

**TechCrete® Concrete Admix** is a permanent waterproofing admixture for concrete and mortar. When added to concrete or mortar, insoluble crystals are formed and developed in the water-bearing capillaries of the mix, effectively blocking the passage of water and ensuring permanent waterproofing throughout the concrete or mortar. TechCrete Admix can also be used in conjunction with waterproofing surface applied slurry systems. Contact Alchemco Technical for specific details.



### PERFORMANCE CHARACTERISTICS

Moisture and lime within the mix combine with the active chemicals in the TechCrete Admix to create a continuous barrier of insoluble crystals which penetrate deep into the capillary structure of the concrete. These capillaries and interstices are blocked to the passage of water, while permitting the transmission of air and water vapor, enabling the structure to breathe.

The rate of crystalline development varies with the variations in the mix design and curing regime of the concrete. However the crystalline development is usually sufficient to provide full waterproofing properties approximately 7-10 days after placement.

TechCrete Admix is equally effective against both negative and positive water or osmotic pressure. After the initial crystallization process has successfully waterproofed the structure or materials, the active chemicals within TechCrete Admix remain dormant in the concrete or mortar to offer long-term protection. Any later contact with water will reactivate the sealing process.



### PRODUCT PROPERTIES

- Provides excellent waterproofing properties by becoming an integral part of the structure.
- Protects concrete and reinforcement against corrosive waterborne substances.
- Crystalline action reactivated by contact with water providing long-term additional protection.
- Effective against both positive and negative pressure.
- Non-toxic or tainting.
- Permits early backfilling without requirement for protection boards.
- Maintenance free
- Bridges hairline cracks up to 1/64" (0.4 mm)

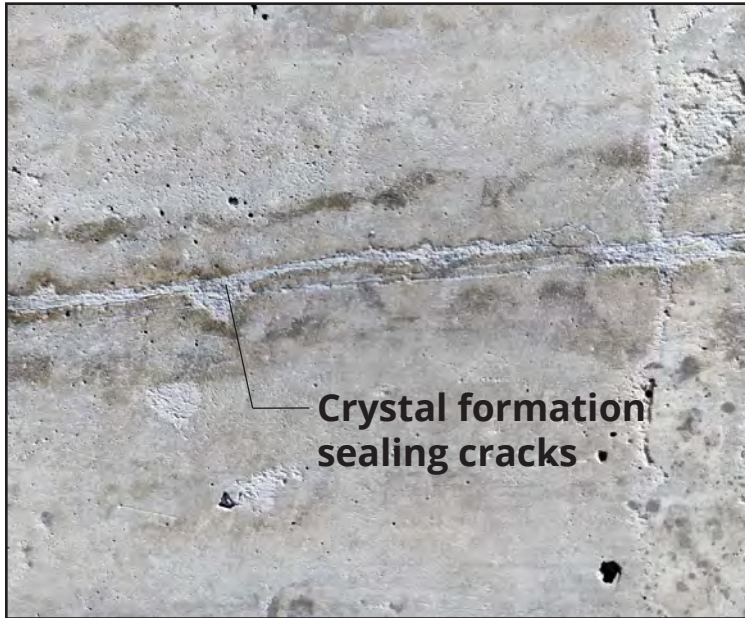


### KEY BENEFITS

- Waterproofs for the life of the structure.
- Maintenance free.
- No future re-application.
- Seals present and future cracks up to 1/64" (.4 mm).
- Lowers waterproofing costs by up to 40%.
- No VOC's

### APPLICATION

TechCrete Admix may be added to the concrete or mortar at either the batching plant or it can be added to the mixer at the job site. It is preferable that TechCrete Admix be added to the dry mix to ensure even distribution prior to the addition of water. If TechCrete Admix is added after the addition of water, mixing must continue for an additional 10 minutes prior to placement of the mix.



### CONCRETE CURING

For proper curing of concrete when TechCrete Admix has been used, prevent concrete from drying to fast. This means that the concrete should be kept wet for at least 7 days after the initial pour of the concrete. One method to accomplish this is mist spraying and then covering with polyethylene sheet or curing blankets. Additionally to ensure proper curing it is recommended that the surface of the concrete be protected from any adverse environment for the 7 day curing period. Do not use any chemical curing agents in combination with TechCrete Admix unless approved or supplied by Alchemco.

### SYSTEM COMPONENTS

If TechCrete Concrete Admix is only going to be used in the application then there are some additional products that are recommended to be used to complete the application.

- TechCrete Concrete Admix
- DuraTite Waterstop by BPA CemFlex
- DuraTite B36 Flexible Waterstop
- DuraTite Mortar Repair
- TechCrete 2500 Waterproofing Agent

If TechCrete Concrete Admix is going to be used in conjunction with a TechCrete 2500 Waterproofing System for Concrete and a 30-Year Material & Labor Warranty will be issued upon completion then the following components are **required** to be used for issuance of the warranty.

- TechCrete Waterproofing Admix
- TechCrete 2500 Waterproofing Agent
- ACR Accelerating Agent
- ACR Polyseal Sealant S+
- ACR PolyMembrane Flashing
- DuraTite Waterstop by BPA CemFlex
- DuraTite B36 Flexible Waterstop
- DuraTite Mortar Repair
- ACR Concrete Masonry Etch
- ACR Concrete Masonry Cleaner
- ACR Paint Remover
- ACR Emulsifying Cleaner





ADMIX FOR CONCRETE & MORTAR

This project was completed in early 2022 using TechCrete Concrete & Mortar Admix. The project are water holding tanks. Water was applied to the tanks and the photos were taken at different intervals after the tanks we filled. As the crystalline admix began react with the concrete it began sealing the concrete against water penetration.

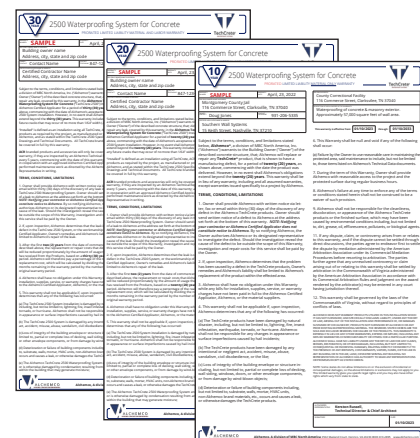


IMPROVED CONCRETE PROPERTIES

	CONTROL	TECHCRETE ADMIX	CHANGE
Initial Setting Time (hr:min)	5:50	7:50	2:00 delay
Final Setting Time (hr:min)	7:20	9:50	2:30 delay
Air Content (%)	1.50	1.50	No change
Slump (mm)	100	100	No change
Compressive Strength @ 28 days (psi)	31.5	36	17.5% better
Drying Shrinkage @ 56 days	380	340	10.5% better
Water Permeability (m/sec)	9.5x10 <sup>12</sup>		93% reduction

AVAILABLE WARRANTIES

Alchemco offers a full range of warranties for both our products and systems. Material Only Warranties and Material & Labor Warranties are available.



Contact the Alchemco Technical Department for a list of all available warranties and the requirements for those warranties.

**PACKAGING**

The following products are required to be used in TechCrete 2500 Systems and are available in the following sizes;

**TechCrete Admix**

- 5 gal pail - 20 - 22 oz water soluble bags
- 5 gal pail - 20 - 0.8 kg water soluble bags
- Drum - 400 lb bulk

**TechCrete 2500 Waterproofing Agent**

- 5 gallon pails (18.92 liters)
- 55 gallon drums (208.2 liters)

**ACR Accelerating Agent**

This product is sold as a concentrate

- 5 gal pail of concentrate = 55 gal drum
- 1/2 gal jug concentrate = 5 gal pail

**ACR Crack & Void**

- 5 gallon pails (18.92 liters)
- 55 gallon drums (208.2 liters)

**ACR Polyseal Sealant S+**

- 20 oz sausage packs
- 2 gallon bulk pails

**ACR PolyMembrane Flashing**

- 5 gallon pails (18.92 liters)
- 55 gallon drums (208.2 liters)



**WARNINGS**



**HAZARDOUS**

May cause irritation to skin. May cause skin to have allergic reaction. May cause serious eye damage. May cause irritation to the respiratory system.

**PRECAUTIONS**

Wear protective gloves, clothing, face and eye protection. If on skin wash with plenty of water. Remove person to fresh air and keep comfortable for breathing. If in eyes rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs, seek medical assistance. Dispose of contents/container in accordance with national regulations.

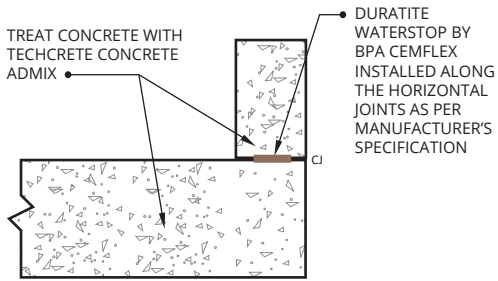
**See Safety Data Sheet for further details regarding safe use of this product. Safety Data Sheets for any Alchemco product may be obtained by contacting Alchemco, 3532 Mayland Court, Henrico, VA 23233. 800-610-2895 or emailing [technical@alchemco.com](mailto:technical@alchemco.com) or calling**

**CHEMTREC 800-424-9300 (US)  
703-741-5970 (International).**



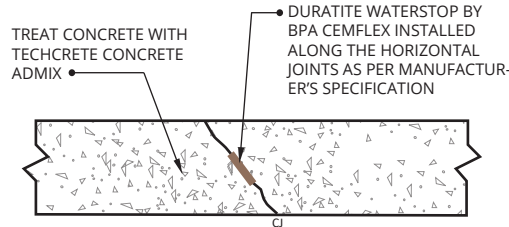
**WARRANTY DISCLAIMER**

Because of conditions of use which may be beyond our control, Alchemco shall not be held responsible in any manner for any personal injury or property loss resulting to the buyer or any other person from handling, storage, or use of this material not in accordance with directions. The buyer and/or user assumes all risk and liability resulting from improper handling or usage. There is no warranty expressed or implied of any kind, except as supplied in writing.

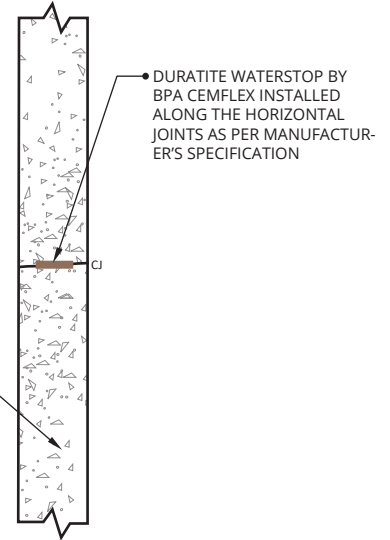


**TYPICAL UPSTAND DETAIL TCA103**  
NOT TO SCALE

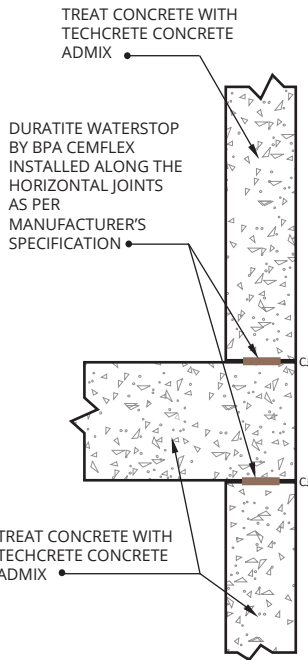
**GENERAL NOTES**  
 1. DURATITE WATERSTOP BY CEMFLEX MUST HAVE A MINIMUM COVER OF 2" (51 MM) ALL AROUND.  
 2. DURATITE WATERSTOP BY CEMFLEX IS ONLY SUITABLE FOR NON-MOVEMENT CONSTRUCTION JOINTS  
 3. CONTACT ALCHEMCO TECHNICAL DEPARTMENT TO REQUEST A PRE-PROJECT SURVEY AND OR REVIEW OF PROJECT PLANS AND SPECIFICATION.



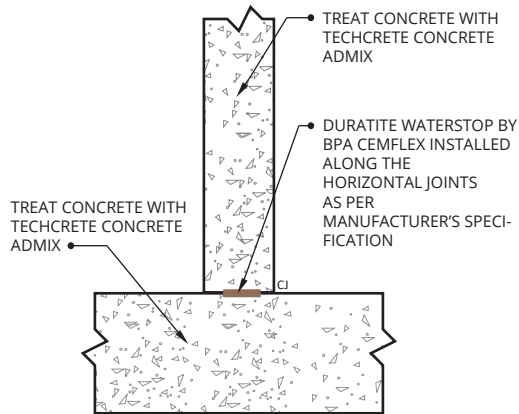
**HORIZONTAL FLOOR SLAB JOINT DETAIL TCA104**  
NOT TO SCALE



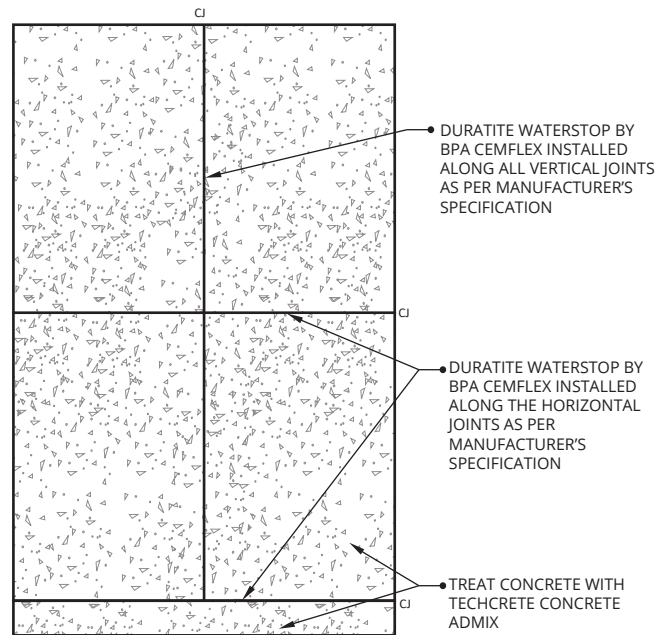
**TOP VIEW: VERTICAL WALL JOINT TCA105**  
NOT TO SCALE



**INTERMEDIATE WALL-SLAB-WALL JOINT TCA101**  
NOT TO SCALE



**FLOOR TO WALL JOINT TCA102**  
NOT TO SCALE



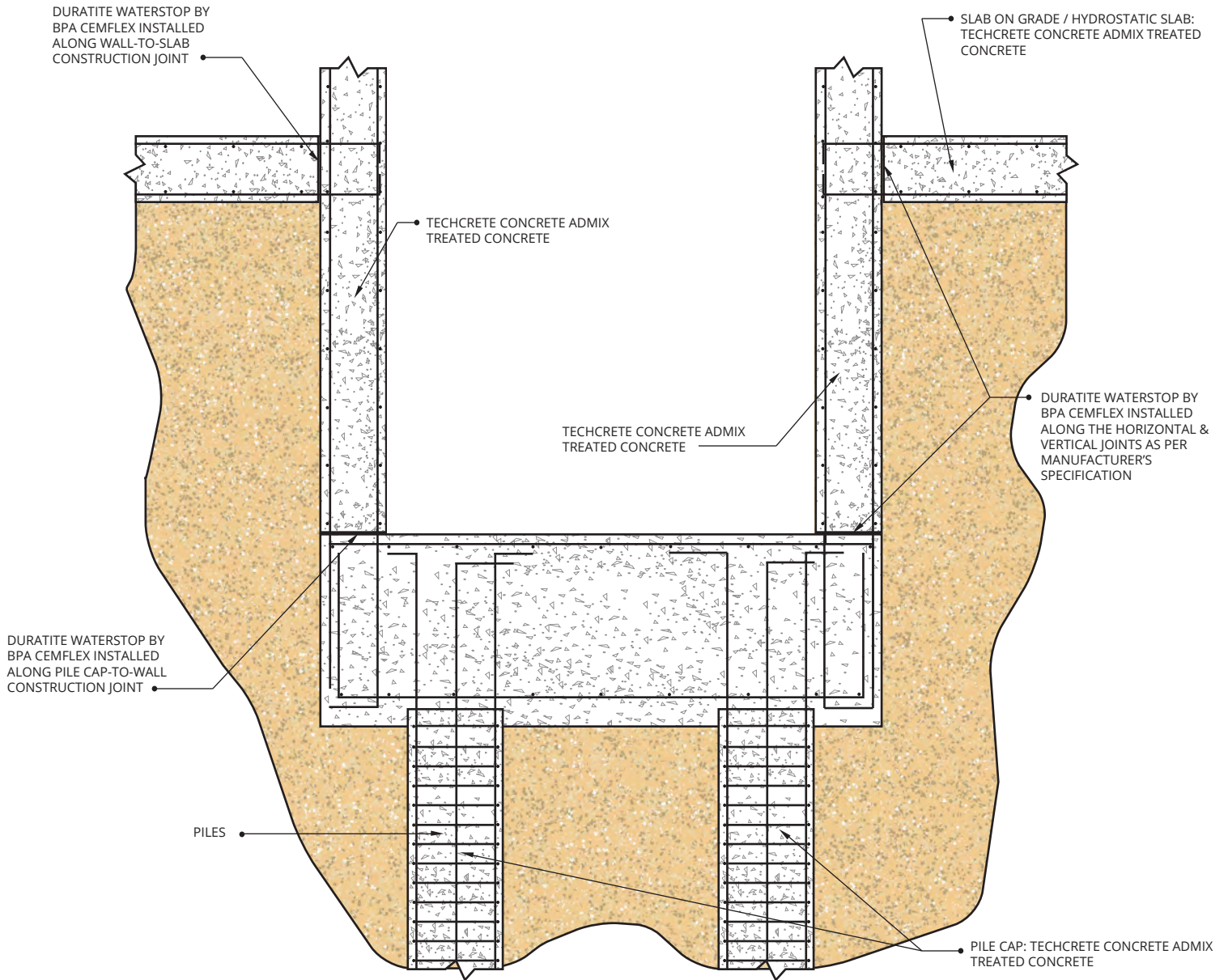
**TYPICAL WALL ELEVATION TCA106**  
NOT TO SCALE

REVISION NUMBER	1
REVISION DATE	3/15/23
DRAWN BY	K. RUSSELL
DRAWING NUMBER	<b>TCA100</b>



**GENERAL NOTES**

1. DURATITE WATERSTOP BY BPA CEMFLEX MUST HAVE A MINIMUM COVER OF 2" (51 MM) ALL AROUND.
2. DURATITE WATERSTOP BY BPA CEMFLEX IS ONLY SUITABLE FOR NON-MOVEMENT CONSTRUCTION JOINTS.
3. TIE-HOLES TO BE REPAIRED WITH DURATITE REPAIR MORTAR AS PER DETAIL TAC400 AND THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
3. CONTACT ALCHEMCO TECHNICAL DEPARTMENT TO REQUEST A PRE-PROJECT SURVEY AND OR REVIEW OF PROJECT PLANS AND SPECIFICATION.

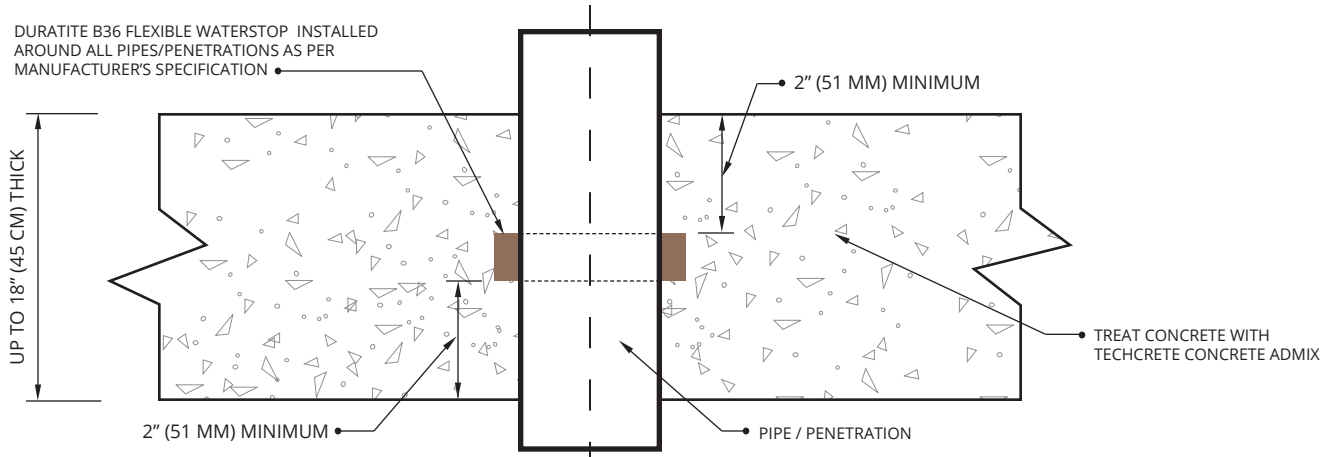


**SECTION: TYPICAL ELEVATOR PIT ON PILE CAP TCA201**  
NOT TO SCALE

REVISION NUMBER	1
REVISION DATE	3/15/23
DRAWN BY	K. RUSSELL
DRAWING NUMBER	<b>TCA200</b>

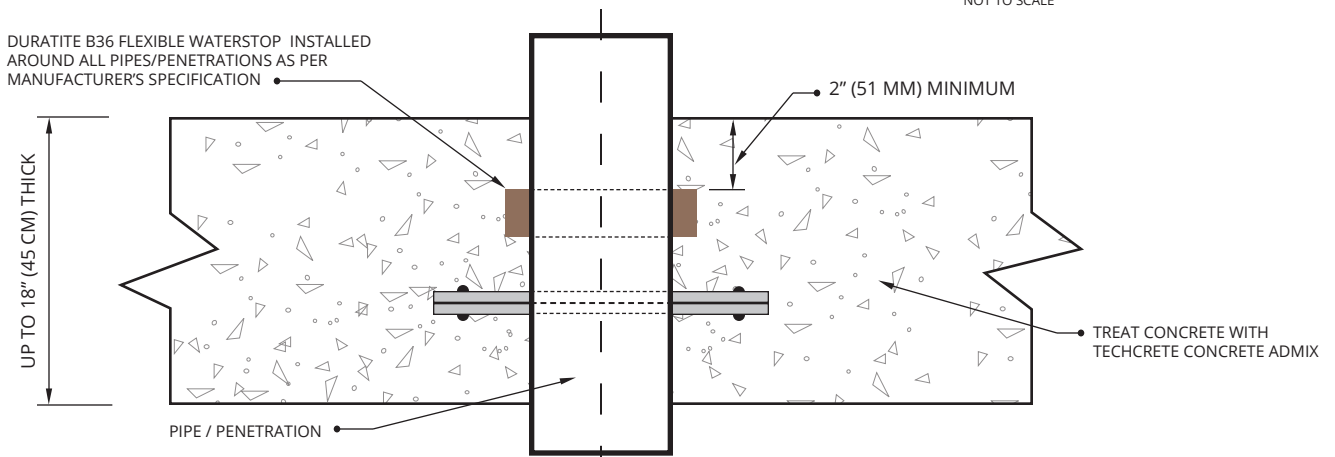
**GENERAL NOTES**

1. DURATITE B36 FLEXIBLE WATERSTOP MUST HAVE A MINIMUM COVER OF AT LEAST 2" (51 MM).
2. 2-STRIPS OF DURATITE B36 FLEXIBLE WATERSTOP IS REQUIRED IF THE SLAB/WALL IS THICKER THAN 18" (45 CM).
3. CONTACT ALCHEMCO TECHNICAL DEPARTMENT TO REQUEST A PRE-PROJECT SURVEY AND/OR REVIEW OF PROJECT PLANS AND SPECIFICATION.



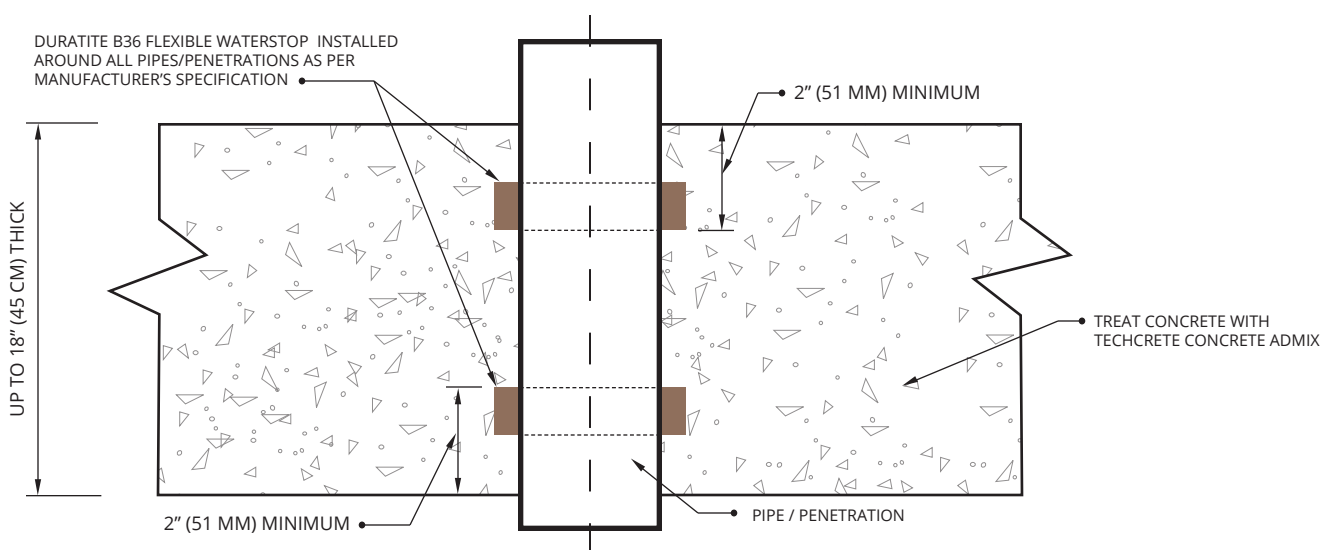
**SECTION: CAST-IN PIPE/PENETRATION DETAIL TCA301**

NOT TO SCALE



**SECTION: CAST-IN PIPE WITH FLANGE DETAIL TCA302**

NOT TO SCALE



**SECTION: CAST-IN PIPE/PENETRATION DETAIL TCA303**

NOT TO SCALE



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CONSTRUCTION DETAILS  
 CAST-IN PIPE / PENETRATION  
 TECHCRETE CONCRETE ADMIX

REVISION NUMBER	1
REVISION DATE	3/15/23
DRAWN BY	K. RUSSELL
DRAWING NUMBER	<b>TCA300</b>

**GENERAL NOTES**

1. TIE-HOLE REPAIR MUST BE DONE ON BOTH SIDES OF THE WALL.
2. CONTACT ALCHEMCO TECHNICAL DEPARTMENT TO REQUEST A PRE-PROJECT SURVEY AND OR REVIEW OF PROJECT PLANS AND SPECIFICATION.

1. PRIME THE SURFACE WITH A COAT OF TECHCRETE 2500 MAKING SURE TO SPRAY INTO THE HOLE.

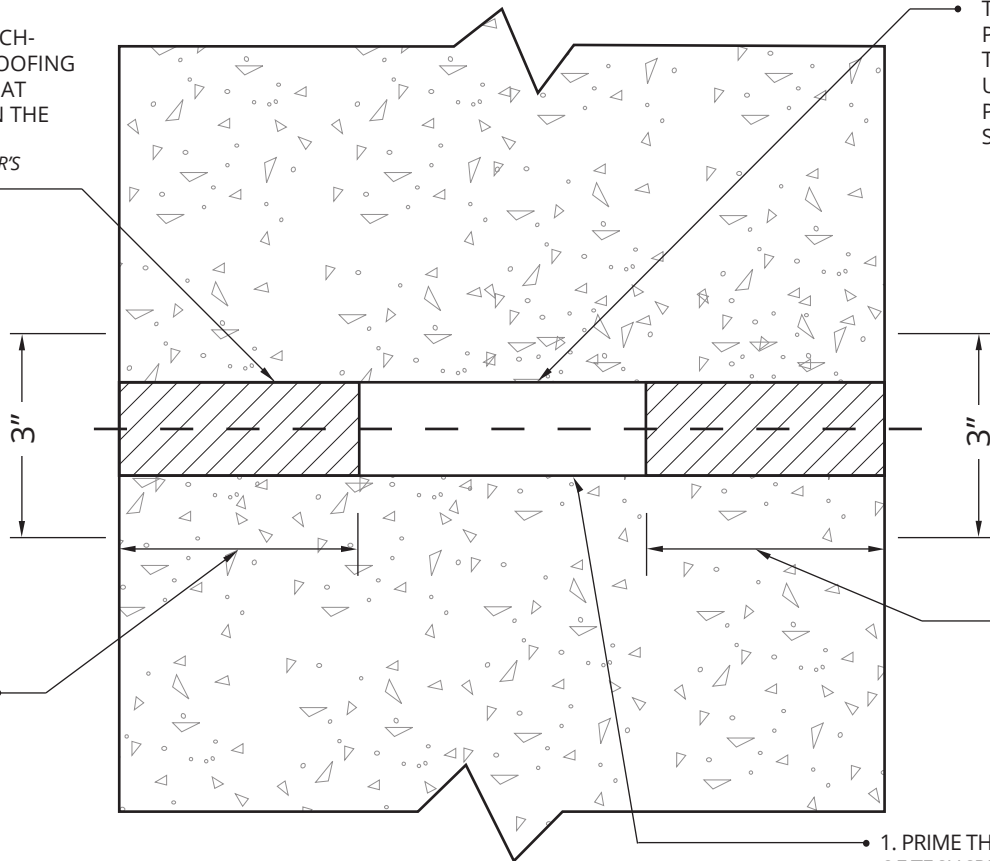
2. FILL TIE-HOLE WITH ACR REPAIR MORTAR, AS DEEP AS POSSIBLE.

3. SPRAY A COAT OF TECHCRETE 2500 WATER PROOFING AGENT OVER THE TOP, AT LEAST 3" CENTERED ON THE HOLE.

*\*ALL AS PER MANUFACTURER'S SPECIFICATIONS*

TIE ROD TO BE REMOVED. PRESSURE WASH INSIDE THE HOLE. USE A TIE-HOLE STOPPER/ PLUG TO FILL THE INNER SECTION OF THE HOLE.

FILL HOLE AS DEEP AS POSSIBLE (MIN 2" / 50 MM)



FILL HOLE AS DEEP AS POSSIBLE (MIN 2" / 50 MM)

1. PRIME THE SURFACE WITH A COAT OF TECHCRETE 2500 WATERPROOFING AGENT MAKING SURE TO SPRAY INTO THE HOLE.
  2. FILL TIE-HOLE WITH ACR REPAIR MORTAR, AS DEEP AS POSSIBLE.
  3. SPRAY A COAT OF TECHCRETE 2500 WATERPROOFING AGENT OVER THE TOP, AT LEAST 3" CENTERED ON THE HOLE.
- \*ALL AS PER MANUFACTURER'S SPECIFICATIONS*

**SECTION: TIE-HOLE REPAIR DETAIL**

NOT TO SCALE

REVISION NUMBER	1
REVISION DATE	3/15/23
DRAWN BY	K. RUSSELL
DRAWING NUMBER	TCA400