Elevate UltraPly™ TPO XR Roofing Systems

Application Guide

August 2025

NOTE: The contents of this guide are considered accurate at the time of posting. All information contained within should be validated for accuracy as it relates to specific project conditions or requirements. Specific codes, uplifts or other factors may result in changes to the information contained within this document. Validate all specific conditions with a Elevate Regional Technical Coordinator prior to its use.

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General

This section of Elvate's Technical Manual provides instructions for the installation of Elevate UltraPly TPO XR membrane using Elevate XR Stick Adhesive, Elevate Twin Jet Adhesive, Elevate Twin Jet Y Adhesive, Elevate ISO Spray R Adhesive, or hot steep asphalt. Reference to the Design Guide, Technical Information Sheets and other sections of Elevate's Technical Specifications is necessary to ensure that the finished roof system is installed in compliance with Elevate requirements and therefore suitable to receive a Red Shield Warranty.

!	NOTE: If a proposed application falls outside this specification, contact a Elevate Regional Technical Coordinator for additional information.

Job Site Considerations (Caution and Warnings)

- Keep all adhesives, sealants, and cleaning materials away from ALL ignition sources (i.e., flames, fire, spark, etc.). Do not smoke while using these materials.
- Consult container labels, Material Safety Data Sheets and Technical Information Sheets for specific safety instructions for all products used on the project.
- Care must be used when installing fasteners to avoid possible conduits and other piping in and under the deck.
- Fumes from adhesive solvents or asphalt may be drawn into the building during installation through rooftop intakes. Take suitable precautions when using such products on an occupied building.
- Store Elevate UltraPly TPO XR membrane in the original undisturbed plastic wrap in a manner to protect it from damage.
- Do not use oil-based or bituminous-based roof cement, mastics, or caulks in direct contact with Elevate UltraPly TPO XR membrane.
- Insulation must be properly stored and protected from ignition sources, moisture, and damage.
- Follow all OSHA, NRCA and other industry recommendations for fire protection.
- When the outside temperature is below 40 °F (4.4 °C), certain combinations of temperature and humidity may cause condensation on the surface of solvent-based adhesives and primers. If this condition occurs, discontinue their application. When the ambient air conditions no longer cause condensation on adhesive surfaces, re-apply additional adhesive or primer, and proceed. The consistency of sealants, adhesives, and primers will begin to thicken as the temperature drops. To minimize this, the following is recommended:
  - Start work with sealants, adhesives, and primers that have been stored between 60 °F and 80 °F (15.5 °C and 26.7 °C). Insulated heated boxes may be helpful.
  - Conduct test areas to determine if conditions will occur such as condensation on adhesives, or difficulty in dispensing adhesives or sealants.
  - Do not use heat guns or open flames to accelerate the drying of adhesives and/or primers.
  - If using water-based bonding adhesive for flashing applications, temperatures of substrates and atmosphere must be at least 40 °F (4.4 °C) and rising. Longer drying times should be expected for lower temperatures and higher humidity.

Roof Substrate Preparation

!	It is the roofing contractor's responsibility to ensure that the substrate is acceptable for the Elevate roof system.
	Elevate does not approve of or recognize the results of destructive testing by others for the purposes of project close-out or to satisfy contract requirements. Any damage caused by such testing may prevent Elevate from issuing a warranty. Elevate is not responsible for costs associated with repairs or enhancements performed to the roof system as a result of testing.

Correct Substrate Defects

- Defects that require correction before work can commence should be brought to the attention of the General Contractor or Owner in writing and addressed by them.
- For re-roofing applications, remove existing roof system components as specified by the Project designer and documents. Components or conditions that are discovered during installation that could be detrimental to the performance of the new roof system should be brought to the attention of the project designer for corrective action.
- Good roofing practice requires complete removal of the existing roof to the structural deck if soundness and integrity of the existing roof system cannot be verified. Recovering an existing roof system with a new roof is an alternative to removing existing roof components. However, non-destructive testing, in conjunction with examination of core cuts, must be performed to determine the condition of the existing roof system and decking.
- The building owner or project designer is responsible for assuring that all wet or damaged insulation and/or wet/damaged substrates are removed and replaced in re-roofing applications. A reliable diagnostic technique is taking and evaluating a series of roof cuts. There are three other techniques available to make this determination by indirect means: Nuclear moisture detection;

Infrared thermography; and Electric capacitance. These techniques provide measurement of factors that can be associated with the presence of moisture, which can then be correlated to the roofing cuts to verify the results of the non- destructive testing.

Rooftop Moisture

Ponding water, snow, frost, dew, and ice must be removed from the substrates/work surfaces before installing the UltraPly TPO XR System.

Prepare Surfaces

Acceptable substrates to receive the UltraPly TPO XR Roofing System must be properly prepared before membrane installation. The surfaces(s) must be relatively even, clean, dry, smooth, and free of sharp edges, fins, loose or foreign materials, oil, grease, and other materials that may damage the membrane. Rough surfaces that could damage the membrane must be overlaid with acceptable insulation.

Fill Voids

All surface voids of the immediate substrate to receive UltraPly TPO XR membrane greater than ¼" (6.35 mm) wide must be filled with insulation or other approved filler.

Concrete Additives

Concrete Additives can have a negative impact on the adhesion of asphaltic membranes and insulation products. The concrete supplier/installer should verify that any additives in the mix will not render the deck unsuitable for roofing application. Elevate does not accept surface-applied curing compounds for warranted systems.

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	Elevate does not accept for warranty any concrete substrates that have been sealed with chemical sealers or silicon surface treatments.

Wood Nailer Locations and Installation

Elevate no longer requires the use of treated wood nailers. This is due to the new EPA requirements that have caused treated lumber to have more corrosive properties than the previous generation of wood treatments.

If architectural specifications require the use of treated wood nailers, the following Elevate requirements apply:

- Refer to the Elevate Design Guide for the appropriate Elevate fastener to be used for securing membrane into wood nailers.
- Nails penetrating treated wood nailers must be hot-dipped galvanized, meeting ASTM A653, Class G185 or as currently recommended by industry associations.
- Aluminum fasteners, flashings and accessory products must not make direct contact with treated wood nailers.
- Uncoated metal and painted metal flashing and accessories, except for 300-series stainless steel, must not make direct contact with treated wood nailers.
- When in doubt of the type of treatment of the wood nailer or its compatibility with a metal component, use UltraPly TPO membrane as a separator.

Because of recent EPA regulations regarding treated wood, new treatments for lumber may be highly corrosive to fasteners. Contact the fastener manufacturer for their recommendations on fasteners if attaching nailers that have been treated with corrosive materials.

Wood nailers must be installed as specified by the project designer or as noted in Elevate Details and the TPO System Design Guide. Install wood nailers as follows:

Wood Nailer Grade

- When wood nailers are used, Elevate specifications require the use of wood that is kiln dried (Southern Pine, Douglas Fir) structural grade #2 or better, unless otherwise noted.
- While being stored on the roof, properly elevate, and cover non-treated wood to protect from the weather and keep dry.
- Nailers must be properly anchored to provide secure attachment through the warranty term.
- Nailers are not covered by the Red Shield Warranty.

Size of Nailer

Nailers shall be a min. thickness of 2″ x 4″ (51 mm x 102 mm) nominal 1½″ x 3½″ (38 mm x 89 mm) and exceed the width of any metal flange attached to it by a min. of ½″ (13 mm).

Position of Nailer

- Total wood nailer height must match the total thickness of insulation being used and should be installed with a ⅛" (3.2 mm) gap between each length and each change of direction.
- When nailers are stacked, end joints should be staggered a min. of 12″ (305 mm) from the prior layer in straight runs.

Secure Wood Nailer

- Wood nailers must be firmly fastened to the deck or building.
- Mechanically fasten wood nailers to resist a min. force of 200 lb/f (890 N) in any direction.
- Refer to attachment requirements of the roofing system as specified by the project designer if greater than 200 lb/f (890 N).

Taper Wood Nailer

The wood nailer must be tapered (if applicable) so that it will always be flush at the point of contact with the insulation (refer to Elevate Details).

Pour-In-Place Decks

For new construction over poured-in-place decks or fill, and all recover projects, a waterproof separator membrane shall be placed between the non-treated lumber and the deck.

Installation of Wood Nailers by Others

- Make these specifications and details available when nailers are to be installed by others.
- Work that compromises the integrity of the roof system may jeopardize the roof warranty.

For Additional Information

Please consult the NRCA Special Report, "Use of Treated Wood in Roof Assemblies".

Air or Vapor Barrier Installation

Install Vapor Retarder (when specified):

Install a vapor retarder as specified by the project designer or as required by Elevate.

Install Air Barrier (when specified):

Install an air barrier as specified by the project designer or as required by Elevate.

V-Force FR Vapor Barrier Installation

Elevate V-Force FR Membrane is intended for use in applications where a vapor barrier is specified.

1. Ensure all surfaces are dry, sound, clean, "as new" condition, and free of oil, grease, dirt, excess mortar, or other contaminants detrimental to the adhesive of the membrane.
2. Fill voids and gaps in the substrate greater than ⅞" (22.2 mm) in width to provide an even surface.
3. Plan layout prior to application to help minimum waste.
4. Pre-plan special application areas like curbs and penetrations to achieve the proper detailing to ensure water and airtight installation.
5. Cold weather may affect the adhesion properties of the pressure sensitive adhesive. It is always recommended to conduct field adhesion testing separately or in conjunction with mock-up construction on the job site. Primers can improve adhesion to substrates in these conditions.
6. Stage rolls prior to application to follow a shingle fashion installation with the upper courses lapped over the lower courses. All side and head laps are a minimum of 3" (76.2 mm). Laps from vertical to horizontal application should be a minimum of 6" (152.4 mm).
7. On steel decks, laps of sheets should be supported by deck flutes. Cover flutes where the end laps will occur with 24 gauge 6" (152.4 mm) wide metal strips spanning the flutes. Attach with #10 pancake head screws through 9/32" (7.14 mm) oval holes (by others).
8. Roll our membrane out into position.
9. Lift leading edge of membrane enough to peel enough of the first half of the release liner back to allow it to extend past the edge of the roll. Repeat for other half of release liner.
10. Roll membrane back and hand press adhesive to substrate.
11. Have someone hold the non-adhered end of roll membrane while release liner is removed.
12. Continue to pull release liner from underside of roll at a 45-degree angle at a pace to not tear liner.
13. Roll the membrane with a weighted roller, minimum 70 lb (31.75 kg).
14. Position and install additional rolls in a shingles application to achieve a 3" (76.2 mm) minimum lap at all head and side locations.
15. Refer to the Elevate website (www.elevatecommercialbp.com) for details and additional product and installation information.

V-Force Vapor Barrier Installation

Elevate V-Force Membrane is intended for use in applications where a vapor barrier is specified.

1. All substrates except metal decks must be primed with either Elevate SA Water Based or SA Solvent Based Primer.
2. Position V-Force Membrane with min. 3″ (76 mm) side laps and 6″ (152 mm) end laps.
3. Shingle side laps up the roof slope wherever possible and stagger end laps min. 12" (305 mm).
4. Peel back approximately 5' (1.5 m) of release liner from the end of the roll and adhere it to the substrate.

5. Keeping the V-Force flat and properly positioned, remove the remaining release liner on a 45° angle.
6. Roll the V-Force with a 75 lb (34 kg) roller to fully mate the product to the substrate.
7. Refer to the Elevate website (www.elevatecommercialbp.com) for details and additional product and installation information.

Insulation Installation

InvisiWeld Systems require a min. 1½″ (38 mm) of insulation over the metal deck for operation of induction welding equipment. Elevate UltraPly Platinum TPO Roofing System warranties require a new approved substrate board. Ballast systems are not permitted when the membrane is installed directly over any mechanically attached insulation or over a hard surface such as HailGard / ISOGARD HG, ISOGARD HD, DensDeck®, SECUROCK®, DEXcell®, OSB or concrete. Ballast systems are not approved for use when Elevate Platinum System warranties are desired.

Install Insulation

- Install only as much insulation as can be covered with roofing membrane and completed before the end of the day's work or before the onset of inclement weather.
- Form continuous insulation joints over deck flange. Do not cantilever insulation edges over deck ribs. Min. bearing surface: 1″ (25 mm).

Multiple Layers of Insulation

When installing multiple layers of insulation, all joints between layers shall be staggered 6″ (152 mm) min.

Fit Insulation.

- Neatly fit insulation to all penetrations, projections, and nailers. Insulation should be loosely fitted, with no gaps greater than ¼" (6 mm) filled with acceptable insulation. The membrane shall not be left unsupported over a space greater than ¼" (6 mm).
- On metal decks, the edge of the board parallel with the roof deck flutes should be completely supported by the flange.
- Tapered insulation with acceptable facers for bonding must be installed around roof drains to provide proper slope for drainage as shown in Elevate Details.

Insulation Attachment - Mechanical

- Insulation must be attached using Elevate Insulation Plates and Fasteners. HailGard fasteners may be used to attach HailGard / ISOGARD HG insulation without the use of insulation plates.
- If installed on a metal deck (where allowed by specification), the edge of the board parallel with the roof deck should be completely supported and fasteners must penetrate the top flange of the deck.
- When installing fasteners, care should be taken to avoid penetration of conduits and other piping below or encased in the deck.
- For insulation attachment please refer to the Technical Information Sheets that reference the specific insulation being used. Use appropriate attachment patterns and fastening rates of that specific insulation and desired warranty term. Elevate Platinum Warranties requires increased fastening.
- For specific deck penetration requirements refer to the Technical Information Sheet that references the specific fastener being used.
- When installing a multi-layer insulation assembly, the fastening pattern is determined by the type and thickness of the top layer of insulation and the performance criteria of the system. MAS systems with an adhered perimeter shall require the perimeter insulation to use fastening pattern used in a adhered membrane system as determined by the top layer of insulation.
- Multiple layers of insulation may be installed using a common fastener.
- Ensure that the fasteners are fully seated, but not overdriven. Use a properly adjusted clutch or depth sensing type of drill. Do not use a standard single speed drill. If a fastener must be removed after installation, do not reinstall fastener into same hole.
- Fastener pull tests should be conducted on existing decks or decks with conditions that are not "like new". Pull values below Elevate requirements may require increased fastening, alternate system requirements or refusal of warranty coverage.

Insulation Attachment – Asphalt Attachment

- The substrate may require priming or a base sheet prior to installing the insulation. Refer to the Design Guide for specific information.
- The insulation shall be no larger than 4' x 4' (1.2 m x 1.2 m) panels.
- Insulation may be attached using a solid mopping of Elevate SEBS Asphalt (as required by warranty terms) or ASTM D 312 Type III or Type IV asphalt. Resista™ / ISOGARD CG and ISOGARD HD may not be asphalt attached.
- The asphalt shall be at the manufacturer's stated EVT less ~ 25 °F (-4 °C) at the point of installation. Install enough asphalt to achieve complete adhesion, approximately 25-30 lb per 100 ft^2 (1.2-1.4 k/m^2), depending on substrate.
- It is necessary to "walk" boards in to ensure complete adhesion to the substrate.
- Additional layers of insulation should be installed in the same fashion.

Insulation Attachment – Adhesive Attachment

- Insulation may be attached using I.S.O. Twin Pack™, I.S.O. Stick™, I.S.O. SPRAY™ R, Twin Jet or Twin Jet Y.
- Apply the adhesive in strict accordance with the instructions provided with the product and the Technical Information Sheets that are a part of this Technical Database.
- It may be necessary to prime the substrate prior to installing the insulation adhesive with a prescribed primer.
- If installed on a metal deck (where allowed by specification), the edge of the board parallel with the roof deck flutes must be completely supported.
- The insulation or coverboard shall be no larger than 4' x 4' (1.2 m x 1.2 m).
- It is necessary to weight each board, using full pails of bonding adhesive or other available source of weight that will not damage the insulation board, at each corner, to ensure complete adhesion to the foam and substrate. Refer to the specific product Technical Information Sheet for min. wait times.

EPS Fanfold and Flute Fill Insulation Attachment

Table 1: EPS Installation Requirements for Warranty

EPS INSTALLATION REQUIREMENTS FOR WARRANTY	
Product	Minimum Installation Requirements
Alleguard Fanfold Rigid Board Insulation (TIS 967)	▪ Preliminarily fastened with appropriate fasteners and plates at a minimum of 5 fasteners and plates per 32 ft^2 (2.97 m^2) into appropriate substrate. ▪ Approved for use in appropriate re-cover applications only.
Alleguard Flute Fill Rigid Insulation (TIS 968)	▪ Loose laid or preliminarily attached with appropriate fastener and plates.

NOTE:
1. EPS direct to deck application is acceptable but may not meet building code or Factory Mutal (FM) requirements.
2. Performance validation (uplift and/or fire) may not be available when EPS insulation is used.
3. Non-Faced EPS shall not be in direct contact with bonding adhesives, asphalt products, PVC, or PVC KEE membrane.

- Fanfold insulation is approved for use when recover applications call for mechanically attached membrane applications of Elevate UltraPly TPO membrane systems.
- Fanfold must be Type VIII with a minimum thickness of 1/2 (12.7 mm) and must meet the following minimum physical properties outlined below.
- Existing gravel surfaced roofs should be spud/scraped clean and vacuumed.
- Existing single-ply membrane should be cut into 10' x 10' (3.05 m x 3.05 m) grids and all flashings and base tie-ins should be detached/removed before attaching Fanfold with appropriate fasteners and insulation plates. Those may include Elevate #12 Insulation Fasteners, All Purpose Fasteners and Heavy-Duty Fasteners with Elevate Insulation Plates, as well as IsoFast™ Bested Fasteners and Insulation Plates or AP AccuTrac® Kits.
- InvisiWeld applications are not allowed when Fanfold is the immediate substrate.
- Damaged or wet components of the existing roofing system must be removed/replaced.
- Fanfold must have a suitable facer. "Bare" EPS must never come into contact with PVC or PVC KEE membranes, or with residual asphalt.
- Adjacent Fanfold sheets should be laid parallel and staggered ever 2' (0.61 m).
- For projects requiring performance validation, switch to an appropriate Elevate insulation and/or cover board.
- Check with local building code authorities for requirements for partial tear-offs and recovers.
- The maximum Red Shield™ Warranty term for systems including Fanfold is 20 years. Wind speeds up to 55 MPH may be approved based on project characteristics. Hail and Cut & Puncture Protection are not available when Fanfold is used in lieu of an Elevate insulation and/or cover board.
- Contact a Regional Technical Coordinator for more information.

Membrane Installation

Ensure proper welds are being achieved. If welding problems occur validate the following:
- Ensure the weld area is clean, dry, and free of contaminants prior to welding.
- If cleaning occurs completely dry area prior to welding.
- Perform test welds with scrap membrane to dial in the proper welding temperatures.
- Perform test welds prior to job start, after breaks in installation, and during temperature swings.

! NOTE: Once weld areas have cooled, validate weld is fully bonded and no gaps, fish mouths, pin holes or cold welds exist. Probe all welds to verify weld is completed properly.

NOTE: It is important to verify that welds completed at any transition from machine to hand application is completed properly. Validate weld transition is fully bonded and no gaps, fish mouths, pin holes or cold welds exist. Probe all welds to verify weld is completed properly.

NOTE: Lap membrane to cover membrane printed areas (lap lines, fastener location marks and product identifications printing) whenever possible.

Initial Membrane Positioning

Fold Method

1. Position membrane: Place UltraPly TPO XR membrane over acceptable substrate without stretching membrane starting at the low point of the roof. Position UltraPly TPO XR membrane panels in "shingle" fashion so seams shed, and do not "buck" water flow.
2. Mark Substrate: Mark the substrate along the top edge of the panel as necessary by snapping chalk lines.
3. Fold membrane back: After positioning the UltraPly TPO XR membrane on the substrate in the desired location, fold the membrane back on itself without wrinkling or moving the membrane, exposing the substrate.
4. Snap lines: Using the marks made previously, snap chalk lines.
5. Install panel: As described in this guide and additional instructions.

Unroll Method

1. Position membrane: Position the first panel of UltraPly TPO XR membrane over roof area to receive membrane. Position UltraPly TPO XR membrane in "shingle" fashion so seams shed, and do not "buck" water flow. Note: When using the unroll method, it is recommended that the first panel be installed in the fold method to assure proper alignment of subsequent rolls being installed using the unroll method.
2. "Set" the roll: Unroll about 10-20 ft (3.05-6.10 m) of the UltraPly XR Membrane and adjust it to its final position. This "sets" the roll and insures that unrolling the "set" roll will result in proper membrane placement when unrolled. Setting pails of adhesive on membrane at this point will serve to temporarily ballast and keep the roll in its proper position before adhering.
3. Install panel: As described in this guide and additional instructions.

Application of XR Membrane Using Hot Asphalt

1. Apply asphalt to substrate: Apply asphalt (at the specified equiviscous temperature) to bonding substrate at a minimum of 30 lb per 100 ft^2 (1.46 kg/m^2) +/- 3 lb per 100 ft^2 lb/100 ft^2 (.146 kg/m^2). Do not apply asphalt to the fleece or seaming area of the UltraPly TPO XR membrane. Apply asphalt completely and evenly on the bonding substrate, avoiding puddles, globs, and uncoated areas.

   Notes on application:
   - The asphalt shall be at the manufacturer's specified equiviscous temperature (EVT) less 25 °F (14 °C) to 30 °F (17 °C) at the point of installation. Install a minimum of 30 lb per 100 ft^2 (1.46 kg/m^2) and a maximum of 35 lb per 100ft^2 (1.70 kg/m^2) asphalt to ensure that complete adhesion is achieved. Irregular substrates generally require additional quantities of asphalt to assure positive adhesion of the membrane.
   - Do not apply hot steep asphalt to substrate directly under the top or overlap portion of the seam. Do not walk on freshly applied UltraPly TPO XR membrane until asphalt has completely cooled.
   - Provide sufficient protection of UltraPly TPO XR membrane from asphalt handling equipment. Plan the roof installation to minimize traffic over new roof areas.
2. While the asphalt is still molten, mate the UltraPly TPO XR membrane to asphalt: Starting at one end of the fold, roll the UltraPly TPO XR membrane into the asphalt evenly, avoiding bridging and wrinkling. Because asphalt cooling rates vary due to ambient air temperatures, the time from asphalt application to membrane installation can vary greatly and must be adjusted as necessary to assure proper adhesion. When temperatures are such that rapid cooling is occurring, the "Unroll Method" described in section 2.07B should be used.
3. Without walking on the membrane, using a stiff bristled push broom, broom the freshly installed membrane to insure even and sufficient mating of the membrane into the asphalt.
4. Adjoining roll ends are to be butted to each other not lapped. Refer to Elevate TPO XR End Lap detail for specific requirements.

5. Additional panel installation: Unroll adjacent panels completely, lapping the selvedge edge over the previous panel to allow for a minimum 1½" (38.1 mm) robotic heat welded seam or 2" (50.8 mm) hand welded seam. Once aligned in the final position, repeat steps used above.

> **!** NOTE: It is important to verify that welds completed at any transition from machine to hand application is completed properly. Validate weld transition is fully bonded and no gaps, fish mouths, pin holes or cold welds exist. Probe all welds to verify weld is completed properly.

Application of XR Membrane Using XR Stick or ISO Spray R Adhesive

General Conditions

1. Install only as much UltraPly TPO XR membrane (XR100 or XR115) as can be completed and made watertight during the working day.
2. Substrates and ambient conditions shall exceed 40 °F (4 °C) and rising.
3. Substrates to receive XR STICK, or ISO SPRAY R Adhesive shall be above 40 °F and rising, clean, smooth, dry, free of sharp edges, loose and foreign materials, oil, grease, and other contaminates.
4. Apply XR STICK or SPRAY R ADHESIVE to bonding substrate only at a coverage rate range of 60-200 ft^2/gal (1.4-4.8 m^2/L), depending on the application and porosity of the substrate. Do not apply XR STICK or SPRAY R adhesive to the fleece or seaming portion of the UltraPly TPO XR membrane.
5. XR STICK is available in 2-part 0.2 gal (750 ml) cartridges or 5 gal (19 L) boxes and can be dispensed using various Elevate approved hand or electric dispensing units, through a static mixing tip as a two-component low rise polyurethane foam adhesive in beads or ribbons.
6. ISO SPRAY R Adhesive is available in 15 gal (57 L) or 55 gal (208 L) drums that are dispensed using a heated high or low-pressure spray or bead extruding system as a mixed two component polyurethane adhesive applied with a full coverage spray application or a bead dispensing application. See adhesive TIS for additional equipment information.
7. Apply XR STICK or ISO SPRAY R adhesive evenly on the bonding substrate, avoiding puddles, globs, and uncoated areas.

Membrane Installation

1. Starting at the highest roof elevation, unroll and position UltraPly TPO XR membrane. Position UltraPly TPO XR membrane panels so the laps will be completed in "shingle fashion", and not "buck" or hold water. Unroll UltraPly TPO XR membrane sheet and position in place. Fold sheets in half width-wise.
2. Fold the properly positioned panels of UltraPly TPO XR membrane back to expose the substrate to receive ISO SPRAY R or XR STICK Adhesive.
3. Dispense ISO SPRAY R or XR STICK Adhesive on the substrate as follows:
   - Spray Application: fully spray adhesive to obtain full coverage (approx. ⅛" to ¼" thick after foaming).
   - Bead Application: For extruded bead applications, apply a ¾" to 1" wide bead, when wet, of the adhesive at a rate of 4", 6" or 12" on center depending on application requirements.
   - NOTE: Closer Bead spacing may be required at building corners and edges depending on wind zone. Apply ISO Spray R or XR STICK Adhesive to the substrate achieving a light-yellow color foam.
   - If the ISO SPRAY R or XR STICK does not rise, stop dispensing; troubleshooting is required to determine why the ISO SPRAY R or XR STICK is not rising.
   - Do not apply ISO SPRAY R Adhesive or XR STICK directly to the UltraPly XR Membrane. Keep lap areas of UltraPly TPO XR Membrane clean and free of ISO SPRAY R or XR STICK Adhesive. Remove any adhesive that contaminates the lap areas immediately and clean the lap area with appropriate cleaning materials.
4. Allow ISO SPRAY R or XR STICK to rise (within 1 to 3 minutes, depending on ambient conditions), then mate the UltraPly TPO XR Membrane into the freshly installed ISO SPRAY R or XR STICK Adhesive. The rise time will vary based on environmental conditions like temperature and humidity. Shaded areas, and cool overcast days will have longer rise times.
5. Roll the freshly mated UltraPly TPO XR Membrane using a 150 lb x 30" or 100 lb x 16" roller (such as linoleum roller or landscaping roller) to ensure proper adhesion. NOTE: Roller not to exceed 150 lb.
6. Performance of ISO SPRAY R or XR STICK Adhesive should be periodically monitored during the workday to verify that sufficient rise, adhesion, and full mating is occurring.
7. Do not attempt to apply ISO SPRAY R or XR STICK when unfavorable conditions exist (ie: rain, snow frost, high wind, etc.).

Coverage Rate for XR Stick or ISO Spray S Adhesive

Full Coverage Spray Application

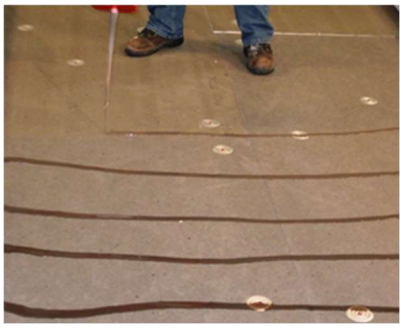
1. ISO Spray R Adhesive can be spray applied in a full coverage application to the roofing substrate.
2. Relatively smooth surfaces will result in a coverage rate of approximately 96 ft^2 per gallon (2.3 m^2 per L) of mixed (1:1) ISO Spray R Adhesive.
   NOTE:
   - Coverage rate will be reduced due to irregularities in substrates. Note that the coverage rate for ISO SPRAY R at the roof perimeter and corner sections may vary according to roof system design requirements.
   - Refer to Equipment Supplier's suitability for use of mix/meter/spray two-component polyurethane adhesive.

Bead Coverage Application

Using the approved equipment dispensing a continuous mixed bead width of ¾" (19 mm) to 1" (25 mm), when applied over various substrates, the coverage rates of mixed (1:1) ISO Spray R Adhesive or XR STICK beads will vary depending on the bead spacing:

- 4" o.c. bead spacing coverage rate: 60 – 90 ft^2 per gallon (1.4 – 2.2 m^2 per L) of mixed (1:1) ISO Spray R Adhesive or XR STICK depending on the substrate
- 6" o.c. bead spacing coverage rate: 90 – 120 ft^2 per gallon (2.2 – 2.9 m^2 per L) of mixed (1:1) ISO Spray R Adhesive or XR STICK depending on the substrate
- 12" o.c. bead spacing coverage rate: 170 – 200 ft^2 per gallon (4.1 – 4.8 m^2 per L) of mixed (1:1) ISO Spray R Adhesive or XR STICK depending on the substrate

  NOTE:
  - Coverage rate may be reduced due to irregularities in substrates.
  - Coverage rates will vary if the bead spacing is increased.
  - These typical coverage rates are applicable when the XR Stick is properly mixed with 1:1 ratio and applied in the appropriate bead spacing in a serpentine pattern at a bead width of ¾" to 1" (19 mm to 25.4 mm).
  - The coverage rate for ISO Spray R Adhesive or XR STICK at the roof perimeter and corner sections may vary according to roof system design requirements.



Bead application of XR Stick in cartridge on mechanically attached Polyisocyanurate insulation board @ 12" o.c.

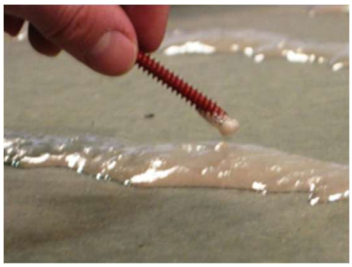
Bead application of XR Stick in cartridge on mechanically attached Polyisocyanurate insulation board @ 6" o.c.

Freshly applied beads of XR Stick on mechanically attached Polyisocyanurate insulation board @ 4" o.c.

Reaction Time

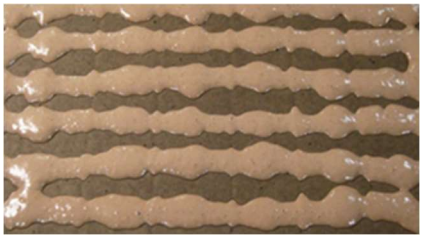
When applying ISO Spray R Adhesive or XR Stick, the TPO XR membrane must be placed into the adhesive while it is still wet and tacky (before it reaches tack free state). The membrane may be placed into adhesive shortly after it has reached its maximum rise, typically after 2-3 minutes.

STEP 1: Freshly applied ISO Spray R Adhesive / XR Stick - cream stage

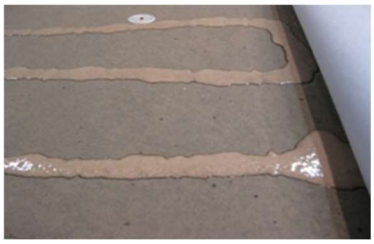


STEP 2: Allow ISO Spray R Adhesive / XR Stick Adhesive to rise (1 to 3 minutes)

STEP 3: Tack-free stage – ready for application of UltraPly TPO XR Membrane (after 5 -7 minutes)



Close up of 4" Bead Spacing



Close up of 12" Bead Spacing

Roll UltraPly TPO XR into XR Stick or ISO Spray R Adhesive

Apply pressure to the top surface of the membrane to ensure contact with a roller (not to exceed 150 lb/68 kg)

Table 2: Perimeter and Corner Enhancements for XR Stick or ISO Spray S Adhesive – Bead Application

PERIMETER AND CORNER ENHANCEMENTS FOR XR STICK OR ISO SPRAY S ADHESIVE – BEAD APPLICATION			
Building Height	**Bead Spacing (Perimeter)**	**Bead Spacing (Corner)**	**Bead Spacing (Field)**
0-25'	6" (152.4 mm) o.c – 4' (1.22 m) perimeter	4" (101.6 mm) o.c.	12" (305 mm) o.c.
25-50'	6" (152.4 mm) o.c – 8' (2.44 m) perimeter	4" (101.6 mm) o.c.	12" (305 mm) o.c.
50-75'	6" (152.4 mm) o.c – 12' (3.66 m) perimeter	4" (101.6 mm) o.c.	12" (305 mm) o.c.
75-100'	6" (152.4 mm) o.c – 16' (4.88 m) perimeter	4" (101.6 mm) o.c.	12" (305 mm) o.c.
Greater than 100'	Contact a Elevate Regional Technical Coordinator for bead spacing requirements.		

NOTE:

- When following local building code or regulatory agency's requirements, the bead spacing of ISO Spray R Adhesive or XR Stick in the perimeter and corner areas may differ from the table above. The coverage rate for XR Stick at the roof perimeter and corner sections may vary according to roof system design and wind uplift requirements. Please refer to Elevate's code approval guide or contact a Elevate Regional Technical Coordinator at 1-800-428-5411 for more information.
- Use a ¾ to 1" (19-25 mm) wide bead

Table 3: Acceptable Substrates for UltraPly TPO XR Installed with XR Stick or ISO Spray R Adhesive

ACCEPTABLE SUBSTRATES FOR ULTRAPLY TPO XR INSTALLED WITH XR STICK OR ISO SPRAY R ADHESIVE[2]		
Deck / Substrate	**Acceptable**	**Note**
Structural Concrete (New)	✓	New poured decks must be completely dry prior to application of XR Stick.
Structural Concrete (Existing)	✓	Existing decks should be dry and free of existing moisture prior to application of XR Stick.
Plywood and OSB	✓	
Cementitious Wood Fiber	N/A	
Gypsum Decks	✓*	
Lightweight Concrete[1]	✓	
Coal Tar Pitch Built-up Roofs	N/A	ISOGARD™ HD Cover board required over coal tar BUR.
Existing Asphalt and Modified Bitumen Roofs (Mineral or Smooth Surfaced)[3]	✓	Any residual asphalt must be cleaned and scraped as smooth as possible.
Existing Single-Ply Roofs	N/A	
SBS Base Sheets	✓	
Insulations[2]		
ISOGARD / ISO 95+ G/L or ISOGARD CG / RESISTA	✓	
Wood Fiberboard	✓	
Cementitious Wood Fiber	✓	
ISOGARD HD	✓	
DensDeck Products	✓	DensDeck Prime, DensDeck StormX Prime

SECUROCK Products	✓	SECUROCK Gypsum-Fiber, Cement Board and UltraLight Coated Glass-Mat
DEXcell Products	✓	DEXcell FA Glass Mat, Cement Board and FA VSH Glass Mat
Expanded / Extruded Polystyrene	N/A	
Fiberglass	N/A	
Perlite	N/A	

NOTE:

1. Acceptable Lightweight concrete substrates include cellular or air-entrained concrete. Lightweight concrete substrates with aggregate (such as perlite or vermiculite) are not acceptable.
2. See specific product Technical Information Sheets for additional information.
3. Staining of membrane may occur if installed over asphalt products.

✓ = Acceptable; N/A = Not Acceptable

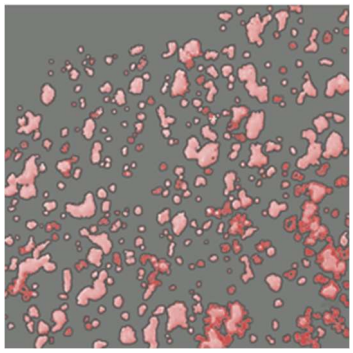
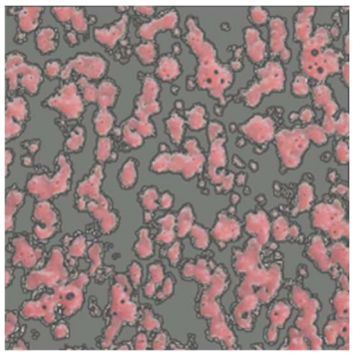
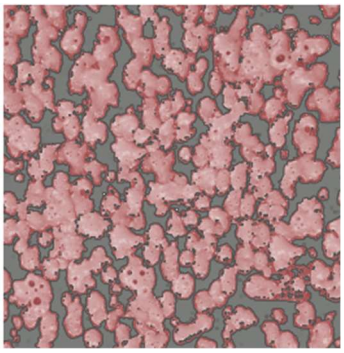
Cautions and Warnings When Working with XR Stick or ISO Spray R Adhesive

- Review the applicable SDS for complete safety information prior to use.
- The foam produced is an organic material. It must be considered as combustible and may constitute a fire hazard. The foam adhesive must not be left exposed or unprotected. Shield from heat and sparks.
- Do not smoke during application.
- Use with adequate ventilation. Avoid breathing vapors. Wear a NIOSH or MSHA approved respirator for organic vapors with pre-filters and solvent-resistant cartridges or supplied airline respirators while spraying. Proper safety training is essential for all persons involved in the installation process. If vapor is inhaled, move to fresh air, and administer oxygen if breathing is difficult. Consult a physician immediately.
- Avoid contact with eyes. Safety glasses or goggles are required.
- If ISO Spray R or XR STICK adhesive is splashed in eyes, immediately flush eyes with plenty of clean water for at least 15 minutes. Contact a physician immediately.
- Avoid contact with skin. Wear long sleeved shirt and long pants. Wash hands thoroughly after handling. In case of contact with skin, thoroughly wash affected area with soap and water or corn oil.
  NOTE: Permeation resistant gloves that meet ANSI/ISEA 105-2005 are required when handling the material directly or during application.
- Job site storage temperatures in excess of 90 °F (32 °C) may affect product shelf life. Should the components be stored at temperatures lower than 70 °F (21 °C), restore to room temperature prior to use. Do not allow ISO Spray R or XR STICK to freeze (storage below 32 °F (0 °C)).
- Use spray booths, windscreens, and/or lower spray pressure with spatter tips when spraying in windy conditions.
- Precautions must be taken to prevent ISO Spray R or XR STICK vapors or overspray from entering buildings during application. All air intake vents on roofs must be closed during the application of ISO Spray R or XR STICK.
- Use desiccant dryers on Part A drums to avoid formation of crystals from exposure to moisture in the air.
- ISO Spray R or XR STICK Adhesive does not adhere well to previously unexposed asphalt when applied in bead form.
- KEEP OUT OF THE REACH OF CHILDREN.

Adhere Membrane Using Elevate Twin Jet Adhesive

1. After allowing the pre-positioned Elevate UltraPly TPO XR Membrane to relax, back-roll the membrane panels to expose the substrate to receive Twin Jet adhesive. (Do not “butterfly” large areas of roof membrane during Twin Jet Adhesive application.) Take care not to move or otherwise disturb Elevate UltraPly TPO XR Membrane from its final intended position while back-rolling.
2. Dispense Twin Jet onto the substrate as follows:
   - Bead Application: Apply Twin Jet Adhesive on the substrate in ¾" - 1" (19- 25 mm) wide beads, spaced maximum 12" (305 mm) on center.
   - Spatter Application: Spatter Twin Jet at a rate of 60-70% coverage over the horizontal substrate and 75-85% when used at base tie-in locations. Expect to achieve approximately 2200 ft^2 to 2350 ft^2 (204 m^2 to 218 m^2) per cannister set.
3. Do not apply Twin Jet Adhesive directly to Elevate UltraPly TPO XR Membrane. Keep lap areas of TPO XR Membrane clean and free of Twin Jet Adhesive overspray. Remove any Twin Jet Adhesive from the seam area before mating the seam, or strip in the contaminated seam area.
4. Allow Twin Jet Adhesive to rise in height and reach open/mate condition. Mate the TPO XR membrane to the substrate before a skim coat develops on the adhesive (see product TIS for additional information).
5. Immediately after setting the membrane in the Twin Jet adhesive, broom the membrane to initiate adhesion, then roll thoroughly using a 75 lb to 150 lb (34 kg to 68 kg) roller. It is important that the freshly installed membrane and substrate remain in contact with the Twin Jet adhesive until the adhesive sets to ensure proper adhesion.

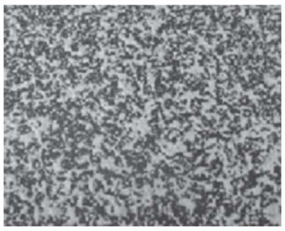
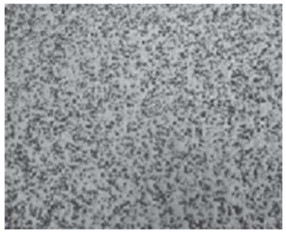
Twin Jet Spatter Application Examples

TOO LITTLE	60 – 70% COVERAGE	75 – 85% COVERAGE
		

Adhere Membrane Using Elevate Twin Jet Y Adhesive

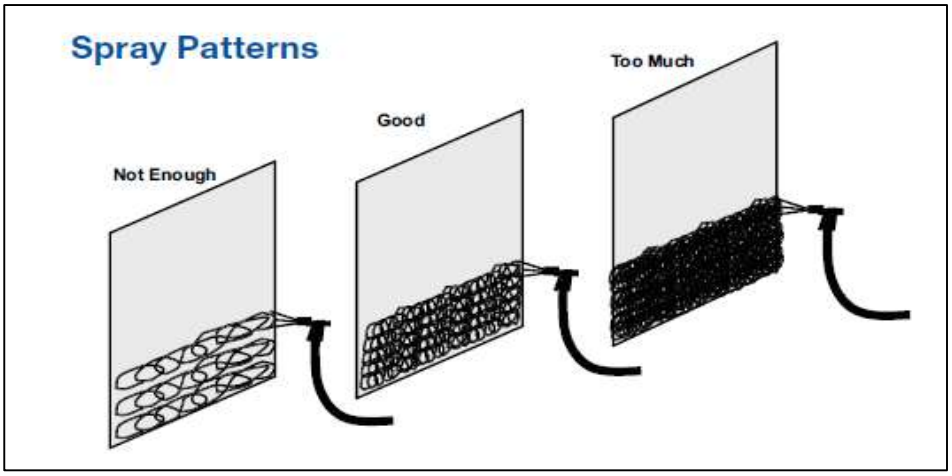
1. After allowing the pre-positioned Elevate UltraPly TPO XR Membrane to relax, back-roll the membrane panels to expose the substrate to receive Twin Jet Y adhesive. (Do not "butterfly" large areas of roof membrane during Twin Jet Y Adhesive application.) Take care not to move or otherwise disturb Elevate UltraPly TPO XR Membrane from its final intended position while back-rolling.
2. Dispense Twin Jet Y onto the substrate as follows:
   - Bead Application: Apply Twin Jet Y Adhesive on the substrate in ¾" - 1" (19- 25 mm) wide beads, spaced maximum 12" (305 mm) on center. Twin Jet Y should be applied in serpentine pattern.
   - Spatter Application: Spatter Twin Jet Y at a rate of 60-70% coverage over the horizontal substrate and 75-85% when used at base tie-in locations. Expect to achieve approximately 3000 ft^2 (278.71 m^2) per cannister set.
3. Do not apply Twin Jet Y Adhesive directly to Elevate UltraPly TPO XR Membrane. Keep lap areas of TPO XR Membrane clean and free of Twin Jet Y Adhesive overspray. Remove any Twin Jet Y Adhesive from the seam area before mating the seam, or strip in the contaminated seam area.
4. Allow Twin Jet Y Adhesive to rise in height and reach open/mate condition. Mate the TPO XR membrane to the substrate before a skim coat develops on the adhesive (see product TIS for additional information).
5. Immediately after setting the membrane in the Twin Jet Y adhesive, broom the membrane to initiate adhesion, then roll thoroughly using a 75 lb to 150 lb (34 kg to 68 kg) roller. It is important that the freshly installed membrane and substrate remain in contact with the Twin Jet Y adhesive until the adhesive sets to ensure proper adhesion.

Twin Jet Y Spatter Application Examples

APPLICATION EXAMPLE	TOO LITTLE	60 – 70% COVERAGE	75 – 85% COVERAGE
			

Adhere Membrane Using Elevate Jet Bond Spray Adhesive

1. Assembling Jet Bond Spray Applicator:
   a) Connect the hose to the gun and tighten fitting securely with wrench. Connect the other end of the hose to the cylinder outlet and tighten fitting securely with wrench. Use caution not to cross-thread the connections.
   b) Open the cylinder valve fully, checking all connections for leaks. Tighten if necessary.
   c) Once the valve has been opened, do not close the valve until the cylinder is completely empty or the hose and spray gun are to be removed and proper cleaning is performed.
   d) The spray tip may require periodic cleaning.
   e) Agitate Jet Bond canister for 30 seconds prior to use. Periodically shake the canister during application to maintain canister pressure and produce optimal fan spray pattern.
2. Dispensing Notes:
   a) Maintain the trigger fully open while applying adhesive. Do not spray in short bursts.
   b) Keeping the spray nozzle perpendicular to the substrate, picture-frame the spray area with adhesive and then go back and forth with an approximate 50% overlap to fill in the area.
   c) For all smooth and fleece backed membranes a two-sided application of Jet Bond is required. Reference the "Good" spray pattern below After allowing the pre-positioned Elevate UltraPly TPO XR Membrane to relax, back-roll the membrane panels to expose the substrate to receive Jet Bond Spray adhesive. (Do not "butterfly" large areas of roof membrane during Jet Bond Spray Adhesive application.) Take care not to move or otherwise disturb Elevate UltraPly TPO XR Membrane from its final intended position while back-rolling.



3. For TPO XR Fleece back membrane: spray with the trigger fully open, at a distance of 12" – 18" (305 mm – 457 mm), and at a rate of approximately 0.5 – 0.75 ft/sec (approximately 0.152 – 0.228 m/sec) to obtain the "Good" spray pattern. Apply Jet Bond Adhesive to the TPO XR membrane first to allow sufficient flash-off time.
4. Coverage rate is approximately 1000 ft^2 (93 m^2) per canister for smooth membranes, and approximately 750 ft^2 (69.7 m^2) per canister for TPO XR fleece backed membrane.
5. Keep membrane lap areas clean and free of Jet Bond Adhesive overspray and remove any adhesive from the seam area with Elevate Splice Wash or Elevate LVOC Adhesive Flush Solution before mating the seam.
6. Allow solvent to flash-off from Jet Bond Adhesive prior to mating the two surfaces. Perform "touch-push test" in areas of heavier application to verify the adhesive is tacky but does not transfer to finger.
7. Flash-off time is typically 6 – 8 minutes with a working time maximum of 30 minutes. These times will vary depending on ambient conditions.
8. Carefully mate the membrane to the substrate. Broom the membrane, then roll the membrane thoroughly using a 75 lb (34 kg) to 150 lb (68 kg) roller for horizontal surfaces and a silicone hand roller for vertical surfaces.

Membrane Seaming

Clean the Lap Splice Area

Wearing chemical resistant gloves and using a clean white cotton rag dampened with Elevate SW-100 (Splice Wash), thoroughly clean the salvage edge area of the top sheet and an area on bottom sheet at least 2¾" inches (69.8 mm) wide if the seam area has become contaminated with dirt, debris, moisture or other contaminates. If contaminated with asphalt, the finished seam must be stripped in with an 8" wide piece of UltraPly TPO membrane of the same or greater thickness. Membranes left exposed or unwrapped for more than 12 hours must be cleaned before any welding activity.

Equipment and Test Splice Requirements

- The speed of the welding machine shall be adjusted to provide proper seam strength based on ambient conditions.
- Ample power source shall be provided to heat welding equipment. A generator dedicated to the heat welding equipment shall be used on all installations. Refer to the welding and generator equipment requirements in the Technical Information section of this manual for minimum requirements. For specifics, consult the welder manufacturer's data sheets.
- When weather conditions vary, adjustments to the welding machine must be made. It is recommended that this be done using spare or test material before starting welding of the finished roofing material. In addition, there shall be destructive tests performed daily and at the beginning of welding and after interruptions in the welding process (such as power failure; welder shut down; job site condition change; after break or lunch). There should be periodic checks (including at the start of each workday welding will occur).

Welder Settings:

Standard Setup

The speed of the machine shall be adjusted to provide proper seam strength. Ample power source shall be provided to all heat welding equipment. A generator dedicated to the heat welding equipment shall be used on all installations. Refer to the welding and generator equipment requirements located in the Elevate UltraPly TPO Application Guide. When weather conditions vary, adjustments to the welding machine shall be made. Sample welds should be made by using spare material before welding the finished roofing material. In addition, destructive tests must be performed at the beginning of each workday and every time there is an interruption in the welding process (such as power failure; welder shut down; job site condition change; after break or lunch). It is recommended to perform periodic checks of the weld integrity throughout the day's installation.

Seam Guide

Adjust the wheel guide by placing unit on top of the membrane with the outer edge of the Drive/Pressure wheel in contact with the membrane edge.

Hot Air Weld Lap Splices: Horizontal field splices, these areas are to be welded first:

- Wherever possible, all field splices on the horizontal surface (including flashing) should be completed using an automatic heat welder that has been designed for hot air welding of thermoplastic membranes. Refer to the welding equipment requirements in the Technical Information Sheets for minimum requirements. For specifics, consult the welder manufacturer's data sheets.
- Seam width requirements: Seams made with the automatic welder shall be a minimum of 1 ½" (38.1 mm) wide. Seams made with hand welders shall be a minimum of 2" (50.8 mm) wide. Use silicone hand rollers to assure proper mating of surfaces as hand welding proceeds. **NOTE: It is important to verify that welds completed at any transition from machine to hand application is completed properly. Validate weld transition is fully bonded and no gaps, fish mouths, pin holes or cold welds exist. Probe all welds to verify weld is completed properly.**
- Vertical field splices: On vertical surface welds, or where an automatic welder is not practical, hand welders shall be used.

End Splices

End lap splices are applied over field membrane sections where no selvedge edge is available, after the side lap splice is completed. Using Elevate TPO Cover Strip or a minimum 8" (203.2 mm) wide strip of standard (non-fleece) 60 mil TPO membrane, splice the butted end joint by welding the strip along its entire length. Seal any cut edges as shown in lap splice detail.

Seam Inspection

Probe all completed welds with a dull cotter pin puller type tool to verify seam integrity. Do not probe welds until they have cooled. Any welds found to be insufficiently fused need to be repaired on a daily basis.

T-Joint Patches

T-joint patches shall be installed at all intersections of field seams when membrane is greater than 0.045" (1.14mm) Membrane to receive T-Patch cover shall have the edged eased by heating and rolling to minimize any step. Refer to Lap Splice and T-Joint Detail Section of Elevate's Technical Manual.

Cut Edge Sealant

All membrane lap edges with exposed scrim (cut edges) shall be sealed with Elevate UltraPly TPO Clear Cut Edge Sealant or UltraPly TPO General Purpose Sealant.

Additional Membrane Securement and Base Tie-In Flashing

Provide membrane securement: Secure the membrane at all locations where the membrane undergoes an angle change greater than 1"/12" (25.4 mm in 304.8 mm). This typically occurs at: roof edges; curbs; wall intersections; parapets, etc. Mechanically fasten with Elevate HD Seam Plates using Elevate Fasteners applied either horizontally into the deck or vertically into the wall in accordance with Elevate Base Tie-In Details. Refer to the Elevate System Design Guide or Elevate Technical Information Sheets to determine the applicable fastener and penetration requirements for specific substrate conditions.

Flashing - Penetrations

General

- Remove all loose existing flashing (i.e., lead flashings, bituminous materials, mastics, etc.).
- Flash all penetrations that pass through the UltraPly TPO XR membrane in accordance with Elevate standard TPO details as indicated in the Technical Information Manual.
- The flashing seal must be made directly to the penetration.

Pipes, Round Supports, Structural Steel Tubing, etc.

- Flash pipes with Elevate UltraPly TPO Pre-molded Pipe Flashing where practical.
- Refer to the Elevate Technical Information Sheet for minimum and maximum pipe diameters that can be successfully flashed with Elevate UltraPly TPO Pre-Molded Pipe Flashings.
- Flash inside and outside corners with Elevate pre-molded products per Elevate details.
- Elevate UltraPly TPO Unsupported Flashing is only to be used at non 90 degree inside and outside corners, "T" joints, and field wrapped pipe boots and other special conditions where allowed by Elevate details.

Roof Drains (Cast Iron Only)

1. Remove all existing flashing (including lead flashing), roofing materials and cement from the existing drain in preparation for UltraPly TPO membrane and Elevate Water Block Seal.
2. Provide a clean even finish on the mating surfaces between the clamping ring and the drain bowl.
3. Install tapered insulation with acceptable bonding surfaces around the drain to provide a smooth transition from the roof surface to the drain. Slope into drain shall not exceed 1"/12" (25.4 mm in 304.8 mm).
4. A minimum 4' X 4' (1.2m x 1.2m) UltraPly TPO membrane sheet shall be centered over the drain area per detail TPMXR-D-01 because UltraPly TPO XR membrane cannot be sealed properly to roof drains use UltraPly TPO membrane at these locations.
   - When using Asphalt to apply UltraPly TPO XR, stop asphalt at end of XR membrane. Use appropriate adhesive in drain area per Elevate details.
   - 20-year warranty roof assemblies will require a second layer of standard UltraPly TPO membrane installed in the sump area. See 20-year detail PTPM-D-01.
5. Position the UltraPly TPO membrane, then cut a hole for the roof drain to allow a ½" (12.7 mm) minimum and ¾" (19.1 mm) maximum inside the clamping ring.
6. Using a punch, or other suitable device, make round holes (sized to receive clamping bolts) in the membrane to align with clamping bolts. Do not cut the membrane back to the bolt holes.
7. Install Elevate Water Block Seal on the clamping ring seat flange below the membrane. Use a minimum of one half of a 10-ounce (295 CC) tube for a 10" (254 mm) drain.
8. Install the roof drain clamping ring and clamping bolts. Tighten the clamping bolts to achieve constant compression of the Water-block Seal.
9. Contact Elevate Roofing Solutions Group for flashing of other drain types.

Pipe Clusters and Unusual Shaped Penetrations

1. Fabricate Elevate UltraPly TPO Coated metal penetration pockets to allow a minimum clearance of 1" (25.4 mm) between the penetrations and all sides.
2. Secure Elevate QuickSeam or weldable penetration pockets and flash per current Elevate details.
3. Fill penetration pockets with Elevate Pourable Sealer to shed water away from penetrations. Elevate Pourable Sealer shall be poured to a depth of 2" (51 mm) minimum.
4. Elevate UltraPly TPO unsupported flashing may also be used for some details.

"Hot" Pipes (greater than 140 °F [60 °C])

- Protect UltraPly TPO components from direct contact with steam or heat sources that exceed the in-service temperature of 140 °F (60 °C).
- Pipes and roof penetrations exceeding 140 °F (60 °C) shall be flashed to an intermediate, or separator, sleeve to protect UltraPly TPO components from these direct heat sources.

Flexible Penetrations

- Flexible roof penetrations shall be flashed by means of a watertight "gooseneck".
- Watertight "gooseneck" shall be set in Water Block Seal, secured to deck, and flashed in accordance with Elevate Details.

Scuppers

1. Remove any existing scuppers and install a new scupper sleeve fabricated from Elevate UltraPly TPO coated metal.
2. Secure new scupper to the structure.
3. Flash new scupper in accordance with Elevate Details.

Expansion Joints

- Install expansion joints in accordance with Elevate details where specified by project designer.
- Flash expansion joints in accordance with Elevate details.

Flashing – Walls, Parapets, Mechanical Equipment Curbs, Etc.

General

- Using the largest piece(s) of continuous Elevate UltraPly TPO (non-fleece) membrane practical, flash all walls, parapets, curbs, etc, to the height specified by the project designer.
- Evaluate bonding substrate; add acceptable bonding substrate as required: The following substrates require the installation of ⅝" (15.9 mm) exterior grade or "Wolmanized" plywood anchored in accordance with project designer's requirements: Interior Gypsum board; Stucco; Cobblestone; Textured masonry, exterior gypsum panels, Corrugated metal panels; all other uneven or loose substrates.

Curb and Base Flashing with UltraPly TPO Membrane

1. Apply UltraPly Bonding Adhesive at about the same time to both the membrane flashing and the surface to receive the flashing at about the same time to allow approximately the same drying time.
2. Allow flash off period for bonding adhesive.
3. Test bonding adhesive for readiness. Touch the bonding adhesive surface with a clean, dry finger to be certain that the adhesive does not stick or string. As you are touching the adhesive, push straight down to check for stringing, and push forward on the adhesive at an angle to ensure that the adhesive is ready throughout its thickness. If either motion exposes wet or stringy adhesive when the finger is lifted, then the adhesive is not ready for mating. Flash off time will vary depending on ambient air conditions. This is especially true for water-based adhesives. Elevate Water-based Bonding Adhesive will change appearance from opaque to nearly transparent, indicating it is ready for mating. Coverage rate will differ with varying substrates and/or climatic conditions.
4. Roll membrane flashing up the vertical bonding adhesive coated substrate evenly and carefully taking care to avoid wrinkles.
5. Broom the membrane flashing after mating using a stiff push broom to insure proper contact and mating.
6. Complete the splice between the membrane base flashing and the main roof UltraPly TPO XR membrane by hot air welding. Complete lap splices in accordance with Elevate details.
7. Install termination of base flashing in accordance with Elevate Details.
8. Install Intermediate Attachment over membrane flashing 36" (91.44 cm) on center in accordance with Elevate Details.
   NOTE: Intermediate Attachment may be eliminated if:
   - Wall surface is smooth without noticeable high spots or depressions: such as plywood, poured or pre-cast concrete, hollow core block or masonry walls where mortar joints are flush with masonry surface, AND
   - The termination of membrane flashing is a Termination Bar or membrane flashing extending completely under coping to the outside wall to the outside face edge.

Flashing – Gravel Stops or Roof Edge Metals

Elevate Prefabricated Coping, AnchorGard or EdgeGard

- Install in accordance with Elevate details.

UltraPly TPO Coated Metal

- Install in accordance with Elevate details.
- When using UltraPly TPO Coated Metal perimeter UltraPly TPO XR sheet must be placed parallel to metal edge with salvage edge positioned to weld to the edge metal.
- Coated metal edge detail must provide enough room to permit "T" patch or strip-in of details with sufficient width wood nailer for support.

Elevate Edge Metal – Special Conditions and Flashed Using TPO QuickSeam Flashing

1. Install gravel stop metal as specified by project designer. Flange of gravel stop metal shall be flashed using TPO QuickSeam Flashing (For a maximum 20-year warranty).
2. Apply Elevate TPO QuickPrime Plus to flange of gravel stop/edge metal with QuickScrubber or QuickScrubber Plus pad and handle with long back and forth strokes with heavy pressure on splicing area to receive the TPO QuickSeam Flashing. Stir the TPO QuickPrime Plus before and during use. Dip the Elevate QuickScrubber or QuickScrubber Plus pad into TPO QuickPrime Plus, keeping the pad flat. Change pads every 200' (61 m) or when pad no longer holds the proper amount of TPO QuickPrime Plus.
3. Allow a brief flash-off time (usually less than 10 minutes) for the TPO QuickPrime Plus before applying TPO QuickSeam Flashing.
4. Install TPO QuickSeam Flashing centered over the flange edge of the gravel stop/edge metal using. Roll the TPO QuickSeam Flashing using a silicone coated rubber roller immediately after installation of TPO QuickSeam Flashing.

Membrane Repair

Repair Punctures/Cuts/Damage to UltraPly TPO XR Membrane

- The repair material shall be heat welded UltraPly TPO 96 or 120 membrane and extend 2" (50.8 mm) minimum past the damaged area in all directions. Round all corners of the repair piece. Example: A pinhole will require a minimum 4" x 4" (101.6 mm x 101.6 mm) patch.
- Clean the membrane prior to completing repair. When making a repair to UltraPly TPO XR membrane that has been in service for some time, it is necessary to remove accumulated field dirt. Scrub the membrane with a scrub brush and warm soapy water, followed by rinsing with clear water and wipe with clean cotton rags. For membranes with significant accumulation of dirt, cleaning with acetone and clean cotton cloths may be required. Elevate SW-100 Splice Wash may then be used.
- Splice new membrane to existing using approved splicing procedures.

Temporary Closure (Not Warranted by Elevate)

- Temporary closures to ensure that moisture does not damage any completed section of the new roofing system are the responsibility of the roofing contractor.
- Completion of flashings, terminations, and temporary closures should be completed as required to provide a watertight condition.
- Any material contaminated by temporary closure shall be removed and discarded before resumption of installation.

Roof Walkways

- Install walkways in locations as specified by the project designer in accordance with Elevate requirements.
- Walkways shall consist of 30" (762 mm) wide Elevate UltraPly TPO Walkway or Elevate X-Tred™ Walkway Pad.
- Heat weld the edges of the walkway material to the UltraPly TPO XR membrane using approved welding procedures. See the UltraPly TPO Application Guide for additional information.

Sheet Metal Work

- For specific installation instructions for the Elevate prefabricated metal edge treatments: Elevate Coping, AnchorGard, EdgeGard or UltraPly TPO Coated Metal or System, refer to the respective Technical Information Sheet.
- For all other sheet metal work not supplied by Elevate, refer to fabrication and installation requirements established by the project designer.

Clean Up

General

If required by the specifier to ensure the aesthetics of the Elevate UltraPly membrane, (i.e., handprints, footprints, general traffic grime, industrial pollutants, and environmental dirt), the membrane may be cleaned by scrubbing with non-abrasive soapy water and rinsing the area completely with clean water. Elevate SW-100 Splice Wash can be used sparingly to clean small areas of membrane.

Cleaning Procedure for In-Service Thermoplastic Membrane

1. Ensure that the existing area to which new thermoplastic membrane is to be mated is clean, smooth, and free of all contaminants.
2. Thoroughly clean this area with detergent and water. It is recommended that a water-soluble granular cleaner be used such as T-M-T brand, which is manufactured by the U.S. Borax Company. Liquid cleaners tend to leave a film residue that can interfere with heat-weld quality. The cleaner must be completely rinsed/removed from areas where welding may occur and allowed to completely dry before any welding is performed.
3. It is recommended that a polypropylene scouring pad be used for maximum cleaning. This is the type manufactured by 3M. Coupled with the granular detergent it allows for enough abrasive action to thoroughly clean the sheet without causing damage to it.

> ! NOTE: DO NOT USE STEEL WIRE BRUSHES UNDER ANY CIRCUMSTANCES.

4. It is imperative that the area be thoroughly rinsed several times to remove all cleaner and contaminants before heat welding. Further, the area must be allowed to dry completely before continuing. If blisters form upon heat welding, the area has not been allowed to dry sufficiently and heat welding should discontinue.
5. After allowing to dry sufficiently, the heat-welding areas on the existing membrane shall be cleaned a second time with denatured alcohol and wiped clean with a clean cotton rag to remove all surface impediments and eliminate any surface curing which may have occurred.

> ! AGAIN: THOROUGH CLEANING WITH DENATURED ALCOHOL IS THE MOST CRITICAL PROCEDURE TO ENSURE THE PERFORMANCE OF THE NEW TO EXISTING MEMBRANE HEAT-WELD.

6. All heat welding shall be in accordance with Elevate thermoplastic details and specifications as published. Keep in mind that the existing sheet is aged, which may call for more allowance. Care should be taken not to overheat and scorch either membrane.
7. Upon completion, allow newly welded seams to cool.

! IMPORTANT: ALL WELDS MUST BE THOROUGHLY PROBED AND CHECKED FOR COMPLETE INTEGRITY AND REWELDED OR STRIPPED IN AS REQUIRED.

Thermoplastic Detail Lists

Detail Table 1: Base Tie-In Details

Base Tie-In Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UT-BT-01	PVC-BT-01	TPM-BT-01	TPM-BT-01-BASE TIE-IN WITH HD SEAM PLATE FASTENED TO DECK
UT-BT-02	PVC-BT-02	TPM-BT-02	TPM-BT-02-BASE TIE-IN WITH HD SEAM PLATE TO WALL OR CURB
UT-BT-03	N/A	TPM-BT-03	TPM-BT-03-BASE TIE-IN WITH QUICKSEAM RPF AND 2" METAL PLATES FASTENED TO DECK
UT-BT-04	N/A	TPM-BT-04	TPM-BT-04-BASE TIE-IN WITH QUICKSEAM RPF AND 2" METAL PLATES FASTENED TO WALL/CURB
UT-BT-05	PVC-BT-03	TPM-BT-05	TPM-BT-05-BASE TIE-IN WITH HD PLATE-DECK OBSTRUCTION
UT-BT-06	N/A	TPM-BT-06	TPM-BT-06-BASE TIE-IN WITH QUICKSEAM RPF AND 2" METAL PLATES-DECK OBSTRUCTION
UT-BT-07	PVC-BT-04	TPM-BT-07	TPM-BT-07-BASE TIE-IN AT CURB / PARAPET WITH EXISTING CANT
UT-BT-08	PVC-BT-05	TPM-BT-08	TPM-BT-08-BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITH BRAKE)
UT-BT-09	PVC-BT-06	TPM-BT-09	TPM-BT-09-BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITH BRAKE)
UT-BT-09A	PVC-BT-06A	TPM-BT-09A	TPM-BT-09A-BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITH BRAKE)-INSTALLATION STEPS 1 AND 2
UT-BT-09B	PVC-BT-06B	TPM-BT-09B	TPM-BT-09B-BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITH BRAKE)-INSTALLATION STEPS 3 AND 4
UT-BT-10	PVC-BT-07	TPM-BT-10	TPM-BT-10-BASE TIE-IN WITH THERMOPLASTIC COATED METAL
UT-BT-11	PVC-BT-08	TPM-BT-11	TPM-BT-11-BASE TIE-IN WITH THERMOPLASTIC COATED METAL SPLICE
UT-BT-11A	PVC-BT-08A	TPM-BT-11A	TPM-BT-11A-BASE TIE-IN WITH THERMOPLASTIC COATED METAL SPLICE-INSTALLATION STEPS 1 AND 2
UT-BT-11B	PVC-BT-08B	TPM-BT-11B	TPM-BT-11B-BASE TIE-IN WITH THERMOPLASTIC COATED METAL SPLICE-INSTALLATION STEPS 3 AND 4
UT-BT-12	N/A	TPM-BT-12	TPM-BT-12-BASE TIE-IN AT WELDED WATERTIGHT CURB (FLANGES UNDER 2")
UT-BT-13	N/A	TPM-BT-13	TPM-BT-13-BASE TIE-IN AT WELDED WATERTIGHT CURB (FLANGES UNDER 2"-3")
UT-BT-14	N/A	TPM-BT-14	TPM-BT-14-QUICKSEAM RPF LAYOUT AT OUTSIDE CORNER
UT-BT-15	N/A	TPM-BT-15	TPM-BT-15-QUICKSEAM RPF LAYOUT AT INSIDE CORNER
UT-BT-16	PVC-BT-09	TPM-BT-16	TPM-BT-16-THERMOPLASTIC MEMBRANE SECUREMENT AT OUTSIDE CORNER
UT-BT-17	PVC-BT-10	TPM-BT-17	TPM-BT-17-THERMOPLASTIC MEMBRANE SECUREMENT AT INSIDE CORNER
UT-BT-18	N/A	TPM-BT-18	TPM-BT-18-TIE-IN ULTRAPLY TPO SYSTEM TO EXISTING THERMOPLASTIC SYSTEM (MONOLITHIC SUBSTRATE)
UT-BT-19	N/A	TPM-BT-19	TPM-BT-19-TIE-IN ULTRAPLY TPO SYSTEM TO EXISTING THERMOPLASTIC SYSTEM (NON-MONOLITHIC SUBSTRATE)
UT-BT-20	N/A	TPM-BT-20	TPM-BT-20-TIE-IN ULTRAPLY TPO SYSTEM TO EXISTING EPDM SYSTEM (MONOLITHIC SUBSTRATE)
UT-BT-21	N/A	TPM-BT-21	TPM-BT-21-TIE-IN ULTRAPLY TPO SYSTEM TO EXISTING EPDM SYSTEM (NON-MONOLITHIC SUBSTRATE)
UT-BT-22	N/A	TPM-BT-22	TPM-BT-22-TIE-IN ULTRAPLY TPO SYSTEM TO EXISTING ASPHALT SYSTEM (MONOLITHIC SUBSTRATE)
UT-BT-23	N/A	TPM-BT-23	TPM-BT-23-TIE-IN ULTRAPLY TPO SYSTEM TO EXISTING ASPHALT SYSTEM (NON-MONOLITHIC SUBSTRATE)
UT-BT-24	N/A	TPM-BT-24	TPM-BT-24-TIE-IN WITH METAL ROOF DECK
N/A	PVC-LS-10	TPM-BT-25	TPM-BT-25-TIE-IN LAP SPLICE WELDED NEW TO EXISTING PVC-MECHANICALLY ATTACHED
N/A	PVC-LS-11	TPM-BT-26	TPM-BT-26-TIE-IN LAP SPLICE PVC CLAD METAL NEW TO EXISTING PVC-MECHANICALLY ATTACHED
N/A	PVC-LS-12	TPM-BT-27	TPM-BT-27-TIE-IN LAP SPLICE VERTICAL SEPARATION WITH COPING NEW TO EXISTING PVC
N/A	PVC-LS-13	TPM-BT-28	TPM-BT-28-TIE-IN LAP SPLICE TIE-IN NEW PVC TO EXISTING PVC-MONOLITHIC SUBSTRATE
N/A	PVC-LS-14	TPM-BT-29	TPM-BT-29-TIE-IN LAP SPLICE-VERTICAL SEPARATION WITH COPING-NEW PVC OR PVC KEE TO EXISTING SINGLE-PLY
UT-LS-16	N/A	TPM-BT-30	TPM-BT-30-TIE-IN LAP SPLICE-VERTICAL SEPARATION WITH COPING-NEW TPO TO EXISTING SINGLE-PLY
NEW	N/A	TPM-BT-31	TPM-BT-31-TRANSITION-ULTRAPLY TPO MEMBRANE-ADHERED TO MECHANICALLY ATTACHED
NEW	NEW	TPM-BT-32	TPM-BT-32-TRANSITION-ELEVATE THERMOPLASTIC MEMBRANE-ADHERED TO MECHANICALLY ATTACHED
Platinum Base Tie-In Details			
PUT-BT-01	PKE-BT-01	PTPM-BT-01	PTPM-BT-01-BASE TIE-IN WITH SEAM PLATES FASTENED TO DECK
PUT-BT-02	PKE-BT-02	PTPM-BT-02	PTPM-BT-02-BASE TIE-IN WITH SEAM PLATES FASTENED TO WALL OR CURB
ADD	PKE-BT-03	PTPM-BT-03	PTPM-BT-03-BASE TIE-IN WITH SEAM PLATE-DECK OBSTRUCTION
PUT-BT-07	PKE-BT-04	PTPM-BT-07	PTPM-BT-07-BASE TIE-IN CURB/PARAPET WITH EXISTING CANT
PUT-BT-08	PKE-BT-05	PTPM-BT-08	PTPM-BT-08-BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITH BREAK)
PUT-BT-09	PKE-BT-06	PTPM-BT-09	PTPM-BT-09-THERMOPLASTIC COATED METAL WITH SPLICE (WITH BREAK)
ADD	PKE-BT-06A	PTPM-BT-09A	PTPM-BT-09A-THERMOPLASTIC COATED METAL WITH SPLICE (WITH BREAK)-INSTALLATION STEPS 1 AND 2
ADD	PKE-BT-06B	PTPM-BT-09B	PTPM-BT-09B-THERMOPLASTIC COATED METAL WITH SPLICE (WITH BREAK)-INSTALLATION STEPS 3 AND 4
PUT-BT-10	PKE-BT-07	PTPM-BT-10	PTPM-BT-10-BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITH BREAK)
PUT-BT-11	PKE-BT-08	PTPM-BT-11	PTPM-BT-11-BASE TIE-IN WITH THERMOPLASTIC COATED METAL SPLICE
ADD	PKE-BT-08A	PTPM-BT-11A	PTPM-BT-11A-BASE TIE-IN WITH THERMOPLASTIC COATED METAL SPLICE-INSTALLATION STEPS 1 AND 2
ADD	PKE-BT-08B	PTPM-BT-11B	PTPM-BT-11B-BASE TIE-IN WITH THERMOPLASTIC COATED METAL SPLICE-INSTALLATION STEPS 3 AND 4
PUT-BT-16	PKE-BT-09	PTPM-BT-16	PTPM-BT-16-MEMBRANE SECUREMENT AT OUTSIDE CORNER
PUT-BT-17	PKE-BT-10	PTPM-BT-17	PTPM-BT-17-MEMBRANE SECUREMENT AT INSIDE CORNER
ADD	PKE-LS-12	PTPM-BT-18	PTPM-BT-18-TIE-IN LAP SPLICE-VERTICAL SEPARATION WITH COPING-NEW THERMOPLASTIC MEMBRANE TO EXISTING THERMOPLASTIC MEMBRANE

Detail Table 2: Corner Details

Corner Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UT-C-01	PVC-C-01	TPM-C-01	TPM-C-01 - OUTSIDE CORNER
UT-C-01A	PVC-C-01A	TPM-C-01A	TPM-C-01A - OUTSIDE CORNER FIELD FABRICATED WITH THERMOPLASTIC UNSUPPORTED FLASHING
UT-C-02	N/A	TPM-C-02	TPM-C-02 - OUTSIDE CORNER AT WELDED WATERTIGHT CURB USING QUICKSEAM FLASHING (FLANGES UNDER 2")
UT-C-02A	N/A	TPM-C-02A	TPM-C-02A - OUTSIDE CORNER AT WELDED WATERTIGHT CURB USING QUICKSEAM FLASHING (FLANGES UNDER 2") - STEPS 1 & 2
UT-C-02B	N/A	TPM-C-02B	TPM-C-02B - OUTSIDE CORNER AT WELDED WATERTIGHT CURB USING QUICKSEAM FLASHING (FLANGES UNDER 2") - STEPS 3 & 4
UT-C-03	N/A	TPM-C-03	TPM-C-03 - OUTSIDE CORNER AT WELDED WATERTIGHT CURB (FLANGES 2" - 3")
UT-C-03A	N/A	TPM-C-03A	TPM-C-03A - OUTSIDE CORNER AT WELDED WATERTIGHT CURB (FLANGES 2" - 3") - INSTALLATION STEPS 1 AND 2
UT-C-03B	N/A	TPM-C-03B	TPM-C-03B - OUTSIDE CORNER AT WELDED WATERTIGHT CURB (FLANGES 2" - 3") - INSTALLATION STEPS 3 AND 4
UT-C-04	PVC-C-02	TPM-C-04	TPM-C-04 - INSIDE CORNER WITH SEPARATE WALL FLASHING
UT-C-05	ADD	TPM-C-05	TPM-C-05 - INSIDE CORNER WITH CONTINUOUS WALL FLASHING
UT-C-05A	N/A	TPM-C-05A	TPM-C-05A - INSIDE CORNER
UT-C-05B	PVC-C-05B	TPM-C-05B	TPM-C-05B - INSIDE CORNER - FABRICATED WITH THERMOPLASTIC UNSUPPORTED FLASHING
UT-C-06	PVC-C-04	TPM-C-06	TPM-C-06 - OUTSIDE CORNER WITH THERMOPLASTIC COATED METAL (WITH BRAKE)
UT-C-06A	PVC-C-04A	TPM-C-06A	TPM-C-06A - OUTSIDE CORNER WITH THERMOPLASTIC COATED METAL (WITH BRAKE) - INSTALLATION STEPS
UT-C-07	PVC-C-05	TPM-C-07	TPM-C-07 - OUTSIDE CORNER WITH THERMOPLASTIC COATED METAL
UT-C-07A	PVC-C-05A	TPM-C-07A	TPM-C-07A - OUTSIDE CORNER WITH THERMOPLASTIC COATED METAL - INSTALLATION STEPS
UT-C-08	PVC-C-06	TPM-C-08	TPM-C-08 - INSIDE CORNER WITH THERMOPLASTIC COATED METAL (WITH BRAKE)
UT-C-08A	PVC-C-06A	TPM-C-08A	TPM-C-08A - INSIDE CORNER WITH THERMOPLASTIC COATED METAL (WITH BRAKE) - INSTALLATION STEPS 1 AND 2
UT-C-08B	PVC-C-06B	TPM-C-08B	TPM-C-08B - INSIDE CORNER WITH THERMOPLASTIC COATED METAL (WITH BRAKE) - INSTALLATION STEPS 3 AND 4
UT-C-09	PVC-C-07	TPM-C-09	TPM-C-09 - INSIDE CORNER WITH THERMOPLASTIC COATED METAL
UT-C-09A	PVC-C-07A	TPM-C-09A	TPM-C-09A - INSIDE CORNER WITH THERMOPLASTIC COATED METAL - INSTALLATION STEPS
UT-C-10	N/A	TPM-C-10	TPM-C-10 - CURB FLASHING WITH ULTRAPLY TPO REINFORCED CURB CORNERS
UT-C-11	N/A	TPM-C-11	TPM-C-11 - CURB FLASHING WITH ULTRAPLY TPO CUSTOM CURB FLASHING
Platinum Corner Details			
PUT-C-01	PKE-C-01	PTPM-C-01	PTPM-C-01 - OUTSIDE CORNER

PUT-C-05	PKE-C-02	PTPM-C-05	PTPM-C-05 - INSIDE CORNER
PUT-C-06	PKE-C-04	PTPM-C-06	PTPM-C-06 - OUTSIDE CORNER WITH THERMOPLASTIC COATED METAL (WITH BREAK)
PUT-C-07	PKE-C-05	PTPM-C-07	PTPM-C-07 - OUTSIDE CORNER WITH THERMOPLASTIC COATED METAL
PUT-C-08	PKE-C-06	PTPM-C-08	PTPM-C-08 - BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITH BREAK)
PUT-C-09	PKE-C-07	PTPM-C-09	PTPM-C-09 - INSIDE CORNER WITH THERMOPLASTIC COATED METAL

Detail Table 3: Drain and Scupper Details

Drian & Scupper Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UT-D-01	PVC-D-01	TPM-D-01	TPM-D-01 - ROOF DRAIN
UT-D-02	PVC-D-02	TPM-D-02	TPM-D-02 - OVERFLOW ROOF DRAIN WITH WATER DAM
UT-D-03	PVC-D-03	TPM-D-03	TPM-D-03 - DRAIN INSERT
UT-D-04	PVC-D-04	TPM-D-04	TPM-D-04 - ROOF DRAIN WITH OVERFLOW ROOF DRAIN
UT-S-01	N/A	TPM-S-01	TPM-S-01 - THRU-WALL SCUPPER (WELDED SLEEVE)
UT-S-01A	N/A	TPM-S-01A	TPM-S-01A - THRU-WALL SCUPPER (WELDED SLEEVE) INSTALLATION STEPS 1 AND 2
UT-S-01B	N/A	TPM-S-01B	TPM-S-01B - THRU-WALL SCUPPER (WELDED SLEEVE) INSTALLATION STEPS 3 AND 4
UT-S-02	N/A	TPM-S-02	TPM-S-02 - OVERFLOW THRU-WALL SCUPPER (WELDED SLEEVE)
UT-S-02A	N/A	TPM-S-02A	TPM-S-02A - OVERFLOW THRU-WALL SCUPPER (WELDED SLEEVE) INSTALLATION STEPS 1 AND 2
UT-S-02B	N/A	TPM-S-02B	TPM-S-02B - OVERFLOW THRU-WALL SCUPPER (WELDED SLEEVE)
UT-S-03	N/A	TPM-S-03	TPM-S-03 - THRU-WALL SCUPPER (NON-WELDED SLEEVE)
UT-S-03A	N/A	TPM-S-03A	TPM-S-03A - THRU-WALL SCUPPER (NON-WELDED SLEEVE) INSTALLATION STEPS 1 AND 2
UT-S-03B	N/A	TPM-S-03B	TPM-S-03B - THRU-WALL SCUPPER (NON-WELDED SLEEVE) INSTALLATION STEPS 3 AND 4
UT-S-03C	N/A	TPM-S-03C	TPM-S-03C - THRU-WALL SCUPPER (NON-WELDED SLEEVE) INSTALLATION STEP 5
UT-S-04	N/A	TPM-S-04	TPM-S-04 - OVERFLOW THRU-WALL SCUPPER (NON-WELDED SLEEVE)
UT-S-04A	N/A	TPM-S-04A	TPM-S-04A - OVERFLOW THRU-WALL SCUPPER (NON-WELDED SLEEVE) INSTALLATION STEPS 1 AND 2
UT-S-04B	N/A	TPM-S-04B	TPM-S-04B - OVERFLOW THRU-WALL SCUPPER (NON-WELDED SLEEVE) INSTALLATION STEPS 3 AND 4
UT-S-04C	N/A	TPM-S-04C	TPM-S-04C - OVERFLOW THRU-WALL SCUPPER (NON-WELDED SLEEVE) INSTALLATION STEP 5
UT-S-05	PVC-S-01	TPM-S-05	TPM-S-05 - THRU-WALL THERMOPLASTIC COATED METAL SCUPPER
UT-S-05A	PVC-S-01A	TPM-S-05A	TPM-S-05A - THRU-WALL THERMOPLASTIC COATED METAL SCUPPER INSTALLATION STEPS 1 AND 2
UT-S-05B	PVC-S-01B	TPM-S-05B	TPM-S-05B - THRU-WALL THERMOPLASTIC COATED METAL SCUPPER INSTALLATION STEPS 3 AND 4
UT-S-06	PVC-S-02	TPM-S-06	TPM-S-06 - OVERFLOW THRU-WALL THERMOPLASTIC COATED METAL SCUPPER
UT-S-06A	PVC-S-02A	TPM-S-06A	TPM-S-06A - OVERFLOW THRU-WALL THERMOPLASTIC COATED METAL SCUPPER INSTALLATION STEPS 1 AND 2
UT-S-06B	PVC-S-02B	TPM-S-06B	TPM-S-06B - OVERFLOW THRU-WALL THERMOPLASTIC COATED METAL SCUPPER INSTALLATION STEPS 3 AND 4
Platinum Drain and Scupper Details			
PUT-D-01	PKE-D-01	PTPM-D-01	PTPM-D-01 - ROOF DRAIN
PUT-D-02	PKE-D-02	PTPM-D-02	PTPM-D-02 - OVERFLOW ROOF DRAIN WITH WATER DAM
PUT-D-03	PKE-D-03	PTPM-D-03	PTPM-D-03 - DRAIN INSERT
PUT-D-04	PKE-D-04	PTPM-D-04	PTPM-D-04 - ROOF DRAIN WITH OVERFLOW ROOF DRAIN
PUT-S-05	PKE-S-01	PTPM-S-05	PTPM-S-05 - THRU-WALL THERMOPLASTIC COATED METAL SCUPPER
N/A	PKE-S-01A	PTPM-S-05A	PTPM-S-05A - THRU-WALL THERMOPLASTIC COATED METAL SCUPPER - INSTALLATION STEPS 1 AND 2
N/A	PKE-S-01B	PTPM-S-05B	PTPM-S-05B - THRU-WALL THERMOPLASTIC COATED METAL SCUPPER - INSTALLATION STEPS 2 AND 3
PUT-S-06	PKE-S-02	PTPM-S-06	PTPM-S-06 - OVERFLOW THRU WALL THERMOPLASTIC COATED METAL SCUPPER
N/A	PKE-S-02A	PTPM-S-06A	PTPM-S-06A - OVERFLOW THRU WALL THERMOPLASTIC COATED METAL SCUPPER - INSTALLATION STEPS 1 AND 2
N/A	PKE-S-02B	PTPM-S-06B	PTPM-S-06B - OVERFLOW THRU WALL THERMOPLASTIC COATED METAL SCUPPER - INSTALLATION STEPS 3 AND 4

Detail Table 4: Expansion Joint Details

Expansion Joint Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UT-E-01	N/A	TPM-E-01	TPM-E-01 - EXPANSION JOINT (FIELD FABRICATED) WITH QUICKSEAM RPF - ROOF TO WALL
UT-E-02	PVC-E-01	TPM-E-02	TPM-E-02 - EXPANSION JOINT (FIELD FABRICATED) WITH WELDED SPLICE - ROOF TO WALL
UT-E-03	N/A	TPM-E-03	TPM-E-03 - EXPANSION JOINT (FIELD FABRICATED) WITH QUICKSEAM RPF AND WOOD NAILER - ROOF TO ROOF
UT-E-04	PVC-E-02	TPM-E-04	TPM-E-04 - EXPANSION JOINT (FIELD FABRICATED) WITH WELDED SPLICE AND WOOD NAILER - ROOF TO ROOF
UT-E-05	N/A	TPM-E-05	TPM-E-05 - EXPANSION JOINT (FIELD FABRICATED) WITH QUICKSEAM RPF – ROOF TO ROOF
UT-E-06	PVC-E-03	TPM-E-06	TPM-E-06 - EXPANSION JOINT (FIELD FABRICATED) WITH WELDED SPLICE - ROOF TO ROOF
UT-E-07	N/A	TPM-E-07	TPM-E-07 - EXPANSION JOINT (MANUFACTURED COVER) WITH QUICKSEAM RPF
UT-E-08	PVC-E-04	TPM-E-08	TPM-E-08 - EXPANSION JOINT (MANUFACTURED COVER) WITH WELDED SPLICE
UT-E-09	N/A	TPM-E-09	TPM-E-09 - EXPANSION JOINT (FIELD FABRICATED) WITH QUICKSEAM RPF - CURB TO CURB
UT-E-10	PVC-E-05	TPM-E-10	TPM-E-10 - EXPANSION JOINT (FIELD FABRICATED) WITH WELDED SPLICE - CURB TO CURB
UT-E-11	N/A	TPM-E-11	TPM-E-11 - EXPANSION JOINT WITH SLIP PLATE - ROOF TO WALL
UT-E-12	N/A	TPM-E-12	TPM-E-12 - EXPANSION JOINT WITH SLIP PLATE - ROOF TO ROOF
Platinum Expansion Joint Details			
PKE-E-01	PKE-E-01	PTPM-E-02	PTPM-E-02 - EXPANSION JOINT (FIELD FABRICATED) WITH WELDED SPLICE ROOF TO WALL
PKE-E-02	PKE-E-02	PTPM-E-04	PTPM -E-04 - EXPANSION JOINT (FIELD FABRICATED) WITH WELDED SPLICE AND WOOD NAILER - ROOF TO ROOF
PKE-E-03	PKE-E-03	PTPM-E-06	PTPM -E-06 - EXPANSION JOINT (FIELD FABRICATED) WITH WELDED SPLICE - ROOF TO ROOF
PKE-E-04	PKE-E-04	PTPM-E-08	PTPM -E-08 - EXPANSION JOINT (MANUFACTURED COVER) WITH WIDE WELD SPLICE
PKE-E-05	PKE-E-05	PTPM-E-10	PTPM -E-10 - EXPANSION JOINT (FIELD FABRICATED) WIDE WELD SPLICE - CURB TO CURB

Detail Table 5: Lap Splice Details

Lap Splice Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UT-LS-01	PVC-LS-1	TPM-LS-01	TPM-LS-01 - LAP SPLICE WITH 1 1/2" AUTOMATIC WELDER
UT-LS-02	PVC-LS-2	TPM-LS-02	TPM-LS-02 - LAP SPLICE WITH 2" HAND WELD
UT-LS-03	N/A	TPM-LS-03	TPM-LS-03 - LAP SPLICE WITH ELEVATE METAL BATTEN STRIP AND WIDE WELD
UT-LS-04	PVC-LS-3	TPM-LS-04	TPM-LS-04 - LAP SPLICE FASTENER LAYOUT FOR STANDARD WELD SEAM
UT-LS-05	N/A	TPM-LS-05	TPM-LS-05 - LAP S SPLICE FASTENER LAYOUT FOR WIDE WELD SEAM
UT-LS-06	PVC-LS-4	TPM-LS-06	TPM-LS-06 - LAP SPLICE WITH HEADLAP UNDER FIELD SEAM USING T-JOINT COVER
UT-LS-07	N/A	TPM-LS-07	TPM-LS-07 - LAP SPLICE WITH HEADLAP UNDER FIELD SEAM USING TPO QUICKSEAM T-JOINT
UT-LS-08	PVC-LS-5	TPM-LS-08	TPM-LS-08 - LAP SPLICE WITH HEADLAP OVER FIELD SEAM USING T-JOINT COVER
UT-LS-09	N/A	TPM-LS-09	TPM-LS-09 - LAP SPLICE WITH HEADLAP OVER FIELD SEAM USING TPO QUICKSEAM T-JOINT
UT-LS-10	PVC-LS-6	TPM-LS-10	TPM-LS-10 - LAP SPLICE WITH HEADLAP UNDER CURB OR WALL FLASHING USING T-JOINT COVER
UT-LS-11	N/A	TPM-LS-11	TPM-LS-11 - LAP SPLICE WITH HEADLAP UNDER CURB OR WALL FLASHING USING TPO QUICKSEAM FLASHING
UT-LS-12	PVC-LS-7	TPM-LS-12	TPM-LS-12 - LAP SPLICE AT CURB OR WALL FLASHING USING T-JOINT COVER
UT-LS-13	N/A	TPM-LS-13	TPM-LS-13 - LAP SPLICE AT FIELD TO CURB/WALL FLASHING TRANSITION USING T-JOINT COVER
UT-LS-14	PVC-LS-8	TPM-LS-14	TPM-LS-14 - CUT EDGE TREATMENT APPLICATION
UT-LS-15	PVC-LS-9	TPM-LS-15	TPM-LS-15 - LAP SPLICE AT EXPANSION JOINT TUBE

Platinum Lap Splice Details			
PUT-LS-09	PKE-LS-01	PTPM-LS-01	PTPM-LS-01 - LAP SPICE WITH 1-1/2" AUTOMATIC WELDER
PUT-LS-02	PKE-LS-02	PTPM-LS-02	PTPM-LS-02 - LAP SPLICE WITH 2" HAND WELD
ADD	PKE-LS-03	PTPM-LS-03	PTPM-LS-03 - LAP SPLICE - LAYOUT
PUT-LS-06	PKE-LS-04	PTPM-LS-04	PTPM-LS-04 - LAP SPLICE WITH HEADLAP UNDER FIELD SEAM - T-JOINT COVER
PUT-LS-08	PKE-LS-05	PTPM-LS-05	PTPM-LS-05 - LAP SPLICE WITH HEADLAP OVER FIELD SEAM - T-JOINT COVER
ADD	PKE-LS-06	PTPM-LS-06	PTPM-LS-06 - LAP SPLICE UNDER CURB OR WALL FLASHING - T-JOINT COVER
ADD	PKE-LS-07	PTPM-LS-07	PTPM-LS-07 - FLASHING LAP SPLICE WITH WELDED T-JOINT COVER AND ANGLE CHANGE PATCH
ADD	PKE-LS-08	PTPM-LS-08	PTPM-LS-08 - CUT EDGE SEALANT APPLICATION
ADD	PKE-LS-09	PTPM-LS-09	PTPM-LS-09 - LAP SPLICE AT EXPANSION JOINT TUBE
PUT-LS-03	ADD	PTPM-LS-10	PTPM-LS-10 - LAP SPLICE WITH CONTINUOUS WIDE WELD

Detail Table 6: Miscellaneous Details

Miscellaneous Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UT-M-01	UT-M-01	TPM-M-01	TPM-M-01 - THERMOPLASTIC WALKWAY PAD
UT-M-02	UT-M-02	TPM-M-02	TPM-M-02 - CONCRETE WALKWAY PAVER
UT-M-03	UT-M-03	TPM-M-03	TPM-M-03 - EQUIPMENT OR PIPE SUPPORT
UT-M-04	UT-M-04	TPM-M-04	TPM-M-04 - WOOD SLEEPER
UT-M-05	UT-M-05	TPM-M-05	TPM-M-05 - GREASE CATCH PAN
UT-M-06	UT-M-06	TPM-M-06	TPM-M-06 - LIGHTNING ROD
UT-M-07	UT-M-07	TPM-M-07	TPM-M-07 - X-TRED WALKWAY PAD
UT-M-08	N/A	TPM-M-08	TPM-M-08 - ULTRAPLY TPO WALKWAY PAD INSTALLATION OVER ADHERED MEMBRANE SYSTEM - STEP 1 OF 4
UT-M-08A	N/A	TPM-M-08A	TPM-M-08A - ULTRAPLY TPO WALKWAY PAD INSTALLATION OVER ADHERED MEMBRANE SYSTEM - STEP 2 OF 4
UT-M-08B	N/A	TPM-M-08B	TPM-M-08B - ULTRAPLY TPO WALKWAY PAD INSTALLATION OVER ADHERED MEMBRANE SYSTEM - STEP 3 OF 4
UT-M-08C	N/A	TPM-M-08C	TPM-M-08C - ULTRAPLY TPO WALKWAY PAD INSTALLATION AT DIRECTION CHANGE OR MEMBRANE SEAM WITH QUICKSEAM TAPE - STEP 4 OF 4
NEW	PVC-M-08	TPM-M-09	TPM-M-09 - FLASHING AT EQUIPMENT PAD WITH SELF ADHERED FLASHING
N/A	NEW	TPM-M-10	TPM-M-10 - VINYL RIB INSTALLATION

Detail Table 7: Penetration Details

Penetration Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UT-P-01	N/A	TPM-P-01	TPM -P-01 - PENETRATION WITH ULTRAPLY TPO LARGE PIPE FLASHING
UT-P-02	PVC-P-01	TPM-P-02	TPM -P-02 - PENETRATION WITH THERMOPLASTIC UNIVERSAL PIPE FLASHING (SMALL)
UT-P-03	N/A	TPM-P-03	TPM -P-03 - PENETRATION WITH QUICKSEAM PIPE FLASHING
UT-P-04	PVC-P-02	TPM-P-04	TPM -P-04 - PENETRATION WITH THERMOPLASTIC FLASHING (UNSUPPORTED)
UT-P-05	PVC-P-03	TPM-P-05	TPM -P-05 - PENETRATION WITH THERMOPLASTIC MEMBRANE
UT-P-06	PVC-P-04	TPM-P-06	TPM -P-06 - PENETRATION (HOT STACK) WITH THERMOPLASTIC FLASHING (UNSUPPORTED)
UT-P-07	PVC-P-05	TPM-P-07	TPM -P-07 - PENETRATION (HOT STACK) WITH THERMOPLASTIC MEMBRANE
UT-P-08	N/A	TPM-P-08	TPM -P-08 - PENETRATION WITH TPO PENETRATION POCKET KIT
UT-P-09	N/A	TPM-P-09	TPM -P-09 - PENETRATION WITH QUICKSEAM 6 INCH PENETRATION POCKET
UT-P-10	N/A	TPM-P-10	TPM -P-10 - PENETRATION WITH FIELD FABRICATED ROUND PVC PENETRATION POCKET
UT-P-11	PVC-P-06	TPM-P-11	TPM -P-11 - PENETRATION WITH THERMOPLASTIC COATED METAL PENETRATION POCKET TO WOOD NAILER
UT-P-12	N/A	TPM-P-12	TPM -P-12 - PENETRATION WITH METAL PENETRATION POCKET TO NAILER
UT-P-13	N/A	TPM-P-13	TPM -P-13 - PENETRATION WITH METAL PENETRATION POCKET TO DECK
UT-P-14	N/A	TPM-P-14	TPM -P-14 - PENETRATION WITH METAL PENETRATION POCKET TO NAILER FOR RECOVER OR REROOF
UT-P-15	PVC-P-07	TPM-P-15	TPM -P-15 - MEMBRANE SECUREMENT AT PENETRATION WITH HD SEAM PLATES AND TARGET PATCH
UT-P-16	PVC-P-08	TPM-P-16	TPM -P-16 - MEMBRANE SECUREMENT AT PENETRATION WITH HD SEAM PLATES AND COVER STRIPS
UT-P-17	N/A	TPM-P-17	TPM -P-17 - PENETRATION WITH ULTRAPLY QUICKSEAM PIPE FLASHING
UT-P-18	N/A	TPM-P-18	TPM -P-18 - SQUARE PENETRATION WITH SQUARE ULTRAPLY TPO CUSTOM PIPE BOOT
UT-P-19	N/A	TPM-P-19	TPM -P-19 - ROUND PENETRATION WITH CONICAL ULTRAPLY TPO CUSTOM PIPE BOOT
UT-P-20	N/A	TPM-P-20	TPM -P-20 - ROUND PENETRATION WITH ROUND ULTRAPLY TPO CUSTOM PIPE BOOT
UT-P-21	N/A	TPM-P-21	TPM -P-21 - ROUND PENETRATION WITH ULTRAPLY TPO SPLIT PIPE BOOT
N/A	PVC-P-09	TPM-P-21A	TPM-P-21A - ROUND PENETRATION WITH PVC SPLIT PIPE BOOT
Platinum Penetration Details			
PUT-P-01	N/A	PTPM-P-01	PTPM-P-01 - PENETRATION WITH ULTRAPLY TPO LARGE PIPE FLASHING
PUT-P-02	N/A	PTPM-P-02	PTPM-P-02 - PENETRATION WITH ULTRAPLY TPO LARGE PIPE FLASHING
PUT-P-04	N/A	PTPM-P-04	PTPM-P-04 - PENETRATION WITH ULTRAPLY TPO FLASHING
PUT-P-09	N/A	PTPM-P-09	PTPM-P-09 - PENETRATION WITH TPO PENETRATION POCKET
PUT-P-11	PKE-P-06	PTPM-P-11	PTPM-P-11 - PENETRATION WITH THERMOPLASTIC COATED METAL PENETRATION POCKET TO NAILER
PUT-P-13	N/A	PTPM-P-13	PTPM-P-13 - PENETRATION WITH METAL PENETRATION POCKET ATTACHED TO DECK
PUT-P-14	N/A	PTPM-P-14	PTPM-P-14 - PENETRATION WITH METAL PENETRATION POCKET TO NAILER FOR RE-COVER OR RE-ROOF
PUT-P-15	N/A	PTPM-P-15	PTPM-P-15 - PENETRATION HOT STACK WITH ULTRAPLY TPO PLATINUM MEMBRANE
N/A	PKE-P-01	PTPM-P-16	PTPM-P-16 - PENETRATION WITH ELEVATE PVC UNIVERSAL PIPE FLASHING
N/A	PKE-P-04	PTPM-P-18	PTPM-P-18 - PENETRATION (HOT STACK WITH ELEVATE PVC UNSUPPORTED FLASHING
ADD	PKE-P-07	PTPM-P-19	PTPM-P-19 - MEMBRANE SECUREMENT AT PENETRATION WITH HD SEAM PLATES AND TARGET PATCH
ADD	PKE-P-08	PTPM-P-20	PTPM-P-20 - MEMBRANE SECUREMENT AT PENETRATION WITH HD SEAM PLATES AND WELDED COVER STRIP

Detail Table 8: Perimeter Enhancement Details

Perimeter Enhancement Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UT-PE-01	PVC-PE-01	TPM-PE-01	TPM-PE-01 - BATTEN OR HD PLATE WITH 8" WELDED THERMOPLASTIC COVER STRIP AT PERIMETER ENHANCEMENT
UT-PE-02	N/A	TPM-PE-02	TPM-PE-02 - BATTEN OR HD PLATE WITH 9.5" ULTRAPLY TPO QUICKSEAM FLASHING AT PERIMETER ENHANCEMENT
UT-PE-03	N/A	TPM-PE-03	TPM-PE-03 - BATTEN WITH 5.5" ULTRAPLY TPO QUICKSEAM FLASHING AT PERIMETER ENHANCEMENT
UT-PE-04	N/A	TPM-PE-04	TPM-PE-04 - BATTEN OR HD PLATE WITH ULTRAPLY TPO QUICKSEAM R.M.A. AT PERIMETER ENHANCEMENT
UT-PE-05	PVC-PE-02	TPM-PE-05	TPM-PE-05 - THERMOPLASTIC MEMBRANE ENHANCEMENT AT PERIMETER WITH INVISIWELD PLATES AND FASTENERS
UT-PE-06	PVC-PE-03	TPM-PE-06	TPM-PE-06 - PERIMETER ENHANCEMENT - HD SEAM PLATE OR BATTEN STRIP WITH THERMOPLASTIC 8" COVER STRIP
UT-PE-07	N/A	TPM-PE-07	TPM-PE-07 - BATTEN STRIP OR HD PLATE AND FASTENER WITH ULTRAPLY TPO 9.5" QUICKSEAM FLASHING AT PERIMETER ENHANCEMENT
UT-PE-08	N/A	TPM-PE-08	TPM-PE-08 - ULTRAPLY TPO PEEL STOP EXAMPLE WITH STANDARD PLATES AND FASTENERS OR INVISIWELD PLATES

Detail Table 9: Roof Edge Details

Roof Edge Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UT-RE-01	PVC-RE-01	TPM-RE-01	TPM-RE-01 - THERMOPLASTIC ROOF EDGE WITH ANCHORGARD SP FASCIA
UT-RE-02	N/A	TPM-RE-02	TPM-RE-02 - TPO ROOF EDGE WITH ANCHORGARD SP FASCIA AND QUICKSEAM RPF STRIP
UT-RE-03	N/A	TPM-RE-03	TPM-RE-03 - TPO ROOF EDGE WITH ANCHORGARD - BALLASTED
UT-RE-04	N/A	TPM-RE-04	TPM-RE-04 - TPO ROOF EDGE WITH ANCHORGARD SP EXTENDED FASCIA AND ELEVATE BALLAST PAVER
UT-RE-05	PVC-RE-02	TPM-RE-05	TPM-RE-05 - THERMOPLASTIC ROOF EDGE WITH ANCHORGARD SP EXTENDED FASCIA
UT-RE-06	N/A	TPM-RE-06	TPM-RE-06 - TPO ROOF EDGE WITH ANCHORGARD SP EXTENDED FACE AND QUICKSEAM RPF STRIP
UT-RE-07	PVC-RE-03	TPM-RE-07	TPM-RE-07 - THERMOPLASTIC ROOF EDGE WITH ELEVATE EDGEGARD+ FASCIA - CRIMP-ON
UT-RE-08	N/A	TPM-RE-08	TPM-RE-08 - TPO ROOF EDGE WITH ELEVATE EDGEGARD+ AND QUICKSEAM RPF STRIP
UT-RE-09	PVC-RE-04	TPM-RE-09	TPM-RE-09 - THERMOPLASTIC ROOF EDGE WITH ELEVATE EDGEGARD+ AND SEPARATE FLASHING
UT-RE-10	PVC-RE-05	TPM-RE-10	TPM-RE-10 - THERMOPLASTIC ROOF EDGE WITH ELEVATE EDGEGARD+ - SNAP-ON VERSION
UT-RE-11	N/A	TPM-RE-11	TPM-RE-11 - TPO ROOF EDGE WITH ELEVATE EDGEGARD AND QUICKSEAM RPF STRIP
UT-RE-12	PVC-RE-06	TPM-RE-12	TPM-RE-12 - THERMOPLASTIC ROOF EDGE WITH ELEVATE EDGEGARD AND SEPARATE FLASHING
UT-RE-13	PVC-RE-07	TPM-RE-13	TPM-RE-13 - THERMOPLASTIC ROOF EDGE - GUTTER WITH ELEVATE DRAIN BAR
UT-RE-14	N/A	TPM-RE-14	TPM-RE-14 - ROOF EDGE - GUTTER WITH SLOTTED DRAIN BAR (BY OTHERS)
UT-RE-15	N/A	TPM-RE-15	TPM-RE-15 - TPO ROOF EDGE AT GUTTER WITH FLANGE - 20 YEARS
UT-RE-16	N/A	TPM-RE-16	TPM-RE-16 - TPO ROOF EDGE AT GUTTER WITH FLANGE - 25 YEARS
UT-RE-17	PVC-RE-08	TPM-RE-17	TPM-RE-17 - ROOF EDGE - GUTTER WITH THERMOPLASTIC COATED METAL
UT-RE-18	PVC-RE-09	TPM-RE-18	TPM-RE-18 - THERMOPLASTIC ROOF EDGE WITH ELEVATE DRAIN BAR
UT-RE-19	N/A	TPM-RE-19	TPM-RE-19 - TPO ROOF EDGE WITH SLOTTED DRAIN BAR - (BY OTHERS)
UT-RE-20	N/A	TPM-RE-20	TPM-RE-20 - TPO ROOF EDGE WITH FASCIAL METAL (BY OTHERS)
UT-RE-20A	N/A	TPM-RE-20A	TPM-RE-20A - TPO ROOF EDGE WITH ELEVATE DRIP EDGE SYSTEM
UT-RE-20B	N/A	TPM-RE-20B	TPM-RE-20B - TPO ROOF EDGE WITH ELEVATE GRAVEL STOP SYSTEM
New	New	TPM-RE-20C	TPM-RE-20C - THERMOPLASTIC ROOF EDGE WITH FASCIA METAL (BY OTHERS) WITH THERMOPLASTIC FLASHING STRIP
UT-RE-21	N/A	TPM-RE-21	TPM-RE-21 - TPO ROOF EDGE WITH FASCIA METAL BY OTHERS
UT-RE-21A	N/A	TPM-RE-21A	TPM-RE-21A - TPO ROOF EDGE WITH ELEVATE DRIP EDGE SYSTEM
UT-RE-21B	N/A	TPM-RE-21B	TPM-RE-21B - TPO ROOF EDGE WITH ELEVATE GRAVEL STOP SYSTEM
UT-RE-22	PVC-RE-10	TPM-RE-22	TPM-RE-22 - ROOF EDGE WITH THERMOPLASTIC COATED METAL
UT-RE-23	PVC-RE-11	TPM-RE-23	TPM-RE-23 - ROOF EDGE SPLICE WITH THERMOPLASTIC COATED METAL
UT-RE-23A	PVC-RE-11A	TPM-RE-23A	TPM-RE-23A - ROOF EDGE SPLICE WITH THERMOPLASTIC COATED METAL - INSTALLATION STEPS 1 AND 2
UT-RE-23B	PVC-RE-11B	TPM-RE-23B	TPM-RE-23B - ROOF EDGE SPLICE WITH THERMOPLASTIC COATED METAL - INSTALLATION STEPS 3 AND 4
UT-RE-24	N/A	TPM-RE-24	TPM-RE-24 - ROOF EDGE WITH TPO QUICKSEAM FLASHING - END SPLICE OVERLAP
UT-RE-25	N/A	TPM-RE-25	TPM-RE-25 - ROOF EDGE AT CORNER WITH TPO QUICKSEAM FLASHING
UT-RE-26	N/A	TPM-RE-26	TPM-RE-26 - ROOF EDGE WITH TPO QUICKSEAM FLASHING AT FIELD SEAM
UT-RE-27	N/A	TPM-RE-27	TPM-RE-27 - ROOF EDGE AT METAL SPLICE WITH TPO QUICKSEAM FLASHING COVER
Platinum Roof Edge Details			
PUT-RE-01	PKE-RE-01	PTPM-RE-01	PTPM-RE-01 - THERMOPLASTIC MEMBRANE ROOF EDGE WITH ELEVATE ANCHORGARD SP FASCIA
PUT-RE-05	PKE-RE-02	PTPM-RE-05	PTPM-RE-05 - THERMOPLASTIC MEMBRANE ROOF EDGE WITH ELEVATE ANCHORGARD SP EXTENDED FASCIA
PUT-RE-09	PKE-RE-04	PTPM-RE-09	PTPM-RE-09 - THERMOPLASTIC MEMBRANE ROOF EDGE WITH ELEVATE EDGEGARD+ FASCIA - CRIMP-ON SINGLE-PLY
PUT-RE-12	PKE-RE-06	PTPM-RE-12	PTPM-RE-12 - THERMOPLASTIC MEMBRANE ROOF EDGE WITH ELEVATE EDGEGARD+ FASCIA - SNAP-ON SINGLE-PLY
PUT-RE-13	PKE-RE-07	PTPM-RE-13	PTPM-RE-13 - THERMOPLASTIC MEMBRANE ROOF EDGE WITH ELEVATE DRAIN BAR
PUT-RE-16	PKE-RE-08	PTPM-RE-16	PTPM-RE-16 - THERMOPLASTIC MEMBRANE ROOF EDGE GUTTER WITH THERMOPLASTIC COATED METAL
NEW	NEW	PTPM-RE-16A	PTPM-RE-16A - THERMOPLASTIC MEMBRANE ROOF EDGE WITH THERMOPLASTIC COATED METAL
PUT-RE-17	PKE-RE-09	PTPM-RE-17	PTPM-RE-17 - THERMOPLASTIC MEMBRANE ROOF EDGE WITH ELEVATE DRAIN BAR

Detail Table 10: Termination Details

Termination Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UT-T-01	PVC-T-01	TPM-T-01	TPM-T-01 - TERMINATION WITH ELEVATE TERMINATION BAR
UT-T-02	PVC-T-02	TPM-T-02	TPM-T-02 - TERMINATION ON OUTSIDE OF PARAPET WALL WITH ELEVATE TERMINATION BAR
UT-T-03	PVC-T-03	TPM-T-03	TPM-T-03 - TERMINATION WITH REGLET COUNTER-FLASHING
UT-T-04	PVC-T-04	TPM-T-04	TPM-T-04 - TERMINATION WITH REGLET COUNTER-FLASHING AND ELEVATE TERMINATION BAR
UT-T-05	PVC-T-05	TPM-T-05	TPM-T-05 - TERMINATION WITH SURFACE MOUNTED COUNTERFLASHING
UT-T-06	PVC-T-06	TPM-T-06	TPM-T-06 - TERMINATION WITH SURFACE MOUNTED COUNTER-FLASHING AND TERMINATION BAR
UT-T-07	PVC-T-07	TPM-T-07	TPM-T-07 - TERMINATION AT EIFS OR WALL CLADDING
UT-T-08	PVC-T-08	TPM-T-08	TPM-T-08 - ELEVATE TERMINATION BAR AT ELEVATION CHANGE
UT-T-09	PVC-T-09	TPM-T-09	TPM-T-09 - ELEVATE TERMINATION BAR AT TILT UP PANEL JOINT
UT-T-10	PVC-T-10	TPM-T-10	TPM-T-10 - ELEVATE TERMINATION BAR AT TILT UP PANEL JOINT WITH REGLET COUNTER-FLASHING
UT-T-11	PVC-T-11	TPM-T-11	TPM-T-11 - TERMINATION AT TOP OF WALL WITH COPING STONE
UT-T-12	PVC-T-12	TPM-T-12	TPM-T-12 - TERMINATION AT TOP OF WALL WITH ELEVATE COPING
UT-T-12A	PVC-T-12A	TPM-T-12A	TPM-T-12A - TERMINATION AT TOP OF WALL WITH UNA-EDGE COPING
UT-T-13	PVC-T-13	TPM-T-13	TPM-T-13 - TERMINATION AT TOP OF WALL WITH ELEVATE ANCHORGARD STANDARD
UT-T-14	PVC-T-14	TPM-T-14	TPM-T-14 - TERMINATION AT R.T.U. (UNIT FLANGE ABOVE ROOF MEMBRANE)
UT-T-15	PVC-T-15	TPM-T-15	TPM-T-15 - TERMINATION AT R.T.U. WITH COUNTER-FLASHING (UNIT FLANGE ABOVE MEMBRANE)
UT-T-16	N/A	TPM-T-16	TPM-T-16 - TERMINATION AT R.T.U. WITH QUICKSEAM RPF (UNIT FLANGE MOUNTED TO SUBSTRATE)
UT-T-17	N/A	TPM-T-17	TPM-T-17 - TERMINATION AT R.T.U. WITH QUICKSEAM RPF AND COUNTER-FLASHING (UNIT FLANGE MOUNTED TO SUBSTRATE)
UT-T-18	PVC-T-16	TPM-T-18	TPM-T-18 - TERMINATION AT R.T.U. WITH SEPARATE FLASHING (UNIT FLANGE MOUNTED TO SUBSTRATE)
UT-T-19	PVC-T-17	TPM-T-19	TPM-T-19 - TERMINATION AT R.T.U. WITH COUNTER-FLASHING AND SEPARATE FLASHING (UNIT FLANGE MOUNTED TO SUBSTRATE)
UT-T-20	PVC-T-18	TPM-T-20	TPM-T-20 - TERMINATION AT SHINGLES
UT-T-21	N/A	TPM-T-21	TPM-T-21 - TPO MEMBRANE TERMINATION AT METAL ROOF PANEL

N/A	PVC-T-19	TPM-T-21A	TPM-T-21A - PVC MEMBRANE TERMINATION AT METAL ROOF PANEL
UT-T-22	PVC-T-20	TPM-T-22	TPM-T-22 - INTERMEDIATE WALL FLASHING ATTACHMENT (WITH COVER STRIP)
UT-T-23	PVC-T-21	TPM-T-23	TPM-T-23 - INTERMEDIATE WALL FLASHING ATTACHMENT (WITH WELDED SPLICE)
UT-T-24	PVC-T-24	TPM-T-24	TPM-T-24 - INTERMEDIATE WALL FLASHING ATTACHMENT (MEMBRANE NOT ADHERED TO WALL/CURB)
UT-T-25	PVC-T-22	TPM-T-25	TPM-T-25 - TERMINATION AT TOP OF WALL WITH ELEVATE COPING OVER SELF ADHERED MEMBRANE
UT-T-25A	PVC-T-25A	TPM-T-25A	TPM-T-25A - TERMINATION AT TOP OF WALL WITH ELEVATE ONE COPING OVER SELF ADHERED MEMBRANE
Platinum Termination Details			
PUT-T-06	PKE-T-06	PTPM-T-06	PTPM-T-06 - TERMINATION WITH SURFACE MOUNTED COUNTER-FLASHING AND TERMINATION BAR
PUT-T-11	PKT-T-11	PTPM-T-11	PTPM-T-11 - TERMINATION AT TOP OF WALL WITH COPING STONE
PUT-T-12	PKT-T-12	PTPM-T-12	PTPM-T-12 - TERMINATION AT TOP OF WALL WITH ELEVATE COPING
PUT-T-13	PKT-T-13	PTPM-T-13	PTPM-T-13 - ALTERNATE TERMINATION AT TOP OF WALL WITH ELEVATE ANCHORGARD PLATINUM FASCIA
PUT-T-15	PKT-T-15	PTPM-T-15	PTPM-T-15 - TERMINATION AT R.T.U. WITH COUNTER-FLASHING (UNIT FLANGE ABOVE MEMBRANE)
PUT-T-18	PKT-T-16	PTPM-T-18	PTPM-T-18 - TERMINATION AT R.T.U. WITH SEPARATE FLASHING (UNIT FLANGE MOUNTED TO SUBSTRATE)
PUT-T-19	PKT-T-17	PTPM-T-19	PTPM-T-19 - TERMINATION AT R.T.U. WITH WELDED SPLICE AND COUNTER-FLASHING (UNIT FLANGE MOUNTED TO SUBSTRATE)
PUT-T-23	PKT-T-21	PTPM-T-23	PTPM-T-23 - INTERMEDIATE WALL FLASHING ATTACHMENT WITH WELDED SPLICE

Detail Table 11: Thermoplastic XR Base Tie-In Details

Thermoplastic XR Base Tie-In Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UTXR-BT-01	PVCXR-BT-01	TPMXR-BT-01	TPMXR-BT-01 - BASE TIE-IN WITH STANDARD THERMOPLASTIC MEMBRANE FLASHING AND HD SEAM PLATES FASTENED TO DECK
UTXR-BT-02	PVCXR-BT-02	TPMXR-BT-02	TPMXR-BT-02 - BASE TIE-IN WITH HD SEAM PLATES FASTENED TO WALL OR CURB
UTXR-BT-03	PVCXR-BT-03	TPMXR-BT-03	TPMXR-BT-03 - BASE TIE-IN AT CURB / PARAPET WITH EXISTING CANT
UTXR-BT-04	PVCXR-BT-04	TPMXR-BT-04	TPMXR-BT-04 - TIE-IN AT SHINGLES
UTXR-BT-05	PVCXR-BT-05	TPMXR-BT-05	TPMXR-BT-05 - BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITH BRAKE)
UTXR-BT-06	PVCXR-BT-06	TPMXR-BT-06	TPMXR-BT-06 - BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITH BRAKE) SPLICE
UTXR-BT-07	PVCXR-BT-07	TPMXR-BT-07	TPMXR-BT-07 - BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITHOUT BRAKE)
UTXR-BT-08	PVCXR-BT-08	TPMXR-BT-08	TPMXR-BT-08 - BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITHOUT BRAKE) SPLICE
UTXR-BT-09	PVCXR-BT-09	TPMXR-BT-09	TPMXR-BT-09 - MEMBRANE SECUREMENT AT OUTSIDE CORNER
UTXR-BT-10	PVCXR-BT-10	TPMXR-BT-10	TPMXR-BT-10 - MEMBRANE SECUREMENT AT INSIDE CORNER
UTXR-BT-12	PVCXR-BT-12	TPMXR-BT-12	TPMXR-BT-12 - BASE TIE-IN WITH FOAM ADHESIVE AND SEPARATE THERMOPLASTIC FLASHING
UTXR-BT-13	PVCXR-BT-13	TPMXR-BT-13	TPMXR-BT-13 - BASE TIE-IN WITH HD SEAM PLATE INTO DECK WITH DECK OBSTRUCTION
Platinum Thermoplastic XR Base Tie-In Details			
ADD	PKEXR-BT-01	PTPMXR-BT-01	PTPMXR-BT-01 - BASE TIE-IN WITH STANDARD THERMOPLASTIC FLASHING AND HD SEAM PLATES FASTENED TO THE DECK
ADD	PKEXR-BT-02	PTPMXR-BT-02	PTPMXR-BT-02 - BASE TIE-IN WITH HD SEAM PLATES FASTENED TO WALL OR CURB
ADD	PKEXR-BT-03	PTPMXR-BT-03	PTPMXR-BT-03 - BASE TIE-IN CURB OR PARAPET WITH EXISTING CANT
ADD	PKEXR-BT-04	PTPMXR-BT-04	PTPMXR-BT-04 - TIE-IN AT SHINGLES
ADD	PKEXR-BT-05	PTPMXR-BT-05	PTPMXR-BT-05 - BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITH BRAKE)
ADD	PKEXR-BT-06	PTPMXR-BT-06	PTPMXR-BT-06 - BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITH BRAKE) SPLICE
ADD	PKEXR-BT-07	PTPMXR-BT-07	PTPMXR-BT-07 - BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITHOUT BRAKE)
ADD	PKEXR-BT-08	PTPMXR-BT-08	PTPMXR-BT-08 - BASE TIE-IN WITH THERMOPLASTIC COATED METAL (WITHOUT BRAKE) SPLICE
ADD	PKEXR-BT-09	PTPMXR-BT-09	PTPMXR-BT-09 - MEMBRANE SECUREMENT AT OUTSIDE CORNER
ADD	PKEXR-BT-10	PTPMXR-BT-10	PTPMXR-BT-10 - MEMBRANE SECUREMENT AT INSIDE CORNER

Detail Table 12: Thermoplastic XR Drain and Scupper Details

Thermoplastic XR Drain and Scupper Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UTXR-D-01	PVCXR-D-01	TPMXR-D-01	TPMXR-D-01-ROOF DRAIN (TARGET PATCH REQUIRED)-THERMOPLASTIC XR ADHERED SYSTEM
UTXR-D-02	PVCXR-D-02	TPMXR-D-02	TPMXR-D-02-ROOF DRAIN (TARGET PATCH REQUIRED)-THERMOPLASTIC XR MECHANICALLY ATTACHED SYSTEM
Platinum Thermoplastic XR Drain and Scupper Details			
ADD	PKEXR-D-01	PTPMXR-D-01	PTPMXR-D-01-ROOF DRAIN (TARGET PATCH REQUIRED) THERMOPLASTIC XR MEMBRANE ADHERED SYSTEM

Detail Table 13: Thermoplastic XR Lap Splice Details

Thermoplastic XR Lap Splice Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UTXR-LS-01	PVCXR-LS-01	TPMXR-LS-01	TPMXR-LS-01 - THERMOPLASTIC XR MEMBRANE SPLICE WITH CONTINUOUS WELD (WITH SELVEDGE EDGE)
UTXR-LS-02	PVCXR-LS-02	TPMXR-LS-02	TPMXR-LS-02 - THERMOPLASTIC XR MEMBRANE SPLICE WITH WELDED COVER STRIP (WITHOUT SELVEDGE EDGE)
UTXR-LS-03	PVCXR-LS-03	TPMXR-LS-03	TPMXR-LS-03 - LAP SPLICE WITH MECHANICAL ATTACHMENT
UTXR-LS-04	PVCXR-LS-04	TPMXR-LS-04	TPMXR-LS-04 - THERMOPLASTIC XR MEMBRANE END LAP SPLICE OVER FIELD SEAM
UTXR-LS-05	ADD	TPMXR-LS-05	TPMXR-LS-05 - LAP SPLICE WITH HEADLAP UNDER FIELD SEAM USING T-JOINT COVER
UTXR-LS-06	ADD	TPMXR-LS-06	TPMXR-LS-06 - LAP SPLICE WITH HEADLAP OVER FIELD SEAM USING T-JOINT COVER
Platinum Thermoplastic XR Lap Splice Details			
ADD	PKEXR-LS-01	PTPMXR-LS-01	PTPMXR-LS-01 - THERMOPLASTIC XR MEMBRANE LAP SPLICE WITH CONTINUOUS WELD (WITH SELVEDGE EDGE)
ADD	PKEXR-LS-02	PTPMXR-LS-02	PTPMXR-LS-02 - THERMOPLASTIC XR MEMBRANE SPLICE WITH WELDED COVER STRIP (WITHOUT SELVEDGE EDGE)
ADD	PKEXR-LS-04	PTPMXR-LS-04	PTPMXR-LS-04 - THERMOPLASTIC XR MEMBRANE WITH END LAP SPLICE WITH WELDED COVER STRIP

Detail Table 14: Thermoplastic XR Perimeter Enhancement Details

Thermoplastic XR Perimeter Enhancement Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
NEW	NEW	TPMXR-PE-09	TPMXR-PE-09 – PERIMETER ENHANCEMENT USING FLEECE BACK MEMBRANE STRIP ATTACHED WITH BATTEN OR HD PLATES WITH WELDED THERMOPLASTIC COVER STRIP
NEW	NEW	TPMXR-PE-10	TPMXR-PE-10 - PERIMETER ENHANCEMENT WITH METAL BATTEN OR HD PLATES WITH XR FLEECE MEMBRANE PROTECTION STRIP (MECHANICALLY ATTACHED / HAIL COVERAGE)

Detail Table 15: Thermoplastic XR Roof Edge Details

Thermoplastic XR Roof Edge Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UTXR-RE-01	PVCXR-RE-01	TPMXR-RE-01	TPMXR-RE-01 - THERMOPLASTIC XR MEMBRANE ROOF EDGE WITH ANCHORGARD SP FASCIA
UTXR-RE-02	PVCXR-RE-02	TPMXR-RE-02	TPMXR-RE-02 - THERMOPLASTIC XR MEMBRANE ROOF EDGE WITH ELEVATE EDGEGARD+ FASCIA AND SEPARATE FLASHING
UTXR-RE-03	PVCXR-RE-03	TPMXR-RE-03	TPMXR-RE-03 - THERMOPLASTIC XR MEMBRANE ROOF EDGE GUTTER WITH ELEVATE DRAIN BAR
UTXR-RE-04	N/A	TPMXR-RE-04	TPMXR-RE-04 - ULTRAPLY TPO XR MEMBRANE ROOF EDGE WITH FASCIA METAL BY OTHERS
UTXR-RE-05	PVCXR-RE-05	TPMXR-RE-05	TPMXR-RE-05 - ROOF EDGE WITH THERMOPLASTIC COATED METAL (WITH XR MEMBRANE SELVEDGE EDGE)
UTXR-RE-05A	PVCXR-RE-05A	TPMXR-RE-05A	TPMXR-RE-05A - ROOF EDGE WITH THERMOPLASTIC COATED METAL (WITH XR MEMBRANE SELVEDGE EDGE AT SPLICE - INSTALLATION STEPS 1 & 2)
UTXR-RE-05B	PVCXR-RE-05B	TPMXR-RE-05B	TPMXR-RE-05B - ROOF EDGE WITH THERMOPLASTIC COATED METAL (WITH XR MEMBRANE SELVEDGE EDGE AT SPLICE - INSTALLATION STEPS 3 & 4)
Platinum Thermoplastic XR Roof Edge Details			
ADD	PKEXR-RE-01	PTPMXR-RE-01	PTPMXR-LS-01 - THERMOPLASTIC XR ROOF EDGE WITH ANCHORGARD PLATINUM FASCIA
ADD	PKEXR-RE-02	PTPMXR-RE-02	PTPMXR-LS-02 - THERMOPLASTIC XR ROOF EDGE WITH ELEVATE EDGEGARD+ FASCIA ON SINGLE-PLY
ADD	PKEXR-RE-03	PTPMXR-RE-03	PTPMXR-LS-03 - THERMOPLASTIC XR ROOF EDGE GUTTER WITH ELEVATE DRAIN BAR

Detail Table 16: Thermoplastic InvisiWeld Details

Thermoplastic InvisiWeld Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UT-IW-1A	PVC-IW-01	TPM-IW-01	TPM-IW-01 - THERMOPLASTIC COATED INVISIWELD PLATE
UT-IW-2	PVC-IW-02	TPM-IW-02	TPM-IW-02 - THERMOPLASTIC MEMBRANE INVISIWELD ASSEMBLY
UT-IW-3	PVC-IW-03	TPM-IW-03	TPM-IW-03 - THERMOPLASTIC MEMBRANE INVISIWELD METAL ROOF RETROFIT ASSEMBLY
UT-IW-4	PVC-IW-04	TPM-IW-04	TPM-IW-04 - THERMOPLASTIC MEMBRANE INVISIWELD METAL ROOF RETROFIT PURLIN FASTENING EXAMPLE LAYOUT - 60' OR LESS
UT-IW-4A	PVC-IW-04A	TPM-IW-04A	TPM-IW-04A - THERMOPLASTIC MEMBRANE INVISIWELD METAL ROOF RETROFIT PURLIN FASTENING EXAMPLE LAYOUT - GREATER THAN 60'
UT-IW-5	PVC-IW-05	TPM-IW-05	TPM-IW-05 - THERMOPLASTIC MEMBRANE INVISIWELD METAL RETROFIT RIDGE DETAIL
UT-IW-6	PVC-IW-06	TPM-IW-06	TPM-IW-06 - THERMOPLASTIC MEMBRANE INVISIWELD METAL RETROFIT DETAIL
UT-IW-7	PVC-IW-07	TPM-IW-07	TPM-IW-07 - THERMOPLASTIC MEMBRANE INVISIWELD INSULATION ATTACHMENT PATTERNS
UT-IW-8	PVC-IW-08	TPM-IW-08	TPM-IW-08 - THERMOPLASTIC MEMBRANE REPAIR OVER INVISIWELD PLATE
UT-IW-9	PVC-IW-09	TPM-IW-09	TPM-IW-09 - BASE TIE-IN USING THERMOPLASTIC COATED INVISIWELD PLATE - CONTINUOUS FLASHING
UT-IW-10	PVC-IW-10	TPM-IW-10	TPM-IW-10 - BASE TIE-IN USING THERMOPLASTIC COATED INVISIWELD PLATE - SEPARATE FLASHING
UT-IW-11	PVC-IW-11	TPM-IW-11	TPM-IW-11 - INVISIWELD ATTACHED WALL FLASHING SECUREMENT (MEMBRANE NOT ADHERED TO WALL OR CURB)
UT-IW-12	PVC-IW-12	TPM-IW-12	TPM-IW-12 - THERMOPLASTIC MEMBRANE INVISIWELD PATTER LAYOUT - EXAMPLE BASED ON ROOF ZONES

Detail Table 17: Thermoplastic Metal Building Retrofit Details

Thermoplastic Metal Building Retrofit Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
MBRT-LS-01	ADD	TPM-MBR-LS-01	TPM-MBR-LS-01 - IN-SEAM ATTACHMENT WITH PLATE INTO PURLIN
MBRT-LS-02	N/A	TPM-MBR-LS-02	TPM-MBR-LS-02 - QUICKSEAM R.M.A. STRIP ATTACHMENT INTO PURLIN
MBRT-LS-03	ADD	TPM-MBR-LS-03	TPM-MBR-LS-03 - MEMBRANE SECUREMENT USING INVISIWELD PLATE INTO PURLIN
UT-IW-13	N/A	TPM-MBR-LS-04	TPM-MBR-LS-04 - THERMOPLASTIC MEMBRANE METAL ROOF RETROFIT ASSEMBLY - R.M.A. ATTACHMENT
MBRT-RE-01	ADD	TPM-MBR-RE-01	TPM-MBR-RE-01 - ROOF EDGE AT EAVE OR RAKE USING THERMOPLASTIC COATED METAL
MBRT-RE-02	N/A	TPM-MBR-RE-02	TPM-MBR-RE-02 - ROOF EDGE AT EAVE OR RAKE USING METAL FASCIA AND QUICKSEAM FLASHING
MBRT-RE-03	ADD	TPM-MBR-RE-03	TPM-MBR-RE-03 - GUTTER DETAIL USING THERMOPLASTIC COATED METAL FASCIA
MBRT-RE-04	ADD	TPM-MBR-RE-04	TPM-MBR-RE-04 - GUTTER DETAIL USING METAL TERMINATION BAR
MBRT-RE-05	ADD	TPM-MBR-RE-05	TPM-MBR-RE-05 - ROOF EDGE AT EAVE OR RAKE USING ANCHORGARD NAILER-T
MBRT-T-01	ADD	TPM-MBR-T-01	TPM-MBR-T-01 - ROOF RIDGE IN-SEAM PLATE SECUREMENT
MBRT-T-02	N/A	TPM-MBR-T-02	TPM-MBR-T-02 - ROOF RIDGE SECUREMENT - R.M.A. STRIP
MBRT-T-03	ADD	TPM-MBR-T-03	TPM-MBR-T-03 - ROOF RIDGE - INVISIWELD SECUREMENT
MBRT-T-04	ADD	TPM-MBR-T-04	TPM-MBR-T-04 - ROOF RIDGE - EXISTING VENT CONDITION

Detail Table 18: Thermoplastic Membrane Layout Details

Thermoplastic Membrane Layout Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
UT-120-1-06	ADD	TPM-120-1-06	LAYOUT TPM-120-1-06 ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-120-1-12	ADD	TPM-120-1-12	LAYOUT TPM-120-1-12 ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-120-2-06	ADD	TPM-120-2-06	LAYOUT TPM-120-2-06 ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-120-2-12	PVC-120-2-12	TPM-120-2-12	LAYOUT TPM-120-2-12-ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-120-4-06	ADD	TPM-120-4-06	LAYOUT TPM-120-4-06-ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-120-4-12	PVC-120-4-12	TPM-120-4-12	LAYOUT TPM-120-4-12-ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-148-2-06	N/A	TPM-148-2-6	LAYOUT TPM-148-2-06-ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-148-2-12	N/A	TPM-148-2-12	LAYOUT TPM-148-2-12-ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-148-4-06	N/A	TPM-148-4-06	LAYOUT TPM-148-4-06-ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-148-4-12	N/A	TPM-148-4-12	LAYOUT TPM-148-4-12-ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-96-1-06	ADD	TPM-96-1-06	LAYOUT TPM-96-1-06-ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-96-1-12	ADD	TPM-96-1-12	LAYOUT TPM-96-1-12-ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-96-2-06	ADD	TPM-96-2-06	LAYOUT TPM-96-2-06-ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD
UT-96-2-12	ADD	TPM-96-2-12	LAYOUT TPM-96-2-12-ULTRAPLY TPO ATTACHMENT LAYOUT - PICTURE FRAME METHOD

Detail Table 19: Fleece Backed Thermoplastic Membrane and Modified Bitumen Hybrid Details

Fleece Backed Thermoplastic Membrane and Modified Bitumen Hybrid Details			
Detail Number			Detail Name
TPO	PVC	Thermoplastic	
NEW	NEW	XBH-BT-01	XBH-BT-01 - BASE TIE-IN (DECK ATTACHMENT) - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-BT-02	XBH-BT-02 - BASE TIE-IN (WALL ATTACHMENT) - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-D-01	XBH-D-01 - ROOF DRAIN (TARGET PATCH REQUIRED) - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-D-01A	XBR-D-01A - ROOF DRAIN (TARGET PATCH REQUIRED) THERMOPLASTIC XR AND CUT BACK MOD-BIT HYBRID ADHERED SYSTEM
NEW	NEW	XBH-D-02	XBH-D-02 - ROOF DRAIN (MEMBRANE INTO DRAIN) - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-D-03	XPH-D-03 - ROOF DRAIN INSERT (MEMBRANE INTO DRAIN) - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-E-02	XBH-E-02 - EXPANSION JOINT (FIELD FABRICATED) WITH WELDED SEAM - ROOF TO WALL - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-E-04	XBH-E-04 - EXPANSION JOINT (FIELD FABRICATED) WITH WELDED SPICE AND WOOD NAILER - ROOF TO WALL - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-E-06	XBH-E-06 - EXPANSION JOINT (FIELD FABRICATED) WITH WELDED SPLICE - ROOF TO ROOF - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-E-08	XBH-E-08 - EXPANSION JOINT (MANUFACTURED COVER) WITH WELDED SPLICE - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-E-10	XPH-E-10 - EXPANSION JOINT (FIELD FABRICATED) WITH WELDED SPLICE - CURB TO CURB - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-RE-01	XBH-RE-01 - ROOF EDGE WITH ANCHORGARD SP FASCIA - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-RE-02	XBH-RE-02 - MEMBRANE ROOF EDGE WITH ELEVATE EDGEGARD + FASCIA AND SEPARATE FLASHING FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-RE-03	XBH-RE-03 - ROOF EDGE WITH ELEVATE DRAIN BAR - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	N/A	XBH-RE-04	XBH-RE-04 - ROOF EDGE WITH FASCIAL METAL BY OTHERS - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-T-14	XBH-T-14 - TERMINATION AT R.T.U. (UNIT FLANGE ABOVE ROOF MEMBRANE) - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-T-15	XBH-T-15 - TERMINATION AT R.T.U. WITH COUNTER-FLASHING (UNIT FLANGE ABOVE MEMBRANE) - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-T-18	XBH-T-18 - TERMINATION AT R.T.U. WITH SEPARATE FLASHING (UNIT FLANGE MOUNTED TO SUBSTRATE) - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM
NEW	NEW	XBH-T-19	XBH-T-19 - TERMINATION AT R.T.U. WITH COUNTER-FLASHING AND SEPARATE FLASHING (UNIT FLANGE MOUNTED TO SUBSTRATE) - FLEECE BACKED THERMOPLASTIC AND MODIFIED BITUMEN HYBRID SYSTEM