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FOUL DRAINAGE NOTE:

FOUL WATER DRAINAGE INSTALLATION INCLUDING INDIVIDUAL HOUSE CONNECTIONS TO BE DESIGNED AND INSTALLED TO COMPLY WITH IRISH WATER CODE OF PRACTICE AND IRISH WATER STANDARD DETAILS.

FOUL WATER SEWER TO BE 150mm Ø uPVC SN8

INDIVIDUAL FOUL WATER HOUSE CONNECTIONS TO BE 100mm Ø uPVC PIPE

HYDRAULIC DESIGN TO COMPLY WITH CLAUSE 3.6 OF IW-CDS-5030-03, AND IN PARTICULAR CL. 3.6.5 & 3.6.6

HYDROBRAKE VORTEX FLOW CONTROL WITH MAX OUTFLOW TO LOCAL AUTHORITY REQUIREMENTS

LEAN MIX CONCRETE PROTECTION SLABS TO BE PROVIDED TO SEWERS WITH COVER LESS THAN 1.2m UNDER ROADS.

STORM WATER DRAINAGE NOTE:

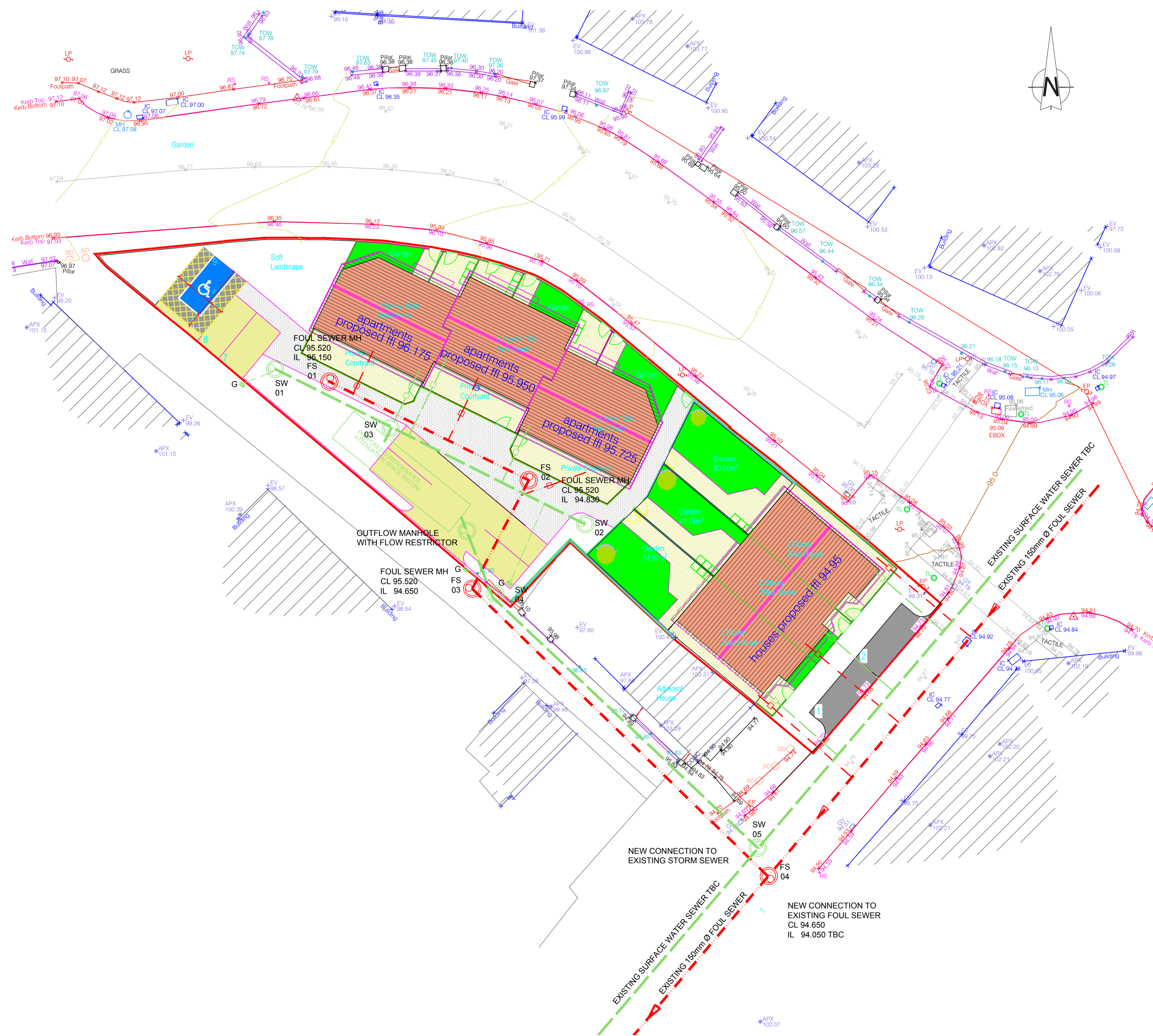
STORM WATER ATTENUATION TANK TO BE INSTALLED TO MANUFACTURERS GUIDELINES

INDIVIDUAL STORM WATER HOUSE CONNECTIONS TO BE 100mm Ø uPVC PIPE

STORM WATER GULLY CONNECTIONS TO BE 150mm Ø uPVC PIPE

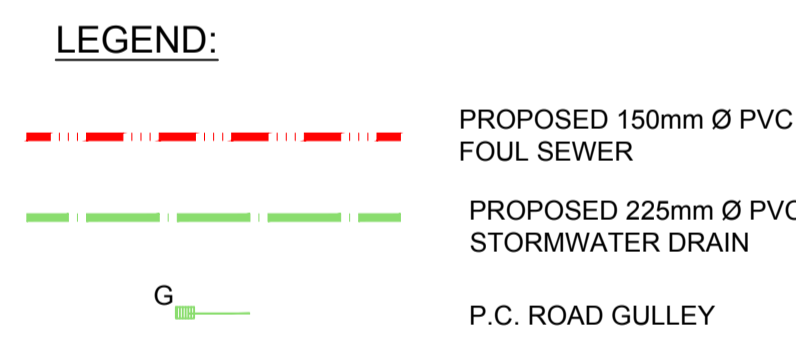
STORM WATER SEWER PIPE TO BE 225mm uPVC PIPE

ALL SEWER PIPES TO BE uPVC COMPLY WITH IS EN1401 2009/2012 "UD" STIFFNESS CLASS 8kN/m²



FOUL SEWER		
MANHOLE NUMBER	COVER LEVEL	INVERT LEVEL
FS 01	95.520	95.150
FS 02	95.520	94.830
FS 03	95.520	94.650
FS 04	94.650	94.050

TBC



SITE BOUNDARY OUTLINED IN RED

Rev :	Note :	Date :	Drawn :	Approved :
P1	ISSUED FOR PART 8 PLANNING APPLIC.	20 OCT. '21		DOS

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Project: TIPPERRARY COUNTY COUNCIL
 RESIDENTIAL DEVELOPMENT AT
 GROVE STREET, ROSCREA, CO. TIPPERRARY
 ARCHITECT: C.J.FALCONER & ASSOCIATES

Title: **PROPOSED DRAINAGE LAYOUT**

Purpose of Issue :	Scale :	
PART 8 PLANNING	1:200	
Project No. :	Drawing No. :	Issue No. :
21049	102	P1



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NOTE:

WATERMAIN INSTALLATIONS INCLUDING INDIVIDUAL HOUSE CONNECTIONS TO BE DESIGNED AND INSTALLED TO COMPLY WITH IRISH WATER CODE OF PRACTICE AND STANDARD DETAILS.

WATERMAIN TO BE LOCATED PRIMARILY UNDER ROADS, IN 150mm GRIT SURROUND WITH MINIMUM 1400mm COVER








PROVIDE CONCRETE ANCHOR BLOCKS TO ALL FITTINGS, INCLUDING BOTH SIDES OF SLUICE VALVES AND AT ALL BENDS

ALL FITTINGS TO BE MARKED WITH INDICATOR PLATES TO BS.3251

WATERMAIN TO BE 100mm Ø NOMINAL BORE HDPE PE80 SDR-11 WITH 25mm HDPE PE80 SDR-11 SERVICE CONNECTIONS TO EACH DWELLING WITH BOUNDARY BOX AS PER STD-W-03 OF IRISH WATER REQUIREMENTS

SERVICE PIPE DIAMETER INCREASED TO 32MM FOR HOUSE CONNECTIONS IN EXCESS OF 15METRES IN LENGTH

LEGEND

-  INDIVIDUAL UNIT SERVICE PIPES SHALL BE PE-80 SDR11 25MM O.D. WITH BOUNDARY BOX AS PER STD-W-03 TO IRISH WATER REQUIREMENTS CONNECTIONS IN EXCESS OF 15METRES TO BE 32MM O.D.
-  ALL WATERMAIN PIPES BLUE IN COLOUR SHALL BE MDPE (PE-80) SDR-11 RATING NOM. DIAMETER 110MM
-  FIRE HYDRANT TO EN 14339 WITH OUTLET COMPLYING WITH BS 750 AND TO IRISH WATER REQUIREMENTS (OUTLET NOT MORE THAN 300mm BELOW COVER LEVEL)
-  WASH OUT HYDRANT
-  AIR VALVE
-  SLUICE VALVE
-  THRUST BLOCK

SITE BOUNDARY OUTLINED IN RED

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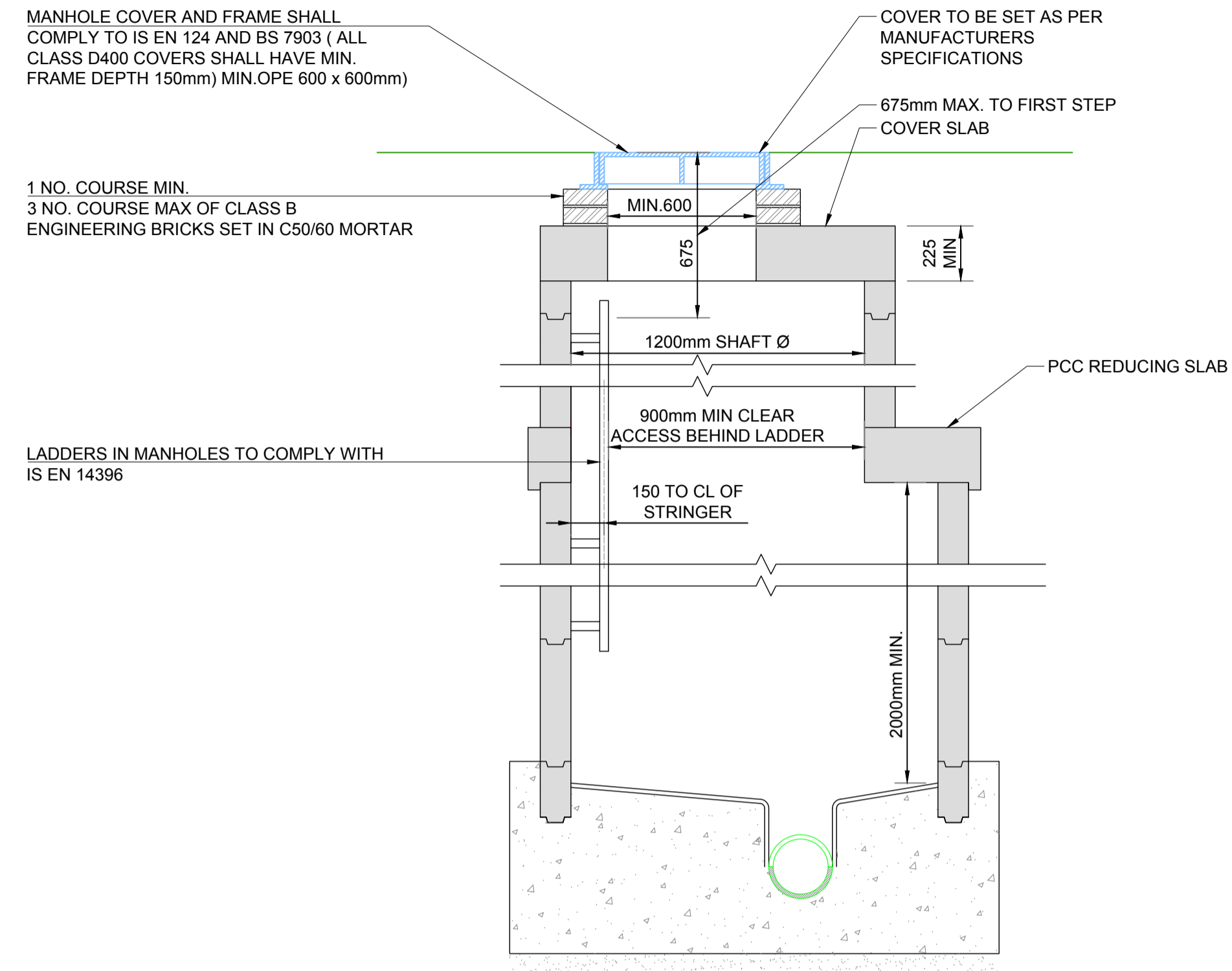
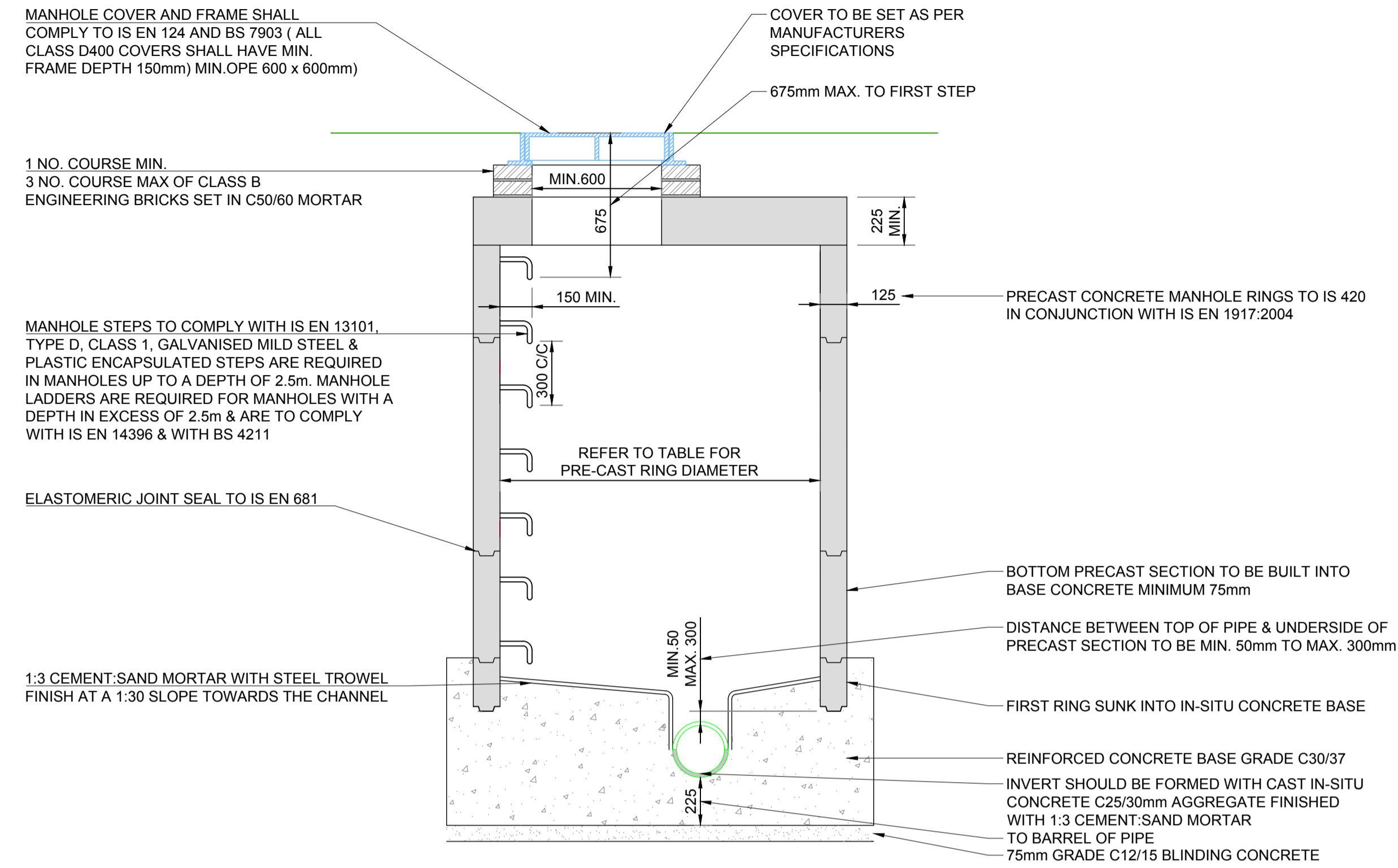
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Project : TIPPERRARY COUNTY COUNCIL
 RESIDENTIAL DEVELOPMENT AT
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 ARCHITECT: C.J.FALCONER & ASSOCIATES

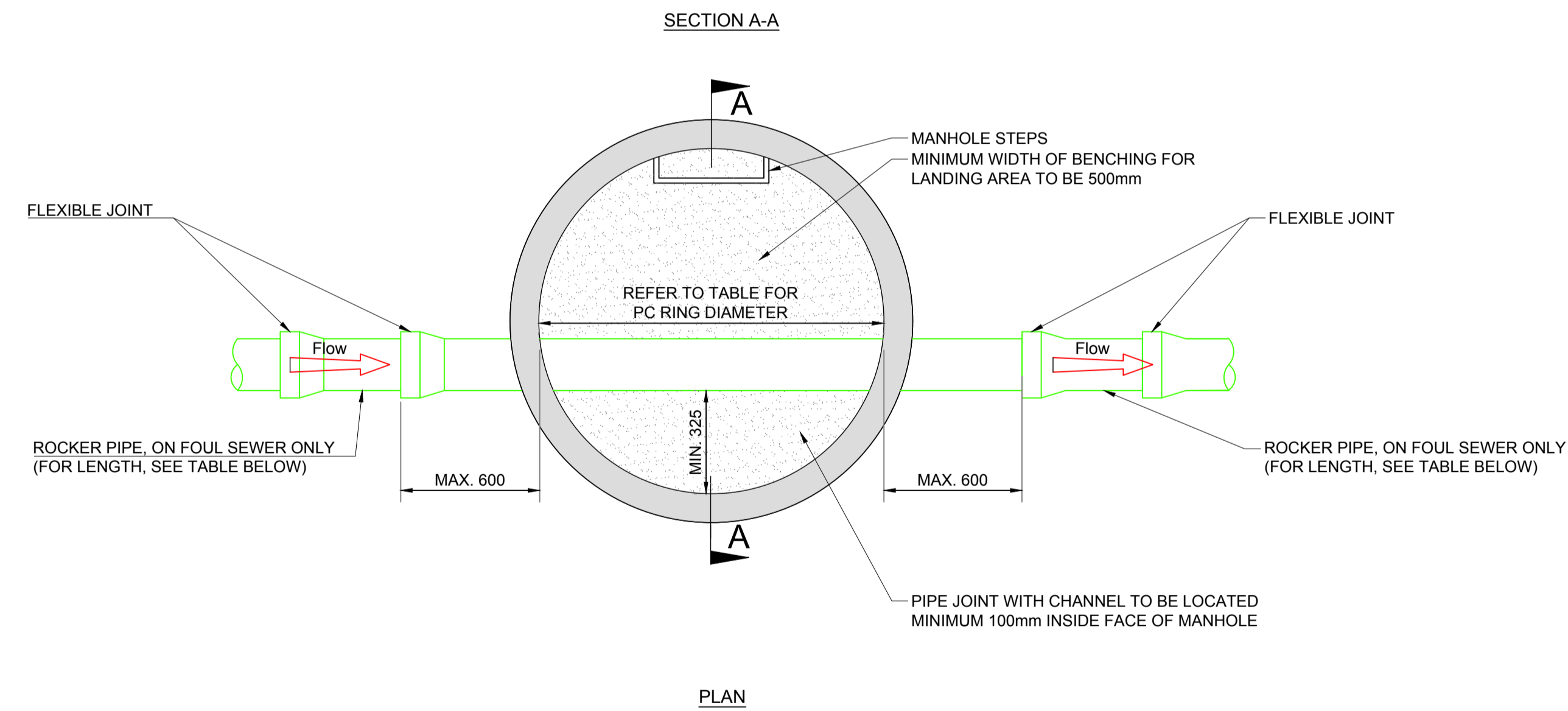
Title : **PROPOSED WATERMAIN LAYOUT**

Purpose of Issue :	Scale :	
PART 8 PLANNING	1:200	
Project No. :	Drawing No. :	Issue No. :
21049	103	P1

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**MANHOLE DETAIL >3m + <6m
GROUND TO SOFFIT DEPTH**
(NOTE: ON MANHOLES <1.5m Ø, REDUCING SLAB NOT TO BE USED + PCC RINGS TO CONTINUE UP TO COVER SLAB)



PRE-CAST CONCRETE MANHOLE
(IRISH WATER REF. STD-WW-10)

MINIMUM MANHOLE DIAMETERS	
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)
LESS THAN 375	1200
375 TO 450	1350
500 TO 750	1500

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

NOTE:

ALL WORKS TO BE TO IRISH WATER SPECIFICATION AND STANDARD DETAILS AND AGREED IN ADVANCE OF WORKS

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Project: TIPPERRARY COUNTY COUNCIL RESIDENTIAL DEVELOPMENT AT GROVE STREET, ROSCREA, CO. TIPPERRARY
ARCHITECT: C.J.FALCONER & ASSOCIATES

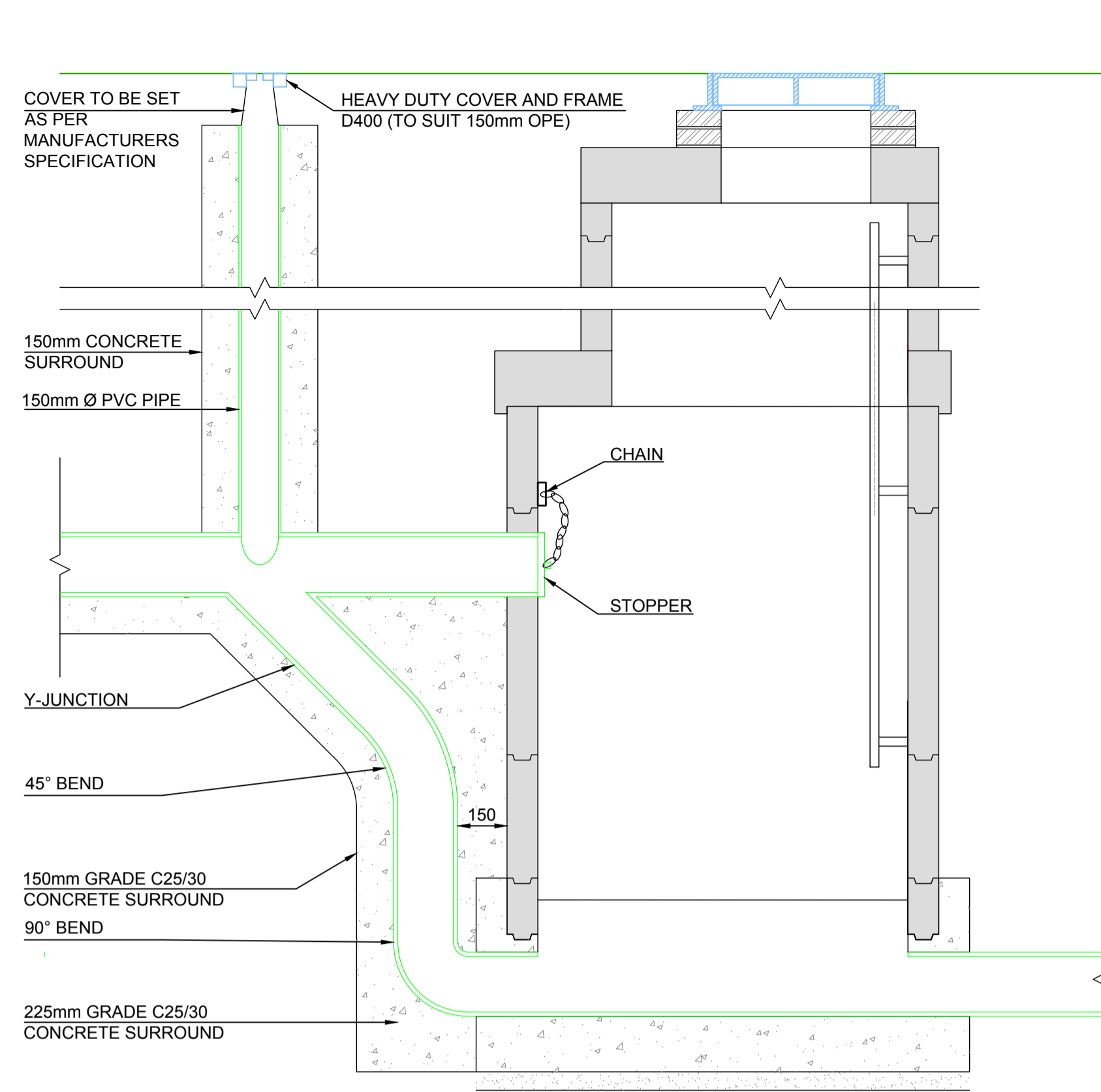
Title: DRAINAGE DETAILS SHEET 1/2

Purpose of Issue: PART 8 PLANNING Scale: NTS

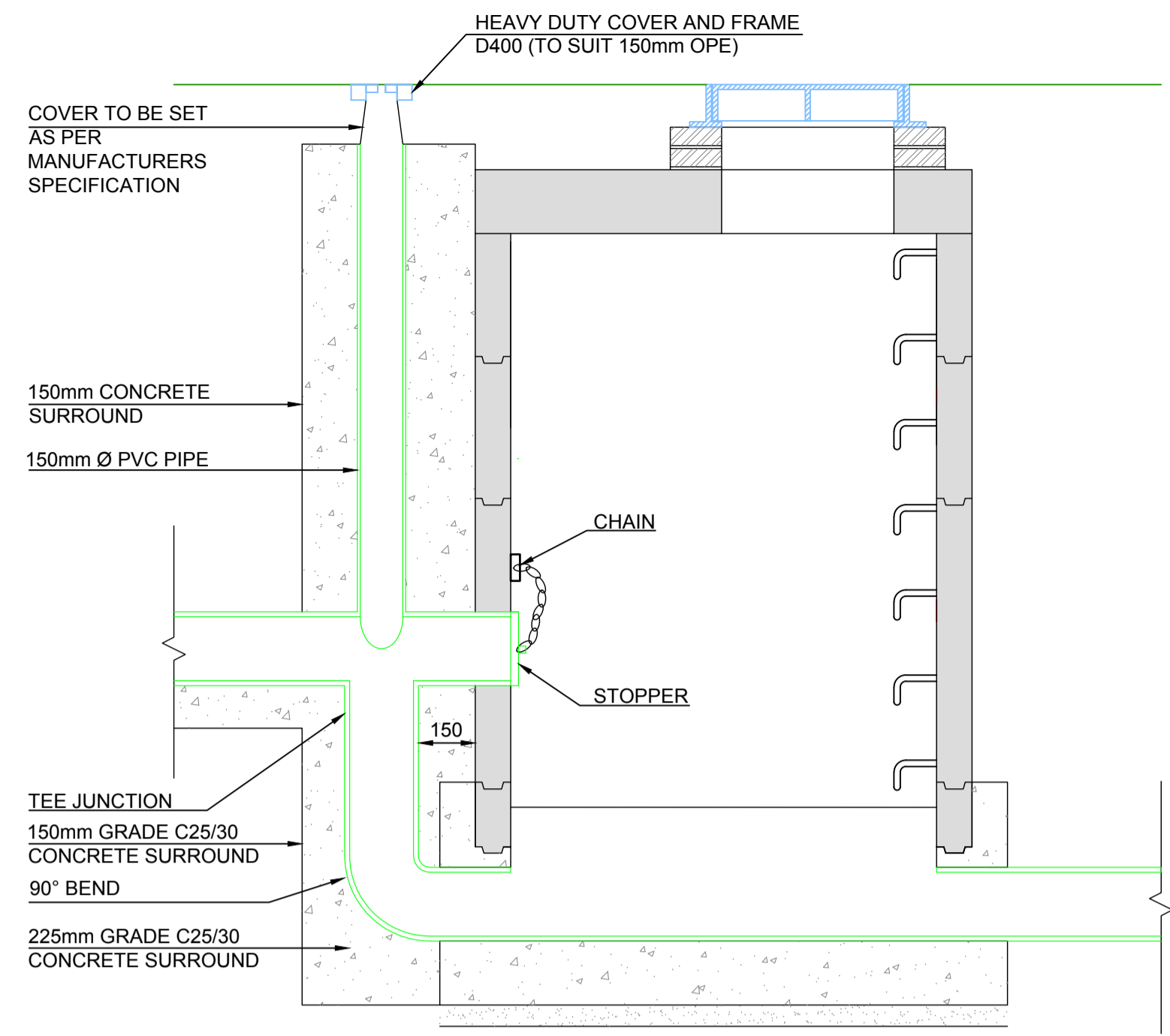
Project No.: 21049 Drawing No.: 104 Issue No.: P1

General Notes :

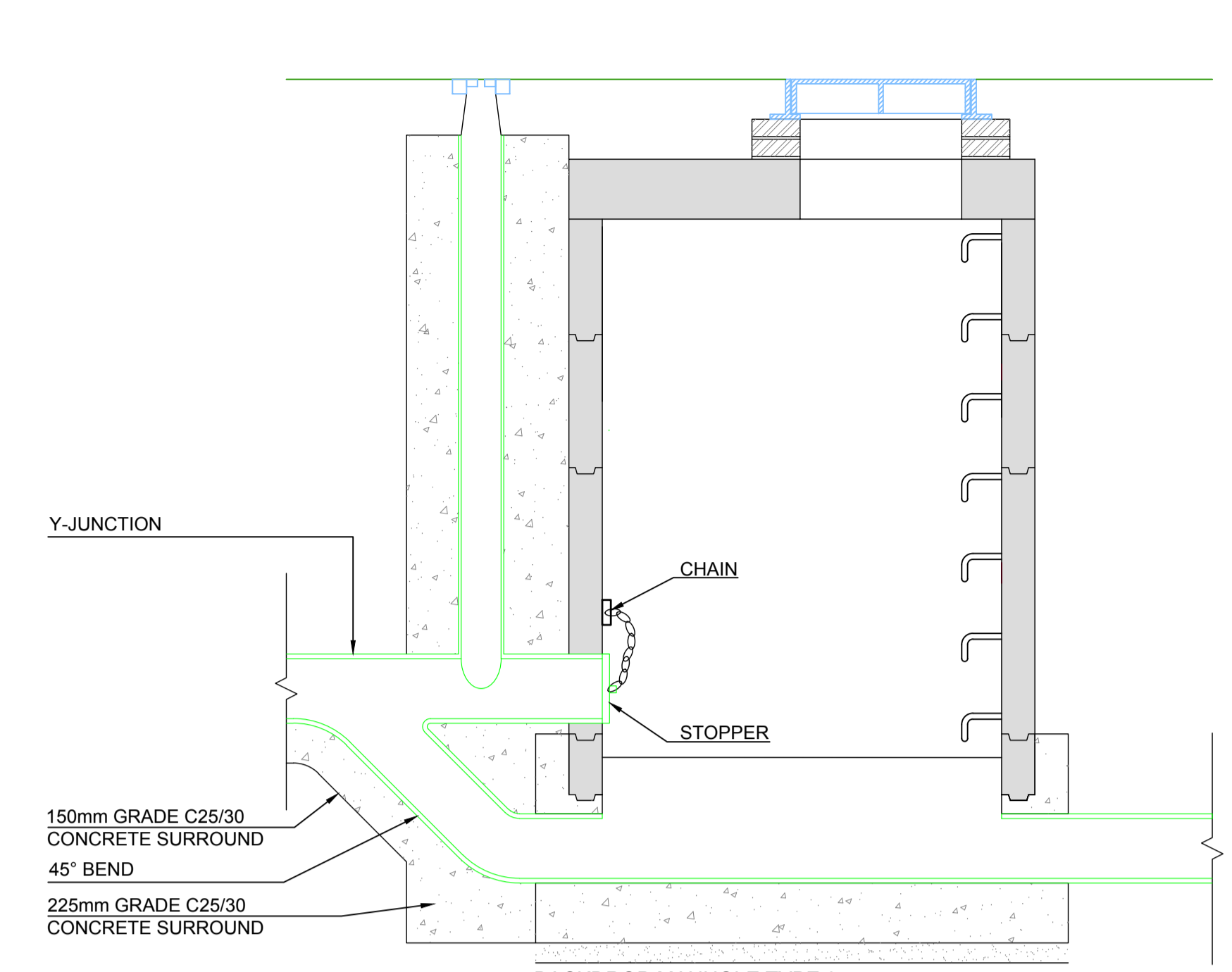
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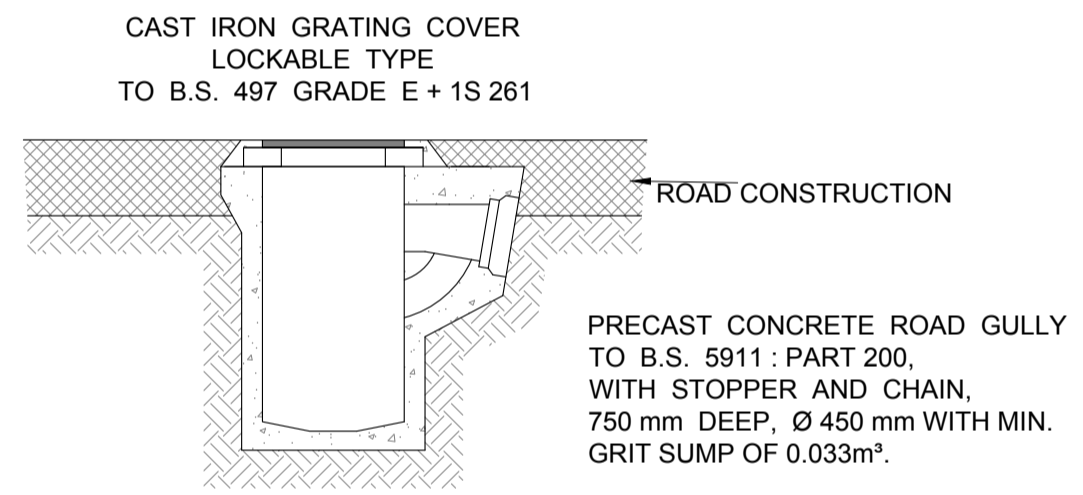
BACKDROP MANHOLE TYPE 1
(IRISH WATER REF. STD-WW-12)
150 - 450mm Ø (INCL.) DROP GREATER THAN 1700mm
500mm - 900mm Ø (INCL.) DROP GREATER THAN 2300mm



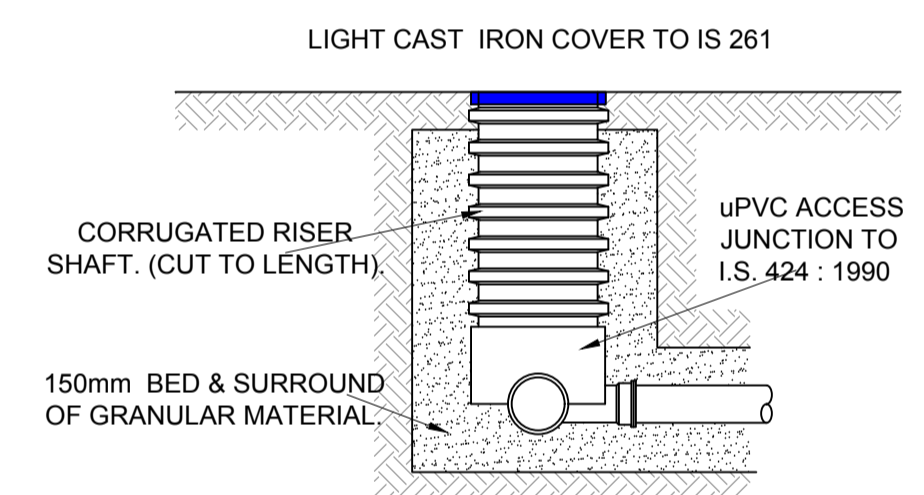
BACKDROP MANHOLE TYPE 2
(IRISH WATER REF. STD-WW-12)
150 - 450mm Ø (INCL.) DROP GREATER THAN 900mm AND LESS THAN 1700mm
500mm - 900mm Ø (INCL.) DROP GREATER THAN 1300mm AND LESS THAN 2300mm



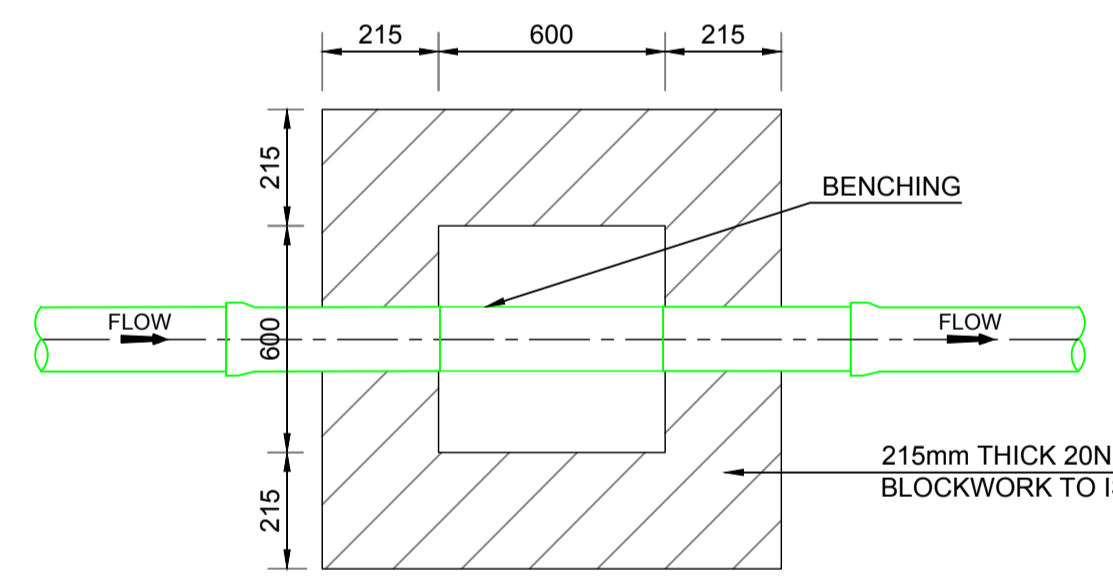
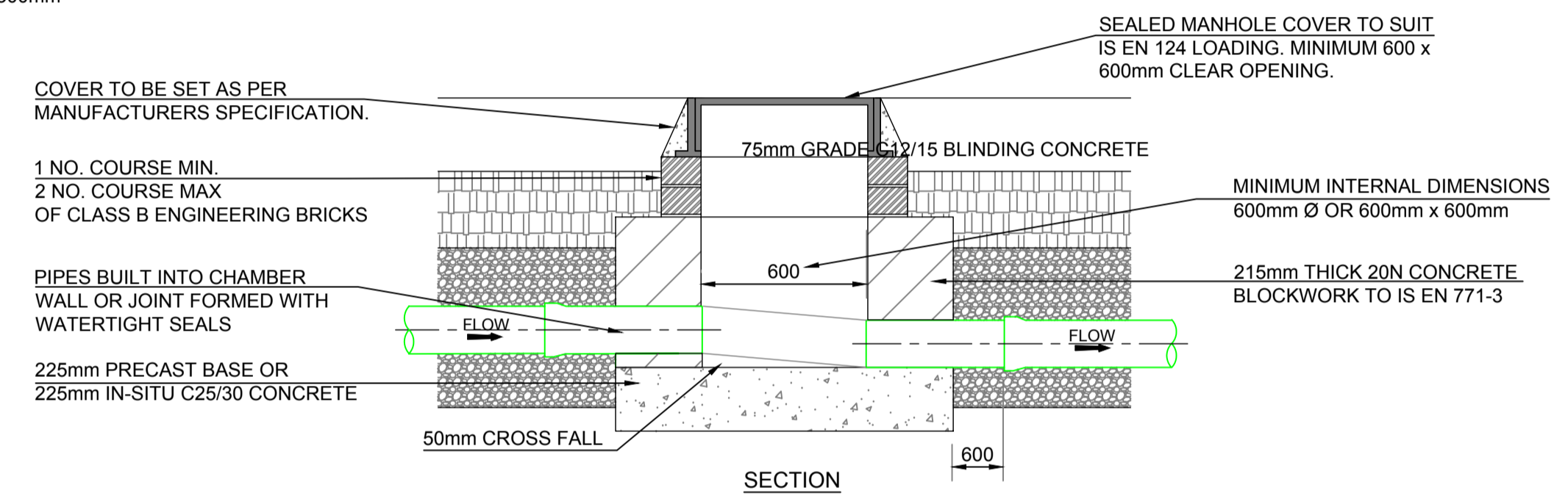
BACKDROP MANHOLE TYPE 3
(IRISH WATER REF. STD-WW-12)
150 - 450mm Ø (INCL.) DROP GREATER THAN 600mm AND LESS THAN 900mm
500mm - 900mm Ø (INCL.) DROP GREATER THAN 600mm AND LESS THAN 1300mm



TYPICAL PRECAST ROAD GULLY DETAIL
SCALE 1:20

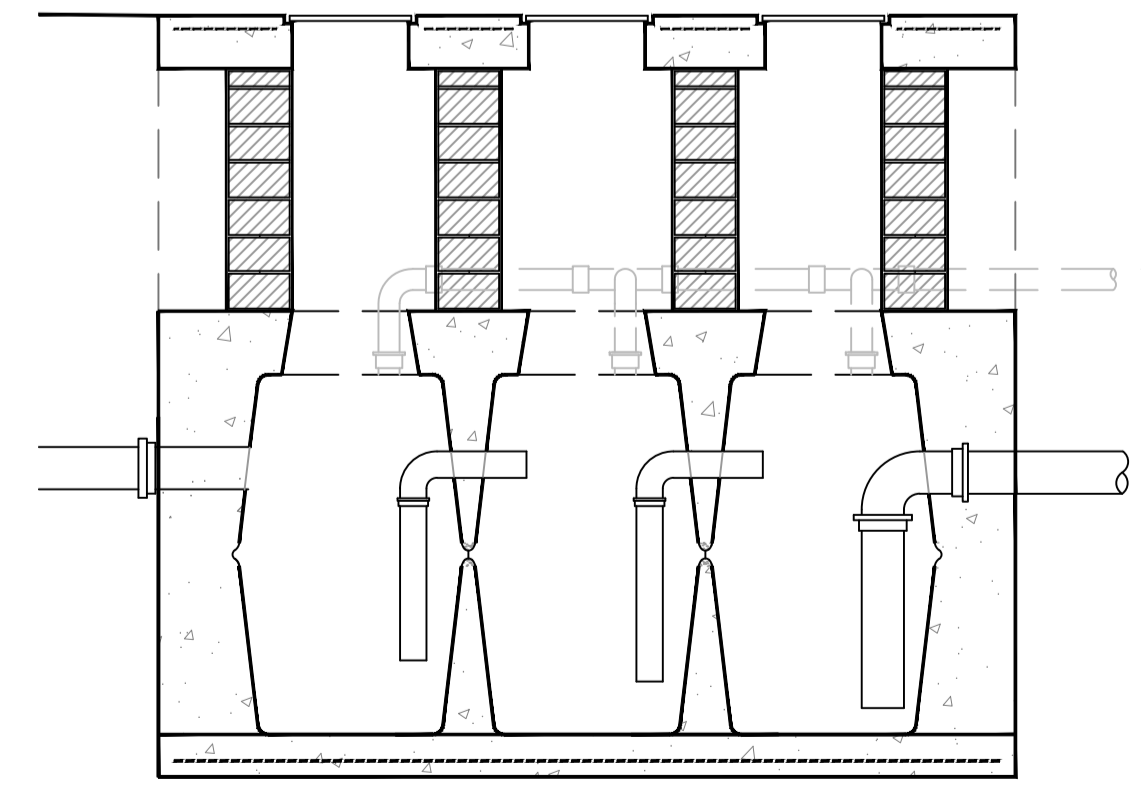


TYPICAL ACCESS JUNCTION DETAIL
SCALE 1:20



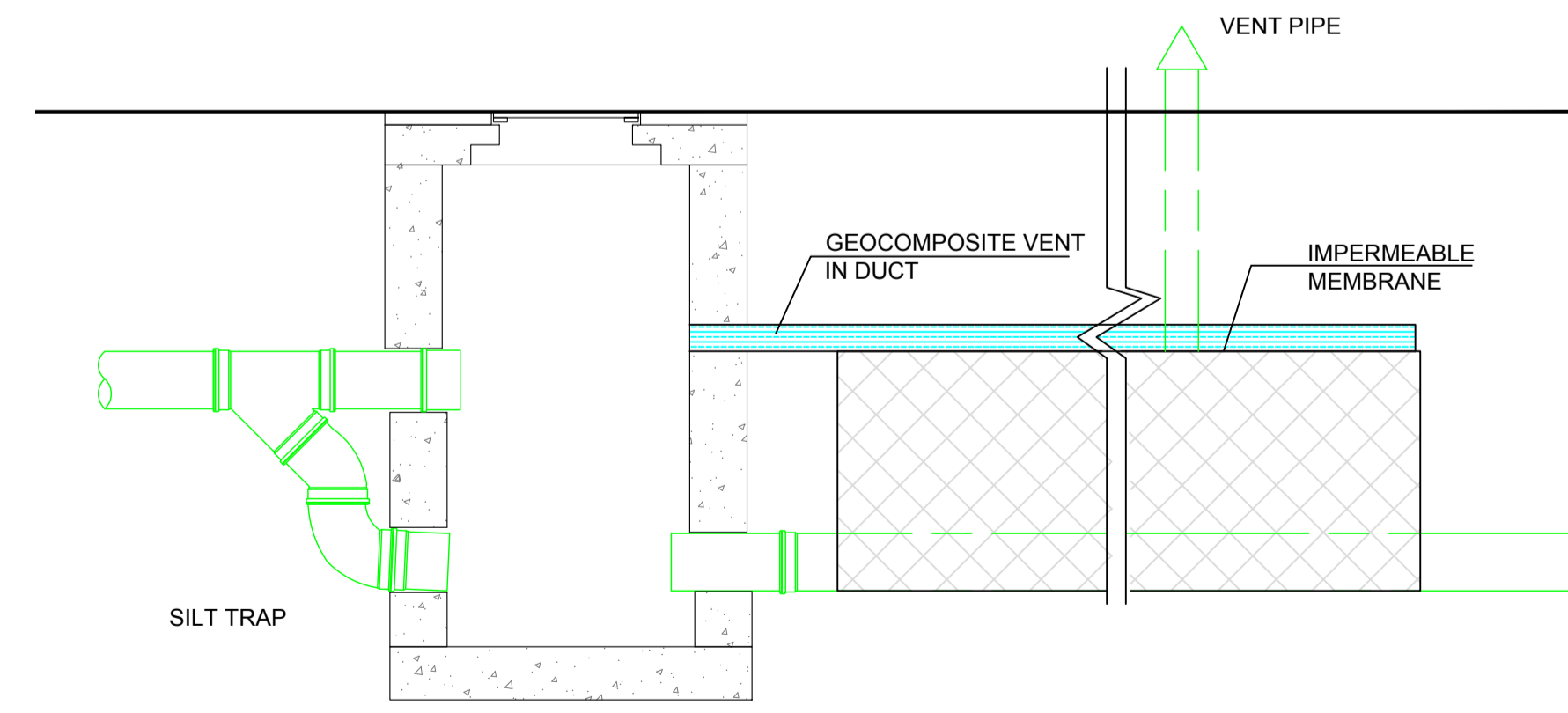
FLOOR PLAN
BLOCKWORK INSPECTION CHAMBER
(IRISH WATER REF. STD-WW-13)

NOTE:
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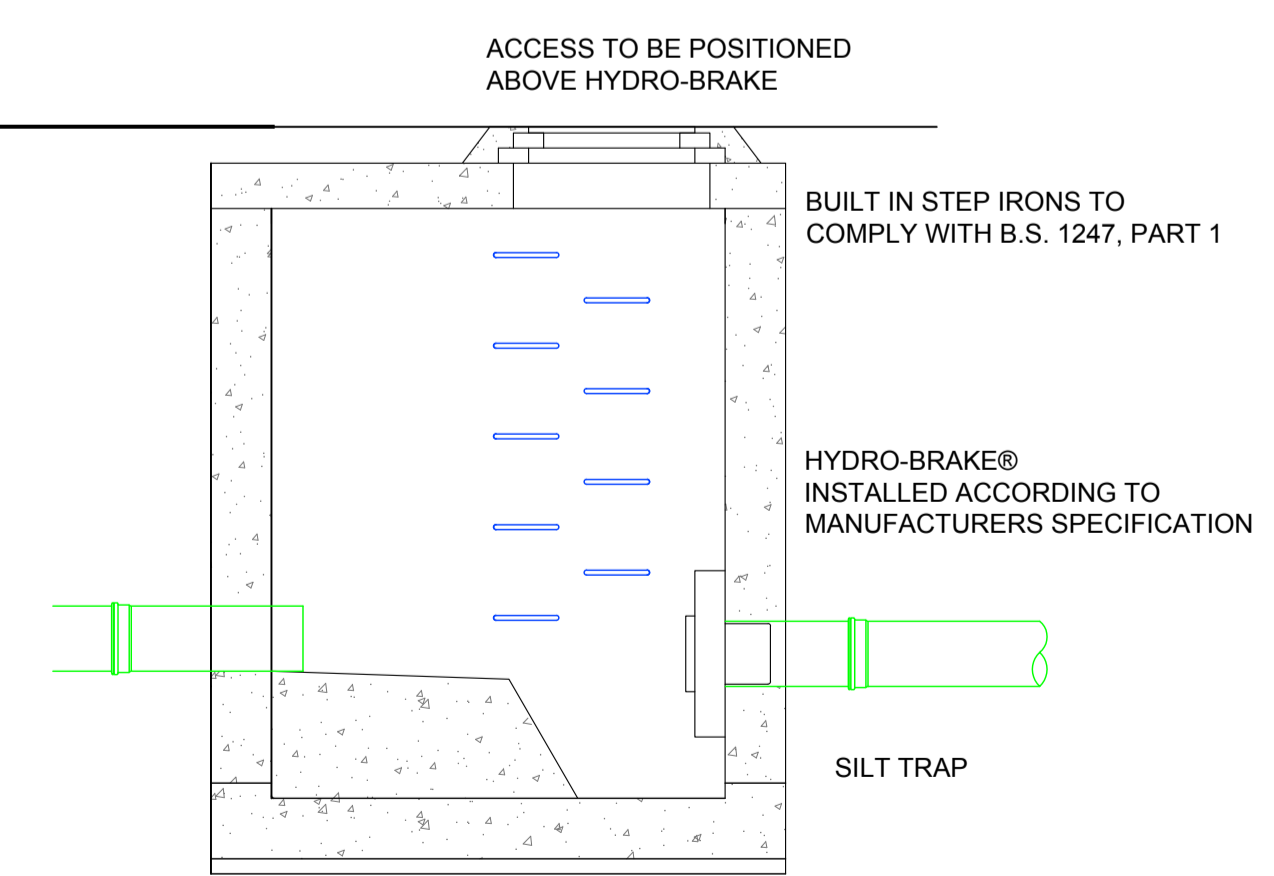
TYPICAL INTERCEPTOR TRAP, 3500 LITRE CAPACITY

HYDROCARBON INTERCEPTOR DETAIL
SCALE 1:20



TYPICAL EXTERNAL BACKDROP MANHOLE
PATENT VOID FORMER STORM WATER ATTENUATION SYSTEM WITH VOLUME AS PER DRAINAGE LAYOUT INSTALLED TO MANUFACTURERS INSTRUCTIONS

ATTENUATION DETAIL
SCALE 1:20



MANHOLE WITH SILT TRAP AND HYDRO-BRAKE, MAXIMUM OUTFLOW IN ACCORDANCE WITH SITE DRAINAGE DESIGN

OUTFLOW MANHOLE DETAIL
SCALE 1:20

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Date: 20 OCT '21 Drawn: Approved: DOS				

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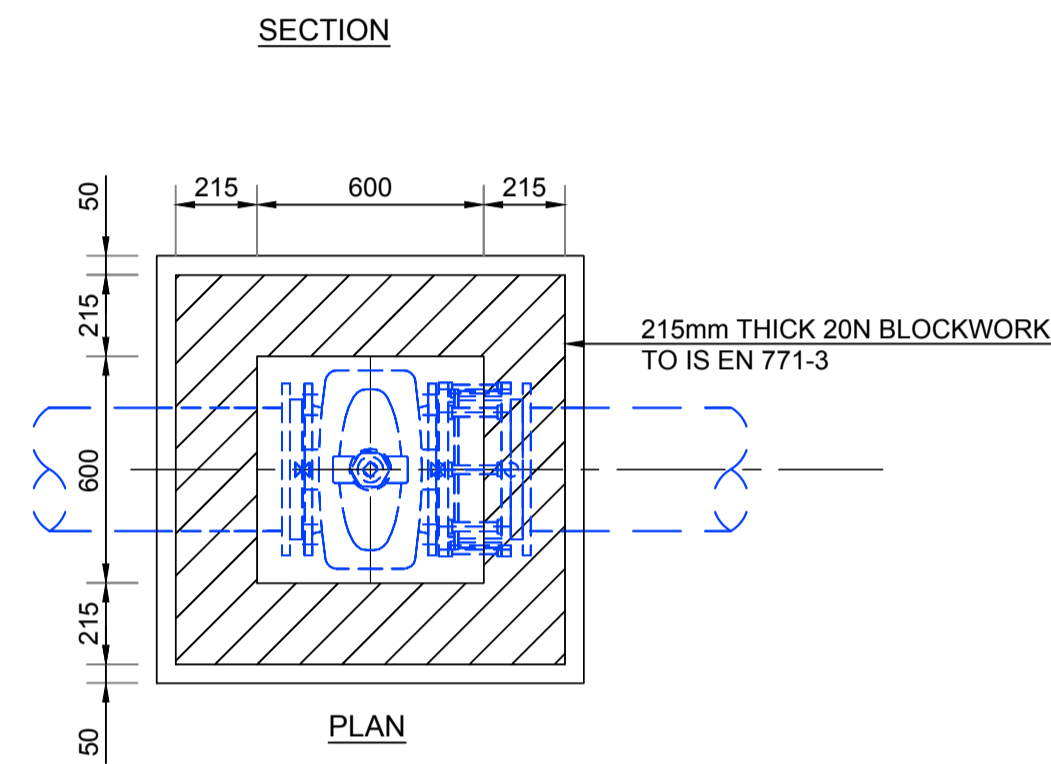
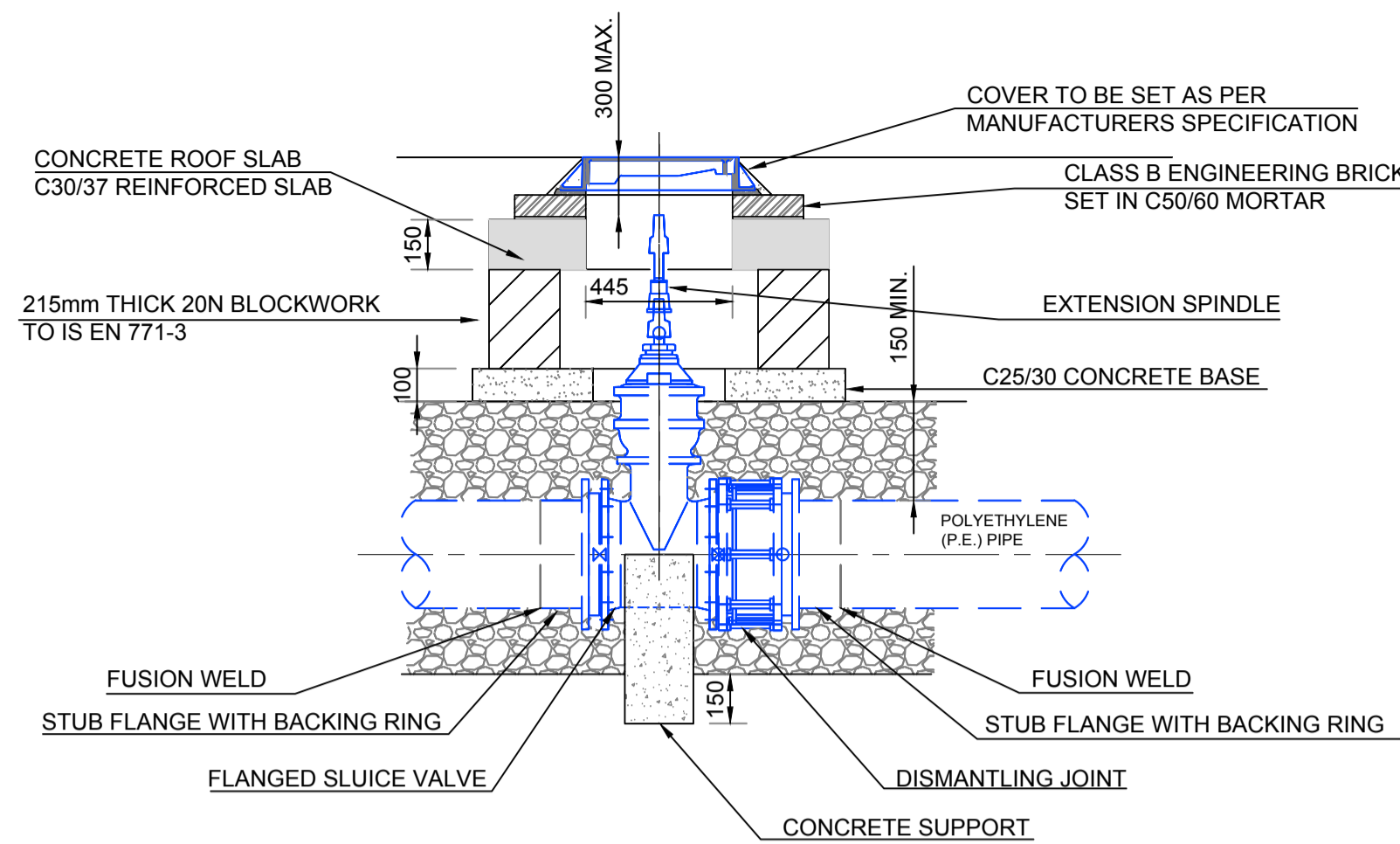
Project:
TIPPERARY COUNTY COUNCIL
RESIDENTIAL DEVELOPMENT AT
GROVE STREET, ROSCREA, CO. TIPPERARY

Architect: C.J.FALCONER & ASSOCIATES

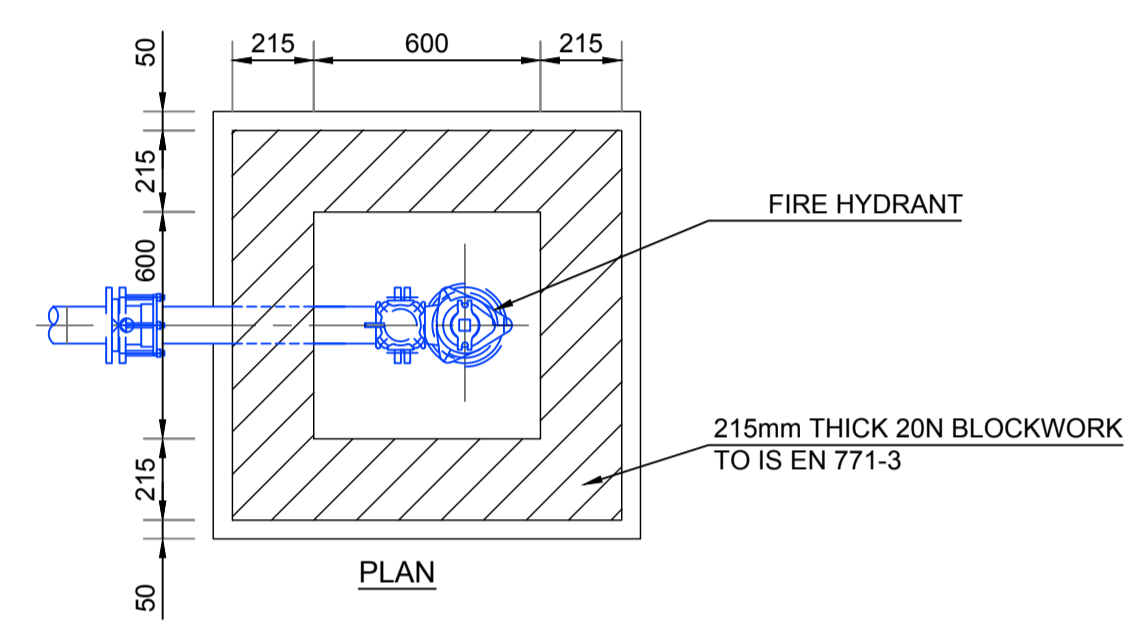
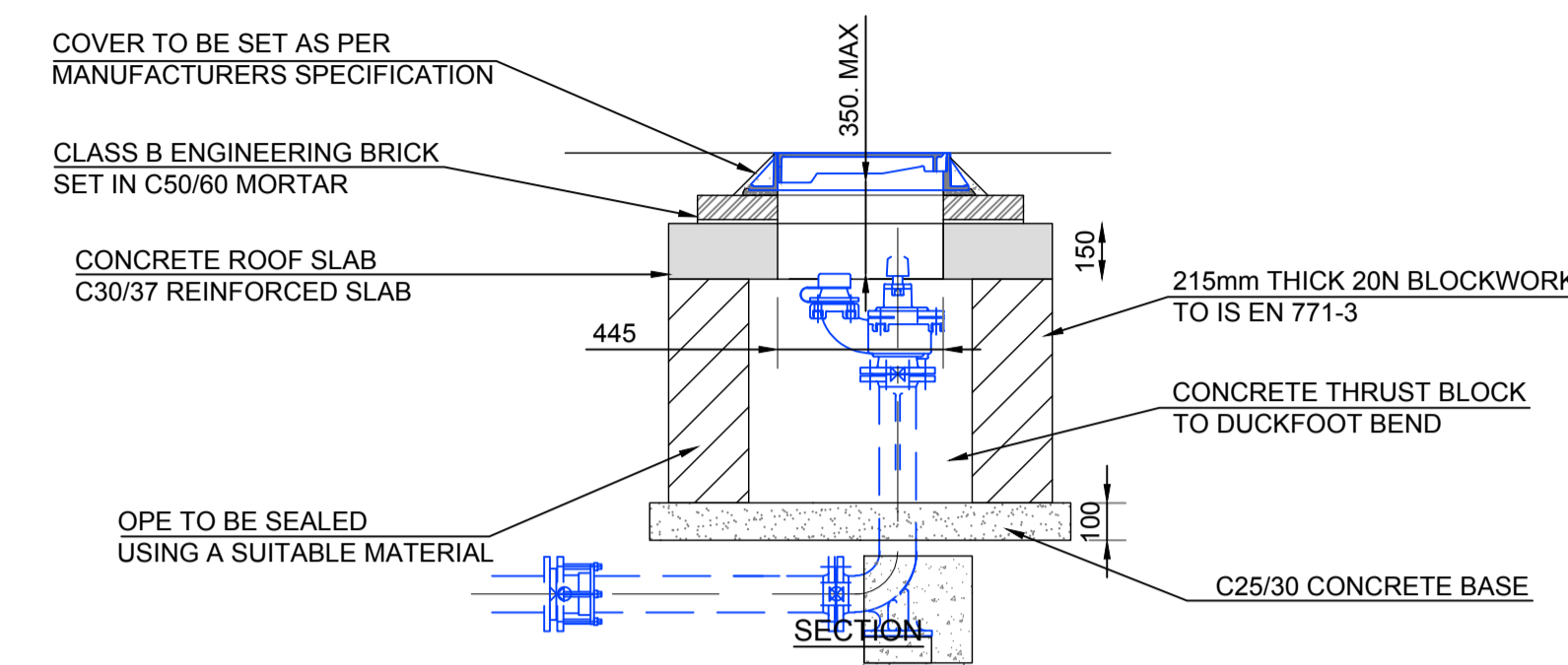
Title:
DRAINAGE DETAILS
SHEET 2/2

Purpose of Issue:	Scale:	
PART 8 PLANNING	NTS	
Project No.:	Drawing No.:	Issue No.:
21049	105	P1

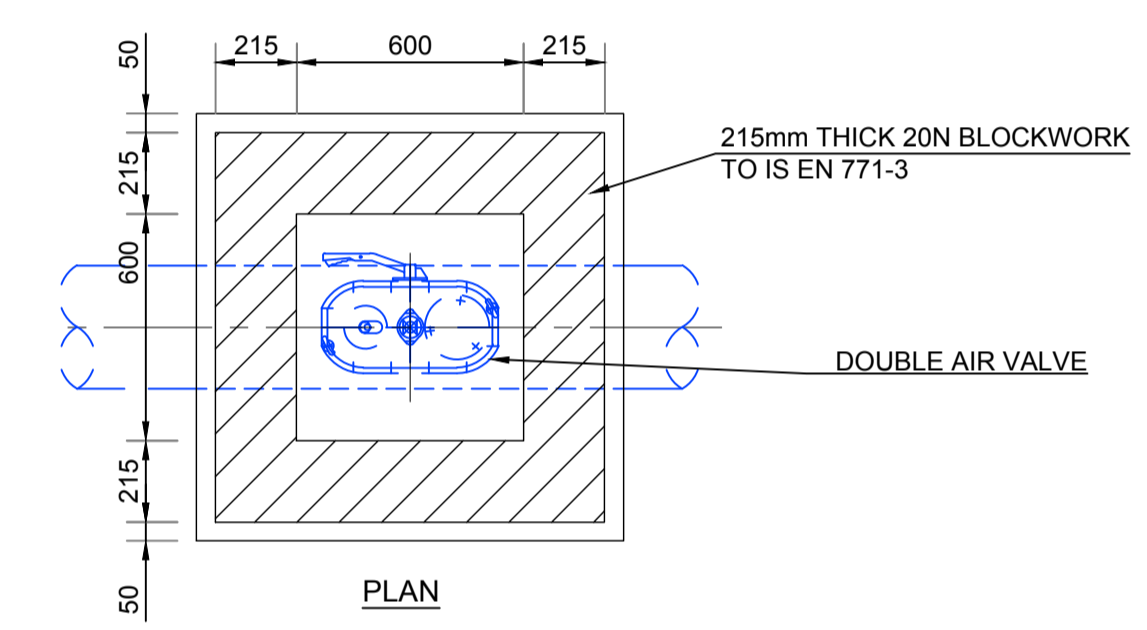
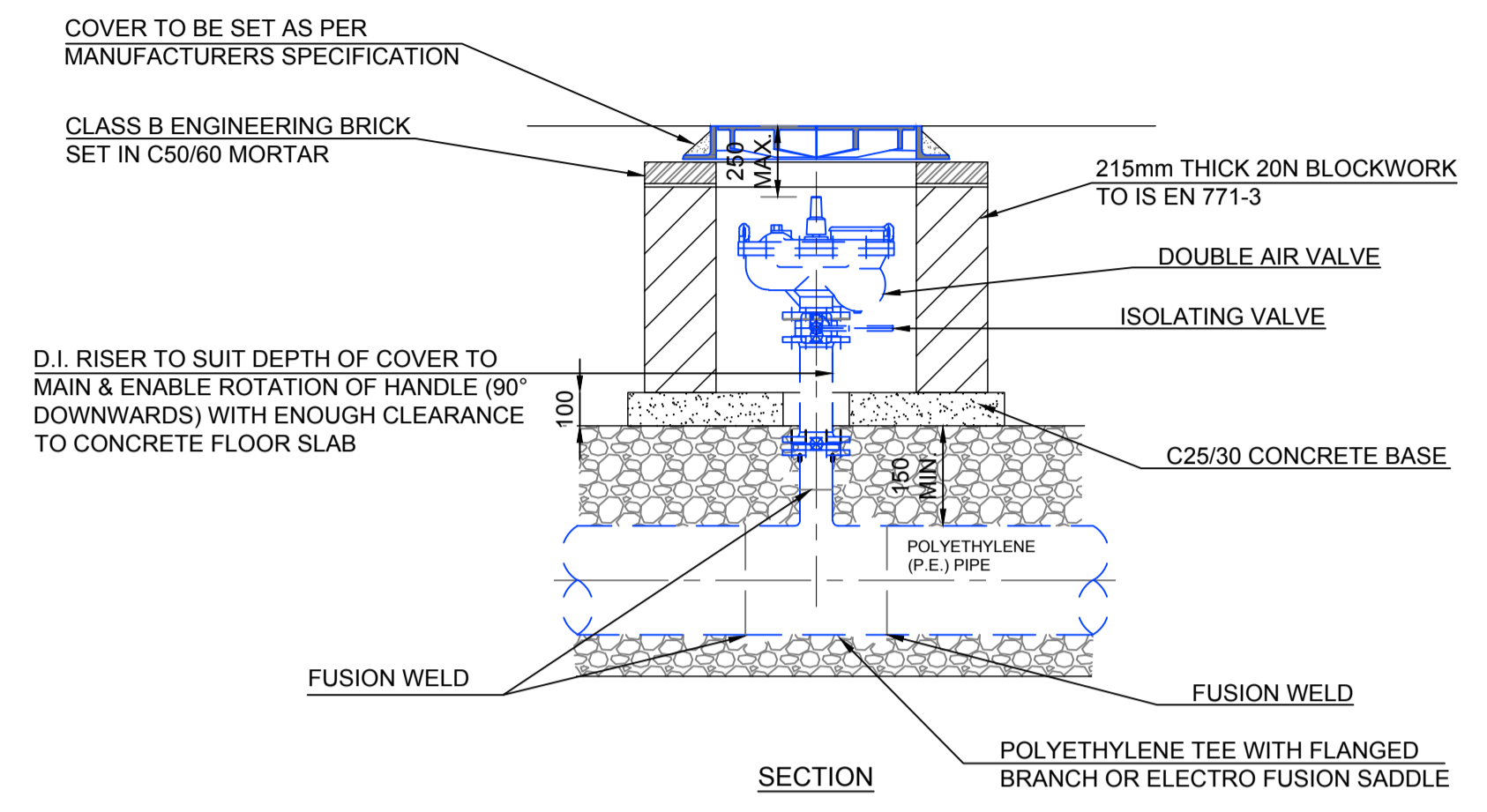
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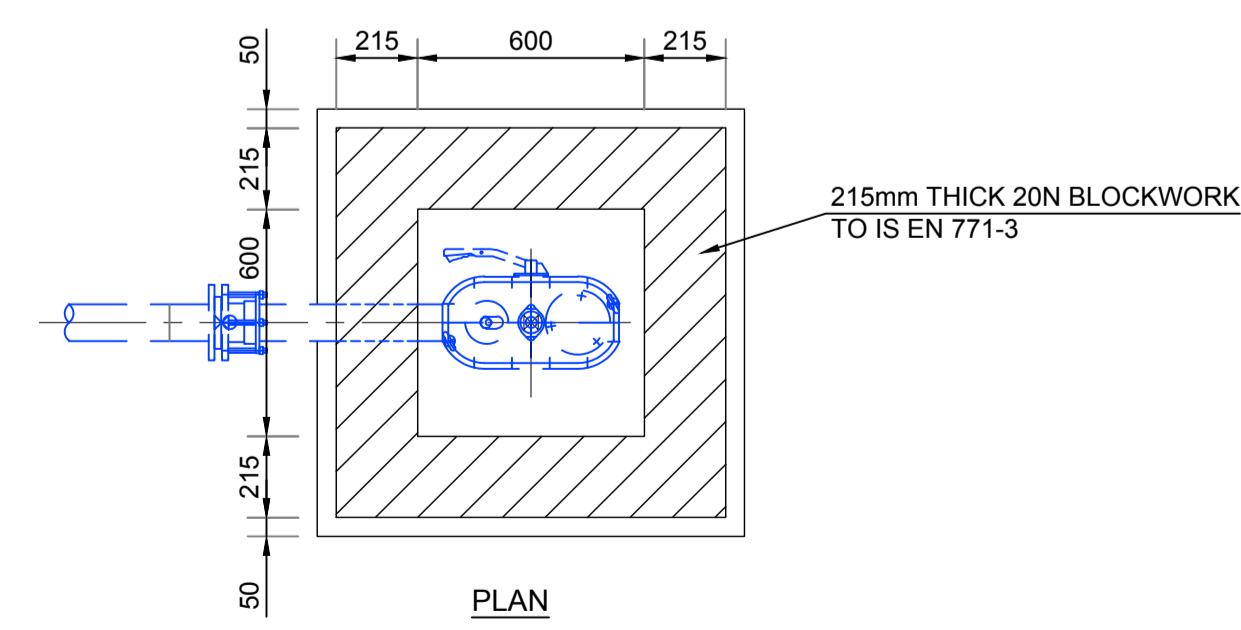
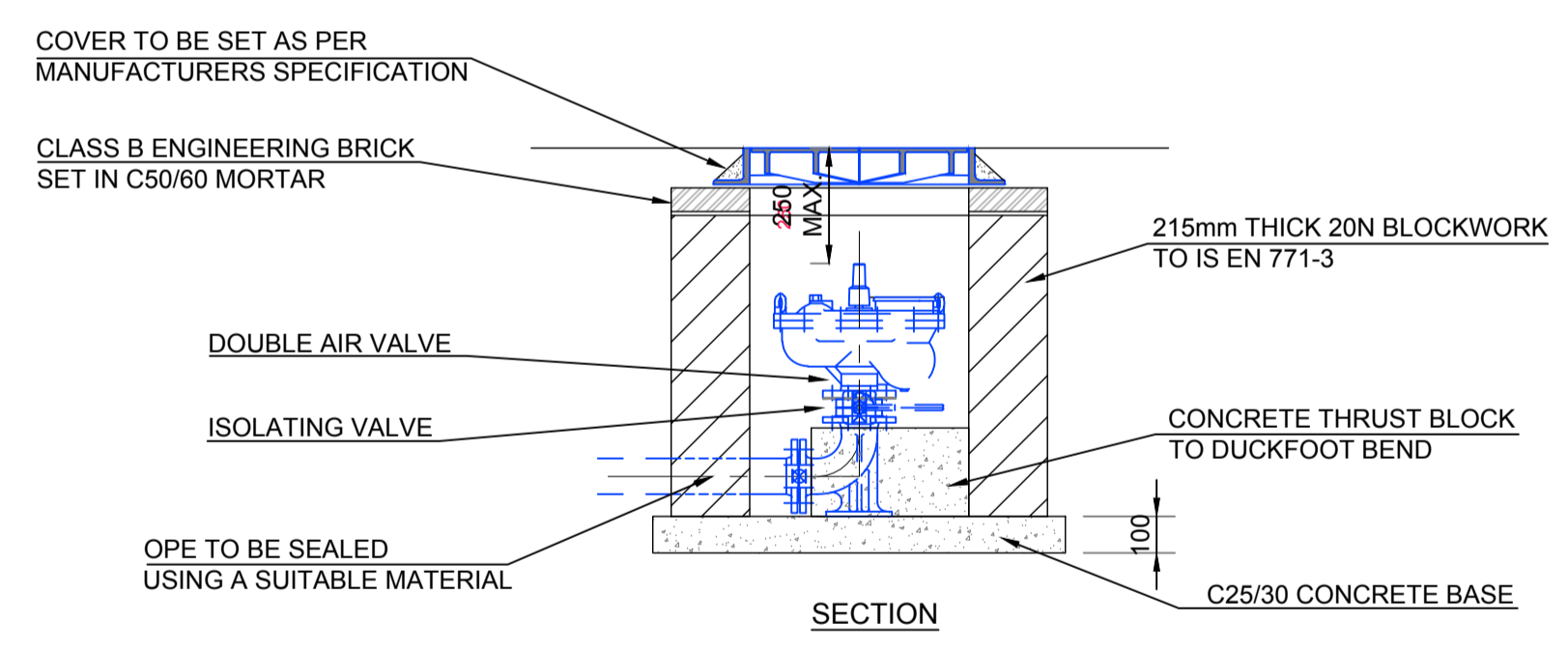
BLOCKWORK SLUICE VALVE CHAMBER DETAIL
(IRISH WATER REF. STD-W-15)



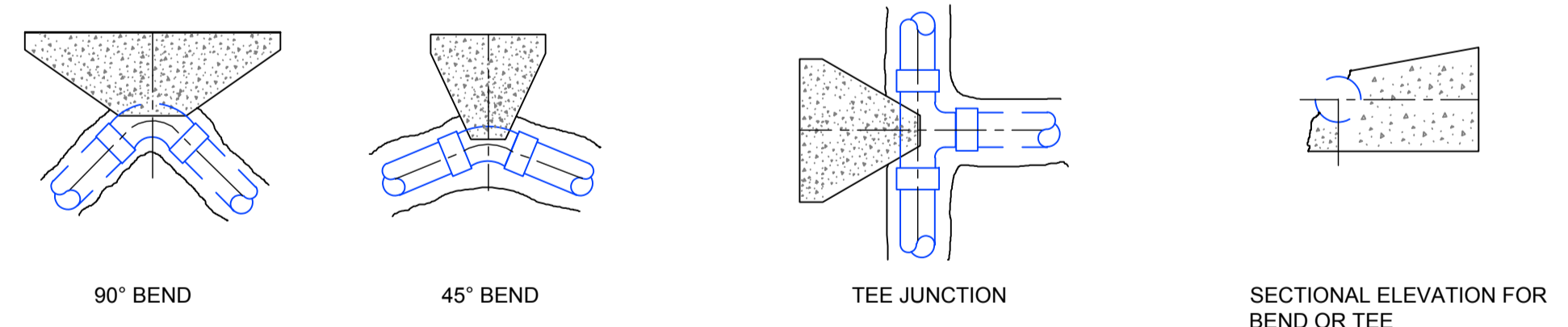
OFF-LINE FIRE HYDRANT DETAIL
(IRISH WATER REF. STD-W-19)



ON-LINE AIR VALVE DETAIL
(IRISH WATER REF. STD-W-22)



OFF-LINE AIR VALVE DETAIL
(IRISH WATER REF. STD-W-23)



TYPICAL THRUST BLOCK DETAILS
(IRISH WATER REF. STD-W-28)

NOTE:
ALL WORKS TO BE TO IRISH WATER SPECIFICATION AND STANDARD DETAILS AND AGREED IN ADVANCE OF WORKS

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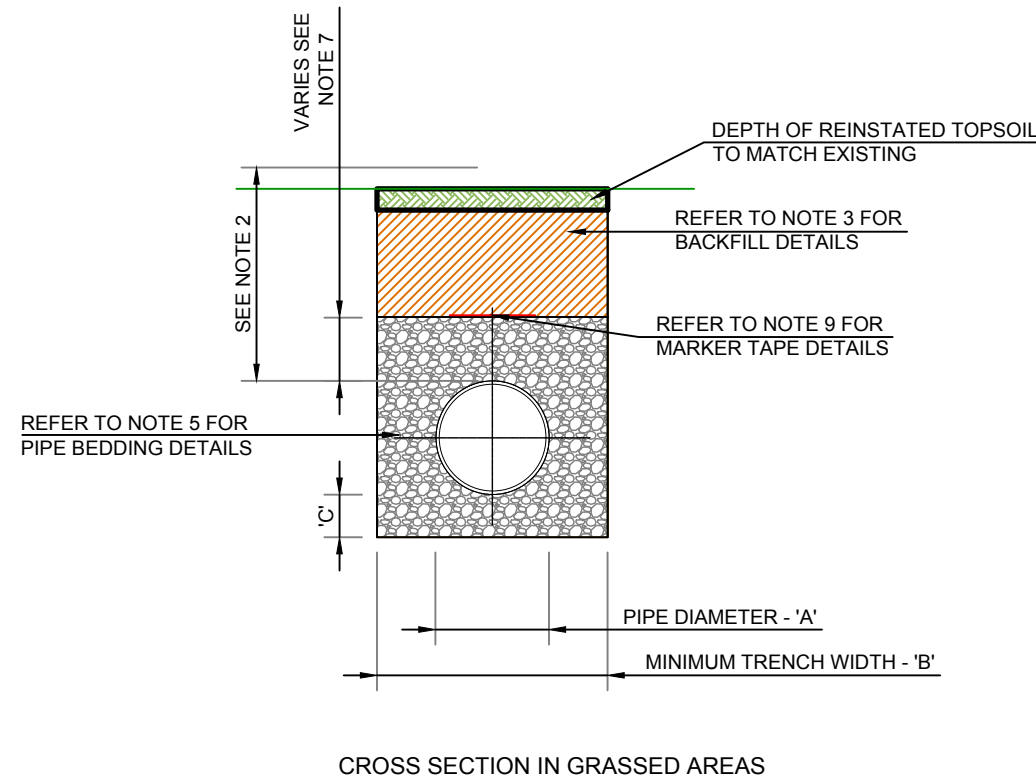
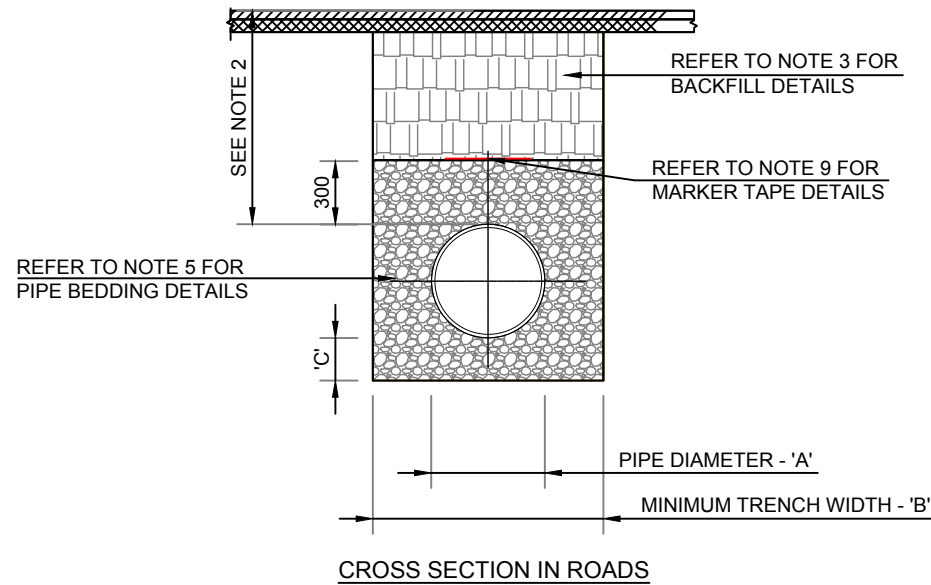
ARCHITECT: C.J.FALCONER & ASSOCIATES

Title: **WATERMAIN DETAILS**

Purpose of Issue:	Scale:	
PART 8 PLANNING	NTS	
Project No.:	Drawing No.:	Issue No.:
21049	106	P1

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NOTES:
(AS PER IRISH WATER. SEE STD-WW-07)

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- THE MINIMUM DEPTH OF COVER FROM THE FINISHED SURFACE TO THE CROWN OF GRAVITY PIPES WITHOUT PROTECTION SHOULD BE AS FOLLOWS:
 - GARDENS AND PATHWAYS WITHOUT ANY POSSIBILITY OF VEHICULAR ACCESS - DEPTH NOT LESS THAN 0.5m. (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)
 - DRIVEWAYS, 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 0.75m.
 - DRIVEWAYS, PARKING AREAS AND NARROW STREETS WITHOUT FOOTWAYS (EG. MEWS DEVELOPMENTS) WITH LIMITED ACCESS FOR VEHICLES WITH A GROSS VEHICLE WEIGHT IN EXCESS OF 7.5 TONNES - DEPTH NOT LESS THAN 0.9m.
 - DEPTH OF SEWERS IN GATED ESTATES SHALL BE SIMILAR TO THAT OUTLINED ABOVE.
 - AGRICULTURAL LAND AND PUBLIC OPEN SPACE - DEPTH NOT LESS THAN 0.9m
 - OTHER 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 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE SEWER MAIN IS LOCATED ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF THE ROADWAY. CLAUSE 808 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS,

4. SELECTED EXCAVATED MATERIAL MAY BE USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUND MATERIAL SUBJECT TO APPROVAL 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 GRADED AGGREGATE OR 10mm SINGLE SIZED AGGREGATE TO IS EN 13242. CONCRETE BED, HAUNCH AND 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 808 IN 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. IN GREEN FIELD AREAS, TYPE B BACKFILL (SELECTED EXCAVATED MATERIAL) WILL BE ALLOWED ABOVE THE SIDE HAUNCH GRANULAR MATERIAL IN THE CASE OF RIGID PIPES. A GRANULAR SURROUND OF A MINIMUM DEPTH 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 150mm BELOW THE ACTUAL DEPTH OF THE TRENCH WITH THE VOID FILLED WITH CLAUSE 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. THE GRANULAR MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL MATERIAL

9. NON DEGRADABLE MARKER TAPE SHOULD BE INSTALLED AT TOP OF PIPE BEDDING LAYER. 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 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 AND CONSTRUCTION ACCESS REQUIREMENTS.

PIPE DIAMETER 'A' (mm)	TRENCH WIDTH 'B' (mm)
<80 RISING MAIN	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)
<100	100
150 - 450	200

NOTE:

ALL WORKS TO COMPLY WITH IRISH WATER CODE OF PRACTICE AND STANDARD DETAILS AGREED IN ADVANCE OF WORKS

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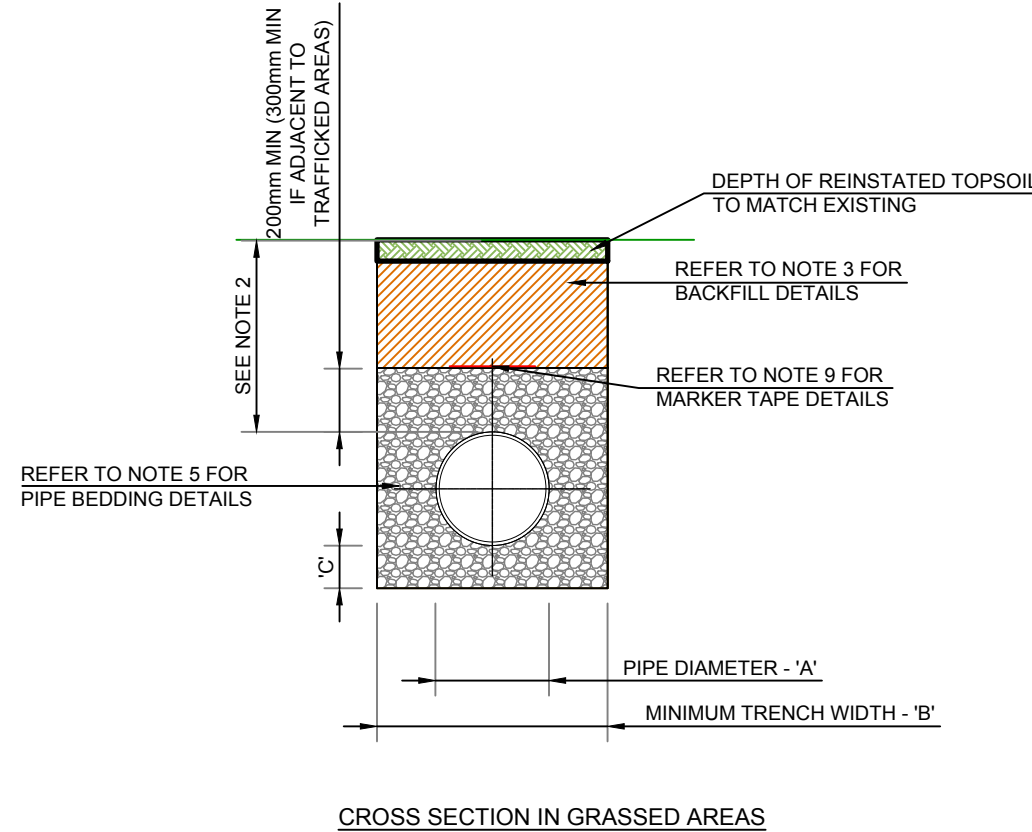
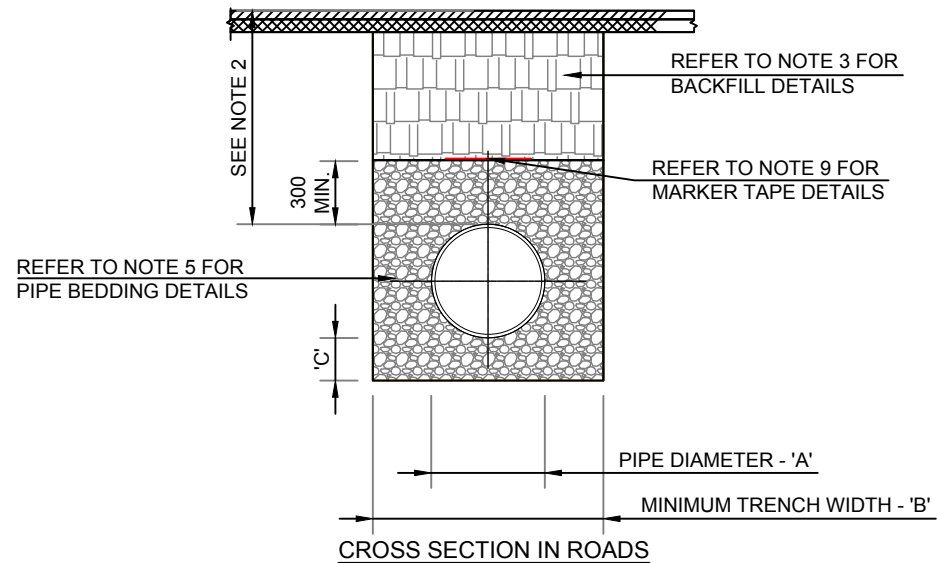
Project :
TIPPERARY COUNTY COUNCIL
RESIDENTIAL DEVELOPMENT AT
GROVE STREET, ROSCREA, CO. TIPPERARY
ARCHITECT: C.J.FALCONER & ASSOCIATES

Title :
WASTEWATER DRAINAGE -
TRENCH BEDDING AND BACKFILL

Purpose of Issue :	Scale :	
PART 8 PLANNING	NTS	
Project No. :	Drawing No. :	Issue No. :
21049	107	P1

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NOTES:
(AS PER IRISH WATER. SEE STD-W-13)

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- THE MINIMUM DEPTH OF COVER FROM THE FINISHED GROUND LEVEL TO THE EXTERNAL CROWN OF THE PIPE SHALL BE 750mm FOR SERVICE CONNECTIONS, 900mm FOR WATER MAINS, GREATER DEPTHS OF COVER AND/OR PIPE STRENGTH AND/OR A HIGHER CLASS OF BEDDING MATERIAL MAY BE REQUIRED WHERE HIGH TRAFFIC LOADING IS ANTICIPATED. THE MAXIMUM COVER SHOULD NOT EXCEED 1.2m WHERE PRACTICABLE.
- CLAUSE 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS IS TO BE USED AS BACKFILL MATERIAL WHERE THE SEWER MAIN IS LOCATED ROADS, FOOTPATHS OR WHEN THE NEAREST PART OF THE TRENCH IS WITHIN 1m OF THE PAVED EDGE OF THE ROADWAY. CLAUSE 808 IS TO BE COMPACTED AS PER CLAUSE 802 OF THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS,
- SELECTED EXCAVATED MATERIAL MAY BE USED IN GREEN-FIELD AREAS ABOVE GRANULAR PIPE SURROUND MATERIAL SUBJECT TO APPROVAL BY IRISH WATER.
- PIPE BEDDING SHALL COMPLY WITH WIS 4-08-02 AND IGN 4-08-01. GRANULAR MATERIAL SHALL BE 14mm TO 5mm GRADED AGGREGATE OR 10mm SINGLE SIZED AGGREGATE TO IS EN 13242.
- IN SOFT GROUND CONDITIONS (CBR <5) THE MATERIAL SHOULD BE EXCAVATED AND DISPOSED OF IN ACCORDANCE WITH THE WASTE MANAGEMENT ACT AND CLAUSE 808 IN 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.
- 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 150mm BELOW THE ACTUAL DEPTH OF THE TRENCH WITH THE VOID FILLED WITH CLAUSE 808 MATERIAL IN ACCORDANCE WITH THE NATIONAL ROADS AUTHORITY SPECIFICATION FOR ROAD WORKS. THE GRANULAR MATERIAL SHALL BE LAID ABOVE THIS VOID BACKFILL MATERIAL
- SHOULD MINIMUM COVER NOT BE ACHIEVABLE, CONCRETE GRADE C8/10 SHALL BE USED AS BACKFILL MATERIAL.
- MARKER TAPE SHOULD BE 400mm WIDE BLUE POLYETHYLENE MATERIAL IN ACCORDANCE WITH EN12163, 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.
- TRENCH WIDTHS FOR PIPE SIZES <80mm MAY BE <500mm, SUBJECT TO CONSIDERATION BEING GIVEN TO THE TRENCH DEPTH, HEALTH & SAFETY AND CONSTRUCTION ACCESS REQUIREMENTS.

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

NOTE:

ALL WORKS TO COMPLY WITH IRISH WATER CODE OF PRACTICE AND STANDARD DETAILS AGREED IN ADVANCE OF WORKS

Rev :	Note :	Date :	Drawn :	Approved :
Rev :	Note :	Date :	Drawn :	Approved :
P1	ISSUED FOR PART 8 PLANNING APPLIC.	20 OCT. '21		DOS



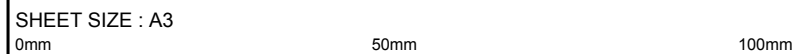
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Project :
TIPPERARY COUNTY COUNCIL
RESIDENTIAL DEVELOPMENT AT
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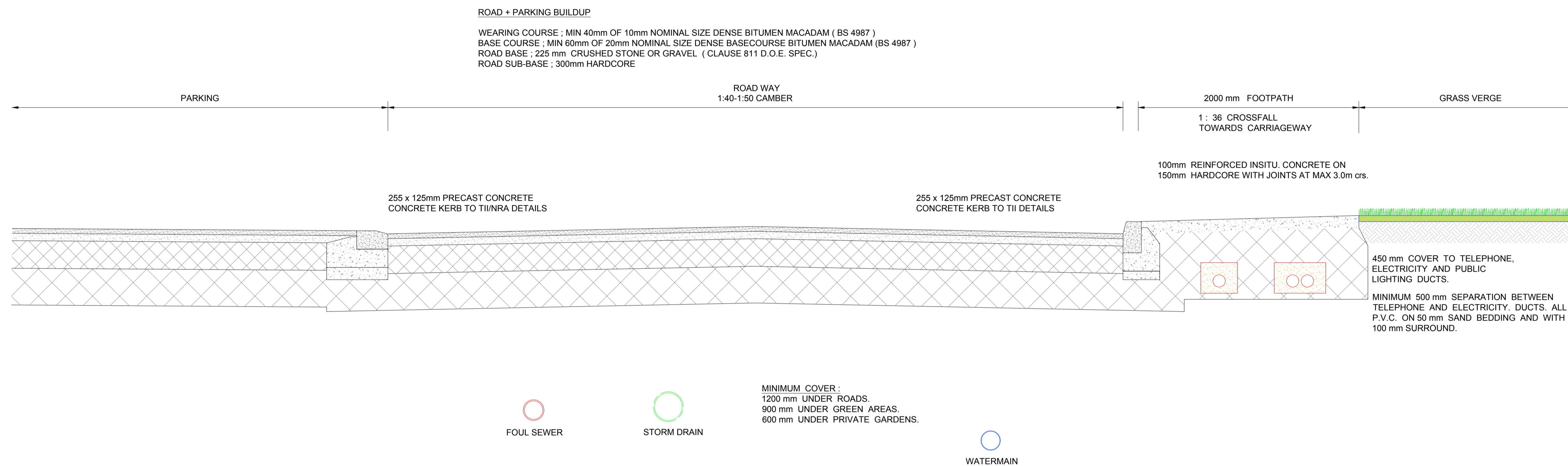
Title :
**WATERMAIN -
TRENCH BEDDING AND BACKFILL**

Purpose of Issue : PART 8 PLANNING Scale : NTS

Project No. : 21049 Drawing No. : 108 Issue No. : P1



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CARRIAGEWAY SECTION
 SCALE 1:20

Rev :	Note :	Date :	Drawn :	Approved :
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P1	ISSUED FOR PART 8 PLANNING APPLIC.	20 OCT. '21		DOS

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Project : TIPPERARY COUNTY COUNCIL
 RESIDENTIAL DEVELOPMENT AT
 GROVE STREET, ROSCREA, CO. TIPPERARY
ARCHITECT: C.J.FALCONER & ASSOCIATES

Title :
 TYPICAL
 CARRIAGEWAY SECTION

Purpose of Issue : PART 8 PLANNING **Scale :** 1:100; 1:20

Project No. : 21049 **Drawing No. :** 109 **Issue No. :** P1