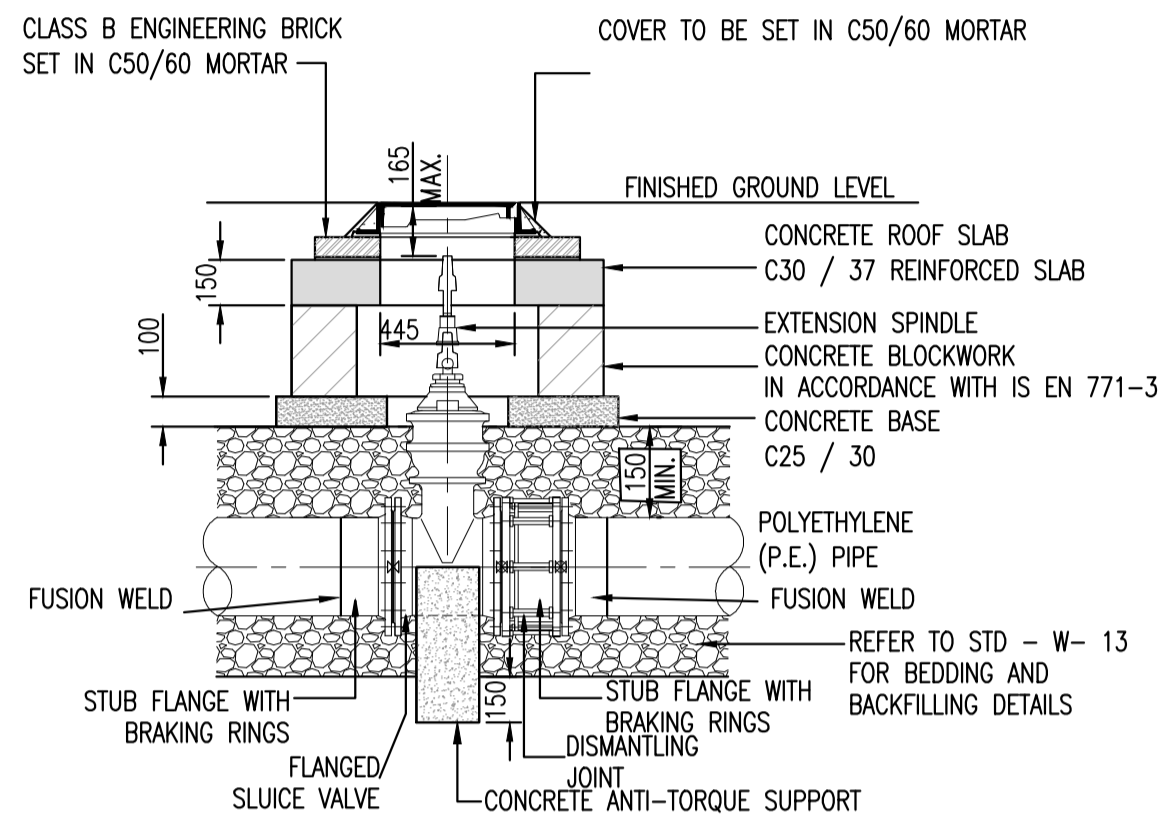
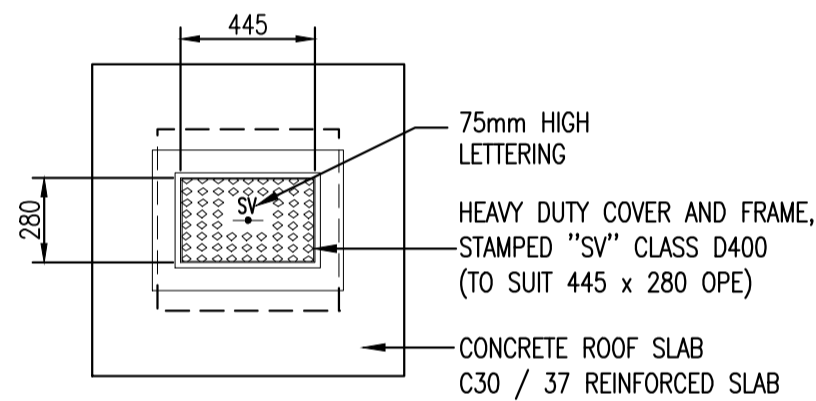


SLUICE VALVE NOTES:

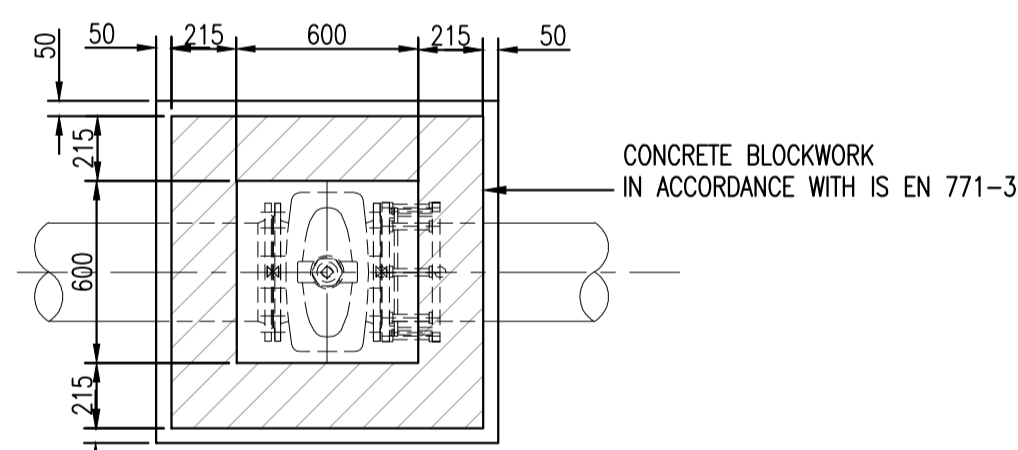
- ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- SLUICE VALVE CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 OR BS 5834 COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
- SLUICE VALVES SHALL BE RESILIENT SEATED AND SHALL COMPLY WITH BS 5163-1, BS 5163-2, IS EN 1074-1, IS EN 1074-2, OR EQUIVALENT E.U. SPECIFICATIONS.
- ALL SLUICE VALVES SHALL BE ANTI-CLOCKWISE CLOSING.
- VALVE CHAMBER TO BE CONSTRUCTED OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER. LOADS & DEAD LOADS, & CONSIST OF A REINFORCED CONCRETE SLAB OF IN-SITU CONCRETE, GRADE C30/37, WITH A MINIMUM THICKNESS OF 150mm. ALTERNATIVELY, PRE-CAST CONCRETE ROOFS MAY BE USED, SUBJECT TO IRISH WATER REVIEW, & COMPLIANCE WITH BS 5911, Part 4.
- CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER STD-W-13.
- DUCTILE IRON PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201:2011.
- 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN AREAS.
- THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD DRAWING STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
- ANTI-CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
- 450 x 450mm INTERNAL DIMENSION CHAMBERS MAY BE PROVIDED SUBJECT TO REVIEW BY IW. SUCH CHAMBERS SHALL BE PROVIDED WITH GRADE "A" HEAVY DUTY COVER & FRAME & STAMPED "SV".
- ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
- NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS. 15. EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS" BY THE DEPT. OF TRANSPORT, TOURISM & SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.



SLUICE VALVE CHAMBER SECTION



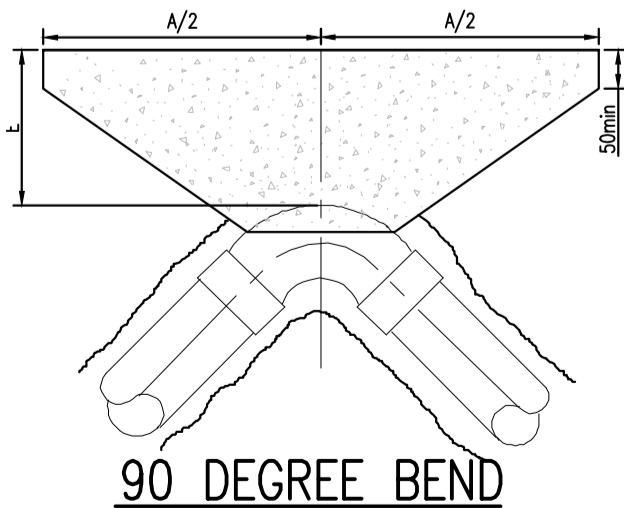
SLUICE VALVE CHAMBER ROOF PLAN



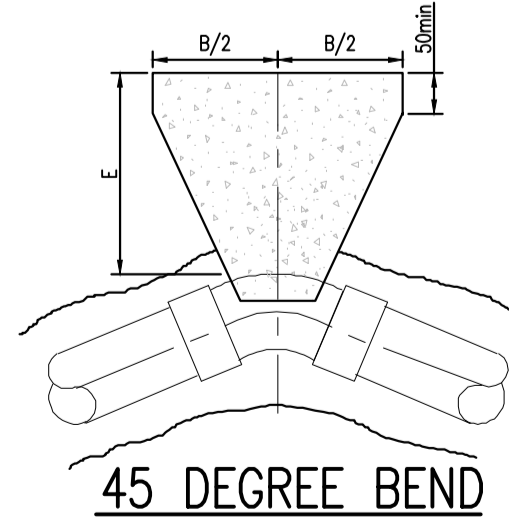
FLOOR PLAN SLUICE VALVE CHAMBER FOR POLYETHYLENE (PE) PIPE (BLOCKWORK CONSTRUCTION) STD-W-15

12 BAR TO 15 BAR TEST PRESSURE

NOM. DIA. (mm)	DIMENSIONS			
	A	B	E	G
100	600	330	200	390
150	950	510	225	660
200	1150	600	300	790
250	1350	750	300	970
300	1580	850	320	1110
350	2100	1150	450	1450
400	2550	1400	500	1800
450	3000	1630	680	2130
500	3590	1950	800	2540
600	4100	2200	850	2880



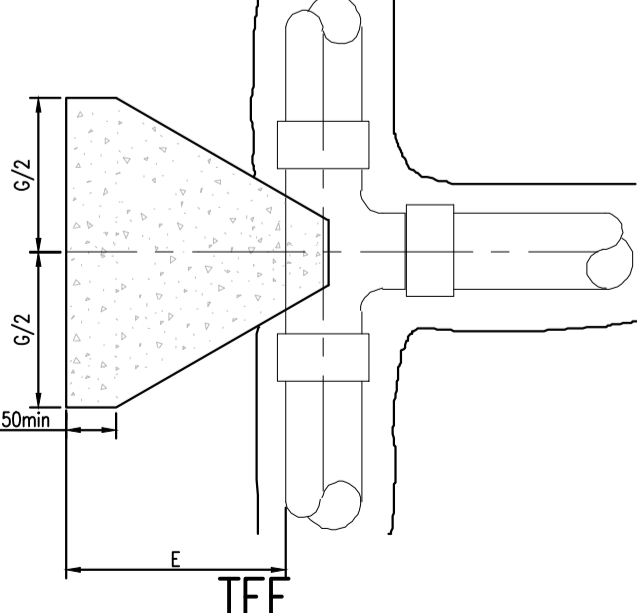
90 DEGREE BEND



45 DEGREE BEND

12 BAR TO 15 BAR TEST PRESSURE

NOM. DIA. (mm)	DIMENSIONS			
	A	B	E	G
100	700	380	200	510
150	1135	620	225	760
200	1400	750	300	980
250	1730	940	320	1210
300	2090	1130	380	1480
350	2600	1410	500	1840
400	2980	1610	750	2110
450	3400	1840	900	2330
500	4080	2210	1000	2880
600	5010*	2710*	1000	3550*



TEE

15 BAR TO 18 BAR TEST PRESSURE

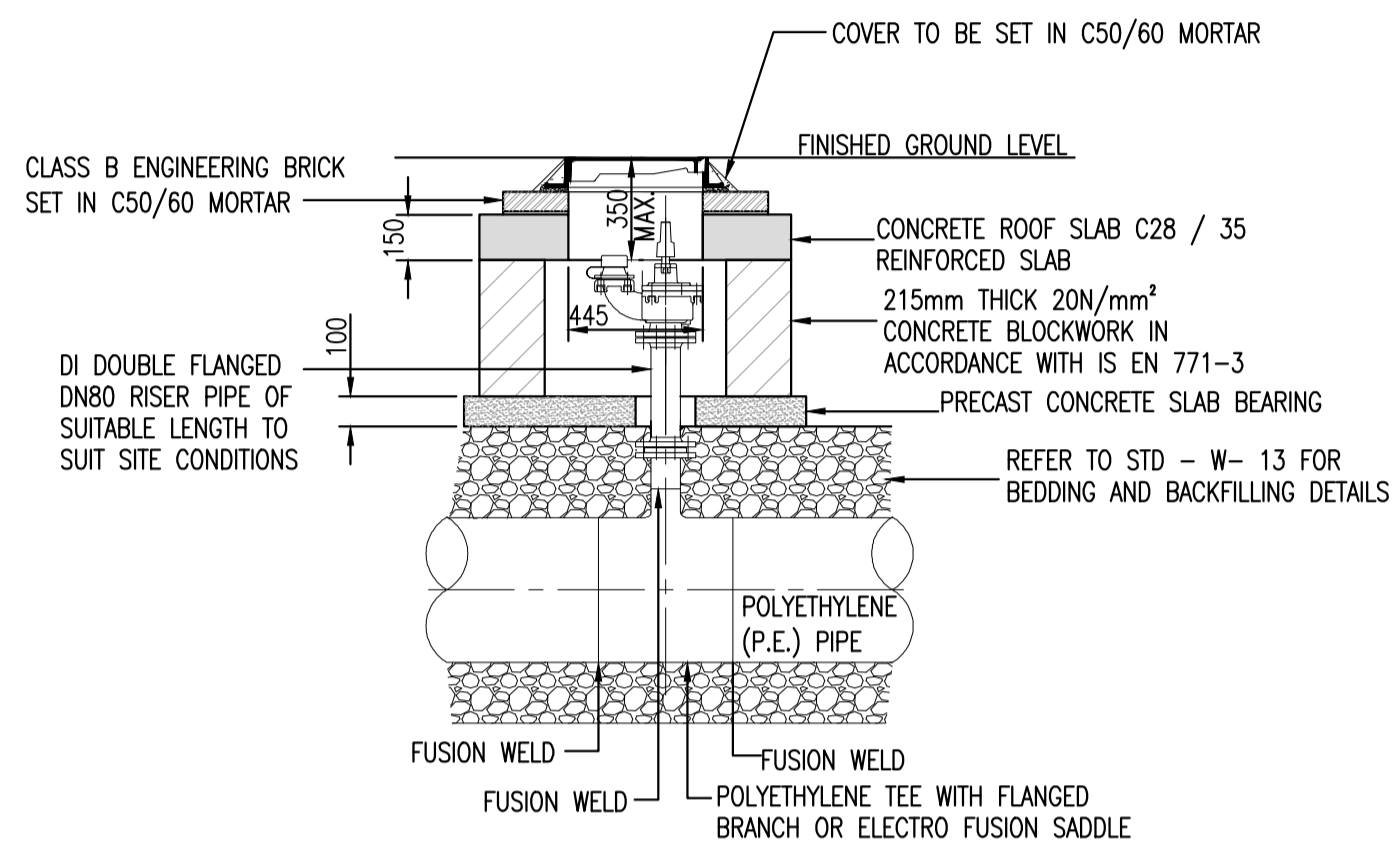
NOM. DIA. (mm)	DIMENSIONS			
	A	B	E	G
100	750	400	220	530
150	1250	700	250	890
200	1650	890	320	1170
250	1960	1060	350	1370
300	2300	1200	500	1630
350	2930	1580	750	2070
400	3510	1900	1000	2490
450	3810	2270	1000	2970
500	4340*	2380	1000	3700
600	6370*	3450*	1000	4500*

TABLE OF DIMENSIONS FOR STEEPLY INCLINED PIPELINES

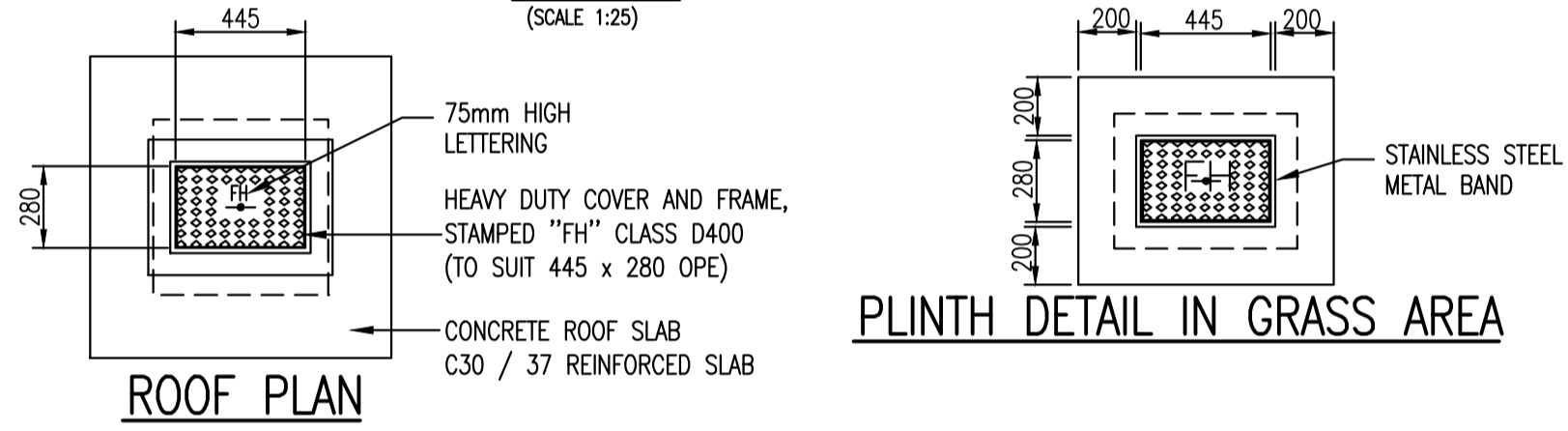
GRADIENT	SPACING
1 IN 2 & STEEPER	5.5m
BELOW 1 IN 2 TO 1 IN 4	11.0m
1 IN 4 TO 1 IN 5	16.6m
1 IN 5 TO 1 IN 6	22.0m

HYDRANT NOTES:

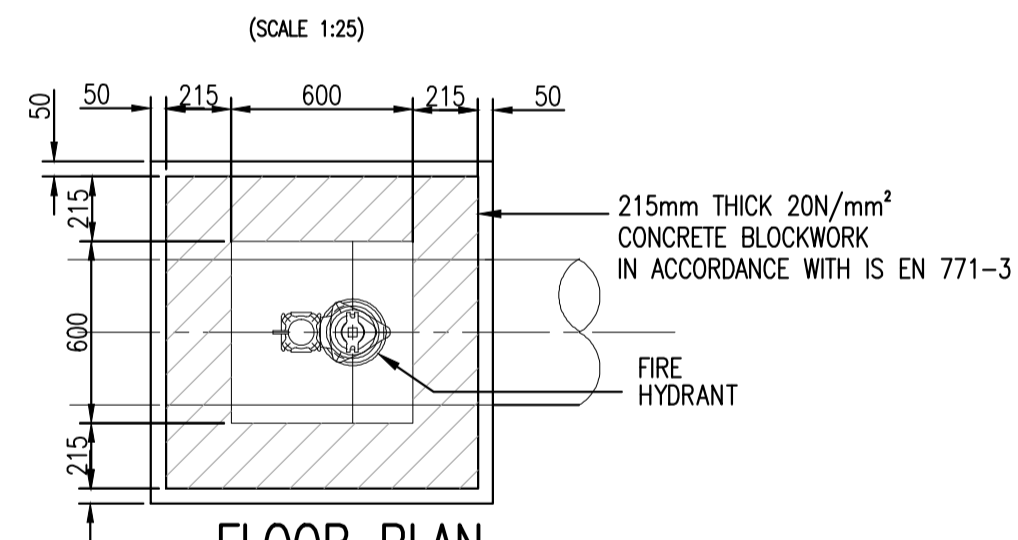
- ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- HYDRANT CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 OR BS 5834 COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
- ALL HYDRANTS, SURFACE BOX FRAMES & COVERS SHALL COMPLY WITH THE RELEVANT PROVISIONS OF IS EN 14339, IS EN 1074-6 & BS 750. FIRE HYDRANTS SHALL BE TYPE 2. THE HYDRANT INLET SHALL BE 80mm DIAMETER WITH PN16.
- ALL HYDRANTS SHALL BE CLOCKWISE CLOSING.
- HYDRANT CHAMBER TO BE CONSTRUCTED OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED ROOF SLABS SHALL BE DESIGNED TO CARRY ALL LIVE LOADS & DEAD LOADS, & CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER. CONSIST OF A REINFORCED CONCRETE SLAB OF IN-SITU CONCRETE, GRADE C30/37, WITH A MINIMUM THICKNESS OF 150mm. ALTERNATIVELY, PRE-CAST CONCRETE ROOFS MAY BE USED, SUBJECT TO IRISH WATER REVIEW, & COMPLIANCE WITH BS 5911, Part 4.
- CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER STD-W-13.
- DUCTILE IRON PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201:2011.
- 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN AREAS.
- THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STANDARD DRAWING STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
- ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
- ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
- NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
- EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS" BY THE DEPT. OF TRANSPORT, TOURISM & SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.



SECTION



ROOF PLAN

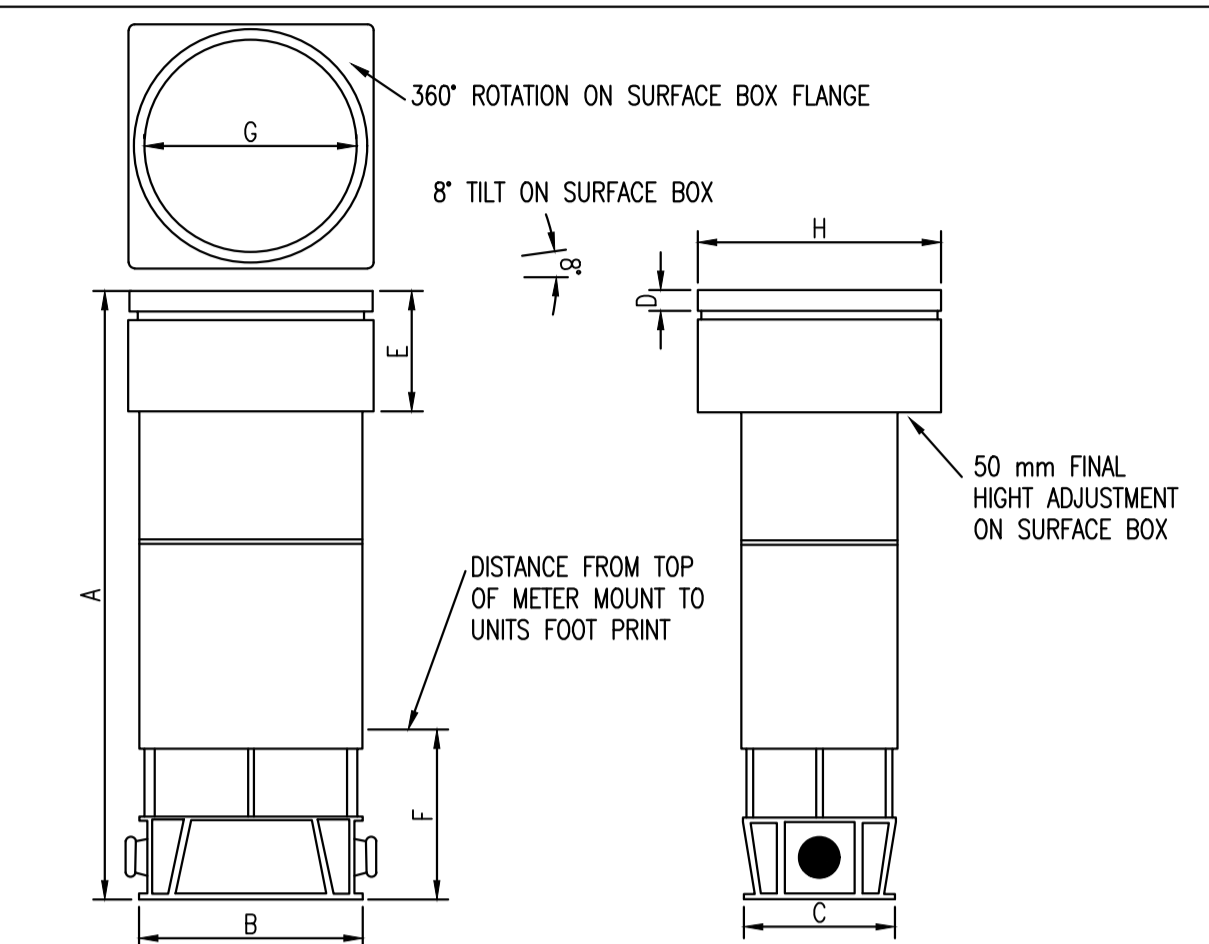


FLOOR PLAN ON-LINE FIRE HYDRANT CHAMBER FOR POLYETHYLENE (PE) PIPE (BLOCKWORK CONSTRUCTION) STD-W-18

WATERMAIN TRUST AND SUPPORT BLOCKS

Dimensions and details

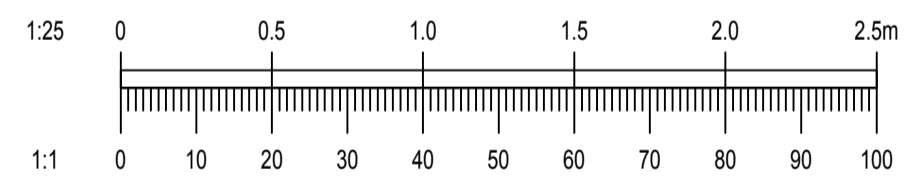
Box Type	A(min)	A(max)	B	C	D	E	F	G	H	Weight
Standard Unit (20mm, 25mm and 32mm connections)	499mm	870mm	208mm	151mm	20mm	112mm	170mm	173mm	225mm	4.5kg
Short Units	310mm	545mm	208mm	151mm	20mm	112mm	170mm	173mm	225mm	3.4kg



PROPOSED WATER SUPPLY BOUNDARY BOX DETAILS

NOTES:

- DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS.
- WATERMANS SHALL BE LAID IN ACCORDANCE WITH THE LOCAL AUTHORITY / IRISH WATER SPECIFICATION FOR THE LAYING OF NEW WATERMANS AND BYLAWS WHICH OVER-RIDE THESE NOTES. THE CONSTRUCTION OF THE WATERMAIN SHALL BE IN ACCORDANCE WITH THE BEST CURRENT PRACTICE AND THE LATEST EDITIONS OF THE RELEVANT STANDARDS AND CODES OF PRACTICE.
- WATERMANS SHALL NOT BE LAID UNDER WALLS OR AREAS DESIGNATED FOR TREES/SHRUBS/FLOWERS.
- PIPES SHALL BE HDPE (BLUE PIPE) UNLESS NOTED OTHERWISE BY AGREEMENT WITH THE LOCAL AUTHORITY. DUCTILE IRON PIPES SHALL BE USED UNDER ROADS OF CLASSIFICATION "DISTRICT DISTRIBUTOR" UPWARDS UNLESS NOTED OTHERWISE.
- PIPES SHALL CONFORM TO THE UK WATER INDUSTRY SPECIFICATION OR EQUIVALENT E.U. SPECIFICATION.
- DUCTILE IRON (DI) PIPES SHALL CONFORM TO IS EN 545 AND SHALL HAVE MINIMUM C40 PRESSURE RATING. DUCTILE IRON FITTINGS SHALL HAVE 16 BAR RATING AT LEAST DI PIPEWORK SHALL BE COATED INTERNALLY WITH A BLAST FURNACE CEMENT LINING WHICH COMPRISES WITH THE REQUIREMENTS OF BS 6920. EXTERNAL PROTECTION SHALL INCLUDE AN ALLOY OF 70NC AND ALUMINUM WITH A MINIMUM 15% ALUMINUM WITH OR WITHOUT OTHER MATERIALS HAVING A MASS OF 400g/m² COMPLETE WITH A FINISHING LAYER OF BLUE FUSION BONDED EPOXY IN ACCORDANCE WITH IS EN 14901.
- WATERMANS SHALL BE LAID UNDER FOOTPATHS PREFERABLY OR GRASS MARGINS WHERE APPROVED. NO PIPE, CONDUIT, CABLE OR OTHER SERVICE SHALL BE LAID LONGITUDINALLY OVER THE LINE OF A WATERMAIN. NO CABINET POLES, JUNCTION BOXES OR CHAMBERS SHALL BE CONSTRUCTED OVER A WATERMAIN.
- THE MINIMUM COVER TO A WATERMAIN SHALL BE 750mm, THE MAXIMUM COVER SHALL BE 900mm UNLESS NOTED OTHERWISE.
- CONNECTIONS TO THE MAINS WHICH ARE THE PROPERTY OF THE IRISH WATER CAN BE MADE BY THE IRISH WATER ONLY. NO OTHER PERSON MAY INTERFERE IN ANY WAY WITH THESE MAINS. SUCH CONNECTIONS WILL BE MADE BY IRISH WATER AT THE EXPENSE OF THE PERSONS REQUIRING THEM. THE ESTIMATED COST OF SUCH CONNECTIONS MUST BE LOGGED WITH IRISH WATER BEFORE THE WORK IS UNDERTAKEN.
- IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT ALL WORKS ARE CONSTRUCTED IN ACCORDANCE WITH THE IRISH WATER CODE OF PRACTICE AND STANDARD DETAILS. THE CODE OF PRACTICE AND STANDARD DETAILS ARE AVAILABLE TO DOWNLOAD FROM THE IRISH WATER WEB SITE AT WWW.WATER.IE/CONNECTIONS/DEVELOPER-SERVICES/ WHERE THE DETAILS CONTAINED ON THIS DRAWING DIFFER FROM THE IRISH WATER CODE OF PRACTICE OR STANDARD DETAILS THIS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY. IRISH WATER STANDARDS WILL TAKE PRECEDENCE.



REV.	DATE	AMENDMENT	DRN	APPD
A	07/11/19	FINAL SHD SUBMISSION	PW	AK

STATUS FOR PLANNING NOT FOR CONSTRUCTION

Waterman Moylan Engineering Consultants
 BLOCK 9, EASTPOINT BUSINESS PARK, ALFIE BYRNE ROAD, DUBLIN D03 H3F4 IRELAND. Tel: (01) 664 8900
 Email: info@waterman-moylan.ie www.waterman-moylan.ie

CLIENT **BALLYMORE PROPERTY DEVELOPMENTS LTD**
 ARCHITECT **REDDY ARCHITECTURE**
 PROJECT **RESIDENTIAL DEVELOPMENT, SEAMOUNT, MALAHIDE, CO DUBLIN**
 TITLE **TYPICAL WATERMAIN CONSTRUCTION DETAILS SHEET 2 OF 2**

DRAWN PW	DESIGNED BC	APPROVED IW	DATE JUNE '19
SCALE 1:25 @ A1	JOB NO. 18-001	DRG. NO. P333	REVISION A