



Aussie Membrane 520 PRO®: Installation Instructions

DESCRIPTION

Aussie Membrane 520 PRO is a vapor-proof, gray liquid polyurethane, which dries to a tough, seamless, flexible waterproofing membrane. The Aussie Membrane 520 PRO is a single component cold-applied polyurethane liquid. It exhibits excellent adhesion, strength, elongation, and recovery properties.

Aussie Membrane 520 PRO is excellent for both below-grade and deck applications. Below-grade applications include foundation walls (CMU & Concrete), retaining walls, basements, and non-potable water detention vaults. Deck and podium applications include plaza decks, split slab decks, plywood decks, green roofs, and planters.

ACCESSORY PRODUCTS

Aussie System 520 PRO®: Single component cold-applied polyurethane liquid, which dries to a tough, seamless flexible waterproof membrane that exhibits excellent adhesion, strength, elongation and recovery properties.

AVM Epoxy Primers®: Two-component, solvent-based, epoxy primer for use over concrete, plywood, metal flashings and other polyurethane and acrylic deck coatings.

AVM Drainboard 60000/9000/9000T®: Provides protection for waterproofing systems and managing subsurface water around building foundations and water at above grade decks and podiums.

AVM Mat 570/800®: Polyester stitch bond mat for reinforcement.

Aussie Seal M®: Single component, marine-grade polyether sealant used for detailing, including around penetrations and at cant strips.

INSTALLATION: BACKFILLED WALLS

Prior to installation of the Aussie System 520 PRO, all surfaces must be prepared per the concrete substrate preparation requirements. Concrete substrates do not need to be fully cured. Depending on weather conditions and other factors, the Aussie Membrane 520 PRO may be applied to concrete that's been cured a minimum of seven (7) days. Depending on the amount of moisture, AVM Epoxy Primer may be needed. Do not apply the Aussie Membrane to waterlogged surfaces. Verify adhesion via a properly conducted pull test. Contact AVM for details.

Aussie Membrane 520 PRO can be sprayed with a Graco 833 or equivalent pump capable of producing 4,000 PSI with a .023 inch or larger tip. Thinning may be required based on ambient air temperature. Please contact AVM for thinning and tip size recommendations.

Once the concrete is properly prepared and an adhesion test over the substrate has passed, begin installation by opening the pail of Aussie System 520 PRO. It is recommended to mix the product at a low speed with a drill and paddle prior to application.

Once mixed, brush or spray a liberal coat of the Aussie Membrane 520 PRO onto the surface achieving 30 mils wet. Apply the Membrane by rolling or spraying up and down. Allow to cure until dry to the touch before installing the second coat. This typically takes about 12 hours at 75°F and with 50% relative humidity.

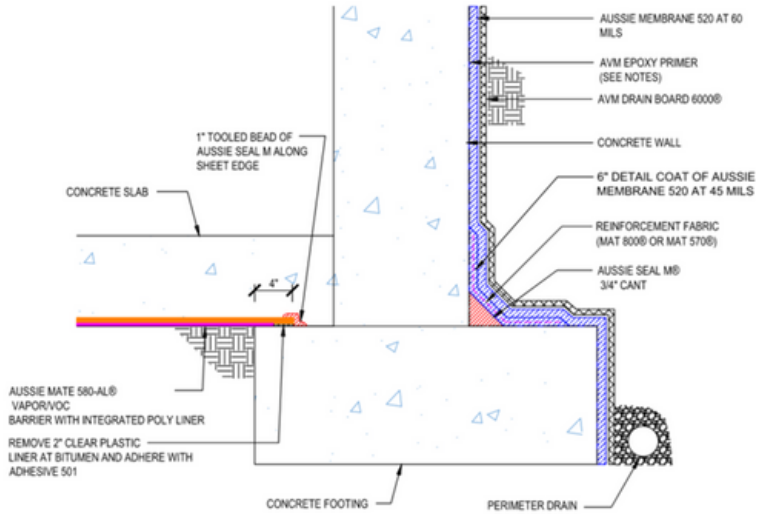
Temperatures and humidity can affect the dry time.

Once the System is dry to the touch but still tacky, a second coat of the Aussie Membrane 520 PRO can be installed over the first coat. Roll or spray the second coat over the first testing mil thickness for 30 additional mils, totaling 60 mils for the system. Using two coats to achieve the 30 mils will reduce the chances of the product sagging and bubbling. Check for pinholes in the system as it cures. Any areas of pinholes should receive additional Aussie System 520 PRO. Full cure is typically achieved after 24-48 hours. Install AVM Drainboard or an acceptable protection course over the membrane as soon as the membrane has cured. Do not leave the membrane exposed to UV for more than 7 days. When installing Drainboard or protection board over the AVM System 520, use stick pins, double-sided tape, spray adhesive, or primer. Do not puncture through the System with fasteners or nails.

INSTALLATION: BACKFILLED WALLS: DETAILING

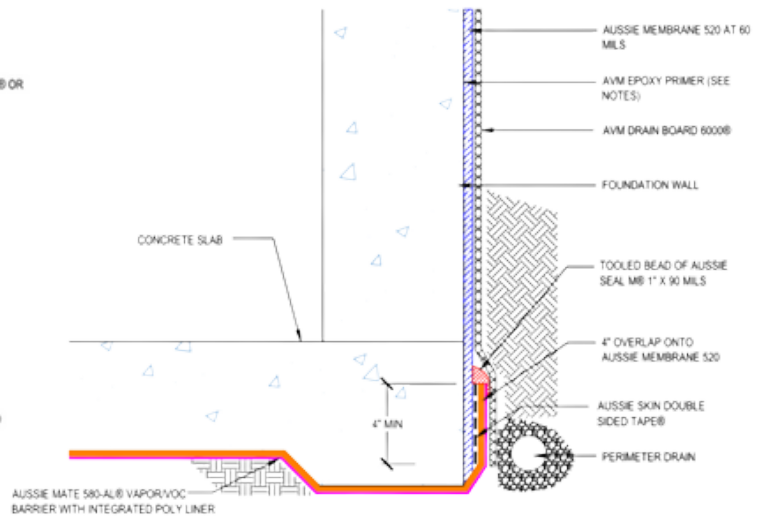
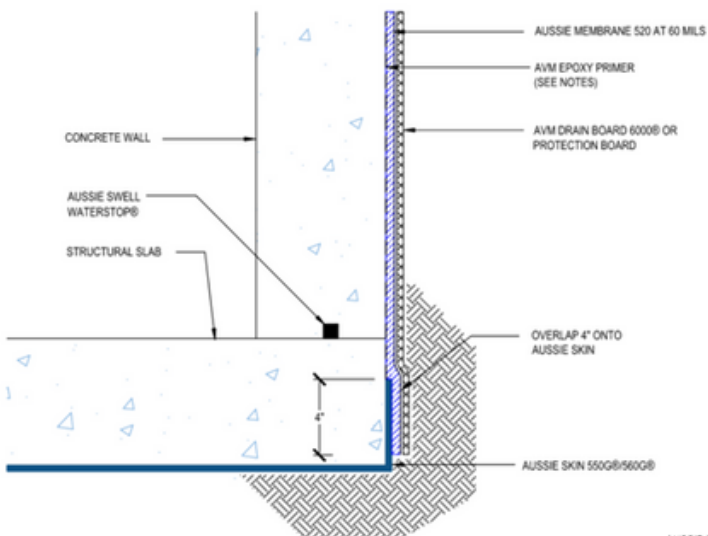
Begin the backfill installation at bottom of the wall or footing. For extended footings where there is no transition to an underslab waterproofing system or vapor barrier install the 60-mil system over the entire face of the footing and bring the system onto the top of the footing. Install a 3/4" cant of Aussie Seal M in the corner where the footing and the wall meet. Once the Aussie Seal M begins to skim over, install a 45-mil detail coat of the Aussie System 520 PRO, extending 3" onto the footing and 3" up the wall. Once that is installed and is dry to the touch, begin bringing the 60-mil system up the wall per the instructions above. Install AVM Drainboard over the system. Refer to the design team for drainage. See detail below showing this installation.

Installation Instructions



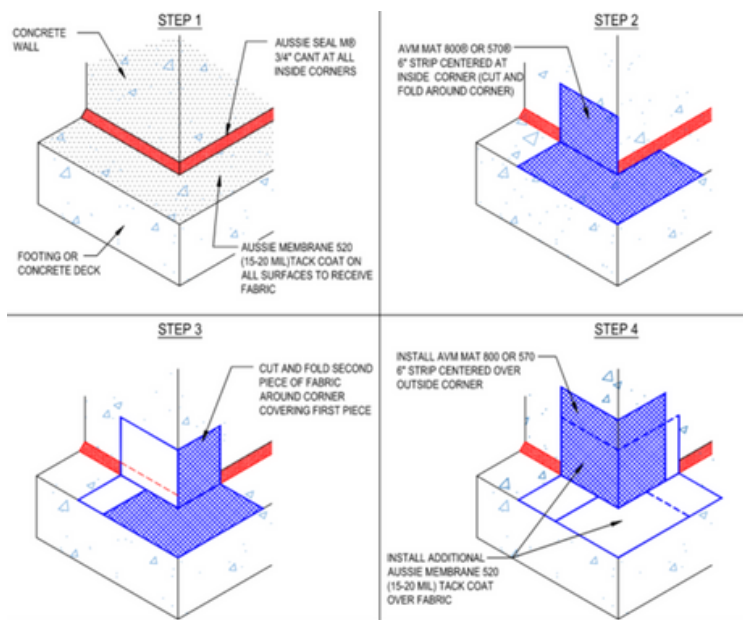
Backfilled Wall with Extended Footing

When transitioning the Aussie System 520 into an underslab waterproofing system or vapor barrier, always ensure there is good material to bring up from underslab onto the face of the footing for the Aussie System 520 to transition with. Please note that AVM Epoxy Primer may be required for the Aussie System 520 PRO to adhere to underslab waterproofing systems or vapor barriers. Below we have the transitions with both of our Aussie Skin systems and our Aussie Mate 580-AL vapor barrier.

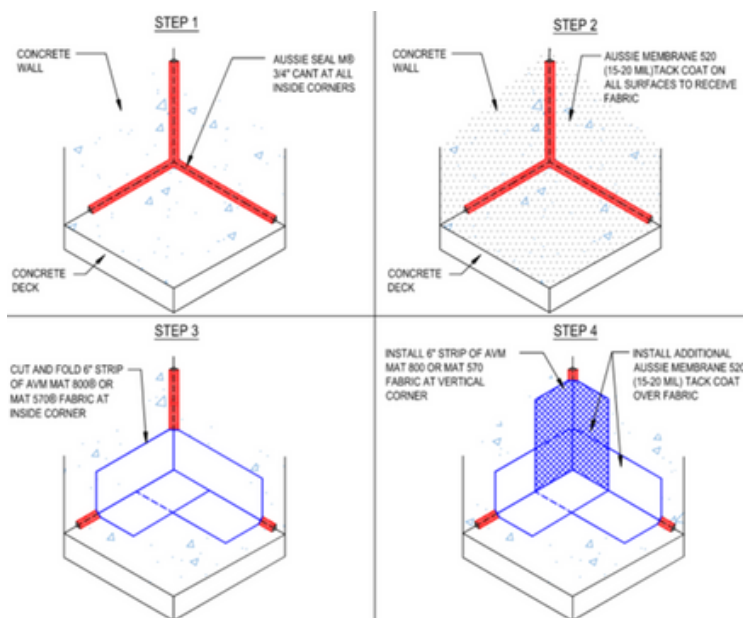


When you get to inside and outside corners at the footing, install a 3/4" cant of Aussie Seal M in the inside corners and install a 6" detail coat of Aussie System 520 PRO at 45-mils as shown in the details below.

Installation Instructions

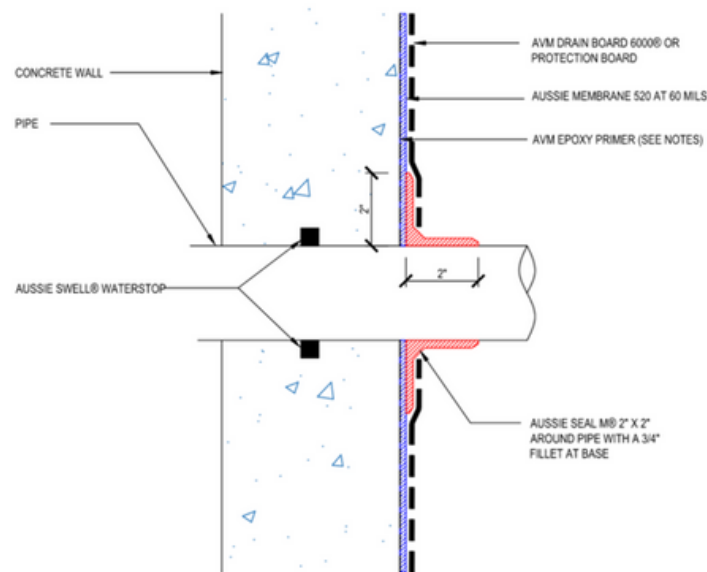


Outside Corner Detail



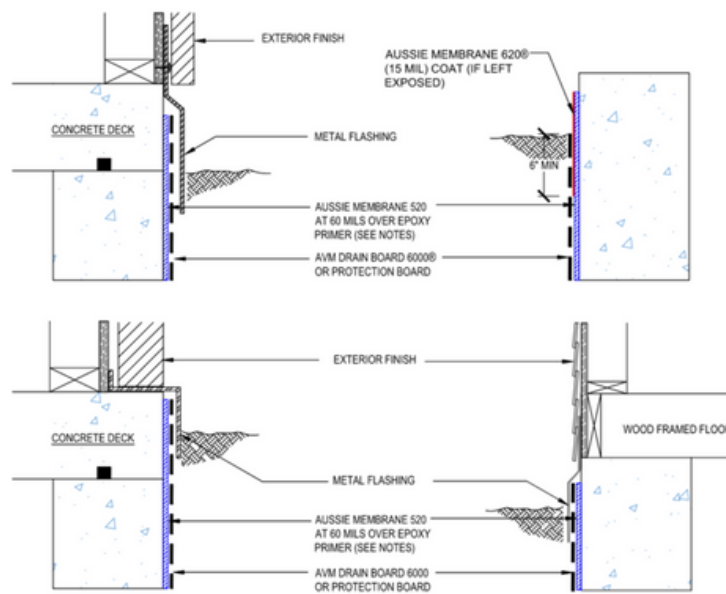
Inside Corner Detail

When installing the Aussie System 520 PRO at pipe penetrations, ensure the concrete around the base of the pipe is prepped. Fill any gaps, voids, or irregularities with Aussie Seal M or non-shrink grout. Bring the 60-mil coat tight to the penetration. Once the Aussie System 520 PRO is cured, install Aussie Seal M 2" up the pipe penetration and 2" onto the Aussie System 520 PRO with a 3/4" fillet around the base of the pipe. All penetrations should also receive an Aussie Swell Red Waterstop around the pipe. Ensure the waterstop has 3" concrete coverage on both sides to prevent concrete spalling. See next figure.



Typical Pipe Penetration Detail

Aussie System 520 PRO is a self-terminating membrane and does not require a termination bar when terminating. The Aussie System 520 PRO does need to be completely covered to prevent it from being exposed to UV rays. This can be done using metal flashing that extends over the system and drainboard/protection board before it is backfilled over. If the top edge of the system is left exposed, AVM's UV stable system Aussie System 620 can be installed over the exposed portion of the system and down 6" below finished grade. These methods are shown below.



Backfill Terminations

INSTALLATION: PODIUMS/PLANTERS – CONCRETE DECKS

Aussie System 520 PRO may be installed to concrete that has cured for a minimum of 7 days depending on weather and site conditions. In the event there is an elevation in moisture in the concrete, AVM Epoxy Primer can be installed over the concrete prior to the AVM System 520 being installed. An adhesion test should be performed to determine if the AVM Epoxy Primer is required or not. When AVM Epoxy Primer is required, install per instructions on the AVM Technical Data Sheets. Allow primer to become dry to the touch but slightly tacky prior to applying the base coat of AVM System 520 PRO.

If the primer is not sanded to refusal, it should be coated before it becomes tack free. If the surface has become hardened or it exceeds the recoat window, then the surface must be abraded using a 100-grit sanding pad and re-primed before proceeding.

Moisture Testing: When installing a seamless waterproofing, checking for moisture is critical to ensure proper adhesion and long-term system performance. Elevated moisture levels can cause adhesion failure, blistering, and coating degradation.

- Moisture readings must not exceed 5 lbs/1,000 sq. ft. over 24 hours per ASTM F1869.
- Regardless of moisture reading a test patch is always recommended to:
 - Confirm proper adhesion.
 - Determine if Epoxy Primer is needed.

Mockup: Establish a 100-200 sq/ft mockup area completed with the intended materials. The mockup should be approved by a project representative for functionality, slope and adhesion. Once the mockup is approved, it shall become the benchmark for the waterproofing installation.

INSTALLATION: PODIUMS/PLANTERS – CONCRETE PREPARATION & REQUIREMENTS

Concrete may be green or damp (7 days minimum cured) and shall be a profile CSP3 per ICRI specifications with a minimum compressive strength of 2,000 psi. All surface residues must be removed from the substrate.

This may be achieved by shot-blasting, bead-blasting or mechanically grinding the surface pending the conditions of the substrate. The surface must be clean and free of all contaminants, including mold, paint, sealers, existing coatings, or curing agents that may interfere with adhesion.

CMU Blocks shall be struck flush with no concave. Spalled areas/voids must be repaired using AVM Crete 6400 or polymer modified exterior grout. All surface imperfections such as ridges, fins, or other defects must be ground down to prevent telegraphing through.

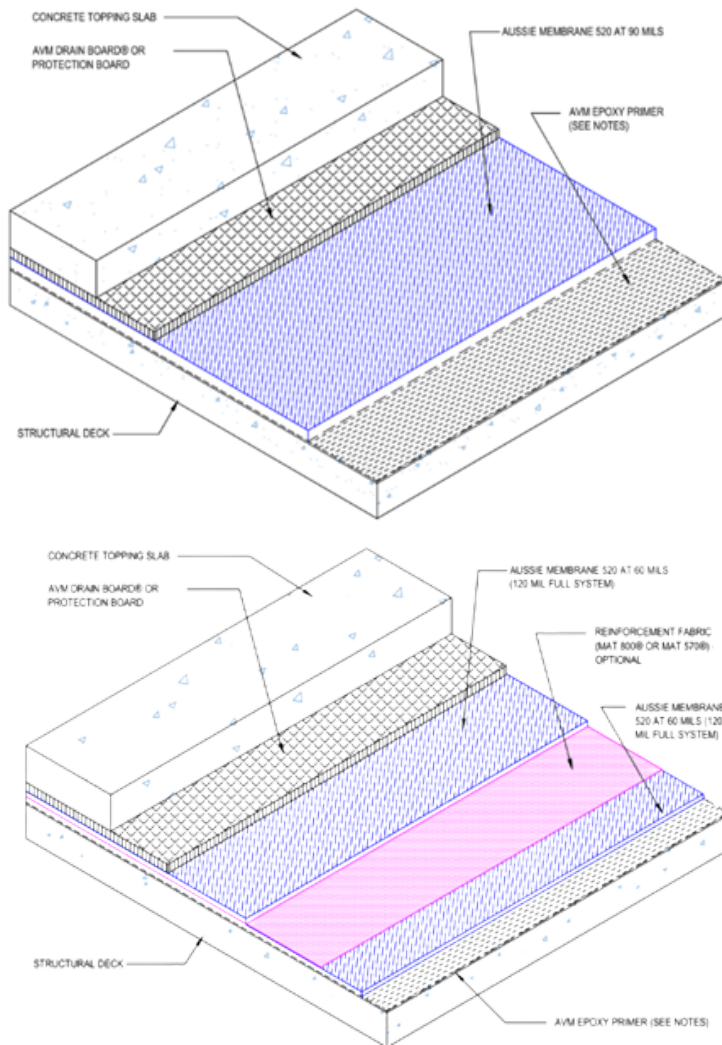
Drains must be clean, operational, and recessed below the deck surface. As per standard industry practice, all deck surfaces shall be sloped at a minimum of 1/4" per foot to drain to ensure proper water runoff. Drain types vary by location, substrate and waterproofing membrane type. Contact AVM for appropriate drains to be used.

INSTALLATION: PODIUMS/PLANTERS – CONCRETE DETAILING

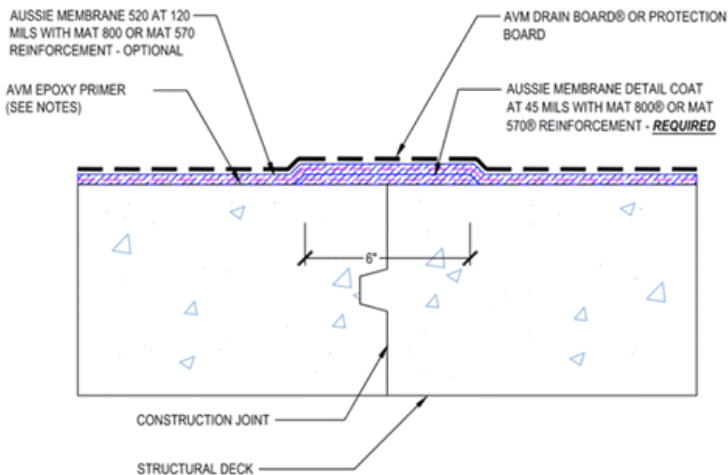
AVM Aussie System 520 PRO can be installed on podiums at either 90 mils thick or 120 mils thick depending on the warranty duration and type that is listed in the specifications (contact an AVM Representative to discuss warranty requirements). When installing the AVM Aussie System 520 PRO, open the pail mix, the material with a drill and paddle on a slow speed to stir the product, and then pour the pail of AVM System 520 PRO onto the substrate. Use a roller or brush, install the first coat onto the substrate. For 90 mil systems, the first coat would be 45 mils thick. For 120 mil systems, the first coat is 60 mils thick. Let the first coat cure for 12 hours or so before installing the second coat over the first.

For the 120 mils systems, AVM Mat 800 or AVM Mat 570 Reinforcement Fabric can be installed into the first coat to reinforce the system. Once the topcoat has cured, AVM Drainboard 6000/9000/9000T can be installed over the completed system. AVM Epoxy Primer may be required if proper adhesion is not achieved. See below figures for the 90 mil system and the 120 mil system.

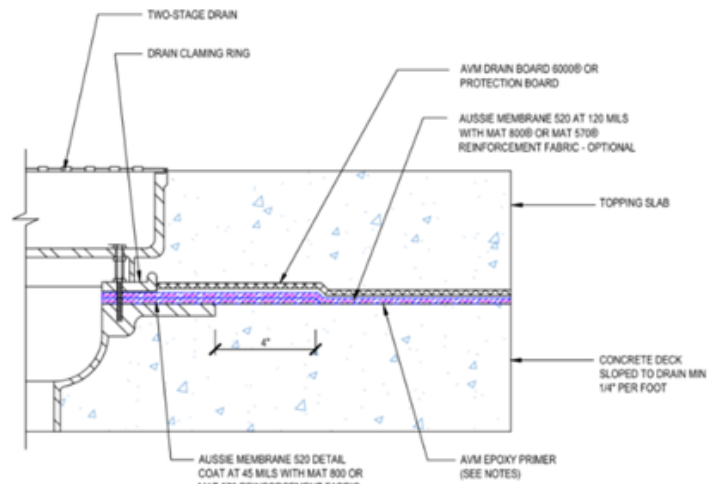
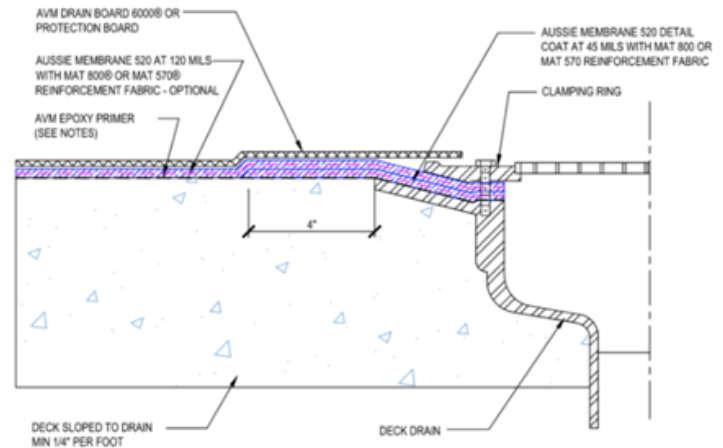
Installation Instructions



When installing at construction joints, center a 6" detail coat (3" in each direction) of Aussie System 520 PRO at 45 mils over the construction joint. Wet set a 6" strip of AVM Mat 800 or AVM Mat 570 into the Aussie System 520 PRO detail coat. Install the full system over the detail coat once the detail coat has cured. See diagram of the 120-mil system below.

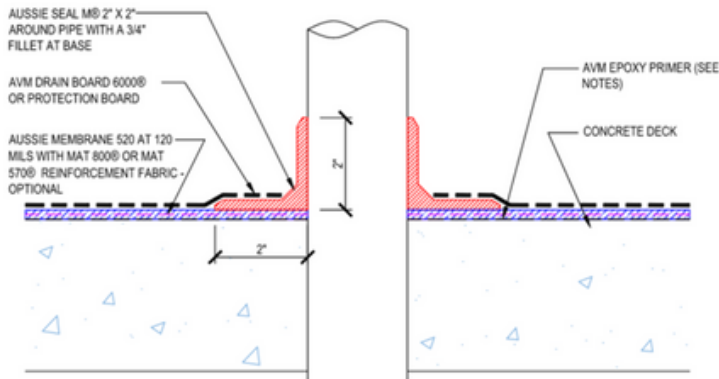


For drains, install a detail coat of Aussie System 520 PRO at 45 mils over the metal flange of the drain and extend it out 4" minimum. Wet set a strip of AVM Mat 800 or AVM Mat 570 into the Aussie System 520 PRO detail coat. Once the detail coat is cured bring the full system of Aussie Membrane 520 PRO over the detail coat and then install the clamping ring at the membrane edge that runs into the drain. Below are diagrams of a flush deck drain & a two-stage drain in a split slab application.

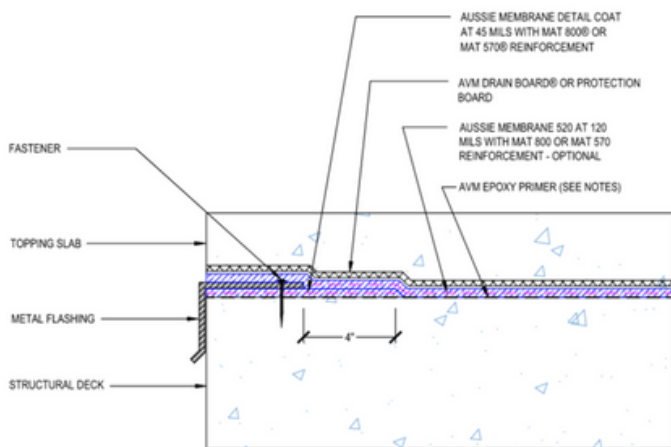


Installation Instructions

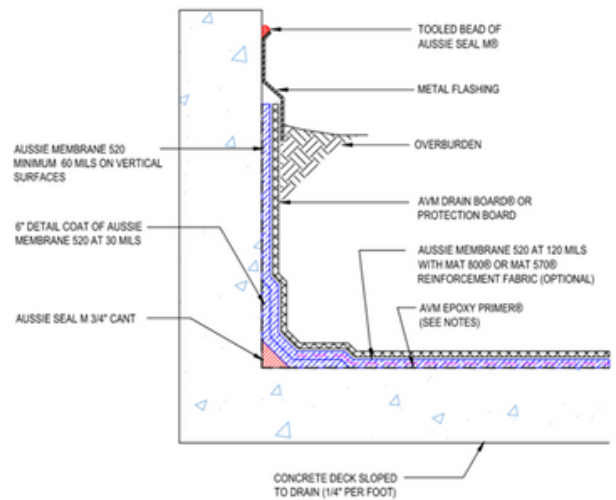
For penetrations, much like in backfill wall applications, bring your system tight to the pipe penetration. Let it cure and then install Aussie Seal 2" up the pipe penetration and 2" onto the Aussie System 520 PRO with a $\frac{3}{4}$ " fillet at the base of the pipe. All penetrations need to be grouted in place and should be a minimum of 6" apart. See diagram below.



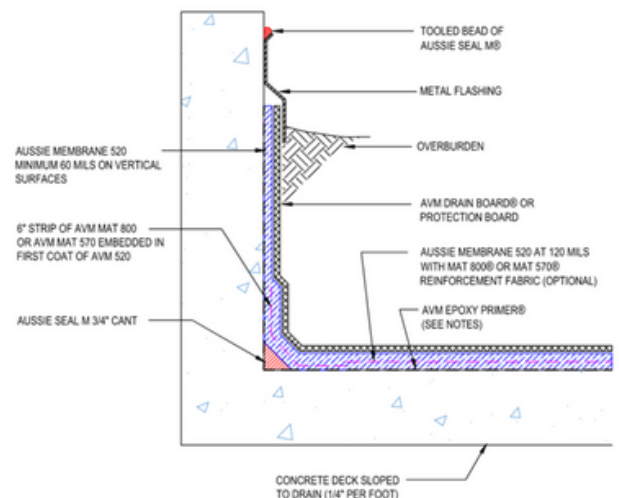
In split slab applications, the Aussie System 520 PRO is brought to the edge of the deck to terminate over edge metal. The edge metal should be a minimum 26 gauge bonderized metal and be free of any oil, grease, or dust/debris that would prohibit a bond of the Aussie System 520 PRO. For the edge termination detail, install a detail coat of Aussie System 520 PRO at 45 mils at the membrane edge that will extend 4" past the edge metal. The edge metal is installed over the detail coat and fastened in. Bring the full system over the edge metal to the edge of the deck. See diagram below.



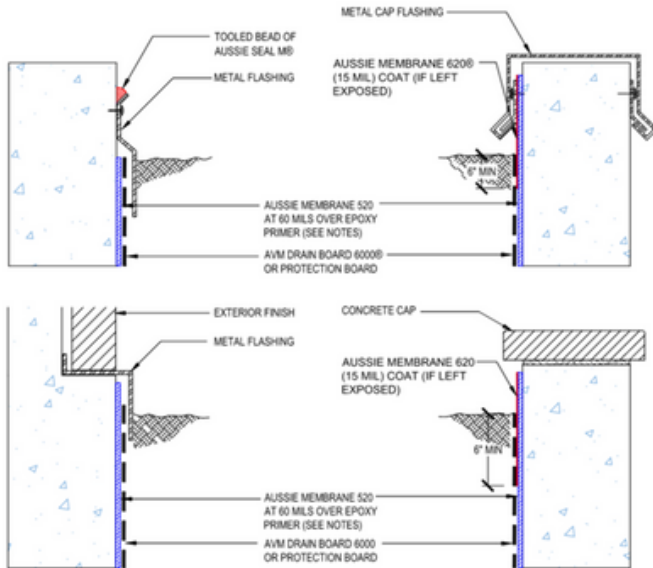
At the deck to wall transition in concrete deck applications, there are two different ways to detail the Aussie System 520 PRO. In option 1, begin by installing an Aussie Seal cant at $\frac{3}{4}$ " in the corner. Center a 6" 30 mil detail coat at the corner. Once that is cured, bring the AVM Aussie System 520 PRO (90 or 120 mils) over the corner and once past the detail coat, continue up the planter wall at 60 mils. Metal flashing should always cover the system. See the diagram below for Option 1.



Option 2 will also begin with a $\frac{3}{4}$ " cant of Aussie Seal M in the corner. Instead of doing a detail coat, bring the first coat of Aussie System 520 PRO up the vertical planter wall a minimum of 3". Center and wet set a 6" strip of AVM Mat 800 or AVM Mat 570 into the first coat of AVM 520 PRO. Bring the second coat of Aussie System 520 over the first coat. Continue to bring the Aussie System 520 PRO up the vertical at 60 mils. See diagram below.



Planter terminations are much like the backfill terminations discussed in the previous section. Aussie System 520 PRO is not UV stable so needs to be covered either by backfill, metal flashing, or Aussie System 620. See diagram below.



INSTALLATION: PODIUMS/PLANTERS - CONCRETE REQUIREMENTS

Crack Treatments (>1/16"): All non-moving cracks less than 1/16" wide shall be detailed with 45 mils 520 Pro extending a minimum of 2" onto either side prior to installation of the full waterproofing system.

Shrinkage cracks greater than 1/16" in width must be ground out to a minimum of 1/4" wide by 1/2" depth filled with Aussie Seal Sealant and reinforced with 6" AVM mat 800 polyester followed by a detail coat of 45 mils Aussie Membrane 520 Pro no less than 2" on either side.

Expansion/Movement Joints: All expansion or moving joints must be honored using appropriate backer rod and sealed with an AVM-approved sealant for specific recommendations contact your local AVM Representative.

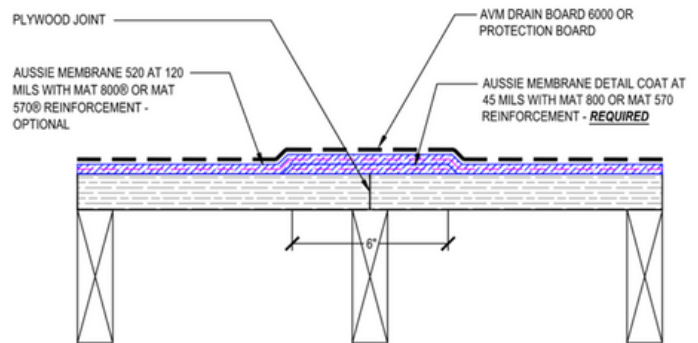
Slope Preparation: If an additional slope is required over concrete substrate, use AVM Crete 6400 as needed to create the necessary pitch for proper drainage.

Parge Coat: If the horizontal concrete substrate is uneven or contains surface imperfections such as divots, a parge coat of Crete 6200 shall be applied to achieve a smooth and level surface suitable for subsequent installation.

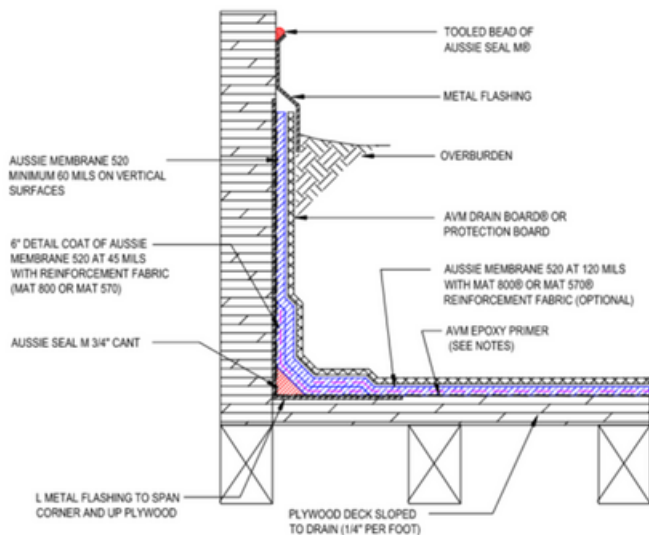
If the vertical concrete substrate is uneven or contains surface imperfections such as divots or a concave grout line such as CMU blocks a parge coat of Crete 6400 shall be applied to achieve a smooth and level surface suitable for subsequent installation.

INSTALLATION: PODIUMS/PLANTERS - PLYWOOD DECKS

Plywood needs to be a minimum 5/8" exterior grade with A side up and fastened using rink shanks or screws. All plywood substrates shall be clean and dry. Detail plywood joints by installing a 6" 45 mil detail coat of Aussie System 520 PRO centered at the joint and wet setting AVM Mat 800 or AVM Mat 570 over the detail coat. Bring the AVM System 520 PRO system over the detail coat/reinforcement once the detail coat has cured. See the diagram below.



Any time there is a corner where the AVM System 520 is turning up plywood, L metal flashing needs to be installed at the corner first. A minimum 26-gauge bonderized (preferred) L-metal flashing shall be installed at all deck-to-wall transitions when applying the AVM 520 Pro System from a concrete or plywood deck to sheathing. L metal flashing shall be wet set in urethane sealant and fastened every 4-6" staggered to lie flat in plywood applications. All metal surfaces shall be properly abraded to bright white to fully remove oils, coatings, and paint. Prime with 401 Epoxy primer and solvent wipe to ensure proper adhesion of the waterproofing system. See diagram below for detailing in deck to wall applications with metal flashing



MEMBRANE INSPECTION

Visually inspect all coated surfaces to ensure full adhesion and proper membrane coverage, with particular attention to corners, drainage areas, footings, and other hard-to-reach locations. Carefully examine the membrane for pinholes—the surface should be completely and evenly sealed.

If pinholes are detected, apply additional coats of Aussie Membrane until all imperfections are sealed. If bubbles or other surface defects are present, remove them by cutting out the affected area along with surrounding membrane as needed. Reinstall the membrane in accordance with the standard application instructions to restore a continuous, uniform seal.

DRAINAGE BOARDS

For vertical applications and non-vehicular between-slab applications with topping slabs up to 4 inches thick, use AVM Drain Board 6000.

For vehicular between-slab applications or horizontal applications with topping slabs thicker than 4 inches, use AVM Drain Board 9000.

Other applications may require specialized drainage solutions—consult AVM for project-specific recommendations.

The drainage board must cover the entire area where the Aussie Membrane has been applied.

PROTECTION BOARDS

Protection Boards: Protection boards offer no drainage ability and are not recommended in vertical applications deeper than 18 inches.

Several types of Protection Boards are commonly used and acceptable for use with the Aussie Membrane.

1/4" fanfold foam boards such as Amoco, Dow or Insulfoam.

Foam panels, typically 1/2" thick or more.
Protective panels 4'x8' 1/4" or thicker made by Gardner/Apoc or equal.

FRENCH DRAINS

At footings, cold joints, and other areas where water may accumulate, install a French drain system or other approved drainage method to relieve hydrostatic pressure and facilitate water removal.

If weep-holes are used:

- Ensure all weep-hole entrances are protected with gravel, drainage fabric, or other approved materials to prevent clogging.
- Verify that a sufficient number of weep-holes are installed, and that each is appropriately sized to accommodate the anticipated water flow.

Proper drainage is critical to maintaining the long-term performance of the waterproofing system.

FLOOD TESTING

Flood testing is an efficient and economical method to verify the waterproof integrity of the membrane prior to installing protective layers or finished surfaces. Follow the guidelines below to ensure safe and effective testing:

1. Ensure the membrane is fully cured before beginning the flood test.
2. Visually inspect all corners, penetrations, and hard-to-reach areas for any gaps or openings where water could penetrate. Seal all imperfections prior to testing.
3. Close all drains using approved drain plugs or other suitable methods.
4. Use caution while walking on the membrane or installing drain plugs to avoid damaging the membrane.
5. Slowly fill the deck area with water, taking care not to overfill.
6. If unsure whether the deck can support the weight of the water, consult with a licensed architect or structural engineer before proceeding with the flood test.

ELECTRONIC LEAK DETECTION

Electronic Leak Detection can be performed on podiums using AVM waterproofing and may be required for specific warranty eligibility. Please contact AVM for questions regarding warranty.