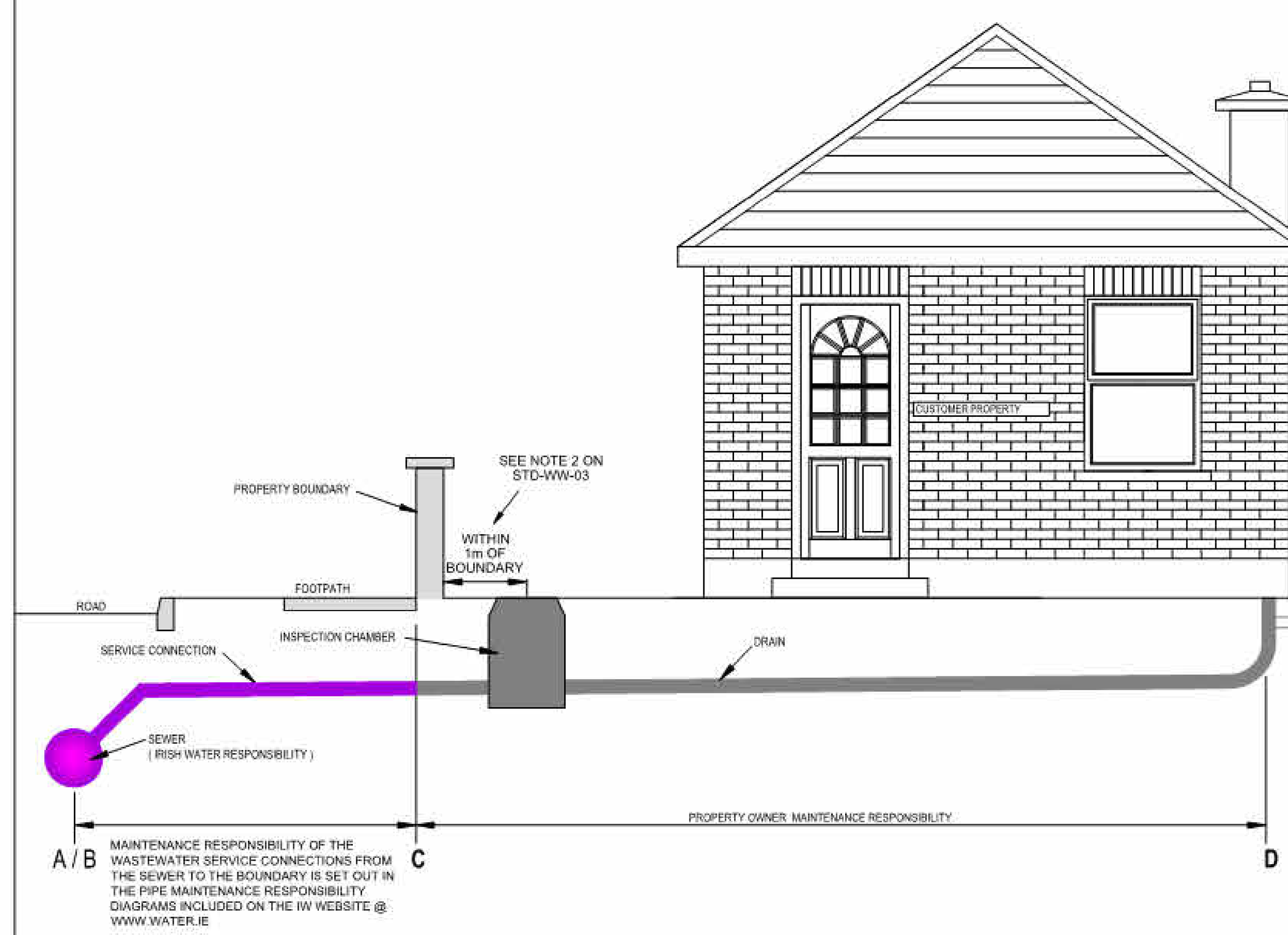


A / B MAINTENANCE RESPONSIBILITY OF THE WASTEWATER SERVICE CONNECTIONS FROM THE SEWER TO THE BOUNDARY IS SET OUT IN THE PIPE MAINTENANCE RESPONSIBILITY DIAGRAMS INCLUDED ON THE IW WEBSITE @ WWW.WATER.IE

	MAINTENANCE RESPONSIBILITY
(A) SEWER	IRISH WATER
(B-C) SERVICE CONNECTION (INCLUDING SADDLE)	SEE NOTE ABOVE
INSPECTION CHAMBER	PROPERTY OWNER
(C-D) DRAIN	PROPERTY OWNER
INTERNAL PLUMBING	PROPERTY OWNER

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

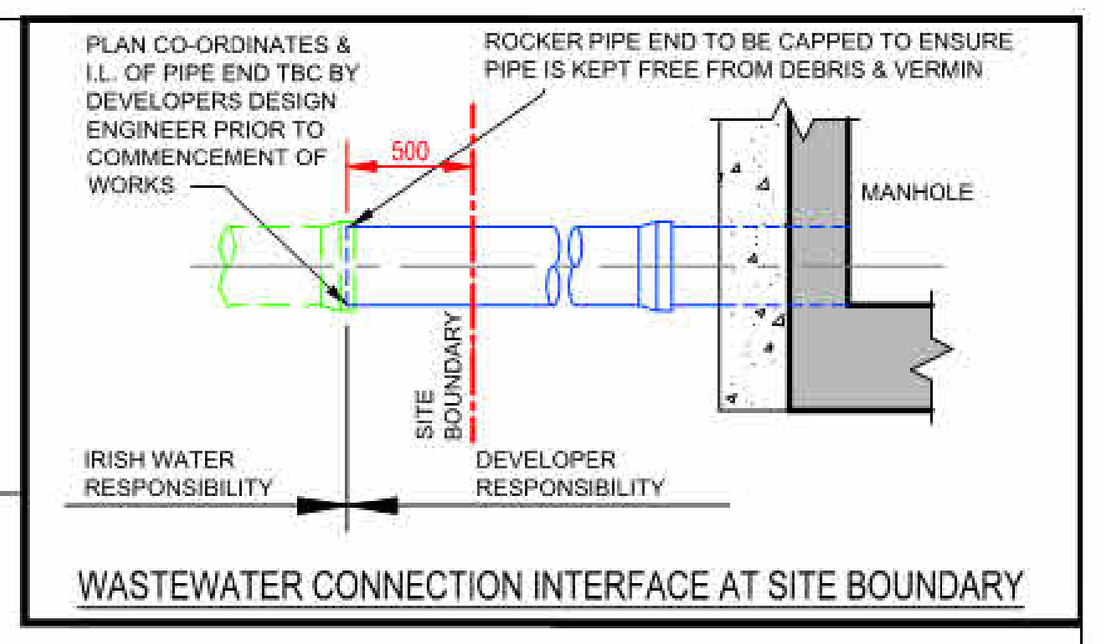
UISCE ÉIREANN : IRISH WATER — STANDARD DETAILS - WASTEWATER — SCALE: NOT TO SCALE — DATE: SEPT. 2015

TITLE: WASTEWATER SERVICE CONNECTION MAINTENANCE RESPONSIBILITY — DRAWING No. STD-WW-01 — REV 2

No.	Date	Drn	Chk	Description	App
2	07/20	RH	TOC	B-C ownership revised	MOD
1	11/17	JMC	TOC	Note reference added	MOD
0	09/15	JMC	TOC	Initial Issue	SL

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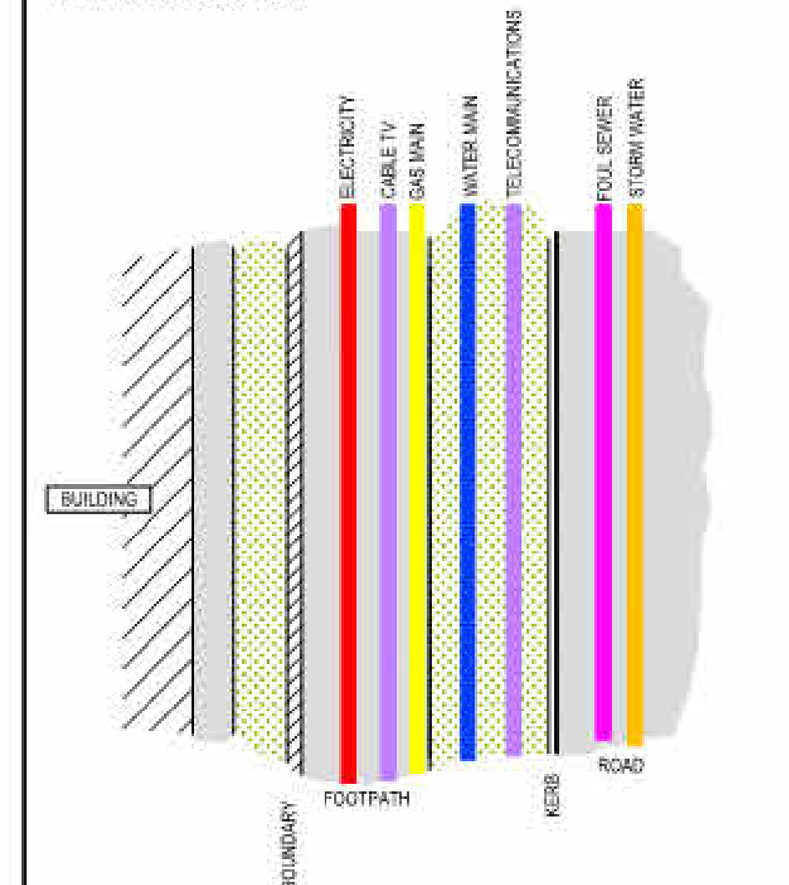
1. THE MINIMUM SIZE FOR A GRAVITY FOUL SERVICE CONNECTION SHALL BE 100mm DIAMETER
2. THE MINIMUM SIZE OF GRAVITY FOUL SEWER SHALL BE 225mm DIAMETER IN GENERAL. GRAVITY SEWERS ON BRANCHES SERVING 20 OR LESS PROPERTIES TO BE 150mm DIAMETER SUBJECT TO AGREEMENT WITH IRISH WATER.
3. THE MINIMUM SIZE FOR RISING MAINS SHALL NOT BE LESS THAN 80mm & THE DESIRED MINIMUM SIZE OF RISING MAIN SHALL BE 100mm DIAMETER.
4. EACH PROPERTY SHALL HAVE A SEPARATE WASTE WATER SERVICE CONNECTION. A CONNECTION SHALL NOT BE TAKEN FROM AN EXISTING SERVICE CONNECTION.
5. FOR SITES WITH HIGH DENSITY DEVELOPMENTS, EARLY ENGAGEMENT IS REQUIRED IN RELATION TO AGREEING A CO-ORDINATED UTILITY SERVICES LAYOUT PLAN TO ENSURE THAT THE REQUIRED SEPARATION DISTANCES ARE ACHIEVED BETWEEN THE VARIOUS SERVICES.



WASTEWATER CONNECTION INTERFACE AT SITE BOUNDARY



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.



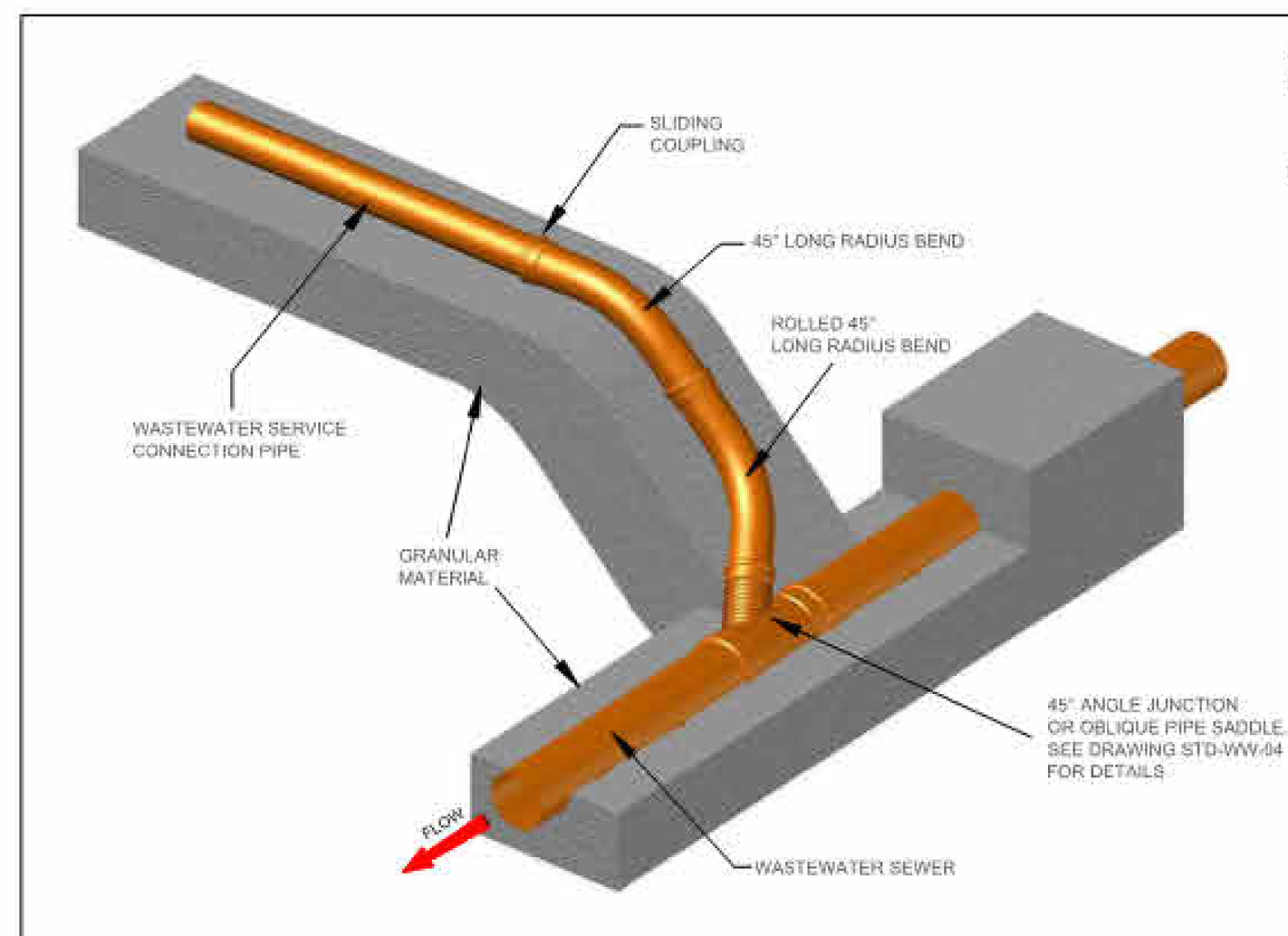
TYPICAL LAYOUT OF SERVICES IN FOOTPATH / ROAD WHERE SUCH AREAS ARE AVAILABLE

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

UISCE ÉIREANN : IRISH WATER — STANDARD DETAILS - WASTEWATER — SCALE: NOT TO SCALE — DATE: SEPT. 2015

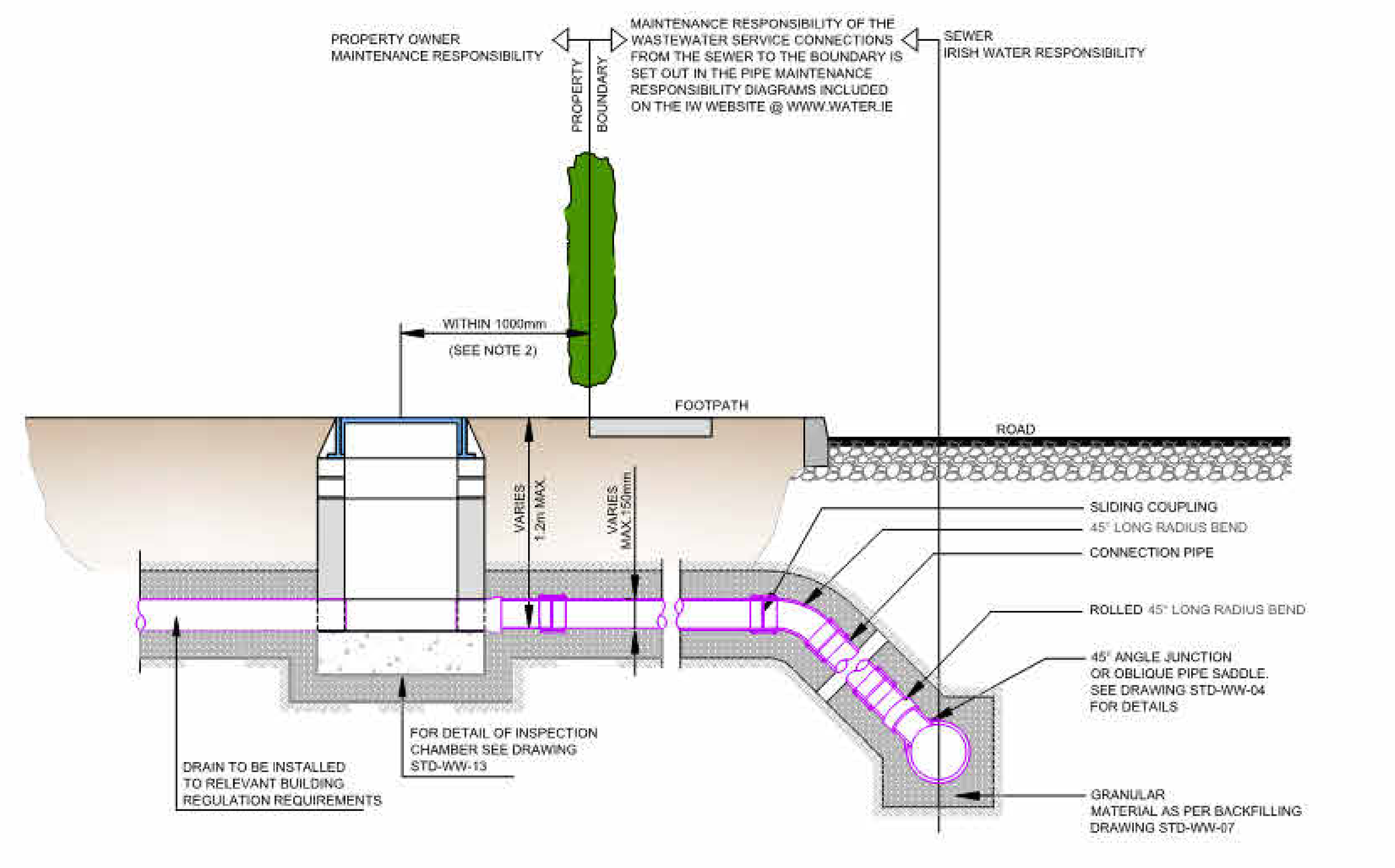
TITLE: TYPICAL LAYOUT FOR SEWER WITHIN NEW DEVELOPMENTS — DRAWING No. STD-WW-02 — REV 2

No.	Date	Drn	Chk	Description	App
2	07/20	RH	TOC	Connection Interface Detail added Dead end future connection shown Notes Updated	MOD
1	11/17	JMC	TOC	Updated Note 2	MOD
0	09/15	JMC	TOC	Initial Issue	SL



3D VIEW SHOWING SERVICE CONNECTION PIPEWORK

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. AN INSPECTION CHAMBER SHOULD BE LOCATED AT OR WITHIN 1m OF THE PROPERTY BOUNDARY AT THE UPSTREAM END OF EACH SERVICE CONNECTION ON THE PRIVATE SIDE OF THE CURTILAGE, IF PRACTICABLE. CONSULT WITH IRISH WATER ON ALTERNATIVE LOCATIONS.
3. ANY PIPE AND ASSOCIATED ACCESS UPSTREAM OF THE POINT OF CONNECTION TO A PUBLIC SEWER WITHIN THE CONFINES OF A PRIVATE BOUNDARY IS A PRIVATE DRAIN AND SHOULD BE CONSTRUCTED IN ACCORDANCE WITH BUILDING REGULATIONS.



SECTION SHOWING DRAIN AND SERVICE CONNECTION PIPEWORK

PIPE SIZE (mm)	GRADIENT
100	1:40 - 1:80

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

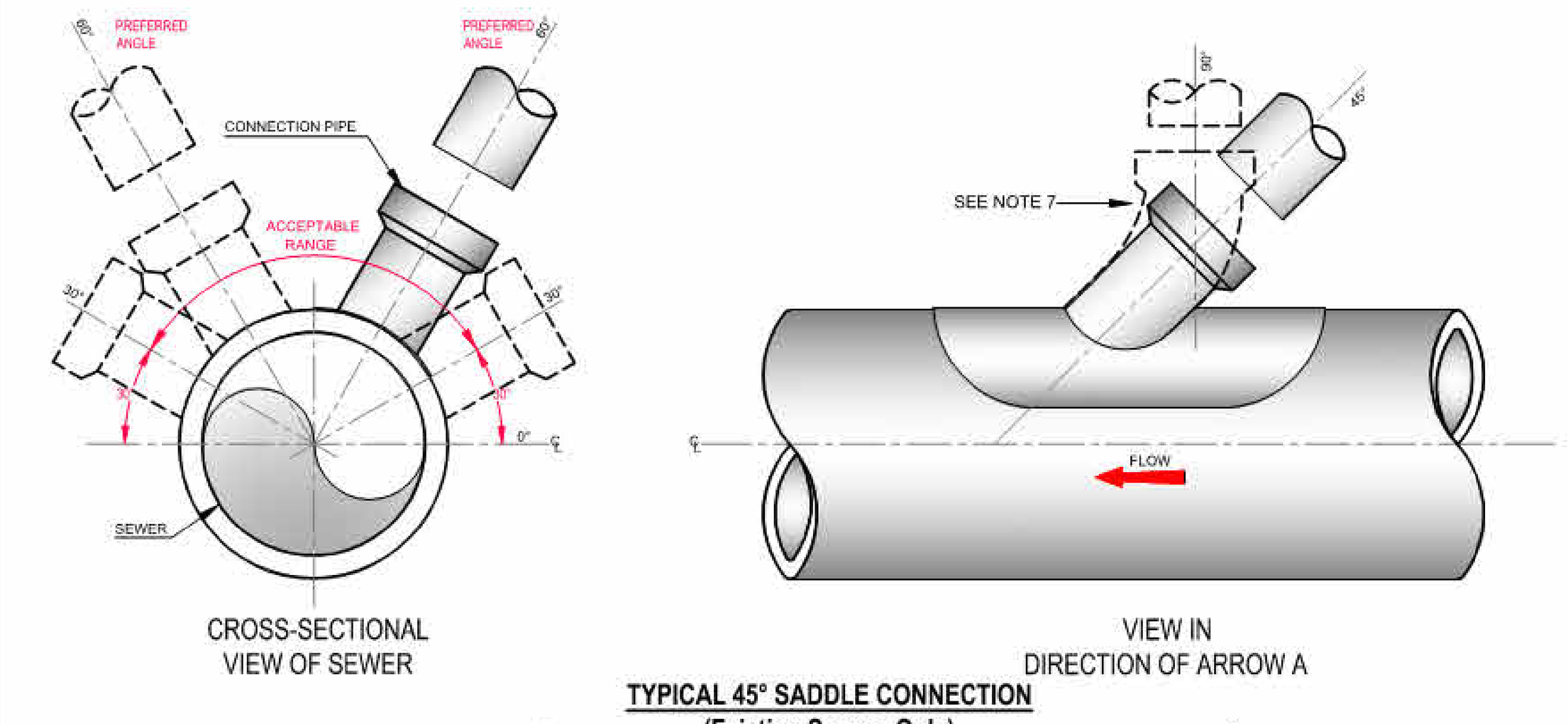
UISCE ÉIREANN : IRISH WATER — STANDARD DETAILS - WASTEWATER — SCALE: NOT TO SCALE — DATE: SEPT. 2015

TITLE: DRAIN AND SERVICE CONNECTION PIPEWORK — DRAWING No. STD-WW-03 — REV 2

No.	Date	Drn	Chk	Description	App
2	07/20	RH	TOC	Service connection responsibility revised Concrete surround at saddle removed 3D view added	MOD
1	11/15	JMC	TOC	Updated Notes	MOD
0	09/15	JMC	TOC	Initial Issue	SL

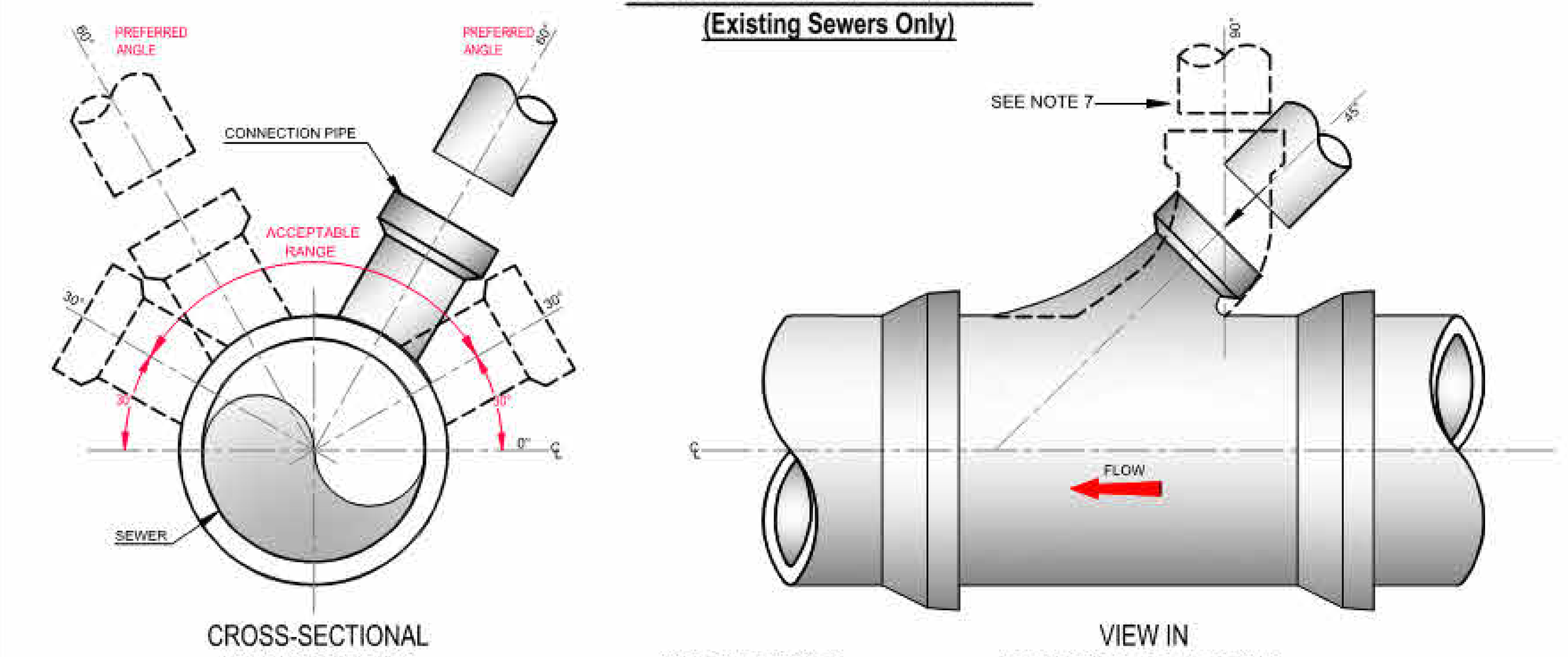
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1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. AS FAR AS PRACTICABLE, JUNCTIONS AND SERVICE CONNECTIONS SHALL BE BUILT IN FOR ALL PLANNED USERS WHEN THE SEWER IS BEING CONSTRUCTED. WHERE IT IS NECESSARY TO MAKE A POST-CONSTRUCTION CONNECTION THE DEVELOPER SHALL BRING THE SERVICE CONNECTION TO THE INSPECTION CHAMBER, INSTALL THE INSPECTION CHAMBER AND SEAL THE UPSTREAM END UNTIL THE CONNECTION IS REQUIRED.
3. THE VERTICAL ANGLE BETWEEN THE SERVICE CONNECTING PIPE AND THE HORIZONTAL SHALL BE WITHIN THE ACCEPTABLE RANGE OF 30° to 90°.
4. WHERE THE SERVICE PIPE CONNECTION WITHIN THE FOOTPRINT OF THE SELF LAY AGREEMENT IS BEING MADE TO A SEWER WITH A NOMINAL INTERNAL DIAMETER OF 300mm DIAMETER OR LESS, CONNECTIONS SHALL BE MADE USING 45° ANGLE JUNCTIONS.
5. WHERE THE CONNECTION IS BEING MADE TO A SEWER WITH A NOMINAL INTERNAL DIAMETER GREATER THAN 300mm, THE FOLLOWING SHALL APPLY :
   A. WHERE THE DIAMETER OF THE CONNECTING PIPE IS GREATER THAN HALF THE DIAMETER OF THE SEWER, AN ACCESS MANHOLE SHALL BE CONSTRUCTED TO FORM THE CONNECTION POINT; OR,
   B. WHERE THE DIAMETER OF THE CONNECTION PIPE IS LESS THAN OR EQUAL TO HALF THE DIAMETER OF THE SEWER, THEN THE CONNECTION SHALL BE MADE USING A PREFORMED Y-BRANCH FITTING WITH A 45 DEG. SLOW BEND TO FORM THE CONNECTION TO THE WORKS.
6. CONNECTION USING SADDLES MAY ONLY BE USED IN EXCEPTIONAL CIRCUMSTANCES AND ONLY TO WHERE THE CONNECTION IS TO AN EXISTING SEWER. CONNECTIONS MADE WITH SADDLE FITTINGS SHALL BE MADE BY CUTTING AND SAFELY REMOVING A CORE FROM THE PIPE AND JOINTING THE SADDLE FITTING TO THE PIPE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS TO ENSURE A WATERTIGHT JOINT. THE CONNECTING PIPE SHALL NOT PROTRUDE INTO THE SEWERS
7. THE USE OF 90° "Y"-BRANCH OR SADDLE CONNECTIONS TO THE SEWER MAY BE ALLOWED, PROVIDED THE SADDLE OR BRANCH INCORPORATES A SWEPT TEE CONNECTION TOWARDS THE DIRECTION OF FLOW OF THE SEWER.



CROSS-SECTIONAL VIEW OF SEWER — VIEW IN DIRECTION OF ARROW A

TYPICAL 45° SADDLE CONNECTION (Existing Sewers Only)



CROSS-SECTIONAL VIEW OF SEWER — **45° "Y" BRANCH** — VIEW IN DIRECTION OF ARROW A

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

UISCE ÉIREANN : IRISH WATER — STANDARD DETAILS - WASTEWATER — SCALE: NOT TO SCALE — DATE: SEPT. 2015

TITLE: TYPICAL SEWER / SERVICE PIPE CONNECTION — DRAWING No. STD-WW-04 — REV 2

No.	Date	Drn	Chk	Description	App
2	07/20	RH	TOC	Updated connection detail & notes	MOD
1	11/17	JMC	TOC	Updated connection detail & notes	MOD
0	09/15	JMC	TOC	Initial Issue	SL

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1. SEPARATION DISTANCES BETWEEN SEWERS ASSOCIATED WITH THE WORKS FROM OTHER UTILITY PIPES AND ACCESSORIES SHALL BE IN ACCORDANCE WITH SECTION 3.5.9 TO 3.5.21 OF THE CODE OF PRACTICE. SEPARATION DISTANCES FOR ALL NEW INSTALLATIONS FROM EXISTING IRISH WATER PIPES SHALL BE AS OUTLINED IN SECTION 3.20 OF THE CODE OF PRACTICE.
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. 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 AN EXISTING PIPE LESS THAN 200mm IN DIAMETER.
   2m AT EITHER SIDE OF AN EXISTING PIPE OF 200mm TO 350mm IN DIAMETER.
   5m AT EITHER SIDE OF AN EXISTING PIPE OF 350mm OR GREATER IN DIAMETER.

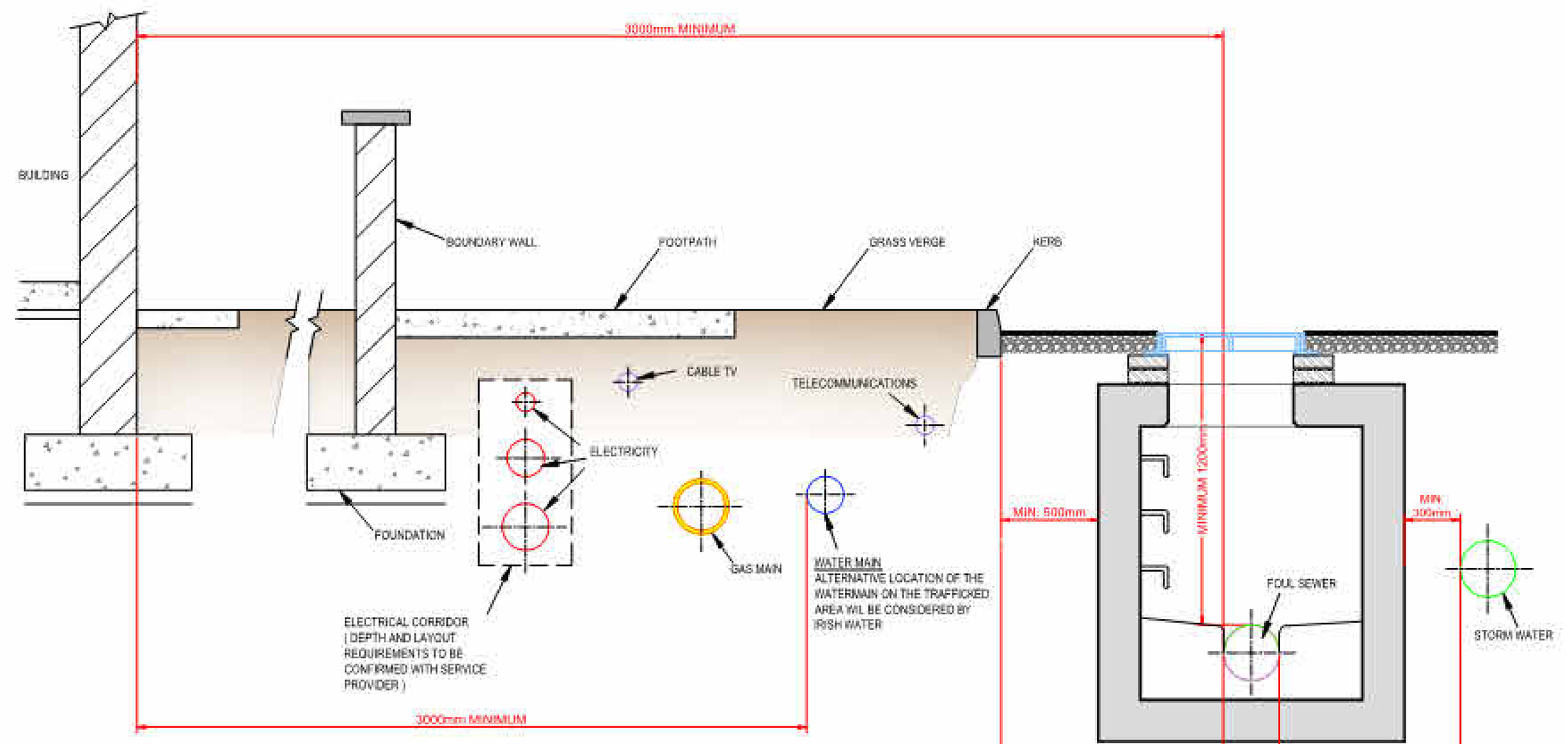
   WHERE DUCTS OR PIPES ARE TO BE LAID CLOSE TO AN EXISTING WATERMAIN OR SEWER IN THE OWNERSHIP OF IRISH WATER. NOTIFICATION IN WRITING SHALL BE PROVIDED A MINIMUM OF 10 DAYS AHEAD OF ADVANCEMENT OF THE WORK. THIS ALSO APPLIES WHERE THE DEPTH OF THE IRISH WATER WATERMAIN OR SEWER EXCEEDS 1.5m. IN ALL OF 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 >350mm 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.).
4. 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.
5. ANY DAMAGE SHALL BE NOTIFIED IMMEDIATELY TO IRISH WATER. THE PERSON WHO CAUSES THE DAMAGE TO A SEWER MAIN OR FITTING WILL BE DEEMED TO HAVE COMMITTED AN OFFENCE UNDER SECTION 45 OF THE WATER SERVICES ACT 2007.
6. UNDER NO CIRCUMSTANCES WILL IRISH WATER ACCEPT SEWER 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.
7. THE MINIMUM CLEAR HORIZONTAL DISTANCES SHOWN BELOW WILL BE INCREASED IF THE DEPTH OF THE SEWER EXCEEDS 3M OR IF THE DIAMETER IS GREATER THAN 375mm. THE MINIMUM CLEAR DISTANCES FOR PIPE DIAMETERS OF 450mm AND GREATER OR FOR DEPTHS EXCEEDING 4.0m SHALL BE BASED ON SPECIFIC CONSULTATION WITH IRISH WATER. THESE SEPARATION DISTANCES SHALL ALSO APPLY TO SEPARATION FROM EXISTING STRUCTURES, INCLUDING ATTENUATION TANKS AND SWALES.
8. THE EXTERNAL FACES OF MANHOLES SHALL BE AT LEAST 0.5m FROM THE EXTERNAL FACE OF THE KERB LINE.
9. THE EXTERNAL WALL OF THE SEWER IS TO BE AT LEAST 1.0m FROM THE EXTERNAL FACE OF THE KERB LINE.
10. WHERE DESIGN DEVIATES FROM TYPICAL DETAILS, THE LAYOUT SHALL BE SUBMITTED TO IRISH WATER FOR REVIEW AND AGREEMENT, WHICH IS TO BE OBTAINED IN WRITING BEFORE WORK COMMENCES.

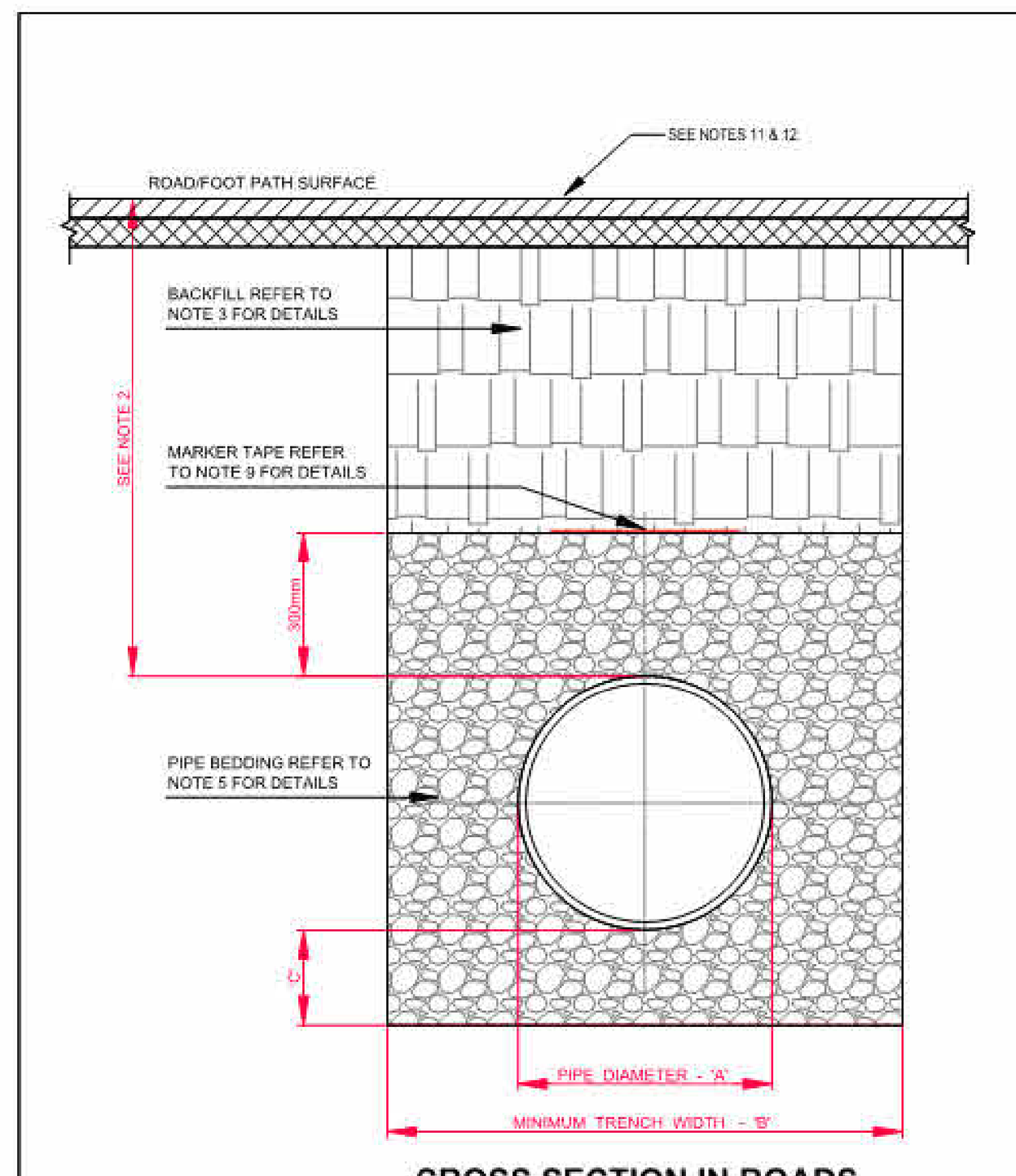


REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

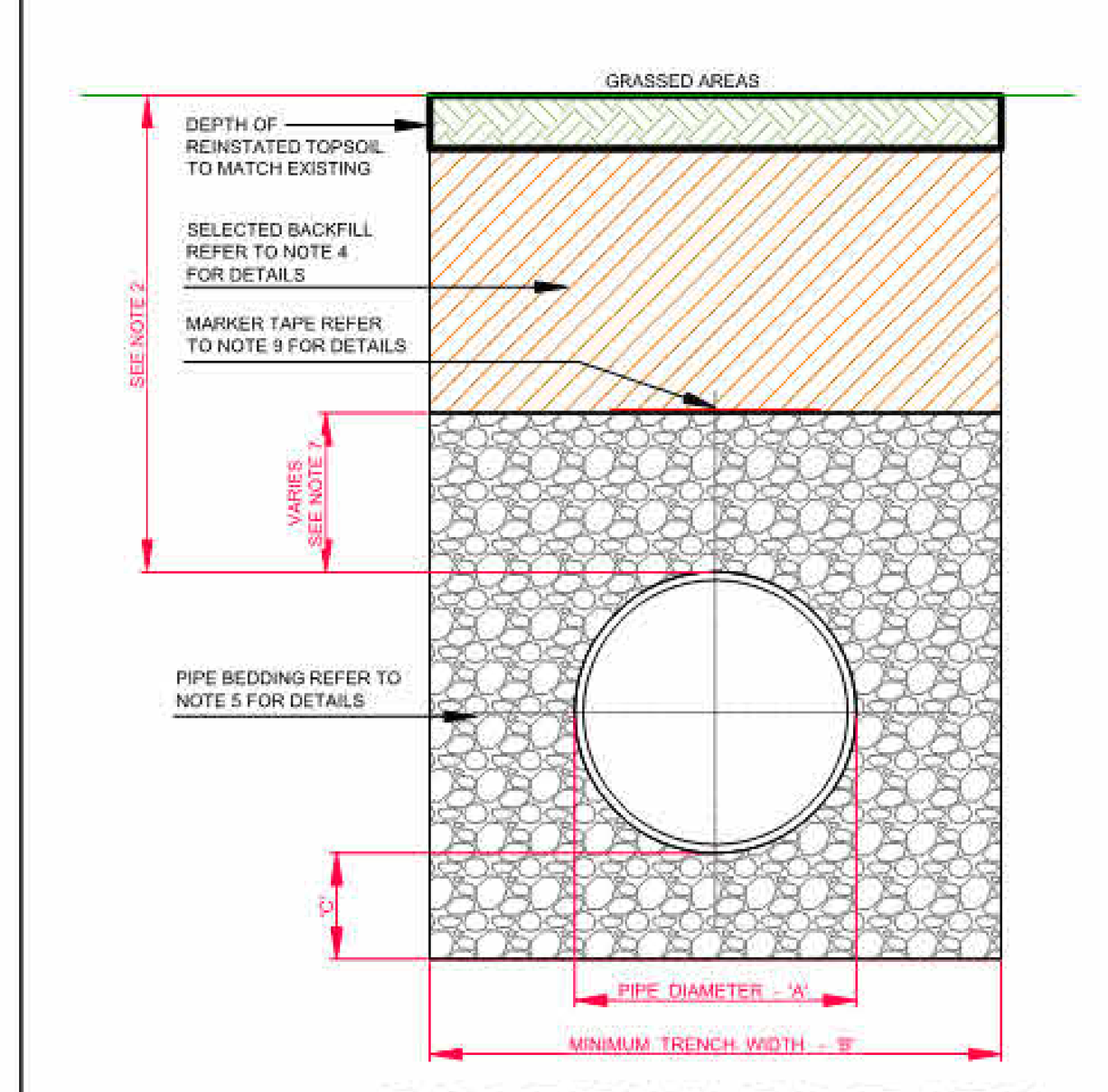
UISCE ÉIREANN : IRISH WATER — STANDARD DETAILS - WASTEWATER — SCALE: NOT TO SCALE — DATE: SEPT. 2015

TITLE: TYPICAL SERVICE LAYOUT INDICATING SEPARATION DISTANCES — DRAWING No. STD-WW-05 — REV 2

No.	Date	Drn	Chk	Description	App
2	07/20	RH	TOC	Separation distances to sewers added, updated notes	MOD
1	11/17	JMC	TOC	Updated notes	MOD
0	09/15	JMC	TOC	Initial Issue	SL



CROSS SECTION IN ROADS



CROSS SECTION IN GRASSED AREAS

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. THE MINIMUM DEPTH OF COVER FROM THE FINISHED SURFACE TO THE CROWN OF GRAVITY PIPES **WITHOUT PROTECTION** SHOULD BE AS FOLLOWS:
   A) GARDENS AND PATHWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS - DEPTH NOT LESS THAN 0.5 M. (THIS WOULD NORMALLY RELATE TO DRAINS IN PRIVATE PROPERTY, SHALLOW PIPES OF THIS NATURE ARE UNDESIRABLE AND SHOULD BE INSTALLED IN ACCORDANCE WITH THE CURRENT BUILDING REGULATIONS).
   B) DRIVEWAYS, FOOTWAYS, PARKING AREAS AND YARDS WITH HEIGHT RESTRICTIONS TO PREVENT ENTRY BY VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.75 M.
   C) DRIVEWAYS, FOOTWAYS, PARKING AREAS AND NARROW STREETS WITHOUT FOOTWAYS (E.G. MEWS DEVELOPMENTS) WITH LIMITED ACCESS FOR VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.9 M.
   D) DEPTHS OF SEWERS IN GATED ESTATES SHALL BE SIMILAR TO THAT OUTLINED ABOVE.
   E) AGRICULTURAL LAND AND PUBLIC OPEN SPACE - DEPTH NOT LESS THAN 0.9 M.
   F) OTHER ROADWAYS, HIGHWAYS AND PARKING AREAS WITH UNRESTRICTED ACCESS TO VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 1.2m.
3. CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE SEWER 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 TRANSPORT INFRASTRUCTURE IRELAND 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 EVIDENCE OF THIS WRITTEN APPROVAL TO BE PROVIDED TO IRISH WATER IN ADVANCE OF THE COMMENCEMENT OF WORKS.
4. SELECTED EXCAVATED MATERIAL COMPLYING WITH THE REQUIREMENTS OF "ACCEPTABLE MATERIAL" AS OUTLINED ON CLAUSE 601 OF THE TII SPECIFICATION FOR ROADWORKS, TABLE 6/1,CLASS 8,CLASS 2. 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. THE PIPE BEDDING GRANULAR MATERIAL SHALL BE 14mm TO 5mm (14/5) GRADED AGGREGATE OR 10mm (10/5) SINGLE SIZED AGGREGATE TO IS EN 13242. CONCRETE BED, HAUNCH, & SURROUND, WHERE REQUIRED, SHALL BE TO STD-WW-08.
6. IN SOFT GROUND CONDITIONS (CBR < 5) THE MATERIAL SHOULD BE EXCAVATED AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS SHALL REPLACE THE EXCAVATED MATERIAL, WRAPPED IN GEO-TEXTILE WRAPPING. ALTERNATIVELY, SPECIAL PIPE SUPPORT ARRANGEMENTS, INCLUDING PILING ETC. MAY BE REQUIRED WHERE THE DEPTH OF SOFT MATERIAL IS EXCESSIVE. SUCH ARRANGEMENTS SHALL BE SUBJECT TO ASSESSMENT BY IRISH WATER BEFORE ADVANCING WITH THE WORK.
7. IN GREEN FIELD AREAS, TYPE B BACKFILL (SELECTED EXCAVATED MATERIAL COMPLYING WITH THE REQUIREMENTS OF "ACCEPTABLE MATERIAL" AS OUTLINED ON CLAUSE 601 OF THE TII SPECIFICATION FOR ROADWORKS, TABLE 6/1,CLASS 8,CLASS 2.) WILL BE ALLOWED ABOVE THE SIDE HAUNCH GRANULAR MATERIAL IN THE CASE OF RIGID PIPES. A GRANULAR SURROUND OF A MINIMUM DEPTH OF 150mm ABOVE THE CROWN OF THE PIPE IS REQUIRED FOR FLEXIBLE PIPES AND TYPE B MATERIAL MAY BE USED AS BACKFILL ABOVE THIS. ALL RISING MAINS IN GREENFIELD AREAS SHALL HAVE A MINIMUM COVER OF 300mm OF GRANULAR MATERIAL ABOVE THE EXTERNAL CROWN OF THE PIPE.
8. PIPES SHALL NOT BE SUPPORTED ON STONES, ROCKS OR ANY HARD OBJECTS AT ANY POINT ALONG THE TRENCH. ROCK SHALL BE EXCAVATED TO A DEPTH OF 150mm BELOW THE ACTUAL DEPTH OF THE TRENCH WITH THE VOID FILLED WITH CLAUSE 804 / 808 MATERIAL IN ACCORDANCE WITH THE TRANSPORT INFRASTRUCTURE IRELAND SPECIFICATION FOR ROAD WORKS. THE GRANULAR MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL MATERIAL.
9. NON DEGRADABLE MARKER TAPE SHOULD BE INSTALLED AT THE TOP OF PIPE BEDDING LAYER FOR SEWERS AND RISING MAINS. IT SHOULD RUN CONTINUOUSLY AROUND MANHOLES. IN THE CASE OF NON METAL PIPE MATERIAL, THE MARKER TAPE SHOULD INCORPORATE A TRACE WIRE WHICH IS LINKED TO FITTINGS AND TERMINATED AT THE WASTE WATER PUMPING STATION (IF PROVIDED) AND THE DISCHARGE MANHOLE.
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.

PIPE DIAMETER 'A' (mm)	TRENCH WIDTH 'B' (mm)
≤ 80 RISING MAIN	SEE NOTE 10.
100	500
150 - 200	600
>200 - 350	750
>350 - 450	900

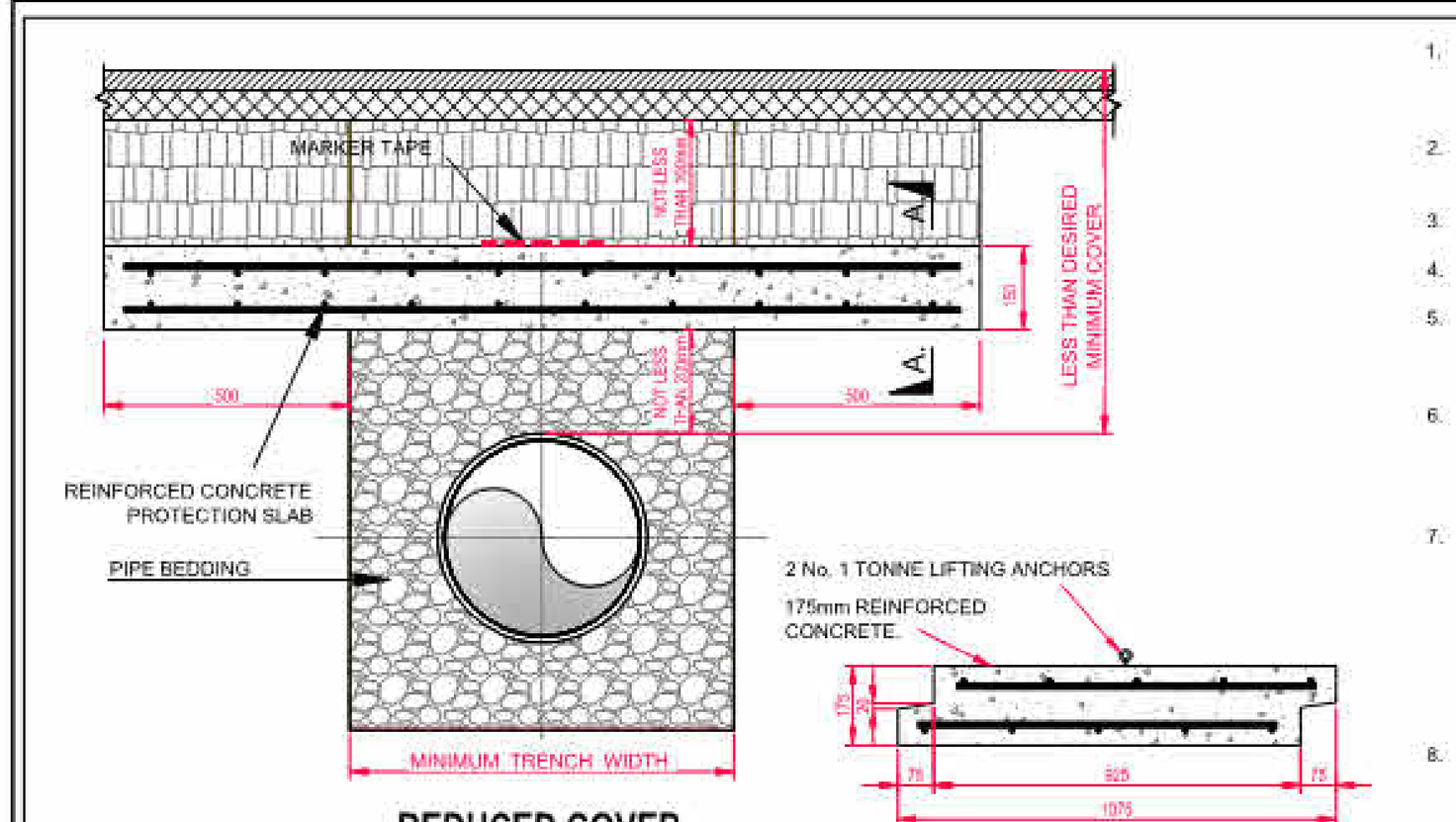
PIPE DIAMETER 'A' (mm)	DEPTH OF BEDDING 'C' (mm)
≤100	100
150 - 450	200

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

UISCE ÉIREANN : IRISH WATER — STANDARD DETAILS - WASTEWATER — SCALE: NOT TO SCALE — DATE: SEPT. 2015

TITLE: TRENCH BACKFILL AND BEDDING — DRAWING No. STD-WW-07 — REV 2

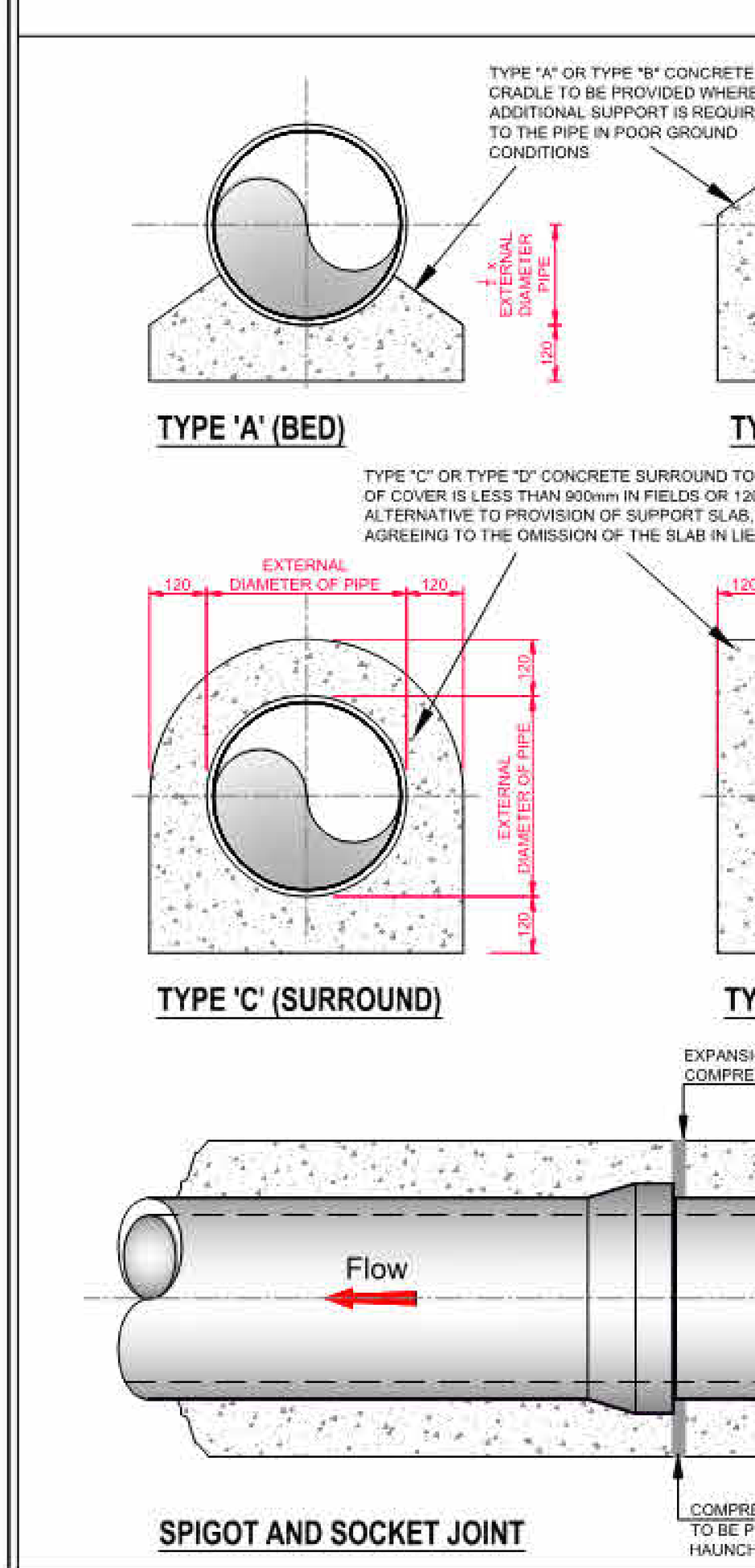
No.	Date	Drn	Chk	Description	App
2	07/20	RH	TOC	Modified trench width table Minor edit to note 5 Note 9 revised re marker tape	MOD
1	11/17	JMC	TOC	Updated & Added Notes	MOD
0	09/15	JMC	TOC	Initial Issue	SL



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

1. FOR ANY SLABBING WORKS TO BE CARRIED OUT WITHIN THE VICINITY OF THE PIPELINE, A METHOD STATEMENT IS TO BE SUBMITTED FOR REVIEW BY IRISH WATER.
2. MARKER TAPE TO BE PLACED ABOVE THE SLAB AND ALONG THE DIRECTION OF THE PIPELINE
3. CONCRETE TO BE GRADE C30/35
4. MINIMUM COVER TO STEEL REINFORCEMENT =40mm
5. 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.
6. 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
7. 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.

   DIRECTION OF TRAFFIC FLOW / DIRECTION OF LAY
8. 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.



9. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
10. CONCRETE BED AND HAUNCHES MAY BE REQUIRED TO PROVIDE ADDITIONAL SUPPORT IN POOR GROUND CONDITIONS. PROPOSALS TO BE PROVIDED TO IRISH WATER WITH GEOTECHNICAL REPORT SUPPORTING THEIR USE.
11. CONCRETE SURROUNDS SHALL HAVE A MINIMUM THICKNESS OF 150mm WITH AN ABSOLUTE MINIMUM DEPTH OF COVER ABOVE THE EXTERNAL CROWN OF THE PIPE OF 750mm.
12. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206 AND TO BE GRADE C16/20 TO IS EN206
13. THE HAUNCHES AND SURROUNDS TO BE FORMED USING FORM WORK TO PROVIDE A ROUGH CAST FINISH.
14. EXPANSION JOINTS IN THE CONCRETE SHALL BE PROVIDED AT ALL PIPE JOINTS TO ALLOW FOR PIPE FLEXIBILITY. COMPRESSIBLE FILLER BOARD TO BE IN ACCORDANCE WITH BS EN 622-1 AND BS EN 622-4, AND TO BE 18mm THICK.
15. POLYETHYLENE AND uPVC PIPES SHALL BE WRAPPED IN PLASTIC SHEETING HAVING A COMPOSITION IN ACCORDANCE WITH BS 6076 BEFORE BEING CAST INTO CONCRETE.
16. BITUMINOUS MATERIAL SHALL NOT BE PUT IN CONTACT WITH PE OR PVC PIPES.

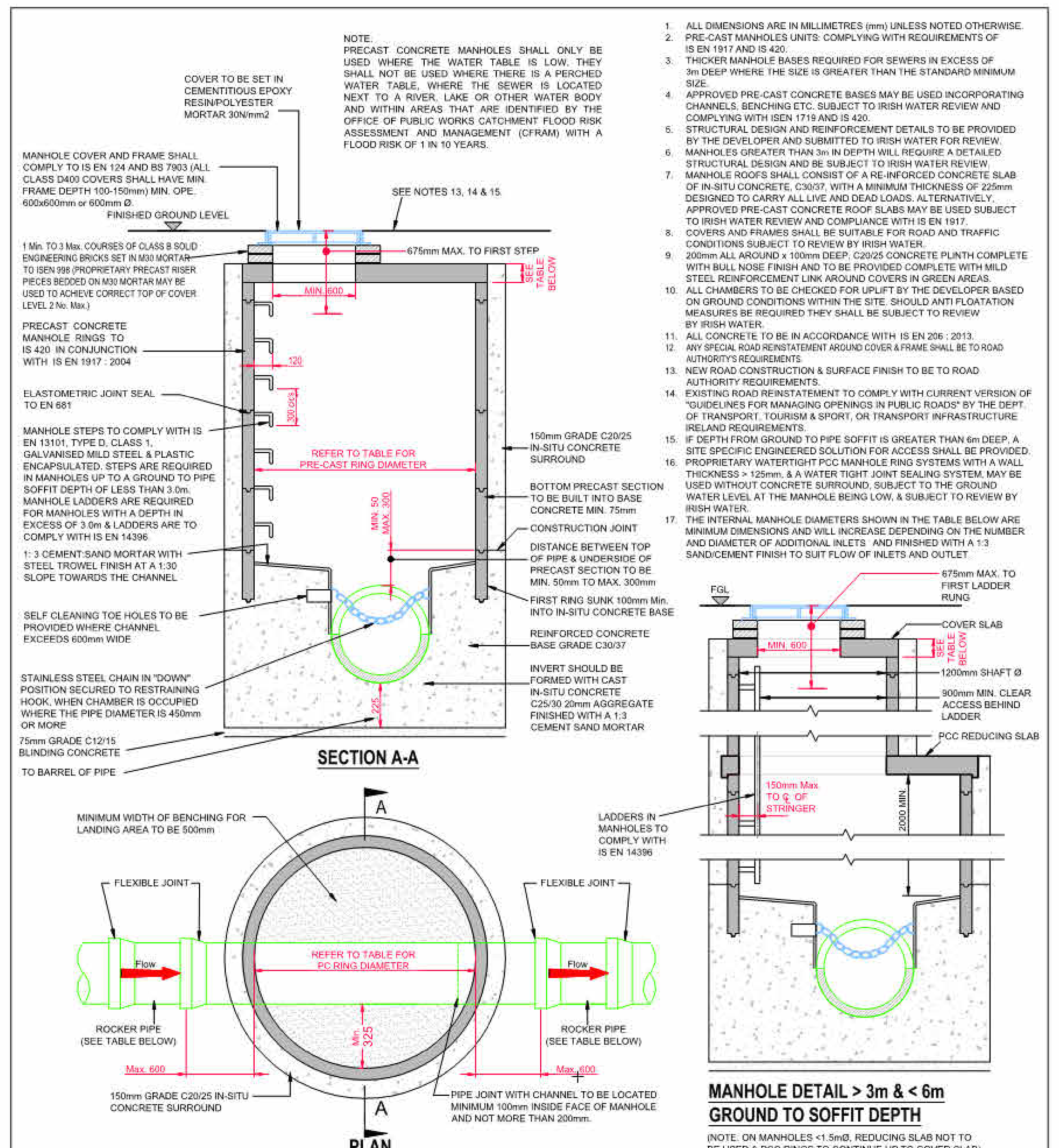
REFER TO INDEX SHEET FOR NOTES REGARDING DESIGN RESPONSIBILITY & RISK ASSESSMENT

UISCE ÉIREANN : IRISH WATER — STANDARD DETAILS - WASTEWATER — SCALE: NOT TO SCALE — DATE: SEPT. 2015

TITLE: CONCRETE PROTECTION SLAB, BED, HAUNCH, AND SURROUND, TO WASTEWATER PIPES — DRAWING No. STD-WW-08 — REV 1

No.	Date	Drn	Chk	Description	App
1	07/20	RH	TOC	Protection slab detail added and notes updated. title updated.	MOD
0	09/15	JMC	TOC	Initial Issue	SL

NOTE.
PRECAST CONCRETE MANHOLES SHALL ONLY BE USED WHERE THE WATER TABLE IS LOW. THEY SHALL NOT BE USED WHERE THERE IS A PERCHED WATER TABLE, WHERE THE SEWER IS LOCATED NEXT TO A RIVER, LAKE OR OTHER WATER BODY AND WITHIN AREAS THAT ARE IDENTIFIED BY THE OFFICE OF PUBLIC WORKS CATCHMENT FLOOD RISK ASSESSMENT AND MANAGEMENT (CFRAM) WITH A FLOOD RISK OF 1 IN 10 YEARS.



MANHOLE DETAIL > 3m & < 6m GROUND TO SOFFIT DEPTH

(NOTE: ON MANHOLES <1.5mØ, REDUCING SLAB NOT TO BE USED & PCC RINGS TO CONTINUE UP TO COVER SLAB)

1. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. PRE-CAST MANHOLES UNITS: COMPLYING WITH REQUIREMENTS OF IS EN 1917 AND IS 420.
3. THICKER MANHOLE BASES REQUIRED FOR SEWERS IN EXCESS OF 3m DEEP WHERE THE SIZE IS GREATER THAN THE STANDARD MINIMUM SIZE.
4. APPROVED PRE-CAST CONCRETE BASES MAY BE USED INCORPORATING CHANNELS, BENCHING ETC. SUBJECT TO IRISH WATER REVIEW AND COMPLYING WITH ISEN 1719 AND IS 420.
5. STRUCTURAL DESIGN AND REINFORCEMENT DETAILS TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
6. MANHOLES GREATER THAN 3m IN DEPTH WILL REQUIRE A DETAILED STRUCTURAL DESIGN AND BE SUBJECT TO IRISH WATER REVIEW.
7. MANHOLE ROOFS SHALL CONSIST OF A RE-INFORCED CONCRETE SLAB OF IN-SITU CONCRETE, C30/37, WITH A MINIMUM THICKNESS OF 225mm DESIGNED TO CARRY ALL LIVE AND DEAD LOADS. ALTERNATIVELY, APPROVED PRE-CAST CONCRETE ROOF SLABS MAY BE USED SUBJECT TO IRISH WATER REVIEW AND COMPLIANCE WITH IS EN 1917.
8. COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO REVIEW BY IRISH WATER.
9. 200mm ALL AROUND x 100mm DEEP, C20/25 CONCRETE PLINTH COMPLETE WITH BULL NOSE FINISH AND TO BE PROVIDED COMPLETE WITH MILD STEEL REINFORCEMENT LINK AROUND COVERS IN GREEN AREAS.
10. 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.
11. ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206 : 2013.
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. IF DEPTH FROM GROUND TO PIPE SOFFIT IS GREATER THAN 6m DEEP, A SITE SPECIFIC ENGINEERED SOLUTION FOR ACCESS SHALL BE PROVIDED.
16. PROPRIETARY WATERTIGHT PCC MANHOLE RING SYSTEMS WITH A WALL THICKNESS > 125mm, & A WATER TIGHT JOINT SEALING SYSTEM, MAY BE USED WITHOUT CONCRETE SURROUND, SUBJECT TO THE GROUND WATER LEVEL AT THE MANHOLE BEING LOW, & SUBJECT TO REVIEW BY IRISH WATER.
17. THE INTERNAL MANHOLE DIAMETERS SHOWN IN THE TABLE BELOW ARE MINIMUM DIMENSIONS AND WILL INCREASE DEPENDING ON THE NUMBER AND DIAMETER OF ADDITIONAL INLETS AND FINISHED WITH A 1:3 SAND/CEMENT FINISH TO SUIT FLOW OF INLETS AND OUTLET

MINIMUM MANHOLE DIAMETERS

DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)	MIN. PRECAST ROOF SLAB EFFECTIVE THICKNESS (mm)	MIN. IN-SITU ROOF SLAB THICKNESS (mm)
LESS THAN 375	1200	160	225
375 TO 450	1350	160	225
500 TO 750 *	1500	170	225

ROCKER PIPE LENGTH

PIPE DIAMETER (mm)	ROCKER PIPE LENGTH (mm)
150 TO 600	600
GREATER THAN 600 TO 750 *	1000
GREATER THAN 750 *	1250

* SEWERS GREATER THAN 450mm Ø ARE OUTSIDE THE SCOPE OF THE STANDARD DETAILS. MANHOLE SIZE OF THESE CHAMBERS MAY BE REQUIRED DUE TO MULTIPLE PIPES WITHIN MANHOLE.

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

UISCE ÉIREANN : IRISH WATER — STANDARD DETAILS - WASTEWATER — SCALE: NOT TO SCALE — DATE: SEPT. 2015

TITLE: PRE-CAST CONCRETE MANHOLE WITH CAST IN-SITU BASE — DRAWING No. STD-WW-10 — REV 3

No.	Date	Drn	Chk	Description	App
3	07/20	RH	TOC	Notes Updated	MOD
2	11/17	JMC	TOC	Added rocker pipe table, deep manhole detail, added & updated notes	MOD
1	08/16	JMC	TOC	Added steps & revised access ope & cover notes	MOD
0	09/15	JMC	TOC	Initial Issue	SL

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REV.	DRAWN	DATE	DETAILS
C	D.O'S.	27.04.'26	Issued For Planning

CLIENT: Dipharma Unlimited Company.

PROJECT: Development at Countess Road, Killarney, Co. Kerry

DRAWING TITLE: Proposed Wastewater Details (Sheet 1 of 2).

SHEET	SCALE	DRAWN	CHECKED	APPROVED	PROJECT NO. - DRAWING NO. - STATUS/ISSUE
A1	1 : 1	D.O'S.	S.O'G.	L.O'T.	7334 - 0025 - C