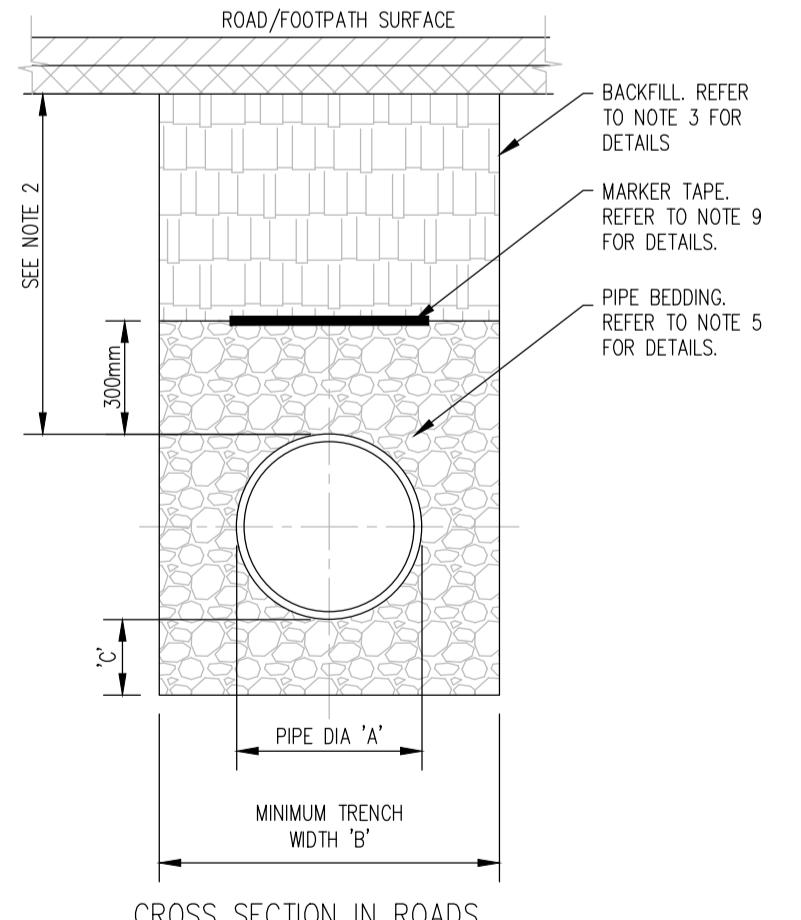
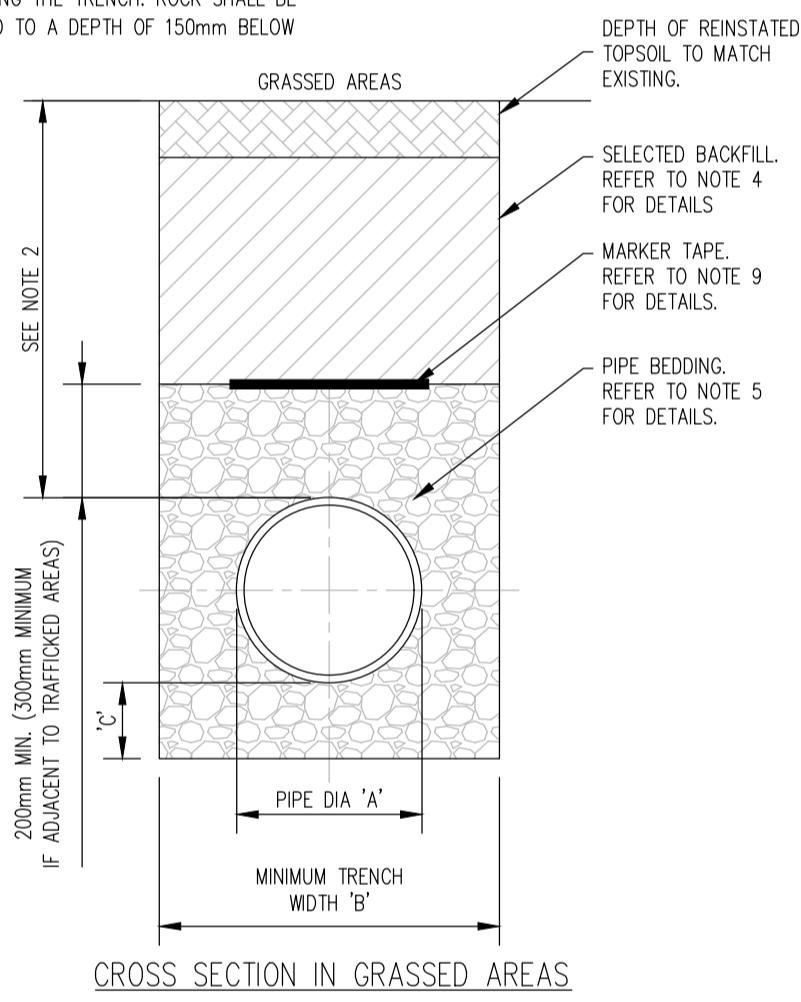


NOTES:  
 1 ALL DIMENSIONS ARE IN MILLIMETRES (mm)  
 UNLESS NOTED OTHERWISE.  
 2 THE MINIMUM DEPTH OF COVER FROM THE  
 FINISHED SURFACE TO THE EXTERNAL CROWN  
 OF THE PIPE SHALL BE 750mm FOR SERVICE  
 CONNECTIONS, 900mm FOR WATER MAINS.  
 GREATER DEPTHS OF COVER AND/OR PIPE  
 STRENGTH AND/OR A HIGHER CLASS OF  
 BEDDING MATERIAL MAY BE REQUIRED WHERE  
 HIGH TRAFFIC LOADING IS ANTICIPATED. THE  
 MAXIMUM COVER SHOULD NOT EXCEED 1.2M  
 WHERE PRACTICABLE.  
 3 CLAUSE 808 MATERIAL IN ACCORDANCE WITH THE  
 TRANSPORT INFRASTRUCTURE IRELAND  
 SPECIFICATION FOR ROAD WORKS IS TO BE  
 USED AS BACKFILL MATERIAL WHERE THE  
 WATER MAIN IS LOCATED IN ROADS,  
 FOOTPATHS OR WHERE THE NEAREST PART OF  
 THE TRENCH IS WITHIN 1M OF THE PAVED  
 EDGE OF THE ROADWAY. CLAUSE 808 IS TO  
 BE COMPACTED AS PER CLAUSE 802 OF THE  
 TRANSPORT INFRASTRUCTURE IRELAND  
 SPECIFICATION FOR ROAD WORKS.

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 WS  
 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 OUT AND  
 DISPOSED OF IN ACCORDANCE WITH THE  
 WASTE MANAGEMENT ACT AND CLAUSE 808  
 MATERIAL IN ACCORDANCE WITH THE  
 TRANSPORT INFRASTRUCTURE IRELAND  
 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  
 OR ROCKS, OR ANY HARD OBJECT AT ANY  
 POINT ALONG THE TRENCH. ROCK SHALL BE  
 EXCAVATED TO A DEPTH OF 150mm BELOW



TRENCH BACKFILL AND BEDDING  
 (STD - W - 13)  
 SCALE 1:20

THE ACTUAL DEPTH OF THE TRENCH WITH THE  
 VOID FILLED WITH CLAUSE 804 MATERIAL IN  
 ACCORDANCE WITH THE TRANSPORT  
 INFRASTRUCTURE IRELAND SPECIFICATION FOR  
 ROAD WORKS. THE GRANULAR MATERIAL  
 SHALL BE LAID ABOVE THE VOID BACKFILL  
 MATERIAL.

8 SHOULD MINIMUM COVER NOT 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 OR 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 WIDTHS FOR PIPE SIZES ≤80mm  
 MAY BE ≤500mm, SUBJECT TO CONSIDERATION  
 BEING GIVEN TO THE TRENCH DEPTH, HEALTH  
 & SAFETY & CONSTRUCTION ACCESS  
 REQUIREMENTS.

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

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

NOTES:  
 1 ALL DIMENSIONS ARE IN MILLIMETRES (mm)  
 UNLESS NOTED OTHERWISE.

2 STRUCTURAL DESIGN AND REINFORCEMENT  
 DETAIL TO BE PROVIDED BY THE DEVELOPER  
 AND SUBMITTED TO IRISH WATER FOR  
 REVIEW.

3 CONCRETE FOR FLOW METER CHAMBER TO  
 BE C30/37

4 PRECAST METER CHAMBER (WITH CONCRETE  
 SURROUND) MAY BE USED SUBJECT TO IRISH  
 WATER APPROVAL.

5 METER CHAMBER SHALL BE COVERED WITH  
 APPROVED HEAVY DUTY METAL COVERS TO

IS EN124 RATING D400. COVER AND FRAME  
 SHALL BE SUITABLE FOR ROAD AND TRAFFIC  
 CONDITIONS AND IS SUBJECT TO THE  
 APPROVAL OF IRISH WATER.

6 200mm ALL ROUND, 100mm DEEP  
 CONCRETE PLINTH WITH PROTECTIVE  
 STAINLESS STEEL METAL BAND AROUND  
 COVER IN GREEN AREAS.

7 ANTI CORROSION TAPE TO BE PROVIDED  
 AROUND BURIED FLANGES.

8 DUCTILE IRON PIPES AND FITTINGS TO BE IN  
 ACCORDANCE WITH IS 1954. PE PIPES AND  
 FITTINGS TO BE IN ACCORDANCE WITH IS EN  
 12201:2011.

9 ALL CHAMBERS TO BE CHECKED FOR UPLIFT

BY THE DEVELOPER BASED ON GROUND  
 CONDITIONS WITHIN THE SITE. SHOULD ANTI  
 FLOTATION MEASURES BE REQUIRED THEY  
 SHALL BE SUBJECT TO APPROVAL FROM  
 IRISH WATER.

10 PIPEWORK TO BE DOWNSIZED TO  
 ACCOMMODATE THE REQUIRED RANGE OF  
 THE FLOW METER. STRAIGHT PIPE LENGTHS  
 UPSTREAM AND DOWNSTREAM OF THE METER  
 TO BE PROVIDED. IF THE METER IS NOT  
 CAPABLE OF ACCURATE NIGHT FLOW  
 MEASUREMENTS, A BY-PASS FLOW METER  
 SHALL BE PROVIDED WITH APPROPRIATE  
 VALVES, FITTINGS AND PIPEWORK.

11 ALL CONCRETE TO BE IN ACCORDANCE WITH  
 IS EN206.

NOTES:  
 1 ALL DIMENSIONS ARE IN MILLIMETRES  
 (mm) UNLESS NOTED OTHERWISE.

2 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 THE APPROVAL OF IRISH  
 WATER.

3 SLUICE VALVES SHALL BE RESILIENT SEATED  
 AND SHALL COMPLY WITH BS 5163-1, BS  
 5163-2, IS 1074-1, IS 1074-2, OR  
 EQUIVALENT EU SPECIFICATIONS.

4 ALL SLUICE VALVES SHALL BE  
 PROVIDED WITH ANTI CORROSION  
 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  
 APPROVAL FROM IRISH WATER.

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 STEEL  
 METAL BAND AROUND COVER IN GREEN  
 AREAS.

9 THRUST BLOCKS (NOT SHOWN ON DRAWING)  
 TO BE PROVIDED AS PER STANDARD  
 DRAWING STD-W-28 AT ALL TEES AND  
 BENDS, TAPERS, DEAD ENDS AND PIPES AT  
 STEEP SLOPES.

10 ALL HYDRANTS, SURFACE BOX FRAMES AND  
 COVERS SHALL COMPLY WITH THE  
 RELEVANT PROVISIONS OF IS EN 14339, IS  
 EN 1074-1 & BS 750. FIRE HYDRANTS  
 SHALL BE TYPE 2, THE HYDRANT INLET  
 SHALL BE 80mm DIAMETER WITH PN16.

11 ALL CONCRETE TO BE IN ACCORDANCE WITH  
 IS EN 206.

12 ALL THRUST FLANGES TO BE ADEQUATELY  
 PROVIDED AROUND BURIED FLANGES.

13 ALL HYDRANTS SHALL BE CLOCKWISE  
 CLOSING.

NOTES:  
 1 ALL DIMENSIONS ARE IN MILLIMETRES  
 (mm) UNLESS NOTED OTHERWISE.

2 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 THE APPROVAL OF IRISH WATER.

3 ALL HYDRANTS, SURFACE BOX FRAMES AND  
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 RELEVANT PROVISIONS OF IS EN 14339, IS  
 EN 1074-1 & BS 750. FIRE HYDRANTS  
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 DENSITY BLOCKWORK. ALTERNATIVELY  
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 UNITS MAY ALSO BE USED SUBJECT TO  
 APPROVAL FROM IRISH WATER.

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 STEEL  
 METAL BAND AROUND COVER IN GREEN  
 AREAS.

9 THRUST BLOCKS (NOT SHOWN ON DRAWING)  
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 STEEP SLOPES.

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 COVERS SHALL COMPLY WITH THE  
 RELEVANT PROVISIONS OF IS EN 14339, IS  
 EN 1074-1 & BS 750. FIRE HYDRANTS  
 SHALL BE TYPE 2, THE HYDRANT INLET  
 SHALL BE 80mm DIAMETER WITH PN16.

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 IS EN 206.

12 ALL THRUST FLANGES TO BE ADEQUATELY  
 PROVIDED AROUND BURIED FLANGES.

NOTES:  
 1 ALL DIMENSIONS ARE IN MILLIMETRES  
 (mm) UNLESS NOTED OTHERWISE.

2 AIR 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 THE APPROVAL OF IRISH WATER.

3 AIR VALVES SHALL COMPLY WITH THE  
 REQUIREMENTS OF IS EN 1074-4. AIR  
 VALVES SHALL BE DOUBLE ORIFICE TYPE  
 AND SHALL INCLUDE AN ISOLATING VALVE.  
 THE ISOLATING VALVE SHALL BE A GATE  
 VALVE CONFORMING TO IS 1074-2 AND  
 SHALL BE OF A BOLTLESS BONNET DESIGN

4 THE AIR VALVES SHALL OF BODIES AND  
 COVERS OF CAST IRON TO BS 1563  
 WITH FLANGES DRILLED TO PN16 IN  
 ACCORDANCE WITH BS EN 1092. EACH  
 VALVE SHALL HAVE A LARGE AND A SMALL  
 AIR ESCAPE ORIFICE WITH AN ISOLATING  
 VALVE.

5 SERVICE CONNECTIONS SHALL NOT BE  
 PROVIDED WITHIN 2m OF THE AIR VALVE  
 LOCATION.

6 AIR VALVE CHAMBERS TO BE OF PRECAST  
 CONCRETE UNITS OR HIGH DENSITY

NOTES:  
 1 ALL DIMENSIONS ARE IN MILLIMETRES  
 (mm) UNLESS NOTED OTHERWISE.

2 PRECAST CONCRETE CHAMBERS SHALL BE  
 SURROUNDED BY A MINIMUM OF 150mm  
 COMPACTED CLAUSE 808 MATERIAL AS PER  
 STD-W-13.

3 DUCTILE IRON PIPES AND FITTINGS TO BE IN  
 ACCORDANCE WITH IS EN 545.

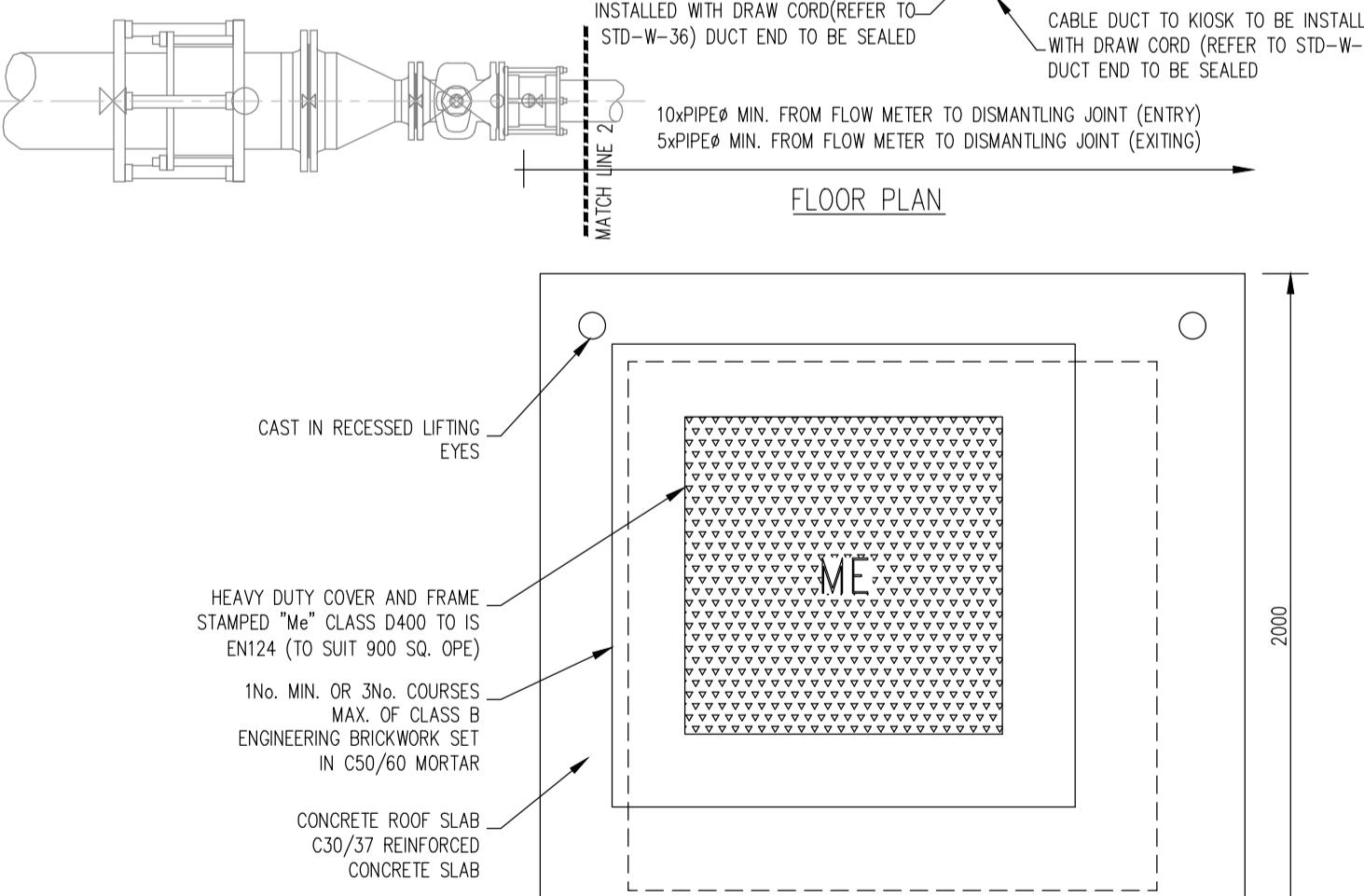
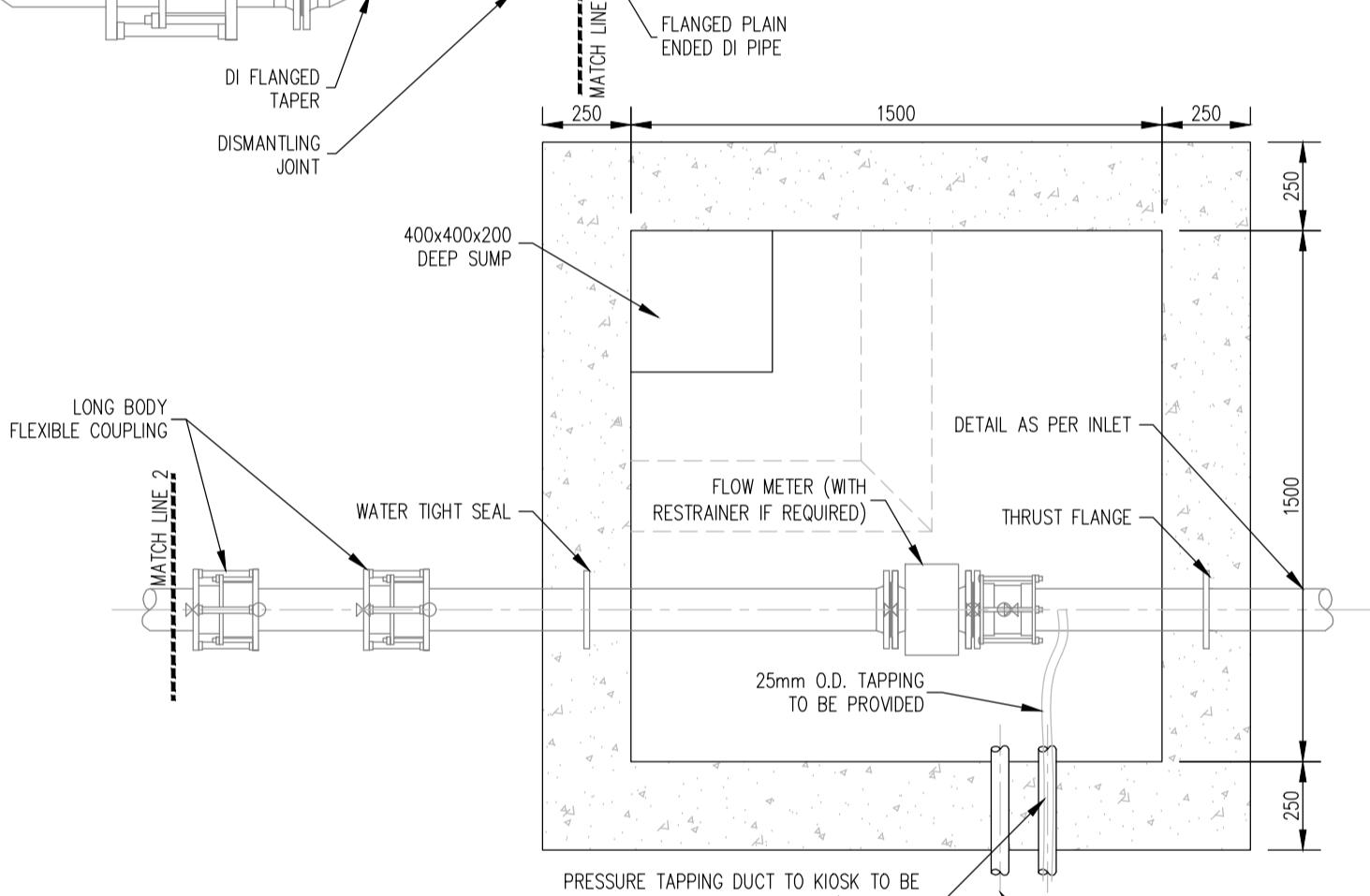
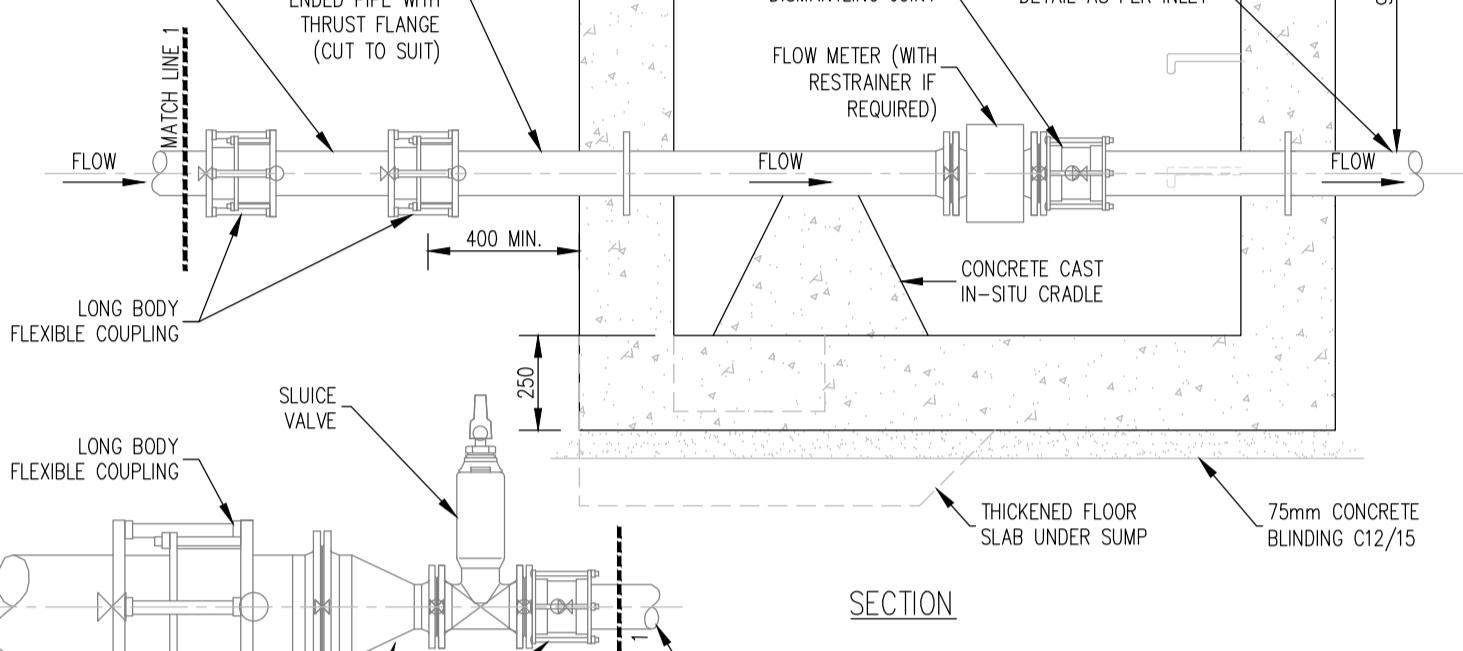
4 200mm ALL AROUND, 100mm DEEP  
 CONCRETE PLINTH WITH PROTECTIVE STEEL  
 METAL BAND AROUND COVER IN GREEN  
 AREAS.

5 THRUST BLOCKS (NOT SHOWN ON DRAWING)  
 TO BE PROVIDED AS PER STANDARD  
 DRAWING STD-W-28 AT ALL TEES AND  
 BENDS, TAPERS, DEAD ENDS AND PIPES AT  
 STEEP SLOPES.

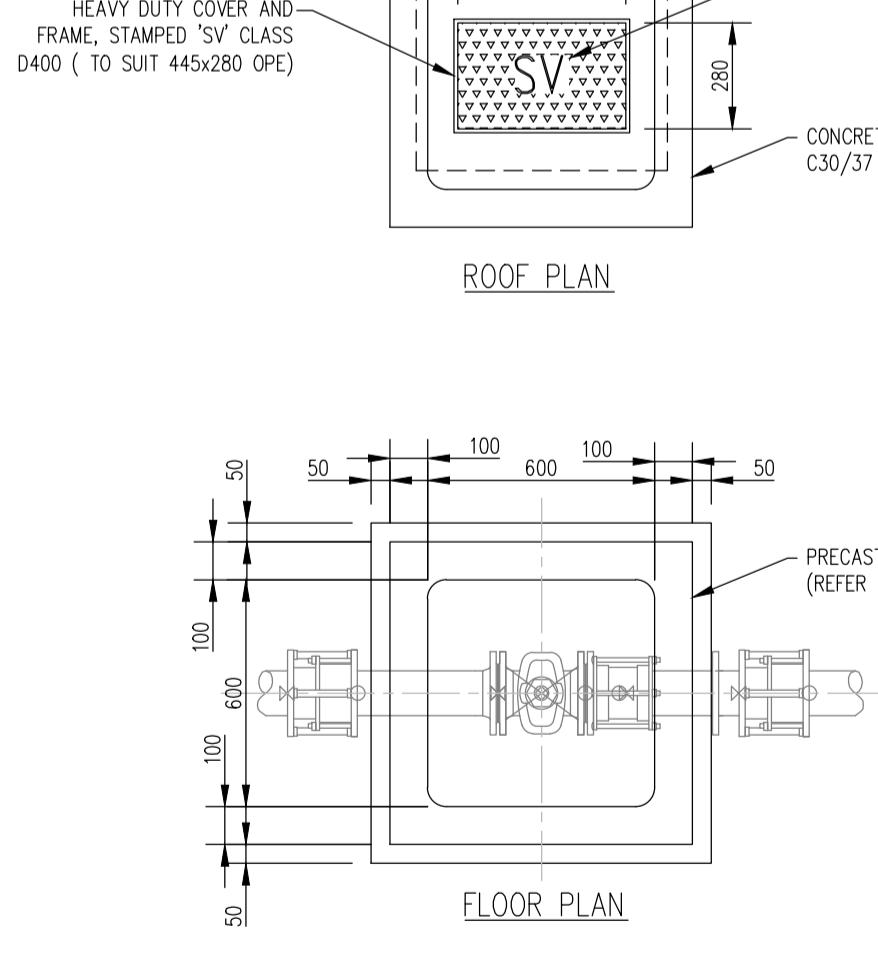
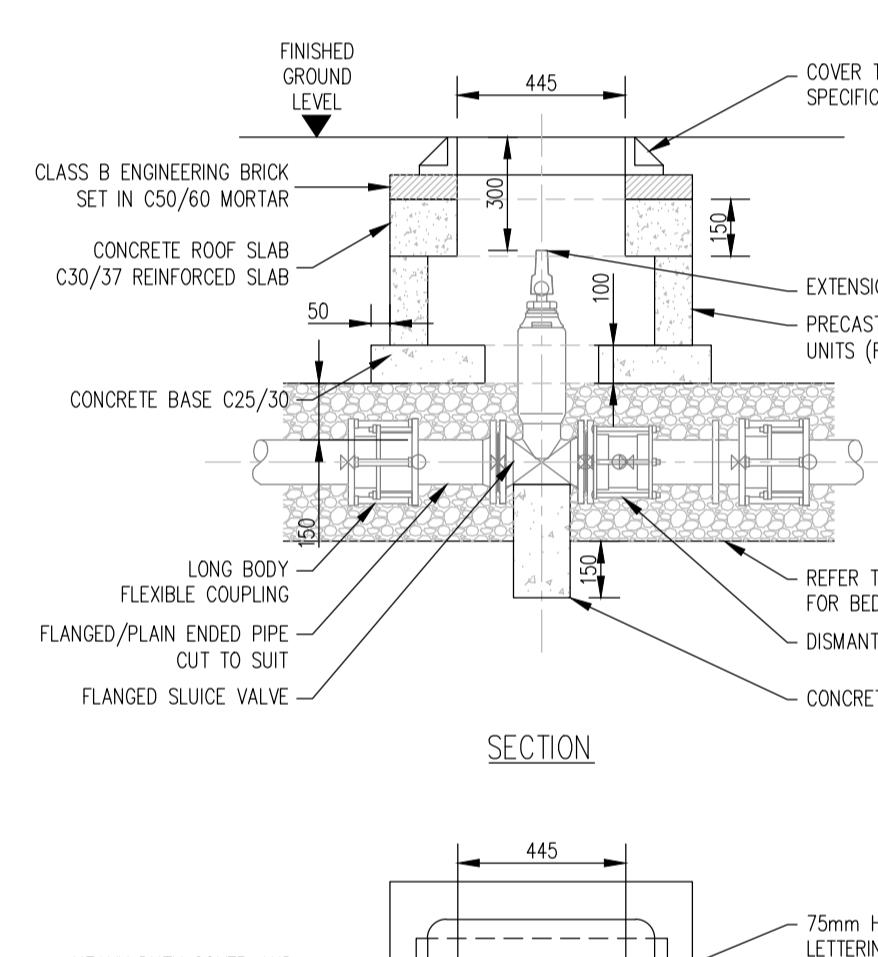
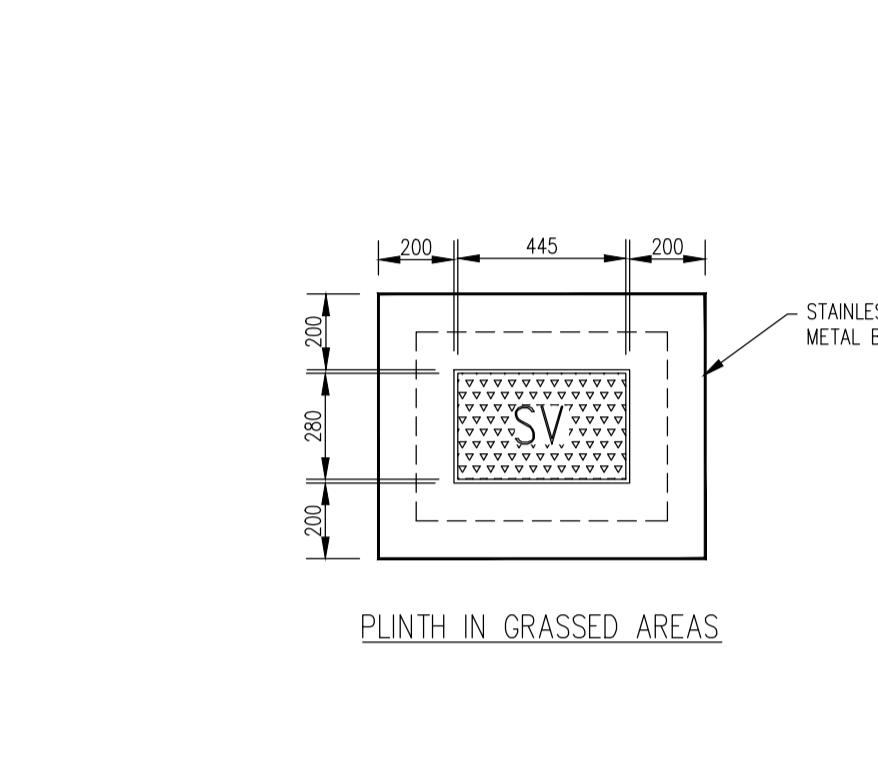
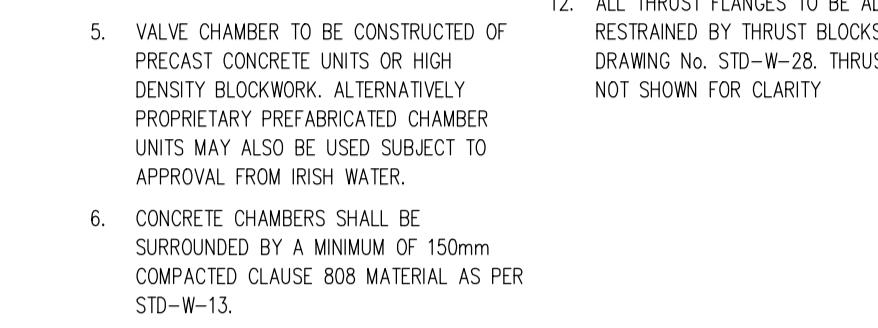
6 ANTI CORROSION TAPE TO BE PROVIDED  
 AROUND BURIED FLANGES.

7 THE LOCATION OF THE AIR VALVE SHALL BE  
 SUBJECT TO PARTICULAR AGREEMENT  
 WITH IRISH WATER TO ENSURE THAT THE  
 RISK OF CONTAMINATION THROUGH THE  
 VALVE IS ELIMINATED.

8 AIR VALVE CHAMBERS TO BE OF PRECAST  
 CONCRETE UNITS OR HIGH DENSITY



METER CHAMBER (<300mmØ)  
 (STD - W - 26)  
 SCALE 1:20



SLUICE VALVE CHAMBER  
 (PRECAST CONCRETE CONSTRUCTION)  
 (STD - W - 14)  
 SCALE 1:20

