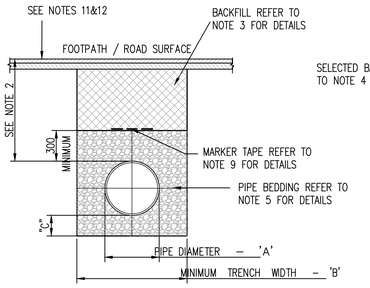
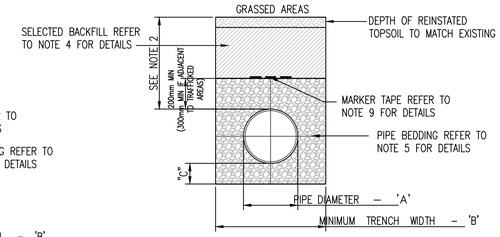


PIPE BEDDING UNDER ROADWAY



PIPE BEDDING UNDER OPEN SPACE

PIPE DIAMETER 'A' (mm)	TRENCH WIDTH 'B' (mm)
< 80	SEE NOTE 10
100	500
150	600
200	600
250	750
300	750
350	750
400	900
450	900

PIPE DIAMETER 'A' (mm)	DEPTH OF BEDDING 'C' (mm)
< 200	150
> 250	200

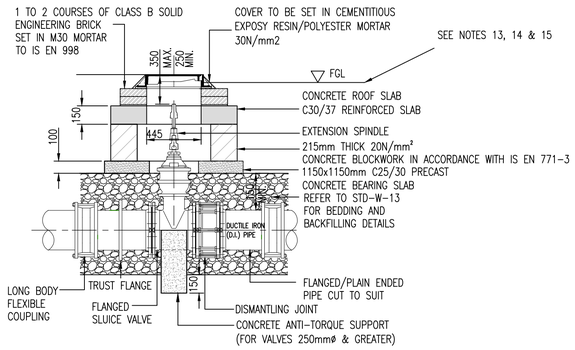
PIPE BEDDING NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. THE MINIMUM DEPTH OF COVER FROM THE FINISHED SURFACE TO THE CROWN OF THE PIPE SHALL BE 900mm WHERE THE PIPE IS TO BE LOCATED IN HOUSING ESTATE ROADS. GREATER DEPTHS OF COVER AND/OR PIPE STRENGHT AND/OR A HIGHER CLASS OF BEDDING MATERIAL MAY BE REQUIRED WHERE HIGH TRAFFIC LOADING IS ANTICIPATED. THE DESIRABLE COVER FOR A WATERMAIN SHOULD BE 1200mm, WHERE PRACTICABLE & SHOULD NOT EXCEED 3.0m.
3. CLAUSE 804/808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE WATER MAIN IS LOCATED IN ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF THE ROADWAY. CLAUSE 804/808 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. CLAUSE 808 IS TO BE USED WITHIN 500mm OF CEMENT BOUNDS MATERAIL, CONCRETE PAVEMENTS, CONCRETE STRUCTURES OR CONCRETE PRODUCTS. ALTERNATIVE BACKFILL MATERIAL TO THAT DESCRIBED ABOVE (CLAUSE 804/808) OF THE PIPE TRENCH WILL ONLY BE ALLOWED BY IRISH WATER WHERE THE ROADS AUTHORITY IN WHOSE FUNCTIONAL AREA THE DEVELOPMENT IS LOCATED, PROVIDES WRITTEN APPROVAL TO THE DEVELOPER TO THE USE SUCH ALTERNATIVE MATERIAL.
4. SELECTED EXCAVATED MATERIAL MAY BE USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUND MATERIAL SUBJECT TO THE APPROVAL OF IRISH WATER.
5. PIPE BEDDING SHALL COMPLY WITH WIS 4-08-02 AND IGN 4-08-01 GRANULAR MATERIAL SHALL BE 14mm TO 5mm GRADED AGGREGATE OR 10mm SINGLE SIZED AGGREGATE IS EN 13242.
6. IN SOFT GROUND CONDITIONS (CBR < 5) THE MATERIAL SHOULD BE EXCAVATED AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 804/808 MATERIAL IN ACCORDANCE WITH THE THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS SHALL REPLACE THE EXCAVATED MATERIAL, WRAPPED IN GEO-TEXTILE WRAPPING. ALTERNATIVELY, SPECIAL PIPE SUPPORT ARRANGEMENTS, INCLUDING PILING ETC. MAY BE REQUIRED WHERE THE DEPTH OF SOFT MATERIAL IS EXCESSIVE. SUCH ARRANGEMENTS SHALL BE SUBJECT TO ASSESSMENT BY IRISH WATER BEFORE ADVANCING WITH THE WORK.
7. PIPES SHALL NOT BE SUPPORTED ON STONES, ROCKS OR ANY HARD OBJECTS AT ANY POINT ALONG THE TRENCH. ROCK SHALL BE EXCAVATED TO A DEPTH OF 150mm BELOW THE ACTUAL DEPTH OF THE TRENCH WITH THE VOID FILLED WITH CLAUSE 804/808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. THE GRANULAR MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL MATERIAL.
8. SHOULD MINIMUM COVER NOT TO BE ACHIEVABLE, CONCRETE GRADE C8/10 SHALL BE USED AS BACKFILL MATERIAL.
9. MARKER TAPE TO BE 400mm WIDE BLUE POLYETHYLENE MATERIAL IN ACCORDANCE WITH EN 12163, PLASTIC PIPES SHALL HAVE WARNING TAPE INCORPORATED A REINFORCED BAND BRACING WIRE. SERVICE PIPES SHALL HAVE 200mm WIDE MESH TAPE. MARKER TAPE TO BE LAID AT TOP OF PIPE BEDDING LAYER.
10. TRENCH WIDTH FOR PIPE SIZE <80mm MAY BE <500mm SUBJECT TO CONSIDERATION BEING GIVEN TO THE TRENCH DEPTH, HEALTH & SAFETY, CONSTRUCTION ACCESS REQUIREMENTS.
11. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
12. EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF "GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROAD" BY THE DEPT. OF TRANSPORT, TOURISM AND SPORT. OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.

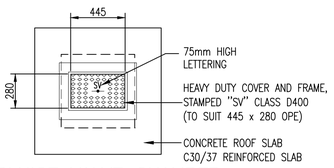
SLUICE VALVE NOTES:

1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. SLUICE VALVE CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 AND BS 5834. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO THE APPROVAL OF IRISH WATER.
3. 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.
4. ALL SLUICE VALVES SHALL BE ANTI-CLOCKWISE CLOSING.
5. 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. ROOF SLABS SHALL BE DESIGNED TO CARRY ALL LIVE 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 IS EN 1917&IS 420. PCC CHAMBER RISER UNITS SHOULD BE INTERLOCKING WHEN STACKED TO PREVENT LATERAL MOVEMENT OF INDIVIDUAL UNITS.
6. CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER STD-W-13.
7. DUCTILE IRON PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545.
8. 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH WITH PROTECTIVE STAINLESS STEEL METAL BAND AROUND COVER IN GREEN AREAS.
9. THRUST BLOCKS (NOT SHOWN ON DRAWING), TO BE PROVIDED AS PER STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
10. ANTI-CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
11. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
12. ALL THRUST FLANGES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
13. 450x450mm 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'. BEARING SLABS TO BE 900x900mm IN ALL CASES.
14. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
15. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY'S REQUIREMENTS.
16. EXISTING ROAD REINSTATEMENT TO COMPLY WITH CURRENT VERSION OF 'GUIDELINES FOR MANAGING OPENINGS IN PUBLIC ROADS' BY THE DEPTH OF TRANSPORT, TOURISM&SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.

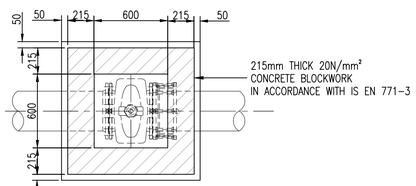
TRENCH BACKFILL AND BEDDING DETAIL
STD-W-13



SLUICE VALVE CHAMBER SECTION

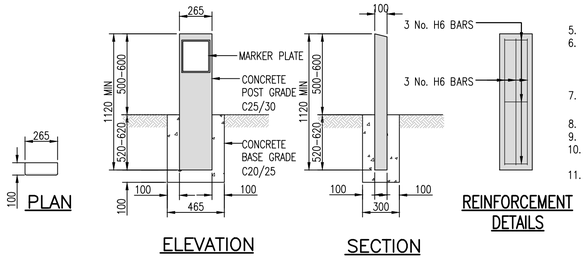


SLUICE VALVE CHAMBER ROOF PLAN



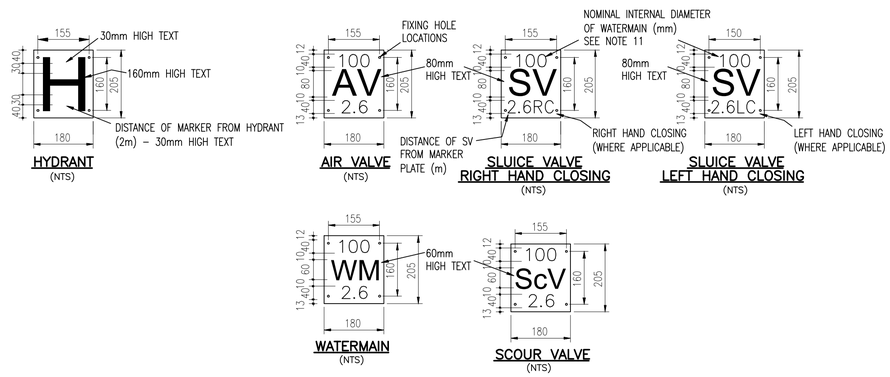
FLOOR PLAN
SLUICE VALVE CHAMBER

SLUICE VALVE DETAIL FOR D.I. PIPE <350MM DIA. (BLOCKWORK CONSTRUCTION) STD-W-14



MARKER PLATES NOTES

1. WHERE PRACTICAL MARKER PLATES SHALL BE FIXED TO ADJACENT WALLS OR ALTERNATIVELY ATTACHED TO MARKER POSTS.
2. PLATES TO BE FIXED IN POSITION USING WALL PLUGS AND STAINLESS STEEL SCREWS.
3. MARKER PLATES TO BE MANUFACTURED IN ACCORDANCE WITH BS 3251.
4. FOR HYDRANT PLATE ALL CHARACTERS SHOULD BE BLACK AND THE REMAINDER OF THE FRONT FACE SHOULD CONFORM TO COLOUR REFERENCE No. 309 (CANARY YELLOW) OF BS 381C.
5. PIPE DIAMETER ON HYDRANT PLATE TO REFER TO WATERMAIN NOT BRANCH.
6. SLUICE VALVE, AIR VALVE, SCOUR VALVE AND WASHOUT HYDRANT, ETC. SHOULD BE CAST ALUMINIUM. ALL CHARACTERS SHOULD BE BLACK ON WHITE PAINT BACKGROUND. ALTERNATIVE MATERIAL MAY BE USED SUBJECT TO ACCEPTANCE BY IRISH WATER.
7. CONCRETE MARKER POST TO BE GRADE C25/30 AND IN ACCORDANCE WITH IS EN 206/2013.
8. CONCRETE BASE TO BE GRADE C20/25.
9. PLASTIC MARKER POSTS ARE NOT ACCEPTABLE.
10. PAINTING SPECIFICATION: 2 PACK EPOXY PRIMER 40-60 MICRONS FOLLOWED BY 2 PACK HIGH GLOSS POLYURETHANE TOP COAT APLLIED AT 40-60 MICRONS.
11. REFERENCES TO PIPE DIAMETERS ON MARKER PLATES REFER SPECIFICALLY TO THE NOMINAL DIAMETER OF THE PIPE REGARDLESS OF PIPE MATERIAL.



MARKER POST/PLATE DETAILS STD-W-27

1:25 0 0.5m 1m 1.5m 2m 2.5m
1:1 0 10 20 30 40 50 60 70 80 90 100

This drawing should not be scaled. Dimensions to be verified on site.
Any discrepancies should be referred to the Engineer prior to work being put in hand.
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NOTES:

1. DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.

2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS.

3. WATERMAINS SHALL BE LAID IN ACCORDANCE WITH THE LOCAL AUTHORITY/ IRISH WATER SPECIFICATION FOR THE LAYING OF NEW WATERMAINS AND BY LAWS 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.

4. WATERMAINS SHALL NOT BE LAID UNDER WALLS OR AREAS DESIGNATED FOR TREES/SHRUBS/FLOWERS.

5. 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.

6. PIPES SHALL CONFORM TO THE UK WATER INDUSTRY SPECIFICATION OR EQUIVALENT E.U. SPECIFICATION.

7. 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 ZINC AND ALUMINUM WITH A MINIMUM 15% ALUMINUM WITH OR WITHOUT OTHER MATERIALS HAVING A MASS OF $400g/m^2$ COMPETE WITH A FINISHING LAYER OF BLUE FUSION BONDED EPOXY IN ACCORDANCE WITH IS EN 14901.

8. WATERMAINS 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.

9. THE MINIMUM COVER TO A WATERMAIN SHALL BE 750mm, THE MAXIMUM COVER SHALL BE 900mm UNLESS NOTED OTHERWISE.

10. 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 LODGED WITH IRISH WATER BEFORE THE WORK IS UNDERTAKEN.

11. 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	Description	By	Chk

Amendments

Project
PHASE 1, MOORETOWN

Title
WATERMAIN DETAILS SHEET 1 OF 4

Client
FINGAL COUNTY COUNCIL

waterman moylan

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Status
PUBLIC DISPLAY

Designed By	Approved	Waterman Ref
RM	MD	23-102
Drawn By	**Date**	**Scales @ A1**
MS	MARCH 2024	1:25

Project - Originator - Volume - Level - Type - Role - Number: MTN - WMC - PH1 - ZZ - DR - C - P1320
Revision

Drawing Location: M:\Projects\23\23-102 Mooretown\Drawings\Waterman Moylan\Civil\Planning\Autocad Drawings\PHASE 1\MTN-WMC-PH1-ZZ-DR-C-P1320 Watermain Construction Details; Sheet 1 of 4.dwg
Date: May 28, 2024 - 2:25pm