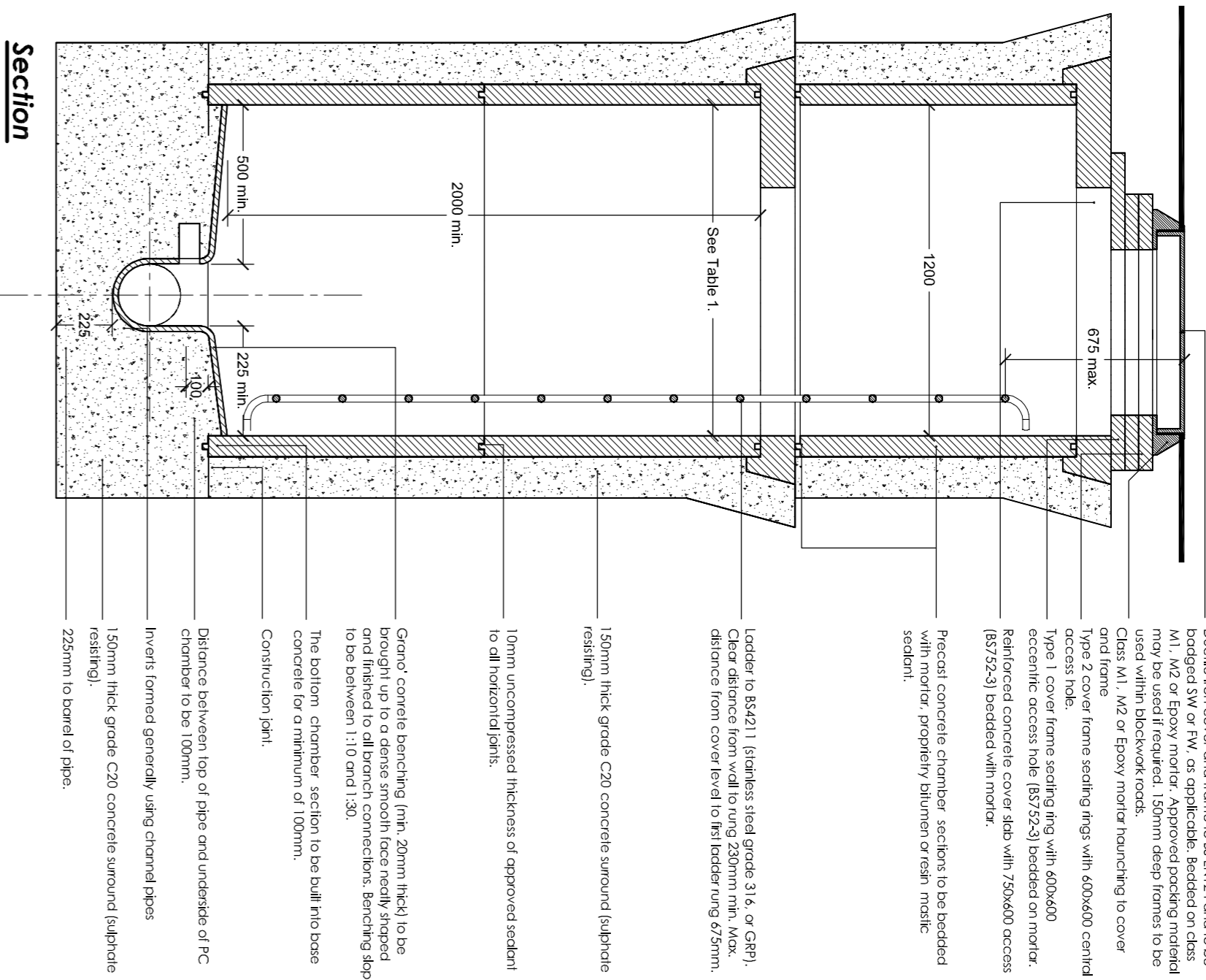


Type 'A' Manhole



Double face cover and frame to BS EN 124 and to be constructed from heavy duty cast iron. Bedding may be used if required. 150mm deep frames to be Class M1, M2 or Eflow motor hounding to cover and frame. 10mm uncompacted thickness of approved roadbit to all horizontal pipes.

150mm thick grade C20 concrete surround (aliphatic roadbit).

Distance between top of pipe and underside of FC chamber to be 100mm.

Invert formed generally using channel pipes.

150mm thick grade C20 concrete surround (aliphatic roadbit) to band of pipe.

225mm to band of pipe.

Construction joint.

The bottom chamber section to be built into base concrete for a minimum of 100mm.

Concrete for a minimum of 100mm.

Reinforced concrete cover slab with 20x60x20 access (BS7232) bedded with mortar.

Precast concrete chamber section to be bedded with mortar, proprietary blunder or resin mastic.

Reinforced concrete cover slab with 20x60x20 access (BS7232) bedded with mortar.

Type 1 cover frame sealing ring with 40x40x20 central eccentric access hole (BS7232) bedded on mortar.

Type 1 cover frame sealing ring with 40x40x20 central eccentric access hole (BS7232) bedded on mortar.

Class M1, M2 or Eflow motor hounding to cover and frame.

150mm deep frames to be Class M1, M2 or Eflow motor hounding to cover and frame.

Approved bedding material may be used if required. 150mm deep frames to be Class M1, M2 or Eflow motor hounding to cover and frame.

Double face cover and frame to BS EN 124 and to be constructed from heavy duty cast iron. Bedding may be used if required. 150mm deep frames to be Class M1, M2 or Eflow motor hounding to cover and frame. 10mm uncompacted thickness of approved roadbit to all horizontal pipes.

150mm thick grade C20 concrete surround (aliphatic roadbit).

Distance between top of pipe and underside of FC chamber to be 100mm.

Invert formed generally using channel pipes.

150mm thick grade C20 concrete surround (aliphatic roadbit) to band of pipe.

225mm to band of pipe.

Construction joint.

The bottom chamber section to be built into base concrete for a minimum of 100mm.

Concrete for a minimum of 100mm.

Reinforced concrete cover slab with 20x60x20 access (BS7232) bedded with mortar.

Precast concrete chamber section to be bedded with mortar, proprietary blunder or resin mastic.

Reinforced concrete cover slab with 20x60x20 access (BS7232) bedded with mortar.

Type 1 cover frame sealing ring with 40x40x20 central eccentric access hole (BS7232) bedded on mortar.

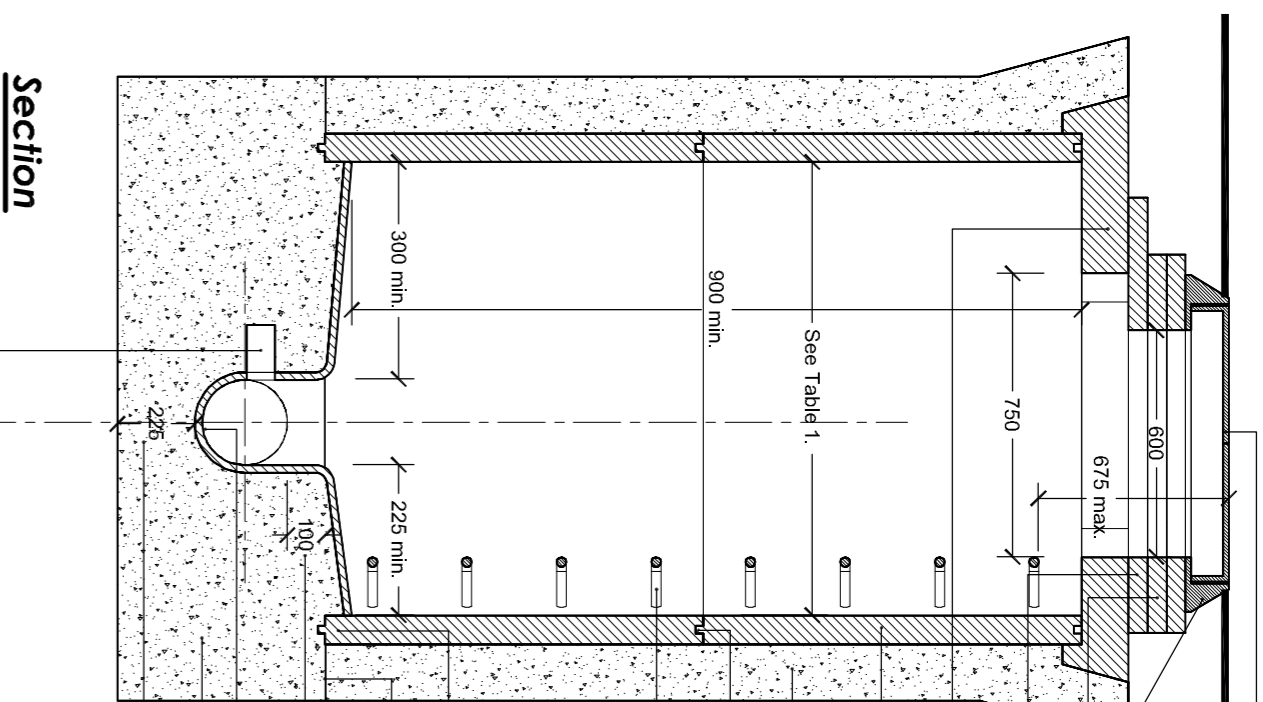
Type 1 cover frame sealing ring with 40x40x20 central eccentric access hole (BS7232) bedded on mortar.

Class M1, M2 or Eflow motor hounding to cover and frame.

150mm deep frames to be Class M1, M2 or Eflow motor hounding to cover and frame.

Approved bedding material may be used if required. 150mm deep frames to be Class M1, M2 or Eflow motor hounding to cover and frame.

Type 'B' Manhole



Double face cover and frame to BS EN 124 and to be constructed from heavy duty cast iron. Bedding may be used if required. 150mm deep frames to be Class M1, M2 or Eflow motor hounding to cover and frame. 10mm uncompacted thickness of approved roadbit to all horizontal pipes.

150mm thick grade C20 concrete surround (aliphatic roadbit).

Distance between top of pipe and underside of FC chamber to be 100mm.

Invert formed generally using channel pipes.

150mm thick grade C20 concrete surround (aliphatic roadbit) to band of pipe.

225mm to band of pipe.

Construction joint.

The bottom chamber section to be built into base concrete for a minimum of 100mm.

Concrete for a minimum of 100mm.

Reinforced concrete cover slab with 20x60x20 access (BS7232) bedded with mortar.

Precast concrete chamber section to be bedded with mortar, proprietary blunder or resin mastic.

Reinforced concrete cover slab with 20x60x20 access (BS7232) bedded with mortar.

Type 2 cover frame sealing ring with 40x40x20 central eccentric access hole (BS7232) bedded on mortar.

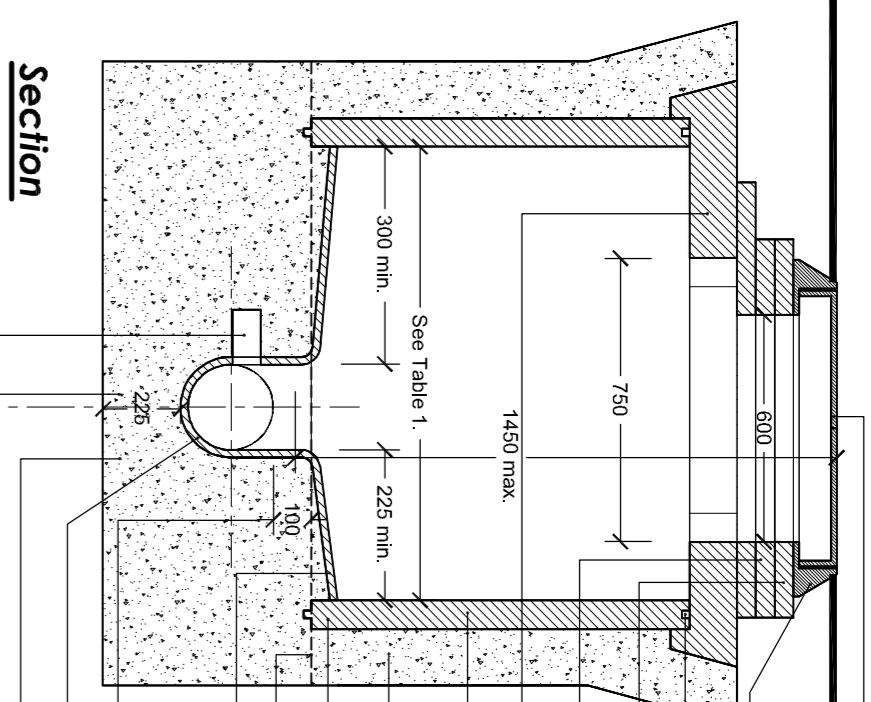
Type 2 cover frame sealing ring with 40x40x20 central eccentric access hole (BS7232) bedded on mortar.

Class M1, M2 or Eflow motor hounding to cover and frame.

150mm deep frames to be Class M1, M2 or Eflow motor hounding to cover and frame.

Approved bedding material may be used if required. 150mm deep frames to be Class M1, M2 or Eflow motor hounding to cover and frame.

Type 'X' Manhole



Double face cover and frame to BS EN 124 and to be constructed from heavy duty cast iron. Bedding may be used if required. 150mm deep frames to be Class M1, M2 or Eflow motor hounding to cover and frame. 10mm uncompacted thickness of approved roadbit to all horizontal pipes.

150mm thick grade C20 concrete surround (aliphatic roadbit).

Distance between top of pipe and underside of FC chamber to be 100mm.

Invert formed generally using channel pipes.

150mm thick grade C20 concrete surround (aliphatic roadbit) to band of pipe.

225mm to band of pipe.

Construction joint.

The bottom chamber section to be built into base concrete for a minimum of 100mm.

Concrete for a minimum of 100mm.

Reinforced concrete cover slab with 20x60x20 access (BS7232) bedded with mortar.

Precast concrete chamber section to be bedded with mortar, proprietary blunder or resin mastic.

Reinforced concrete cover slab with 20x60x20 access (BS7232) bedded with mortar.

Type 2 cover frame sealing ring with 40x40x20 central eccentric access hole (BS7232) bedded on mortar.

Type 2 cover frame sealing ring with 40x40x20 central eccentric access hole (BS7232) bedded on mortar.

Class M1, M2 or Eflow motor hounding to cover and frame.

150mm deep frames to be Class M1, M2 or Eflow motor hounding to cover and frame.

Approved bedding material may be used if required. 150mm deep frames to be Class M1, M2 or Eflow motor hounding to cover and frame.

Table 1		Table 2	
Diámetro de (tubo) (pipe) in manhole (mm)	1200	Diámetro de (tubo) (pipe) in manhole (mm)	1200
Profundidad de (tubo) (pipe) in manhole (mm)	1200	Profundidad de (tubo) (pipe) in manhole (mm)	1200
Diámetro de (tubo) (pipe) in manhole (mm)	1200	Diámetro de (tubo) (pipe) in manhole (mm)	1200
Profundidad de (tubo) (pipe) in manhole (mm)	1200	Profundidad de (tubo) (pipe) in manhole (mm)	1200
Diámetro de (tubo) (pipe) in manhole (mm)	1200	Diámetro de (tubo) (pipe) in manhole (mm)	1200
Profundidad de (tubo) (pipe) in manhole (mm)	1200	Profundidad de (tubo) (pipe) in manhole (mm)	1200

Notes

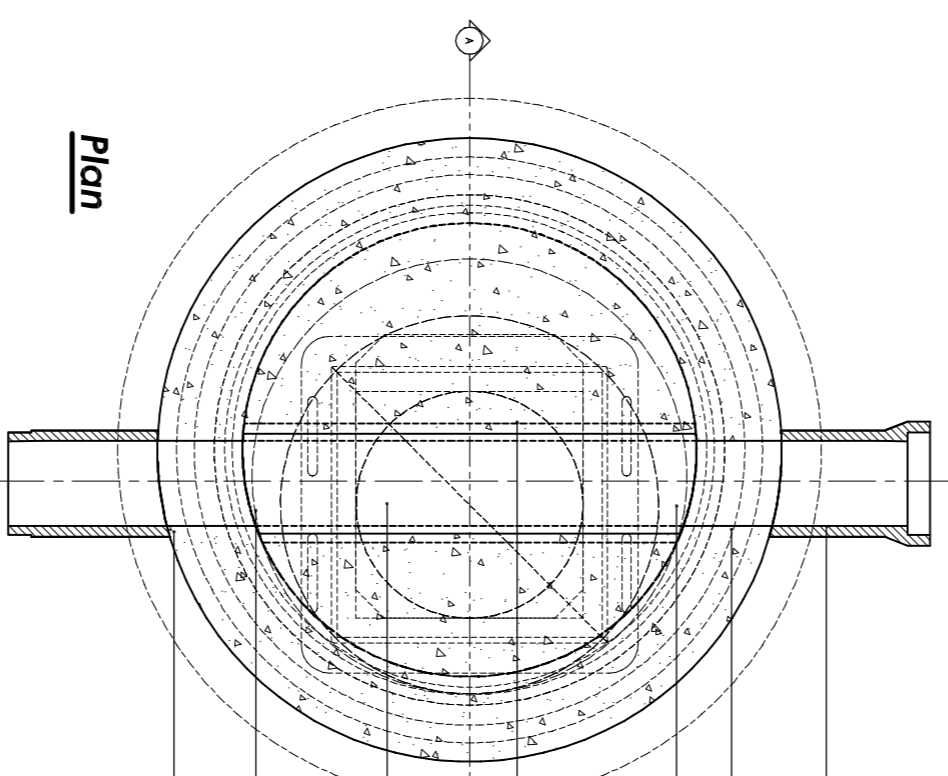
1. Details and Specifications are to be in accordance with the current edition of the Water Authorities Association Publication Sewers for Adoption with Tables A to Adoption and Adaption.
2. Manhole cover and frame to be spheroidal graphite (Ductile Iron) to BS EN 124 Class opening and min. 100 deep. Type C, A, E members to have 1220x685 double cover and frame.
3. All pipes to enter manholes with soft lead.
4. Exposed reinforcing steel in cast pipes to be painted with hot-dip or other approved anti-rust paint.
5. Invert bucket fill, Type 8 modified is to be Type 1 granular material under adoptable paved areas or where the 45° envelope of the load foundation.
6. Brick arches in brickwork manholes are required for pipes 225 diameter and greater.
7. Brickwork to be completed a maximum of 30mm per course.
8. Bedding of concrete to bedrock manholes, gravity duty process and concrete bedrock manholes shall be completed from 50mm above concrete to 50mm below concrete (Class 8).
9. Minimum 150 gap between joints in precast concrete ring and full concrete surround.
10. Spheroidal graphite concrete shall be used in accordance with BS EN 124 Class opening and min. 100 deep. Type C, A, E members to have 1220x685 double cover and frame.
11. Invert concrete grade to be in accordance with BS EN 124 Part 2.

Rev Amendment

By Date

T1 TENDER BILL

CR 13.11.12



Plan

Joint to be as close as practicable to face of manhole to permit satisfactory joint and subsequent movement.

Rocker pipe. See table 2.

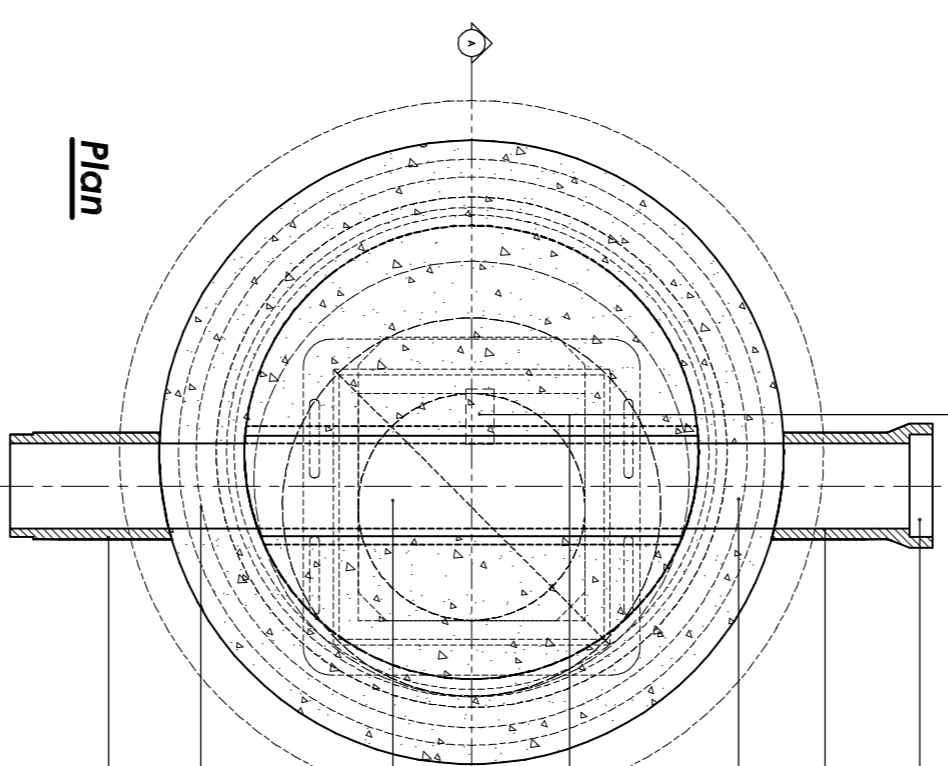
Pipe joint with channel to be bedded min. 100mm inside face of chamber.

Too holes to be provided in bedding of sewer greater than 450mm dia. for access to invert.

Chambers with outgoing pipes greater than 400mm dia. shall be filled with guard boxes, safety chains or other safety devices.

Short length pipes to be similar length to rocker pipe.

All pipes entering or leaving manholes shall have a flexible joint within 400mm of the inside face of the pipe with length of table 2.



Plan

Joint to be as close as practicable to face of manhole to permit satisfactory joint and subsequent movement.

Rocker pipe. See table 2.

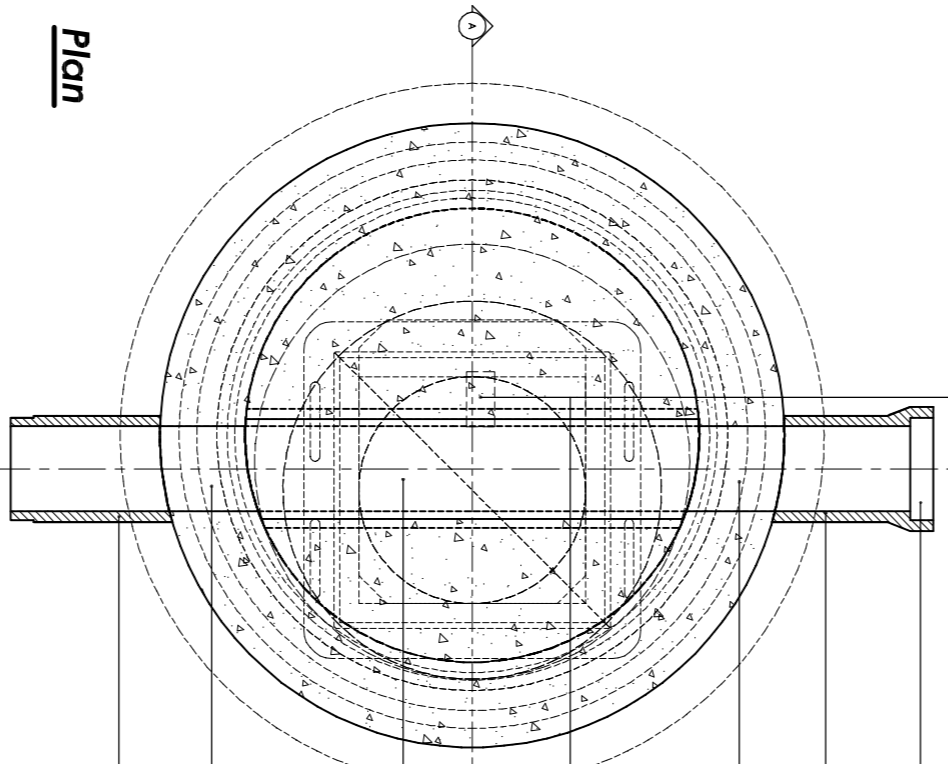
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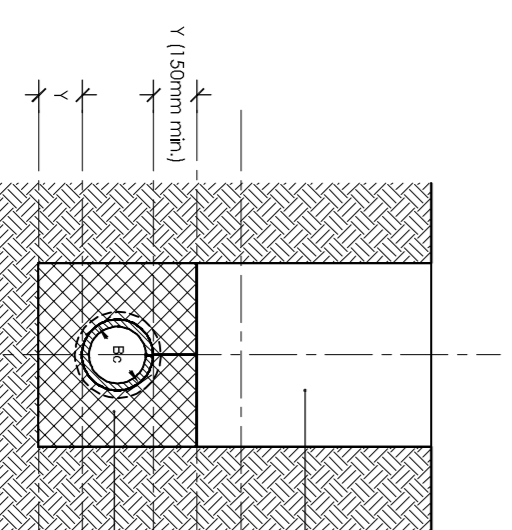
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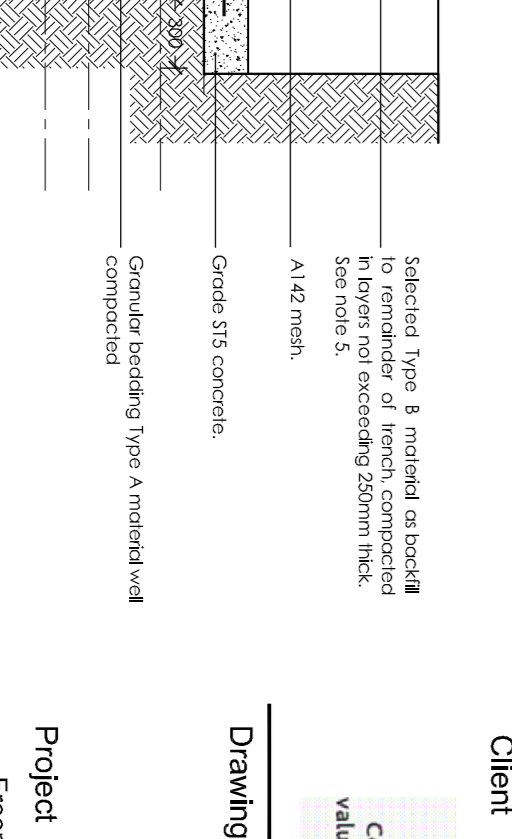
All pipes entering or leaving manholes shall have a flexible joint within 400mm of the inside face of the pipe with length of table 2.



Selected Type 8 modified or bedded to remainder of trench, compacted in layers not exceeding 200mm thick. 300mm dia. Minimum 250mm initial bedfall zone, lightly compacted by hand. Chamber bedding Type A modified with compacted.



Selected Type 8 modified or bedded to remainder of trench, compacted in layers not exceeding 200mm thick. 300mm dia. Minimum 250mm initial bedfall zone, lightly compacted by hand. Chamber bedding Type A modified with compacted.



Selected Type 8 modified or bedded to remainder of trench, compacted in layers not exceeding 200mm thick. 300mm dia. Minimum 250mm initial bedfall zone, lightly compacted by hand. Chamber bedding Type A modified with compacted.

Project: Freemanite Close and Tavener Close, Basingstoke

Drawing: CIVIL ENGINEERING

Adoptable Drainage Details

Scale: as noted @ A1 Date: November 2012 Approver: SWF

Drawing no.: 1216 - 532 T1

Page No.	Trench width (maximum)	Undercut sides	Barrel	Socket	Rate or variable material
52	440	50	50	200	50
53	480	50	50	200	50
54	520	50	50	200	50
55	560	50	50	200	50
56	600	50	50	200	50
57	640	50	50	200	50
58	680	50	50	200	50
59	720	50	50	200	50
60	760	50	50	200	50
61	800	50	50	200	50
62	840	50	50	200	50
63	880	50	50	200	50
64	920	50	50	200	50
65	960	50	50	200	50
66	1000	50	50	200	50
67	1040	50	50	200	50
68	1080	50	50	200	50
69	1120	50	50	200	50
70	1160	50	50	200	50
71	1200	50	50	200	50
72	1240	50	50	200	50
73	1280	50	50	200	50
74	1320	50	50	200	50
75	1360	50	50	200	50
76	1400	50	50	200	50
77	1440	50	50	200	50
78	1480	50	50	200	50
79	1520	50	50	200	50
80	1560	50	50	200	50
81	1600	50	50	200	50
82	1640	50	50	200	50
83	1680	50	50	200	50
84	1720	50	50	200	50
85	1760	50	50	200	50
86	1800	50	50	200	50

Page No.	Trench width (maximum)	Undercut sides	Barrel	Socket	Rate or variable material
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57	640	50	50	200	50
58	680	50	50	200	50
59	720	50	50	200	50
60	760	50	50	200	50
61	800	50	50	200	50
62	840	50	50	200	50
63	880	50	50	200	50
64	920	50	50	200	50
65	960	50	50	200	50
66	1000	50	50	200	50
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63	880	50	50	200	50