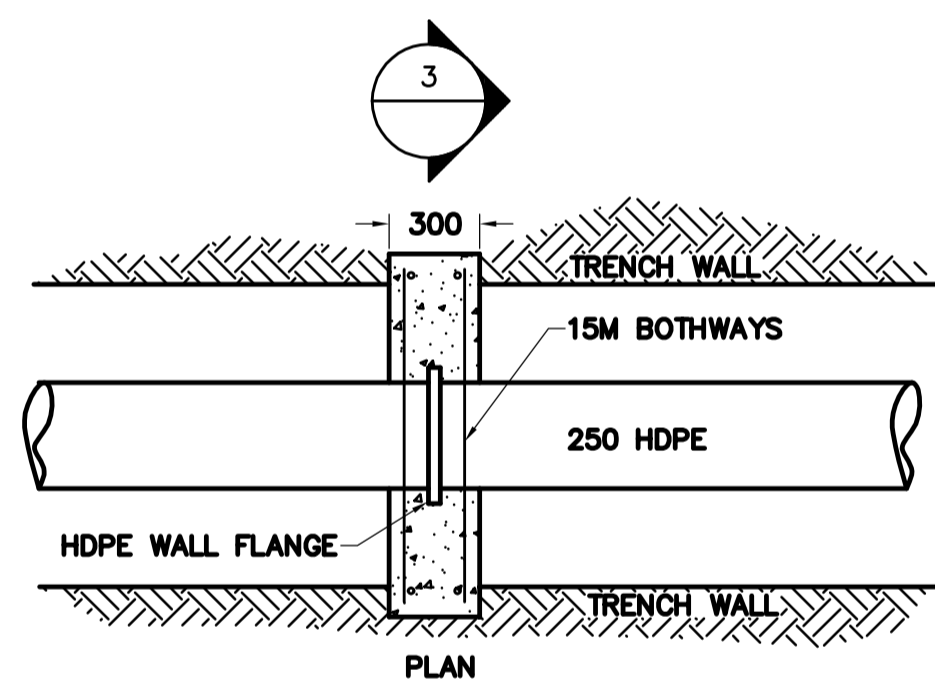


1 AIR RELEASE VALVE CHAMBER
NTS

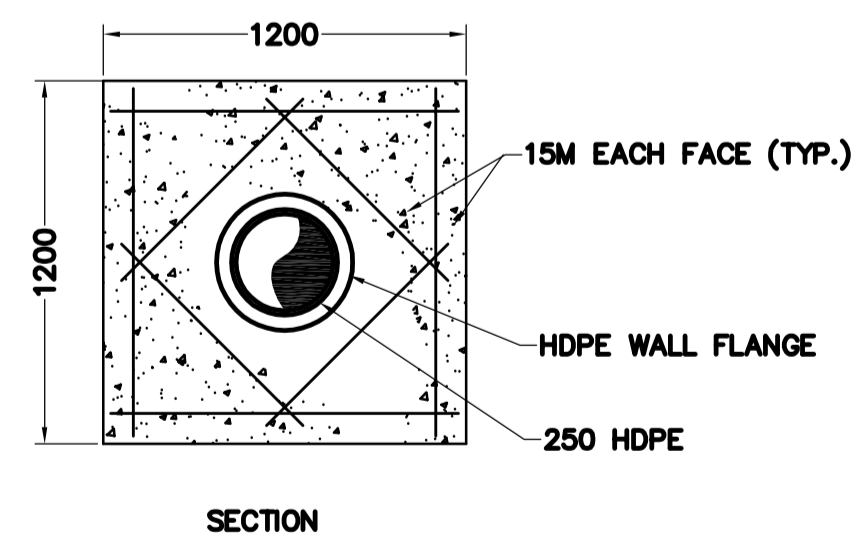
AIR RELEASE CHAMBER LOCATION TABLE						
ID NUMBER	DETAIL #	NORTHING	EASTING	OUTLET SIZE	MODEL TYPE	STATION
ARC 01	1	5523932.766	647729.925	50 mm	402WA	29+06.000
ARC 02	1	5524055.875	647586.953	50 mm	402WA	27+03.000
ARC 03	4	5524155.242	647283.877	50 mm	402WA	24+30.000
ARC 04	1	5524298.729	646885.949	50 mm	402WA	19+80.000
ARC 05	1	5524483.885	646372.219	25 mm	401WA	14+33.915
ARC 06	1	5524794.067	645512.545	25 mm	401WA	5+20.000
ARC 07	1	5524916.085	645174.356	50 mm	402WA	1+60.464
ARC 08	1	5525013.401	645102.125	50 mm	402WA	30+03.608
ARC 09	1	5525350.883	645092.908	50 mm	402WA	26+66.000
ARC 10	1	5525896.679	645078.002	25 mm	401WA	21+20.000
ARC 11	1	5526696.381	645056.163	25 mm	401WA	13+20.000
ARC 12	1	5527226.183	645041.694	25 mm	401WA	7+90.000

GATE VALVE LOCATION TABLE				
ID NUMBER	NORTHING	EASTING	DIAMETER	STATION
FM 01	5523926.678	647727.749	200 mm	29+09.000
FM 02	5524145.578	647310.680	250 mm	24+31.50
FM 03	5524299.237	646884.538	250 mm	19+78.50
FM 04	5524382.571	646653.429	250 mm	17+32.819
FM 05	5524916.432	645172.886	250 mm	1+58.964
FM 06	5525011.901	645102.166	250 mm	30+05.108

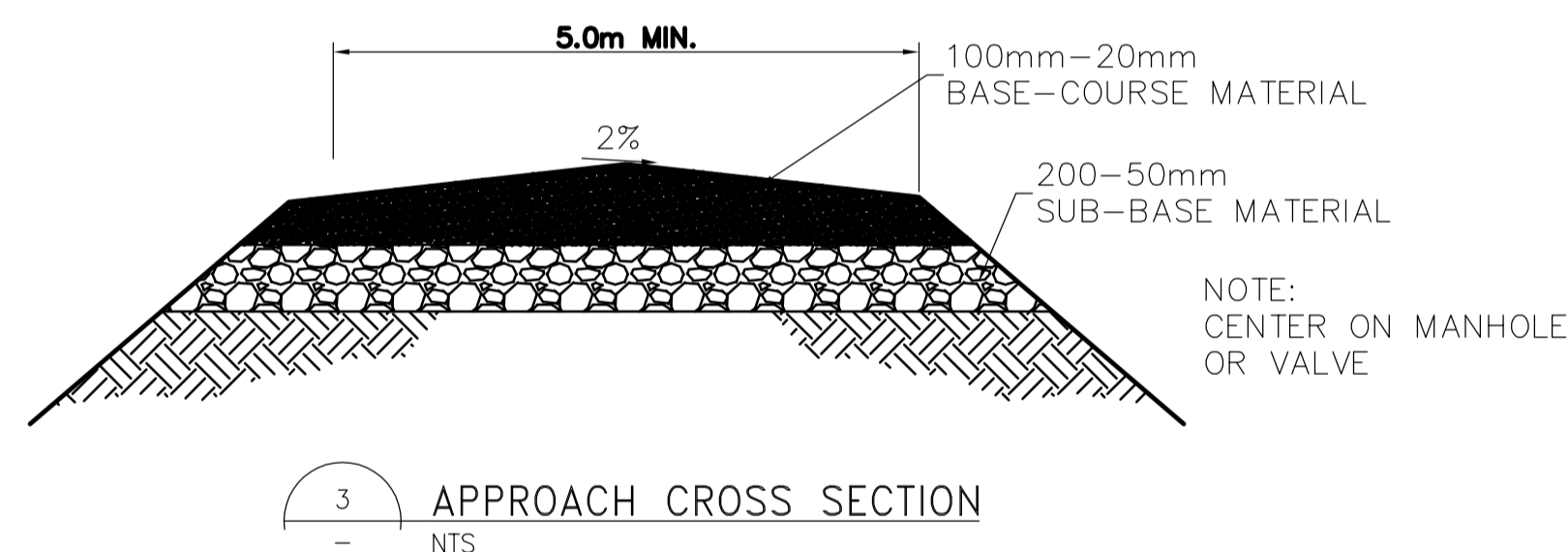
NOTE: FLANGED VALVES MUST MEET ALL MATERIAL AND DESIGN REQUIREMENTS OF CITY OF WINNIPEG STANDARDS AT-4.1.1.80 AND BE FROM ONE OF THE APPROVED MANUFACTURERS.



NOTE: ANCHOR BLOCK TO BE LOCATED 1.5-2.0m EACH SIDE OF CLEANOUT MANHOLE OR CONNECTION TO DUCTILE IRON PIPE



2 ANCHOR BLOCK DETAIL
NTS



FITTING COORDINATE TABLE				
DESCRIPTION	NORTHING	EASTING	INVERT	STATION
CONNECTION	5523925.863	647728.339	231.642	29+10.000
11.25 BEND	5523946.929	647713.090	231.132	28+84.000
22.5 BEND	5524045.384	647596.059	233.350	27+33.939
15 BEND	5524145.541	647318.173	233.523	24+38.554
15 BEND	5524145.238	647311.621	233.529	24+32.499
60 BEND	5524941.236	645104.095	229.722	0+84.162

NOTE:
A. LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

BENCHMARK NOTES:
DRAWING COORDINATES ARE UTM NAD83 - SCALE FACTOR 0.99983
B.M. No. NORTHING EASTING ELEVATION
PILE 136 5523873.734 647764.406 236.242
PILE 133 5523256.606 647782.387 236.056

APEGM
Certificate of Authorization
Earth Tech Canada Inc.
No. 730

150 mm W.M.	WATERMAIN	150 mm W.M.	HYDRO	HYDRO	LIGHT STANDARD
◇	HYDRANT	◆	M.T.S.	ANCHOR	ANCHOR
⊙	VALVE	⊙	CONCRETE	POLE	POLE
⊖	LAND DRAINAGE SEWER	⊖	ASPHALT	CONTOURS	CONTOURS
⊕	WASTEWATER SEWER	⊕	PROPERTY LINE	RAIL X-ING SIGNAL	RAIL X-ING SIGNAL
○	MANHOLE	⊕	SURVEY BAR	⊕	RAILWAY TRACK
□	CATCH BASIN	⊕	ELEVATION	(32.750)	DITCH
▽	CURB INLET	⊕	TREE	ANODE	
+	JUNCTIONS	⊕	CONCRETE SIDEWALK	FENCE	
—	CULVERT	—			
—	GAS	—			
---	EXISTING	---	EXISTING	---	EXISTING
---	LEGEND - PLAN	---	LEGEND - PLAN	---	LEGEND - PLAN
---	PROPOSED	---	PROPOSED	---	PROPOSED

B.M. ELEV.	NO.	REVISIONS	DATE	BY
	01	ADDENDUM 2	07/08/20	DA
	00	ISSUED FOR TENDER	07/07/30	DA

CH2MHILL Frederickson Cooper ARCHITECTS	EarthTech A Tyco International Ltd. Company
DESIGNED BY: KWF	CHECKED BY: GK
DRAWN BY: JS	APPROVED BY: AHL
SCALE: AS NOTED	RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI
DATE: 2005/12/09	DATE: 2007/7/30

ENGINEER'S SEAL
PROVINCE OF MANITOBA
ORIGINAL SIGNED BY
K.W. FITCHETT
30/07/2007
REGISTERED PROFESSIONAL ENGINEER

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT
ENGINEERING DIVISION

WATER TREATMENT PLANT
SUPPLY AND INSTALLATION
OF FORCEMAIN

CIVIL
AIR RELEASE CHAMBER
PLAN AND SECTION AND DETAILS

CITY FILE NUMBER
SHEET 22 OF 23
CITY DRAWING NUMBER
1-6012-C-C012-001-01D