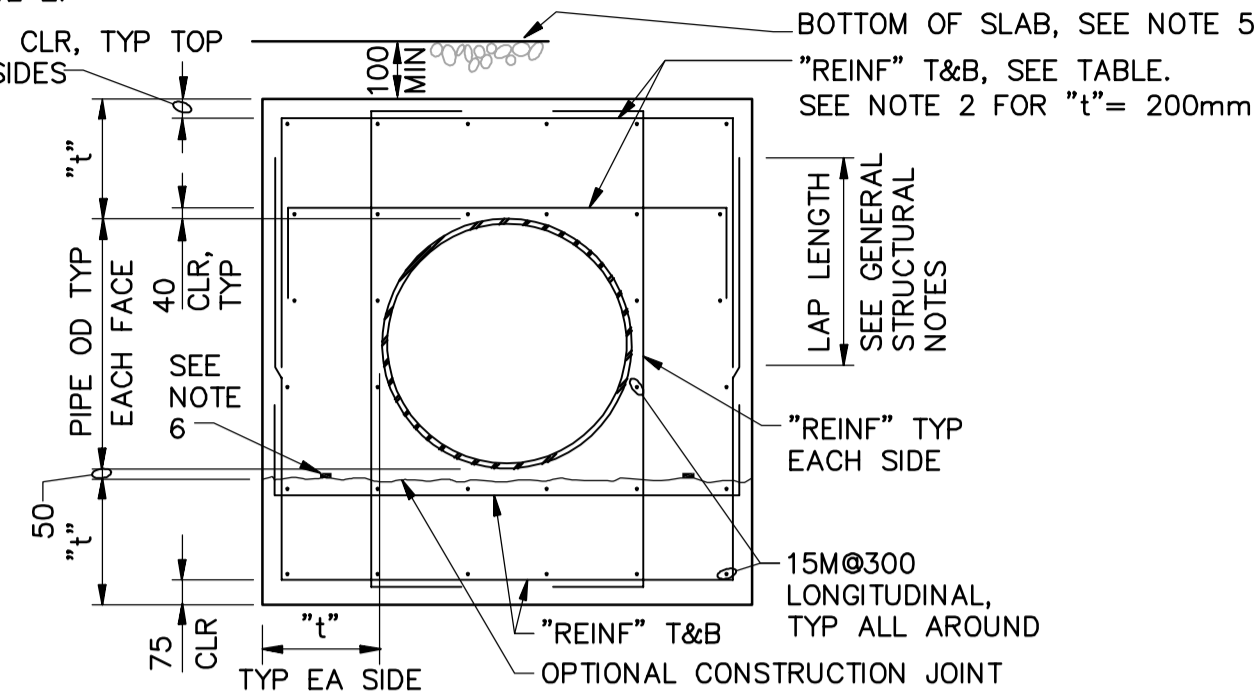


- NOTES:
1. TIE PIPE ENCASEMENT TO SLAB AS SHOWN WHEN DISTANCE BETWEEN PIPE ENCASEMENT AND BOTTOM OF SLAB IS LESS THAN 400mm.
 2. 150mm PLASTIC WS IN ENCASEMENT JOINTS. WELD TO WS IN SLAB JOINTS. SEE DETAIL BELOW.
 3. PROVIDE 50MM ETHAFORM 220 OR EQUAL ON EACH SIDE OF PIPE ENCASEMENT .

1 PIPE ENCASEMENT
N.T.S.

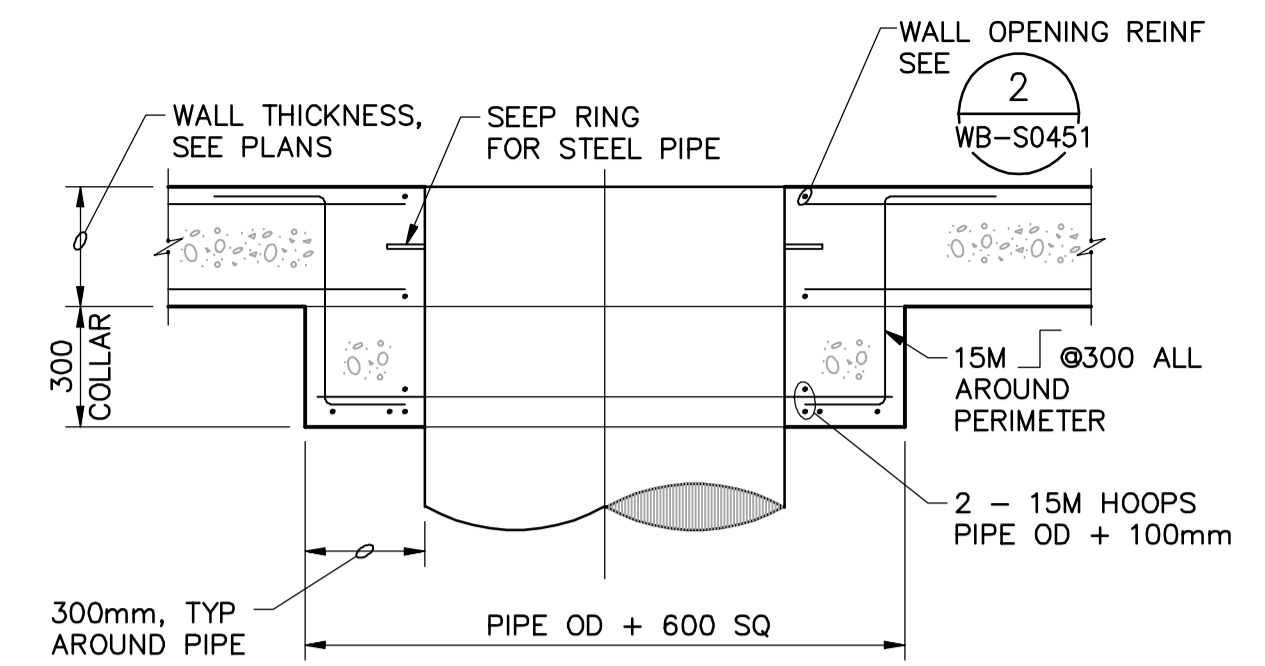
PIPE DIA (mm)	H=3000mm		H=6000mm		H=9000mm		H=12000mm	
	"t" (mm)	REINF	"t" (mm)	REINF	"t" (mm)	REINF	"t" (mm)	REINF
500 THRU 750	200	15M@300	250	15M@300	250	15M@300	250	20M@300
900 THRU 1050	250	15M@300	250	20M@300	250	25M@300	250	20M@150
1200 THRU 1400	250	20M@300	250	25M@300	250	25M@150	300	25M@150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

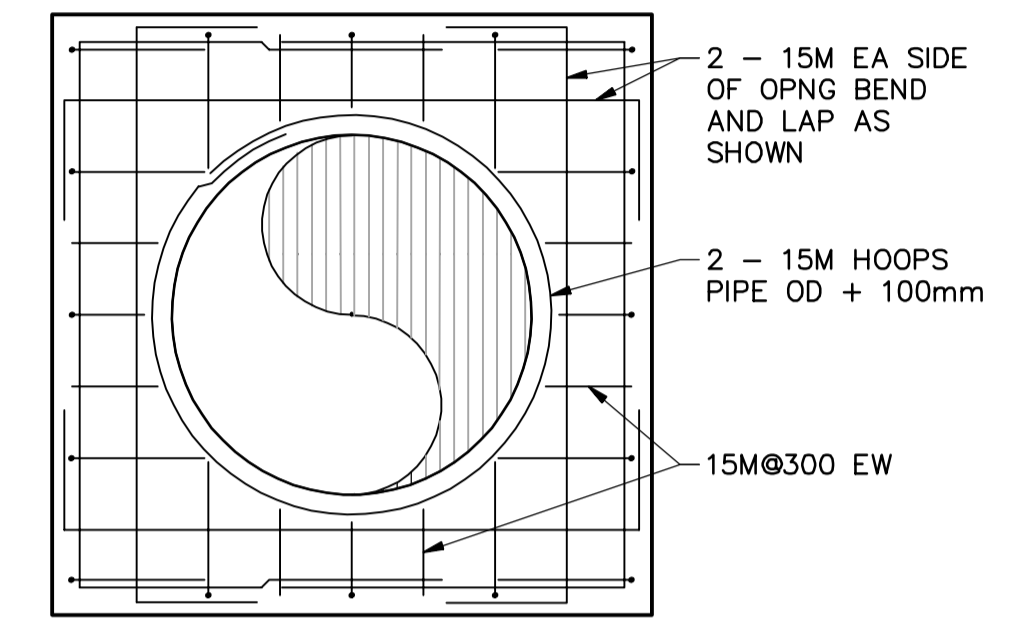


- NOTES:
1. THIS DETAIL APPLIES TO PIPE DIAMETER OF 500mm AND LARGER. FOR SMALLER THAN 500mm, SEE DETAIL.
 2. FOR "t"=200mm REINFORCING SHALL BE ONE LAYER AND CENTERED IN SLABS OR WALLS. SIM
 3. FOR ENCASEMENT AT PIPE RISER, SEE 4.
 4. "h" IS FILL HEIGHT OR WATER DEPTH OR COMBINATION ABOVE PIPE.
 5.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

2 PIPE ENCASEMENT
N.T.S.

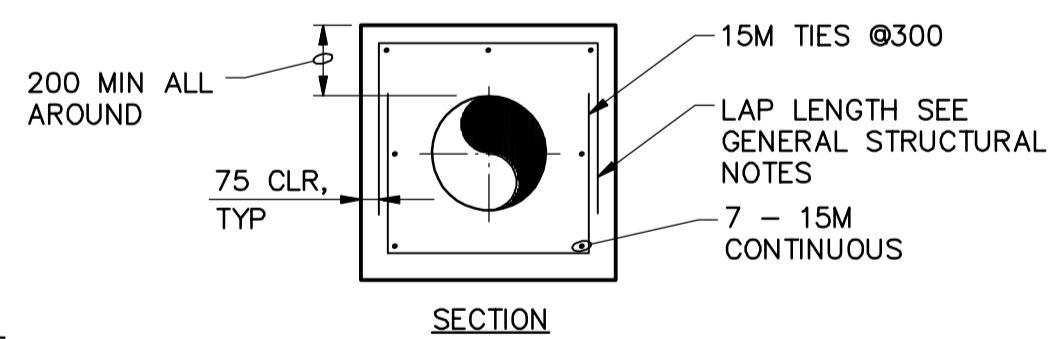
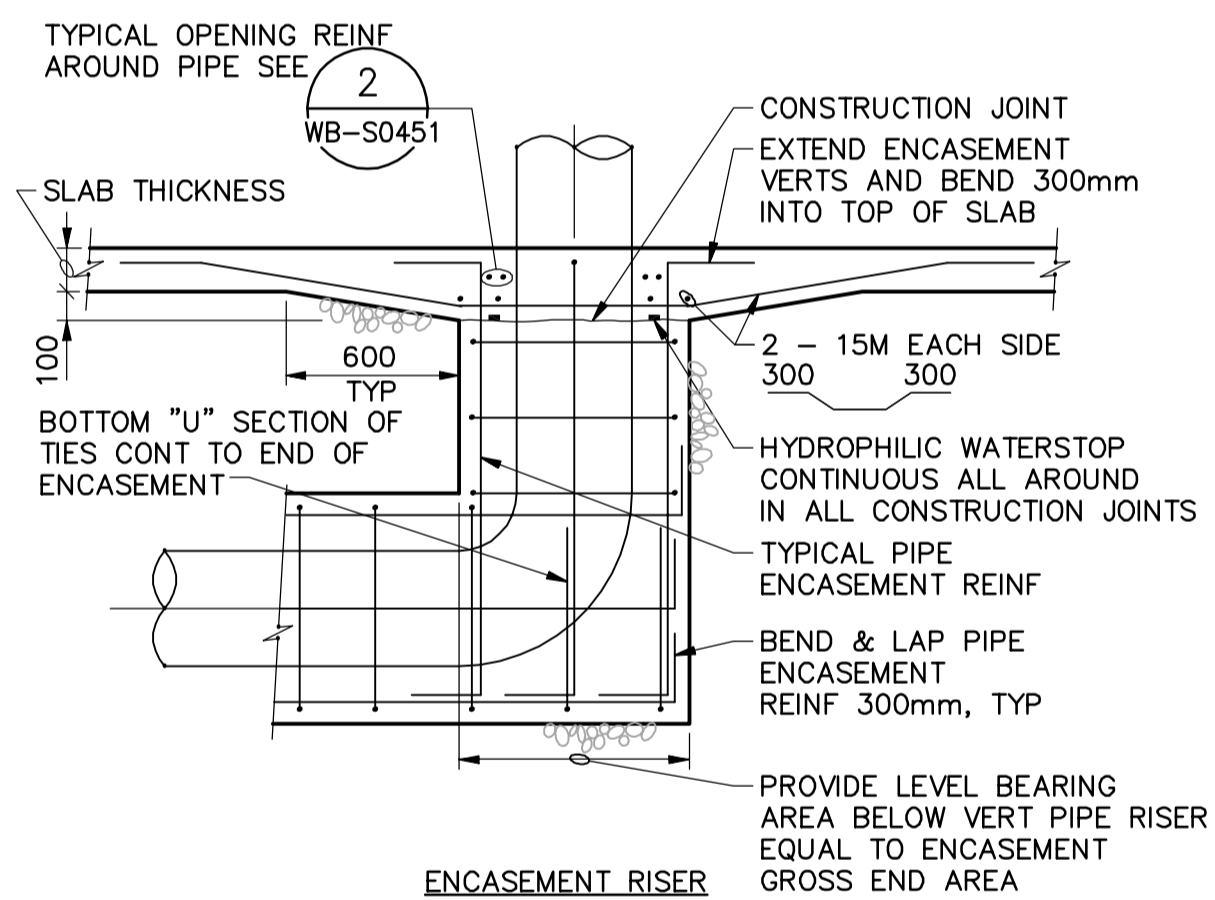


PLAN/SECTION



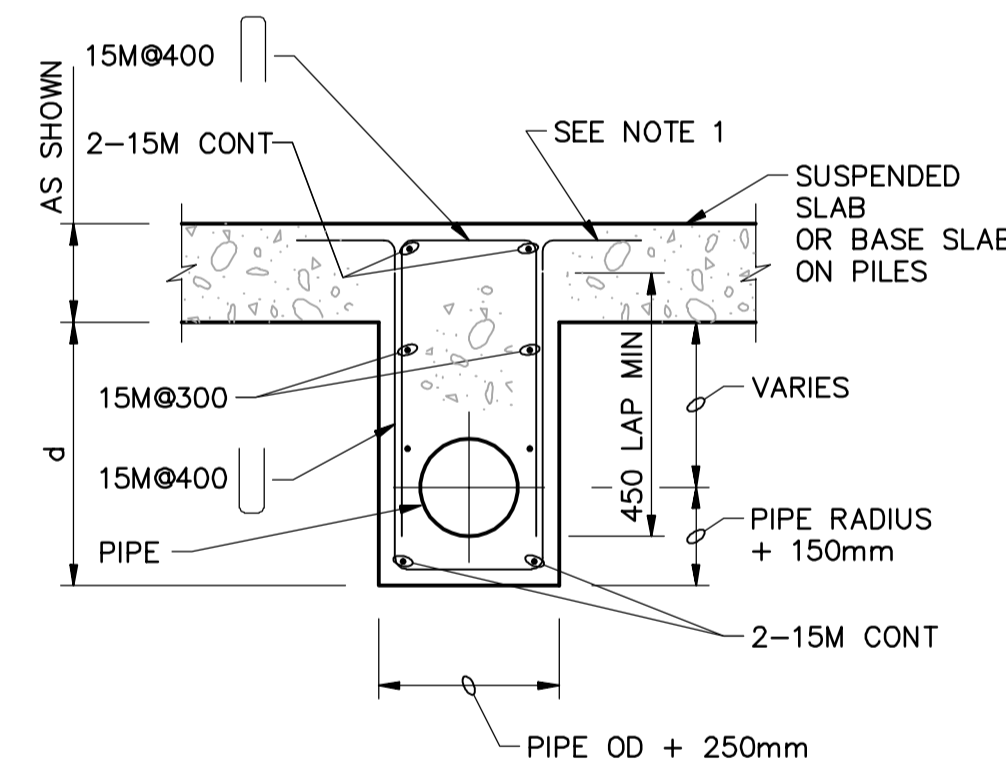
ELEVATION

3 PIPE COLLAR
N.T.S.



- 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 & ENCASEMENT TOGETHER. SEE 1.

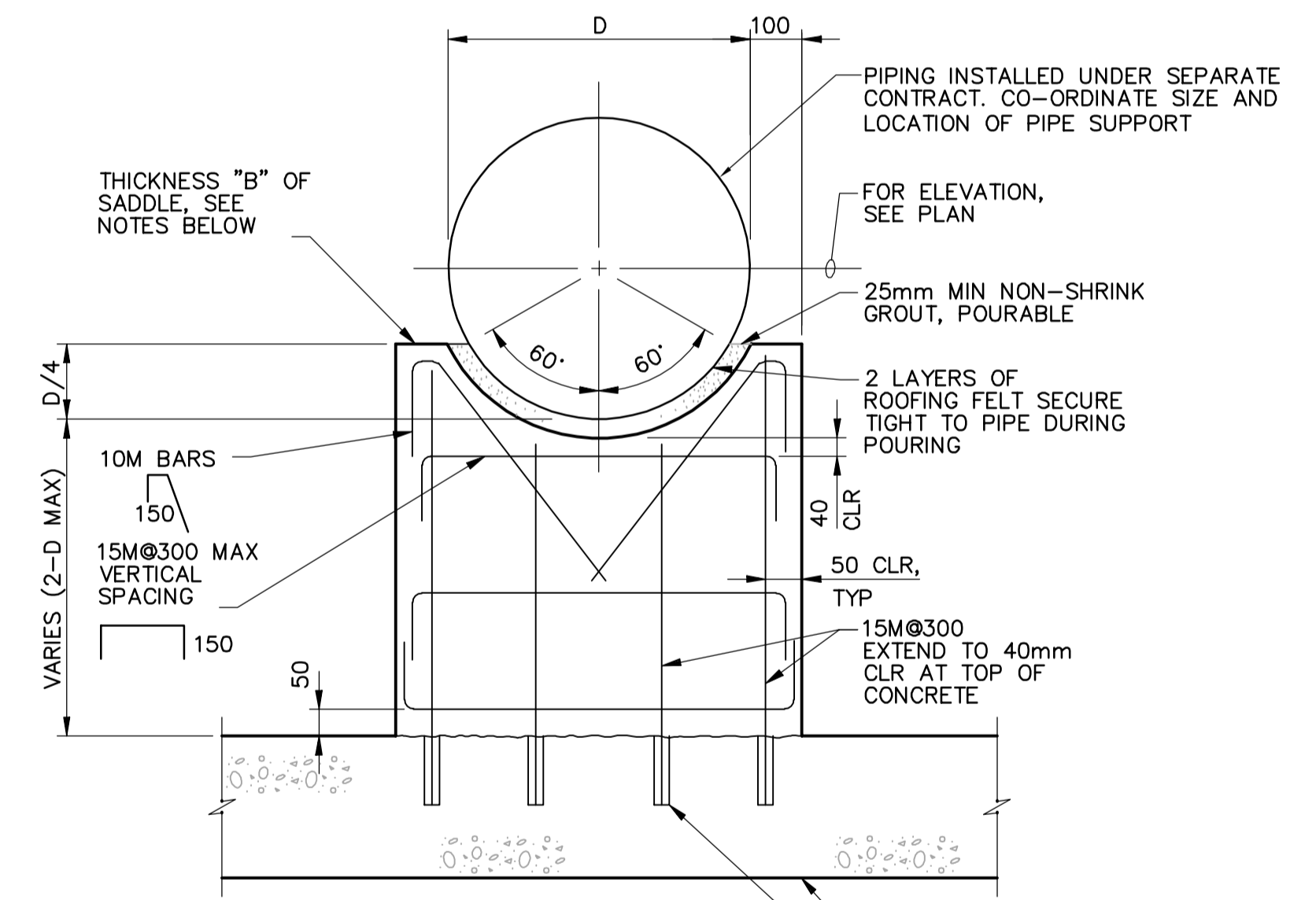
4 PIPE ENCASEMENT
N.T.S.



SECTION

- NOTES:
1. IF d<600 BEND BOTTOM U-BARS TO FORM HOOK OUT AT TOP (AS SHOWN DOTTED). DELETE TOP U-BAR.
 2. IF d>600 DETAIL AS SHOWN WITH U-BARS ON TOP AND BOTTOM.

5 PIPE IN BEAM 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.
 4. PIPING INSTALLED UNDER SEPARATE CONTRACT COORDINATE PIPE SIZE AND LOCATION OF SUPPORT.

6 TYPICAL CONCRETE PIPE SUPPORT
N.T.S.

<p>Certificate of Authorization CH2M HILL Canada Ltd. No. 1441 Expiry: April 30, 2006</p>	B.M. ELEV.	<p>Frederickson Cooper ARCHITECTS</p>	<p>A Yeo International Ltd. Company</p>	ENGINEER'S SEAL	<p>THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION</p>
				DESIGNED BY DK	
		DRAWN BY PT	APPROVED BY DJT	FOUNDATIONS AND CONCRETE STRUCTURES	
		SCALE: NTS	RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI	STRUCTURAL	
	01 583-2005 ADDENDUM 3 06/03/10 DK			CONSULTANT DRAWING NO. WB-S0458	CITY FILE NUMBER
	00 ISSUED FOR TENDER 2006/02/03 DK				SHEET OF
	NO. REVISIONS DATE BY DATE 2005/08/31 DATE 2006/02/08				CITY DRAWING NUMBER 1-060B-A-80458-001-0D