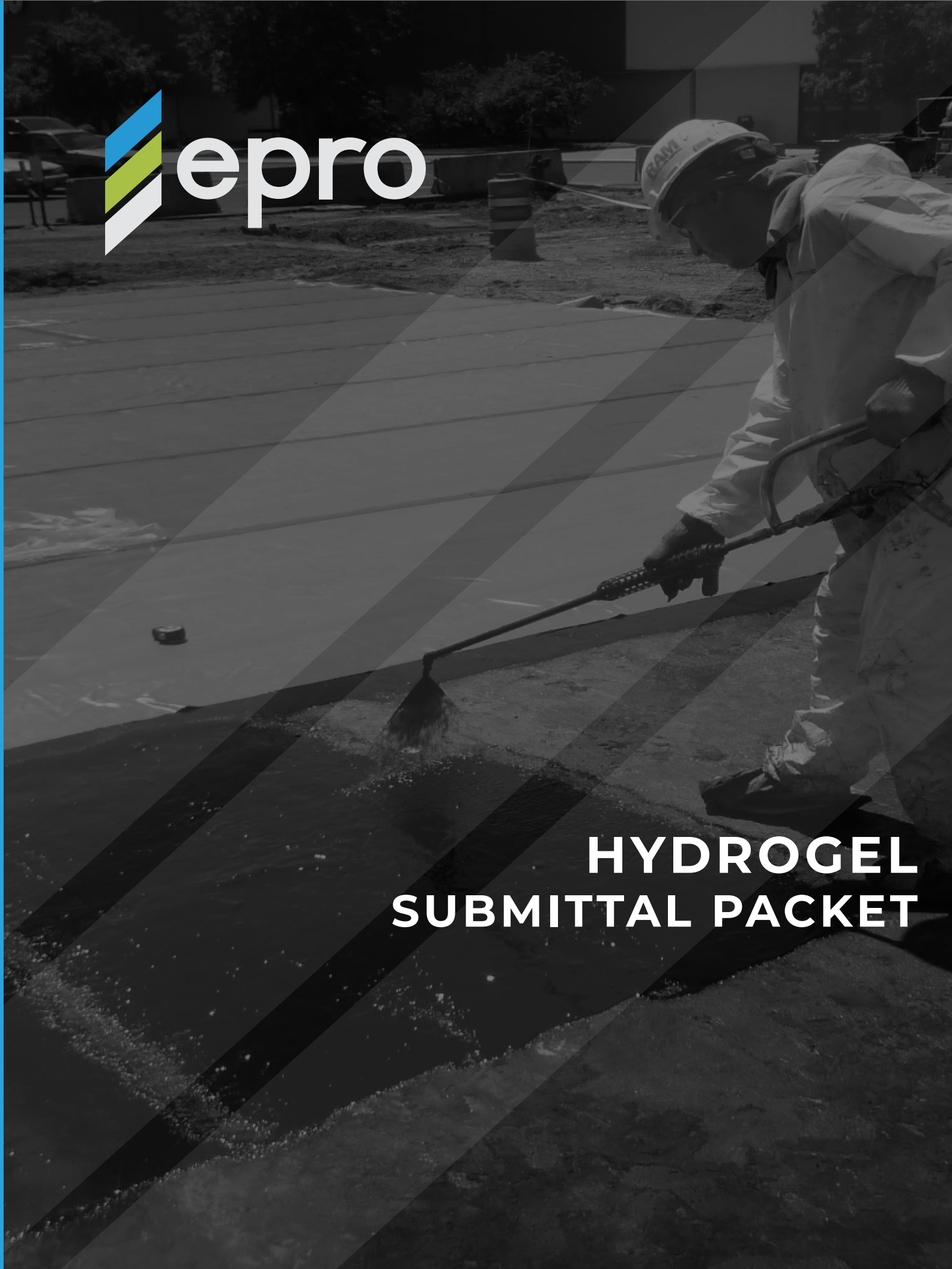


epro

HYDROGEL
SUBMITTAL PACKET

HydroGel

HOT APPLIED POLYMER RUBBER GEL

Hot fluid-applied polymer rubber gel composite membrane system
Self-healing, non-curing, versatile, fast application

HydroGel Polymer Rubber Gel

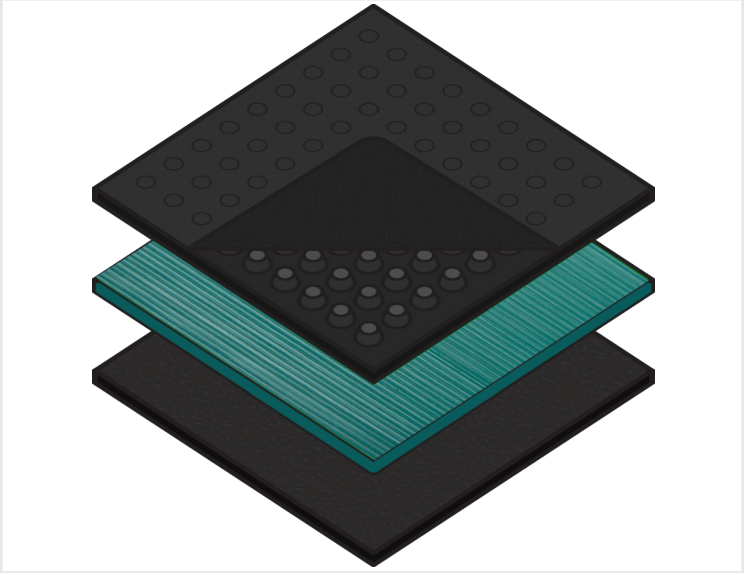
HydroGel is a single component, 99% solids, highly elastomeric modified polymer rubber gel with exceptional adhesive properties. **HydroGel** is a post-applied waterproofing systems for above and below grade construction, ideal for both new construction and restoration applications. Its superior flexibility, adhesiveness, and self-healing characteristics make **HydroGel** the ideal choice for effective, permanent waterproofing. **HydroGel** can be applied to green concrete, reducing overall project time and costs.

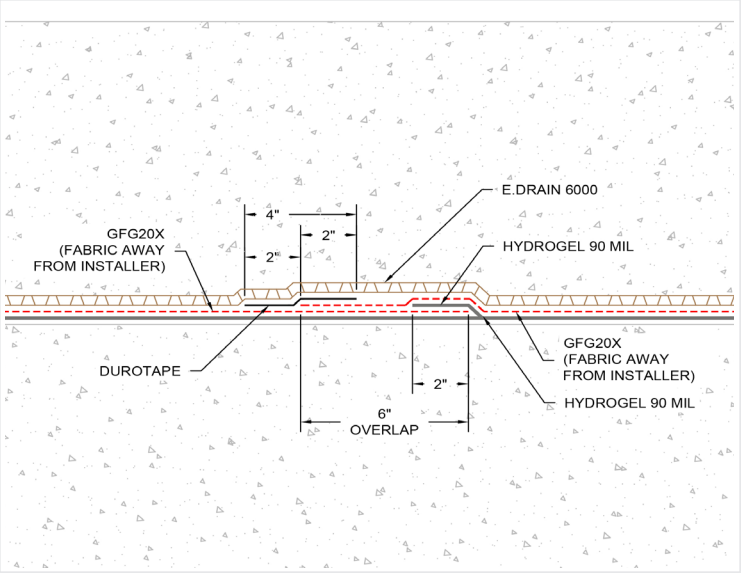
Superior productivity with proven performance

- **99% solids content, single component material.** No material loss in heating. No mixing components. No VOCs. Low odor.
- **Spray application.** Extremely fast, reduced labor, productive application using heated spray pumps ensures timely project completion.
- **Squeegee application.** Fast, productive application using traditional hot applied methods ensures timely project completion.
- **Fully adhered application.** Eliminates lateral water migration.
- **Ideal for restoration waterproofing.** Adheres and conforms well to rough substrates reducing surface prep and speeding production.
- **Composite waterproofing system.** Dual layer high performance system consisting of a durable protection course over the self-healing polymer rubber gel system.
- **Applies to green concrete, no surface primer is necessary.** No cure time. No need to wait 28 days prior to application. Application is quick with minimal substrate prep.

EPRO Services Inc. Kansas City, MO 64129
www.eproinc.com tel 800.882.1896

HydroGel – Horizontal Assembly





System: Hydrogel

Application: Horizontal Decks, Balconies, Planter Boxes, Green Roofs | **System Thickness: 106 mils (2.7 mm)**

	1st Layer	2nd Layer	3rd Layer
Product Name	Hydrogel (90 mils | 2.3 mm)	GFG20X (16 mils | 0.8 mm)	e.drain 6000

DESCRIPTION

HydroGel hot fluid-applied polymer rubber gel waterproofing assembly is comprised of a single-component, 99% solids, VOC-free monolithic fluid membrane that is protected by a high density polyethylene (HDPE) protection sheet to allow for immediate QA/QC. HydroGel's Polymer Rubber Gel Technology creates a non-curing, self-healing, and self-sealing waterproofing layer that is non-slumping, flexible, and does not off-gas or lose film thickness after application. HydroGel assemblies dynamically respond to substrate movement, eliminate lateral water migration, and have excellent crack-bridging and crack-sealing capabilities.

HydroGel - Horizontal Assembly is a redundant field-installed composite deck waterproofing system for traditional podium deck, planter, and green roof applications. Designed to be installed in most temperaure conditions and for projects where performance is paramount, HydroGel - Horizontal Assembly combines the benefits of a self-healing and structurally responsive monolithic fluid applied waterproofing membrane with EPRO's GFG Series HDPE vapor barrier protection course. Ideal for deck applications sloped to area drains with a minimum slope of 1/8" per lineal foot, HydroGel - Horizontal Assemblies provide a reinforced fluid-applied deck solution that can be applied over green concrete, as a restoration membrane over previously applied waterproofing systems, and in below freezing weather conditions.

HydroGel is applied using either specialized hot melt pumps for spray applictiaon, or traditional hot melt gravity pour equipment for squeegee and trowel application.

HydroGel - Horizontal Assembly can be used in conjunction with concrete topping slabs, pedestal and paver systems, and green roofs.

BENEFITS

- Self-heals damage to membrane.
- Self-seals cracks to prevent lateral water migration.
- No VOCS, no volume loss, and primer-free application.
- Seamless fluid application fully bonds to substrate.
- Composite assembly meets Class A vapor barrier standards.
- Fast installation in all temperatures (0 - 120°F | -18 - 49°C).
- Designed for new construction and green concrete applications.
- Designed to restoration applications over rough substrates and previously installed waterproofing.

LIMITATIONS

- Requires specialized hot melt equipment for application.
- HydroGel must be installed with a protection course.

SYSTEM COMPONENTS

- Waterproofing: HydroGel
- Protection Course: GFG16, GFG20X
- Drainage Course: e.drain 6000
- Ancillary Products: SkrimTape, DuroTape, BentoTak, e.stop gu

SPECIFICATIONS, DRAWINGS, AND TECHNICAL ASSISTANCE

The most current specifications and drawings can be found on www.eproinc.com. For project specific details contact EPRO directly, or the local EPRO representative.

Site conditions, performance goals, and budget determine which system is more appropriate for a given project. For more information regarding product performance, testing, plan review, or general technical assistance, please contact EPRO.

WARRANTY

EPRO provides a wide range of warranty options for E.Series systems. For a project to be eligible for any warranty option beyond a 1-year material warranty, an EPRO Authorized Applicator must be used and the project must be registered and approved by EPRO prior to the commencement of any product application.

Warranty options available for this system include:

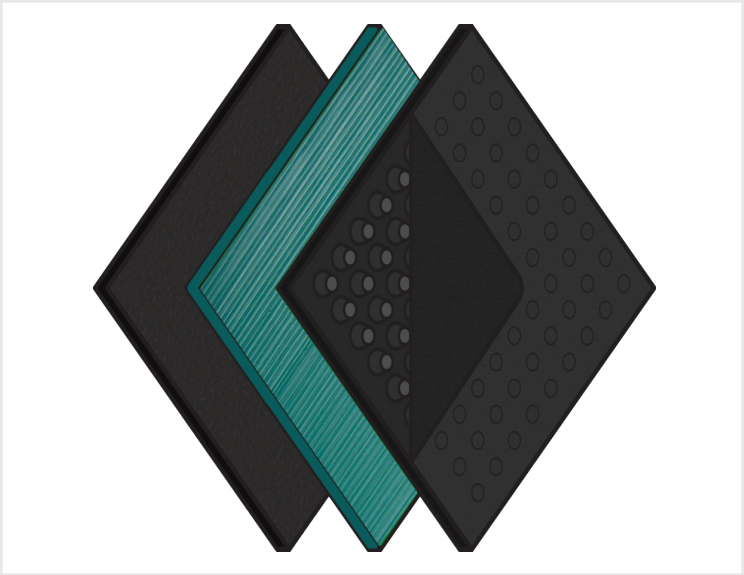
- Material warranty
- E.Series Labor and Material Warranty
- E.Assurance No-Dollar-Limit Warranty

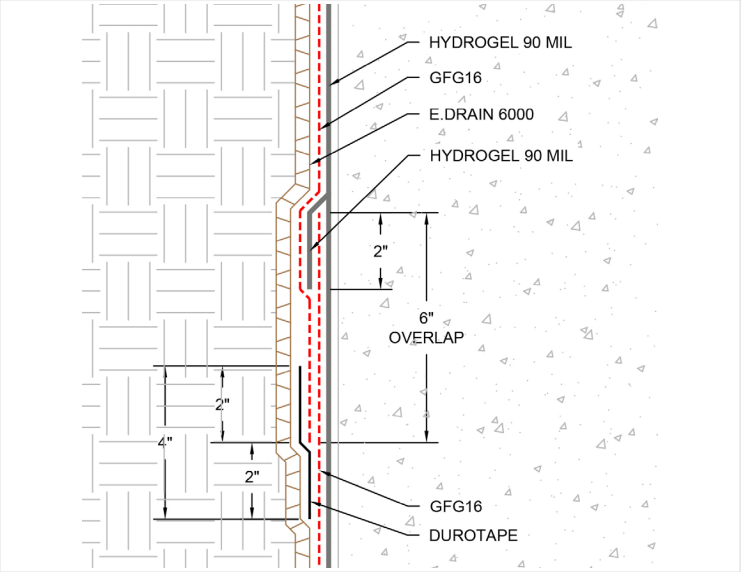
For information relating to EPRO's E.Assurance warranty program, contact EPRO. All E.Assurance no-dollar-limit labor and material warranties are approved on a project by project basis. E.Assurance warranties are available for deck applications when EPRO systems are used on the below-grade envelope.

Typical Physical Properties

Physical Property	Test Method	Value
Solids Content	ASTM D 1353	99%
Hardness	ASTM C 836-89	80
Resistance to Decay	ASTM E 154-88	0% moisture permeation and weight change
Peel Adhesion to Concrete	ASTM C 836; C 794	5.8 lbf/in (1015 N/m), Pass
Extensibility after Heat Aging	ASTM C 836; C 1522	1/4" (6.35 mm) No Cracking, Pass
Cold Temperature Crack Bridging	ASTM C 1305	Unaffected at -15°F (-26°C), Pass
Hydrostatic Pressure Resistance (max psi = 45)	ASTM C 1306	> 100 ft (31.64 m, 45 psi) (11 days duration)
Permeance to Water Vapor Transmission	ASTM E 96, Method B	0.016 perms (0.915 ng/(Pa*s*m^2)
Deflection, HDPE (GFG20X)	ASTM E 154	3.2-inches (81.28 mm)
Puncture Resistance, HDPE (GFG20X)	ASTM E 154	125 lbf (21,890 N/m)
Tensile Strength MD, HDPE (GFG20X)	ASTM D 412	3891 psi (26.82 Mpa)
Elongation MD, HDPE (GFG20X)	ASTM D 412	486% (4.861)
Tensile Strength CMD, HDPE (GFG20X)	ASTM D 412	3405 psi (23.47 Mpa)
Elongation CMD, HDPE (GFG20X)	ASTM D 412	399.5% (3.995)

HydroGel – Vertical Assembly





System: Hydrogel

Application: Vertical Walls, Tunnels, Planter Boxes | **System Thickness: 106 mils (2.7 mm)**

	1st Layer	2nd Layer	3rd Layer
Product Name	Hydrogel (90 mils | 2.3 mm)	GFG16 (16 mils | 0.8 mm)	e.drain 6000

DESCRIPTION

HydroGel hot fluid-applied polymer rubber gel waterproofing assembly is comprised of a single-component, 99% solids, VOC-free monolithic fluid membrane that is protected by a high density polyethylene (HDPE) protection sheet to allow for immediate QA/QC. HydroGel's Polymer Rubber Gel Technology creates a non-curing, self-healing, and self-sealing waterproofing layer that is non-slumping, flexible, and does not off-gas or lose film thickness after application. HydroGel assemblies dynamically respond to substrate movement, eliminate lateral water migration, and have excellent crack-bridging and crack-sealing capabilities.

HydroGel - Vertical Assembly is a redundant field-installed composite vertically applied waterproofing system for walls, tunnel exteriors, and tunnel interiors with shotcrete liners. Designed to be installed in most temperaure conditions and for projects where performance is paramount, HydroGel - Vertical Assembly combines the benefits of a self-healing and structurally responsive monolithic fluid applied waterproofing membrane with EPRO's GFG Series HDPE vapor barrier protection course. HydroGel - Vertical Assemblies provide a post-applied waterproofing solution that can be applied over green concrete, as a restoration membrane over previously applied waterproofing systems, and in below freezing weather conditions.

HydroGel is applied using either specialized hot melt pumps for spray applictiaon or traditional hot melt gravity pour equipment for squeegee and trowel application.

HydroGel - Vertical Assembly can be used in conjunction with over excavated wall construction, two-sided formwork, precast concrete, and concrete masonry units (CMU).

BENEFITS

- Self-heals damage to membrane.
- Self-seals cracks to prevent lateral water migration.
- No VOCS, no volume loss, and primer-free application.
- Seamless fluid application fully bonds to substrate.
- Composite assembly meets Class A vapor barrier standards.
- Fast installation in all temperatures (0 - 120°F | -18 - 49°C).
- Designed for new construction and green concrete applications.
- Designed to restoration applications over rough substrates and previously installed waterproofing.

LIMITATIONS

- Requires specialized hot melt equipment for application.
- HydroGel must be installed with a protection course.

SYSTEM COMPONENTS

- Waterproofing: HydroGel
- Protection Course: GFG16, GFG20X
- Drainage Course: e.drain 6000
- Ancillary Products: SkrimTape, DuroTape, BentoTak, e.stop gu

SPECIFICATIONS, DRAWINGS, AND TECHNICAL ASSISTANCE

The most current specifications and drawings can be found on www.eproinc.com. For project specific details contact EPRO directly, or the local EPRO representative.

Site conditions, performance goals, and budget determine which system is more appropriate for a given project. For more information regarding product performance, testing, plan review, or general technical assistance, please contact EPRO.

WARRANTY

EPRO provides a wide range of warranty options for E.Series systems. For a project to be eligible for any warranty option beyond a 1-year material warranty, an EPRO Authorized Applicator must be used and the project must be registered and approved by EPRO prior to the commencement of any product application.

Warranty options available for this system include:

- Material warranty
- E.Series Labor and Material Warranty
- E.Assurance No-Dollar-Limit Warranty

For information relating to EPRO's E.Assurance warranty program, contact EPRO. All E.Assurance no-dollar-limit labor and material warranties are approved on a project by project basis. E.Assurance warranties are available for deck applications when EPRO systems are used on the below-grade envelope.

Typical Physical Properties

Physical Property	Test Method	Value
Solids Content	ASTM D 1353	99%
Hardness	ASTM C 836-89	80
Resistance to Decay	ASTM E 154-88	0% moisture permeation and weight change
Peel Adhesion to Concrete	ASTM C 836; C 794	5.8 lbf/in (1015 N/m), Pass
Extensibility after Heat Aging	ASTM C 836; C 1522	1/4" (6.35 mm) No Cracking, Pass
Cold Temperature Crack Bridging	ASTM C 1305	Unaffected at -15°F (-26°C), Pass
Hydrostatic Pressure Resistance (max psi = 45)	ASTM C 1306	> 100 ft (31.64 m, 45 psi) (11 days duration)
Permeance to Water Vapor Transmission	ASTM E 96, Method B	0.016 perms (0.915 ng/(Pa*s*m^2)
Deflection, HDPE (GFG20X)	ASTM E 154	3.2-inches (81.28 mm)
Puncture Resistance, HDPE (GFG20X)	ASTM E 154	125 lbf (21,890 N/m)
Tensile Strength MD, HDPE (GFG20X)	ASTM D 412	3891 psi (26.82 Mpa)
Elongation MD, HDPE (GFG20X)	ASTM D 412	486% (4.861)
Tensile Strength CMD, HDPE (GFG20X)	ASTM D 412	3405 psi (23.47 Mpa)
Elongation CMD, HDPE (GFG20X)	ASTM D 412	399.5% (3.995)

GFG20X

Product Description

Basic Use: GFG20X is a superior horizontal protection course option for HydroGel and TurboSeal polymer rubber gel post-applied waterproofing systems. Using EPRO's composite waterproofing design concept, GFG20X enhances HydroGel and TurboSeal system assemblies by adding a durable high density polyethylene (HDPE) ridged membrane with taped seams to increase chemical resistance, waterproofing capabilities, and overall system robustness. Used as a key component in horizontal podium deck systems, GFG20X protects coated surfaces and allows for immediate QA/QC.

Composition: GFG20X is a 16 mil (0.41 mm) cross-laminated HDPE sheet with integrated traction ridges bonded to a 4.7 oz (160 gsm) geotextile.

While GFG20X is installed as a component of EPRO's HydroGel and TurboSeal assemblies, it alone exceeds all Class A, B, and C vapor barrier requirements.

Benefits

- Excellent chemical resistance.
- High puncture resistance protects waterproofing from damage.
- Extremely low industry leading impermeability to water vapor when installed as part of the composite system.
- Embeds geotextile reinforcement into polymer rubber gel layer.

Limitations

- Seams must be sealed.
- Do not use flame or direct heat to dry membrane.
- Weighted rollers may be required in freezing temperatures.
- Sheet must be pressed into gel layer for a complete mechanical bond.

Technical Data

Properties: See physical properties table

Coverages: One roll covers 900 square feet (83.62 square meters), not including overlaps or waste

Specification Writer: Contact EPRO before writing specifications on this product. HydroGel and TurboSeal system assemblies should be reviewed in order to meet project specific site conditions.

Installation

Preparation: Please refer to manufacturer's specifications for substrate requirements. Rolls should be inspected for surface damage prior to application.

Application: Please refer to manufacturer's specifications.
Sheet - Place GFG20X over HydroGel or TurboSeal coated surface and embed into gel with deck broom or weighted roller.
Seams - Adhere seams by applying a 2" (5 cm) layer of polymer rubber gel on bottom sheet edge, overlap top sheet a minimum of 6" (15 cm), and then tape centered along the seam with DuroTape.

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Roll Size: 6' x 150' (1.83 x 45.7 m) unfolded rolls, 94 lbs (42.64 kgs)

Warranty

Limited Warranty: EPRO Services, Inc. believes to the best of its knowledge that performance tables are accurate and reliable. EPRO warrants this product to be free from defects. EPRO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. EPRO's liability shall be limited in all events to supplying sufficient product to retreat the specific areas to which defective product has been applied. EPRO shall have no other liability, including liability for incidental or resultant damages, whether due to breach of warranty or negligence. This warranty may not be modified or extended by representatives of EPRO or its distributors.

Equipment

- Application: Deck broom, weighted sheet roller, box cutter, knife
- Seaming: 4" Hand Roller

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product was previously supplied by Kingfield Construction Products under the same name.

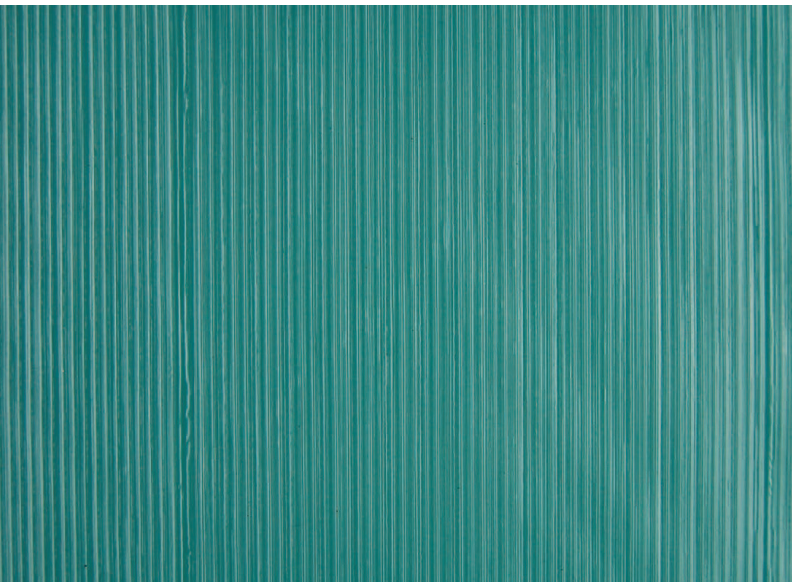
epro GFG20X

Typical Physical Properties

Physical Property	Test Method	Value
Film Material		HDPE
Film Color		Green
Geotextile Color		Black
Geotextile Weight		4.7 oz (160 gsm)
Membrane Thickness		31 Mil
Classification	ASTM E 1745	Exceeds Class A, B, and C
Water Vapor Permeance	ASTM E 96	0.007 perms
Tensile Strength	ASTM D 882	136 lbf/in
Puncture Resistance	ASTM D 1709	5,210 grams
Peel Adhesion to Concrete	ASTM E 903	8 lbs/in
Coefficient of Friction	ASTM D 1894	0.6
Elmendort Tear	ASTM D 1922	9,500 gram
Puncture-Propagation Tear	ASTM D 2582	20,000 gram
Life Expectancy	ASTM E 154	Indefinite
Chemical Resistance	ASTM E 154	Unaffected

Dimensions: 6' x 150' (1.83 x 45.72 m)
Weight: 94 lbs (42.64 kgs)

GFG16



Product Description

Basic Use: GFG16 is a horizontal and vertical protection course for HydroGel and TurboSeal polymer rubber gel post-applied waterproofing systems. Using EPRO's composite waterproofing design concept, GFG16 enhances HydroGel and TurboSeal system assemblies by adding a durable high density polyethylene (HDPE) ridged membrane with taped seams to increase chemical resistance, waterproofing performance, and overall system robustness. Used as a key component in vertical waterproofing systems, GFG16 protects coated surfaces and allows for immediate QA/QC.

Composition: GFG16 is a 16 mil (0.41 mm) cross-laminated HDPE membrane with integrated traction ridges.

While GFG16 is installed as a component of EPRO's HydroGel and TurboSeal assemblies, it alone exceeds all Class A, B, and C vapor barrier requirements.

Benefits

- Excellent chemical resistance.
- Large roll size significantly minimizes seams.
- High puncture resistance protects waterproofing from damage.
- Extremely low industry leading impermeability to water vapor when installed as part of the composite system.

Limitations

- Seams must be sealed.
- Do not use flame or direct heat to dry membrane.
- Weighted rollers may be required in freezing temperatures.
- Sheet must be pressed into gel layer for a complete mechanical bond.

Technical Data

Properties: See physical properties table

Coverages: One roll covers 1800 square feet (167.23 square meters), not including overlaps or waste

Specification Writer: Contact EPRO before writing specifications on this product. HydroGel and TurboSeal system assemblies should be reviewed in order to meet project specific site conditions.

Installation

Preparation: Please refer to manufacturer's specifications for substrate requirements. Rolls should be inspected for surface damage prior to application.

Application: Please refer to manufacturer's specifications.
Sheet - Place GFG16 over HydroGel or TurboSeal coated surface and embed into gel with firm hand pressure or deck broom.
Seams - Adhere seams by applying a 2" (5 cm) layer of polymer rubber gel on bottom sheet edge, overlap top sheet a minimum of 6" (15 cm), and then tape centered along the seam with DuroTape.

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Roll Size: 12' x 150' (3.66 x 45.72 m) unfolded rolls, 137 lbs (62.14 kgs)

Warranty

Limited Warranty: EPRO Services, Inc. believes to the best of its knowledge that performance tables are accurate and reliable. EPRO warrants this product to be free from defects. EPRO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. EPRO's liability shall be limited in all events to supplying sufficient product to retreat the specific areas to which defective product has been applied. EPRO shall have no other liability, including liability for incidental or resultant damages, whether due to breach of warranty or negligence. This warranty may not be modified or extended by representatives of EPRO or its distributors.

Equipment

- Application: Deck broom, weighted sheet roller, box cutter, knife
- Seaming: 4" Hand Roller

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product is also known as e.base 316.
This product was previously supplied by Kingfield Construction Products under the same name.

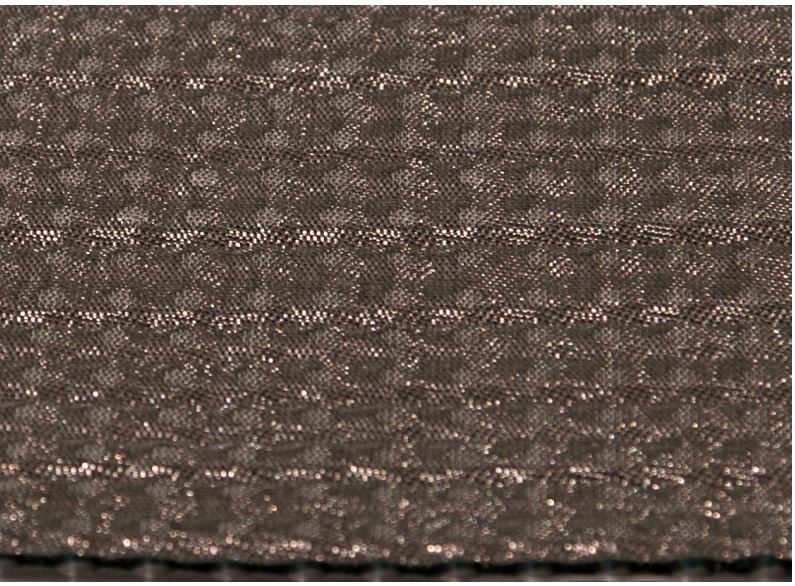
epro GFG16

Typical Physical Properties

Physical Property	Test Method	Value
Film Material		HDPE
Film Color		Green
Film Thickness		16 Mil
Classification	ASTM E 1745	Exceeds Class A, B, and C
Water Vapor Permeance	ASTM E 96	0.007 perms
Tensile Strength	ASTM E 154-93 (ASTM D 882)	83.75 lbf/in
Puncture Resistance	ASTM D 1709	3,960 grams
Coefficients of Friction	ASTM D 1894	0.6
Methane Permeance	ASTM D 1434	90.59 cm^3 /(m^2. Atm. Day)
Radon Diffusion Coefficient	K124/02/95	$2.4^{(-11)}m^2/S$
Life Expectancy	ASTM E 154	Indefinite
Chemical Resistance	ASTM E 154	Unaffected

Dimensions: 12′ x 150′ (3.66 x 45.72 m)
Weight: 137 lbs (62.14 kgs)

e.drain 9000



Product Description

Basic Use: e.drain 9000 is applied in horizontal above grade waterproofing applications over plaza decks, planters, green roofs, and balconies. e.drain 9000 prefabricated drainage composite is designed to protect the E.Series system assembly, while effectively eliminating the buildup and ponding of water against the membrane assembly.

Composition: e.drain 9000 features a lightweight three-dimensional, high-compressive strength polypropylene core and bonded woven geotextile fabric. The bonded filter fabric allows water to pass freely into the molded drain while preventing soil particles from entering and clogging the core structure.

Benefits

- Provides extremely high compressive strength to meet a wide variety of project conditions
- Woven geotextile retains soil and sand while allowing filtered water to pass into drainage core
- Maintains flexibility in freezing temperatures

Limitations

- Long-term UV exposure is not recommended

Technical Data

Properties: See physical properties table

Coverages: 6′ x 50′ roll covers 300 square feet, not including overlaps or waste.

Specification Writer: Contact EPRO before writing specifications on this product. E.Series system assemblies should be reviewed in order to meet project specific site conditions.

Installation

Preparation: Please refer to manufacturer's specifications for substrate requirements. Rolls should be inspected for cosmetic damage prior to application. Substrate must be inspected prior to application to make certain it is in accordance with manufacturer's requirements.

Application: Please refer to manufacturer's specifications. Drainage panels may run horizontally or vertically. In blindside shoring applications, secure e.drain to shoring using 2-inch flat washer fasteners every 24 inches on center on seams and terminations and a minimum of every 48 inches on center in the field.

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com). 4' and 8' rolls are also available.

Roll: 6′ x 50′, 75 lbs.

Warranty

Limited Warranty: EPRO Services, Inc. believes to the best of its knowledge that performance tables are accurate and reliable. EPRO warrants this product to be free from defects. EPRO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. EPRO's liability shall be limited in all events to supplying sufficient product to retreat the specific areas to which defective product has been applied. EPRO shall have no other liability, including liability for incidental or resultant damages, whether due to breach of warranty or negligence. This warranty may not be modified or extended by representatives of EPRO or its distributors.

Equipment

Secure with shot pins using power-actuated fastener or by hand.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product was formally known as Ecodrain-S9000.

epro | e.drain 9000

Typical Physical Properties

Physical Property	Test Method	Value
Dimpled Core		
Core Material		Polypropylene
Color		Black
Dimple Height	ASTM D 1777	0.4" (10.16mm)
Compressive Strength	ASTM D 6364	21,000 psf (1005 kN/m²)
Flow rate	ASTM 4716	23 g/min/ft
Filter Fabric		
Grab Tensile	ASTM D 4632	370x250 lbs
CBR Puncture Resistance	ASTM D 6241	850 lbs
Apparent Operating Size	ASTM D 4751	40 sieve size (.42mm)
Water Flow Rate	ASTM D 4491	60 gpm/ft² (2460 l/min/m²)

Dimensions: 4' x 50', 6' x 50', 8' x 50'
Weight: 4' roll = 50 lbs, 6' rolls = 75 lbs, 8' rolls = 100 lbs

PM Sealant

Product Description

Basic Use: PM Sealant is a Silyl Terminated Polyether (STPE) non-isocyanate, non-solvent detailing sealant that combines the strength of polyurethanes with the weathering resistance of silicones. PM Sealant can withstand the most stringent requirements for high performance bonding and elasticity under severe aging and UV weathering conditions without cracking or yellowing when subjected to extended UV-light exposure.

PM Sealant is used for penetration detailing, as a seam edge and patching detailing sealant, along the transition construction joint between two pours, and for sealing applied termination bar.

Compliances: Conforms to ASTM C920, Type S, Grade NS, Class 25, and AAMA 802.3 Type II Back Bedding Compound. USDA accepted.

Composition: PM Sealant is a gray, single-component, 100% solids, moisture-cured, elastomeric STPE sealant.

Benefits

- Replaces Silicone and Urethane sealants.
- Does not require a primer.
- Cures rapidly, even at low temperatures, and retains its properties to -75°F (-59°C).
- Non-reactive, PM Sealant will not oxidize or corrode metals.
- PM Sealant does not contain VOC's.
- Provides a continuous smooth surface.

Limitations

- Surfaces must be clean and dry for application.
- Surfaces must be free from frost or ice.

Technical Data

Properties: See physical properties table.

Coverages: Coverage is dependent on the size of application bead. Minimum Bead Size & Estimated Linear Coverage:

- 3/8" x 3/8" (10 mm x 10 mm): Penetrations, seam edges, corner & patch detailing.
  - Sausage: 21' (6.4 m)

- 3/4" x 3/4" with 1" cant (19 mm x 19 mm with 25 mm cant): Horizontal to vertical footing or brick ledge transition joint, wall vertical inside corner.
  - Sausage: 11' (3.4 m)

Storage and Handling: Store raised off the floor, away from moisture and sun, between 55-80°F (13-27°C).

Shelf Life: Sausage = 12 months.

Specification Writer: Contact EPRO before writing specifications on this product. EPRO System selection should be reviewed in order to meet project specific site conditions.

Installation

Preparation: Please refer to manufacturer's specifications for substrate requirements. Buckets and Sausages should be inspected for cosmetic damage prior to application.

Application: Please refer to manufacturer's specifications.

Substrate Preparation: Use with adequate ventilation. Wipe substrates to receive PM Sealant clean to remove any dirt, dust, or moisture. Clean the surface of penetrations or protrusions with a wire brush to remove dirt, dust, rust, and loose particles. Surface must be free of frost or ice. No priming is necessary.

Installation: Determine minimum bead thickness and tool into surface.

Horizontal to vertical transition joints shall be applied like a caulk into a 1" (25 mm) cant, making sure product is injected into the joint with as well as applied to the surface.

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Sausage Size: 20 oz (591 ml), 2.5 lbs (1.13 kg)
Case Size: 20 sausages, 50 lbs (22.7 kg)

Warranty

Limited Warranty: EPRO Services, Inc. believes to the best of its knowledge that performance tables are accurate and reliable. EPRO warrants this product to be free from defects. EPRO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. EPRO's liability shall be limited in all events to supplying sufficient product to retreat the specific areas to which defective product has been applied. EPRO shall have no other liability, including liability for incidental or resultant damages, whether due to breach of warranty or negligence. This warranty may not be modified or extended by representatives of EPRO or its distributors.

Equipment

Caulking gun (20 oz. sausage capactiy), knife, box cutter.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product was formally known as Primetak Detail Sealant by Kingfield Construction Products.

PM Sealant

Physical Property	Test Method	Value
Material		STPE
Color		Gray
Corrosive Properties		Non-corrosive
High Temperature Resistance		Up to 300°F for short periods
Low Temperature Flexibilty		Properties retained to -75°F (-59°C)
Skin Time		< 30 minutes @ 77°F & 50% RH
Tack Free Time	ASTM C 679	< 60 minutes @ 77°F & 50% RH
Sag	ASTM D 2202	Non-sagging
Staining	ASTM C 510	Non-staining
Tensile Strength	ASTM D 412	225 PSI
Lap Shear (shear rate = 1"/min)	(internal eq. ASTM D 1002)	275 PSI
Elongation	ASTM D 412	275%
Hardness	ASTM C 661	45-50
Ultraviolet Radiation (UV) Rating	ASTM G 26	2000+ hours UV-A, no change in appearance or physical properties

Dimensions: Sausage: 20 oz (591 ml)
Weight: Sausage: 2.5 lbs (1.13 kg)

e.stop hpl

Product Description

Basic Use: e.stop hpl is designed to self seal joints or penetrations in concrete when exposed to moisture, and specified when a bentonite based waterstop is not effective due to contamination, or high salinity.

Composition: e.stop hpl is a rubber based product that has been formulated with special hydrophilic compounds that are intended to expand in a controlled fashion when exposed to moisture.

Benefits

- Does not over expand which can cause self deterioration
- Does not over stress adjoining substrate material
- Excellent resistance in tidal areas (hydration/dehydration)
- Ideal for groundwater conditions that limit the effectiveness of bentonite based products

Limitations

- Not a self-adhering product and requires the use of e.stop primer prior to securing waterstop to concrete, metal, or PVC (Pipe) surfaces
- Not designed, nor intended to function as an expansion joint sealant
- Not resistant to pre-hydration, store in dry area.

Technical Data

Properties: See physical properties table

Coverages: 16.8' linear feet

Specification Writer: Contact EPRO before writing specifications on this product. E.Series system assemblies should be reviewed in order to meet project specific site conditions.

Installation

Preparation: Surfaces should be clean and dry. Remove all dirt, rocks, rust or other construction debris. Do not install e.stop hpl in standing water or on an iced substrate. Apply a continuous layer of e.stop primer along the substrate where e.stop hpl will be installed. Assure proper 3" (75 mm) concrete coverage will be maintained.

Installation: Firmly press the entire length of e.stop hpl onto the adhesive. For best results apply e.stop hpl within 30 minutes of adhesive installation. e.stop primer may be applied to damp surfaces, but not in standing water.

At structural and pipe penetrations, cut into strips to fit around the penetration. Apply to adhesive and abut coil ends together. On irregular surfaces such as stone or rough concrete, make sure waterstop remains in direct contact with the substrate along the entire installation. There should not be any air gap between the waterstop and the substrate

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Roll: 16.8' x 3/4" x 1" x per roll, six rolls per case

Warranty

Limited Warranty: EPRO Services, Inc. believes to the best of its knowledge that performance tables are accurate and reliable. EPRO warrants this product to be free from defects. EPRO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. EPRO's liability shall be limited in all events to supplying sufficient product to retreat the specific areas to which defective product has been applied. EPRO shall have no other liability, including liability for incidental or resultant damages, whether due to breach of warranty or negligence. This warranty may not be modified or extended by representatives of EPRO or its distributors.

Equipment

No special equipment is needed.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product was formally known as Eprostop-HPL.

epro | e.stop hpl

Typical Physical Properties

Physical Property	Test Method	Value
Specific Gravity	ASTM D71	1.35+5
Hydrocarbon Content	ASTM D4	47% min.
Volatile Matter	ASTM D6	1% max.
Penetration, cone 77°F, 150 gm 5 sec	ASTM D217	40+5

Dimensions: 16.8' x 3/4" x 1"

DuroTape

Product Description

Basic Use: DuroTape is a seaming, detailing, and repair tape used for GFG Series protection sheets. DuroTape's aggressive adhesive forms a continuous seal that prevents lateral water migration within the seams and through the membrane.

DuroTape is used to reinforce seam overlaps, end laps, penetrations, details, damage to the membrane, adhere to soldier pile flanges, and more.

Composition: DuroTape is a 35 mil (0.9 mm) 4-inch (100 mm) wide single-sided tape reinforced with a green polyethylene backing.

Benefits

- Single-sided adhesive protects seam and eliminates water migration through application area.
- DuroTape is flexible, making it easy to apply for seaming, detailing, and membrane repairs.
- DuroTape stays flexible in the extreme cold.
- Strong adhesive prevents seam delamination due to environmental exposure.
- DuroTape is chemically resistant and provides protection against corrosion over metal substrates.
- DuroTape can be applied between -20 - 125°F (-29 - 52°C)

Limitations

- Surfaces must by clean and dry.
- Do not leave exposed for longer than 60 days.

Technical Data

Properties: See physical properties table.

Coverages: One roll covers 50 linear feet (15.24 linear meters), not including overlaps or waste.

Storage and Handling: Store raised off the floor away from sun and moisture, between 40-90°F (5-32°C).

Specification Writer: Contact EPRO before writing specifications on this product. HydroGel and Turbo Seal Post-Applied Waterproofing Systems should be reviewed in order to meet project specific site conditions.

Installation

Preparation: Please refer to manufacturer's specifications for substrate requirements. Rolls should be inspected for surface damage prior to application.

Application: Please refer to manufacturer's specifications.

Substrate Preparation: Wipe substrates to receive DuroTape clean to remove any dirt, dust, or moisture. Clean the surface of penetrations or protrusions with a wire brush to remove dirt, dust, rust, and loose particles.

Installation: Adhere DuroTape by removing the release liner from the adhesive surface, center tape along the top of the lap seam with the green plastic reinforcement facing the applicator, and press down firmly onto the seam. Roll applied tape with weighted roller to maximize adhesion.

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Roll Size: 35 mil (0.9 mm), 4" x 50' (100 mm x 15.24 m), 4.67 lbs (2.12 kg)
Box Size: 6 rolls, 28 lbs (12.7 kg)

Warranty

Limited Warranty: EPRO Services, Inc. believes to the best of its knowledge that performance tables are accurate and reliable. EPRO warrants this product to be free from defects. EPRO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. EPRO's liability shall be limited in all events to supplying sufficient product to retreat the specific areas to which defective product has been applied. EPRO shall have no other liability, including liability for incidental or resultant damages, whether due to breach of warranty or negligence. This warranty may not be modified or extended by representatives of EPRO or its distributors.

Equipment

4" heavy seam roller, knife, box cutter, or scissors.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product was previously supplied by Kingfield Construction Products under the same name.

epro | DuroTape

Typical Physical Properties

Physical Property	Test Method	Value
Film Color		Green
Adhesive Color		Gray
Film Thickness	ASTM D 1000	7 Mil
Adhesive Thickness	ASTM D 1000	28 Mil
Composite Thickness	ASTM D 1000	35 Mil
Cathodic Disbondment, 30 days	ASTM G 8	<0.4 in^2 (No Primer)
Adhesion to Primed Steel	ASTM D 1000	10 lbf/in
Tensile Strength	ASTM D 1000	14 lbf/in
Elongation	ASTM D 1000	800%
Dielectric Strength	ASTM D 149	Exceeds 12 kV
Impact Resistance	ASTM G 14	20 in/lb (double wrap)
Water Vapor Transmission Rate	ASTM E 96, Method B	<0.05 perms
Water Absorption	ASTM D 570	<0.2%

Dimensions: Roll: 4" x 50' (100 mm x 15.24 m), Box: 4" x 300' (100 mm x 91.44 m)
Weight: Roll: 4.67 lbs (2.12 kgs), Box: 28 lbs (12.7 lbs)

SkrimTape

Product Description

Basic Use: SkrimTape is a detailing tape that is used with the XT1 urethane and HydroGel polymer rubber gel waterproofing systems. The aggressive adhesive and geotextile backing form a continuous and integral seal to the waterproofing membranes.

SkrimTape can be used to reinforce horizontal-to-vertical transitions, corners, construction joints, expansion joints, cracks, drains, and penetration detailing.

Composition: SkrimTape is 30 mil (0.8 mm) chemically resistant 6-inch (150 mm) wide single-sided tape reinforced with a white geotextile backing.

Benefits

- SkrimTape is flexible, making it easy to apply for detailing.
- SkrimTape stays adhesive and flexible in extreme cold.
- Strong adhesive prevents delamination in high temperatures.
- SkrimTape can be applied between -20 - 140°F (-29 - 60°C)

Limitations

- Surfaces must by clean and dry.
- Geotextile backing needs to be protected from moisture.

Technical Data

Properties: See physical properties table.

Coverages: One roll covers 50 linear feet (15.24 linear meters), not including overlaps or waste.

Storage and Handling: Store raised off the floor away from sun and moisture, between 40-90°F (5-32°C).

Specification Writer: Contact EPRO before writing specifications on this product. XT1 and HydroGel Post-Applied Waterproofing Systems should be reviewed in order to meet project specific site conditions.

Installation

Preparation: Please refer to manufacturer's specifications for substrate requirements. Rolls should be inspected for surface damage prior to application.

Application: Please refer to manufacturer's specifications.

Substrate Preparation: XT1 and HydroGel pretreated areas must have moisture and surface dust removed prior to SkrimTape application.

Installation:

- Pre-treatment: Apply waterproofing detail coat (min. 90 mil | 2.3 mm) a minimum width of 8" (200 mm) along detail area.
- Application: Remove SkrimTape release liner and adhere onto pre-treatment with geotextile facing installer, leave 1" (25 mm) of exposed pre-treatment on both sides of applied tape.
- Post-Application: Topcoat SkrimTape with field waterproofing application.

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Roll Size: 30 mil (0.8 mm), 6" x 50' (150 mm x 15.24 m), 8.5 lbs (3.86 kgs)
Box Size: 2 rolls, 17 lbs (7.7 kgs)

Warranty

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Equipment

Knife, box cutter, or scissors.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product was formally known as Versadex FB by Kingfield Construction Products.

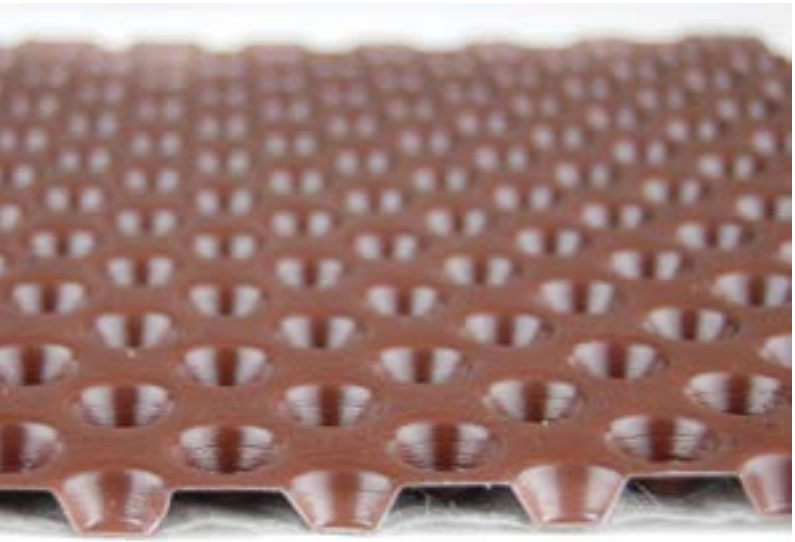
epro | SkrimTape

Typical Physical Properties

Physical Property	Test Method	Value
Geotextile Color		White
Adhesive Color		Gray
Film Thickness	ASTM D 1000	11 Mil
Adhesive Thickness	ASTM D 1000	19 Mil
Composite Thickness	ASTM D 1000	30 Mil
Adhesion to Metal	ASTM D 1000	12 lbf/in
Adhesion to Wood	ASTM D 1000	8 lbf/in
Adhesion to TPO	ASTM D 1000	8 lbf/in
Tensile Strength	ASTM D 1000	15 lbf/in
Elongation	ASTM D 1000	100%
Water Vapor Transmission Rate	ASTM E 96, Method B	<0.005 perms
Water Absorption (adhesive)	ASTM D 570	<0.5%

Dimensions: Roll: 6" x 50' (150 mm x 15.24 m), Box: 6" x 100" (150 mm x 30.48 m)
Weight: Roll: Roll: 8.5 lbs (3.86 kgs, Box: 17 lbs (7.7 kgs)

e.drain



Product Description

Basic Use: e.drain has been specifically designed to meet the drainage and protection requirements of below grade waterproofing applications. E.Series utilizes e.drain in applications for over excavated below grade foundation walls to effectively eliminate the buildup of nuisance water, provide another layer of waterproofing redundancy, and provide protection during backfill. e.drain is also applied to shoring as a base course for e.spray. When concrete is applied, the e.drain and e.spray become integrated into the below grade foundation walls, forming a uniform composite system that directs water away and provides a seamless waterproofing membrane.

Composition: e.drain features a lightweight three-dimensional, highly flexible high density polyethylene (HDPE) core and a polypropylene geotextile filter fabric. The filter fabric is bonded to the dimples of the HDPE core.

Benefits

- High density polyethylene core provides a high level of chemical resistance and performs as a waterproofing barrier
- Unique shallow dimple design allows for a uniform application of e.spray
- For shoring applications, e.drain allows waterproofing to become fully integrated into and bonded to the building foundation wall
- Variable widths (6' and 8') provide minimal overlapping of seams and increase installation efficiency
- Suitable for both cast in place concrete and shotcrete

Limitations

- High risk projects may require more redundancy
- Not ideal in backfill applications greater than 20 feet

Technical Data

Properties: See physical properties table

Coverages: 6' and 8' wide rolls cover 394 and 527 square feet, respectively, not including overlaps or waste

Specification Writer: Contact EPRO before writing specifications on this product. E.Series system assemblies should be reviewed in order to meet project specific site conditions.

Installation

Preparation: Please refer to manufacturer's specifications for substrate requirements. Rolls should be inspected for cosmetic damage prior to application. Substrate must be inspected prior to application to make certain it is in accordance with manufacturer's requirements.

Application: Please refer to manufacturer's specifications. Drainage panels may run horizontally or vertically and must be secured to the wall using manufacturer's approved fasteners and subsequent detailing methods.

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Roll: 6' x 65.7', 60 lbs. or 8' x 65.7', 73 lbs.

Warranty

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Equipment

Secure with shot pins using power-actuated fastener or by hand.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product was formally known as Ecodrain-E.

epro | e.drain

Typical Physical Properties

Physical Property	Test Method	Value
Dimpled Core		
Core		HDPE
Core Material Thickness		30 mil
Color		Brown
Dimple Height	ASTM D1777-96	.31"
Compressive Strength	ASTM D6364-06	5,200 lbs./ft²
Flow rate	ASTM D4716	5.1 gal./min./ft.
Filter Fabric		
Grab Tensile	ASTM D4632-91	130 lbs.
CBR Puncture Resistance	ASTM D6241	40 lbs.
Apparent Operating Size	ASTM D4751-99	70 sieve size (.0212 mm)
Water Flow Rate	ASTM D4491-99	55 gpm/ft²
UV Resistance	ASTM D4355-92	70% (500 hrs)

Dimensions: 6' x 65.7', 8' x 65.7'
Weight: 6' rolls = 60 lbs., 8' rolls = 73 lbs.

e.stop gu

Product Description

Basic Use: e.stop gu is a self-adhering gunnable expanding waterstop paste designed to stop water infiltration through cast-in-place concrete at construction joints and penetrations. It expands upon contact with water to form a positive seal against the concrete. The key to e.stop gu's effectiveness is that it is highly expansive, which seals and fills voids in cracks and concrete, and is easy to apply using caulking equipment.

e.stop gu can be applied over rough and smooth concrete, steel piles, dowels and Nelson Studs, and on iron or PVC pipes.

For shotcrete applications, e.stop gu requires a double layer application with a minimum 1-inch separation.

Composition: e.stop gu is a gray hydrophilic expanding urethane waterstop sealant.

Benefits

- Active swelling waterstop is fully encased in concrete to seal off water ingress.
- Self-adhering over concrete, iron, steel, and PVC.
- Fast and easy installation.
- Conforms to irregular surfaces.
- Seals around pipe penetrations.
- Ideal when pouring against existing concrete.
- High resistance to hydrostatic pressure.

Limitations

- Not an expansion joint sealant.
- It is designed for structural concrete with a minimum of 2,600 psi compressive strength.
- Requires a minimum of 3-inch (75 mm) of concrete coverage depending on the size of the bead used.
- Must be fully cured before concrete pour.
- Not resistant to pre-hydration.

Technical Data

Properties: See physical properties table.

Coverages: Coverage is dependent on the size of application bead. Applied material skins over after two hours and moisture cures in ten hours.

Minimum bead size and estimated linear coverage:

- 1/2" x 1/2": 6'-6" (2 m)
- 3/8" x 3/4": 5'-11" (1.8 m)

Storage and Handling: Store raised off the floor, away from moisture and sun, between 55-80°F (13-27°C).

Shelf Life: 12 months.

Specification Writer: Contact EPRO before writing specifications on this product. EPRO System selection should be reviewed in order to meet project specific site conditions.

Installation

Preparation: Please refer to manufacturer's specifications for substrate requirements. Tubes should be inspected for cosmetic damage prior to application.

Application: Please refer to manufacturer's specifications. Substrate Preparation: Wipe substrates to receive e.stop gu clean to remove any dirt, dust, or moisture. Clean the surface of penetrations or protrusions with a wire brush to remove dirt, dust, rust, and loose particles. Surface must be free of frost or ice. No priming is necessary.

Installation: e.stop gu is used as a waterstop for penetrations, piles, dowels, and all concrete construction joints.

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Tube Size: 10.8 oz (320 ml), 0.68 lbs (0.31 kg)
Case Size: 24 tubes, 16.2 lbs (7.35 kg)

Warranty

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Equipment

Caulking gun (10.8 oz. tube capactiy).

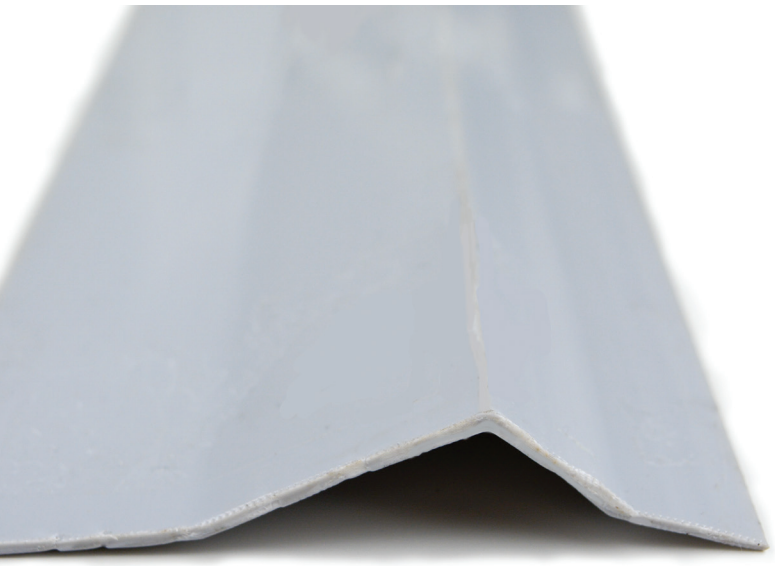
Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product was formally known as SepaSeal SH-100 by Kingfield Construction Products.

Physical Properties	
Hydrostatic Head Resistance	
1/2 x 1/2	100 feet (43 psi / 30.5 m)
3/8 x 3/4	150 feet (65 psi / 46 m)

e.term hd



Product Description

Basic Use: e.term hd is made from flexible, high strength PVC. It provides an excellent solution for top terminations with below-grade waterproofing membranes and drainage boards systems. e.term hd protects the waterproofing top edge and will secure drain panels and protection boards.

Composition: High strength PVC.

Benefits

- Unique design prevents penetration of the membrane system
- Performs as a termination bar and flashing
- Flashing prevents debris from getting behind the prefabricated drainage composite

Limitations

- A sealant bead is required on the top edge of the termination bar

Technical Data

Properties: See physical properties table

Coverages: 8 lineal feet

Specification Writer: Contact EPRO before writing specifications on this product. E.Series system assemblies should be reviewed in order to meet project specific site conditions.

Installation

Surface Preparation: All surfaces shall be prepared in accordance to manufacturer's specifications. Substrate shall be smooth and uniform to allow for consistent fastening and then e.term hd termination bar is achieved.

Application: Install e.term hd at the top edge of material or through waterproofing membrane using 1-1/4" galvanized shot pins and counter flash with drain board. Attach every 1 ft. on center with appropriate mechanical or power actuated fasteners.

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Bar: 8 feet in length and available individually or in bundles of 50

Warranty

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Equipment

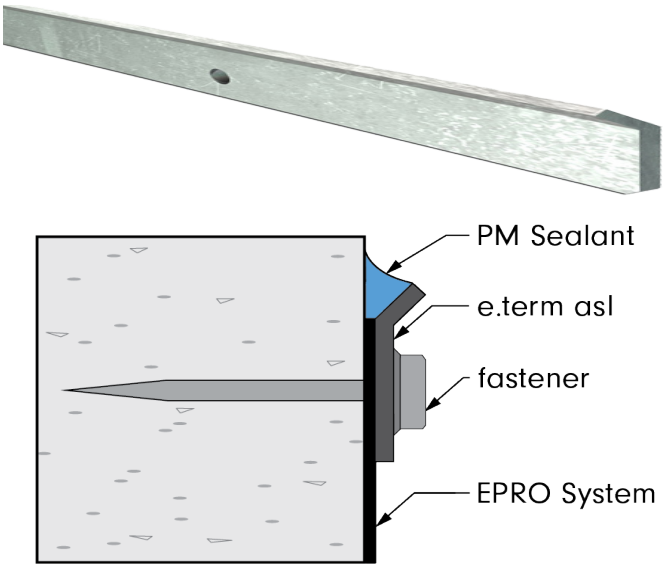
Secure 1-1/4" shot pins using power-actuated fastener or by hand.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product was formally known as Term Bar HD.

e.term asl



Product Description

Basic Use: e.term asl is a 75 mil (1.9 mm) thick termination bar with an angled sealant ledge made from 6063-T6 extruded aluminum with 1/4" x 3/8" slotted holes 6-inches (150 mm) on-center. It provides an excellent solution for top terminations with below-grade waterproofing membranes and vapor barrier systems. e.term asl protects the waterproofing top edge and will secure drain panels and protection boards.

Composition: 75 mil (1.9 mm) thick, 1-inch wide, extruded 6063-T6 aluminum.

Benefits

- Performs as a termination bar.
- Unique design prevents delamination of the waterproofing or vapor barrier membrane system.
- Angled sealant edge secures sealant at termination edge.
- Prevents top edge damage of the covered membrane.

Limitations

- A sealant bead or reinforcement detail is required on the top edge of the termination bar

Technical Data

Coverage: Bar: 10 linear feet (3.1 meters)
Tube: 50 bars, 500 linear feet (152.4 meters)

Storage and Handling: Store raised off the floor away from moisture.

Specification Writer: Contact EPRO before writing specifications on this product. EPRO System selection should be reviewed in order to meet project specific site conditions.

Installation

Surface Preparation: All surfaces shall be prepared in accordance to manufacturer's specifications. Substrate shall be smooth and uniform to allow for consistent fastening.

Application: Install e.term asl at the top edge of material or through waterproofing membrane with the angled sealant ledge facing up and fasten every 12-inches (300 mm) on-center with appropriate mechanical or power actuated fasteners using 1.25" (32 mm) galvanized shot pins or nylon-mushroom cap galvanized nails. Seal top edge of term bar and 1/8" (3 mm) beyond fastener head with PM Sealant or e.roll reinforcement detail.

Warranty

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Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Bar Size: 0.075" x 1" x 10' (1.9 mm x 25 mm x 3.1 m), 1.0 lbs (0.45 kg)
Tube Size: 50 strips, 500 linear feet (152.4 m), 50 lbs (22.7 kg)

Equipment

Fasteners: Galvanized or Stainless-Steel (min. 1.25" | 32 mm)
- Shot pins (mechanical or powder-actuated fastening)
- Nylon-mushroom cap nails (drilled manual fastening)

Sealant:
- PM Sealant - STPE sausage-packaged sealant.
- e.roll - Single-component polymer-modified anionic asphalt emulsion.
- e.poly - Polyester reinforcing fabric.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

e.stop

Product Description

Basic Use: e.stop b is an expanding strip waterstop designed to stop water infiltration through cast-in-place concrete construction joints. It expands upon contact with water to form a positive seal against the concrete. The key to e.stop b's effectiveness is that it is highly expansive, which seals and fills voids in cracks and concrete.

Composition: e.stop b is a moisture activated high sodium bentonite content based waterstop.

Benefits

- Active swelling waterstop is fully encased in concrete to seal off water ingress
- Fast and easy installation
- Seals around pipe penetrations
- Ideal when pouring against existing concrete
- High resistance to hydrostatic pressure

Limitations

- Not a self-adhering product and requires the use of e.stop primer prior to securing waterstop to concrete, metal, or PVC (Pipe) surfaces
- Not designed, nor intended to function as an expansion joint sealant
- It is designed for structural concrete with a minimum of 3,000 psi compressive strength. e.stop b requires a minimum of 3" (75 mm) of concrete coverage.
- Not resistant to pre-hydration

Technical Data

Properties: See physical properties table

Coverages: 16.67" linear feet

Specification Writer: Contact EPRO before writing specifications on this product. E.Series system assemblies should be reviewed in order to meet project specific site conditions.

Installation

Preparation: Surfaces should be clean and dry. Remove all dirt, rocks, rust or other construction debris. Do not install e.stop b in standing water or on an iced substrate. Apply a continuous layer of e.stop primer along the substrate where e.stop b will be installed. Assure proper 3" (75 mm) concrete coverage will be maintained.

Installation: Firmly press the entire length of e.stop b onto the adhesive. For best results apply e.stop b within 30 minutes of adhesive installation. e.stop primer may be applied to damp surfaces, but not in standing water.

At structural and pipe penetrations, cut into strips to fit around the penetration. Apply to adhesive and abut coil ends together. On irregular surfaces such as stone or rough concrete, make sure waterstop remains in direct contact with the substrate along the entire installation. There should not be any air gap between the waterstop and the substrate

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Roll: 16.67' x 3/4" x 1" x per roll, six rolls per case

Warranty

Limited Warranty: EPRO Services, Inc. believes to the best of its knowledge that performance tables are accurate and reliable. EPRO warrants this product to be free from defects. EPRO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. EPRO's liability shall be limited in all events to supplying sufficient product to retreat the specific areas to which defective product has been applied. EPRO shall have no other liability, including liability for incidental or resultant damages, whether due to breach of warranty or negligence. This warranty may not be modified or extended by representatives of EPRO or its distributors.

Equipment

No special equipment is needed.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product was formally known as Eprostop-BP.

epro | e.stop

Typical Physical Properties

Physical Property	Test Method	Value
Hydrostatic Head	Independent	231 ft
Wet/Dry Cycling (25 cycles)	Independent	No Effect
Adhesion to Concrete	Independent	Excellent

Dimensions: 16.67' x 3/4" x 1"

HydroGel

Product Description

Basic Use: HydroGel is a component of the HydroGel hot fluid-applied composite waterproofing assembly developed with Polymer Rubber Gel Technology.

HydroGel is non-slumping, flexible, and does not off-gas or lose film thickness after application. HydroGel maintains a watertight barrier during horizontal and vertical substrate movement, has excellent crack-bridging and crack-sealing capabilities, and eliminates lateral water migration. Ideal for horizontal and vertical applications, HydroGel can be applied over green concrete, as a restoration membrane over previously applied waterproofing systems, and in below freezing weather conditions.

Designed for projects where performance is paramount, HydroGel composite assemblies combine the benefits of a self-healing and structurally responsive monolithic fluid applied waterproofing membrane with EPRO's GFG Series high density polyethylene (HDPE) vapor barrier protection course.

LEED: HydroGel contains over 20% recycled content and is produced in an ecological minimal-impact facility.

Composition: HydroGel is a single-component, 99% solids, and VOC-free polymer rubber gel formulated with asphalt, recycled rubber fibers, and proprietary polymers and resins.

Benefits

- Self-heals damage to membrane.
- Self-seals cracks to prevent lateral water migration.
- No VOCS, no volume loss, and primer-free application.
- Seamless fluid application fully bonds to substrate.
- Composite assembly meets Class A vapor barrier standards.
- Fast installation in all temperatures.
- Designed for new construction and green concrete applications.
- Designed to restoration applications over rough substrates and previously installed waterproofing.

Limitations

- Requires specialized hot melt equipment for application.
- HydroGel must be installed with a protection course.

Technical Data

Properties: See physical properties table.

Coverages: *Per tote based on concrete surface profile (CSP).*
General New Construction (CSP 1-4):
- 100ft^2 @ 90 mil; 75ft^2 @ 120 mil (9.3m^2 @ 2.3mm; 7m^2 @ 3mm)

General Restoration (CSP 5-8):
- 75ft^2 @ 90 mil; 60ft^2 @ 120 mil (9.3m^2 @ 2.3mm; 7m^2 @ 3mm)

Storage and Handling: Store raised off the floor away from sun and moisture, between 40-80°F (5-27°C), maximum 7 boxes high.

Specification Writer: Contact EPRO before writing specifications on this product. HydroGel Polymer Rubber Gel Waterproofing System should be reviewed in order to meet project specific site conditions.

Installation

Preparation: Please refer to manufacturer's specifications for substrate requirements. Totes should be inspected for surface damage prior to application.

Application: Please refer to manufacturer's specifications.
Before application, HydroGel must be melted with a air/oil jacketed heated spray pump (360-390°F | 182-199°C) or air/oil jacketed hot melt kettle (250-340°F | 120-170°C).

Installation of Fluid Membrane:
Spray: Use HydroGel Application Gun to spray a monolithic coat across the substrate, min. of two passes to reach system thickness.
Squeegee: Use a hot melt bucket to pour onto substrate and use spread HydroGel in 3-4 passes to reach system thickness.

Apply SkrimTape reinforcement tape into areas requiring detailing.

Installation of Protection Sheet: Cover fluid applied membrane with GFG Series HDPE protection sheet and tape seams with DuroTape.

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Tote Size: 22"L x 14"W x 6"H (550mm x 350mm x 150mm), 44 lbs (20 kg)

Warranty

Limited Warranty: EPRO Services, Inc. believes to the best of its knowledge that performance tables are accurate and reliable. EPRO warrants this product to be free from defects. EPRO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. EPRO's liability shall be limited in all events to supplying sufficient product to retreat the specific areas to which defective product has been applied. EPRO shall have no other liability, including liability for incidental or resultant damages, whether due to breach of warranty or negligence. This warranty may not be modified or extended by representatives of EPRO or its distributors.

Equipment

Mixing: Air/oil jacketed spray pump or jacketet hot melt kettle.

Application: HydroGel Application Gun, hot melt bucket, notched or smooth squeegee, roller, or metal trowel.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product was previously supplied by Kingfield Construction Products under the same name.

HydroGel

Typical Physical Properties

Physical Property	Test Method	Value
Solids Content	ASTM D 1353	99%
Hardness	ASTM C 836-89	80
Resistance to Decay	ASTM E 154-88	0% moisture permeation and weight change
Peel Adhesion to Concrete	ASTM C 836; C 794	5.8 lbf/in (1015 N/m), Pass
Extensibility after Heat Aging	ASTM C 836; C 1522	1/4" (6.35 mm) No Cracking, Pass
Cold Temperature Crack Bridging	ASTM C 1305	Unaffected at -15°F (-26°C), Pass
Hydrostatic Pressure Resistance (max psi = 45)	ASTM C 1306	> 100 ft (31.64 m, 45 psi) (11 days duration)
Permeance to Water Vapor Transmission	ASTM E 96, Method B	0.016 perms (0.915 ng/(Pa*s*m^2)

Dimensions: 22"L x 14"W x 6"H (550mm x 350mm x 150mm)
Weight: 44 lbs (20 kg)

e.drain 6000

Product Description

Basic Use: e.drain 6000 is applied in negative side applications to blindside shoring walls, in positive side applications to over excavated walls, and over plaza decks. e.drain 6000 prefabricated drainage composite is designed to protect the E.Series system assembly, while effectively eliminating the buildup and ponding of water against the membrane assembly.

Composition: e.drain 6000 features a lightweight three-dimensional, high-compressive strength polypropylene core and bonded non-woven geotextile fabric. The bonded filter fabric allows water to pass freely into the molded drain while preventing soil particles from entering and clogging the core structure.

Benefits

- Provides extremely high compressive strength to meet a wide variety of project conditions
- Polypropylene provides greater chemical resistance than traditional polystyrene
- Maintains flexibility in freezing temperatures

Limitations

- Long-term UV exposure is not recommended

Technical Data

Properties: See physical properties table

Coverages: 6’ x 50’ roll covers 300 square feet; 8’ x 50’ roll covers 400 square feet, not including overlaps or waste

Specification Writer: Contact EPRO before writing specifications on this product. E.Series system assemblies should be reviewed in order to meet project specific site conditions.

Installation

Preparation: Please refer to manufacturer’s specifications for substrate requirements. Rolls should be inspected for cosmetic damage prior to application. Substrate must be inspected prior to application to make certain it is in accordance with manufacturer’s requirements.

Application: Please refer to manufacturer’s specifications. Drainage panels may run horizontally or vertically. In blindside shoring applications, secure e.drain to shoring using 2-inch flat washer fasteners every 24 inches on center on seams and terminations and a minimum of every 48 inches on center in the field.

Availability and Packaging

Contact EPRO sales representative for local distributors or authorized applicators (www.eproinc.com).

Roll: 6' x 50', 8' X 50'

Weight: 6' rolls = 64 lbs, 8' rolls = 81 lbs

Warranty

Limited Warranty: EPRO Services, Inc. believes to the best of its knowledge that performance tables are accurate and reliable. EPRO warrants this product to be free from defects. EPRO makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. EPRO’s liability shall be limited in all events to supplying sufficient product to retreat the specific areas to which defective product has been applied. EPRO shall have no other liability, including liability for incidental or resultant damages, whether due to breach of warranty or negligence. This warranty may not be modified or extended by representatives of EPRO or its distributors.

Equipment

Secure with shot pins using power-actuated fastener or by hand.

Technical Services and Information

Complete technical services and information are available by contacting EPRO at 800.882.1896 or www.eproinc.com.

This product was formally known as Ecodrain-S6000.

e.drain 6000

Typical Physical Properties

Physical Property	Test Method	Value
Dimpled Core		
Core Material		Polypropylene
Color		Black
Dimple Height	ASTM D1777	0.4" (10.16 mm)
Compressive Strength	ASTM D1621	16,500 psf (790 kN/m²)
Flow rate	ASTM D4716	21 gal/min/ft
Filter Fabric		
Grab Tensile	ASTM D4632	100 lbs
CBR Puncture Resistance	ASTM D6241	250 lbs
Apparent Operating Size	ASTM D4751	70 US Sieve (.0212mm)
Water Flow Rate	ASTM D4491	140 gpm/ft² (5704 l/min/m²)
UV Resistance	ASTM D4355	70% (500 hrs)

Dimensions: 6' x 50', 8' X 50'
Weight: 6' rolls = 64 lbs, 8' rolls = 81 lbs

EPRO Services, Inc.
(800) 882-1896
eproinc.com

7/1/20

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): e.drain (formerly ECODRAIN-E), e.drain 6000 (formerly ECODRAIN-S6000), e.drain 6200 (formerly ECODRAIN-S6200), e.drain 9000 (formerly ECODRAIN-S9000), e.drain 990 (formerly ECORAIN-S990), e.drain ds (ECODRAIN-DS)
Product Description: Dimpled HDPE Sheet
Chemical Name: Polyethylene Compounds
Chemical Family: Polyolefin
CAS No: N/A

Supplier:
EPRO Services, Inc.
PO Box 347
Derby, KS 67037
800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

Based on pertinent data available, these products are considered “articles” and are not hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200). GHS Label Elements not required.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not meet the definition given in 29 CFR 1910.1200 for hazardous material and composition is not required.

NO	Components	CAS No.	OSHA PEL
1	Polyethylene	9002-88-4	Not established
2	Polypropylene	9003-07-0	Not established
3	Proprietary	Mixtures	Not established

4. FIRST-AID MEASURES

Inhalation: Not likely in current form
Ingestion: Not likely in current form
Eye Contact: As with any foreign object, flush with water. If pain or irritation persists, consult physician.
Skin Contact: Wash with soap and water. In case of irritation, consult physician.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Dry chemical, carbon dioxide or foam.

Special Fire Fighting Procedures: Wear NIOSH approved, positive pressure, self-contained breathing apparatus (SCBA) and full protective clothing. Extinguish fires with foam or dry chemical. Do not use water jet.
Unusual Fire and Explosion Hazards: Avoid accumulation and dispersion of dust to reduce explosion potential. Fire may produce irritating gases and dense smoke.

6. ACCIDENTAL RELEASE MEASURES

Spill is not applicable. Sold in solid form.

7. HANDLING AND STORAGE

Handling: Wear safety glasses during cutting and fabricating processes. Electrostatic charge may build up during handling. Grounding of equipment is recommended.
Handling: No special handling unless large rolls are used. Use lifting devices, as necessary.
Storage: Store in a dry place and away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Emergency Overview: Practically nontoxic
Primary Route(s) of Exposure: Inhalation, Eye, Skin Contact

Potential Health Effects and Symptoms of Over-Exposure
Negligible hazard at room temperature under normal use.
Eye Contact: Solid flake or dust may cause transient irritation as a result of mechanical abrasion.
Skin Contact: Essentially no irritation to skin. Mechanical injury only. Hot solid may cause thermal burns.
Inhalation: Exposure to dust at high concentration may cause irritation to respiratory tract.
Ingestion: May cause choking if swallowed.
Medical Conditions Aggravated by Overexposure: Not expected. Film is generally accepted as being biologically inert. No specific antidotal treatment, symptomatic support required.
Carcinogenicity: NTP: No IARC: No OSHA: No

Eye Protection: As required by site-specific conditions. Not normally required.
Skin Protection: Gloves required when handling hot material. Not normally required.
Respiratory Protection: None required in normal use of product. NIOSH approved dust mask recommended if dust conditions exist.
Engineering Control: Ventilation Requirements — General
General ventilation should be sufficient. However, if operating conditions create high airborne concentrations of this material, special ventilation may be needed. If handling results in dust generation, special ventilation may be needed to ensure that dust exposure does not exceed the OHSA PEL for nuisance dust.
Required Work/Hygiene Procedure: Minimize contact with skin. Do not eat, drink, or smoke in work area. Wash hands thoroughly after handling, especially before eating drinking, smoking, chewing, or using restroom facility. Dusted clothing and shoes should be thoroughly cleaned before use.
Exposure guidelines

No.	Components	OSHA-PEL	ACGIH-TLV
1	Polyethylene	None	None
2	Polypropylene	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

Flash Point: Greater than 400°
Autoignition: Not applicable
Flammable Limits in Air (LEL, %): Not applicable
(UEL, %): Not applicable
Physical Form: Solid
Color: Black
Odor: Insignificant
Boiling Point: Not applicable
Melting Point: ~ 320°F
Freezing Point: Not applicable
Solubility in Water: None
Specific Gravity: Less than 1 (water = 1)
Vapor Density: Not applicable (air = 1)
Evaporation Rate: None (Butyl acetate = 1)
Vapor Pressure: Not applicable
% Volatile: None
pH: Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable
Conditions to Avoid: Strong oxidizers
Hazardous Decomposition: Carbon dioxide, carbon monoxide
Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

Inhalation: Not likely under normal use
Injection: Not likely under normal use
Ingestion: Not likely under normal use
Skin Contact: Prolonged contact may cause irritation to some individuals

Eye Effects: Not toxic, may irritate eyes
Skin Effects: Not toxic, may irritate skin
Target Organs: None
Chronic: No known health effects from long term use or contact
Carcinogenicity: The IARC evaluation is the "Carbon black (airborne, unbound particles of respirable size) is possibly carcinogenic to humans (Group 2B)"
Mutagenicity & Reproductive Effects: Not believed to be mutagenic or a reproductive hazard
The information provided below can be subject to misinterpretation. Therefore, it is essential the following information be interpreted by individuals trained in its evaluation.

Chemical
Polyethylene and Polypropylene: No toxicology data available.
Polyethylene and polypropylene are not considered hazardous materials under the OHSA Hazard Communication Standard

12. ECOLOGICAL INFORMATION

Environmental Data: Not expected to be hazardous to the environment in present form.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Federal, State, and local environmental control regulations.

14. TRANSPORT INFORMATION

DOT Shipping Name: Not listed
DOT Label: Not regulated
DOT Hazard Class: Not applicable
UN/NA Number: Not applicable
Hazard Label(s): Not applicable
Hazard Placard(s): Not applicable
Packing Group: Not applicable
Bulk Packaging: Not applicable
RQ: Not applicable
Emergency Response Guide (ERG) No.: Not applicable

15. REGULATORY INFORMATION

FEDERAL REGULATORY INFORMATION – Polyethylene, Polypropylene
OSHA Status: None
EPA Clean Air Act Status: None
EPA Clean Water Act Status: None
TSCA Status: All ingredients are listed on TSCA Inventory (40 CFR710)
CERCLA RQ: None
USA TSCA: This product is considered an article and is exempt from TSCA requirements.
Canada Domestic Substances List (DSL): This product is not specified on the DSL or NDSL.

SARA Title III Polyethylene, Polypropylene

Section 302*	Section 313**	Section 311/312***
None	None	None

*Reportable quantity of extremely hazardous substance, Sec. 302
*Threshold planning quantity, extremely hazardous substance, Sec. 302
**Toxic chemical. Sec. 313
**Category as required by Sec 313 (40CFR372.65C). Must be used on Toxic Release Inventory form.
***Hazard category for SARA Sec311/312 reporting H1=acute health hazard, H2=chronic health hazard, P3=fire hazard, P4 sudden release of pressure hazard, P5=reactive hazard

California Proposition 65: Carbon Black (airborne, unbound particles of respirable size), CAS# 1333-86-4 is listed as a possible carcinogen.

Canada Regulations (WHMIS): Not listed

RCRA Status: If disposed of in its purchased form, this would not be a RCRA hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product used to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste (40CFR261.20-24).

OTHER REGULATORY INFORMATION

The following chemicals are specifically listed by individual states; other product-specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

State	Chemical	Regulation
None	Polyethylene	None
None	Polypropylene	None

International

None

16. OTHER INFORMATION

NFPA	HMIS
Fire—1	Health - 0
Health—0	Flammability - 1
Reactivity—0	Reactivity - 0
Specific Hazard—None	Personal Protection Index - E

This information provided on this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designated only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

EPRO Services, Inc.
(800) 882-1896
eproinc.com

7/1/20

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): GFG 20X, e.base 216 (formerly Ecoshield P16), e.base 205 (formerly ECOSHIELD P), e.shield 205 (formerly ECOSHIELD PP)
Product Description: Film
Chemical Name: Polyethylene Compounds
Chemical Family: Polyolefin
CAS No: N/A

Supplier:
EPRO Services, Inc.
PO Box 347
Derby, KS 67037
800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

Physical Appearance: Natural translucent or in various colors.
Immediate Concerns: When using or handling as supplied there are very low hazards.
OSHA Hazard Category: Combustible dust.
GHS Hazard Categories: Not classified.
Signal Word: Warning! This product as shipped is not classified as a combustible dust; however, a combustible concentration of dust may occur if fine powders accumulated or suspended in an enclosed or confined area (e.g. from cutting or sanding the films.
Pictogram: There is no pictogram for a combustible dust hazard.
Rough edges of films could result in minor cuts to hands. Appropriate gloves should be worn to prevent cuts and/or scraps. Avoid contact with strong oxidizing agents. When working with film at hot temperatures, the material may begin to decompose producing fumes that can contain carbon dioxide, carbon monoxide, and other unidentified organic compounds that come from the breakdown of the materials used to make the films. Adequate ventilation should be provided to minimize exposures to vapors and fumes. When cutting, shaping, or modifying films, other hazards may exist.
Potential Health Effects

Eyes: Dust from cutting may result and mechanically irritate the eyes. If using elevated temperatures, vapors may irritate eyes.

Skin: Cuts or scraps referenced above. If using elevated temperatures to soften films exposure to molten resin may cause thermal burns.

Ingestion: May cause choking if swallowed.

Inhalation: Inhalation of dust at high concentration may cause irritation of the respiratory system. Inhalation of vapors from use of elevated temperatures may also cause irritation of the respiratory system.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The primary composition of this product is polyethylene. This product contains a proprietary blend of components encapsulated with a polymer matrix.

NO	Components	CAS No.	Wt. Percent
1	Polyethylene	9002-88-4	40-80
2	Polypropylene	9003-07-0	15-50
3	Proprietary	Mixtures	0-30

4. FIRST-AID MEASURES

The following applies if films are cut, sanded, or otherwise processed which generates dust, debris, or vapors.
Eye Contact: Immediately flush eyes with water for at least 15 minutes. Do not rub the eyes. If irritation or other symptoms occur, consult a physician.
Skin Contact: Get medical attention for serious burns. In case of skin contact with hot product immediately immerse in or flush with clean, cold water.
Inhalation: Remove to fresh air. Consult physician if irritation of respiratory passage occurs.
Ingestion: Consult physician.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Dry chemical, carbon dioxide or foam.
Hazardous Combustion Products: Carbon monoxide, carbon dioxide, and other possible toxic combustion products.
Explosion Hazard: Avoid generating dust, fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Special Fire Fighting Equipment: Wear NIOSH approved, positive pressure, self-contained breathing apparatus (SCBA) and full protective clothing.
Sensitive to Static Discharge: Static discharge could be an ignition source for a combustible concentration of dust.

6. ACCIDENTAL RELEASE MEASURES

As supplied, the product presents no risk of spill or release.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Wear safety glasses during cutting and fabricating processes. Electrostatic charge may build up during handling. Grounding of equipment is recommended.
Handling: If product is cut or sanded, avoid exposure to dust and debris. Provide appropriate local ventilation at machinery and at places where dust can be generated. In addition, wear suitable respiratory equipment to avoid breathing dusts containing titanium dioxide and/or carbon black.
Storage: Store in a dry place and away from direct sunlight. Keep away from heat, flame, and strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: Not applicable.

Engineering Controls: Ventilation Requirements—General ventilation should be sufficient. However, if operating conditions create high airborne concentrations of this material, special ventilation may be needed. If handling results in dust generation, special ventilation may be needed to ensure that dust exposure does not exceed the OSHA PEL for nuisance dust.

Personal Protective Equipment
Respiratory Protection: Not required in normal use of product. NIOSH approved dust mask recommended if dust conditions exist.
Eye Protection: When cutting or processing product, wear safety glasses with side shields.
Body Protection: Wear protective gloves to avoid incidental cuts or scraps that could occur when handling the edges of product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Solid
Specific Gravity: 0.7 – 1.2 (water = 1)
Appearance: Solid film
Odor: Insignificant
Solubility in Water: Insoluble
Melting Point: 120 - 170°C
Flash Point: Not applicable
Autoignition: Not applicable

Physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Stability: Stable
Conditions to Avoid: Do not store product near heat or flame. When cutting or sanding, minimize dust generation and accumulation. Avoid contact with strong oxidizing agents.
Hazardous Decomposition: No dangerous decomposition products known.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Skin Irritation: Not expected to cause skin irritation.
Eye Irritation: Mechanical eye irritation.
Sensitization/Allergic Reaction: No sensitizing effects known.
Repeated dose toxicity: No known chronic health effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data is available on the adverse effects of this product on the environment.
Persistence and Degradability: No data available.
Bioaccumulative Potential: No data available.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Federal, State, and local environmental control regulations.

14. TRANSPORT INFORMATION

This product is not regulated as a hazardous material/dangerous good for transportation. This product is not regulated by US DOT, IMO, and IATA. It is not applicable for UN/NA number, hazard label, hazard placard, packing group, bulk packaging, RQ, and emergency response guide (ERG) number.

15. REGULATORY INFORMATION

United States

US Toxic Substances Control Act (TSCA): All components comprising these products are compliant with TSCA. These products have no special requirements under TSCA (e.g. consent orders, test rules, 12(b) requirements, etc.)

OSHA Hazard Communication Rule: This product is not considered a hazardous material as shipped or at temperatures below the melting point according to OSHA definitions.

SARA Title III: This product is not subject to SARA Title III requirements.

SARA Section 302 Toxic Chemical List: No components listed.

SARA Section 3313 Toxic Chemical List: No components listed.

OTHER REGULATORY INFORMATION

The following chemicals are specifically listed by individual states; other product-specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

State	Chemical	Regulation
None	Polyethylene	None

International

None

16. OTHER INFORMATION

HMIS

Health: 0

Flammability: 1

Physical Hazard: 0

This information provided on this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designated only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

EPRO Services, Inc.
(800) 882-1896
eproinc.com

7/1/20

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): e.drain (formerly ECODRAIN-E), e.drain 6000 (formerly ECODRAIN-S6000), e.drain 6200 (formerly ECODRAIN-S6200), e.drain 9000 (formerly ECODRAIN-S9000), e.drain 990 (formerly ECORAIN-S990), e.drain ds (ECODRAIN-DS)
Product Description: Dimpled HDPE Sheet
Chemical Name: Polyethylene Compounds
Chemical Family: Polyolefin
CAS No: N/A

Supplier:
EPRO Services, Inc.
PO Box 347
Derby, KS 67037
800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

Based on pertinent data available, these products are considered “articles” and are not hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200). GHS Label Elements not required.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not meet the definition given in 29 CFR 1910.1200 for hazardous material and composition is not required.

NO	Components	CAS No.	OSHA PEL
1	Polyethylene	9002-88-4	Not established
2	Polypropylene	9003-07-0	Not established
3	Proprietary	Mixtures	Not established

4. FIRST-AID MEASURES

Inhalation: Not likely in current form
Ingestion: Not likely in current form
Eye Contact: As with any foreign object, flush with water. If pain or irritation persists, consult physician.
Skin Contact: Wash with soap and water. In case of irritation, consult physician.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Dry chemical, carbon dioxide or foam.

Special Fire Fighting Procedures: Wear NIOSH approved, positive pressure, self-contained breathing apparatus (SCBA) and full protective clothing. Extinguish fires with foam or dry chemical. Do not use water jet.
Unusual Fire and Explosion Hazards: Avoid accumulation and dispersion of dust to reduce explosion potential. Fire may produce irritating gases and dense smoke.

6. ACCIDENTAL RELEASE MEASURES

Spill is not applicable. Sold in solid form.

7. HANDLING AND STORAGE

Handling: Wear safety glasses during cutting and fabricating processes. Electrostatic charge may build up during handling. Grounding of equipment is recommended.
Handling: No special handling unless large rolls are used. Use lifting devices, as necessary.
Storage: Store in a dry place and away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Emergency Overview: Practically nontoxic
Primary Route(s) of Exposure: Inhalation, Eye, Skin Contact

Potential Health Effects and Symptoms of Over-Exposure
Negligible hazard at room temperature under normal use.
Eye Contact: Solid flake or dust may cause transient irritation as a result of mechanical abrasion.
Skin Contact: Essentially no irritation to skin. Mechanical injury only. Hot solid may cause thermal burns.
Inhalation: Exposure to dust at high concentration may cause irritation to respiratory tract.
Ingestion: May cause choking if swallowed.
Medical Conditions Aggravated by Overexposure: Not expected. Film is generally accepted as being biologically inert. No specific antidotal treatment, symptomatic support required.
Carcinogenicity: NTP: No IARC: No OSHA: No

Eye Protection: As required by site-specific conditions. Not normally required.
Skin Protection: Gloves required when handling hot material. Not normally required.
Respiratory Protection: None required in normal use of product. NIOSH approved dust mask recommended if dust conditions exist.
Engineering Control: Ventilation Requirements — General
General ventilation should be sufficient. However, if operating conditions create high airborne concentrations of this material, special ventilation may be needed. If handling results in dust generation, special ventilation may be needed to ensure that dust exposure does not exceed the OHSA PEL for nuisance dust.
Required Work/Hygiene Procedure: Minimize contact with skin. Do not eat, drink, or smoke in work area. Wash hands thoroughly after handling, especially before eating drinking, smoking, chewing, or using restroom facility. Dusted clothing and shoes should be thoroughly cleaned before use.
Exposure guidelines

No.	Components	OSHA-PEL	ACGIH-TLV
1	Polyethylene	None	None
2	Polypropylene	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

Flash Point: Greater than 400°
Autoignition: Not applicable
Flammable Limits in Air (LEL, %): Not applicable
(UEL, %): Not applicable
Physical Form: Solid
Color: Black
Odor: Insignificant
Boiling Point: Not applicable
Melting Point: ~ 320°F
Freezing Point: Not applicable
Solubility in Water: None
Specific Gravity: Less than 1 (water = 1)
Vapor Density: Not applicable (air = 1)
Evaporation Rate: None (Butyl acetate = 1)
Vapor Pressure: Not applicable
% Volatile: None
pH: Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable
Conditions to Avoid: Strong oxidizers
Hazardous Decomposition: Carbon dioxide, carbon monoxide
Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

Inhalation: Not likely under normal use
Injection: Not likely under normal use
Ingestion: Not likely under normal use
Skin Contact: Prolonged contact may cause irritation to some individuals

Eye Effects: Not toxic, may irritate eyes
Skin Effects: Not toxic, may irritate skin
Target Organs: None
Chronic: No known health effects from long term use or contact
Carcinogenicity: The IARC evaluation is the "Carbon black (airborne, unbound particles of respirable size) is possibly carcinogenic to humans (Group 2B)"
Mutagenicity & Reproductive Effects: Not believed to be mutagenic or a reproductive hazard
The information provided below can be subject to misinterpretation. Therefore, it is essential the following information be interpreted by individuals trained in its evaluation.

Chemical
Polyethylene and Polypropylene: No toxicology data available.
Polyethylene and polypropylene are not considered hazardous materials under the OHSA Hazard Communication Standard

12. ECOLOGICAL INFORMATION

Environmental Data: Not expected to be hazardous to the environment in present form.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Federal, State, and local environmental control regulations.

14. TRANSPORT INFORMATION

DOT Shipping Name: Not listed
DOT Label: Not regulated
DOT Hazard Class: Not applicable
UN/NA Number: Not applicable
Hazard Label(s): Not applicable
Hazard Placard(s): Not applicable
Packing Group: Not applicable
Bulk Packaging: Not applicable
RQ: Not applicable
Emergency Response Guide (ERG) No.: Not applicable

15. REGULATORY INFORMATION

FEDERAL REGULATORY INFORMATION – Polyethylene, Polypropylene
OSHA Status: None
EPA Clean Air Act Status: None
EPA Clean Water Act Status: None
TSCA Status: All ingredients are listed on TSCA Inventory (40 CFR710)
CERCLA RQ: None
USA TSCA: This product is considered an article and is exempt from TSCA requirements.
Canada Domestic Substances List (DSL): This product is not specified on the DSL or NDSL.

SARA Title III Polyethylene, Polypropylene

Section 302*	Section 313**	Section 311/312***
None	None	None

*Reportable quantity of extremely hazardous substance, Sec. 302
*Threshold planning quantity, extremely hazardous substance, Sec. 302
**Toxic chemical. Sec. 313
**Category as required by Sec 313 (40CFR372.65C). Must be used on Toxic Release Inventory form.
***Hazard category for SARA Sec311/312 reporting H1=acute health hazard, H2=chronic health hazard, P3=fire hazard, P4 sudden release of pressure hazard, P5=reactive hazard

California Proposition 65: Carbon Black (airborne, unbound particles of respirable size), CAS# 1333-86-4 is listed as a possible carcinogen.

Canada Regulations (WHMIS): Not listed

RCRA Status: If disposed of in its purchased form, this would not be a RCRA hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product used to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste (40CFR261.20-24).

OTHER REGULATORY INFORMATION

The following chemicals are specifically listed by individual states; other product-specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

State	Chemical	Regulation
None	Polyethylene	None
None	Polypropylene	None

International

None

16. OTHER INFORMATION

NFPA	HMIS
Fire—1	Health - 0
Health—0	Flammability - 1
Reactivity—0	Reactivity - 0
Specific Hazard—None	Personal Protection Index - E

This information provided on this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designated only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

EPRO Services, Inc.
(800) 882-1896
eproinc.com

7/1/20

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): White Tape
Product Description: Adhesion tape
Synonyms: N/A
CAS No: N/A

Supplier:
EPRO Services, Inc.
PO Box 347
Derby, KS 67037
800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

The product listed is considered an article as defined in 29 CFR 1910.1200 Section C. "Article means a manufactured item other than a fluid or particle: (1) which is formed to a specific shape or design during manufacture; (2) which has end use functions dependent in whole or in part upon its shape or design during end use; and (3) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical, and does not pose a physical hazard or health risk to employees."

Therefore, this product is not regulated, and an SDS is not required for this product by the referred standard because, when used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, use or processing of this product not in accordance with the product's recommendations, or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

3. COMPOSITION/INFORMATION ON INGREDIENTS

4. FIRST-AID MEASURES

5. FIRE-FIGHTING MEASURES

6. ACCIDENTAL RELEASE MEASURES

7. HANDLING AND STORAGE

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

9. PHYSICAL AND CHEMICAL PROPERTIES

10. STABILITY AND REACTIVITY

11. TOXICOLOGICAL INFORMATION

12. ECOLOGICAL INFORMATION (non-mandatory)

13. DISPOSAL CONSIDERATIONS (non-mandatory)

14. TRANSPORT INFORMATION (non-mandatory)

15. REGULATORY INFORMATION (non-mandatory)

16. OTHER INFORMATION

This information provided on this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designated only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

EPRO Services, Inc.
(800) 882-1896
eproinc.com

7/1/20

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): e.drain (formerly ECODRAIN-E), e.drain 6000 (formerly ECODRAIN-S6000), e.drain 6200 (formerly ECODRAIN-S6200), e.drain 9000 (formerly ECODRAIN-S9000), e.drain 990 (formerly ECORAIN-S990), e.drain ds (ECODRAIN-DS)
Product Description: Dimpled HDPE Sheet
Chemical Name: Polyethylene Compounds
Chemical Family: Polyolefin
CAS No: N/A

Supplier:
EPRO Services, Inc.
PO Box 347
Derby, KS 67037
800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

Based on pertinent data available, these products are considered “articles” and are not hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200). GHS Label Elements not required.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not meet the definition given in 29 CFR 1910.1200 for hazardous material and composition is not required.

NO	Components	CAS No.	OSHA PEL
1	Polyethylene	9002-88-4	Not established
2	Polypropylene	9003-07-0	Not established
3	Proprietary	Mixtures	Not established

4. FIRST-AID MEASURES

Inhalation: Not likely in current form
Ingestion: Not likely in current form
Eye Contact: As with any foreign object, flush with water. If pain or irritation persists, consult physician.
Skin Contact: Wash with soap and water. In case of irritation, consult physician.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Dry chemical, carbon dioxide or foam.

Special Fire Fighting Procedures: Wear NIOSH approved, positive pressure, self-contained breathing apparatus (SCBA) and full protective clothing. Extinguish fires with foam or dry chemical. Do not use water jet.
Unusual Fire and Explosion Hazards: Avoid accumulation and dispersion of dust to reduce explosion potential. Fire may produce irritating gases and dense smoke.

6. ACCIDENTAL RELEASE MEASURES

Spill is not applicable. Sold in solid form.

7. HANDLING AND STORAGE

Handling: Wear safety glasses during cutting and fabricating processes. Electrostatic charge may build up during handling. Grounding of equipment is recommended.
Handling: No special handling unless large rolls are used. Use lifting devices, as necessary.
Storage: Store in a dry place and away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Emergency Overview: Practically nontoxic
Primary Route(s) of Exposure: Inhalation, Eye, Skin Contact

Potential Health Effects and Symptoms of Over-Exposure
Negligible hazard at room temperature under normal use.
Eye Contact: Solid flake or dust may cause transient irritation as a result of mechanical abrasion.
Skin Contact: Essentially no irritation to skin. Mechanical injury only. Hot solid may cause thermal burns.
Inhalation: Exposure to dust at high concentration may cause irritation to respiratory tract.
Ingestion: May cause choking if swallowed.
Medical Conditions Aggravated by Overexposure: Not expected. Film is generally accepted as being biologically inert. No specific antidotal treatment, symptomatic support required.
Carcinogenicity: NTP: No IARC: No OSHA: No

Eye Protection: As required by site-specific conditions. Not normally required.
Skin Protection: Gloves required when handling hot material. Not normally required.
Respiratory Protection: None required in normal use of product. NIOSH approved dust mask recommended if dust conditions exist.
Engineering Control: Ventilation Requirements — General
General ventilation should be sufficient. However, if operating conditions create high airborne concentrations of this material, special ventilation may be needed. If handling results in dust generation, special ventilation may be needed to ensure that dust exposure does not exceed the OHSA PEL for nuisance dust.
Required Work/Hygiene Procedure: Minimize contact with skin. Do not eat, drink, or smoke in work area. Wash hands thoroughly after handling, especially before eating drinking, smoking, chewing, or using restroom facility. Dusted clothing and shoes should be thoroughly cleaned before use.
Exposure guidelines

No.	Components	OSHA-PEL	ACGIH-TLV
1	Polyethylene	None	None
2	Polypropylene	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

Flash Point: Greater than 400°
Autoignition: Not applicable
Flammable Limits in Air (LEL, %): Not applicable
(UEL, %): Not applicable
Physical Form: Solid
Color: Black
Odor: Insignificant
Boiling Point: Not applicable
Melting Point: ~ 320°F
Freezing Point: Not applicable
Solubility in Water: None
Specific Gravity: Less than 1 (water = 1)
Vapor Density: Not applicable (air = 1)
Evaporation Rate: None (Butyl acetate = 1)
Vapor Pressure: Not applicable
% Volatile: None
pH: Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable
Conditions to Avoid: Strong oxidizers
Hazardous Decomposition: Carbon dioxide, carbon monoxide
Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

Inhalation: Not likely under normal use
Injection: Not likely under normal use
Ingestion: Not likely under normal use
Skin Contact: Prolonged contact may cause irritation to some individuals

Eye Effects: Not toxic, may irritate eyes
Skin Effects: Not toxic, may irritate skin
Target Organs: None
Chronic: No known health effects from long term use or contact
Carcinogenicity: The IARC evaluation is the "Carbon black (airborne, unbound particles of respirable size) is possibly carcinogenic to humans (Group 2B)"
Mutagenicity & Reproductive Effects: Not believed to be mutagenic or a reproductive hazard
The information provided below can be subject to misinterpretation. Therefore, it is essential the following information be interpreted by individuals trained in its evaluation.

Chemical
Polyethylene and Polypropylene: No toxicology data available.
Polyethylene and polypropylene are not considered hazardous materials under the OHSA Hazard Communication Standard

12. ECOLOGICAL INFORMATION

Environmental Data: Not expected to be hazardous to the environment in present form.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Federal, State, and local environmental control regulations.

14. TRANSPORT INFORMATION

DOT Shipping Name: Not listed
DOT Label: Not regulated
DOT Hazard Class: Not applicable
UN/NA Number: Not applicable
Hazard Label(s): Not applicable
Hazard Placard(s): Not applicable
Packing Group: Not applicable
Bulk Packaging: Not applicable
RQ: Not applicable
Emergency Response Guide (ERG) No.: Not applicable

15. REGULATORY INFORMATION

FEDERAL REGULATORY INFORMATION – Polyethylene, Polypropylene
OSHA Status: None
EPA Clean Air Act Status: None
EPA Clean Water Act Status: None
TSCA Status: All ingredients are listed on TSCA Inventory (40 CFR710)
CERCLA RQ: None
USA TSCA: This product is considered an article and is exempt from TSCA requirements.
Canada Domestic Substances List (DSL): This product is not specified on the DSL or NDSL.

SARA Title III Polyethylene, Polypropylene

Section 302*	Section 313**	Section 311/312***
None	None	None

*Reportable quantity of extremely hazardous substance, Sec. 302
*Threshold planning quantity, extremely hazardous substance, Sec. 302
**Toxic chemical. Sec. 313
**Category as required by Sec 313 (40CFR372.65C). Must be used on Toxic Release Inventory form.
***Hazard category for SARA Sec311/312 reporting H1=acute health hazard, H2=chronic health hazard, P3=fire hazard, P4 sudden release of pressure hazard, P5=reactive hazard

California Proposition 65: Carbon Black (airborne, unbound particles of respirable size), CAS# 1333-86-4 is listed as a possible carcinogen.

Canada Regulations (WHMIS): Not listed

RCRA Status: If disposed of in its purchased form, this would not be a RCRA hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product used to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste (40CFR261.20-24).

OTHER REGULATORY INFORMATION

The following chemicals are specifically listed by individual states; other product-specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

State	Chemical	Regulation
None	Polyethylene	None
None	Polypropylene	None

International

None

16. OTHER INFORMATION

NFPA	HMIS
Fire—1	Health - 0
Health—0	Flammability - 1
Reactivity—0	Reactivity - 0
Specific Hazard—None	Personal Protection Index - E

This information provided on this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designated only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

EPRO Services, Inc.
(800) 882-1896
eproinc.com

7/1/20

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): SkrimTape
Product Description: Fabric tape
Synonyms: N/A
CAS No: N/A

Supplier:
EPRO Services, Inc.
PO Box 347
Derby, KS 67037
800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

Physical hazards: Not classified.
Health hazards: Carcinogenicity (Category 2).
Environmental hazards: Not classified.
OSHA defined hazards: Not classified
Label elements
Hazard symbol: None
Signal word: None
Hazard statement: The mixture does not meet the criteria for classification.
Precautionary statement
Prevention: Observe good industrial hygiene practices.
Response: Wash hands after handling.
Storage: Store away from incompatible materials.
Disposal: Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC): None known.
Supplemental Information: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Chemical name	**CAS number**	**%**
Talc (powder)	14807-96-6	10 - < 20
Other components below reportable levels*		80 - < 90

*Designates that a specific chemical identity and/or % of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

Inhalation: Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact: Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact: Rinse with water. Get medical attention if irritation develops and persist.
Ingestion: Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effect, acute, and delayed: Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed: Treat symptomatically.
General information: Ensure that medical personnel are aware of the materials involved and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water fog, foam, dry chemical powder, carbon dioxide (CO2).
Unsuitable extinguishing media: Do not use water jet as an extinguisher as this will spread fire.
Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions: Use water spray to cool unopened containers.
Specific methods: Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards: No unusual fire or explosion hazards noted.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up: Stop the flow of material if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities: Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits
US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Talc (powder)	TWA	0.3 mg/m3	Total dust
(CAS 14807-96-6)		0.1 mg/m3	Respirable
		20 mppcf	
		2.4 mppcf	Respirable

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Talc (powder) (CAS 14807-96-6)	TWA	2 mg/m3	Respirable fraction

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Talc (powder) (CAS 14807-96-6)	TWA	2 mg/m3	Respirable

Biological limit values: No biological exposure limits noted for the ingredients.
Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment
Eye/face protection: Wear safety glasses with side shields (or goggles).
Skin protection: Wear appropriate chemical resistant gloves. Wear suitable protective clothing.
Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards: Wear appropriate thermal protective clothing when necessary.
General hygiene: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid
Color: various file, gray adhesive
Odor threshold: Not available
Melting/freezing point: Not available
Flash point: >428.0°F (>220.0°C)
Flammability (solid, gas): Not available
Flammability limit – upper %: Not available
Explosive limit – upper %: Not available
Vapor density: Not available
Solubility in water: Not available
Auto-ignition temperature: >842°F (>450°C)
Viscosity: Not available
Specific gravity: 1.04 estimated

Form: solid, roll, or sheet
Odor: Characteristic
pH: Not available
Initial boiling point and range: Not available
Evaporation rate: Not available
Flammability limit – lower %: Not available
Explosive limit – lower %: Not available
Vapor pressure: Not available
Relative density: Not available
Partition coefficient (n-octanol/water): Not available
Decomposition temperature: Not available
Density: 1.04 g/cm3 estimated
VOC (Weight %): 0 g/l

10. STABILITY AND REACTIVITY

Reactivity: The product is stable and non-reactive under normal conditions of use, storage, and transport.
Chemical stability: Material is stable under normal conditions.
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.
Conditions to avoid: Avoid temperatures exceeding flash point or contact with incompatible materials.
Incompatible materials: Strong oxidizing agents.
Hazardous decomposition products: No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation: Prolonged inhalation may be harmful.

Skin contact: No adverse effects due to skin contact are expected.

Eye contact: Direct contact with eyes may cause temporary irritation.

Ingestion: Expected to be a ow ingestion hazard.

Symptoms related to the physical, chemical, and toxicological characteristics: Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity: Not available.

Skin corrosion/irritation: Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation: Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization: Not available.

Skin sensitization: This product is not expected to cause skin sensitization.

Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Talc (powder) (CAS 14807-96-6)	2B Possibly carcinogenic to humans.
	3 Not classifiable as to carcinogenicity to humans

OSHA Specifically Regulated Substances (29 CFR 1910.100-1050): Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens: Not listed.

Reproductive toxicity: This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity – single exposure: Not classified.

Specific target organ toxicity – repeated exposure: Not classified.

Aspiration hazard: Not available.

Chronic effects: Prolonged inhalation may be harmful.

12. ECOLOGICAL INFORMATION (non-mandatory)

Ecotoxicity: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability: No data is available on the degradability of this product.

Bioaccumulative potential: Not available.

Mobility in soil: No data available.

Other adverse effects: No other adverse environmental effect (e.g. ozone depletion, photochemical ozone reaction potential, endocrine disruption, global warming potential) are expected from this component.

13. DISPOSAL CONSIDERATIONS (non-mandatory)

Disposal instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations: Dispose in accordance with all applicable regulations.

Hazardous waste code: Waste code should be assigned in discussion between user, producer, and waste disposal company.

Waste from residues / unused products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container mut be disposed of in a safe manner.
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow warning even after container is emptied.

14. TRANSPORT INFORMATION (non-mandatory)

DOT: Not regulated as dangerous goods.
IATA: Not regulated as dangerous goods.
IMDG: Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

15. REGULATORY INFORMATION (non-mandatory)

US federal regulations: All components are on the U.S. EPA TSCA Inventory List. This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.
CERLA Hazardous Substance List (40 CFR 302.4): Not listed.
SARA 304 Emergency release notification: Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not regulated.

Superfund Amendment and Reauthorization Act of 1986 (SARA)

Hazard categories: Immediate Hazard – No
Delayed Hazard – Yes
Fire Hazard – No
Pressure Hazard – No
Reactivity Hazard – No

SARA 302 Extremely hazardous substance: Not listed.
SARA 311/312 Hazardous chemical: No
SARA 313 (TRI reporting): Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated.
Safe Drinking Water Act (SDWA): Not regulated.

US state regulations

US California Controlled Substances-CA Dept of Justice (CA Health and Safety Code Section 11100): Not listed.
US California Candidate Chemicals List-Safer Consumer Products Regulations (CA Code Regs, tit. 22, 69502.3, Subd. (a)): Talc (powder) (CAS 14807-96-6)
US Massachusetts RTK – Substance List: Talc (powder) (CAS 14807-96-6)
US New Jersey Worker and Community Right-to-Know Act: Talc (powder) (CAS 14807-96-6)
US Pennsylvania Worker and Community Right-to-Know Law: Talc (powder) (CAS 14807-96-6)
US Rhode Island RTK: Not regulated
US California Proposition 65: Titanium Dioxide is listed due to it respirable nature in power form. As supplied and applied the titanium dioxide I bound within the product matrix and is not expected to be in a respirable form. WARNING: This product contains a chemical known to the State of California to cause cancer.
US California Proposition 65 – CRT: Listed date/Carcinogenic substance
TITANIUM DIOXIDE (CAS 13463-67-7) Listed: September 2, 2011

International Inventories

Country or region	Inventory Name	On Inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Exiting Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Exiting and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
US & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*"Yes" indicates that all components of this product comply with the inventory requirements by the governing countries. "no" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country.

16. OTHER INFORMATION

This information provided on this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designated only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

EPRO Services, Inc.
(800) 882-1896
eproinc.com

7/1/20

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): GFG 16, e.shield 311 (formerly Ecoshield H11), e.base 316 (formerly Ecoshield H16), e.base 305 (formerly Ecoshield H)
Product Description: Film
Chemical Name: Polyethylene Compounds
Chemical Family: Polyolefin
CAS No: N/A

Supplier:
EPRO Services, Inc.
PO Box 347
Derby, KS 67037
800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

Physical Appearance: Firms that are natural translucent or in various colors.
Immediate Concerns: When using or handling as supplied there are very low hazards.
OSHA Hazard Category: Combustible dust.
GHS Hazard Categories: Not classified.
Signal Word: Warning! This product as shipped is not classified as a combustible dust; however, a combustible concentration of dust may occur if fine powders accumulated or suspended in an enclosed or confined area (e.g. from cutting or sanding the films.
Pictogram: There is no pictogram for a combustible dust hazard.
Rough edges of films could result in minor cuts to hands. Appropriate gloves should be worn to prevent cuts and/or scraps. Avoid contact with strong oxidizing agents. When working with film at hot temperatures, the material may begin to decompose producing fumes that can contain carbon dioxide, carbon monoxide, and other unidentified organic compounds that come from the breakdown of the materials used to make the films. Adequate ventilation should be provided to minimize exposures to vapors and fumes. When cutting, shaping, or modifying films, other hazards may exist.

Potential Health Effects

Eyes: Dust from cutting may result and mechanically irritate the eyes. If using elevated temperatures, vapors may irritate eyes.

Skin: Cuts or scraps referenced above. If using elevated temperatures to soften films exposure to molten resin may cause thermal burns.

Ingestion: May cause choking if swallowed.

Inhalation: Inhalation of dust at high concentration may cause irritation of the respiratory system. Inhalation of vapors from use of elevated temperatures may also cause irritation of the respiratory system.

3. COMPOSITION/INFORMATION ON INGREDIENTS

NO	Components	CAS No.	Percent	OSHA PEL
1	Polyethylene	9002-88-4	50 – 100%	Not established
2	Proprietary	Mixtures	0 – 50%	Not established

4. FIRST-AID MEASURES

The following applies if films are cut, sanded, or otherwise processed which generates dust, debris, or vapors.
Eye Contact: Immediately flush eyes with water for at least 15 minutes. Do not rub the eyes. If irritation or other symptoms occur, consult a physician.
Skin Contact: Get medical attention for serious burns. In case of skin contact with hot product immediately immerse in or flush with clean, cold water.
Inhalation: Remove to fresh air. Consult physician if irritation of respiratory passage occurs.
Ingestion: Consult physician.
Notes to Physician: No known delayed effects following single exposure.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Dry chemical, carbon dioxide or foam.
Hazardous Combustion Products: Carbon monoxide, carbon dioxide, and other possible toxic combustion products.
Explosion Hazard: Avoid generating dust, fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Special Fire Fighting Equipment: Wear NIOSH approved, positive pressure, self-contained breathing apparatus (SCBA) and full protective clothing.
Sensitive to Static Discharge: Static discharge could be an ignition source for a combustible concentration of dust.

6. ACCIDENTAL RELEASE MEASURES

As supplied, the product presents no risk of spill or release.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Wear safety glasses during cutting and fabricating processes. Electrostatic charge may build up during handling. Grounding of equipment is recommended.
Handling: If product is cut or sanded, avoid exposure to dust and debris. Provide appropriate local ventilation at machinery and at places where dust can be generated. In addition, wear suitable respiratory equipment to avoid breathing dusts containing titanium dioxide and/or carbon black.
Storage: Store in a dry place and away from direct sunlight. Keep away from heat, flame, and strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: Not applicable.

Engineering Controls: Ventilation Requirements—General ventilation should be sufficient. However, if operating conditions create high airborne concentrations of this material, special ventilation may be needed. If handling results in dust generation, special ventilation may be needed to ensure that dust exposure does not exceed the OSHA PEL for nuisance dust.

Personal Protective Equipment
Respiratory Protection: None required in normal use of product. NIOSH approved dust mask recommended if dust conditions exist.
Eye Protection: When cutting or processing product, wear safety glasses with side shields.
Body Protection: Wear protective gloves to avoid incidental cuts or scraps that could occur when handling the edges of product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Solid
Specific Gravity: 0.7 – 1.2 (water = 1)
Appearance: Solid film
Odor: Insignificant
Solubility in Water: Insoluble
Melting Point: 120 - 130°C
Flash Point: Not applicable
Autoignition: Not applicable

Physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Stability: Stable
Conditions to Avoid: Do not store product near heat or flame. When cutting or sanding, minimize dust generation and accumulation. Avoid contact with strong oxidizing agents.
Hazardous Decomposition: No dangerous decomposition products known.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Skin Irritation: Not expected to cause skin irritation.
Eye Irritation: Mechanical eye irritation.
Sensitization/Allergic Reaction: No sensitizing effects known.
Repeated dose toxicity: No known chronic health effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data is available on the adverse effects of this product on the environment.
Persistence and Degradability: No data available.
Bioaccumulative Potential: No data available.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Federal, State, and local environmental control regulations.

14. TRANSPORT INFORMATION

This product is not regulated as a hazardous material/dangerous good for transportation. This product is not regulated by US DOT, IMO, and IATA. It is not applicable for UN/NA number, hazard label, hazard placard, packing group, bulk packaging, RQ, and emergency response guide (ERG) number.

15. REGULATORY INFORMATION

United States

US Toxic Substances Control Act (TSCA): All components comprising these products are compliant with TSCA. These products have no special requirements under TSCA (e.g. consent orders, test rules, 12(b) requirements, etc.)

OSHA Hazard Communication Rule: This product is not considered a hazardous material as shipped or at temperatures below the melting point according to OSHA definitions.

SARA Title III: This product is not subject to SARA Title III requirements.

SARA Section 302 Toxic Chemical List: No components listed.

SARA Section 3313 Toxic Chemical List: No components listed.

OTHER REGULATORY INFORMATION

The following chemicals are specifically listed by individual states; other product-specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

State	Chemical	Regulation
None	Polyethylene	None

International

None

16. OTHER INFORMATION

HMIS

Health: 0

Flammability: 1

Physical Hazard: 0

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EPRO Services, Inc.
(800) 882-1896
eproinc.com

7/1/20

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): HydroGel
Product Description: Poly Rubber Gel Waterproofing Material
Synonyms: N/A
CAS No: N/A

Supplier:
EPRO Services, Inc.
PO Box 347
Derby, KS 67037
800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

FIRE AND EXPLOSION HAZARD:	Combustible
FLASH POINT:	424°F
SPONTANEOUS COMBUSTION POINT:	707~752°F
DANGEROUS ARTICLES CLASS:	Chapters 4 petroleum 4
TOXIC SUBSTANCES CAUSEDBY COMBUSTION:	Carton monoxide and other toxic carbon compounds

PERSONAL HEALTH HAZARDS

EYES: Acute: Irritation, thermal burn
SKIN: Chronic: blister, rash
INHALATION: Acute: displeasure, dizziness, vomit
INGESTION: Acute: nausea, vomit, dizziness, unconsciousness

3. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	OTHER NAME	C.A.S Number	CONTENT %
ASPHALT	BITUMEN	8052-42-4	N. AV.
PROCESS OIL	-	68791-76-6	N. AV.
RUBBER	RUBBER CHIP		N. AV.
HYDROTREATED RAFFINATE	-	64742-57-0	N. AV.
HYDROCARBON RESIN	-	64742-16-1	N. AV.
POLYOLEFIN	1-Propene	9003-07-0	N. AV.
S1 (SECRET)	S1 (SECRET)	S1 (SECRET)	N. AV.

4. FIRST-AID MEASURES

EYES: Wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

SKIN: Remove contaminated clothing and shoes immediately. Launder before re-use. Wash affected area thoroughly with soap and water until no evidence of material remains (at least 15-20 minutes). Get medical attention immediately if material is hot and burned the skin.
INHALATION: Remove from exposure area to fresh air immediately. In case of difficulty with breathing dyspnea, perform artificial respiration and get medical attention immediately.
INGESTION: Call a physician immediately. ONLY induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Extinguisher Method: Foam, CO2, watering, powder extinguisher materials, dry send.
Special Fire Fighting Procedures: Keep upwind. Full protective equipment including self-contained breathing apparatus should be used. Move combustible materials from fire area.

6. ACCIDENTAL RELEASE MEASURES

SPILLS
LIFE PROTECTION: Isolate hazard area and restrict entry. Eliminate all sources of ignition.
ENVIRONMENTAL PROTECTION: Eliminate leaking material. Prevent the spread of leaking material.
ELIMINATION METHOD: Wipe the product with sand, soil or cloth. Put the leaking material in container and dispose of in accordance with federal, state, and local authorities and the Waste Management Act. Clean up contamination area with cleanser and water.

7. HANDLING AND STORAGE

HANDLING: Avoid contact with eyes, skin and clothing. Wear protective equipment and wash thoroughly after handling.

STORAGE: Keep container tightly closed and keep away from all ignition sources such as open flame and spark.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: If dizziness occurs, seek fresh air.
Respiratory: When used frequently or in a confined space, wear a safety mask.
Eyes: Wear safety glasses.
Skin: Wear non-penetrable clothes, chemical and heat protecting gloves, heat protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Solid of black or Semi-Solid (Viscid)
ODOR:	Slight asphalt odor
PH:	No data available
SOLUBILITY:	Insoluble
MELTING POINT:	No data available
BOILING POINT RANGE:	680~752°F
VAPOR PRESSURE:	No data available
IGNITION OR EXPLOSION RANGE:	Not applicable
SPECIFIC GRAVITY:	0.9~1.0
OCTANOL-WATER PARTITION COEFFICIENT:	No data available

DECOMPOSITION TEMPERATURE:	No data available
VAPOR DENSITY:	No data available
EVAPORATING RATE:	No data available
MOLECULAR WEIGHT:	No data available

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY AND POSSIBILITY OF HARMFUL RESPONSE:

Normal temperature and pressure are stable.
Containers may explode when heated to high temperatures.
Not easily ignited but some can take.
Fire, irritating or toxic gases may be fired.

CONDITIONS TO AVOID: Solvents, flame ignition sources.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Monoxide and other toxic compounds.

LIKELY TO DEVELOP HAZARDOUS MATERIAL RESPONSE: No data available.

11. TOXICOLOGICAL INFORMATION

ASPHALT

Acute oral toxicity: LD50 > 500 mg/kg Rat
Acute dermal toxicity: LD50 > 200 mg/kg Rabbit
Acute inhalation toxicity: No data available
Mutagenicity: Salmonella – Positive reaction, Rat – Negative reaction
Reproductive toxicity: No data available
Carcinogenicity:

Industrial safety of health law article: No data available
OSHA: No data available
IARC: Group 3
ACGIH: A4
NTP: No data available
EU CLP: No data available

PROCESS OIL

Acute oral toxicity: No data available (components of the Industrial Safety and Health Act of mineral oil 3900 mg/mˆ3 4 hr taken inhaled LC50)
Acute inhalation toxicity: Vertigo, vomit, nausea, rash, etc.
Subacute toxicity: No data available
Chronic toxicity: No data available
Mutagenicity: No data available
Reproductive toxicity: No data available
Carcinogenic toxic substance: Not applicable

RUBBER

Acute oral toxicity: No data available
Acute dermal toxicity: No data available
Acute inhalation toxicity: No data available
Mutagenicity: No data available
Reproductive toxicity: No data available

Carcinogenicity:

OSHA: No data available
IARC: No data available
ACGIH: No data available
NTP: No data available
EU CLP: No data available

HYDROTREATED RAFFINATE

Acute oral toxicity: No data available
Acute dermal toxicity: No data available
Acute inhalation toxicity: No data available
Mutagenicity: No data available
Reproductive toxicity: No data available
Carcinogenicity:

Industrial safety of health law article: No data available
OSHA: No data available
ACGIH: No data available
NTP: No data available
EU CLP: Care. 1B (DMSO extract measured by how IP346 less than 3% except in the case)

HYDRO CARBON RESIN

Acute oral toxicity: LD50 7000 mg/kg (mammal)
Acute dermal toxicity: No data available
Acute inhalation toxicity: No data available
Mutagenicity: No data available
Reproductive toxicity: No data available
Carcinogenicity:

Industrial safety of health law article: No data available
OSHA: No data available
IARC: No data available
ACGIH: No data available
NTP: No data available
EU CLP: No data available

SI (SECRET)

Acute oral toxicity: LD50 > 5000 mg/kg Rat
Acute dermal toxicity: No data available
Acute inhalation toxicity: No data available
Mutagenicity: No data available
Reproductive toxicity: No data available
Carcinogenicity:

Industrial safety of health law article: No data available
OSHA: No data available
ACGIH: No data available
NTP: No data available
EU CLP: No data available

12. ECOLOGICAL INFORMATION (non-mandatory)

ECOTOXICITY: No data
PERSISTENCE AND DEGRADABILITY: No data
MOVILITY IN SOIL: No data
BIOACCUMULATIVE POTENTIAL: No data

13. DISPOSAL CONSIDERATIONS (non-mandatory)

Dispose in accordance with Waste Management Act. Dispose in accordance with federal, state, and local authorities.

14. TRANSPORT INFORMATION (non-mandatory)

UN NO: UN classification no information on hazardous substances
TRANSPORT CONSIDERATIONS: Avoid physical shock, fire
PROPER SHIPPING NAME: No data
PACKING: No data
TRANSPORTATION-RELATED REGULATIONS AND LAWS: Fire Hazard Chapter 4 petroleum law because it is equivalent to transportation, must comply with fire regulations.

15. REGULATORY INFORMATION (non-mandatory)

REGULATIONS BY OCCUPATIONAL SAFETY AND HEALTH: Occupational safety and health Act Article 41
REGULATED BY THE TOXIC CHEMICALS CONNTROL ACTS: No data
OTHER FOREIGN LAW:

OSHA: No data
TSCA: No data
SARA: No data
EU: No data

16. OTHER INFORMATION

This information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designated only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

EPRO Services, Inc.
(800) 882-1896
eproinc.com

7/1/20

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): DuroTape
Product Description: Polymer adhesive tape
Synonyms: N/A
CAS No: N/A

Supplier:
EPRO Services, Inc.
PO Box 347
Derby, KS 67037
800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

Physical hazards: Not classified.
Health hazards: Carcinogenicity (Category 2).
Environmental hazards: Not classified.
OSHA defined hazards: Not classified
Label elements
Hazard symbol: None
Signal word: None
Hazard statement: The mixture does not meet the criteria for classification.
Precautionary statement
Prevention: Observe good industrial hygiene practices.
Response: Wash hands after handling.
Storage: Store away from incompatible materials.
Disposal: Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC): None known.
Supplemental Information: None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

Chemical name	**CAS number**	**%**
Talc (powder)	14807-96-6	10 - < 20
Other components below reportable levels*		80 - < 90

*Designates that a specific chemical identity and/or % of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

Inhalation: Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact: Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact: Rinse with water. Get medical attention if irritation develops and persist.
Ingestion: Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effect, acute, and delayed: Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed: Treat symptomatically.
General information: Ensure that medical personnel are aware of the materials involved and take precautions to protect themselves.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water fog, foam, dry chemical powder, carbon dioxide (CO2).
Unsuitable extinguishing media: Do not use water jet as an extinguisher as this will spread fire.
Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions: Use water spray to cool unopened containers.
Specific methods: Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards: No unusual fire or explosion hazards noted.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures: Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up: Stop the flow of material if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions: Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities: Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits
US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Talc (powder)	TWA	0.3 mg/m3	Total dust
(CAS 14807-96-6)		0.1 mg/m3	Respirable
		20 mppcf	
		2.4 mppcf	Respirable

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Talc (powder) (CAS 14807-96-6)	TWA	2 mg/m3	Respirable fraction

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Talc (powder) (CAS 14807-96-6)	TWA	2 mg/m3	Respirable

Biological limit values: No biological exposure limits noted for the ingredients.
Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment
Eye/face protection: Wear safety glasses with side shields (or goggles).
Skin protection: Wear appropriate chemical resistant gloves. Wear suitable protective clothing.
Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment.
Thermal hazards: Wear appropriate thermal protective clothing when necessary.
General hygiene: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid
Color: various file, gray adhesive
Odor threshold: Not available
Melting/freezing point: Not available
Flash point: >428.0°F (>220.0°C)
Flammability (solid, gas): Not available
Flammability limit – upper %: Not available
Explosive limit – upper %: Not available
Vapor density: Not available
Solubility in water: Not available
Auto-ignition temperature: >842°F (>450°C)
Viscosity: Not available
Specific gravity: 1.04 estimated

Form: solid, roll, or sheet
Odor: Characteristic
pH: Not available
Initial boiling point and range: Not available
Evaporation rate: Not available
Flammability limit – lower %: Not available
Explosive limit – lower %: Not available
Vapor pressure: Not available
Relative density: Not available
Partition coefficient (n-octanol/water): Not available
Decomposition temperature: Not available
Density: 1.04 g/cm3 estimated
VOC (Weight %): 0 g/l

10. STABILITY AND REACTIVITY

Reactivity: The product is stable and non-reactive under normal conditions of use, storage, and transport.
Chemical stability: Material is stable under normal conditions.
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.
Conditions to avoid: Avoid temperatures exceeding flash point or contact with incompatible materials.
Incompatible materials: Strong oxidizing agents.
Hazardous decomposition products: No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation: Prolonged inhalation may be harmful.

Skin contact: No adverse effects due to skin contact are expected.

Eye contact: Direct contact with eyes may cause temporary irritation.

Ingestion: Expected to be a ow ingestion hazard.

Symptoms related to the physical, chemical, and toxicological characteristics: Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity: Not available.

Skin corrosion/irritation: Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation: Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization: Not available.

Skin sensitization: This product is not expected to cause skin sensitization.

Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Talc (powder) (CAS 14807-96-6)	2B Possibly carcinogenic to humans.
	3 Not classifiable as to carcinogenicity to humans

OSHA Specifically Regulated Substances (29 CFR 1910.100-1050): Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens: Not listed.

Reproductive toxicity: This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity – single exposure: Not classified.

Specific target organ toxicity – repeated exposure: Not classified.

Aspiration hazard: Not available.

Chronic effects: Prolonged inhalation may be harmful.

12. ECOLOGICAL INFORMATION (non-mandatory)

Ecotoxicity: The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability: No data is available on the degradability of this product.

Bioaccumulative potential: Not available.

Mobility in soil: No data available.

Other adverse effects: No other adverse environmental effect (e.g. ozone depletion, photochemical ozone reaction potential, endocrine disruption, global warming potential) are expected from this component.

13. DISPOSAL CONSIDERATIONS (non-mandatory)

Disposal instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

Local disposal regulations: Dispose in accordance with all applicable regulations.

Hazardous waste code: Waste code should be assigned in discussion between user, producer, and waste disposal company.

Waste from residues / unused products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container mut be disposed of in a safe manner.
Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow warning even after container is emptied.

14. TRANSPORT INFORMATION (non-mandatory)

DOT: Not regulated as dangerous goods.
IATA: Not regulated as dangerous goods.
IMDG: Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

15. REGULATORY INFORMATION (non-mandatory)

US federal regulations: All components are on the U.S. EPA TSCA Inventory List. This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.
CERLA Hazardous Substance List (40 CFR 302.4): Not listed.
SARA 304 Emergency release notification: Not regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not regulated.

Superfund Amendment and Reauthorization Act of 1986 (SARA)

Hazard categories: Immediate Hazard – No
Delayed Hazard – Yes
Fire Hazard – No
Pressure Hazard – No
Reactivity Hazard – No

SARA 302 Extremely hazardous substance: Not listed.
SARA 311/312 Hazardous chemical: No
SARA 313 (TRI reporting): Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): Not regulated.
Safe Drinking Water Act (SDWA): Not regulated.

US state regulations

US California Controlled Substances-CA Dept of Justice (CA Health and Safety Code Section 11100): Not listed.
US California Candidate Chemicals List-Safer Consumer Products Regulations (CA Code Regs, tit. 22, 69502.3, Subd. (a)): Talc (powder) (CAS 14807-96-6)
US Massachusetts RTK – Substance List: Talc (powder) (CAS 14807-96-6)
US New Jersey Worker and Community Right-to-Know Act: Talc (powder) (CAS 14807-96-6)
US Pennsylvania Worker and Community Right-to-Know Law: Talc (powder) (CAS 14807-96-6)
US Rhode Island RTK: Not regulated
US California Proposition 65: Titanium Dioxide is listed due to it respirable nature in power form. As supplied and applied the titanium dioxide I bound within the product matrix and is not expected to be in a respirable form. WARNING: This product contains a chemical known to the State of California to cause cancer.
US California Proposition 65 – CRT: Listed date/Carcinogenic substance
TITANIUM DIOXIDE (CAS 13463-67-7) Listed : September 2, 2011

International Inventories

Country or region	Inventory Name	On Inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Exiting Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Exiting and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
US & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*"Yes" indicates that all components of this product comply with the inventory requirements by the governing countries. "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country.

16. OTHER INFORMATION

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EPRO Services, Inc.
(800) 882-1896
eproinc.com

7/1/20

SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

1. PRODUCT IDENTIFICATION

Trade Name(s): e.drain (formerly ECODRAIN-E), e.drain 6000 (formerly ECODRAIN-S6000), e.drain 6200 (formerly ECODRAIN-S6200), e.drain 9000 (formerly ECODRAIN-S9000), e.drain 990 (formerly ECORAIN-S990), e.drain ds (ECODRAIN-DS), e.drain 302
Product Description: Dimpled HDPE Sheet
Chemical Name: Polyethylene Compounds
Chemical Family: Polyolefin
CAS No: N/A

Supplier:
EPRO Services, Inc.
PO Box 347
Derby, KS 67037
800-882-1896 (8:00am – 5:00pm CST)

2. HAZARD(S) IDENTIFICATION

Based on pertinent data available, these products are considered “articles” and are not hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200). GHS Label Elements not required.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product does not meet the definition given in 29 CFR 1910.1200 for hazardous material and composition is not required.

NO	Components	CAS No.	OSHA PEL
1	Polyethylene	9002-88-4	Not established
2	Polypropylene	9003-07-0	Not established
3	Proprietary	Mixtures	Not established

4. FIRST-AID MEASURES

Inhalation: Not likely in current form
Ingestion: Not likely in current form
Eye Contact: As with any foreign object, flush with water. If pain or irritation persists, consult physician.
Skin Contact: Wash with soap and water. In case of irritation, consult physician.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Dry chemical, carbon dioxide or foam.

Special Fire Fighting Procedures: Wear NIOSH approved, positive pressure, self-contained breathing apparatus (SCBA) and full protective clothing. Extinguish fires with foam or dry chemical. Do not use water jet.
Unusual Fire and Explosion Hazards: Avoid accumulation and dispersion of dust to reduce explosion potential. Fire may produce irritating gases and dense smoke.

6. ACCIDENTAL RELEASE MEASURES

Spill is not applicable. Sold in solid form.

7. HANDLING AND STORAGE

Handling: Wear safety glasses during cutting and fabricating processes. Electrostatic charge may build up during handling. Grounding of equipment is recommended.
Handling: No special handling unless large rolls are used. Use lifting devices, as necessary.
Storage: Store in a dry place and away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Emergency Overview: Practically nontoxic
Primary Route(s) of Exposure: Inhalation, Eye, Skin Contact

Potential Health Effects and Symptoms of Over-Exposure
Negligible hazard at room temperature under normal use.
Eye Contact: Solid flake or dust may cause transient irritation as a result of mechanical abrasion.
Skin Contact: Essentially no irritation to skin. Mechanical injury only. Hot solid may cause thermal burns.
Inhalation: Exposure to dust at high concentration may cause irritation to respiratory tract.
Ingestion: May cause choking if swallowed.
Medical Conditions Aggravated by Overexposure: Not expected. Film is generally accepted as being biologically inert. No specific antidotal treatment, symptomatic support required.
Carcinogenicity: NTP: No IARC: No OSHA: No

Eye Protection: As required by site-specific conditions. Not normally required.
Skin Protection: Gloves required when handling hot material. Not normally required.
Respiratory Protection: None required in normal use of product. NIOSH approved dust mask recommended if dust conditions exist.
Engineering Control: Ventilation Requirements — General
General ventilation should be sufficient. However, if operating conditions create high airborne concentrations of this material, special ventilation may be needed. If handling results in dust generation, special ventilation may be needed to ensure that dust exposure does not exceed the OHSA PEL for nuisance dust.
Required Work/Hygiene Procedure: Minimize contact with skin. Do not eat, drink, or smoke in work area. Wash hands thoroughly after handling, especially before eating drinking, smoking, chewing, or using restroom facility. Dusted clothing and shoes should be thoroughly cleaned before use.
Exposure guidelines

No.	Components	OSHA-PEL	ACGIH-TLV
1	Polyethylene	None	None
2	Polypropylene	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

Flash Point: Greater than 400°
Autoignition: Not applicable
Flammable Limits in Air (LEL, %): Not applicable
(UEL, %): Not applicable
Physical Form: Solid
Color: Black
Odor: Insignificant
Boiling Point: Not applicable
Melting Point: ~ 320°F
Freezing Point: Not applicable
Solubility in Water: None
Specific Gravity: Less than 1 (water = 1)
Vapor Density: Not applicable (air = 1)
Evaporation Rate: None (Butyl acetate = 1)
Vapor Pressure: Not applicable
% Volatile: None
pH: Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable
Conditions to Avoid: Strong oxidizers
Hazardous Decomposition: Carbon dioxide, carbon monoxide
Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

Inhalation: Not likely under normal use
Injection: Not likely under normal use
Ingestion: Not likely under normal use
Skin Contact: Prolonged contact may cause irritation to some individuals

Eye Effects: Not toxic, may irritate eyes
Skin Effects: Not toxic, may irritate skin
Target Organs: None
Chronic: No known health effects from long term use or contact
Carcinogenicity: The IARC evaluation is the "Carbon black (airborne, unbound particles of respirable size) is possibly carcinogenic to humans (Group 2B)"
Mutagenicity & Reproductive Effects: Not believed to be mutagenic or a reproductive hazard
The information provided below can be subject to misinterpretation. Therefore, it is essential the following information be interpreted by individuals trained in its evaluation.

Chemical
Polyethylene and Polypropylene: No toxicology data available.
Polyethylene and polypropylene are not considered hazardous materials under the OHSA Hazard Communication Standard

12. ECOLOGICAL INFORMATION

Environmental Data: Not expected to be hazardous to the environment in present form.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Federal, State, and local environmental control regulations.

14. TRANSPORT INFORMATION

DOT Shipping Name: Not listed
DOT Label: Not regulated
DOT Hazard Class: Not applicable
UN/NA Number: Not applicable
Hazard Label(s): Not applicable
Hazard Placard(s): Not applicable
Packing Group: Not applicable
Bulk Packaging: Not applicable
RQ: Not applicable
Emergency Response Guide (ERG) No.: Not applicable

15. REGULATORY INFORMATION

FEDERAL REGULATORY INFORMATION – Polyethylene, Polypropylene
OSHA Status: None
EPA Clean Air Act Status: None
EPA Clean Water Act Status: None
TSCA Status: All ingredients are listed on TSCA Inventory (40 CFR710)
CERCLA RQ: None
USA TSCA: This product is considered an article and is exempt from TSCA requirements.
Canada Domestic Substances List (DSL): This product is not specified on the DSL or NDSL.

SARA Title III Polyethylene, Polypropylene

Section 302*	Section 313**	Section 311/312***
None	None	None

*Reportable quantity of extremely hazardous substance, Sec. 302
*Threshold planning quantity, extremely hazardous substance, Sec. 302
**Toxic chemical. Sec. 313
**Category as required by Sec 313 (40CFR372.65C). Must be used on Toxic Release Inventory form.
***Hazard category for SARA Sec311/312 reporting H1=acute health hazard, H2=chronic health hazard, P3=fire hazard, P4 sudden release of pressure hazard, P5=reactive hazard

California Proposition 65: Carbon Black (airborne, unbound particles of respirable size), CAS# 1333-86-4 is listed as a possible carcinogen.

Canada Regulations (WHMIS): Not listed

RCRA Status: If disposed of in its purchased form, this would not be a RCRA hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product used to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste (40CFR261.20-24).

OTHER REGULATORY INFORMATION

The following chemicals are specifically listed by individual states; other product-specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements, you should contact the appropriate agency in your state.

State	Chemical	Regulation
None	Polyethylene	None
None	Polypropylene	None

International

None

16. OTHER INFORMATION

NFPA	HMIS
Fire—1	Health - 0
Health—0	Flammability - 1
Reactivity—0	Reactivity - 0
Specific Hazard—None	Personal Protection Index - E

This information provided on this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designated only as a guide for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

Applications:	**Post-Applied Foundation Wall and Horizontal Deck Fluid Applied Waterproofing - Hydrostatic and Non-hydrostatic Conditions**
Spec Version:	**EproHydroGel.FH.v1.07.20gs**
Date issued:	**July, 2020**
Note:	**This specification may be superseded at any time. Check eproinc.com for the most up to date version of this specification.**

SECTION 07 14 00
FLUID APPLIED WATERPROOFING

HydroGel Guide Specification

Vertical Wall
&
Horizontal Deck

HydroGel is a composite waterproofing system that combines the durability of high density polyethylene with a single component, flexible, self-healing polymer rubber gel. This guide specification has been prepared according to the principles established in the Manual of Practice published by the Construction Specification Institute.

Sections highlighted in red throughout this guide specification are specifier notes intended to provide information about certain optional text or additional information relevant to that section. For additional questions, your local EPRO technical representative can be contacted through: EPRO Services, Inc., Wichita KS; 1.800.882.1896; www.eproinc.com.

HYDROGEL FLUID APPLIED WATERPROOFING SPECIFICATION

SECTION 07 14 00 – FLUID APPLIED WATERPROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the contract, including general and supplementary conditions, and Division 1 specification section, apply to this section.

1.2 SECTION INCLUDES

A. The Work of this Section includes, but is not limited to, ***HydroGel*** fluid applied composite waterproofing:

1. Vertical Wall: The waterproofing system applied on exposed concrete foundation walls, tunnels, and vertical deck walls.

2. Horizontal Deck: The waterproofing system applied on split slab concrete decks, planters, balconies, green roofs, and podium decks.

B. Related Sections:

1. Section 02 24 00: Environmental Assessment

2. Section 02 32 00: Geotechnical Investigation

3. Section 03 30 00: Concrete Surface/Substrate

4. Section 03 10 00: Concrete Forming

5. Section 03 15 00: Concrete Accessories

6. Section 03 15 13: Waterstops

7. Section 03 20 00: Concrete Reinforcing

8. Section 03 30 00: Cast-in-Place Concrete

9. Section 03 40 00: Precast Concrete

10. Section 07 90 00: Joint Protection

11. Section 31 30 00: Earthwork Methods

12. Section 31 41 00: Shoring

13. Section 31 60 00: Special Foundations and Load Bearing Elements

14. Section 31 71 23: Tunneling by Cut and Cover

15. Section 33 41 00: Subdrainage

1.3 REFERENCE STANDARDS

A. The following standards and publications are applicable to the extent referenced in the text.

B. American Standard Testing Methods (ASTM):

D 1353 Standard Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products

E 154 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover

C 836 Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course

C 1522 Standard Test Method for Extensibility After Heat Aging of Cold Liquid-Applied Elastomeric Waterproofing Membranes

D 4833 Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products

D 56 Standard Test Method for Flash Point by Tag Closed Cup Tester

D 412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension

D 751 Standard Test Methods for Coated Fabrics

D 794 Practice for Determining Permanent Effect of Heat on Plastics xxx

E 96 Standard Test Methods for Water Vapor Transmission of Materials

D 1876 Standard Test Method for Peel Resistance of Adhesives (T-Peel Test)

C 1305 Standard Test Method for Crack Bridging Ability of Liquid-Applied Waterproofing Membrane

C 1306 Standard Test Method for Hydrostatic Pressure Resistance of a Liquid-Applied Waterproofing Membrane

D 903 Standard Test Method for Peel or Stripping Strength of Adhesive Bonds

D 1745 Standard Test Method for Peel or Stripping Strength of Adhesive Bonds

D 1434 Standard Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting

D 1709 Standard Test Methods for Impact Resistance of Plastic Film by the Free-Falling Dart Method

D 1621 Standard Test Method for Compressive Properties of Rigid Cellular Plastics

D 1777 Standard Test Method for Thickness of Textile Materials

D 4716 Standard Test Method for Determining the (In-plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head

D 71 Standard Test Method for Relative Density of Solid Pitch and Asphalt (Displacement Method)

1.4 PERFORMANCE REQUIREMENTS

A. General: Provide a fully adhered waterproofing system that prevents the passage of water under hydrostatic or non-hydrostatic conditions and complies with the physical requirements as demonstrated by testing performed by an independent testing agency.

1.5 SUBMITTALS

A. Product Data: For each type of waterproofing specified submit manufacturer's printed technical data, tested physical and performance properties, instructions for evaluating, preparing, and treating substrates, and installation instructions.

B. Shop Drawings: Project specific drawings showing locations and extent of waterproofing, details for substrate joints and cracks, sheet flashing, penetrations, transitions, and termination conditions.

C. Samples: Submit two standard size samples of the following:

1. Individual components of the specified waterproofing system.

D. Applicator Certification: Submit written confirmation at the time of bid that applicator is currently approved by the membrane manufacturer.

E. Manufacturer's Warranty Requirements: Submit complete documentation of manufacturer's warranty requirements and sample warranty.

1.6 QUALITY ASSURANCE

A. Applicator Qualifications: Waterproofing applicator shall be an EPRO Authorized Applicator who is trained and approved for ***HydroGel*** application in accordance with EPRO standards and policies.

***

Specifier Note: For projects requiring the manufacturer's special no-dollar-limit labor and material E.Assurance warranty, add the following items B. and C. language to section 1.6 (reference Section 1.9 Warranty):

B. Special Applicator Qualifications: The waterproofing applicator must be E.Assurance Certified at the time of bid.

C. Third Party Inspection: Owner shall make all arrangements and payments for an approved third-party inspection firm participating in the waterproofing manufacturer's Certified Inspection Program to monitor waterproofing material installation compliance with the project contract documents and manufacturer's published literature and site specific details. Inspection reports shall be submitted directly to the waterproofing system manufacturer and made available to other parties per the owners' direction.

***

D. Pre-Construction Meeting: A meeting shall be held prior to application of the waterproofing system to assure proper substrate preparation, confirm installation conditions and any additional project specific requirements. Attendees of the meeting shall include, but are not limited to the following:

1. EPRO representative

2. EPRO certified applicator

3. Third party inspector [as required]

4. General contractor

5. Owner's representative

6. Concrete/Shotcrete contractor

7. Rebar contractor

8. Project design team

9. All appropriate related trades

E. Field Sample: Apply waterproofing system field sample to 100 ft^2 (9.3 m^2) of each assembly to demonstrate proper application techniques and standard of workmanship.

1. Notify waterproofing system manufacturer representative, architect, certified inspector, and other appropriate parties one week in advance of the dates and times when field sample will be prepared.

2. If architect and certified inspector determine that field sample does not meet requirements; reapply composite membrane system until field sample is approved.

3. Retain and maintain approved field sample during construction in an undisturbed condition as a standard for judging the completed composite membrane system. An undamaged field sample may become part of the completed work.

F. Materials: Waterproofing system and auxiliary materials shall be single sourced from the waterproofing manufacturer.

1.7 MATERIAL DELIVERY, STORAGE AND DISPOSAL

A. Delivery: Deliver materials to site labeled with manufacturer's name, product brand name, material type, and date of manufacture. Upon the arrival of materials to the jobsite, inspect materials to confirm material has not been damaged during transit.

B. Storage: Proper storage of onsite materials is the responsibility of the certified applicator. Consult product data sheets to confirm storage requirements. Storage area shall be clean, dry, and protected from the elements. Protect stored materials from direct sunlight.

C. Disposal: Remove and replace any material that cannot be properly applied in accordance with local regulations and specification section 01 74 19.

1.8 PROJECT CONDITIONS

A. Substrate Review: Substrates shall be reviewed by the certified applicator and accepted by the certified inspector prior to application. Application without signoff from certified inspector will likely result in voidance of warranty.

B. Penetrations: All plumbing, electrical, mechanical, and structural items to be passing through the waterproofing system shall be properly spaced, positively secured in their proper positions, and appropriately protected prior to system application and throughout the construction phase. Braided grounding rods are not allowed to pass through the membrane in waterproofing applications.

C. Clearance: Minimum clearance of 24 inches is required for application of polymer rubber gel, ***HydroGel***. For areas with less than 24-inch clearance, the product may be applied by hand using a brush or roller.

D. Overspray: When applying ***HydroGel*** with the spray method, protect all adjacent areas not receiving waterproofing. Masking is necessary to prevent unwanted overspray from adhering to, or staining, areas not receiving the membrane.

E. Weather Limitations: Perform work only when existing and forecast weather conditions are within manufacturer's recommendations.

1. EPRO applicators reserve the right not to install product when application conditions might be within manufactures acceptance, but ambient conditions may limit a successful application.

2. Minimum ambient temperature must be 0 F and rising.

1.9 WARRANTY

A. General Warranty: The special warranty specified in this section shall not deprive the owner of other rights the owner may have under other provisions of the contract documents, and shall be in addition to, and run concurrent with, other warranties made by the contractor under requirements of the contract documents.

B. Special Warranty: Submit a written warranty signed by waterproofing manufacturer agreeing to replace system materials that do not conform with manufactures published specifications or are deemed to be defective. Warranty does not include failure of waterproofing due to failure of soil substrate prepared and treated according to requirements or formation of new joints and cracks in the specially applied concrete that exceed 1/8 inch (3.175 mm) in width.

1. Warranty Period: 5 years after date of substantial completion. [Longer warranty periods are available upon request.]

2. Coverage: Manufacturer will guarantee that the material provided is free of defect for the warranty period.

***

Specifier Note: Additional upgraded warranty options, E.Series L&M and E.Assurance NDL, are available by contacting the manufacturer. These warranties may have additional requirements and approval must be granted in accordance with the manufacturer's warranty requirements.

Insert the following language in 1.9 B for additional Special Warranty options:

3. Labor and Material (E.Series L&M): Manufacturer will provide non-prorated coverage for the warranty term, agreeing to repair or replace material that does not meet requirements or remain watertight.

OR

4. No-Dollar-Limit Labor and Material Warranty (E.Assurance NDL): Manufacturer will provide a non-prorated, no-dollar-limit coverage for the warranty term, agreeing to repair or replace material that does not meet requirements or remain watertight.

***

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturer: EPRO Services, Inc. (EPRO), P.O. Box 347; Derby, KS 67037; Tel: (800) 882-1896; Email: info@eproinc.com; Web: www.eproinc.com

2.2 MATERIALS

A. Fluid applied waterproofing membrane: ***HydroGel*** is a composite polymer rubber gel waterproofing system. Provide system with the following physical properties:

PROPERTIES	TEST METHOD	VALUE
Solids Content	99%	ASTM D 1353
Resistance to Decay	0% moisture permeation and weight change	ASTM E 154
Hardness*	80	ASTM C 836
Extensibility After Heat Aging	¼" no cracking / pass	ASTM C 1522
Puncture Resistance*	125 lbf	ASTM D 4833
Flash Point	>228°F	ASTM D 56
Tensile Strength MD	3891 PSI	ASTM D 412
Elongation % MD	486%	ASTM D 412
Deflection, HDPE	3.2 in.	ASTM E 154
Hydrostatic Pressure Resistance*	169 ± 3 lbs/in^2	ASTM D 751
Adhesion to Concrete	5.8 lbf/in / pass	ASTM C 794
Crack Bridging Flexibility	No cracks	ASTM C 836
Moisture Permeability	0.016 perms (0.915 ng/(Pa x s x m^2	ASTM E 96
Peel Resistance	>1.15 lbf/in	ASTM D 1876
Cold Temperature Crack Bridging	Unaffected, Pass	ASTM C 1305
Hydrostatic Pressure Resistance	Min. 45 PSI	ASTM C 1306

*Results based on composite system with GFG16 HDPE protection sheet.

B. Protection Sheet

1. ***GFG20X*** is a 31 mil thick high density polyethylene reinforced protection sheet with geotextile backing for horizontal waterproofing applications. Provide protection sheet with the following physical properties:

PROPERTIES	TEST METHOD	VALUE
Peel Adhesion to Concrete (geotextile)	8 lbs/in	ASTM D 903
Tensile Strength	136 lbf/in	ASTM D 882
Elongation	MD 789.1 / TD 857.1	ASTM D 882
Vapor Barrier Classification	Class A	ASTM D 1745
Life Expectancy	Indefinite	ASTM E 154
Chemical Resistance	Unaffected	ASTM E 154
Radon Transmission Rate	0.062	ASTM D 1434
Water Vapor Permeation	0.007 grain/hr. ft. in^2 Hg	ASTM E 96
Dart Impact Strength	11.48 lbs	ASTM D 1709

2. ***GFG16*** is a 16 mil thick high density polyethylene protection sheet for horizontal and vertical waterproofing applications. Provide protection sheet with the following physical characteristics:

PROPERTIES	TEST METHOD	VALUE
Tensile Strength	83.75 lbf/in	ASTM D 882
Vapor Barrier Classification	Class A	ASTM D 1745
Life Expectancy	Indefinite	ASTM E 154
Chemical Resistance	Unaffected	ASTM E 154
Dart Impact Strength	3960 grams	ASTM D 1709
Water Vapor Permeation	0.007 grain/ hr ft in^2 Hg	ASTM E 96

C. Waterstops

1. ***e.stop gu*** is a gunnable urethane modified hydrophilic detailing sealant for application around penetrations.

2. ***BentoTak*** is a self-adhesive hydrophilic bentonite waterstop strip for application in non-moving joints and around penetrations with the following physical properties:

PROPERTIES	TEST METHOD	VALUE
Specific Gravity @25C	ASTM D 71	1.403
Flash Point	ASTM D 93 Pensky-Martens	482 F (250 C)
Hydrostatic Pressure Resistance		> 160 ft head, No Flow

D. Seaming and Detailing Materials

1. ***DuroTape*** is a single-sided 35 mil thick specialty adhesive tape with high density polyethylene backing for adhering end lap seams, side lap seams, and detailing.

2. ***SkrimTape*** is a single-sided 35 mil thick specialty adhesive tape with a woven polyester fabric backing for reinforcing joints, corners, cracks, and penetrations.

E. Prefabricated Drainage:

1. ***e.drain***: ***e.drain*** features a lightweight three-dimensional, highly flexible high density polyethylene (HDPE) core and a polypropylene geotextile filter fabric. The filter fabric is bonded to the dimples of the HDPE core.

PROPERTIES	TEST METHOD	VALUE
DIMPLED CORE		
Core		HDPE
Core Material Thickness		30 Mil
Color		Black/Brown
Dimple Height	ASTM D 1777	.31 inch
Compressive Strength	ASTM D 6364	5,200 lbs./ft²
Flow rate	ASTM D 4716	5.1 gal/min/ft
FILTER FABRIC		
Grab Tensile	ASTM D 4632	130 lbs
CBR Puncture Resistance	ASTM D 6241	40 lbs
Apparent Operating Size	ASTM D 4751	70 sieve size (.0212 mm)
Water Flow Rate	ASTM D 4491	55 gpm/ ft²
UV Resistance	ASTM D 4355	70% (500 hrs)

2. ***e.drain 6000***: ***e.drain 6000*** features a lightweight three-dimensional, high-compressive strength polypropylene core and bonded non-woven geotextile fabric. The bonded filter fabric allows water to pass freely into the molded drain while preventing soil particles from entering and clogging the core structure.

PROPERTIES	TEST METHOD	VALUE
DIMPLED CORE		
Core Material		Polypropylene
Color		Black
Dimple Height	ASTM D 1777	0.4" (10.16 mm)
Compressive Strength	ASTM D 6364	16,500 psf (790 kN/m²)
Flow rate	ASTM D 4716	21 gal/min/ft
FILTER FABRIC		
Grab Tensile	ASTM D 4632	100 lbs
CBR Puncture resistance	ASTM D 6241	250 lbs
Apparent Operating Size	ASTM D 4751	70 sieve size (.0212 mm)
Water Flow Rate	ASTM D 4491	140 gpm/ft² (5704 l/min/m²)
UV Resistance	ASTM D 4355	70% (500 hrs)
Dimensions: 6' x 5'		
Weight: 63 pounds		

3. ***e.drain 12ds***: ***e.drain 12ds*** features a lightweight three-dimensional, highly flexible polypropylene core and a non-woven geotextile filter fabric. The filter fabric is bonded to the dimples of the polypropylene core to prevent clogging within the drain.

PROPERTIES	TEST METHOD	VALUE
DIMPLED CORE		
Core Material		Polypropylene
Color		Black
Compressive strength	ASTM D 1621	9,500 PSF (455 kN/m²)
Thickness	ASTM D 1777	1 Inch
Flow rate	ASTM D 4716	30 gpm/ft of width
		FILTER FABRIC
CBR puncture	ASTM D 6241	250 lbs
Grab tensile strength	ASTM D 4632	100 lbs
AOS	ASTM D 4751	70 U.S. sieve
Permittivity	ASTM D 4491	2.0 sec^{-1}
Flow rate	ASTM D 4491	140 gpm/ft²
UV resistance	ASTM D 4355	70% (500 hrs)
Dimensions: 165' x 12" x 1"		
Weight: 65 pounds		

2.3 AUXILIARY MATERIALS

A. General: All auxiliary materials shall be provided by the specified waterproofing manufacturer. Auxiliary materials used in lieu of, or in addition to, the manufacturer's materials must be approved in writing by EPRO prior to installation.

1. Detailing Material: ***PM Sealant*** an STPE moisture cure detailing sealant.

2. Backer Rod: Closed-cell polyethylene foam

3. Termination Bar: 1-inch (25 mm) aluminum or stainless steel with fastener holes minimum 12-inch (25 mm) on-center.

4. Fastener: ***e.fastener*** or approved alternate.

5. Shot Pins: Minimum 1-inch (25 mm) galvanized steel pins with ¾ inch (19 mm) aluminum washer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Comply with project documents, manufacturer's product information, including product application and installation guidelines, pre-job punch list, as well as, manufacturer's shipping and storage recommendations.

B. The general contractor shall engage the certified waterproofing contractor and certified inspector to ensure surfaces are prepared in accordance with manufacturer's instructions. Unless explicitly stated in the contract documents, the waterproofing contractor is not responsible for surface preparation.

C. Examine all substrates, areas, and conditions under which the composite membrane system will be installed, applicator and inspector must be present. Do not proceed with installation until unsatisfactory conditions have been corrected and surface preparation requirements have been met. If conditions exist that are not addressed in this section notify inspector and contact EPRO for additional clarification.

1. Verify that concrete has cured and aged for a minimum seven days after pour or stripping of forms.

2. Verify that substrate is visibly dry and free of ponded water, frost, or snow.

3.2 SUBSTRATE PREPARATION

A. Clean and prepare substrate according to manufacturer's written recommendations. Provide clean, relatively smooth, dust-free, and dry substrate for waterproofing application.

B. Remove grease, oil, bitumen, form-release agents, paints, curing compounds, acid residues, and other penetrating contaminants or film-forming coatings from the substrate.

C. Patch all holes and voids and smooth out any surface misalignments and remove and patch all concrete form ties.

D. Mask adjoining surfaces not receiving waterproofing to prevent overspray affecting other construction.

3.3 APPLICATION HORIZONTAL AND VERTICAL

A. General: The composite membrane system shall be installed to the positive side vertical wall or slab under strict accordance with the manufacture's guideline and project specifications. Complete all detailing before installing the membrane over the field of the substrate.

3.3.2 TREATMENT OF CRACKS, JOINTS, CORNERS AND REPAIRED AREAS

A. Treat, rout, and fill cracks larger than 1/8 inch with hydraulic cement or rapid set grout.

B. The following areas shall receive a reinforcement detail of ***HydroGel*** and ***SkrimTape***:

1. All cracks less than 1/8 inch.

2. All previously repaired cracks.

3. All cold joints.

4. All corners.

C. Corners: A reinforcement detail shall be applied to all transitions including all inside and outside corners, and all transitions from a horizontal to vertical planes.

D. Reinforcement Detail: Apply a 90 mil (2.3 mm) coat of ***HydroGel*** at detail area extending 3-inches beyond detail area. Adhere ***SkrimTape*** reinforcing tape into the ***HydroGel***.

3.3.3 SEALING OF PENETRATIONS

A. Standard Pipe Penetrations: Prepare membrane penetrations so they are free of any material that prohibit the material to bond directly to the penetration surface: foam, insulation, protective coatings, etc.

1. Install ***e.stop gu*** around the penetration.

2. Install a penetration detail target patch of ***HydroGel*** and ***SkrimTape*** around the penetration.

3. Penetration detail target patch: Apply a 90 mil (2.3 mm)coat of ***HydroGel*** around the penetration extending a minimum 4-inches(100 mm) up vertically onto the penetration and a minimum 4-inches (100 mm) horizontally out around the base of the penetration. Adhere ***SkrimTape*** reinforcing tape into the ***HydroGel***.

B. Membrane Application

1. Apply ***HydroGel*** at a rate to provide a continuous, monolithic coat of 90 mil (2.3 mm) minimum thickness.

2. Apply ***HydroGel*** in and around penetrations and cavities to ensure the formation of monolithic seal around all penetrations.

3. Apply additional 90 mil (2.3 mm) coat of ***HydroGel*** at all penetration and detail areas.

4. Verify applied thickness of ***HydroGel*** every 1000 ft^2 (93 m2).

C. Protection Layer Application:

1. Embed protection sheet into the membrane while the membrane is still warm.

2. Overlap adjoining sheet edges a minimum of 6-inches (150 mm) to ensure complete coverage.

3. Apply 2-inch (50 mm) 30 mil (0.75 mm) minimum thickness tack coat of ***HydroGel*** within overlap seam edge along bottom sheet edge.

4. Tape all seams with ***DuroTape*** centered along seam ensuring a continuously adhered seam. Roll all seams.

5. The completed composite waterproofing assembly must be protected from damage resultant from follow on trades and environmental exposure.

3.4 TERMINATION AT TOP OF GRADE

A. Terminate the waterproofing system at top of grade with a termination bar. Fasten the termination bar every 12-inches (300 mm) on-center and seal the top of termination bar with a bead of ***PM Sealant***.

3.5 DRAINAGE COURSE / INSULATION / PAVER PLACEMENT

A. General

1. Contractor shall examine the deck area to be covered with subsequent topping materials in order to ensure that all deck areas have received the membrane, the membrane is free of damage, it is properly protected, and all flashing has been properly installed, before placing the insulation.

2. The drainage course (if required), insulation (if required), and other subsequent topping materials shall be installed as each section is completed.

B. Prefabricated Drainage Course Placement (as required)

1. Install drainage course on horizontal and vertical surfaces in accordance with the manufacturer's recommendations.

2. Layout and position drainage course and allow to lay flat. Cut and fit drainage course to perimeter and penetrations.

3. Bond all geotextile overlap edges to adjacent drainage course geotextile with an acceptable adhesive to ensure geotextile integrity.

4. Place subsequent topping materials as soon as possible.

C. Insulation Placement (as required)

1. Loose lay (horizontal applications) in a staggered manner and tightly butt together all insulation boards. The maximum acceptable opening between insulation boards is 3/8-inch (9mm). Insulation shall be installed within 3/4-inch (18 mm) of all projections, penetrations, etc. When multi-layer insulation applications are involved the bottom layer of insulation shall be the thickest layer and shall be a minimum of 2-inch thick (50 mm). All layers shall be installed unadhered to each other and all joints staggered in relation to underlying layers.

2. For vertical, multi-layer applications, the second layer of insulation board shall be spot adhered to the protection layer with an appropriate adhesive.

D. Architectural Finish Paver Placement (as required)

1. Install architectural finish pavers on tabs or pedestals in accordance with manufacturer's recommendations and architectural layout.

3.6 WATERSTOP INSTALLATION

A. Strictly comply with installation guidelines in manufacturer’s published literature, including but not limited to, the following:

1. Apply ***BentoTak*** at all cold joints, construction joints, steel penetrations, and steel beams.

2. Properly prepare the surface to ensure complete contact to substrate, remove all debris that may prevent the adhesive bond. Wire brush steel surfaces to remove rust and remove any contaminants that would prevent ***BentoTak*** from adhering to surface. Do not install in ponding water if concrete pour is greater than 7 days from installation.

3. Apply a continuous strip of ***BentoTak*** no less than 1.25-inch (32 mm) from outside concrete face molding the butting ends of the strips together without overlap.

4. Apply a continuous 3/8-inch (9 mm) minimum bead of ***e.stop gu*** around the circumference of all PVC penetrations, detail areas, or to irregular concrete substrates.

5. Inspect for damage just prior to concrete pour and repair as needed.

3.7 FIELD QUALITY CONTROL

A. Strictly comply with installation guidelines in manufacturer's published literature, including but not limited to, the following:

1. Conduct a visual inspection after the ***HydroGel*** waterproofing system has been installed. Note any visual deficiencies and mark for repair.

2. Inspect all protection sheet seams for complete and continuous adhesion. Note any deficiencies and mark for repair.

3.8 PROTECTION AND CLEANING

A. Strictly comply with installation guidelines in manufacturer's published literature, including but not limited to, the following:

1. Protect waterproofing system in accordance with manufacturer's recommendations until placement of concrete.

2. Do not allow heavy equipment or machinery on top of unprotected waterproofing system.

3. Inspect for damage just prior to placement of concrete and make repairs in accordance with manufacturer's written guidelines and recommendations.

4. Take care in the placement of overburden. Do not damage with earth moving equipment.

5. Repair areas as needed following manufacturer's written guidelines.

6. Do not leave waterproofing system exposed for longer than 60 days prior to subsequent topping materials.

3.9 REPAIRS

A. Strictly comply with manufacturer's written guidelines for repair, including but not limited to, the following:

1. Inspect damaged area to determine which system components have been damaged.

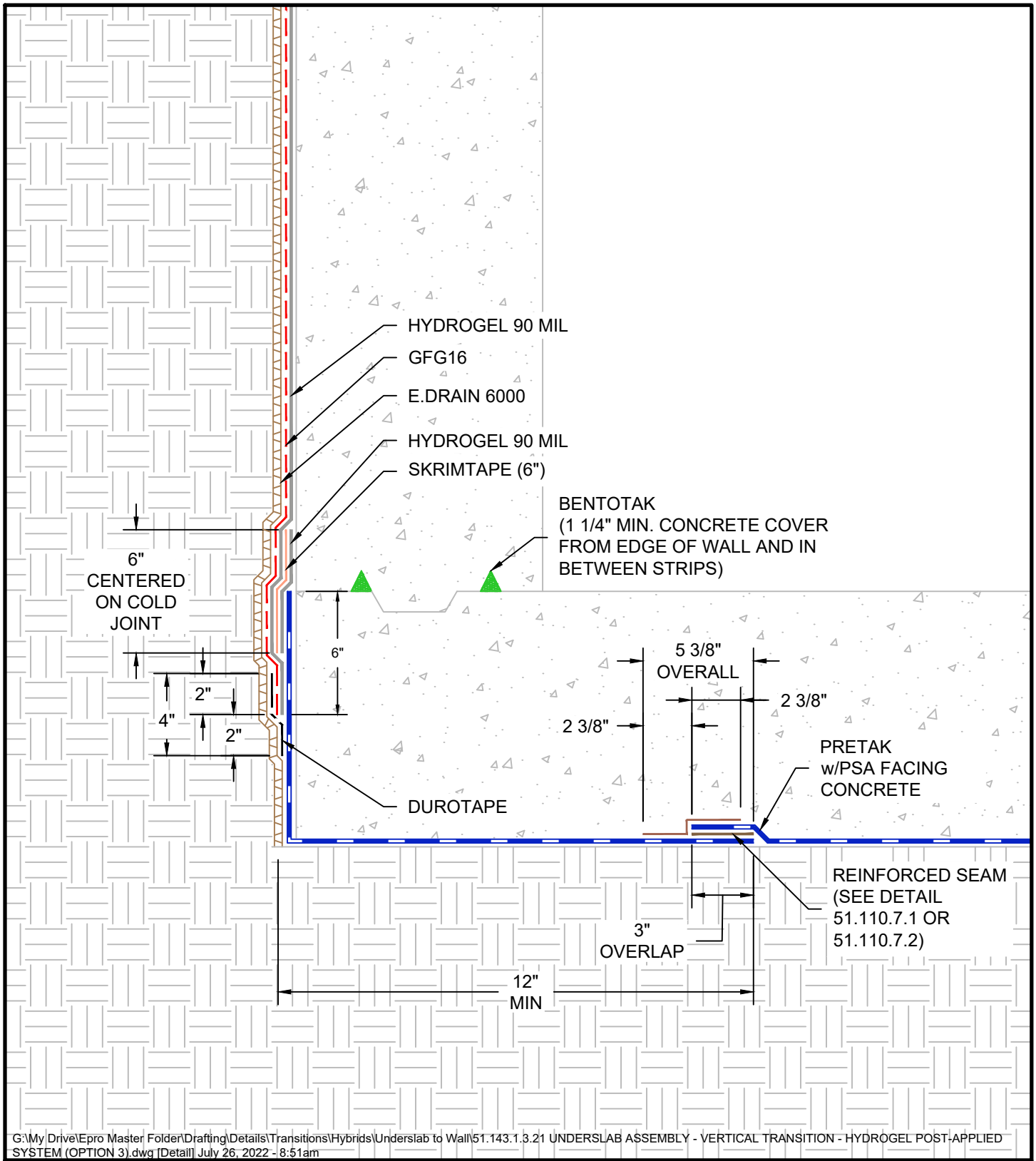
2. For punctures in the waterproofing system protection sheet smaller than ¼-inch (12 mm) in diameter, apply a ***DuroTape*** patch over the damaged area.

3. For areas where more than two punctures exist in any 1 square foot area of the waterproofing system protection sheet, regardless of size, apply an appropriately sized patch of protection sheet and minimum 90 mil (2.3 mm) thick layer of ***HydroGel*** that extends 6-inches (150 mm) beyond the damaged area.

4. For damages or punctures larger than 1/4-inch (12 mm) in diameter, apply an appropriately sized patch of protection sheet and minimum 90 mil (2.3 mm) thick layer of ***HydroGel*** that extends 6-inches (150 mm) beyond the damaged area.

5. Apply the remaining layers as specified.

End of Section



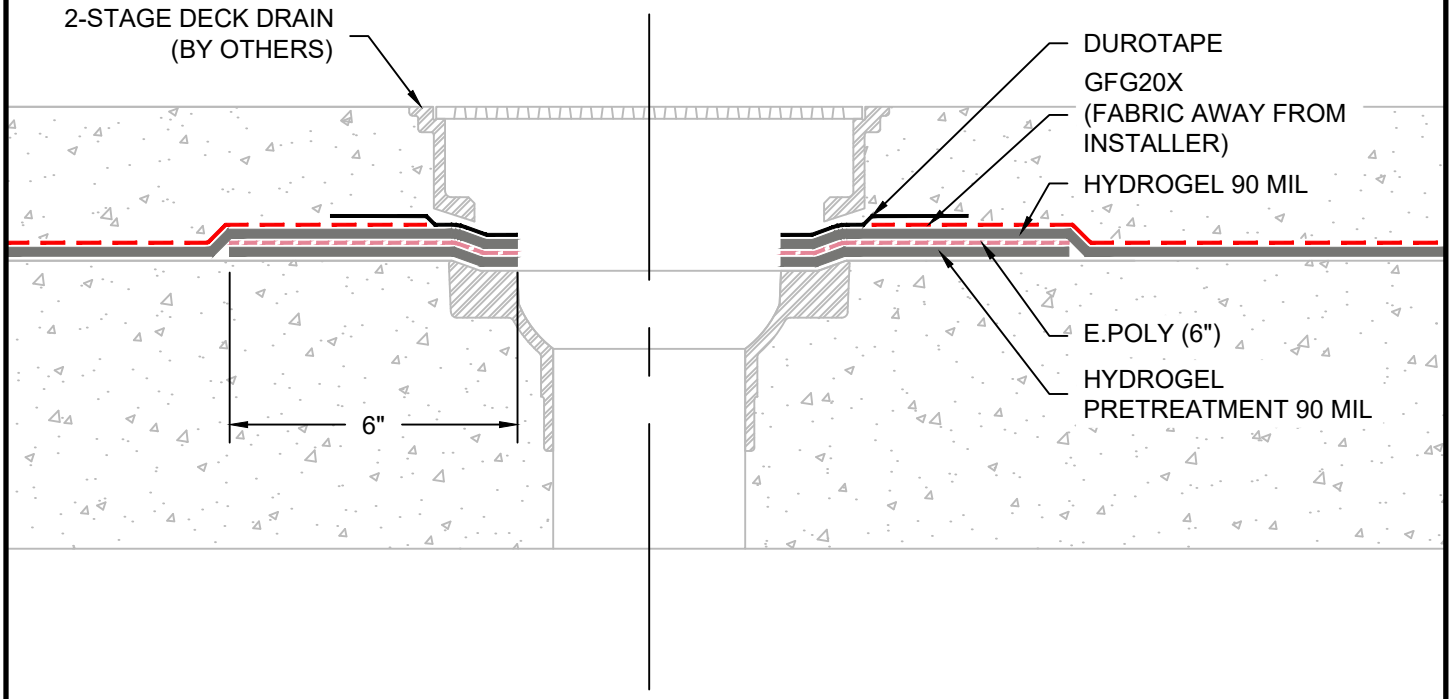
G:\My Drive\Epro Master Folder\Drafting\Details\Transitions\Hybrids\Underslab to Wall\51.143.1.3.21 UNDERSLAB ASSEMBLY - VERTICAL TRANSITION - HYDROGEL POST-APPLIED SYSTEM (OPTION 3).dwg [Detail] July 26, 2022 - 8:51am

UNDERSLAB ASSEMBLY - VERTICAL TRANSITION - HYDROGEL POST-APPLIED SYSTEM (REINFORCED SEAM)

SYSTEM NAME	DRAWING NUMBER
PRETAK	51.143.1.3.21
DRAFTER	DATE
RJT	7/25/2022

PRETAK HYDROGEL

NTS



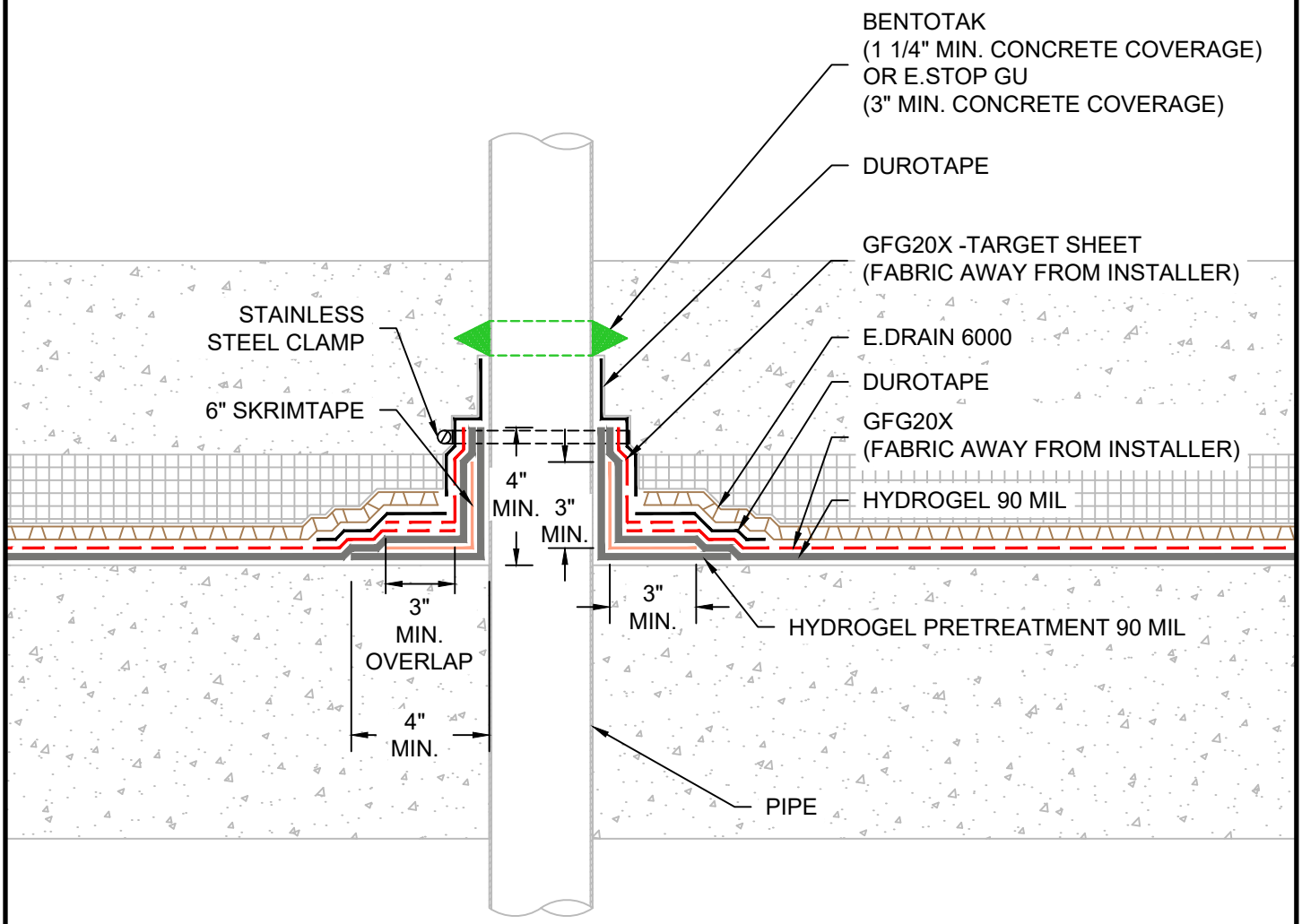
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.425.1.2 DECK DRAIN AT SPLIT SLAB OPTION 2.dwg [Detail] September 22, 2021 - 10:21am

DECK DRAIN AT SPLIT SLAB (OPTION 2)

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.425.1.2
DRAFTER	DATE
RJT	09/22/2021

HYDROGEL

NTS



NOTES:

1. ALL PIPES, CONDUITS, AND SLEEVES SHALL BE FREE OF DIRT, CONCRETE SPLATTER, PAINT, OIL, AND RUST.

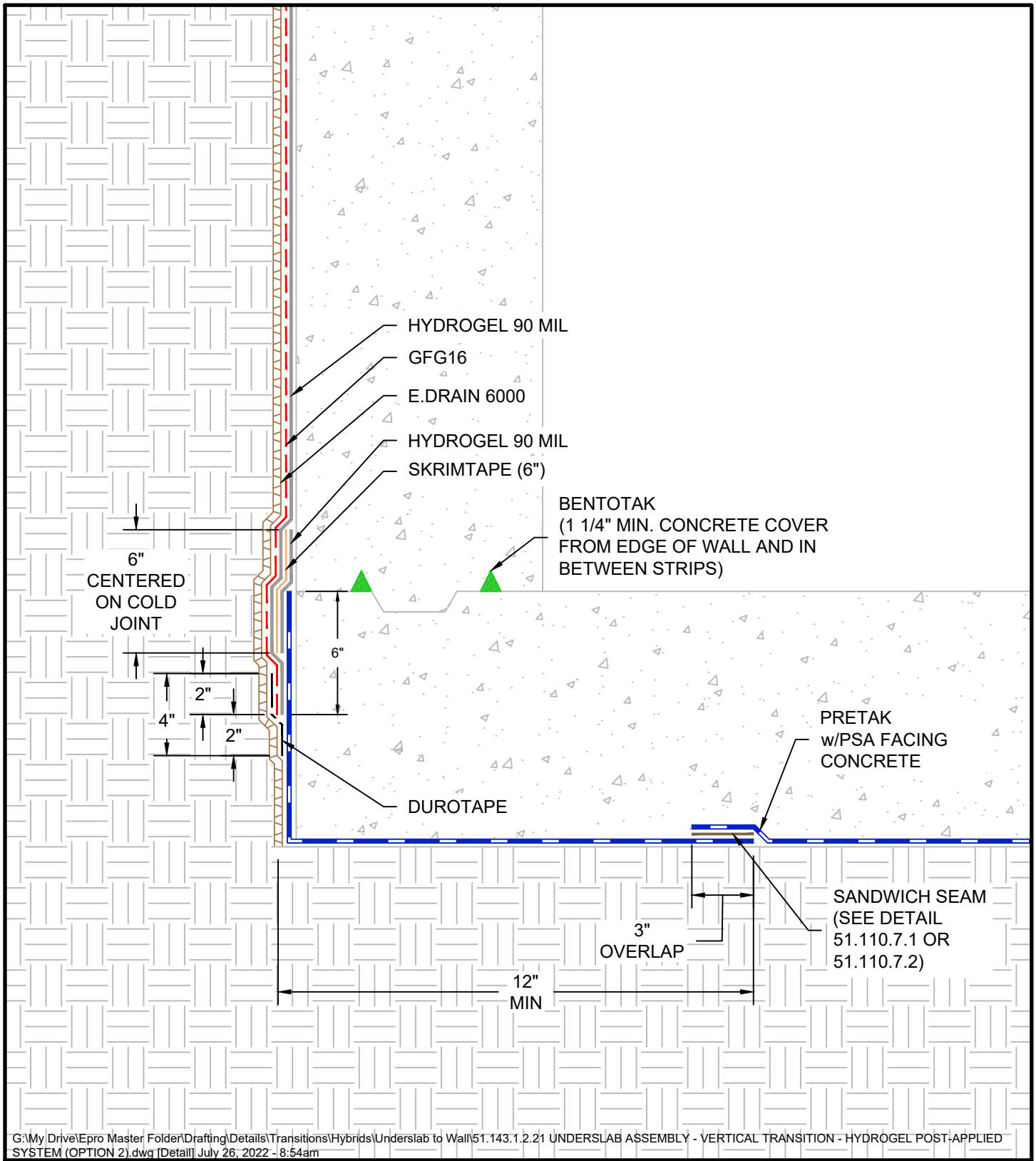
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.420.2 DECK PIPE PENETRATION WITH INSULATION.dwg [Detail] November 05, 2021 - 11:07am

DECK PIPE PENETRATION WITH INSULATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.420.2
DRAFTER	DATE
RJT	11/04/2021

HYDROGEL

NTS



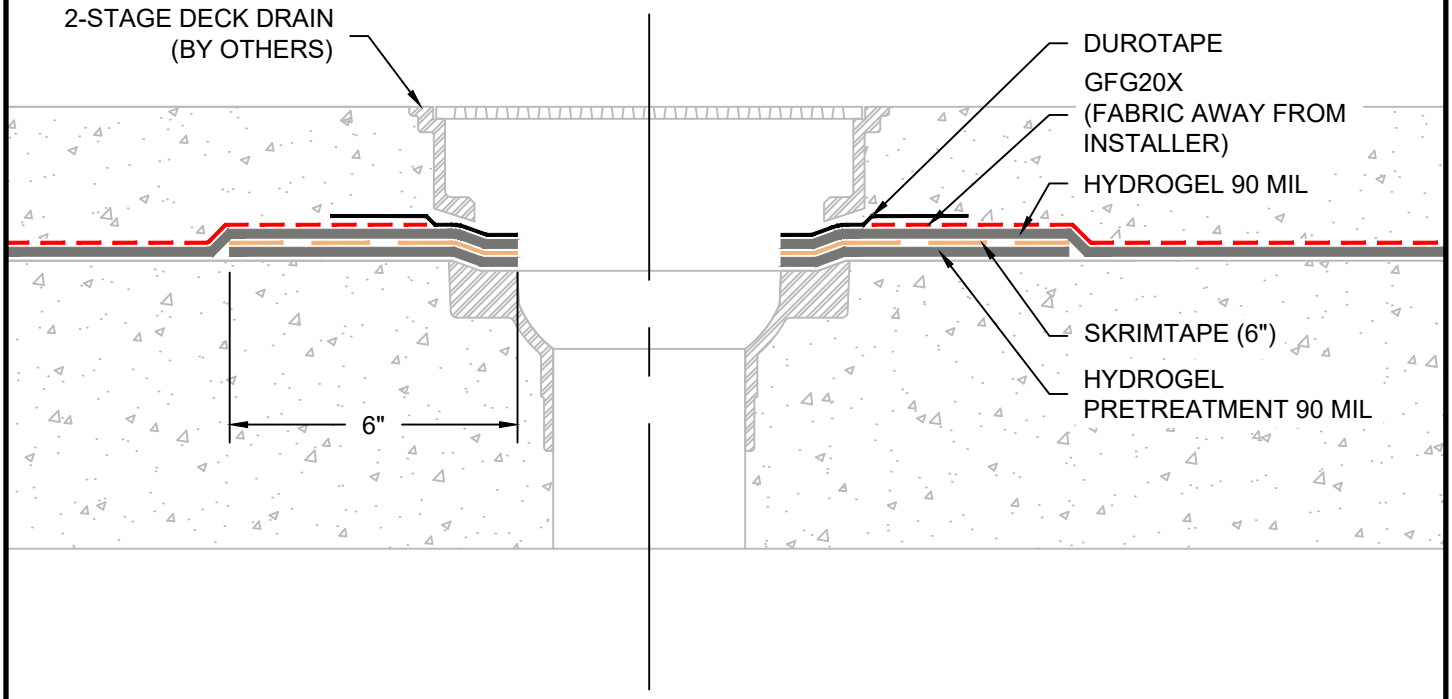
G:\My Drive\Epro Master Folder\Drafting\Details\Transitions\Hybrids\Underslab to Wall\51.143.1.2.21 UNDERSLAB ASSEMBLY - VERTICAL TRANSITION - HYDROGEL POST-APPLIED SYSTEM (OPTION 2).dwg [Detail] July 26, 2022 - 8:54am

UNDERSLAB ASSEMBLY - VERTICAL TRANSITION - HYDROGEL POST-APPLIED SYSTEM (SANDWICH SEAM)

SYSTEM NAME	DRAWING NUMBER
PRETAK	51.143.1.2.21
DRAFTER	DATE
RJT	7/25/2022

PRETAK HYDROGEL

NTS



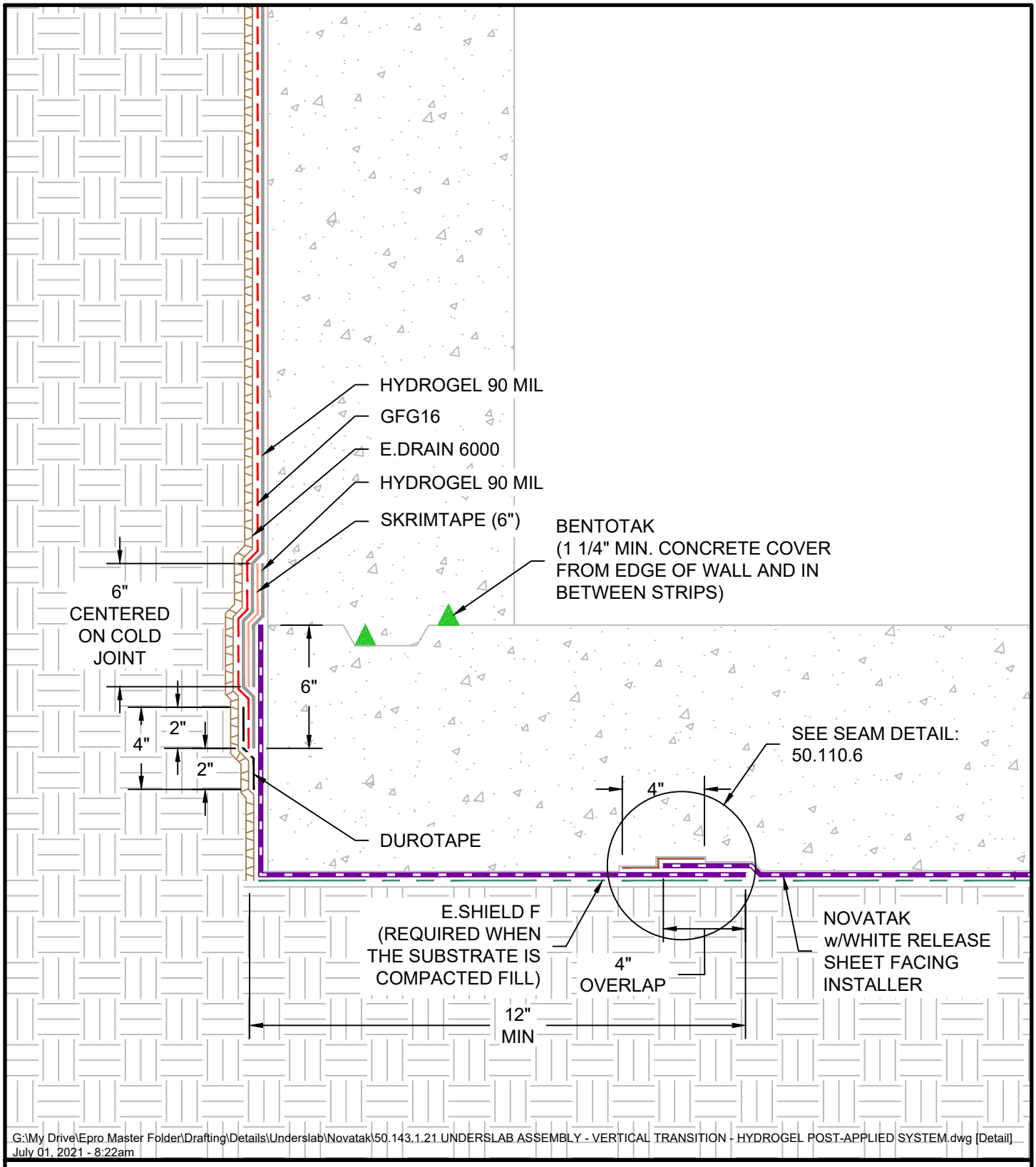
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.425.1.1 DECK DRAIN AT SPLIT SLAB OPTION 1.dwg [Detail] September 22, 2021 - 10:19am

DECK DRAIN AT SPLIT SLAB (OPTION 1)

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.425.1.1
DRAFTER	DATE
RJT	09/22/2021

HYDROGEL

NTS



G:\My Drive\Epro Master Folder\Drafting\Details\Underslab\Novatak\50.143.1.21 UNDERSLAB ASSEMBLY - VERTICAL TRANSITION - HYDROGEL POST-APPLIED SYSTEM.dwg [Detail]
July 01, 2021 - 8:22am

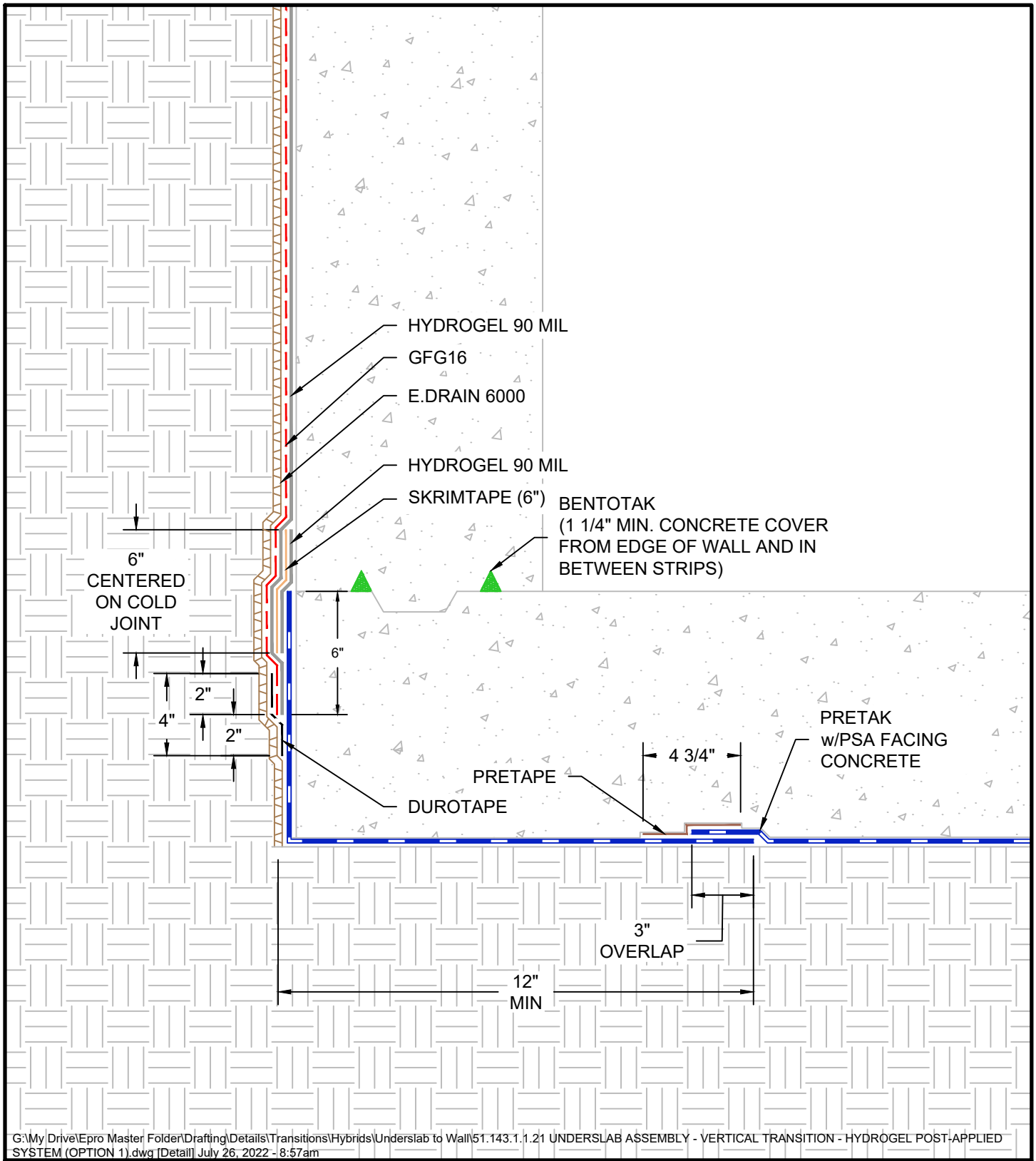
UNDERSLAB ASSEMBLY - VERTICAL TRANSITION - HYDROGEL POST-APPLIED SYSTEM

epro

SYSTEM NAME	DRAWING NUMBER
NOVATAK	50.143.1.21
DRAFTER	DATE
RJT	6/11/2021

NOVATAK

NTS



G:\My Drive\Epro Master Folder\Drafting\Details\Transitions\Hybrids\Underslab to Wall\51.143.1.1.21 UNDERSLAB ASSEMBLY - VERTICAL TRANSITION - HYDROGEL POST-APPLIED SYSTEM (OPTION 1).dwg [Detail] July 26, 2022 - 8:57am

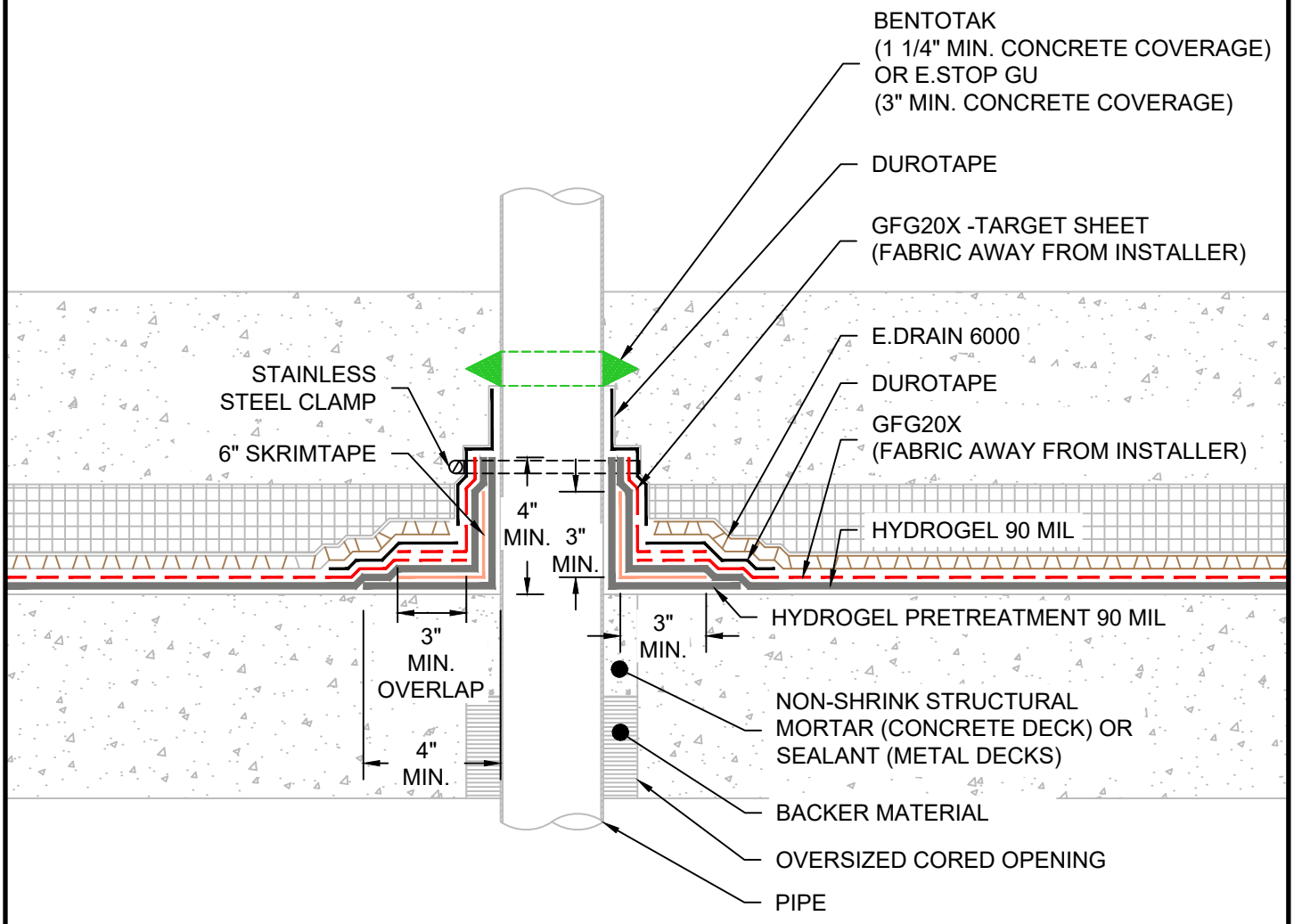
UNDERSLAB ASSEMBLY - VERTICAL TRANSITION - HYDROGEL POST-APPLIED SYSTEM (POSITIVE LAP SEAM)

epro

SYSTEM NAME	DRAWING NUMBER
PRETAK	51.143.1.1.21
DRAFTER	DATE
RJT	3/25/2021

PRETAK HYDROGEL

NTS



NOTES:

1. ALL PIPES, CONDUITS, AND SLEEVES SHALL BE FREE OF DIRT, CONCRETE SPLATTER, PAINT, OIL, AND RUST.

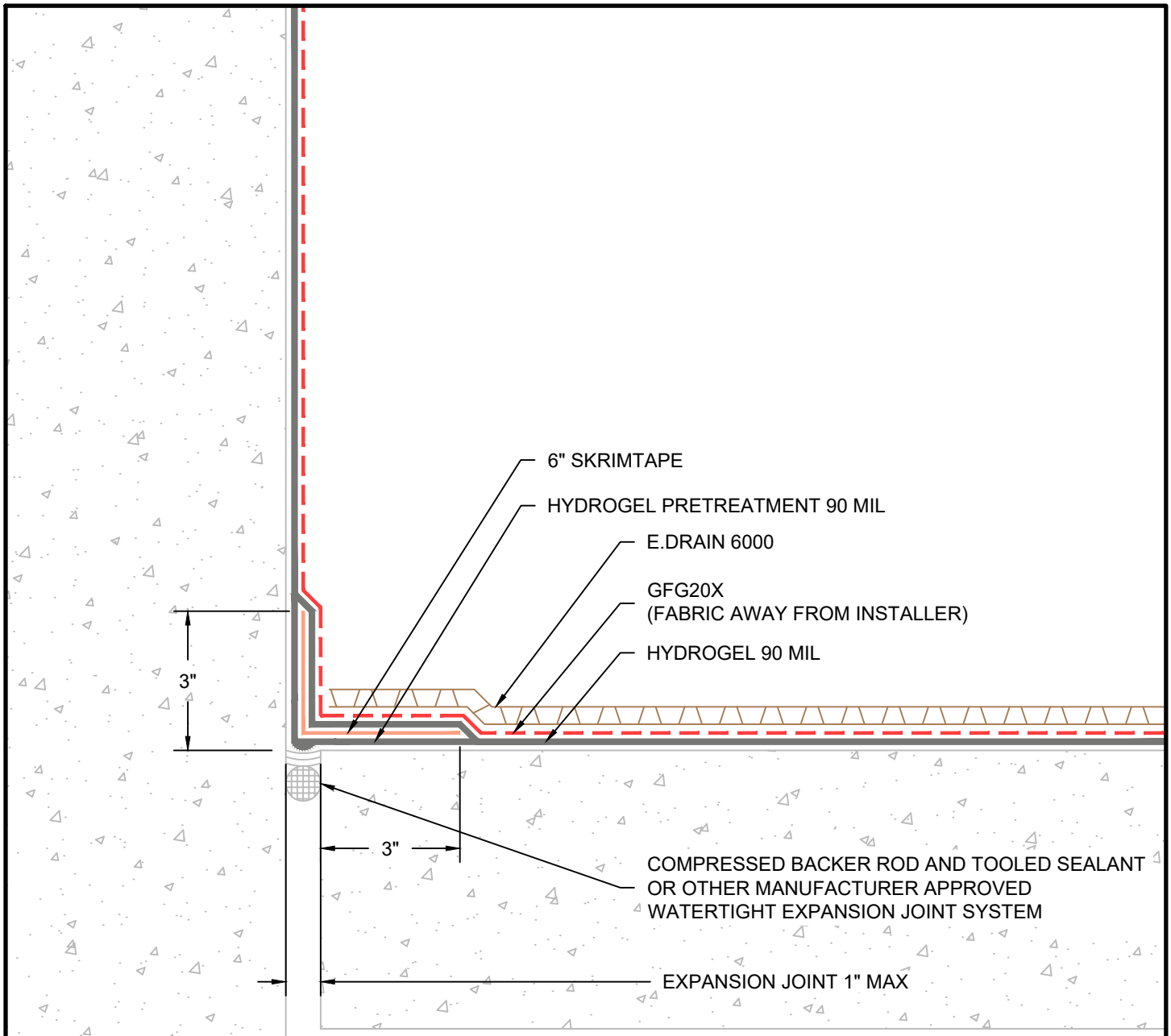
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.421.2 DECK CORED PIPE PENETRATION WITH INSULATION.dwg [Detail] November 05, 2021 - 11:05am

DECK CORED PIPE PENETRATION WITH INSULATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.421.2
DRAFTER	DATE
RJT	11/04/2021

HYDROGEL

NTS



NOTES:

1. DETAIL IS DESIGNED TO ACCOMMODATE 50% (MAX.) TOTAL MOVEMENT.
2. BACKER ROD AND TOOLED SEALANT OR OTHER MANUFACTURER APPROVED WATERTIGHT EXPANSION JOINT SYSTEM ARE REQUIRED TO BE INSTALLED PRIOR TO HYDROGEL/SKRIMTAPE INSTALLATION.

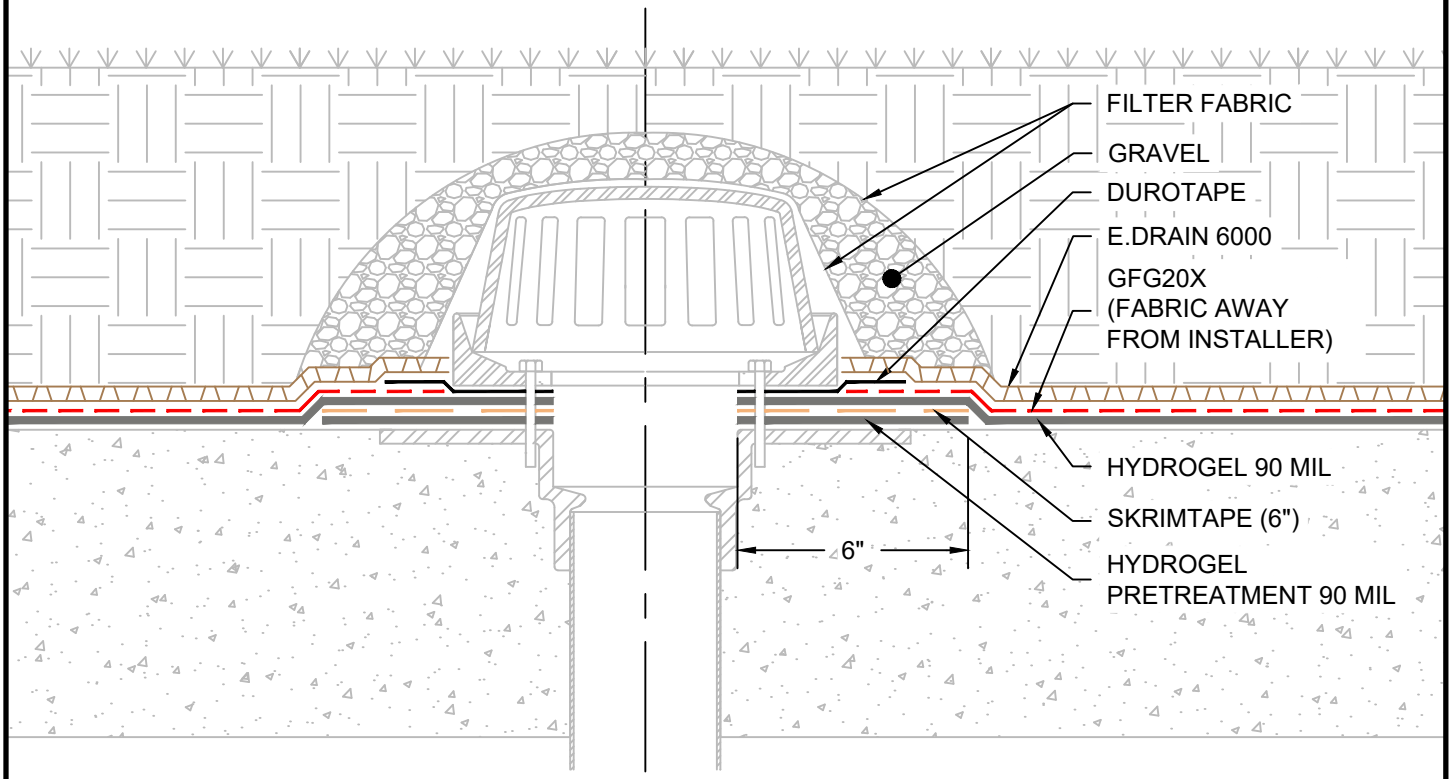
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.451.1 DECK TO WALL EXPANSION JOINT.dwg [Detail] July 01, 2020 - 2:23pm

DECK TO WALL EXPANSION JOINT

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.451.1
DRAFTER	DATE
RJT	07/01/2020

HYDROGEL

NTS



G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.427.1.1 PLANTER ASSEMBLY - DRAIN OPTION 1.dwg [Detail] September 22, 2021 - 10:23am

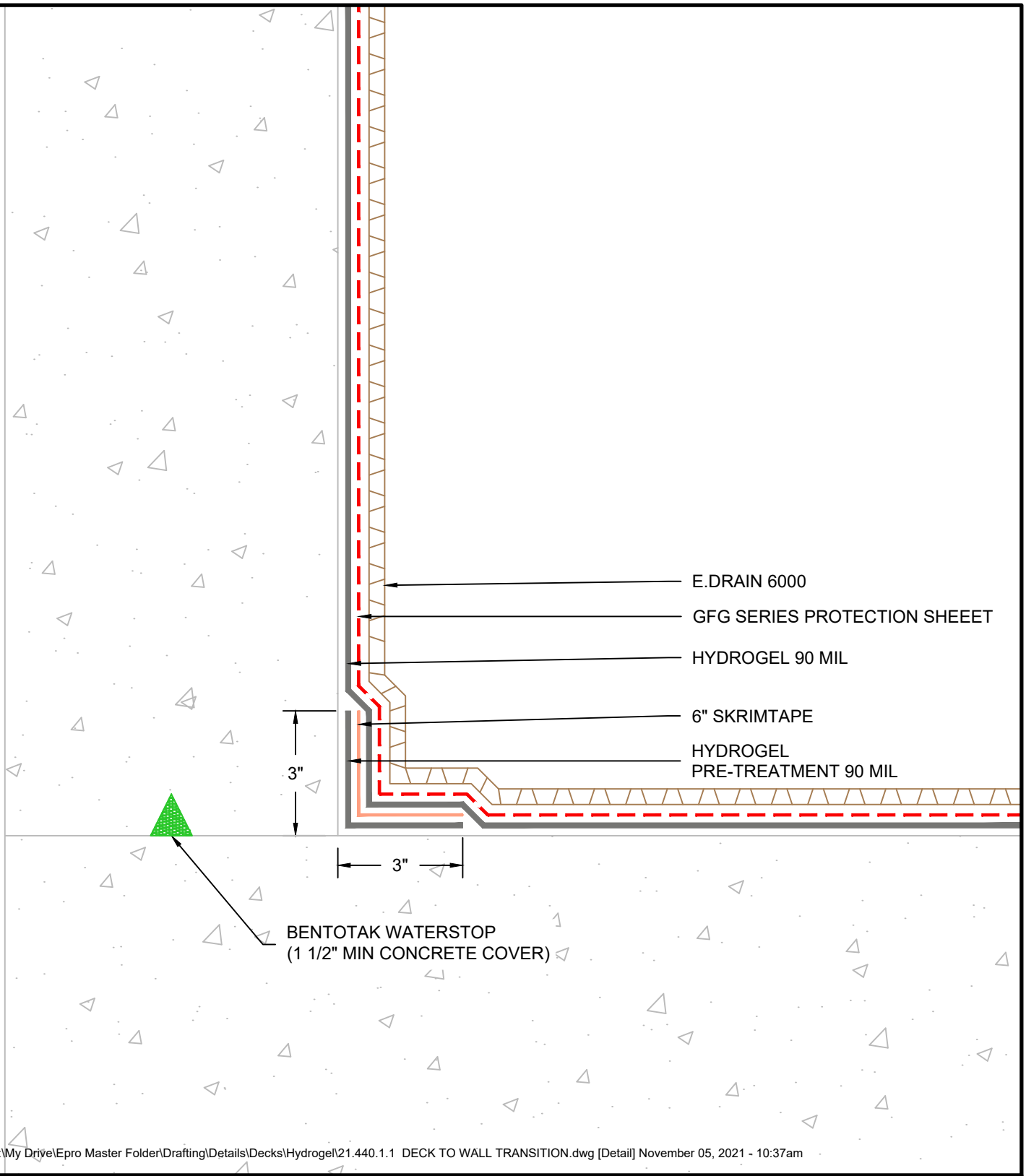
PLANTER ASSEMBLY: DRAIN (OPTION 1)

epro

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.427.1.1
DRAFTER	DATE
RJT	09/22/2021

HYDROGEL

NTS



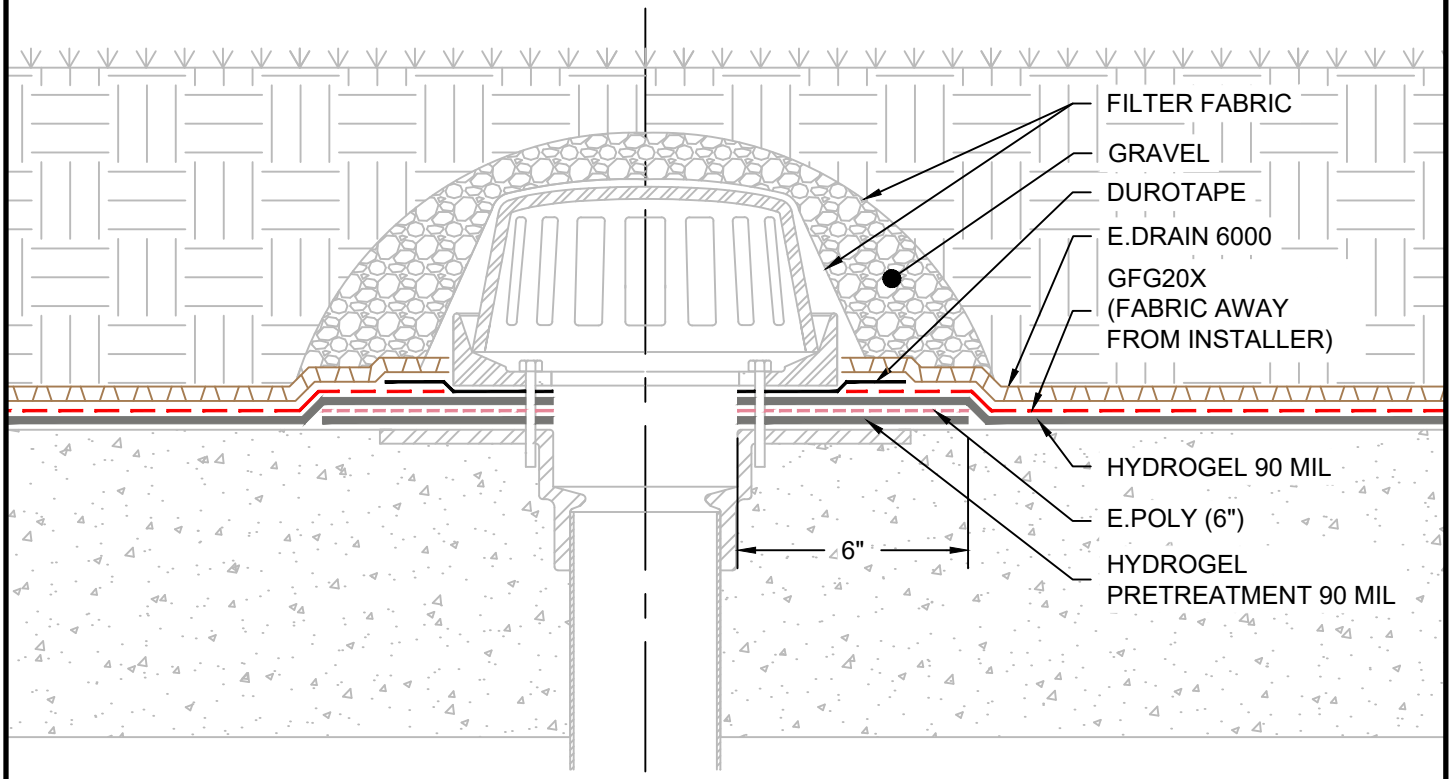
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.440.1.1 DECK TO WALL TRANSITION.dwg [Detail] November 05, 2021 - 10:37am

DECK TO WALL TRANSITION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.440.1.1
DRAFTER	DATE
RJT	11/04/2021

HYDROGEL

NTS



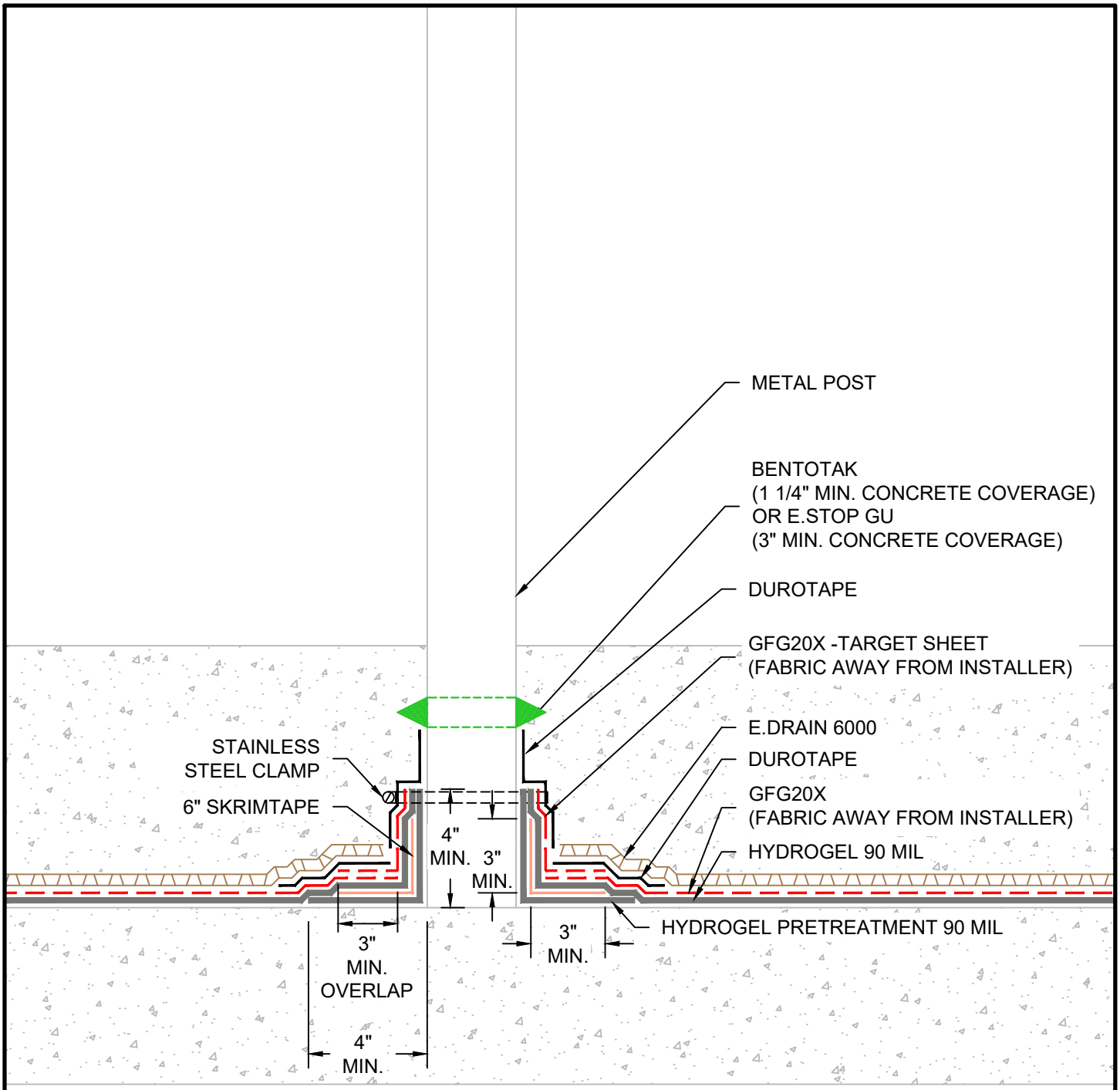
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.427.1.2 PLANTER ASSEMBLY - DRAIN OPTION 2.dwg [Detail] September 22, 2021 - 10:23am

PLANTER ASSEMBLY: DRAIN (OPTION 2)

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.427.1.2
DRAFTER	DATE
RJT	09/22/2021

HYDROGEL

NTS



NOTES:

1. POST SHALL BE FREE OF DIRT, CONCRETE SPLATTER, PAINT, OIL, AND RUST.

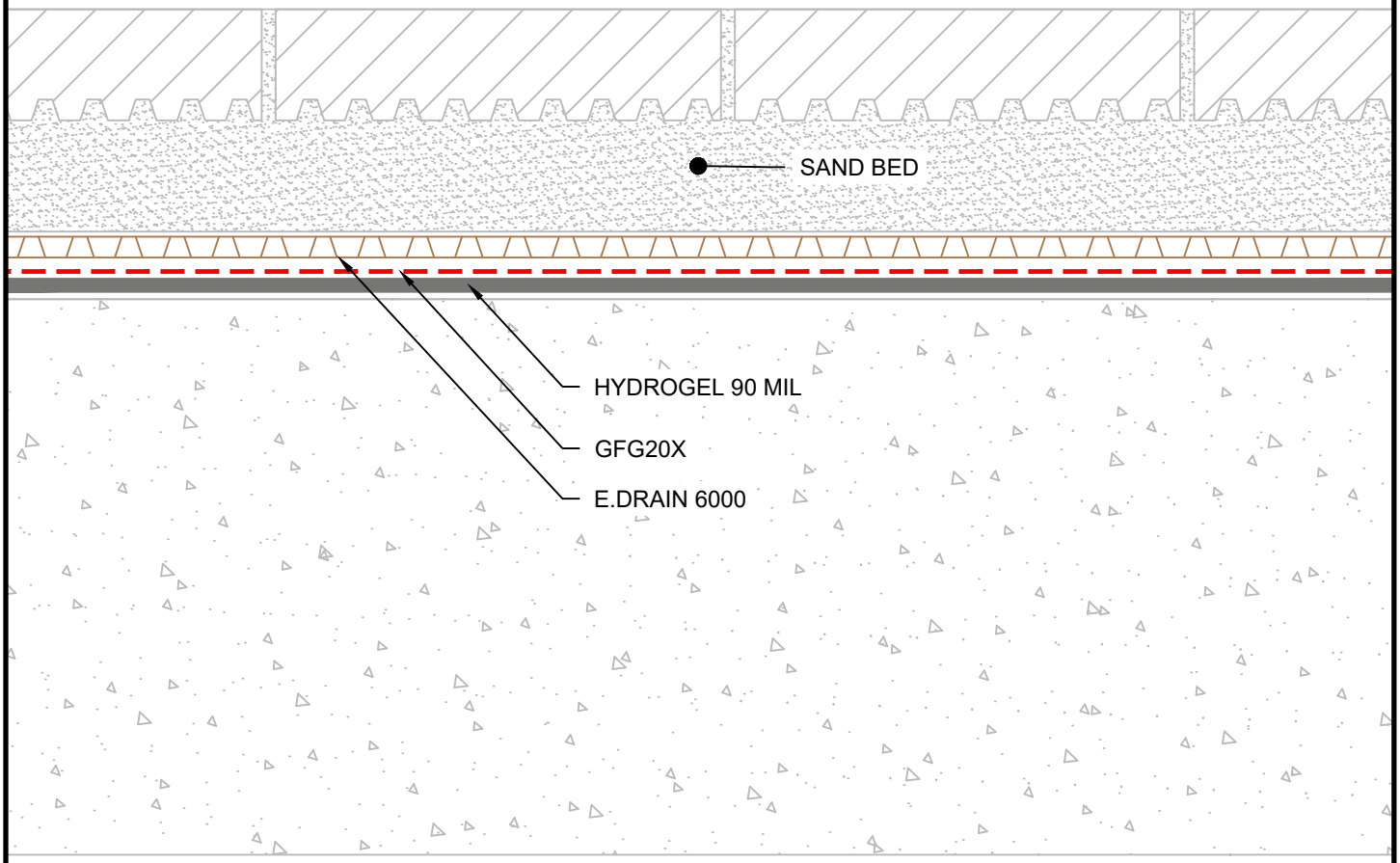
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.423.1 DECK POST PENETRATION.dwg [Detail] November 05, 2021 - 10:39am

DECK POST PENETRATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.423.1
DRAFTER	DATE
RJT	11/04/2021

HYDROGEL

NTS



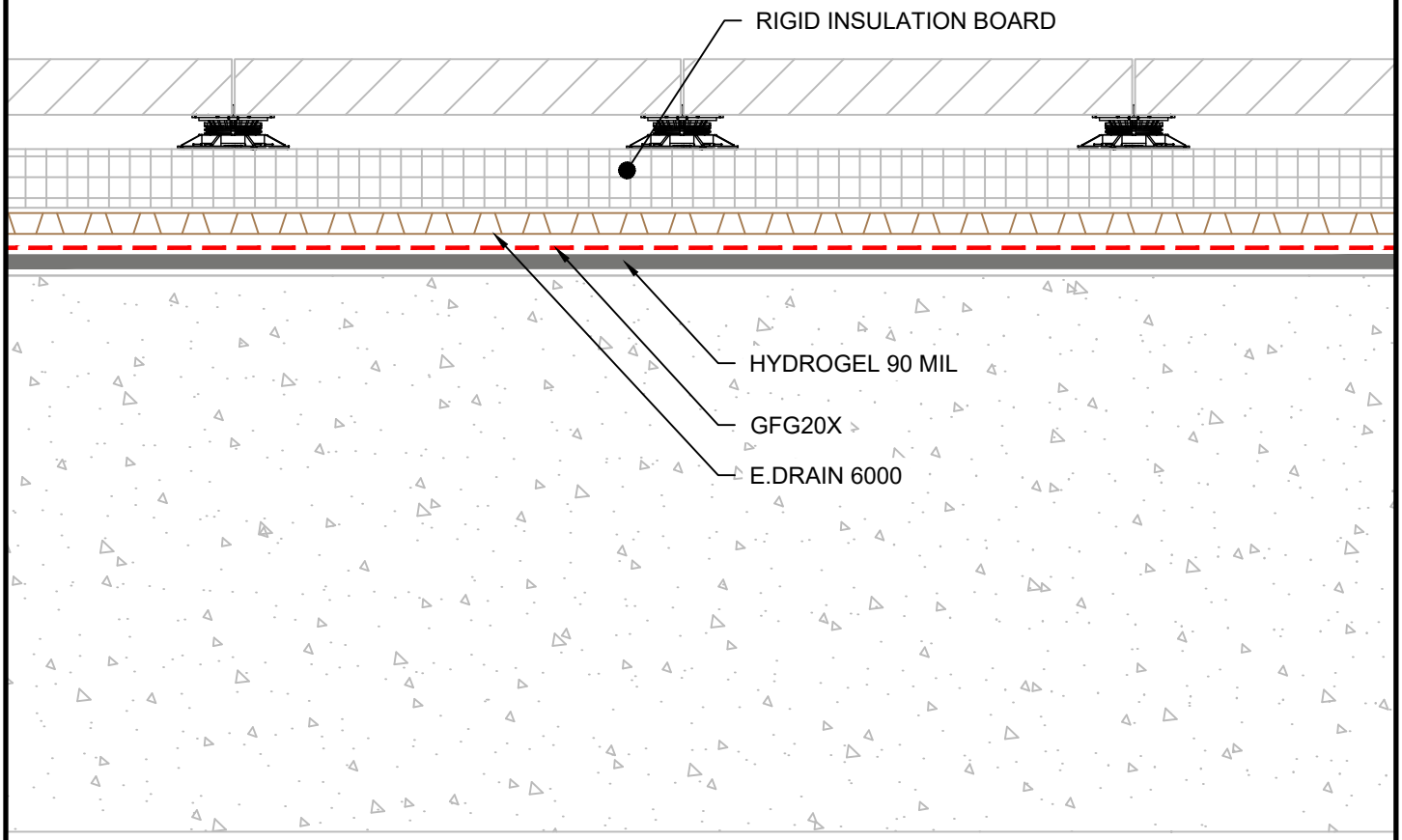
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.400.6 PAVER ON SAND BED DECK STANDARD ASSEMBLY.dwg [Detail] July 29, 2020 - 11:25am

PAVER ON SAND BED DECK STANDARD ASSEMBLY

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.400.6
DRAFTER	DATE
RJT	07/29/2020

HYDROGEL

NTS

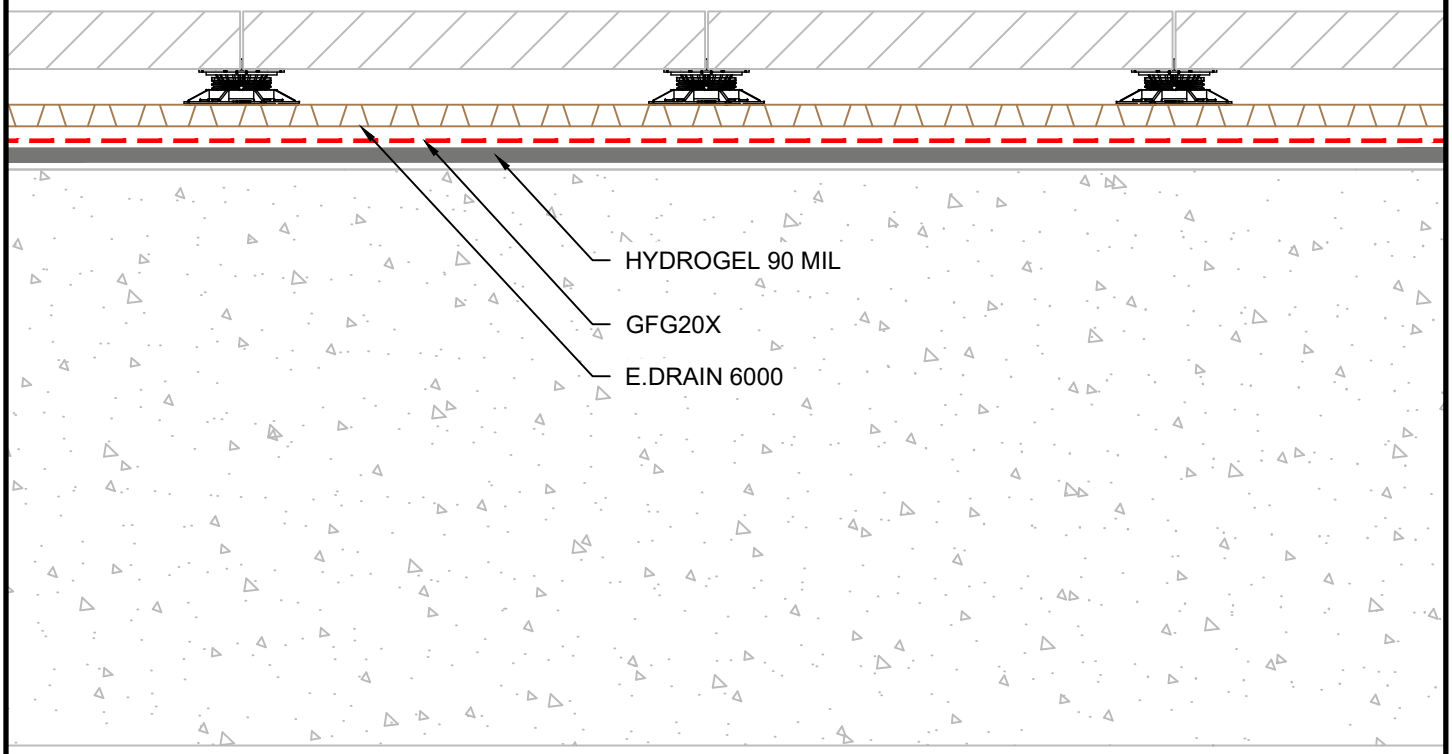


G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.400.4 PEDESTAL PAVER INSULATED DECK STANDARD ASSEMBLY.dwg [Detail] July 29, 2020 - 11:18am

PEDESTAL PAVER INSULATED DECK STANDARD ASSEMBLY

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.400.4
DRAFTER	DATE
RJT	07/29/2020

NTS



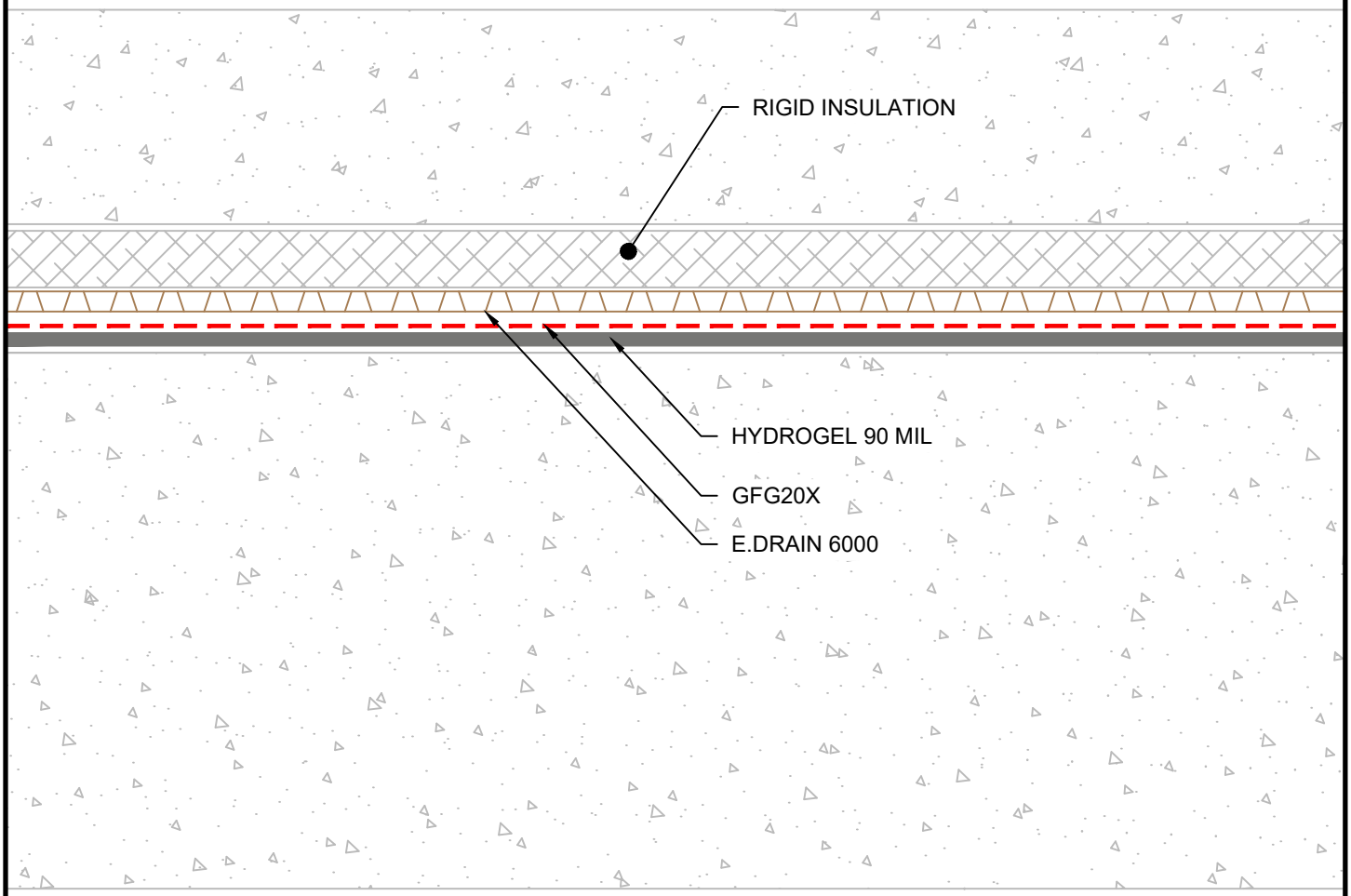
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.400.3 PEDESTAL PAVER DECK STANDARD ASSEMBLY.dwg [Detail] July 29, 2020 - 11:21am

PEDESTAL PAVER DECK STANDARD ASSEMBLY

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.400.3
DRAFTER	DATE
RJT	07/29/2020

HYDROGEL

NTS



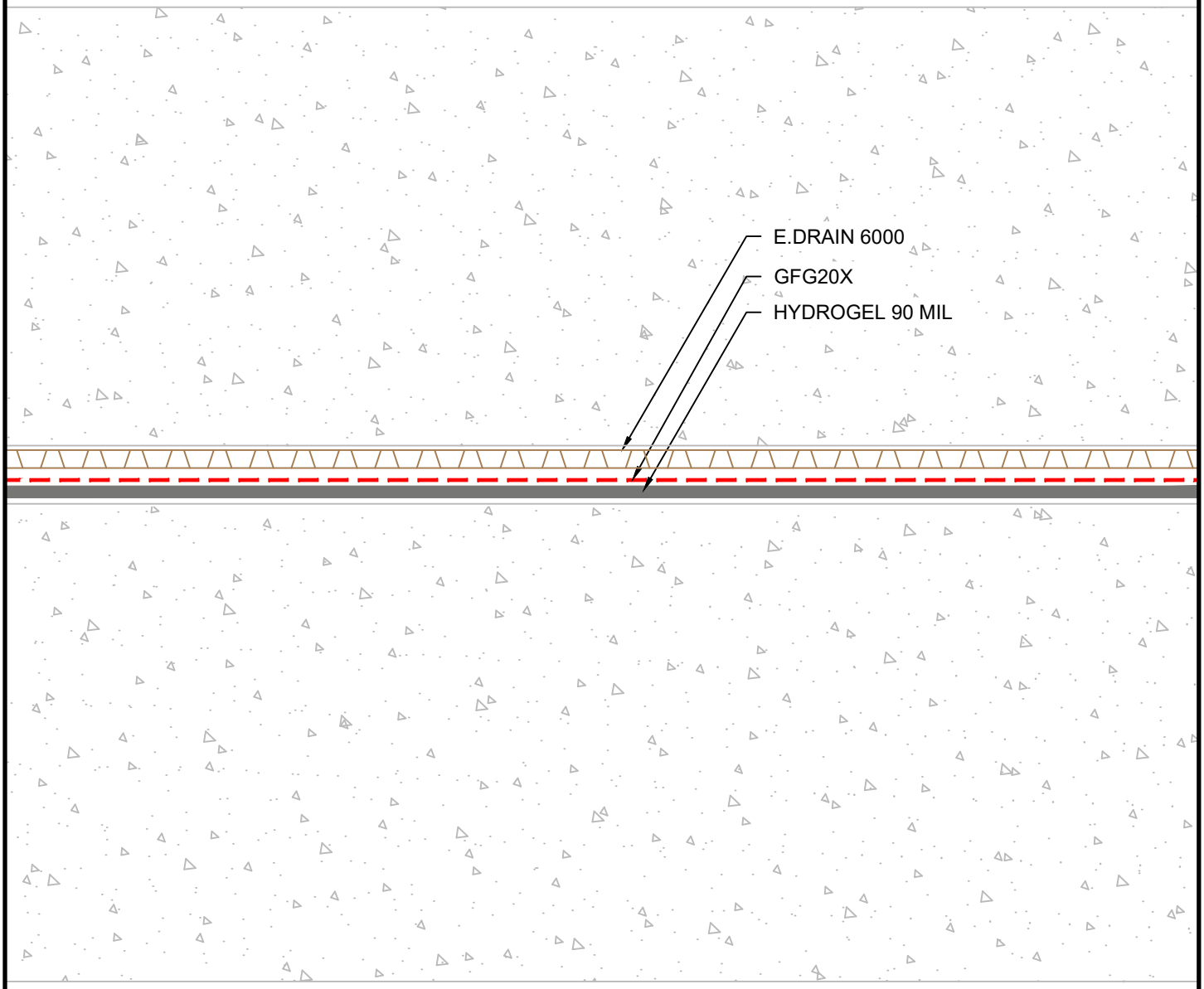
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.400.2 INSULATED DECK STANDARD ASSEMBLY.dwg [Detail] July 29, 2020 - 11:22am

INSULATED DECK STANDARD ASSEMBLY

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.400.2
DRAFTER	DATE
RJT	07/29/2020

HYDROGEL

NTS



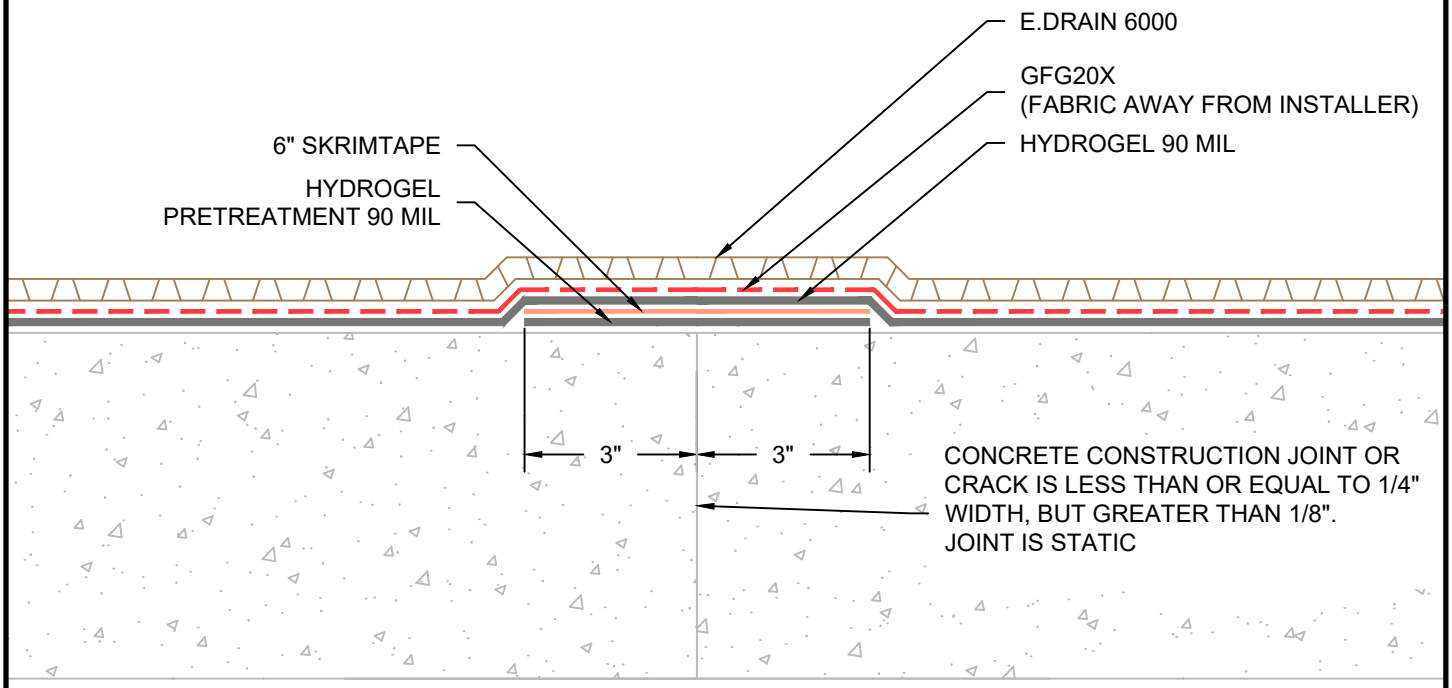
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.400.1 DECK ASSEMBLY.dwg [Detail] January 21, 2021 - 12:14pm

DECK ASSEMBLY

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.400.1
DRAFTER	DATE
RJT	01/21/2021

HYDROGEL

NTS



G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.452.2 JOINT OR CRACK AT DECK LESS THAN OR EQUAL TO 14 INCH. BUT GREATER THAN 18th inch.dwg [Detail]
July 01, 2020 - 2:22pm

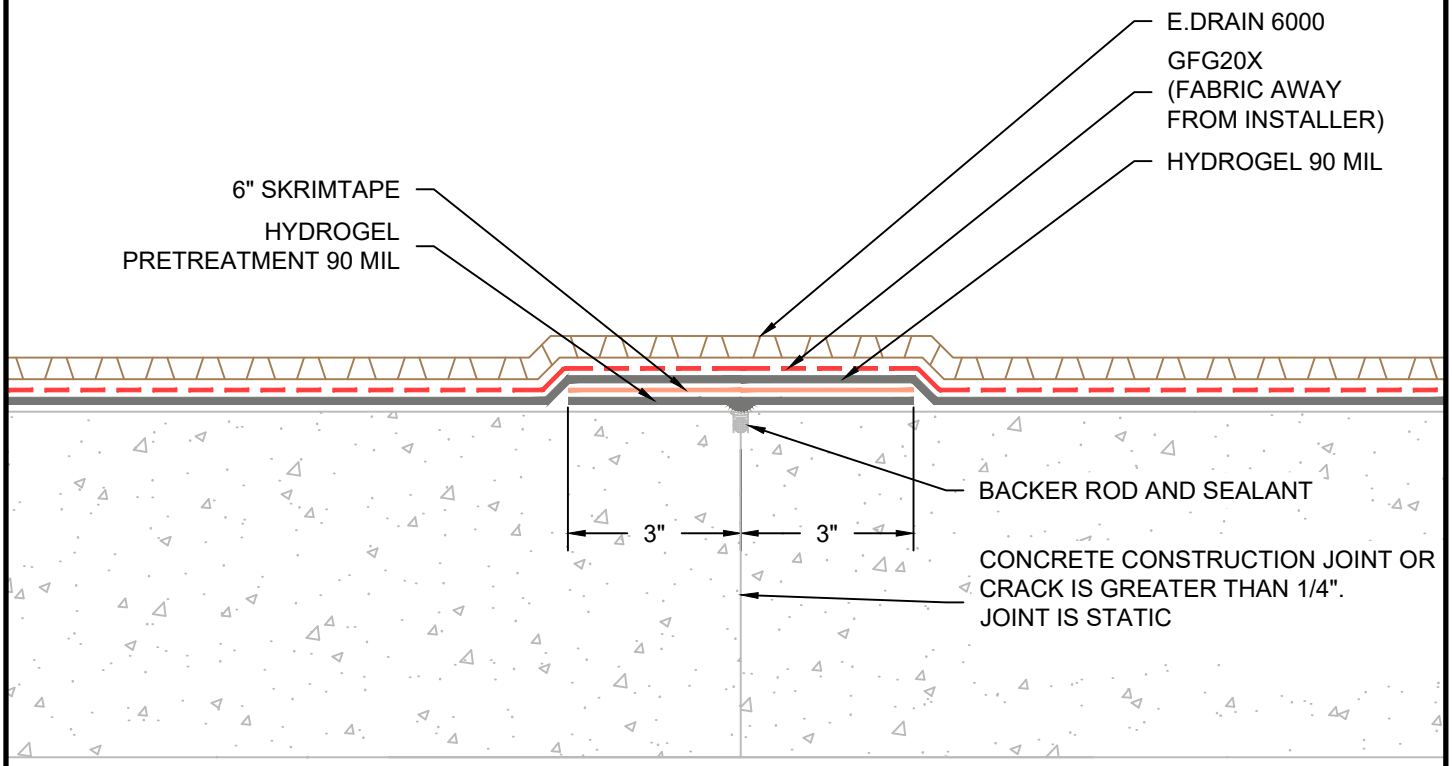
JOINT OR CRACK AT DECK LESS THAN OR EQUAL TO 1/4", BUT GREATER THAN 1/8"

epro

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.452.2
DRAFTER	DATE
RJT	07/01/2020

HYDROGEL

NTS



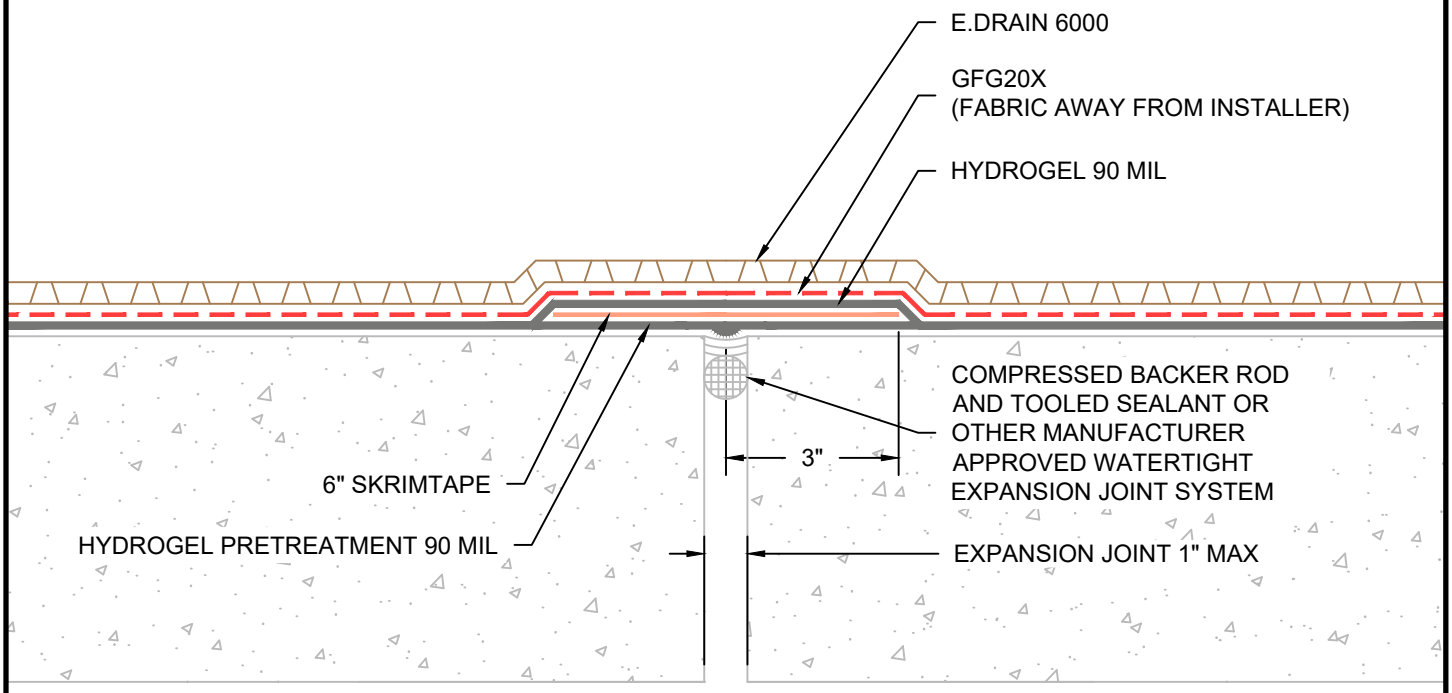
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.452.3 JOINT OR CRACK AT DECK GREATER THAN 14 INCH.dwg [Detail] July 01, 2020 - 2:21pm

JOINT OR CRACK AT DECK GREATER THAN 1/4"

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.452.3
DRAFTER	DATE
RJT	07/01/2020

HYDROGEL

NTS



NOTES:
1. DETAIL IS DESIGNED TO ACCOMMODATE 50% (MAX.) TOTAL MOVEMENT.
2. BACKER ROD AND TOOLED SEALANT OR OTHER MANUFACTURER APPROVED WATERTIGHT EXPANSION JOINT SYSTEM ARE REQUIRED TO BE INSTALLED PRIOR TO HYDROGEL/SKRIMTAPE INSTALLATION.

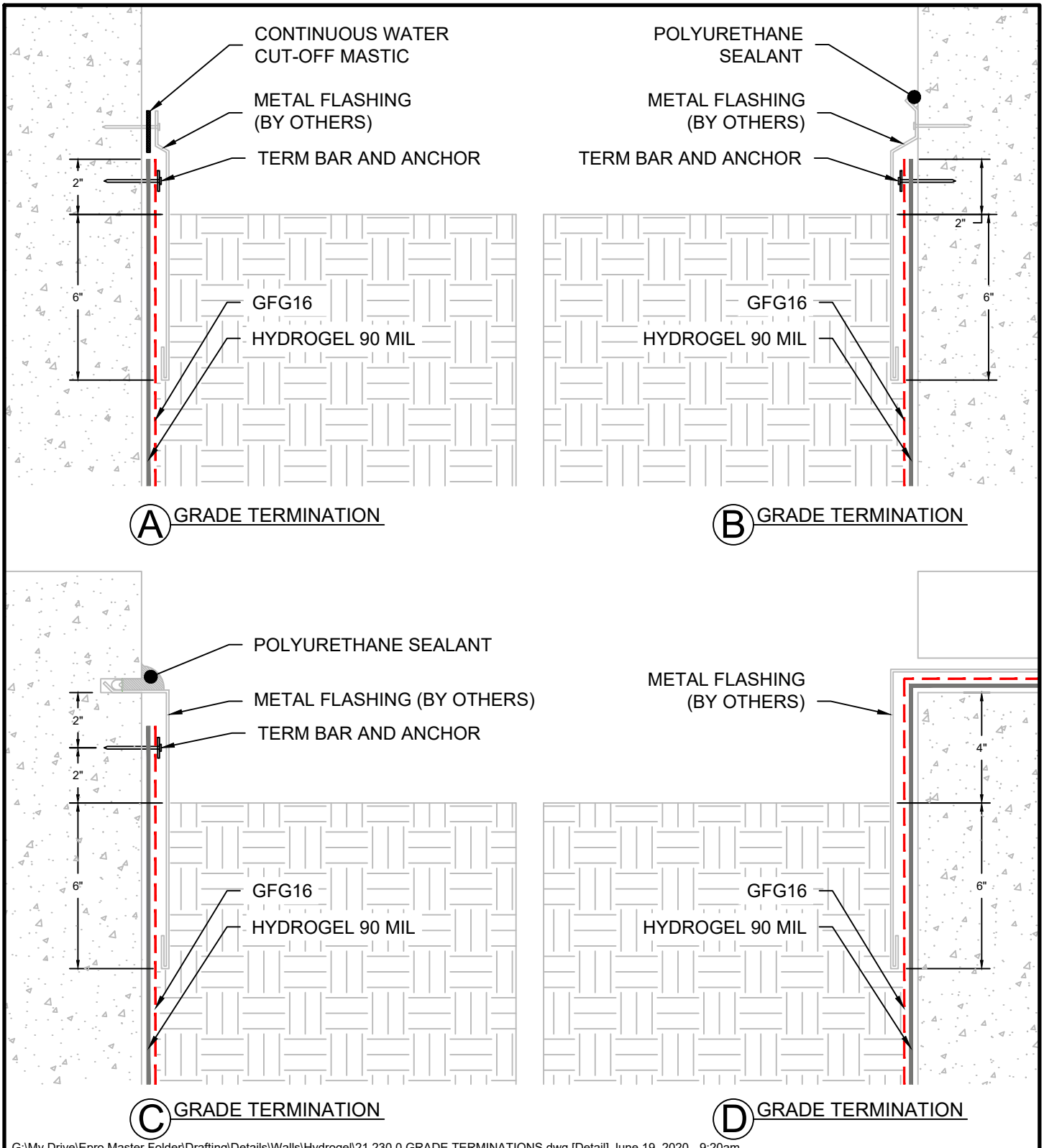
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.450.1 DECK TO DECK EXPANSION JOINT.dwg [Detail] July 01, 2020 - 2:24pm

DECK TO DECK EXPANSION JOINT

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.450.1
DRAFTER	DATE
RJT	07/01/2020

HYDROGEL

NTS



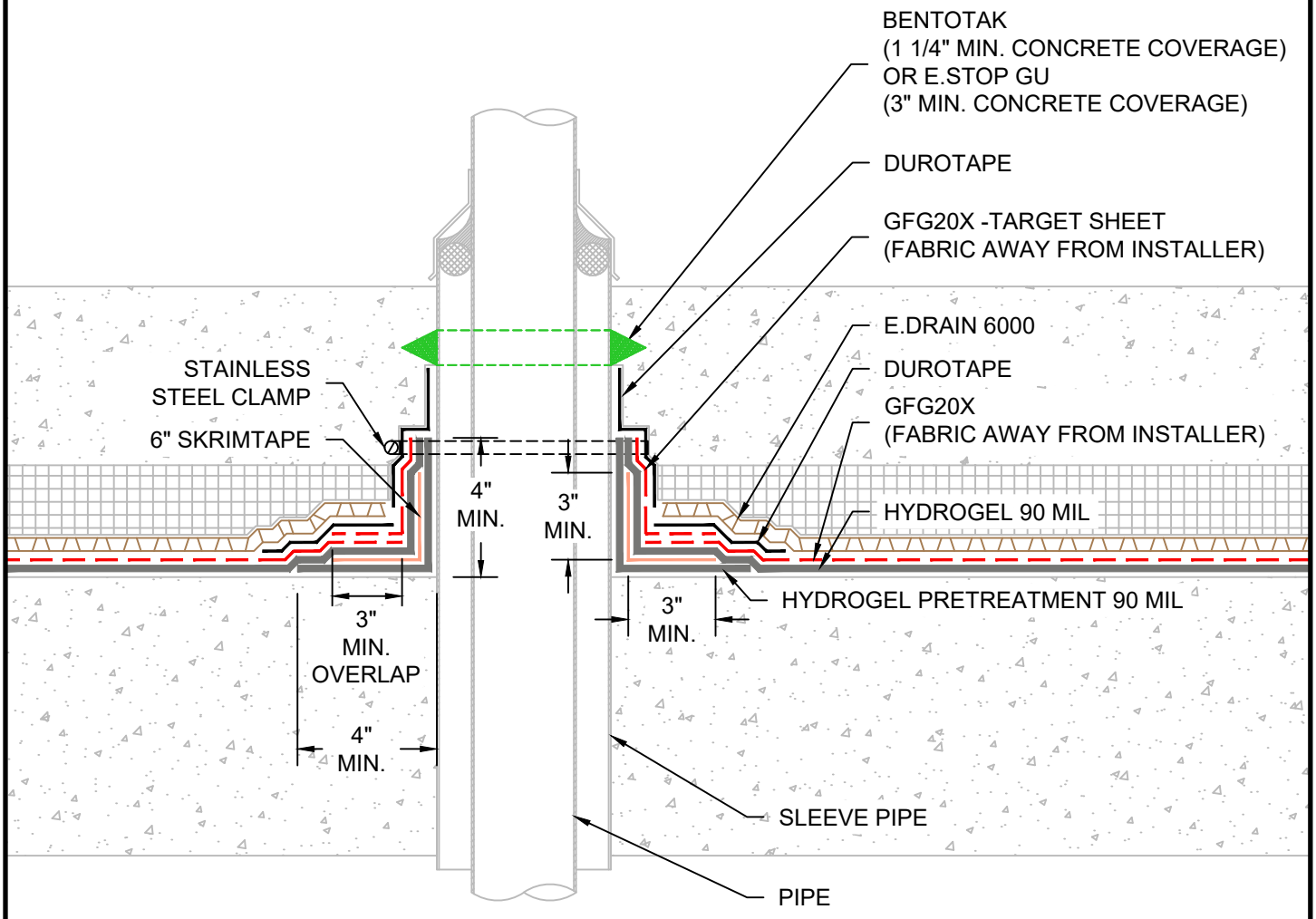
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.230.0 GRADE TERMINATIONS.dwg [Detail] June 19, 2020 - 9:20am

GRADE TERMINATIONS

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.230.0
DRAFTER	DATE
RJT	06/12/2020

HYDROGEL

NTS



NOTES:

1. ALL PIPES, CONDUITS, AND SLEEVES SHALL BE FREE OF DIRT, CONCRETE SPLATTER, PAINT, OIL, AND RUST.

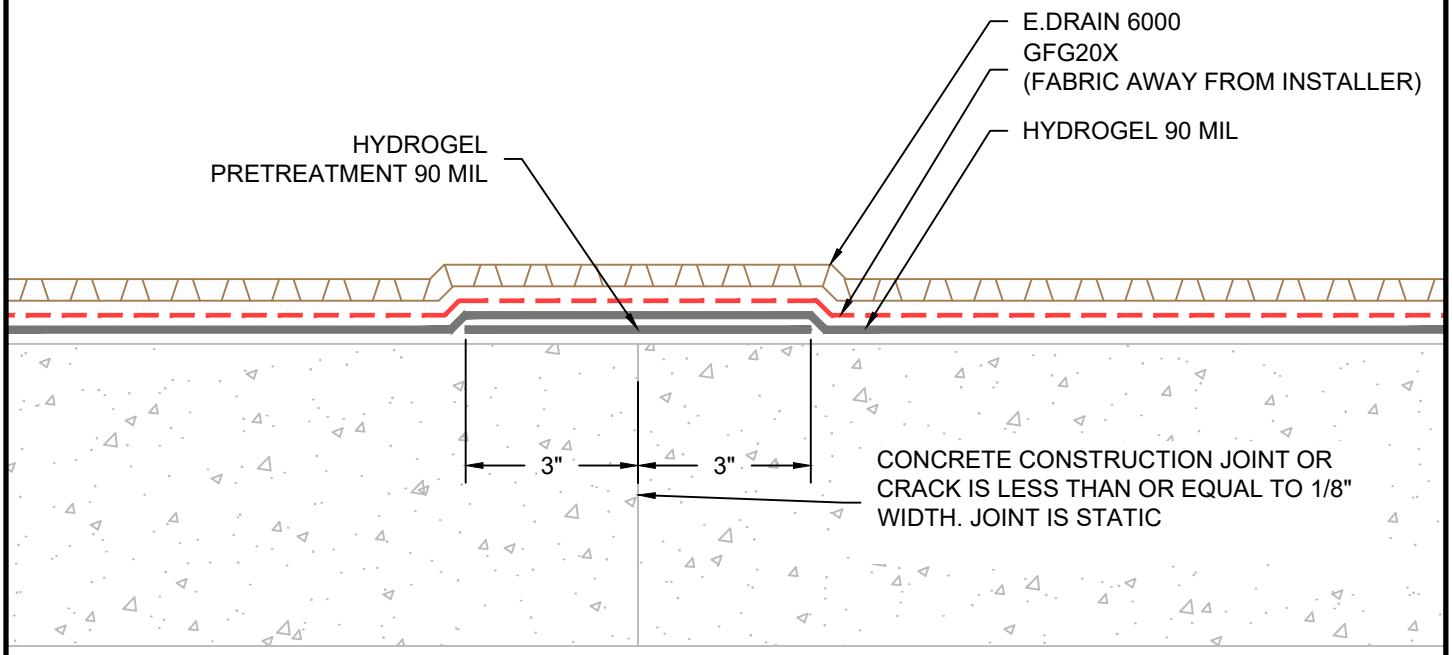
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.422.2 DECK SLEEVED PIPE PENETRATION WITH INSULATION.dwg [Detail] November 05, 2021 - 11:02am

DECK SLEEVED PIPE PENETRATION WITH INSULATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.422.2
DRAFTER	DATE
RJT	11/04/2021

HYDROGEL

NTS



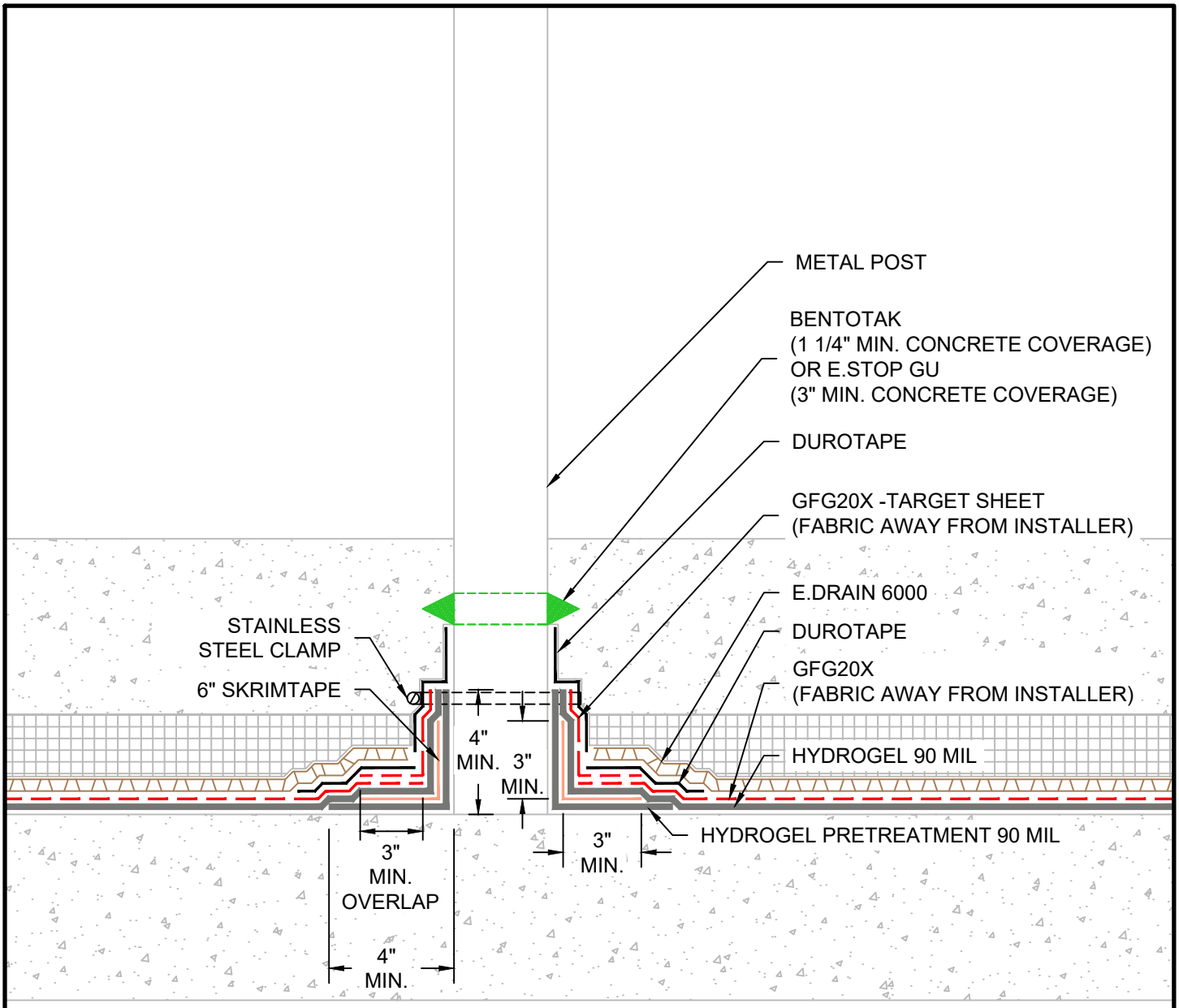
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.452.1 JOINT OR CRACK AT DECK LESS THAN OR EQUAL TO 18 INCH.dwg [Detail] October 22, 2020 - 1:58pm

JOINT OR CRACK AT DECK LESS THAN OR EQUAL TO 1/8" - PLAN VIEW

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.452.1
DRAFTER	DATE
RJT	10/22/2020

HYDROGEL

NTS



NOTES:

1. POST SHALL BE FREE OF DIRT, CONCRETE SPLATTER, PAINT, OIL, AND RUST.

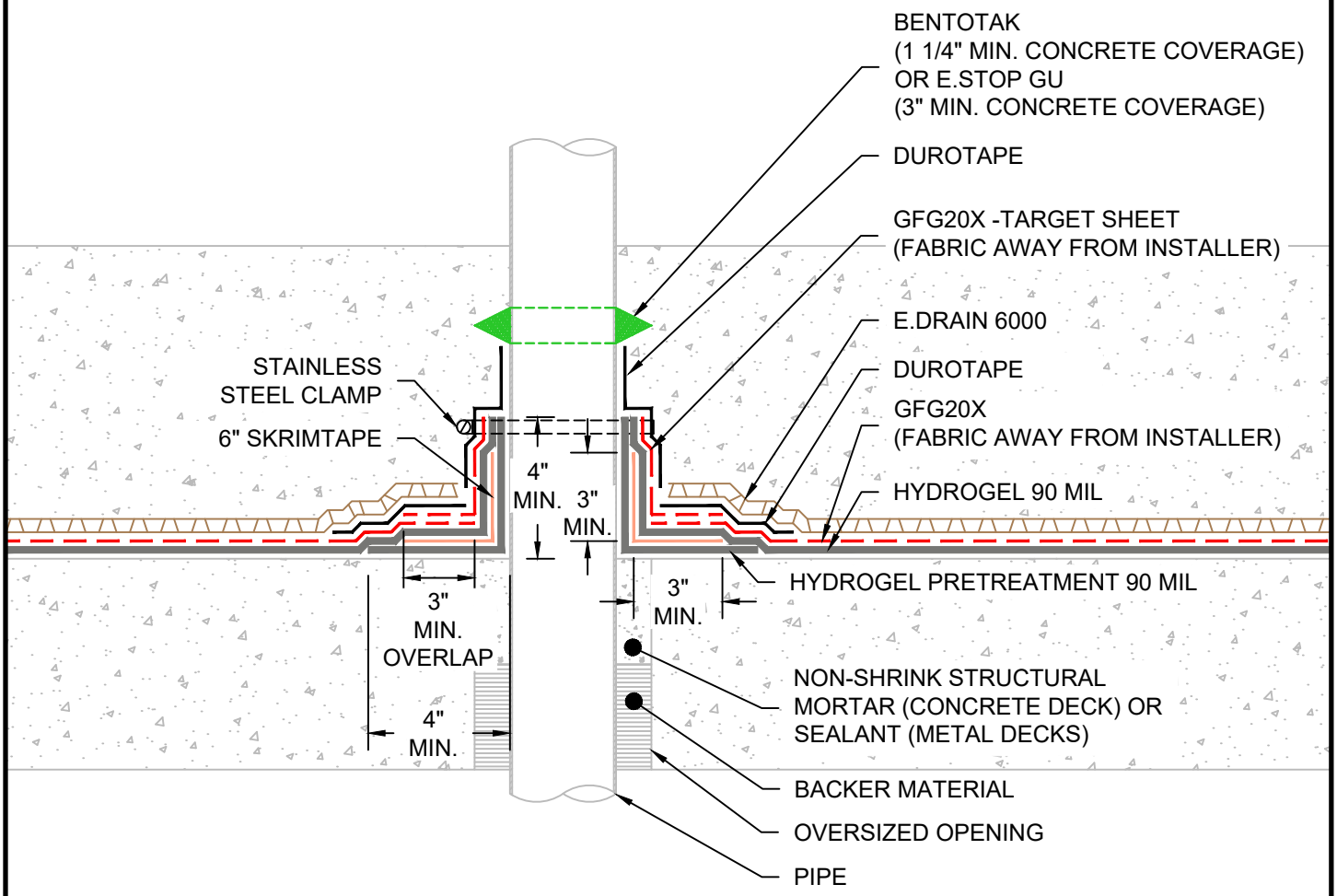
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.423.2 DECK POST PENETRATION WITH INSULATION.dwg [Detail] November 05, 2021 - 10:37am

DECK POST PENETRATION WITH INSULATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.423.2
DRAFTER	DATE
RJT	11/04/2021

HYDROGEL

NTS



NOTES:

1. ALL PIPES, CONDUITS, AND SLEEVES SHALL BE FREE OF DIRT, CONCRETE SPLATTER, PAINT, OIL, AND RUST.

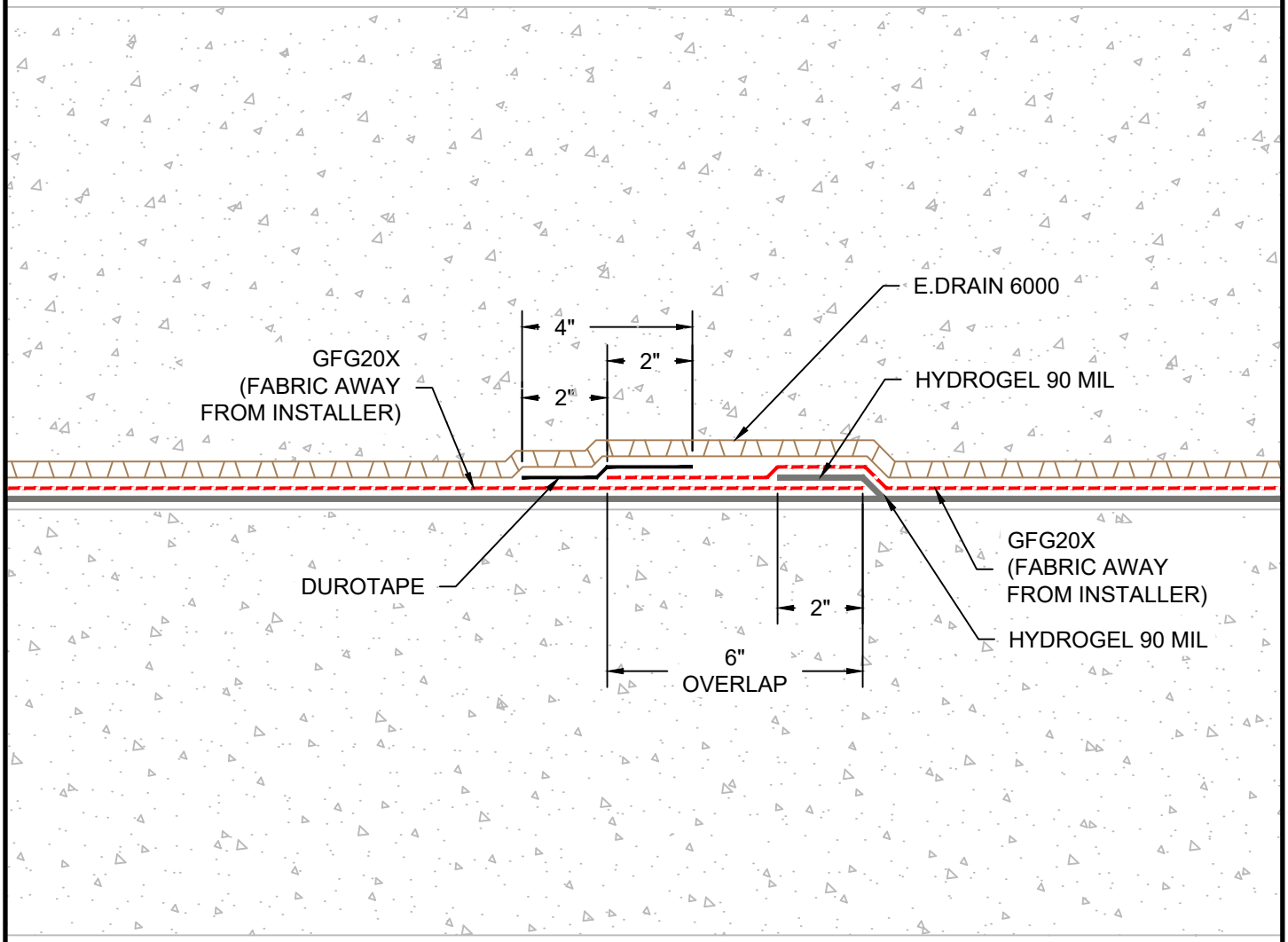
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.421.1 DECK CORED PIPE PENETRATION.dwg [Detail] November 05, 2021 - 11:06am

DECK CORED PIPE PENETRATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.421.1
DRAFTER	DATE
RJT	11/04/2021

HYDROGEL

NTS



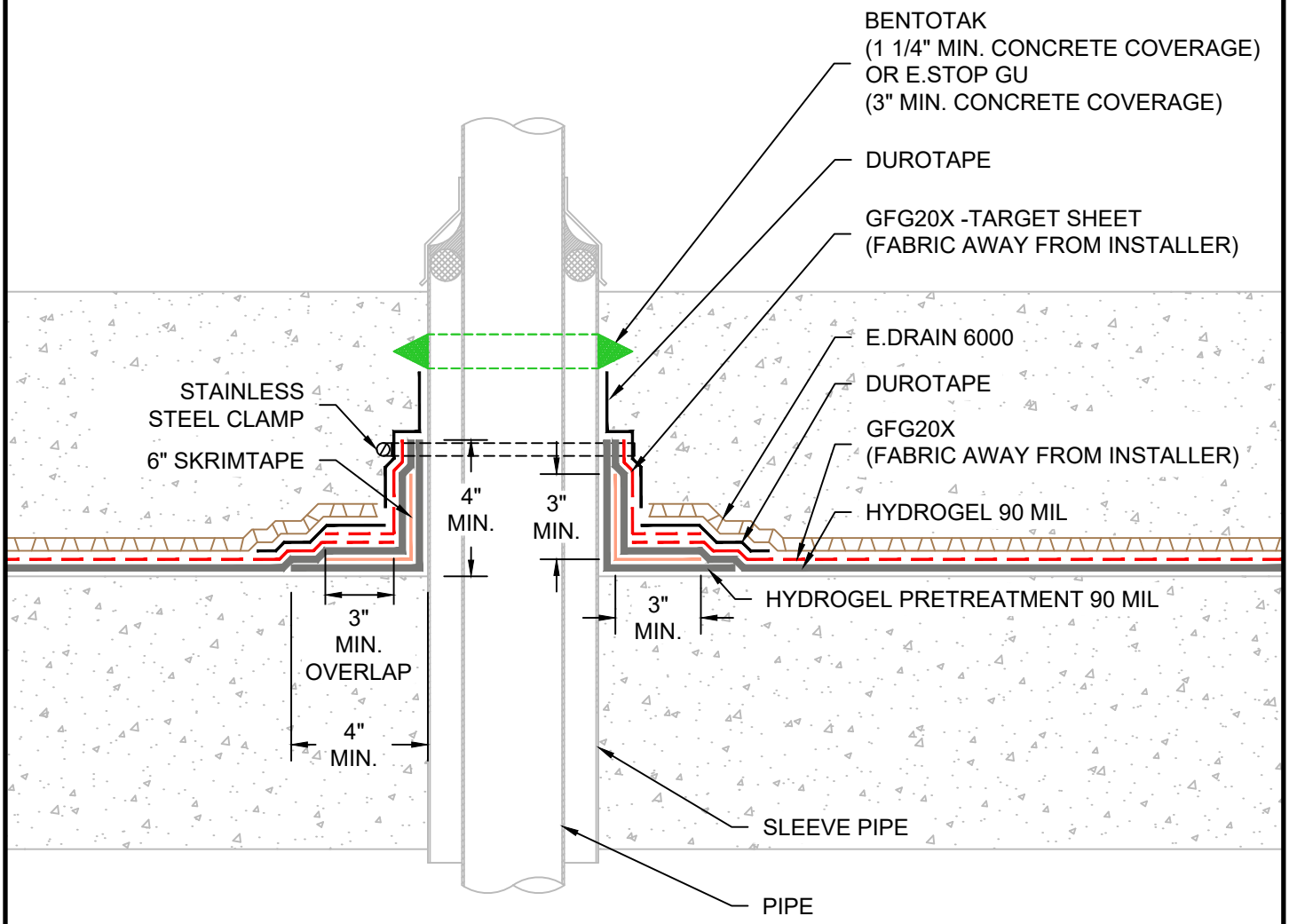
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.410.6 DECK PROTECTION COURSE - SEAM OVERLAP.dwg [Detail] June 19, 2020 - 8:50am

DECK PROTECTION COURSE - SEAM OVERLAP

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.410.6
DRAFTER	DATE
RJT	06/12/2020

HYDROGEL

NTS



NOTES:

1. ALL PIPES, CONDUITS, AND SLEEVES SHALL BE FREE OF DIRT, CONCRETE SPLATTER, PAINT, OIL, AND RUST.

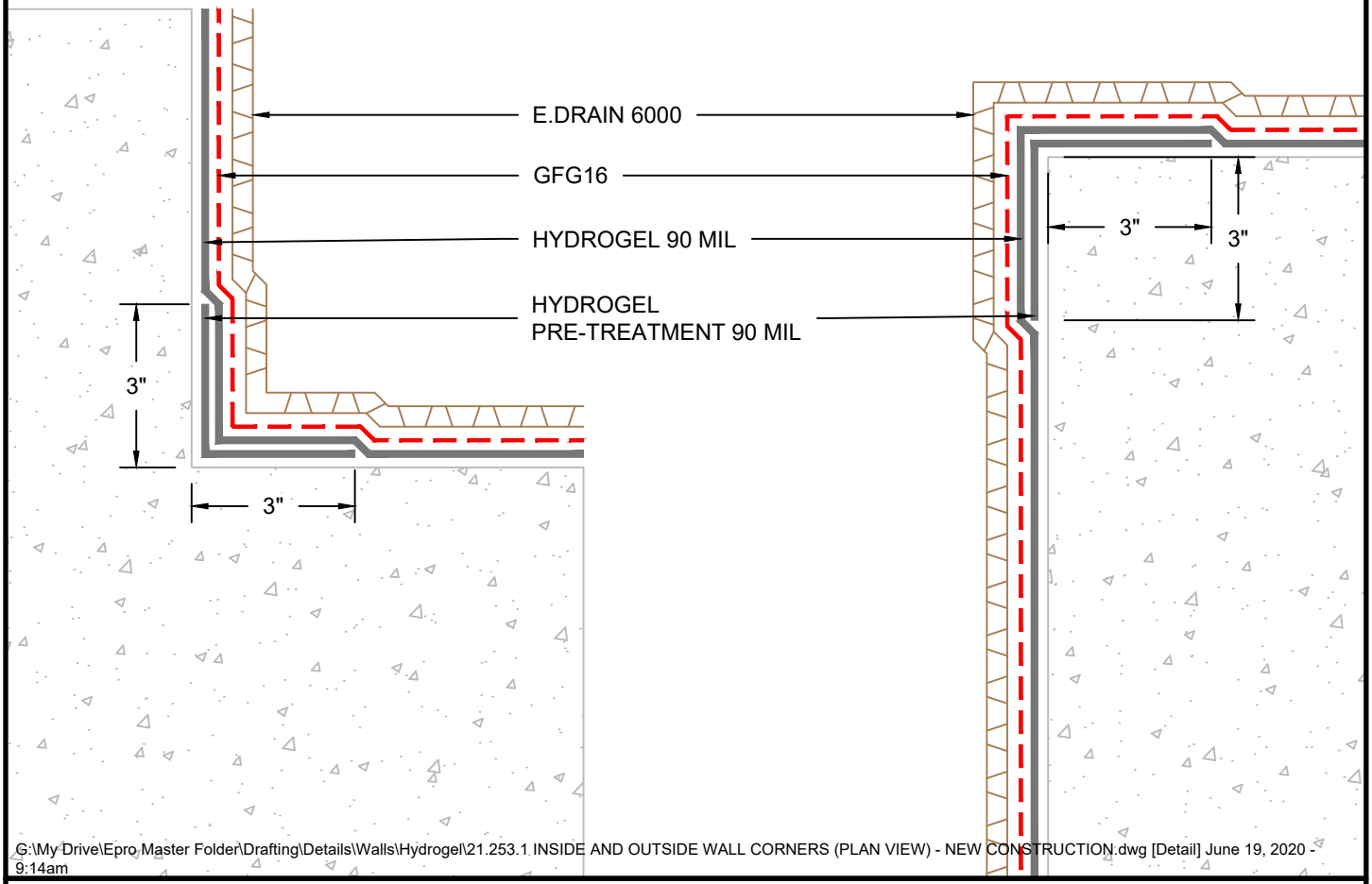
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.422.1 DECK SLEEVED PIPE PENETRATION.dwg [Detail] November 05, 2021 - 11:03am

DECK SLEEVED PIPE PENETRATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.422.1
DRAFTER	DATE
RJT	11/04/2021

HYDROGEL

NTS



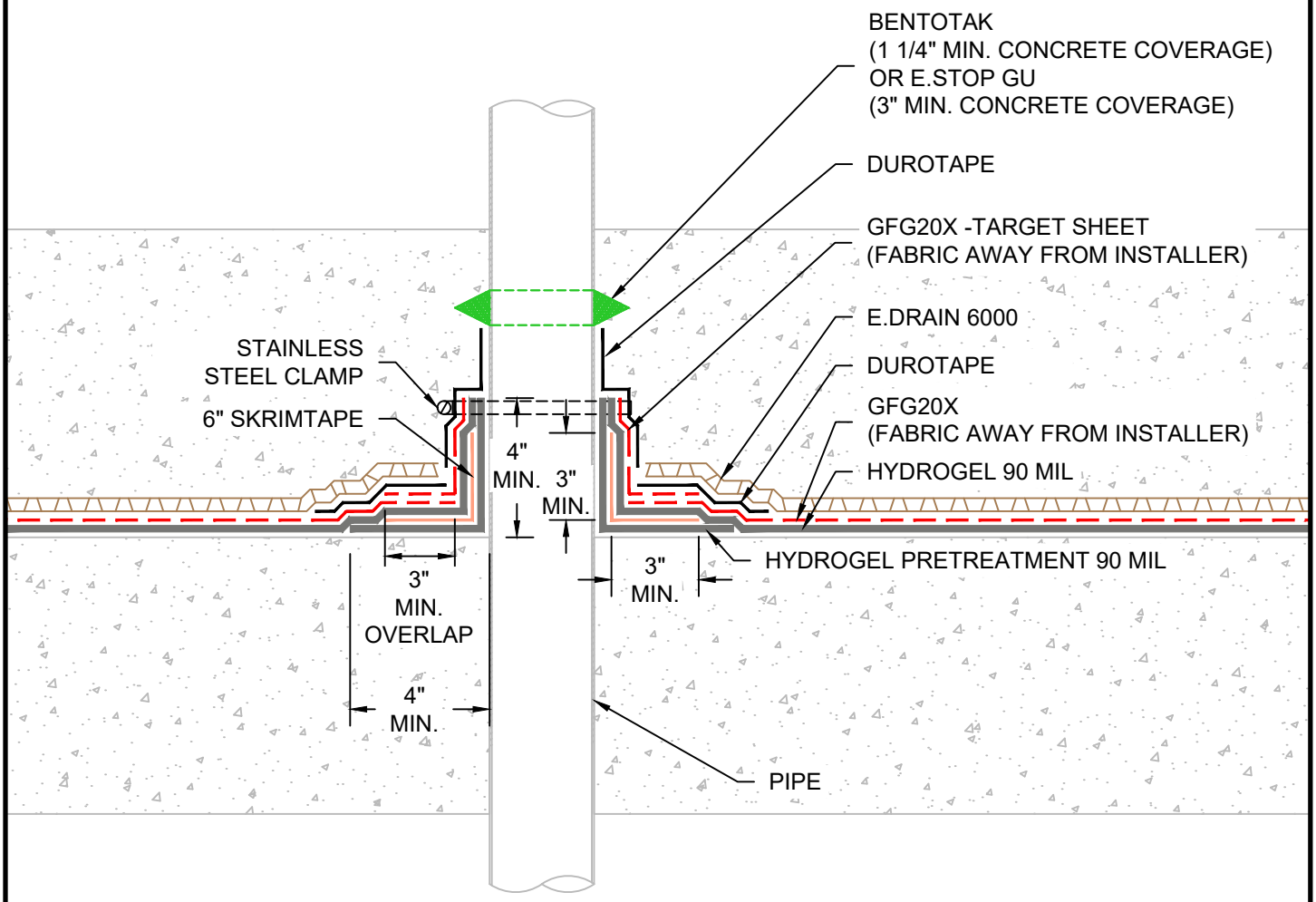
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.253.1 INSIDE AND OUTSIDE WALL CORNERS (PLAN VIEW) - NEW CONSTRUCTION.dwg [Detail] June 19, 2020 - 9:14am

INSIDE AND OUTSIDE WALL CORNERS (PLAN VIEW) - NEW CONSTRUCTION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.253.1
DRAFTER	DATE
RJT	06/12/2020

HYDROGEL

NTS



NOTES:

1. ALL PIPES, CONDUITS, AND SLEEVES SHALL BE FREE OF DIRT, CONCRETE SPLATTER, PAINT, OIL, AND RUST.

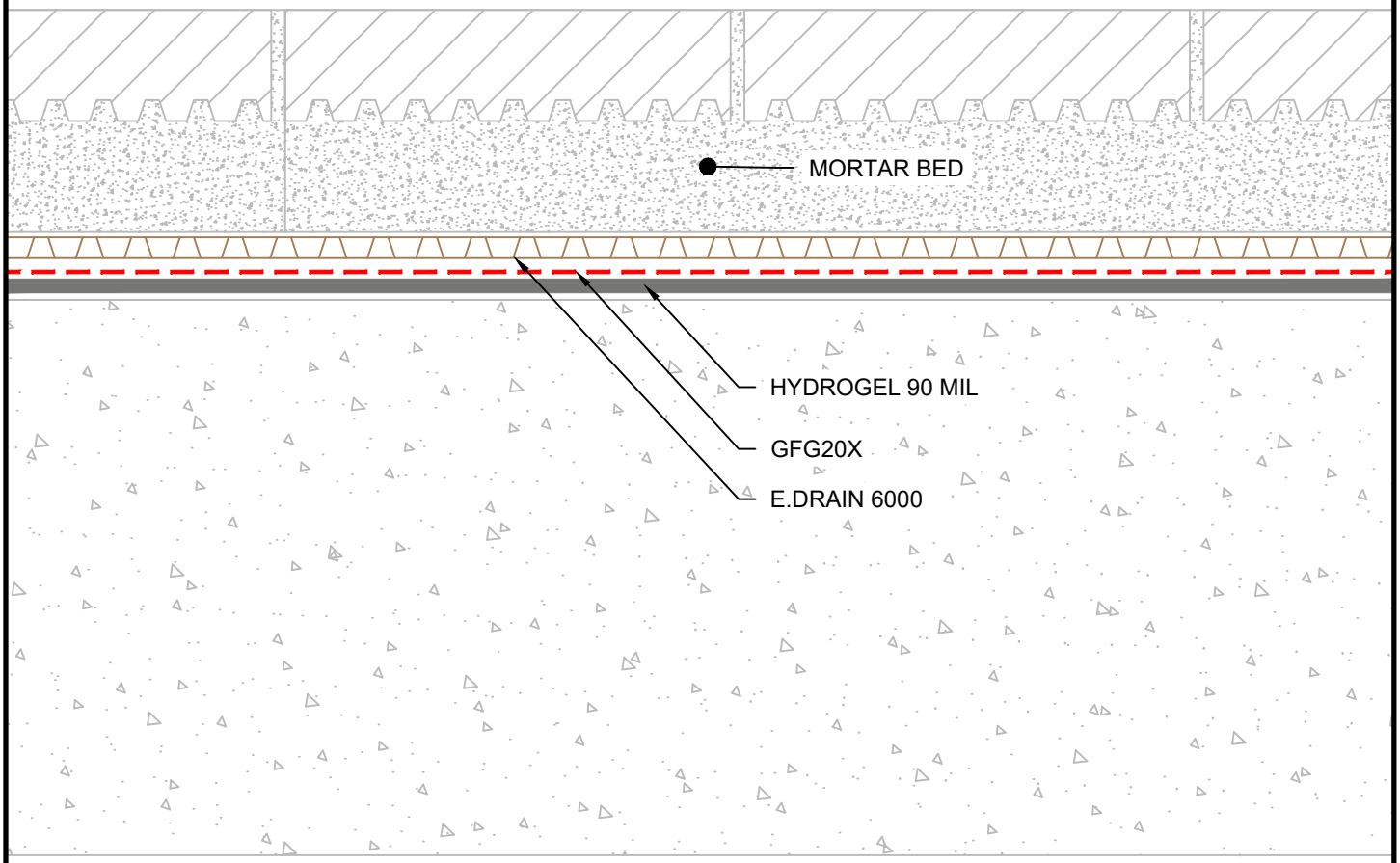
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.420.1 DECK PIPE PENETRATION.dwg [Detail] November 05, 2021 - 11:07am

DECK PIPE PENETRATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.420.1
DRAFTER	DATE
RJT	11/04/2021

HYDROGEL

NTS



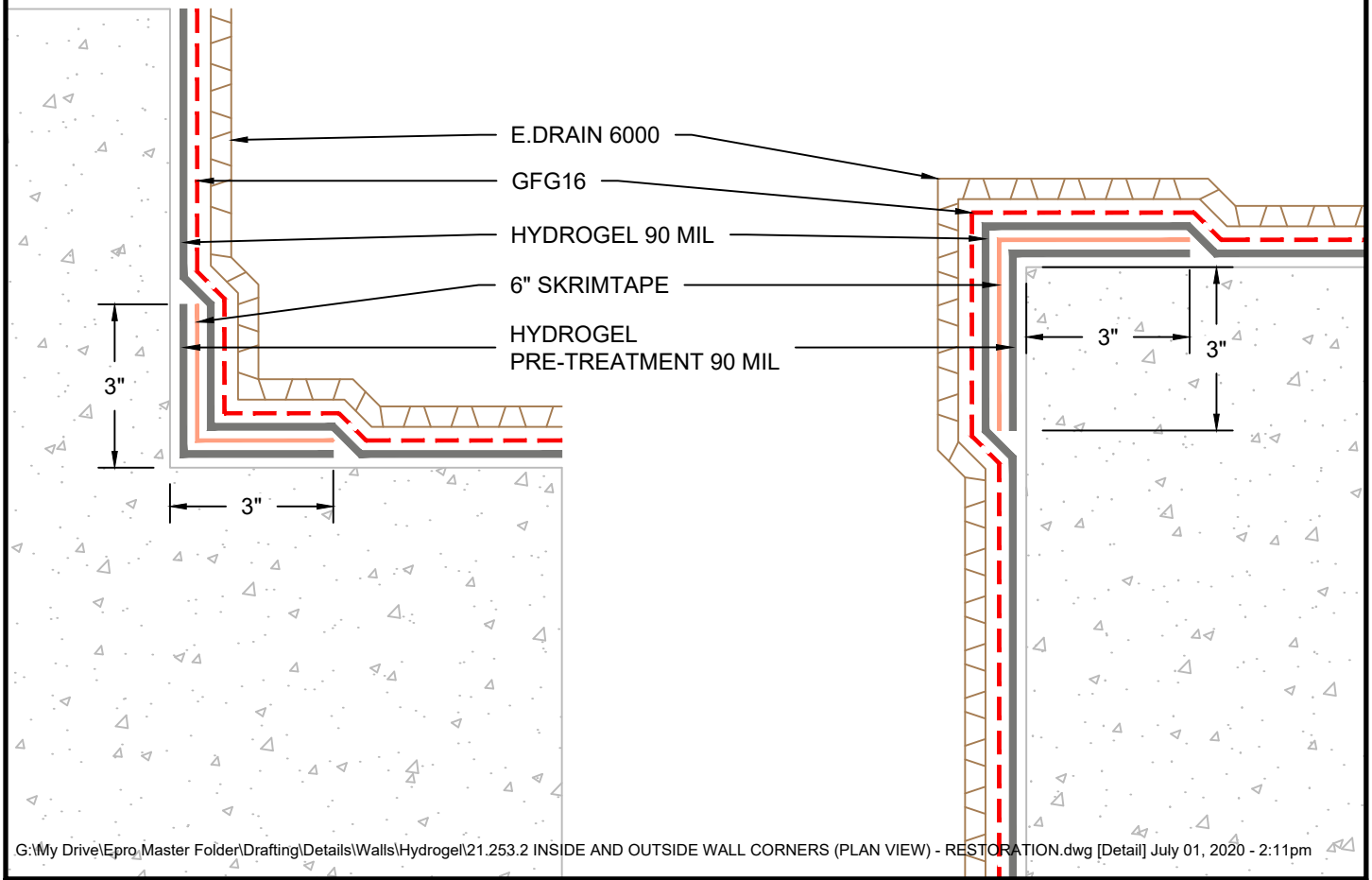
G:\My Drive\Epro Master Folder\Drafting\Details\Decks\Hydrogel\21.400.5 PAVER ON MORTAR BED DECK STANDARD ASSEMBLY.dwg [Detail] July 29, 2020 - 11:17am

PAVER ON SAND BED MORTAR STANDARD ASSEMBLY

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.400.5
DRAFTER	DATE
RJT	07/29/2020

HYDROGEL

NTS



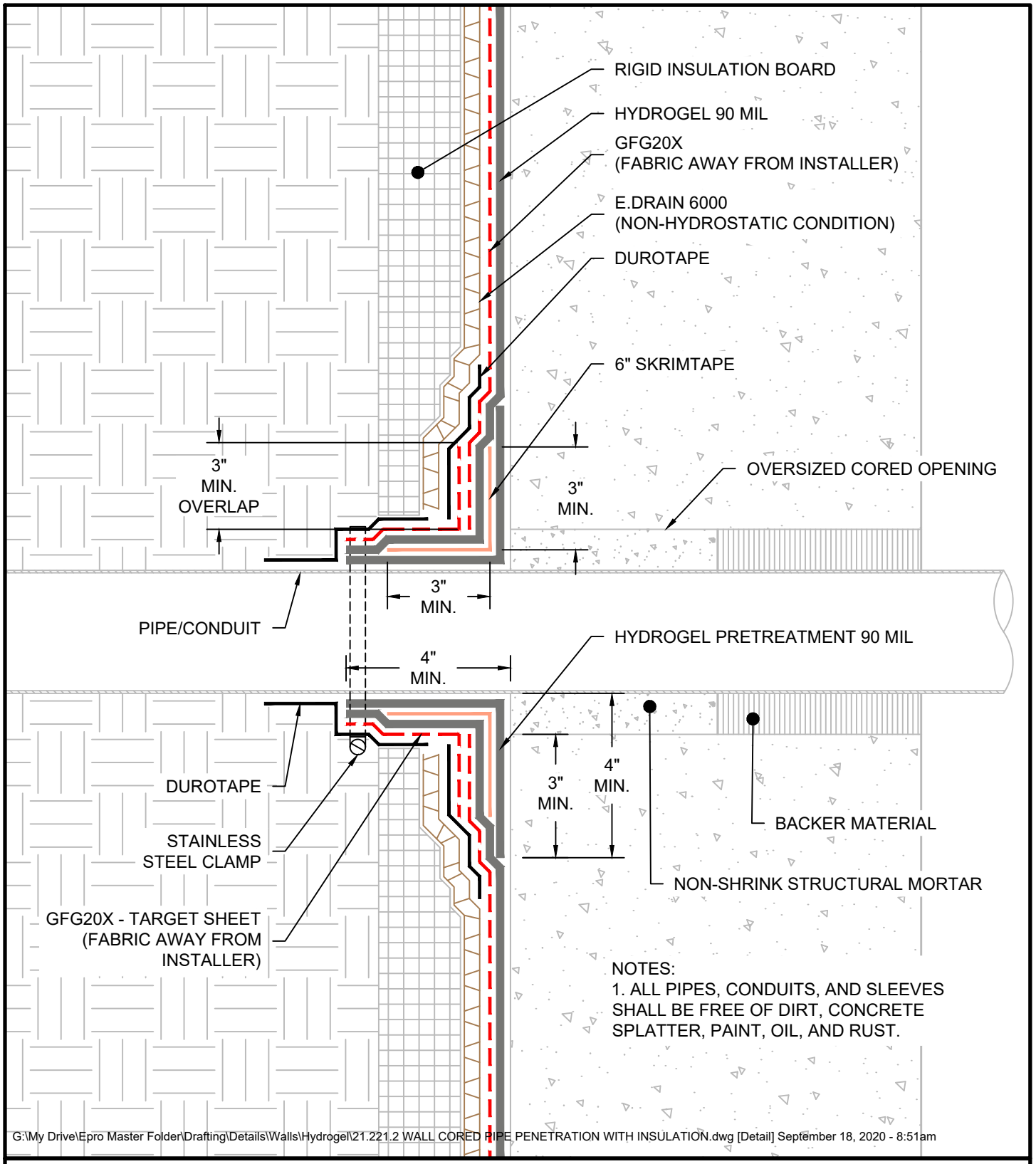
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.253.2 INSIDE AND OUTSIDE WALL CORNERS (PLAN VIEW) - RESTORATION.dwg [Detail] July 01, 2020 - 2:11pm

INSIDE AND OUTSIDE WALL CORNERS (PLAN VIEW) - RESTORATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.253.2
DRAFTER	DATE
RJT	07/01/2020

HYDROGEL

NTS



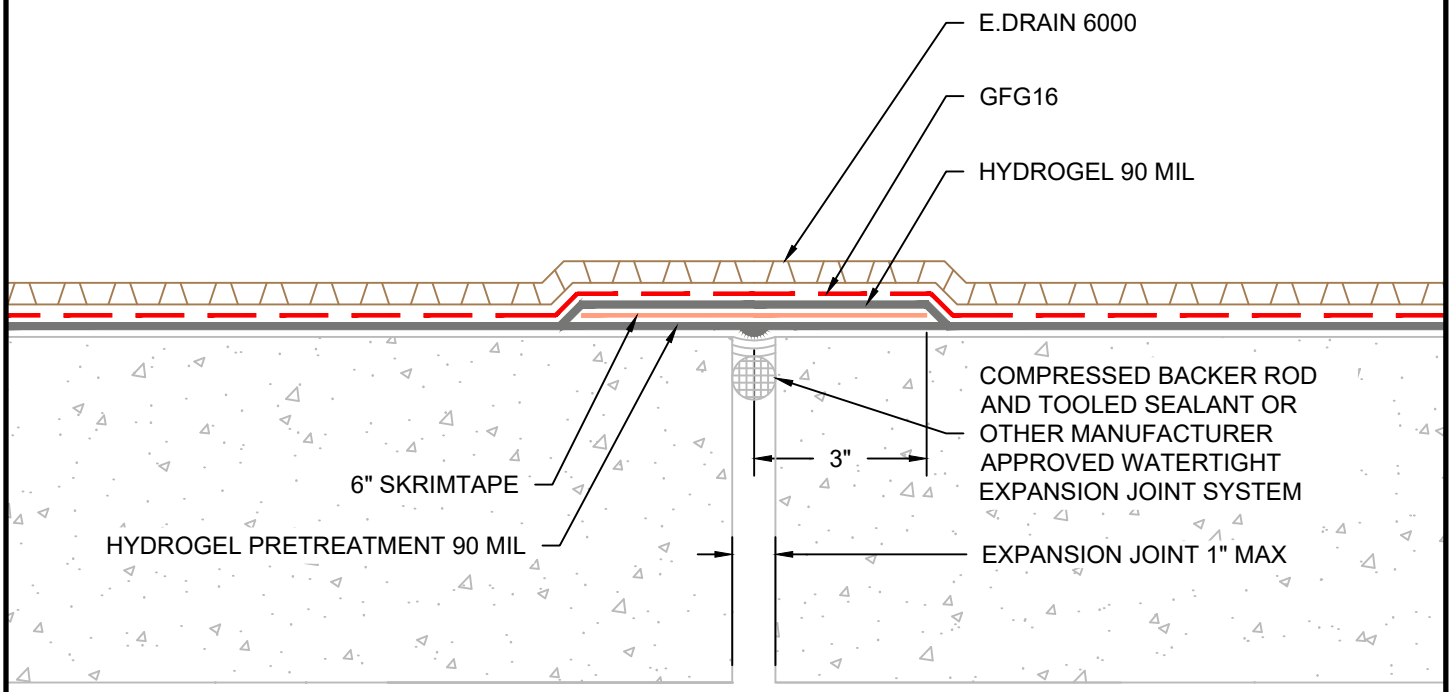
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.221.2 WALL CORED PIPE PENETRATION WITH INSULATION.dwg [Detail] September 18, 2020 - 8:51am

WALL WITH SLEEVED PIPE PENETRATION with INSULATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.221.2
DRAFTER	DATE
RJT	08/11/2020

HYDROGEL

NTS



NOTES:
1. DETAIL IS DESIGNED TO ACCOMMODATE 50% (MAX.) TOTAL MOVEMENT.
2. BACKER ROD AND TOOLED SEALANT OR OTHER MANUFACTURER APPROVED WATERTIGHT EXPANSION JOINT SYSTEM ARE REQUIRED TO BE INSTALLED PRIOR TO HYDROGEL/SKRIMTAPE INSTALLATION.

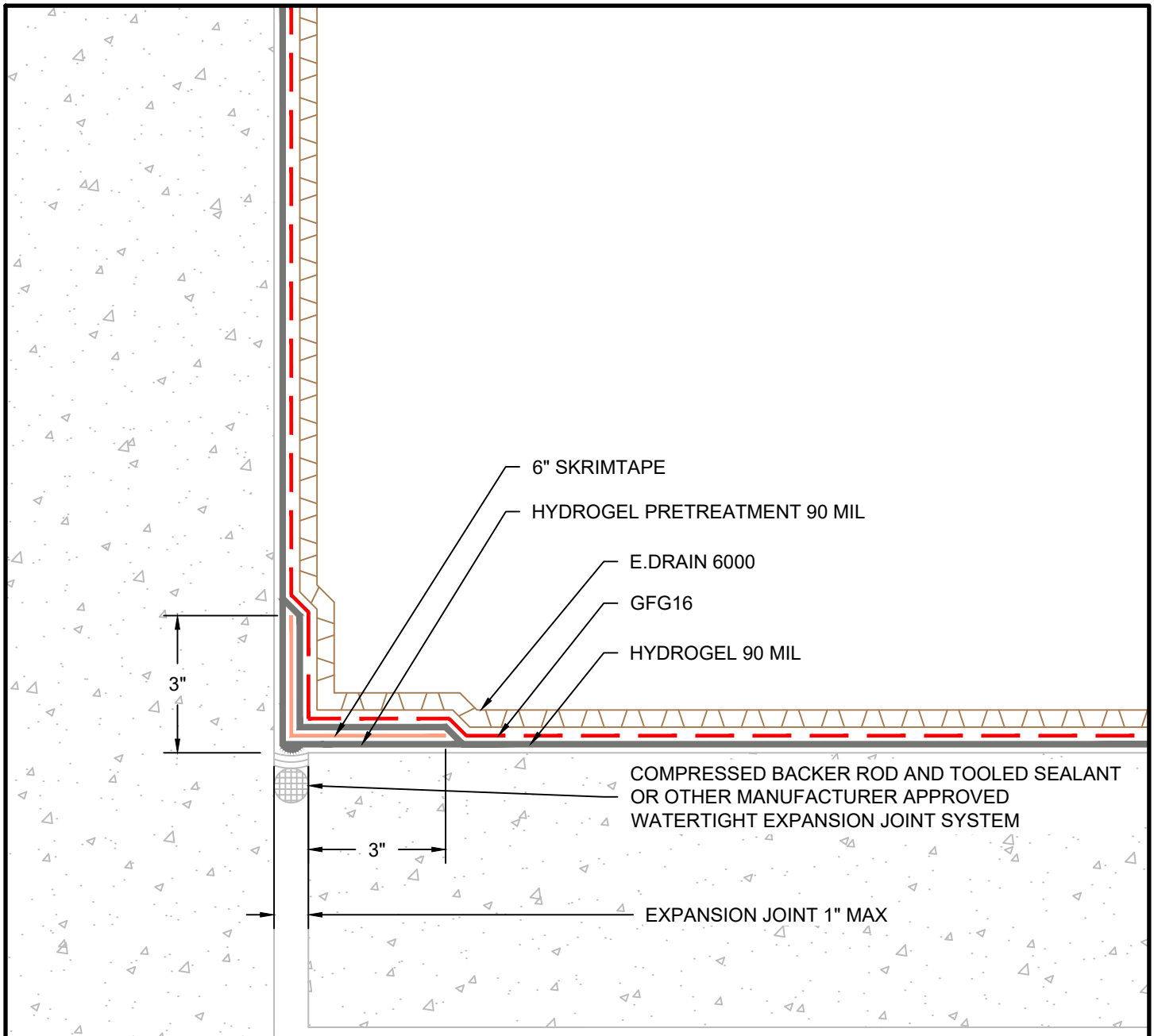
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.250.1 WALL TO WALL EXPANSION JOINT - PLAN VIEW.dwg [Detail] July 01, 2020 - 2:04pm

WALL TO WALL EXPANSION JOINT - PLAN VIEW

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.250.1
DRAFTER	DATE
RJT	07/01/2020

HYDROGEL

NTS



NOTES:

1. DETAIL IS DESIGNED TO ACCOMMODATE 50% (MAX.) TOTAL MOVEMENT.
2. BACKER ROD AND TOOLED SEALANT OR OTHER MANUFACTURER APPROVED WATERTIGHT EXPANSION JOINT SYSTEM ARE REQUIRED TO BE INSTALLED PRIOR TO HYDROGEL/SKRIMTAPE INSTALLATION.

G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.251.1 WALL TO WALL CORNER EXPANSION JOINT - PLAN VIEW.dwg [Detail] July 01, 2020 - 2:03pm

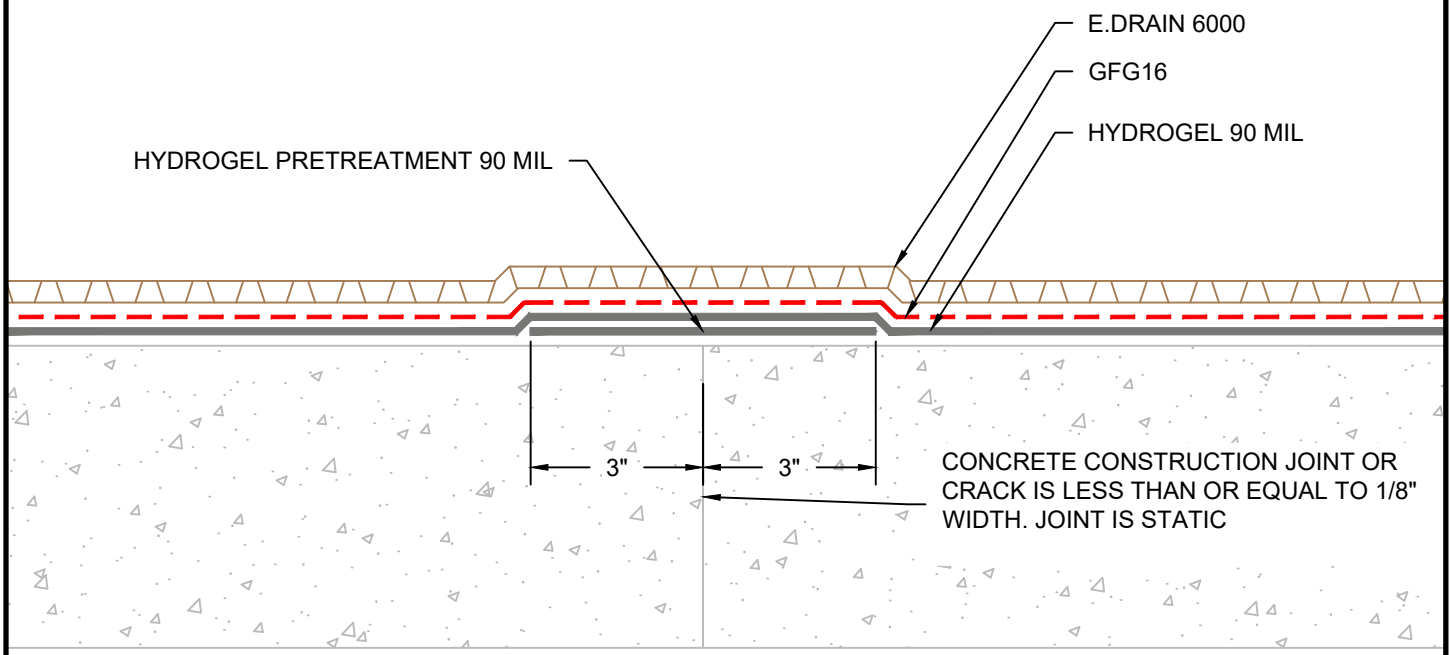
WALL TO WALL CORNER EXPANSION JOINT - PLAN VIEW

epro

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.251.1
DRAFTER	DATE
RJT	07/01/2020

HYDROGEL

NTS



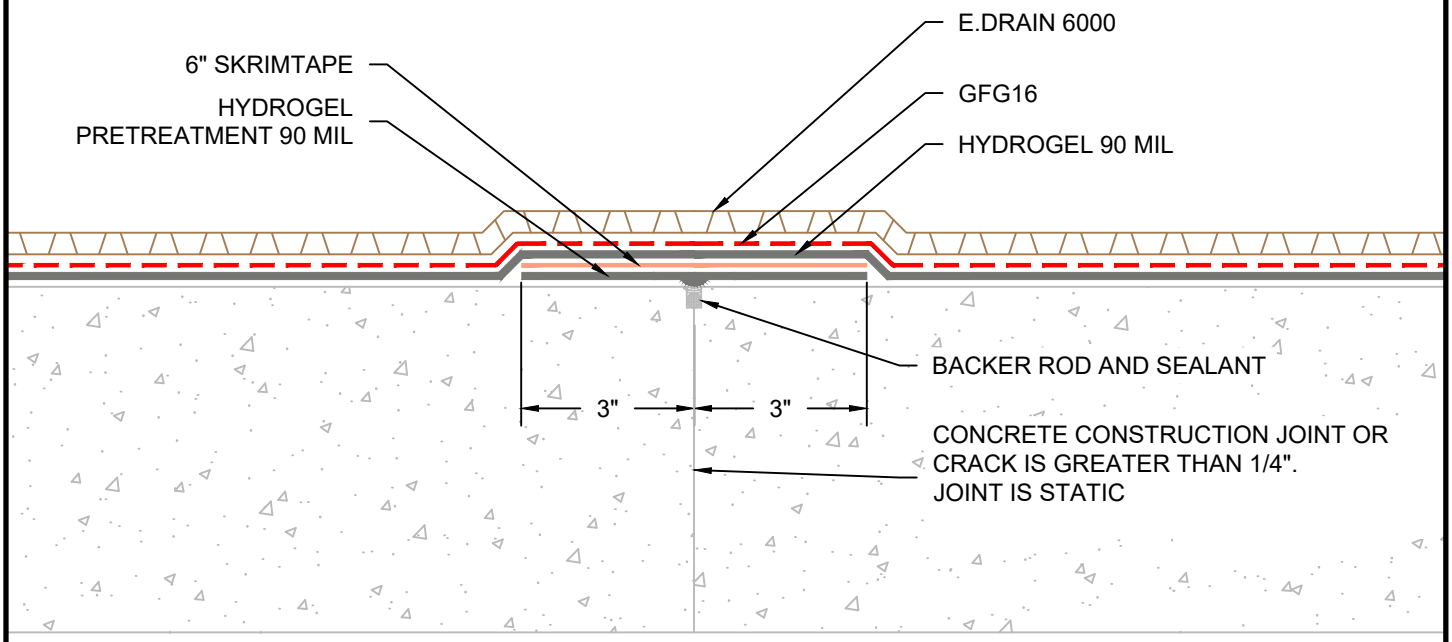
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.252.1 JOINT OR CRACK AT WALL LESS THAN OR EQUAL TO 18 INCH - PLAN VIEW.dwg [Detail] June 19, 2020 - 9:16am

JOINT OR CRACK AT WALL LESS THAN OR EQUAL TO 1/8" - PLAN VIEW

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.252.1
DRAFTER	DATE
RJT	06/12/2020

HYDROGEL

NTS



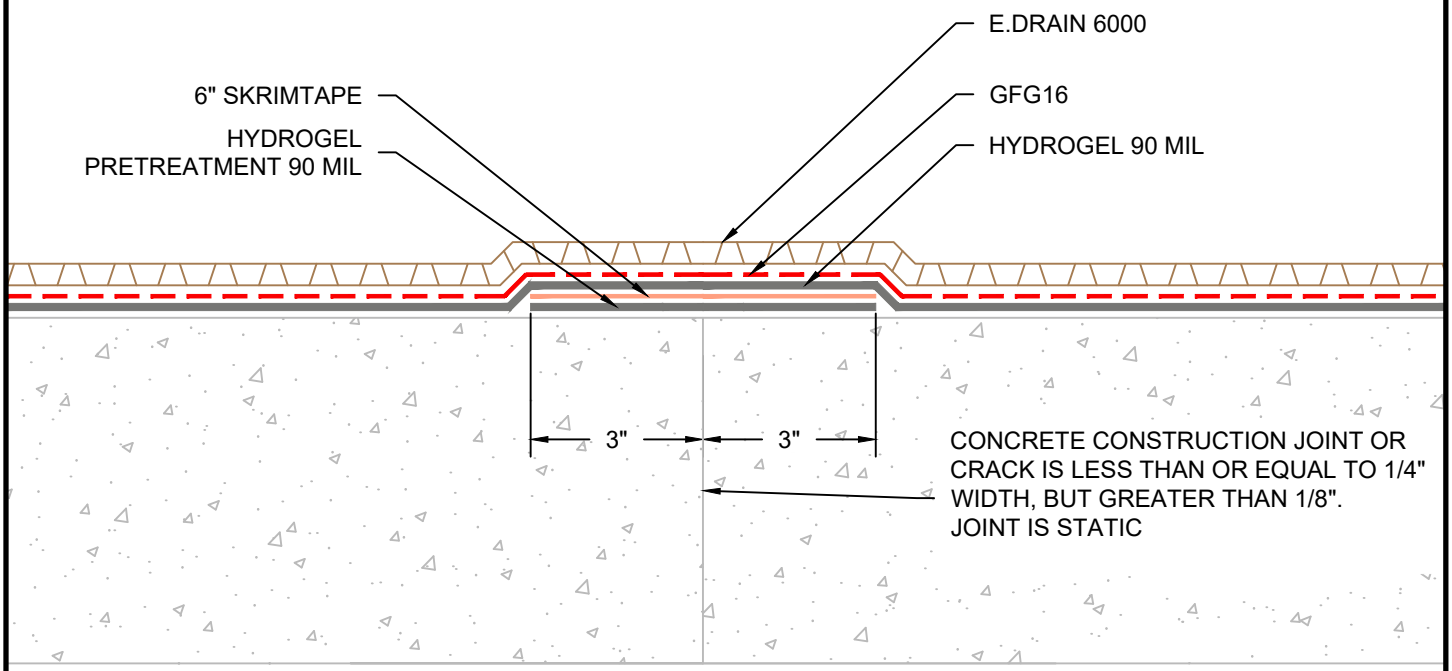
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.252.3 JOINT OR CRACK AT WALL GREATER THAN 14 INCH - PLAN VIEW.dwg [Detail] July 01, 2020 - 2:01pm

JOINT OR CRACK AT WALL GREATER THAN 1/4" - PLAN VIEW

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.252.3
DRAFTER	DATE
RJT	07/01/2020

HYDROGEL

NTS



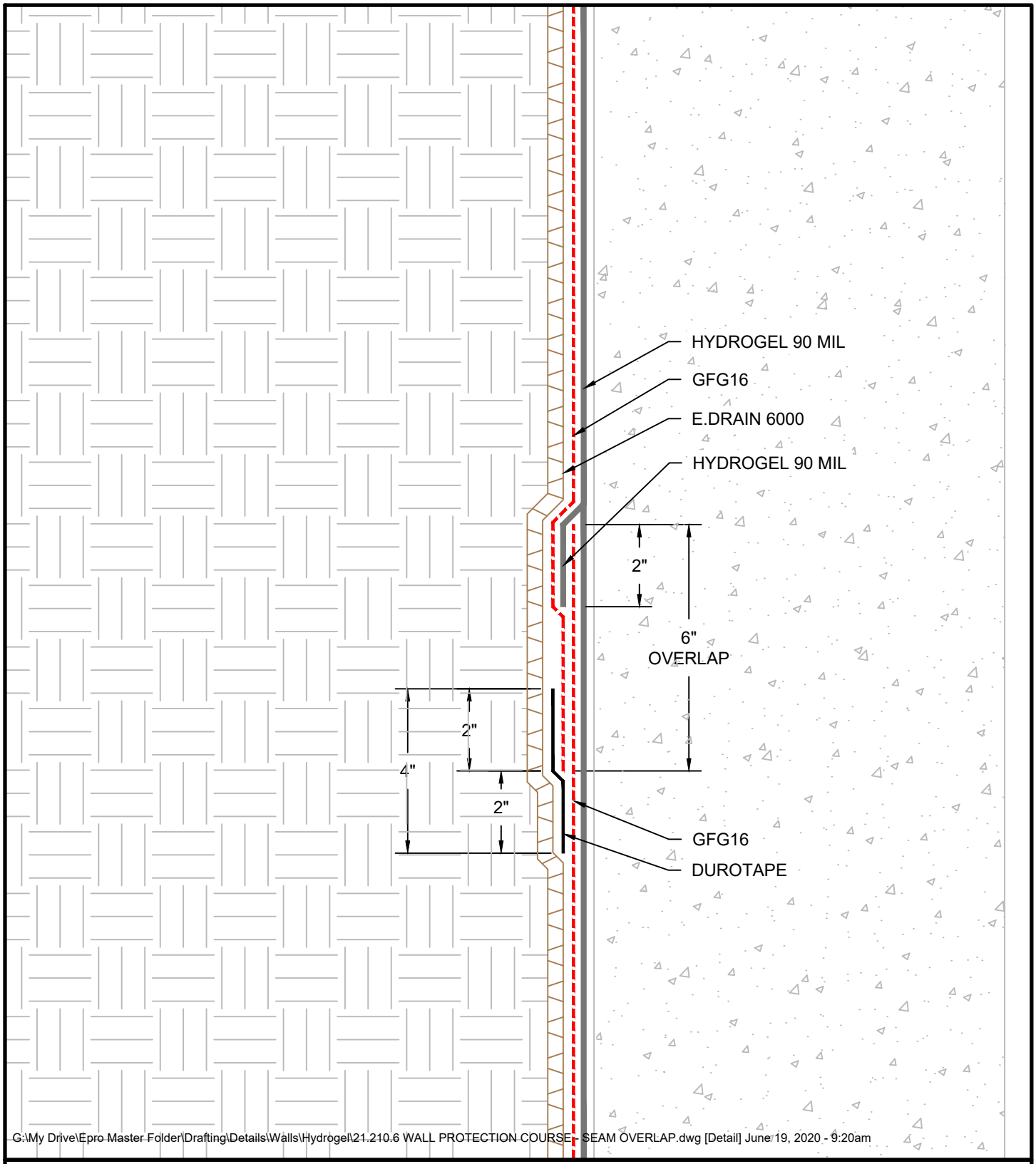
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.252.2 JOINT OR CRACK AT WALL LESS THAN OR EQUAL TO 14 INCH. BUT GREATER THAN 18 INCH - PLAN VIEW.dwg [Detail] July 01, 2020 - 2:02pm

JOINT OR CRACK AT WALL LESS THAN OR EQUAL TO 1/4", BUT GREATER THAN 1/8" - PLAN VIEW

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.252.2
DRAFTER	DATE
RJT	07/01/2020

HYDROGEL

NTS



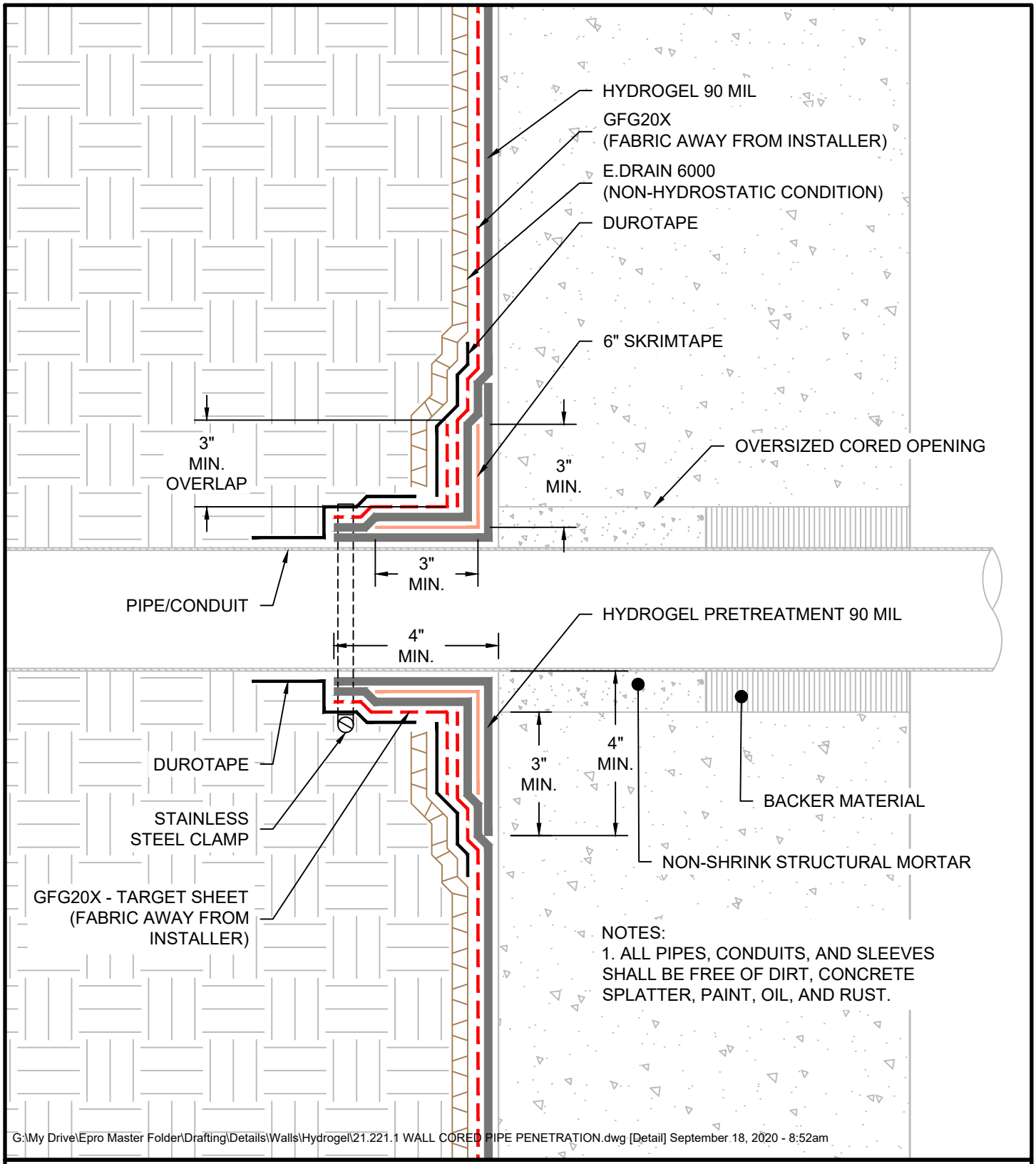
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.210.6 WALL PROTECTION COURSE - SEAM OVERLAP.dwg [Detail] June 19, 2020 - 9:20am

WALL PROTECTION COURSE - SEAM OVERLAP

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.210.6
DRAFTER	DATE
RJT	06/12/2020

HYDROGEL

NTS



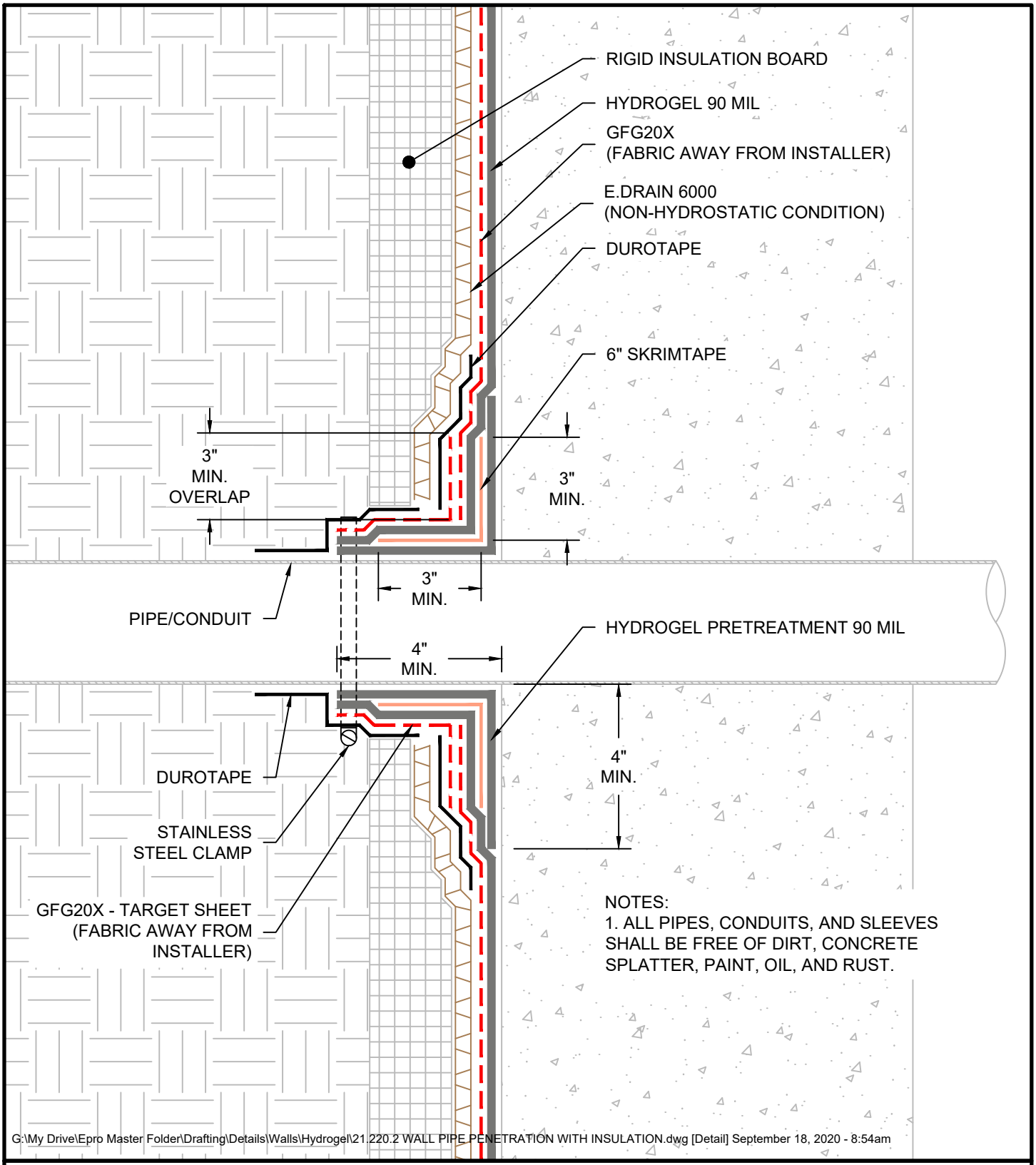
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.221.1 WALL CORED PIPE PENETRATION.dwg [Detail] September 18, 2020 - 8:52am

WALL CORED PIPE PENETRATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.221.1
DRAFTER	DATE
RJT	08/11/2020

HYDROGEL

NTS



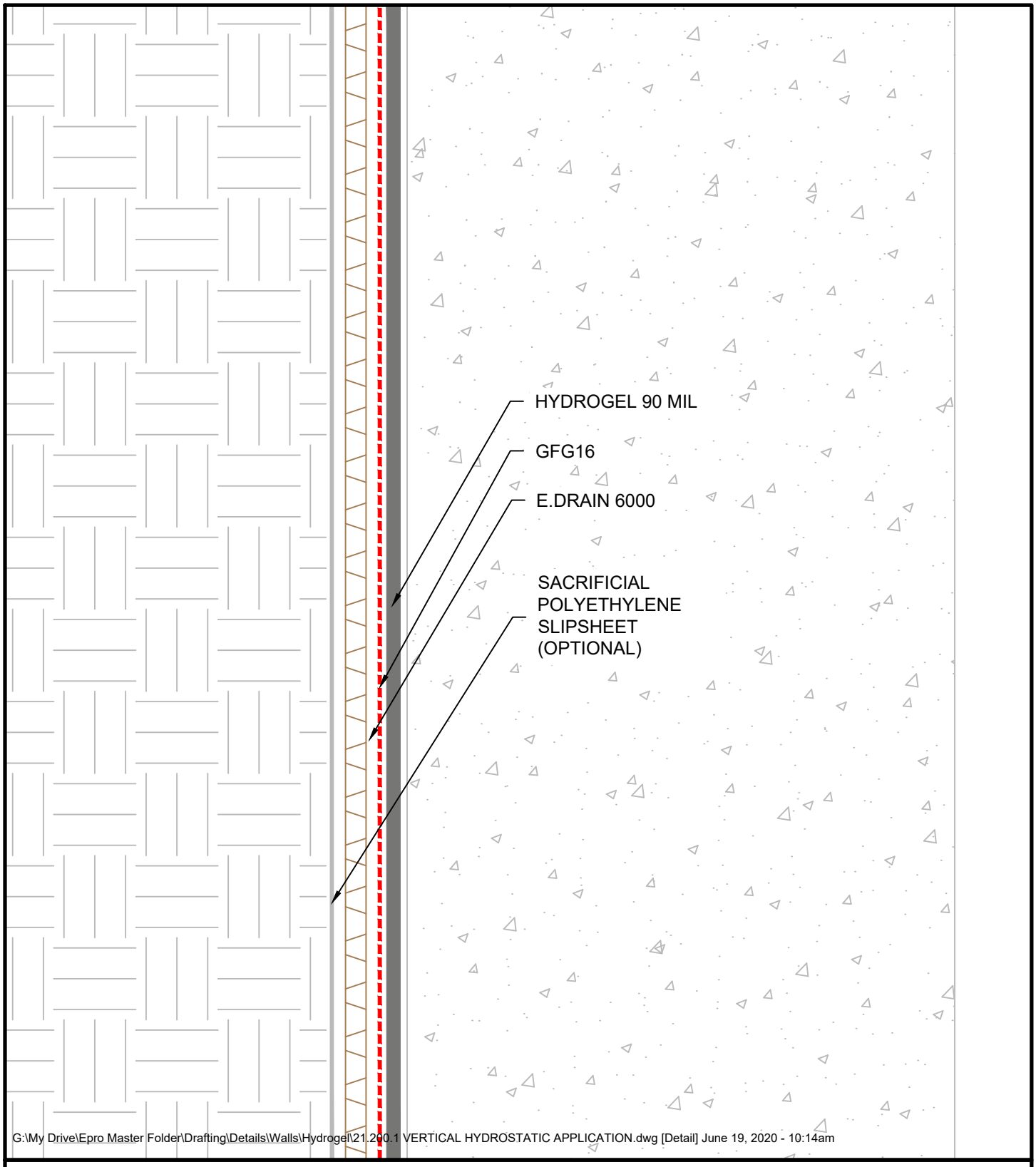
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.220.2 WALL PIPE PENETRATION WITH INSULATION.dwg [Detail] September 18, 2020 - 8:54am

WALL PIPE PENETRATION with INSULATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.220.2
DRAFTER	DATE
RJT	08/11/2020

HYDROGEL

NTS



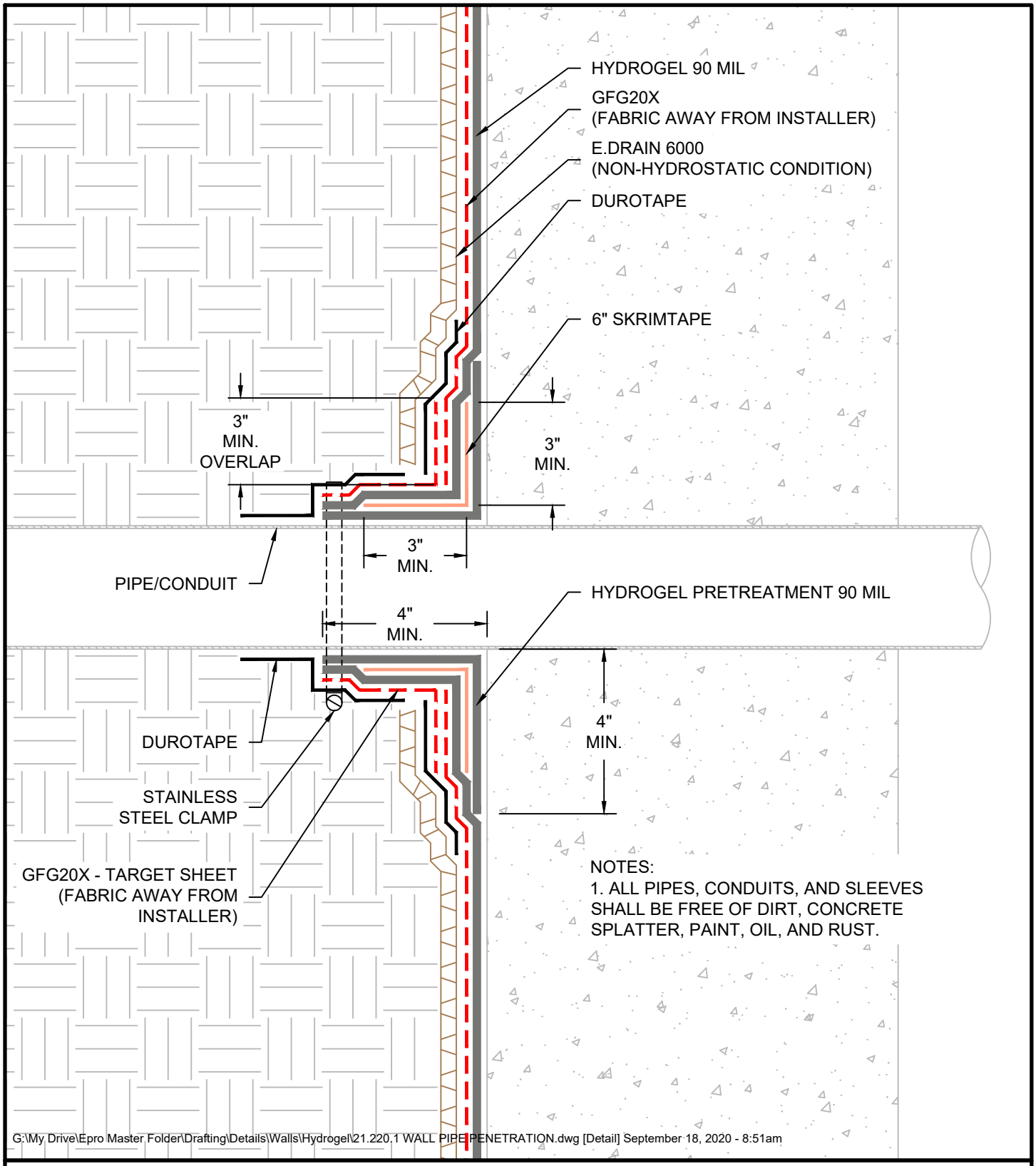
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.200.1 VERTICAL HYDROSTATIC APPLICATION.dwg [Detail] June 19, 2020 - 10:14am

VERTICAL HYDROSTATIC APPLICATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.200.1
DRAFTER	DATE
RJT	6/10/2020

HYDROGEL

NTS



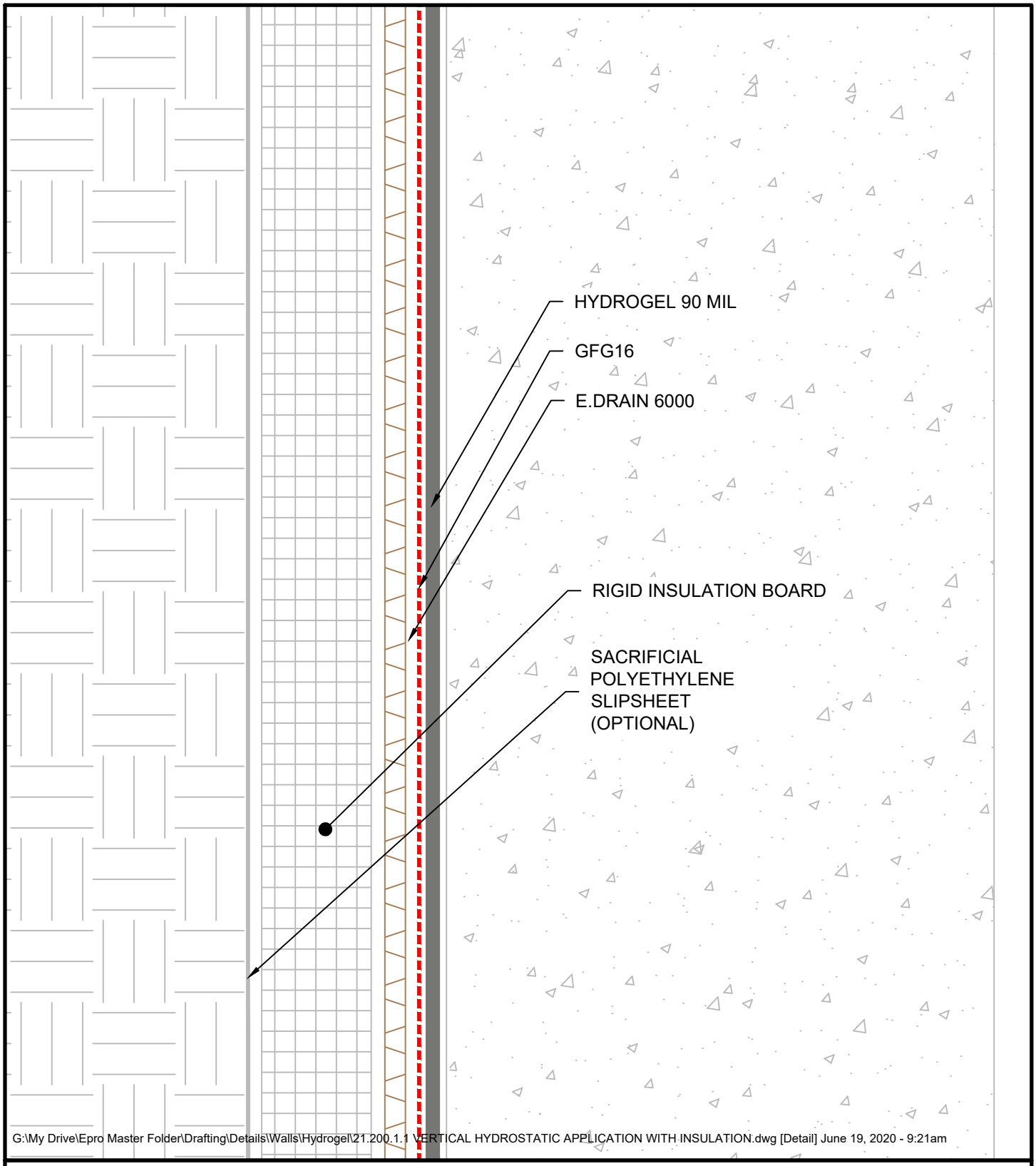
G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.220.1 WALL PIPE PENETRATION.dwg [Detail] September 18, 2020 - 8:51am

WALL PIPE PENETRATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.220.1
DRAFTER	DATE
RJT	08/11/2020

HYDROGEL

NTS



G:\My Drive\Epro Master Folder\Drafting\Details\Walls\Hydrogel\21.200.1.1 VERTICAL HYDROSTATIC APPLICATION WITH INSULATION.dwg [Detail] June 19, 2020 - 9:21am

VERTICAL HYDROSTATIC APPLICATION WITH INSULATION

SYSTEM NAME	DRAWING NUMBER
HYDROGEL	21.200.1.1
DRAFTER	DATE
RJT	06/12/2020

HYDROGEL

NTS