

CAHERLINE NEWTOWN GROUP WATER SCHEME NETWORK UPGRADE

VOLUME A1 BOOK OF DRAWINGS

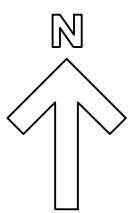
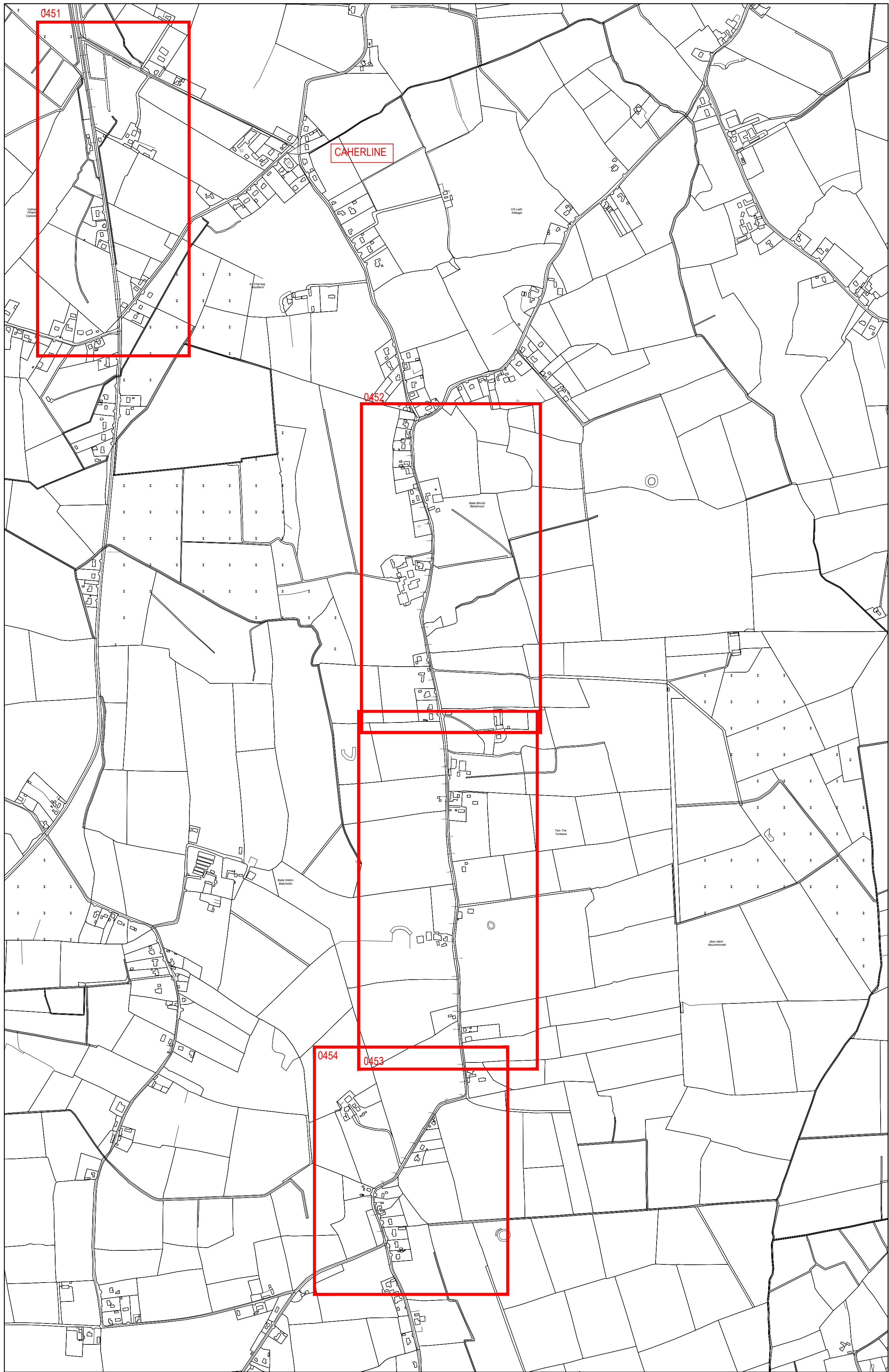


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CAHERLINE NEWTOWN GROUP WATER SCHEME NETWORK UPGRADE

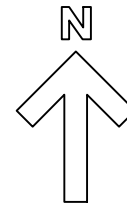
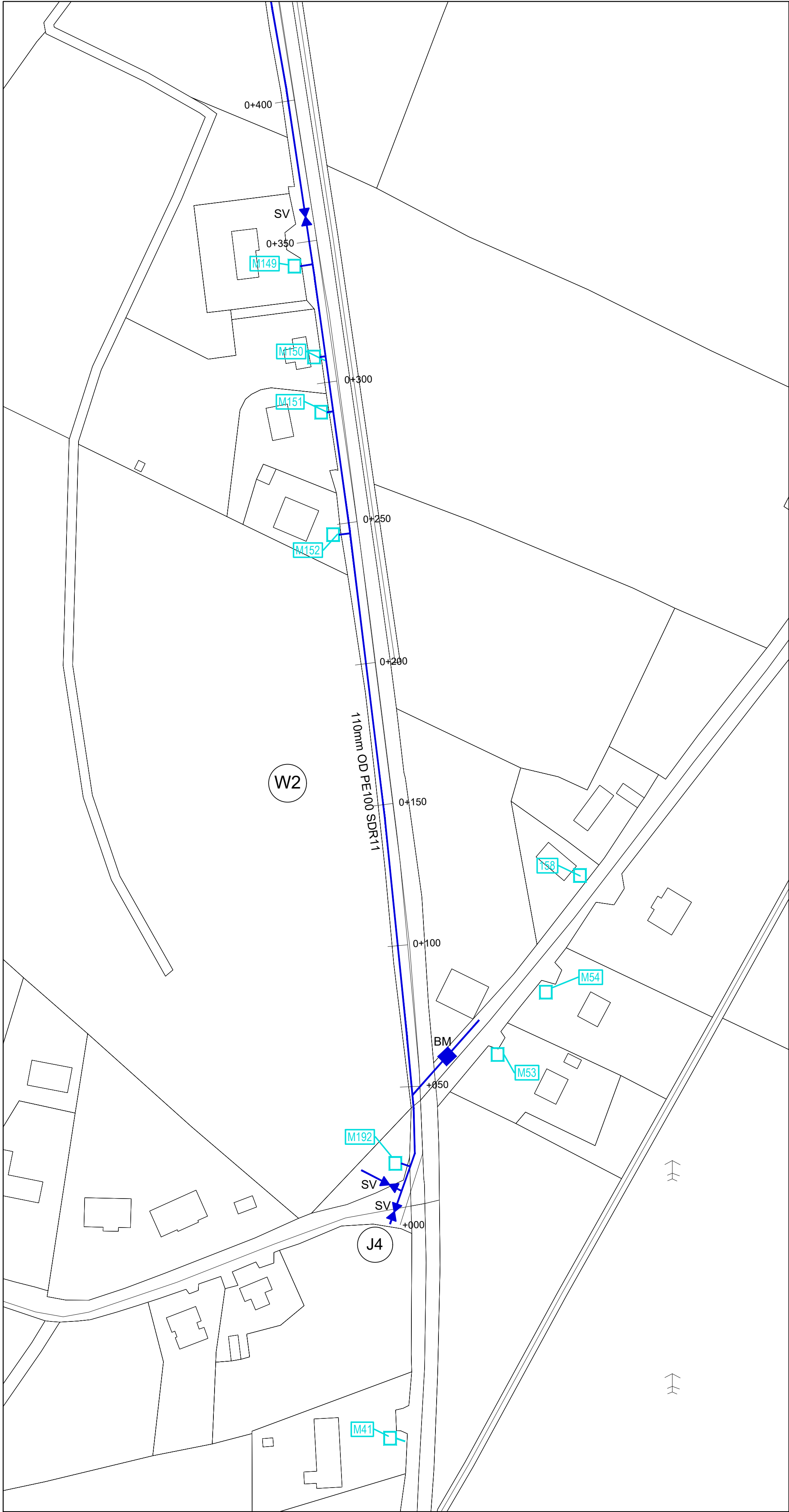
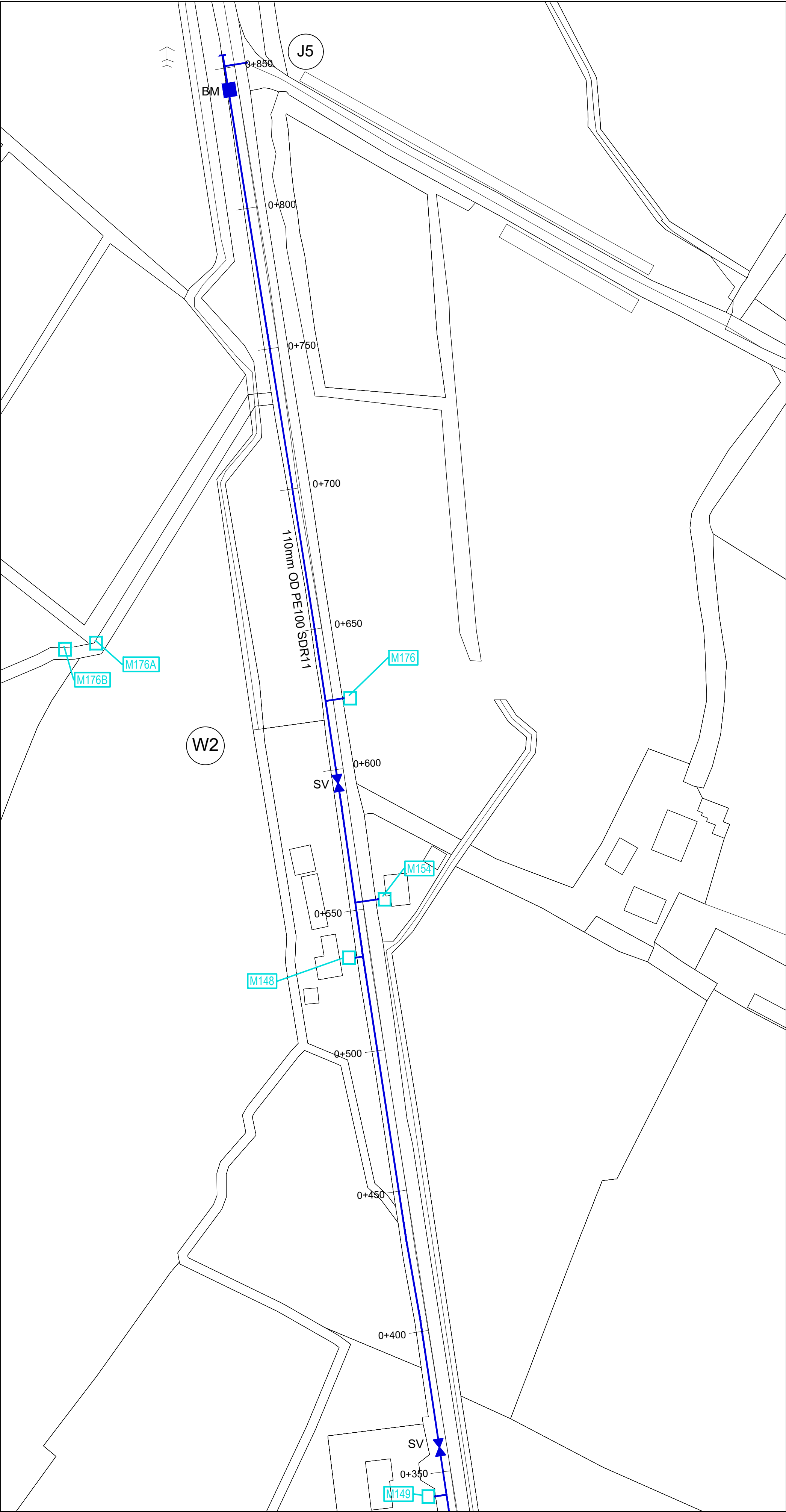
LIST OF DRAWINGS

<u>Drg. No.</u>	<u>Drawing Title</u>
25023-TJOC-XX-XX-DR-C-0450	KEY PLAN
25023-TJOC-XX-XX-DR-C-0451	PROPOSED WATERMAIN LAYOUT - SHEET 1
25023-TJOC-XX-XX-DR-C-0452	PROPOSED WATERMAIN LAYOUT - SHEET 2
25023-TJOC-XX-XX-DR-C-0453	PROPOSED WATERMAIN LAYOUT - SHEET 3
25023-TJOC-XX-XX-DR-C-0454	PROPOSED WATERMAIN LAYOUT - SHEET 4
25023-TJOC-XX-XX-DR-C-0500	BEDDING DETAILS
25023-TJOC-XX-XX-DR-C-0501	VALVE CHAMBER DETAILS
25023-TJOC-XX-XX-DR-C-0502	TRENCH REINSTATEMENT DETAILS
25023-TJOC-XX-XX-DR-C-0503	MISCELLANEOUS DETAILS - SHEET 1 OF 2
25023-TJOC-XX-XX-DR-C-0504	MISCELLANEOUS DETAILS - SHEET 2 OF 2



KEY PLAN
SCALE: 1:7500

C01	AT	ISSUED FOR TENDER	22.07.2026
REV	STAT	DESCRIPTION	DATE
DRAWING STATUS: ISSUED FOR TENDER			
CHECKED BY: LC		REVIEWED BY: BP	APPROVED BY: NMCC
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PROJECT: CAHERLINE NEWTOWN GWS NETWORK UPGRADE			
CLIENT: CAHERLINE NEWTOWN GWS			
DRAWING TITLE: PROPOSED WATERMAIN LAYOUT KEY PLAN			
SCALE: 1:7500		(A1)	
PROJECT - ORIGINATOR - VOLUME - LOCATION - TYPE - ROLE - NUMBER 25023-TJOC-XX-XX-DR-C-0450			REV: C01



- NOTES:
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 - FOR BEDDING DETAILS REFER TO DRAWING 0500.
 - FOR VALVE CHAMBER DETAILS REFER TO DRAWING 0501
 - FOR TRENCH REINSTATEMENT DETAILS REFER TO DRAWING 0502.
 - FOR BULK METER AND MISCELLANEOUS DETAILS REFER TO DRAWING 0503.

LEGEND

PROPOSED WATERMAIN
CONSTRUCTED BY HDD

PROPOSED WATERMAIN
CONSTRUCTED BY OPEN DIG

SCOUR VALVE

SLUICE VALVE

AIR VALVE

FIRE HYDRANT

BULK METER

EXISTING HOUSE METERS

JUNCTION NUMBERS
(REFER TO DRAWING 0503 FOR DETAILS)

W1

W1

ScV

SV

AV

FH

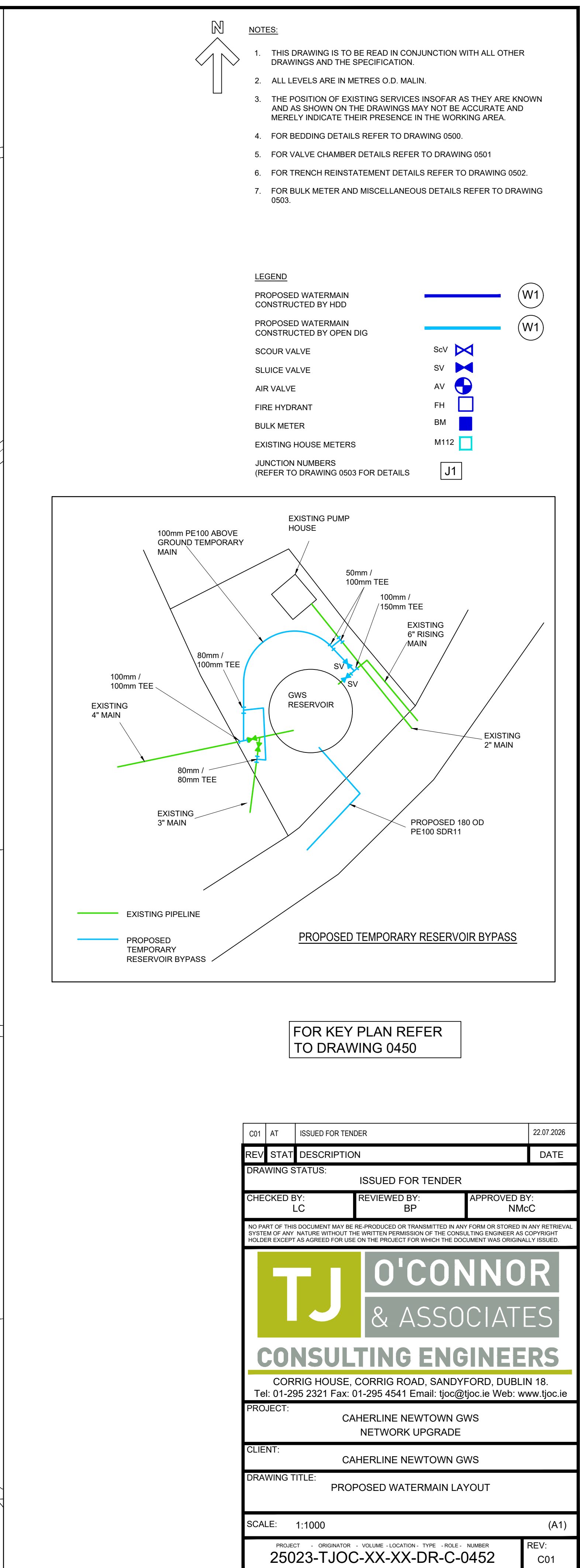
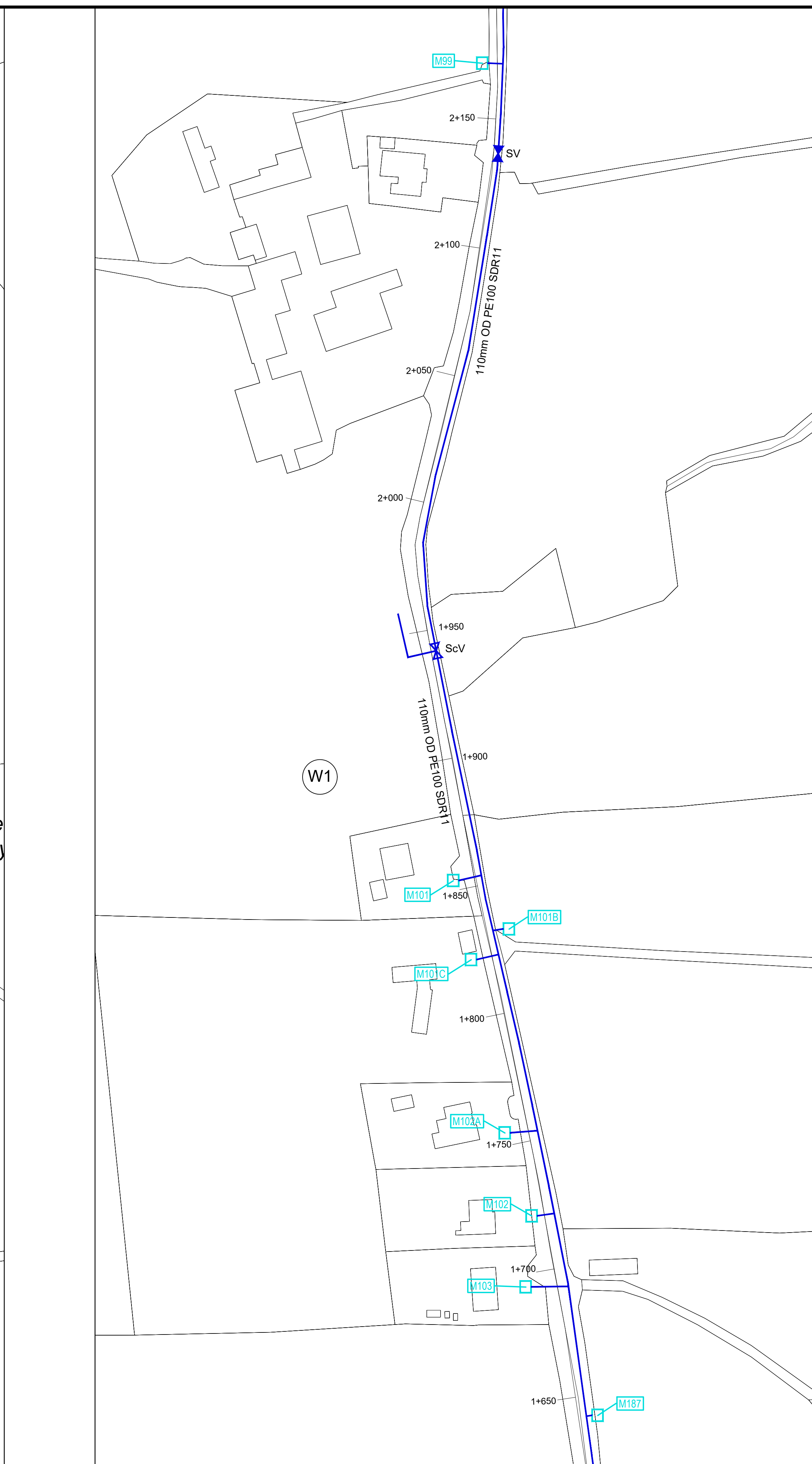
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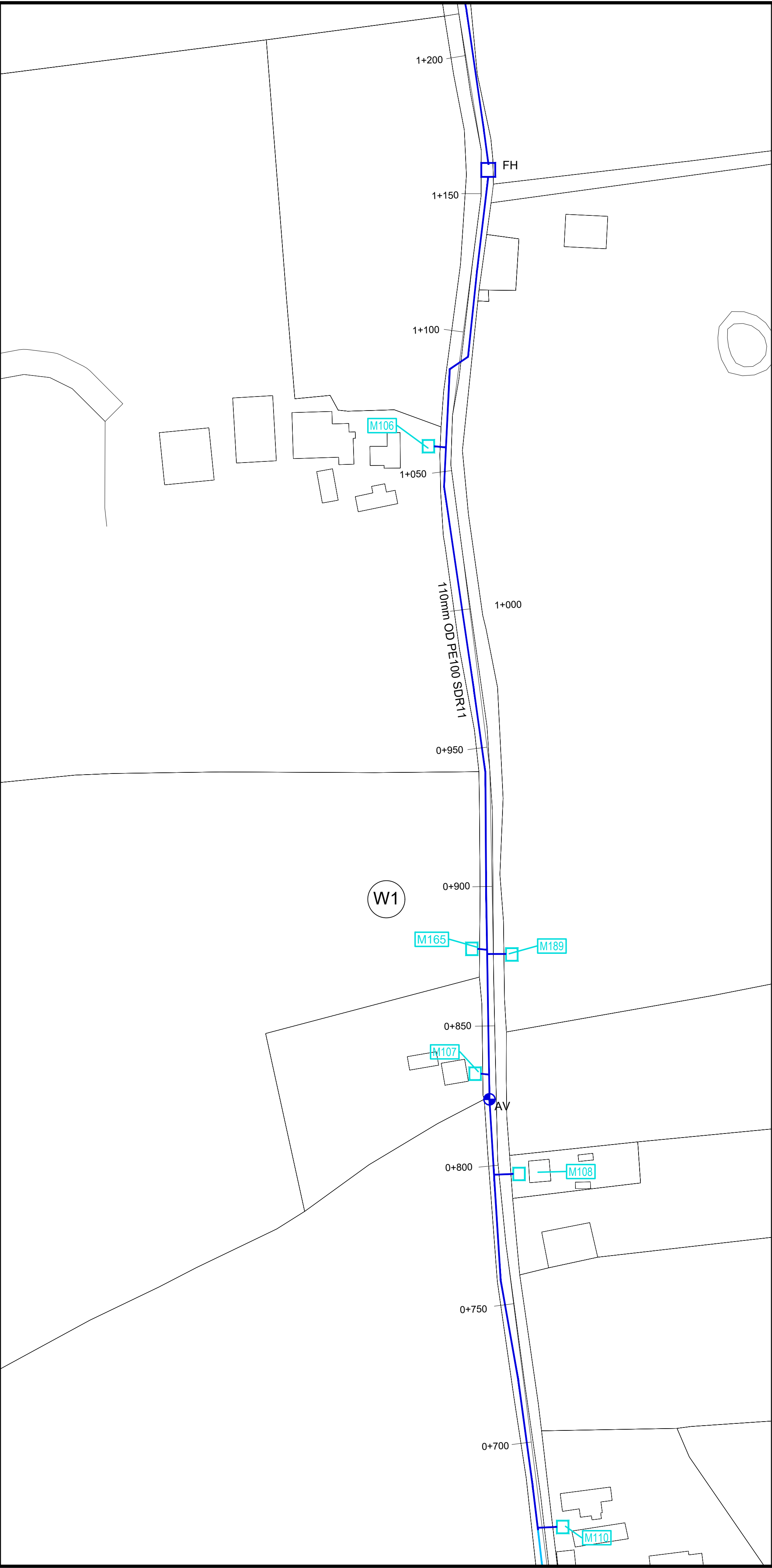
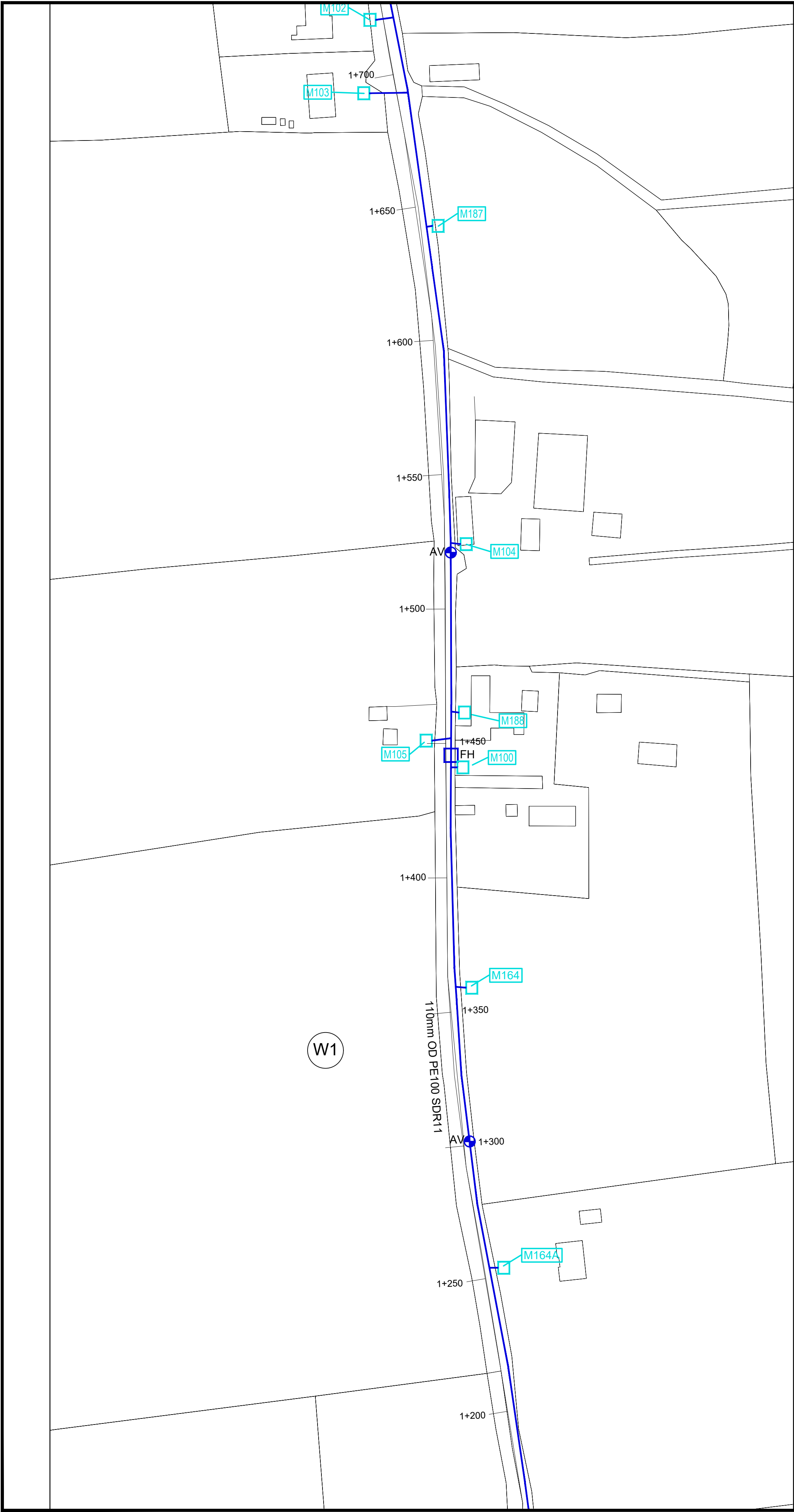
M112

J1

FOR KEY PLAN REFER
TO DRAWING 0450

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PROJECT:			
CAHERLINE NEWTOWN GWS NETWORK UPGRADE			
CLIENT:			
CAHERLINE NEWTOWN GWS			
DRAWING TITLE:			
PROPOSED WATERMAIN LAYOUT			
SCALE: 1:1000 (A1)			
PROJECT - ORIGINATOR - VOLUME - LOCATION - TYPE - ROLE - NUMBER			REV:
25023-TJOC-XX-XX-DR-C-0451			C01





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 - FOR TRENCH REINSTATEMENT DETAILS REFER TO DRAWING 0502.
 - FOR BULK METER AND MISCELLANEOUS DETAILS REFER TO DRAWING 0503.

LEGEND

PROPOSED WATERMAIN
CONSTRUCTED BY HDD

PROPOSED WATERMAIN
CONSTRUCTED BY OPEN DIG

SCOUR VALVE

SLUICE VALVE

AIR VALVE

FIRE HYDRANT

BULK METER

EXISTING HOUSE METERS

JUNCTION NUMBERS
(REFER TO DRAWING 0503 FOR DETAILS)

ScV

SV

AV

FH

BM

M112

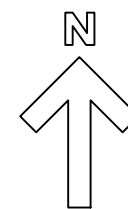
J1

W1

W1

FOR KEY PLAN REFER
TO DRAWING 0450

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PROJECT: CAHERLINE NEWTOWN GWS NETWORK UPGRADE			
CLIENT: CAHERLINE NEWTOWN GWS			
DRAWING TITLE: PROPOSED WATERMAIN LAYOUT			
SCALE: 1:1000			(A1)
PROJECT - ORIGINATOR - VOLUME - LOCATION - TYPE - ROLE - NUMBER 25023-TJOC-XX-XX-DR-C-0453			REV: C01



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 4. FOR BEDDING DETAILS REFER TO DRAWING 0500.
 5. FOR VALVE CHAMBER DETAILS REFER TO DRAWING 0501
 6. FOR TRENCH REINSTATEMENT DETAILS REFER TO DRAWING 0502.
 7. FOR BULK METER AND MISCELLANEOUS DETAILS REFER TO DRAWING 0503.

LEGEND

PROPOSED WATERMAIN
CONSTRUCTED BY HDD

PROPOSED WATERMAIN
CONSTRUCTED BY OPEN DIG

SCOUR VALVE

SLUICE VALVE

AIR VALVE

FIRE HYDRANT

BULK METER

EXISTING HOUSE METERS

JUNCTION NUMBERS

(REFER TO DRAWING 0503 FOR DETAILS)

ScV 

SV AV

FH ☐

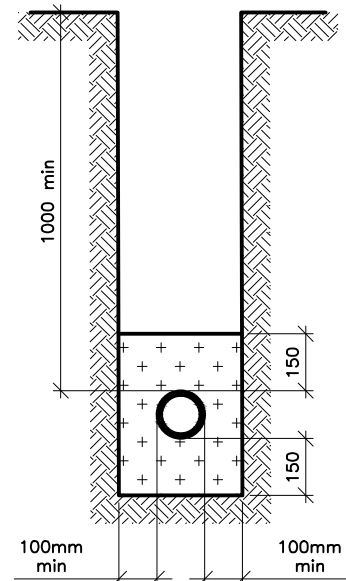
BM M112 ☐

11

J1

FOR KEY PLAN REFER
TO DRAWING 0450

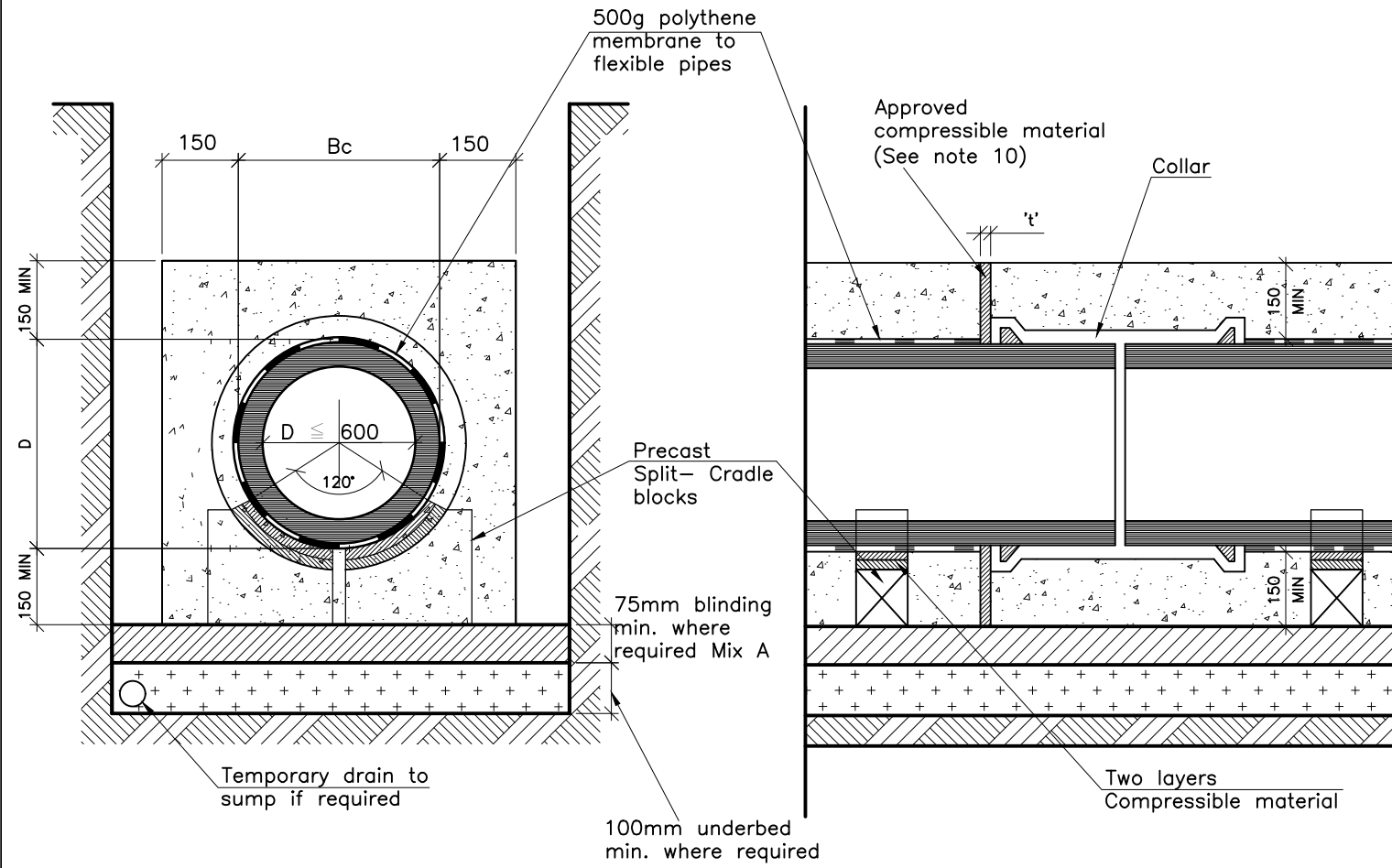
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DRAWING STATUS:		ISSUED FOR TENDER	
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PROJECT:		CAHERLINE NEWTOWN GWS NETWORK UPGRADE	
CLIENT:		CAHERLINE NEWTOWN GWS	
DRAWING TITLE:		PROPOSED WATERMAIN LAYOUT	
SCALE: 1:1000			(A1)
PROJECT - ORIGINATOR - VOLUME - LOCATION - TYPE - ROLE - NUMBER 20253-TJOC-XX-XX-DR-C-0454			REV: C01



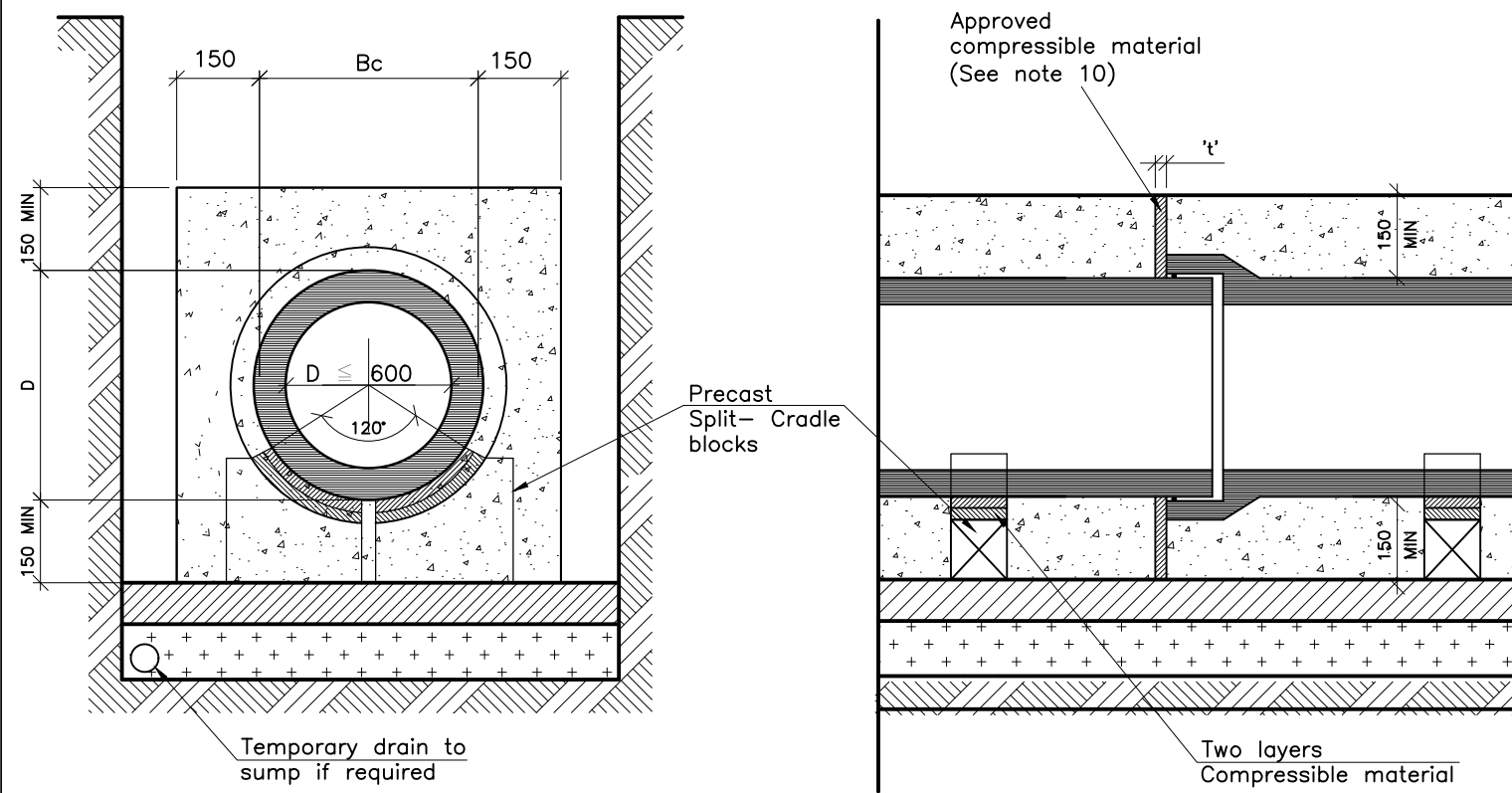
MACHINE CUT, TRENCH BOTTOM
CLASS E – For 110 AND 63mmO.D.
PE 100 SDR11 Pipes

NOTE : The Contractor shall allow for greater trench widths as required as per his Method of Construction and also to accommodate equipment, as per Section 6.5 of the Guidelines for the Opening, Backfilling and Reinstatement of Openings in Public Roads (Apr.2017). All costs associated with Trench Widths shall be deemed to be included in the Contract Sum.

Detail 1



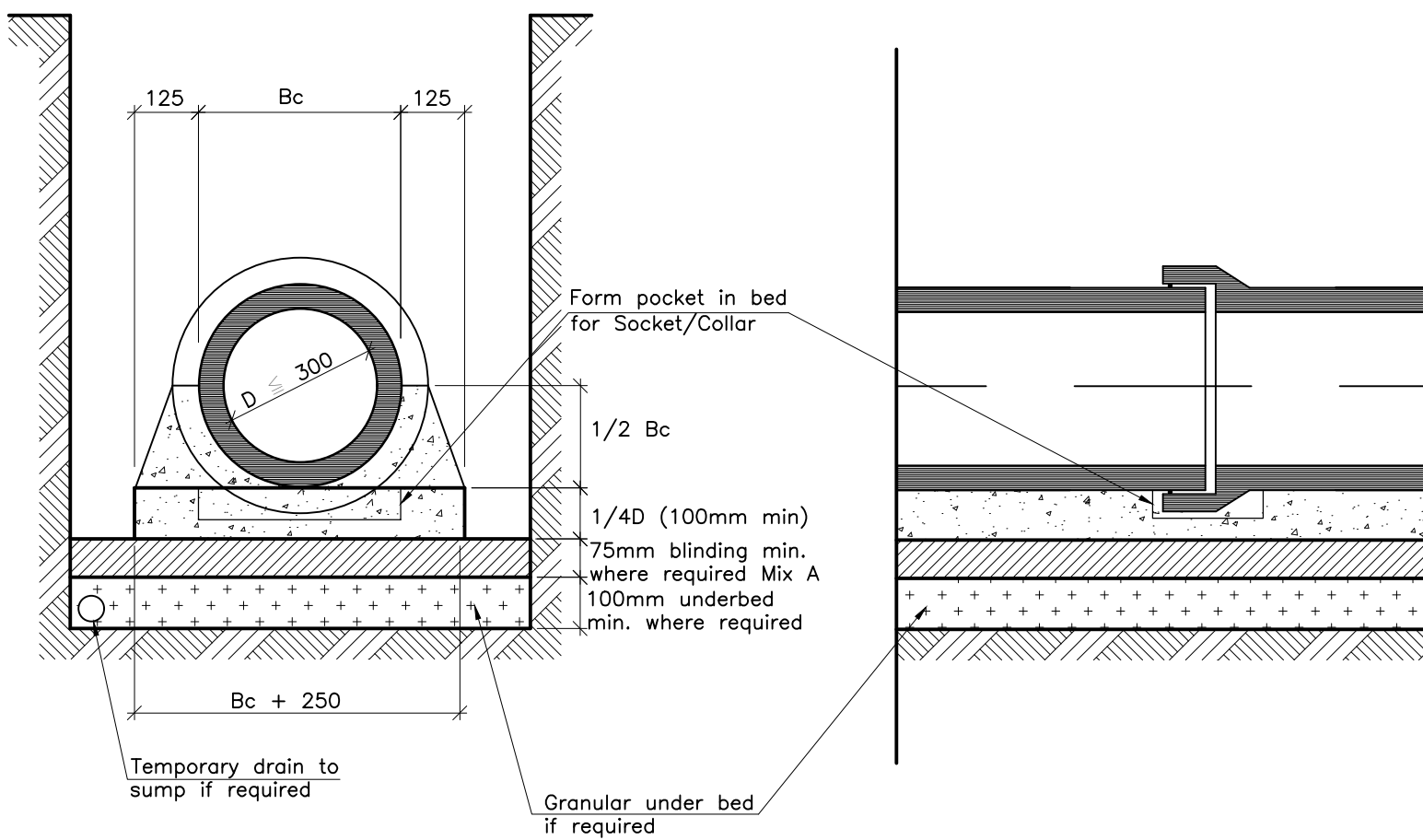
PIPES WITH COLLAR JOINTS



SOCKET AND SPIGOT PIPES

CONCRETE SURROUND

Detail 3



CONCRETE BED & HAUNCH

Detail 4

1. CONCRETE ARCHES, CRADLES AND SURROUND.

- 1.1. Concrete shall be Mix 'B', 30 N/mm² concrete with 20mm aggregate as described in the Specification.
- 1.2. No backfill, other than the initial 300mm of cover, shall be placed over the pipe until the compressive strength of the concrete has reached 15 N/mm².
- 1.3. The concrete shall be monolithic having no vertical or horizontal construction joints other than one vertical joint perpendicular to the line of the pipe at each pipe joint.
- 1.4. In the case of reinforced concrete cradles and arches the minimum area of steel shall be as follows :-

Nominal bore of pipe	Tranverse [per metre run]	Size [mm]	Longitudinal	Size [mm]
Not exceeding 400mm	400mm ²	10	200mm ²	8
400 – 800mm	800mm ²	12	310mm ²	10
800 – 1200mm	1200mm ²	16	470mm ²	10
1200 – 1600mm	1600mm ²	20	670mm ²	12
1600 – 2000mm	2000mm ²	20	750mm ²	12

- 1.5. In the case of reinforced concrete surround the steel reinforcement shall typically be as for cradles and arches with twice the area of steel unless specifically detailed otherwise.

2. BLINDING

- 2.1. 75mm minimum of Mix 'A' concrete blinding shall be used in general under concrete beds, surrounds and cradles. In rock the blinding may be dispensed with on the Engineer's instruction.

3. TYPE A GRANULAR BEDDING MATERIAL

- 3.1. Type A granular bedding material shall consist of rounded gravel which shall comply with the grading limits described in the Specification.
- 3.2. The compaction factor of Type A granular bedding material shall be determined in accordance with the Specification and extra care shall be taken with the compaction of material having a compaction factor greater than 0.1.

- 4.1. Where trench conditions dictate, or where instructed by the Engineer, a Type A granular underbed 100mm (min) deep shall be placed on trench bottom.

5. DIMENSIONS

- 5.1. Dimension 'X' : Denotes the thickness of the granular surround used over both barrel and socket/collar (if any) of pipes and shall be 150mm .

- 5.2. D – Denotes the nominal diameter of a pipe

- 5.3. Bc – Denotes the external diameter of a pipe

6. TYPE B SELECTED FILL MATERIAL

- 6.1. Type B selected fill shall be a uniform non-cohesive readily compacted material free from tree roots, vegetable matter, building rubbish and frozen soil and excluding clay lumps retained on a 75mm sieve and stones retained on a 25mm sieve.
- 6.2. Type B selected fill shall, consist of selected material removed from the trench excavations, screened if necessary, or if the excavated material is unsuitable it shall consist of suitable imported material.

7. WATER STOPS IN PIPE TRENCHES

- 7.1. In granular bedding and/or backfill, clay dams 300mm long shall be provided across the full trench and for the complete depth of the bedding and/or fill at intervals not exceeding 50m as described in the Specification.

8. TEMPORARY DRAIN

- 8.1. Temporary open jointed drains (75mm diam.) shall be placed in granular bedding and/or underbed where required.

9. PRECAST SUPPORT BLOCKS

- 9.1. Precast concrete support blocks complete with compressible pads consisting of two layers of Bitumen Damp-Proof sheeting complying with BS 743 Type 5, shall be used under pipes which require concrete Bed and Haunch, Cradle or Surround as set out in the Specification.

10. CONCRETE BEDDING JOINTS

- 10.1. Joints shall be formed in concrete Beds and Haunches, Cradles, Arches and Surrounds as described in the Specification and as detailed hereunder.

NOMINAL BORE OF PIPE (mm)	THICKNESS OF 2 LAYER COMPRESSIBLE FILLER 'Y' (mm)
LESS THAN 450	18
450 – 1200	36
EXCEEDING 1200	54

11. RIGID PIPES

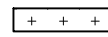
- 11.1. For the purpose of this drawing rigid pipes shall include Concrete (Conc.) Asbestos Cement (A.C.), and Vitrefied Clayware (V.C.) Pipes.
- 11.2. All types of bedding and surrounds may be used with rigid pipes.

12. FLEXIBLE PIPES

- 12.1. For the purpose of this drawing flexible pipes shall include Polyvinyl Chloride (PVC), Acrylonitrile Butadiene Styrene (ABS), Glass Reinforced Plastic (GRP), Polyethylene (P.E), Ductile Iron (D.I.) and Steel pipes.
- 12.2. Concrete bed, haunch and surrounds and Class E bedding are permissible for use with flexible pipes. Flexible pipes in excess of 150mm in diameter shall not be used, except where expressly specified, or permitted by the Engineer.

LEGEND

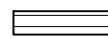
TYPE A GRANULAR BEDDING MATERIAL SHOWN THUS



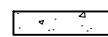
TYPE B FILL SHOWN THUS



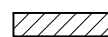
EXCAVATED MATERIAL LOOSELY FILLED SHOWN THUS



CONCRETE SHOWN THUS



CONCRETE BLINDING SHOWN THUS
(75mm min. unless specified elsewhere)



THIS DRAWING MUST BE READ IN CONJUNCTION WITH
THE PIPEWORK SECTIONS OF THE SPECIFICATION

C01	AT	ISSUED FOR TENDER	22.07.2026
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REV	SUIT	DESCRIPTION	DATE
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DRAWING STATUS: ISSUED FOR TENDER			
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PROJECT: CAHERLINE NEWTOWN GWS NETWORK UPGRADE

CLIENT: CAHERLINE NEWTOWN GWS

DRAWING TITLE: STANDARD BEDDING DETAILS FOR PIPES

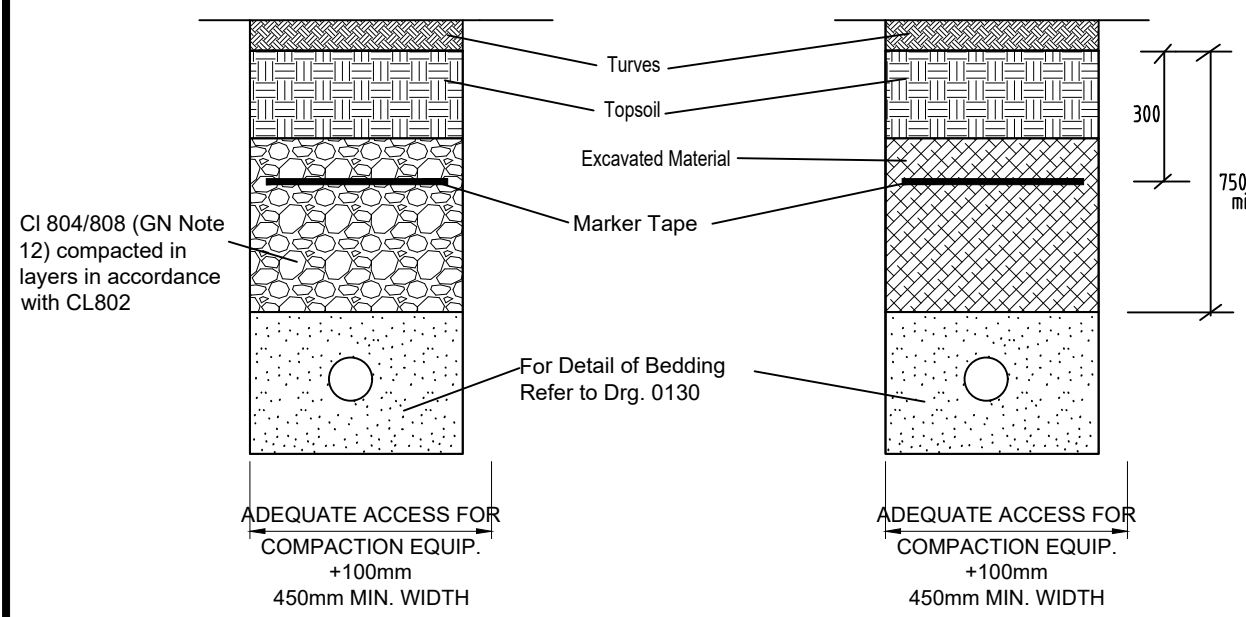
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PROJECT - ORIGINATOR - VOLUME - LOCATION - TYPE - ROLE - NUMBER
25023-TJOC-XX-XX-DR-C-0500
REV: C01

C01	AT	ISSUED FOR TENDER	22.07.2020
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PROJECT:		CAHERLINE NEWTOWN GWS NETWORK UPGRADE	
CLIENT:		CAHERLINE NEWTOWN GWS	
DRAWING TITLE:		STANDARD VALVE CHAMBER DETAILS	
SCALE:		NTS	
PROJECT - ORIGINATOR - VOLUME - LOCATION - TYPE - ROLE - NUMBER 25023-TJOC-XX-XX-DR-C-0501			REV: C01

To apply when nearest point of trench is within one metre of paved edge of a national or regional road or in the median of a dual carriageway or motorway or within 0.5 metres of paved edge of a local road. In addition, the compacted 808 material shall extend to the road edge.

To apply when nearest point of trench is over one metre from paved edge of a national or regional road or over 0.5 metres from paved edge of a local road.



NOTES:

Notes 1-17 listed in General Reinstatement Notes apply.

18. Prior to excavation, all grass areas are to be cut into turves which are to be carefully stacked and reused within one week of cutting during the period 1st April to 31st August or within two weeks of cutting during the remainder of the year. Turves not used within these periods shall be regarded as topsoil. Outside of this period or where turves from grass area are not suitable, imported turves approved by the road authority are to be used.
19. Where topsoiling and seeding is permitted by the road authority the following shall apply:
 - a. Prior to seeding or turfing, an approved fertilizer shall be evenly distributed on the topsoil at a rate of not less than 100g per sq. metre
 - b. The areas to be grassed shall be covered with topsoil to a minimum depth of 100mm which shall be reduced to a fine 10th, free from stones and debris with any dimension greater than 25mm. The topsoil shall be graded and lightly compacted to 100mm depth or existing depth - whichever is greater. Any outstanding debris or stones exceeding 25mm dimension shall be removed.
 - c. Pay due regard to the season and weather condition before sowing grass seed. Immediately prior to sowing the grass seed, the topsoil shall be reduced to a fine 10th. Sowing the grass seed shall be carried out by an even distribution, using a blend of (per Hectare) 170kg Manhattan Rye Grass and 13kg Dwarf Clover or other mix as specified by the road authority. For slopes in excess of ten degrees, these quantities shall be increased by 50%. The seed shall be covered by lightly raking into the surface of the topsoil. The area shall be watered every second day.
20. All drainage channels shall be marked on the carriageway, mapped and shall be fully restored in conjunction with verge reinstatement to ensure that surface water runoff is discharged from the road surface.
21. All temporary reinstatement as detailed above shall be carried out immediately after backfilling the When all settlement has taken place or after a three month period, whichever is the greater, the trench shall be topped up with topsoil to its original level.
22. Where works are in close proximity to trees/tree roots compliance with BS 5837:2012 is required.

DETAIL 1

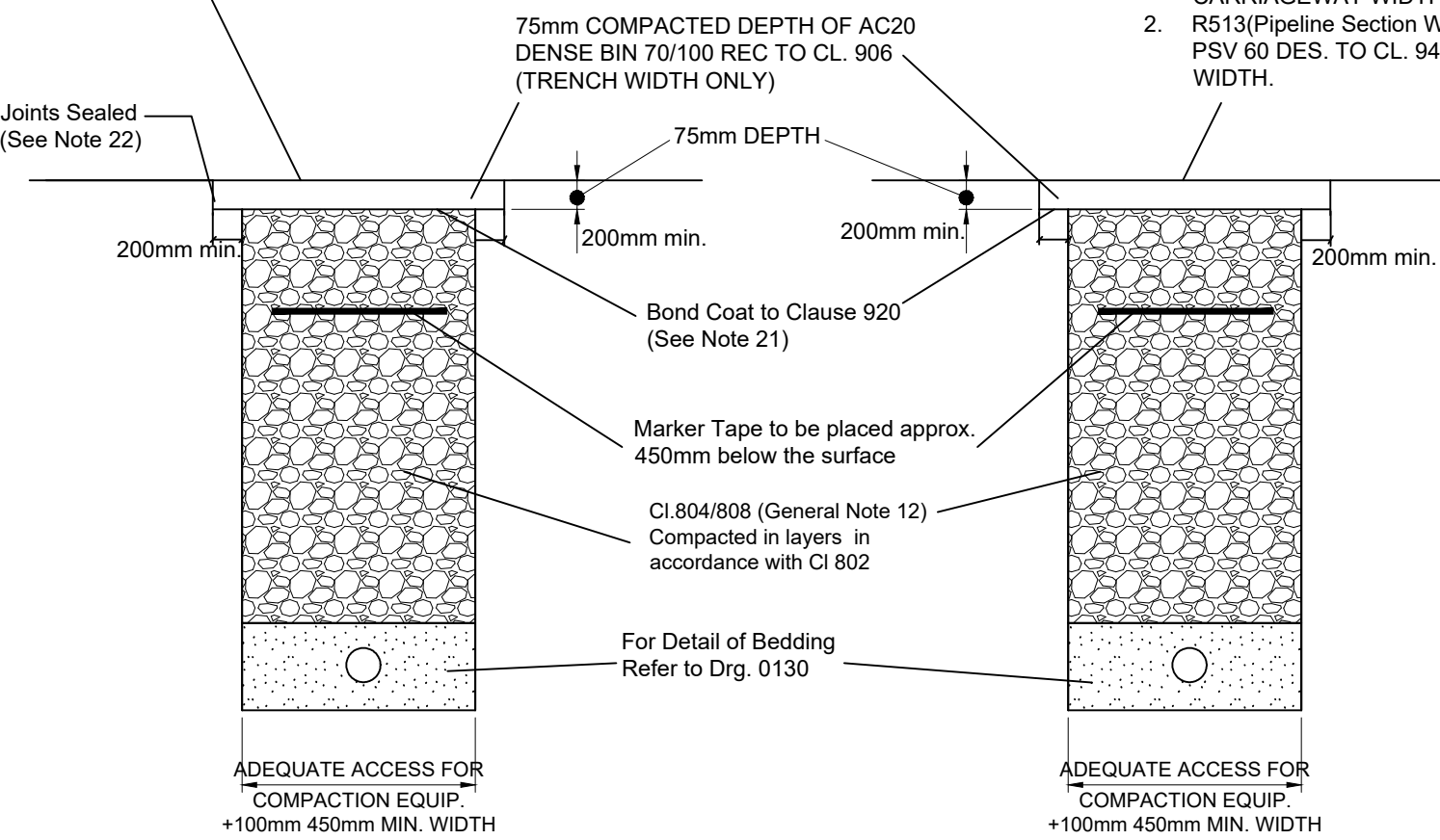
PERMANENT REINSTATEMENT
GRASS VERGES, MEDIANS, FIELDS AND LAWNS

SURFACE DRESS SURFACE TO CL. 919/CL. 912, AS FOLLOWS:

1. PIPELINE SECTION W1 FULL ROAD CARRIAGEWAY WIDTH(Ballybrood/Gallaboola Road)
2. R513 (PIPELINE SECTION W2) HALF ROAD CARRIAGEWAY WIDTH

SURAFACING: TO HDD PITS AS FOLLOWS:

1. BALLYBRROD / GALLABOOLA ROAD (Pipeline Section W1) SURFACE DRESS TO CL.919/CL.921 FULL ROAD CARRIAGEWAY WIDTH.
2. R513(Pipeline Section W2) SMA 14 PMB SURF 65/100 PSV 60 DES. TO CL. 942 HALF ROAD CARRIAGEWAY WIDTH.



LONGITUDINAL OPENING

HDD PITS

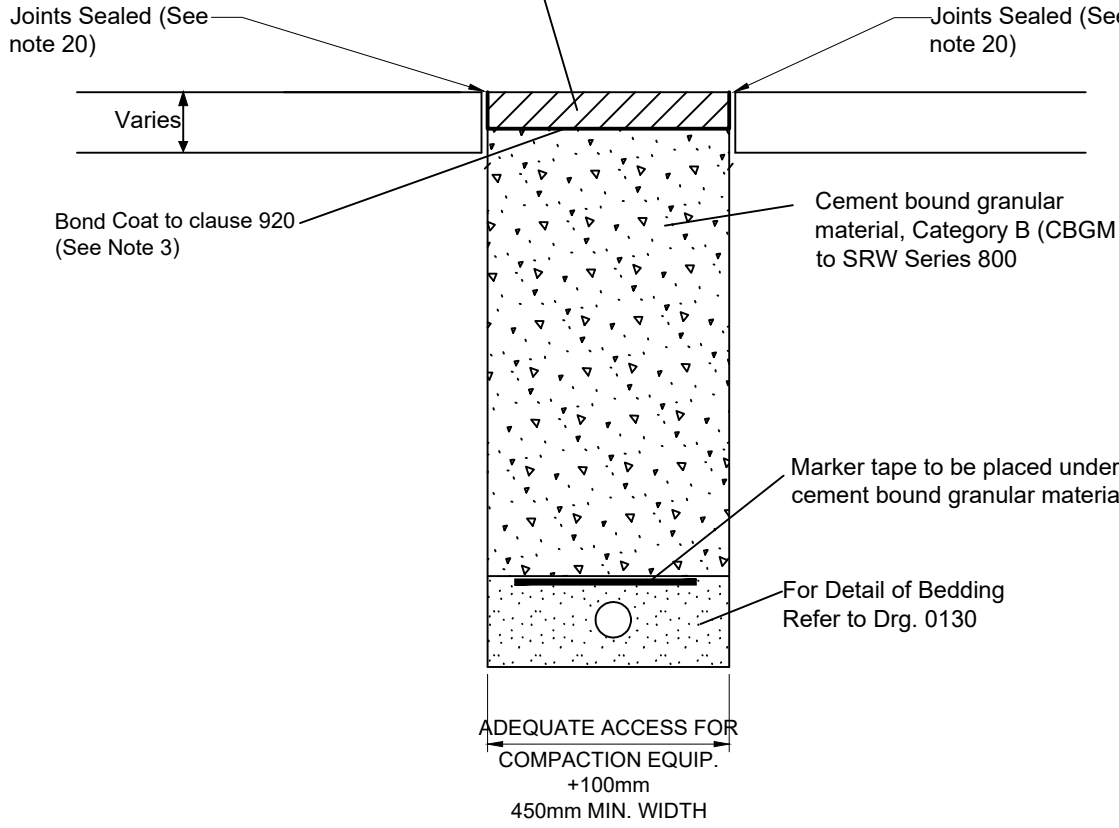
NOTES:

- Notes 1-17 listed in General Reinstatement Notes apply.
18. As a minimum the reinstatement layer shall match existing bound AC layers or depths shown.
 19. Where a temporary surface has been used, material shall be planned out to the depth specified in this drawing. The new permanent surface shall be machine laid and mechanically compacted with a vibrating roller.
 20. Where the trimmed edge of an excavation is within 400mm* of a joint/edge, ironwork or other reinstatement, this trimmed edge shall be extended to include same and the area of reinstatement shall be extended accordingly. (* increase to 800mm where this is pre-existing practice)
 21. Clause 808 or Cement Bound Granular Material surface to be sprayed per Clause 920 prior to application of Asphalt Concrete Layer.
 22. Joint sealer shall be a hot 40/60 pen bitumen binder or cold thixotropic bitumen 50 - 70 pen to be applied to all vertical cuts in accordance with B.S. 594987 prior to application of bituminous materials.
 23. For roads without an Asphalt Concrete surface (e.g. may be CL. 804 with double Surface Dressing), the road authority may at its discretion permit the temporary reinstatement surface of Asphalt Concrete to be regulated in lieu of excavation and reinstatement; and subsequently surface dressed.
 24. Where road widths are greater than 5.5 metres and the works are confined to one half of the road, then the Surface Dressing shall only be applied over a half road width. Where the road widths are less than 5.5 metres, Surface Dressing should be applied over the full road width.
 18. Regard must be had to the seasonal restrictions affecting Surface Dressing (See IAT Surface Dressing Guidelines).
 19. On highly trafficked roads services must have a minimum cover of 750mm.
 20. Where required by the road authority the trench may be reinstated with a Cement Bound Granular Material.

DETAIL 4

PERMANENT REINSTATEMENT LONGITUDINAL
OPENING AND HDD PITS IN ROADWAY

75mm COMPACTED DEPTH OF AC10 OR AC14
CLOSE SURF 70/100 REC TO CL. 912
OR
75mm COMPACTED DEPTH OF AC20 DENSE BIN
70/100 REC TO CL. 906



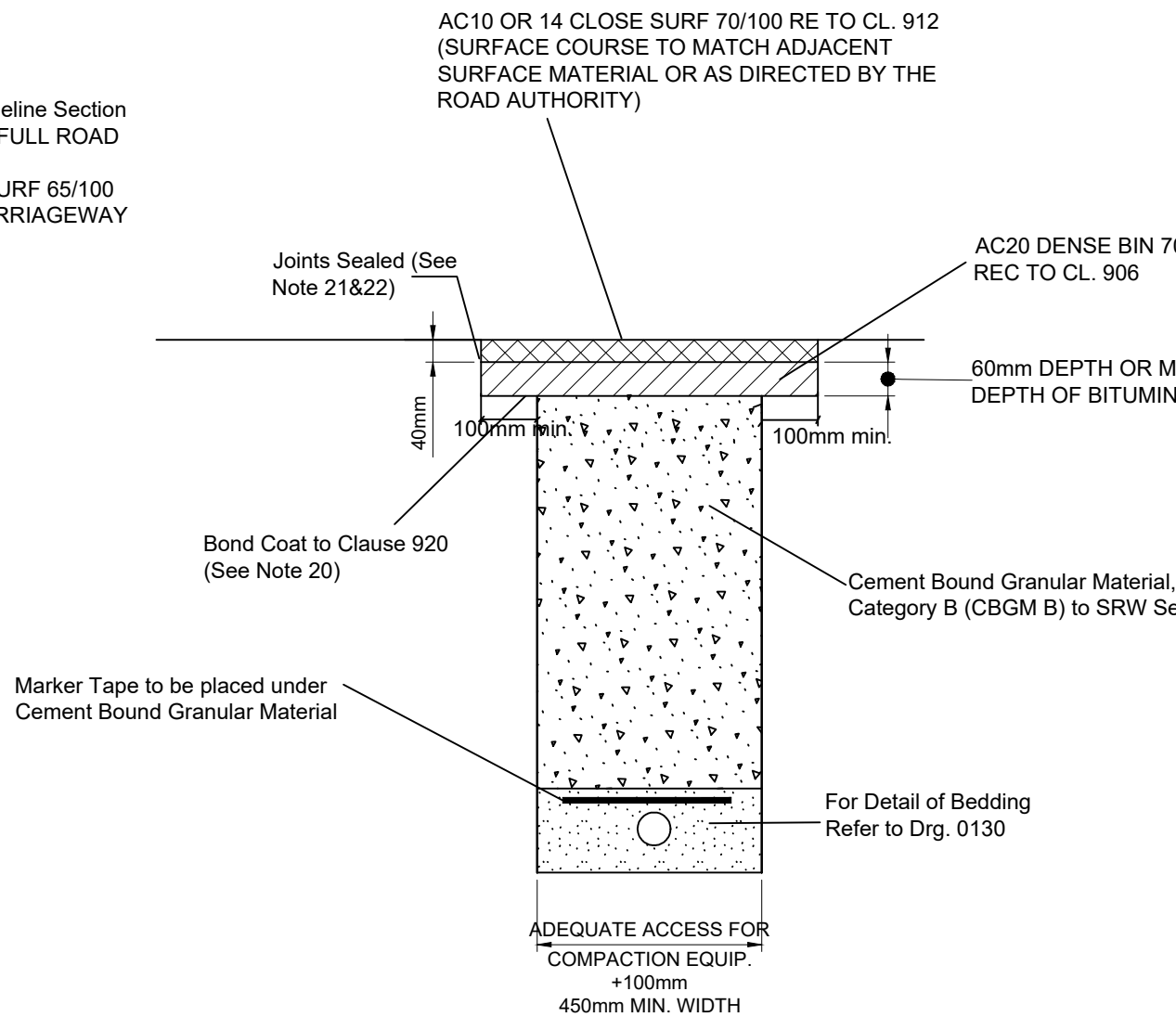
NOTES:

Notes 1-17 listed in General Reinstatement Notes apply.

18. As a minimum the reinstatement layer shall match existing bound AC layers or depths shown. Cement Bound Granular Material surface to be sprayed per Clause 920 prior to application of Asphalt Concrete Layer.
19. Joint sealer shall be a hot 40/60 pen bitumen binder or cold thixotropic bitumen 50 - 70 pen to be applied to all vertical cuts in accordance with B.S. 594987 prior to application of bituminous materials.
20. Licence Holder must maintain temporary reinstatement to a safe and acceptable standard.
21. Temporary road surface warning signs must be used in accordance with the Traffic Signs Manual (Chapter 8) & RLS 8/2007.
22. Refer to DETAIL 5 for requirements on permanent reinstatement.
23. The coarse aggregate in the surface course Asphalt Concrete shall have a polished stone value of not less than 60.

DETAIL 2

TEMPORARY REINSTATEMENT (Pavement)
TRANSVERSE OPENINGS IN ROADWAYS



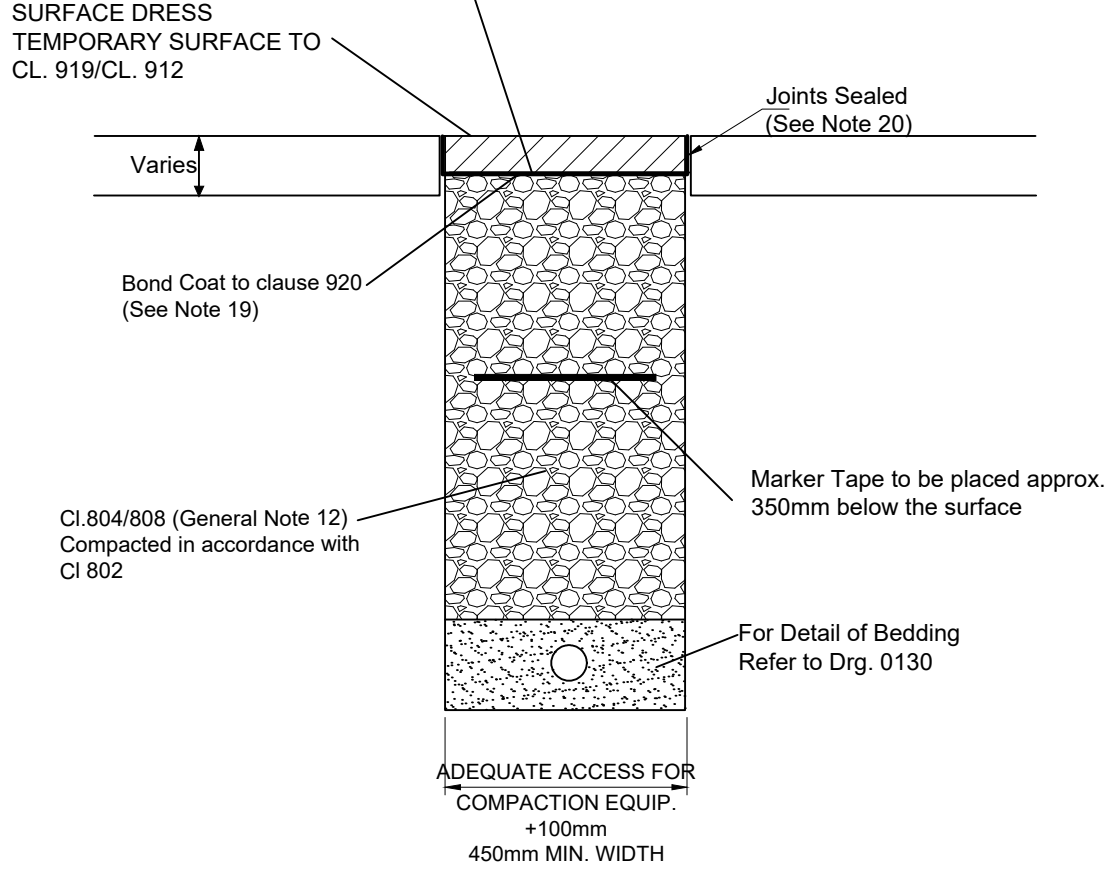
NOTES:

- Notes 1-17 listed in General Reinstatement Notes apply.
18. Where a temporary surface has been used, material shall be planned out to the depth specified in this drawing. The new permanent surface shall be machine laid and mechanically compacted with a vibrating roller.
 19. Where the trimmed edge of an excavation is within 400mm* of a joint/edge, ironwork or other reinstatement, this trimmed edge shall be extended to include same and the area of reinstatement shall be extended accordingly. (* increase to 800mm where this is pre-existing practice)
 20. Cement Bound Granular Material surface to be sprayed per Clause 920 prior to application of Asphalt Concrete Layer.
 21. Joint sealer to be a hot 40/60 pen bitumen binder or cold thixotropic bitumen 50 - 70 pen to be applied to all vertical cuts in accordance with B.S. 594987 prior to application of bituminous materials.
 22. Joints sealed with hot bitumen and topped with fine sand/grit to get a minimum 55 skid resistance value as determined by the Portable Skid Resistance Pendulum used in accordance with Road Note 27 and shall not exceed 3mm depth and 50mm width or other method approved by the road authority.
 23. The coarse aggregate in the surface course Asphalt Concrete shall have a polished stone value of not less than 60.
 24. Surface course to match existing surfaces unless otherwise directed by road authority.

DETAIL 5

PERMANENT REINSTATEMENT TRANSVERSE OPENING IN
ROADWAY

75mm COMPACTED DEPTH OF AC10 OR AC14
CLOSE SURF 70/100 REC TO CL. 912
OR
75mm COMPACTED DEPTH OF AC20 DENSE BIN
70/100 REC TO CL. 906



NOTES:

Notes 1-17 listed in General Reinstatement Notes apply.

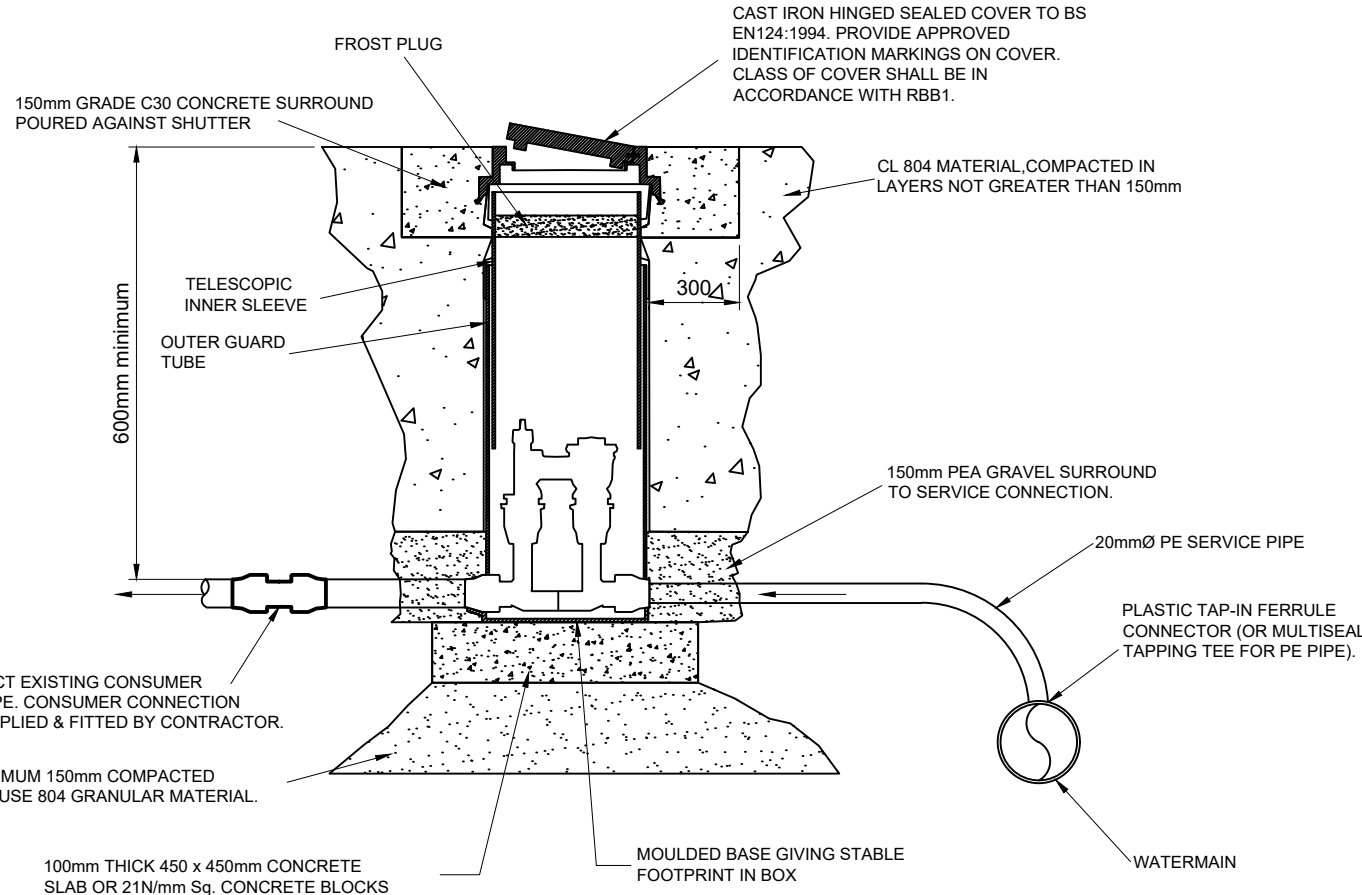
18. As a minimum the reinstatement layer shall match existing bound AC layers or depths shown.
19. Clause 808 surface or Cement Bound Granular Layer to be sprayed per Clause 920 prior to application of Asphalt Concrete Layer.
20. Joint sealer shall be a hot 40/60 pen bitumen binder or cold thixotropic bitumen 50 - 70 pen to be applied to all vertical cuts in accordance with B.S. 594987 prior to application of bituminous materials.
21. Licence Holder must maintain temporary reinstatement to a safe and acceptable standard.
22. Temporary road surface warning signs must be used in accordance with the Traffic Signs Manual (Chapter 8) & RLS 8/2007.
23. The coarse aggregate in the surface course Asphalt Concrete shall have a polished stone value of not less than 60.

DETAIL 3

TEMPORARY REINSTATEMENT
LONGITUDINAL OPENING AND HDD PITS IN ROADWAY

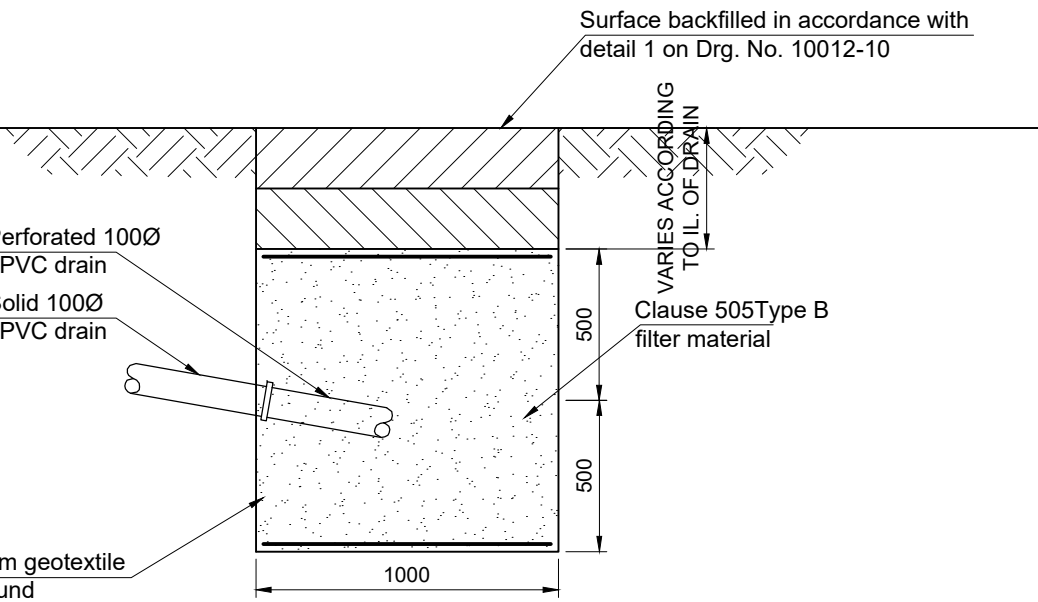
General Reinstatement Notes

1. Compliance with these drawings and details are mandatory. Dependent on circumstances and where drawings provide options/alternatives, road authorities may specify one option only as being applicable. Where a utility has an approved equivalent detail for bedding and surround this may be substituted for the bedding and surround detail shown in the Standard Drawings, provided it is agreed with the road authority in advance.
2. Full width/lane/bay reinstatements works shall be machine laid with materials used in accordance with TII Specification for Road Works and use materials and depths of reconstruction to match the existing surface. Note: Surface Dressing does not constitute full width reinstatement unless the structural Asphaltic Concrete (AC) layer is provided over the full width.
3. On approach to the works site, the name of the contractor and Licence Holder must be clearly displayed with a 24 hour contact number.
4. All works shall have a temporary traffic management plan, which shall be available for inspection on site, and shall comply with the Traffic Signs Manual and health and safety requirements.
5. Prior to any excavation works taking place, the location of all underground and over ground services must be identified and marked by a competent person trained in the use of cable detectors. Contact shall be made with all relevant service providers in this regard.
6. All works and materials shall comply with the TII Specification for Road Works. Series 900 of that specification will be the March 2011 version. All other Series will be to the current version.
7. Excavation on a road should not be closer than 500mm to the kerb line in order to prevent undermining of the adjacent footway. The trench should be located so as to avoid surface joints being located in the wheel track as far as reasonably practicable.
8. All bound (or concrete) edges shall be saw cut to expose the full vertical thickness of each layer prior to excavation. All edges shall be essentially straight, smooth and vertical.
9. Excavations shall be sufficiently protected to avoid harmful effects caused by weather or adjacent wheel loading.
10. Refer to Chapter 6 for requirements on pipe/duct type/colour and marker tape.
11. The method of work shall ensure proper compaction and such compaction may be tested by the road authority. To ensure adequate compaction, minimum clearances must be maintained vertically and horizontally between individual ducts or services installed in a group.
12. CL.808 to be used within 500mm of cement bound materials, concrete pavements, concrete structures or concrete products. Otherwise CL. 804 may be used. Foamed concrete to CL. 1043 may only be used as a bedding material or backfill material with prior approval of the road authority. Cement Bound Granular Mixture B shall have a minimum strength class of C8/10, unless otherwise directed.
13. Where steel plates or other trench covers are used, they must comply with Section 6.3.7.
14. Hand laying of hot bituminous mixtures shall be restricted to the following circumstances:
 - i. At the edges of the layers of material and at gullies, manholes and other ironwork.
 - ii. In confined spaces where it is impracticable for a paver to operate.
 - iii. At the approaches to expansion joints at bridges, viaducts or other structures.
 - iv. Transverse reinstatements less than 4 metres in width.
 - v. Longitudinal reinstatements less than 20 metres in length.
 - vi. Surface course reinstatements of longitudinal excavations less than 1 metre in width.
 - vii. Temporary reinstatementThe method of laying shall be such that the finished surface is free from dragging, tearing and segregation of the material.
15. All surface course aggregate shall have a minimum PSV of 60 declared unless otherwise specified by the road authority. Temporary surfaces to be managed in accordance with RLS8/2007.
16. Any damage to the road structure or areas adjacent to the opening and resulting from the works shall be repaired and included within the area to be reinstated.
17. Where there are exceptional circumstances not covered by the drawings, the reinstatement specification must be agreed with the road authority.



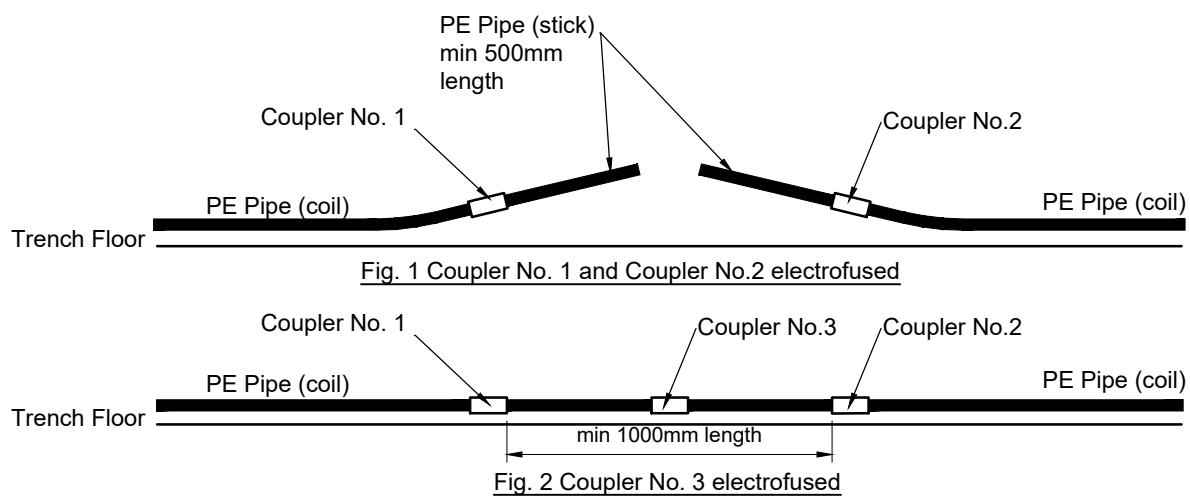
STANDARD RAISED BOUNDARY BOX DETAIL

N.T.S.



DETAIL 6

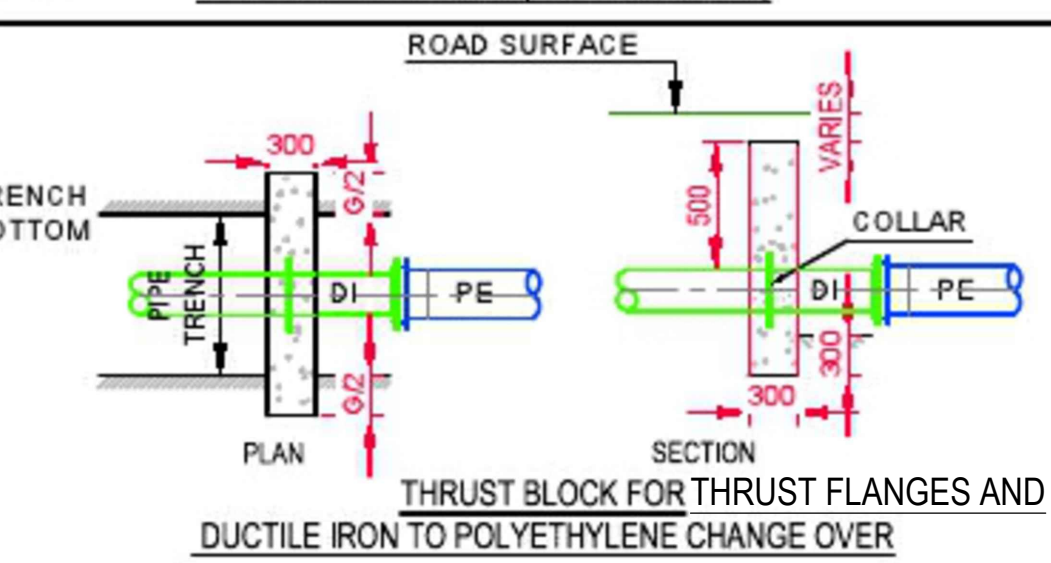
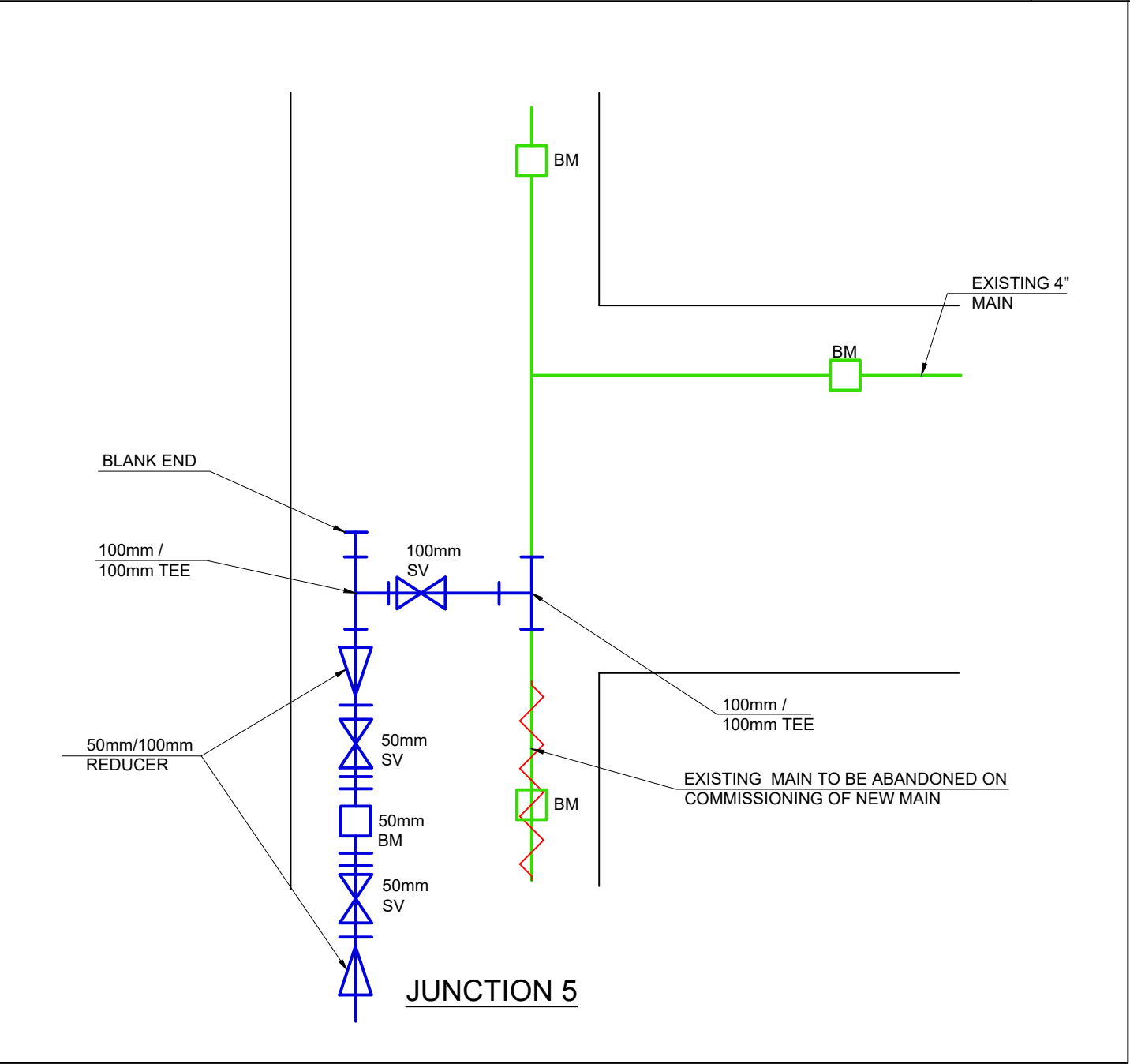
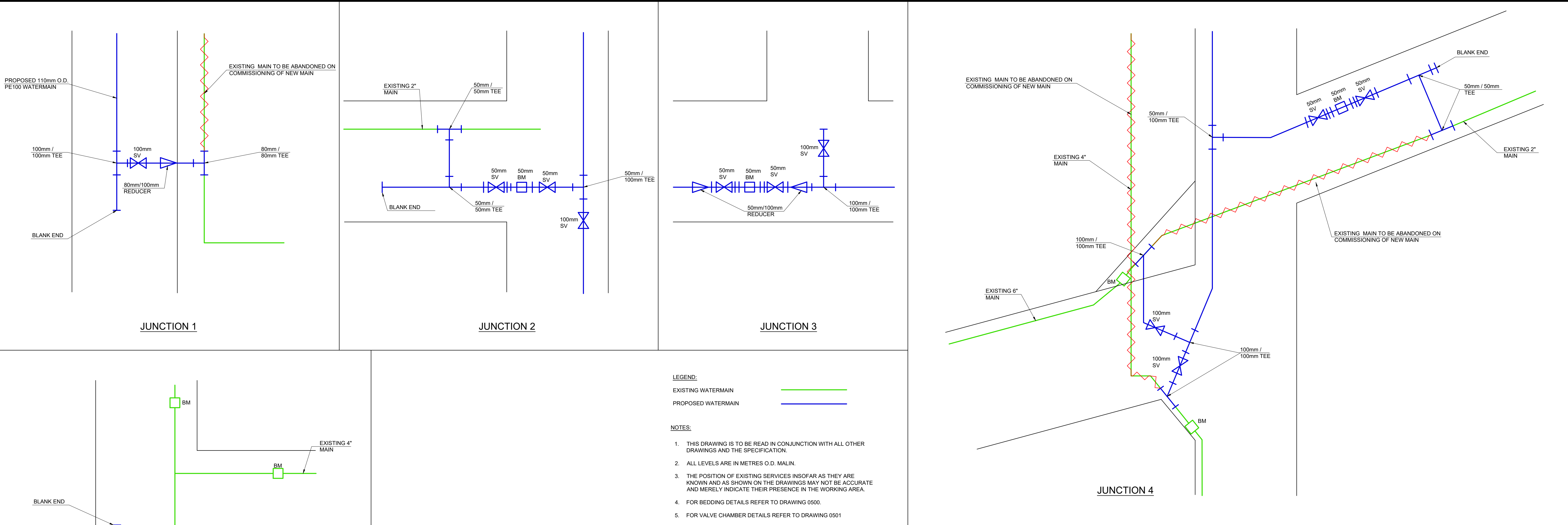
SOAKPIT DETAIL



DETAIL 7

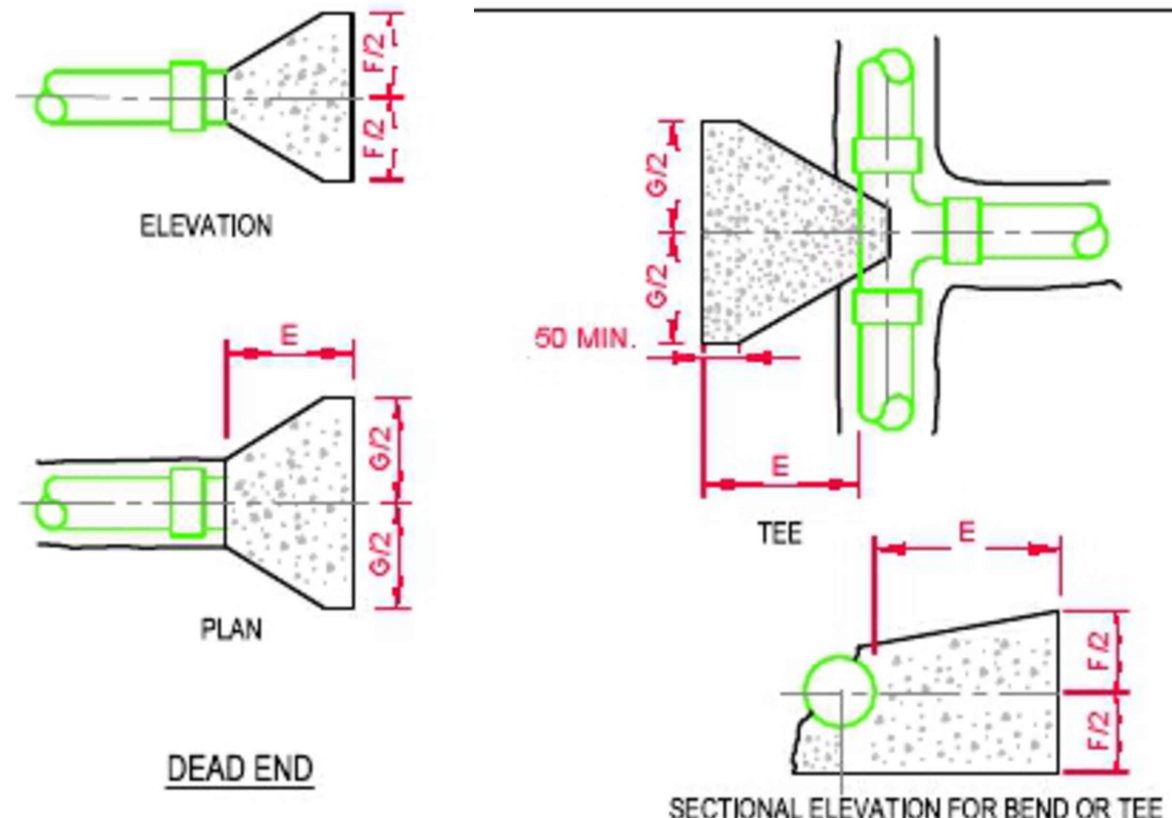
PE PIPE CONNECTION WITH
ELECTROFUSION COUPLERS

P01	S2	ISSUED FOR INFORMATION		
REV	SUIT	DESCRIPTION		DATE
DRAWING STATUS: ISSUED FOR INFORMATION				
CHECKED BY: LC		REVIEWED BY: BP	APPROVED BY: NMCC	
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PROJECT:		CAHERLINE NEWTOWN GWS NETWORK UPGRADE		
CLIENT:		CAHERLINE NEWTOWN GWS		
DRAWING TITLE:		TRENCH REINSTATEMENT DETAILS		
SCALE: NTS				(A1)
PROJECT - ORIGINATOR - VOLUME - LOCATION - TYPE - ROLE - NUMBER 25023-TJOC-XX-XX-DR-C-0502				
				REV: P01



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

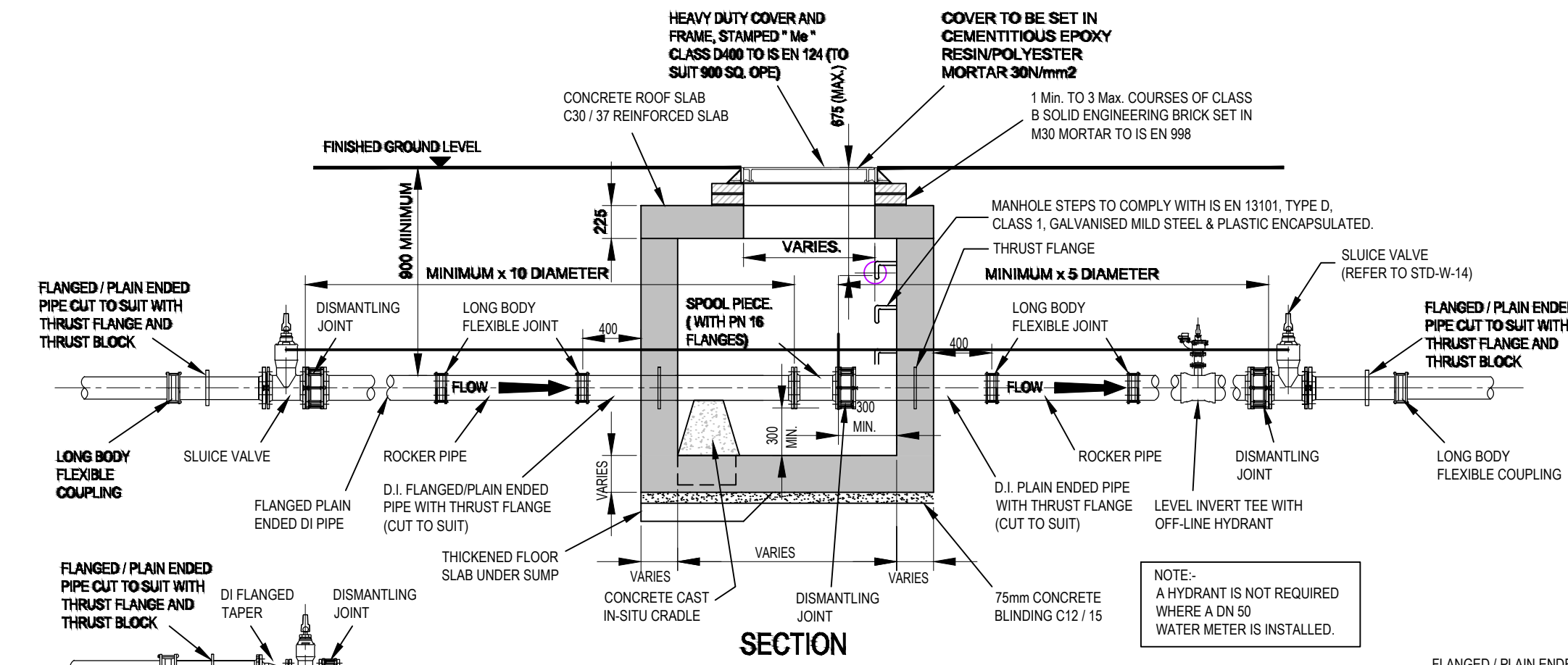
1. ALL DIMENSIONS IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
2. CONCRETE THRUST BLOCKS (ANCHORAGE) SHALL BE POSITIONED SYMMETRICALLY WITH RESPECT TO THE CONNECTING PIPE & BENDS.
3. TRENCH DIMENSIONS : REFER TO DRAWING No's. 0502
4. THRUST BLOCKS SHALL BEAR ON UNDISTURBED SOIL. IF FOR ANY REASON THEY 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.



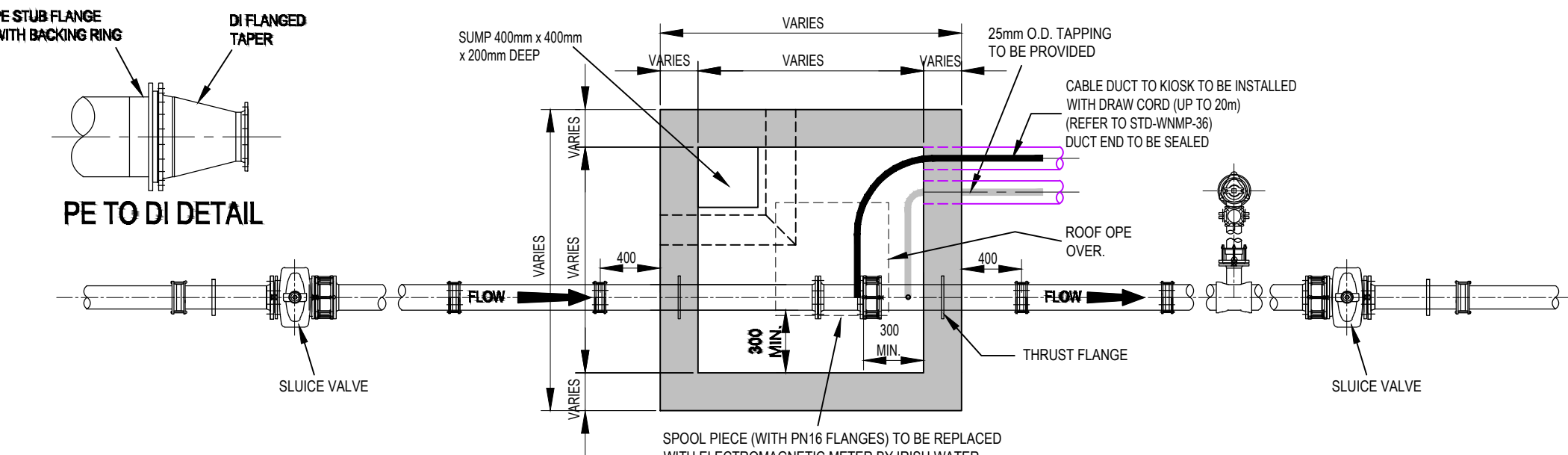
C01	AT	ISSUED FOR TENDER	22.07.2026
REV	SUIT	DESCRIPTION	DATE
DRAWING STATUS:		ISSUED FOR TENDER	
CHECKED BY: LC	REVIEWED BY: BP	APPROVED BY: NMcC	
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		O'CONNOR & ASSOCIATES	
CONSULTING ENGINEERS			
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PROJECT:	CAHERLINE NEWTOWN GWS NETWORK UPGRADE		
CLIENT:	CAHERLINE NEWTOWN GWS		
DRAWING TITLE:	MISCELLANEOUS DETAILS		
SCALE: NTS			(A1)
PROJECT - ORIGINATOR - VOLUME - LOCATION - TYPE - ROLE - NUMBER 25023-TJOC-XX-XX-DR-C-0503			REV: C01

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 T. J. O'CONNOR & ASSOCIATES 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. PRE-CAST 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 FLOATION 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)

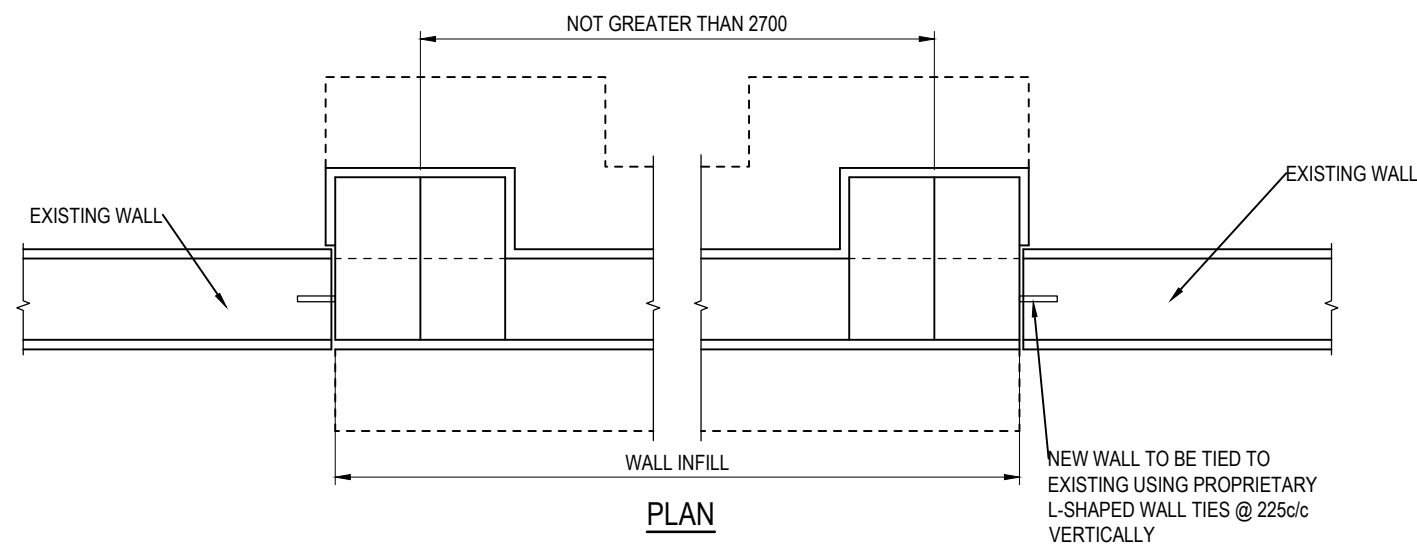
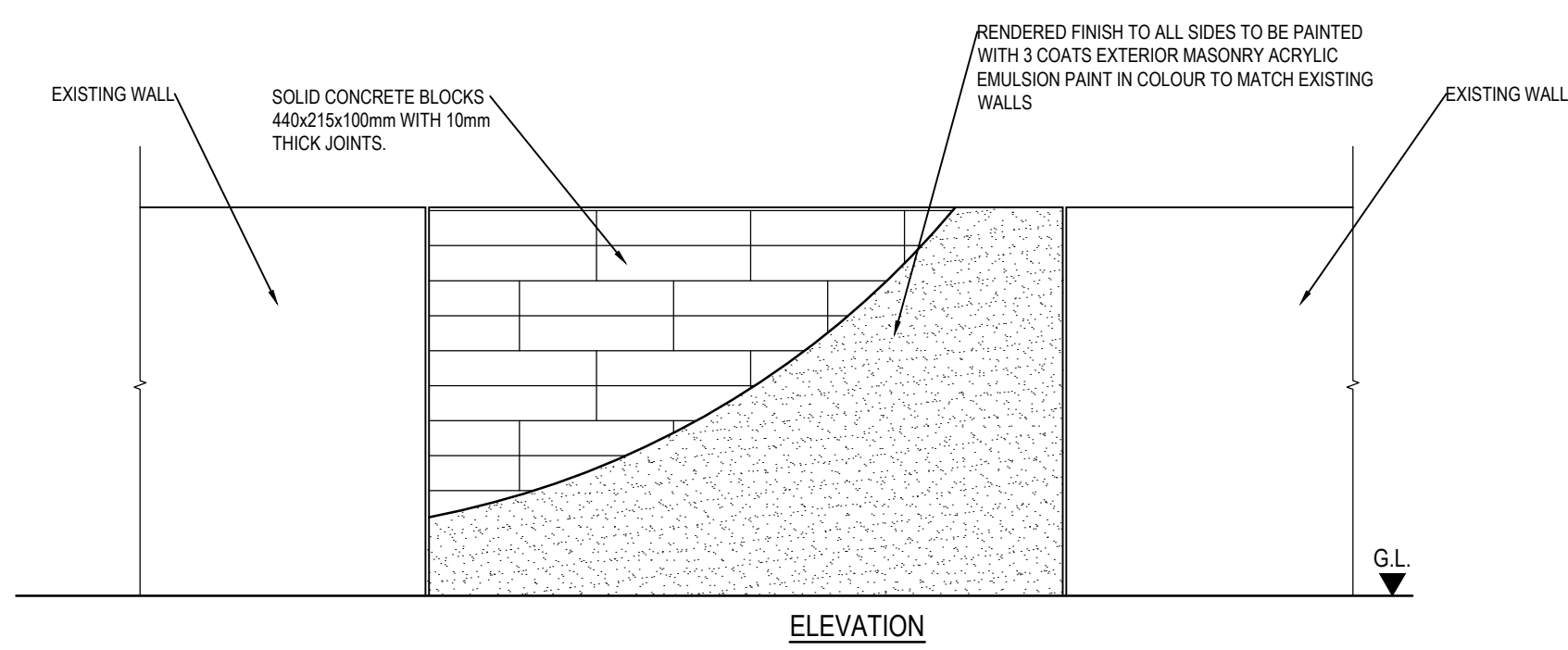
ELECTROMAGNETIC WATER METER SPOOL PIECE LENGTHS							
Ø mm	DN50	DN80	DN100	DN125	DN150	DN200	DN250
Length mm	200		250		300	350	450



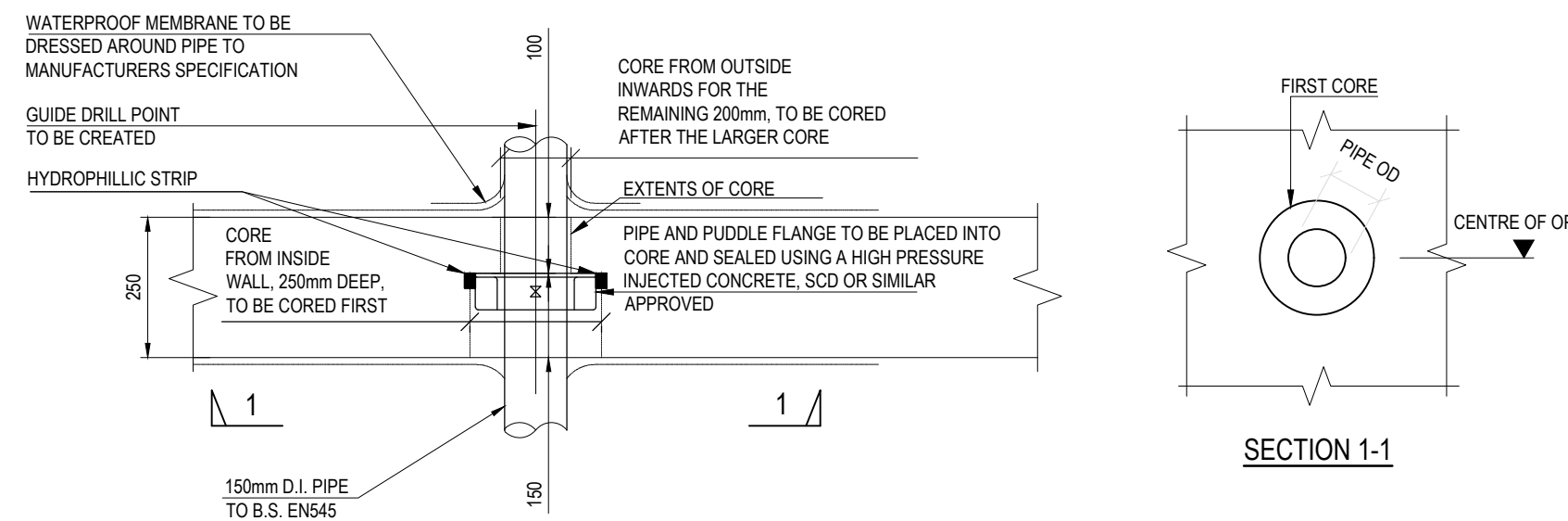
METER DIAMETER 'A' (mm)	INTERNAL CHAMBER DIMENSIONS	COVER DIMENSIONS	FLOOR SLAB DEPTH	WALL THICKNESS
50 - 100	1200 x 1200	750 x 750	200mm	200mm
101 - 250	1500 x 1500	900 x 900	250mm	250mm



FLOOR PLAN
ELECTROMAGNETIC METER CHAMBER
(80 - 250mm DIA.)



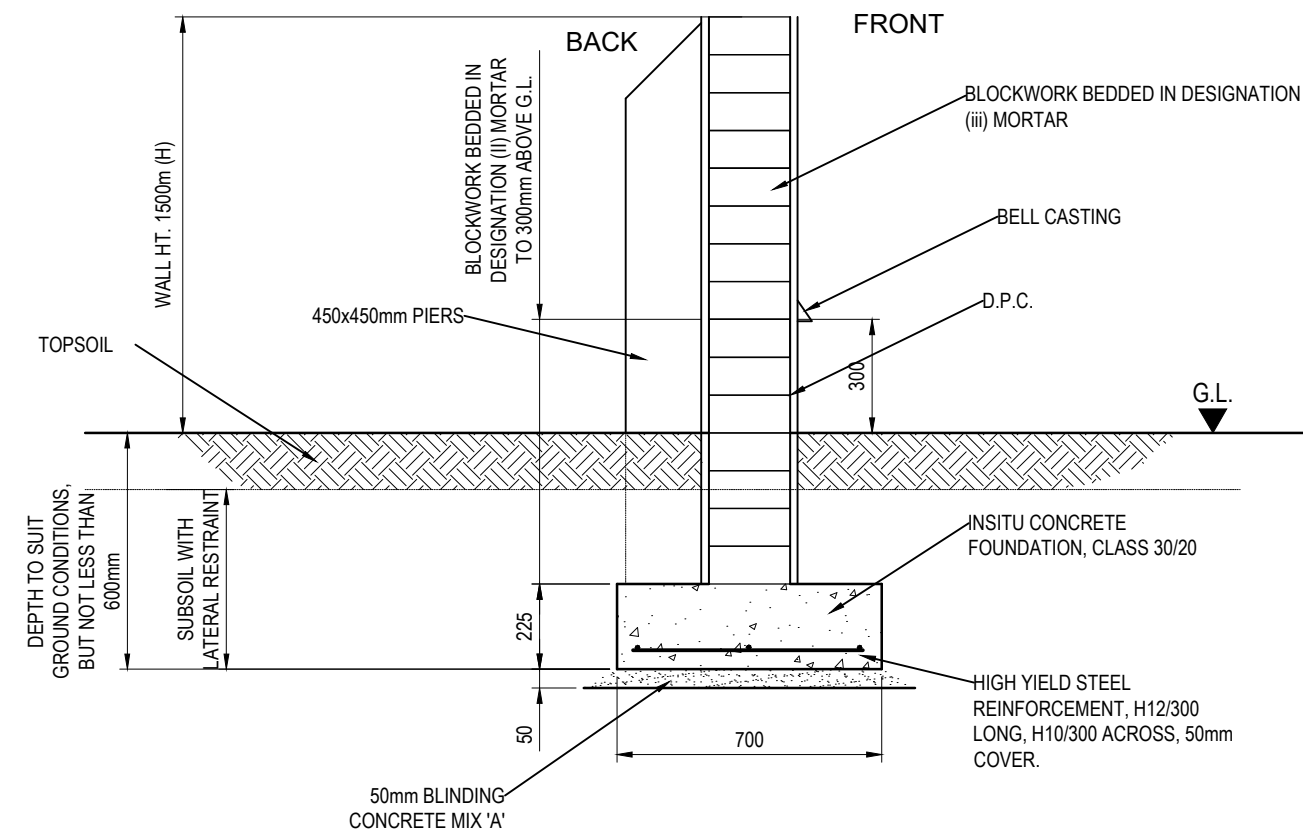
TYPICAL BLOCKWORK WALL



DETAIL OF CONNECTION CORED THROUGH RESERVOIR WALL FOR PROPOSED PIPE
(SCALE: NTS)

NOTES:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS AND THE SPECIFICATION.
- ALL LEVELS ARE IN METRES O.D. MALIN.
- THE POSITION OF EXISTING SERVICES INSOFAR AS THEY ARE KNOWN AND AS SHOWN ON THE DRAWINGS MAY NOT BE ACCURATE AND MERELY INDICATE THEIR PRESENCE IN THE WORKING AREA.
- FOR BEDDING DETAILS REFER TO DRAWING 0500.
- FOR VALVE CHAMBER DETAILS REFER TO DRAWING 0501
- FOR TRENCH REINSTATEMENT DETAILS REFER TO DRAWING 0502.



SECTION

NOTES:

- BLOCKS TO COMPLY I.S. 20. MORTAR TO COMPLY WITH I.S. 406. MASONRY TO COMPLY WITH I.S. 325: PARTS 1 & 2. FULL ADHESION OF BLOCKWORK TO MORTAR AT ALL INTERFACES.
- RENDERED FINISHES TO BE IN ACCORDANCE WITH BS 5262 CODE OF PRACTICE FOR EXTERNAL RENDERINGS.
- PIERS AT ENDS AND CHANGES OF DIRECTION. ENDS OF WALL TO RETURN BY H/3.
- MINIMUM ALLOWABLE BEARING CAPACITY OF FORMATION IS 28kN/m² (UNIFORMLY DISTRIBUTED) OR 50kN/m² (TRIANGULARLY DISTRIBUTED).

C01	AT	ISSUED FOR TENDER	22.07.2026
REV	SUIT	DESCRIPTION	DATE
DRAWING STATUS: ISSUED FOR TENDER			
CHECKED BY: LC	REVIEWED BY: BP	APPROVED BY: NMCC	
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PROJECT: CAHERLINE NEWTOWN GWS NETWORK UPGRADE			
CLIENT: CAHERLINE NEWTOWN GWS			
DRAWING TITLE: MISCELLANEOUS DETAILS			
SCALE: NTS		(A1)	
PROJECT - ORIGINATOR - VOLUME - LOCATION - TYPE - ROLE - NUMBER 25023-TJOC-XX-XX-DR-C-0504			REV: C01