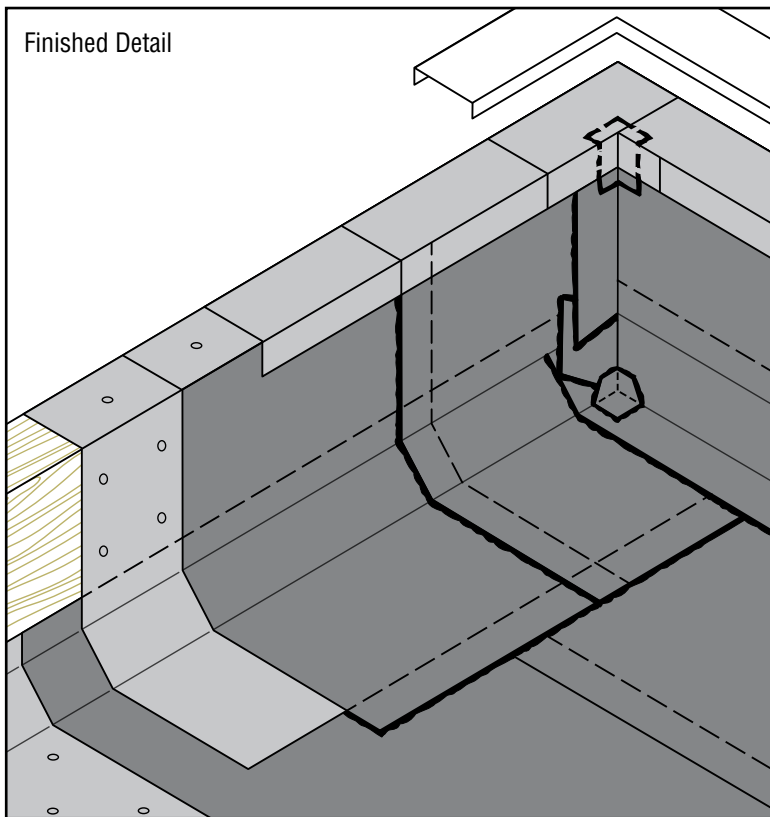
- Second, make a cut from the inner top outer corner of the wall through the side edge of the roll; cut perpendicular to the roll's length. The roll will drop down and lay flat against the wall surface.
- Third, make a cut from the top point of the cant strip on a 45° angle upwards through the side edge of the roll.
- Fourth, cut from the bottom point of the cant strip. These two cuts will allow the roll to conform to the wall and cant and extend into the field.

Cap Sheet Base Flashing Corner Cuts

Repeat the third and fourth cuts from Base Sheet Base Flashing to allow the roll to conform to the wall and cant and extend into the field.

Cap Sheet Corner Pieces

Cut cap sheet into rounds and slice horizontal edges to create a "bowtie". Apply to cover cut origin points of Cap Sheet Counterflashings.



NOT DRAWN TO SCALE

NOTE: This detail is intended to illustrate outside corner cuts and application. See appropriate parapet wall detail for Base Flashing application instructions.

Base & Cap Field Corner Cuts

In order to allow a flat fit into the corner, make a cut from the bottom point of the cant strip out through the top edge of the roll; the cut will be parallel to the length of the roll. Repeat with a second cut from the top point of the cant strip.

Base Sheet Base Flashing Corner Cuts

Base Sheet Base Flashing folds over the outer edge of the wall, top inner corner of the wall, and bottom inner corner of the wall onto the field. Several cuts are necessary to allow for a flat fit. Cut the membrane to the required length: The total length of the sheet equals 2 (2" turn over) + width of top of wall + wall height + length of cant strip surface + 4 (4" into the field).

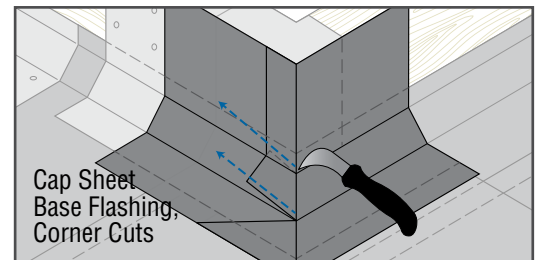
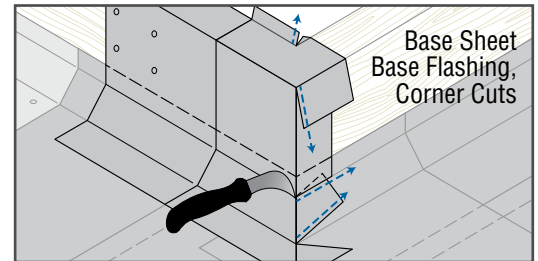
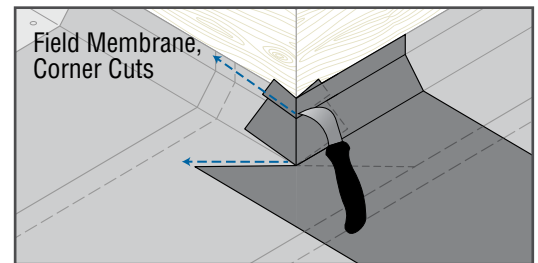
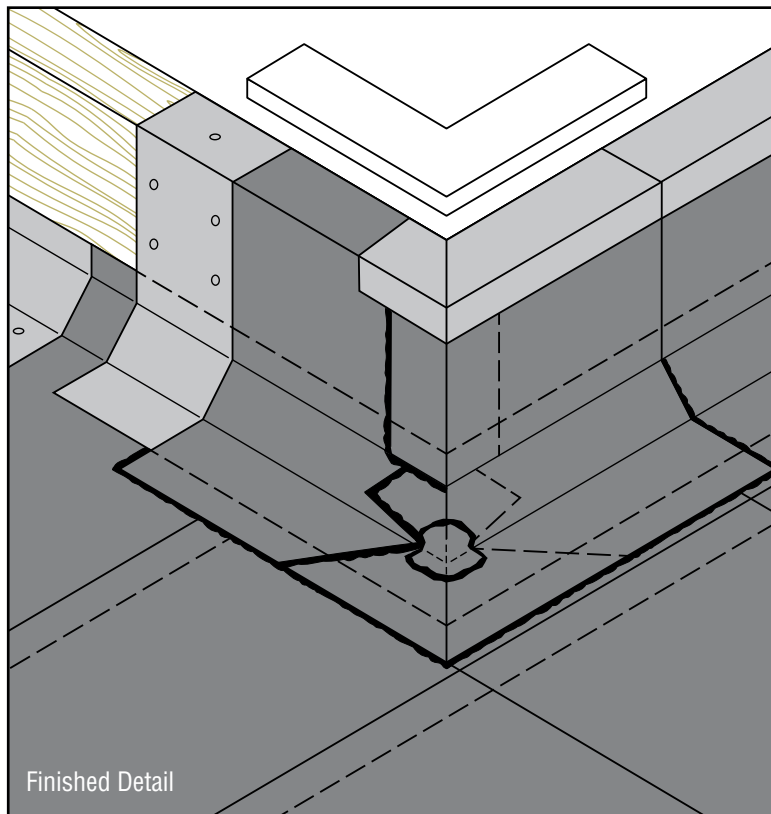
- Lay sheet with selvage edge perpendicular to the parapet wall so 2" of the roll extends beyond the top

outer edge of the wall. First, make a 45° cut from the top outer corner of the wall through the outer corner of the roll. This will allow you to turn the roll down over the top edges of the wall.

- Second, make a cut from the inner top corner of the wall through the side edge of the roll; cut perpendicular to the roll's length. The roll will drop down and lay flat against the wall surface.
- Third, make a cut from the top point of the cant strip on a 45° angle upwards through the side edge of the roll.
- Fourth, cut from the bottom point of the cant strip. These two cuts will allow the roll to conform to the wall and cant and extend into the field.

Cap Sheet Base Flashing Corner Cuts

Repeat the third and fourth cuts from Base Sheet Base Flashing to allow the roll to conform to the wall and cant and extend into the field.



NOT DRAWN TO SCALE

Anchor Sheet or Base Ply Field & Counterflashing

Mechanically attach or fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by specified system, product selection and deck type. Extend base layer directly behind scupper without seams a minimum of 6" beyond scupper flanges in all directions.

Scupper Flange

For nailable surfaces, flange must also be nailed 3" o.c. along bottom edge, 3/4" from perimeter.

Cap Sheet, Field

Fully adhere (self-adhered, torch, cold adhesive or hot asphalt). Proper attachment is defined by product selection.

Base Flashing

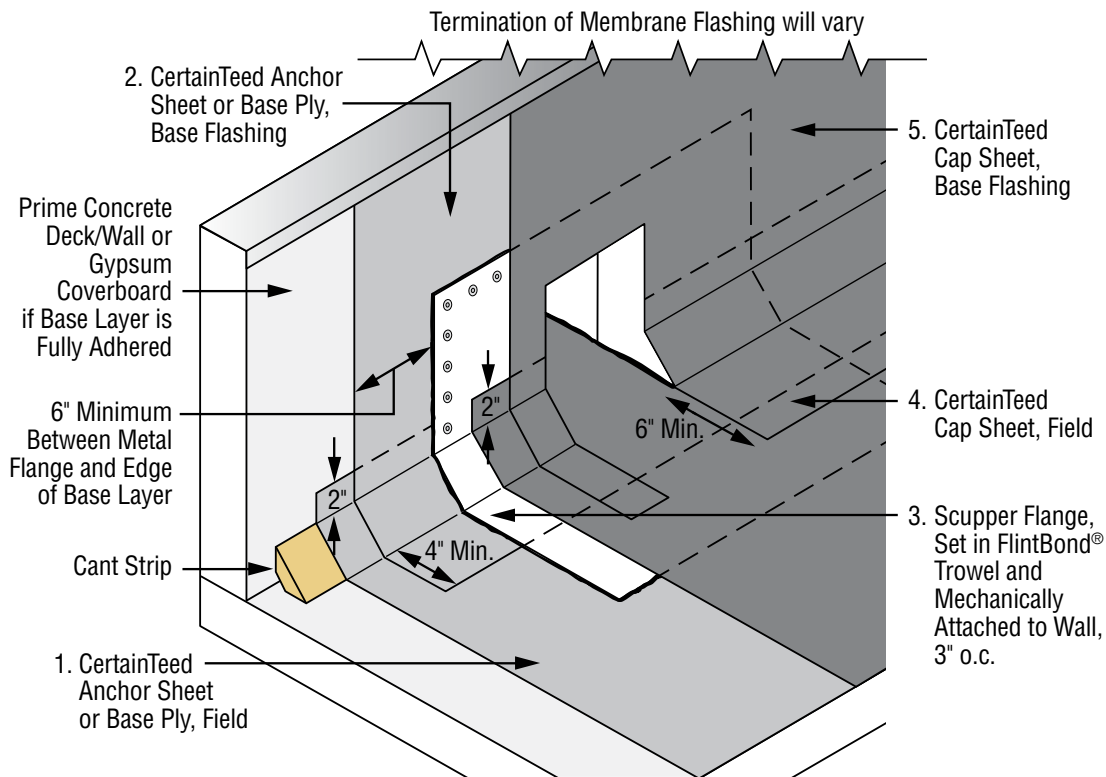
WALL ATTACHMENT: Mechanically attach or fully adhere (self-adhered, torch-weld, cold adhesive or hot asphalt;

torch-weld is not an approved method for base ply wall attachment), if Fully adhered, gang fasten top edge 9" o.c. with tin discs; FIELD ATTACHMENT: Treat the granulated surface of Cap Sheet, Field, where the Base Flashing overlap occurs: **If self-adhered or using cold process** apply FlintBond® Trowel to entire lapped surface with 1/4" bleed out or (in cold weather¹) hot air weld² with bead of FlintBond Caulk at edge;

If torch-welded (cap only³) heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.

If using hot asphalt apply to entire lapped surface with 1/4" bleed out.

CertainTeed recommends strapping all Base Flashing and Counterflashing rolls, running the width of the roll up or perpendicular to the vertical surface.



NOT DRAWN TO SCALE

Premium Application

Add a CertainTeed Modified Bitumen Base Ply behind the Cap Sheet, Counterflashing. Extend it a minimum of 4" out onto the Cap Sheet, Field. Extend the Cap Sheet, Counterflashing out onto the Cap Sheet, Field a minimum of 4" beyond the underlying additional ply.

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2" per pass.

Anchor Sheet or Base Ply

Mechanically attach or fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by specified system, product selection and deck type.

If applying by cold process or hot asphalt extend compound onto drain flange; **If the base layer is mechanically attached in the field**, base layer must be fully adhered beginning 9" from the drain flange edge.

Lead or Copper Flashing

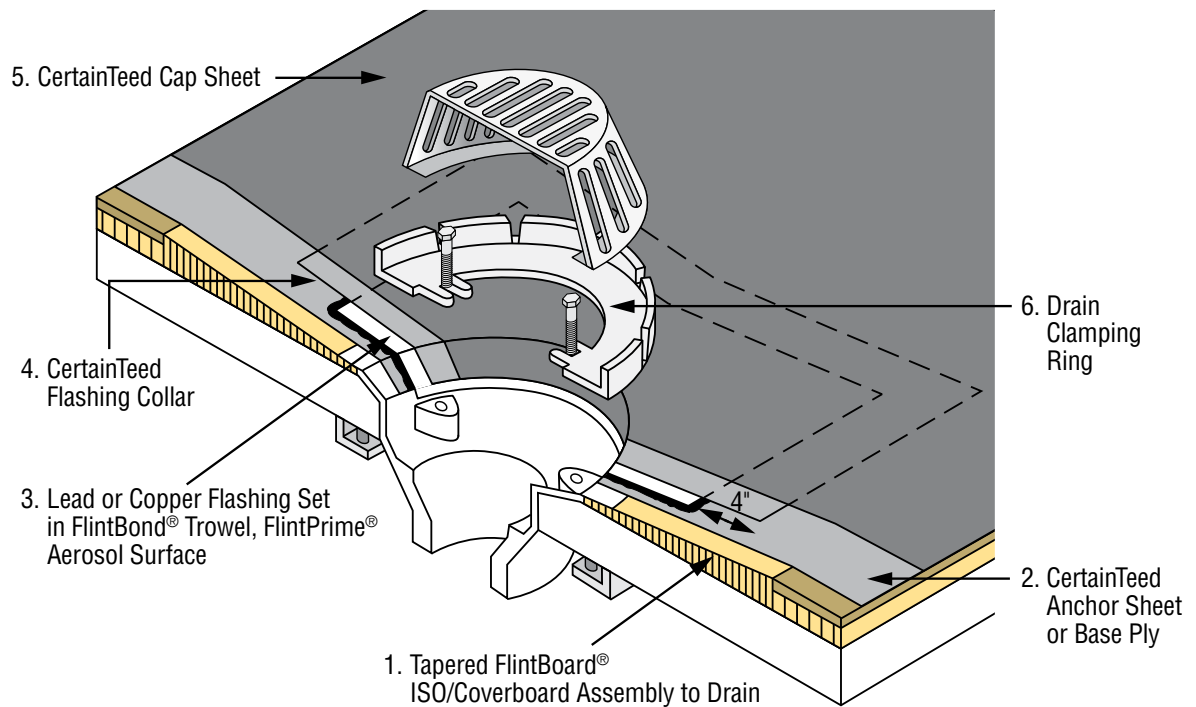
Flashing should be a minimum 30" x 30", 2.5 lb. lead or 16 oz. soft copper, turned down into the drain bow.

Flashing Collar

Fully adhere (self-adhered, torch, cold process or hot asphalt) a minimum 38" x 38" flashing collar. Proper attachment is defined by product selection.

Cap Sheet

Fully adhere in accordance with the approved, published product application method.



NOT DRAWN TO SCALE

Three-Ply Application

Replace the Flashing Collar with a CertainTeed Modified Bitumen Interply, extending the full dimension of the field.

Anchor Sheet or Base Ply

Mechanically attach or fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment of the base layer is defined by specified system, product selection and deck type.

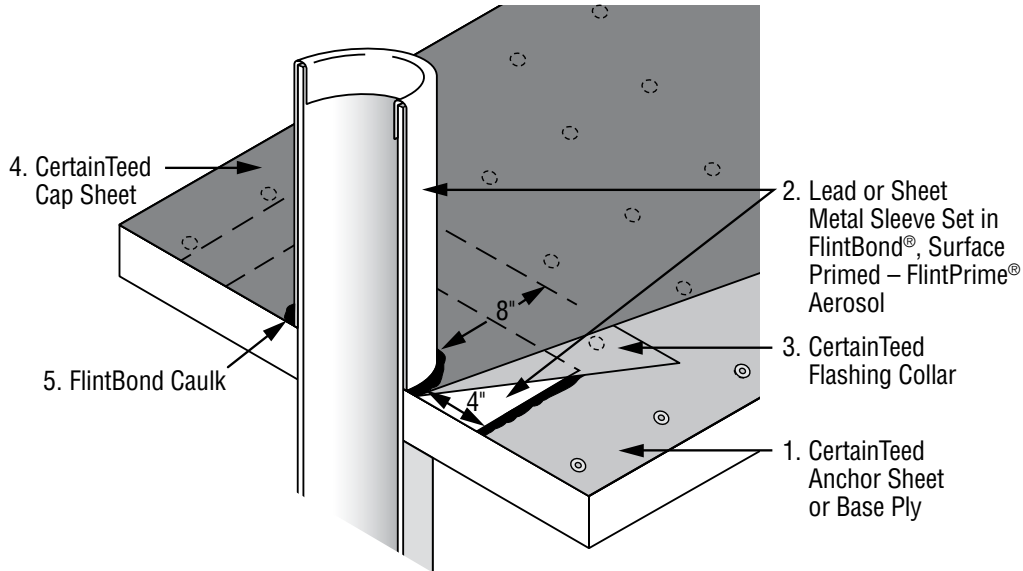
Metal Flashing

Shall have a 4" wide, primed continuous flange.

Flashing Collar & Cap Sheet

Fully adhere (self-adhered, torch, cold process or hot asphalt), extending a minimum 4" beyond the metal flange. Proper attachment is defined by product selection.

If self-adhered in cold weather¹ hot air weld² collar to metal surface.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the metal surface while applying rolling pressure from a silicone roller to the overlapping Collar. With the hot air welder set between 300°F-500°F (setting 2-3), apply heat to the overlap interface while bonding Collar with rolling pressure onto the Metal. Roll the overlapping Collar in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Continue overlap application, 2" per pass.

Anchor Sheet or Base Ply, Field

Mechanically attach or fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment of the base layer is defined by specified system, product selection and deck type.

Cap Sheet, Field

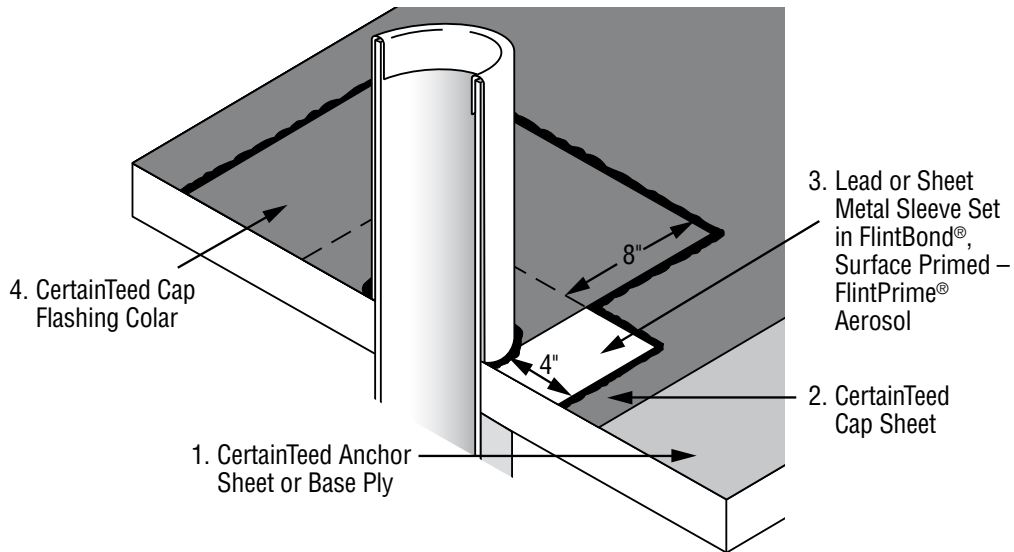
Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

Metal Flashing

Shall have a 4" wide primed continuous flange. Set in FlintBond® Trowel or hot asphalt.

Cap Flashing Collar

Fully adhere (self-adhered, torch, cold process or hot asphalt), extending a minimum 8" beyond the metal flange. Treat the granulated surface of Cap Sheet where the Cap Flashing Collar overlap occurs: **If self-adhered or using cold process** apply FlintBond Trowel to entire lapped surface with 1/4" bleed out or (in cold weather¹) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the metal surface while applying rolling pressure from a silicone roller to the overlapping Collar. With the hot air welder set between 300°F-500°F (setting 2-3), apply heat to the overlap interface while bonding Collar with rolling pressure onto the Metal. Roll the overlapping Collar in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Continue overlap application, 2" per pass.

Built Up Ply Sheet

Ply sheets shall be set in hot asphalt; number of plies is defined by specification.

Metal Flashing

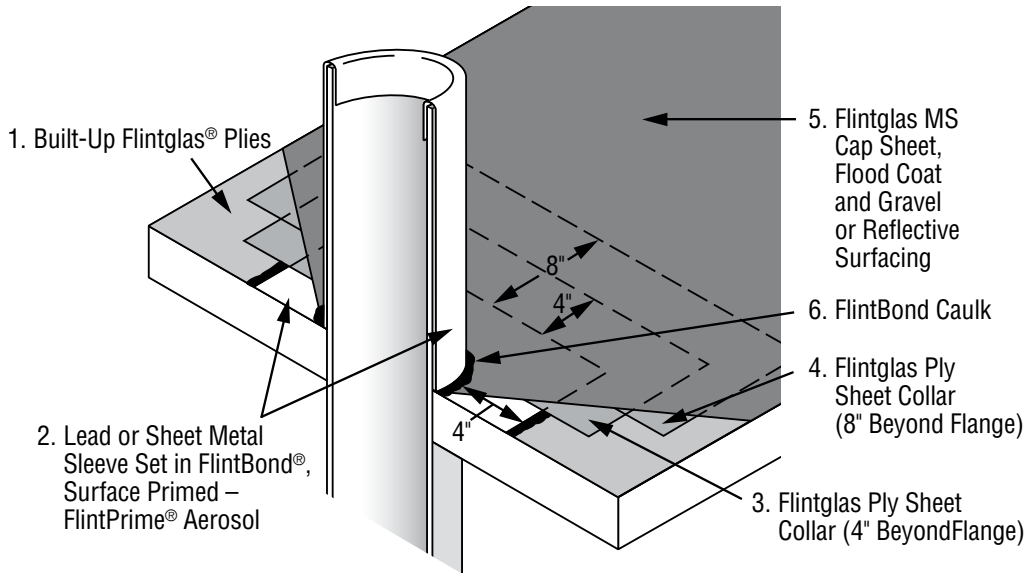
Shall have a 4" wide primed continuous flange. Set in FlintBond® Trowel or hot asphalt.

Flashing Collars

Set two Flintglas Ply Sheet flashing collars in hot asphalt extending 4" and 8", respectively, beyond the metal flange.

Cap Sheet

Fully adhere in hot asphalt; if not using Flintglas® MS Cap, top layer ply sheet may be surfaced with flood coat and gravel or FlintCoat® reflective coating.



NOT DRAWN TO SCALE

Anchor Sheet or Base Ply

Mechanically attach or fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment of the base layer is defined by specified system, product selection and deck type.

Penetration Pocket

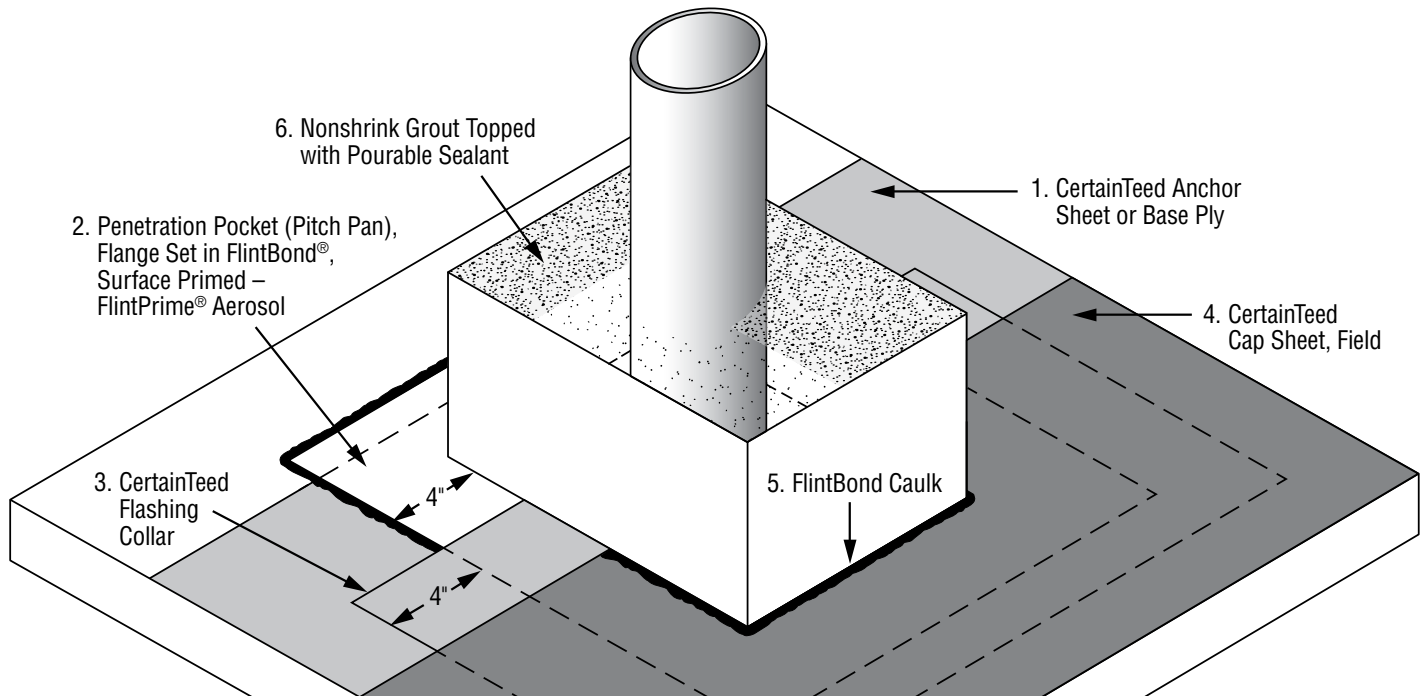
Shall have a 4" wide primed continuous flange and a minimum 4" height. Set in FlintBond® Trowel or hot asphalt.

Flashing Collar & Cap Sheet

Fully adhere (self-adhered, torch, cold process or hot asphalt), extending a minimum 4" beyond the metal flange. Proper attachment is defined by product selection. If self-adhered in cold weather¹ hot air weld² collar to metal surface.

Pan Fill

Fill the inside of the pan to within two inches (2") of the top with a non-shrinking grout. After the grout has set, fill the remainder of the pan with a one part pourable sealant.



NOT DRAWN TO SCALE

Note:

Penetration Pockets are not the preferred flashing method at penetrations because they may be a maintenance problem. Please refer to SmartFlash Details for the preferred flashing method.

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the metal surface while applying rolling pressure from a silicone roller to the overlapping Collar. With the hot air welder set between 300°F-500°F (setting 2-3), apply heat to the overlap interface while bonding Collar with rolling pressure onto the Metal. Roll the overlapping Collar in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Continue overlap application, 2" per pass.

Anchor Sheet or Base Ply, Field

Mechanically attach or fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment of the base layer is defined by specified system, product selection and deck type.

Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

Base Flashing

WALL ATTACHMENT: Mechanically attach Anchor 12" o.c. or self-adhere Base Ply; Fully adhere Cap (self-adhered, torch-weld, cold process or hot asphalt; Gang fasten Base and Cap at top edge 9" o.c. with tin discs; Ensure 1.4"

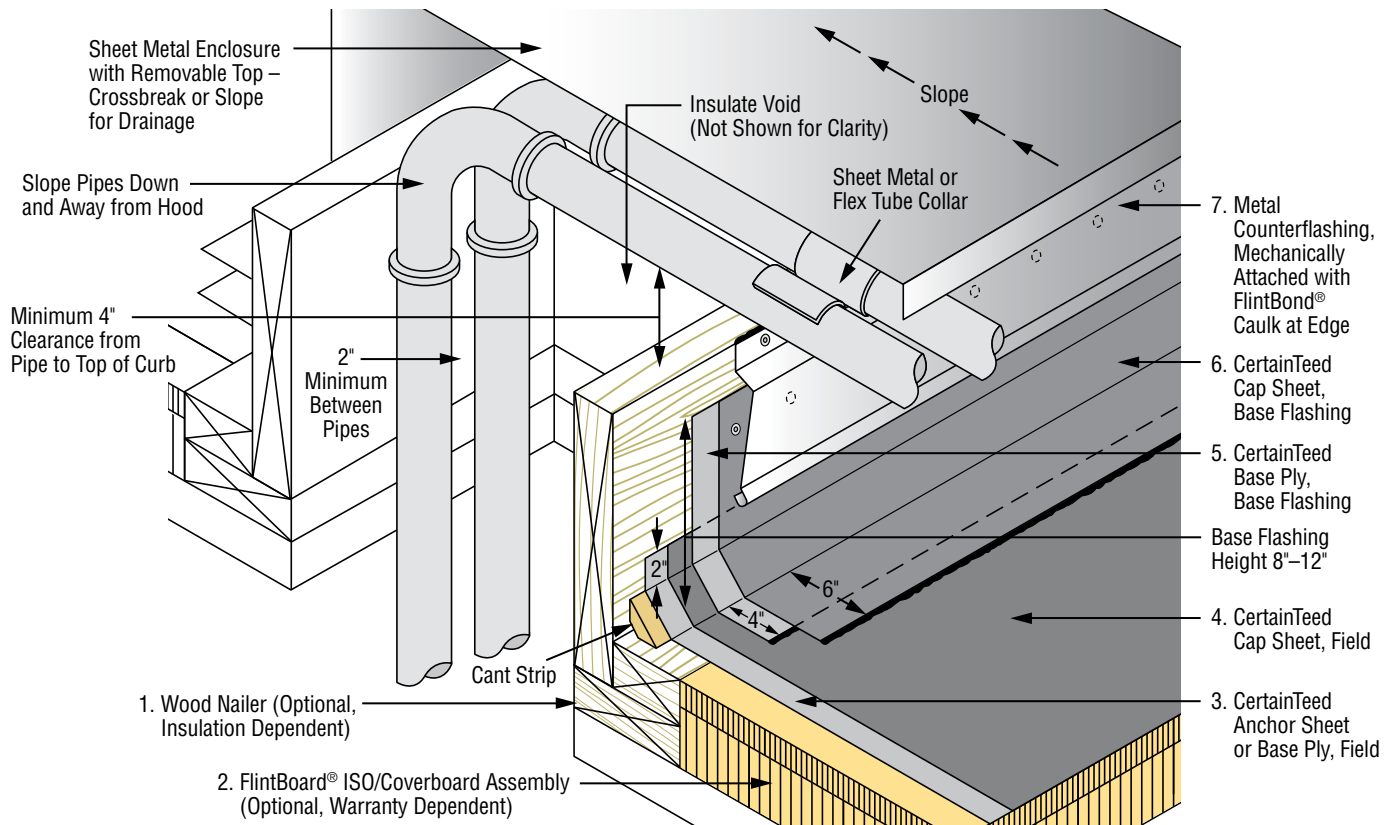
bleed out on top edge or apply FlintBond® Caulk.

FIELD ATTACHMENT: Treat the granulated surface of Cap Sheet, Field, where the Base Flashing overlap occurs:

If self-adhered or using cold process apply FlintBond Trowel to entire lapped surface with 1/4" bleed out or (in cold weather¹) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded (cap only³)** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.

Metal Counterflashing

Mechanically attached with appropriate fastener approximately 24" o.c., apply bead of FlintBond Caulk along top edge.



¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2" per pass.

³When potential fire hazards can be mitigated, CertainTeed considers it acceptable to install torch-applied CertainTeed Counterflashing using the direct torching method provided low output (50,000 BTU output or less) torching equipment is used. When potential fire hazards cannot be mitigated, torch-applied Counterflashing must be installed using the indirect methods such as torch and flop.

Base Ply

Fully adhere (self-adhered or cold process). Proper attachment is defined by product selection.

Cap Sheet

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection.

Metal Flange

Shall have a 4" wide primed continuous flange. Set in FlintBond® Trowel or hot asphalt.

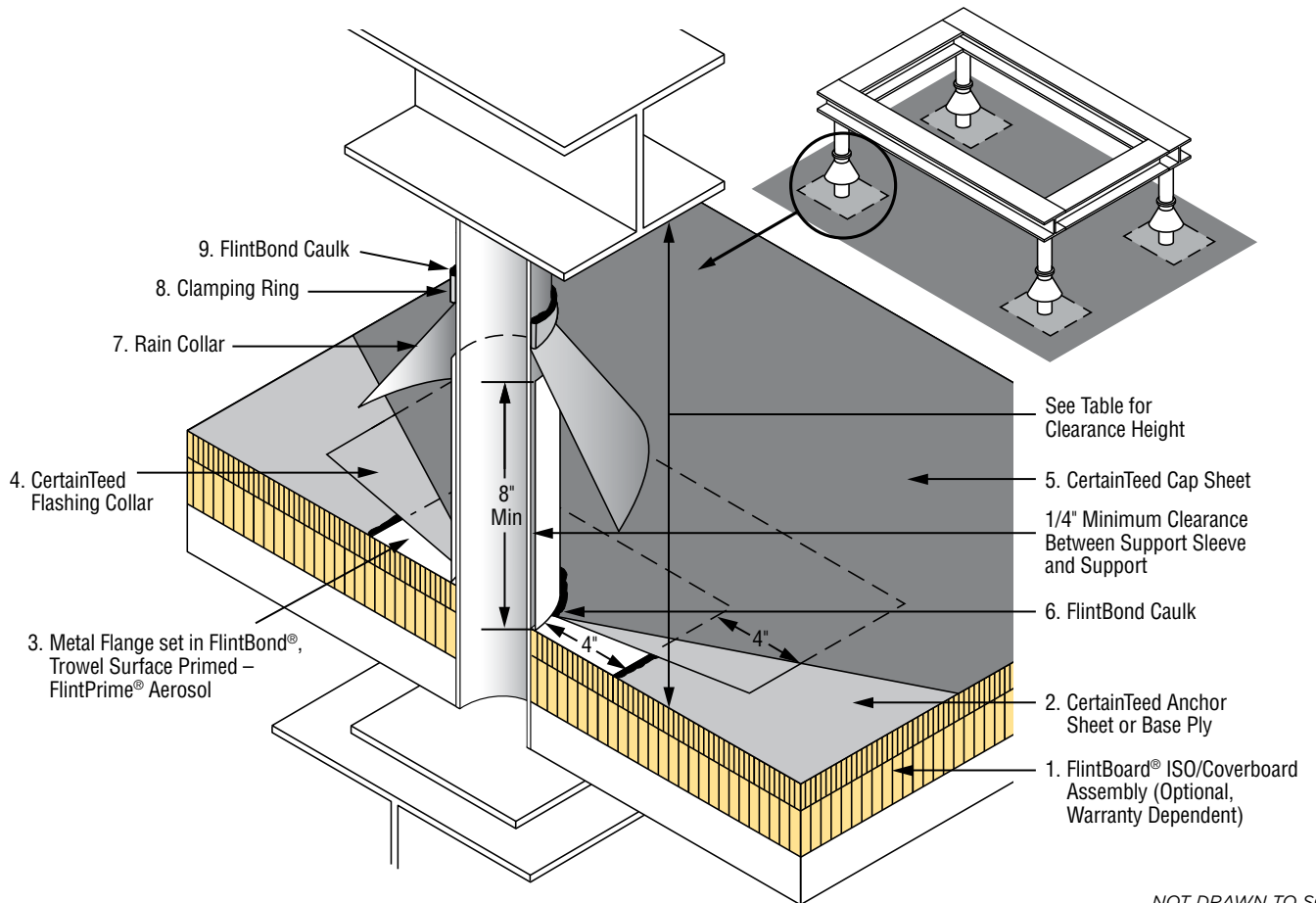
Flashing Collar

Fully adhere (self-adhered, torch, cold process or hot asphalt), extending a minimum 4" beyond the metal flange. Proper attachment is defined by product selection.

If self-adhered in cold weather¹ hot air weld² collar to metal surface.

Cap Sheet

Fully adhere (self-adhered, torch, cold process or hot asphalt) cap sheet in the field. Proper attachment is defined by product selection.



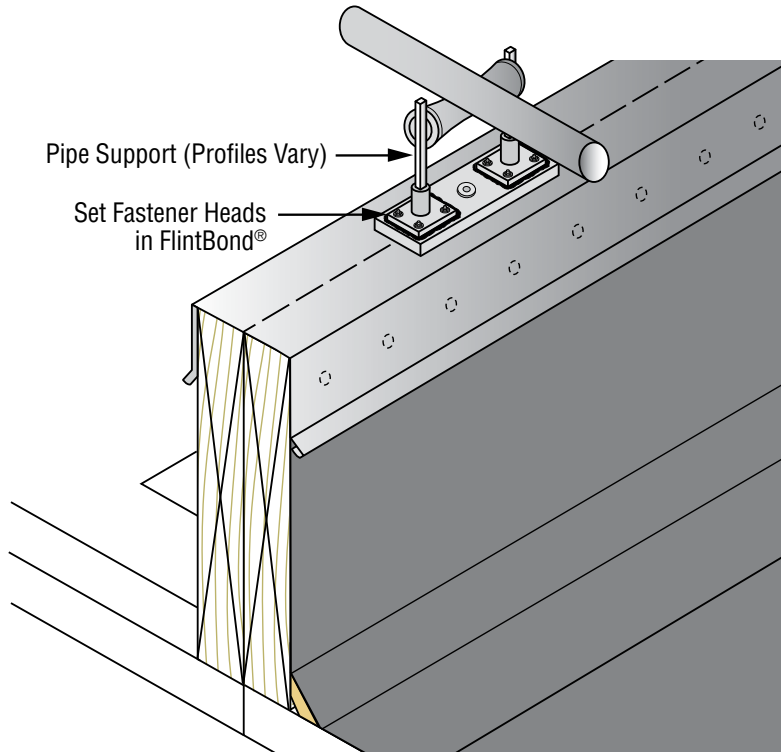
NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the metal surface while applying rolling pressure from a silicone roller to the overlapping Collar. With the hot air welder set between 300°F-500°F (setting 2-3), apply heat to the overlap interface while bonding Collar with rolling pressure onto the Metal. Roll the overlapping Collar in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Continue overlap application, 2" per pass.

Width of Equipment	Clearance
Up to 24"	14"
25" to 36"	18"
37" to 48"	24"
49" to 60"	30"
61" and Wider	36"

NOTE: This detail is intended to illustrate pipe support application.
See appropriate parapet wall detail for Base Flashing application instructions.



NOT DRAWN TO SCALE

Insulation and Wood Nailers

Chamfer/taper to create slope away from joint.

Base Ply

Fully adhere (self-adhered or cold process).
Proper attachment is defined by product selection.

Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection.

Flexible Liner

Mechanically attach with appropriate fasteners, 9" o.c.

Weatherproofing Strip

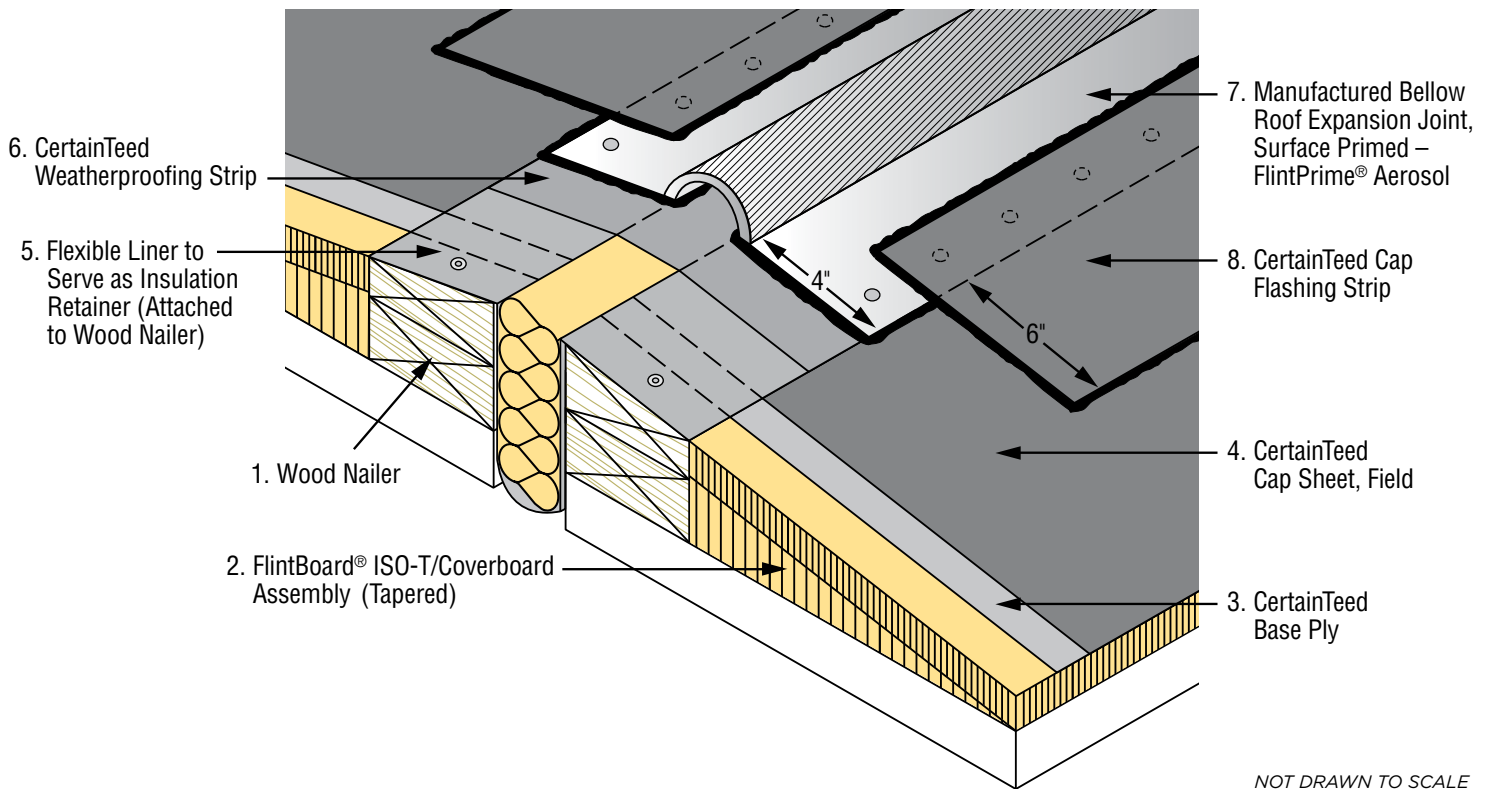
Self-adhere WinterGuard® Metal, WinterGuard® HT or Flintlastic® SA PlyBase/SA MidPly.

Manufactured Bellow

Set in 1/8"-1/4" uniform bed of FlintBond® Trowel adhesive and mechanically attach with appropriate fasteners 4" o.c.; endlaps shall be set in FlintBond® Trowel with two nails; prime surface of flange with FlintPrime® Aerosol.

Cap Sheet Flashing Strip

Fully adhere (self-adhered, torch, cold process or hot asphalt), extending a minimum 6" beyond the metal flange. Proper attachment is defined by product selection. Treat the granulated surface of Cap Sheet, Field, where the Cap Flashing Strip overlap occurs: **If self-adhered or using cold process** apply FlintBond Trowel to entire lapped surface with 1/4" bleed out or (in cold weather¹) hot air weld² to metal and Cap Sheet, Field with bead of FlintBond Caulk at edge; **if torch-welded** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.



¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the metal/granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 300°F-500°F (setting 2-3), apply heat to the overlap interface while bonding Cap with rolling pressure onto the Metal/granular surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Continue overlap application, 2" per pass.

Anchor Sheet or Base Ply, Field

Mechanically attach or fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment of the base layer is defined by specified system, product selection and deck type.

Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

Base Flashing

WALL ATTACHMENT: Mechanically attach Anchor 12" o.c. or self-adhere Base Ply; Fully adhere Cap (self-adhered, torch-weld, cold process or hot asphalt; Gang fasten Base and Cap at top edge 9" o.c. with tin discs; Ensure 1.4" bleed out on top edge or apply FlintBond® Caulk.

FIELD ATTACHMENT: Treat the granulated surface of Cap Sheet, Field, where the Base Flashing overlap occurs: **If self-adhered** or using cold process apply FlintBond Trowel to entire lapped surface with 1/4" bleed out or (in

cold weather¹⁾ hot air weld²⁾ with bead of FlintBond Caulk at edge; **If torch-welded (cap only³⁾)** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.

Flexible Liner

Mechanically attach with appropriate fasteners, 9" o.c.

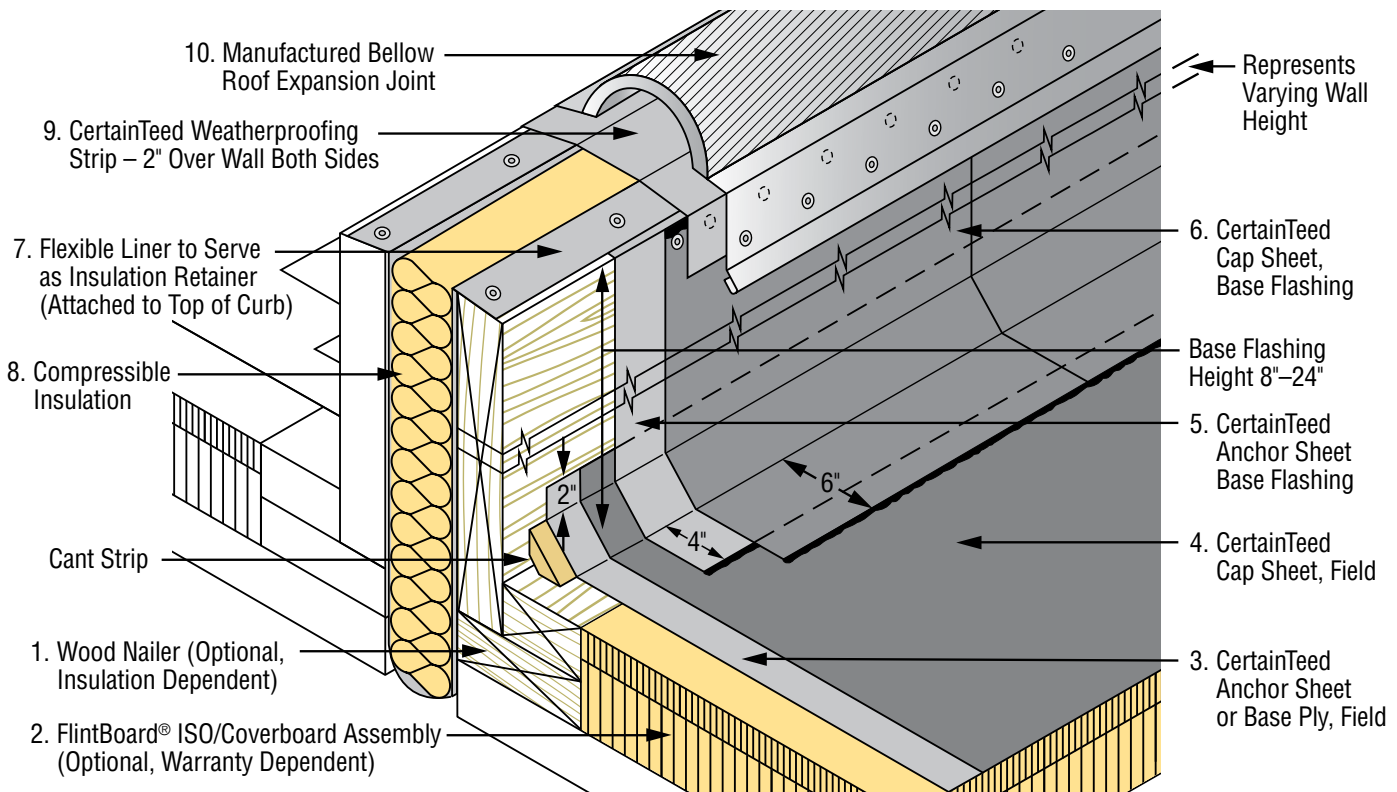
Weatherproofing Strip

Self-adhere WinterGuard® Metal, WinterGuard® HT or Flintlastic® PlyBase/MidPly. Turn down over wall 2" both sides (to be gang fastened when bellow is attached)..

Manufactured Bellow

Mechanically attach with appropriate fasteners 9" o.c.; endlaps shall be set in FlintBond Trowel with two nails; prime surface of flange with FlintPrime® Aerosol.

CertainTeed recommends strapping all Base Flashing and Counterflashing rolls, running the width of the roll up or perpendicular to the vertical surface.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2" per pass.

³When potential fire hazards can be mitigated CertainTeed considers it acceptable to direct torch provided low output (50,000 BTU or less) equipment is used; when potential fire hazards cannot be mitigated indirect torching methods should be utilized.

Use this detail when the potential for differential movement may occur between the deck and a vertical surface. Wood members should not be fastened to the wall.

Anchor Sheet or Base Ply, Field

Mechanically attach or Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by specified system, product selection and deck type.

Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

Base Flashing

WALL ATTACHMENT: Mechanically attach Anchor 12" o.c. or self-adhere Base Ply; Fully adhere Cap (self-adhered, torch-weld, cold process or hot asphalt; Gang fasten Base and Cap at top edge 9" o.c. with tin discs; Ensure 1.4" bleed out on top edge or apply FlintBond® Caulk.

FIELD ATTACHMENT: Treat the granulated surface of Cap

Sheet, Field, where the Base Flashing overlap occurs: **If self-adhered or using cold process** apply FlintBond Trowel to entire lapped surface with 1/4" bleed out or (in cold weather¹) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded (cap only³)** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.

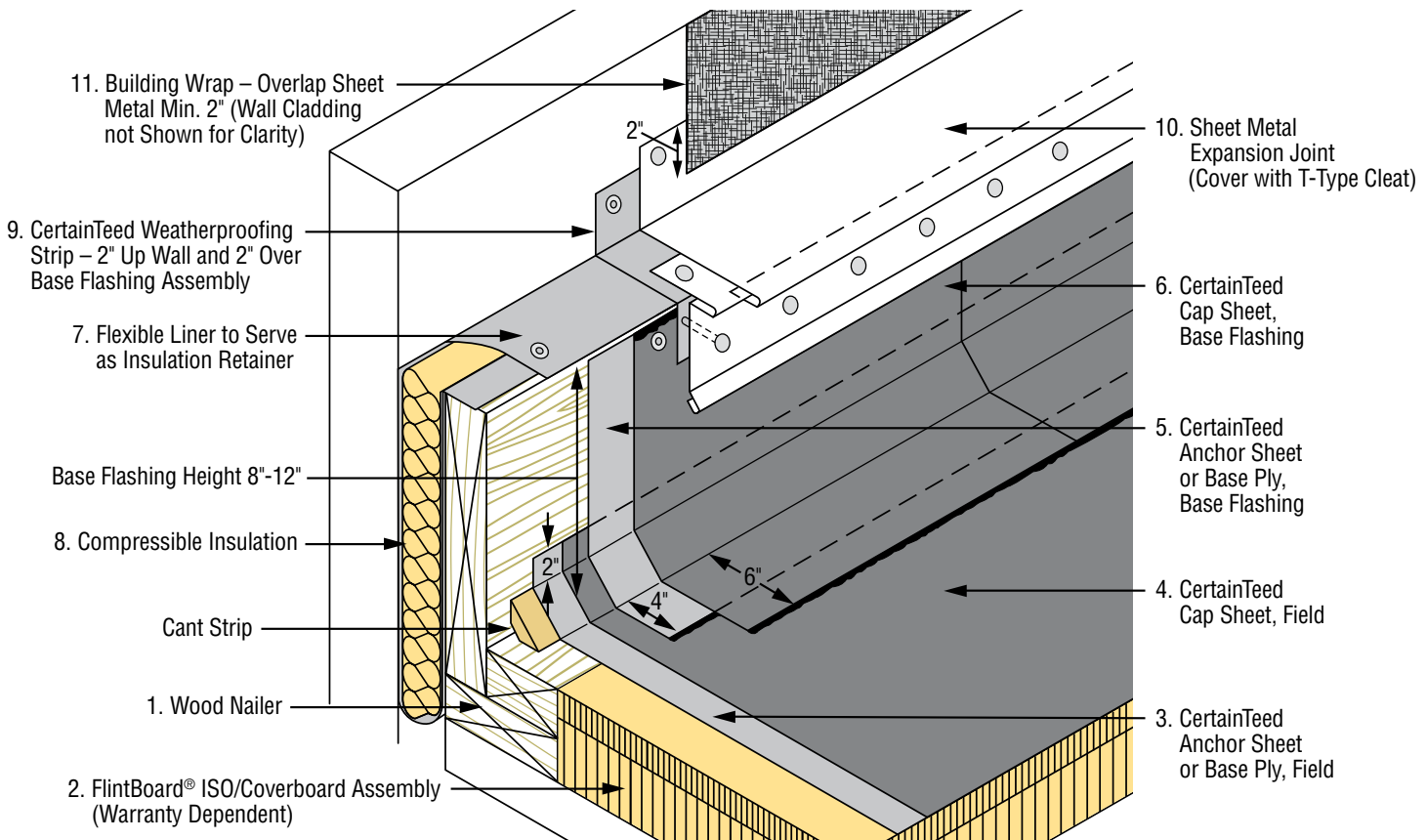
Weatherproofing Strip

Secure and self-adhere CertainTeed WinterGuard® Metal, WinterGuard® HT or Flintlastic® SA PlyBase 2" up the wall and turned down over base flashing, nail top edge 12" o.c. with 11 gauge ring shank nails.

Sheet Metal

Refer to the Architectural Metal Flashing section of the NRCA Roofing Manual for securement options.

CertainTeed recommends strapping all Base Flashing and Counterflashing rolls, running the width of the roll up or perpendicular to the vertical surface.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2"-3" per pass.

³When potential fire hazards can be mitigated CertainTeed considers it acceptable to direct torch provided low output (50,000 BTU or less) equipment is used; when potential fire hazards cannot be mitigated indirect torching methods should be utilized.

One way vents should be prefabricated from spun aluminum; plastic vents are not acceptable. Refer to CertainTeed Commercial Roof Systems Specifications, General Recommendations, Section 3.9 for application recommendations for Lightweight Insulating Concrete Decks.

Pressure Release Vent

Install a minimum 4" diameter pressure release vent with 4" wide primed continuous flange and weather resistant hood 20 feet from perimeter edges and 40 feet o.c. thereafter, located directly over 4" diameter

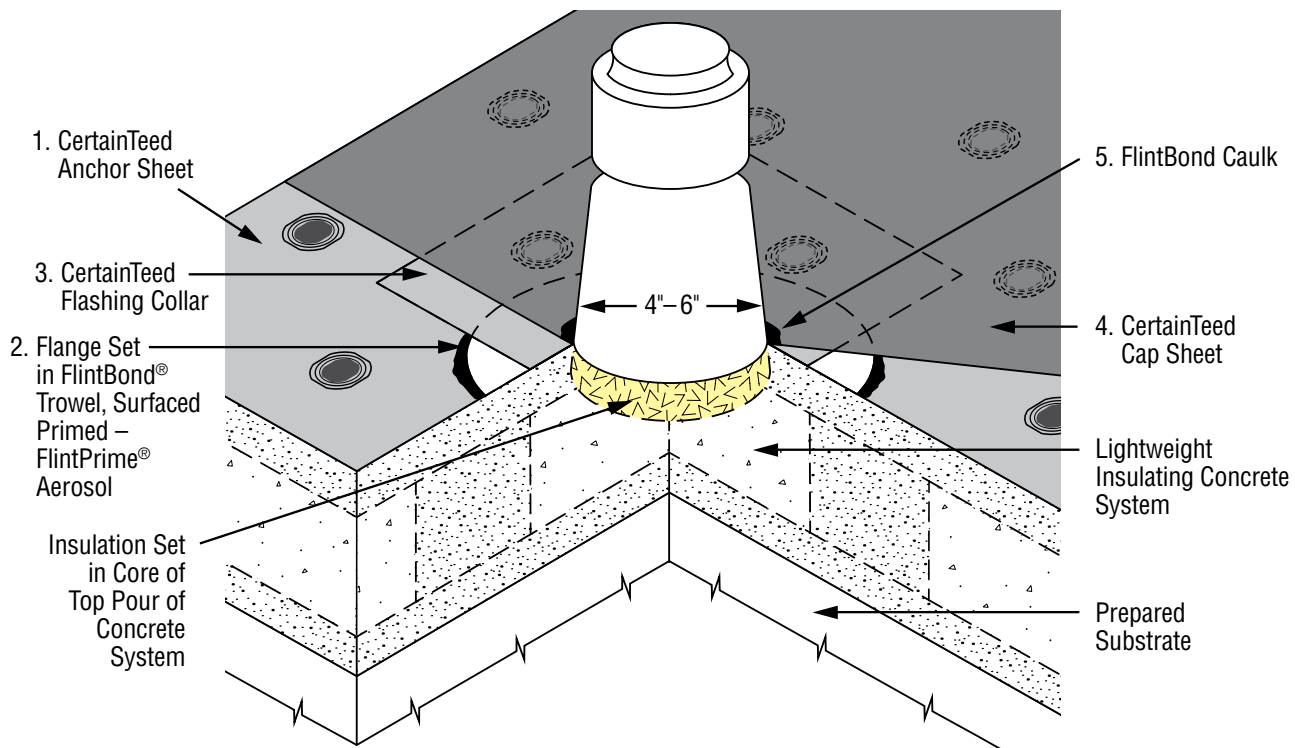
opening cut through the roof system and into the insulating fill not less than 2"; center the release vent over the prepared opening on top of the complete filed membrane.

Anchor Sheet

Mechanically attach with FlintFast® FM 90 Base Sheet Fastener, Twin Loc or Do-All Loc Nails a minimum 9" o.c. in sidelaps and two staggered rows space 18" o.c. in the field.

Flashing Collar & Cap Sheet

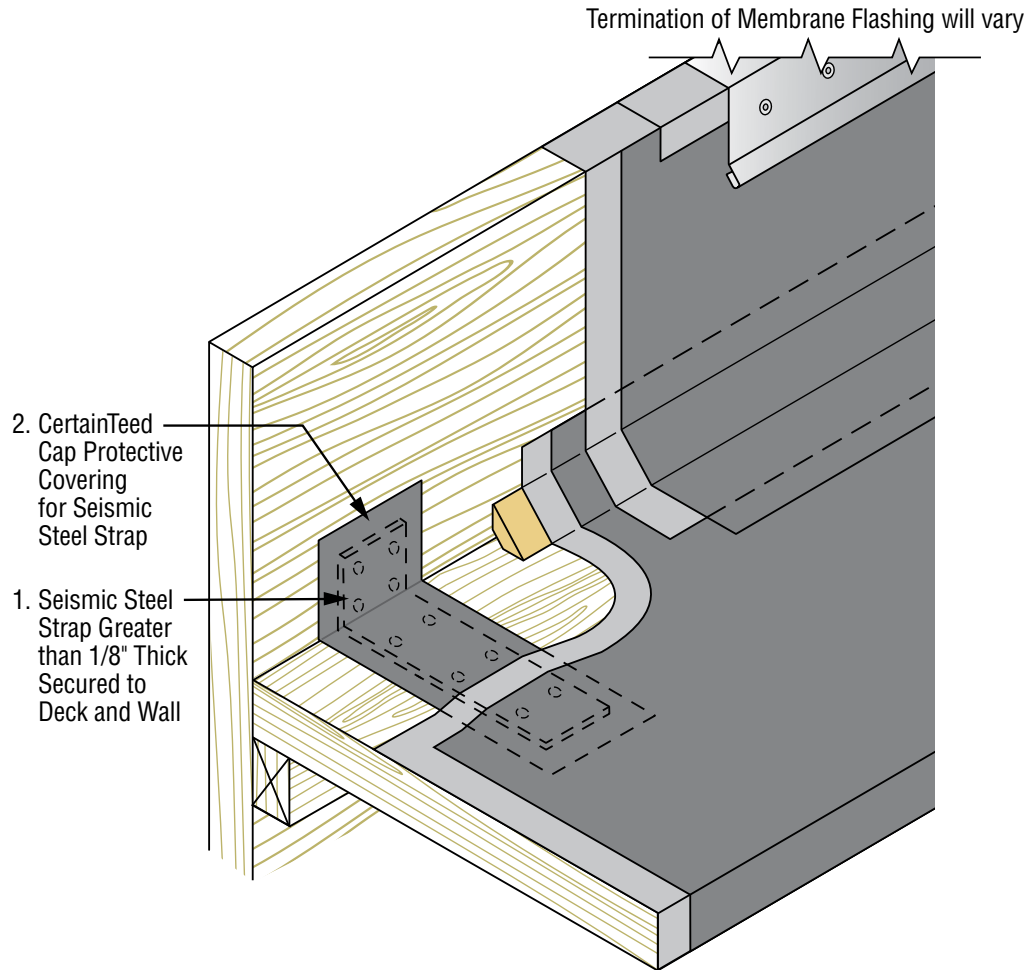
Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection.



NOT DRAWN TO SCALE

This detail is intended to illustrate application associated with a seismic strap. See appropriate parapet wall detail for Base Flashing application instructions.

To reduce stress on roof membrane from seismic strap friction and heat, loose lay Cap Protective Covering atop seismic strap, tack in place as needed.

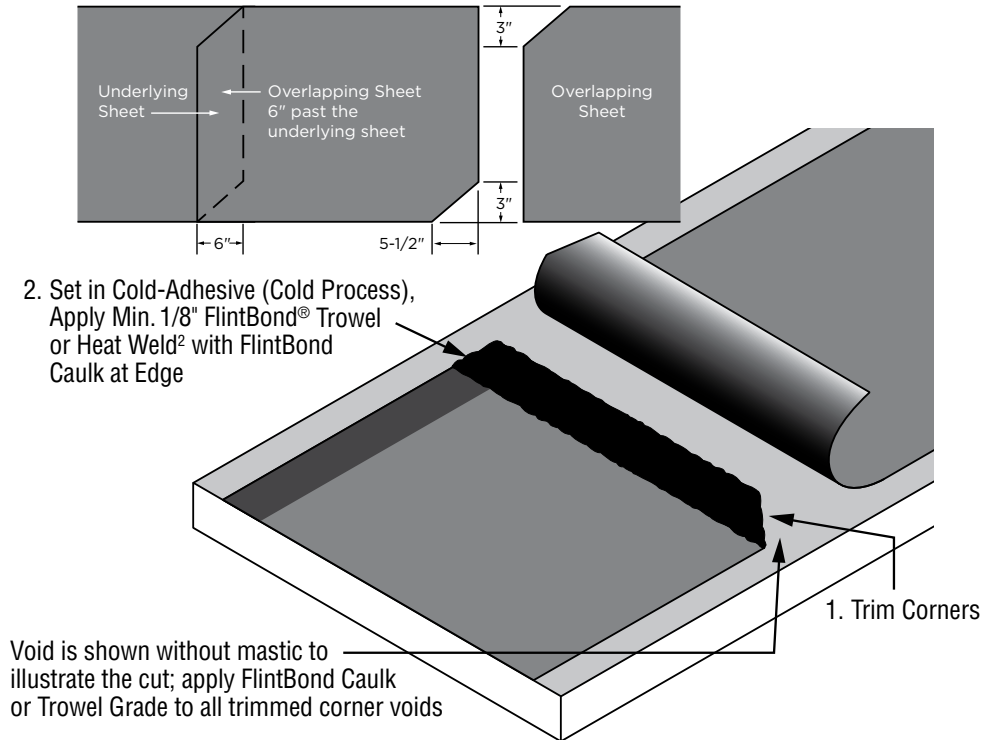


NOT DRAWN TO SCALE

Base Ply, Interply, Cap Corner Treatment

For fully adhered Base Plies, Interplies and Cap Sheets, trim the underlying sheet's lower outside corner at the end of the roll as shown; follow with the overlapping sheet trimming the upper outside corner as shown.

If self-adhered or using cold-adhesive apply FlintBond® Trowel to entire lapped surface with 1/4" bleed out or (in cold weather²) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2"-3" per pass.

Refer to the CertainTeed Shingle Applicator Manual for shingle application guidance.

Anchor Sheet, Field

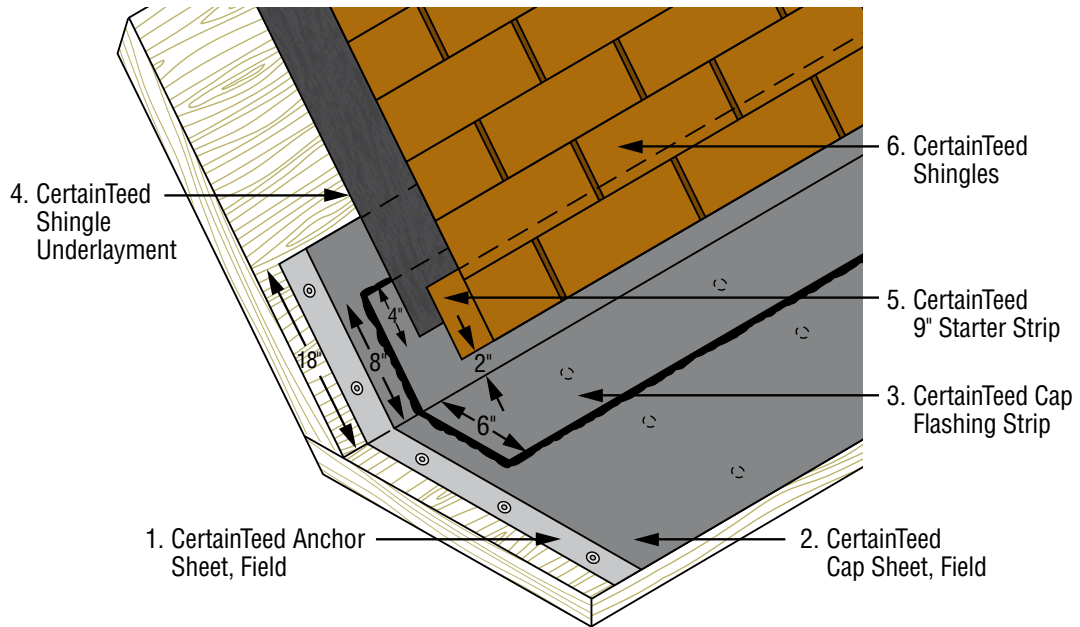
Mechanically attach with cap nails or approved fasteners spaced a minimum 9" o.c. in sidelaps and two staggered rows space 18" o.c. in the field.

Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection.

Cap Sheet Flashing Strip

Treat the granulated surface of Cap Sheet, Field, where the Flashing Strip overlap occurs: **If self-adhered or using cold process** apply FlintBond® Trowel to entire lapped surface with 1/4" bleed out or (in cold weather¹) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2"-3" per pass.

Refer to the CertainTeed Shingle Applicator Manual for underlayment and shingle application guidance.

CertainTeed Flintlastic Strip

Fully adhere (self-adhered, cold process). **If self-adhered** apply Flintbond® Caulk at edge; **if using cold process** set in FlintBond Trowel with 1/4" bleed out at edge.

Anchor Sheet, Field

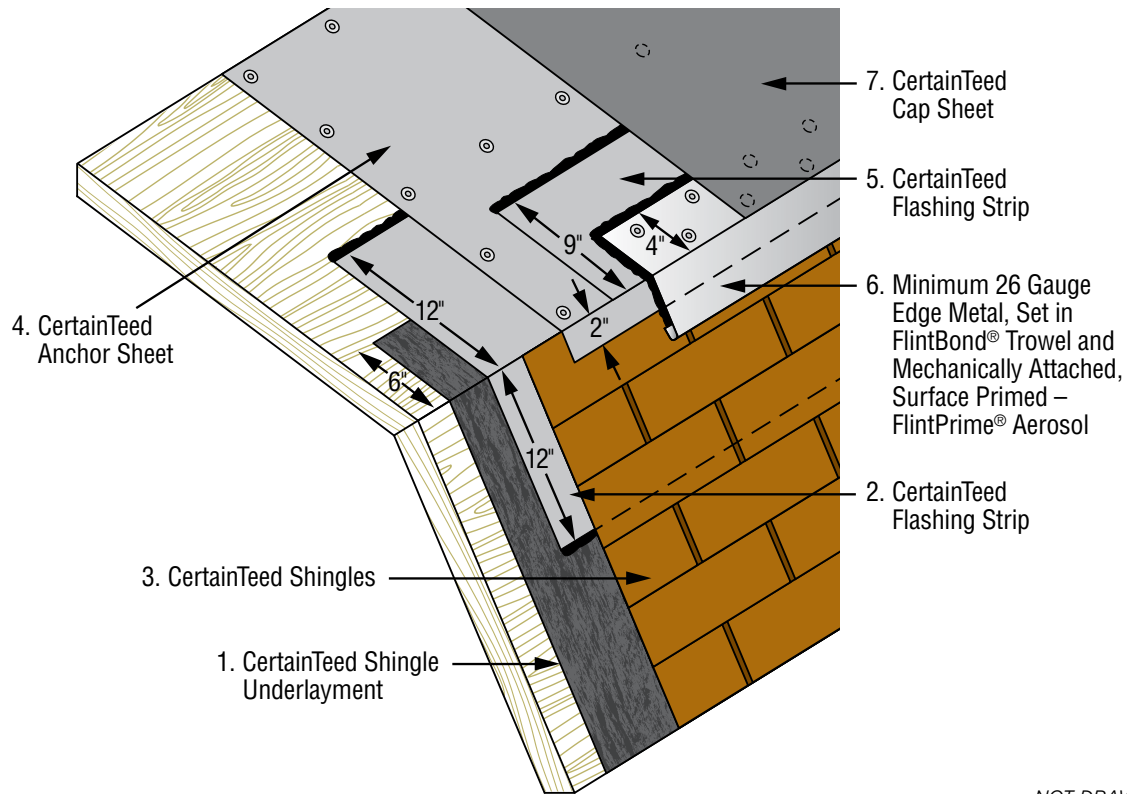
Mechanically attach with cap nails or approved fasteners spaced a minimum 9" o.c. in sidelaps and two staggered rows space 18" o.c. in the field.

Edge Metal

Set in FlintBond Trowel. Mechanically attach a minimum two staggered rows, 6" o.c. or as required by building code; endlaps should receive two nails. Prime surface with FlintPrime® Aerosol.

Cap Sheet

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. **If self-adhered**, in cold weather¹ hot air weld² with bead of FlintBond Caulk at edge.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the metal surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 300°F-500°F (setting 2-3), apply heat to the overlap interface while bonding Cap with rolling pressure onto the Metal. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke.

Prime vertical surface with FlintPrime® or FlintPrime SA, as appropriate for Cap Sheet Base Flashing application method.

Anchor Sheet or Base Ply, Field

Mechanically attach or Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by specified system, product selection and deck type.

Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

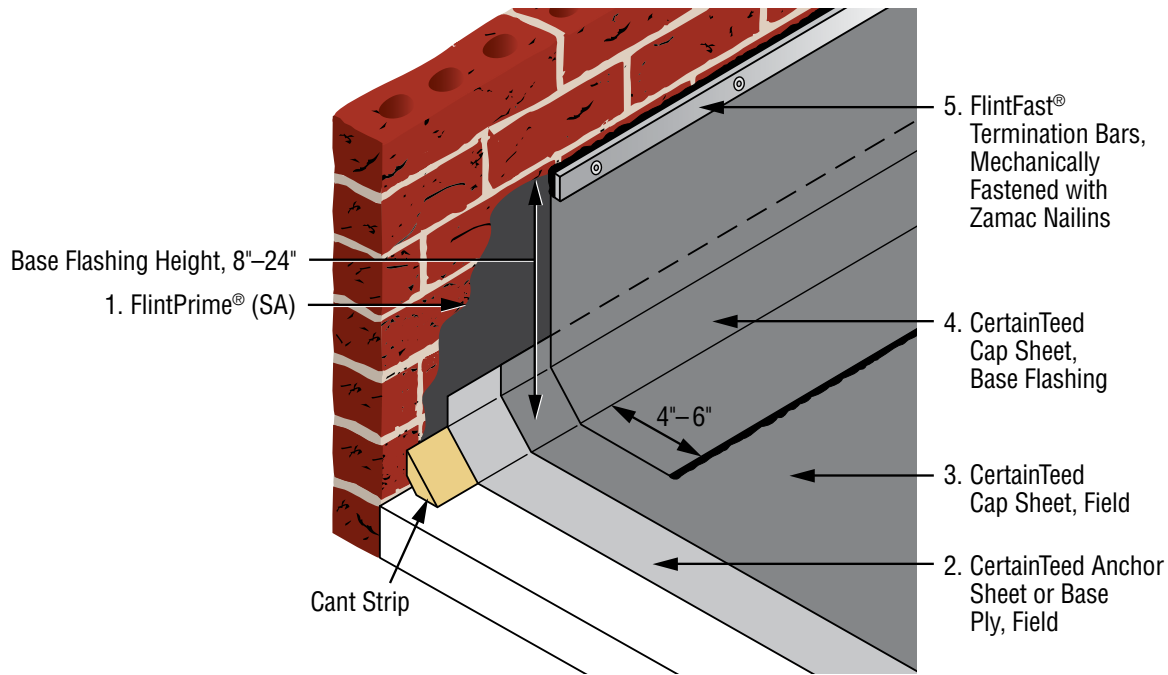
Base Flashing

WALL ATTACHMENT: **If self-adhered** apply FlintBond® Caulk to top edge; **If torch-welded** ensure 1/4" bleed out at top edge; **If using cold-adhesive** set in FlintBond Trowel

with 1/4" bleed out at top edge; if using hot asphalt ensure 1/4" bleed out at top edge. Terminate top edge with FlintFast® Termination Bar and Zamac Nails.

FIELD ATTACHMENT: Treat the granulated surface of Cap Sheet, Field, where the Base Flashing overlap occurs: **If self-adhered or using cold process** apply FlintBond Trowel to entire lapped surface with 1/4" bleed out or (in cold weather) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.

CertainTeed recommends strapping all Base Flashing and Counterflashing rolls, running the width of the roll up or perpendicular to the vertical surface.



NOT DRAWN TO SCALE

Premium Application

Add a CertainTeed Modified Bitumen Base Ply behind the Cap Sheet, Counterflashing. Extend it a minimum of 4" out onto the Cap Sheet, Field. Extend the Cap Sheet, Counterflashing out onto the Cap Sheet, Field a minimum of 4" beyond the underlying additional ply.

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2"-3" per pass.

Anchor Sheet or Base Ply, Field

Mechanically attach or Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by specified system, product selection and deck type.

Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

Base Flashing

CURB ATTACHMENT: Mechanically attach Anchor 12" o.c. or self-adhere Base Ply; Fully adhere Cap (self-adhered, torch-weld, cold process or hot asphalt; Gang fasten Base

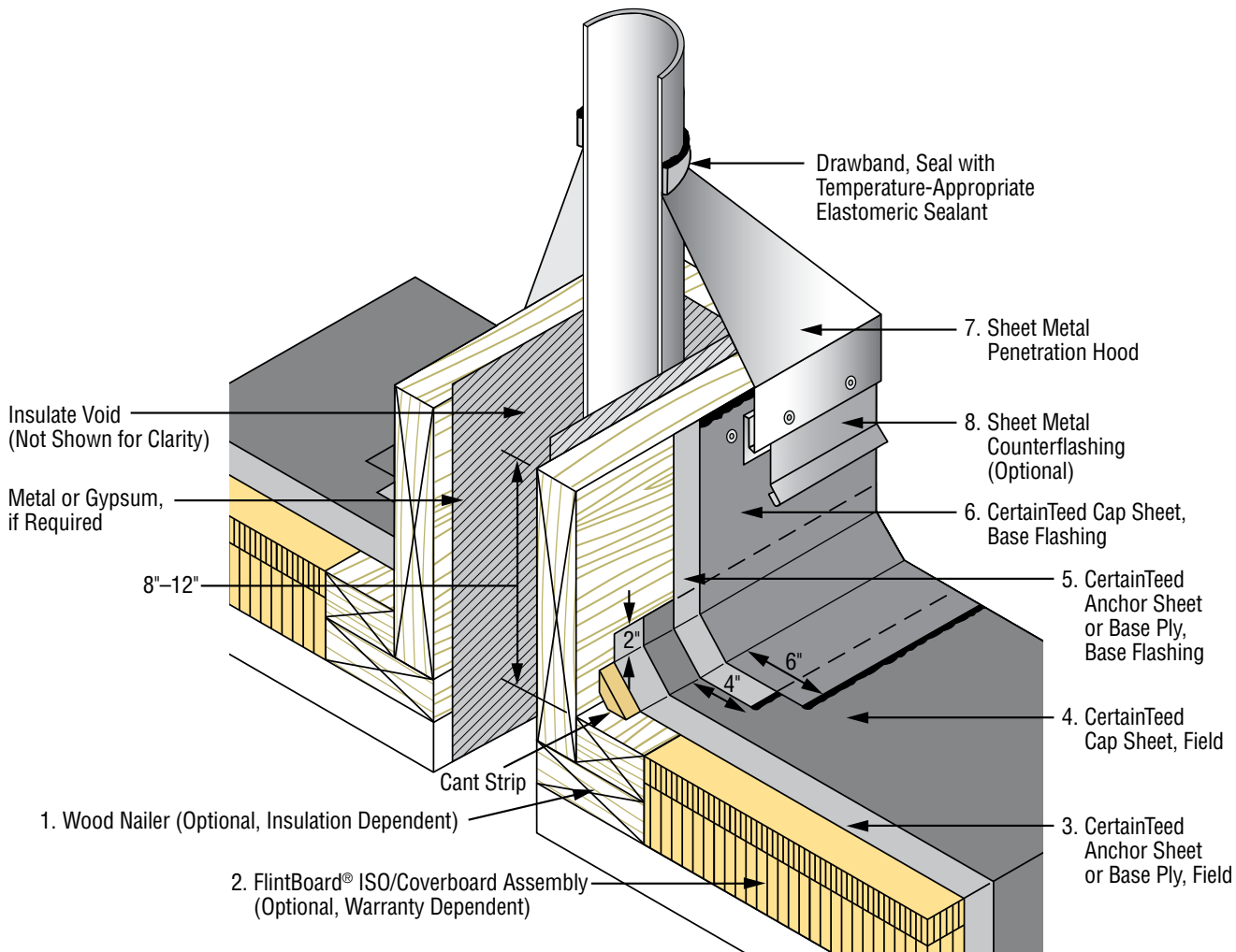
and Cap at top edge 9" o.c. with tin discs; Ensure 1.4" bleed out on top edge or apply FlintBond® Caulk.

FIELD ATTACHMENT: Treat the granulated surface of Cap Sheet, Field, where the Base Flashing overlap occurs:

If self-adhered or using cold process apply FlintBond Trowel to entire lapped surface with 1/4" bleed out or (in cold weather¹) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded (cap only³)** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.

Sheet Metal

Refer to the Architectural Metal Flashing section of the NRCA Roofing Manual for securement options.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2"-3" per pass.

³When potential fire hazards can be mitigated CertainTeed considers it acceptable to direct torch provided low output (50,000 BTU or less) equipment is used; when potential fire hazards cannot be mitigated indirect torching methods should be utilized.

Anchor Sheet or Base Ply, Field

Mechanically attach or Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by specified system, product selection and deck type.

Cap Sheet, Field

Fully adhere (self-adhered, torch, cold process or hot asphalt). Proper attachment is defined by product selection. Extend base ply and cap sheet 2" above cant strip; adhere to cant strip only.

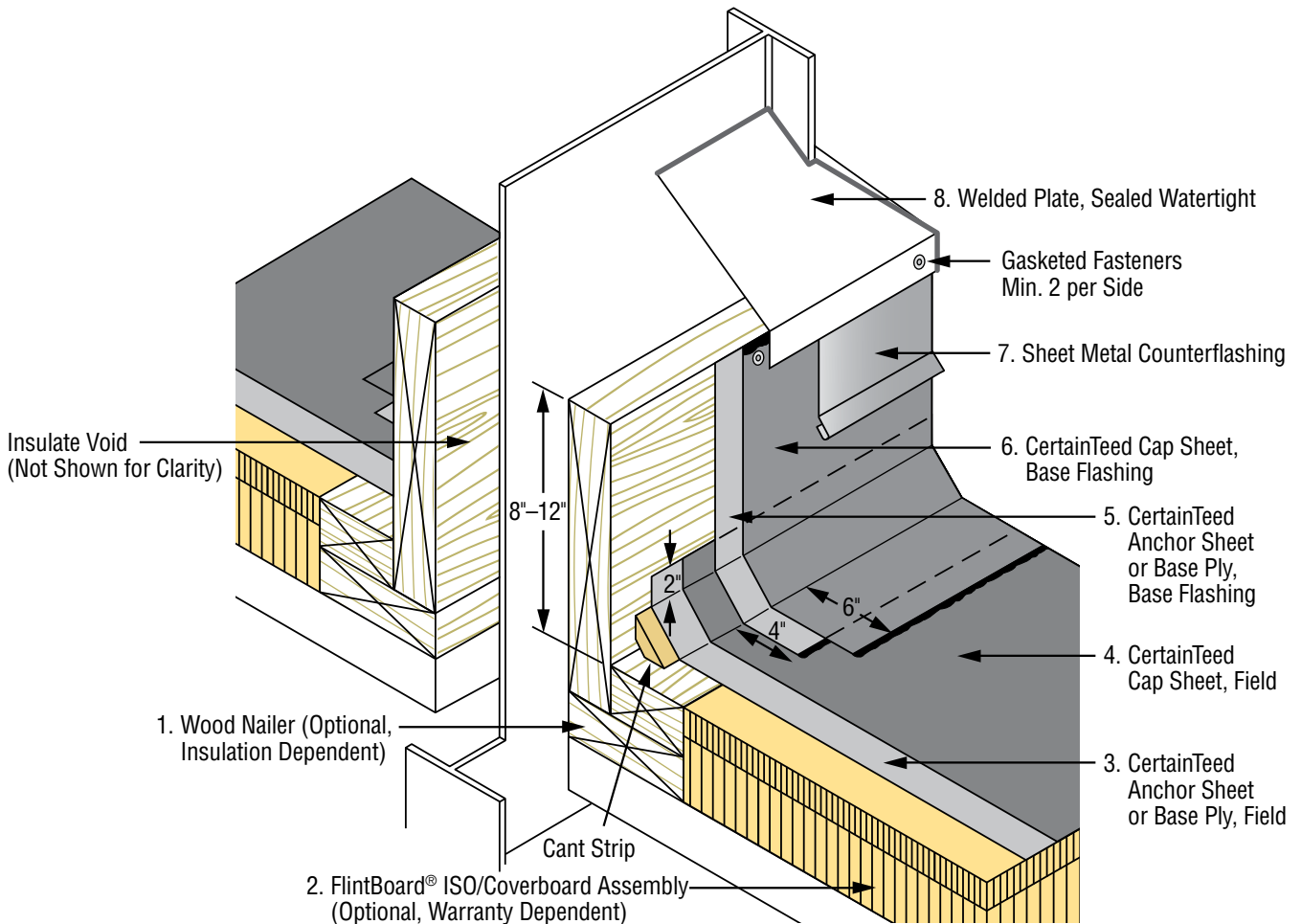
Base Flashing

CURB ATTACHMENT: Mechanically attach Anchor 12" o.c. or self-adhere Base Ply; Fully adhere Cap (self-adhered, torch-weld, cold process or hot asphalt; Gang fasten Base

and Cap at top edge 9" o.c. with tin discs; Ensure 1.4" bleed out on top edge or apply FlintBond Caulk.
FIELD ATTACHMENT: Treat the granulated surface of Cap Sheet, Field, where the Base Flashing overlap occurs: **If self-adhered or using cold process** apply FlintBond® Trowel to entire lapped surface with 1/4" bleed out or (in cold weather) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded (cap only)³** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.

Sheet Metal

Refer to the Architectural Metal Flashing section of the NRCA Roofing Manual for securement options.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2"-3" per pass.

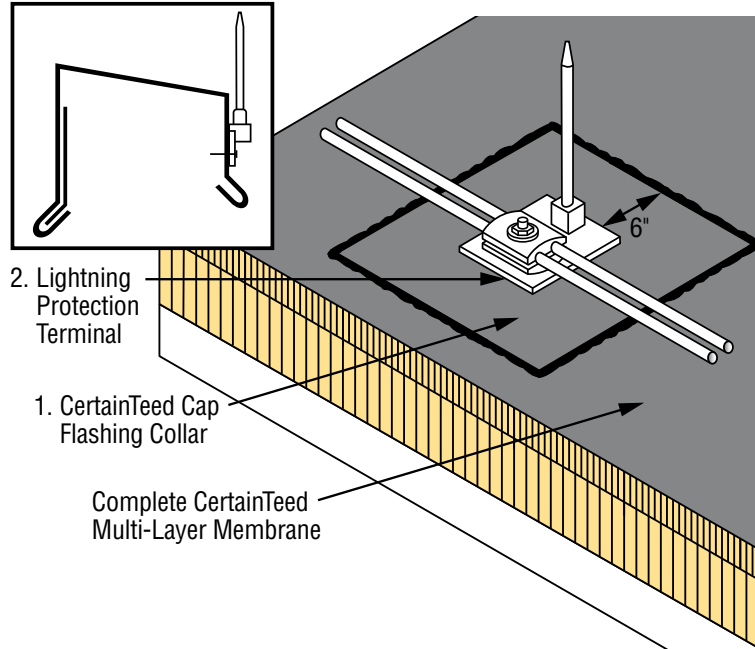
³When potential fire hazards can be mitigated CertainTeed considers it acceptable to direct torch provided low output (50,000 BTU or less) equipment is used; when potential fire hazards cannot be mitigated indirect torching methods should be utilized.

This detail depicts the weatherproofing protection and does not represent lightning protection design.

Extend Flashing Collar a minimum 6" beyond edge of Terminal. Treat the granulated surface of Cap Sheet, Field, where the Cap Sheet Flashing Collar overlap occurs: **If self-adhered or using cold-adhesive** apply FlintBond®

Trowel to entire lapped surface with 1/4" bleed out or (in cold weather¹) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded** heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.

Terminal Support at Coping



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward.

Use this detail when applying CertainTeed built-up and SBS-modified bitumen roll goods on slopes greater than 1:12 and APP-modified bitumen membranes on slopes greater than 2:12.

Nailers

Install minimum 3-1/2" wide nailers or woodblocking set flush to surface of deck at all eaves, ridges, rakes and base of curbs. Nailer spacing is membrane dependent:

SLOPE	Membrane	Polyester Reinforced		Fiberglass Reinforced
		SBS-Modified	APP-Modified	
1"		32' o.c.	N/A (do not backnail)	8' o.c.
2"-3"			32' o.c.	
3"<		16' o.c.	16' o.c.	

Base Sheet

Fully adhere (self-adhered, torch, cold adhesive or hot asphalt). Proper attachment is defined by specified system, product selection, and substrate type. As with standard application, the width of the first sheet shall be cut to allow all side laps to be staggered:

	2-PLY SYSTEMS		3-PLY SYSTEMS		
	Base	Cap	Base	Interply	Cap
Starter Row Width	19-11/16" (1/2 roll)	39-3/8" (full roll)	26-1/4" (2/3 roll)	19-11/16" (1/2 roll)	39-3/8" (full roll)

Apply parallel to slope, overlapping side laps minimum 2" and/or as building code requires. Beginning 1" from the leading edge of the sheet, fasten to nailers with ring shank nails through tin

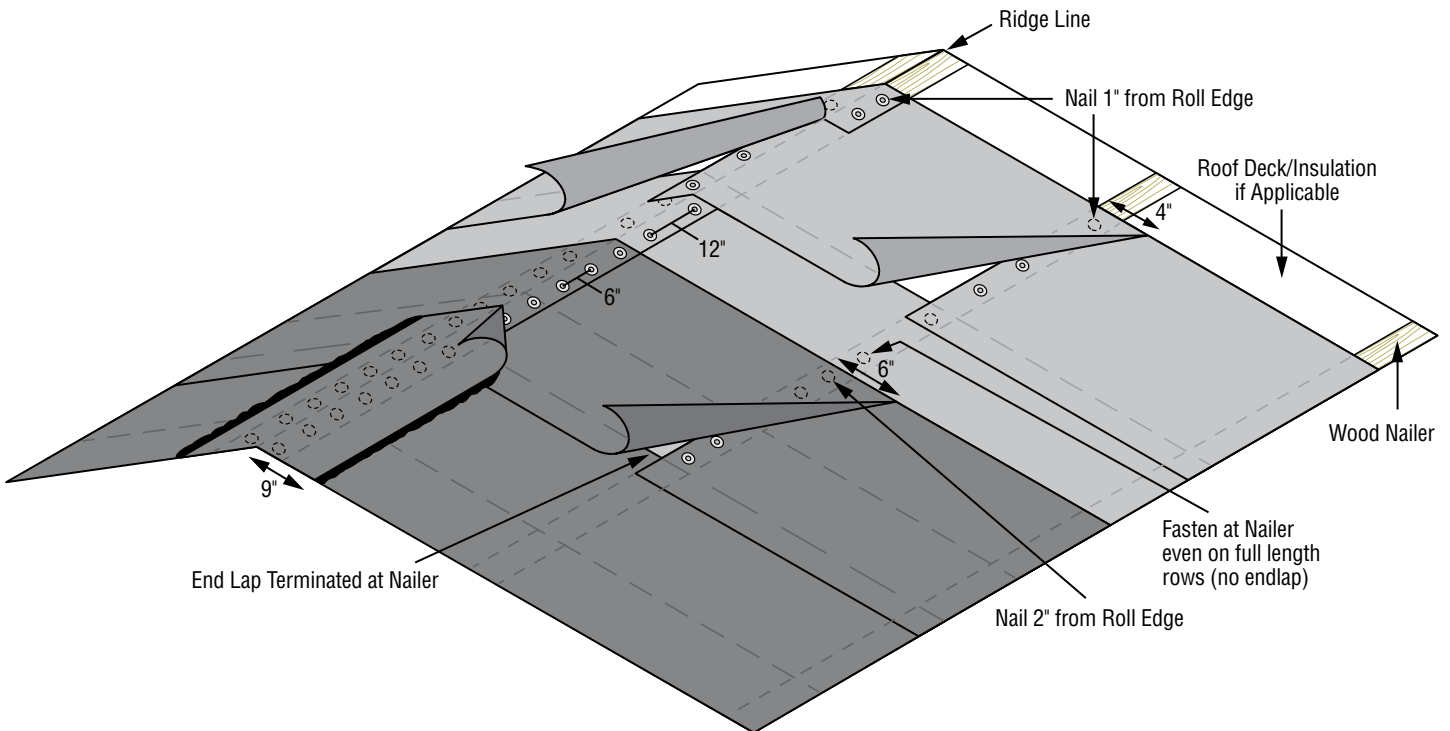
discs spaced 12" o.c. Overlap all end laps 4". Endlaps must occur at nailers such that the top edge of the overlapped sheet can be fastened to the nailer and the fastener completely covered. Fasten roll into each nailer throughout the deck even if length of a single roll covers the entire deck/substrate (no endlaps).

Cap Sheet

Fully adhere (self-adhered, torch, cold adhesive or hot asphalt). Proper attachment is defined by specified system, product selection, and substrate type. Apply parallel to slope, overlapping side laps minimum 3" and/or as building code requires. Beginning at the ridge line nailer, and 2" from the leading edge of the sheet, fasten to nailer with ring shank nails through tin discs spaced 6" o.c. Overlap all end laps 6". Endlaps must occur at nailers such that the top edge of the overlapped sheet can be fastened to the nailer and the fastener completely covered. If length of roll covers the entire deck/substrate (no endlaps), roll should not be fastened at each nailer, just at the ridge.

Header Flashing Strip

Install a minimum 9" beyond field sheets on both sides of the ridge. Properly treat the granulated surface of Cap Sheet where the Header Flashing Strip overlap occurs: **If self-adhered or using cold-adhesive** apply FlintBond® Trowel to entire lapped surface with 1/4" bleed out or (in cold weather) hot air weld² with bead of FlintBond Caulk at edge; **If torch-welded** (cap only³) heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.



NOT DRAWN TO SCALE

¹20°F-49°F (-6.6°C-4.4°C)

²Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2"-3" per pass.

³When potential fire hazards can be mitigated CertainTeed considers it acceptable to direct torch provided low output (50,000 BTU or less) equipment is used; when potential fire hazards cannot be mitigated indirect torching methods should be utilized.

Use this detail when applying CertainTeed built-up and SBS-modified bitumen roll goods on slopes greater than 1:12 and APP-modified bitumen membranes on slopes greater than 2:12

Base Sheet

As with standard application, the width of the first sheet shall be cut to allow all side laps to be staggered:

	2-PLY SYSTEMS		3-PLY SYSTEMS		
	Base	Cap	Base	Interply	Cap
Starter Row Width	19-11/16" (1/2 roll)	39-3/8" (full roll)	26-1/4" (2/3 roll)	19-11/16" (1/2 roll)	39-3/8" (full roll)

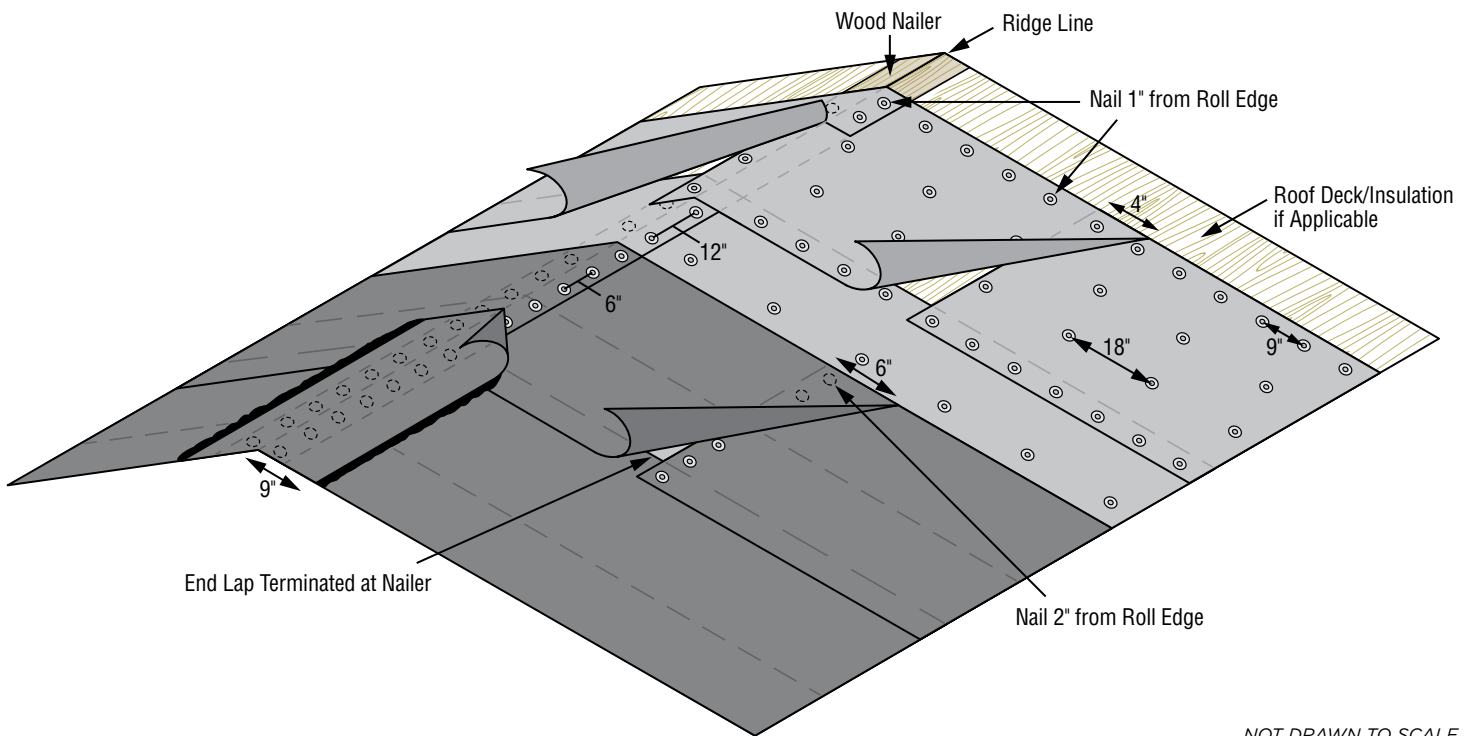
Apply parallel to slope, overlapping side laps minimum 2" and/or as building code requires. Mechanically attach with ring shank nails through tin discs or other approved fasteners¹ spaced a minimum 9" o.c. in sidelaps and 8" o.c. in the field, two staggered rows. At the ridge line, beginning 1" from the leading edge of the sheet, fasten 12" o.c. Overlap all end laps 4". At endlaps, fasten the top edge of the overlapped sheet 12" o.c.:

Cap Sheet

Fully adhere (self-adhered, torch, cold adhesive or hot asphalt). Proper attachment is defined by specified system, product selection, and substrate type. Apply parallel to slope, overlapping side laps minimum 3" and/or as building code requires. Beginning at the ridge line nailer, and 2" from the leading edge of the sheet, fasten to nailer with ring shank nails through tin discs or other approved fasteners¹ spaced 6" o.c. Overlap all end laps 6". At endlaps, fasten the top edge of the overlapped sheet 12" o.c.

Header Flashing Strip

Install a minimum 9" beyond field sheets on both sides of the ridge. Properly treat the granulated surface of Cap Sheet where the Header Flashing Strip overlap occurs: **If self-adhered or using cold-adhesive** apply FlintBond® Trowel to entire lapped surface with 1/4" bleed out or (in cold weather²) hot air weld³ with bead of FlintBond Caulk at edge; **if torch-welded** (cap only⁴) heat sink/scrape the granules with heated trowel or granular embedment tool and ensure 1/4" bleed out; **if using hot asphalt** apply to entire lapped surface with 1/4" bleed out.



NOT DRAWN TO SCALE

¹See Flintlastic Applicator Handbook - Reference Table - General Guide to Mechanical Fasteners.

²20°F-49°F (-6.6°C-4.4°C)

³Apply heat from a hot-air welder with a 2" tip to the overlapped granular surface while applying rolling pressure from a silicone roller to the overlapping Cap. With the hot air welder set between 900°F-1,100°F (setting 8-10), apply heat to the overlap interface while bonding Cap with rolling pressure on the granulated surface. Roll the overlapping Cap in place, moving the hot air welder to allow for forward progress. Avoid applying so much heat or moving at a pace that results in smoke. Apply a bead of FlintBond Caulk along the edge. Continue overlap application, 2"-3" per pass.

⁴When potential fire hazards can be mitigated CertainTeed considers it acceptable to direct torch provided low output (50,000 BTU or less) equipment is used; when potential fire hazards cannot be mitigated indirect torching methods should be utilized.

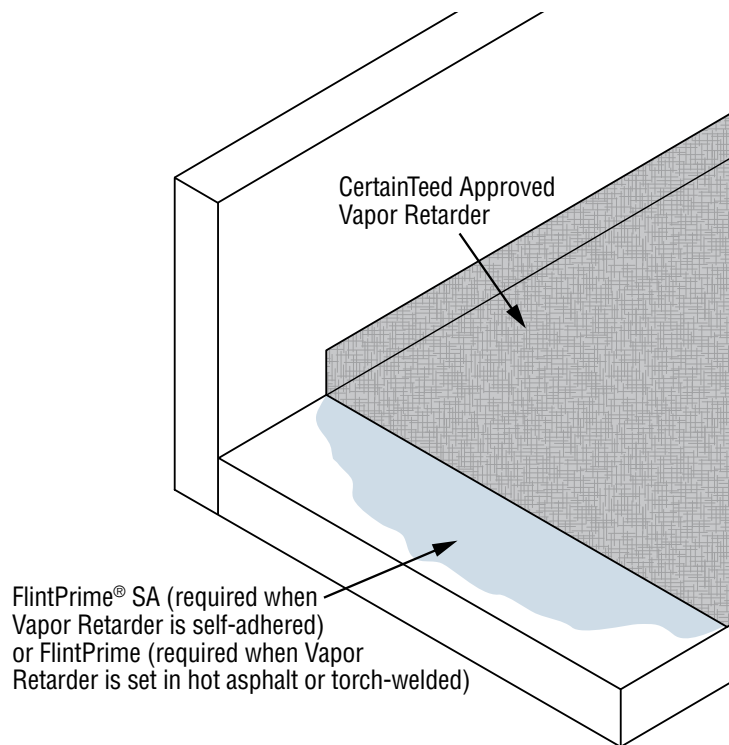
Vapor retarders minimize the incursion of water vapor rising from the building interior into the roof membrane where it can accumulate and condense. The need for a vapor retarder should be evaluated by a design professional that has knowledge of the structure and local environment.

CertainTeed's Black Diamond® Base Sheet

This SBS-modified, self-adhered membrane, can be utilized as a vapor retarder and left exposed up to six months. Alternatively, the following CertainTeed membranes may be utilized as a vapor retarder:

- Flintglas® Ply 4 or Premium Ply 6 (two layers), applied in hot asphalt
- Any Flintlastic® base sheet (surface must be covered within 24 hours or primed prior to application of insulation or waterproofing/weathering roof membrane)
- Any Flintlastic cap sheet

The proper attachment of the vapor retarder is defined by product selection and substrate: **if self-adhered**, prime the deck or substrate with FlintPrime® SA; **if torch-welding** or setting **in hot asphalt**, prime the deck or substrate with FlintPrime.



NOT DRAWN TO SCALE

Vapor retarders minimize the incursion of water vapor rising from the building interior into the roof membrane where it can accumulate and condense. The need for a vapor retarder should be evaluated by a design professional that has knowledge of the structure and local environment.

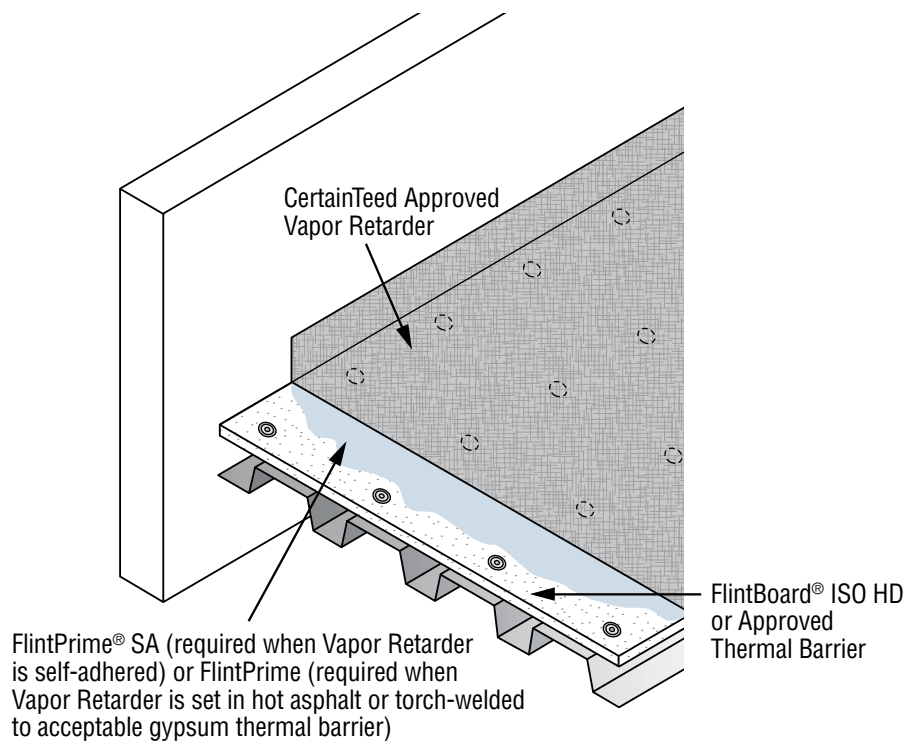
CertainTeed's Black Diamond® Base Sheet

This SBS-modified, self-adhered membrane, can be utilized as a vapor retarder and left exposed up to six months. Alternatively, the following CertainTeed membranes may be utilized as a vapor retarder:

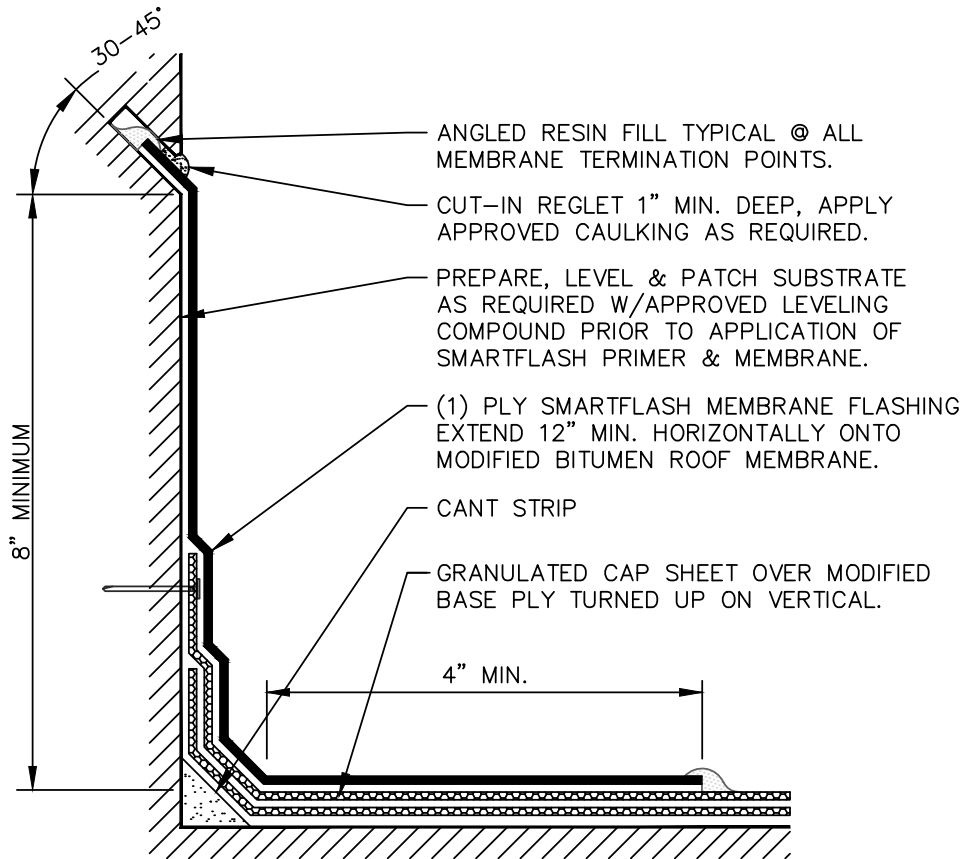
- Flintglas® Ply 4 or Premium Ply 6 (two layers), applied in hot asphalt

- Any Flintlastic® base sheet (surface must be covered within 24 hours or primed prior to application of insulation or waterproofing/weathering roof membrane)
- Any Flintlastic cap sheet

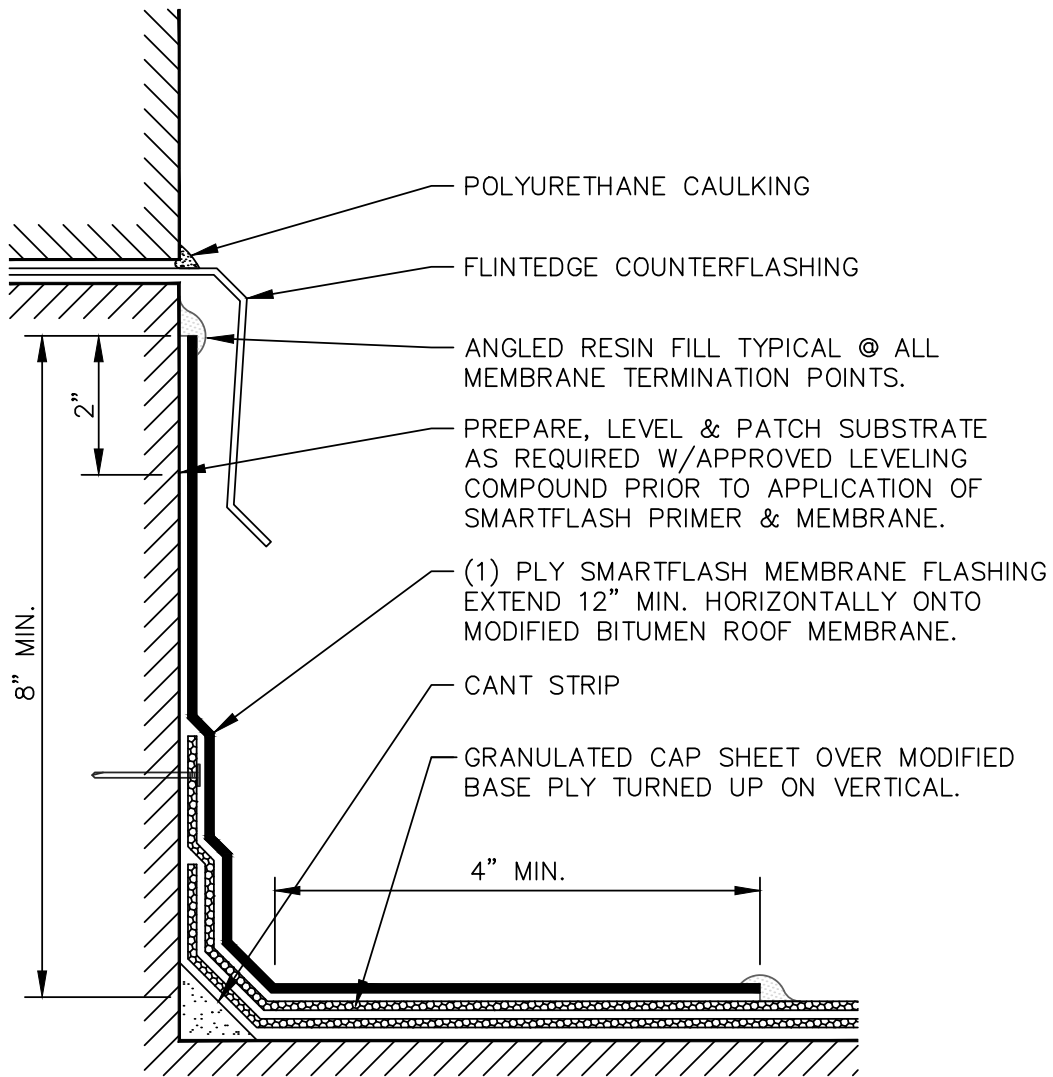
The proper attachment of the vapor retarder is defined by product selection and substrate: **If self-adhered**, prime the deck or substrate with FlintPrime® SA; **if torch-welding** or setting **in hot asphalt**, prime the deck or substrate with FlintPrime. NOTE: Thermal Barriers such as FlintBoard® ISO HD must be installed over steel roof decks prior to the application of a vapor retarder.



NOT DRAWN TO SCALE



DRAWING NO. CTL-01A FB-1A.DWG	ONE PLY BASE FLASHING W / CUT-IN REGLET				
	REVISION 9/19/13	ISSUE DATE 8/1/13	SCALE N.T.S.	DRAWN BY CT	



DRAWING NO.

ONE PLY BASE FLASHING W/ COUNTERFLASHING

CTL-01B

REVISION

9/19/14

ISSUE DATE

8/1/13

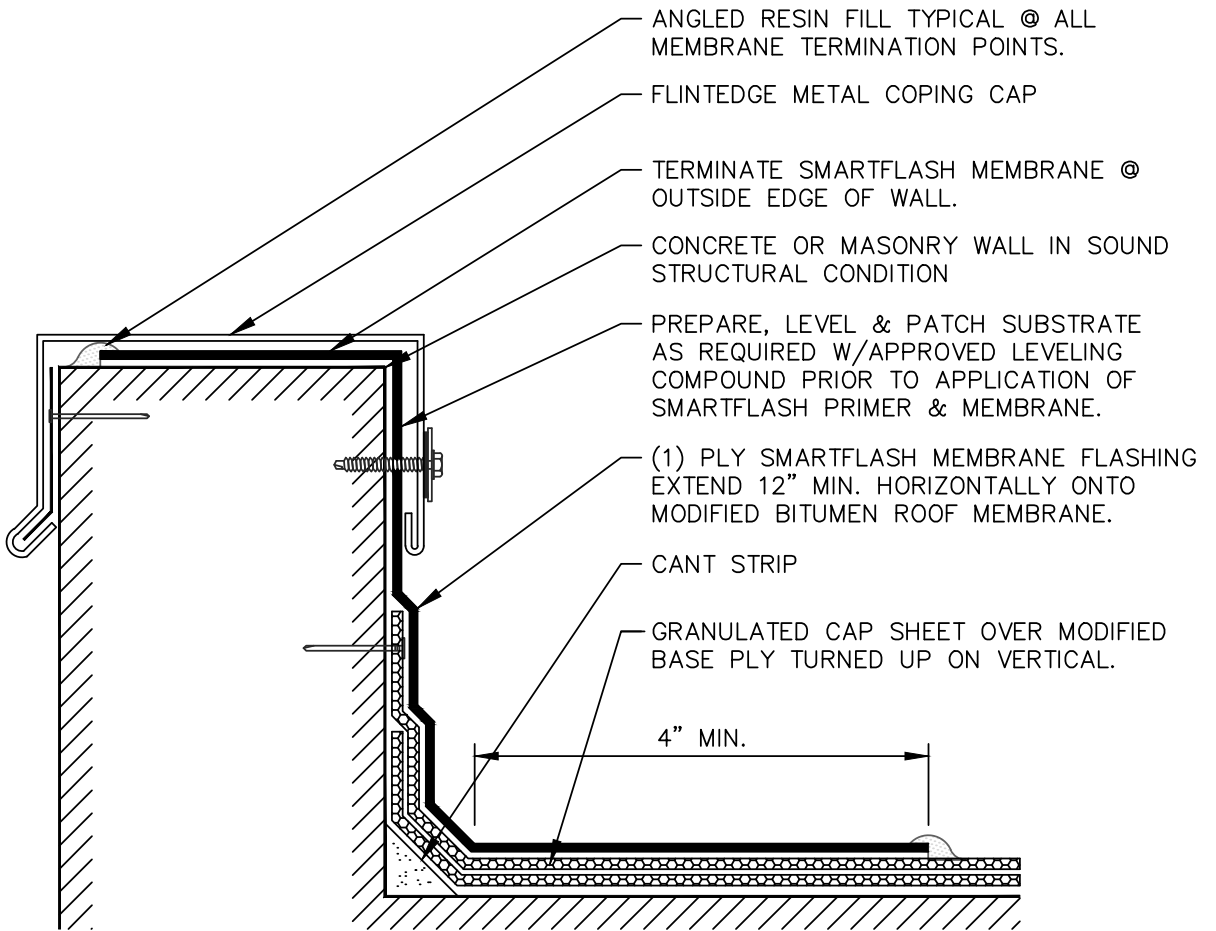
SCALE

N.T.S.

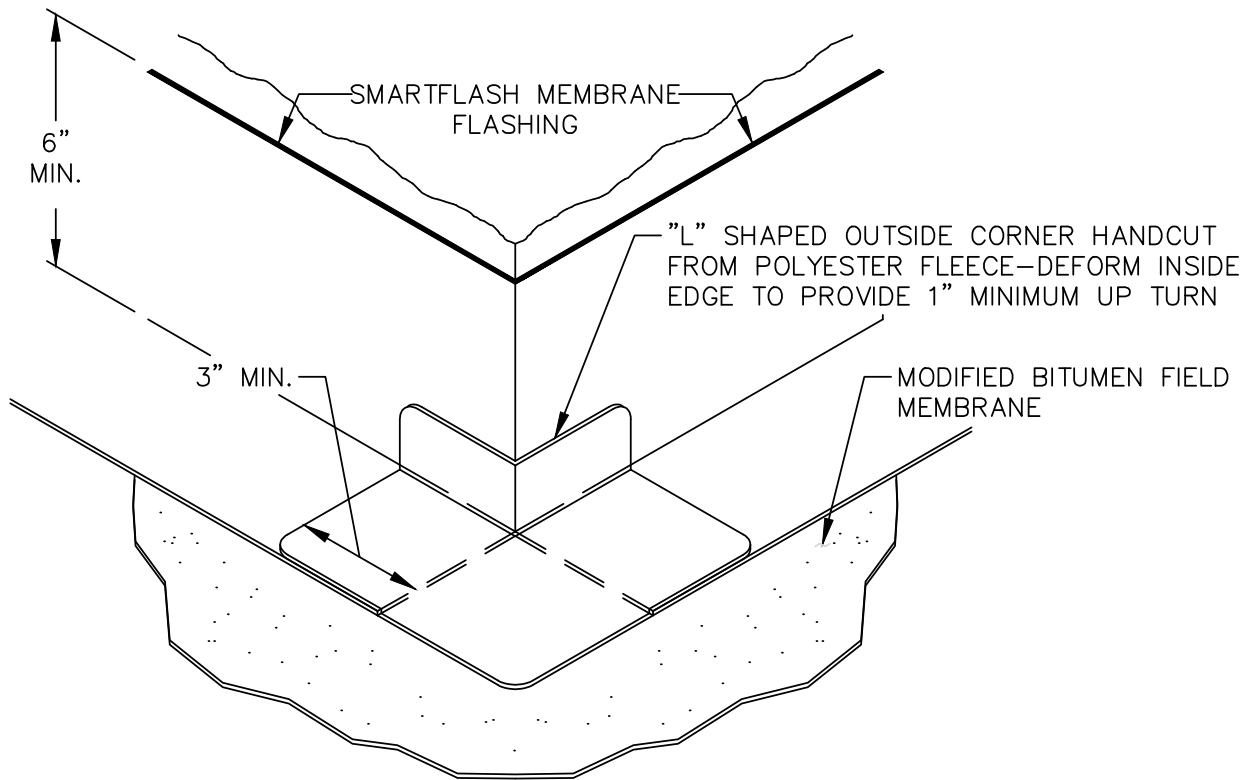
DRAWN BY

CT

FB-1B.DWG



DRAWING NO. CTL-03 FB-3.DWG	PARAPET WALL W/ METAL COPING CAP				
	REVISION 9/19/14	ISSUE DATE 8/1/13	SCALE N.T.S.	DRAWN BY CT	



DRAWING NO.

CTL-15

FM-1.DWG

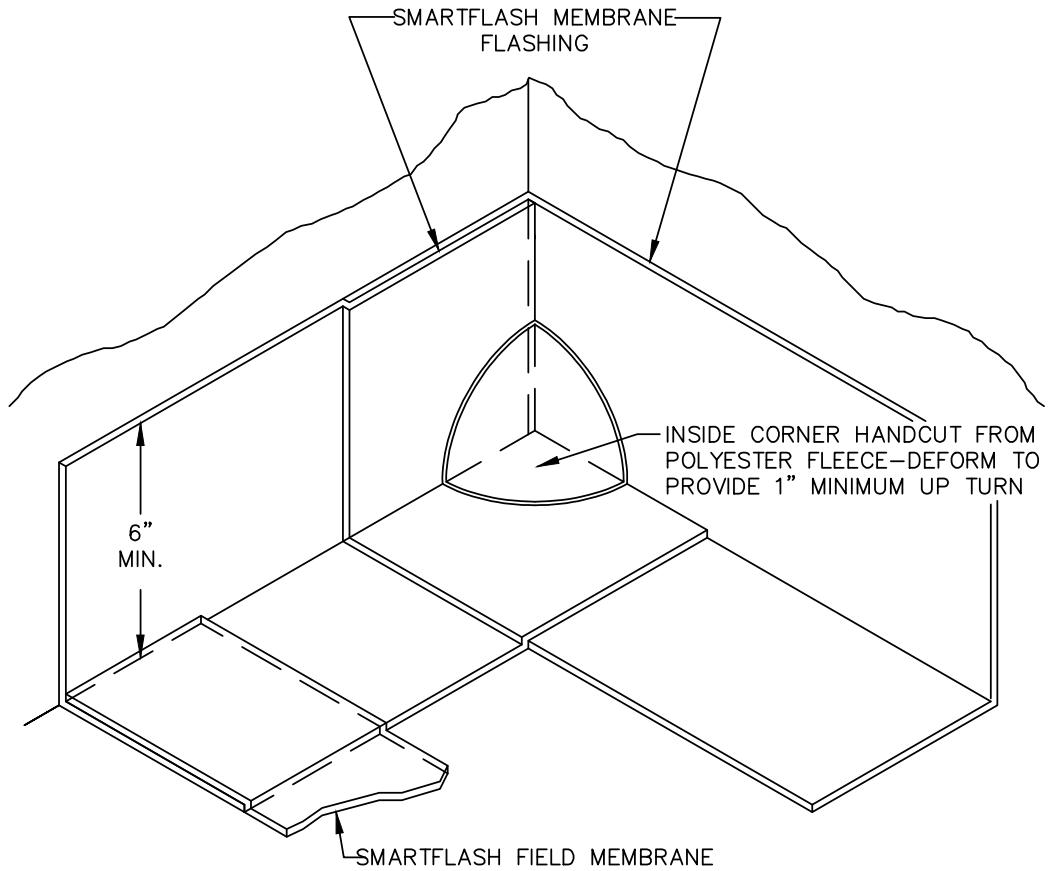
**FIELD FABRICATED
OUTSIDE CORNER FLASHING**

REVISION
9/19/14

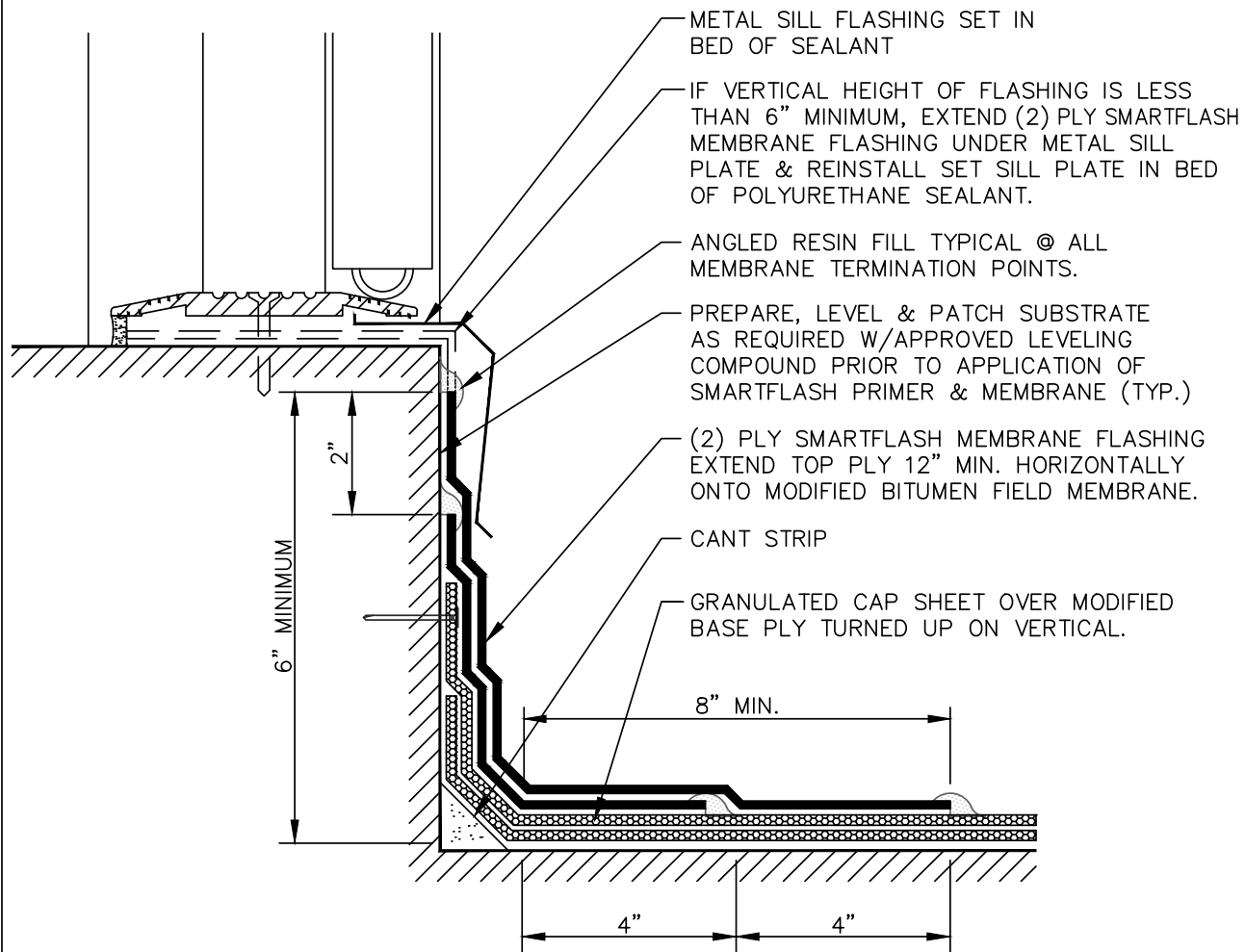
ISSUE DATE
8/1/13

SCALE
N.T.S.

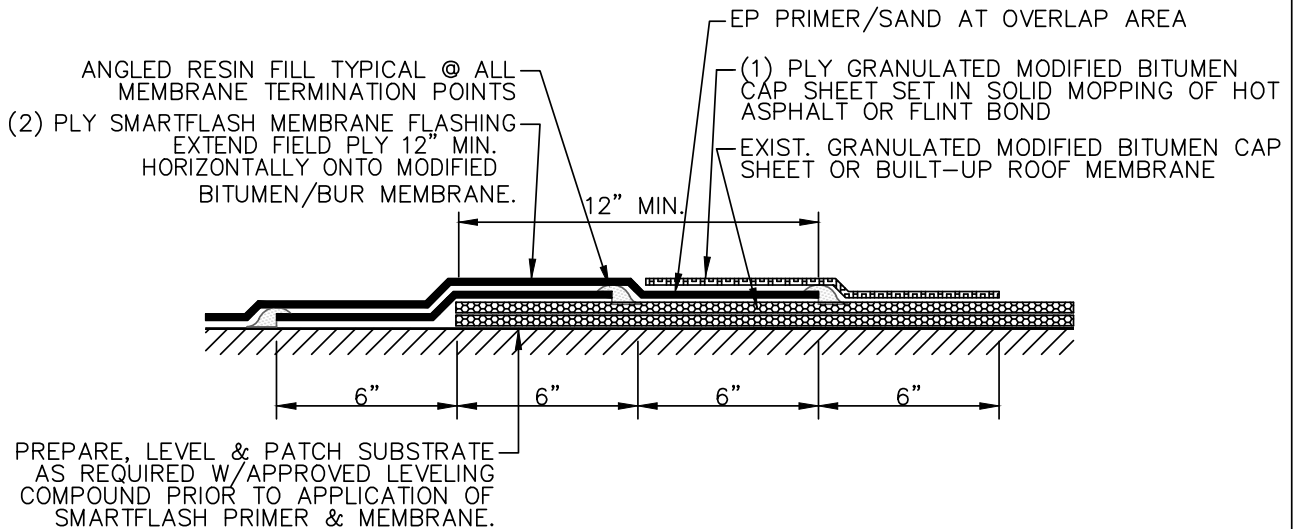
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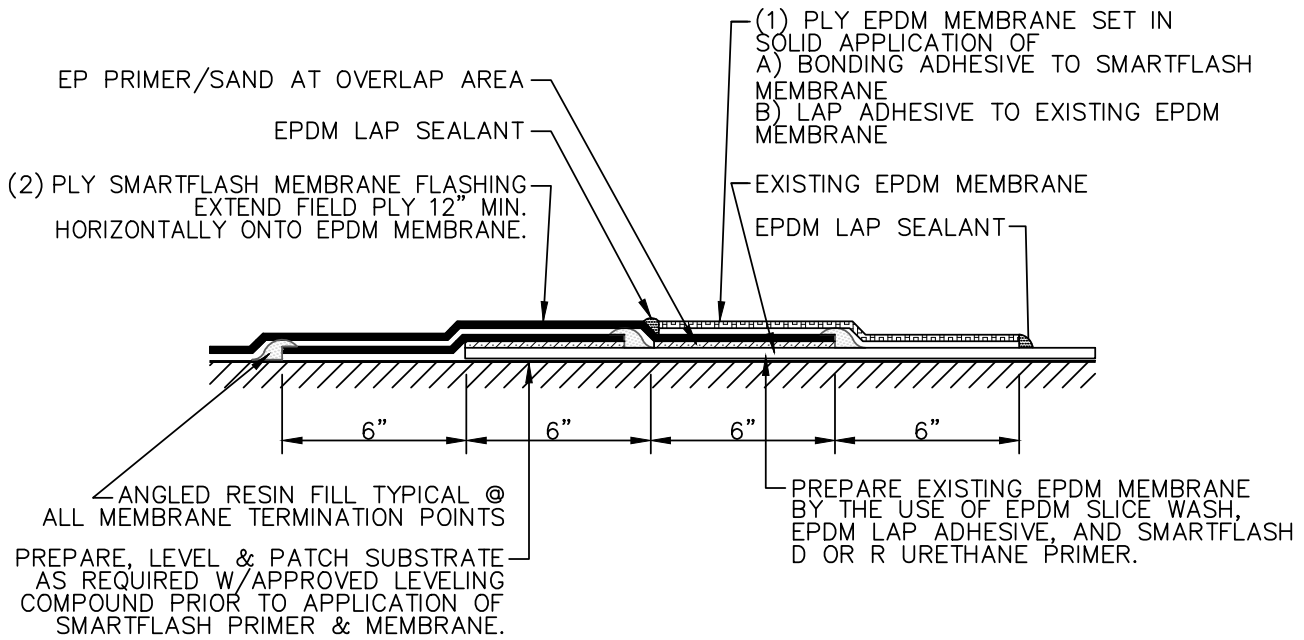
DRAWING NO.	FIELD FABRICATED INSIDE CORNER FLASHING				
CTL-16					REVISION
FM-2.DWG	9/19/14	8/1/13	N.T.S.	CT	



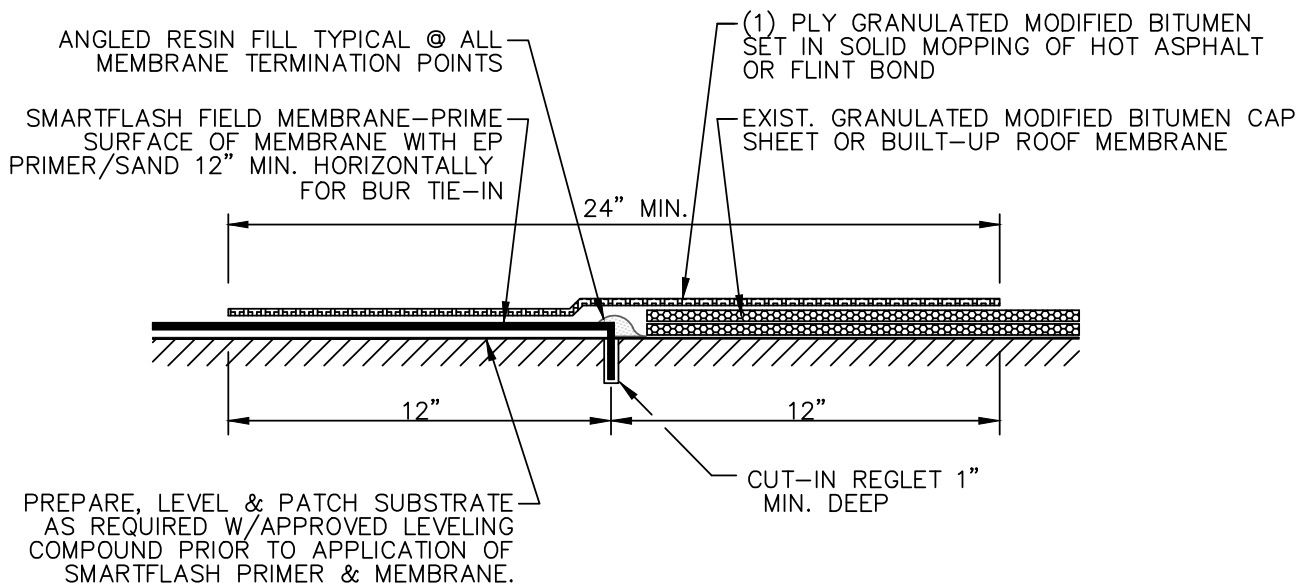
DRAWING NO.	DOOR SILL FLASHING				
CTL-17					
FM-3.DWG	REVISION	ISSUE DATE	SCALE	DRAWN BY	
	9/19/14	8/1/13	N.T.S.	CT	



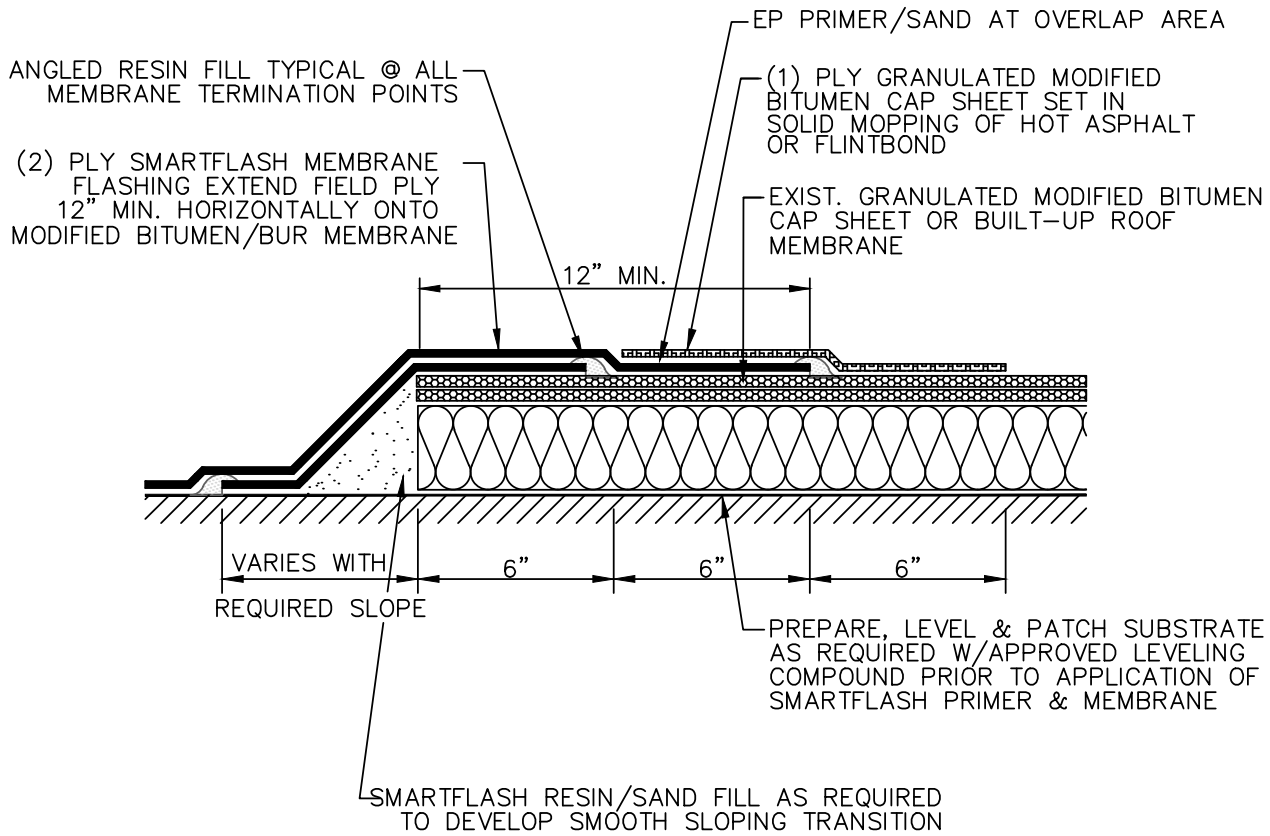
DRAWING NO. CTL-18 FM-4.DWG	TIE-IN TO MODIFIED BITUMEN/BUR MEMBRANE				
	REVISION 9/19/14	ISSUE DATE 8/1/13	SCALE N.T.S.	DRAWN BY CT	



DRAWING NO. CTL-18A M-4A.DWG	TIE-IN TO EPDM MEMBRANE				
	REVISION 9/19/14	ISSUE DATE 8/1/13	SCALE N.T.S.	DRAWN BY CT	



DRAWING NO. CTL-19 FM-5.DWG	TIE-IN TO MODIFIED BITUMEN/BUR MEMBRANE				
	REVISION 9/19/14	ISSUE DATE 8/1/13	SCALE N.T.S.	DRAWN BY CT	



DRAWING NO.

CTL-20

FM-6.DWG

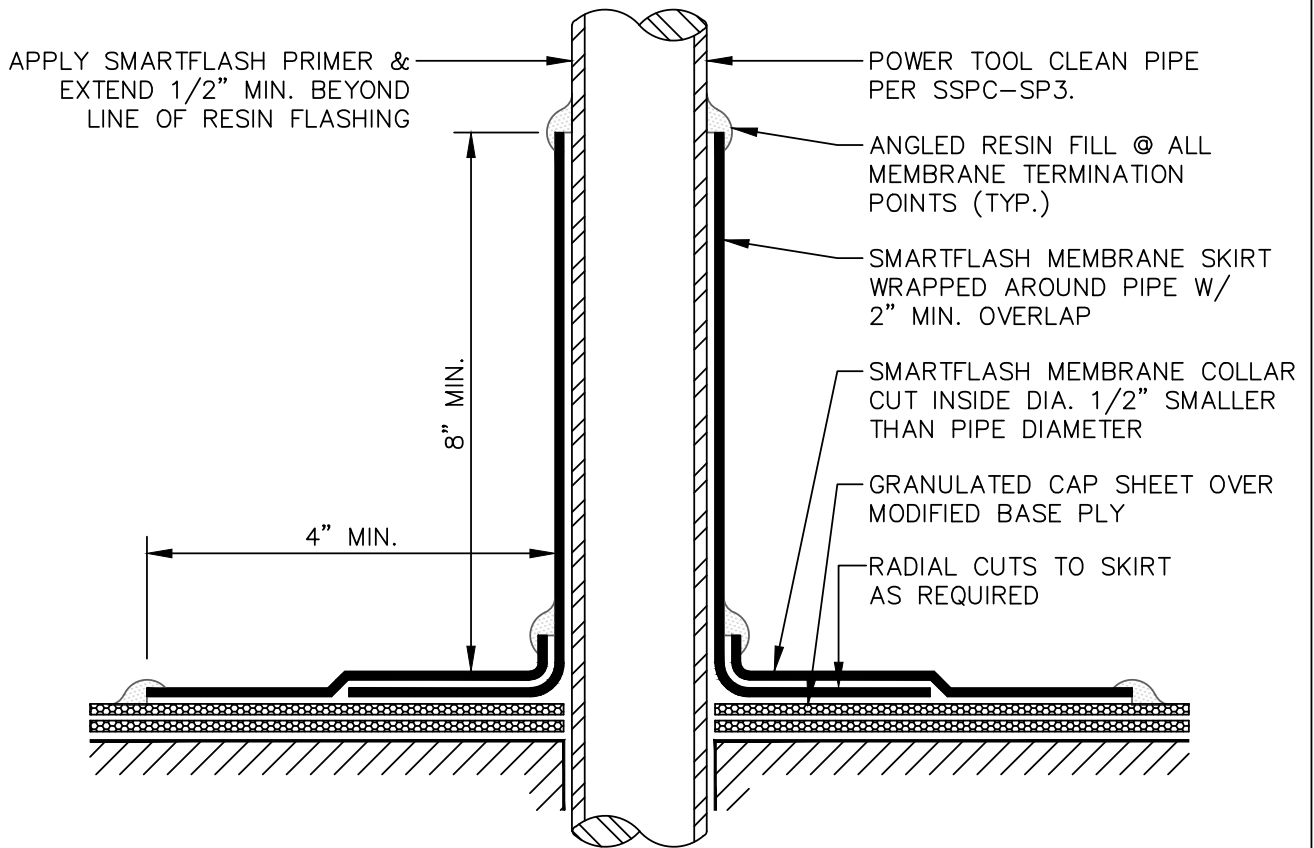
TIE-IN TO MODIFIED BITUMEN/BUR MEMBRANE

REVISION
9/19/14

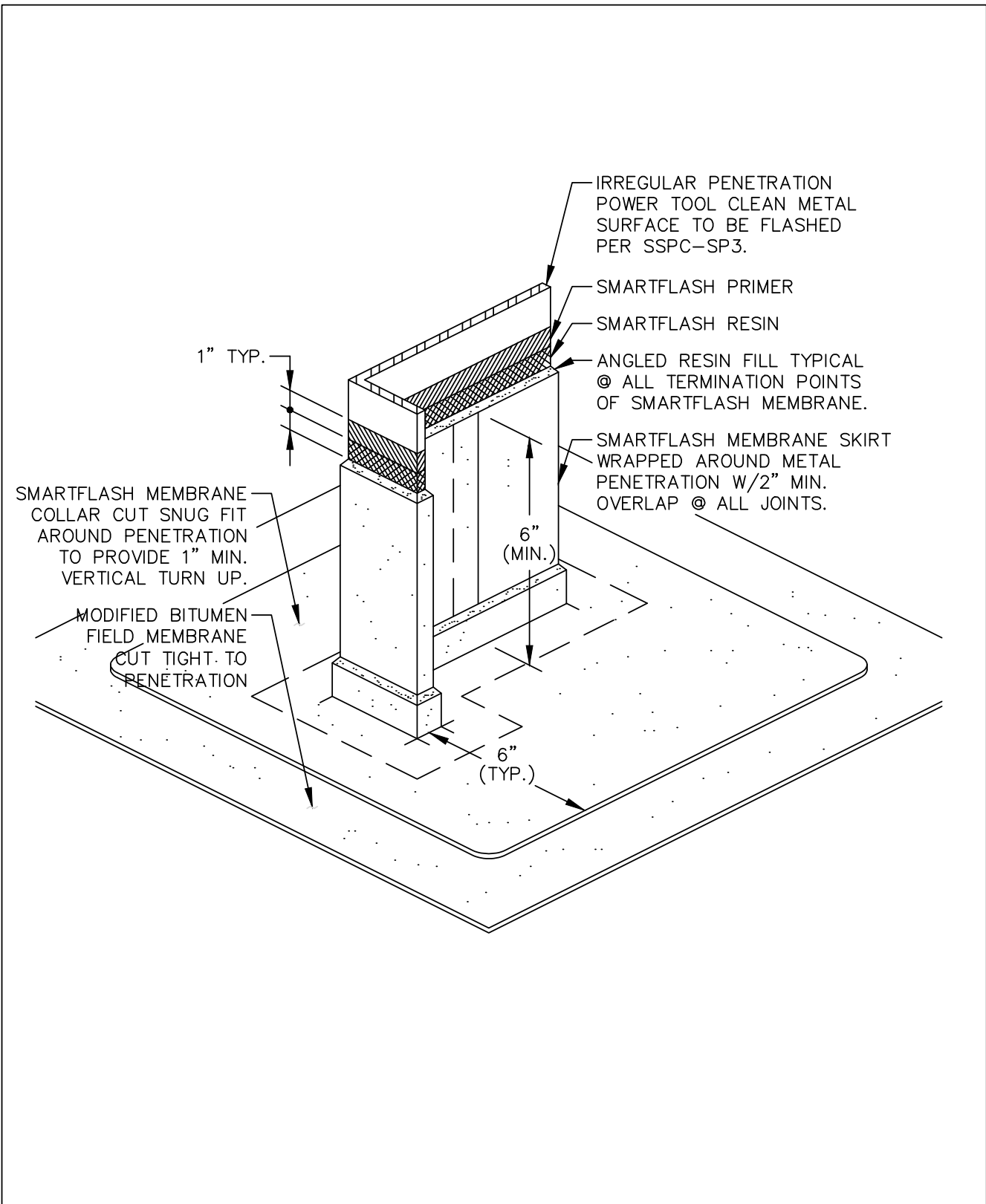
ISSUE DATE
8/1/13

SCALE
N.T.S.

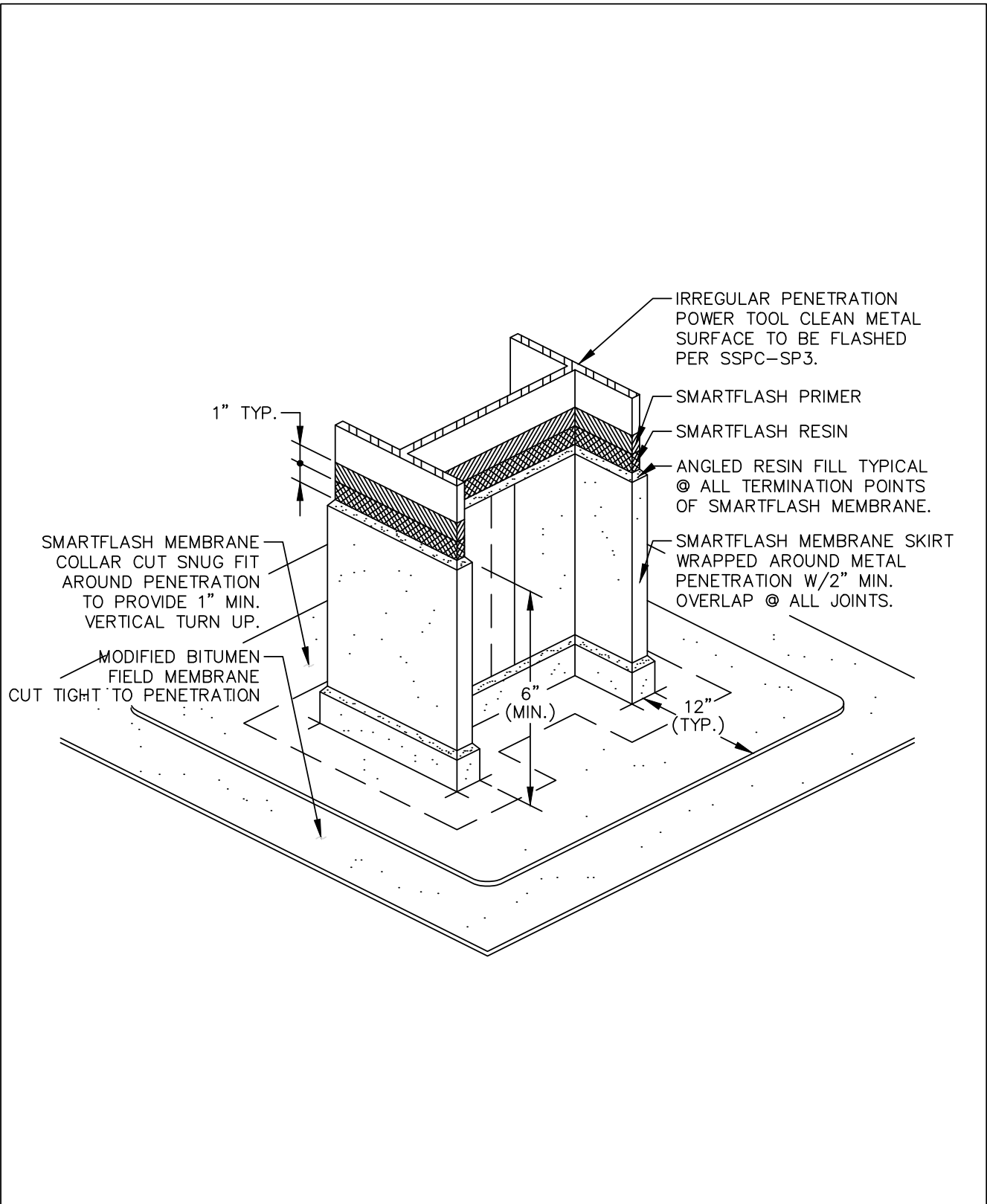
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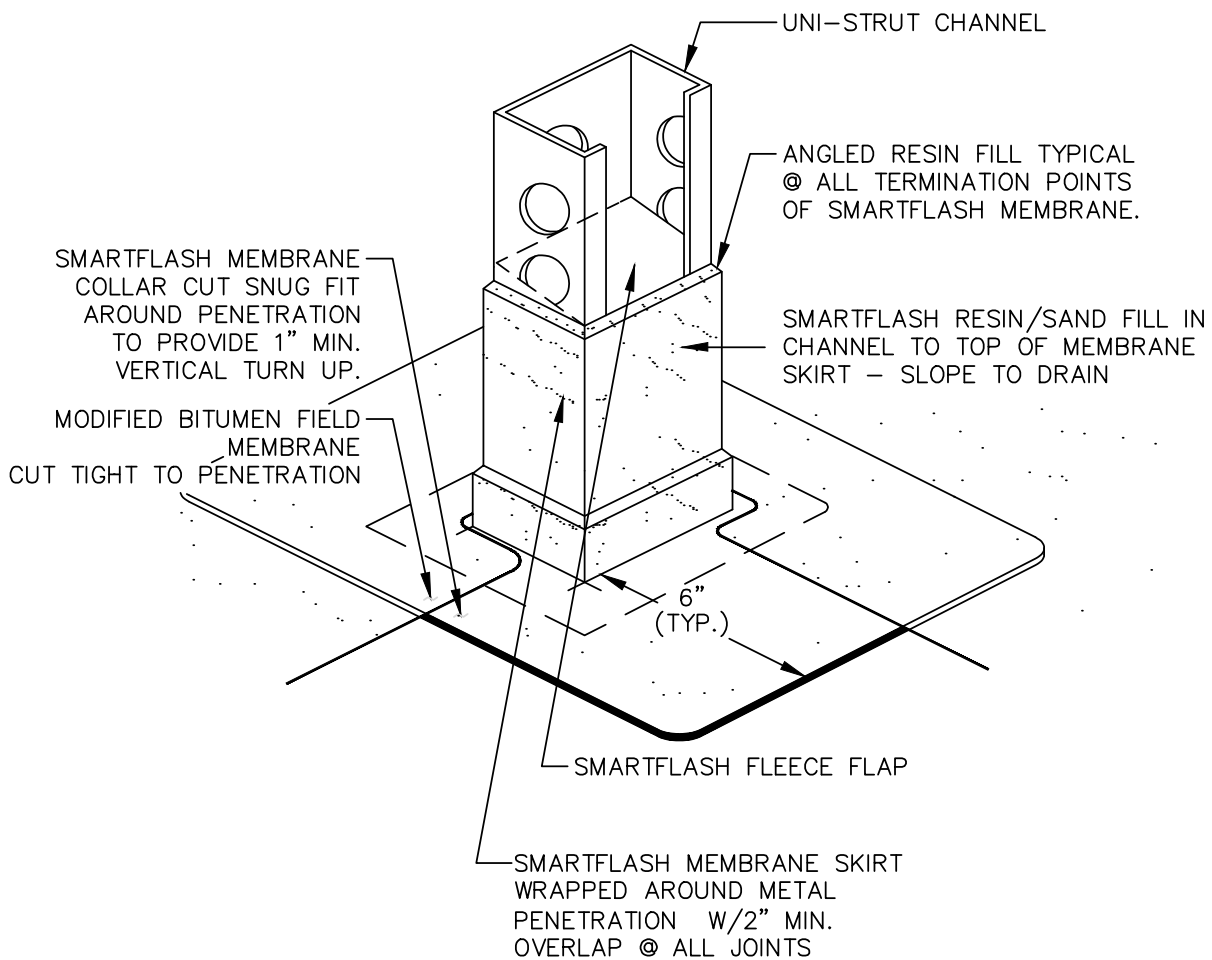
DRAWING NO. CTL-21 FP-1.DWG	FIELD FABRICATED PIPE PENETRATION FLASHING				
	REVISION 9/19/14	ISSUE DATE 8/1/13	SCALE N.T.S.	DRAWN BY CT	



DRAWING NO. CTL-23 FP-3.DWG	IRREGULAR PENETRATION ANGLE FLASHING				
	REVISION 9/19/14	ISSUE DATE 8/1/13	SCALE N.T.S.	DRAWN BY CT	



DRAWING NO. CTL-24 FP-4.DWG	WIDE FLANGE FLASHING				
	REVISION 9/19/14	ISSUE DATE 8/1/13	SCALE N.T.S.	DRAWN BY CT	



DRAWING NO.

CTL-25

FP-5.DWG

**IRREGULAR PENETRATION
UNI-STRUT CHANNEL FLASHING**

REVISION

9/19/14

ISSUE DATE

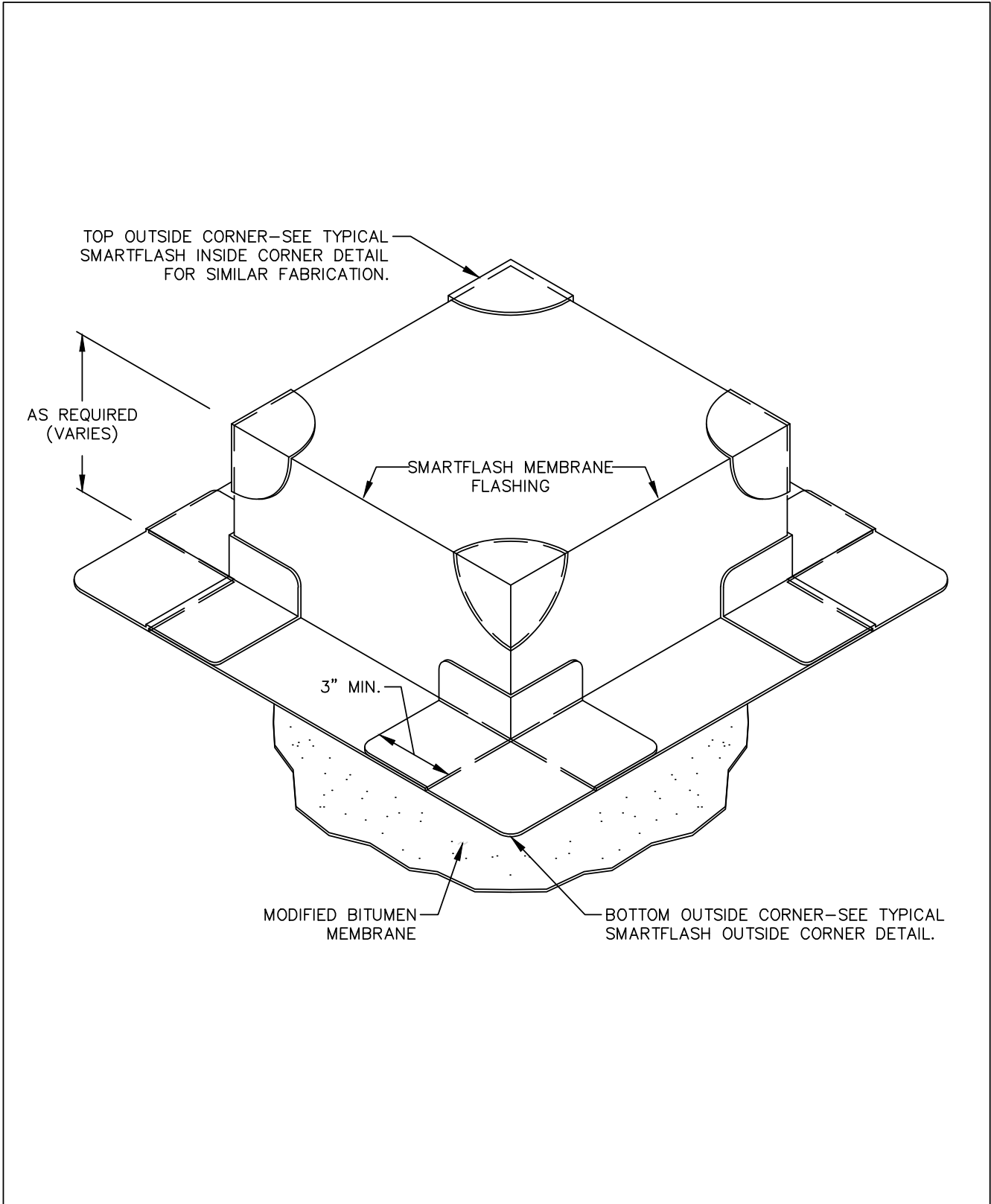
8/1/13

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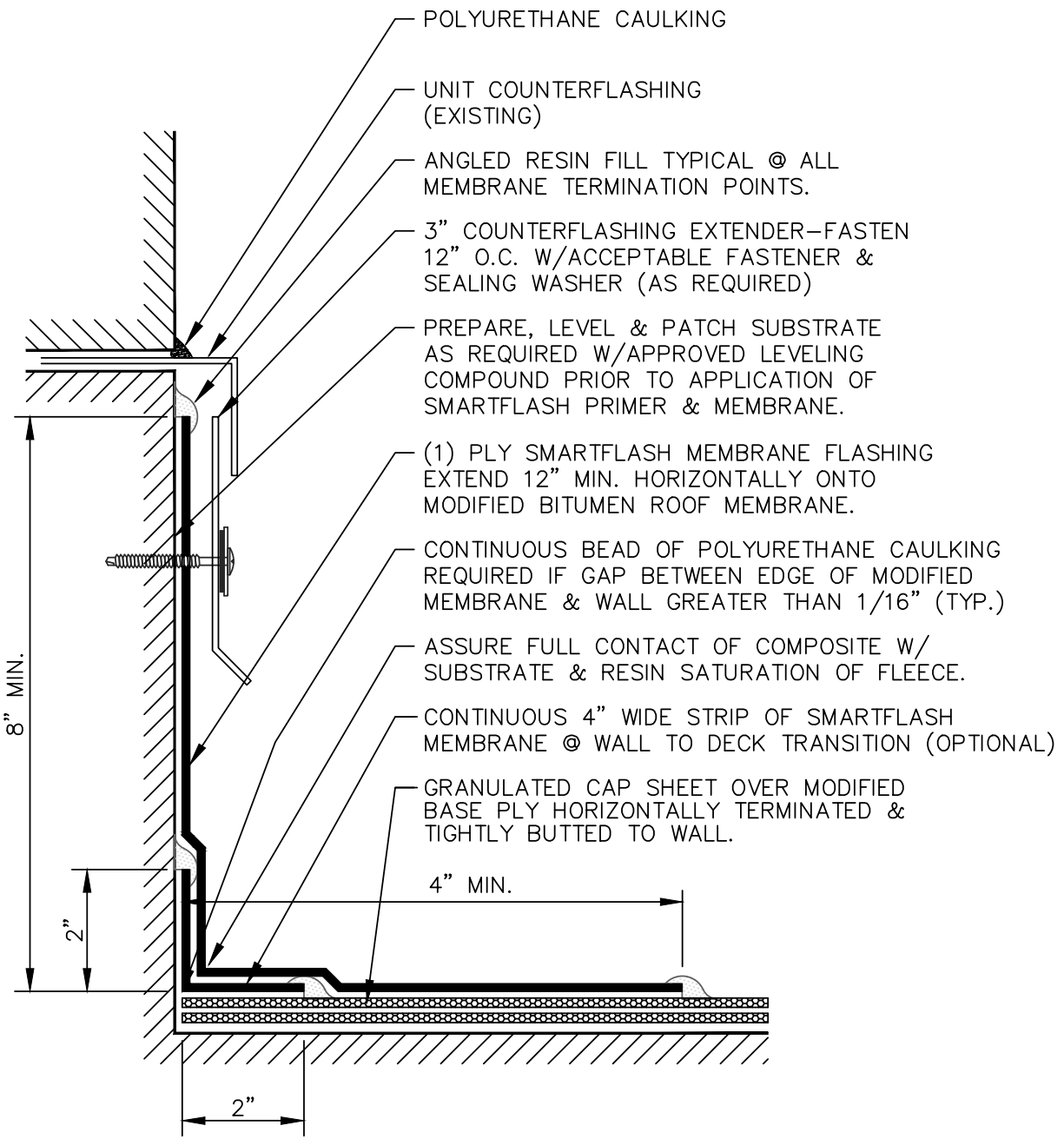
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DRAWN BY

CT



DRAWING NO. CTL-27 FP-7.DWG	CURB/PAD ENCAPSULATION FLASHING				
	REVISION 9/19/14	ISSUE DATE 8/1/13	SCALE N.T.S.	DRAWN BY CT	



- POLYURETHANE CAULKING
- UNIT COUNTERFLASHING (EXISTING)
- ANGLED RESIN FILL TYPICAL @ ALL MEMBRANE TERMINATION POINTS.
- 3" COUNTERFLASHING EXTENDER—FASTEN 12" O.C. W/ACCEPTABLE FASTENER & SEALING WASHER (AS REQUIRED)
- PREPARE, LEVEL & PATCH SUBSTRATE AS REQUIRED W/APPROVED LEVELING COMPOUND PRIOR TO APPLICATION OF SMARTFLASH PRIMER & MEMBRANE.
- (1) PLY SMARTFLASH MEMBRANE FLASHING EXTEND 12" MIN. HORIZONTALLY ONTO MODIFIED BITUMEN ROOF MEMBRANE.
- CONTINUOUS BEAD OF POLYURETHANE CAULKING REQUIRED IF GAP BETWEEN EDGE OF MODIFIED MEMBRANE & WALL GREATER THAN 1/16" (TYP.)
- ASSURE FULL CONTACT OF COMPOSITE W/ SUBSTRATE & RESIN SATURATION OF FLEECE.
- CONTINUOUS 4" WIDE STRIP OF SMARTFLASH MEMBRANE @ WALL TO DECK TRANSITION (OPTIONAL)
- GRANULATED CAP SHEET OVER MODIFIED BASE PLY HORIZONTALLY TERMINATED & TIGHTLY BUTTED TO WALL.

8" MIN.

2"

4" MIN.

2"

DRAWING NO.	ONE PLY CURB FLASHING				
CTL-28 <small>FP-8.DWG</small>	<small>REVISION</small>	<small>ISSUE DATE</small>	<small>SCALE</small>	<small>DRAWN BY</small>	
	9/19/14	8/1/13	N.T.S.	CT	