
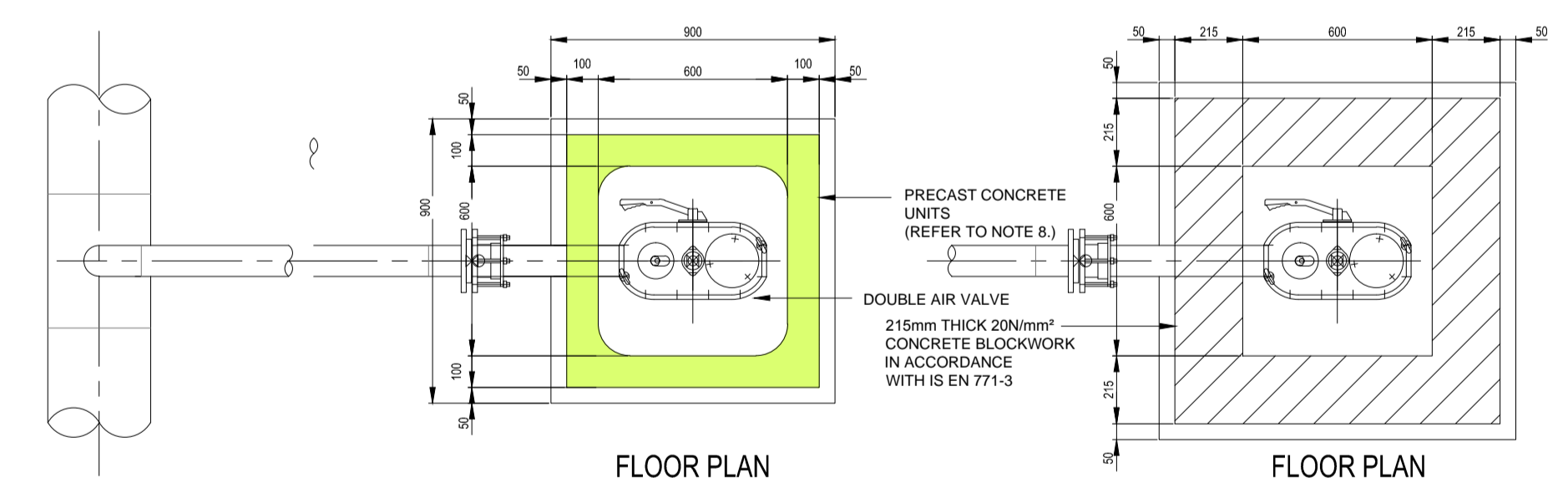
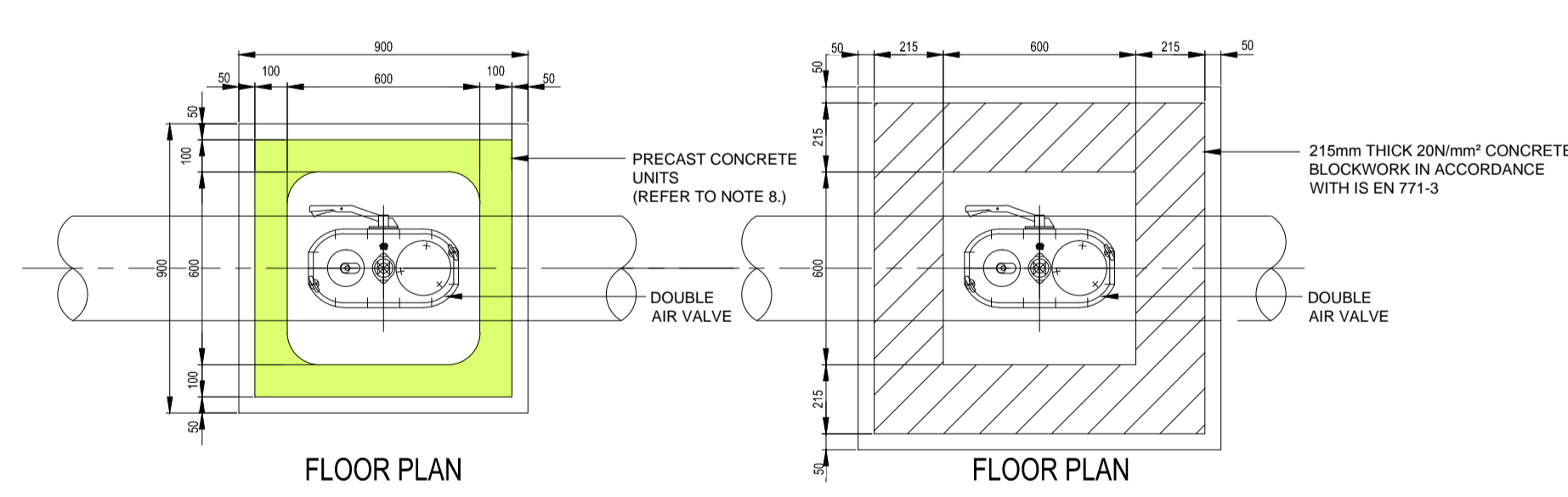
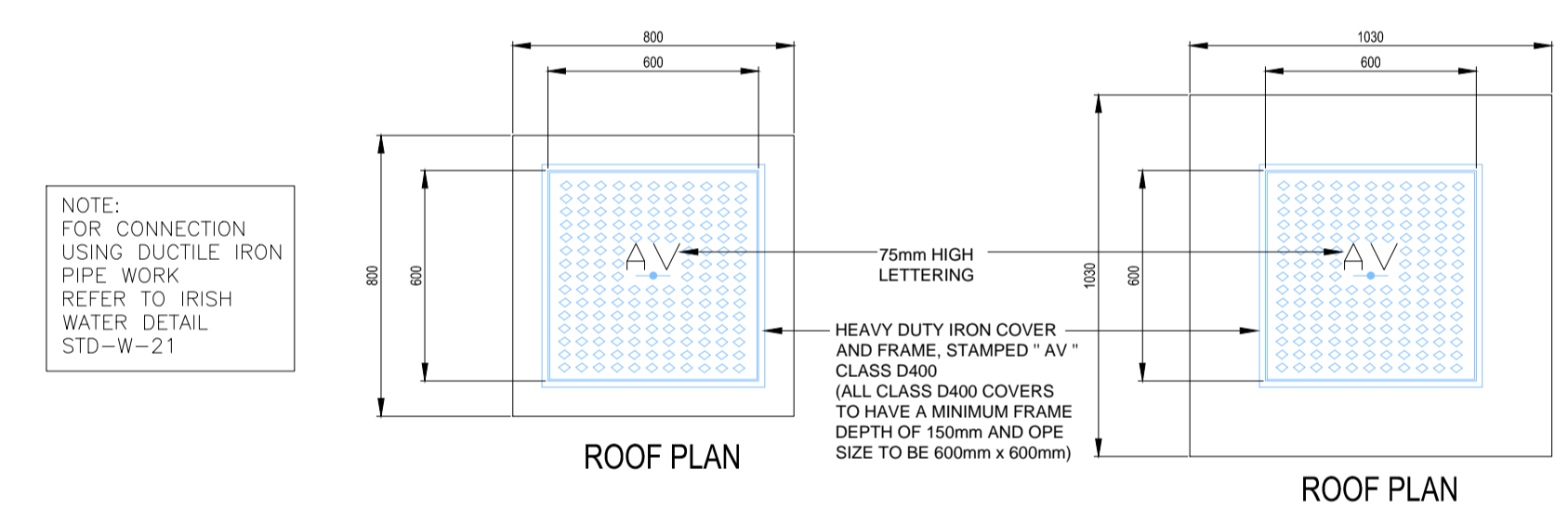
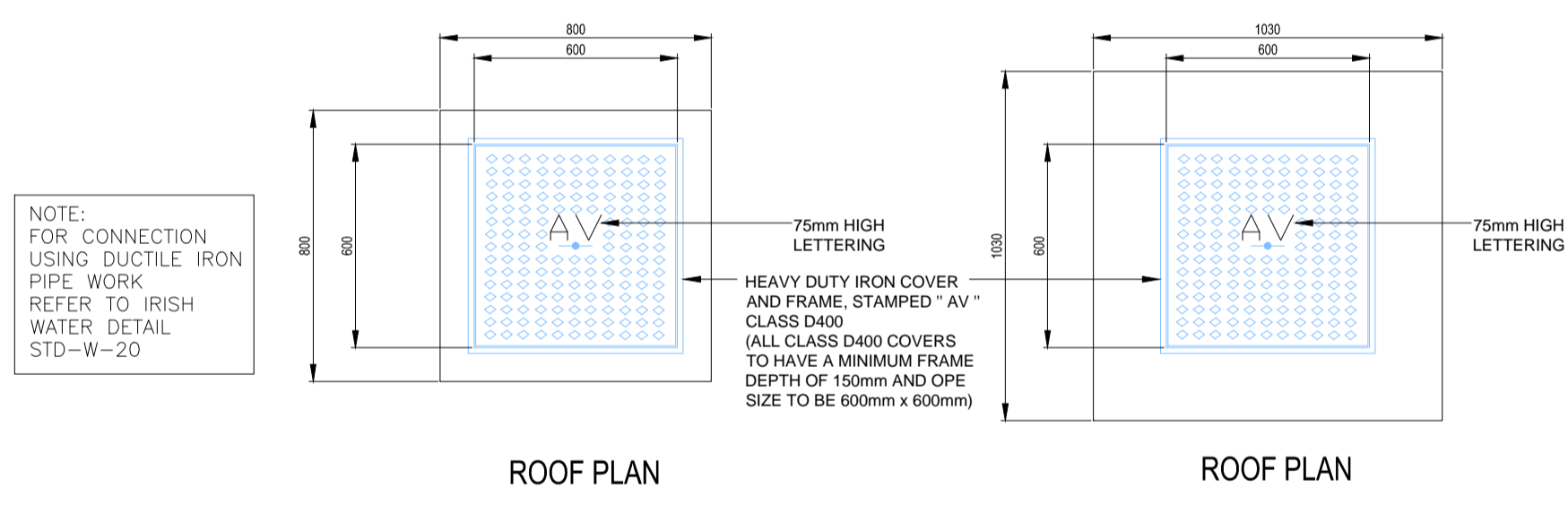
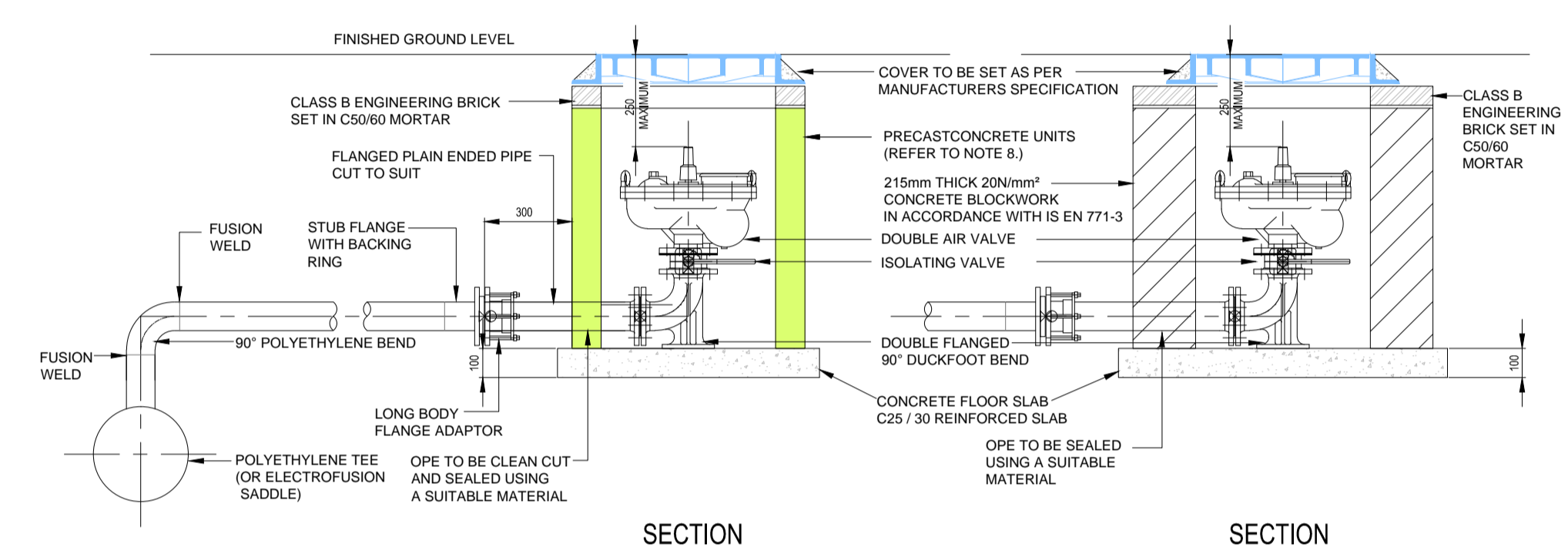
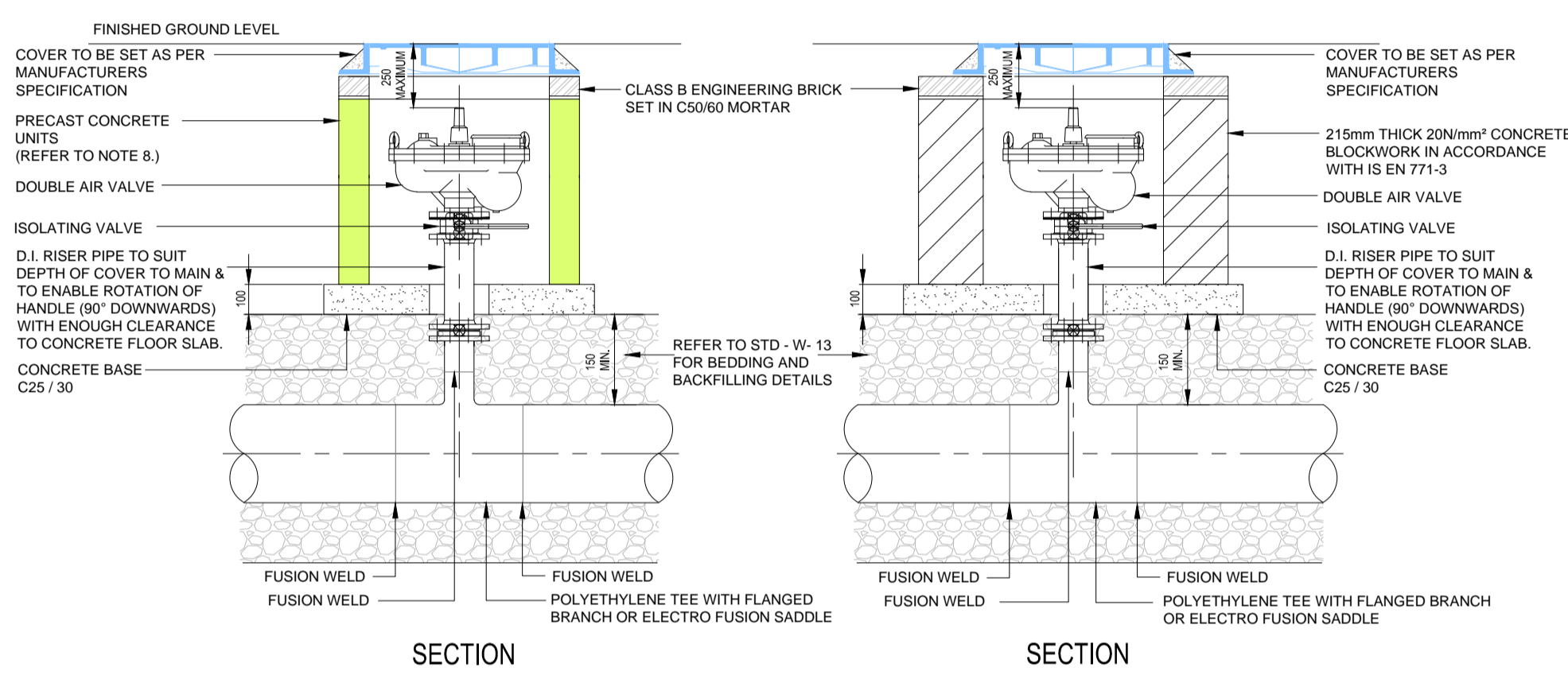
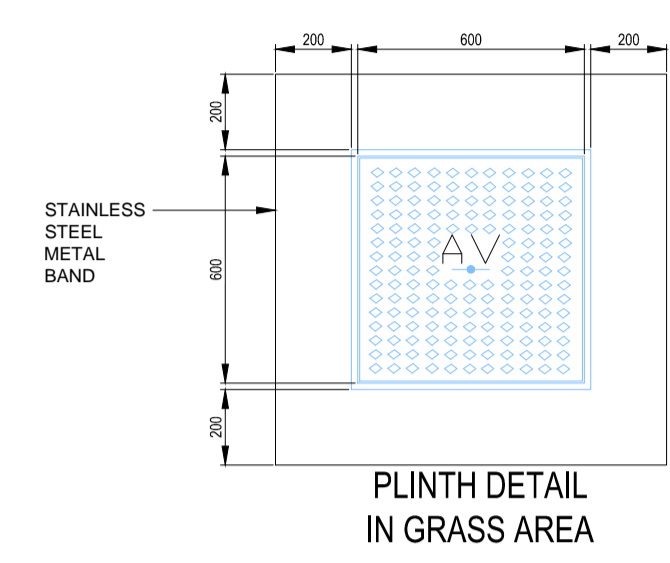
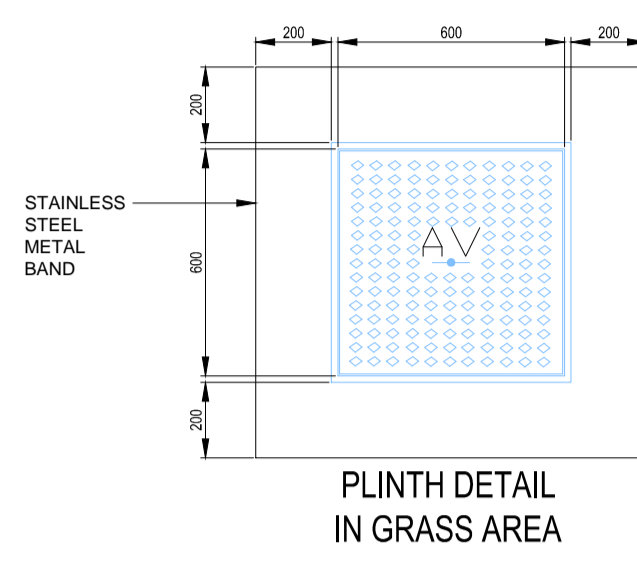


NOTE:
 HATCH INDICATES STRUCTURAL CONCRETE

NO PART OF THIS DRAWING MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR STORED IN ANY RETRIEVAL SYSTEM OF ANY NATURE WITHOUT THE WRITTEN PERMISSION OF MALONE O'REGAN CONSULTING ENGINEERS AS COPYRIGHT HOLDER EXCEPT AS AGREED FOR USE ON THE PROJECT FOR WHICH THE DRAWING WAS ORIGINALLY ISSUED.

A. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND SPECIALISTS DRAWINGS.
 B. ALL DIMENSIONS IN mm UNLESS NOTED.
 C. DO NOT SCALE DIMENSIONS.
 D. THE CONTRACTOR SHALL CHECK ALL DIMENSIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. DISCREPANCIES SHALL BE REPORTED TO THIS OFFICE IN WRITING.

LOCAL AUTHORITY / COUNTY COUNCIL GUIDELINES FOR THE DESIGN AND CONSTRUCTION OF HOUSING MANUAL TO TAKE PRECEDENCE WHERE ANY CONFLICT OCCURS.



ON-LINE DOUBLE AIR VALVE (PRECAST CONCRETE CONSTRUCTION)

OFF-LINE DOUBLE AIR VALVE (PRECAST CONCRETE CONSTRUCTION)

OFF-LINE DOUBLE AIR VALVE (BLOCKWORK CONSTRUCTION)

- ALL DIMENSIONS IN MILLIMETRES (MM) UNLESS NOTED OTHERWISE.
- HYDRANT CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS EN 201 AND BS 6834 COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO THE APPROVAL OF IRISH WATER.
- HYDRANTS SHALL BE DOUBLE FLANGED DRILLED TO PN 16. THEY SHALL COMPLY WITH BS 750: 2012. THE HYDRANT SHALL INCORPORATE A SCREW DOWN GATE VALVE, UNDERGROUND COVER 'GUIDE TO HEAD' TYPE WITH SCREW DOWN CONNECTION OUTLET AND FALSE SPINDLE CAP AND IRON CHAIN.
- ALL HYDRANTS SHALL BE CLOCKWISE CLOSING. HYDRANT CHAMBER TO BE CONSTRUCTED OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO APPROVAL FROM IRISH WATER.
- SLUICE VALVE CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO THE APPROVAL OF IRISH WATER.
- SLUICE VALVE SHALL BE DOUBLE FLANGED WITH DUCTILE IRON RESILIENT SEAL GATE VALVES, SUITABLE FOR USE IN WATER MAINS. THEY SHALL COMPLY WITH THE REQUIREMENTS OF IS EN 1074 AND THEY SHALL HAVE THE BS KITEMARK.
- 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 APPROVAL FROM IRISH WATER.
- AIR VALVE CHAMBERS SHALL BE COVERED WITH APPROVED VENTILATED HEAVY DUTY METAL COVERS TO IS EN 124: 1994 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO THE APPROVAL OF IRISH WATER.
- AIR VALVES SHALL BE DOUBLE AIR VALVE TYPE WITH ISOLATING VALVE IN ACCORDANCE WITH THE REQUIREMENTS OF IS EN 1074. THE ISOLATING VALVE SHALL BE A RESILIENT SEATED GATE VALVE TO IS EN 1074 AND SHALL BE OF A BOLTLESS BONNET DESIGN.
- THE AIR VALVES SHALL HAVE BODIES AND COVERS OF CAST IRON TO BS 1561 WITH FLANGES DRILLED TO PN 16 IN ACCORDANCE WITH BS EN 1091-1. EACH VALVE SHALL HAVE A LARGE AND A SMALL AIR ESCAPE ORIFICE WITH AN ISOLATING VALVE.
- SERVICE CONNECTIONS SHALL NOT BE PROVIDED WITHIN 2M OF THE AIR VALVE LOCATION.
- AIR VALVE CHAMBERS TO BE OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVELY PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO APPROVAL FROM IRISH WATER.
- CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150MM COMPACTED CLAUSE 804 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 WITH PROTECTIVE STAINLESS STEEL METAL BAND 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
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.

P	PART 8 PLANNING ISSUE	06.04.17	KD	ND
REV	DESCRIPTION	DATE	DRWN BY	CHKD BY
STATUS	PURPOSE OF ISSUE			
P	PART 8 PLANNING			

MOR
 MALONE O'REGAN
 CONSULTING ENGINEERS

2B Richview Office Park,
 Clonskeagh,
 DUBLIN 14.

St. Catherine's House,
 Catherine Street
 WATERFORD

Tel: +353 1 260 2655
 Fax: +353 1 260 2660
 Email: info@mor.ie

Tel: +353 51 876 855
 Fax: +353 51 876 828
 Email: info@waterford.mor.ie

CLIENT NAME	KILDARE COUNTY COUNCIL	DRAWING NAME	SITE DEVELOPMENT DETAILS			
JOB NAME	PROPOSED DEVELOPMENT OF 74 NO. RESIDENTIAL UNITS AT CRADDOCKSTOWN ROAD, CRADDOCKSTOWN DEMESNE, NAAS, CO. KILDARE	SHEET	6	WATERMAIN DETAILS 3		
JOB NUMBER	SHB1-CRA-CS-MOR-DR-125	DWG NO		REVISION	P	
		SHEET SIZE	A1	SCALE	1:20	
		DATE	JAN '17	DRAWN BY	KD	
		ENGINEER			ND	