

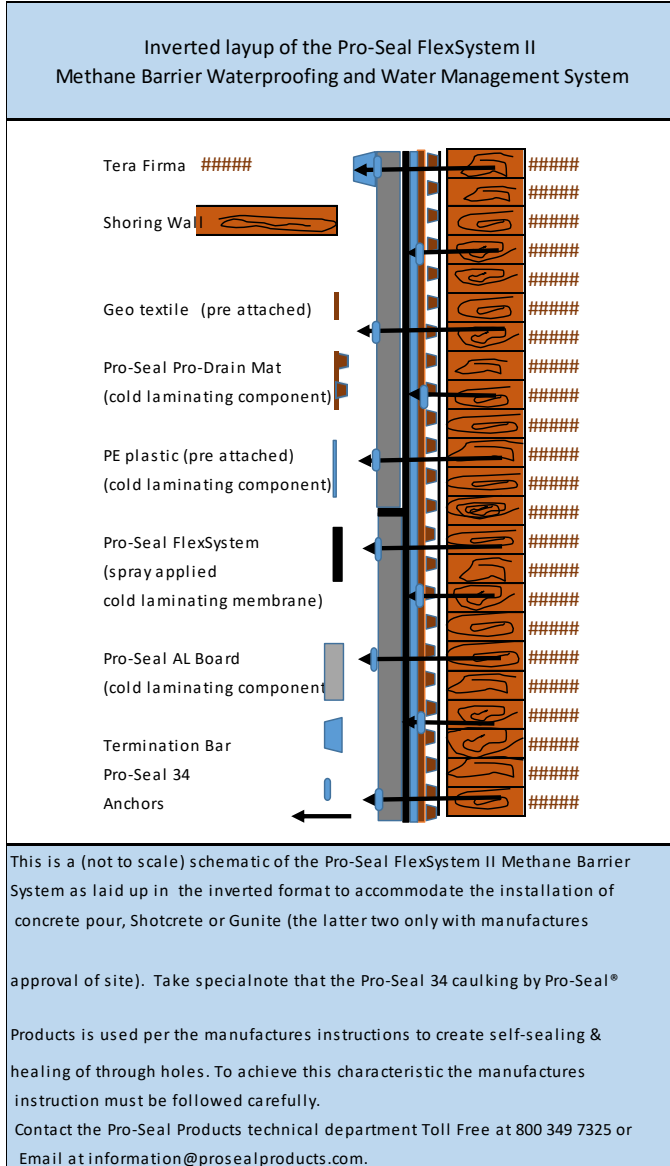
Pro-Seal® Pro-Drain™ (A component of the Methane Barrier System)

City of LA RR# 26015 (CSI # 07130) Methane Barrier Waterproofing and Water Management System



Below is a typical **inverted** cold laminated assembly (layout) of the **Pro-Seal® FlexSystem II Methane Barrier, Waterproofing, and Water Management System™**.

positioning of a neighboring or abutted structure.



Note: Example only 15 year limited warranty layup inverted application.

The layup (above) is used under special conditions where access space might difficult or impossible to achieve after a concrete pour due to location and/or



The photo above is an example of an inverted installation of the **Pro-Seal® FlexSystem II Methane Barrier, Waterproofing, and Water Management System™** that will have concrete poured or shot to it.

System Component

Pro-Seal Pro-Drain® is a multi-layered geocomposite that combines a high compressive strength core with a geo-textile thermo-fused to the core. This highly durable and porous product is designed to help water and fine soil particles flow through the air-gap to the drainage field.

The **Pro-Seal Pro-Drain®** is an integral part of the **Pro-Seal® Products Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management™** combined integrated system.

- Available in 6 ft. or 8 ft. widths
- Easy to install
- High flow capacity
- Low labor cost
- Drains maximum gas vapor and water away from structure



Pro-Seal® Pro-Drain™ (A component of the Methane Barrier System)

City of LA RR# 26015 (CSI # 07130) Methane Barrier Waterproofing and Water Management System



Applications:

- Verticals:
 - Below Grade
- Horizontals:
 - Below Grade
 - Under Floor
 - Between Split Slab

Use anywhere dangerous gas vapors such as Methane and Radon and/or ground water are problematic to your structure

Technical

| Information | Value |
|-------------|----------------------------------|
| Material | 1 Part Roll |
| Mix time | N/A |
| Appearance | Roll |
| Color | Brown |
| Packaging: | Widths; 6 ft. roll or 8 ft. roll |

Available with or without;

- Geo-textile screen
- PE plastic pre attached sheet

Application Layup Options (verticals)

Pro-Seal Pro-Drain® Inverted Layup

The **Pro-Seal Pro-Drain®** may be applied to and anchored to the vertical shoring wall. When the cold lamination layup of the system is completed, generally as seen in the drawing (above), ahead of the concrete pour the concrete is then poured to the completed **Pro-Seal®** barrier system. All anchor, through holes and overlapping **Pro-Drain®** snap joints and overlapping PE plastic must be sealed with **Pro-Seal 34®** caulking as tested with the system and per the manufactures requirements.

Specifications

(Values of Pro-Drain® when not in system)

| Test | Data | Value |
|-------------------------|----------------------|---------------------------------------|
| Core | | |
| ASTM D 3776 | Weight | 2.45 oz./ft ² |
| ASTM D 1621 | Compressive strength | 11,000 psi 550 kn / m ² |
| Filter fabric | | |
| ASTM D 4632 | Grab tensile | 130 lbs. |
| ASTM D 4632 | Elongation | 60% |
| ASTM D 4533 | Trapezoidal tear | 60 lbs. |
| ASTM D 4833 | Puncture strength | 40 lbs. |
| ASTM D 3786 | Mullen burst | 140 psi |
| ASTM D 4751 | Apparent operating | 70 sleeve size |
| ASTM D 4491 | Flow rate | 55 gpm / ft ² |
| ASTM D 5261 | Typical weight | 3.9 oz. / yd. sq. |
| ASTM D 5199 | Thickness | 18 mils |
| ASTM D 4355 | U.V. resistance | 70% @ 500 hrs. |
| Composite system | | |
| ASTM D 4716 | Water flow rate | 5.1 gal/min/ft. |

Primary Substrate below grade vertical (positive side)

Pro-Seal Pro-Drain® Standard Vertical Layup

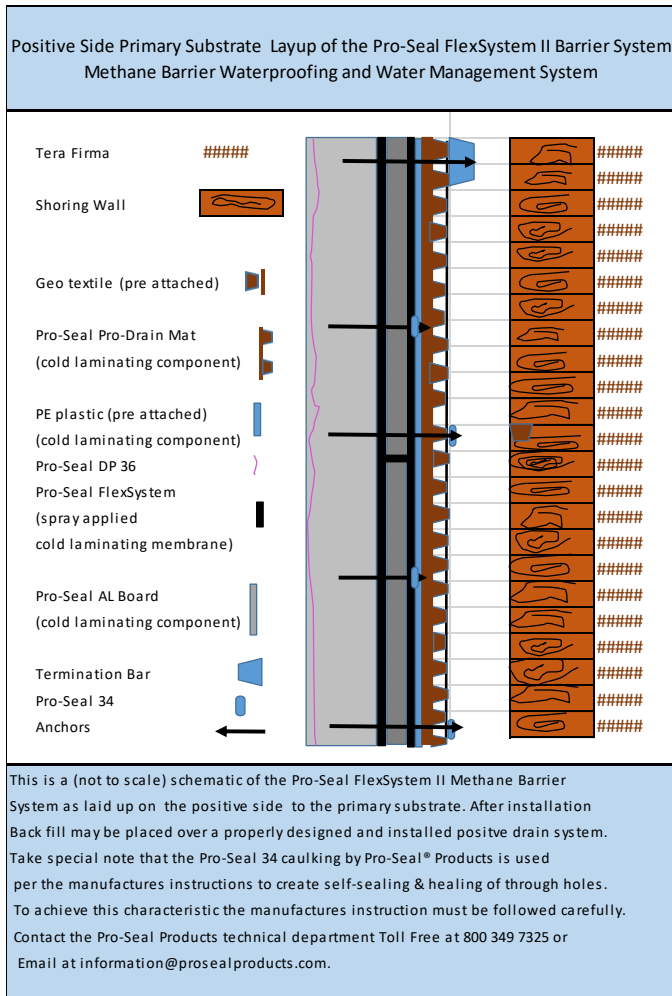
The **Pro-Seal Pro-Drain®** may be applied over the lamination as directly applied to the primary substrate as seen in the positive side layup in the guide drawing (below), prior to back fill. All anchor, through holes and overlapping Pro-Drain® snap joints and overlapping PE plastic must be sealed with **Pro-Seal 34®** caulking and per the manufactures requirements.

Pro-Seal® Pro-Drain™ (A component of the Methane Barrier System)

City of LA RR# 26015 (CSI # 07130) Methane Barrier Waterproofing and Water Management System



Example Primary Positive Side Application



Note: Example only 25 year limited warranty positive side layup.

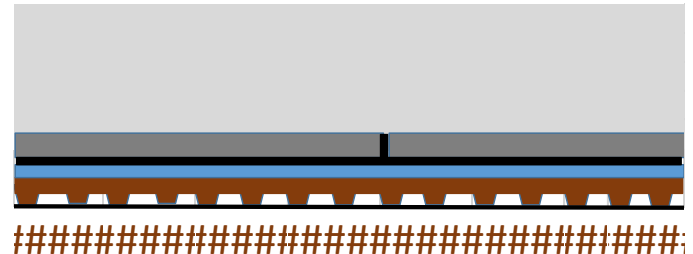
Above Guide Drawing

This layup format of the **Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management System™** is for below grade verticals as applied to the primary substrate concrete, masonry or other substrates as approved by the manufacturer. The **Pro-Seal® FlexSystem II Methane Barrier Waterproofing, and Water Management System™** may be applied to recently poured concrete as early as the forms are removed, after the form release materials are removed from the applied surfaces, where such application is approved by the manufacture.

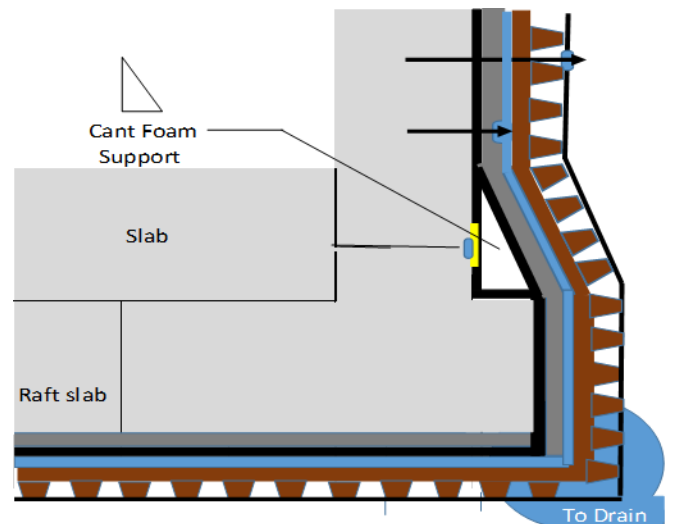
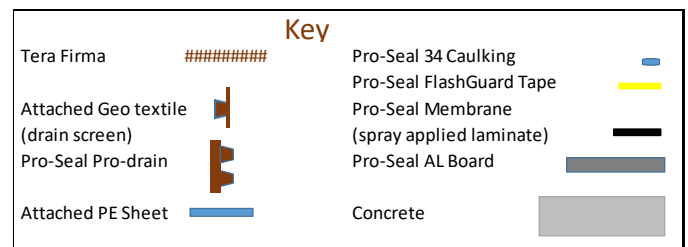
Take special care to note the lamination layup differences between the inverted and positive side applications of the **Pro-Seal® FlexSystem II Methane Barrier**

Waterproofing, and Water Management System™ on vertical surfaces, under slab application and between or split slab applications.

The drawing (below) illustrate the under slab inverted layup and lamination. This will tie into both the inverted and the primary substrate applications of the system.



Note: Example only 15 year limited warranty below slab layup (above)



Note: (Above Example only) horizontal vertical transition tie to drain Example of a 15-year ltd. warranty primary substrate style application. Note: Use Hunter foam for cant stripper manufacturer's requirements.

Inverted Tie in to Shoring Wall

Below is an example only of an under slab tie in to an inverted lay up of **Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management System™** to a zero-clearance site shoring wall. Site conditions will dictate custom site modifications; all such



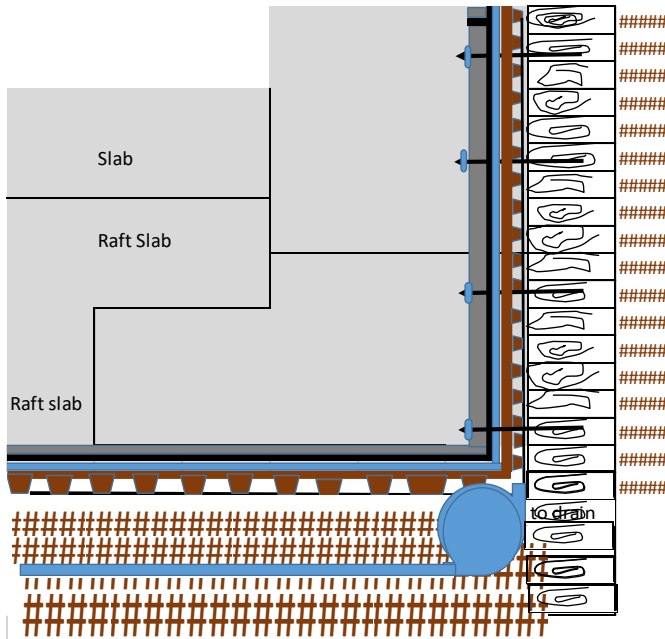
Pro-Seal® Pro-Drain™ (A component of the Methane Barrier System)

City of LA RR# 26015 (CSI # 07130) Methane Barrier Waterproofing and Water Management System



design modification must be reviewed by Pro-Seal Products® Technical Department and approved by the manufacturer.

Transition from Horizontal Under Slab to Vertical (Below)



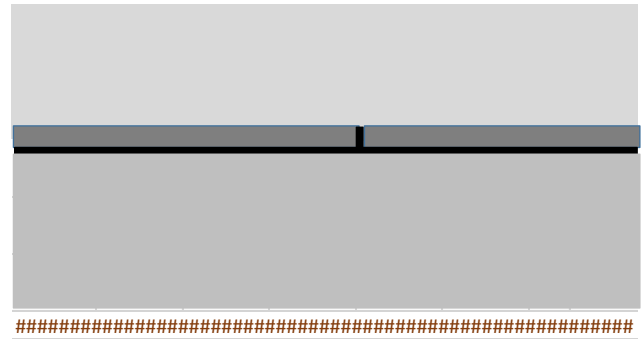
Note: The above is an example to demonstrate the diverse potential of the Pro-Seal FlexSystem II Methane Barrier, Waterproofing and Water Management Systems. This is a horizontal to vertical inverted attached to shoring wall in a zero clearance project. The concrete is poured to the Pro-Seal inverted pre-applied system.

Between Split Slab, Post Construction and Retrofit Configurations

Between Split Slab, Post Construction and Retrofit Configurations are also available. These designs require review by Pro-Seal® Products technical department and manufacturers design acceptance to qualify for warranties. Warranties are available only when a manufacturer's authorized applicator installs any of the Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management System™ configurations.

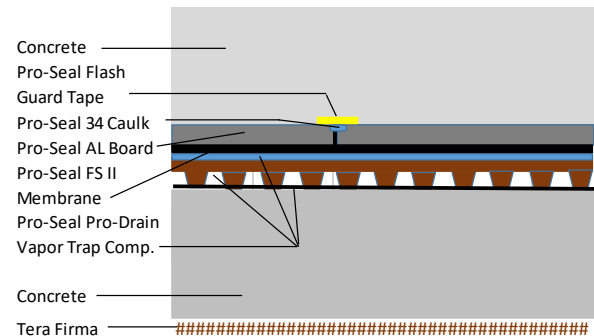
Between Split Slab

When a placing a slab on slab at or below grade This configuration is practical and cost effective. The configurations vary based on the amount of vapor and water egress present and how they need to be controlled. Below are just a few of the possible configurations for your review.



The (above) is a typical basic between slab cold laminated configuration at or below grade. The under slab is first treated with Pro-Seal DP-36® using an LP spray applied fluid extractant and vapor suppressant. Then the FlexSystem Liquid Laminate Membrane is applied. While still wet, the Pro-Seal AL Board® is placed and pressed with a sod roller into the wet membrane. The rolling initiates a pressure activated chemical bond and a heavy, dense, thick, semi ridged, membrane. The system is impervious to gas vapors such as Methane and Radon after the final layup is completed per project sit specific specification.

For environments where there is significant concern for gas and water vapor drive there are other configurations for consideration. Below are schematics for examples of as built and retrofit configuration.



Note: Basic vapor trap configuration for on grade or below grade between slab applications (above).



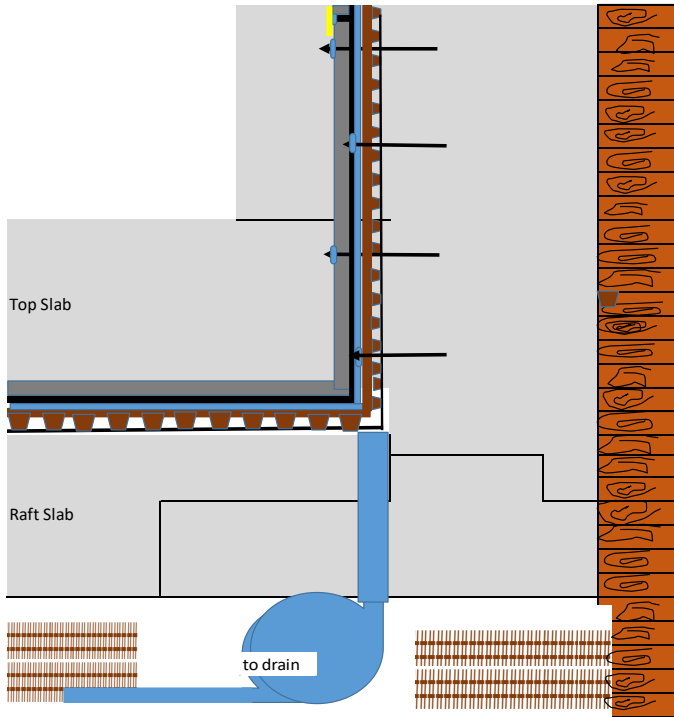
Pro-Seal® Pro-Drain™ (A component of the Methane Barrier System)

City of LA RR# 26015 (CSI # 07130) Methane Barrier Waterproofing and Water Management System



Split Wall Split Slab Configuration

(Example of retrofit and/or new structure)



The above is an example of an Interior split wall and split slab **Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management System™** configuration for archival, museums or other humidity and atmosphere controlled storage at grade or below grade.

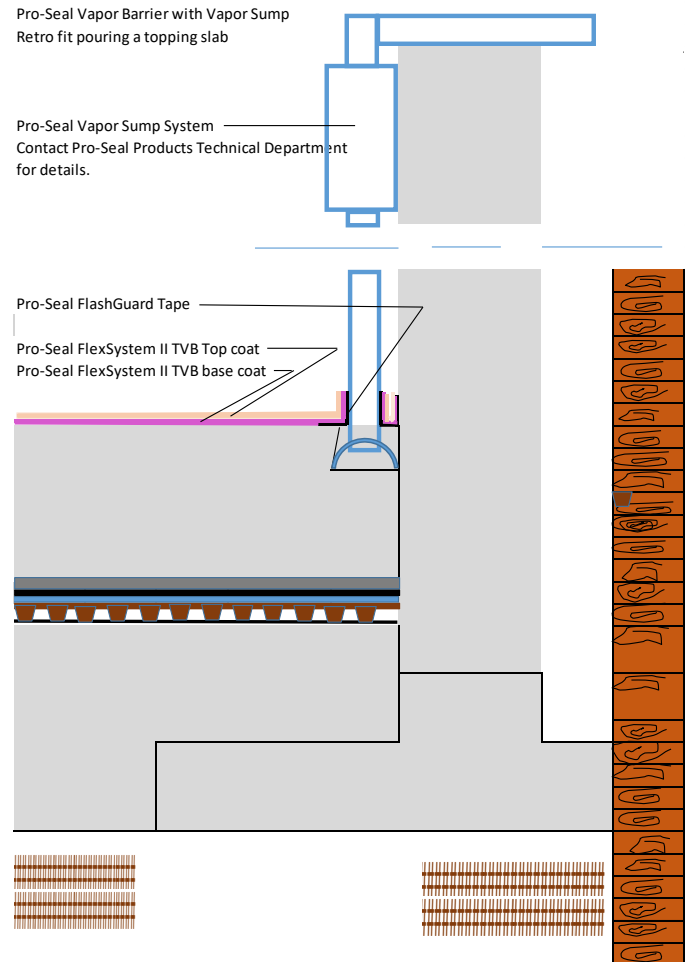
This style of layup of the **Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management System™** may also be used in zero clearance projects. Always contact Pro-Seal Products Technical Department to determine suitability of chosen or designed layup and/or application. Design suitability is determined by site use and vapor drive measurements as determined by client's representatives.

Capturing Maximum Moisture Vapors and Gas Vapors to Exhaust to the Exterior Atmosphere

This example (right) is an alternate interior configuration for the **Pro-Seal® FlexSystem II**

Methane Barrier, Waterproofing and Water Management System™ as a retrofit installation.

Used where a new interior hard floor covering and/or topping slab or floor covering may be poured over a raft slab. This layup is used more often to capture and repurpose previously unused below grade spaces.



Other Pro-Seal Products materials that may be required when installing this style of **Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management System™** barrier layup are:

- Pro-Seal DP-36® (fluid extractant and vapor suppressant)
- Pro-Seal AquaFlex® (tape filler)
- Pro-Seal 34® Caulking



Pro-Seal® Pro-Drain™ (A component of the Methane Barrier System)

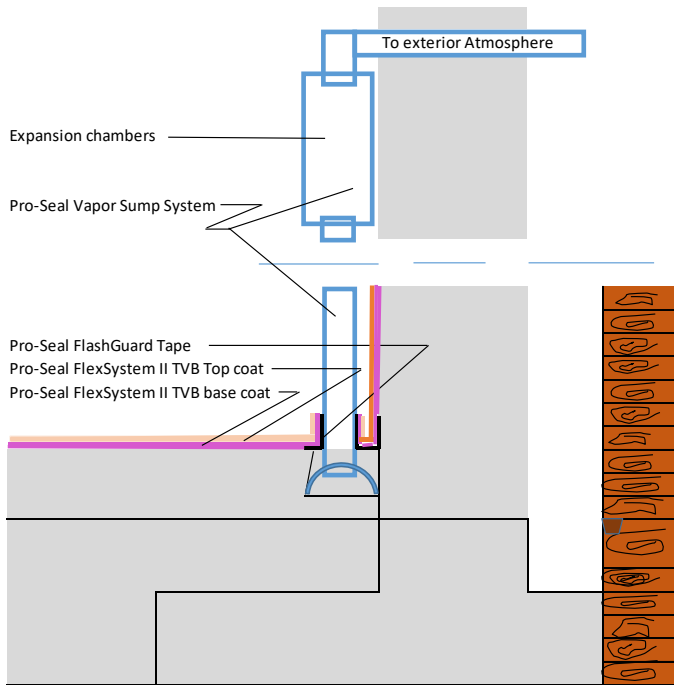
City of LA RR# 26015 (CSI # 07130) Methane Barrier Waterproofing and Water Management System



The example here (below) depicts a retrofit **Pro-Seal® FlexSystem II Methane Barrier** (Topical Vapor Barrier™) where the original barrier has failed or does not exist in a structure. This style of layout of the system is designed to be covered with a topping slab, tile, carpet or other floor covering as approved by the manufacturer.

A Retrofit Installation Layout

(At grade or below grade)



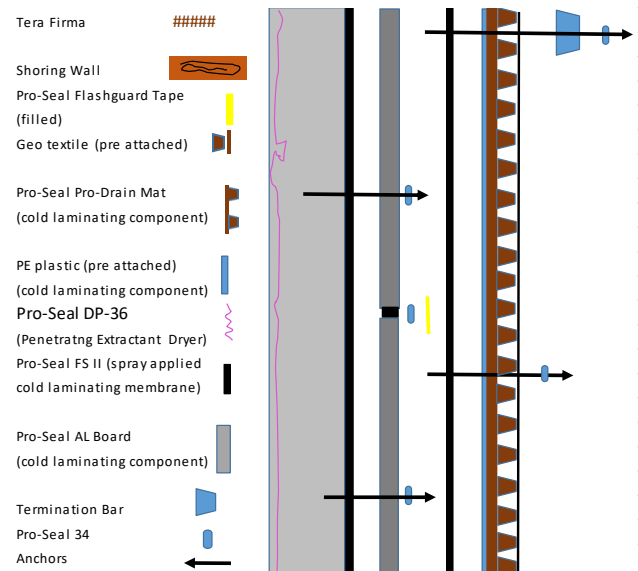
Note: This is an example only of a Pro-Seal Vapor Barrier with Vapor Sump installed as a retrofit to a pre-existing structure. The Pro-Seal Vapor Sump System is inset into the concrete and the vertical rise is placed inside the furring or finish wall system. To accomplish this installation other details may be required. Such details may require Additional Pro-Seal materials such as Pro-Seal 34 caulking, Pro-Seal DP-36 fluid extractant and vapor suppressant, Pro-Seal prothane 230 and Pro-Seal PPW Grout. Contact Pro-Seal Products Technical Department for all details and detail concerning your specific site.

(Above) The **Pro-Seal® Vapor Sump System™** is placed inside a furring wall or a furring wall or other is installed to hide the venting system which vents all vapors such as water, methane radon of other lighter than air gasses to the exterior atmosphere. Be sure to design in access/ inspection ports at appropriate locations.

Please be sure to contact Pro-Seal Products® Technical Department for designs to integrate the **Pro-Seal® Vapor Sump System™** in retrofit sites.

The example (below) is a step by step, 35-year Warranty style, layout of the **Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management System™** to a positive side, primary concrete substrate in order of layout by each component of system. This is an example only; these steps may vary with design modifications based on length of warranty and type of installation.

A Below Grade Style Vertical Layout



| Step 1 | Step 3 | Step 4 | Step 5 |
|--|---|--|---|
| <p>Spray apply Pro-Seal DP 36 deep penetrating fluid extractant and drying agent to substrate.</p> <p>Step 2 Spray apply Pro-Seal Liquid Laminating membrane Pro-Seal FSII to the dry substrate.</p> | <p>Press Pro-Seal AL Board into the wet membrane and mechanically attach. Run anchors through a spot of Pro-Seal 34 to create a self sealing anchor. Flash joints with Pro-Seal 34 and Pro-Seal FlashGuard Tape. Fill with Pro-Seal AquaFlex.</p> | <p>Spray apply Pro-Seal Liquid laminating membrane Pro-Seal FSII to the Pro-Seal AL Board.</p> | <p>Hang Pro-Seal Pro-Drain from the top down with a term bar. Press into the still wet membrane. Seal overlapping snap joint with Pro-Seal 34. Seal overlapping PE with Pro-Seal 34. Mechanically Anchor as required, running anchors through Pro-Seal 34 to assure self sealing anchors.</p> |

The above application process graphic is a guideline only. See the specification as written in the plans for specific site application layout of the **Pro-Seal® FlexSystem II Methane Barrier, Waterproofing and Water Management System™**.



Pro-Seal® Pro-Drain™ (A component of the Methane Barrier System)

City of LA RR# 26015 (CSI # 07130) Methane Barrier Waterproofing and Water Management System



Limited Warranty:

We warrant our product to be free of defects in material and workmanship; and to be in accordance with our company quality control standards. All data, statements, and recommendations made herein are based upon information we believe to be reliable, but are made without any representation, guarantee, or warranty of accuracy. Our products are sold on the condition that the user himself will evaluate them, as well as our recommendations, to determine their suitability for the user's own purpose before adoption.

Also, statements regarding the use of our products or processes are not to be construed as recommendations for their use in violation of any patent rights or in violation of any applicable laws or regulations. Liability under any condition shall be limited to replacement of material only. No statement claim verbal, written, paper medium, electronic medium or any other known or unknown medium made by independent representation, dealers, distributors or any third parties whatsoever that are not in written form, nor authored and/or distributed by from the manufacturer, shall not be the responsibility nor liability of the manufacturer.

Communication with Pro-Seal® Products Is Easy!

- **We love our clients!**
- **We love customer service!**

Sales and Marketing:

Ph.: 800 349 7325

Email: information@prosealproducts.com