Water Infrastructure Standard Details

Connections and Developer Services

Construction Requirements for Self-Lay Developments
July 2020 (Revision 4)

Document IW-CDS-5020-01

UISCE ÉIREANN : IRISH WATER

Part of ervia group

IW-CDS-5020-01

Revision Log

Date	Details of Revision	Revision	Author	Approver
April 2016	General revisions & drawing added	01	T'OC	M'OD
August 2016	General revisions	02	TO'C	MO'D
December 2017	General revisions & drawing added	03	TO'C	MO'D
July 2020	General revisions & drawings added	04	TO'C	MO'D

Background

Technical Documentation has been developed by Irish Water's Connections and Developer Services which outlines the requirements for water services infrastructure within developments.

These Standard Details have been developed to outline to developers Irish Water's requirements for the provision of water infrastructure that is to be installed in developments and that would be connected to Irish Water's networks and subsequently vested in Irish Water.

The aim is to provide details to developers for water infrastructure, which will outline design and construction requirements to ensure consistency in the provision of materials, equipment and workmanship, etc. The Standard Details will also provide the basis for developers' detailed design proposals for water infrastructure, leading to the provision of infrastructure that is suitable for connection to Irish Water's networks and easy operation and maintenance of the new infrastructure.

The Standard Details are based on best practice within the water industry. They take account of the experience of Local Authorities in the provision of these services to new developments. They have been successfully used by Irish Water's own internal functions for a variety of projects and they are in line with water utility industry norms.

There are 57 No Standard Details dealing with water infrastructure covering all aspects of such infrastructure.

These Standard Details are accompanied by a Design Risk Assessment (DRA) (document number IW-CDS-5020-02), which outlines the residual health and safety responsibilities of developers and their designers/contractors in the provision of such infrastructure.

The use of the Standard Details is mandatory in all new Irish Water Connection Agreement Offers issued after 1st June 2016.

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Standard Details Water Networks

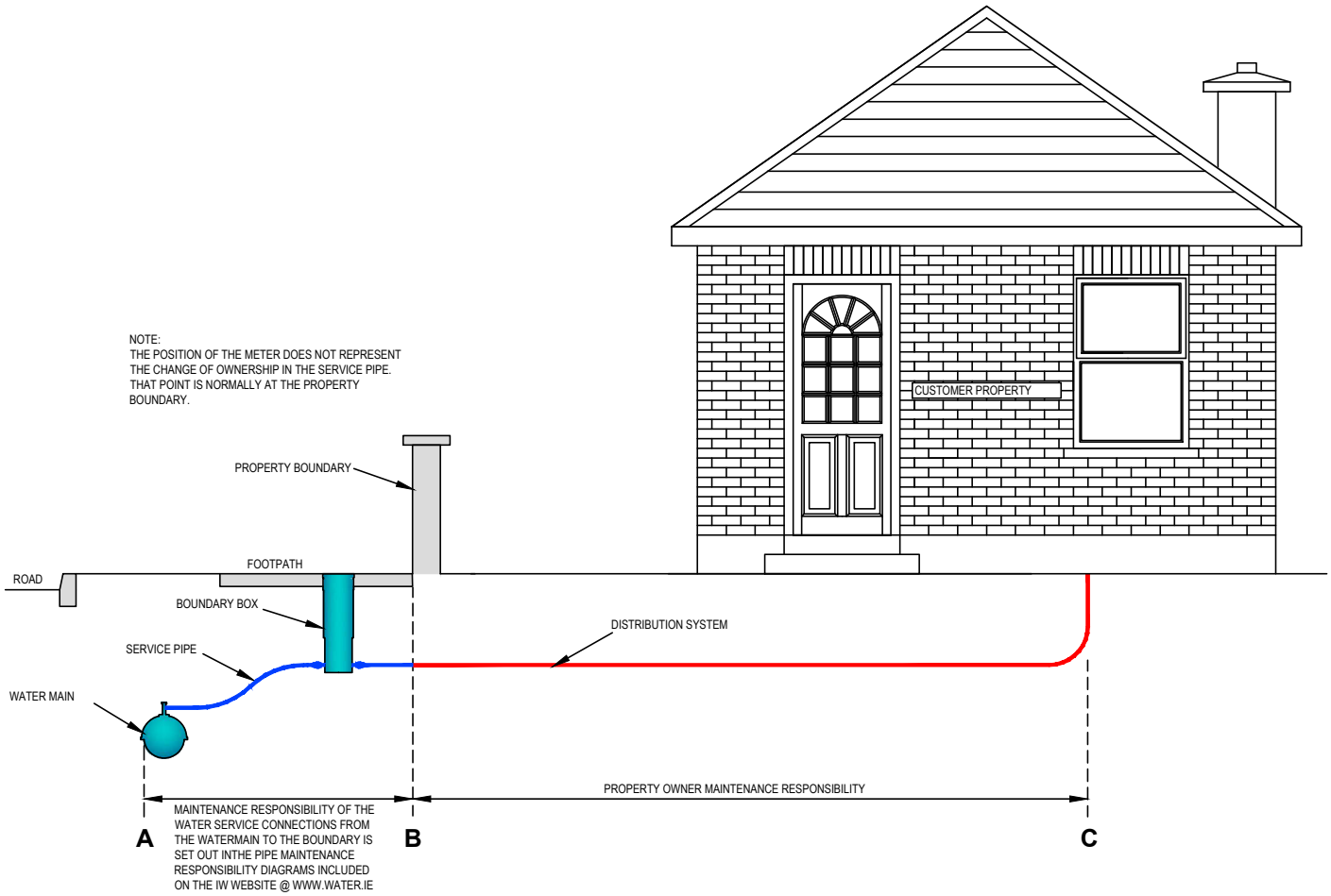
These Standard Details show the acceptable typical details and outline the minimum standards that are required by Irish Water for the provision of water pipes and related infrastructure which are to be connected to the Irish Water Network. They shall be used in conjunction with the associated Design Risk Assessments that have been developed which identify the risks that designers shall take into account in the detailed design of the water pipes and related infrastructure to be connected to the Irish Water Network. The pipes and related infrastructure to be put in place within developments shall comply fully with these Standard Details. Ultimate responsibility (including, but not limited to, any losses, costs, demands, damages, actions, expenses, negligence and claims) for the detailed design, construction and provision of such pipes and related infrastructure shall rest entirely with the Developer, his/her Designer(s), Contractor(s) or other connected party. Irish Water assumes no responsibility for and gives no guarantees, undertakings or warranties in relation to the pipes and related infrastructure to be provided in accordance with these Standard Details.

These Standard Details shall be used in conjunction with current Irish Water Code of Practice IW-CDS-5020-03, which will take precedence over the Standard Details.

These Standard Details may also be used for the installation of water infrastructure for Asset Delivery Works & Capital Project Works Programmes at the discretion of Irish Water.

July 2020

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



	MAINTENANCE RESPONSIBILITY
A - B SERVICE PIPE	SEE NOTE ABOVE
METER / BOUNDARY BOX	IRISH WATER
B - C (DISTRIBUTION SYSTEM)	PROPERTY OWNER
INTERNAL PLUMBING	PROPERTY OWNER

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
1	07/'20	RH	TOC	Responsibility Changed	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

TITLE

WATER SERVICE CONNECTION RESPONSIBILITY

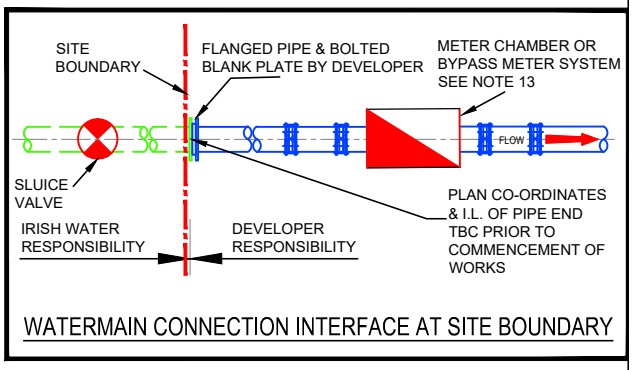
SCALE: NOT TO SCALE

DATE: SEPT. 2015

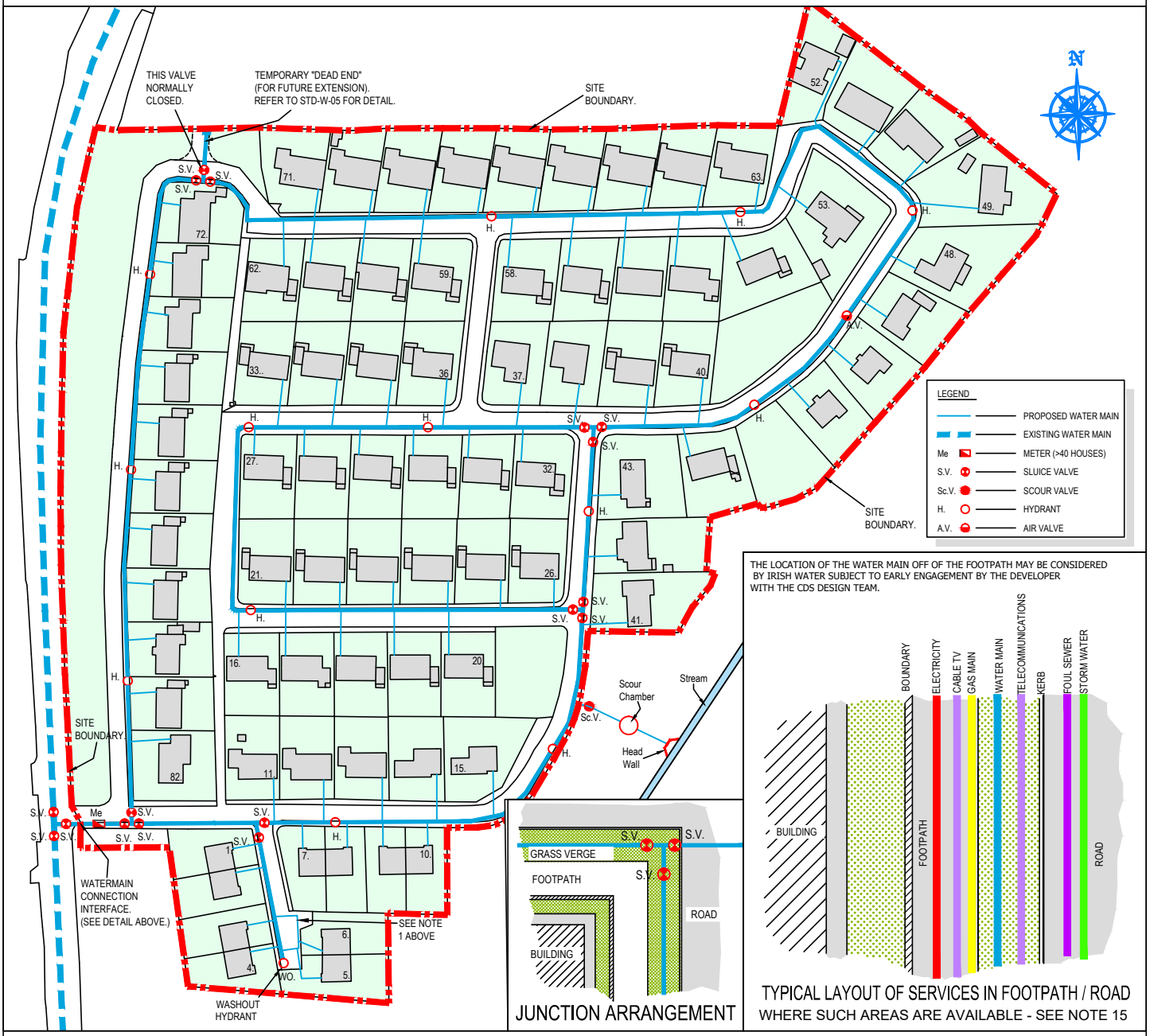
DRAWING No.: STD-W- 01

REV: 1

1. WATER MAIN LAYOUTS SHALL BE ARRANGED IN LOOPS OR RINGS SO AS TO AVOID "DEAD ENDS" OR TERMINAL POINTS. ALL MAINS SHALL TERMINATE IN A LOOP OR RING TO ACCOMMODATE ONE-DIRECTIONAL FLUSHING OF THE NETWORK. LOOPS SHALL HAVE A MINIMUM OF 4 HOUSES AND 1 HYDRANT.
2. THE MINIMUM PIPE SIZE SHALL BE 100mm INTERNAL DIAMETER IN HOUSING DEVELOPMENTS OF 40 AND UP TO 100 HOUSES. DEVELOPMENTS OF 100 HOUSES AND ABOVE SHALL HAVE A MINIMUM PIPE SIZE OF 150mm INTERNAL DIAMETER SPINE AND 100mm BRANCH MAINS. NOMINAL INTERNAL DIAMETERS OF 80mm AND LESS MAY BE ALLOWED IN SMALLER DEVELOPMENTS BUT NOT WHERE HYDRANTS ARE LOCATED AND ONLY AFTER PRIOR WRITTEN AGREEMENT FROM IRISH WATER
3. THE MINIMUM PIPE SIZE SHALL BE 150mm IN INDUSTRIAL OR COMMERCIAL DEVELOPMENTS.
4. EVERY PREMISE SHOULD HAVE A SEPARATE SERVICE CONNECTION. THE USE OF COMMON SERVICE PIPES IS NOT ALLOWED. SERVICE CONNECTIONS SHALL BE AS SHORT AS REASONABLY POSSIBLE. LONG SERVICE CONNECTIONS (IN EXCESS OF 15m) WILL NOT BE ALLOWED. A RIDER MAIN AT THE OPPOSITE SIDE OF THE ROAD TO THE MAIN WATER MAIN MAY BE REQUIRED SUBJECT TO APPROVAL FROM IRISH WATER. SERVICE CONNECTIONS SHALL BE A MINIMUM PIPE SIZE OF 25mm OUTSIDE DIAMETER, 20mm INTERNAL DIAMETER.
5. WATER MAINS SHOULD BE LAID TO PROVIDE THE OPTIMUM CIRCULATION IN THE LOCAL WATER NETWORK. WATER MAINS MAY TERMINATE IN A DEAD END ONLY WITH IRISH WATER APPROVAL, IN WHICH CASE AN ON-LINE WASHOUT HYDRANT SHALL BE PROVIDED AT THE DEAD END, LOCATED WITHIN A CHAMBER OR KIOSK.
6. VALVES SHALL BE ARRANGED IN SUCH A MANNER TO ALLOW THE NETWORK TO BE MANAGED TO ENSURE THAT NO MORE THAN 40 PROPERTIES LOSE WATER FROM A BURST ON THE SYSTEM, AT ANY ONE TIME.
7. NO DOMESTIC PROPERTY SHALL BE MORE THAN 46m FROM A HYDRANT. HYDRANT DETAILS AND LOCATIONS SHALL BE SUBJECT TO THE APPROVAL OF THE RELEVANT LOCAL AUTHORITY FIRE DEPARTMENT.
8. WATER SUPPLY MAINS SHALL BE LAID IN COMMON AREAS AND NOT THROUGH INDIVIDUAL PRIVATE GARDENS OR DRIVEWAYS ETC.
9. A THREE-WAY VALVE ARRANGEMENT SHALL BE PROVIDED AT ALL JUNCTIONS, AS A MINIMUM.
10. THE WATER MAIN PIPEWORK TO NEW DEVELOPMENTS SHOULD BE LOCATED AT THE RIGHT HAND SIDE OF THE ENTRANCE TO THE NEW DEVELOPMENT (FROM A VIEW FACING INTO THE DEVELOPMENT) IF POSSIBLE AND WHERE THE PROPERTIES ARE EQUALLY AND REASONABLY DISTRIBUTED AT BOTH SIDES OF THE ESTATE ROADWAY.
11. AIR VALVES TO BE LOCATED AT POINTS WHERE AIR IS LIKELY TO BUILD UP.
12. THE DEVELOPER IS TO LIAISE WITH THE FIRE SERVICES AUTHORITY IN ORDER TO ENSURE FIRE FLOWS ARE AVAILABLE THROUGHOUT THE DEVELOPMENT.
13. BULK FLOW METERS SHALL BE FITTED IN ALL DEVELOPMENTS WITH A DEMAND IN EXCESS OF 20m³ PER DAY. BULK FLOW METERS SHALL HAVE A FACTORY FITTED AMR AND INSTALLED IN A SUITABLY SIZED CHAMBER. DEVELOPMENTS WITH DEMAND LESS THAN 20m³ PER DAY SHALL BE PROVIDED WITH A DEDICATED BYPASS PIPEWORK AND CHAMBER IN ACCORDANCE WITH STD-W-26F TO ACCOMMODATE THE RECORDING OF NIGHT FLOWS.
14. WATERMAINS TO BE LOCATED IN GRASS VERGE . IF GRASS VERGE IS NOT AVAILABLE, WATERMAINS TO BE LOCATED UNDER FOOTPATH AWAY FROM KERB. REFER TO STD-W-11 FOR TYPICAL UTILITY LAYOUT.
15. WHERE A GRASS VERGE IS NOT AVAILABLE AND A FOOTPATH IS LESS THAN 1.2m WIDE, THE WATERMAIN IS PERMITTED ON THE ROADWAY.



WATERMAIN CONNECTION INTERFACE AT SITE BOUNDARY



JUNCTION ARRANGEMENT

THE LOCATION OF THE WATER MAIN OFF OF THE FOOTPATH MAY BE CONSIDERED BY IRISH WATER SUBJECT TO EARLY ENGAGEMENT BY THE DEVELOPER WITH THE CDS DESIGN TEAM.

TYPICAL LAYOUT OF SERVICES IN FOOTPATH / ROAD WHERE SUCH AREAS ARE AVAILABLE - SEE NOTE 15

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
2	07/'20	RH	TOC	Connection Interface Detail added, notes added	MOD
1	11/'17	JMC	TOC	Temp. "dead end" & note 1 ref. added	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE: TYPICAL LAYOUT FOR WATER MAINS WITHIN DEVELOPMENTS

DRAWING No.: STD-W- 02

REV: 2

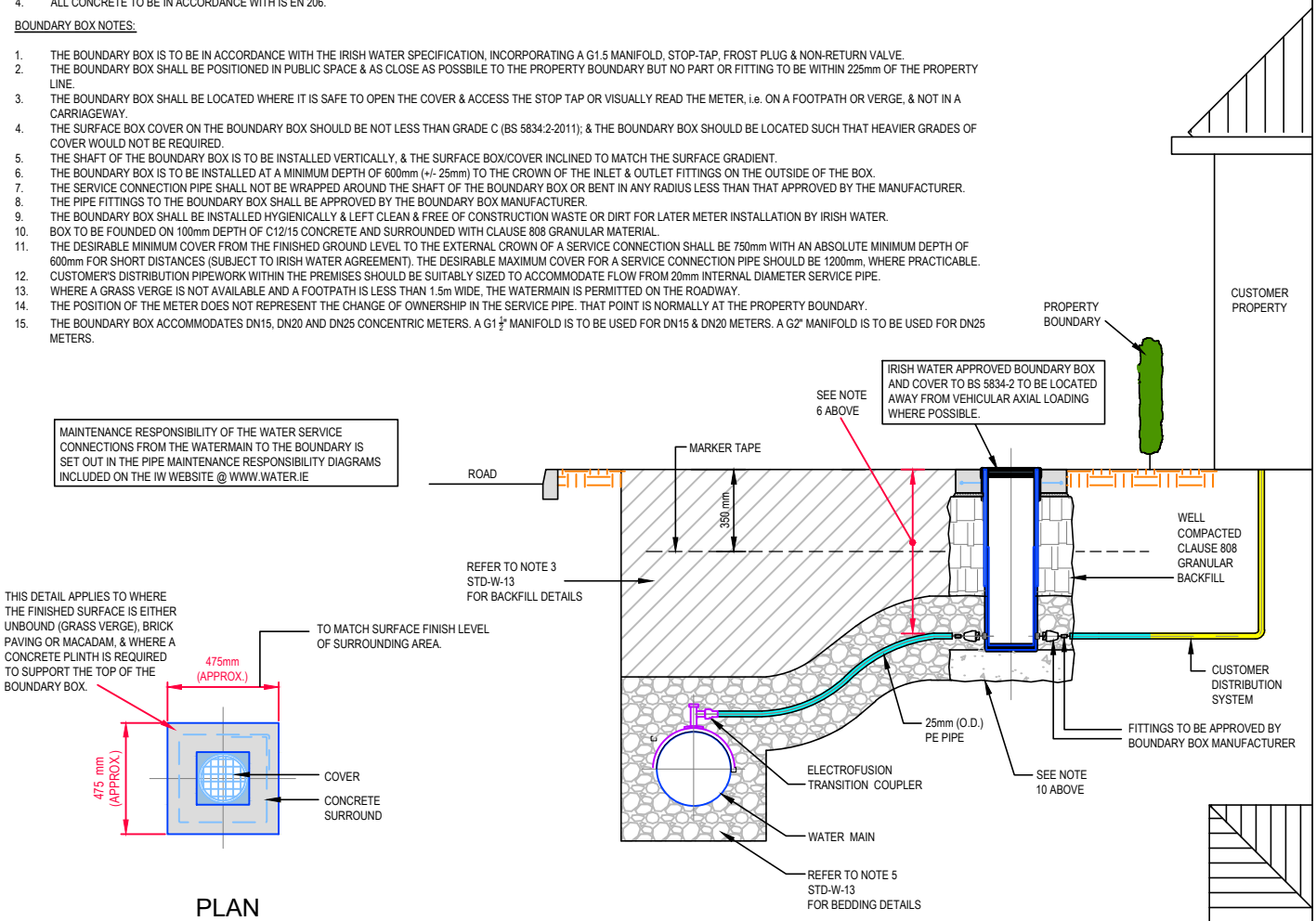
GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. FOR CONNECTION TO AN EXISTING MAIN THE CONNECTION SHALL BE AS PER THE PIPE MANUFACTURER'S SPECIFICATION.
3. ELECTRO FUSION COUPLING TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.

BOUNDARY BOX NOTES:

1. THE BOUNDARY BOX IS TO BE IN ACCORDANCE WITH THE IRISH WATER SPECIFICATION, INCORPORATING A G1.5 MANIFOLD, STOP-TAP, FROST PLUG & NON-RETURN VALVE.
2. THE BOUNDARY BOX SHALL BE POSITIONED IN PUBLIC SPACE & AS CLOSE AS POSSBILE TO THE PROPERTY BOUNDARY BUT NO PART OR FITTING TO BE WITHIN 225mm OF THE PROPERTY LINE.
3. THE BOUNDARY BOX SHALL BE LOCATED WHERE IT IS SAFE TO OPEN THE COVER & ACCESS THE STOP TAP OR VISUALLY READ THE METER, i.e. ON A FOOTPATH OR VERGE, & NOT IN A CARRIAGEWAY.
4. THE SURFACE BOX COVER ON THE BOUNDARY BOX SHOULD BE NOT LESS THAN GRADE C (BS 5834:2-2011); & THE BOUNDARY BOX SHOULD BE LOCATED SUCH THAT HEAVIER GRADES OF COVER WOULD NOT BE REQUIRED.
5. THE SHAFT OF THE BOUNDARY BOX IS TO BE INSTALLED VERTICALLY, & THE SURFACE BOX/COVER INCLINED TO MATCH THE SURFACE GRADIENT.
6. THE BOUNDARY BOX IS TO BE INSTALLED AT A MINIMUM DEPTH OF 600mm (+/- 25mm) TO THE CROWN OF THE INLET & OUTLET FITTINGS ON THE OUTSIDE OF THE BOX.
7. THE SERVICE CONNECTION PIPE SHALL NOT BE WRAPPED AROUND THE SHAFT OF THE BOUNDARY BOX OR BENT IN ANY RADIUS LESS THAN THAT APPROVED BY THE MANUFACTURER.
8. THE PIPE FITTINGS TO THE BOUNDARY BOX SHALL BE APPROVED BY THE BOUNDARY BOX MANUFACTURER.
9. THE BOUNDARY BOX SHALL BE INSTALLED HYGIENICALLY & LEFT CLEAN & FREE OF CONSTRUCTION WASTE OR DIRT FOR LATER METER INSTALLATION BY IRISH WATER.
10. BOX TO BE FOUNDED ON 100mm DEPTH OF C12/15 CONCRETE AND SURROUNDED WITH CLAUSE 808 GRANULAR MATERIAL.
11. THE DESIRABLE MINIMUM COVER FROM THE FINISHED GROUND LEVEL TO THE EXTERNAL CROWN OF A SERVICE CONNECTION SHALL BE 750mm WITH AN ABSOLUTE MINIMUM DEPTH OF 600mm FOR SHORT DISTANCES (SUBJECT TO IRISH WATER AGREEMENT). THE DESIRABLE MAXIMUM COVER FOR A SERVICE CONNECTION PIPE SHOULD BE 1200mm, WHERE PRACTICABLE.
12. CUSTOMER'S DISTRIBUTION PIPEWORK WITHIN THE PREMISES SHOULD BE SUITABLY SIZED TO ACCOMMODATE FLOW FROM 20mm INTERNAL DIAMETER SERVICE PIPE.
13. WHERE A GRASS VERGE IS NOT AVAILABLE AND A FOOTPATH IS LESS THAN 1.5m WIDE, THE WATERMAIN IS PERMITTED ON THE ROADWAY.
14. THE POSITION OF THE METER DOES NOT REPRESENT THE CHANGE OF OWNERSHIP IN THE SERVICE PIPE. THAT POINT IS NORMALLY AT THE PROPERTY BOUNDARY.
15. THE BOUNDARY BOX ACCOMMODATES DN15, DN20 AND DN25 CONCENTRIC METERS. A G1 $\frac{1}{2}$" MANIFOLD IS TO BE USED FOR DN15 & DN20 METERS. A G2" MANIFOLD IS TO BE USED FOR DN25 METERS.

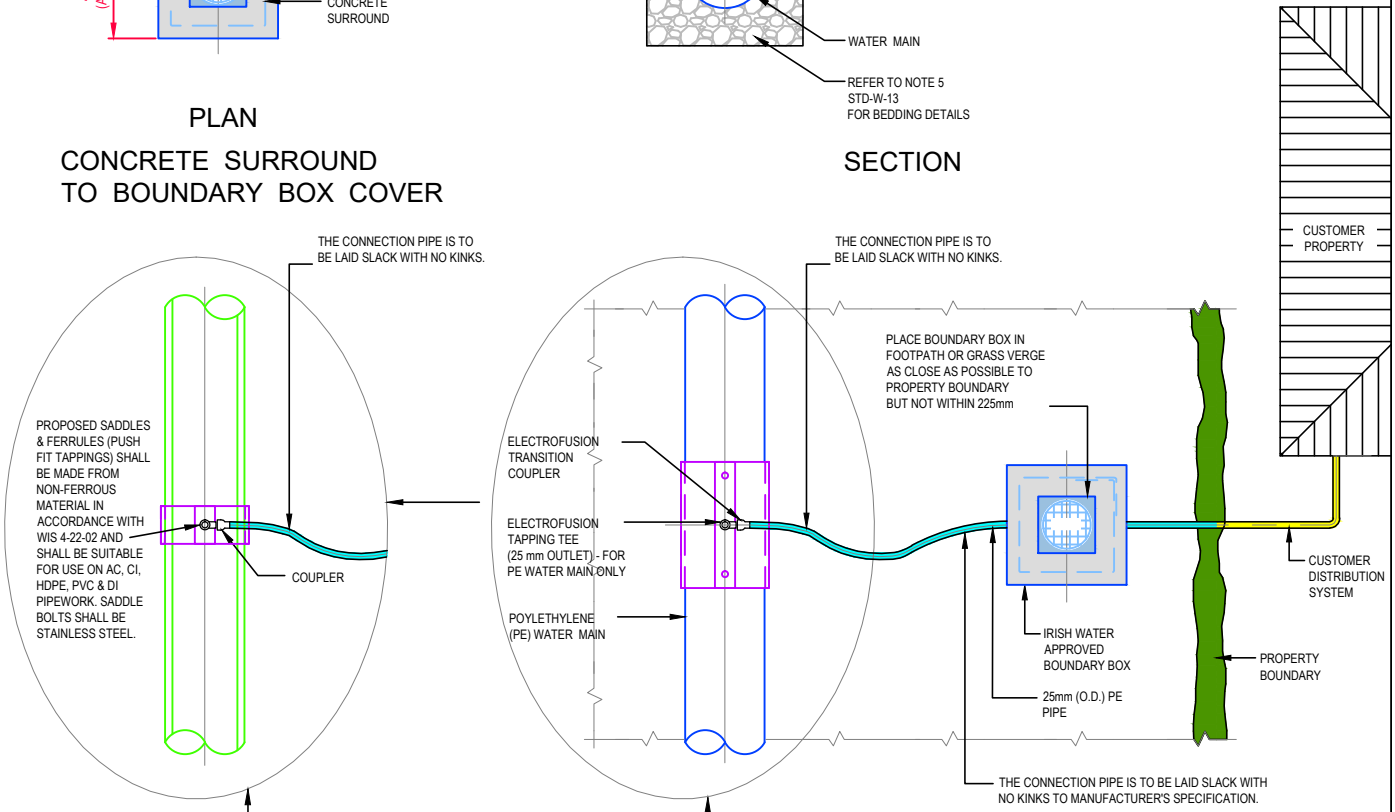
MAINTENANCE RESPONSIBILITY OF THE WATER SERVICE CONNECTIONS FROM THE WATERMAIN TO THE BOUNDARY IS SET OUT IN THE PIPE MAINTENANCE RESPONSIBILITY DIAGRAMS INCLUDED ON THE IW WEBSITE @ WWW.WATER.IE



PLAN

CONCRETE SURROUND TO BOUNDARY BOX COVER

SECTION



FOR D.I. WATER MAINS

FOR POLYETHYLENE (PE) WATER MAIN ONLY

PLAN

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
4	07/'20	RH	TOC	Service connection ownership revised, notes added	MOD
3	11/'17	JMC	TOC	Updated & added notes	MOD
2	08/'16	JMC	TOC	Revised D.I. service tapping detail	MOD
1	04/'16	JMC	TOC	Added dimensions & notes	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

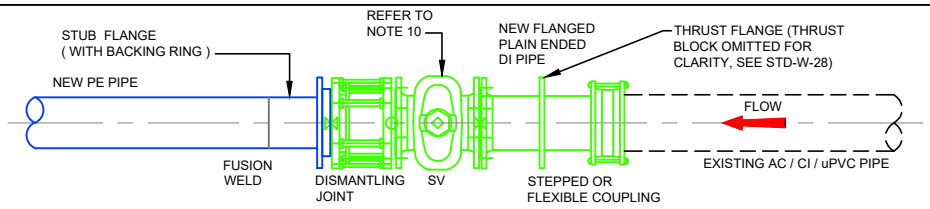
SCALE: NOT TO SCALE

DATE: SEPT. 2015

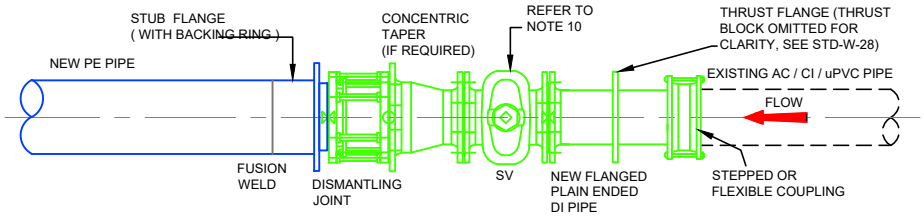
TITLE: CUSTOMER CONNECTION AND BOUNDARY BOX (25mm OD PIPE)

DRAWING No.: STD-W- 03

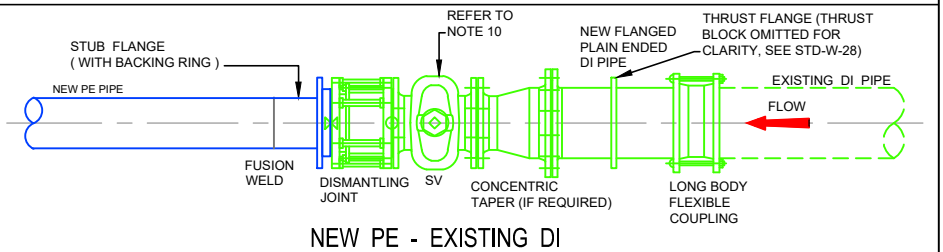
REV: 4



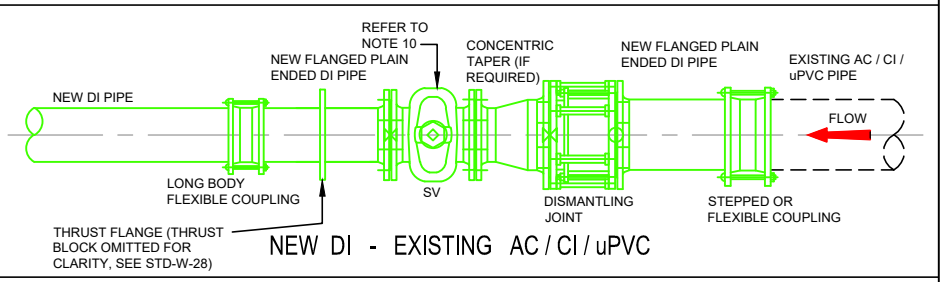
NEW PE - EXISTING AC / CI / uPVC (SAME SIZE AS NEW)



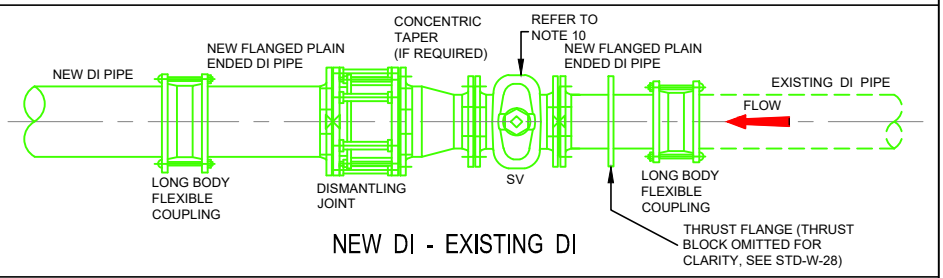
NEW PE - EXISTING AC / CI / uPVC (DIFFERENT SIZE TO NEW)



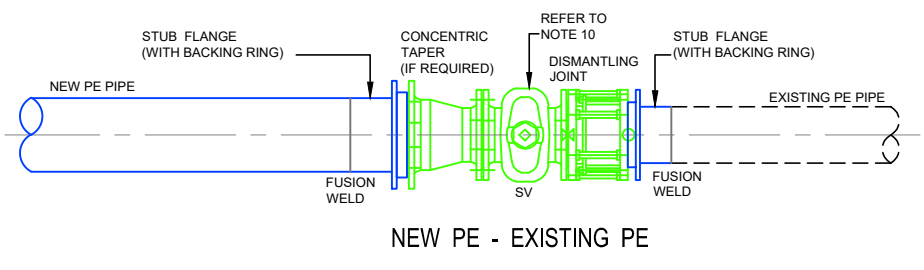
NEW PE - EXISTING DI



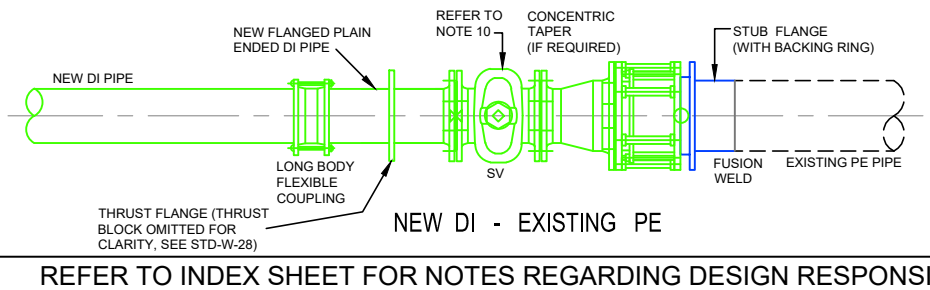
NEW DI - EXISTING AC / CI / uPVC



NEW DI - EXISTING DI



NEW PE - EXISTING PE



NEW DI - EXISTING PE

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. ALL BENDS, TEES, DEAD ENDS, ETC. OF PIPELINES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
3. BUTT FUSION WELDING AND ELECTRO FUSION JOINTING OF PIPES SHALL ONLY BE CARRIED OUT BY TRAINED OPERATIVES IN POSSESSION OF A CURRENT TRAINING CERTIFICATE, USING FULLY AUTOMATIC APPROVED JOINTING MACHINE/RIGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE IDENTITY OF THE PE PIPELINE MANUFACTURER SHALL BE MADE KNOWN TO IRISH WATER PRIOR TO COMMENCEMENT OF THE INSTALLATION. CERTIFICATION AND TESTING (INCLUDING INDEPENDENT THIRD PARTY CERTIFICATION) SHALL BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY MARKED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINTING MACHINE. A PRINTOUT OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH JOINT, SHALL BE PROVIDED AND RETAINED FOR QUALITY ASSURANCE PURPOSES.
4. CONNECTING TO EXISTING MAINS IS TO BE CARRIED OUT BY IRISH WATER OR AN APPROVED IRISH WATER AGENT.
5. WHEN EXISTING AC WATERMAINS ARE PRESENT A SPECIFIC METHOD STATEMENT SHALL BE SUBMITTED TO IRISH WATER PRIOR TO WORKS TAKING PLACE AND SUBJECT TO WRITTEN APPROVAL, DETAILING THE PROTECTION TO BE PUT IN PLACE TO EXISTING MAINS, METHOD OF REMOVAL OF EXISTING AC, METHOD OF DISPOSAL OF EXISTING AC AND METHOD OF CONNECTION TO EXISTING AC.
6. PIPE MATERIAL REFERENCES AS FOLLOWS:
   AC - ASBESTOS CEMENT
   DI - DUCTILE IRON
   CI - CAST IRON
   PE - POLYETHYLENE
   uPVC - UNPLASTICISED POLY VINYL CHLORIDE
   ST - STEEL
   OTHER - REFERS TO ALL EXISTING PIPE MATERIALS OTHER THAN PE (TYPICALL AC, DI, CI, uPVC & ST).
7. SLUICE VALVE CHAMBERS TO BE IN ACCORDANCE WITH STD-W-14 (DI) AND STD-W-15 (PE). CHAMBERS NOT SHOWN FOR CLARITY.
8. ALL THRUST FLANGES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
9. A HIGH LEVEL OF HEALTH & SAFETY PROCEDURES IS REQUIRED WHEN WORKING ON AC MAINS, & THE OPERATION OF DISMANTLING/ REMOVAL OF AC PIPES & JOINTS.
10. VALVES SHALL BE ARRANGED IN SUCH A MANNER TO ALLOW FOR THE NETWORK TO BE MANAGED TO ENSURE THAT NO MORE THAN 40 PROPERTIES LOSE WATER FROM A BURST ON THE SYSTEM AT ANY ONE TIME.

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
4	07/'20	RH	TOC	Dismantling joints relocated	MOD
3	11/'17	JMC	TOC	Added 2 No. Extg. PE Details, updated details & added notes	MOD
2	08/'16	JMC	TOC	Added Note 9	MOD
1	04/'16	JMC	TOC	Added couplings (2 details)	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

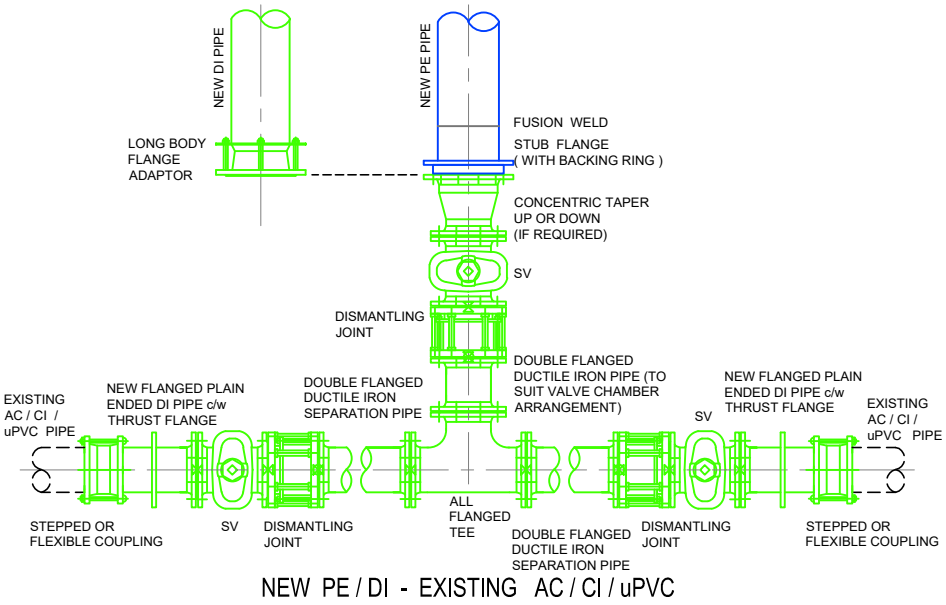
SCALE: NOT TO SCALE

DATE: SEPT. 2015

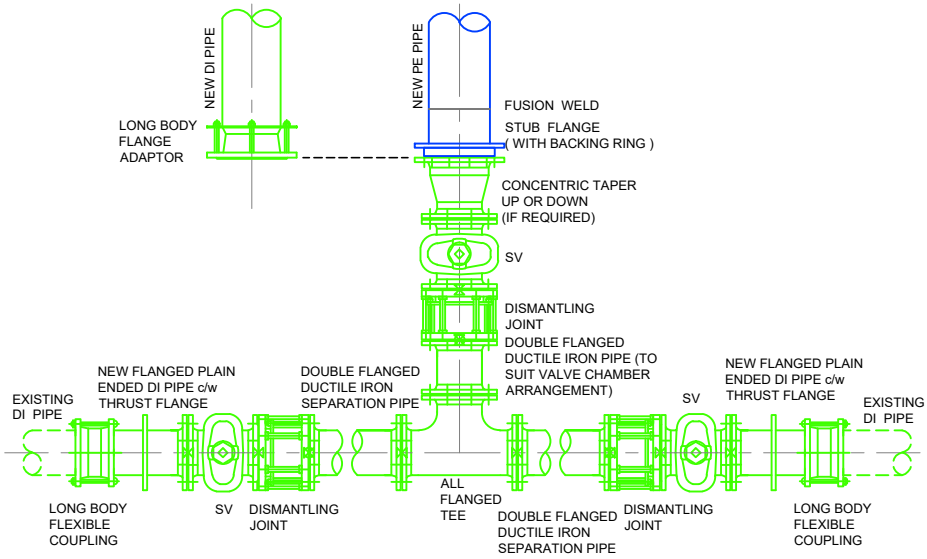
TITLE: GENERAL PIPE CONNECTIONS (Sheet 1 of 7)

DRAWING No.: STD-W- 04

REV: 4

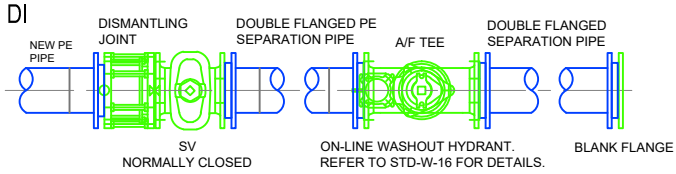


NEW PE / DI - EXISTING AC / CI / uPVC

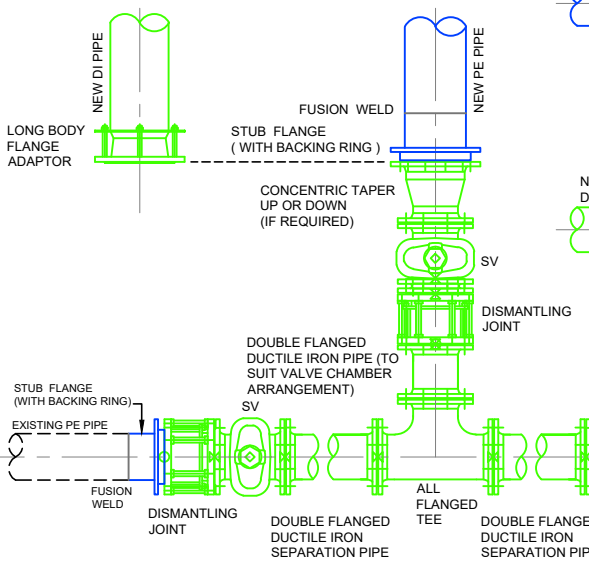


NEW PE / DI - EXISTING DI

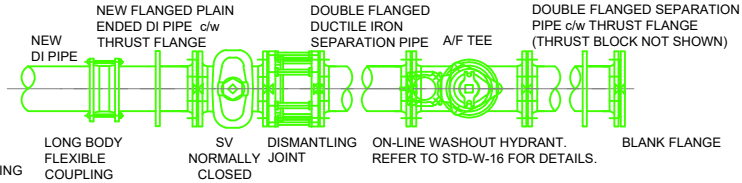
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. ALL BENDS, TEES, DEAD ENDS, ETC. OF PIPELINES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
3. BUTT FUSION WELDING AND ELECTRO FUSION JOINTING OF PIPES SHALL ONLY BE CARRIED OUT BY TRAINED OPERATIVES IN POSSESSION OF A CURRENT TRAINING CERTIFICATE, USING FULLY AUTOMATIC APPROVED JOINTING MACHINE/RIGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE IDENTITY OF THE PE PIPELINE MANUFACTURER SHALL BE MADE KNOWN TO IRISH WATER PRIOR TO COMMENCEMENT OF THE INSTALLATION. CERTIFICATION AND TESTING (INCLUDING INDEPENDENT THIRD PARTY CERTIFICATION) SHALL BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY MARKED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINTING MACHINE. A PRINTOUT OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH JOINT, SHALL BE PROVIDED AND RETAINED FOR QUALITY ASSURANCE PURPOSES.
4. CONNECTING TO EXISTING MAINS IS TO BE CARRIED OUT BY IRISH WATER OR AN APPROVED IRISH WATER AGENT.
5. WHEN EXISTING AC WATERMAINS ARE PRESENT A SPECIFIC METHOD STATEMENT SHALL BE SUBMITTED TO IRISH WATER PRIOR TO WORKS TAKING PLACE AND SUBJECT TO WRITTEN APPROVAL, DETAILING THE PROTECTION TO BE PUT IN PLACE TO EXISTING MAINS, METHOD OF REMOVAL OF EXISTING AC, METHOD OF DISPOSAL OF EXISTING AC AND METHOD OF CONNECTION TO EXISTING AC.
6. PIPE MATERIAL REFERENCES AS FOLLOWS:
   AC - ASBESTOS CEMENT
   DI - DUCTILE IRON
   CI - CAST IRON
   PE - POLYETHYLENE
   uPVC - UNPLASTICISED POLY VINYL CHLORIDE
   ST - STEEL
   OTHER - REFERS TO ALL EXISTING PIPE MATERIALS OTHER THAN PE (TYPICALL AC, DI, CI, uPVC & ST).
7. VALVE CHAMBER TO BE IN ACCORDANCE WITH STD-W-14 (DI) AND STD-W-15 (PE). CHAMBER NOT SHOWN FOR CLARITY.
8. ALL THRUST FLANGES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
9. DOUBLE FLANGED SEPARATION PIPE, UP TO 5m IN LENGTH, MAY BE REQUIRED TO ALLOW SEPARATION DISTANCE BETWEEN VALVE CHAMBERS.
10. A HIGH LEVEL OF HEALTH & SAFETY PROCEDURES IS REQUIRED WHEN WORKING ON AC MAINS, & THE OPERATION OF DISMANTLING/ REMOVAL OF AC PIPES & JOINTS.
11. VALVES SHALL BE ARRANGED IN SUCH A MANNER TO ALLOW FOR THE NETWORK TO BE MANAGED TO ENSURE THAT NO MORE THAN 40 PROPERTIES LOSE WATER FROM A BURST ON THE SYSTEM AT ANY ONE TIME.
12. UNEQUAL TEES MAY BE USED INSTEAD OF CONCENTRIC TAPERS (WHERE APPLICABLE).



TEMPORARY "DEAD-END" DETAIL (FOR FUTURE EXTENSION) - PE



NEW PE - EXISTING PE



TEMPORARY "DEAD-END" DETAIL (FOR FUTURE EXTENSION) - DI

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Added Note 12, separation pipe material added, dismantling joints relocated	MOD
2	11/'17	JMC	TOC	Added new D.I. pipe to details, added 3 No. details & updated notes	MOD
1	08/'16	JMC	TOC	Added Note 10	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE: GENERAL PIPE CONNECTIONS (Sheet 2 of 7)

DRAWING No.: STD-W- 05

REV: 3

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. ALL BENDS, TEES, DEAD ENDS, ETC. OF PIPELINES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
3. BUTT FUSION WELDING AND ELECTRO FUSION JOINTING OF PIPES SHALL ONLY BE CARRIED OUT BY TRAINED OPERATIVES IN POSSESSION OF A CURRENT TRAINING CERTIFICATE, USING FULLY AUTOMATIC APPROVED JOINTING MACHINE/RIGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE IDENTITY OF THE PE PIPELINE MANUFACTURER SHALL BE MADE KNOWN TO IRISH WATER PRIOR TO COMMENCEMENT OF THE INSTALLATION. CERTIFICATION AND TESTING (INCLUDING INDEPENDENT THIRD PARTY CERTIFICATION) SHALL BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY MARKED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINTING MACHINE. A PRINTOUT OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH JOINT, SHALL BE PROVIDED AND RETAINED FOR QUALITY ASSURANCE PURPOSES.
4. CONNECTING TO EXISTING MAINS IS TO BE CARRIED OUT BY IRISH WATER OR AN APPROVED IRISH WATER AGENT.
5. WHEN EXISTING AC WATERMAINS ARE PRESENT A SPECIFIC METHOD STATEMENT SHALL BE SUBMITTED TO IRISH WATER PRIOR TO WORKS TAKING PLACE AND SUBJECT TO WRITTEN APPROVAL, DETAILING THE PROTECTION TO BE PUT IN PLACE TO EXISTING MAINS, METHOD OF REMOVAL OF EXISTING AC, METHOD OF DISPOSAL OF EXISTING AC AND METHOD OF CONNECTION TO EXISTING AC.
6. PIPE MATERIAL REFERENCES AS FOLLOWS:
   AC - ASBESTOS CEMENT
   DI - DUCTILE IRON
   CI - CAST IRON
   PE - POLYETHYLENE
   uPVC - UNPLASTICISED POLY VINYL CHLORIDE
   ST - STEEL
   OTHER - REFERS TO ALL EXISTING PIPE MATERIALS OTHER THAN PE (TYPICALLY AC, DI, CI, uPVC & ST)
7. SLUICE VALVE CHAMBERS TO BE IN ACCORDANCE WITH STD-W-14 (DI) AND STD-W-15 (PE). CHAMBERS NOT SHOWN FOR CLARITY.
8. ALL THRUST FLANGES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
9. DOUBLE FLANGED SEPARATION PIPE, UP TO 5m IN LENGTH, MAY BE REQUIRED TO ALLOW SEPARATION DISTANCE BETWEEN VALVE CHAMBERS.
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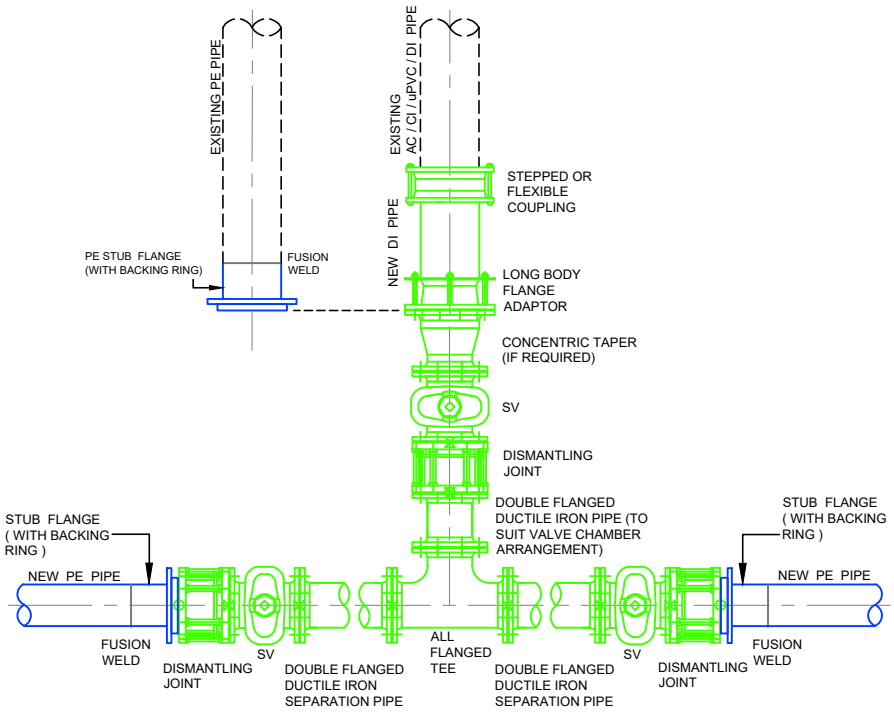
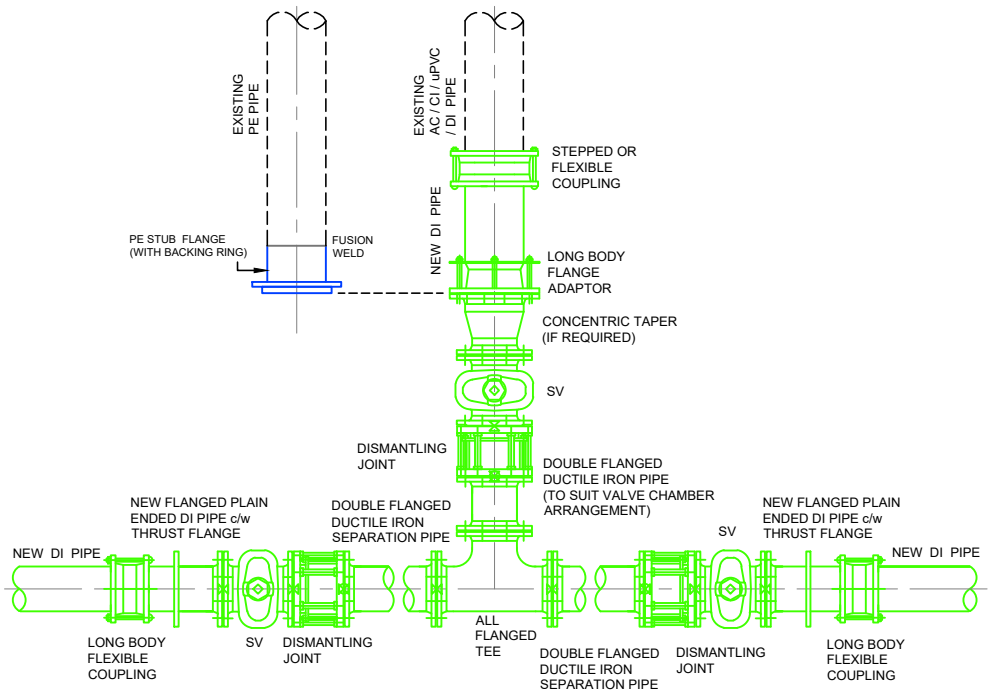
12. UNEQUAL TEES MAY BE USED INSTEAD OF CONCENTRIC TAPERS (WHERE APPLICABLE).



NEW PE - EXISTING AC / CI / uPVC / DI / PE



NEW DI - EXISTING AC / CI / uPVC / DI / PE

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Added Note 12, separation pipe material added, dismantling joints relocated	MOD
2	11/'17	JMC	TOC	Added extg. PE pipe to details & updated notes	MOD
1	08/'16	JMC	TOC	Added Note 10	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE: GENERAL PIPE CONNECTIONS (Sheet 3 of 7)

DRAWING No.: STD-W- 06

REV: 3

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. ALL BENDS, TEES, DEAD ENDS, ETC. OF PIPELINES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
3. BUTT FUSION WELDING AND ELECTRO FUSION JOINTING OF PIPES SHALL ONLY BE CARRIED OUT BY TRAINED OPERATIVES IN POSSESSION OF A CURRENT TRAINING CERTIFICATE, USING FULLY AUTOMATIC APPROVED JOINTING MACHINE/RIGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE IDENTITY OF THE PE PIPELINE MANUFACTURER SHALL BE MADE KNOWN TO IRISH WATER PRIOR TO COMMENCEMENT OF THE INSTALLATION. CERTIFICATION AND TESTING (INCLUDING INDEPENDENT THIRD PARTY CERTIFICATION) SHALL BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY MARKED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINTING MACHINE. A PRINTOUT OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH JOINT, SHALL BE PROVIDED AND RETAINED FOR QUALITY ASSURANCE PURPOSES.
4. CONNECTING TO EXISTING MAINS IS TO BE CARRIED OUT BY IRISH WATER OR AN APPROVED IRISH WATER AGENT.
5. WHEN EXISTING AC WATERMAINS ARE PRESENT A SPECIFIC METHOD STATEMENT SHALL BE SUBMITTED TO IRISH WATER PRIOR TO WORKS TAKING PLACE AND SUBJECT TO WRITTEN APPROVAL, DETAILING THE PROTECTION TO BE PUT IN PLACE TO EXISTING MAINS, METHOD OF REMOVAL OF EXISTING AC, METHOD OF DISPOSAL OF EXISTING AC AND METHOD OF CONNECTION TO EXISTING AC.
6. PIPE MATERIAL REFERENCES AS FOLLOWS:
   AC - ASBESTOS CEMENT
   DI - DUCTILE IRON
   CI - CAST IRON
   PE - POLYETHYLENE
   uPVC - UNPLASTICISED POLY VINYL CHLORIDE
   ST - STEEL
   OTHER - REFERS TO ALL EXISTING PIPE MATERIALS OTHER THAN PE (TYPICALLY AC, DI, CI, uPVC & ST)
7. SLUICE VALVE CHAMBERS TO BE IN ACCORDANCE WITH STD-W-14 (DI) AND STD-W-15 (PE). CHAMBERS NOT SHOWN FOR CLARITY.
8. ALL THRUST FLANGES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
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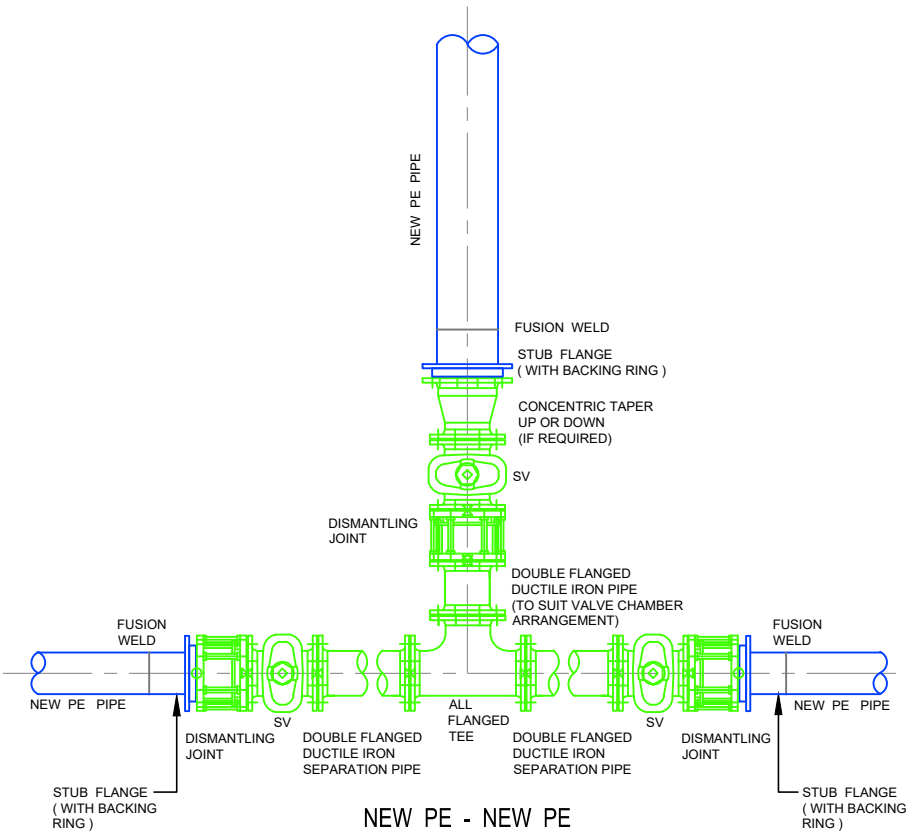
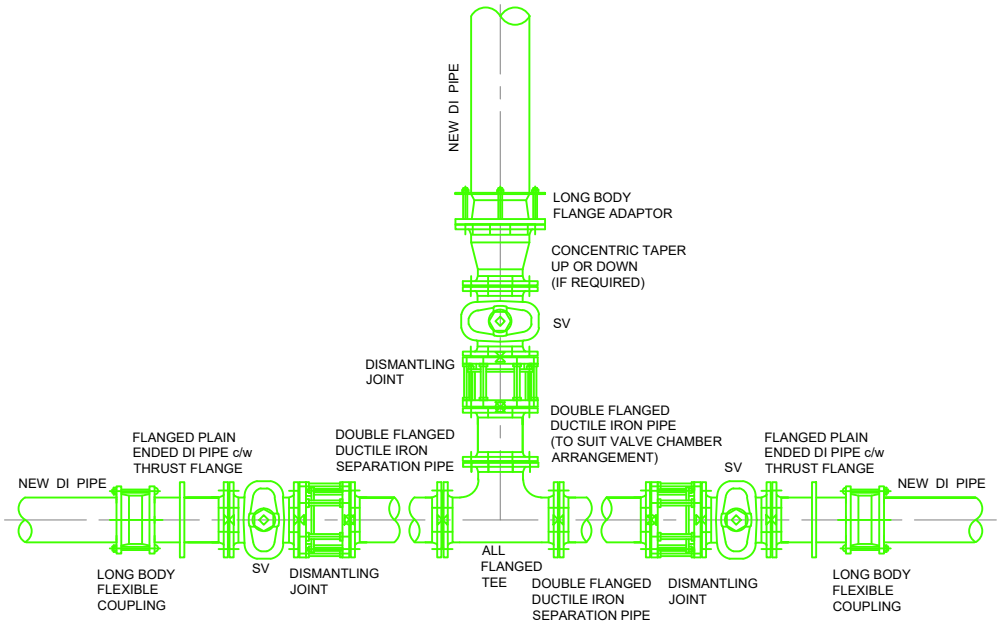


NEW PE - NEW PE



NEW DI - NEW DI

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
2	07/'20	RH	TOC	Added Note 11, separation pipe material added, dismantling joints relocated	MOD
1	11/'17	JMC	TOC	Notes added & updated.	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE: GENERAL PIPE CONNECTIONS (Sheet 4 of 7)

DRAWING No.: STD-W- 07

REV: 2

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. ALL BENDS, TEES, DEAD ENDS, ETC. OF PIPELINES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
3. BUTT FUSION WELDING AND ELECTRO FUSION JOINTING OF PIPES SHALL ONLY BE CARRIED OUT BY TRAINED OPERATIVES IN POSSESSION OF A CURRENT TRAINING CERTIFICATE, USING FULLY AUTOMATIC APPROVED JOINTING MACHINE/RIGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE IDENTITY OF THE PE PIPELINE MANUFACTURER SHALL BE MADE KNOWN TO IRISH WATER PRIOR TO COMMENCEMENT OF THE INSTALLATION. CERTIFICATION AND TESTING (INCLUDING INDEPENDENT THIRD PARTY CERTIFICATION) SHALL BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY MARKED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINTING MACHINE. A PRINTOUT OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH JOINT, SHALL BE PROVIDED AND RETAINED FOR QUALITY ASSURANCE PURPOSES.
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5. WHEN EXISTING AC WATERMAINS ARE PRESENT A SPECIFIC METHOD STATEMENT SHALL BE SUBMITTED TO IRISH WATER PRIOR TO WORKS TAKING PLACE AND SUBJECT TO WRITTEN APPROVAL, DETAILING THE PROTECTION TO BE PUT IN PLACE TO EXISTING MAINS, METHOD OF REMOVAL OF EXISTING AC, METHOD OF DISPOSAL OF EXISTING AC AND METHOD OF CONNECTION TO EXISTING AC.
6. PIPE MATERIAL REFERENCES AS FOLLOWS:
   AC - ASBESTOS CEMENT
   DI - DUCTILE IRON
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   ST - STEEL
   OTHER - REFERS TO ALL EXISTING PIPE MATERIALS OTHER THAN PE (TYPICALLY AC, DI, CI, uPVC & ST)
7. SLUICE VALVE CHAMBERS TO BE IN ACCORDANCE WITH STD-W-14 (DI) AND STD-W-15 (PE). CHAMBERS NOT SHOWN FOR CLARITY
8. ALL THRUST FLANGES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY
9. DOUBLE FLANGED SEPARATION PIPE, UP TO 5m IN LENGTH, MAY BE REQUIRED TO ALLOW SEPARATION DISTANCE BETWEEN VALVE CHAMBERS
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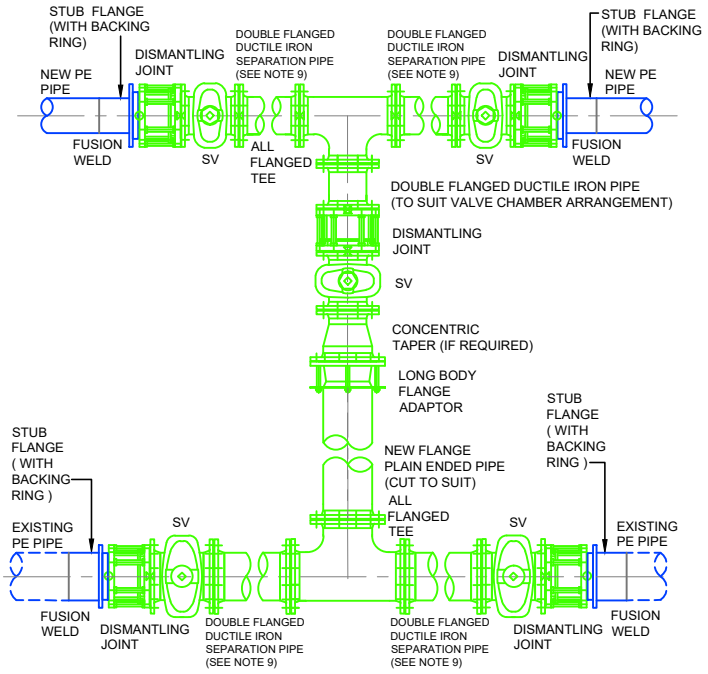
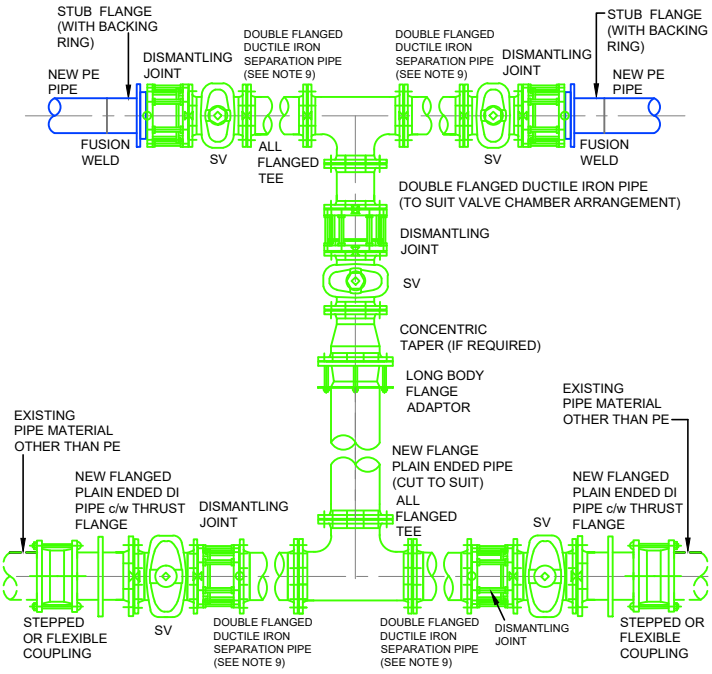
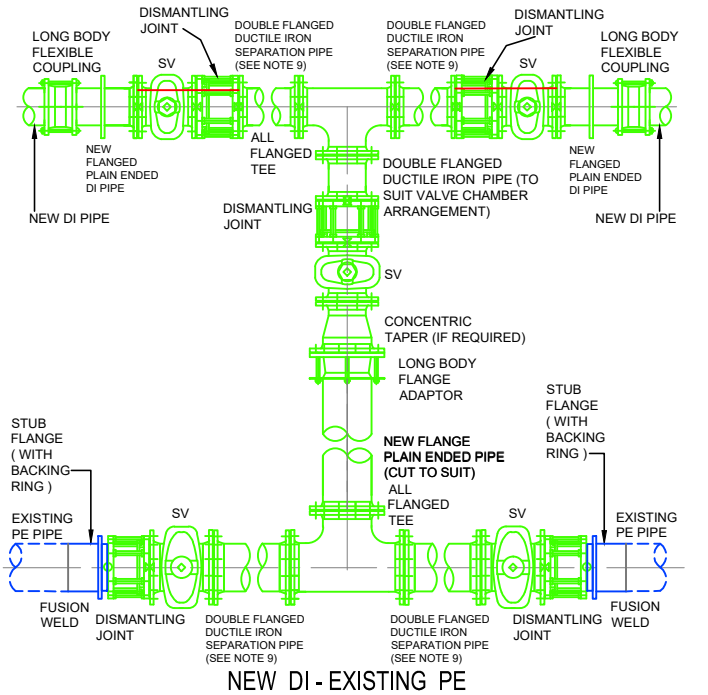


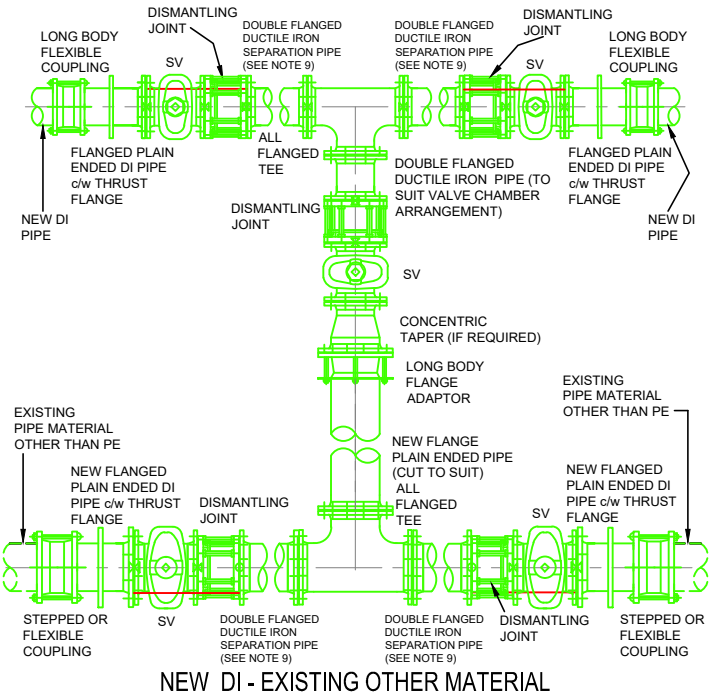
NEW PE - EXISTING PE



NEW PE - EXISTING OTHER MATERIAL



NEW DI - EXISTING PE



NEW DI - EXISTING OTHER MATERIAL

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
2	07/'20	RH	TOC	Added Note 10, separation pipe material added, dismantling joints relocated	MOD
1	11/'17	JMC	TOC	Notes added & updated.	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE: GENERAL PIPE CONNECTIONS (Sheet 5 of 7)

DRAWING No.: STD-W- 08

REV: 2

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

2. ALL BENDS, TEES, DEAD ENDS, ETC. OF PIPELINES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.

3. BUTT FUSION WELDING AND ELECTRO FUSION JOINTING OF PIPES SHALL ONLY BE CARRIED OUT BY TRAINED OPERATIVES IN POSSESSION OF A CURRENT TRAINING CERTIFICATE, USING FULLY AUTOMATIC APPROVED JOINTING MACHINE/RIGS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. THE IDENTITY OF THE PE PIPELINE MANUFACTURER SHALL BE MADE KNOWN TO IRISH WATER PRIOR TO COMMENCEMENT OF THE INSTALLATION. CERTIFICATION AND TESTING (INCLUDING INDEPENDENT THIRD PARTY CERTIFICATION) SHALL BE PROVIDED TO CONFIRM QUALITY ASSURANCE COMPLIANCE. EACH JOINT SHALL BE CLEARLY MARKED WITH THE JOINT LOGGED AUTOMATICALLY ON THE JOINTING MACHINE. A PRINTOUT OF THE JOINT DETAILS, WITH A GPS LOCATION OF EACH JOINT, SHALL BE PROVIDED AND RETAINED FOR QUALITY ASSURANCE PURPOSES.

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   ST - STEEL
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7. SLUICE VALVE CHAMBERS TO BE IN ACCORDANCE WITH STD-W-14 (DI) AND STD-W-15 (PE). CHAMBERS NOT SHOWN FOR CLARITY.

8. ALL THRUST FLANGES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.

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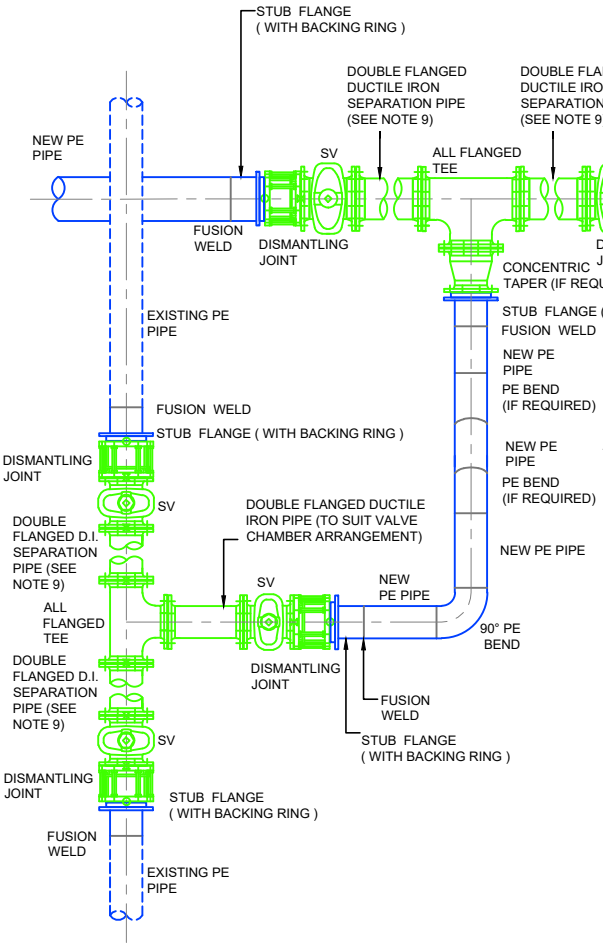
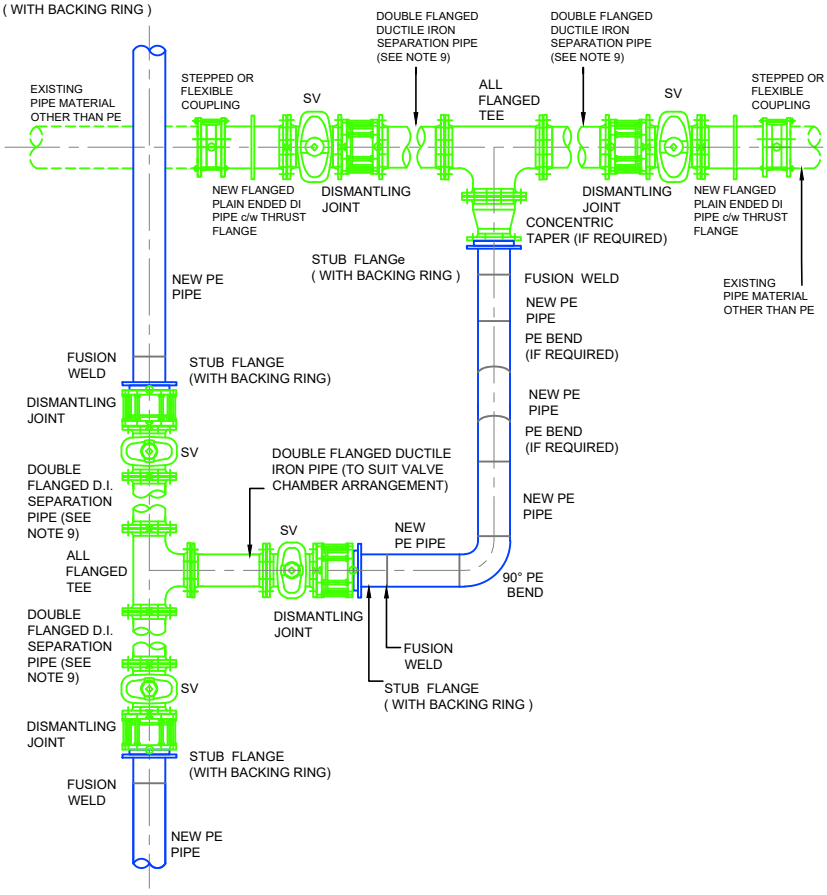


NEW PE - EXISTING PE



NEW PE - EXISTING OTHER MATERIAL

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
2	07/'20	RH	TOC	Added Note 10, separation pipe material added, dismantling joints relocated	MOD
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0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE: GENERAL PIPE CONNECTIONS (Sheet 6 of 7)

DRAWING No.: STD-W- 09

REV: 2

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

2. ALL BENDS, TEES, DEAD ENDS, ETC. OF PIPELINES TO BE ADEQUATELY RESTRAINED BY THRUST BLOCKS AS PER DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.

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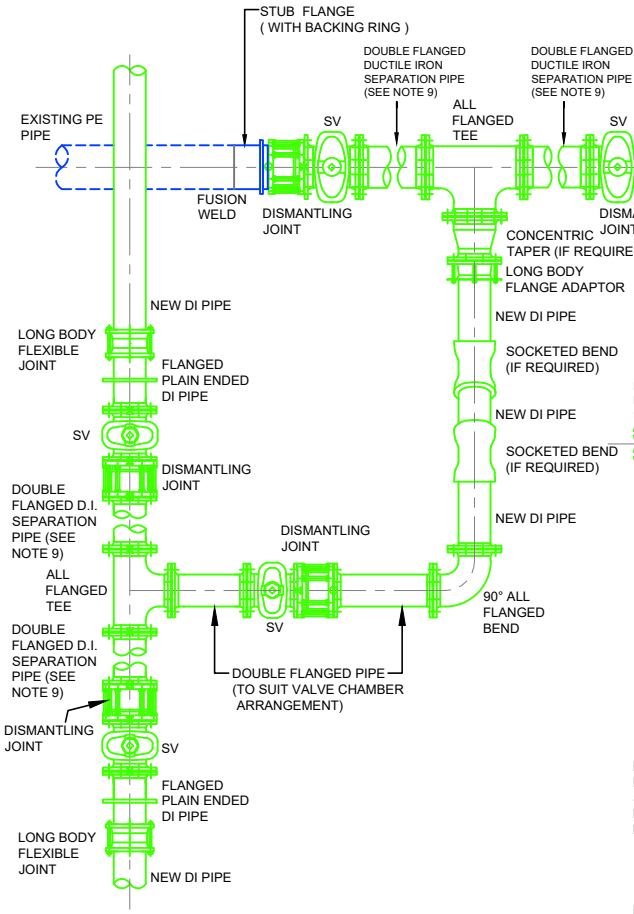
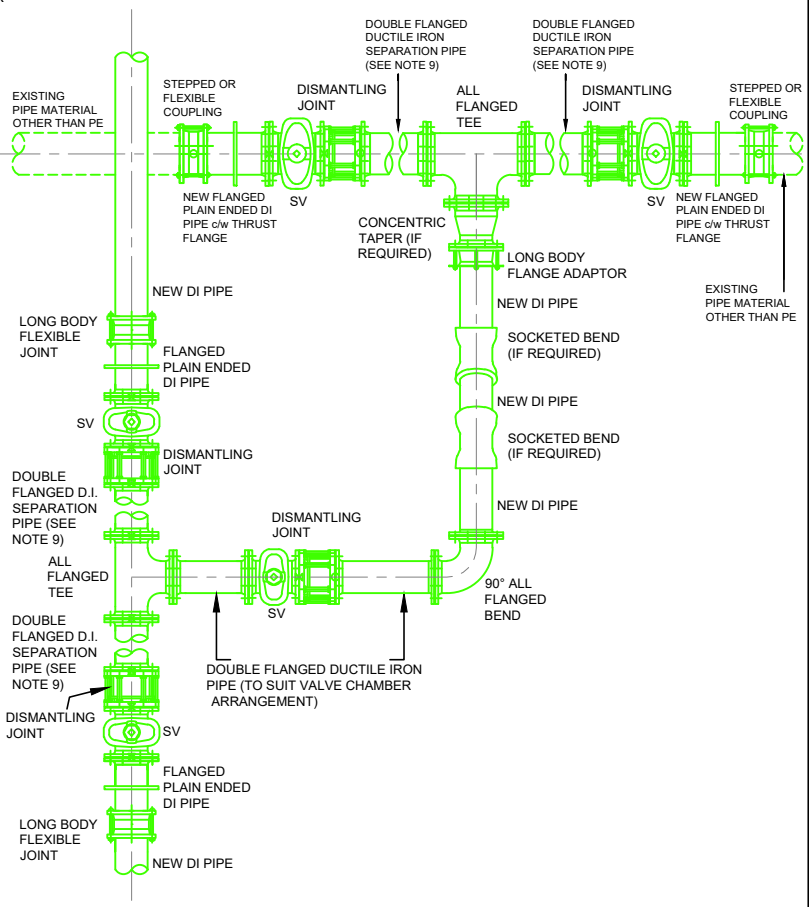


NEW DI - EXISTING PE



NEW DI - EXISTING OTHER MATERIAL

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
2	07/'20	RH	TOC	Added Note 10, separation pipe material added, dismantling joints relocated	MOD
1	11/'17	JMC	TOC	Notes added & updated	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE: GENERAL PIPE CONNECTIONS (Sheet 7 of 7)

DRAWING No.: STD-W- 10

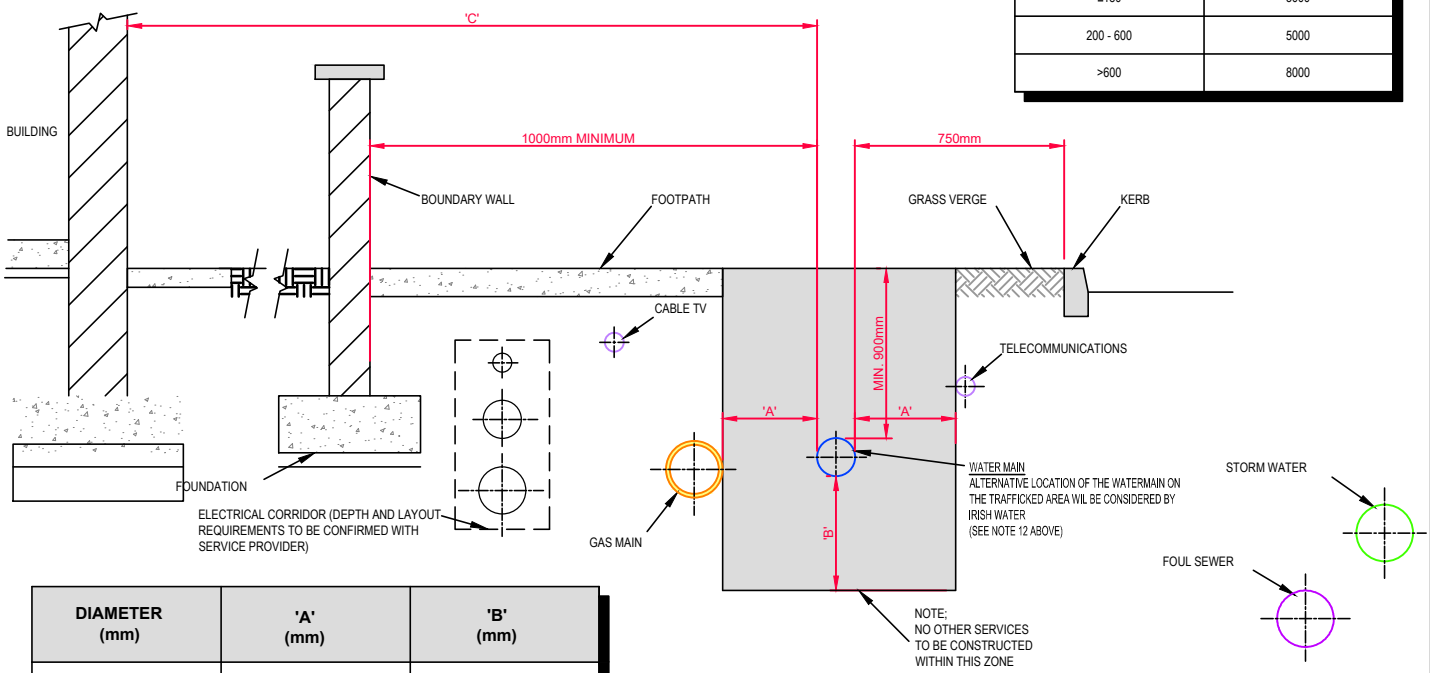
REV: 2

1. SEPARATION DISTANCES BETWEEN WATERMAINS ASSOCIATED WITH THE WORKS FROM OTHER UTILITY PIPES AND ACCESSORIES SHALL BE IN ACCORDANCE WITH SECTION 3.6 OF THE CODE OF PRACTICE. SEPARATION DISTANCES FOR ALL NEW INSTALLATIONS FROM EXISTING IRISH WATER PIPES SHALL BE AS OUTLINED IN SECTION 3.27 OF THE CODE OF PRACTICE. THE SEPARATION DISTANCES SPECIFIED ARE MINIMUM DISTANCES.
2. SPECIFIC SEPARATION CLEARANCE DISTANCES IN EXCESS OF THESE MINIMA SHALL BE PROVIDED FOR SERVICES SUCH AS GAS, ELECTRICITY, FIBRE-OPTIC OR OIL FILLED CABLES AS THE CASE MAY BE. THE PARTICULAR UTILITY PROVIDERS SHALL BE CONSULTED TO DETERMINE THESE MINIMUM SEPARATION DISTANCES AND EVIDENCE OF THIS CONSULTATION, WITH THE SPECIFIED SEPARATION DISTANCES, SHALL BE PROVIDED TO IRISH WATER AT DESIGN STAGE.
3. WATERMAIN (PROPOSED) SEPARATION DISTANCES
   HORIZONTAL
   300mm TO DISTRIBUTION MAINS OF LESS THAN 300mm DIAMETER.
   500mm TO TRUNK MAINS BETWEEN 300mm AND 450mm DIAMETER.
   3m TO ARTERIAL WATER MAINS OF GREATER THAN 450mm DIAMETER.
   VERTICAL
   300mm TO DISTRIBUTION MAINS OF LESS THAN 300mm DIAMETER.
   500mm TO TRUNK/ARTERIAL MAINS OF DIAMETER GREATER THAN 300mm.

   ANY PROPOSED PIPE CROSSING SHOULD BE LOCATED MID-WAY BETWEEN THE WATER JOINTS WITH MINIMUM CLEAR DISTANCE OF 300mm AND UP TO 500mm. ALL CROSSINGS SHOULD BE AT LEAST 500mm AWAY FROM FITTINGS OR JOINTS

4. WATERMAIN (EXISTING) SEPARATION DISTANCES
   HORIZONTAL
   IN THE CASE OF INSTALLATIONS IN CLOSE PROXIMITY TO EXISTING WATER MAINS AND SEWERS, THE FOLLOWING MINIMUM HORIZONTAL DISTANCES SHALL BE MAINTAINED BETWEEN PIPES/DUCTS, CABINETS, POLES, MANHOLES, JUNCTION BOXES, CHAMBERS, ETC. WHERE THE DEPTH OF THE EXISTING INFRASTRUCTURE DOES NOT EXCEED 1.5m
   600mm AT EITHER SIDE OF MAINS UP TO AND INCLUDING 150mm DIAMETER;
   1m AT EITHER SIDE OF MAINS OF 200mm TO 250Mmm DIAMETER;
   2m AT EITHER SIDE OF MAINS OF 300mm AND 375mm DIAMETER;
   5m AT EITHER SIDE OF MAINS OF 400mm AND 450mm DIAMETER;
   SPECIFIC IRISH WATER ADVISED DISTANCES FOR MAINS IN EXCESS OF 450mm;
   600mm AT EITHER SIDE OF GRAVITY SEWER UP TO AND INCLUDING 225mm DIAMETER;
   1m AT EITHER SIDE OF GRAVITY SEWER OF 300mm AND UP TO 450mm DIAMETER;
   1.5m AT EITHER SIDE OF GRAVITY SEWERS OF 600mm DIAMETER AND GREATER ;
5. NOTIFICATION IN WRITING IS REQUIRED SHOULD WORKS BE WITHIN THE FOLLOWING DISTANCES FROM AN EXISTING WATER MAIN OR WASTEWATER RISING MAIN WHERE THE DEPTH OF THE EXISTING INFRASTRUCTURE DOES NOT EXCEED 1.5m:-
   HORIZONTAL
   1m AT EITHER SIDE OF EXISTING PIPES LESS THAN 200mm DIAMETER;
   2m AT EITHER SIDE OF EXISTING PIPES OF 200mm TO 350mm DIAMETER;
   5m AT EITHER SIDE OF EXISTING PIPES OF 350mm OR GREATER;
   WHERE DUCTS OR PIPES ARE TO BE LAID CLOSE TO AN EXISTING WATERMAIN OR SEWER IN THE OWNERSHIP OF IRISH WATER. NOTIFICATION IN WRITING SHALL BE PROVIDED A MINIMUM OF 10 DAYS AHEAD OF ADVANCEMENT OF THE WORK. THIS ALSO APPLIES WHERE THE DEPTH OF THE IRISH WATER WATERMAIN OR SEWER EXCEEDS 1.5m. IN ALL OF THESE INSTANCES, SPECIFIC WRITTEN APPROVAL WILL BE REQUIRED FROM IRISH WATER BEFORE PROCEEDING WITH THE WORK
   NOTIFICATION IN WRITING IS REQUIRED SHOULD WORKS BE WITHIN 1.5m DISTANCE OF A WASTEWATER SEWER.
   REQUIREMENTS SHALL ALSO APPLY TO TRIAL HOLES OR SLIT TRENCHES TO LOCATE THE MAIN OR GAIN GROUND INFO DATA.
   LARGER DIAMETERS >300mm DISTRIBUTION AND TRUNK MAINS, IRISH WATER MUST BE NOTIFIED AT LEAST 1 MONTH IN ADVANCE.
   DEVELOPERS SHALL ALSO COMPLY WITH ANY NOTIFICATION REQUIREMENTS OF OTHER UTILITY PROVIDERS (ESB, GAS MAIN, TELECOMMUNICATION ETC).
6. DETAILED PROPOSALS, INCLUDING WORK METHOD STATEMENTS, INSURANCE CONFIRMATION AND DETAILS OF WORK COMPLETED OF A SIMILAR NATURE MUST BE SUBMITTED TO IRISH WATER FOR ITS CONSIDERATION BEFORE AGREEMENT WILL ISSUE. ALL SUCH WORKS IN THE VICINITY OF ARTERIAL WATER MAINS AND SEWERS (MAINS GREATER THAN 400mm) SHALL BE SUBJECT TO WRITTEN AGREEMENT WITH IRISH WATER BEFORE CONSTRUCTION COMMENCES ON SITE. THIS AGREEMENT SHALL ALSO INCLUDE ANY NECESSARY PROTECTION FOR WATER MAINS.
7. ANY DAMAGE SHALL BE NOTIFIED IMMEDIATELY TO IRISH WATER. THE PERSON WHO CAUSES THE DAMAGE TO A WATER MAIN OR FITTING WILL BE DEEMED TO HAVE COMMITTED AN OFFENCE UNDER SECTION 45 OF THE WATER SERVICES ACT 2007.
8. WATERMAINS OF ANY SIZE SHALL NOT BE WITHIN 1m OF THE BOUNDARY TO A PREMISES
9. UNDER NO CIRCUMSTANCES WILL IRISH WATER ACCEPT WATER MAIN INSTALLATIONS UNDER STRUCTURES, EXISTING OR PROPOSED, OR IN CLOSE PROXIMITY TO ANY EXISTING STRUCTURES OR FEATURES THAT WILL INHIBIT ACCESS FOR POST INSTALLATION MAINTENANCE AND ACCESS.
10. WHERE THE DESIGN DEVIATES FROM THIS STANDARD DETAIL, THE DESIGN SHALL BE SUBJECT TO THE REVIEW OF IRISH WATER.
11. SEPARATION DISTANCES BETWEEN UTILITIES MAY BE INCREASED TO PROVIDE FOR CHAMBER & THRUST BLOCKS AT BENDS.
12. WHERE A GRASS VERGE IS NOT AVAILABLE AND A FOOTPATH IS LESS THAN 1.5m WIDE, THE WATERMAIN IS PERMITTED ON THE ROADWAY.

DIAMETER (mm)	'C' (mm)
≤150	3000
200 - 600	5000
>600	8000



DIAMETER (mm)	'A' (mm)	'B' (mm)
<300	300	300
300 - 450	500	500
>450	3000	500

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
2	07/'20	RH	TOC	Notes added & updated	MOD
1	11/'17	JMC	TOC	Notes added & updated	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE

TYPICAL SERVICE LAYOUT
INDICATING SEPARATION DISTANCES

DRAWING No.: STD-W- 11

REV: 2

METHOD STATEMENTS:
ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH BS 5837 AND INFORMED BY NJUG VOLUME 4

PRECAUTION AREA:

EXCAVATIONS FOR PIPEWORK SHOULD NOT BE UNDERTAKEN WITHIN THIS AREA, UNLESS AGREED WITH IRISH WATER.

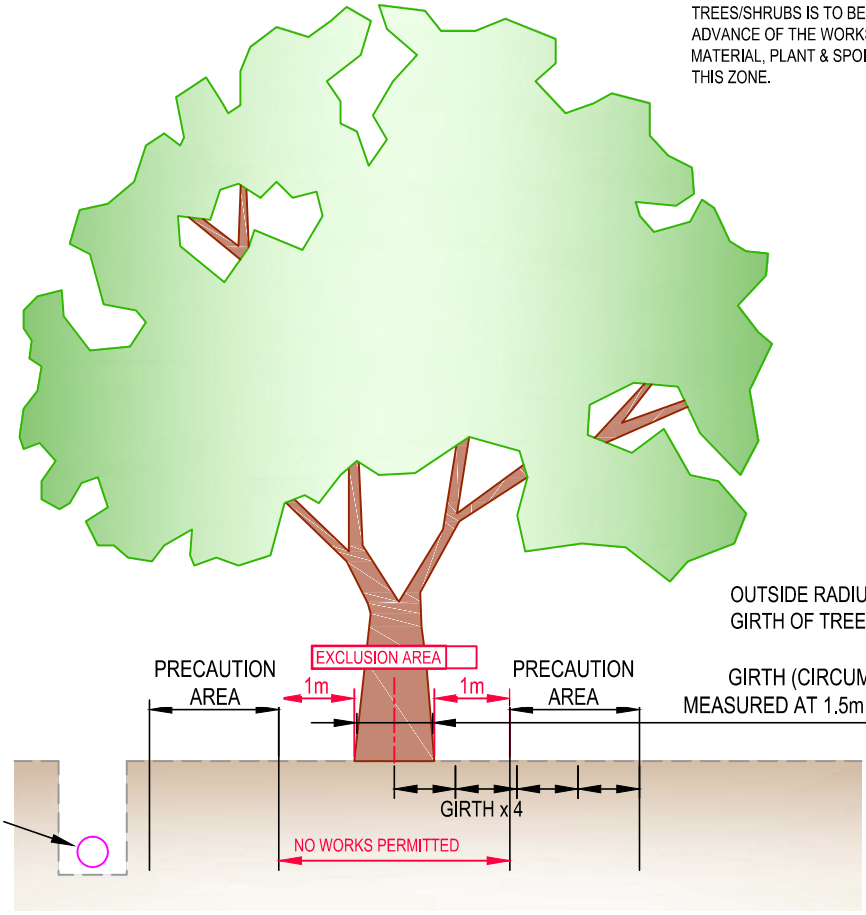
WORKS WITHIN THE PRECAUTION ZONE MUST BE SUPERVISED BY A QUALIFIED ARBORIST. WORKS SHALL BE SUBJECT OF A CLEAR METHOD STATEMENT OUTLINING ALL WORKS ADJACENT TO THE TREES/SHRUBS WHICH IS TO BE PREPARED & AGREED IN ADVANCE OF THE WORKS.

MATERIAL, PLANT & SPOIL SHALL NOT BE STORED WITHIN THIS ZONE.

EXCLUSION AREA:

WORKS IN THIS AREA ARE TO BE AVOIDED, UNLESS ABSOLUTELY NECESSARY & AGREED WITH IRISH WATER.

EXCAVATIONS FOR PIPEWORK SHOULD NOT BE UNDERTAKEN WITHIN THIS AREA, UNLESS NECESSARY AND NO OTHER OPTIONS AVAILABLE. WORKS WITHIN THE EXCLUSION ZONE MUST BE SUPERVISED BY A QUALIFIED ARBORIST AND AGREED WITH IRISH WATER. WORKS SHALL BE SUBJECT OF AN ARBORICULTURAL IMPACT ASSESSMENT AS PER BS 5837 & A CLEAR METHOD STATEMENT OUTLINING ALL WORKS ADJACENT TO THE TREES/SHRUBS IS TO BE PREPARED AND AGREED IN ADVANCE OF THE WORKS.
MATERIAL, PLANT & SPOIL SHALL NOT BE STORED WITHIN THIS ZONE.



OUTSIDE RADIUS OF PRECAUTION AREA = 4 x GIRTH OF TREE

GIRTH (CIRCUMFERENCE OF TREE MEASURED AT 1.5m ABOVE GROUND LEVEL)

PREVENTION MEASURES REQUIRED IN LINE WITH LANDSCAPING DESIGN & SPECIAL PROTECTION REQUIRED. (e.g. BY USE OF APPROPRIATE BARRIERS, HIGH PERFORMANCE JOINTS, OR BY USE OF POLYETHYLENE WITH WELDED JOINTS). THE LANDSCAPE DESIGN AND DETAILS OF THE SPECAIL PROTECTION MEASURES MUST BE AGREED WITH IRISH WATER

EXISTING PLANTING:

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
2	11/'17	JMC	TOC	Revised to suit ILI recommendations & changed drawing title	MOD
1	08/'16	JMC	TOC	Added new section & notes	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

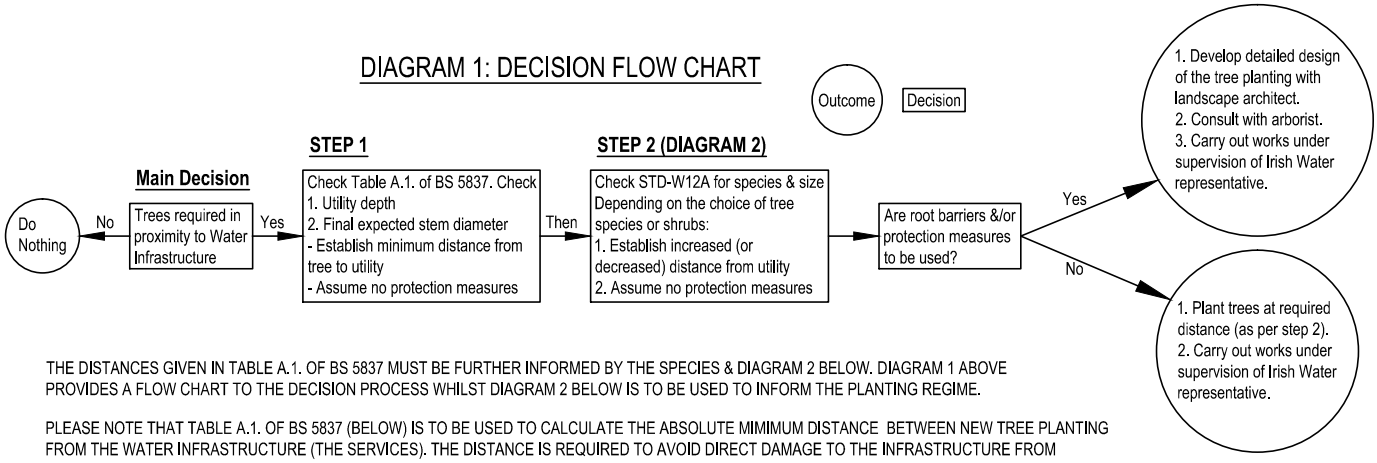
DATE: SEPT. 2015

TITLE: RESTRICTIONS ON WATER INFRASTRUCTURE WORKS ADJACENT TO EXISTING TREES

DRAWING No.: STD-W- 12

REV: 2

DIAGRAM 1: DECISION FLOW CHART



THE DISTANCES GIVEN IN TABLE A.1. OF BS 5837 MUST BE FURTHER INFORMED BY THE SPECIES & DIAGRAM 2 BELOW. DIAGRAM 1 ABOVE PROVIDES A FLOW CHART TO THE DECISION PROCESS WHILST DIAGRAM 2 BELOW IS TO BE USED TO INFORM THE PLANTING REGIME.

PLEASE NOTE THAT TABLE A.1. OF BS 5837 (BELOW) IS TO BE USED TO CALCULATE THE ABSOLUTE MIMIMUM DISTANCE BETWEEN NEW TREE PLANTING FROM THE WATER INFRASTRUCTURE (THE SERVICES). THE DISTANCE IS REQUIRED TO AVOID DIRECT DAMAGE TO THE INFRASTRUCTURE FROM FUTURE GROWTH. THE DISTANCE IS A FUNCTION OF THE DEPTH OF THE SERVICES AND THE (FINAL EXPECTED) STEM DIAMETER OF THE TREE AT MATURITY (i.e. FINAL EXPECTED GROWTH).

TABLE A.1. BS 5837	Minimum distance between young trees or new planting & structures, in metres (m)		
	Final stem dia. < 300mm	Final stem dia. 300mm to 600mm	Final stem dia. > 600mm
Services			
< 1m deep	0.5	1.5	3.0
> 1m deep	--	1.0	2.0

THUS FOR EXAMPLE:
- FOR A SERVICE LESS THAN 1 METRE DEEP, THE MINIMUM DISTANCE IS TO BE 1.5m FOR A TREE BETWEEN 300 AND 600mm STEM DIAMETER AT MATURITY.
- FOR A SERVICE GREATER THAN 1 METRE DEEP, THE MINIMUM DISTANCE IS TO BE 1.0m FOR A TREE BETWEEN 300 AND 600mm STEM DIAMETER AT MATURITY.

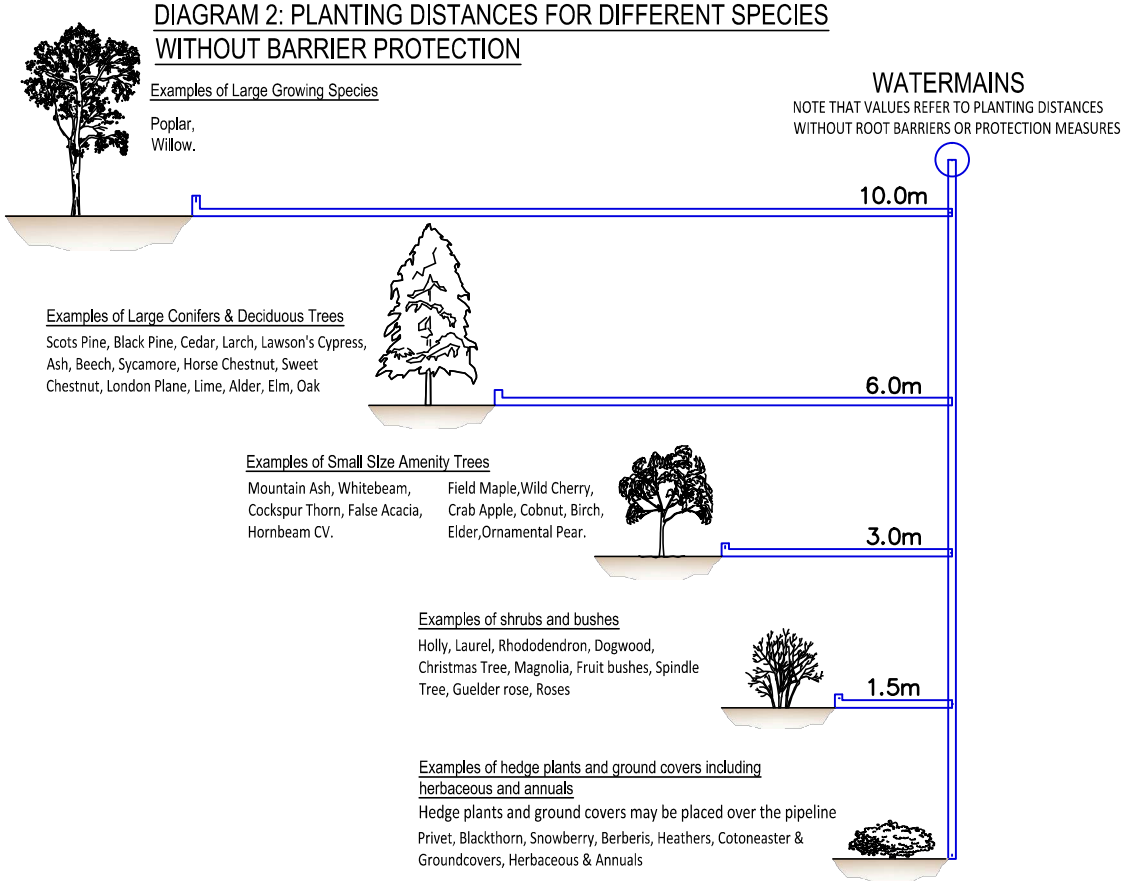
NOTE: RESTRICTIONS RELATE TO INFRASTRUCTURE WITHOUT ROOT INTRUSION PROTECTION.

THE DESIGN OF LANDSCAPING SHALL BE UNDERTAKEN IN CONJUNCTION WITH THE DESIGN OF WATER INFRASTRUCTURE, ETC. THE TREE/BUSH/SHRUB SHALL NOT BE LOCATED CLOSER TO THE WATER INFRASTRUCTURE THAN INDICATED ABOVE, EXCEPT WHERE SPECIAL PROTECTION MEASURES ARE PROVIDED. WHERE THERE IS A RISK OF TREE/ROOT INTRUSION, THE WATER INFRASTRUCTURE SHALL BE RESISTANT TO TREE ROOT INGRESS (e.g. BY USE OF APPROPRIATE BARRIERS, HIGH PERFORMANCE JOINTS, OR BY USE OF POLYETHYLENE WITH WELDED JOINTS). THE LANDSCAPE DESIGN AND DETAILS OF THE SPECIAL PROTECTION MEASURES MUST BE AGREED WITH IRISH WATER

A TREE SHALL NOT BE PLANTED DIRECTLY OVER WATER INFRASTRUCTURE WHERE EXCAVATION OF THE INFRASTRUCTURE WOULD REQUIRE REMOVAL OF THE TREE UNLESS SUCH PLANTING IS AGREED WITH IRISH WATER AND IN GENERAL ONLY SHALLOW ROOTING SHRUBS SHALL BE PLANTED CLOSE TO WATER INFRASTRUCTURE.

PLEASE ENSURE THAT THESE DISTANCES ARE ADHERED TO IN ORDER TO PROTECT THE TREES FROM ANY FUTURE MAINTENANCE. REFERENCE SHOULD ALSO BE MADE TO BS 5837, BS 8545 AND THE NJUG GUIDELINES VOLUME 4 FOR FURTHER INFORMATION.

DIAGRAM 2: PLANTING DISTANCES FOR DIFFERENT SPECIES WITHOUT BARRIER PROTECTION



NOTE: OTHER SPECIES NOT NAMED TO BE PLANTED TO THE SAME SPACINGS DEPENDING ON ROOT FORMATION.

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
0	11/'17	JMC	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

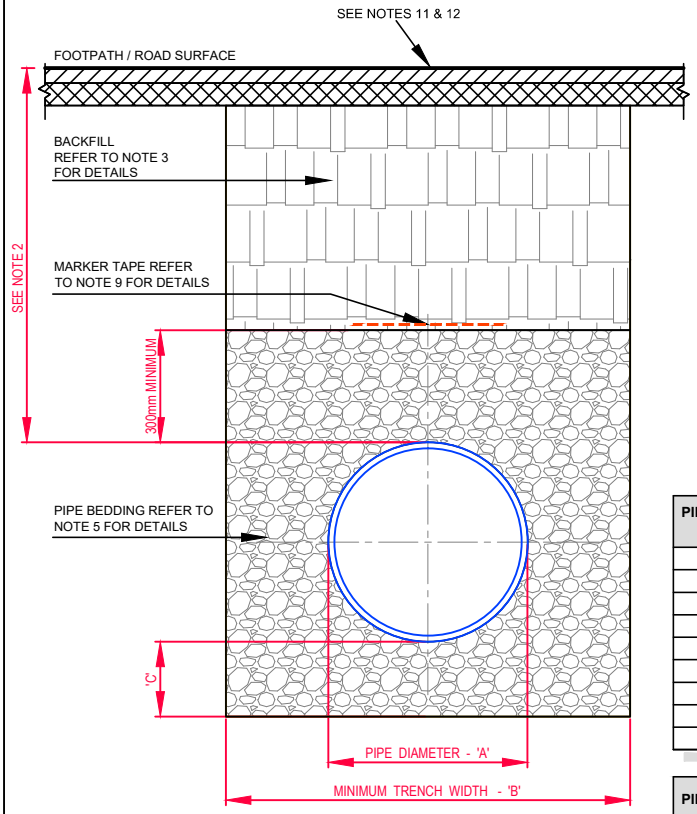
DATE: JUL. 2017

TITLE: RESTRICTIONS ON NEW TREES / SHRUBS PLANTING ADJACENT TO WATER MAINS

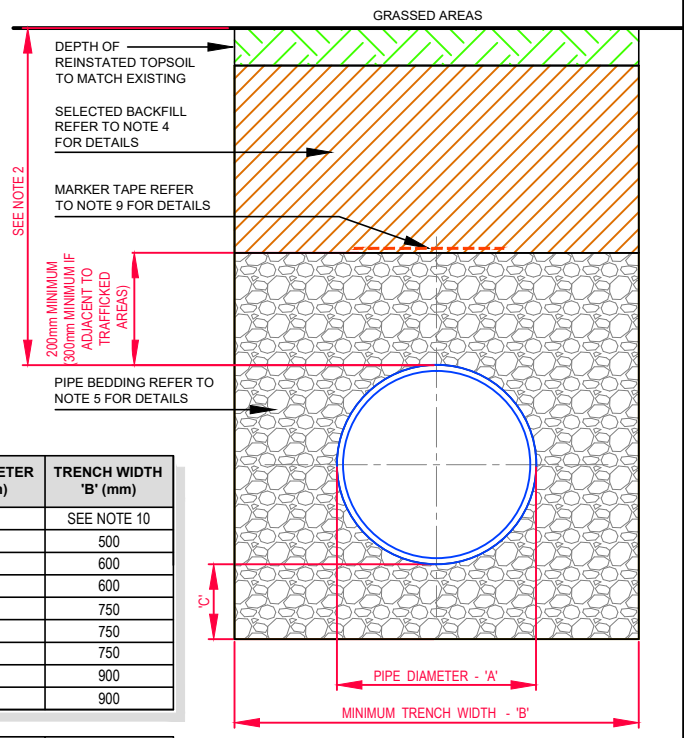
DRAWING No.: STD-W-12A

REV: 0

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. THE MINIMUM DEPTH OF COVER FROM THE FINISHED GROUND LEVEL TO THE EXTERNAL 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 STRENGTH 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 BOUND MATERIALS, CONCRETE PAVEMENTS, CONCRETE STRUCTURES OR CONCRETE PRODUCTS. OTHERWISE CLAUSE 804 MAY BE USED. ALTERNATIVE BACKFILL MATERIAL TO THAT DESCRIBED ABOVE (CLAUSE 804 OR CLAUSE 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 REVIEW BY IRISH WATER.
5. PIPE BEDDING SHALL COMPLY WITH WIS 4-08-02 AND IGN 4-08-01 GRANULAR MATERIAL SHALL BE 14mm TO 5mm (⅜ ³⁄₁₆) GRADED AGGREGATE OR 10mm (⅜ ⅛) SINGLE SIZED AGGREGATE TO 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 804 / 808 MATERIAL IN ACCORDANCE WITH 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 OR ROCKS, OR ANY HARD OBJECT 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 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 WIDTHS FOR PIPE SIZES ≤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 ROADS" BY THE DEPT. OF TRANSPORT, TOURISM & SPORT, OR TRANSPORT INFRASTRUCTURE IRELAND REQUIREMENTS.



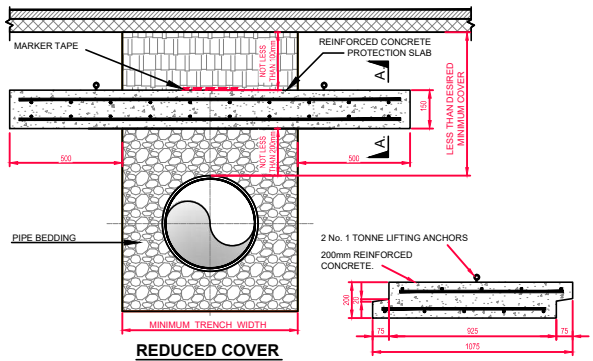
CROSS SECTION IN ROADWAYS



CROSS SECTION IN GRASSED AREAS

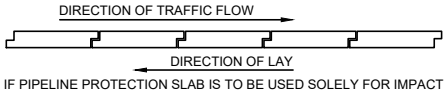
PIPE DIAMETER 'A' (mm)	TRENCH WIDTH 'B' (mm)
≤ 80	SEE NOTE 10
100	500
150	600
200	600
250	750
300	750
350	750
400	900
450	900

PIPE DIAMETER 'A' (mm)	DEPTH OF BEDDING 'C' (mm)
≤ 200	150
≥ 250	200



REDUCED COVER PROTECTION SLAB DETAIL **SECTION A-A**

13. FOR ANY SLABBING WORKS TO BE CARRIED OUT WITHIN THE VICINITY OF THE PIPELINE, A METHOD STATEMENT IS TO BE SUBMITTED FOR APPROVAL BY IRISH WATER.
14. MARKER TAPE TO BE PLACED ABOVE THE PROTECTION SLAB ALONG THE DIRECTION OF THE PIPELINE
15. CONCRETE TO BE GRADE C30/35
16. MINIMUM COVER TO STEEL REINFORCEMENT =40mm
17. SLABS TO BE DESIGNED FOR USE UNDER A HB25 LOAD IN ACCORDANCE WITH BS5400-2. DESIGN TO BE SUBMITTED TO IRISH WATER FOR ASSESSMENT PRIOR TO INSTALLATION
18. THE SOIL ON WHICH THE SLAB RESTS MUST HAVE A CBR OF 4% OR GREATER.WHERE THE CBR IS LESS THAN 4% THE MATERIAL SHALL BE REMOVED AND REPLACED WITH IMPORTED GRANULAR MATERIAL AS APPROVED BY IRISH WATER.
19. IF DIRECTION OF PIPELINE AND DIRECTION OF TRAFFIC FLOW ARE PARALLEL, THE DIRECTION OF LAY OF THE SLAB IS TO BE AGAINST THE DIRECTION OF TRAFFIC FLOW.



20. IF PIPELINE PROTECTION SLAB IS TO BE USED SOLELY FOR IMPACT PROTECTION & OVERALL DEPTH OF COVER IS GREATER THAN 1.2m, THE DISTANCE BETWEEN UNDERSIDE OF SLAB & TOP OF PIPE MAY BE INCREASED AFTER CONSULTATION WITH IRISH WATER.

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
2	07/'20	RH	TOC	Minor edit to note 5 Protection slab detail added Title amended.	MOD
1	11/'17	JMC	TOC	Added & updated notes	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

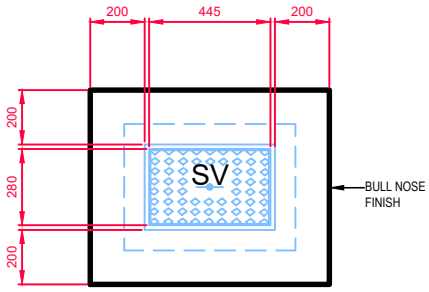
SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE: TRENCH BACKFILL / BEDDING & REDUCED COVER PROTECTION SLAB DETAIL

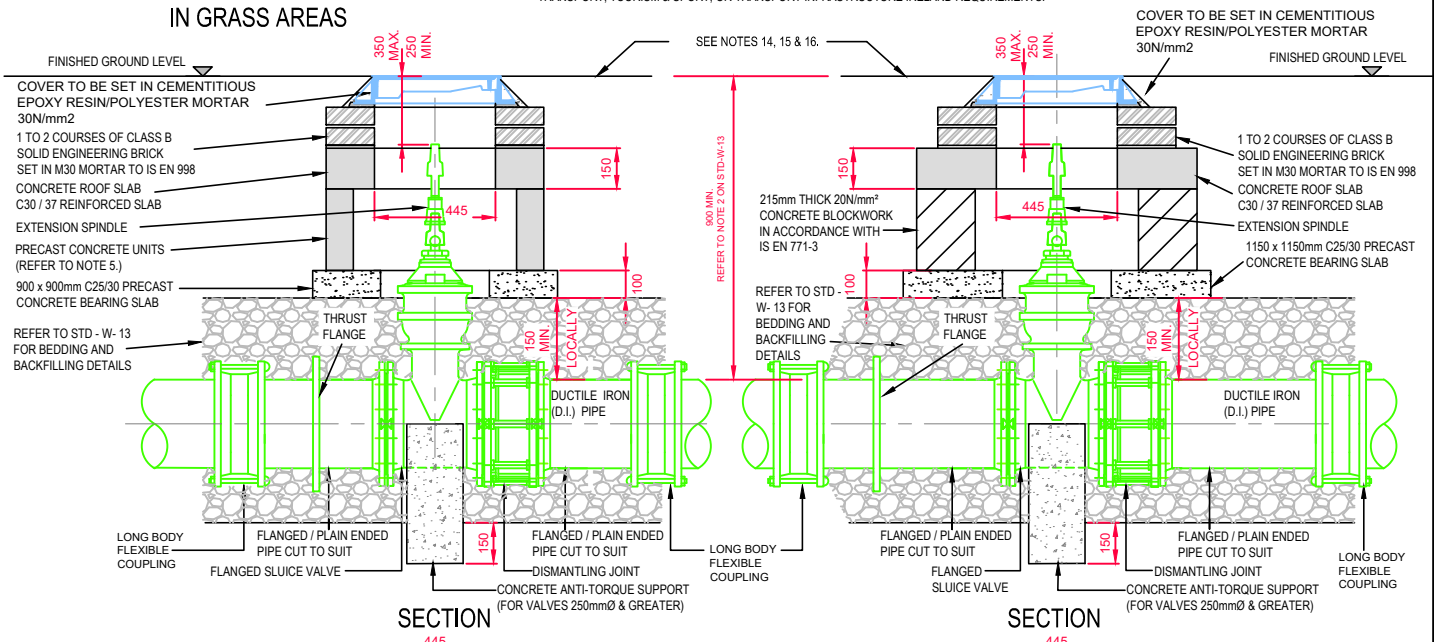
DRAWING No.: STD-W- 13

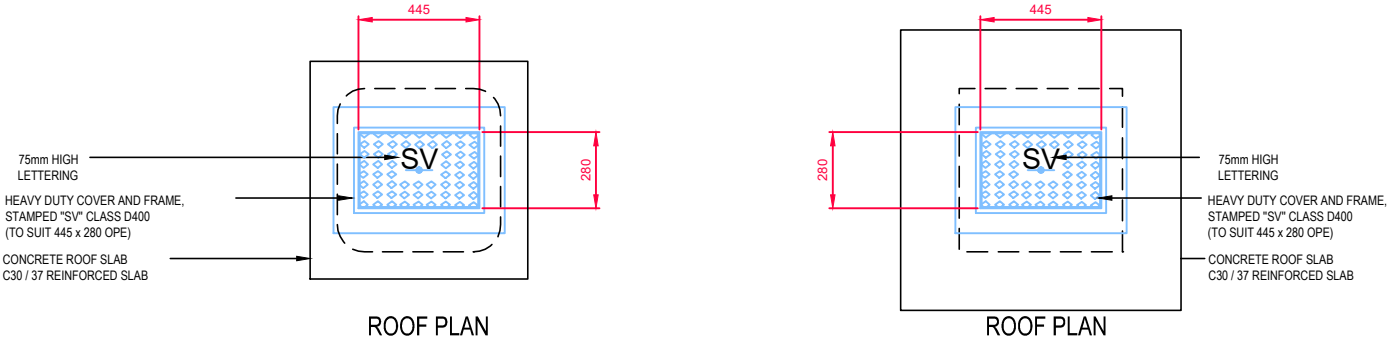
REV: 2

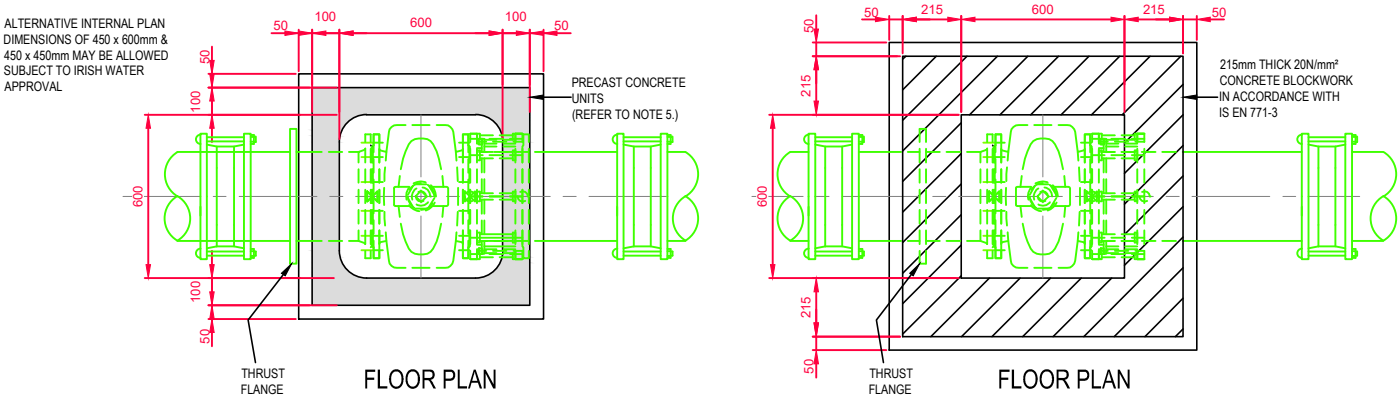


PLINTH DETAIL
IN GRASS AREAS

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 OR BS 5834. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY 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 AROUND COVERS IN GREEN AREAS.
9. 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.
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 DRAWING No. STD-W-28. THRUST BLOCKS NOT SHOWN FOR CLARITY.
13. 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". BEARING SLABS TO BE 900 x 900mm 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 REQUIREMENTS.
16. 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 (PRECAST CONCRETE CONSTRUCTION)

SLUICE VALVE CHAMBER (BLOCKWORK CONSTRUCTION)

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
4	07/'20	RH	TOC	Updated anti-torque support note relocated thrust flange, added plan dimensions, updated notes	MOD
3	11/'17	JMC	TOC	Revised & Added Notes	MOD
2	08/'16	JMC	TOC	Revised Notes 2, 3 & 6	MOD
1	04/'16	JMC	TOC	Added 2 couplings (2 details)	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

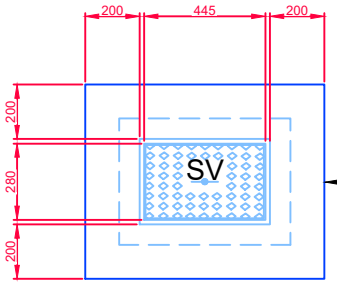
DATE: SEPT. 2015

TITLE

SLUICE VALVE
FOR DUCTILE IRON (D.I.) PIPE (< 350mm DIA.)
(Sheet 1 of 2)

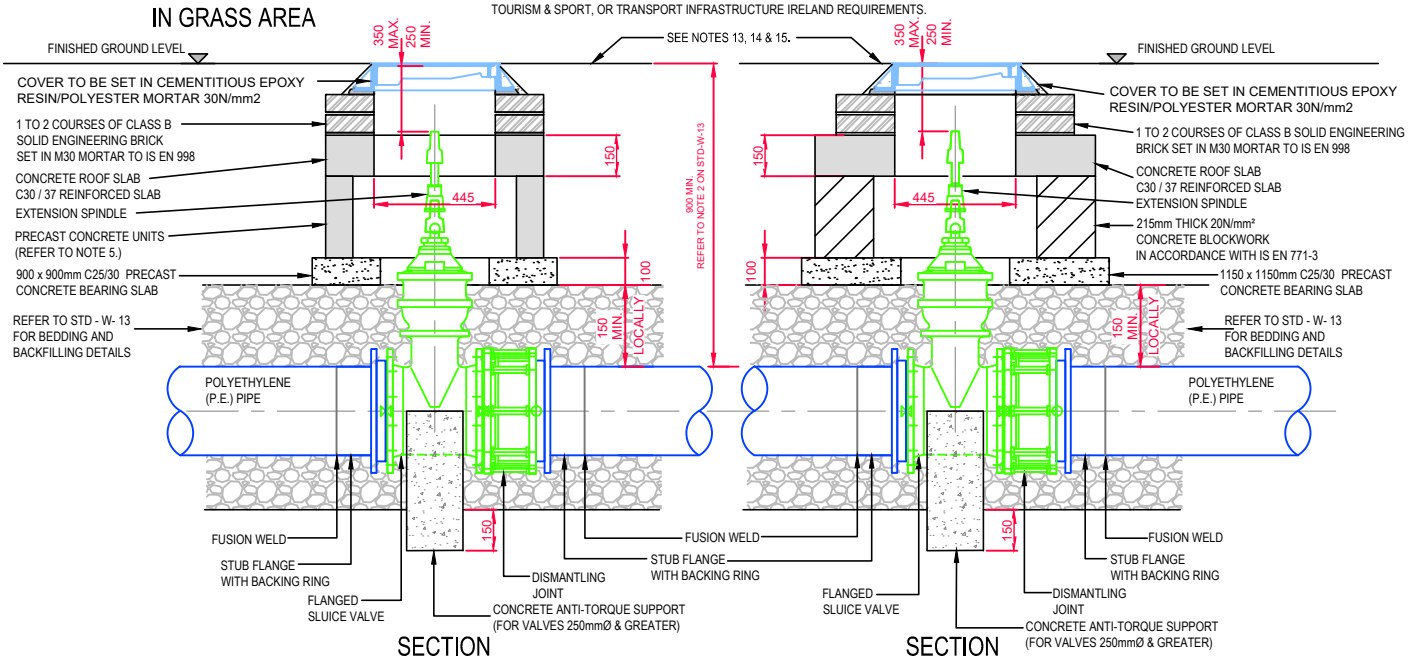
DRAWING No. STD-W- 14

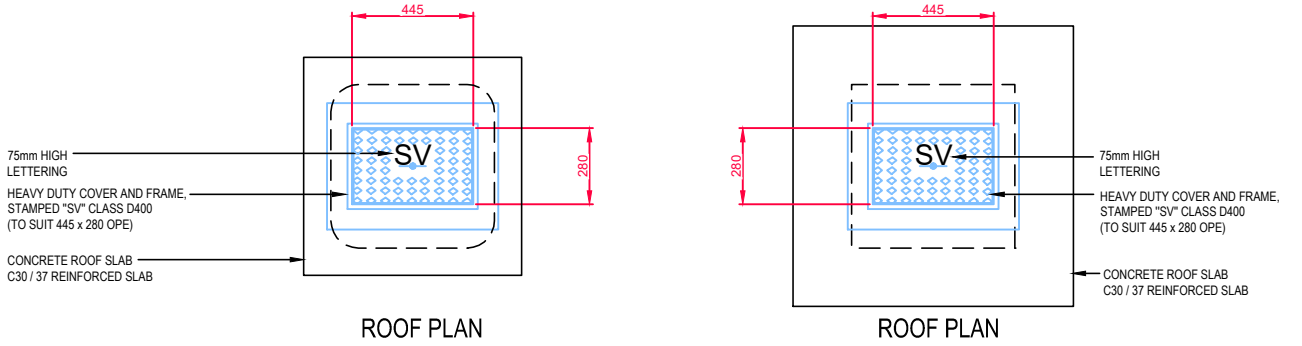
REV 4

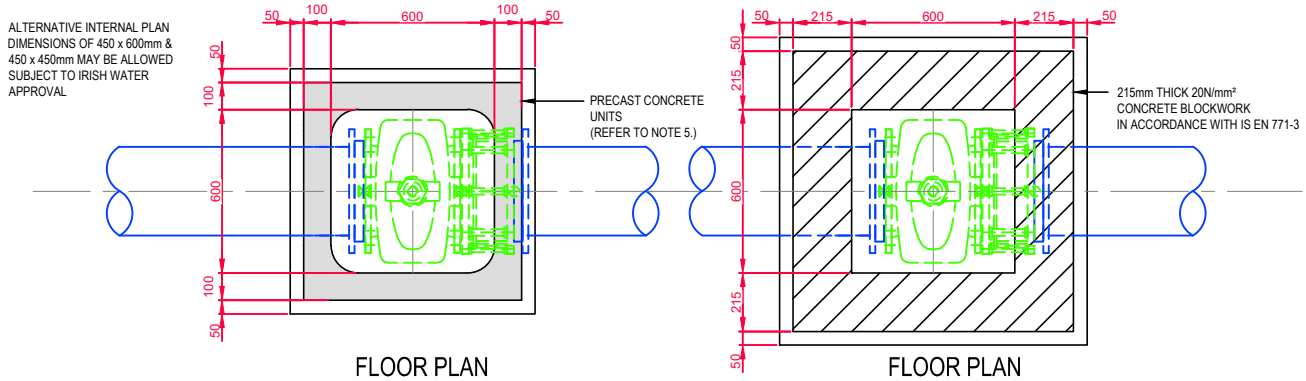


PLINTH DETAIL
IN GRASS AREA

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 OR BS 5834. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY 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. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201:2011.
8. 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN AREAS.
9. 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.
10. ANTI-CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
11. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
12. 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". BEARING SLABS TO BE 900 x 900mm IN ALL CASES.
13. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
14. 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.







REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Updated Anti-Torque Support Note & added plan dimensions note	MOD
2	11/'17	JMC	TOC	Revised & Added Notes	MOD
1	08/'16	JMC	TOC	Revised notes 2, 3 & 6	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

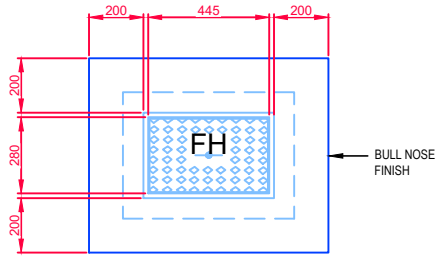
DATE: SEPT. 2015

TITLE

SLUICE VALVE
FOR POLYETHYLENE (P.E.) PIPE (< 350mm DIA.)
(Sheet 2 of 2)

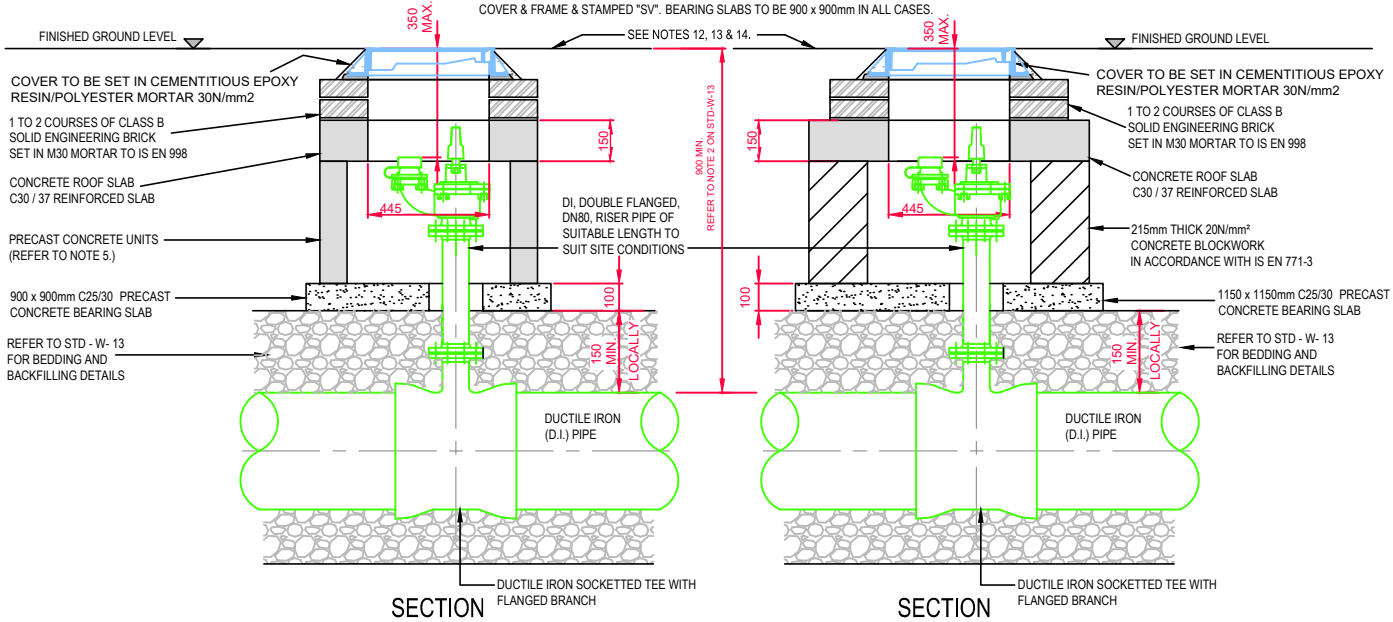
DRAWING No. STD-W- 15

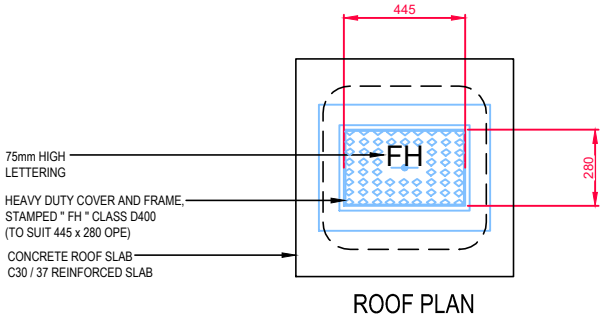
REV 3

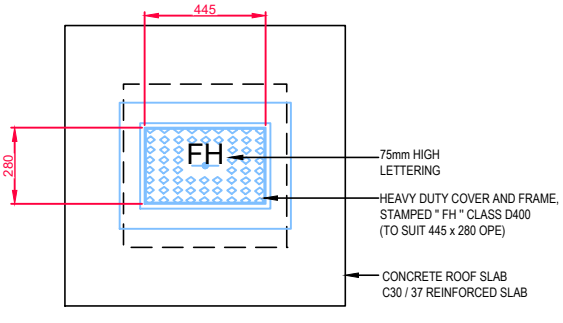


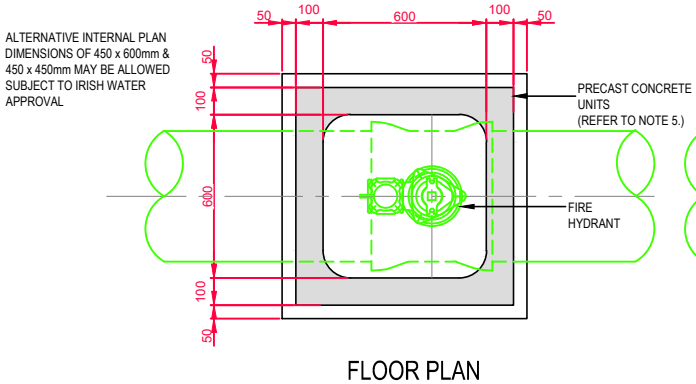
PLINTH DETAIL
IN GRASS AREA

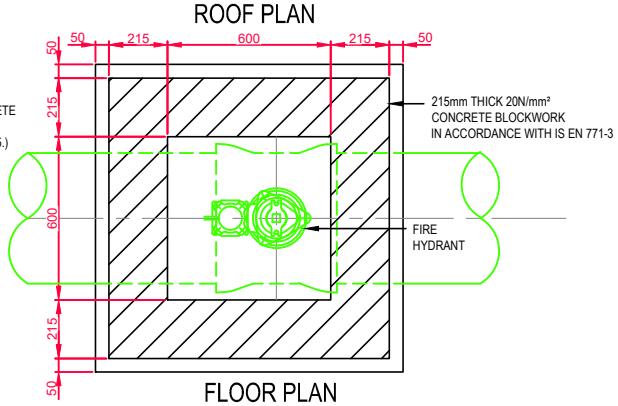
1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. HYDRANT CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS 261 OR BS 5834 COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
3. ALL HYDRANTS, SURFACE BOX FRAMES & 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.
4. ALL HYDRANTS SHALL BE CLOCKWISE CLOSING.
5. HYDRANT 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 AROUND COVERS IN GREEN AREAS.
9. 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.
10. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
11. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
12. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
13. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
14. 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.
15. THE FIRE HYDRANT OUTLET TYPE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE OFFICER FOR THE AREA AND SHALL BE AGREED PRIOR TO THE COMMENCEMENT OF WORKS.
16. THE HYDRANT SHALL BE DOUBLE FLANGED DRILLED TO PN 16. THEY SHALL COMPLY WITH IS EN 14339, IS EN 1074 PART 6 AND BS 750: 2012. THE HYDRANT SHALL INCORPORATE A SCREW DOWN GATE VALVE, UNDERGROUND "GUIDE TO HEAD" TYPE WITH A FALSE SPINDLE CAP. THE OUTLET SHALL BE IN ACCORDANCE WITH ITEM 15 ABOVE.
17. 450 x 600mm 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 900 x 900mm IN ALL CASES.











REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Added notes re. hydrant outlet & plan dimensions	MOD
2	11/'17	JMC	TOC	Revised & added notes	MOD
1	08/'16	JMC	TOC	Revised notes 2,3 & 6	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

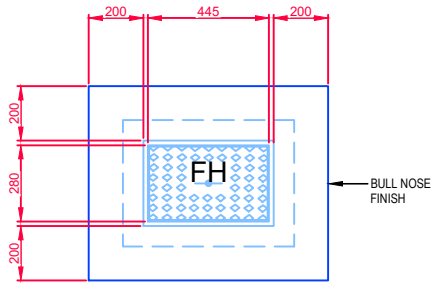
DATE: SEPT. 2015

TITLE

ON - LINE HYDRANT
FOR DUCTILE IRON (D.I.) PIPE
(Sheet 1 of 4)

DRAWING No.: STD-W- 16

REV: 3



PLINTH DETAIL
IN GRASS AREA

1. ALL DIMENSIONS 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 REVIEW BY IRISH WATER.
3. 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.
4. ALL HYDRANTS SHALL BE CLOCKWISE CLOSING.
5. HYDRANT 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 AROUND COVERS IN GREEN AREAS.
9. 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.
10. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
11. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
12. TEE BRANCH: IF DEPTH OF TAKE-OFF PIPEWORK < 900mm, TAKE-OFF TEE MAY BE ROTATED TO ENSURE MIN. DEPTH OF COVER IS MAINTAINED, OR ALTERNATIVELY, PROVIDE PROTECTION TO TAKE-OFF PIPE.
13. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
14. 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.
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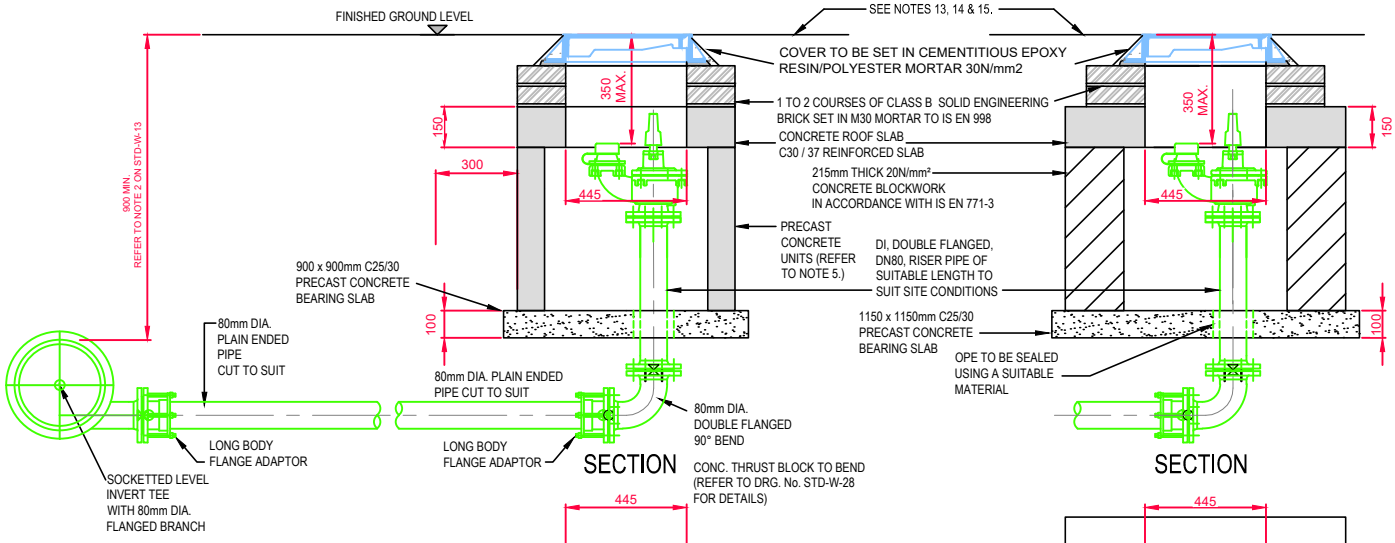
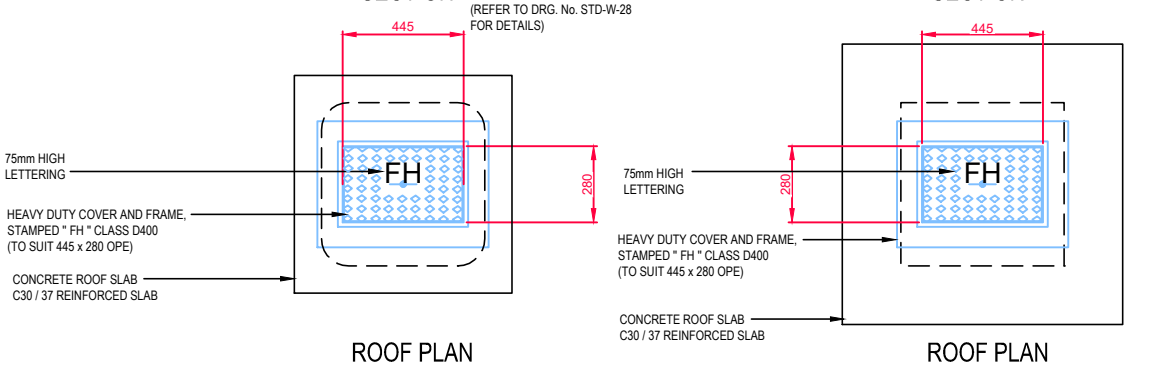
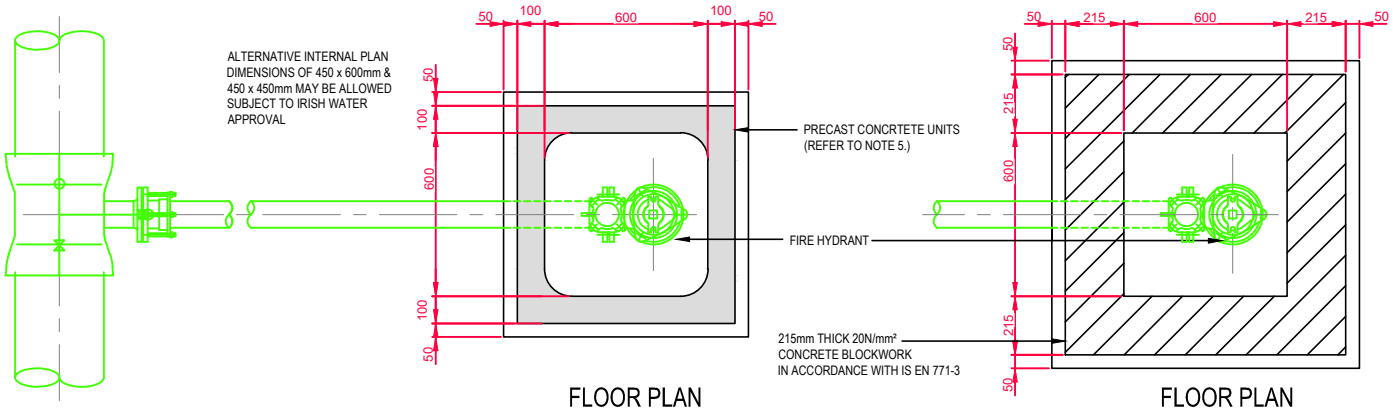
18. 450 x 600mm INTERNAL DIMENSION CHAMBERS MAY BE PROVIDED SUBJECT TO REVIEW BY IW. SUCH CHAMBERS SHALL BE PROVIDED WITH GRADE "A" HEAVY DUTY COVER & FRAME & STAMPED "SV". BEARING SLABS TO BE 900 x 900mm IN ALL CASES.







FIRE HYDRANT CHAMBER (PRECAST CONCRETE CONSTRUCTION)

FIRE HYDRANT CHAMBER (BLOCKWORK CONSTRUCTION)

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
4	07/'20	RH	TOC	Added notes re. hydrant outlet & plan dimensions	MOD
3	11/'17	JMC	TOC	Revised & added notes, & revised pipework	MOD
2	08/'16	JMC	TOC	Revised notes 2,3 & 6	MOD
1	04/'16	JMC	TOC	Added thrust blocks	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

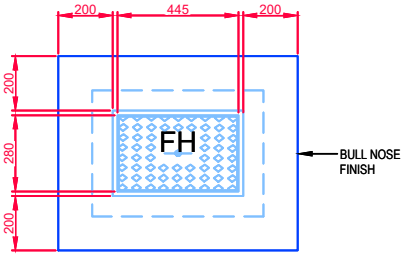
SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE: OFF - LINE HYDRANT FOR DUCTILE IRON (D.I.) PIPE (Sheet 2 of 4)

DRAWING No.: STD-W- 17

REV: 4



PLINTH DETAIL
IN GRASS AREA

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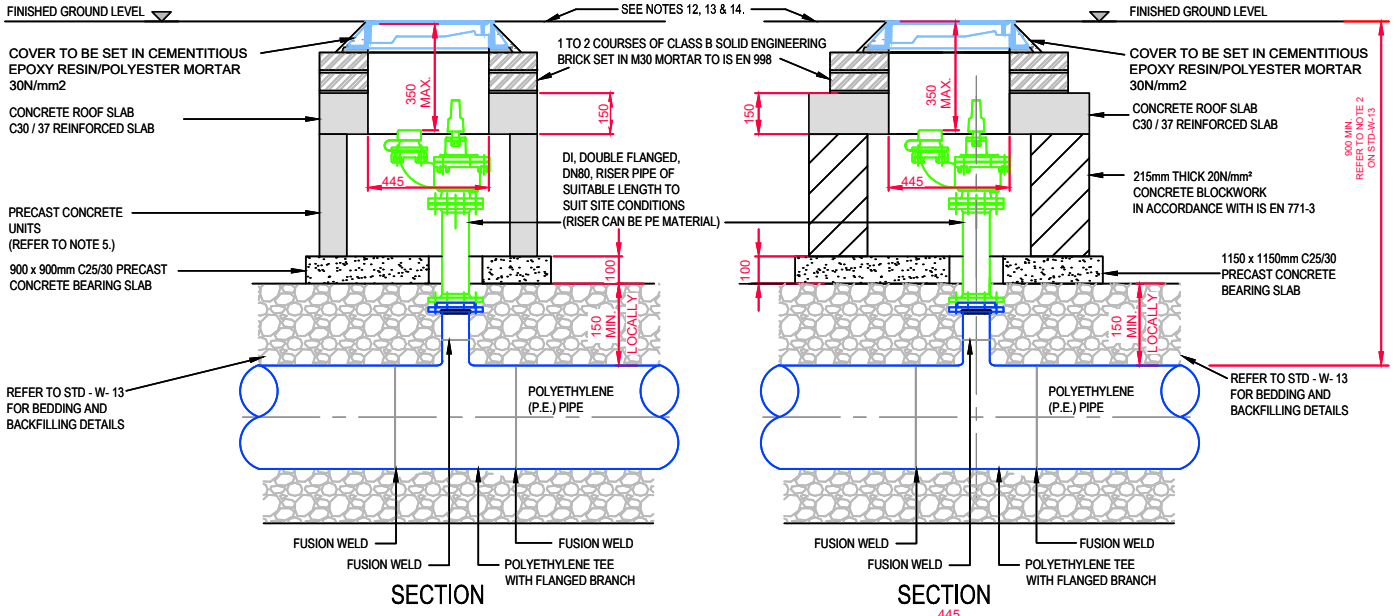
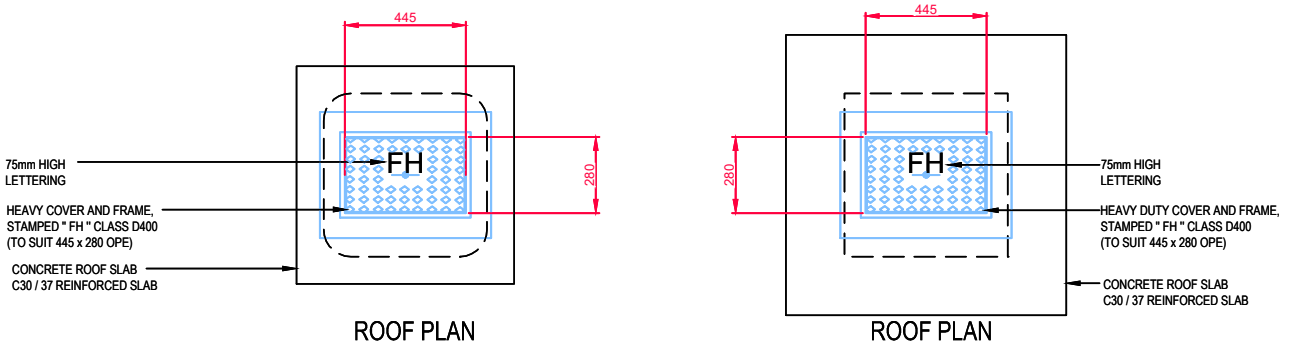
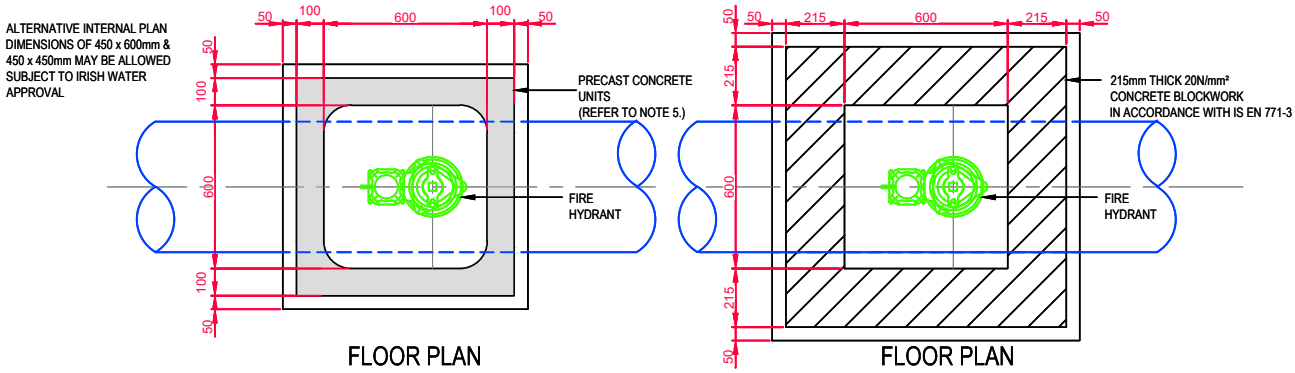
17. 450 x 600mm INTERNAL DIMENSION CHAMBERS MAY BE PROVIDED SUBJECT TO REVIEW BY IW. SUCH CHAMBERS SHALL BE PROVIDED WITH GRADE "A" HEAVY DUTY COVER & FRAME & STAMPED "SV".







REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Added notes re. hydrant outlet & plan dimensions	MOD
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1	08/'16	JMC	TOC	Revised notes 2,3 & 6	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

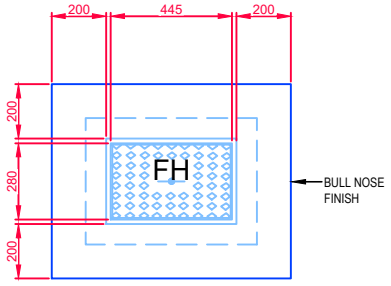
DATE: SEPT. 2015

TITLE

ON - LINE HYDRANT
FOR POLYETHYLENE (P.E.) PIPE
(Sheet 3 of 4)

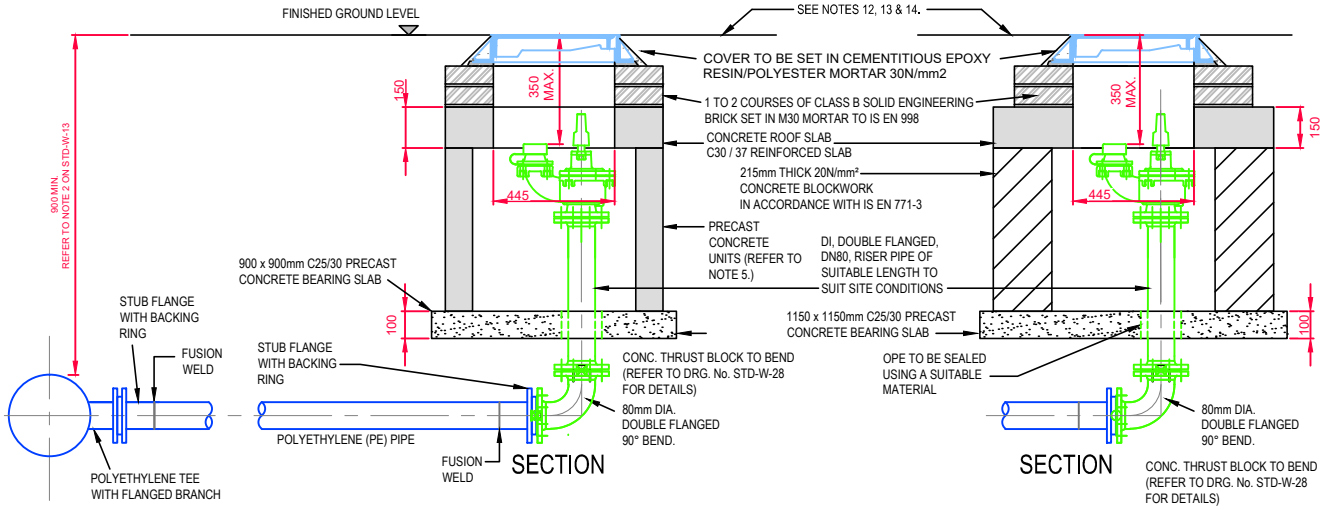
DRAWING No.: STD-W- 18

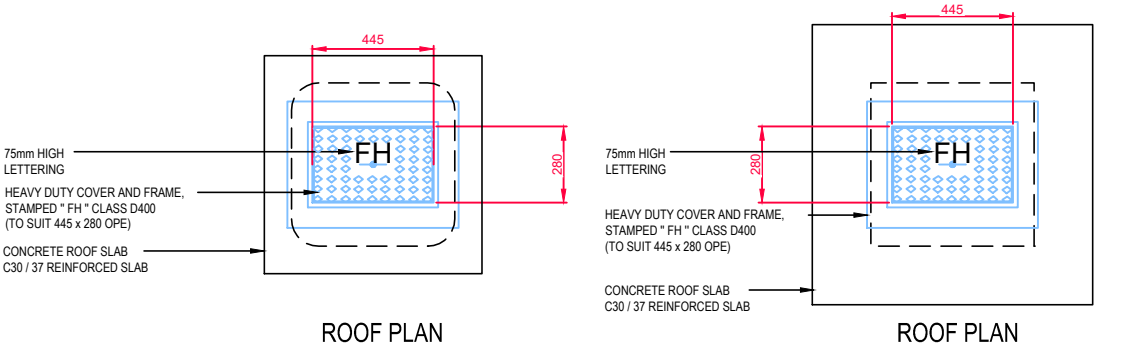
REV: 3

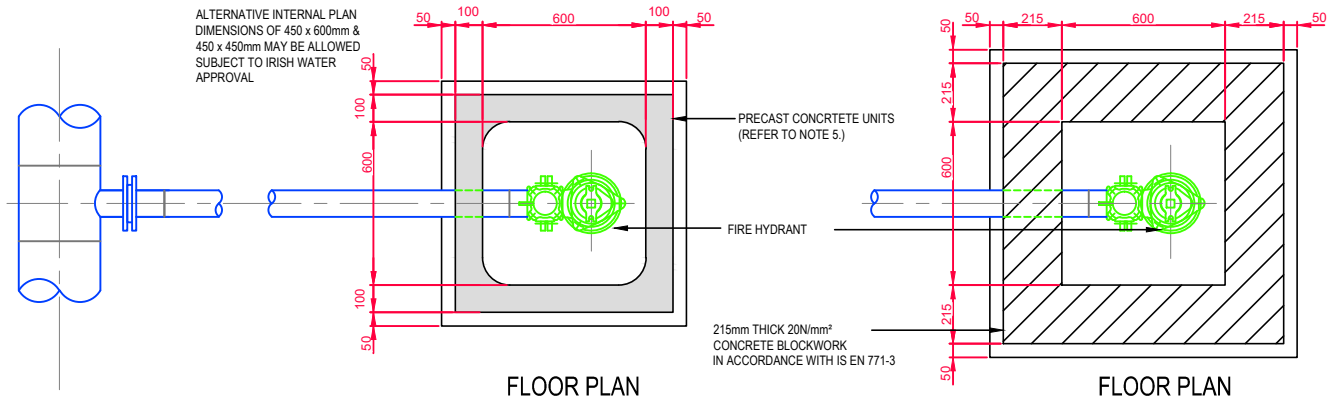


PLINTH DETAIL
IN GRASS AREA

1. ALL DIMENSIONS 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 REVIEW BY IRISH WATER.
3. 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.
4. ALL HYDRANTS SHALL BE CLOCKWISE CLOSING.
5. HYDRANT 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 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. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201:2011.
8. 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN AREAS.
9. 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.
10. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
11. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
12. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
13. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
14. 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.
15. THE FIRE HYDRANT OUTLET TYPE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE OFFICER FOR THE AREA AND SHALL BE AGREED PRIOR TO THE COMMENCEMENT OF WORKS.
16. THE HYDRANT SHALL BE DOUBLE FLANGED DRILLED TO PN 16. THEY SHALL COMPLY WITH IS EN 14339, IS EN 1074 PART 6 AND BS 750: 2012. THE HYDRANT SHALL INCORPORATE A SCREW DOWN GATE VALVE, UNDERGROUND "GUIDE TO HEAD" TYPE WITH A FALSE SPINDLE CAP. THE OUTLET SHALL BE IN ACCORDANCE WITH ITEM 15 ABOVE
17. 450 x 600mm 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".







FIRE HYDRANT CHAMBER (PRECAST CONCRETE CONSTRUCTION)

FIRE HYDRANT CHAMBER (BLOCKWORK CONSTRUCTION)

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
4	07/'20	RH	TOC	Added notes re. hyd. outlet & plan dims, & revised branch pipe to PE	MOD
3	11/'17	JMC	TOC	Revised & added notes, & revised pipework	MOD
2	08/'16	JMC	TOC	Revised notes 2, 3 & 6	MOD
1	04/'16	JMC	TOC	Added thrust blocks	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE

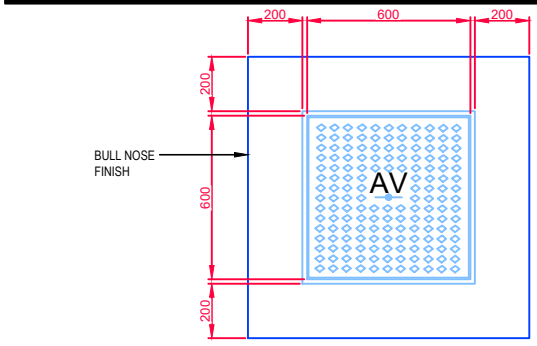
OFF - LINE HYDRANT
FOR POLYETHYLENE (P.E.) PIPE
(Sheet 4 of 4)

DRAWING No.: STD-W- 19

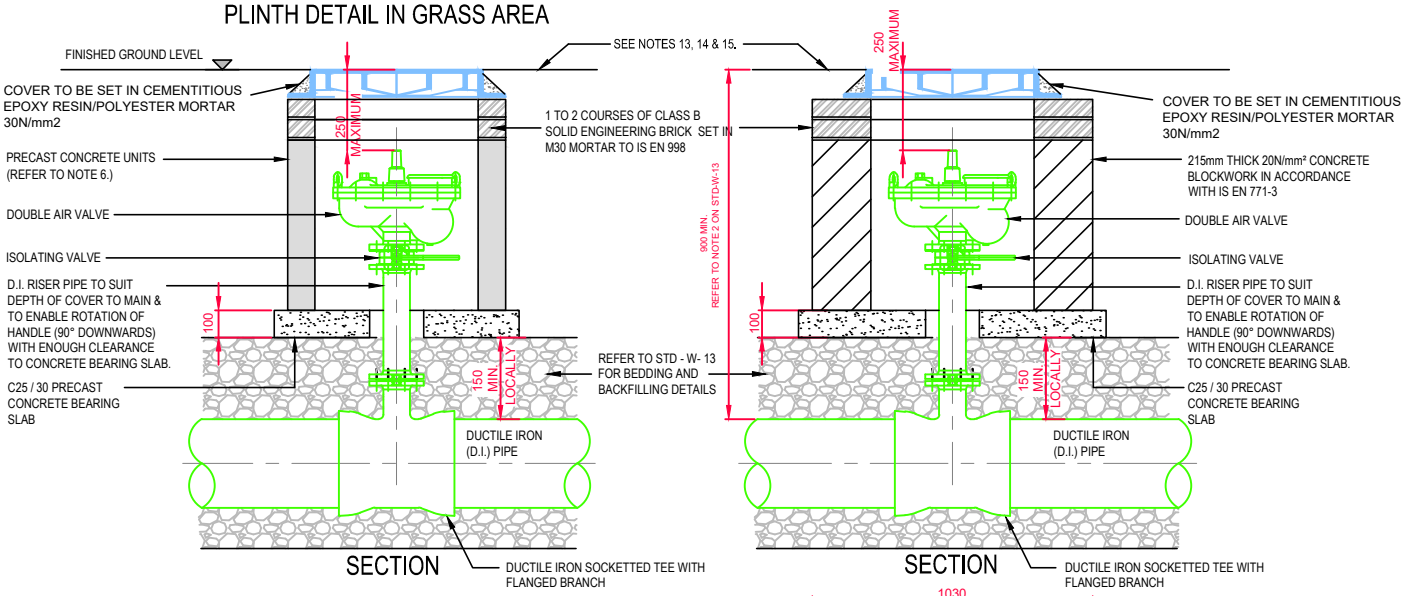
REV: 4

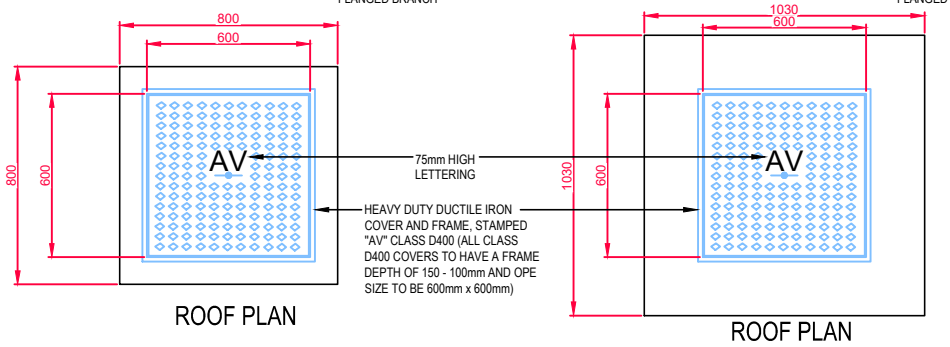
DIAMETER OF MAIN	UP TO 250 (mm)	250 TO 350 (mm)
DIAMETER OF BRANCH	80mm	100mm
BORE OF VALVE INLET	80mm	100mm

1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. AIR VALVE CHAMBERS SHALL BE COVERED WITH APPROVED VENTILATED HEAVY DUTY DUCTILE IRON COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY 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 EITHER A GATE VALVE CONFORMING TO IS EN 1074-2 & SHALL BE OF A BOLTLESS BONNET DESIGN, OR A BUTTERFLY VALVE TO IS EN 1074-2.
4. SERVICE CONNECTIONS SHALL NOT BE PROVIDED WITHIN 2m OF THE AIR VALVE LOCATION.
5. AIR VALVE CHAMBERS TO BE OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVE PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER.
6. PRECAST 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 AROUND COVERS IN GREEN AREAS.
9. 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.
10. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
11. THE LOCATION OF THE AIR VALVE SHALL BE THE SUBJECT OF PARTICULAR AGREEMENT WITH IRISH WATER TO ENSURE THAT THE RISK OF CONTAMINATION THROUGH THE VALVE IS ELIMINATED.
12. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
13. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
14. 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 .



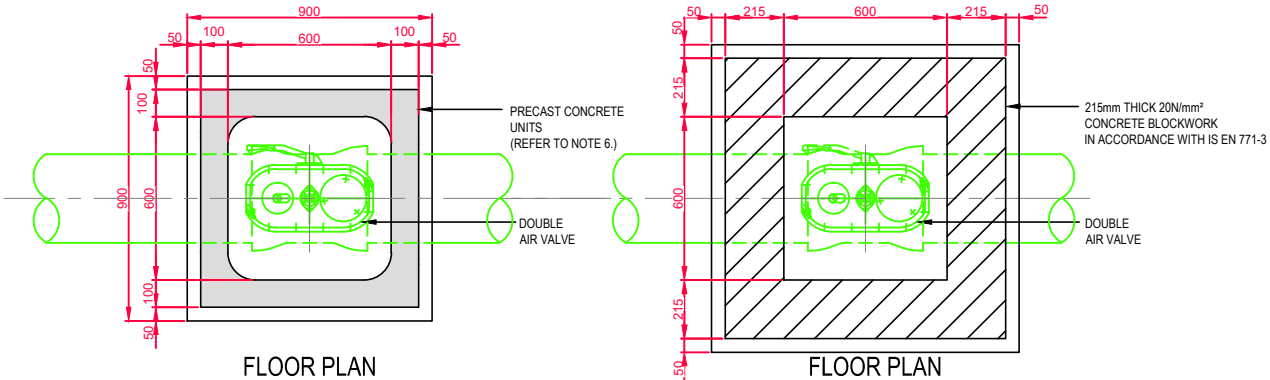
PLINTH DETAIL IN GRASS AREA





ROOF PLAN

ROOF PLAN



FLOOR PLAN
DOUBLE AIR VALVE
(PRECAST CONCRETE CONSTRUCTION)

FLOOR PLAN
DOUBLE AIR VALVE
(BLOCKWORK CONSTRUCTION)

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Updated & revised notes	MOD
2	11/'17	JMC	TOC	Updated & revised notes	MOD
1	08/'16	JMC	TOC	Revised notes 2,3,4 & 7	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

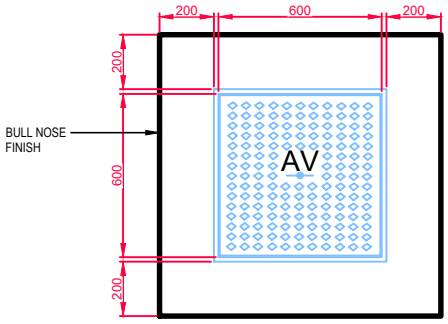
TITLE: ON - LINE AIR VALVE FOR DUCTILE IRON (D.I.) PIPE (Sheet 1 of 4)

DRAWING No.: STD-W- 20

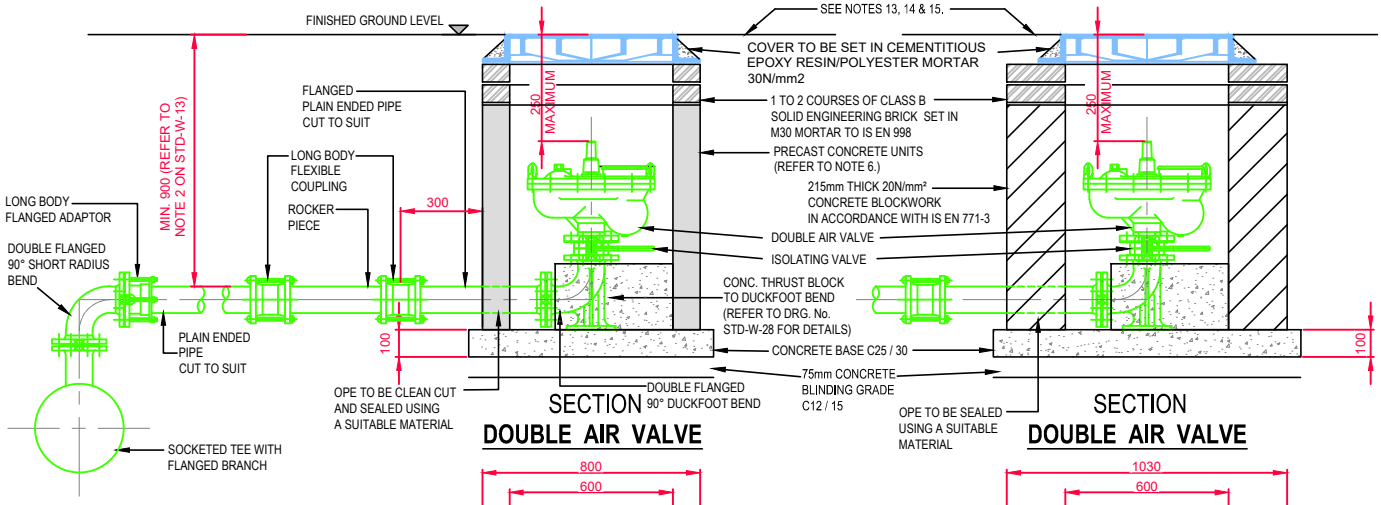
REV: 3

DIAMETER OF MAIN	UP TO 250 (mm)	250 TO 350 (mm)
DIAMETER OF BRANCH	80mm	100mm
BORE OF VALVE INLET	80mm	100mm

1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. AIR VALVE CHAMBERS SHALL BE COVERED WITH APPROVED VENTILATED HEAVY DUTY DUCTILE IRON COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY 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 EITHER A GATE VALVE CONFORMING TO IS EN 1074-2 & SHALL BE OF A BOLTLESS BONNET DESIGN, OR A BUTTERFLY VALVE TO IS EN 1074-2.
4. SERVICE CONNECTIONS SHALL NOT BE PROVIDED WITHIN 2m OF THE AIR VALVE LOCATION.
5. AIR VALVE CHAMBERS TO BE OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVE PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER.
6. PRECAST 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 AROUND COVERS IN GREEN AREAS.
9. 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.
10. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
11. THE LOCATION OF THE AIR VALVE SHALL BE THE SUBJECT OF PARTICULAR AGREEMENT WITH IRISH WATER TO ENSURE THAT THE RISK OF CONTAMINATION THROUGH THE VALVE IS ELIMINATED.
12. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
13. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
14. 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.

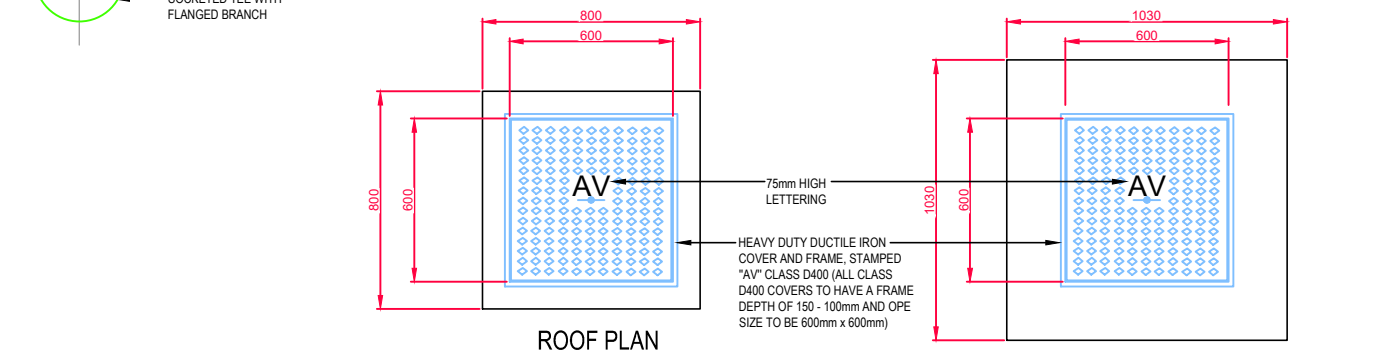


PLINTH DETAIL IN GRASS AREA



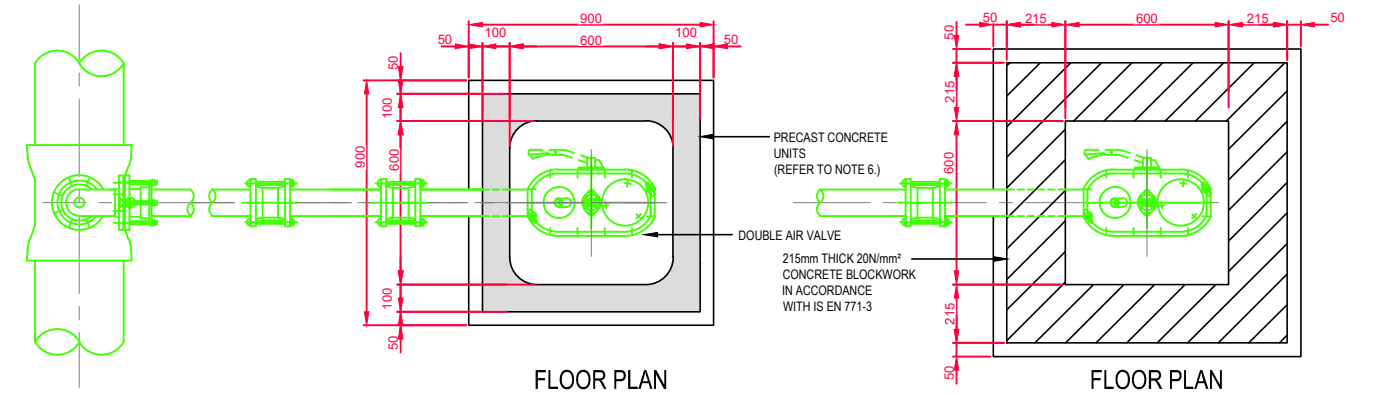
SECTION
DOUBLE AIR VALVE

SECTION
DOUBLE AIR VALVE



ROOF PLAN

ROOF PLAN



FLOOR PLAN
DOUBLE AIR VALVE
(PRECAST CONCRETE CONSTRUCTION)

FLOOR PLAN
DOUBLE AIR VALVE
(BLOCKWORK CONSTRUCTION)

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
4	07/'20	RH	TOC	Updated brickwork bedding mortar spec.	MOD
3	11/'17	JMC	TOC	Added & updated Notes	MOD
2	08/'16	JMC	TOC	Revised notes 2,3,4 & 7	MOD
1	04/'16	JMC	TOC	Added thrust blocks	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE

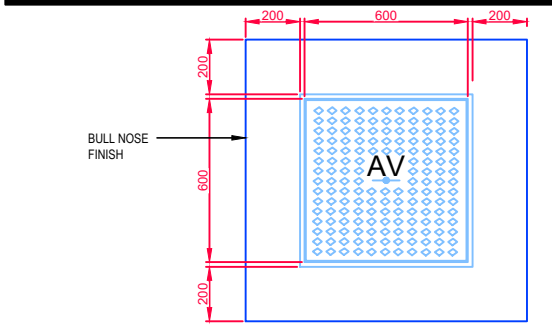
OFF - LINE AIR VALVE
FOR DUCTILE IRON (D.I.) PIPE
(Sheet 2 of 4)

DRAWING No.: STD-W- 21

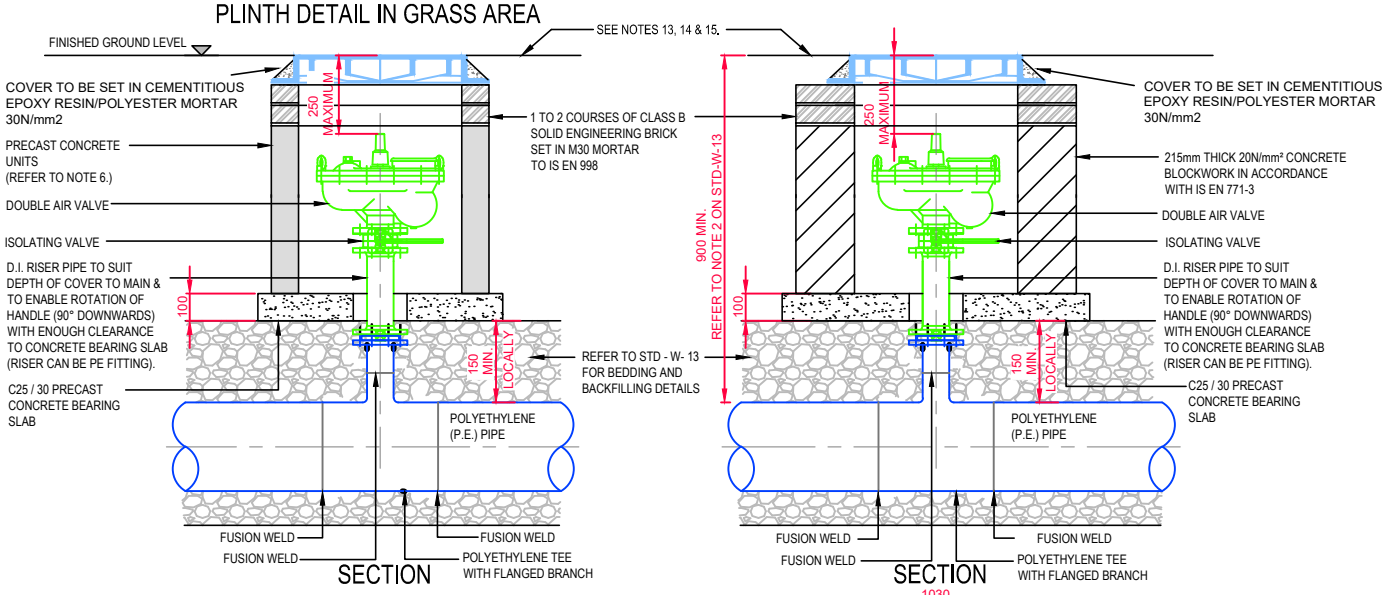
REV: 4

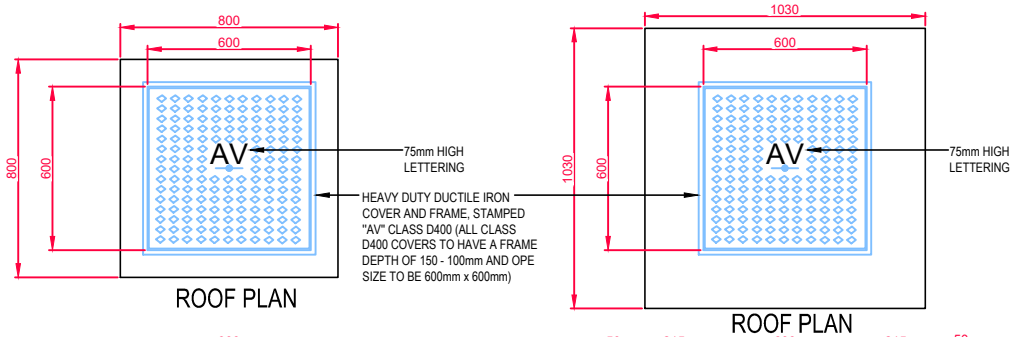
DIAMETER OF MAIN	UP TO 250 (mm)	250 TO 350 (mm)
DIAMETER OF BRANCH	80mm	100mm
BORE OF VALVE INLET	80mm	100mm

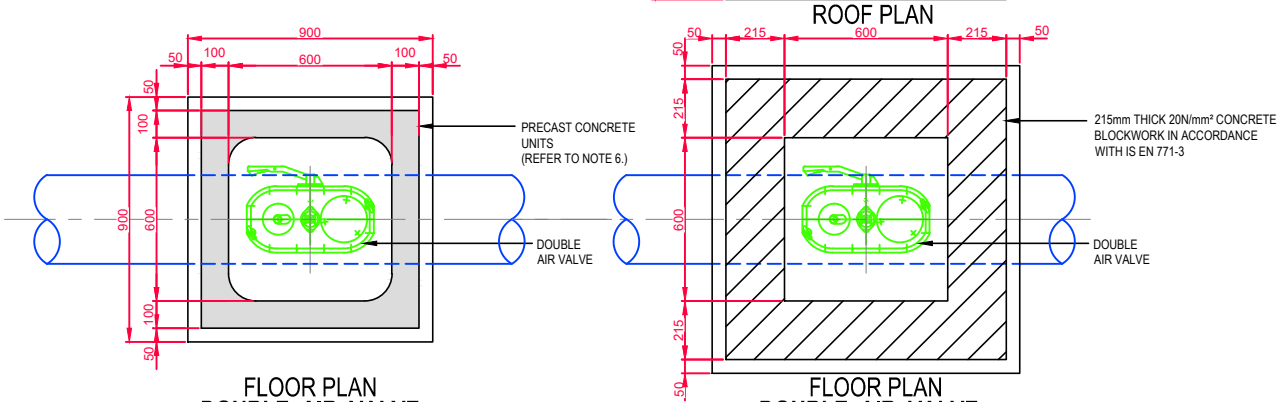
1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. AIR VALVE CHAMBERS SHALL BE COVERED WITH APPROVED VENTILATED HEAVY DUTY DUCTILE IRON COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
3. AIR VALVES 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 EITHER A GATE VALVE CONFORMING TO IS EN 1074-2 & SHALL BE OF A BOLTLESS BONNET DESIGN, OR A BUTTERFLY VALVE TO IS EN 1074-2.
4. SERVICE CONNECTIONS SHALL NOT BE PROVIDED WITHIN 2m OF THE AIR VALVE LOCATION.
5. AIR VALVE CHAMBERS TO BE OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVE PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER.
6. PRECAST CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER STD-W-13.
7. DUCTILE IRON PIPES / FITTINGS AND PE PIPES / FITTINGS TO BE IN ACCORDANCE WITH IS EN 545 AND IS EN 12201:2011.
8. 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN AREAS.
9. 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.
10. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
11. THE LOCATION OF THE AIR VALVE SHALL BE THE SUBJECT OF PARTICULAR AGREEMENT WITH IRISH WATER TO ENSURE THAT THE RISK OF CONTAMINATION THROUGH THE VALVE IS ELIMINATED.
12. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
13. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
14. 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.



PLINTH DETAIL IN GRASS AREA







FLOOR PLAN
DOUBLE AIR VALVE
(PRECAST CONCRETE CONSTRUCTION)

FLOOR PLAN
DOUBLE AIR VALVE
(BLOCKWORK CONSTRUCTION)

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Updated brickwork bedding mortar spec.	MOD
2	11/'17	JMC	TOC	Added & updated notes	MOD
1	08/'16	JMC	TOC	Revised notes 2,3,4 & 7	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

TITLE

ON - LINE AIR VALVE
FOR POLYETHYLENE (P.E.) PIPE
(Sheet 3 of 4)

SCALE	DATE
NOT TO SCALE	SEPT. 2015

DRAWING No.	REV
STD-W- 22	3

DIAMETER OF MAIN	UP TO 250 (mm)	250 TO 350 (mm)
DIAMETER OF BRANCH	80mm	100mm
BORE OF VALVE INLET	80mm	100mm

1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. AIR VALVE CHAMBERS SHALL BE COVERED WITH APPROVED VENTILATED HEAVY DUTY DUCTILE IRON COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY 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 EITHER A GATE VALVE CONFORMING TO IS EN 1074-2 & SHALL BE OF A BOLTLESS BONNET DESIGN, OR A BUTTERFLY VALVE TO IS EN 1074-2.
4. SERVICE CONNECTIONS SHALL NOT BE PROVIDED WITHIN 2m OF THE AIR VALVE LOCATION.
5. AIR VALVE CHAMBERS TO BE OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVE PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER.
6. PRECAST 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. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201:2011.
8. 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN AREAS.
9. 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.
10. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
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14. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
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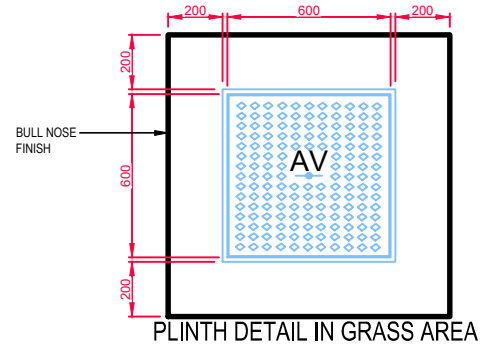
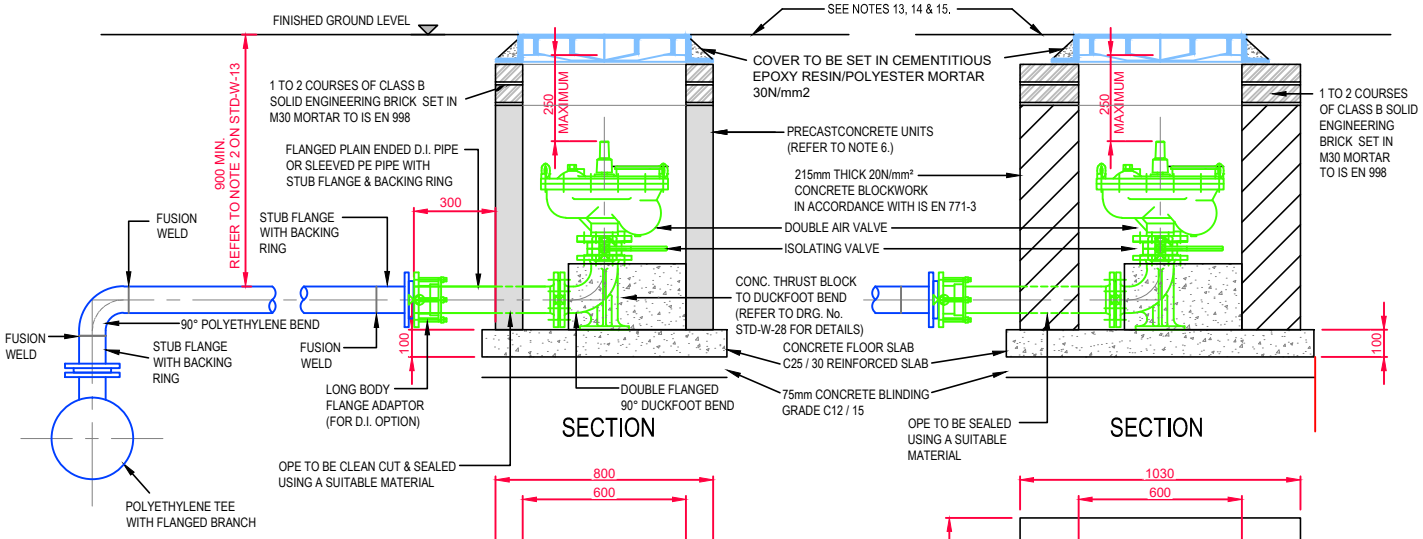


PLINTH DETAIL IN GRASS AREA



DOUBLE AIR VALVE (PRECAST CONCRETE CONSTRUCTION)

DOUBLE AIR VALVE (BLOCKWORK CONSTRUCTION)

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
4	07/'20	RH	TOC	Updated brickwork bedding mortar spec.Added & updated notes	MOD
3	11/'17	JMC	TOC	Added & updated notes	MOD
2	08/'16	JMC	TOC	Revised notes 2,3,4 & 7	MOD
1	04/'16	JMC	TOC	Added thrust blocks	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

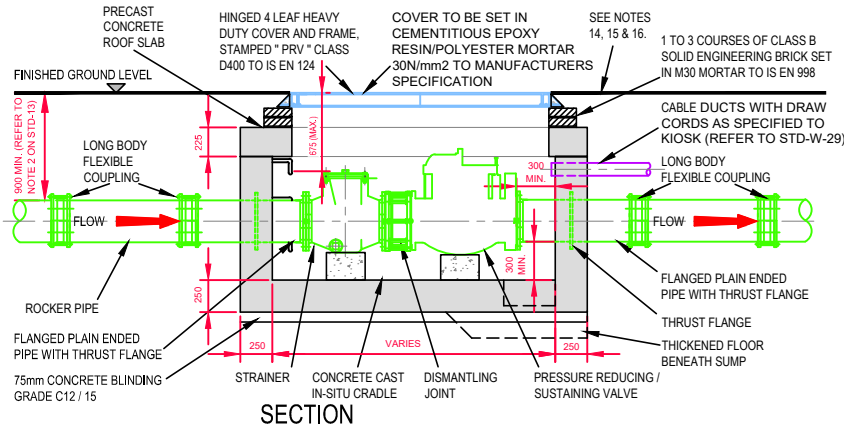
DATE: SEPT. 2015

TITLE: OFF - LINE AIR VALVE FOR POLYETHYLENE (P.E.) PIPE (Sheet 4 of 4)

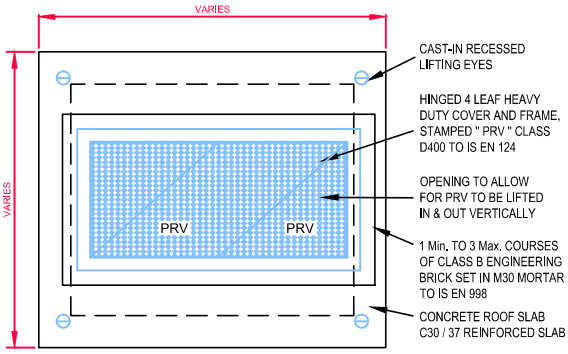
DRAWING No.: STD-W- 23

REV: 4

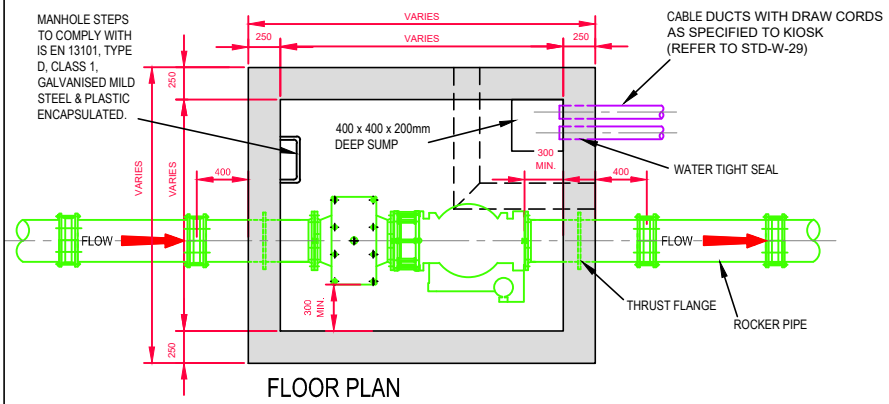
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. STRUCTURAL DESIGN AND REINFORCEMENT DETAIL TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
3. CONCRETE FOR PRESSURE REDUCING / SUSTAINING CHAMBER TO BE C30 / 37. ROOF SLABS SHALL BE DESIGNED TO CARRY ALL LIVE LOADS & DEAD LOADS, & CONSIST OF A REINFORCED CONCRETE SLAB OF IN-SITU CONCRETE, GRADE C30/37, WITH A MINIMUM THICKNESS OF 225mm. ALTERNATIVELY, PRE-CAST CONCRETE ROOFS MAY BE USED, SUBJECT TO IRISH WATER REVIEW, & COMPLIANCE WITH IS 420 & IS EN 1917
4. SLUICE VALVE, HYDRANT, AND AIR VALVE CHAMBERS TO BE OF PRECAST CONCRETE UNITS OR HIGH DENSITY BLOCKWORK. ALTERNATIVE PROPRIETARY PREFABRICATED CHAMBER UNITS MAY ALSO BE USED, SUBJECT TO REVIEW BY IRISH WATER.
5. PRESSURE REDUCING VALVES REQUIRE A MINIMUM LENGTH OF PIPE EQUIVALENT TO 5 TIMES THE DIAMETER, ON EACH SIDE OF THE VALVE TO BE COMPLETELY FREE OF FITTINGS, VALVES, REDUCERS ETC., OR TO PRV/PSV MANUFACTURER'S REQUIREMENTS.
6. P.R.V. / P.S.V. CHAMBER SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
7. 200mm ALL ROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GRASS AREAS.
8. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
9. THRUST BLOCKS AS 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.
10. 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
11. 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 REVIEW BY IRISH WATER.
12. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
13. PIPEWORK TO BE DOWNSIZED IF REQUIRED TO ACCOMMODATE THE REQUIRED RANGE OF PRESSURE REDUCTION.
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 REQUIREMENTS.
16. 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.



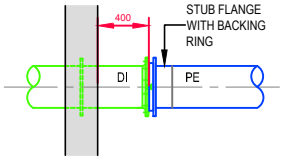
SECTION



ROOF PLAN

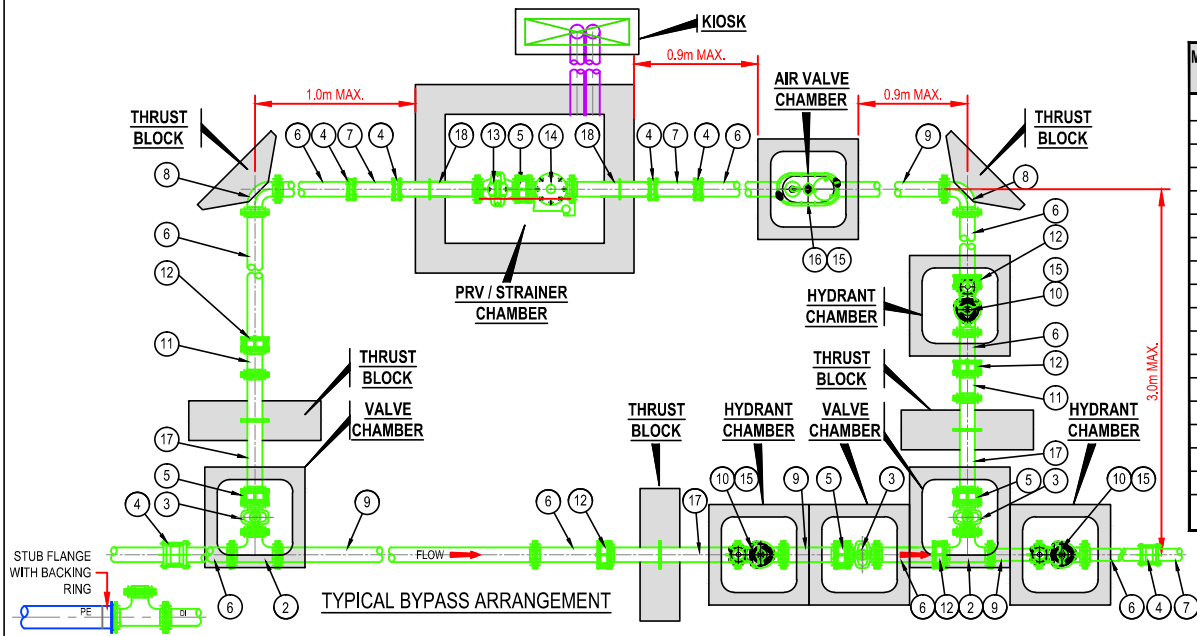


FLOOR PLAN



PE TO DI DETAIL

PRV DIAMETER 'A' (mm)	INTERNAL CHAMBER DIMENSIONS	COVER DIMENSIONS
50 - 100	1500 x 1200	1200 x 600
101 - 250	2200 x 1500	1800 x 900



TYPICAL BYPASS ARRANGEMENT

PE TO DI DETAIL

MARK No.	DESCRIPTION
1	FLANGED PLAIN ENDED PIPE (STANDARD)
2	ALL FLANGED TEE
3	SLUICE VALVE
4	LONG BODY FLEXIBLE COUPLING
5	DISMANTLING JOINT
6	FLANGED PLAIN ENDED PIPE (CUT TO SUIT)
7	PLAIN ENDED PIPE (CUT TO SUIT)
8	90° ALL FLANGED BEND
9	ALL FLANGED PIPEWORK
10	HYDRANT
11	FLANGED TAPER IF REQUIRED
12	FLANGE ADAPTOR
13	STRAINER
14	PRESSURE REDUCING/SUSTAINING VALVE
15	UNEQUAL ALL FLANGED TEE
16	AIR VALVE
17	ALL FLANGED PIPE WITH THRUST COLLAR
18	FLANGED TO PLAIN ENDED PIPE WITH THRUST COLLAR

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Class B brickwork Coursing & thrust flange notes amended	MOD
2	11/'17	JMC	TOC	Revised & added notes, & added chamber sizing table, fittings & kiosk	MOD
1	08/'16	JMC	TOC	Added steps, moved sump & revised cover notes	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

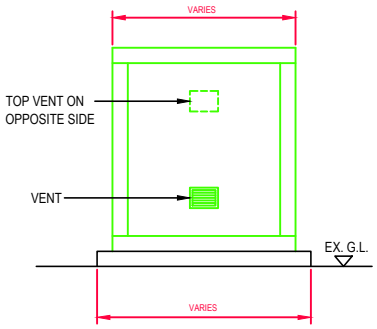
DATE: SEPT. 2015

TITLE

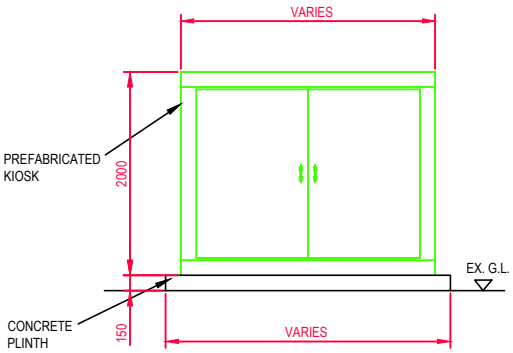
PRESSURE REDUCING / SUSTAINING VALVE CHAMBER IN-SITU R.C. OPTION

DRAWING No.: STD-W- 24

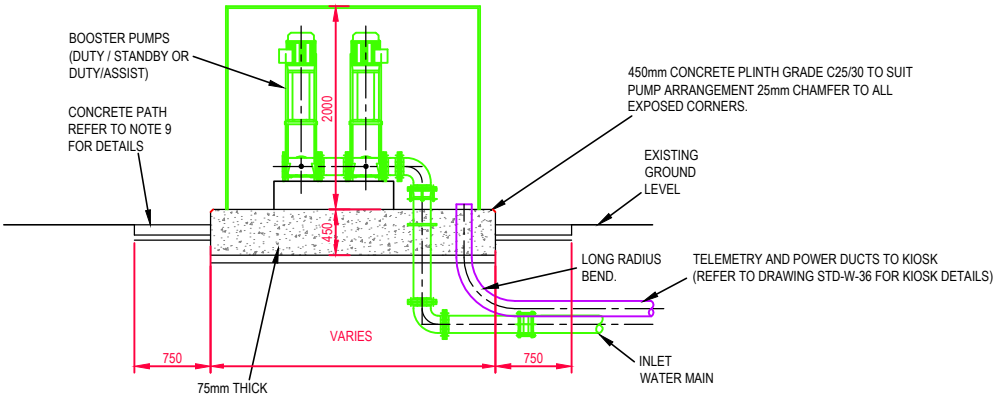
REV: 3



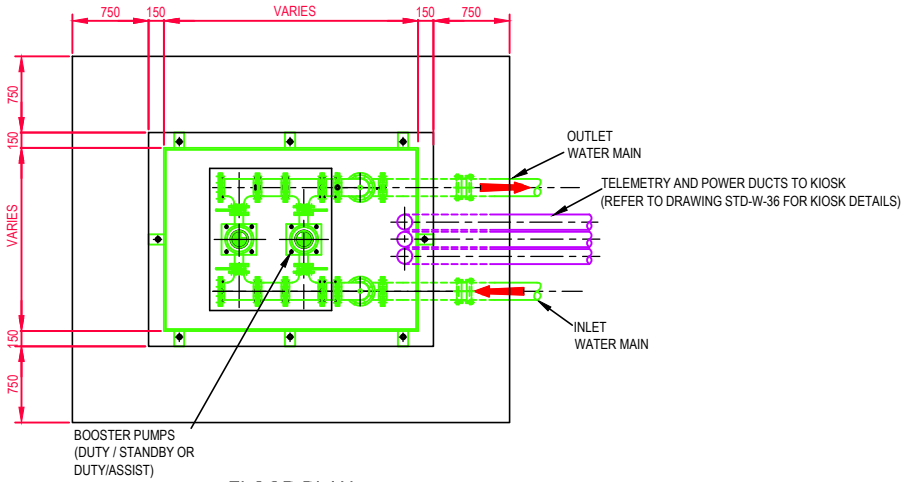
END ELEVATION



FRONT ELEVATION



SECTION



FLOOR PLAN

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. DETAILS OF THE PROPOSED BOOSTING ARRANGEMENT SHALL BE PROVIDED TO IRISH WATER AT CONNECTION APPLICATION STAGE AND AT THE DETAILED DESIGN STAGE OF THE DEVELOPMENT FOR ASSESSMENT.
3. KIOSK TO BE CONSTRUCTED FROM THERMOSETTING U.V. & WEATHER RESISTANT PLASTIC POWDER COATED & HOT DIPPED GALVANISED STEEL (MINIMUM 3mm THICKNESS) IN ACCORDANCE WITH BS EN 1461. STAINLESS STEEL MAY BE USED AS AN ALTERNATIVE KIOSK MATERIAL, PARTICULARLY IN SEVERE ENVIRONMENTS, SUBJECT TO AGREEMENT WITH IRISH WATER.
4. KIOSK TO HAVE SINGLE OR DOUBLE STEEL DOORS WITH MULTIPLE LOCKS TO LPS 1175 SR3 OR EN 1627. MINIMUM DOUBLE LOCKS WITH BOLTS THAT ENGAGE INTO THE SILL & HEADER AS WELL AS BETWEEN THE TWO LEAVES OR LEAF & FRAME. LEADING EDGE OF LEAVES TO HAVE EITHER REBATED EDGES OR FITTED WITH ASTRAGALS.
5. COLOUR TO BE HOLLY GREEN 14 C 39 IN ACCORDANCE WITH BS 4800:2011.
6. THE QUALITY OF KIOSK CONSTRUCTION SHALL ENSURE THAT THE FOLLOWING IS ACHIEVED:
   (a) A THERMAL TRANSMITTANCE OF 1.5W PER m^2K.
   (b) A FIRE RESISTANCE (RETENTION OF STABILITY, INTEGRITY AND INSULATION) EQUIVALENT TO CLASS 2 OF BS 476, WHEN TESTED IN ACCORDANCE WITH BS 476 FOR A PERIOD EXCEEDING 30 MINUTES.
   (c) AN IP RATING OF IP55 OR EQUIVALENT.
7. ALL DUCTING TO BE INSTALLED WITH DRAW CORDS.
8. WATER TIGHT SEALS TO BE PROVIDED AROUND ALL DUCTING ENTERING/EXITING THE BOOSTER PUMP STATION.
9. A 750mm WIDE x 100mm THICK FOOTPATH OF C25/30 CONCRETE ON 50mm SAND BLINDING ON 300mm CLAUSE 804 GRANULAR MATERIAL TO BE PROVIDED AROUND KIOSK.
10. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
11. BOOSTER PUMPS TO BE LOCATED IN IN AREA THAT IS NOT PRONE TO FLOODING.
12. PROVISION TO BE MADE IN THE SIZING OF THE KIOSK FOR THE SAFE REPAIR/MAINTENANCE OF THE BOOSTER PUMPS & FOR THEIR REMOVAL IF REQUIRED.

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
2	07/'20	RH	TOC	Notes Updated	MOD
1	08/'16	JMC	TOC	Added note 4	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

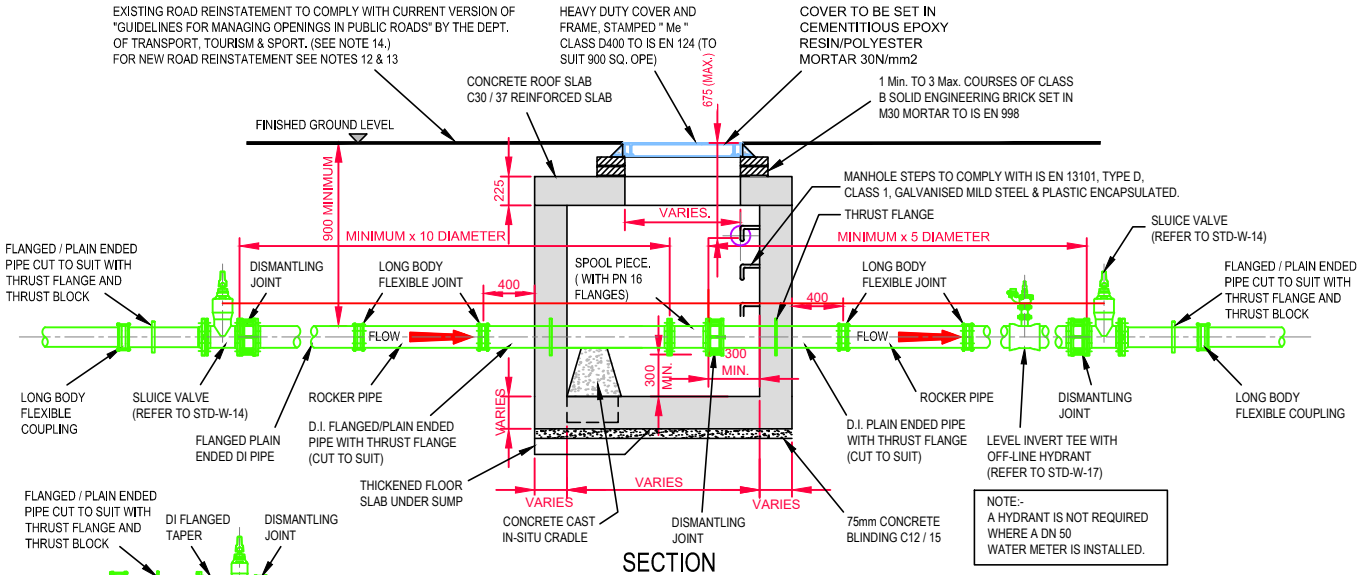
TITLE: BOOSTER PUMP STATION ARRANGEMENT

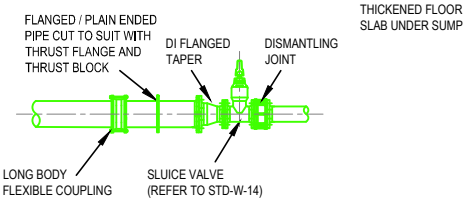
DRAWING No.: STD-W- 25

REV: 2

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. 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 225mm. ALTERNATIVELY, PRE-CAST CONCRETE ROOFS MAY BE USED, SUBJECT TO IRISH WATER REVIEW, & COMPLIANCE WITH IS EN 1917 & IS 420
3. CONCRETE FOR FLOW METER CHAMBER TO BE C30 / 37.
4. PRECAST UNITS COMPLETED WITH RUBBER SEALING GASKET BETWEEN UNITS, COMPLYING WITH THE REQUIREMENTS OF IS EN 1917 AND IS 420, COMPLETE WITH 150mm CONCRETE SURROUND MAY BE USED AS AN ACCEPTABLE ALTERNATIVE. CONCRETE SURROUND TO BE GRADE C20/25 IN ACCORDANCE WITH IS EN 206 .
5. METER CHAMBER SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
6. 200mm ALL ROUND, 100mm DEEP CONCRETE PLINTH AROUND COVER IN GRASS AREAS.
7. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
8. 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.
9. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW BY 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. THE METER SHALL BE CAPABLE OF ACCURATE NIGHT FLOW MEASUREMENTS.
11. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
12. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
13. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
14. 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.
15. DEVELOPER TO PROVIDE SPOOL PIECE, IRISH WATER TO PROVIDE METER. (SEE TABLE BELOW FOR SPOOL PIECE LENGTHS)

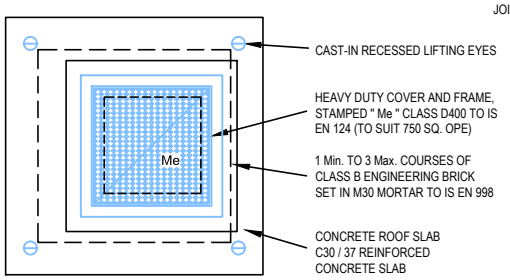
ELECTROMAGNETIC WATER METER SPOOL PIECE LENGTHS							
Ø mm	DN50	DN80	DN100	DN125	DN150	DN200	DN250
Length mm	200		250		300	350	450



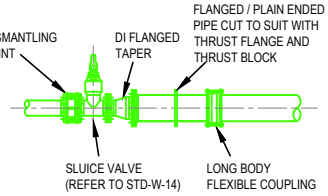


TAPER DETAIL OPTION
(if required)

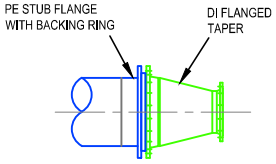
METER DIAMETER 'A' (mm)	INTERNAL CHAMBER DIMENSIONS	COVER DIMENSIONS	FLOOR SLAB DEPTH	WALL THICKNESS
50 - 100	1200 x 1200	750 x 750	200mm	200mm
101 - 250	1500 x 1500	900 x 900	250mm	250mm



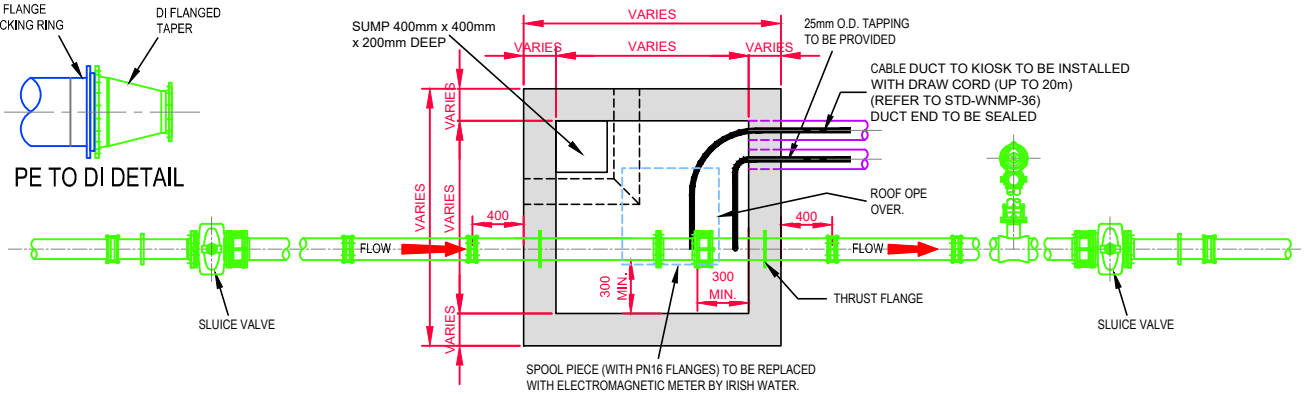
ROOF PLAN



TAPER DETAIL OPTION
(if required)



PE TO DI DETAIL



FLOOR PLAN

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
4	07/'20	RH	TOC	Notes Updated, spool lengths table included	MOD
3	11/'17	JMC	TOC	Revised notes & added table & hydrant	MOD
2	08/'16	JMC	TOC	Added steps & revised cover notes	MOD
1	04/'16	JMC	TOC	Added couplings to details	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE

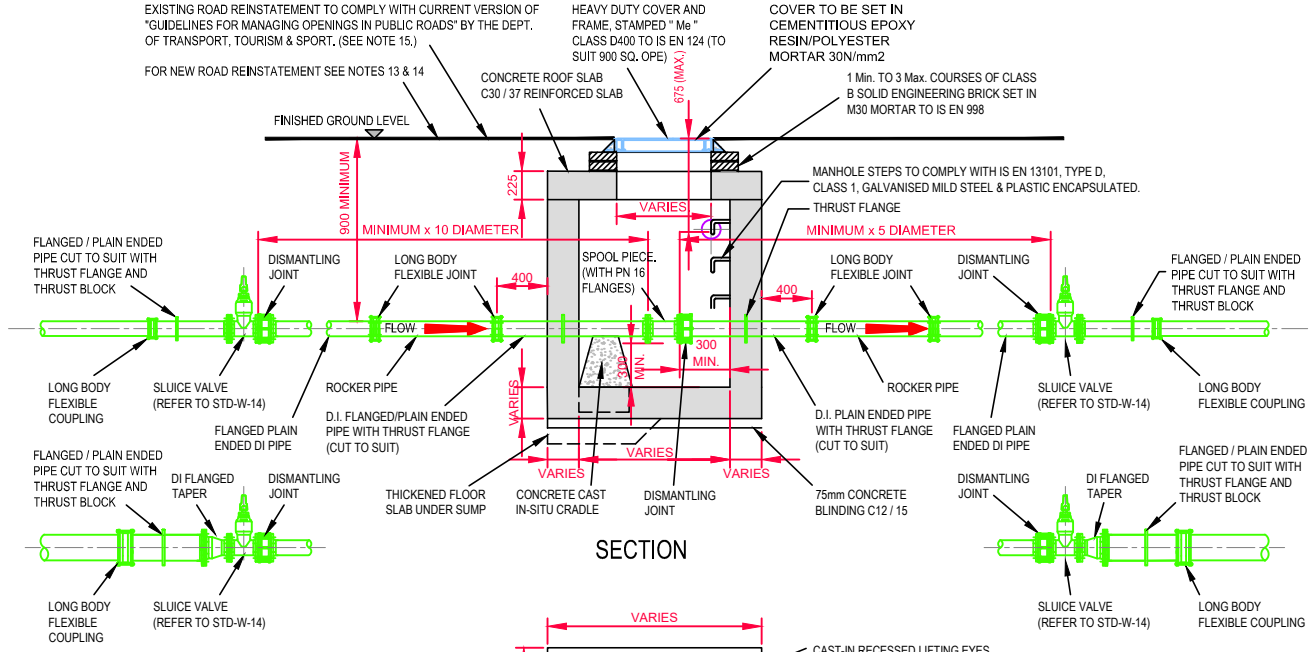
ELECTROMAGNETIC METER CHAMBER (80 - 250mm DIA.)

DRAWING No.: STD-W- 26

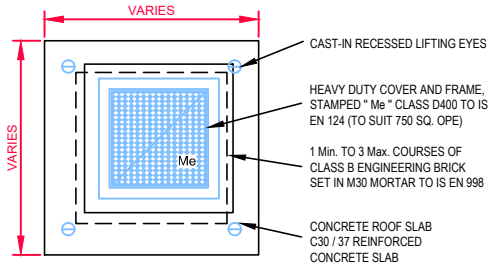
REV: 4

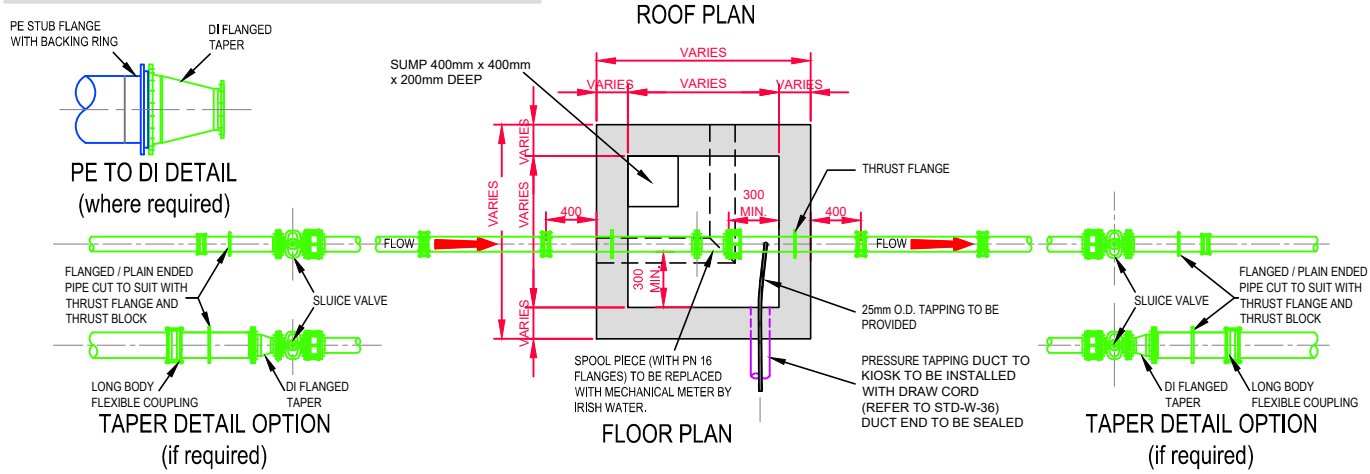
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. STRUCTURAL DESIGN AND REINFORCEMENT DETAIL TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW. ROOF SLABS SHALL BE DESIGNED TO CARRY ALL LIVE LOADS & DEAD LOADS, & CONSIST OF A REINFORCED CONCRETE SLAB OF IN-SITU CONCRETE, GRADE C30/37, WITH A MINIMUM THICKNESS OF 225mm. ALTERNATIVELY, PRE-CAST CONCRETE ROOFS MAY BE USED, SUBJECT TO IRISH WATER REVIEW, & COMPLIANCE WITH IS EN 1917 & IS 420, Part 4.
3. CONCRETE FOR CHAMBERS TO BE C30 / 37.
4. PRECAST UNITS COMPLETED WITH RUBBER SEALING GASKET BETWEEN UNITS, COMPLYING WITH THE REQUIREMENTS OF IS EN 1917 AND IS 420, COMPLETE WITH 150mm CONCRETE SURROUND MAY BE USED AS AN ACCEPTABLE ALTERNATIVE. CONCRETE SURROUND TO BE GRADE C20/25 IN ACCORDANCE WITH IS EN 206.
5. CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
6. 200mm ALL ROUND, 100mm DEEP CONCRETE PLINTH AROUND COVER IN GRASS AREAS.
7. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
8. 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.
9. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW BY 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 EN 206.
12. A SINGLE METER CHAMBER MAY BE USED, WHERE APPLICABLE, TO THE METER SUPPLIER'S REQUIREMENTS, TO LOCATE THE METER. IF A STRAINER IS REQUIRED DUE TO WATER QUALITY PARTICULATE RISK, THIS MAY BE LOCATED IN THE METER CHAMBER OR IN A SEPARATE STRAINER CHAMBER. (SEE STD-W-26B).
13. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
14. 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.
16. DEVELOPER TO PROVIDE SPOOL PIECE, IRISH WATER TO PROVIDE METER. (SEE TABLE BELOW (UNLESS NOTED OTHERWISE) FOR STANDARD SPOOL PIECE LENGTHS)
17. KIOSK AND DUCT NOT REQUIRED EXCEPT WHERE FLOW METER CHAMBER IS LOCATED IN A TRAFFICKED AREA OR AS OTHERWISE REQUIRED BY IRISH WATER
18. DETAILS SHOWN HERE ARE FOR HOUSING DEVELOPMENTS WITH 40-249 UNITS TYPICALLY

MECHANICAL WATER METER SPOOL PIECE LENGTHS								
Ø mm	DN40	DN50	DN80	DN100	DN125	DN150	DN200	DN250
Length mm	150	200		250		300	350	450



METER DIAMETER 'A' (mm)	INTERNAL CHAMBER DIMENSIONS	COVER DIMENSIONS	FLOOR SLAB DEPTH	WALL THICKNESS
40 - 65	450 x 600 (up to 750mm deep) 1200 x 1200 (> 750mm deep)	280 x 445 750 x 750	100mm 200mm	100mm 200mm
80 - 100	1200 x 1200	750 x 750	200mm	200mm
125 - 250	1500 x 1500	900 x 900	250mm	250mm





REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
1	07/'20	RH	TOC	Notes Updated, spool lengths table and taper details included	MOD
0	11/'17	JMC	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

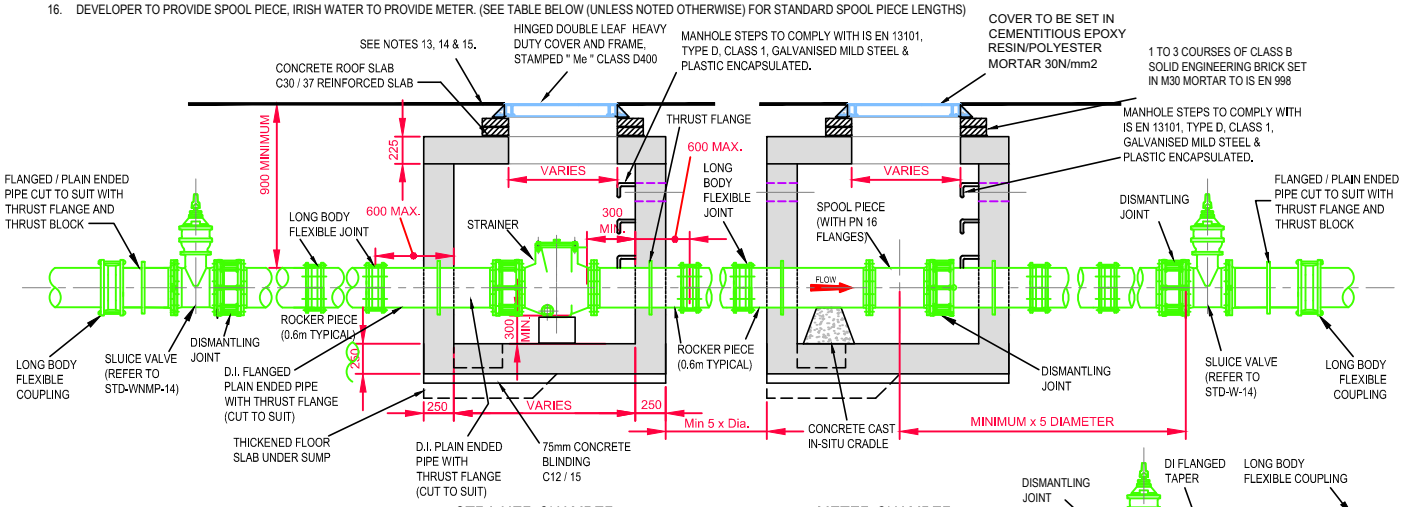
DATE: JUN. 2017

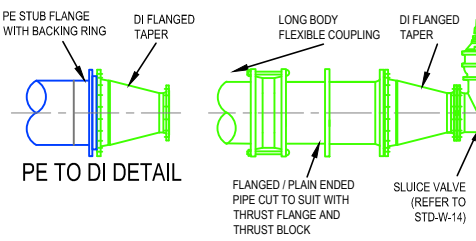
TITLE: CHAMBER FOR FLANGED MECH. METER WITHOUT STRAINER (DN40 - DN250mm DIA.)

DRAWING No.: STD-W-26A

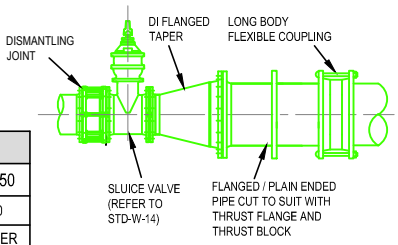
REV: 1

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. 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 225mm. ALTERNATIVELY, PRE-CAST CONCRETE ROOFS MAY BE USED, SUBJECT TO IRISH WATER REVIEW, & COMPLIANCE WITH IS EN 1917 & IS 420, Part 4.
3. CONCRETE FOR CHAMBERS TO BE C30 / 37.
4. PRECAST UNITS COMPLETED WITH RUBBER SEALING GASKET BETWEEN UNITS, COMPLYING WITH THE REQUIREMENTS OF IS EN 1917 AND IS 420, COMPLETE WITH 150mm CONCRETE SURROUND MAY BE USED AS AN ACCEPTABLE ALTERNATIVE. CONCRETE SURROUND TO BE GRADE C20/25 IN ACCORDANCE WITH IS EN 206.
5. CHAMBERS SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW BY IRISH WATER.
6. 200mm ALL ROUND, 100mm DEEP CONCRETE PLINTH AROUND COVER IN GRASS AREAS.
7. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
8. 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.
9. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW BY 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 EN 206.
12. A SINGLE METER CHAMBER MAY BE USED, WHERE APPLICABLE, TO THE METER SUPPLIER'S REQUIREMENTS, TO LOCATE BOTH THE METER & STRAINER. A STRAINER IS ONLY REQUIRED WHERE THERE IS A WATER QUALITY PARTICULATE ISSUE AS ADVISED BY IRISH WATER.
13. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
14. 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.
16. DEVELOPER TO PROVIDE SPOOL PIECE, IRISH WATER TO PROVIDE METER. (SEE TABLE BELOW (UNLESS NOTED OTHERWISE) FOR STANDARD SPOOL PIECE LENGTHS)

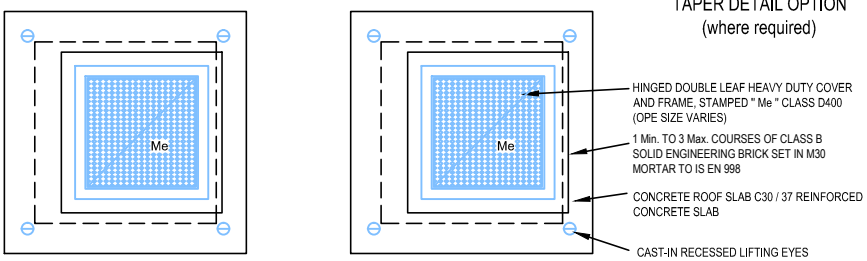


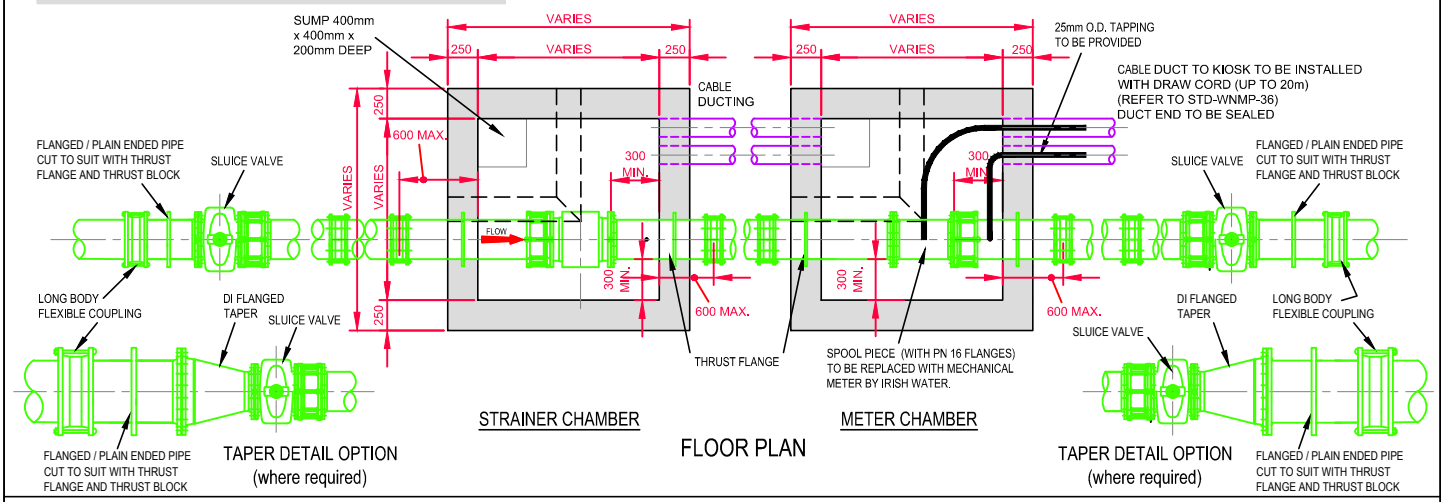


MECHANICAL WATER METER SPOOL PIECE LENGTHS					
Ø mm	DN100	DN125	DN150	DN200	DN250
Length mm	250		300	350	450
SPOOL PIECE FOR STRAINER TO BE CONFIRMED WITH IRISH WATER					



METER DIAMETER 'A' (mm)	INTERNAL CHAMBER DIMENSIONS	COVER DIMENSIONS	FLOOR SLAB DEPTH	WALL THICKNESS
100	1200 x 1200	750 x 750	200mm	200mm
>100 - 250	1500 x 1500	900 x 900	250mm	250mm





REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

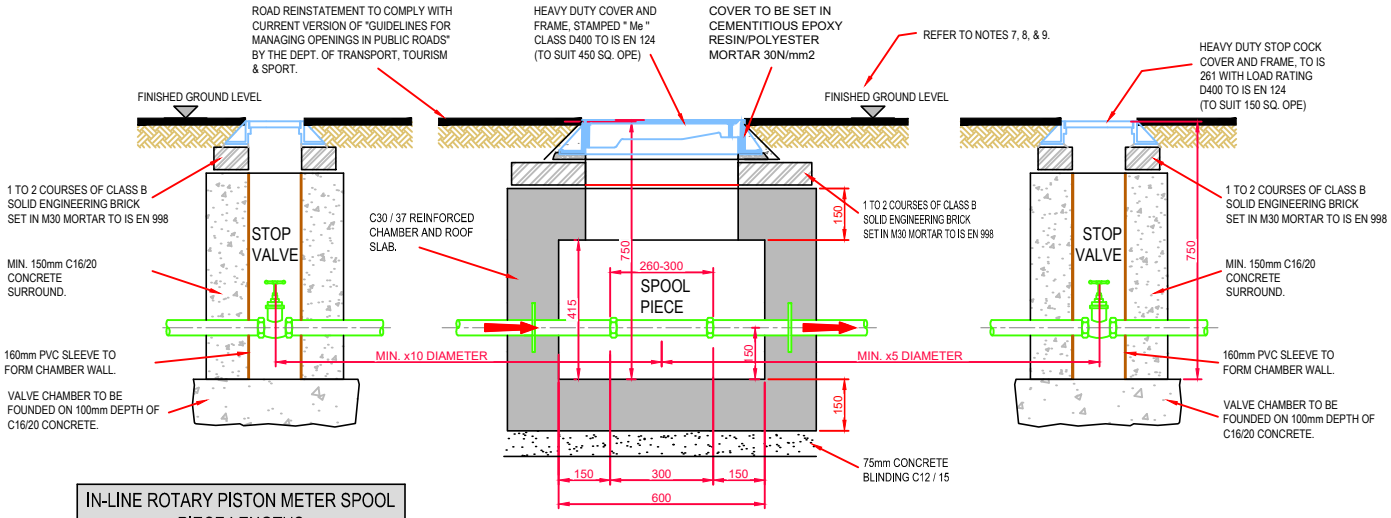
TITLE

CHAMBER FOR FLANGED MECH. METER (DN100 - DN250mm DIA.) WITH SEPARATE STRAINER CHAMBER

SCALE	DATE
NOT TO SCALE	SEPT. 2019

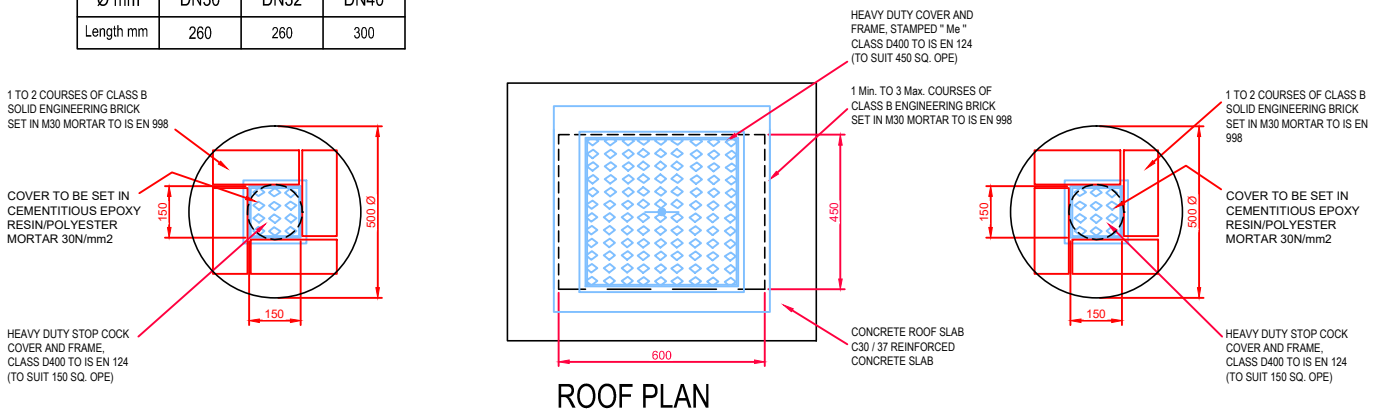
DRAWING No.	REV
STD-W-26B	0

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. 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 APPROVAL, & COMPLIANCE WITH IS EN 1917, AND IS 420
3. METER CHAMBER SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVER TO IS EN 124 RATING D400. COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO REVIEW BY IRISH WATER.
4. 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.
5. ANTI CORROSION TAPE TO BE PROVIDED AROUND ALL BURIED FLANGES.
6. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
7. REINSTATEMENT OF EXISTING ROADS AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
8. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
9. 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.
10. 200mm ALL AROUND x 100mm DEEP, C20/25 CONCRETE PLINTH COMPLETE WITH BULL NOSE FINISH AND MILD STEEL REINFORCEMENT LINK AROUND COVERS IN GREEN AREAS.

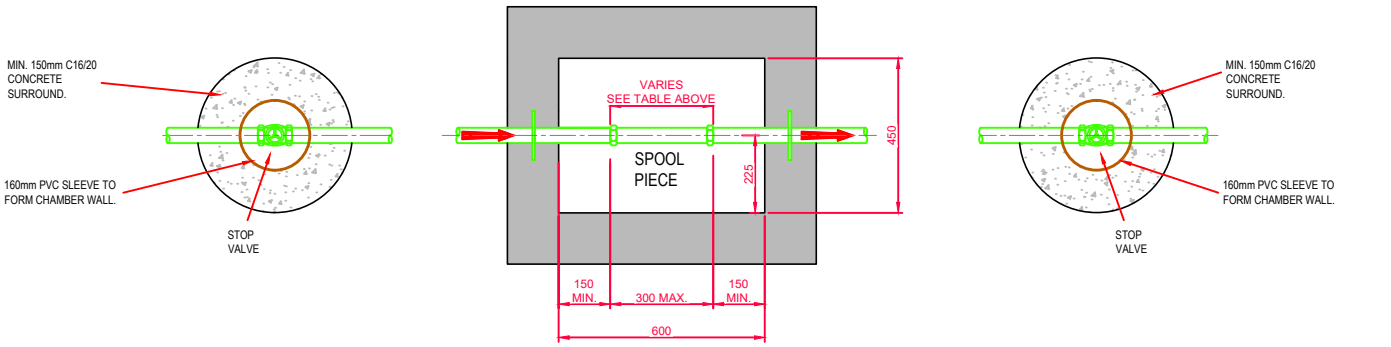


SECTION

IN-LINE ROTARY PISTON METER SPOOL PIECE LENGTHS			
Ø mm	DN30	DN32	DN40
Length mm	260	260	300



ROOF PLAN



PLAN

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

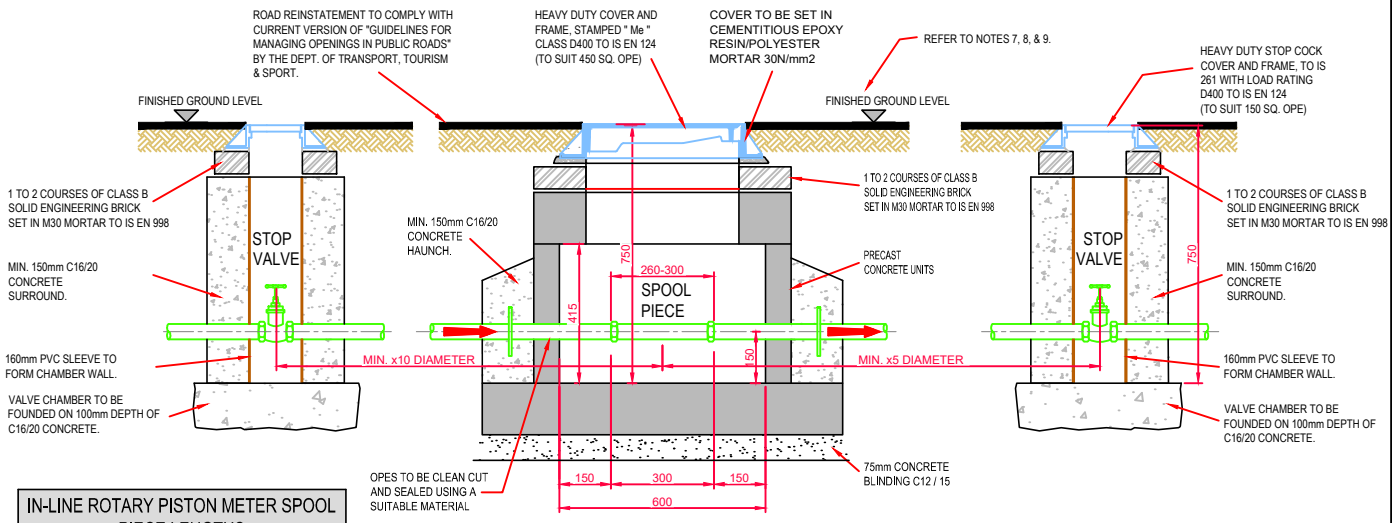
DATE: SEPT. 2019

TITLE: THREADED ROTARY PISTON FLOW METER CHAMBER (DN30 - DN40mm DIA.) IN-SITU CONCRETE OPTION

DRAWING No.: STD-W-26C

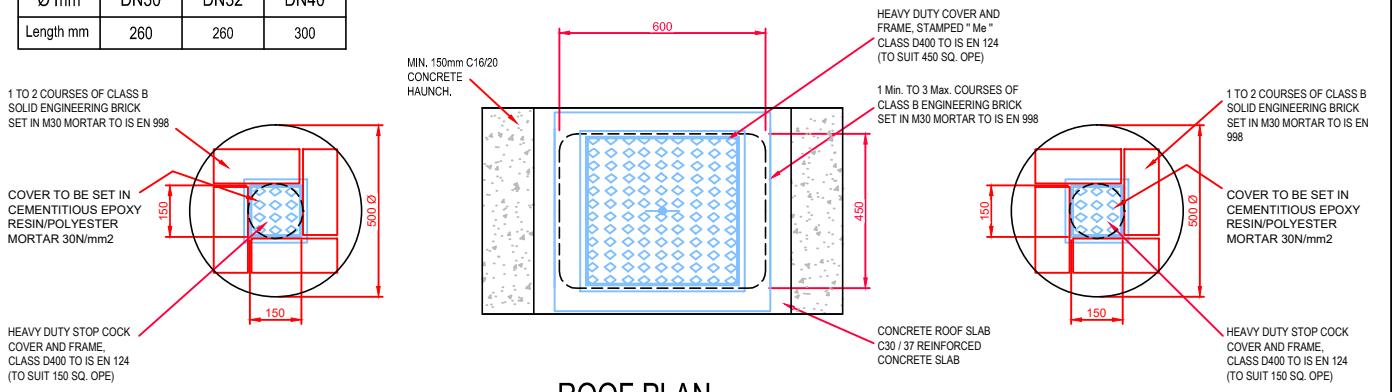
REV: 0

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. 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 APPROVAL, & COMPLIANCE WITH IS EN 1917, AND IS 420
3. METER CHAMBER SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVER TO IS EN 124 RATING D400. COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO REVIEW BY IRISH WATER.
4. 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.
5. ANTI CORROSION TAPE TO BE PROVIDED AROUND ALL BURIED FLANGES.
6. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
7. REINSTATEMENT OF EXISTING ROADS AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
8. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
9. 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.
10. 200mm ALL AROUND x 100mm DEEP, C20/25 CONCRETE PLINTH COMPLETE WITH BULL NOSE FINISH AND MILD STEEL REINFORCEMENT LINK AROUND COVERS IN GREEN AREAS.

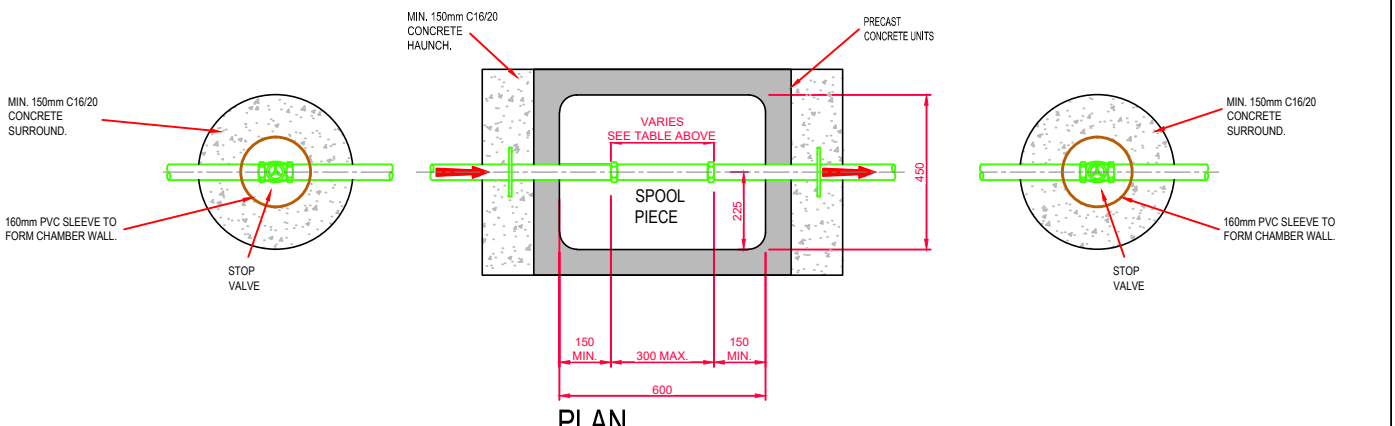


SECTION

IN-LINE ROTARY PISTON METER SPOOL PIECE LENGTHS			
Ø mm	DN30	DN32	DN40
Length mm	260	260	300



ROOF PLAN



PLAN

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

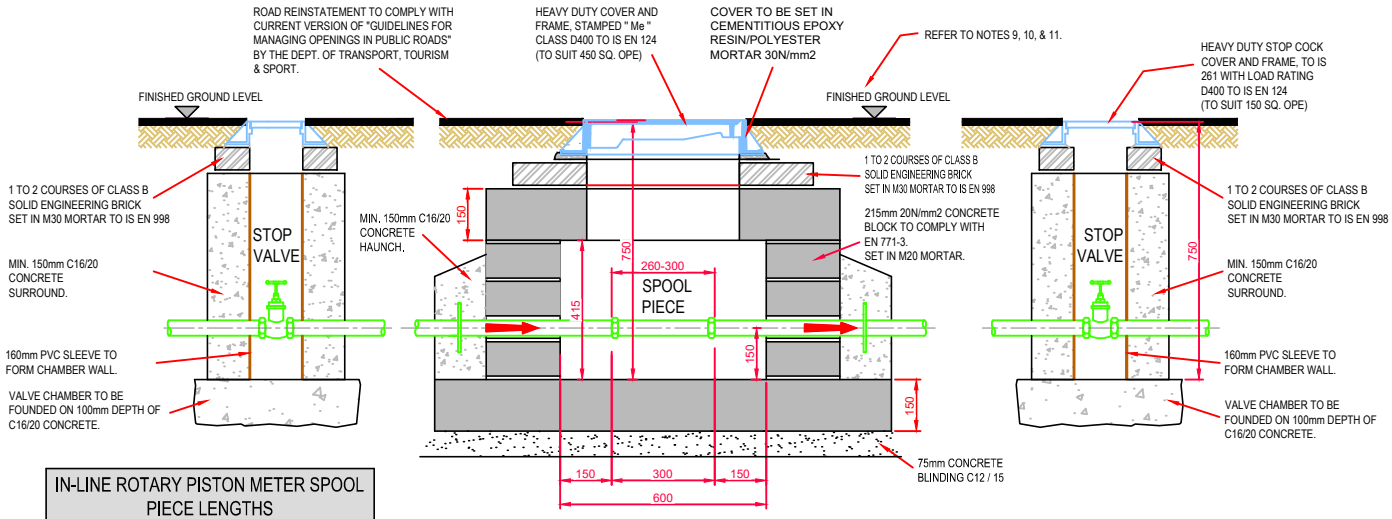
DATE: SEPT. 2019

TITLE: THREADED ROTARY PISTON FLOW METER CHAMBER (DN30 - DN40mm DIA.) PRECAST CONCRETE OPTION

DRAWING No.: STD-W-26D

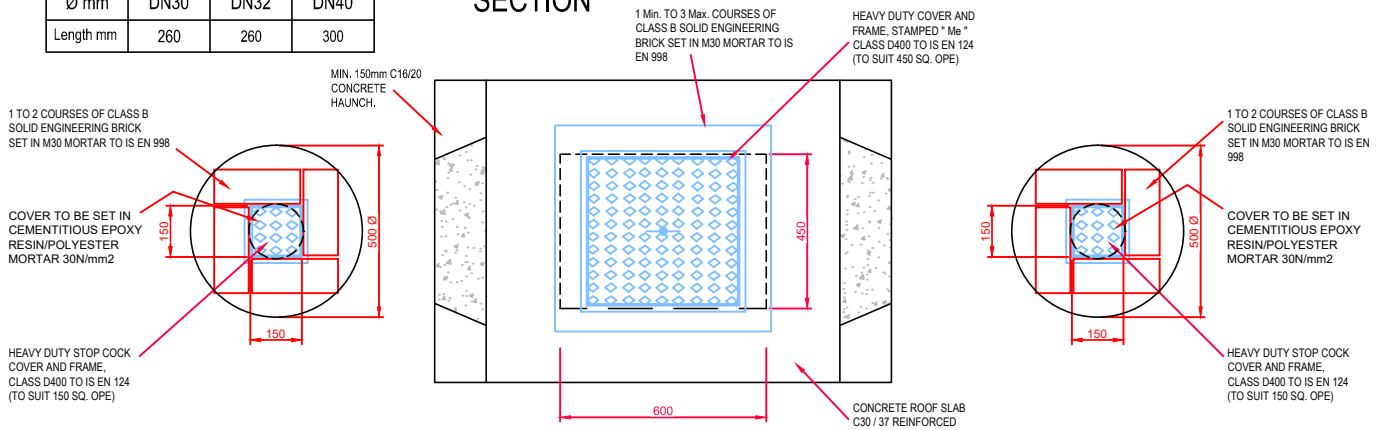
REV: 0

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. 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 APPROVAL, & COMPLIANCE WITH IS EN 1917, AND IS 420
3. METER CHAMBER SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVER TO IS EN 124 RATING D400. COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO REVIEW BY IRISH WATER.
4. 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.
5. ANTI CORROSION TAPE TO BE PROVIDED AROUND ALL BURIED FLANGES.
6. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
7. REINSTATEMENT OF EXISTING ROADS AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
8. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
9. 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.
10. 200mm ALL AROUND x 100mm DEEP, C20/25 CONCRETE PLINTH COMPLETE WITH BULL NOSE FINISH AND MILD STEEL REINFORCEMENT LINK AROUND COVERS IN GREEN AREAS.

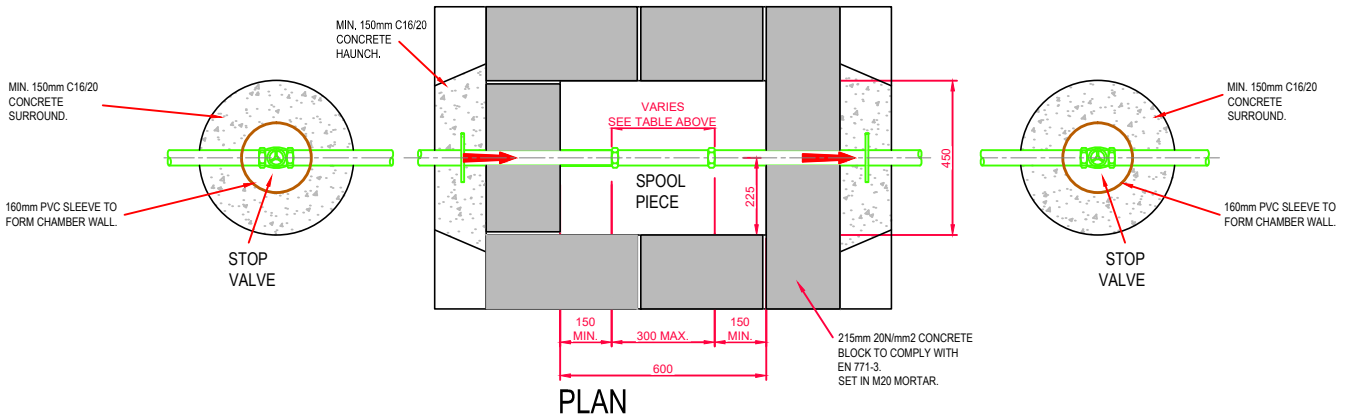


SECTION

IN-LINE ROTARY PISTON METER SPOOL PIECE LENGTHS			
Ø mm	DN30	DN32	DN40
Length mm	260	260	300



ROOF PLAN



PLAN

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2019

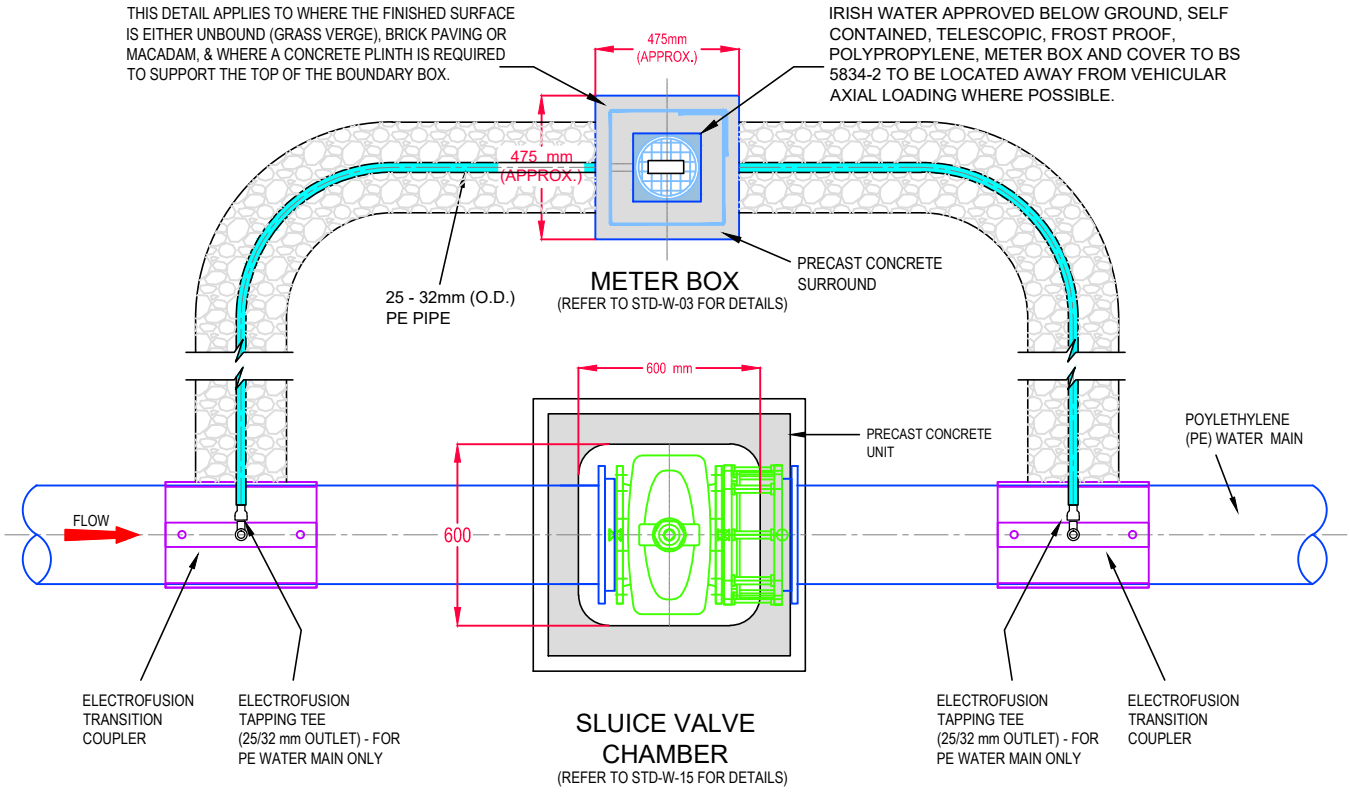
TITLE: THREADED ROTARY PISTON FLOW METER CHAMBER (DN30 - DN40mm DIA.) BLOCKWORK OPTION

DRAWING No.: STD-W-26E

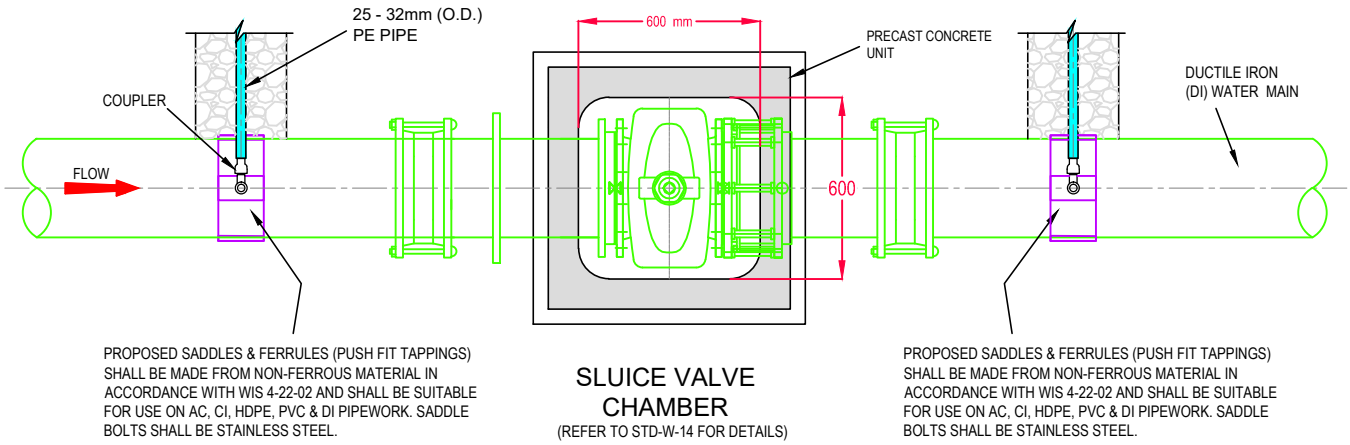
REV: 0

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. 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 APPROVAL, & COMPLIANCE WITH IS EN 1917 & IS 420.
3. 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.
4. 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN AREAS.
5. 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.
6. ANTI CORROSION TAPE TO BE PROVIDED AROUND ALL BURIED FLANGES.
7. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW BY IRISH WATER.
8. ALL CONCRETE TO BE IN ACCORDANCEWITH IS EN 206.
9. ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
10. NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
11. 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.
12. 200mm ALL AROUND x 100mm DEEP, C20/25 CONCRETE PLINTH COMPLETE WITH BULL NOSE FINISH AND MILD STEEL REINFORCEMENT LINK AROUND COVERS IN GREEN AREAS.

NOTE:
- THIS ARRANGEMENT TO BE INSTALLED FOR THE PURPOSE OF TESTING FOR NIGHT FLOWS WHEN CHECKING AN ESTATE FOR LEAKS.
- STOP TAP IN THE METER BOX TO BE IMAINTAINED IN THE CLOSED POSITION.



POLYETHYLENE OPTION



DUCTILE IRON OPTION

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: JAN. 2020

TITLE

BY-PASS FLOW METER CHAMBER
(25-32mm O.D. DIA.)
For Developments with <20m³/Day Water Use

DRAWING No.: STD-W-26F

REV: 0

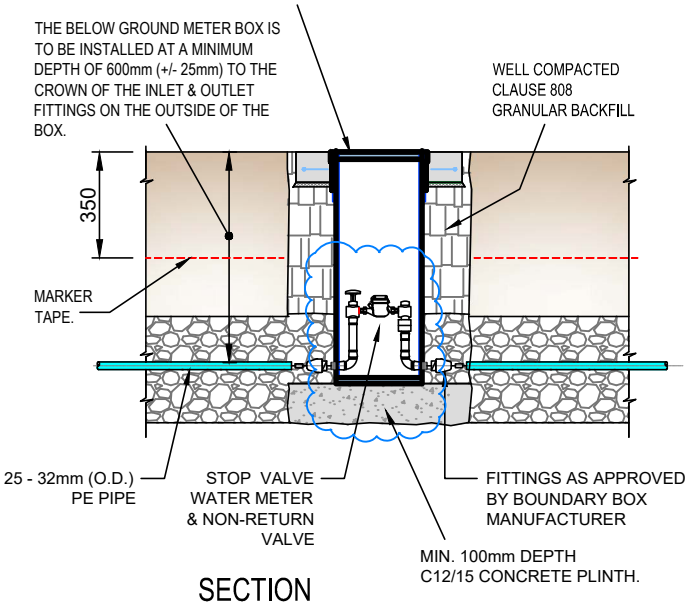
GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. FOR CONNECTION TO AN EXISTING MAIN THE CONNECTION SHALL BE AS PER THE PIPE MANUFACTURER'S SPECIFICATION.
3. ELECTRO FUSION COUPLING TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.

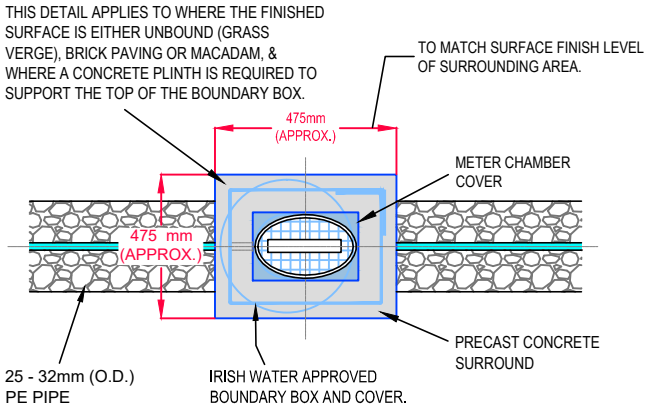
BOUNDARY BOX NOTES:

1. THE BOUNDARY BOX IS TO BE IN ACCORDANCE WITH THE IRISH WATER SPECIFICATION, INCORPORATING A STOP-TAP, FROST PLUG & NON-RETURN VALVE.
2. THE BOUNDARY BOX SHALL BE POSITIONED IN PUBLIC SPACE & AS CLOSE AS POSSBILE TO THE PROPERTY BOUNDARY BUT NO PART OR FITTING TO BE WITHIN 225mm OF THE PROPERTY LINE.
3. THE BOUNDARY BOX SHALL BE LOCATED WHERE IT IS SAFE TO OPEN THE COVER & ACCESS THE STOP TAP OR VISUALLY READ THE METER, i.e. ON A FOOTPATH OR VERGE, & NOT IN A CARRIAGEWAY.
4. THE SURFACE BOX COVER ON THE BOUNDARY BOX SHOULD BE NOT LESS THAN GRADE C (BS 5834:2-2011); & THE BOUNDARY BOX SHOULD BE LOCATED SUCH THAT HEAVIER GRADES OF COVER WOULD NOT BE REQUIRED.
5. THE SHAFT OF THE BOUNDARY BOX IS TO BE INSTALLED VERTICALLY, & THE SURFACE BOX/COVER INCLINED TO MATCH THE SURFACE GRADIENT.
6. THE BOUNDARY BOX IS TO BE INSTALLED AT A MINIMUM DEPTH OF 600mm (+/- 25mm) TO THE CROWN OF THE INLET & OUTLET FITTINGS ON THE OUTSIDE OF THE BOX.
7. THE SERVICE CONNECTION PIPE SHALL NOT BE WRAPPED AROUND THE SHAFT OF THE BOUNDARY BOX OR BENT IN ANY RADIUS LESS THAN THAT APPROVED BY THE MANUFACTURER.
8. THE PIPE FITTINGS TO THE BOUNDARY BOX SHALL BE APPROVED BY THE BOUNDARY BOX MANUFACTURER.
9. THE BOUNDARY BOX SHALL BE INSTALLED HYGIENICALLY & LEFT CLEAN & FREE OF CONSTRUCTION WASTE OR DIRT FOR LATER METER INSTALLATION BY IRISH WATER.
10. BOX TO BE FOUNDED ON 100mm DEPTH OF C12/15 CONCRETE AND SURROUNDED WITH CLAUSE 808 GRANULAR MATERIAL.
11. THE DESIRABLE MINIMUM COVER FROM THE FINISHED GROUND LEVEL TO THE EXTERNAL CROWN OF A SERVICE CONNECTION SHALL BE 750mm WITH AN ABSOLUTE MINIMUM DEPTH OF 600mm FOR SHORT DISTANCES (SUBJECT TO IRISH WATER AGREEMENT). THE DESIRABLE MAXIMUM COVER FOR A SERVICE CONNECTION PIPE SHOULD BE 1200mm, WHERE PRACTICABLE.
12. CUSTOMER'S DISTRIBUTION PIPEWORK WITHIN THE PREMISES SHOULD BE SUITABLY SIZED TO ACCOMMODATE THE FLOW PASSING THROUGH THE BOUNDARY BOX.
13. WHERE A GRASS VERGE IS NOT AVAILABLE AND A FOOTPATH IS LESS THAN 1.5m WIDE, THE WATERMAIN IS PERMITTED ON THE ROADWAY.
14. THE POSITION OF THE METER DOES NOT REPRESENT THE CHANGE OF OWNERSHIP IN THE SERVICE PIPE. THAT POINT IS NORMALLY AT THE PROPERTY BOUNDARY.
15. THE BOUNDARY BOX ACCOMMODATES INLINE ROTARY PISTON METERS UP TO SIZE DN32mm WITH THREADED ENDS.

IRISH WATER APPROVED BELOW GROUND, SELF CONTAINED, TELESCOPIC, FROST PROOF, POLYPROPYLENE, METER BOX AND COVER TO BS 5834-2 TO BE LOCATED AWAY FROM VEHICULAR AXIAL LOADING WHERE POSSIBLE.



SECTION



PLAN

25-32mm O.D. Ø INLINE WATER METER CHAMBER DETAILS

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

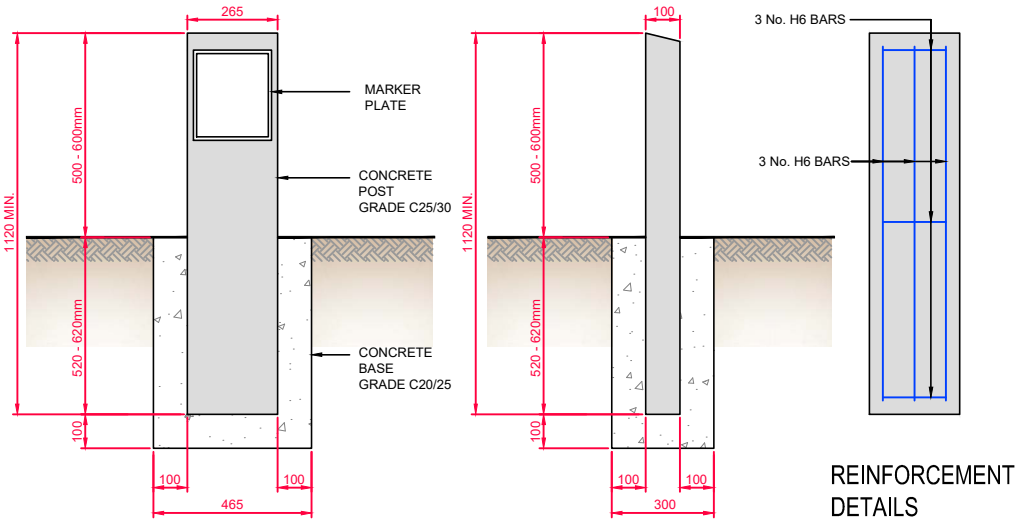
SCALE: NOT TO SCALE

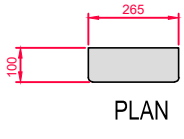
DATE: SEPT. 2019

TITLE: INLINE FLOW METER CHAMBER (25-32mm O.D. DIA.)

DRAWING No.: STD-W-26G

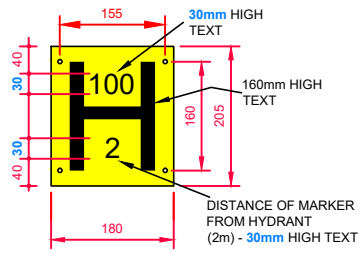
REV: 0



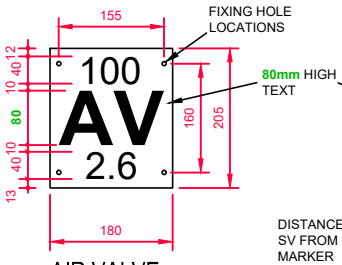


DIAMETER OF WATERMAIN (100mm) - 40mm HIGH TEXT

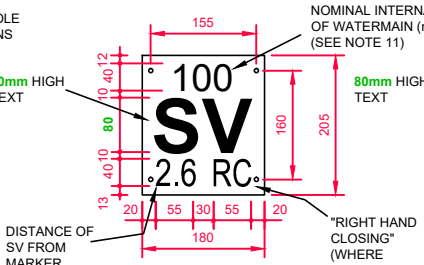
1. WHERE PRACTICAL MARKER PLATES SHALL BE FIXED TO ADJACENT WALLS OR ALTERNATIVELY ATTACHED TO MARKER POSTS.
2. PLATES TO BE FIXED IN POSITION USING WALL PLUGS AND STAINLESS STEEL SCREWS.
3. MARKER PLATES TO BE MANUFACTURED IN ACCORDANCE WITH BS 3251.
4. FOR HYDRANT PLATE ALL CHARACTERS SHOULD BE BLACK AND THE REMAINDER OF THE FRONT FACE SHOULD CONFORM TO COLOUR REFERENCE RAL 0858080.
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 APPLIED AT 40 - 60 MICRONS
11. REFERENCES TO PIPE DIAMETERS ON MARKER PLATES REFER SPECIFICALLY TO THE NOMINAL **INTERNAL** DIAMETER OF THE PIPE REGARDLESS OF PIPE MATERIAL



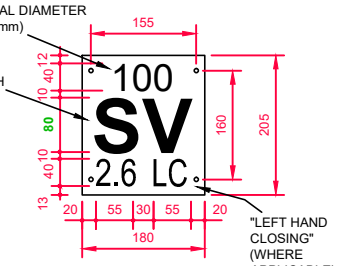
HYDRANT



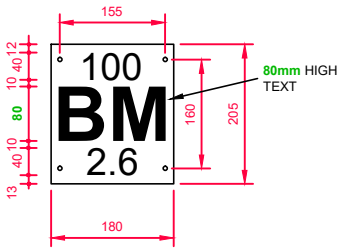
AIR VALVE



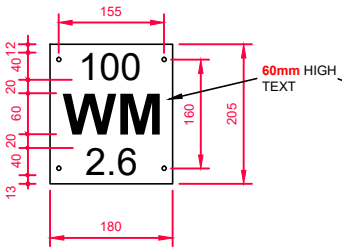
SLUICE VALVE
RIGHT HAND CLOSING



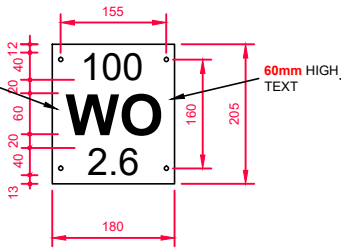
SLUICE VALVE
LEFT HAND CLOSING



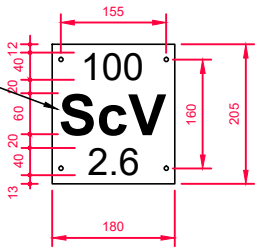
BULK METER



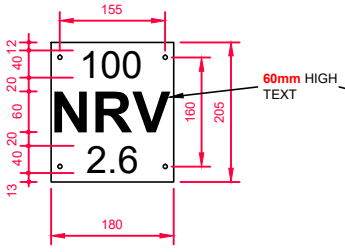
WATER MAIN



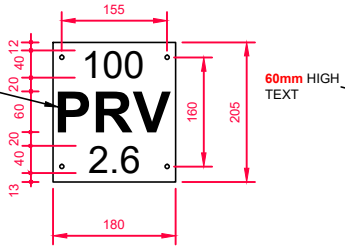
WASHOUT HYDRANT



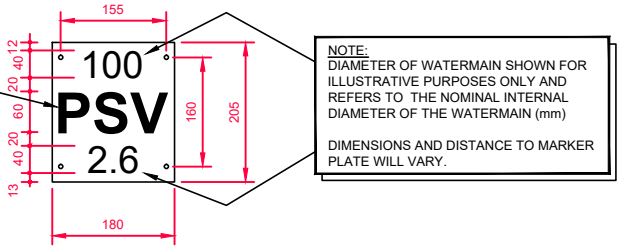
SCOUR VALVE



NON RETURN VALVE



PRESSURE REDUCING VALVE



PRESSURE SUSTAINING VALVE

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Additional Marker Plates Included and Revised Notes	MOD
2	11/'17	JMC	TOC	Added BM plate & updated notes	MOD
1	04/'16	JMC	TOC	Added washout hydrant plate	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

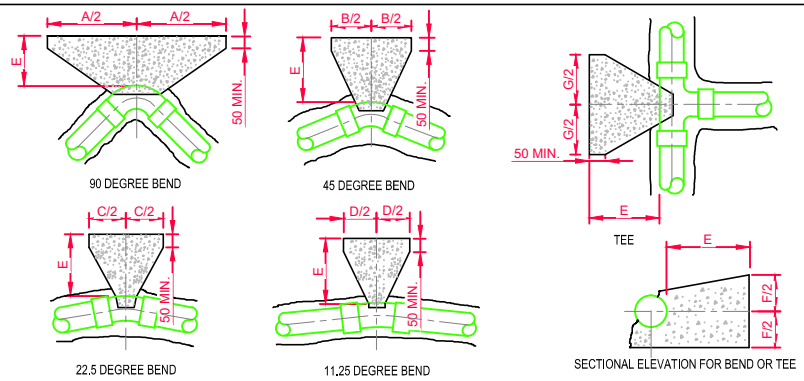
TITLE: MARKER POSTS / PLATES

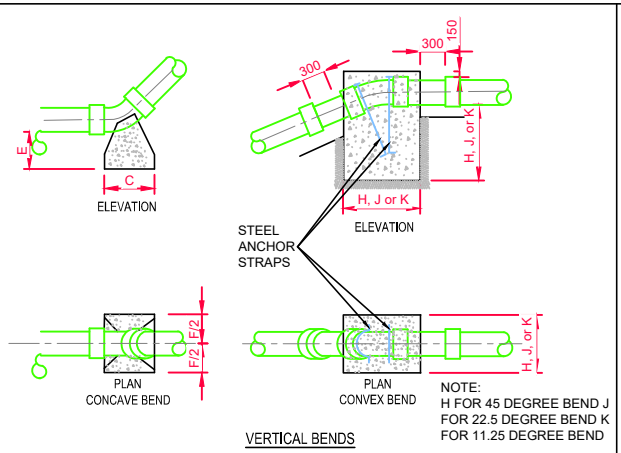
SCALE: NOT TO SCALE

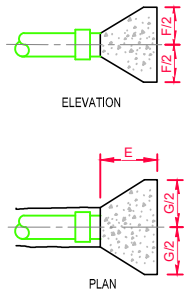
DATE: SEPT. 2015

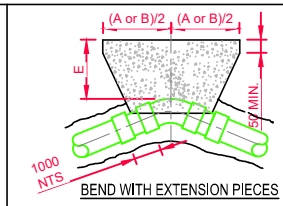
DRAWING No.: STD-W- 27

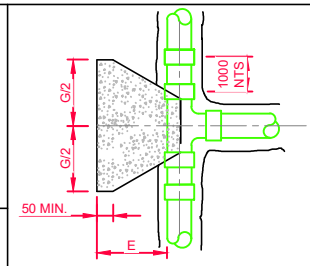
REV: 3

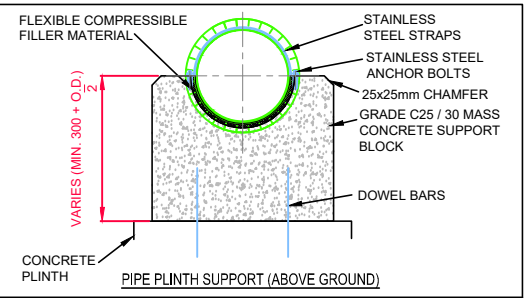


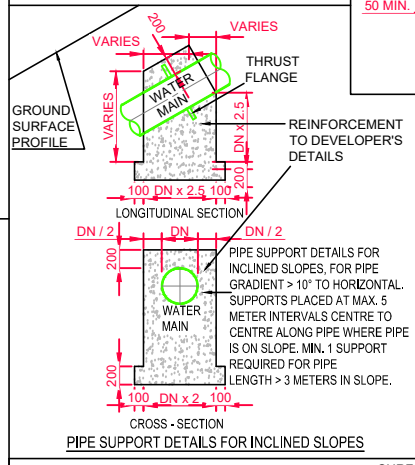


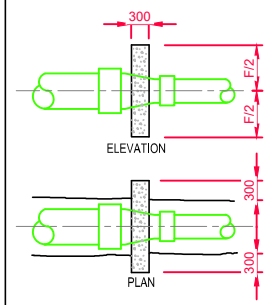


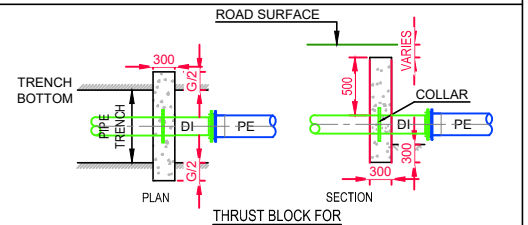


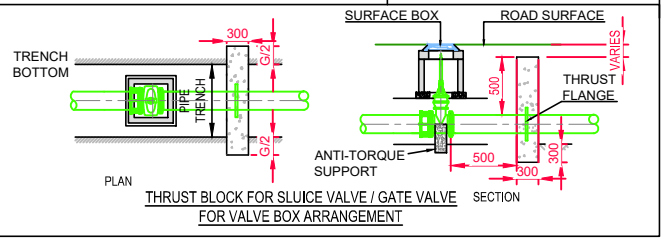












1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. CONCRETE THRUST BLOCKS (ANCHORAGE) SHALL BE POSITIONED SYMMETRICALLY WITH RESPECT TO THE CONNECTING PIPE & BENDS.
3. TRENCH DIMENSIONS : REFER TO DRAWING No's. STD-W-13.
4. THRUST BLOCKS SHALL BEAR ON UNDISTURBED SOIL. IF FOR ANY REASON THEY CANNOT THEN THE DEVELOPER SHALL NOTIFY IRISH WATER IMMEDIATELY WITH A PROPOSED SOLUTION.
5. THRUST BLOCK REINFORCEMENT REQUIRES SPECIFIC DESIGN.
6. FOR TEST PRESSURES GREATER THAN 18 BAR, THRUST BLOCK DESIGN IS TO BE SUBMITTED TO IRISH WATER FOR REVIEW.
7. THRUST BLOCKS ARE DESIGNED FOR AN AVERAGE BEARING PRESSURE OF 100 KN/m (TYPICAL FOR SOFT CLAY) FOR OTHER CONDITIONS. ACTUAL DIMENSIONS MAY BE ALTERED ON INSTRUCTIONS FROM IRISH WATER.
8. CONCRETE IN THRUST BLOCKS SHALL BE GRADE C20/25.
9. COMPRESSIBLE FILLER FOR CONCRETE PROTECTION TO BE IN ACCORDANCE WITH BS EN 622-1 AND BS EN 622-4. BITUMINOUS MATERIAL SHALL NOT BE PUT IN CONTACT WITH PLASTIC PIPES. THE THICKNESS OF COMPRESSIBLE FILLER FOR MAINS < 450mm IN DIAMETER IS TO BE 18mm.
10. CONCRETE THRUST BLOCKS FOR POLYETHYLENE PIPE TO COMPLY WITH THE MANUFACTURES REQUIREMENTS.
11. POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.
12. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.

< 12 BAR TEST PRESSURE

NOM. DIA. (mm)	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
100	600	330	160	80	200	350	390	700	600	400
150	950	510	260	130	225	450	660	900	750	600
200	1150	600	310	160	300	650	790	1050	900	700
250	1350	750	380	200	300	800	970	1200	1000	750
300	1580	850	450	220	320	950	1110	1300	1100	850
350	2100	1150	570	290	450	1000	1450	1550	1200	900
400	2550	1400	700	350	500	1050	1800	1700	1250	1000
450	3000	1630	830	420	680	1100	2130	1800	1450	1150
500	3590	1950	990	500	800	1200	2540	1950	1600	1250
600	4100	2200	1120	570	850	1400	2880	2100	1700	1300

12 BAR TO 15 BAR TEST PRESSURE

NOM. DIA. (mm)	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
100	700	380	190	100	200	350	510	750	600	400
150	1135	620	320	160	225	450	760	950	750	600
200	1400	750	380	190	300	650	980	1150	950	700
250	1730	940	480	240	320	800	1210	1350	1050	850
300	2090	1130	580	300	380	950	1480	1500	1200	950
350	2600	1410	720	360	500	1050	1840	1700	1350	1050
400	2980	1610	820	420	750	1200	2110	1850	1500	1150
450	3400	1840	940	470	900	1300	2330	2000	1600	1250
500	4090	2210	1130	570	1000	1400	2890	2200	1750	1350
600	5010*	2710*	1380	700	1000	1500	3550*	2350	1900	1500

15 BAR TO 18 BAR TEST PRESSURE

NOM. DIA. (mm)	DIMENSIONS									
	A	B	C	D	E	F	G	H	J	K
100	750	400	205	100	220	400	530	800	650	400
150	1250	700	350	180	250	500	890	1000	850	650
200	1650	890	450	230	320	700	1170	1250	1000	800
250	1960	1060	540	270	350	900	1370	1450	1150	900
300	2300	1200	640	320	500	1100	1630	1650	1300	1050
350	2930	1580	830	410	750	1200	2070	1850	1500	1150
400	3510	1900	970	190*	1000	1300	2490	2000	1600	1250
450	3810	2270	1160	580	1000	1350	2970	2150	1700	1350
500	4340*	2380	1210	610	1000	1400	3700	2250	1750	1400
600	6370*	3450*	1760	890	1000	1500	4500*	2400	2050	1650

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

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
1	11/17	JMC	TOC	Anti-torque support note & thrust flange added & notes updated	MOD
0	09/15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

TITLE

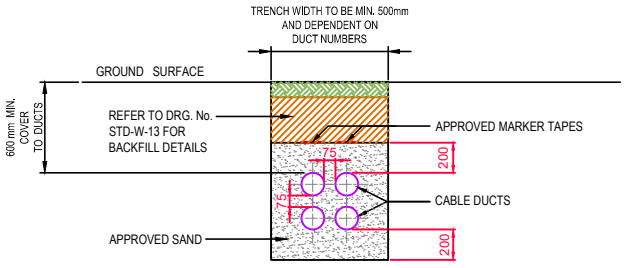
WATER MAIN THRUST AND SUPPORT BLOCKS

SCALE: NOT TO SCALE

DATE: SEPT. 2015

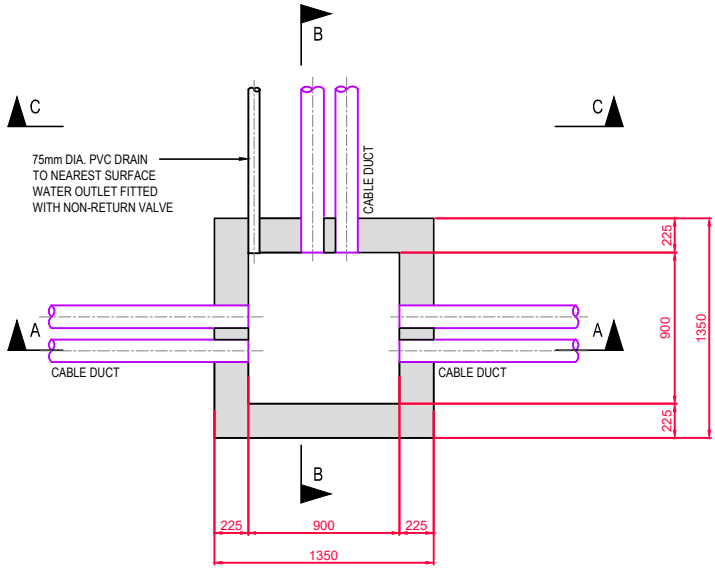
DRAWING No.: STD-W-28

REV: 1

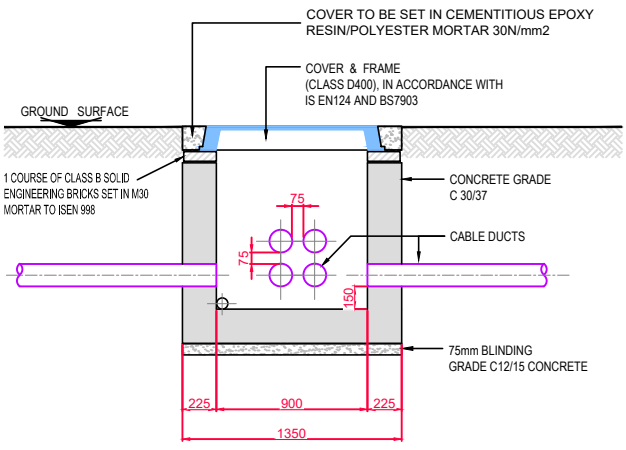


SECTION C - C

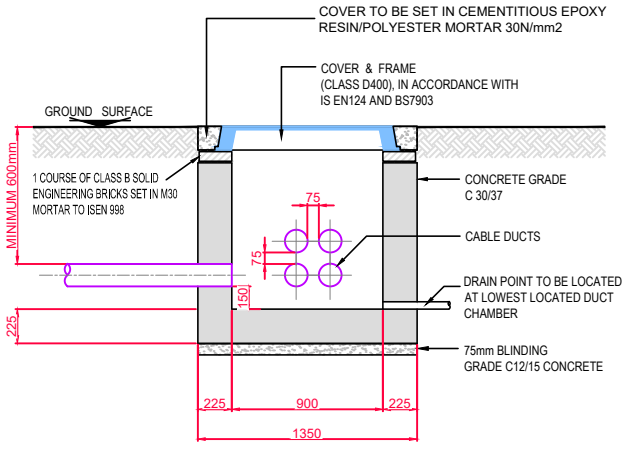
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. STRUCTURAL DESIGN AND REINFORCEMENT DETAILS TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
3. DUCT ARRANGEMENT MAY VARY DEPENDING ON REQUIREMENTS.
4. CABLE DUCTS TO BE IN ACCORDANCE WITH BS 4460 AND BS EN 1401. DUCTS FOR ESB USE TO BE IN ACCORDANCE WITH ESB SPECIFICATION.
5. PROPRIETARY DUCT CHAMBER MAY BE USED SUBJECT TO REVIEW FROM IRISH WATER.
6. LONG RADIUS BENDS MAY BE USED FOR CHANGES IN DIRECTION OF UP TO 45° DUCT CHAMBERS SHALL BE PROVIDED FOR ALL BENDS GREATER THAN 45°.
7. DUCT CHAMBERS TO BE LOCATED AT 50m INTERVALS MAXIMUM.
8. APPROPRIATE MARKER TAPE SHALL BE LAID 200mm ABOVE THE EXTERNAL CROWN OF THE DUCT AND SHOULD INCORPORATE REINFORCED TRACING WIRE. TRACING WIRES SHALL BE CONNECTED ACROSS CHAMBERS. ELECTRICAL MARKER TAPE TO BE USED IN ACCORDANCE WITH ESB SPECIFICATION.
9. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW FROM IRISH WATER.
10. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
11. ALL DUCTING TO BE INSTALLED WITH DRAW CORDS/ROPES, TO ALLOW PULL THROUGH OF CABLES.
12. CABLE DUCT INTERFACE WITH CHAMBER WALL TO BE SEALED TO PREVENT INGRESS OF GROUNDWATER TO CHAMBER.
13. DRAIN POINT TO BE PROVIDED FROM LOWEST LOCATED DUCT CHAMBER



PLAN



SECTION A - A



SECTION B - B

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Included drain point, updated notes	MOD
2	11/'17	JMC	TOC	Updated notes	MOD
1	08/'16	JMC	TOC	Revised cover notes	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

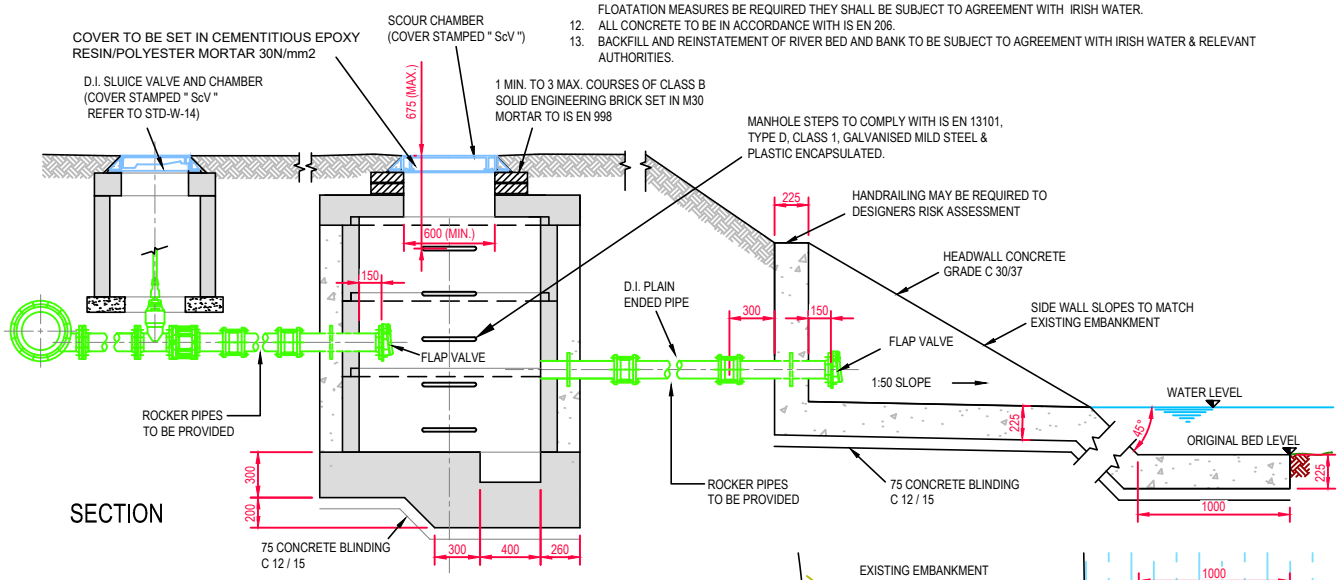
TITLE: DUCT CHAMBER

DRAWING No.: STD-W- 29

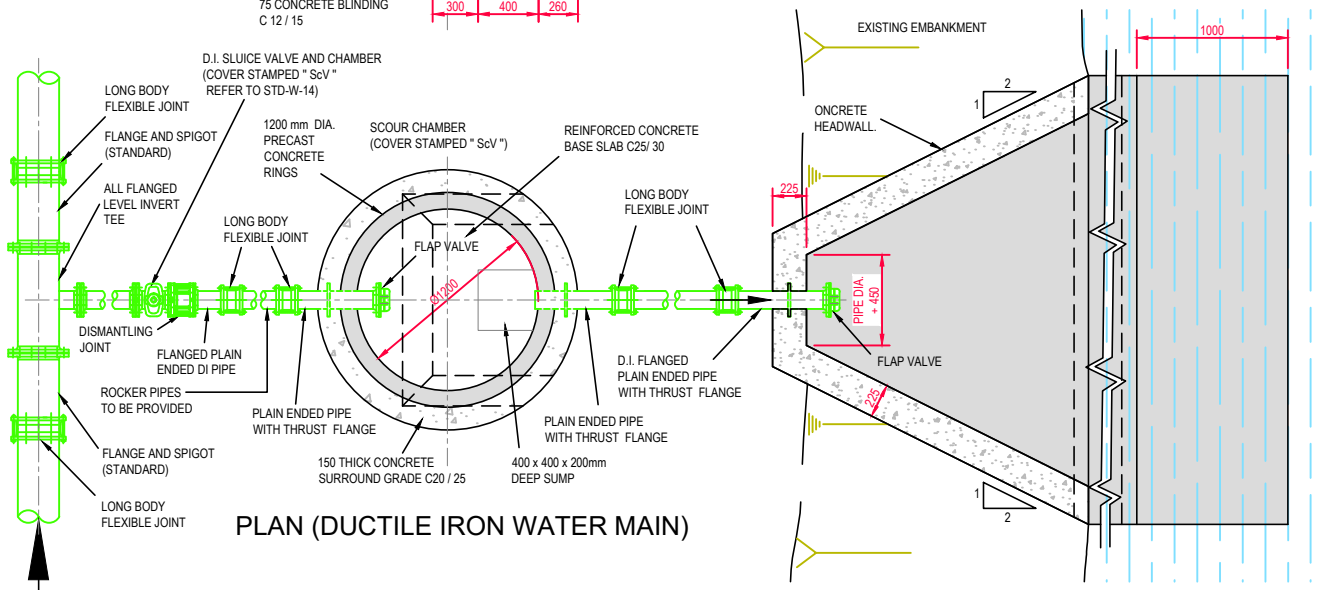
REV: 3

DIAMETER OF WATERMAIN (mm)	DIAMETER OF SCOUR (mm)
NOT EXCEEDING 75	50
100 TO 200	75
200 TO 350	100

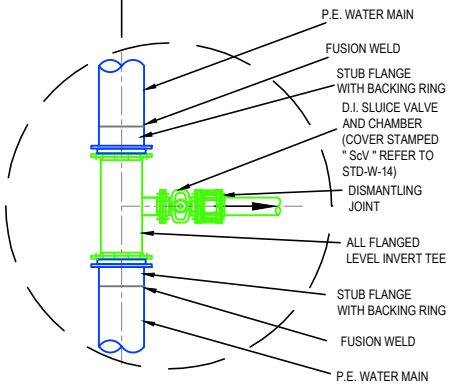
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. STRUCTURAL REINFORCEMENT AND DESIGN DETAIL TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW. ROOF SLABS SHALL BE DESIGNED TO CARRY ALL LIVE LOADS & DEAD LOADS, & CONSIST OF A REINFORCED CONCRETE SLAB OF IN-SITU CONCRETE, GRADE C30/37, WITH A MINIMUM THICKNESS OF 225mm. ALTERNATIVELY, PRE-CAST CONCRETE ROOFS MAY BE USED, SUBJECT TO IRISH WATER REVIEW, & COMPLIANCE WITH IS EN 1719 & IS 420.
3. CONCRETE FOR SCOUR CHAMBER AND HEADWALL TO BE C30 / 37.
4. PREFABRICATED CHAMBER AND HEADWALL MAY ALSO BE USED, SUBJECT TO REVIEW FROM IRISH WATER.
5. SCOUR CHAMBER SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW IRISH WATER.
6. 200mm ALL ROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GRASS AREAS.
7. FINAL DETAIL TO BE REVIEWED BY IRISH WATER AND RELEVANT REGULATORY AUTHORITIES.
8. 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.
9. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
10. ALL PIPEWORK AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201:2011.
11. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO AGREEMENT WITH IRISH WATER.
12. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
13. BACKFILL AND REINSTATEMENT OF RIVER BED AND BANK TO BE SUBJECT TO AGREEMENT WITH IRISH WATER & RELEVANT AUTHORITIES.



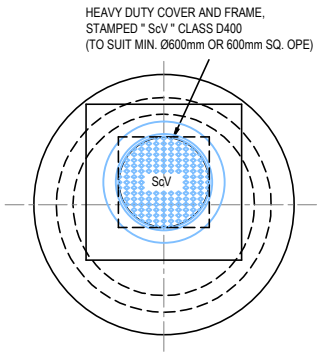
SECTION



PLAN (DUCTILE IRON WATER MAIN)



PLAN (POLYETHYLENE WATER MAIN)



ROOF PLAN

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
4	07/'20	RH	TOC	Updated notes	MOD
3	11/'17	JMC	TOC	Updated notes	MOD
2	08/'16	JMC	TOC	Added steps & revised access cover & ope	MOD
1	04/'16	JMC	TOC	Added 1 No. flexible joint	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

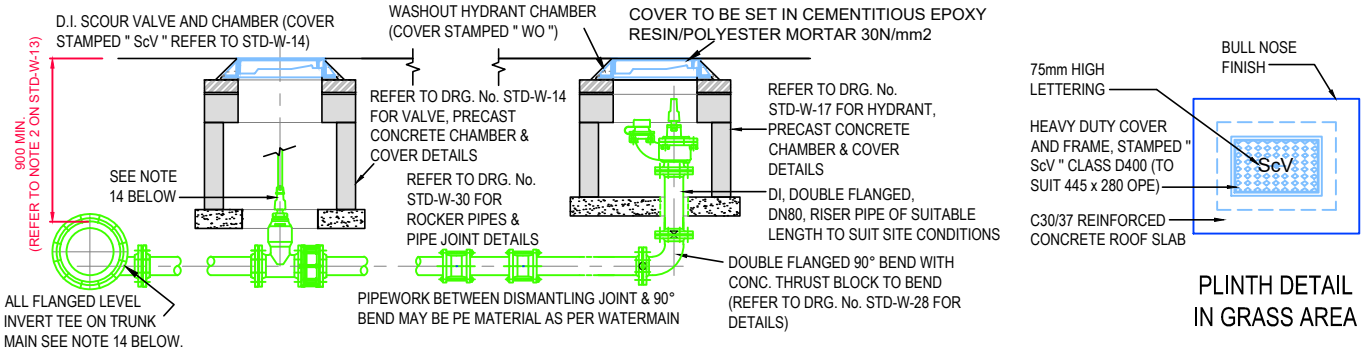
DATE: SEPT. 2015

TITLE

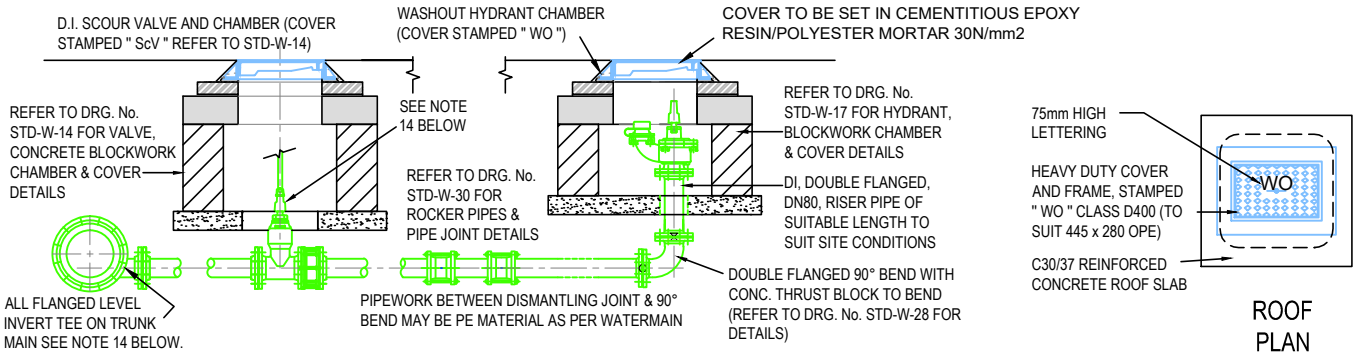
SCOUR CHAMBER AND HEAD WALL ARRANGEMENTS

DRAWING No.: STD-W- 30

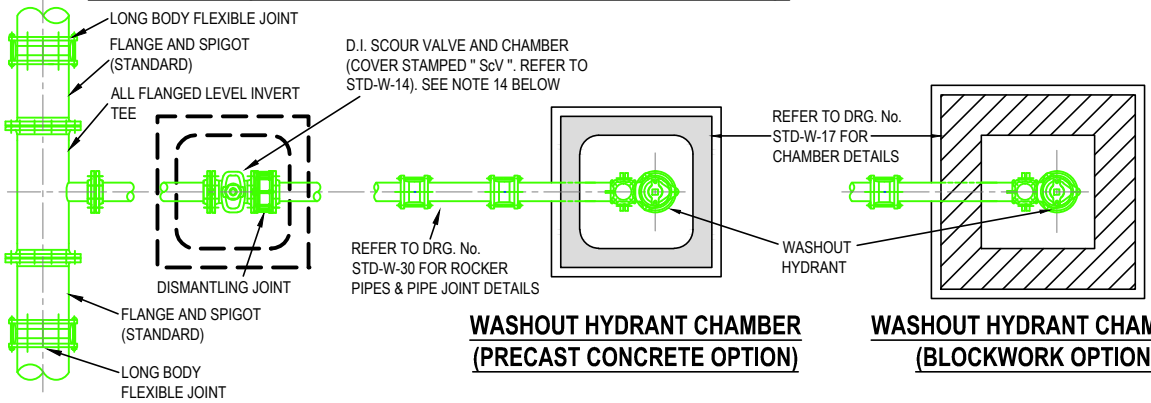
REV: 4



SECTION (PRECAST CONCRETE CHAMBER OPTION)



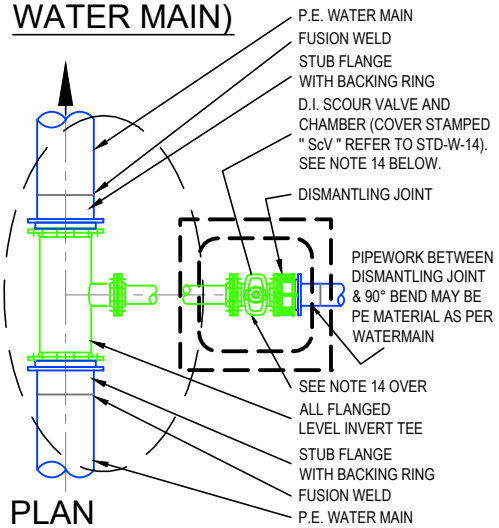
SECTION (BLOCKWORK CHAMBER OPTION)



WASHOUT HYDRANT CHAMBER (PRECAST CONCRETE OPTION)

WASHOUT HYDRANT CHAMBER (BLOCKWORK OPTION)

PLAN (DUCTILE IRON WATER MAIN)



PLAN (POLYETHYLENE WATER MAIN)

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. STRUCTURAL REINFORCEMENT AND DESIGN DETAIL TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
3. HYDRANT 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 REVIEW BY IRISH WATER.
4. 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 "GUIDE TO HEAD" TYPE WITH SCREW DOWN CONNECTION OUTLET AND FALSE SPINDLE CAP AND IRON CHAIN IN ACCORDANCE WITH ITEM 15 BELOW.
5. ALL HYDRANTS SHALL BE CLOCKWISE CLOSING.
6. HYDRANT CHAMBER & SCOUR 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 FROM 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 BS 5911, Part 4.
7. CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER STD-W-13.
8. 200mm ALL ROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GRASS AREAS.
9. 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.
10. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
11. ALL PIPEWORK AND FITTINGS FOR WASHOUT HYDRANT CHAMBER CONNECTION SHALL BE DUCTILE IRON. PIPES AND FITTINGS ON MAIN LINE SHALL BE: PE PIPES & FITTINGS IN ACCORDANCE WITH IS EN 12201:2011, OR DUCTILE IRON PIPES AND FITTINGS IN ACCORDANCE WITH IS EN 545.
12. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO AGREEMENT WITH IRISH WATER.
13. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
14. WHERE HYDRANTS ARE INSTALLED ON TRUNK MAINS OR PRINCIPAL MAINS, A SEPARATE SCOUR VALVE IS REQUIRED. THE PURPOSE OF THE SCOUR VALVE IS TO ISOLATE THE WASHOUT HYDRANT FOR MAINTENANCE PURPOSES & ALSO TO REDUCE THE VELOCITY OF THE DISCHARGE FLOW WHERE HIGH HEAD VALUES ARE CONCERNED. A "SANDWICH" OR "SPADE" VALVE MAY BE USED IN LIEU OF A SEPARATE SCOUR VALVE, SUBJECT TO PRIOR REVIEW BY IRISH WATER.
15. FIRE HYDRANT OUTLET TYPE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE OFFICER FOR THE AREA AND SHALL BE AGREED PRIOR TO THE COMMENCEMENT OF WORKS.

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Added notes re. PE branch pipe	MOD
2	11/'17	JMC	TOC	Revised Chamber Base Detail & updated & added notes	MOD
1	08/'16	JMC	TOC	Revised note 7	MOD
0	04/'16	JMC	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: APR. 2016

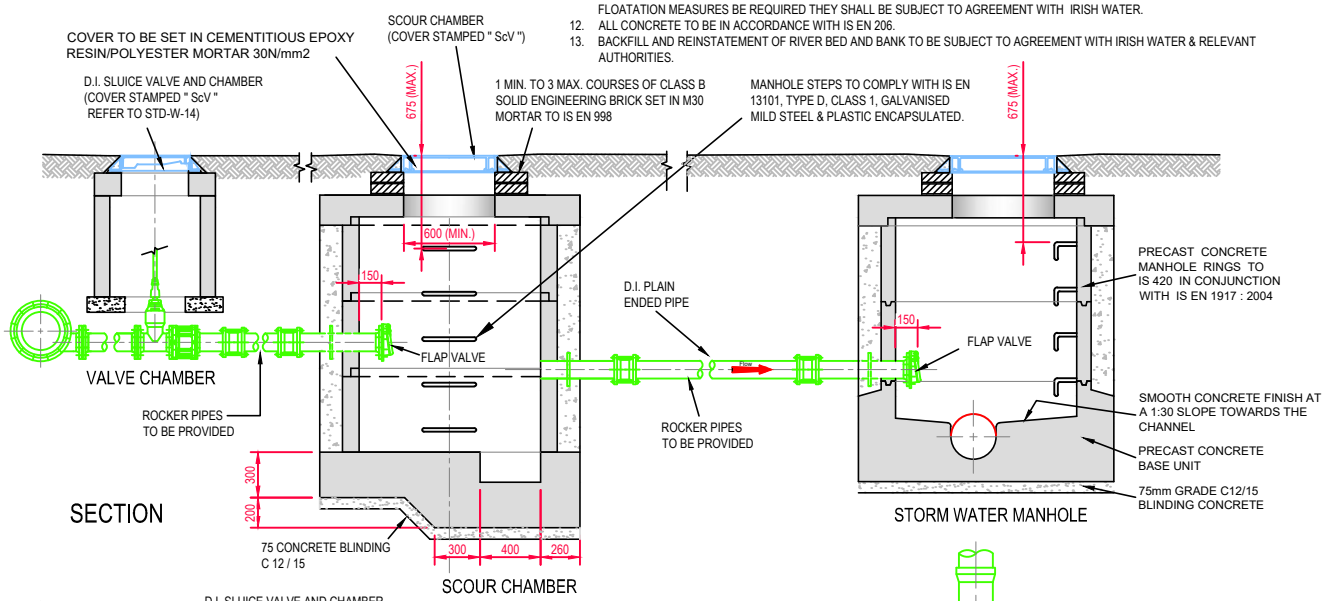
TITLE: WASHOUT HYDRANT

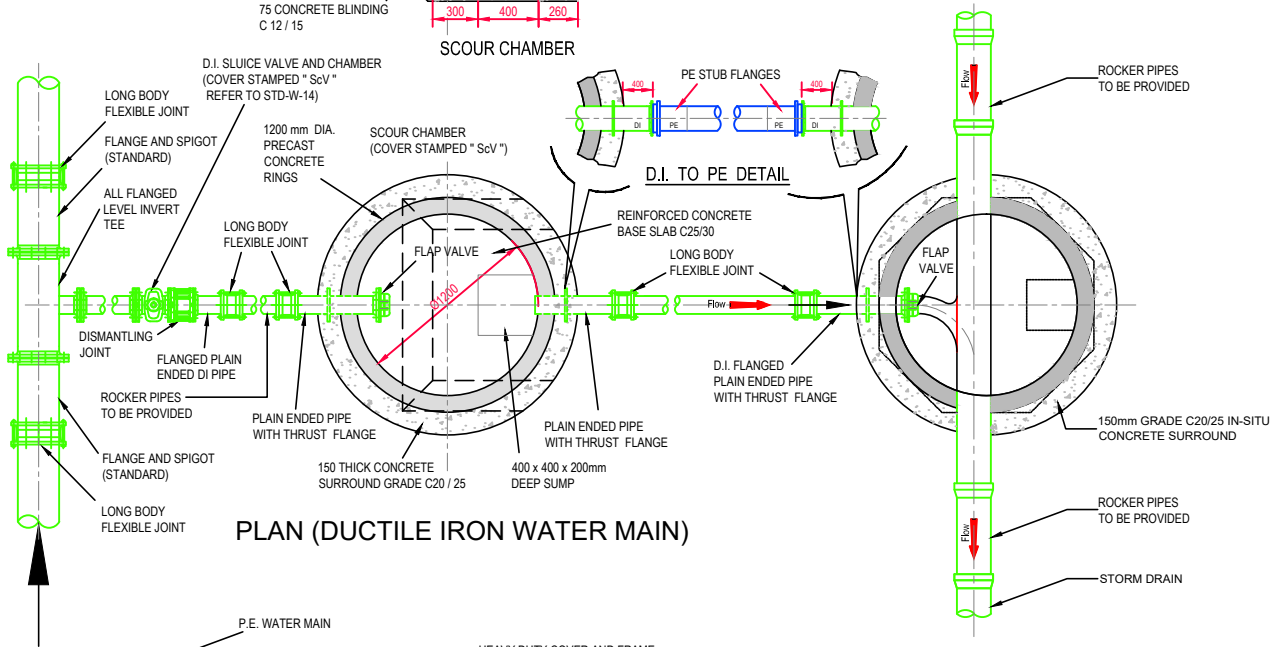
DRAWING No.: STD-W-30A

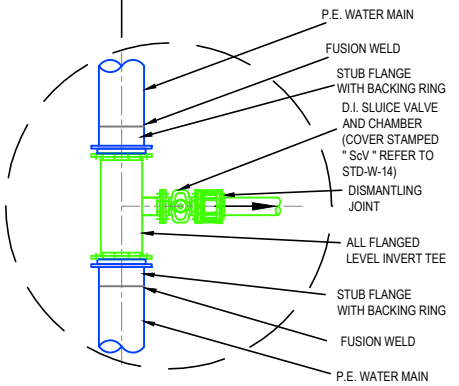
REV: 3

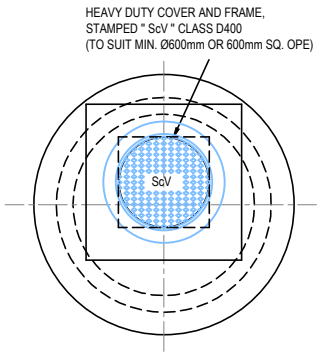
DIAMETER OF WATERMAIN (mm)	DIAMETER OF SCOUR (mm)
NOT EXCEEDING 75	50
100 TO 200	75
200 TO 350	100

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. STRUCTURAL REINFORCEMENT AND DESIGN DETAIL TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW. 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 225mm. ALTERNATIVELY, PRE-CAST CONCRETE ROOFS MAY BE USED, SUBJECT TO IRISH WATER REVIEW, & COMPLIANCE WITH IS EN 1719 & IS 420
3. CONCRETE FOR SCOUR CHAMBER AND HEADWALL TO BE C30 / 37.
4. APPROVAL TO BE OBTAINED FROM LOCAL AUTHORITY FOR CONNECTION TO THE EXISTING STORM SEWER.
5. SCOUR CHAMBER SHALL BE COVERED WITH APPROVED HEAVY DUTY METAL COVERS TO IS EN 124 RATING D400. COVER AND FRAME SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS AND IS SUBJECT TO REVIEW IRISH WATER.
6. 200mm ALL ROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GRASS AREAS.
7. FINAL DETAIL TO BE REVIEWED BY IRISH WATER AND RELEVANT REGULATORY AUTHORITIES.
8. 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.
9. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
10. ALL PIPEWORK AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 545. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201:2011.
11. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO AGREEMENT WITH IRISH WATER.
12. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
13. BACKFILL AND REINSTATEMENT OF RIVER BED AND BANK TO BE SUBJECT TO AGREEMENT WITH IRISH WATER & RELEVANT AUTHORITIES.









REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

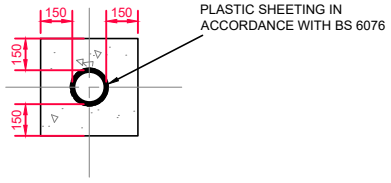
DATE: SEPT. 2019

TITLE: SCOUR CHAMBER TO STORM SEWER ARRANGEMENTS

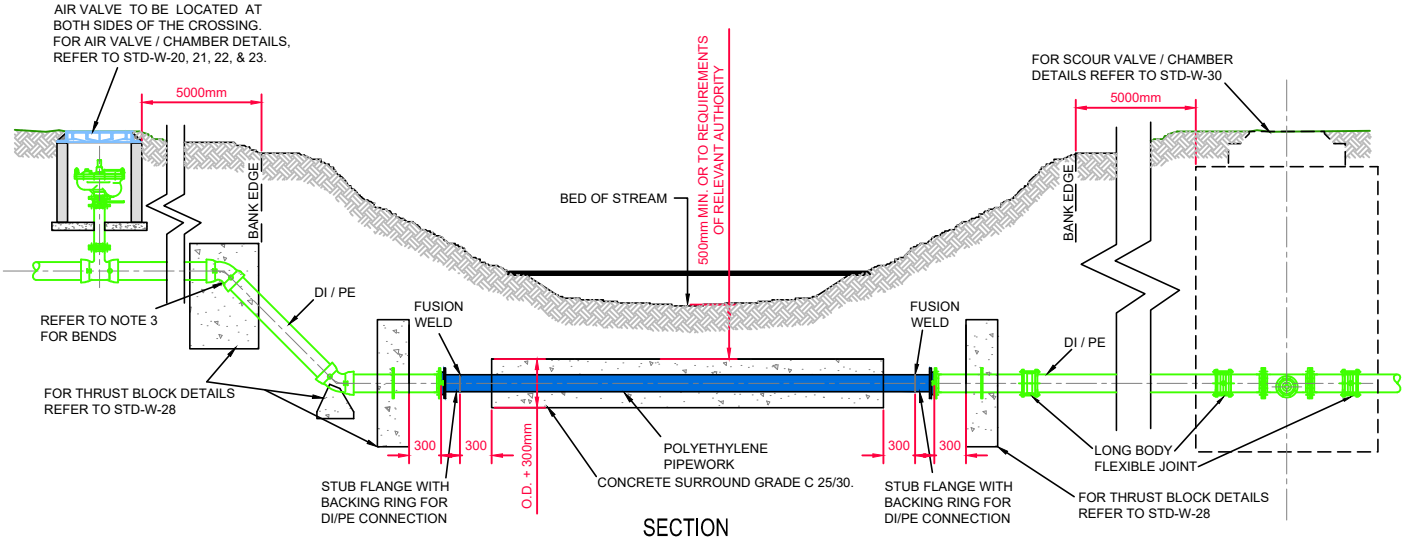
DRAWING No.: STD-W-30B

REV: 0

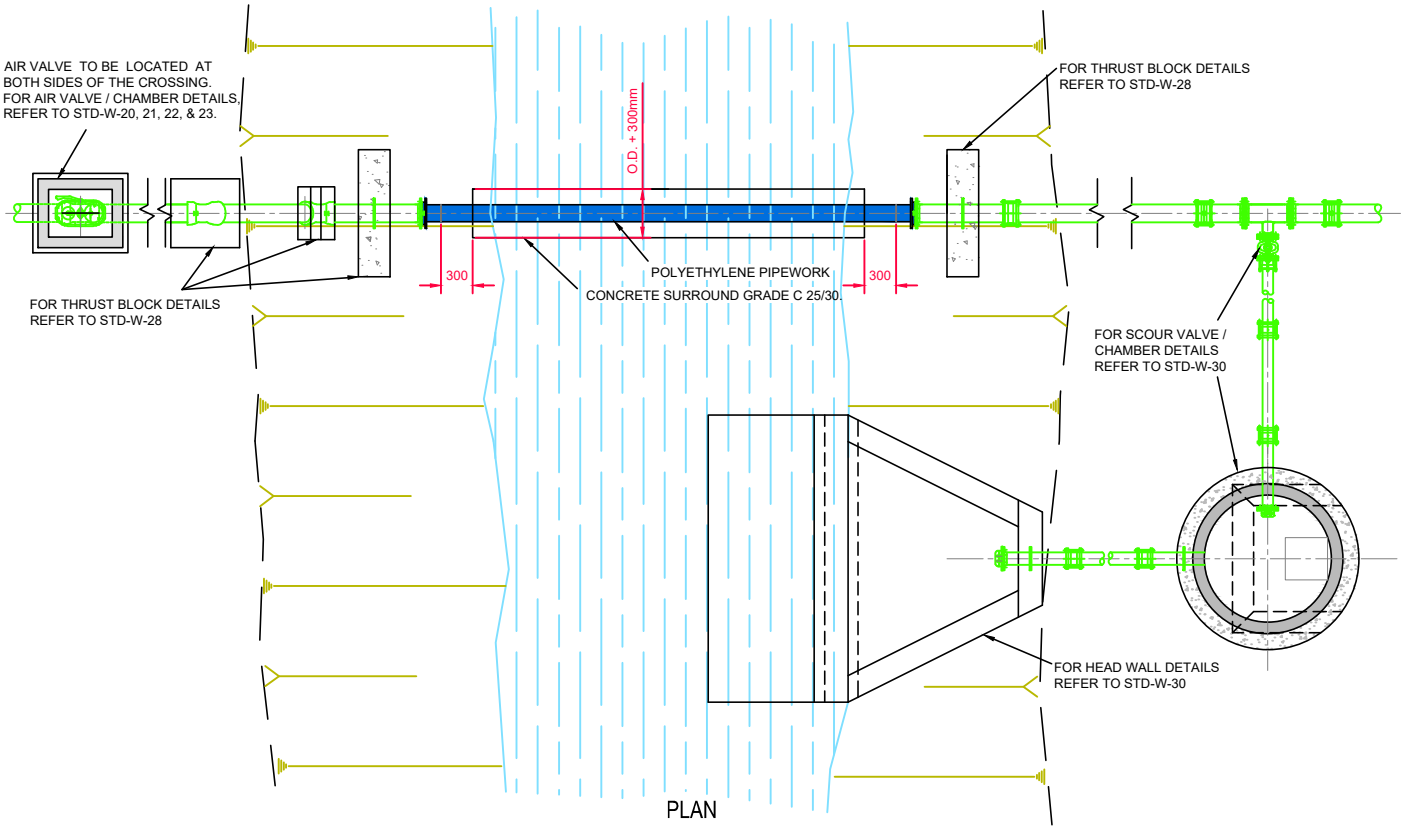
1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. O.D. REFERS TO OUTSIDE DIAMETER OF PIPES OR COLLARS.
3. BENDS AT RESPECTIVE CROSSINGS SHALL BE AS INDICATED ON THE LONGITUDINAL SECTION DRAWING.
4. PIPEWORK AT CROSSING POINT TO BE POLYETHYLENE JOINED USING BUTT FUSION WELDING.
5. POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.
6. THRUST BLOCKS TO BE PROVIDED AS PER STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
7. ALL DUCTILE IRON PIPEWORK AND FITTINGS SHALL BE IN ACCORDANCE WITH IS EN 545. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201:2011.
8. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
9. PIPEWORK FOR WATERMAIN CAN BE EITHER DUCTILE IRON OR POLYETHYLENE. PIPEWORK AT CROSSING POINT TO BE PE IN BOTH CASES.
10. BACKFILL AND REINSTATEMENT OF RIVER BED AND BANK TO BE SUBJECT TO AGREEMENT WITH RELEVANT AUTHORITY & IRISH WATER.



CROSS SECTION
(CONCRETE SURROUND)



SECTION



PLAN

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
2	07/'20	RH	TOC	Title Amended	MOD
1	11/'17	JMC	TOC	Updated pipe depth dimension	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

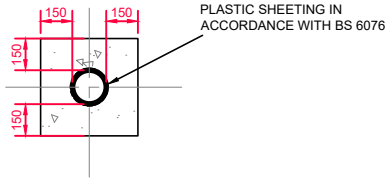
TITLE

TYPICAL DITCH / STREAM CROSSING FOR WATER MAIN DUCTILE IRON OPTION

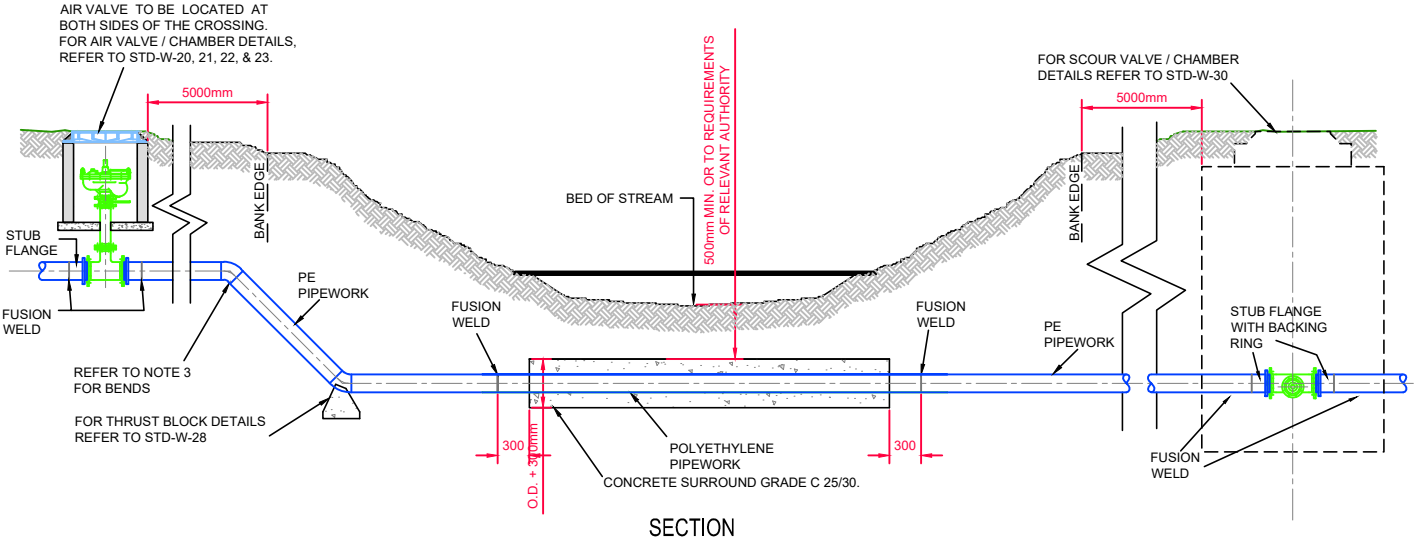
DRAWING No.: STD-W- 31

REV: 2

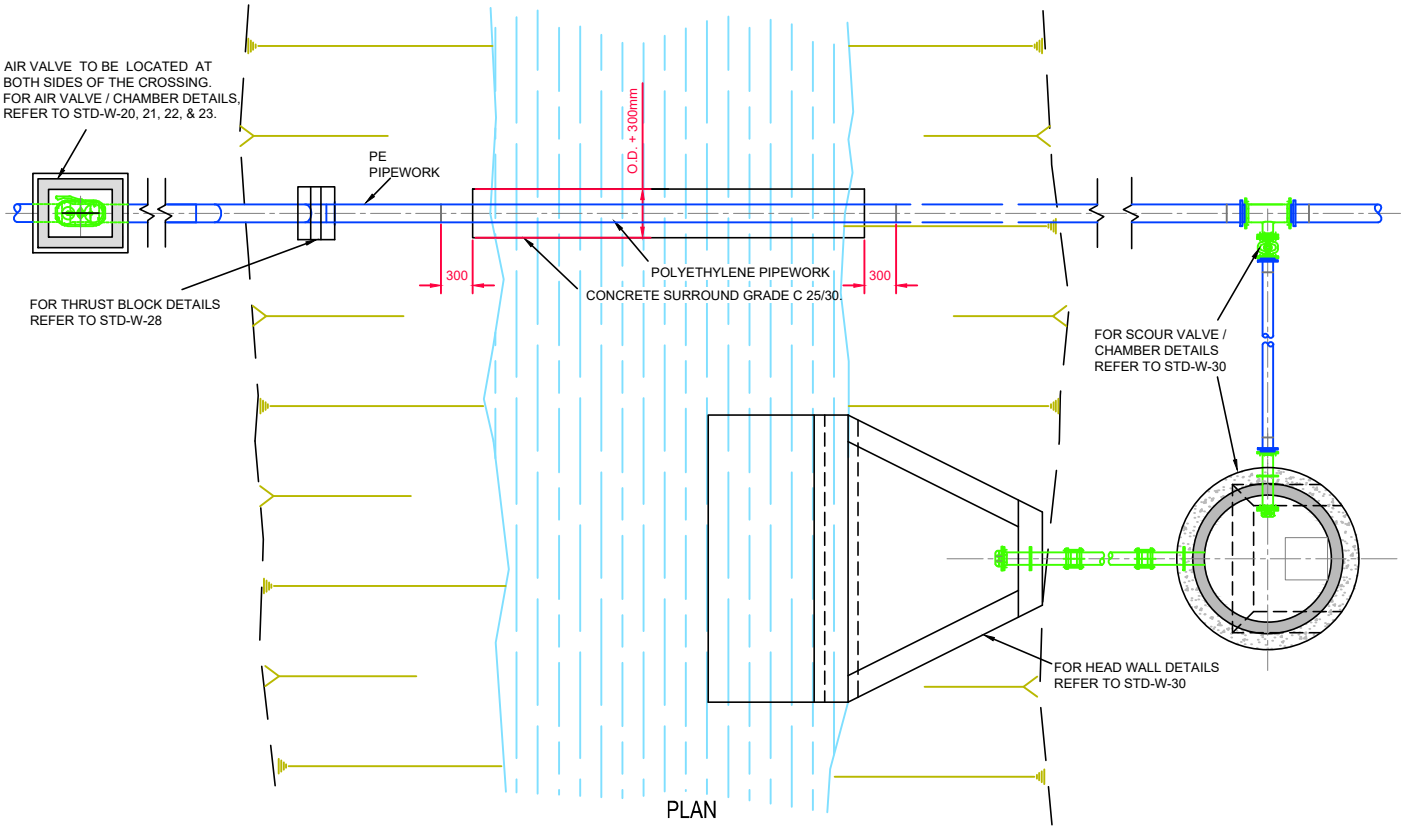
1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. O.D. REFERS TO OUTSIDE DIAMETER OF PIPES OR COLLARS.
3. BENDS AT RESPECTIVE CROSSINGS SHALL BE AS INDICATED ON THE LONGITUDINAL SECTION DRAWING.
4. PIPEWORK AT CROSSING POINT TO BE POLYETHYLENE JOINED USING BUTT FUSION WELDING.
5. POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.
6. THRUST BLOCKS TO BE PROVIDED AS PER STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
7. ALL DUCTILE IRON PIPEWORK AND FITTINGS SHALL BE IN ACCORDANCE WITH IS EN 545. PE PIPES AND FITTINGS TO BE IN ACCORDANCE WITH IS EN 12201:2011.
8. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
9. PIPEWORK FOR WATERMAIN CAN BE EITHER DUCTILE IRON OR POLYETHYLENE. PIPEWORK AT CROSSING POINT TO BE PE IN BOTH CASES.
10. BACKFILL AND REINSTATEMENT OF RIVER BED AND BANK TO BE SUBJECT TO AGREEMENT WITH RELEVANT AUTHORITY & IRISH WATER.



CROSS SECTION
(CONCRETE SURROUND)



SECTION



PLAN

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

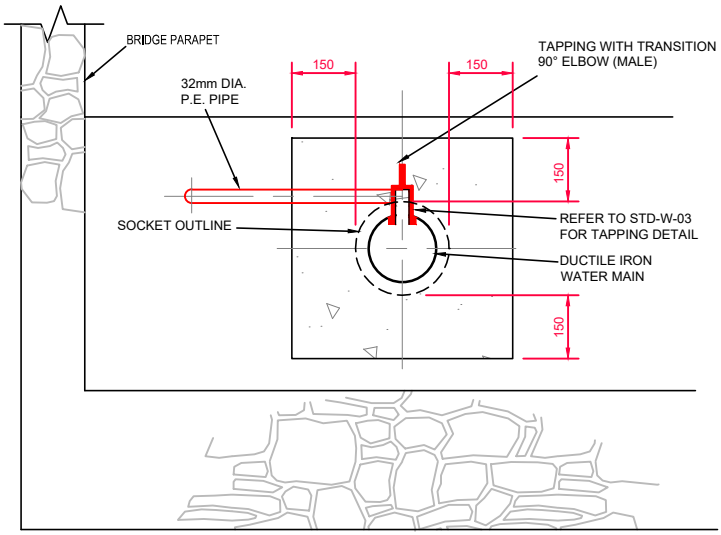
STANDARD DETAILS - WATER

TITLE

TYPICAL DITCH / STREAM CROSSING FOR WATER MAIN POLYETHYLENE OPTION

SCALE	DATE
NOT TO SCALE	SEPT. 2019

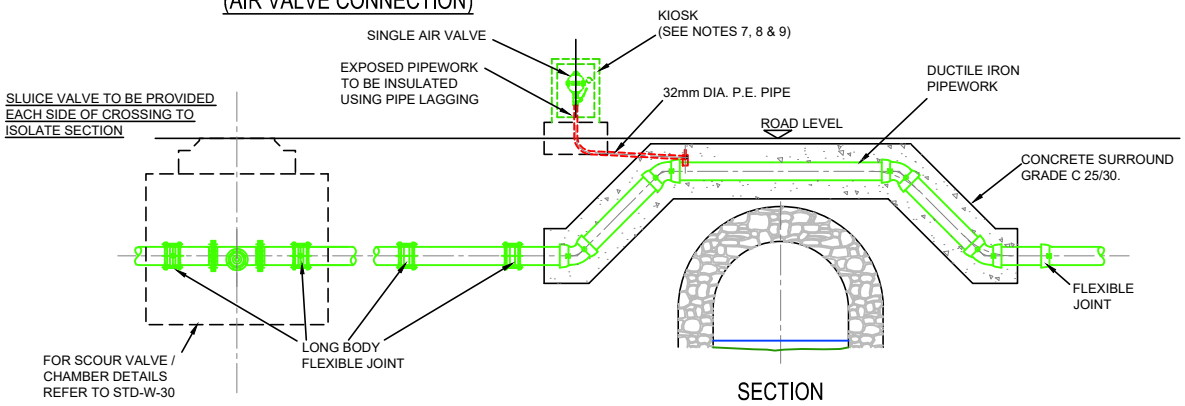
DRAWING No.	REV
STD-W-31A	0



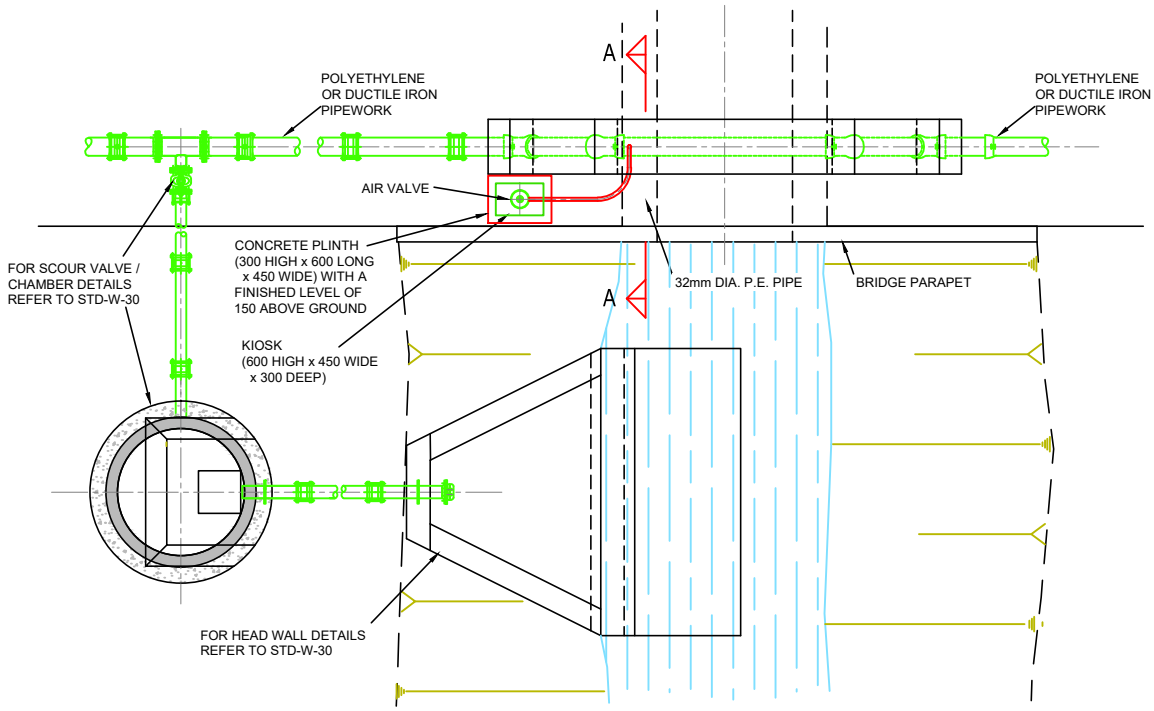
1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. AT BRIDGE CROSSING ALL PIPEWORK TO BE DUCTILE IRON IN ACCORDANCE WITH IS EN 545.
3. O.D. REFERS TO OUTSIDE DIAMETER OF PIPES OR COLLARS.
4. BENDS AT RESPECTIVE CROSSINGS SHALL BE INDICATED ON THE LONGITUDINAL SECTION DRAWING.
5. THE DEVELOPER IS TO SEEK ADVICE FROM IRISH WATER AS TO WHETHER A DUPLICATE MAIN IS TO BE PROVIDED THROUGH THE BRIDGE CROSSING. IF NECESSARY THE DEVELOPER IS TO SUBMIT A DESIGN TO IRISH WATER FOR REVIEW.
6. THRUST BLOCKS TO BE PROVIDED AS PER STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
7. THE QUALITY OF THE KIOSK CONSTRUCTION SHALL ENSURE THAT THE FOLLOWING IS ACHIEVED:

   (a) A THERMAL TRANSMITTANCE OF 1.5W PER m² K
   (b) A FIRE RESISTANCE (RETENTION OF STABILITY, INTEGRITY AND INSULATION) EQUIVALENT TO CLASS 2 OF BS 476, WHEN TESTED IN ACCORDANCE WITH BS 476 FOR A PERIOD EXCEEDING 30 MINUTES.
8. KIOSK (MIN. 600 HIGH x 450 WIDE x 300mm DEEP) - TO BE CONSTRUCTED FROM THERMOSETTING U.V. & WEATHER RESISTANT PLASTIC POWDER COATED & HOT DIPPED GALVANISED MILD STEEL (MIN. 4mm THICKNESS) TO BS EN 1461. STAINLESS STEEL OR NON-METALLIC MATERIALS, SUCH AS GLASS REINFORCED PLASTIC (GRP), MAY BE USED AS AN ALTERNATIVE KIOSK MATERIAL, PARTICULARLY IN SEVERE ENVIRONMENTS, SUBJECT TO AGREEMENT WITH IRISH WATER. COLOUR TO BE HOLLY GREEN BS 4800 14 C 39. KIOSK TO HAVE HINGED, LOCKABLE ACCESS DOOR (HINGES AND LOCKS TO BE STAINLESS STEEL).
9. THE KIOSK SHALL BE LOCATED OFF THE FOOTPATH SO AS NOT TO IMPEDE PEDESTRIANS AND POSITIONED SO AS TO FACILITATE SAFE ACCESS FOR MAINTENANCE PERSONNEL.
10. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
11. DETAIL FOR PE WATERMAIN TO BE AS PER THIS DETAIL. BRIDGE CROSSING PIPEWORK TO BE DI IN BOTH CASES.

SECTION A - A
(AIR VALVE CONNECTION)



SECTION



PLAN

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
1	11/'17	JMC	TOC	Updated & added notes	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

DATE: SEPT. 2015

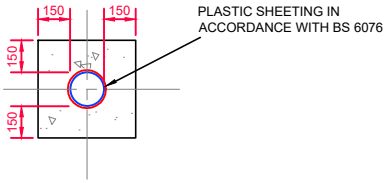
TITLE

TYPICAL
BRIDGE CROSSING FOR WATER MAIN
(Sheet 1 of 2)

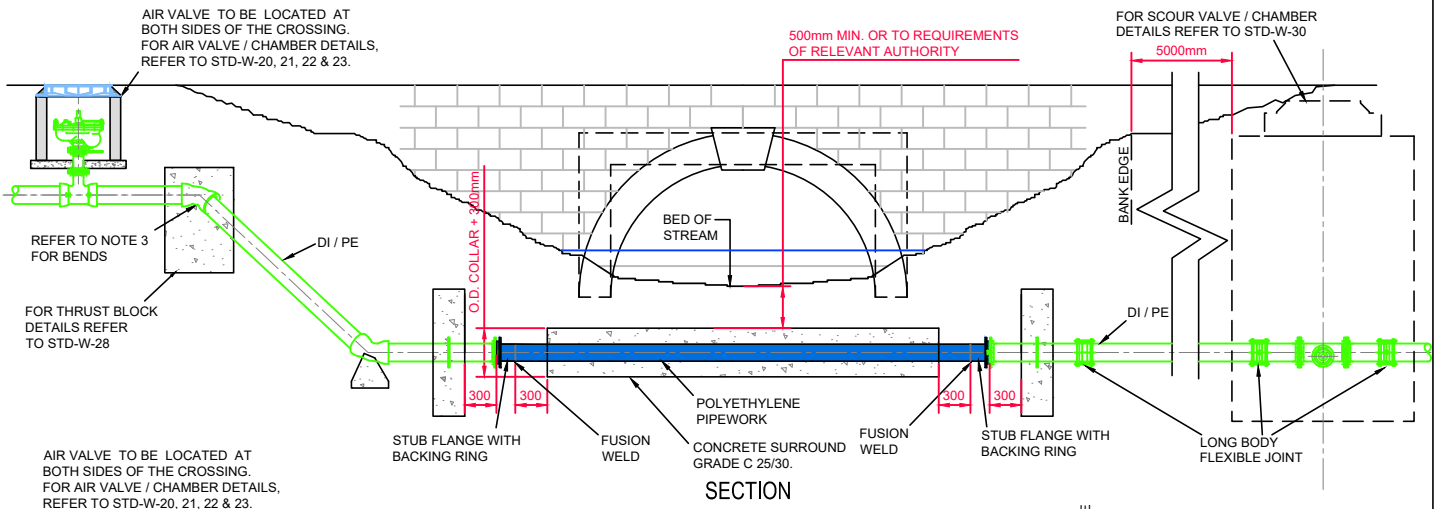
DRAWING No.: STD-W- 32

REV: 1

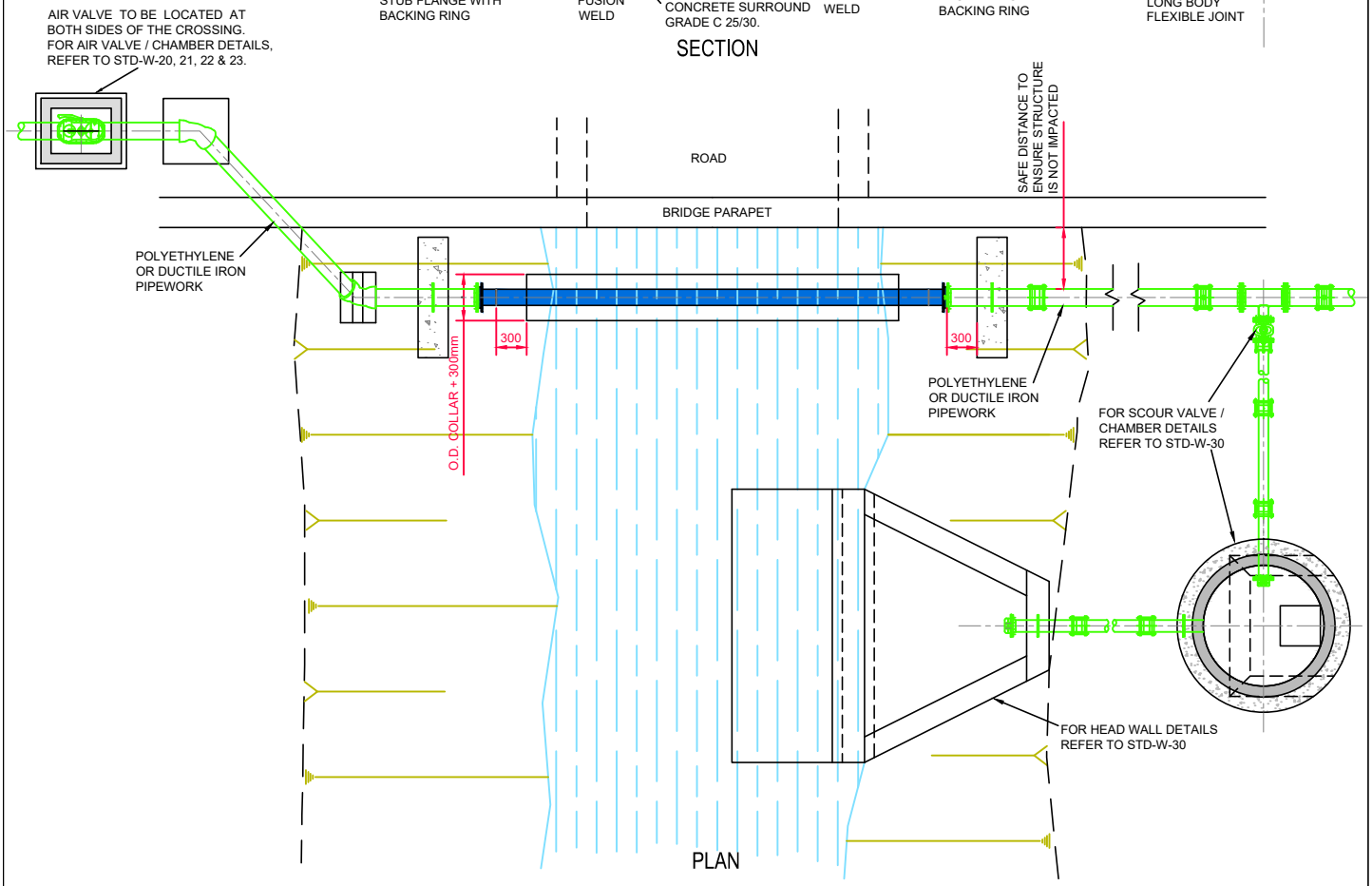
1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. O.D. REFERS TO OUTSIDE DIAMETER OF PIPES OR COLLARS.
3. BENDS AT RESPECTIVE CROSSINGS SHALL BE INDICATED ON THE LONGITUDINAL SECTION DRAWING.
4. PIPEWORK AT CROSSING POINT TO BE JOINED USING BUTT FUSION WELDING.
5. POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.
6. THRUST BLOCKS TO BE PROVIDED AS PER STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
7. THE DEVELOPER IS TO SEEK ADVICE FROM IRISH WATER AS TO WHETHER A DUPLICATE MAIN IS TO BE PROVIDED AT THE BRIDGE CROSSING. IF NECESSARY THE DEVELOPER IS TO SUBMIT A DESIGN TO IRISH WATER FOR REVIEW.
8. BACKFILL AND REINSTATEMENT REQUIREMENTS OF THE RIVER BED AND BANK IS SUBJECT TO AGREEMENT WITH RELEVANT AUTHORITY & IRISH WATER.
9. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
10. ALL DUCTILE IRON PIPEWORK TO BE IN ACCORDANCE WITH IS EN 545. ALL POLYETHYLENE PIPEWORK TO BE IN ACCORDANCE WITH IS EN 12201.
11. PIPEWORK FOR WATERMAIN CAN BE EITHER DUCTILE IRON OR POLYETHYLENE. PIPEWORK AT THE CROSSING POINT TO BE PE IN BOTH CASES.



CROSS SECTION
(CONCRETE SURROUND)



SECTION



PLAN

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
2	07/'20	RH	TOC	Drawing reference edits	MOD
1	11/'17	JMC	TOC	Notes added & updated	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

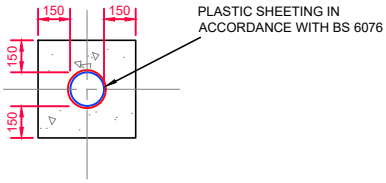
DATE: SEPT. 2015

TITLE

TYPICAL
BRIDGE CROSSING FOR WATER MAIN
(Sheet 2 of 2)

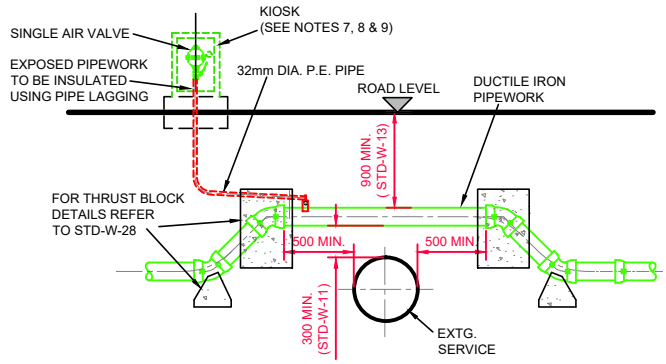
DRAWING No.: STD-W- 33

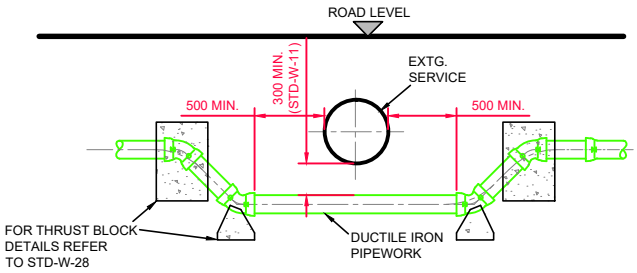
REV: 2

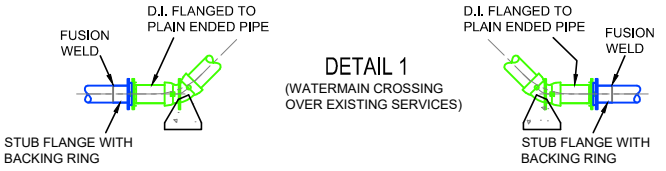


CROSS SECTION
(CONCRETE SURROUND)

1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. O.D. REFERS TO OUTSIDE DIAMETER OF PIPES OR COLLARS.
3. BENDS AT RESPECTIVE CROSSINGS SHALL BE INDICATED ON THE LONGITUDINAL SECTION DRAWING.
4. PIPEWORK AT CROSSING POINT TO BE JOINED USING BUTT FUSION WELDING.
5. POLYETHYLENE PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.
6. THRUST BLOCKS TO BE PROVIDED AS PER STD-W-28 AT ALL TEES, BENDS, TAPERS, DEAD ENDS AND PIPES AT STEEP SLOPES.
7. THE DEVELOPER IS TO SEEK ADVICE FROM IRISH WATER AS TO WHETHER A DUPLICATE MAIN IS TO BE PROVIDED AT THE CROSSING. IF NECESSARY THE DEVELOPER IS TO SUBMIT A DESIGN TO IRISH WATER FOR REVIEW.
8. BACKFILL AND REINSTATEMENT REQUIREMENTS OF THE RIVER BED AND BANK IS SUBJECT TO AGREEMENT WITH RELEVANT AUTHORITY & IRISH WATER.
9. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
10. ALL DUCTILE IRON PIPEWORK TO BE IN ACCORDANCE WITH IS EN 545. ALL POLYETHYLENE PIPEWORK TO BE IN ACCORDANCE WITH IS EN 12201.
11. PIPEWORK FOR WATERMAIN CAN BE EITHER DUCTILE IRON OR POLYETHYLENE. PIPEWORK AT THE CROSSING POINT TO BE PE IN BOTH CASES.



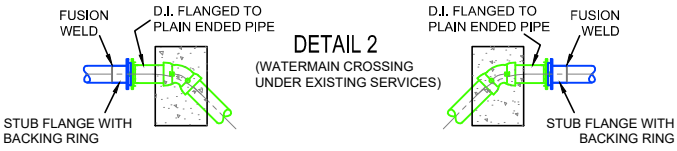




DETAIL 1
(WATERMAIN CROSSING
OVER EXISTING SERVICES)

P.E. TO D.I. OPTION

P.E. TO D.I. OPTION

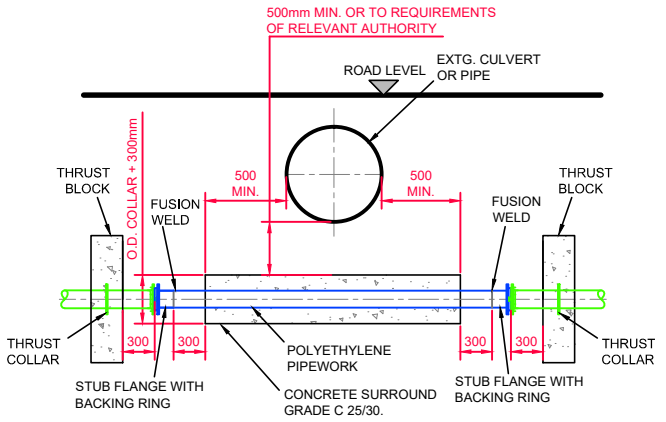


DETAIL 2
(WATERMAIN CROSSING
UNDER EXISTING SERVICES)

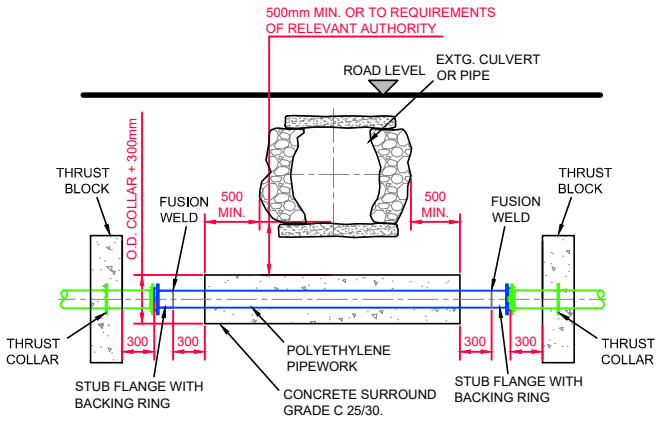
P.E. TO D.I. OPTION

P.E. TO D.I. OPTION

DUCTILE IRON DETAIL



DETAIL 3
(WATERMAIN CROSSING UNDER
EXTG. SERVICE / CULVERT / PIPE)



DETAIL 4
(WATERMAIN CROSSING
UNDER EXTG. CULVERT)

NOTE:
IN SITUATIONS WHERE PE PIPEWORK IS UTILISED EITHER SIDE OF THE CROSSING, THRUST BLOCKS AND THRUST COLLARS ARE NOT REQUIRED.

POLYETHYLENE DETAIL

NOTE:
IN SITUATIONS WHERE PE PIPEWORK IS UTILISED EITHER SIDE OF THE CROSSING, THRUST BLOCKS AND THRUST COLLARS ARE NOT REQUIRED.

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

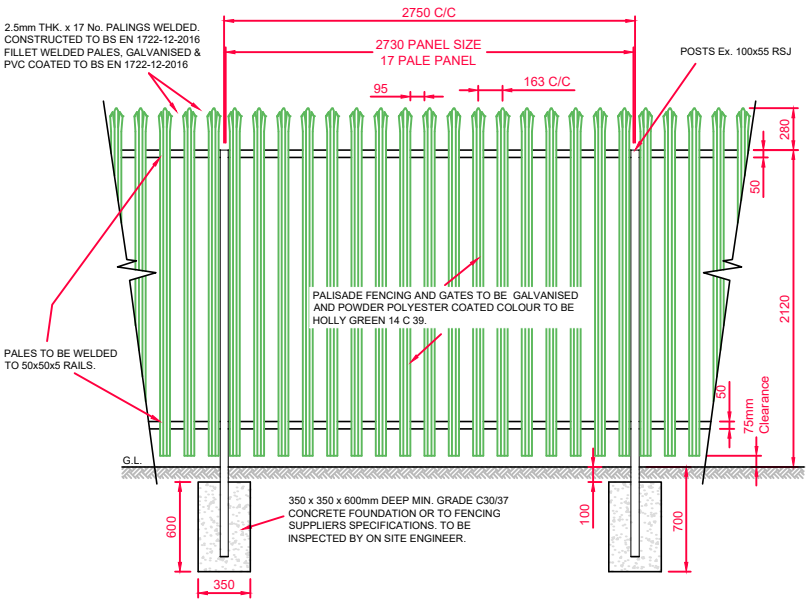
SCALE: NOT TO SCALE

DATE: SEPT. 2018

TITLE: TYPICAL CULVERT & SERVICES CROSSING DETAILS FOR WATER MAIN

DRAWING No.: STD-W-33A

REV: 0



PANEL - ELEVATION

1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. SECURITY FENCING SHALL COMPRISE 2.4m HIGH, CORROSION RESISTANT MILD STEEL FENCING, GALVANISED AND PLASTIC COATED FINISHED, WITH SIMILAR TYPE ACCESS GATES.
3. THE ACCESS GATES SHALL BE OF SUFFICIENT WIDTH TO ACCOMMODATE MAINTENANCE VEHICLES, TANKERS, ETC. THE SECURITY GATES SHALL BE PROVIDED WITH SLIDE BOLTS, SHOOTING BOLTS AND PADLOCKS. IF OPENING OUTWARDS, THE ACCESS GATES SHALL BE SET BACK FROM PARKING AND ACCESS AREAS BY THE WIDTH OF THE LEAF OF THE GATE.
4. BOLTS - UNLESS TAMPER RESISTANT FIXINGS ARE USED, ALL BOLTS TO THE ACCESS GATES & FENCING SHALL BE BURRED OVER.
5. GATE HINGES SHALL BE DESIGNED SO THAT IT IS IMPOSSIBLE TO REMOVE THE GATE BY LIFTING WHEN IT IS IN A CLOSED & LOCKED POSITION. DROP BOLTS SHALL BE FITTED TO EACH GATE LEAF IN SUCH A WAY THAT THEY CANNOT BE REMOVED BUT ALLOW THE GATE TO BE SECURED IN BOTH THE OPEN & CLOSED POSITION.
6. THE SECURITY RATING SHALL BE EITHER BASIC +, ENHANCED OR ENHANCED +. THE FENCE STANDARD WILL BE BASED ON THE SECURITY RATING OF THE SITE & IS TO BE AGREED WITH IRISH WATER.
7. CORNER BRACING AND POST DETAIL TO MANUFACTURER'S SPECIFICATION.
8. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
9. ALL FENCE MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH IS EN 1722-14 : 2006.
10. DIMENSIONS OF GATE PILLARS, GATE FRAME, FENCE PILLARS, FENCE RUNNERS, DIAGONALS, ETC. TO BE TO MANUFACTURER'S SPECIFICATION.
11. FENCE/GATE DESIGN AND DETAILS TO BE PROVIDED TO IRISH WATER FOR REVIEW/ VETTING BEFORE MANUFACTURE.
12. PEDESTRIAN GATE SHALL BE PROVIDED IF DEEMED NECESSARY BY IRISH WATER.
13. COLOUR TO BE HOLLY GREEN 14 C 39 IN ACCORDANCE WITH BS 4800:2011.
14. A 300mm WIDE x 150mm DEEP CONCRETE SILL (IF REQUIRED BY IRISH WATER) GRADE C20/25 CONCRETE SHALL BE PROVIDED TO IRISH WATER'S REQUIREMENTS (ENHANCED + SECURITY RATING ONLY).
15. THE GATES SHALL HAVE THE FOLLOWING SECURITY FEATURES:

a. GATE LOCKING MECHANISM SHALL INCLUDE A SHROUD COVER PROTECTING THE PADLOCK FROM ATTACK AND THE SLIP BOLT SHALL BE OF HIGH CARBON STEEL -TECHNICAL SPECIFICATION TO BE INCLUDED IN THE DESIGN SUBMISSION FOR REVIEW / VETTING BEFORE MANUFACTURE.

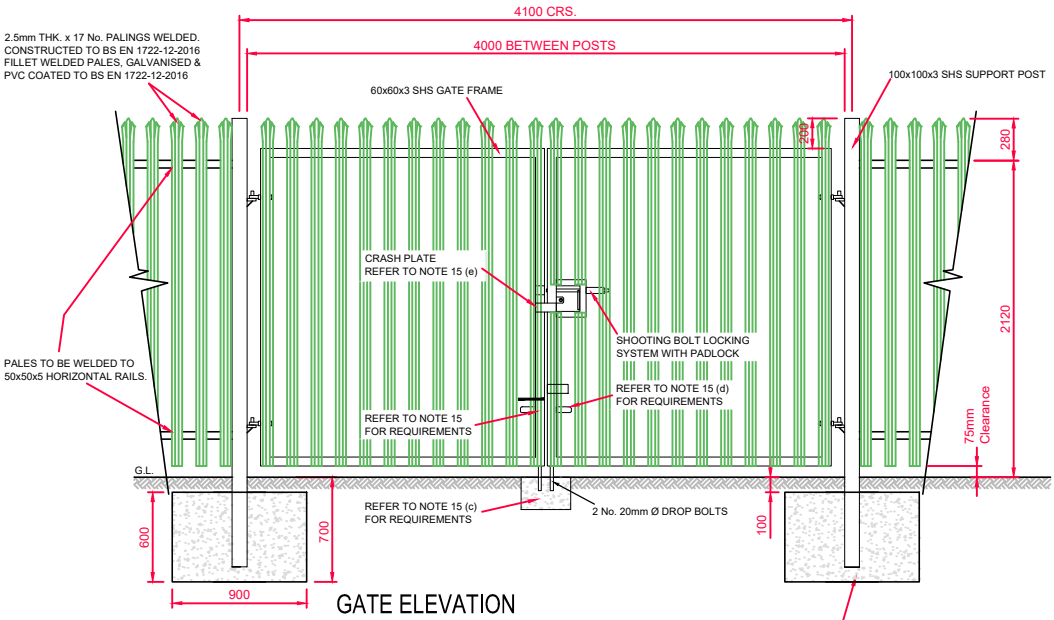
b. DROP BOLTS SHALL BE FITTED TO EACH GATE LEAF IN SUCH A WAY THAT THEY CANNOT BE REMOVED BUT ALLOW THE GATE TO BE SECURED IN BOTH THE OPEN POSITION, AND USING ONE OF THE DROP BOLTS TO LOCK IN A CLOSED POSITION.

c. DROP BOLTS SHALL BE A MINIMUM OF 650MM IN LENGTH WITH 50MM CONTAINED IN A STEEL RETAINER IMBEDDED IN CONCRETE, PROTECTING AGAINST FORCED ATTACK OF THE GATE.

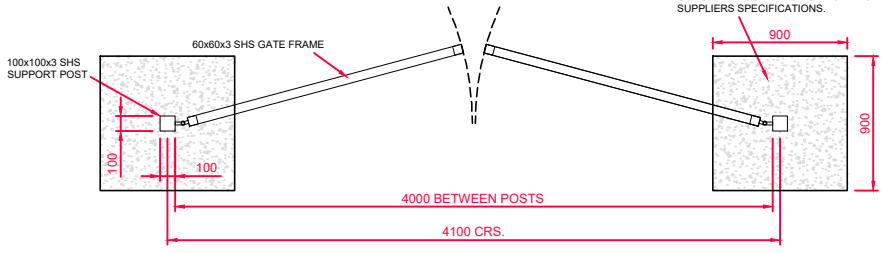
d. THE DESIGN SHALL INCLUDE A METAL STAY ATTACHED TO THE LEAF 2 TO PREVENT THE DROP BOLT FROM BEING ACTIVATED ON LEAF 1 WHILE THE GATE IS IN A LOCKED POSITION AND TO ENSURE THAT THE GATE CANNOT BE LOCKED BY AN OPERATOR UNLESS A DROP BOLT IS ENGAGED IN A RECEIVER.

e. A CRASH PLATE SHALL BE INSTALLED ON LEAF 1 TO PREVENT LEAF 2 FROM SWINGING PASSED THE CLOSE POINT OF THE GATE. THE CRASH PLATE SHALL IN ADDITION BE INSTALLED SUCH THAT IT PROVIDES RESTRICTED ACCESS TO THE SLIDE BOLT, IMPEDING ATTEMPTS OF CUTTING OF SAME.

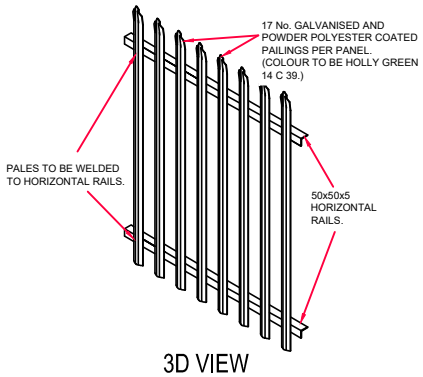
f. BRACKETS ATTACHING FENCE PANELS TO FENCE POST TO BE CONSTRUCTED OF 5MM STEEL WITH TAMPER PROOF CONNECTIONS



GATE ELEVATION



PLAN



3D VIEW

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

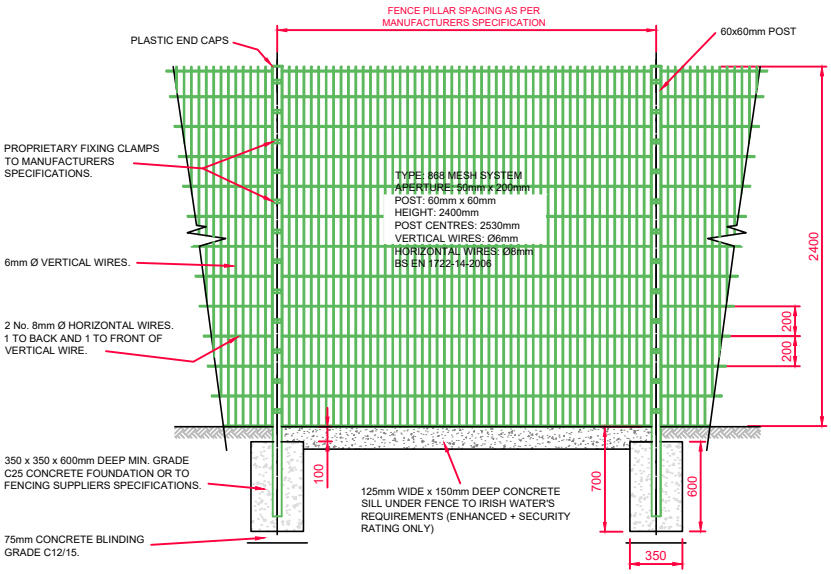
DATE: SEPT. 2019

TITLE

SECURITY GATE AND FENCING
PALISADE OPTION (PREFERRED)

DRAWING No.: STD-W- 34

REV: 0



1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. SECURITY FENCING SHALL COMPRISE 2.4m HIGH, CORROSION RESISTANT MILD STEEL FENCING, GALVANISED AND PLASTIC COATED FINISHED, WITH SIMILAR TYPE ACCESS GATES.
3. THE ACCESS GATES SHALL BE OF SUFFICIENT WIDTH TO ACCOMMODATE MAINTENANCE VEHICLES, TANKERS, ETC. THE SECURITY GATES SHALL BE PROVIDED WITH SLIDE BOLTS, SHOOTING BOLTS AND PADLOCKS. IF OPENING OUTWARDS, THE ACCESS GATES SHALL BE SET BACK FROM PARKING AND ACCESS AREAS BY THE WIDTH OF THE LEAF OF THE GATE.
4. BOLTS - UNLESS TAMPER RESISTANT FIXINGS ARE USED, ALL BOLTS TO THE ACCESS GATES & FENCING SHALL BE BURRED OVER.
5. GATE HINGES SHALL BE DESIGNED SO THAT IT IS IMPOSSIBLE TO REMOVE THE GATE BY LIFTING WHEN IT IS IN A CLOSED & LOCKED POSITION. DROP BOLTS SHALL BE FITTED TO EACH GATE LEAF IN SUCH A WAY THAT THEY CANNOT BE REMOVED BUT ALLOW THE GATE TO BE SECURED IN BOTH THE OPEN & CLOSED POSITION.
6. THE SECURITY RATING SHALL BE EITHER BASIC +, ENHANCED OR ENHANCED +. THE FENCE STANDARD WILL BE BASED ON THE SECURITY RATING OF THE SITE & IS TO BE AGREED WITH IRISH WATER.
7. CORNER BRACING AND POST DETAIL TO MANUFACTURER'S SPECIFICATION.
8. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.
9. ALL FENCE MATERIALS AND WORKMANSHIP TO BE IN ACCORDANCE WITH IS EN 1722-14 : 2006.
10. DIMENSIONS OF GATE PILLARS, GATE FRAME, FENCE PILLARS, FENCE RUNNERS, DIAGONALS, ETC. TO BE TO MANUFACTURER'S SPECIFICATION.
11. FENCE/GATE DESIGN AND DETAILS TO BE PROVIDED TO IRISH WATER FOR REVIEW/ VETTING BEFORE MANUFACTURE.
12. PEDESTRIAN GATE SHALL BE PROVIDED IF DEEMED NECESSARY BY IRISH WATER.
13. COLOUR TO BE HOLLY GREEN 14 C 39 IN ACCORDANCE WITH BS 4800:2011.
14. A 300mm WIDE x 150mm DEEP CONCRETE SILL (IF REQUIRED BY IRISH WATER) GRADE C20/25 CONCRETE SHALL BE PROVIDED TO IRISH WATER'S REQUIREMENTS (ENHANCED + SECURITY RATING ONLY).
15. THE GATES SHALL HAVE THE FOLLOWING SECURITY FEATURES:

a. GATE LOCKING MECHANISM SHALL INCLUDE A SHROUD COVER PROTECTING THE PADLOCK FROM ATTACK AND THE SLIP BOLT SHALL BE OF HIGH CARBON STEEL -TECHNICAL SPECIFICATION TO BE INCLUDED IN THE TENDER SUBMISSION FOR REVIEW / VETTING BEFORE MANUFACTURE.

b. DROP BOLTS SHALL BE FITTED TO EACH GATE LEAF IN SUCH A WAY THAT THEY CANNOT BE REMOVED BUT ALLOW THE GATE TO BE SECURED IN BOTH THE OPEN POSITION, AND USING ONE OF THE DROP BOLTS TO LOCK IN A CLOSED POSITION.

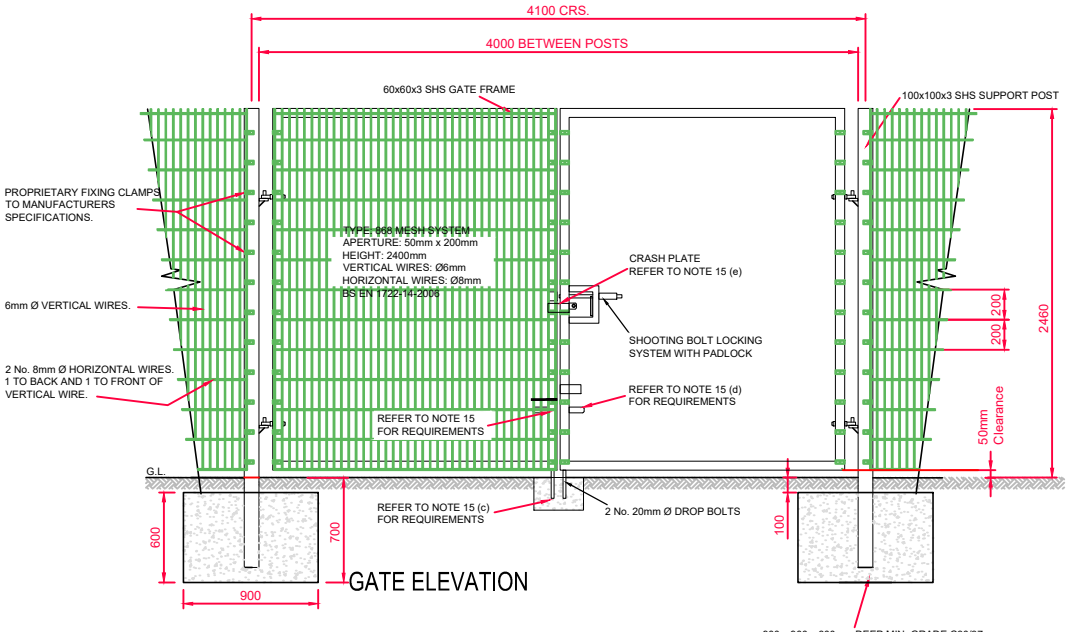
c. DROP BOLTS SHALL BE A MINIMUM OF 650MM IN LENGTH WITH 50MM CONTAINED IN A STEEL RETAINER IMBEDDED IN CONCRETE, PROTECTING AGAINST FORCED ATTACK OF THE GATE.

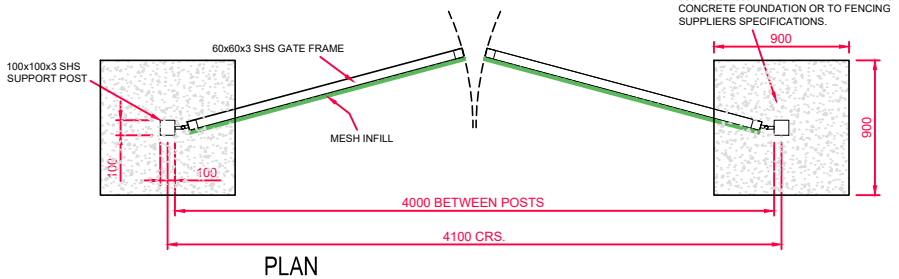
d. THE DESIGN SHALL INCLUDE A METAL STAY ATTACHED TO THE LEAF 2 TO PREVENT THE DROP BOLT FROM BEING ACTIVATED ON LEAF 1 WHILE THE GATE IS IN A LOCKED POSITION AND TO ENSURE THAT THE GATE CANNOT BE LOCKED BY AN OPERATOR UNLESS A DROP BOLT IS ENGAGED IN A RECEIVER.

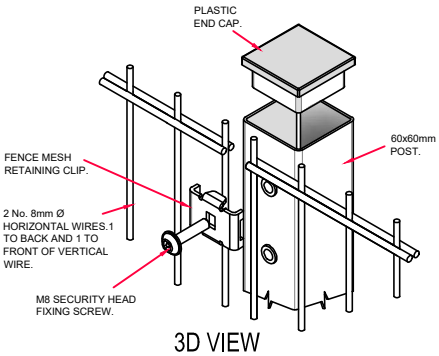
e. A CRASH PLATE SHALL BE INSTALLED ON LEAF 1 TO PREVENT LEAF 2 FROM SWINGING PASSED THE CLOSE POINT OF THE GATE. THE CRASH PLATE SHALL IN ADDITION BE INSTALLED SUCH THAT IT PROVIDES RESTRICTED ACCESS TO THE SLIDE BOLT, IMPEDING ATTEMPTS OF CUTTING OF SAME.

f. BRACKETS ATTACHING FENCE PANELS TO FENCE POST TO BE CONSTRUCTED OF 5MM STEEL WITH TAMPER PROOF CONNECTIONS

SECURITY RATING	MESH SPACING A x B	BAR THICKNESS	HEIGHT	ADDITIONAL FEATURES
BASIC +	200 x 50	Type: 868	2.4m	ANTI-CLIMB
ENHANCED	200 x 50	Type: 868	2.4m	ANTI-CLIMB
ENHANCED +	200 x 50	Type: 868	2.4m	ANTI-CLIMB & ANTI-BURROW







REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Infill mesh updated	MOD
2	11/'17	JMC	TOC	Fencing table updated	MOD
1	08/'16	JMC	TOC	Revised notes & table	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

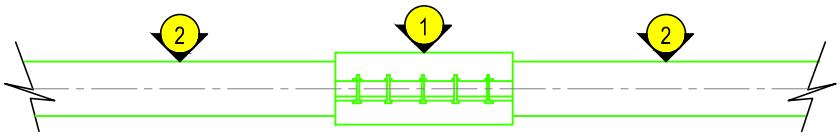
DATE: SEPT. 2015

TITLE

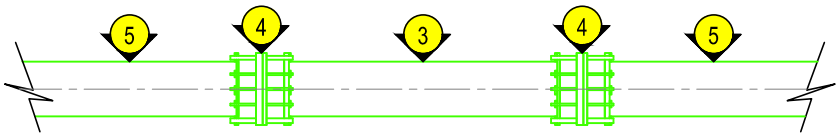
SECURITY GATE AND FENCING WIRE MESH OPTION

DRAWING No.: STD-W-34A

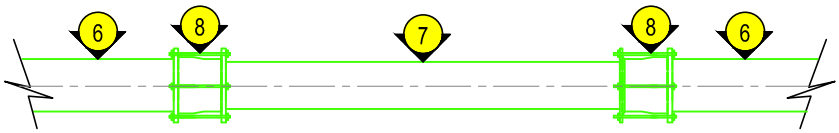
REV: 3



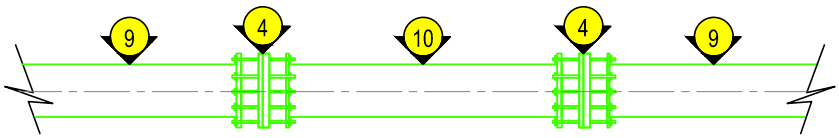
TYPE 1 REPAIR
COUPLING CLAMP FOR
DI, uPVC, ST AND CI



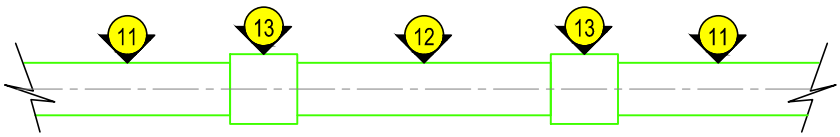
TYPE 2 REPAIR
REPLACEMENT SECTION OF
CAST IRON / DUCTILE IRON



TYPE 3 REPAIR
REPLACEMENT
ASBESTOS CEMENT PIPE



TYPE 4 REPAIR
REPLACEMENT SECTION FOR
uPVC MAIN



TYPE 5 REPAIR
REPLACEMENT SECTION OF
PE MAIN

LEGEND:

1. STAINLESS STEEL WRAP AROUND CLAMP (GRADE 1.4571), ELASTOMER RUBBER GASKET WITH VULCANIZED REINFORCEMENT SHEET OF STAINLESS STEEL.
2. EXISTING ST / uPVC/ DI OR CI PIPE.
3. REPLACEMENT SECTION (MINIMUM 1.0 M) OF PLAIN ENDED DUCTILE IRON PIPE.
4. MULTI FIT UNIVERSAL COUPLING.
5. EXISTING CAST IRON OR DUCTILE IRON PIPE.
6. EXISTING ASBESTOS MAIN.
7. REPLACEMENT OF FULL SECTION OF AC MAIN WITH A FULL LENGTH OF AN ALTERNATIVE IRISH WATER APPROVED PIPE MATERIAL.
8. SPECIAL TRANSITIONAL COUPLER (TO FIT TURNED END OF AC PIPE).
9. EXISTING PVC MAIN.
10. REPLACEMENT SECTION OF AN ALTERNATIVE IRISH WATER APPROVED PIPE MATERIAL (MINIMUM 1.0m) CUT TO LENGTH.
11. EXISTING PE PIPE.
12. REPLACEMENT SECTION OF PE PIPE.
13. FUSION WELDED COUPLING.
14. PIPE MATERIAL REFERENCES AS FOLLOWS:
    AC - ASBESTOS CEMENT.
    DI - DUCTILE IRON.
    CI - CAST IRON.
    PE - POLYETHYLENE.
    uPVC - UNPLASTICISED POLY VINYL CHLORIDE.
    ST - STEEL.
15. REPAIRS TO EXISTING WATER MAINS THAT ARE IN OWNERSHIP OF IRISH WATER SHALL BE CARRIED OUT BY IRISH WATER OR AN AGENT OF IRISH WATER.
16. REPAIRS TO EXISTING WATER MAINS TO BE CARRIED OUT BY CONTRACTORS WHO ARE DEEMED COMPETENT BY IRISH WATER TO CARRY OUT SUCH REPAIRS. THESE REPAIRS SHALL BE CARRIED OUT IN ACCORDANCE WITH AN AGREED METHOD STATEMENT, SAFETY AND HEALTH PLAN AND HYGIENE PLAN.
17. A HIGH LEVEL OF HEALTH & SAFETY PROCEDURES IS REQUIRED WHEN WORKING ON AC MAINS, & THE OPERATION OF DISMANTLING/ REMOVAL OF AC PIPES & JOINTS.

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
2	11/'17	JMC	TOC	Updated Note 10	MOD
1	08/'16	JMC	TOC	Added Note 17	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

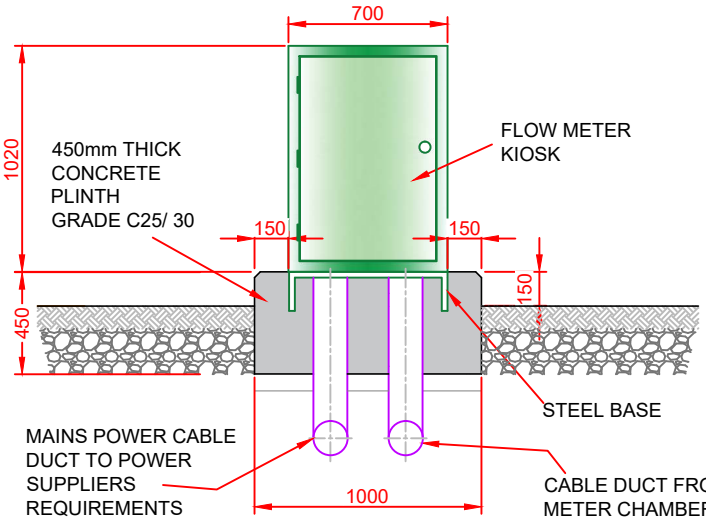
DATE: SEPT. 2015

TITLE: PIPE REPAIR TO EXISTING MAINS

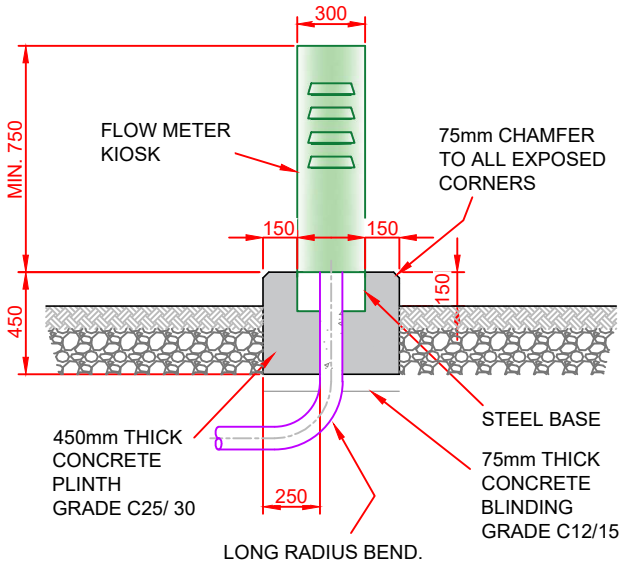
DRAWING No.: STD-W- 35

REV: 2

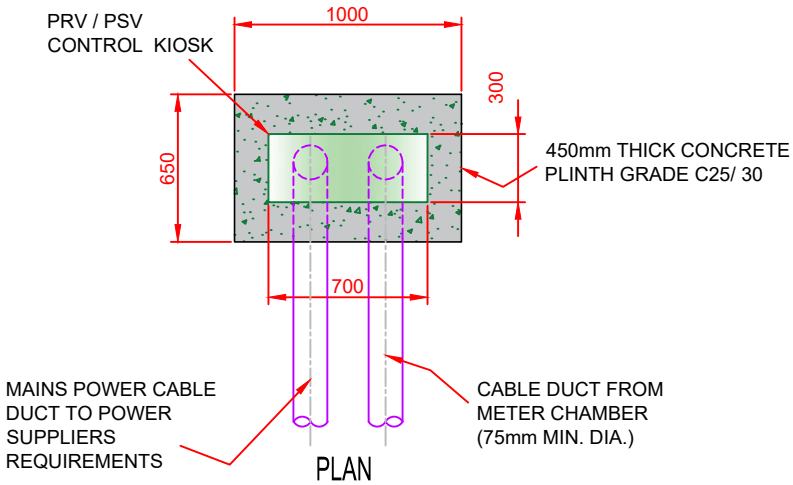
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. THE KIOSK SHALL BE LOCATED OFF THE FOOTPATH SO AS NOT TO IMPEDE PEDESTRIANS AND POSITIONED SO AS TO FACILITATE SAFE ACCESS FOR MAINTENANCE PERSONNEL.
3. KIOSK TO BE CONSTRUCTED FROM THERMOSETTING U.V. & WEATHER RESISTANT PLASTIC POWDER COATED & HOT DIPPED GALVANISED STEEL (MINIMUM 3mm THICKNESS) IN ACCORDANCE WITH BS EN 1461. STAINLESS STEEL MAY BE USED AS AN ALTERNATIVE KIOSK MATERIAL, PARTICULARLY IN SEVERE ENVIRONMENTS, SUBJECT TO AGREEMENT WITH IRISH WATER.
4. KIOSK TO HAVE SINGLE OR DOUBLE STEEL/GRP DOORS WITH MULTIPLE LOCKS TO LPS 1175 SR3 OR EN 1627. MINIMUM DOUBLE LOCKS WITH BOLTS THAT ENGAGE INTO THE SILL & HEADER AS WELL AS BETWEEN THE TWO LEAVES OR LEAF & FRAME. LEADING EDGE OF LEAVES TO HAVE EITHER REBATED EDGES OR FITTED WITH ASTRAGALS.
5. COLOUR TO BE HOLLY GREEN BS 4800 14 C39. INTERIOR FINISH TO BE WHITE UNLESS APPROVED BY IRISH WATER.
6. THE QUALITY OF KIOSK CONSTRUCTION SHALL ENSURE THAT THE FOLLOWING IS ACHIEVED:
   (a) A THERMAL TRANSMITTANCE OF 1.5W PER m²K.
   (b) A FIRE RESISTANCE (RETENTION OF STABILITY, INTEGRITY AND INSULATION) EQUIVALENT TO CLASS 2 OF BS 476, WHEN TESTED IN ACCORDANCE WITH BS 476 FOR A PERIOD EXCEEDING 30 MINUTES.
   (c) AN IP RATING OF IP55 OR EQUIVALENT.
7. KIOSK TO BE BOLTED TO THE PLINTH THROUGH A BOTTOM FLANGE WITH GALVANISED MILD STEEL OR STAINLESS STEEL ANCHOR BOLTS.
8. THE BOTTOM FLANGE SHALL BE SEATED ON A NEOPRENE GASKET AND SEALED WITH MASTIC.
9. REAR WALL SHALL BE REINFORCED WITH STAINLESS STEEL SECTIONS TO WHICH A MARINE PLY WOOD , 18mm THICK BOARD IS FIXED.
10. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE ULTIMATE SIZING OF THE KIOSK TO ENSURE ADEQUATE SPACE REQUIREMENTS.
11. TELEMETRY DUCTING TO BE IN ACCORDANCE WITH BS EN 50085-1:2005 AND ENATS 12-24.
12. ELECTRICAL REQUIREMENTS TO BE IN ACCORDANCE WITH ESB SPECIFICATION.
13. THE ROOF OF THE KIOSK SHALL BE REMOVABLE (BOLTS) TO FACILITATE BACKBOARD REMOVAL.
14. ALL EXPOSED PIPEWORK TO BE ADEQUATELY INSULATED WITH PIPE LAGGING.
15. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.



FRONT ELEVATION



CROSS SECTION



PLAN

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
3	07/'20	RH	TOC	Notes and kiosk revised	MOD
2	11/'17	JMC	TOC	Note 10 revised	MOD
1	08/'16	JMC	TOC	Added Note 4	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

UISCE ÉIREANN : IRISH WATER

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

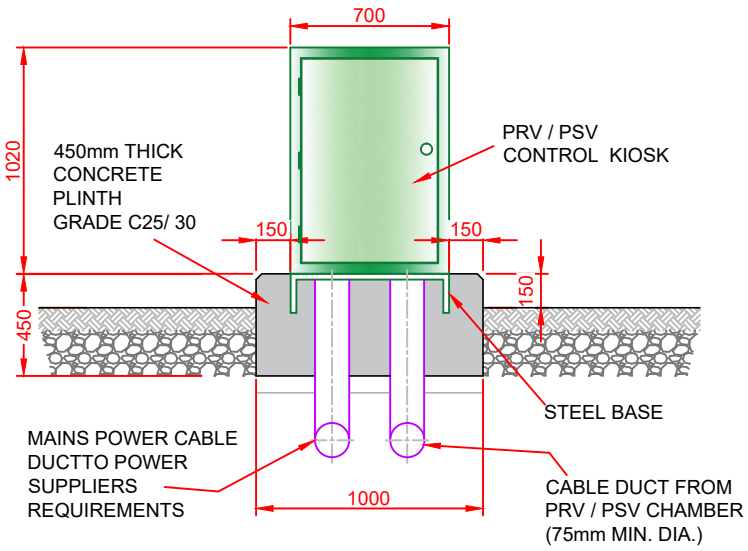
DATE: SEPT. 2015

TITLE: FLOW METER KIOSK

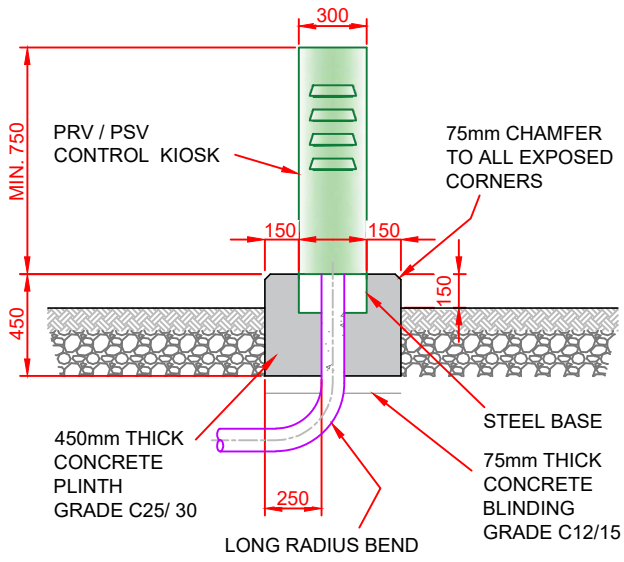
DRAWING No.: STD-W- 36

REV: 3

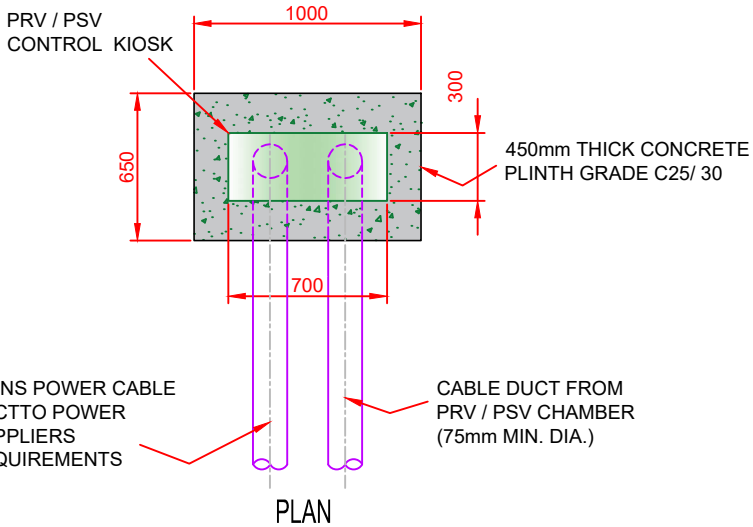
1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. THE KIOSK SHALL BE LOCATED OFF THE FOOTPATH SO AS NOT TO IMPEDE PEDESTRIANS AND POSITIONED SO AS TO FACILITATE SAFE ACCESS FOR MAINTENANCE PERSONNEL.
3. KIOSK TO BE CONSTRUCTED FROM THERMOSETTING U.V. & WEATHER RESISTANT PLASTIC POWDER COATED & HOT DIPPED GALVANISED STEEL (MINIMUM 3mm THICKNESS) IN ACCORDANCE WITH BS EN 1461. STAINLESS STEEL MAY BE USED AS AN ALTERNATIVE KIOSK MATERIAL, PARTICULARLY IN SEVERE ENVIRONMENTS, SUBJECT TO AGREEMENT WITH IRISH WATER.
4. KIOSK TO HAVE SINGLE OR DOUBLE STEEL/GRP DOORS WITH MULTIPLE LOCKS TO LPS 1175 SR3 OR EN 1627. MINIMUM DOUBLE LOCKS WITH BOLTS THAT ENGAGE INTO THE SILL & HEADER AS WELL AS BETWEEN THE TWO LEAVES OR LEAF & FRAME. LEADING EDGE OF LEAVES TO HAVE EITHER REBATED EDGES OR FITTED WITH ASTRAGALS.
5. COLOUR TO BE HOLLY GREEN BS 4800 14 C39. INTERIOR FINISH TO BE WHITE UNLESS APPROVED BY IRISH WATER.
6. THE QUALITY OF KIOSK CONSTRUCTION SHALL ENSURE THAT THE FOLLOWING IS ACHIEVED:
   (a) A THERMAL TRANSMITTANCE OF 1.5W PER m²K.
   (b) A FIRE RESISTANCE (RETENTION OF STABILITY, INTEGRITY AND INSULATION) EQUIVALENT TO CLASS 2 OF BS 476, WHEN TESTED IN ACCORDANCE WITH BS 476 FOR A PERIOD EXCEEDING 30 MINUTES.
   (c) AN IP RATING OF IP55 OR EQUIVALENT.
7. KIOSK TO BE BOLTED TO THE PLINTH THROUGH A BOTTOM FLANGE WITH GALVANISED MILD STEEL OR STAINLESS STEEL ANCHOR BOLTS.
8. THE BOTTOM FLANGE SHALL BE SEATED ON A NEOPRENE GASKET AND SEALED WITH MASTIC.
9. REAR WALL SHALL BE REINFORCED WITH STAINLESS STEEL SECTIONS TO WHICH A MARINE PLY WOOD , 18mm THICK BOARD IS FIXED.
10. THE DEVELOPER SHALL BE RESPONSIBLE FOR THE ULTIMATE SIZING OF THE KIOSK TO ENSURE ADEQUATE SPACE REQUIREMENTS.
11. TELEMETRY DUCTING TO BE IN ACCORDANCE WITH BS EN 50085-1:2005 AND ENATS 12-24.
12. ELECTRICAL REQUIREMENTS TO BE IN ACCORDANCE WITH ESB SPECIFICATION.
13. THE ROOF OF THE KIOSK SHALL BE REMOVABLE (BOLTS) TO FACILITATE BACKBOARD REMOVAL.
14. ALL EXPOSED PIPEWORK TO BE ADEQUATELY INSULATED WITH PIPE LAGGING.
15. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.



FRONT ELEVATION



CROSS SECTION



PLAN

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

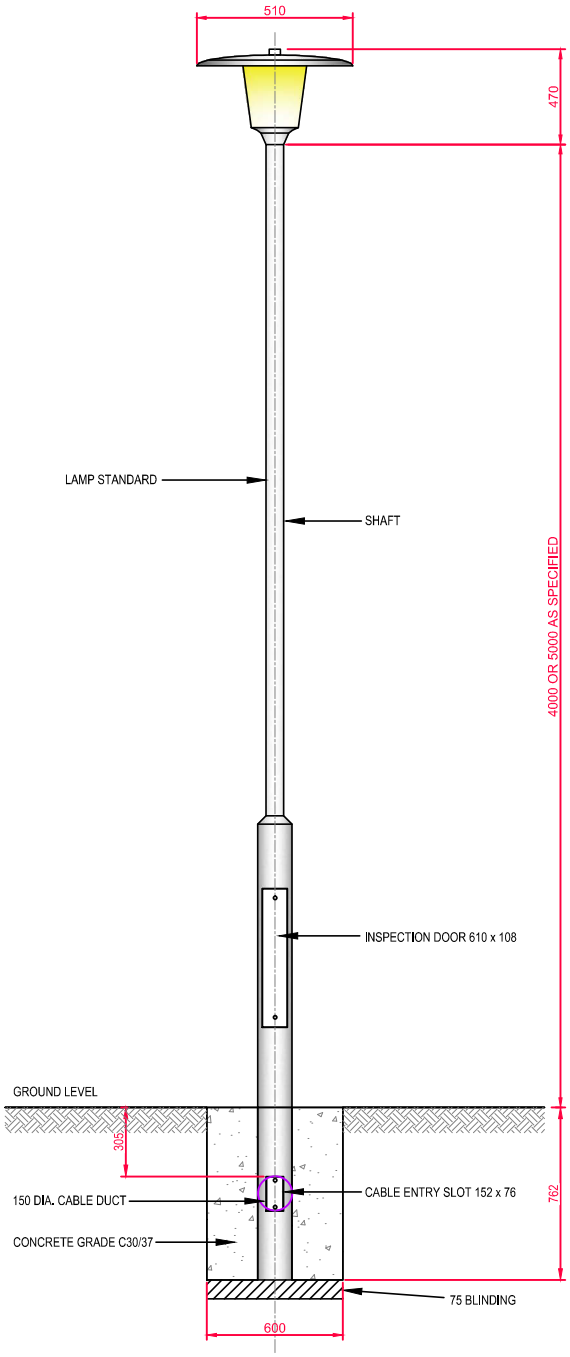
DATE: SEPT. 2019

TITLE: PRV / PSV CONTROL KIOSK

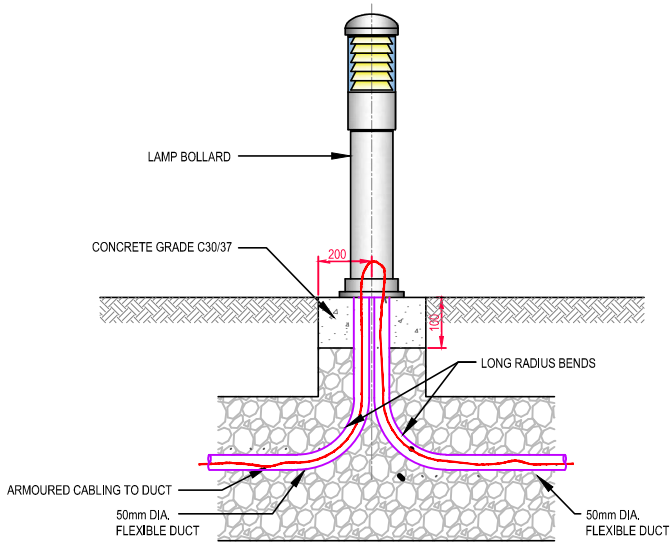
DRAWING No.: STD-W-36A

REV: 0

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. LAMP BOLLARD TO BE REVIEWED BY IRISH WATER.
3. LAMP STANDARD TO BE REVIEWED BY IRISH WATER.
4. ELECTRICAL DUCTING TO BE IN ACCORDANCE WITH ESB SPECIFICATION.



SECTION



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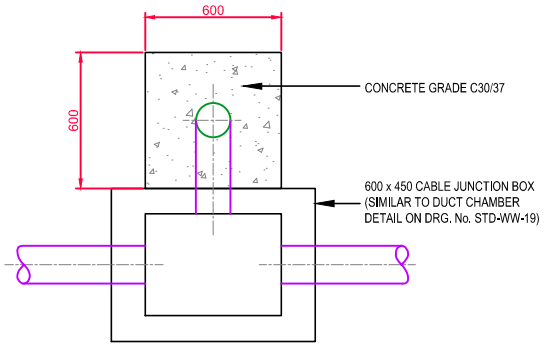
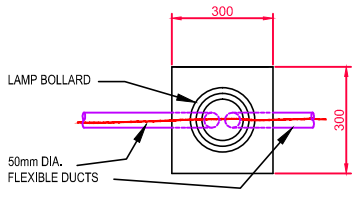


PLAN

LAMP STANDARD



PLAN

LAMP BOLLARD

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
2	07/'20	RH	TOC	Cable ducts to Lamp Bollard Revised	MOD
1	11/'17	JMC	TOC	Notes updated	MOD
0	09/'15	JMC	TOC	Initial Issue	SL

STANDARD DETAILS - WATER

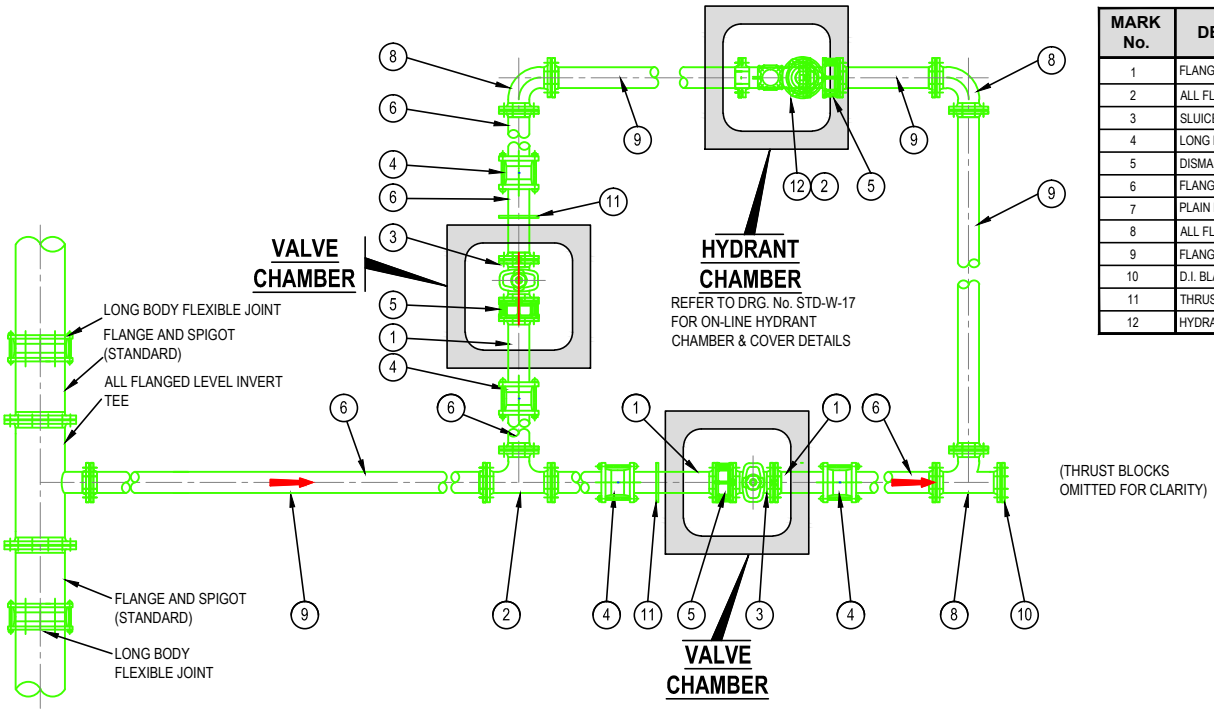
SCALE: NOT TO SCALE

DATE: SEPT. 2015

TITLE: LAMP BOLLARD AND LAMP STANDARD

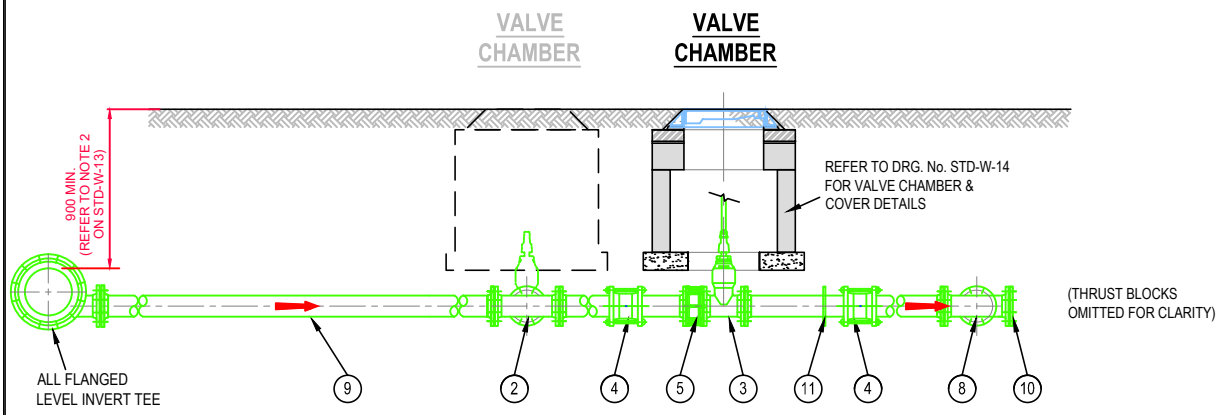
DRAWING No.: STD-W- 37

REV: 2



MARK No.	DESCRIPTION
1	FLANGED PLAIN ENDED PIPE (STANDARD)
2	ALL FLANGED TEE
3	SLUICE VALVE
4	LONG BODY FLEXIBLE COUPLING
5	DISMANTLING JOINT
6	FLANGED PLAIN ENDED PIPE (CUT TO SUIT)
7	PLAIN ENDED PIPE (CUT TO SUIT)
8	ALL FLANGED D.I. "SWEPT TEE"
9	FLANGED PIPEWORK
10	D.I. BLANK FLANGE
11	THRUST FLANGE
12	HYDRANT

PLAN SHOWING D.I. WATERMAIN "LOOP" ARRANGEMENT



SECTION SHOWING D.I. WATERMAIN "LOOP" ARRANGEMENT

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. STRUCTURAL REINFORCEMENT AND DESIGN DETAIL TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
3. HYDRANT 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 REVIEW BY IRISH WATER.
4. THE HYDRANT SHALL BE DOUBLE FLANGED DRILLED TO PN 16. THEY SHALL COMPLY WITH IS EN 14339, IS EN 1074 PART 6 AND BS 750: 2012. THE HYDRANT SHALL INCORPORATE A SCREW DOWN GATE VALVE, UNDERGROUND "GUIDE TO HEAD" TYPE WITH A FALSE SPINDLE CAP. THE OUTLET SHALL BE IN ACCORDANCE WITH ITEM 5 BELOW.
5. FIRE HYDRANT OUTLET TYPE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE OFFICER FOR THE AREA AND SHALL BE AGREED PRIOR TO THE COMMENCEMENT OF WORKS.
6. ALL HYDRANTS SHALL BE CLOCKWISE CLOSING.
7. HYDRANT CHAMBER & SCOUR 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 FROM 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 AND IS 470
8. CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER STD-W-13.
9. 200mm ALL ROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GRASS AREAS.
10. 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.
11. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
12. ALL PIPEWORK AND FITTINGS FOR WASHOUT HYDRANT CHAMBER CONNECTION SHALL BE DUCTILE IRON. PIPES AND FITTINGS ON MAIN LINE SHALL BE: PE PIPES & FITTINGS IN ACCORDANCE WITH IS EN 12201:2011, OR DUCTILE IRON PIPES AND FITTINGS IN ACCORDANCE WITH IS EN 545.
13. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO AGREEMENT WITH IRISH WATER.
14. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

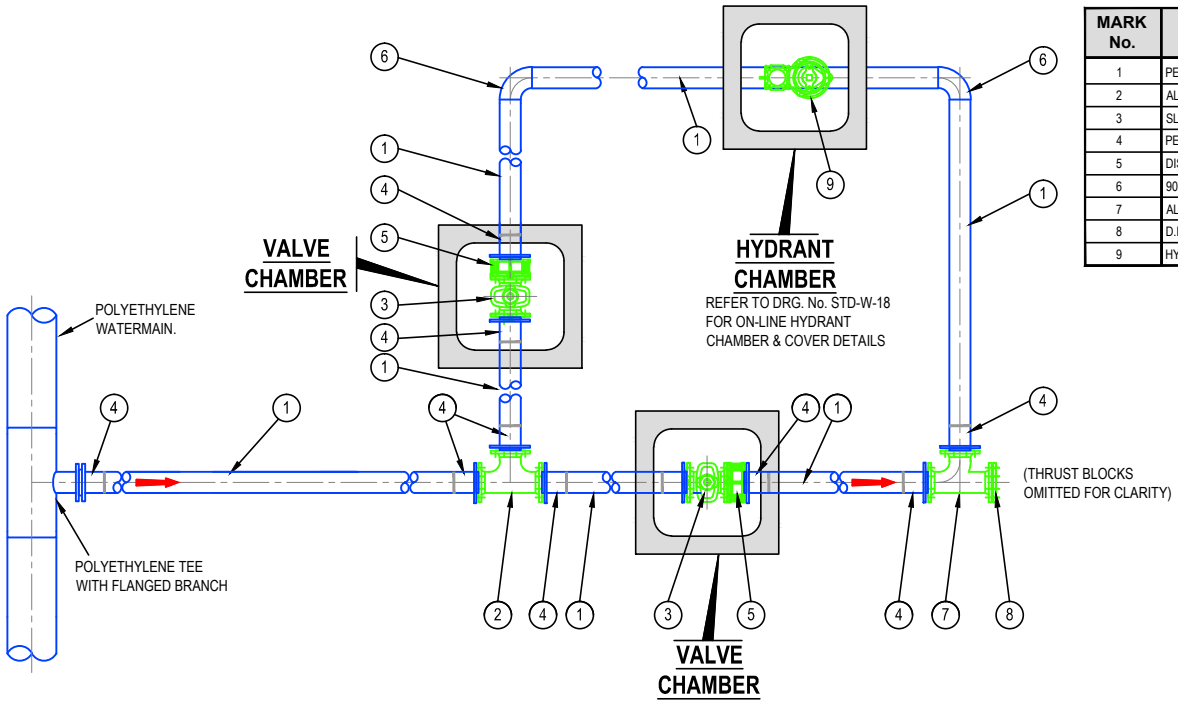
DATE: SEPT. 2019

TITLE: WATERMAIN LOOP DETAIL DUCTILE IRON OPTION

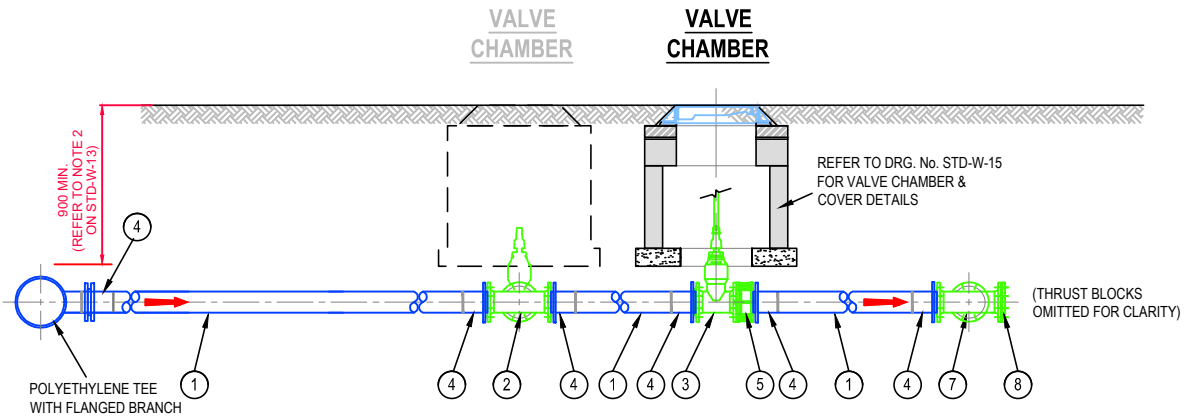
DRAWING No.: STD-W- 38

REV: 0

MARK No.	DESCRIPTION
1	PE PIPEWORK
2	ALL FLANGED TEE
3	SLUICE VALVE
4	PE STUB FLANGE WITH BACKING RING
5	DISMANTLING JOINT
6	90° DEGREE PE BEND
7	ALL FLANGED D.I. "SWEPT TEE"
8	D.I. BLANK FLANGE
9	HYDRANT



PLAN SHOWING PE WATERMAIN "LOOP" ARRANGEMENT



SECTION SHOWING PE WATERMAIN "LOOP" ARRANGEMENT

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. STRUCTURAL REINFORCEMENT AND DESIGN DETAIL TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
3. HYDRANT 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 REVIEW BY IRISH WATER.
4. THE HYDRANT SHALL BE DOUBLE FLANGED DRILLED TO PN 16. THEY SHALL COMPLY WITH IS EN 14339, IS EN 1074 PART 6 AND BS 750: 2012. THE HYDRANT SHALL INCORPORATE A SCREW DOWN GATE VALVE, UNDERGROUND "GUIDE TO HEAD" TYPE WITH A FALSE SPINDLE CAP. THE OUTLET SHALL BE IN ACCORDANCE WITH ITEM 5 BELOW.
5. FIRE HYDRANT OUTLET TYPE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE OFFICER FOR THE AREA AND SHALL BE AGREED PRIOR TO THE COMMENCEMENT OF WORKS.
6. ALL HYDRANTS SHALL BE CLOCKWISE CLOSING.
7. HYDRANT CHAMBER & SCOUR 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 FROM 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 AND IS 470
8. CONCRETE CHAMBERS SHALL BE SURROUNDED BY A MINIMUM OF 150mm COMPACTED CLAUSE 808 MATERIAL AS PER STD-W-13.
9. 200mm ALL ROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GRASS AREAS.
10. 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.
11. ANTI CORROSION TAPE TO BE PROVIDED AROUND BURIED FLANGES.
12. ALL PIPEWORK AND FITTINGS FOR WASHOUT HYDRANT CHAMBER CONNECTION SHALL BE DUCTILE IRON. PIPES AND FITTINGS ON MAIN LINE SHALL BE: PE PIPES & FITTINGS IN ACCORDANCE WITH IS EN 12201:2011, OR DUCTILE IRON PIPES AND FITTINGS IN ACCORDANCE WITH IS EN 545.
13. ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOATATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO AGREEMENT WITH IRISH WATER.
14. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206.

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Drn	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

SCALE: NOT TO SCALE

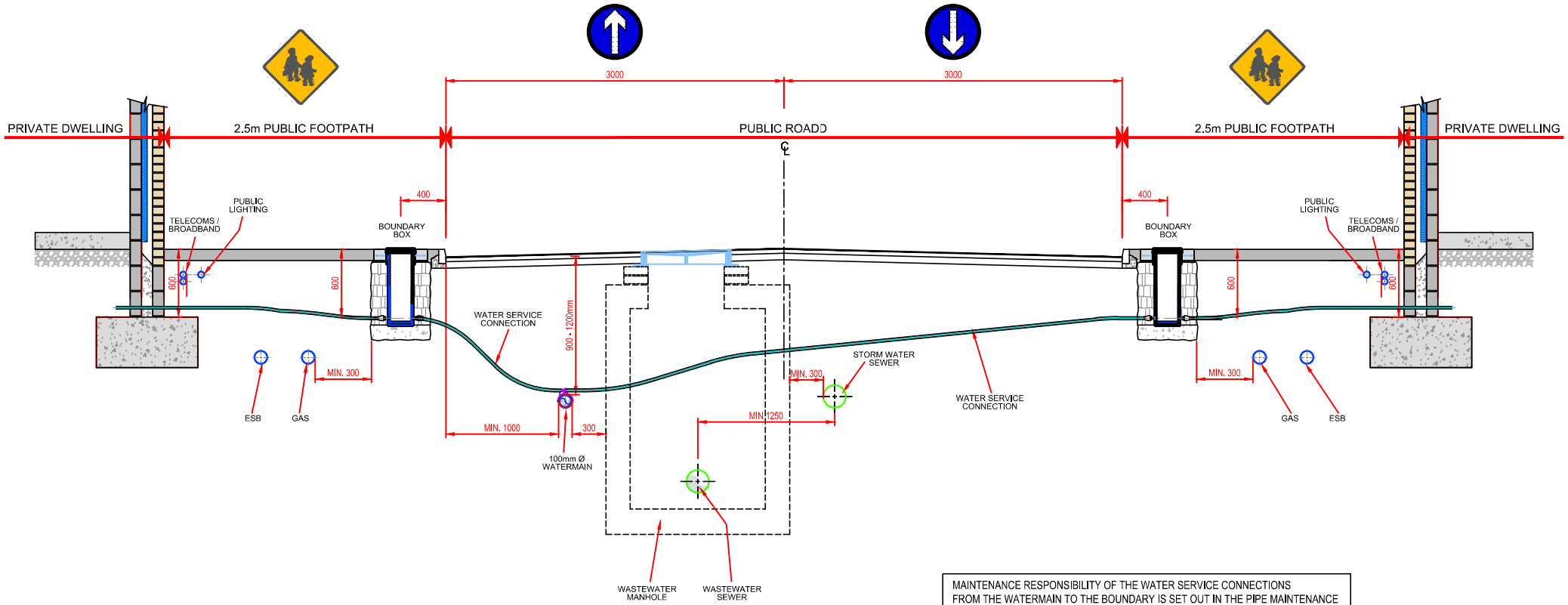
DATE: SEPT. 2019

TITLE: WATERMAIN LOOP DETAIL POLYETHYLENE OPTION

DRAWING No.: STD-W- 39

REV: 0

1. FOR NOTES REFER TO STD-WW-13



MAINTENANCE RESPONSIBILITY OF THE WATER SERVICE CONNECTIONS FROM THE WATERMAIN TO THE BOUNDARY IS SET OUT IN THE PIPE MAINTENANCE RESPONSIBILITY DIAGRAMS INCLUDED ON THE IW WEBSITE @ WWW.WATER.IE

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Dm	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

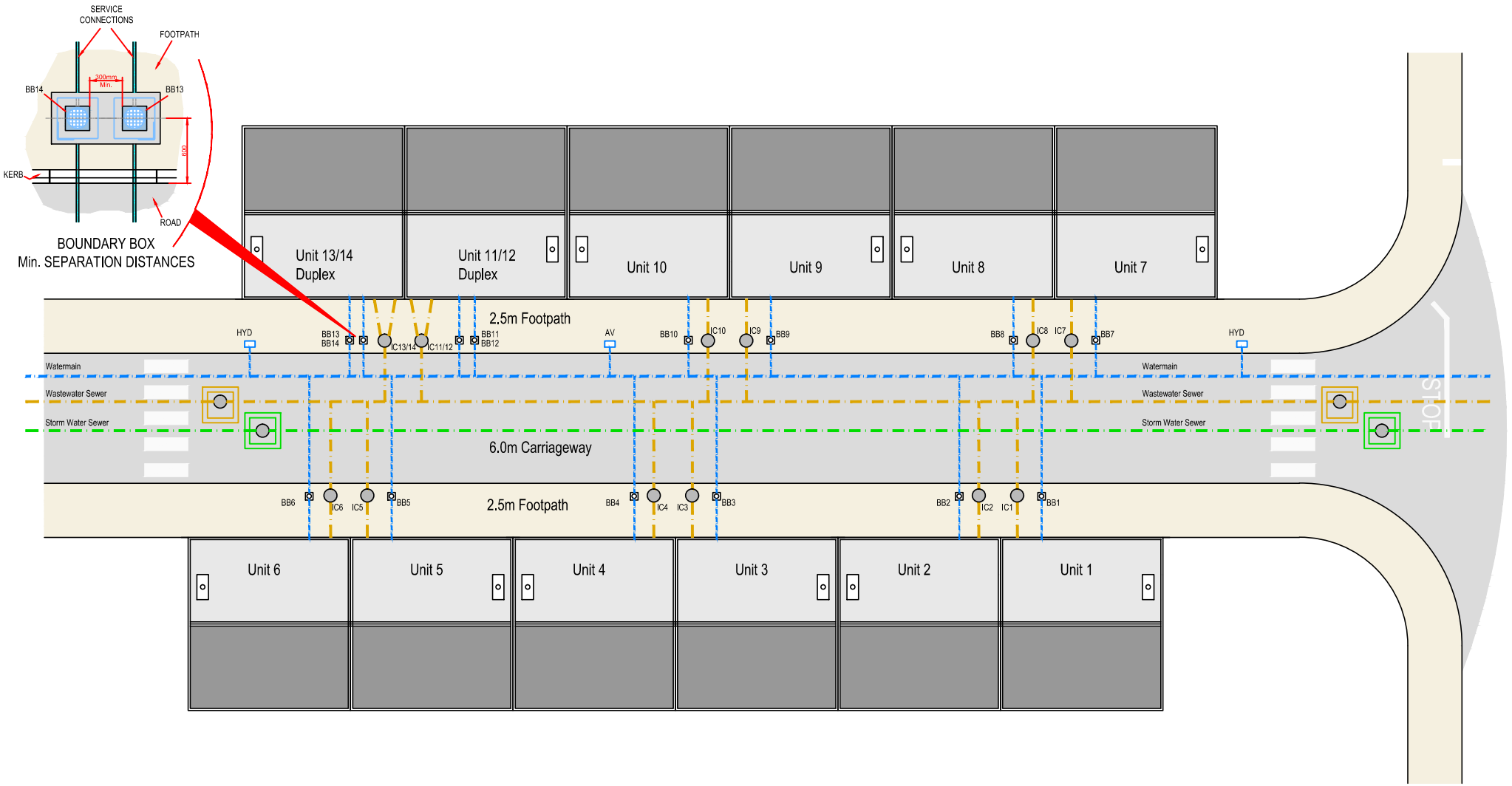
TITLE

SECTION SHOWING WATER SERVICES SEPARATION DETAILS IN HIGH DENSITY DEVELOPMENTS
2.5m Wide Footpaths with 6.0m Wide Carriageway

SCALE	DATE
NOT TO SCALE	APR. 2020

DRAWING No.	REV
STD-W- 40	0

1. FOR NOTES REFER TO STD-WW-13
2. MINIMUM DISTANCE BETWEEN SERVICE CONNECTIONS AND OTHER SERVICES CONNECTIONS TO BE 300mm.



REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Dm	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

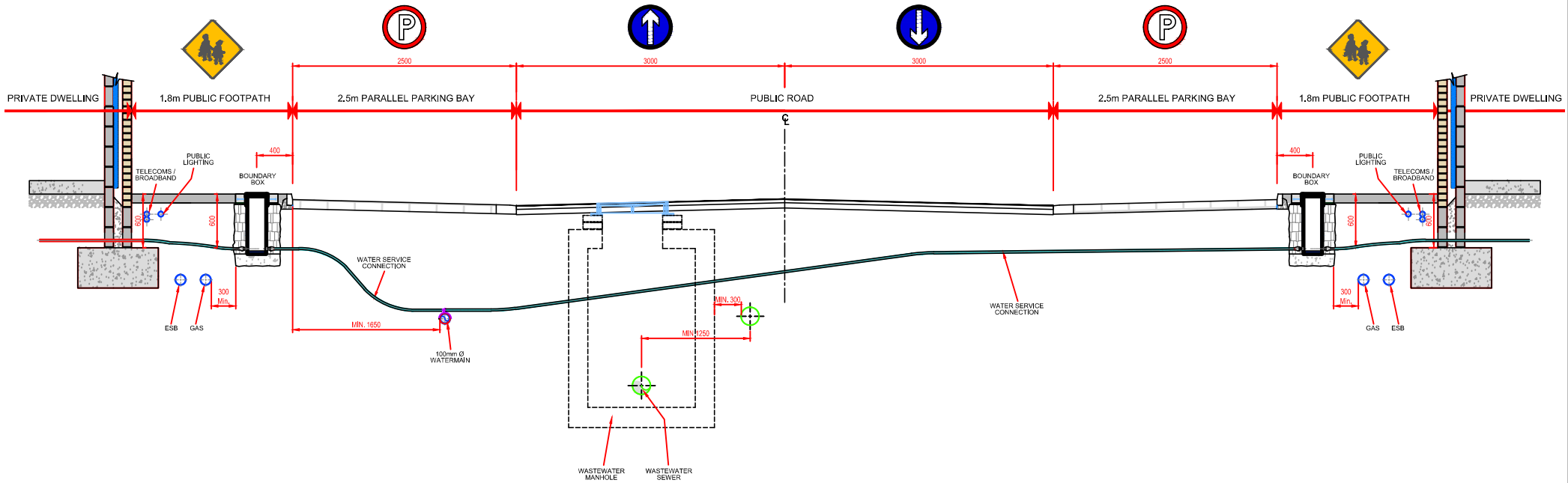
TITLE

LAYOUT PLAN SHOWING BELOW GROUND SERVICES
SEPARATION DETAILS IN HIGH DENSITY DEVELOPMENTS
2.5m Wide Footpaths with 6.0m Wide Carriageway

SCALE	DATE
NOT TO SCALE	APR. 2020

DRAWING No.	REV
STD-W- 41	0

1. FOR NOTES REFER TO STD-WW-13



MAINTENANCE RESPONSIBILITY OF THE WATER SERVICE CONNECTIONS FROM THE WATERMAIN TO THE BOUNDARY IS SET OUT IN THE PIPE MAINTENANCE RESPONSIBILITY DIAGRAMS INCLUDED ON THE IW WEBSITE @ WWW.WATER.IE

REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Dm	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

TITLE

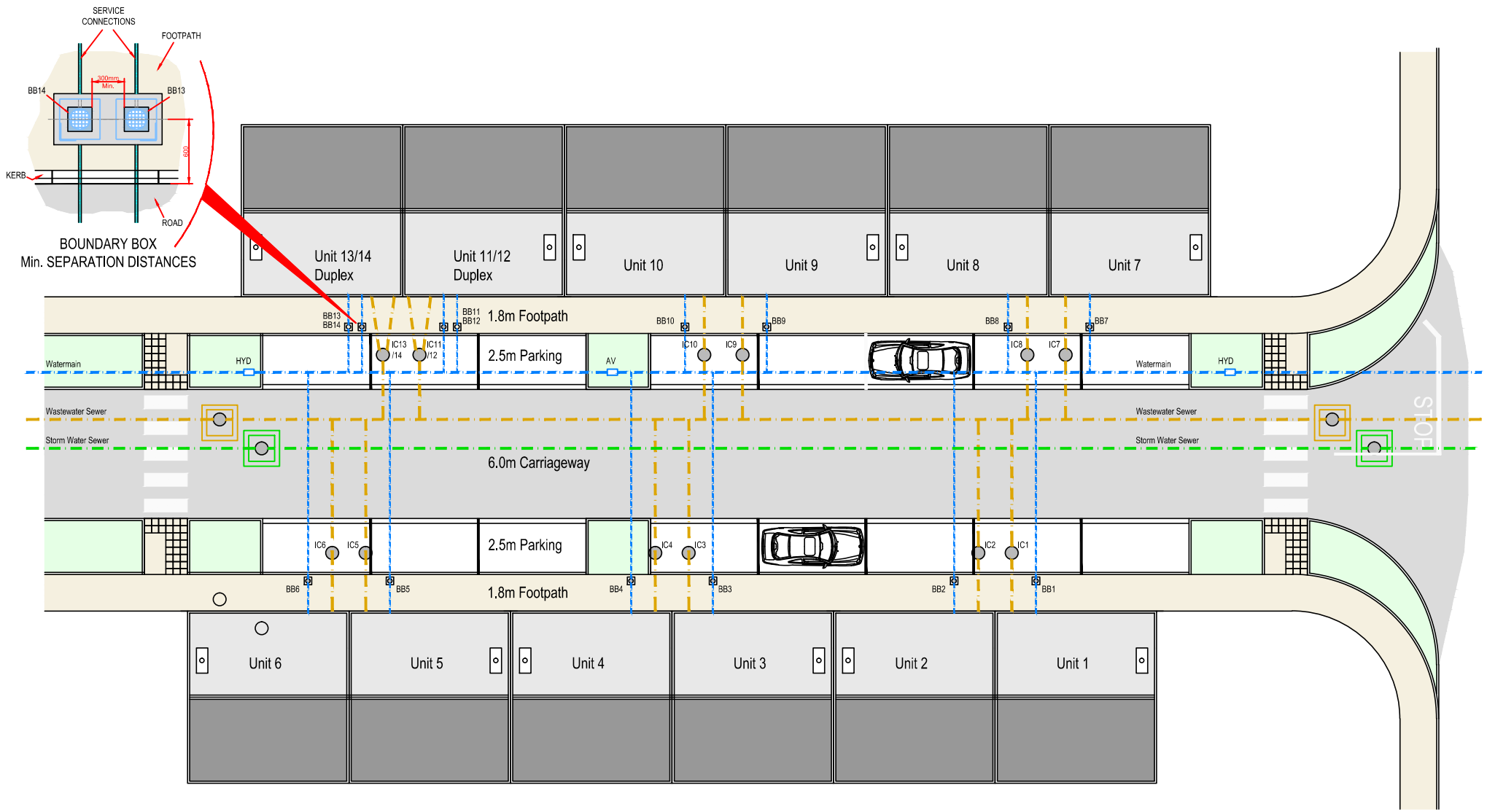
SECTION SHOWING WATER SERVICES SEPARATION DETAILS IN HIGH DENSITY DEVELOPMENTS

1.8m Wide Footpaths, 2.5m wide Parallel Parking Bays with 6.0m Wide Carriageway.

SCALE	DATE
NOT TO SCALE	APR. 2020

DRAWING No.	REV
STD-W- 42	0

1. FOR NOTES REFER TO STD-WW-13
2. MINIMUM DISTANCE BETWEEN SERVICE CONNECTIONS AND OTHER SERVICES CONNECTIONS TO BE 300mm.



REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER

No.	Date	Dm	Chk	Description	App
0	07/'20	RH	TOC	Initial Issue	MOD

STANDARD DETAILS - WATER

TITLE

LAYOUT PLAN SHOWING BELOW GROUND SERVICES
SEPARATION DETAILS IN HIGH DENSITY DEVELOPMENTS
1.8m Wide Footpaths, 2.5m wide Parallel Parking Bays with 6.0m Wide Carriageway.

SCALE	DATE
NOT TO SCALE	APR. 2020

DRAWING No.	REV
STD-W- 43	0

STANDARD DETAILS FOR WATER NETWORKS: REVISION LOG – 04 (July 2020)

Drg. No.	DRAWING TITLE	MATERIAL CHANGE	EDITORIAL CHANGE	REV	COMMENTS
STD-W-01	Water service connection responsibility	B-C ownership revised – table revised	Updated & added Notes	1	Drawing revised
STD-W-02	Typical layout for watermains within developments	Connection interface detail added, notes updated	Updated & added Notes	2	Drawing revised
STD-W-03	Customer connection and boundary box (25mm OD pipe)	Service connection ownership revised, notes added	Updated & added Notes	4	Drawing revised
STD-W-04	General pipe connections (Sheet 1 of 7)	Dismantling joints relocated	Details Updated	4	Drawing revised
STD-W-05	General pipe connections (Sheet 2 of 7)	Dismantling joints relocated, separation pipe material added, notes updated	Updated & added Notes	3	Drawing revised
STD-W-06	General pipe connections (Sheet 3 of 7)	Dismantling joints relocated, separation pipe material added, notes updated	Updated & added Notes	3	Drawing revised
STD-W-07	General pipe connections (Sheet 4 of 7)	Dismantling joints relocated, separation pipe material added, notes updated	Updated & added Notes	2	Drawing revised
STD-W-08	General pipe connections (Sheet 5 of 7)	Dismantling joints relocated, separation pipe material added, notes updated	Updated & added Notes	2	Drawing revised
STD-W-09	General pipe connections (Sheet 6 of 7)	Dismantling joints relocated, separation pipe material added, notes updated	Details Updated	2	Drawing revised
STD-W-10	General pipe connections (Sheet 7 of 7)	Dismantling joints relocated, separation pipe material added, notes updated	Details Updated	2	Drawing revised
STD-W-11	Typical service layout indicating separation distances	Notes added	Added Notes	2	Drawing revised
STD-W-12	Restrictions on Water Infrastructure works adjacent to existing trees			2	No Change
STD-W-12A	Restrictions on new trees / shrubs planting adjacent to Water mains			0	No Change
STD-W-13	Trench Backfill / bedding & reduced cover protection slab detail	Protection slab detail added, title changed, notes added	Updated & added Notes	2	Drawing revised
STD-W-14	Sluice valve for ductile iron (D.I.) pipe (<350mm dia.) (Sheet 1 of 2)	Updated anti-torque support note, relocated thrust flange, added plan dimensions, updated notes	Updated & added Notes	4	Drawing revised
STD-W-15	Sluice valve for polyethylene (P.E.) pipe (<350mm dia.) (Sheet 2 of 2)	Updated anti-torque support note, added plan dimensions note, updated notes	Updated & added Notes	3	Drawing revised
STD-W-16	On-line hydrant for ductile iron (D.I.) pipe (Sheet 1 of 4)	Added plan dimensions note, updated brickwork bedding mortar spec, updated notes	Updated & notes revised	3	Drawing revised
STD-W-17	Off-line hydrant for ductile iron (D.I.) pipe (Sheet 2 of 4)	Added plan dimensions note, updated brickwork bedding mortar spec, updated notes	Updated & notes revised	4	Drawing revised
STD-W-18	On-line hydrant for polyethylene (P.E.) pipe (Sheet 3 of 4)	Added plan dimensions note, updated brickwork bedding mortar spec, updated notes	Updated & notes revised	3	Drawing revised
STD-W-19	Off-line hydrant for polyethylene (P.E.) pipe (Sheet 4 of 4)	Added plan dimensions note, updated brickwork bedding mortar spec, revised pipe branch to PE, updated notes	Updated & notes revised	4	Drawing revised
STD-W-20	On-line air valve for ductile iron (D.I.) pipe (Sheet 1 of 4)	Updated brickwork bedding mortar spec and updated notes	Updated & notes revised	3	Drawing revised
STD-W-21	Off-line air valve for ductile iron (D.I.) pipe (Sheet 2 of 4)	Updated brickwork bedding mortar spec. updated notes	Updated & notes revised	4	Drawing revised
STD-W-22	On-line air valve for polyethylene (P.E.) pipe (Sheet 3 of 4)	Updated brickwork bedding mortar spec. updated notes	Updated & notes revised	3	Drawing revised
STD-W-23	Off-line air valve for polyethylene (P.E.) pipe (Sheet 4 of 4)	Updated brickwork bedding mortar spec. updated notes	Updated & notes revised	4	Drawing revised
STD-W-24	Pressure reducing / sustaining valve chamber in-situ R.C. option	Class B brickwork coursing & thrust flange notes amended	Updated & notes revised	3	Drawing revised
STD-W-25	Booster pump station arrangement	Notes updated	Notes updated	2	Drawing revised
STD-W-26	Electromagnetic meter chamber (dn80 - dn250mm Dia.)	Notes updated and spool length table included	Updated & notes revised	4	Drawing revised
STD-W-26A	Chamber for flanged mech. meter without strainer (dn40 - dn250mm Dia.)	Notes updated and spool length table and taper details included	Updated & notes revised	1	Drawing revised
STD-W-26B	Chamber for flanged mech. meter (dn100 - dn250mm Dia.) with separate strainer chamber			0	New Detail
STD-W-26C	Threaded rotary piston flow meter chamber (dn30 - dn40mm Dia.) In-Situ Concrete Option			0	New Detail
STD-W-26D	Threaded rotary piston flow meter chamber (dn30 - dn40mm Dia.) Precast Concrete Option			0	New Detail
STD-W-26E	Threaded rotary piston flow meter chamber (dn30 - dn40mm Dia.) Blockwork Option			0	New Detail
STD-W-26F	By-pass flow meter chamber (25-32mm O.D. Dia) For developments with <20m3/day water use			0	New Detail
STD-W-26G	Flow meter chamber (25-32mm O.D. Dia.)			0	New Detail
STD-W-27	Marker posts / plates	Additional marker plates included and revised notes	Updated & notes revised	3	Drawing revised
STD-W-28	Water main thrust and support blocks			0	No Change
STD-W-29	Duct chamber	Included drain point and updated notes	Updated & notes revised	3	Drawing revised
STD-W-30	Scour chamber and head wall arrangements	Notes updated	Notes updated	4	Drawing revised
STD-W-30A	Washout hydrant	Updated noted re PE pipe branch and notes updated	Updated & notes revised	3	Drawing revised
STD-W-30B	Scour chamber to storm sewer arrangements			0	New Detail
STD-W-31	Typical ditch / stream crossing for watermain ductile iron option	Title amended	Updated	2	Drawing revised
STD-W-31A	Typical ditch / stream crossing for watermain polyethylene option			0	New Detail
STD-W-32	Typical bridge crossing for watermain (Sheet 1 of 2)			1	No Change
STD-W-33	Typical bridge crossing for watermain (Sheet 2 of 2)	Added drawing reference edits	Updated	2	Drawing revised
STD-W-33A	Typical culvert and services crossing details for water main			0	New Detail
STD-W-34	Security gate and fencing palisade option (preferred)	New drawing content	Updated & notes revised	0	New Detail
STD-W-34A	Security gate and fencing wire mesh option	Previous STD-W-34 re-numbered and updated	Updated	3	Drawing revised
STD-W-35	Pipe repair to existing mains			2	No change
STD-W-36	Flow meter kiosk	Notes and kiosk revised	Updated & notes revised	3	Drawing revised
STD-W-36A	PRV / PSV control kiosk			0	New Detail
STD-W-37	Lamp bollard and lamp standard			1	No change
STD-W-38	Watermain loop detail ductile iron option			0	New Detail
STD-W-39	Watermain loop detail polyethylene option			0	New Detail
STD-W-40	Section showing wastewater services separation details in high density developments 2.5m wide footpaths with 6.0m wide carriageway			0	New Detail
STD-W-41	Layout plan showing below ground services separation details in high density developments 2.5m wide footpaths with 6.0m wide carriageway			0	New Detail
STDW-42	Section showing wastewater services separation details in high density developments 1.8m wide footpaths, 2.5m wide parallel parking bays with 6.0m wide carriageway.			0	New Detail
STD-W-43	Layout plan showing below ground services separation details in high density developments 1.8m wide footpaths, 2.5m wide parallel parking bays with 6.0m wide carriageway.			0	New Detail
/	INDEX SHEET	Inclusion of STD-WW-26B, 26C, 26D, 31A, 33A, 34, 36A, 38, 39, 40, 41, 42, 43	Drawing revisions updated	July 2020	Drawing revisions updated
/	Design Risk Assessment for Water Standard Details	Inclusion of STD-WW-??	General Amendments	v4.01	Document revised