

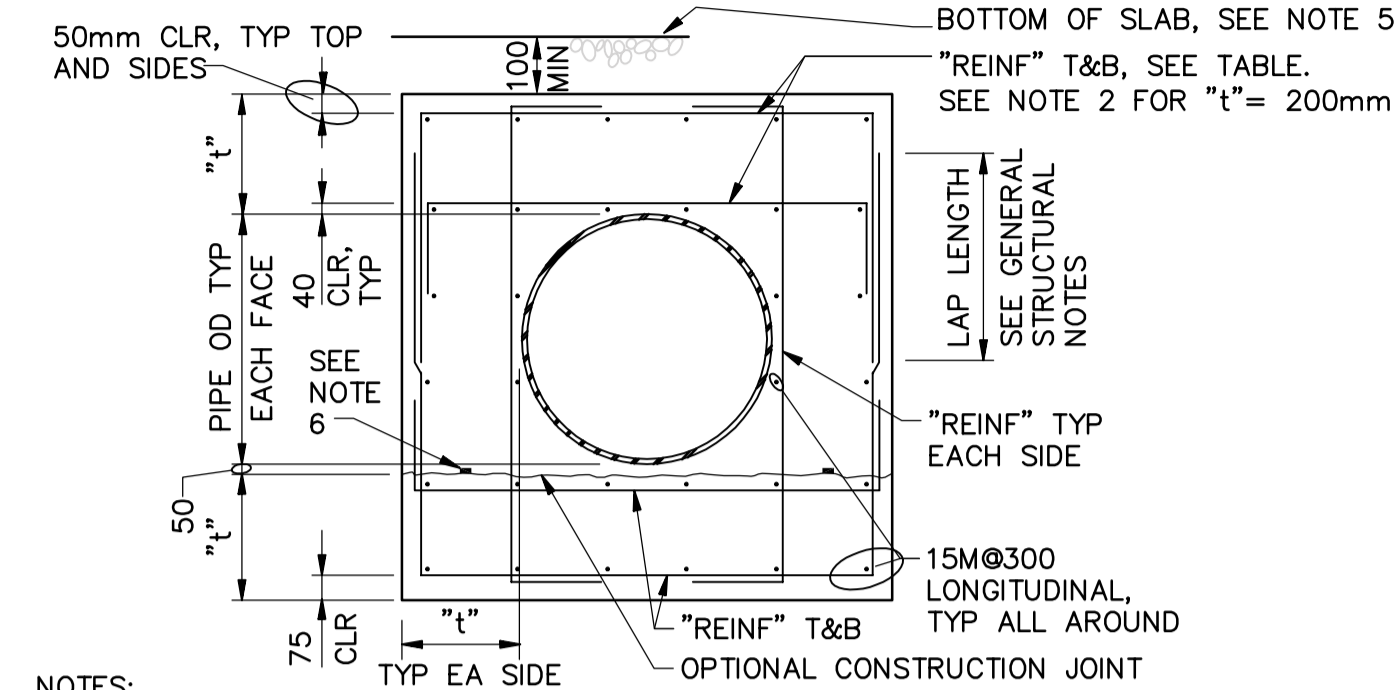
NOTES:

1. TIE PIPE ENCASEMENT TO SLAB AS SHOWN WHEN DISTANCE BETWEEN PIPE ENCASUREMENT AND BOTTOM OF SLAB IS LESS THAN 400mm.
2. 150mm PLASTIC WS IN ENCASUREMENT JOINTS. WELD TO WS IN SLAB JOINTS. SEE DETAIL BELOW.
3. PROVIDE 50MM ETHAFORM 220 OR EQUAL ON EACH SIDE OF PIPE ENCASEMENT.

1 PIPE ENCASEMENT
N.T.S.

PIPE DIA (mm)	H=3000mm		H=6000mm		H=9000mm		H=12000mm	
	"t" (mm)	REINF	"t" (mm)	REINF	"t" (mm)	REINF	"t" (mm)	REINF
500 THRU 750	200	15M@300	250	15M@300	250	15M@300	250	20M@300
900 THRU 1050	250	15M@300	250	20M@300	250	25M@300	250	20M@150
1200 THRU 1400	250	20M@300	250	25M@300	250	25M@150	300	25M@150
1450 THRU 2200	250	20M@300	250	20M@150	300	25M@150	350	25M@150
2250 THRU 3000	300	25M@200	350	25M@150	400	25M@200	400	30M@250

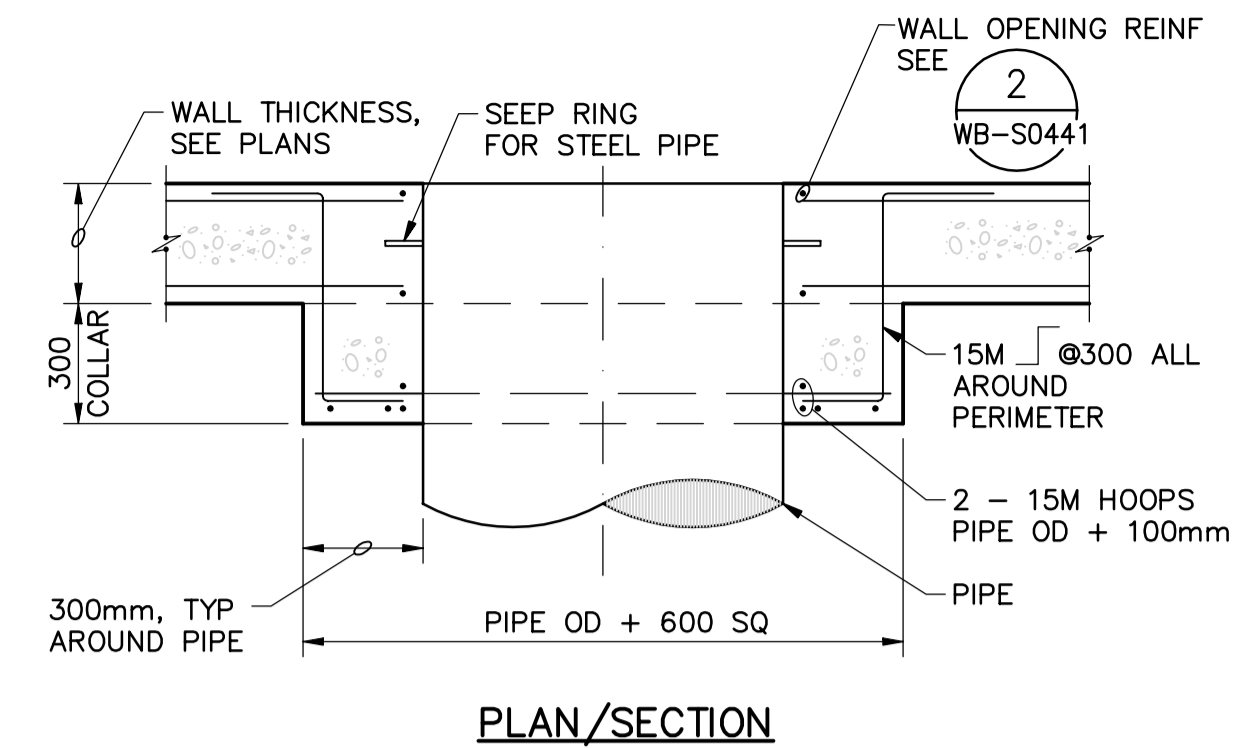
HEAVY DARK LINE INDICATES BREAK BETWEEN ONE LAYER OF REINFORCING AND TWO. SEE NOTE 2.



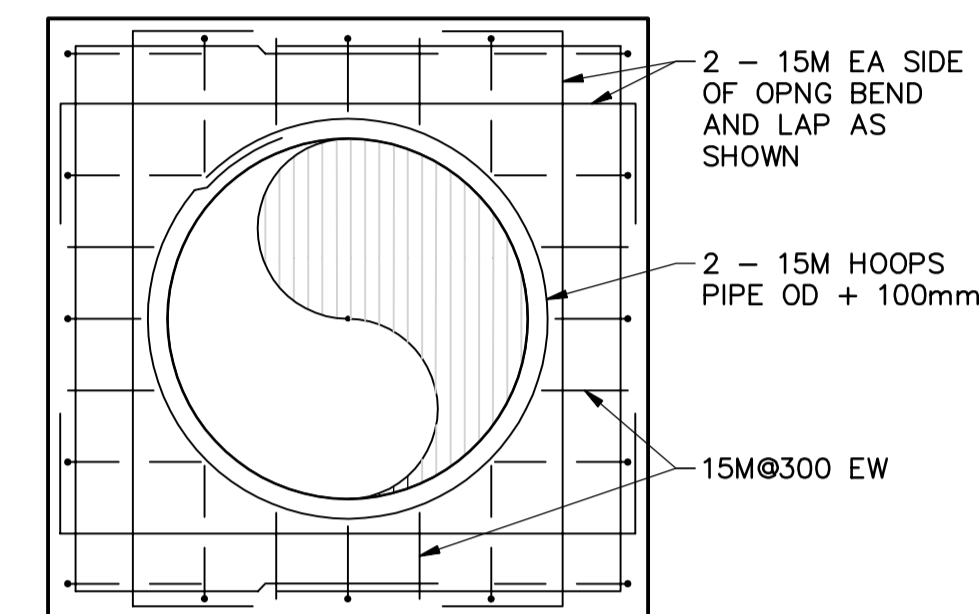
NOTES:

1. THIS DETAIL APPLIES TO PIPE DIAMETER OF 500mm AND LARGER. FOR SMALLER THAN 500mm, SEE DETAIL.
2. FOR "t"=200mm REINFORCING SHALL BE ONE LAYER AND CENTERED IN SLABS OR WALLS. SIM
3. FOR ENCASUREMENT AT PIPE RISER, SEE 4.
4. "H" IS FILL HEIGHT OR WATER DEPTH OR COMBINATION ABOVE PIPE.
5. WHEN PIPE ENCASEMENT CLOSER THAN 400mm TO SLAB ABOVE, TIE SLAB & ENCASUREMENT TOGETHER. SEE 1 UNLESS DETAILED OTHERWISE.
6. HYDROPHILIC WATERSTOP CONTINUOUS ALL AROUND IN ALL CONSTRUCTION JOINTS.

2 PIPE ENCASEMENT
N.T.S.

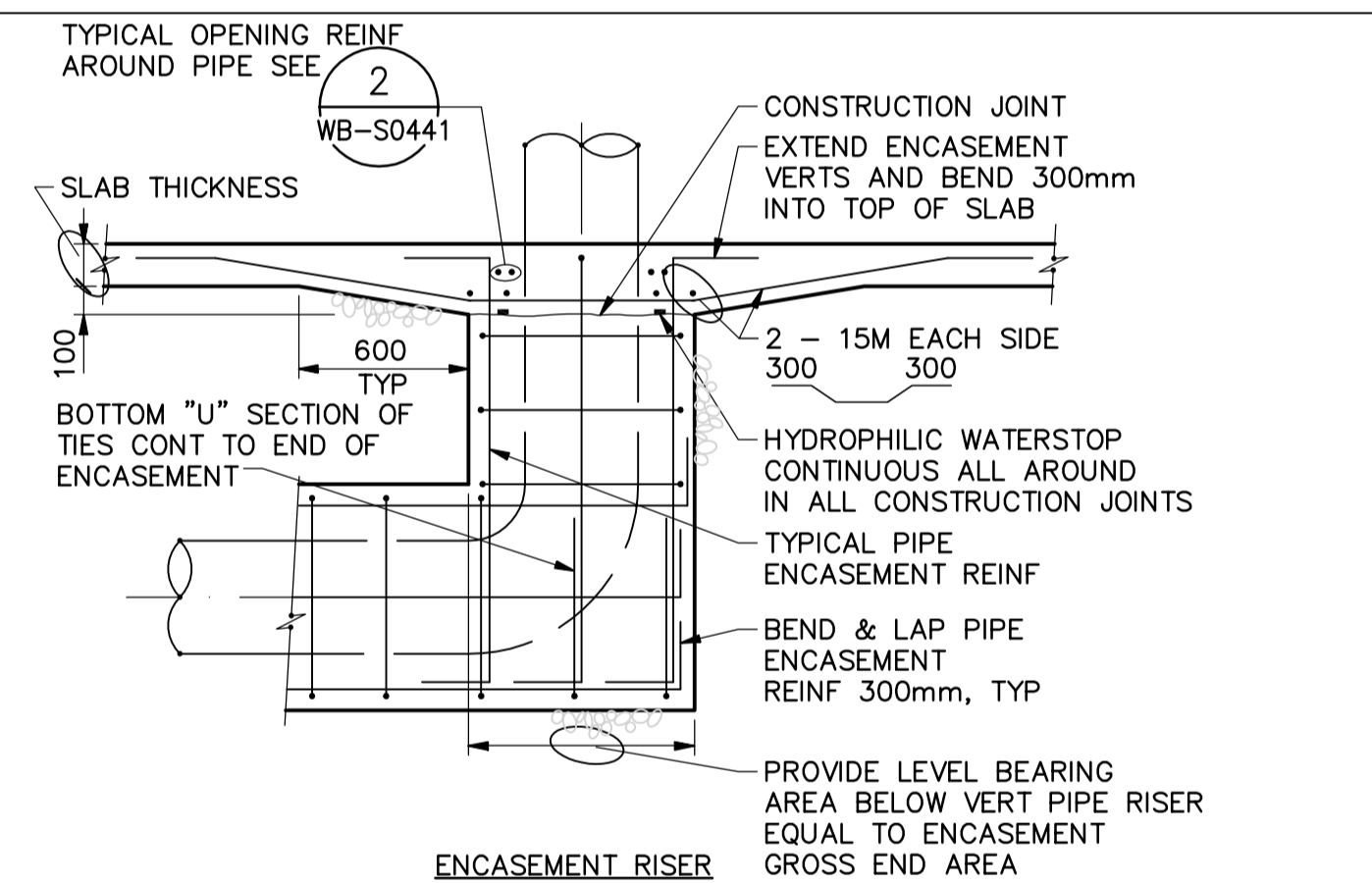


PLAN/SECTION

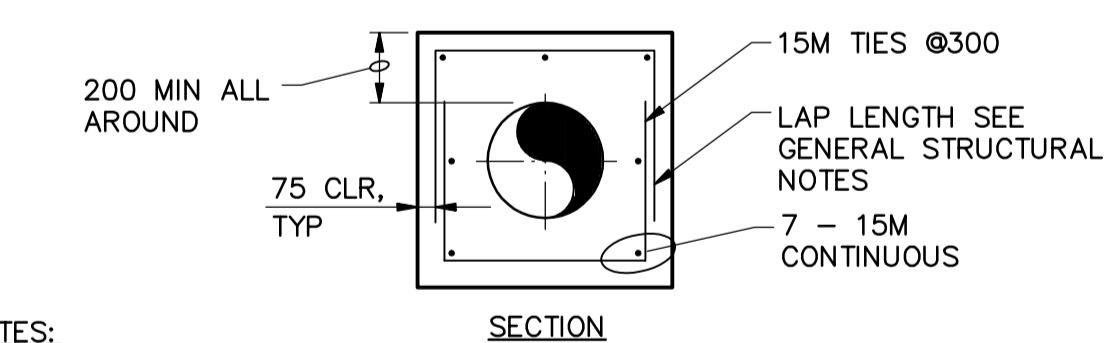


ELEVATION

3 PIPE COLLAR
N.T.S.



ENCASEMENT RISER

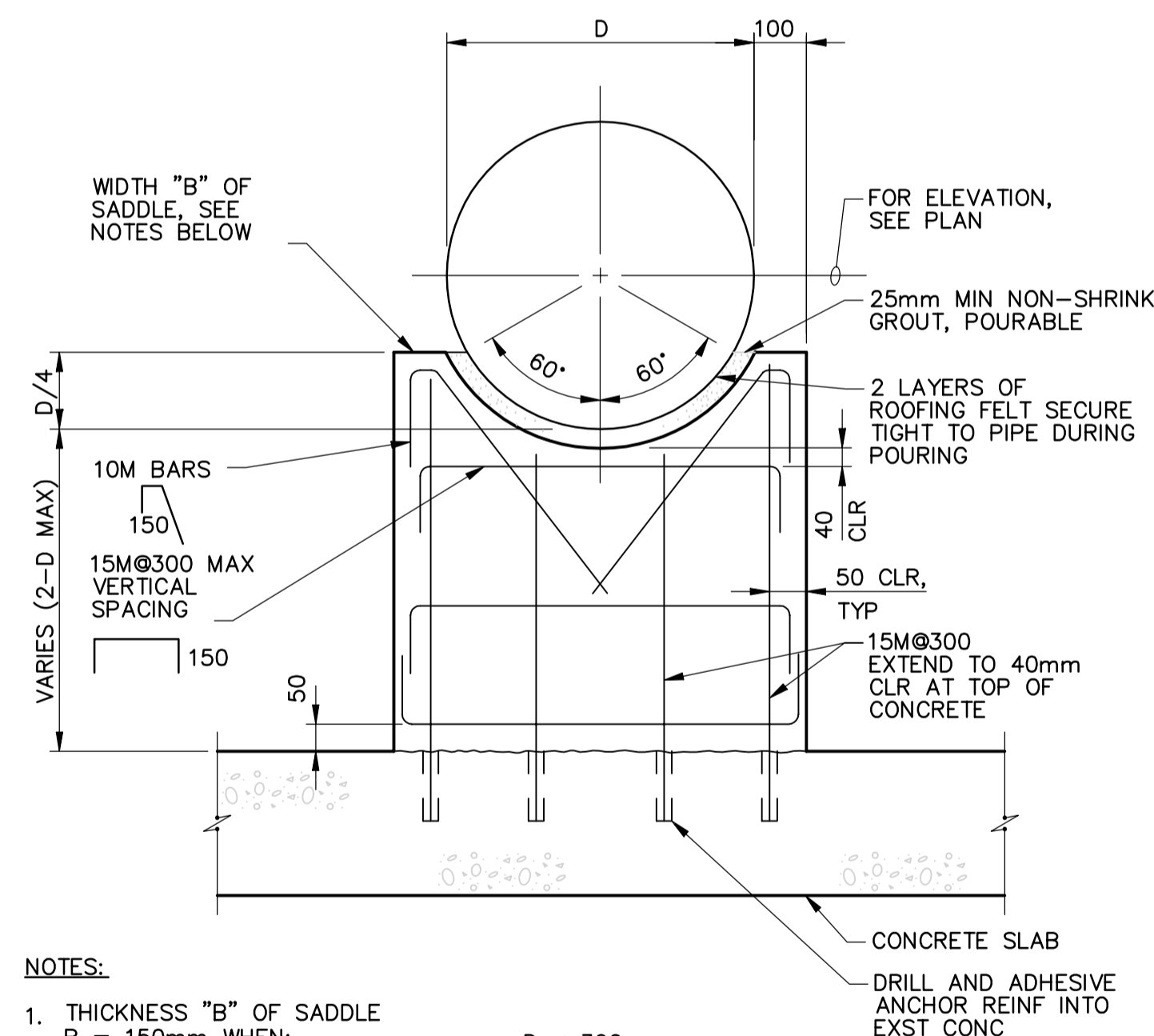


SECTION

NOTES:

1. SECTION APPLIES TO PIPES W/ DIAMETERS 450mm AND SMALLER. FOR 500mm DIAMETER PIPES AND LARGER, SEE 2.
2. WHEN PIPE ENCASEMENT IS CLOSER THAN 400mm TO SLAB ABOVE, TIE SLAB & ENCASUREMENT TOGETHER. SEE 1.

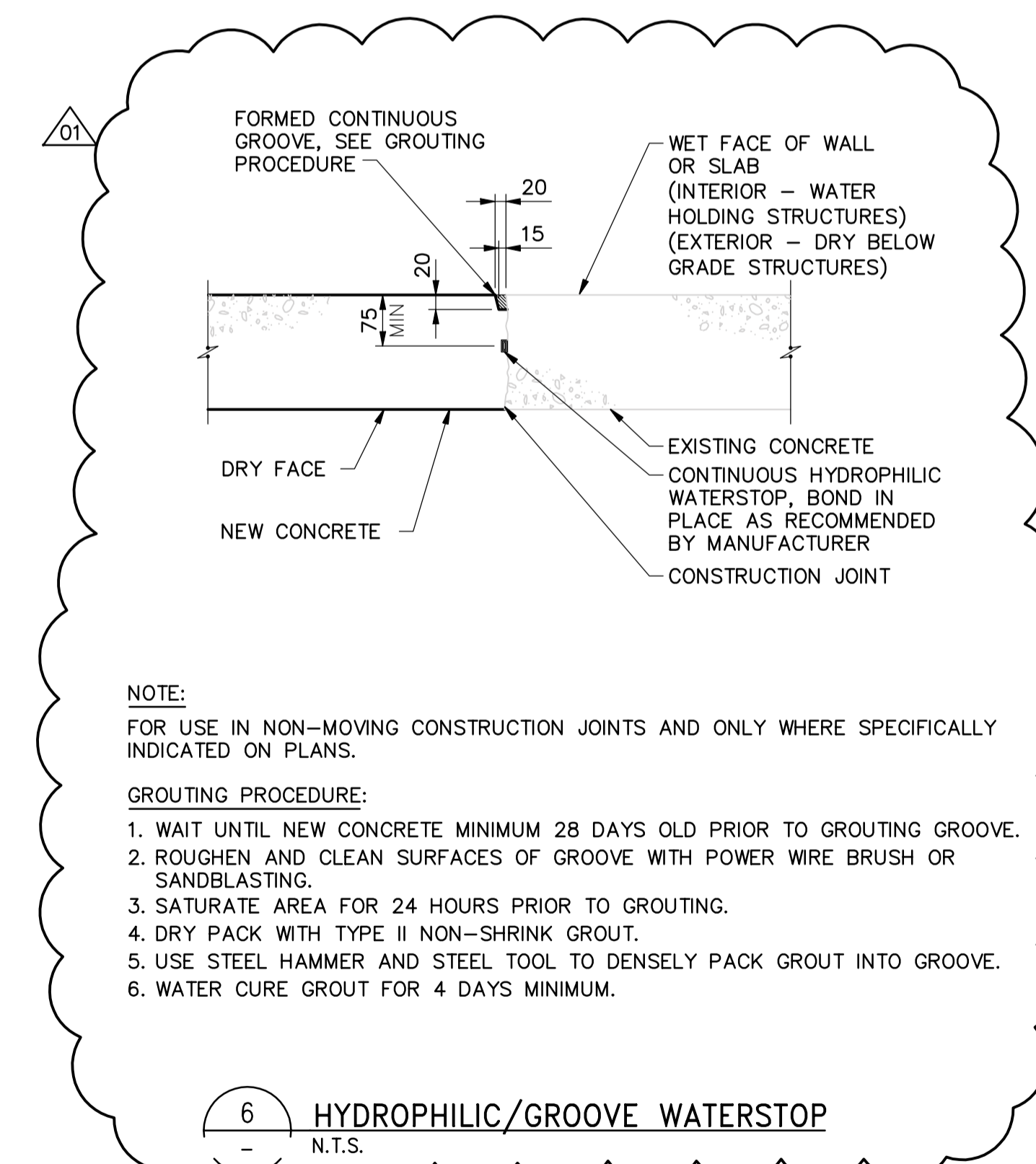
4 PIPE ENCASEMENT
N.T.S.



NOTES:

1. THICKNESS "B" OF SADDLE
 B = 150mm WHEN: D < 300mm
 B = 200mm WHEN: 300mm ≤ D < 600mm
 B = 250mm WHEN: 600mm ≤ D < 900mm
 B = 300mm WHEN: 900mm ≤ D < 1200mm
 B = 400mm WHEN: D ≥ 1200mm
2. FOR "B"=250mm OR THICKER, USE 2 LAYERS OF REINFORCING. TURN HORIZONTAL BARS 90° TO HOOK AROUND VERTICALS, 40mm CLEAR OF CONCRETE
3. FORM 19mm BEVEL ON ALL EXPOSED CORNERS OF SUPPORT.

5 TYPICAL CONCRETE PIPE SUPPORT
N.T.S.



NOTE:

FOR USE IN NON-MOVING CONSTRUCTION JOINTS AND ONLY WHERE SPECIFICALLY INDICATED ON PLANS.

GROUTING PROCEDURE:

1. WAIT UNTIL NEW CONCRETE MINIMUM 28 DAYS OLD PRIOR TO GROUTING GROOVE.
2. ROUGHEN AND CLEAN SURFACES OF GROOVE WITH POWER WIRE BRUSH OR SANDBLASTING.
3. SATURATE AREA FOR 24 HOURS PRIOR TO GROUTING.
4. DRY PACK WITH TYPE II NON-SHRINK GROUT.
5. USE STEEL HAMMER AND STEEL TOOL TO DENSELY PACK GROUT INTO GROOVE.
6. WATER CURE GROUT FOR 4 DAYS MINIMUM.

6 HYDROPHILIC/GROOVE WATERSTOP
N.T.S.

 Certificate of Authorization CH2M Hill Canada Limited (ON) No. 1441 Expiry: April 30, 2006	B.M. ELEV.	 Frederickson Cooper ARCHITECTS	 A Tyco International Ltd. Company	ENGINEER'S SEAL	 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION WATER TREATMENT PLANT FOUNDATIONS AND CONCRETE STRUCTURES 1 STRUCTURAL STANDARD DETAILS	CITY FILE NUMBER
	DESIGNED BY: DK CHECKED BY: AP DRAWN BY: EK APPROVED BY: SCALE: NTS RELEASED FOR CONSTRUCTION BY: DATE: 2005/10/24 DATE:			CONSULTANT DRAWING NO. WB-S0445		SHEET OF
NO. REVISIONS DATE BY		01 650-2005 ADDENDUM 2 05/11/16 EL 00 ISSUED FOR TENDER 05/11/03 DK		CITY DRAWING NUMBER I-060B-D-80445-001-0D		