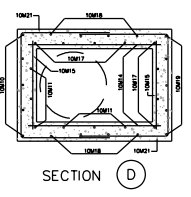
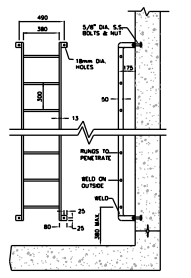
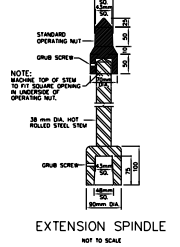
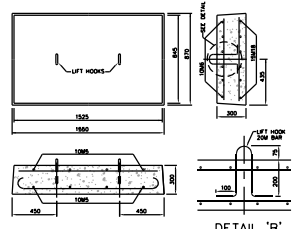
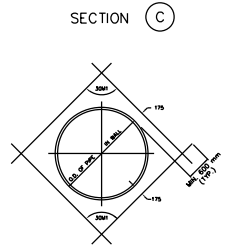
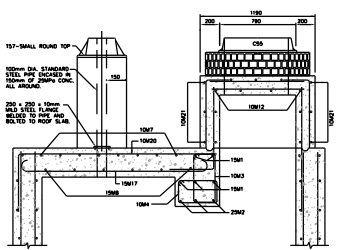
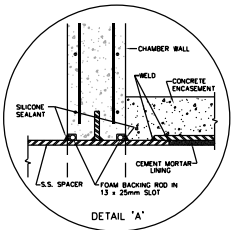
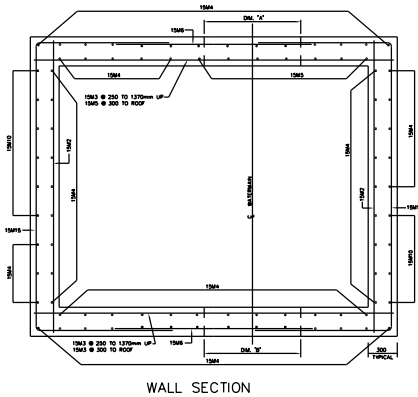
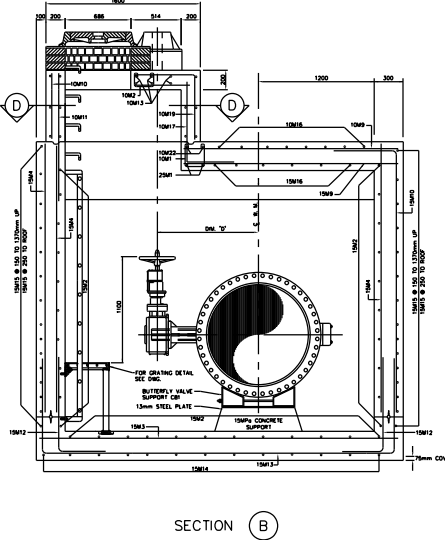
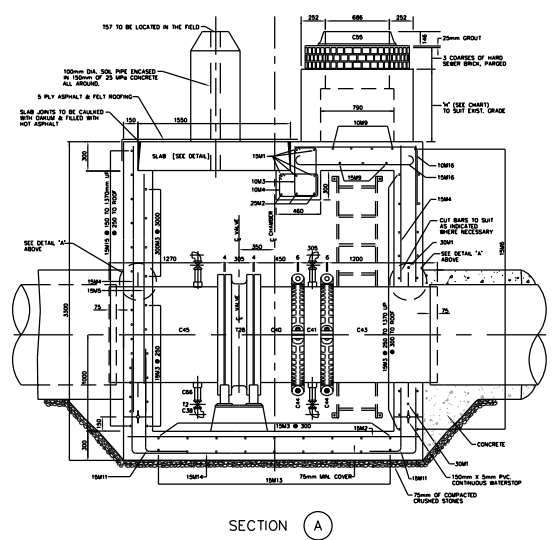


CHAMBER No.	DM. 'A'	DM. 'B'	DM. 'C'	DM. 'D'	DM. 'E'



- NOTES:
- 25MPa CONCRETE TO BE USED EXCEPT AS NOTED.
 - MAXIMUM SIZE OF COARSE AGGREGATE TO BE 20mm.
 - COVER TO MAIN REINFORCEMENT TO BE 50mm OR AS INDICATED.
 - ALL BAR DIMENSIONS ARE OUT TO OUT.
 - BARS TO BE BENT COLD, MINIMUM INSIDE RADIUS TO 4 DIAMETERS.
 - ALL CROSSING BARS TO BE WELD WROLD.
 - ALL REINFORCING STEEL TO BE DEFORMED BULLET-STEEL-BARS GRADE 350, CONFORMING TO C.S.A. STANDARD C30.12M.
 - ALL LAPS IN REINFORCING STEEL TO BE AT LEAST 30 DIAMETERS IN LENGTH OR AS SHOWN, AND TO BE STAGGERED.
 - ALL BRICKWORK TO BE OF HIGH QUALITY HARD SEWER BRICK, LAID IN FULL MORTAR BED AND JOINTS PARGED INSIDE AND OUT.
 - WATERSTOP (PVC) TO BE PROVIDED AT ALL CONSTRUCTION JOINTS.
 - WHERE NECESSARY ADJUST REINFORCING STEEL TO SUIT WATERSTOPS AND OPENINGS.
 - PROVIDE SUMP PIT WITH GRATING AND SLOPE FLOOR TO SUMP 10mm/METRE.
 - DRAIN OUTLET TO BE LOCATED AT NEAREST POINT TO EXISTING SEWER. IF ELEVATION OF SEWER IS HIGHER THAN CHAMBER FLOOR THE DRAIN MAY BE CLAMPED TO THE WALL BY AN APPROVED METHOD, AND SEWER IS AVAILABLE DELETE DRAIN TYPE 'A' AND CONSTRUCT DRAIN TYPE 'B' AND INSTALL PIPE WITH STOPPER AS SHOWN ON DWG.
 - DRAIN CONNECTION TO SEWER TO BE MADE BY CONTRACTOR UNLESS OTHERWISE STATED IN THE GENERAL SPECIFICATIONS.
 - LADDERS, GRATINGS AND RAILINGS TO BE ALUMINUM AND OF REMOVABLE TYPE WITH STAINLESS STEEL BOLTS.
 - TOP TWO STEPS AND ANY ADDITIONAL STEPS IN THE CHIMNEY TO BE OF THE REMOVABLE TYPE.
 - CHAMBERS DEEPER THAN 1200mm FROM SURFACE ELEVATION TO TOP OF VALVE OPERATING SPINDLE SHALL HAVE EXTENSION SPINDLE AND GUIDE BRACKET.
 - ALL ALUMINUM SURFACES CONTACTING CONCRETE TO RECEIVE ONE COAT OF BITUMINOUS PAINT.
 - 'X' DEPENDS ON HEIGHT (H) & BARS SHALL BE COUNTED TO ENSURE THAT THE BOTTOM BAR IS LESS THAN 150mm ABOVE THE ROOF CHAMBER.

BAR No.	DM.	DIMENSIONS					SHAPE	O.C.	No. REQS.
		a	b	c	d	e			
10A1	10	250	250	250	250	250	1	200	7
10A2	10	170	230	230	120	100	1	100	8
10A3	10	1640	520	230	520	230	1	200	19
10A4	10	1300	300	230	300	230	1	200	18
10A5	10	770	770	770	770	770	1	AS SHOWN	16
10A6	10	1430	1430	1430	1430	1430	1	AS SHOWN	20
10A7	10	1600	1600	1600	1600	1600	1	200	8
10A8	10	2250	2250	2250	2250	2250	1	200	5
10A9	10	H=100	H=100	H=100	H=100	H=100	1	300	5
10A10	10	H=400	H=400	H=400	H=400	H=400	1	300	6
10A11	10	614	614	614	614	614	1	300	4
10A12	10	1000	1000	1000	1000	1000	1	200	8
10A13	10	1500	1500	1500	1500	1500	1	300	11
10A14	10	1030	1030	1030	1030	1030	1	300	11
10A15	10	1810	1810	1810	1810	1810	1	300	9
10A16	10	H=430	H=430	H=430	H=430	H=430	1	300	9
10A17	10	H=300	H=300	H=300	H=300	H=300	1	300	8
10A18	10	H=180	H=180	H=180	H=180	H=180	1	300	8
10A19	10	H=64	H=64	H=64	H=64	H=64	1	300	5
10A20	10	2440	1910	550	550	550	1	300	7
10A21	10	2800	800	1000	800	800	1	300	11
10A22	10	4000	500	2000	500	500	1	AS SHOWN	2
10A23	10	3700	3700	3700	3700	3700	1	AS SHOWN	5
10A24	10	3700	3700	3700	3700	3700	1	300	30
10A25	10	2400	2400	2400	2400	2400	1	300	29
10A26	10	2700	2700	2700	2700	2700	1	300	28
10A27	10	1800	1800	1800	1800	1800	1	300	22
10A28	10	1660	1660	1660	1660	1660	1	300	5
10A29	10	2200	2200	2200	2200	2200	1	300	3
10A30	10	3270	2700	500	500	500	1	300	10
10A31	10	1270	1000	300	300	300	1	300	22
10A32	10	1200	1200	1200	1200	1200	1	300	18
10A33	10	5640	1000	3700	1000	1000	1	300	9
10A34	10	4540	800	2000	800	800	1	300	13
10A35	10	8440	1700	3000	1700	1700	1	300	37
10A36	10	1660	1300	300	300	300	1	300	6
10A37	10	2370	2370	2370	2370	2370	1	300	4
10A38	10	1870	1430	400	400	400	1	AS SHOWN	12
20A1	20	3860	3000	3000	3000	3000	1	300	2
20A2	20	4260	3700	3700	3700	3700	1	AS SHOWN	3
20A3	20	O.D. OF PIPE x 600	O.D. OF PIPE x 600	O.D. OF PIPE x 600	O.D. OF PIPE x 600	O.D. OF PIPE x 600	1	AS SHOWN	1



CHAMBER No.	INTERNAL W. DIM. (mm)	SURFACE W. DIM. (mm)	DIFFERENCE W. DIM. (mm)	COVER LOCATION	DRAIN TYPE / DRAIN DIRECTION	FOR LOCATION REFER TO PLAN No.	REMARKS

MATERIAL LIST / CHAMBER	
MARK: SUPPLIED BY CONTRACTOR	MARK: SUPPLIED BY CONTRACTOR
C40 4-50mm BALL VALVE 5800P/WALL/RETURN SEAT	C40 1-750mm FABRICATED S.S. FL-VCT CONNECTION
C41 1-150mm FIBREGLASS CHECK VALVE	C41 1-750mm FABRICATED S.S. VCT. TO VCT. SPACER
C42 1-CENTRE PLUG FOR CHAMBER COVER	C42 1-750mm FABRICATED S.S. VALVE CONNECTION
C43 1-CENTRE PLUG FOR SMALL ROUND TOP	C43 2-750mm VCT. COUPLING, STYLE# SHOULDERED.
C44 1-750mm HOR. BUTTERFLY VALVE 4884 C504	C44 1-750mm FABRICATED S.S. FLANGE ASSEMBLY
C45 1-SMALL ROUND TOP	C45 1-RECTANGULAR FRAME AND COVER PLATE AS PER CITY STANDARD DSGE 2005-2005-1
C46 38-1430 x 160mm S.S. BOLTS & NUTS	C46 38-1430 x 160mm I.C. S.S. STUDS EACH WITH 1 NUT (EXC'D)
C47 38-1430 x 160mm I.C. S.S. STUDS EACH WITH 1 NUT (EXC'D)	C47 1-CRCH ANCHOR WITH M16 S.S. BOLTS WITH NUT
C48 4-50mm SEDNA S60 40 STREET ELBOW	C48 2- 750mm CLOW INSERTED RUBBER GASKETS (SEAL PAK ONE PIECE)
C49 1-13mm MALE ALLET 50M FACED, ROUGH BRASS WITH HOLES 100, 150, 200 OR OTHERWISE	C49 1-L-C RUNNING BRAP WITH CLEANOUT & COVER
C50 4 - M16 x 56mm S.S. BOLTS & NUTS	C50 1-50mm SOL PPMG
C51 1-50mm GASKETS (FLAT GASK ONE PIECE)	C51 1-30mm WITH FRAME AND BRASSING
C52 20mm SEDNA S6040 NIPPLE THREADED	C52 STANDARD ALUMINUM LADDER AND STEPS
C53 4-150mm LONG FOR DRAIN VALVE ASSEMBLES	C53 1-STEEL PLATE, 300mm x 300mm x 6mm
C54 1-50mm THREADED PL. WELD, CLASS 150, PLAT FACED AND MILLERED	C54 2-STANDARD BUTTERFLY VALVE SUPPORTS

FOR DETAILS OF C40, C41, C43, C45 AND C51 SEE DWG.

ALL DIMENSIONS SHOWN HERE ARE IN MILLIMETRES UNLESS OTHERWISE NOTED

			Title Subtitle1 Subtitle2		750 mm HORIZONTAL BUTTERFLY VALVE CHAMBER (POSITION 'B')	
	GENERAL MANAGER, TORONTO WATER		DIRECTOR, Design and Construction Linear Underground Infrastructure		DESIGN	Drawn
CHIEF ENGINEER and EXECUTIVE DIRECTOR, Engineering & Construction Services		MANAGER, Design and Construction Linear Underground Infrastructure		SCALE	SCALE	CONTRACT No. X-X
No.	DATE	REVISIONS	INITIAL	SIGNED	DATE	DRAWING NUMBER
						T-1110.08-2
						SHEET X-OF-X