

XYPEX – METHOD STATEMENT

SCHEMATIC DETAILS

DATE: 02/8/2010

GENERAL CONDITIONS AND METHOD STATEMENTS

General Conditions :

- I. All surfaces to be waterproofed shall be examined for defects such as honeycombing, rock pockets, faulty construction joints, cracks, etc. Any defects shall be repaired by VHH as “Additional Works” prior to the commencement of waterproofing, as per the repair methods below.
- II. Concrete surfaces shall be porous and clean, free from scale, excess form oil, laitance, curing compound, and any other foreign matter. Any removal of foreign materials or extensive cleaning of surfaces shall be charged as “Additional Works”.
- III. Contractor to clarify no foreign organic waterproofing admixture has been used other than normal water reducer and plasticizer.
- IV. All penetration pipes shall be installed prior to the waterproofing works.

Method of Concrete Repair (Prior to Waterproofing):

1. PATCHING OF HONEYCOMBING AND DEFECTIVE CONCRETE - chip out deteriorated concrete onto sound concrete with the edges chipped to roughly 90° angle, and flush out all loose materials with clean water. Apply 1 coat of Xypex Concentrate at the coverage of 1.0 kg/m² over the chipped surface. Then apply cement mortar mixed at 1 part cement to 2 parts sand dosed with 3% Xypex Concentrate or 2% Xypex Admix C-2000.
2. SEALING CRACKS & DEFECTIVE CONSTRUCTION JOINTS - chip a “U” shape slot approximately 2.5cm wide by 3.75cm deep or as necessary along the crack/construction joint. Apply 1 coat of Xypex Concentrate into the slot, and then apply Concentrate in Dry-Pac form followed by packing tightly with block & hammer.

Method of Waterproofing To Concrete:

- A. All concrete surfaces to be waterproofed shall be cleaned and saturated with clean water.
- B. Construction joints shall be chipped to a “U” shaped slot approximately 2.5cm wide by 3.5cm deep. Apply 1 coat of Xypex Concentrate into the slot at the coverage of 1.0 kg/m², then apply Xypex Concentrate Dry-Pac followed by packing tightly with block & hammer. *(To reduce chipping to concrete, a preformed groove along the construction joint on the exterior face can be formed by attaching a wooden strip of approximately 2.0cm width by 3.0cm depth to the form work.)* After the Dry-Pac is completed and within 48 hours, cover the joint with a 2:1 cement mortar fillet 3.0cm by 3.0cm dosed with 2% Xypex Admix C-2000 (or 3% Xypex Concentrate) per the weight of cement.
- C. Pipe penetrations holes shall also be chipped to a “U” shaped slot around the pipe and applied Xypex Concentrate Dry-Pac as above. For vibrating pipes, apply 2 coats of Xypex FCM 40 at a coverage of 3.3 kg/m² (approx. 3mm thickness) extending 30cm around the pipe penetration.
- D. Tie holes shall be cleaned and chipped to approximately 90° around the edges before applying 1 coat of Xypex Concentrate into the hole at a coverage of 1.0 kg/m² prior to filling with a 2:1 cement mortar, dosed with either 2% Xypex Admix C-2000 (or 3% Xypex Concentrate) per the weight of cement then pack tightly with block and hammer.
- E. For Basement Walls & Slabs - All horizontal and vertical surfaces shall receive 2 coats of Xypex Concentrate. The 1st coat shall be at the coverage of 0.65 kg/m² and the second coat at the coverage of 0.65 kg/m². The 2nd coat shall be applied after the 1st coat has set but while it is still “green” within 48 hours. The 1st coat shall be kept moist during the application of the 2nd coat. Waterproofed surfaces shall be protected from weather/traffic and mist cured for at least 2-3 days

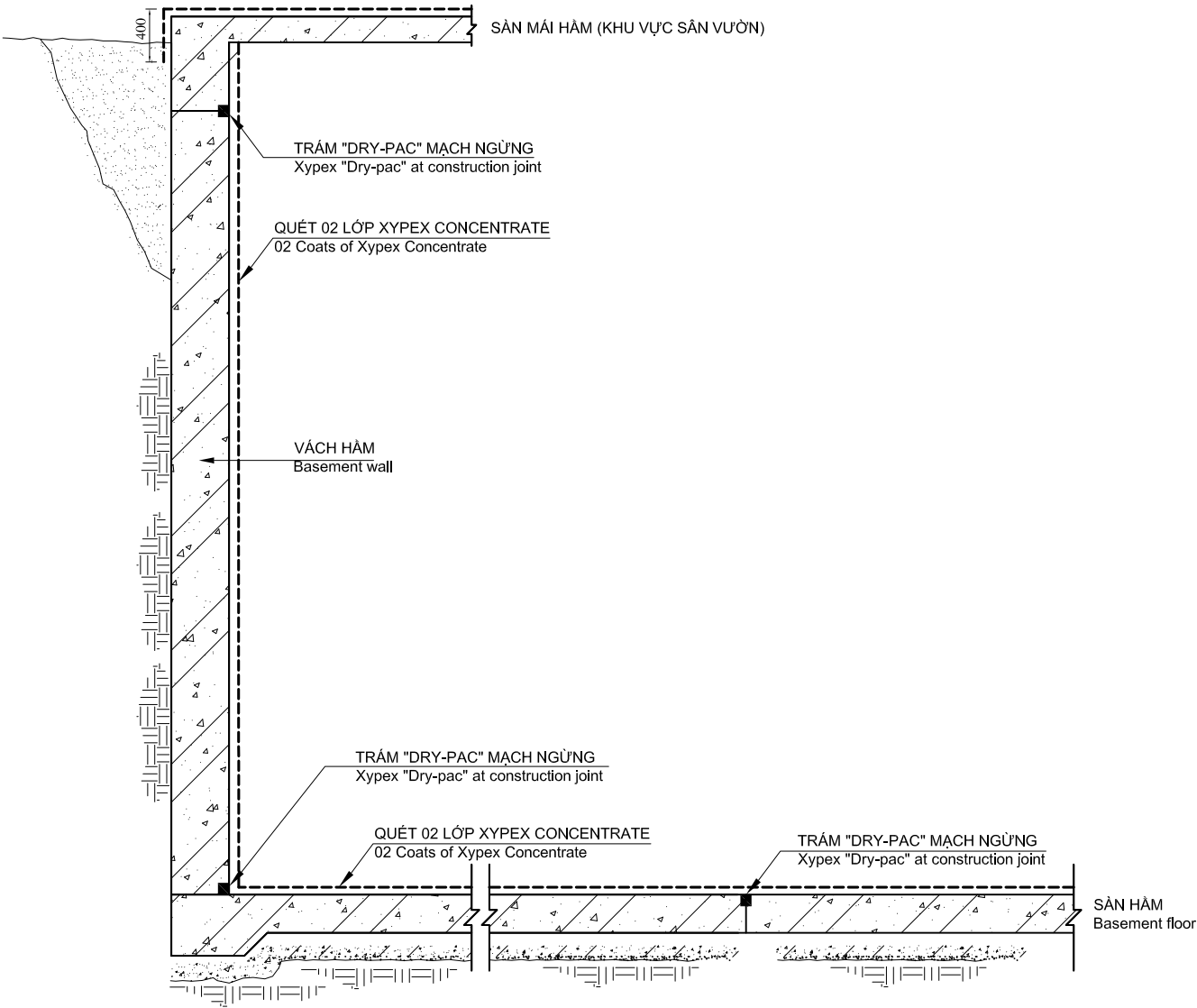
GENERAL CONDITIONS AND METHOD STATEMENTS (CONT.)

- F. For Basement Slab - Where Xypex coating is specified for external application, a lean concrete layer must be placed before the installation of the reinforcements. After the reinforcements are installed, and within 48 hours before pouring concrete, mix 5 parts powder of Xypex Concentrate with 3 parts clean water by volume and pour the slurry over the reinforcements and onto the lean concrete at the coverage of 1.3 kg/m². Maintain moist curing of the Xypex coating until the concrete is placed.
- G. For Water Tanks & Swimming Pools - All horizontal and vertical surfaces shall receive 2 coats of Xypex Concentrate. The 1st coat shall be at the coverage of 0.65 kg/m² and the second coat at the coverage of 0.65 kg/m². Follow the same coating procedure as Step E. Waterproofed surfaces shall be protected from weather/traffic and mist cured for at least 2-3 days. Allow setting for another 12 days before filling the structure with water for testing. See below for tiling installation if specified.
- H. For Waste Water Treatment or Septic Tanks - All horizontal and vertical surfaces shall receive 2 coats of Xypex Concentrate. The 1st coat shall be at the coverage of 0.8 kg/m² and the second coat at the coverage of 0.65 kg/m². Follow the same coating procedure as Step E. Waterproofed surfaces shall be protected from weather/traffic and mist cured for at least 2-3 days. Allow setting for another 15 days before filling the structure with water for testing.
- I. For Toilets - All horizontal and vertical surfaces shall receive 2 coats of Xypex Concentrate at a total coverage of 1.0 kg/m². Follow the same coating procedure as Step E. Apply a fillet 25mm X 25mm along the wall cove with a 2:1 cement mortar, dosed with either 2% Xypex Admix C-2000 (or 3% Xypex Concentrate) per the weight of cement then pack tightly with block and hammer.
- J. For Balconies, Terraces & Roofs - All horizontal and vertical surfaces shall receive 2 coats of Xypex Concentrate. The 1st coat shall be at the coverage of 0.65 kg/m² and the second coat at the coverage of 0.65 kg/m². Follow the same coating procedure as Step E. Apply a fillet 25mm X 25mm along the wall cove with a 2:1 cement mortar, dosed with either 2% Xypex Admix C-2000 (or 3% Xypex Concentrate) per the weight of cement then pack tightly with block and hammer. See below for tiling installation if specified. Moist cure with wet burlap for 3 days.
- K. For tiling over Xypex coatings such as the Swimming Pool & Toilets - As soon as the Xypex coatings completed its 1st 24 hour moist curing. Apply tiling over the Xypex coating immediately the following day then continue moist curing over the tiling. If the tiling is to be installed at a later time, apply a cement scratch coat over the Xypex coating after the 1st 24 hour moist curing, and then continue the moist curing over the scratch coat for another 48 hours. Allow to set for 12 days before water test. Tiling may be installed anytime afterward. For best result, the tiling subcontractor may want to use a bonding agent for the tiling.
- L. In tight unventilated underground tanks or vaults, provide a fan to aid in the curing of the Xypex coating after moist curing.
- M. Backfilling can take place 36 hours after the Xypex application. If backfilling takes place within 7 days after the application, the backfilling material should be moist so as not to draw moisture from the Xypex coating.
- N. For area where decorative coating is specified to apply over concrete, the Xypex coating can be removed by sanding after 6 weeks to meet this requirement without loss of water tightness.

Note: Pls, review Schematic Detail below:

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		Approved:	

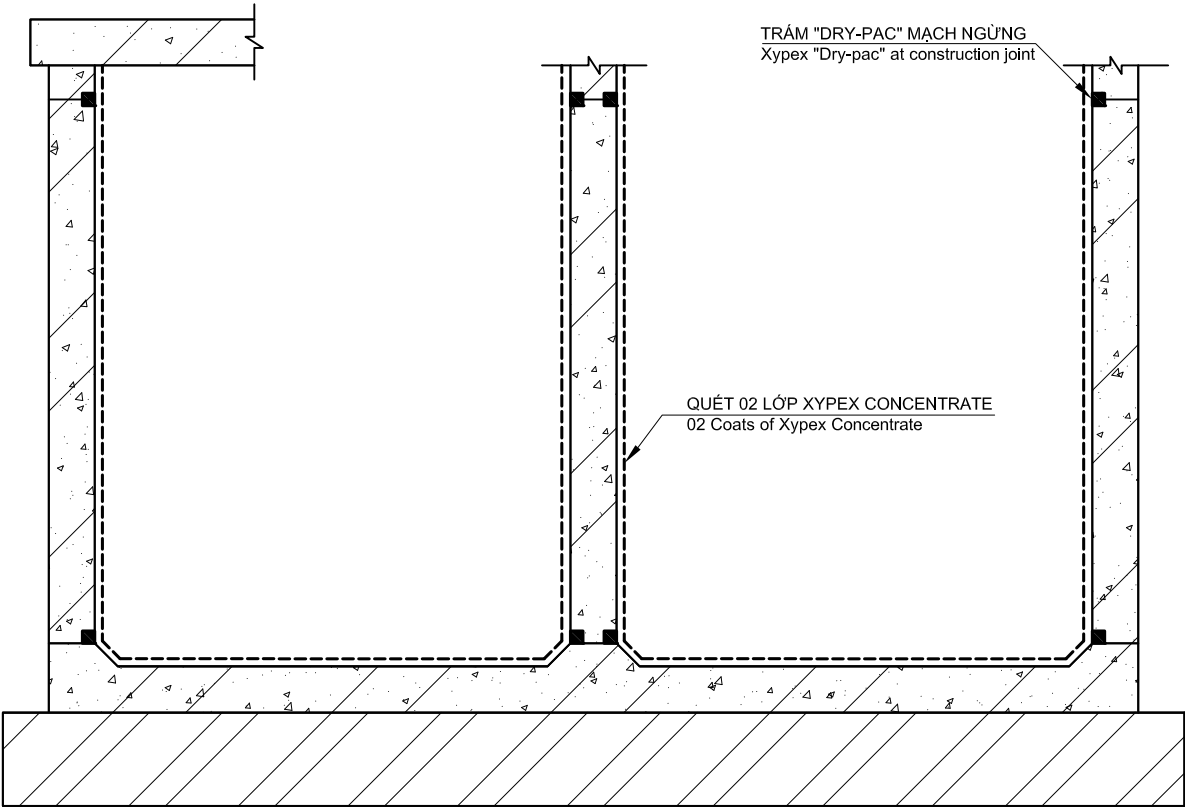
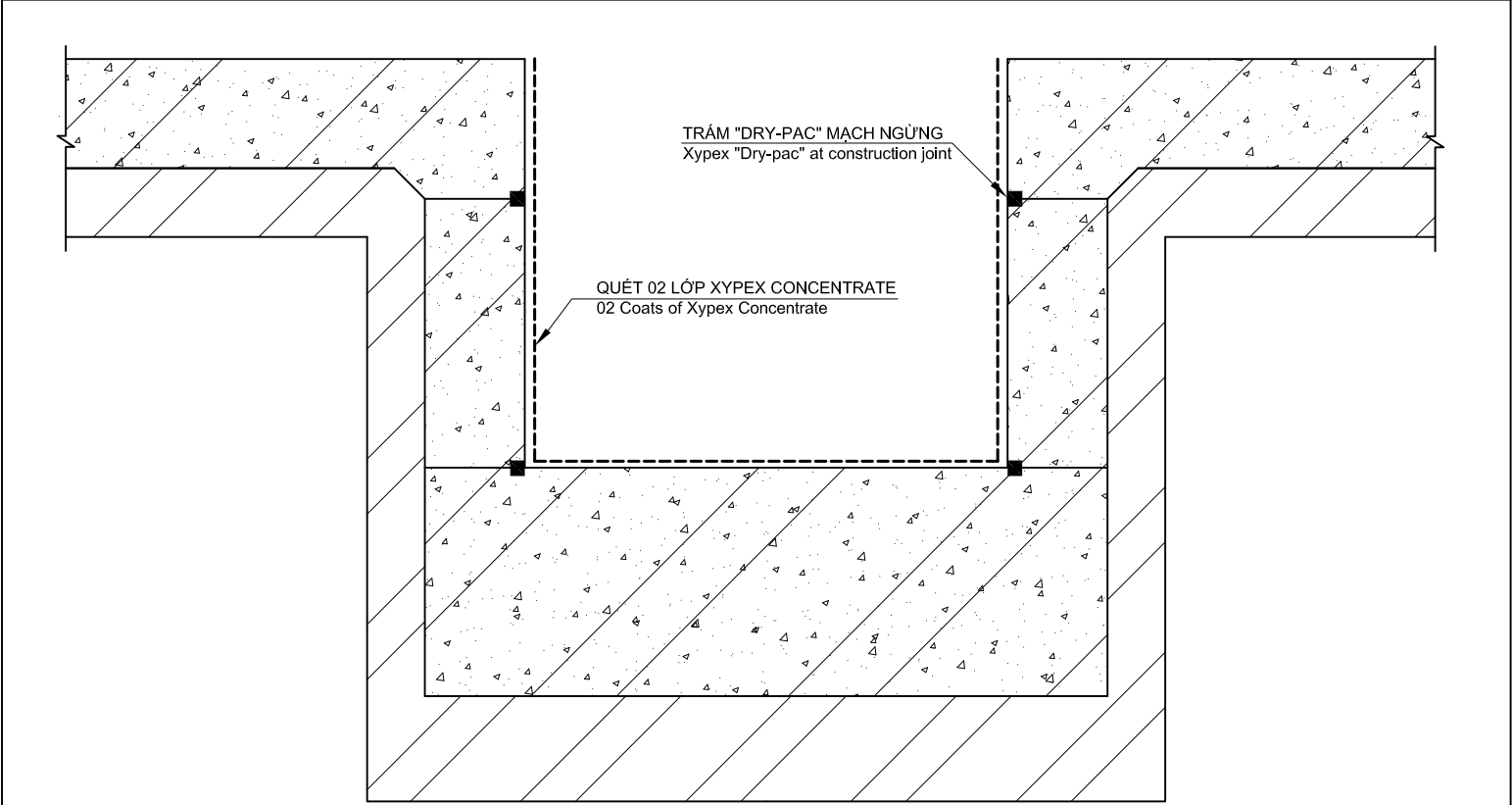
Subject: Method of Xypex waterproofing for basement wall & slab



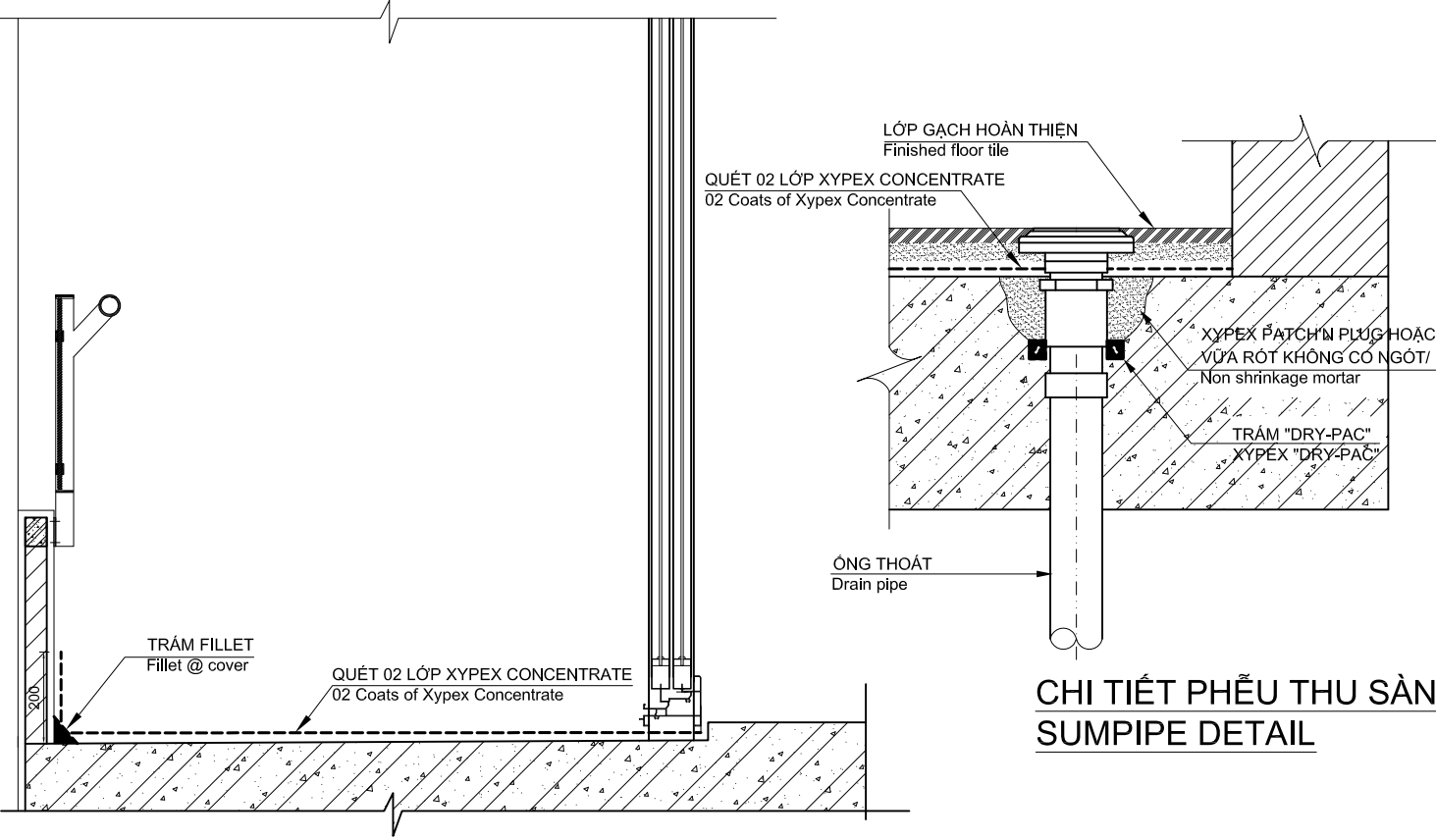
BIỆN PHÁP CHỐNG THẤM TẦNG HẦM ĐIỂN HÌNH
METHOD OF WATERPROOF FOR BASEMENT

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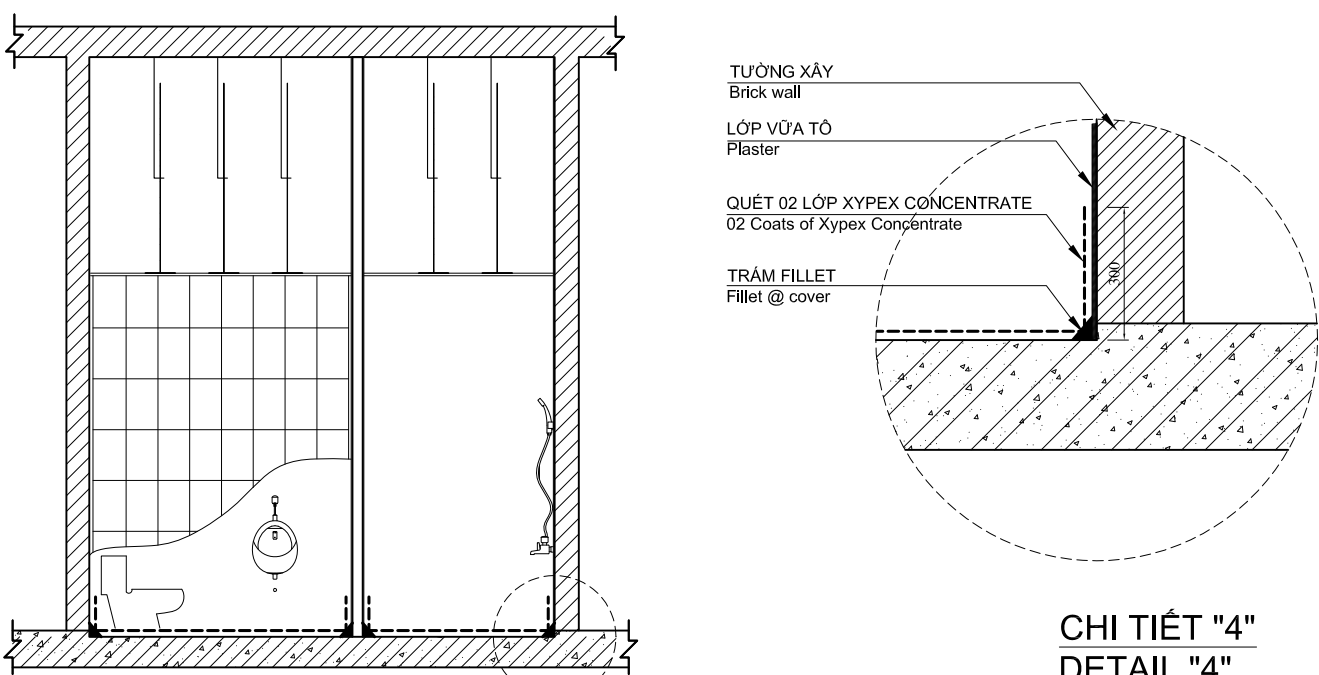
Subject: Method of Xypex waterproofing



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Subject: Method of Xypex waterproofing			



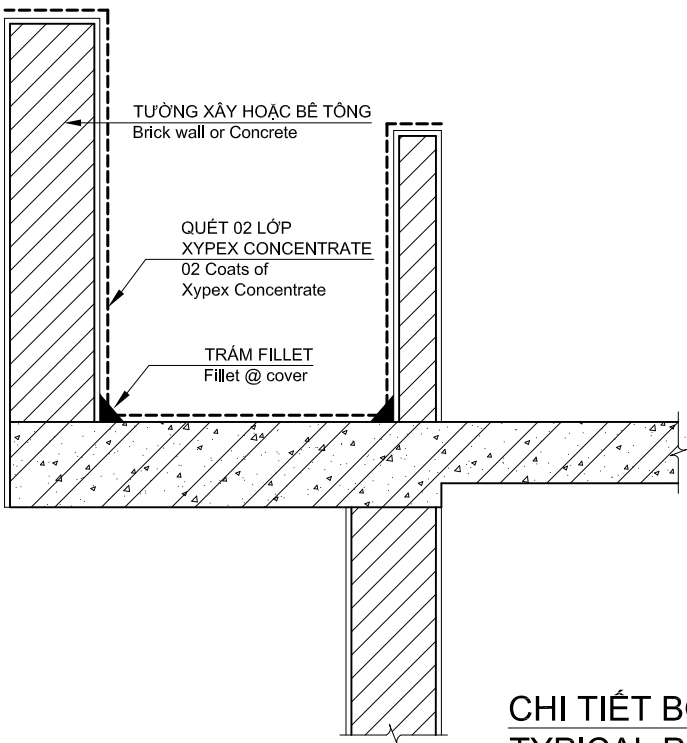
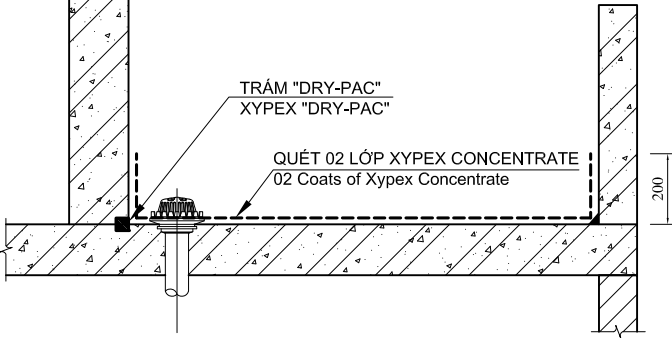
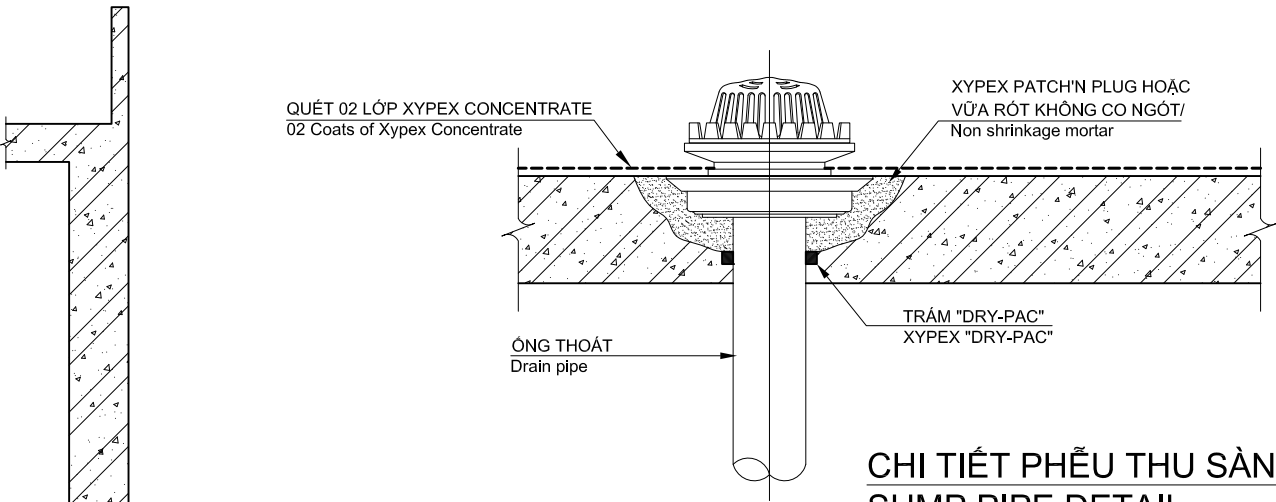
BIỆN PHÁP CHỐNG THẨM BAN CÔNG
METHOD OF WATERPROOF FOR BALCONY



BIỆN PHÁP CHỐNG THẨM TOILET
METHOD OF WATERPROOF FOR TOILET

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Subject: Method of Xypex waterproofing

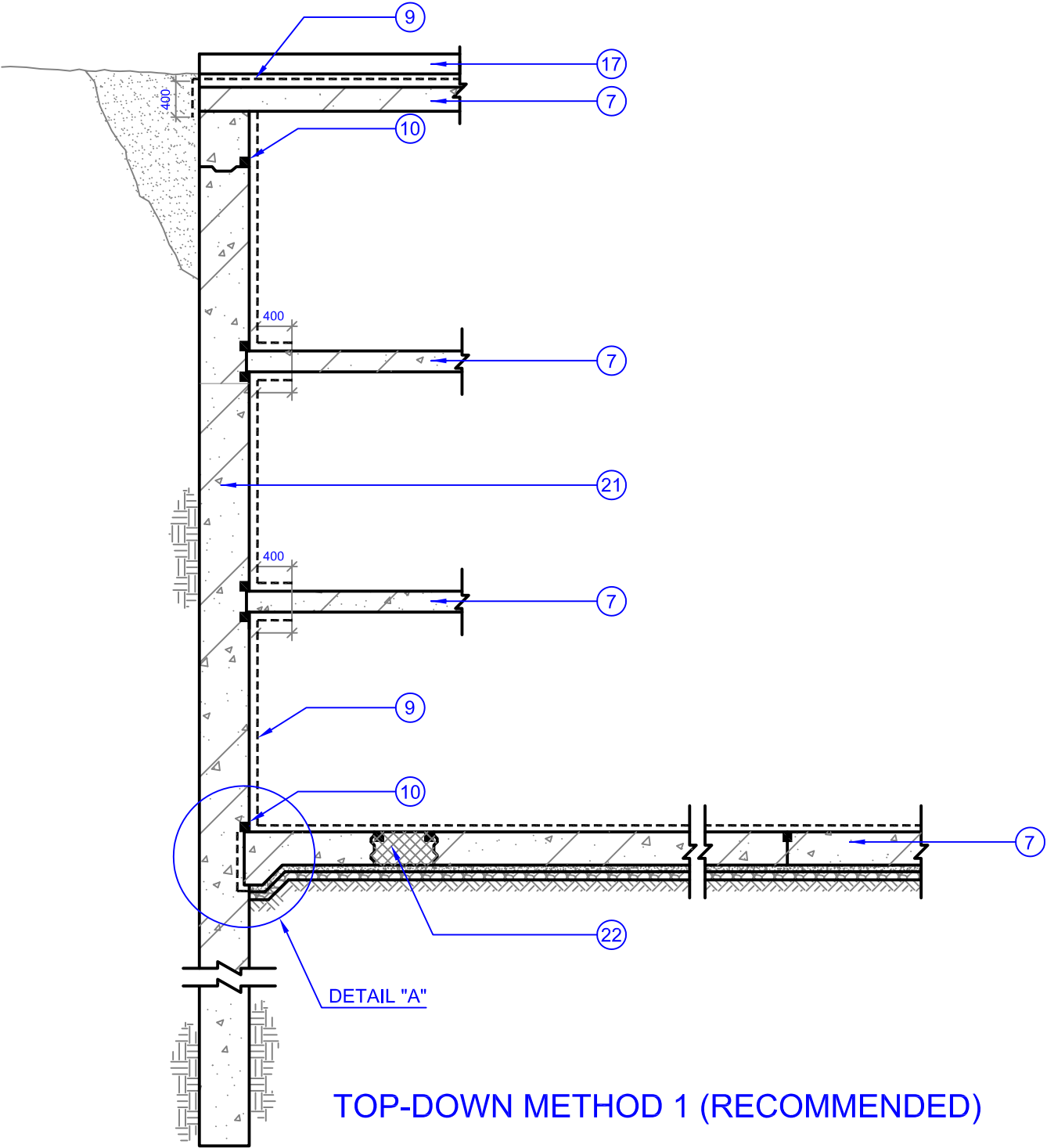


NGUYÊN TẮC CHỐNG THÂM MẶT TRONG BÊ TÔNG HÀM WATERPROOF PRINCIPLE INSIDE CONCRETE BASEMENT	NGUYÊN TẮC CHỐNG THÂM SÀN TẦNG HÀM WATERPROOF PRINCIPLE BASEMENT FLOOR	NGUYÊN TẮC CHỐNG THÂM SÀN SÀN THƯỢNG WATERPROOF PRINCIPLE FLAT ROOF FLOOR	NGUYÊN TẮC CHỐNG THÂM Mái ROOF WATERPROOF PRINCIPLE		
NGUYÊN TẮC CHỐNG THÂM Mái ROOF WATERPROOF PRINCIPLE	NGUYÊN TẮC CHỐNG THÂM SÀN WC WATERPROOF PRINCIPLE AT WC FLOOR	NGUYÊN TẮC CHỐNG THÂM BỂ NƯỚC, BỂ TỰ HOẠI, BỂ DẦU WATERPROOF PRINCIPLE UNDERGROUND, WATER TANK, SEPTIC TANK, OIL BASIN, SWIMMING POOL...	NGUYÊN TẮC CHỐNG THÂM MẠCH NGỪNG SÀN HÀM WATERPROOF PRINCIPLE AT BASEMENT FLOOR CONST. JOINTS		
NGUYÊN TẮC CHỐNG THÂM RÀNH THU NƯỚC WATER PROOF PRINCIPLE AT WATER INTAKE DRAIN	NGUYÊN TẮC CHỐNG THÂM ống xuyên BÊ TÔNG HỒ NƯỚC, HỒ GA WATER PROOF PRINCIPLE PIPE THROUGH CONCRETE WATER TANK, MANHOLE	NGUYÊN TẮC CHỐNG THÂM BULON NẸO WATERPROOF PRINCIPLE FOR ANCHOR BOLT	NGUYÊN TẮC CHỐNG THÂM PHẾU THU SÀN WATERPROOF PRINCIPLE AT SUMP PIPE		
NGUYÊN TẮC CHỐNG THÂM PHẾU THU SÀN WATERPROOF PRINCIPLE AT DRAINAGE PIPE	NGUYÊN TẮC CHỐNG THÂM SÀN, TƯỜNG VÀ Mái HÀM WATERPROOF PRINCIPLE FOR BASEMENT'S SLAB WALL & ROOF	NGUYÊN TẮC CHỐNG THÂM BỂ NƯỚC, BỂ TỰ HOẠI WATERPROOF PRINCIPLE WATER TANK, SEPTIC TANK			
				XYPEX VIETNAM	
				VINH HIEP HUNG Co., LTD 464 Nguyen Dinh Chieu, Dist 3, HCMC	
				Project :	
				Title: Xypex Waterproofing	
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				Approved:	

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		Approved:	

Subject: METHOD OF XYPEX WATERPROOFING FOR BASEMENT SLAB & TOP- DOWN DIAPHRAGM WALL

TYPICAL SECTION OF BASEMENT SLAB & DIAPHRAGM WALL



TOP-DOWN METHOD 1 (RECOMMENDED)

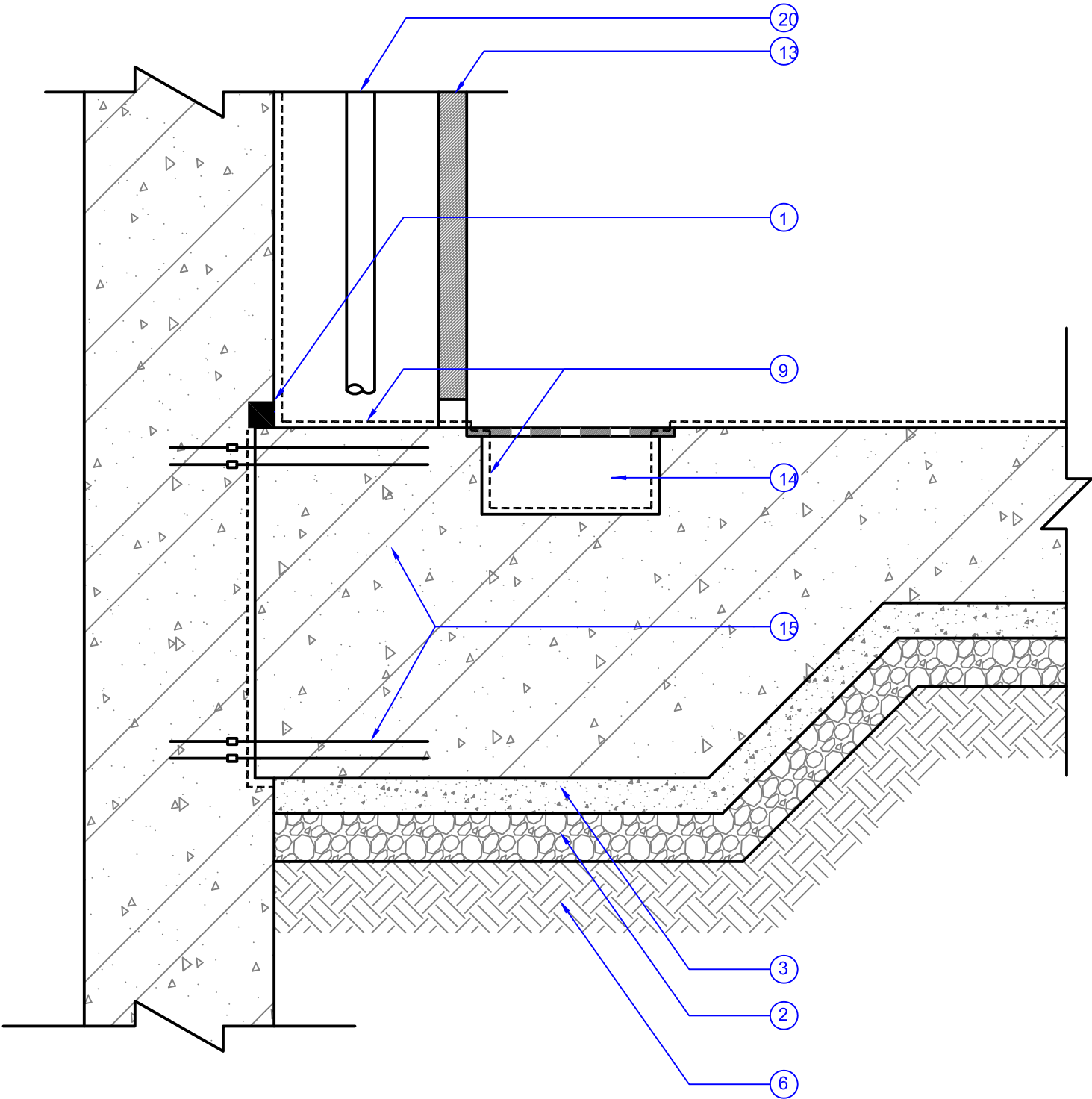
KEY NOTES:

1:	PILE or BARRETTE FOUNDATION	8:	POUR 1 COAT OF XYPEX CONCENTRATE OVER LEAN CONC
2:	AGGREGATE	9:	APPLY 2 COATS OF XYPEX CONCENTRATE
3:	LEAN CONCRETE	10:	XYPEX CONCENTRATE DRY PAC @ CONTS JOINT
4:	1st POUR CONCRETE	11:	XYPEX PATCH N PLUG or NON SHRINK GROUT
5:	POUR CONCRETE IN CONTINUOUS PHASES	12:	FILLET @ COVE
6:	COMPACTED SAND PLACED AFTER REMOVAL OF PILE CAP FORM WORK	17:	FINISH CONCRETE TOPPING
7:	CONCRETE WALL or SLAB	21:	DIAPHRAGM WALL
		22:	LATE STRIP POUR CONCRETE

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Subject: METHOD OF XYPEX WATERPROOFING FOR BASEMENT SLAB & DIAPHRAGM WALL

DETAIL A

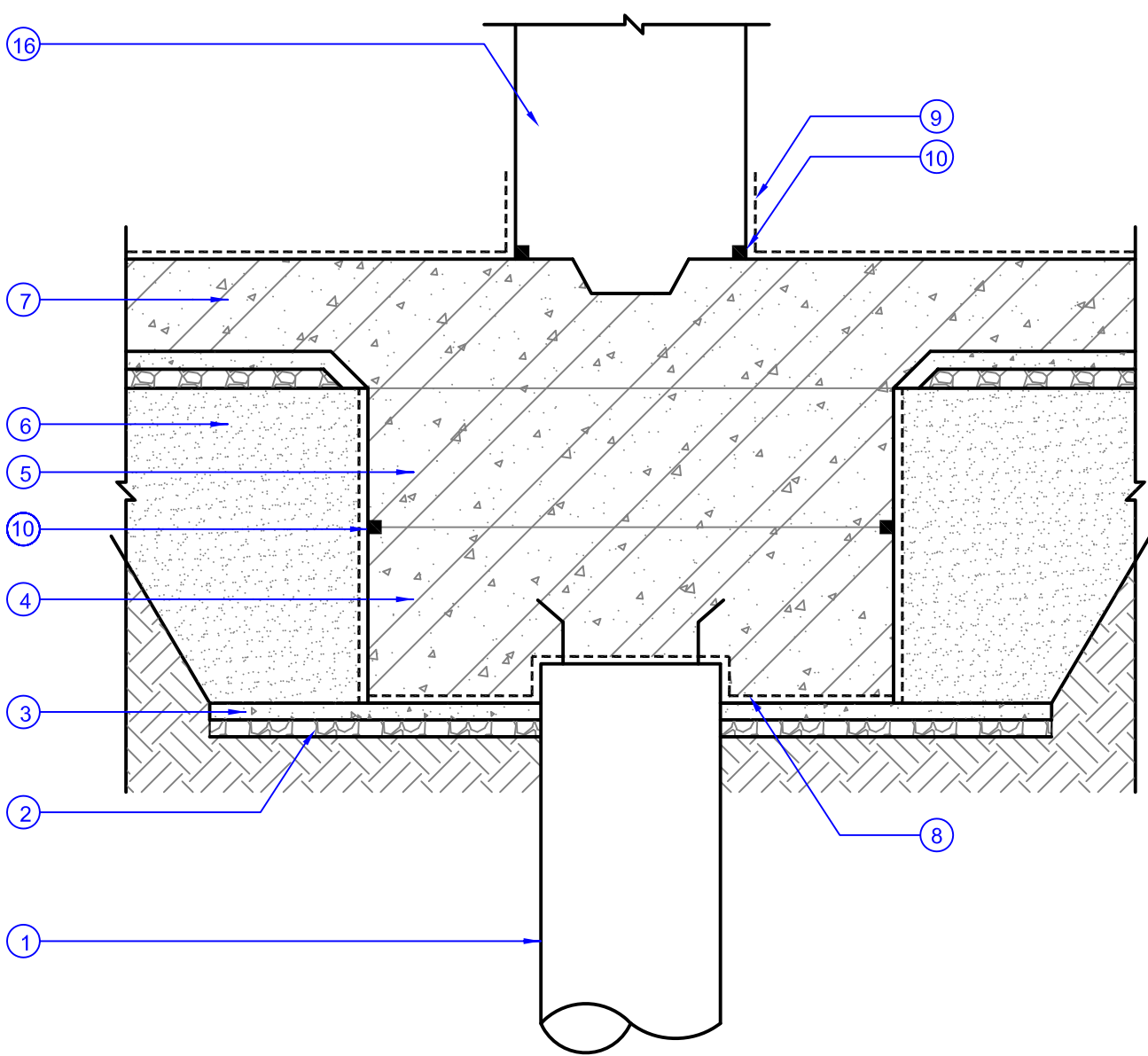


KEY NOTES:

	PILE or BARRETTE FOUNDATION	8	POUR 1 COAT OF XYPEX CONCENTRATE OVER LEAN CONC
2	AGGREGATE	9	APPLY 2 COATS OF XYPEX CONCENTRATE
3	LEAN CONCRETE	10	XYPEX CONCENTRATE DRY PAC @ CONST JOINT
4	1st POUR CONCRETE	11	XYPEX PATCH N PLUG or NON SHRINK GROUT
5	POUR CONCRETE IN CONTINUOUS PHASES	13	CONCRETE BLOCK or BRICK WALL
6	COMPACTED SAND PLACED AFTER REMOVAL OF PILE CAP	14	GUTTER
	FORM WORK	15	STEEL DOWELS
7	CONCRETE WALL or SLAB	20	PIPE

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Subject: METHOD OF XYPEX WATERPROOFING FOR PILE CAP FOUNDATION			

PILE CAP DETAIL: METHOD 1 (RECOMMENDED)



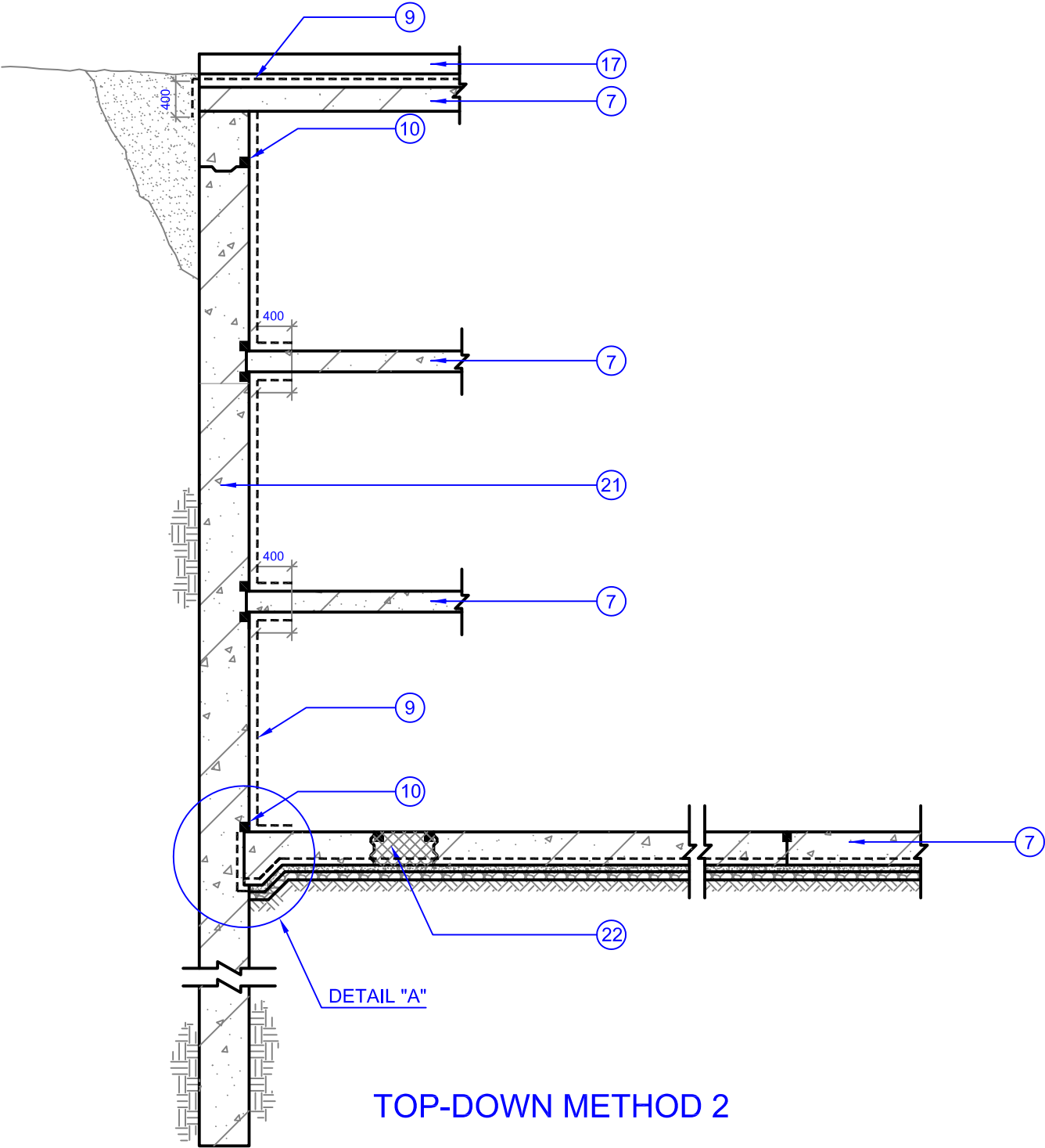
KEY NOTES:

1	PILE or BARRETTE FOUNDATION	8	POUR 1 COAT OF XYPEX CONCENTRATE OVER LEAN CONCR
2	AGGREGATE	9	APPLY 2 COATS OF XYPEX CONCENTRATE
3	LEAN CONCRETE	10	XYPEX CONCENTRATE DRY PAC @ CONST JOINT
4	1st POUR CONCRETE	11	XYPEX PATCH N PLUG or NON SHRINK GROUT
5	POUR CONCRETE IN CONTINUOUS PHASES	12	FILLET @ COVE
6	COMPACTED SAND PLACED AFTER REMOVAL OF PILE CAP FORM WORK	13	CONCRETE BLOCK or BRICK WALL
7	CONCRETE SLAB or WALL	14	GUTTER
		16	COLUMN

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Subject: METHOD OF XYPEX WATERPROOFING FOR BASEMENT SLAB & TOP-DOWN DIAPHRAGM WALL

TYPICAL SECTION OF BASEMENT SLAB & DIAPHRAGM WALL



TOP-DOWN METHOD 2

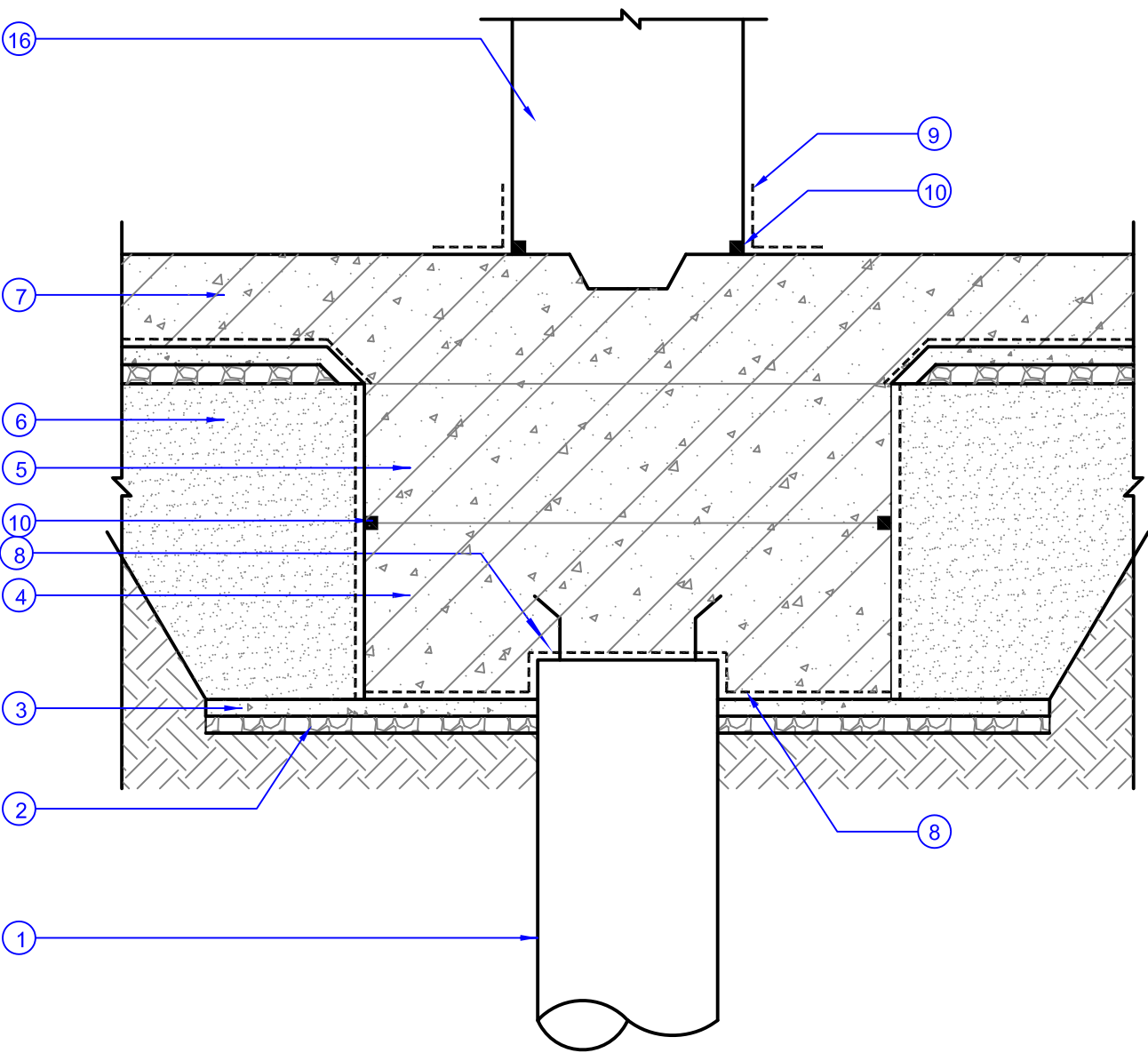
KEY NOTES:

1:	PILE or BARRETTE FOUNDATION	8:	POUR 1 COAT OF XYPEX CONCENTRATE OVER LEAN CONCR
2:	AGGREGATE	9:	APPLY 2 COATS OF XYPEX CONCENTRATE
3:	LEAN CONCRETE	10:	XYPEX CONCENTRATE DRY PAC @ CONTS JOINT
4:	1st POUR CONCRETE	11:	XYPEX PATCH N PLUG or NON SHRINK GROUT
5:	POUR CONCRETE IN CONTINUOUS PHASES	12:	FILLET @ COVE
6:	COMPACTED SAND PLACED AFTER REMOVAL OF PILE CAP FORM WORK	17:	FINISH CONCRETE TOPPING
7:	CONCRETE WALL or SLAB	21:	DIAPHRAGM WALL
		22:	LATE STRIP POUR CONCRETE

	PILE or BARRETTE FOUNDATION	8	POUR 1 COAT OF XYPEX CONCENTRATE OVER LEAN CONC
2	AGGREGATE	9	APPLY 2 COATS OF XYPEX CONCENTRATE
3	LEAN CONCRETE	10	XYPEX CONCENTRATE DRY PAC @ CONST JOINT
4	1st POUR CONCRETE	11	XYPEX PATCH N PLUG or NON SHRINK GROUT
5	POUR CONCRETE IN CONTINUOUS PHASES	13	CONCRETE BLOCK or BRICK WALL
6	COMPACTED SAND PLACED AFTER REMOVAL OF PILE CAP	14	GUTTER
	FORM WORK	15	STEEL DOWELS
7	CONCRETE WALL or SLAB	20	PIPE

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Subject: METHOD OF XYPEX WATERPROOFING FOR PILE CAP FOUNDATION			

PILE CAP DETAIL: METHOD 2



KEY NOTES:

1	PILE or BARRETTE FOUNDATION	8	POUR 1 COAT OF XYPEX CONCENTRATE OVER LEAN CONCRETE
2	AGGREGATE	9	APPLY 2 COATS OF XYPEX CONCENTRATE
3	LEAN CONCRETE	10	XYPEX CONCENTRATE DRY PAC @ CONST JOINT
4	1st POUR CONCRETE	11	XYPEX PATCH N PLUG or NON SHRINK GROUT
5	POUR CONCRETE IN CONTINUOUS PHASES	12	FILLET @ COVE
6	COMPACTED SAND PLACED AFTER REMOVAL OF PILE CAP FORM WORK	13	CONCRETE BLOCK or BRICK WALL
7	CONCRETE SLAB or WALL	14	GUTTER
		16	COLUMN