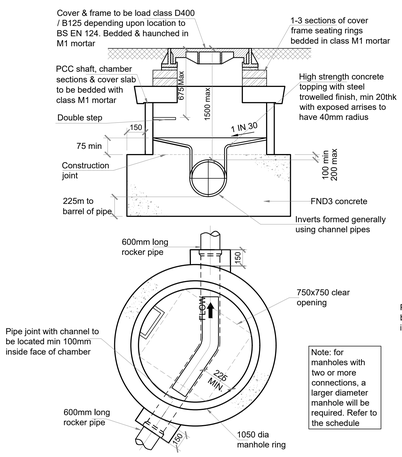
Manhole Notes:

1. A concrete surround is not normally required to manholes unless installed in areas of unstable ground, under conditions of floatation or where subjected to eccentric or exceptional loads. In these instances, a min 150mm surround of min Grade C16/20 concrete shall be provided. Any joints to be staggered with the precast joints.
2. All insitu concrete to be fnd3. In areas of aggressive ground the design sulphate class may need to be increased. For details / requirements refer to the concrete specification otherwise DC-3 or FND3 shall be assumed.
3. D400 covers (to BS EN 124) to typically be used in all trafficked areas. B125 to be used in landscaped areas / areas subjected to pedestrian loading only.
4. 150mm deep covers to be used in category 1, 2 & 3 roads. 100 deep covers to be used in category 4 roads. Double triangular covers to be used in carriageways. Road category as specified by the Highways Authority.
5. Pipes shall be constructed with soffits level, unless specified / detailed differently on the drawings.
6. Rocker pipes to be surrounded with FND3 concrete located 150min / 200max from the first flexible joint to the manhole wall.
7. Class B engineering bricks may be used in lieu of cover frame seating rings. Bricks shall be free from frogs or holes.
8. Manholes to be precast concrete rings to BS 5911
9. Cut ends of reinforced concrete pipes to be treated with epoxy resin paint / mortar.
10. For minimum opening sizes refer to the table below

SHALLOW MANHOLE (<1.5M TO SOFFIT) OPENING REQUIREMENTS			
NOMINAL INT PIPE DIA	MINIMUM INTERNAL CHAMBER DIA	MINIMUM CLEAR OPENING SIZE	COVER SLAB ACCESS HOLE
100	1050	750 x 675	750 X 750 CENTRAL
150	1050	750 x 675	750 X 750 CENTRAL
225	1350	1200 x 675	1200 X 675 CENTRAL
300	1350	1200 x 675	1200 X 675 CENTRAL
375	1800	1200 x 675	1200 X 675 ECCENTRIC
>450	1800 or DN+450	1200 x 675	1200 X 675 ECCENTRIC
STANDARD / DEEP MANHOLE (>1.5M TO SOFFIT) OPENING REQUIREMENTS			
NOMINAL INT PIPE DIA	MINIMUM INTERNAL CHAMBER DIA	MINIMUM CLEAR OPENING SIZE	COVER SLAB ACCESS HOLE
100	1200	600 x 600	600 x 600 ECCENTRIC
150	1200	600 x 600	600 x 600 ECCENTRIC
225	1200	600 x 600	600 x 600 ECCENTRIC
300	1200	600 x 600	600 x 600 ECCENTRIC
375	1200	600 x 600	600 x 600 ECCENTRIC
450	1200	600 x 600	600 x 600 ECCENTRIC
>450	1800 or DN+775	600 x 600	600 x 600 ECCENTRIC

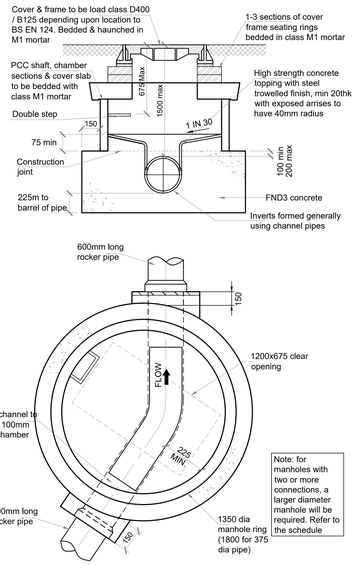
CHAMBER DIA	"X" MIN
1050	800
1200	950
1350	1000
1500	1050
1800	1150
2100	1300
2400	1450
2700	1550
3000	1700



Note: for manholes with two or more connections, a larger diameter manhole will be required. Refer to the schedule

Manhole Type '1A' Standard Detail
Circular Pre-cast Manhole
<1.5m to soffit, 100mm to 150mm DIA Pipe

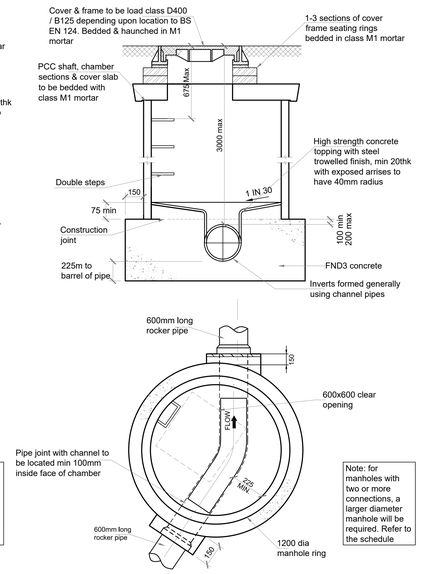
Scale 1:20



Note: for manholes with two or more connections, a larger diameter manhole will be required. Refer to the schedule

Manhole Type '1B' Standard Detail
Circular Pre-cast Manhole
<1.5m to soffit, 225mm to 375mm DIA Pipe

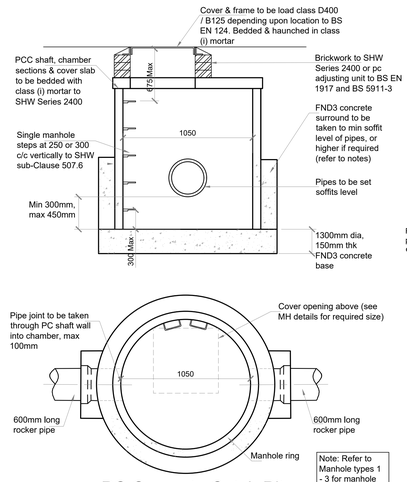
Scale 1:20



Note: for manholes with two or more connections, a larger diameter manhole will be required. Refer to the schedule

Manhole Type '2' Standard Detail
Circular Pre-cast Manhole
1.5m to 3.0m to soffit, 100mm to 450mm DIA Pipe

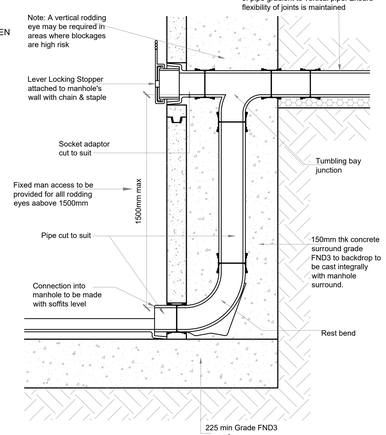
Scale 1:20



PC Concrete Catch Pit
Standard Detail

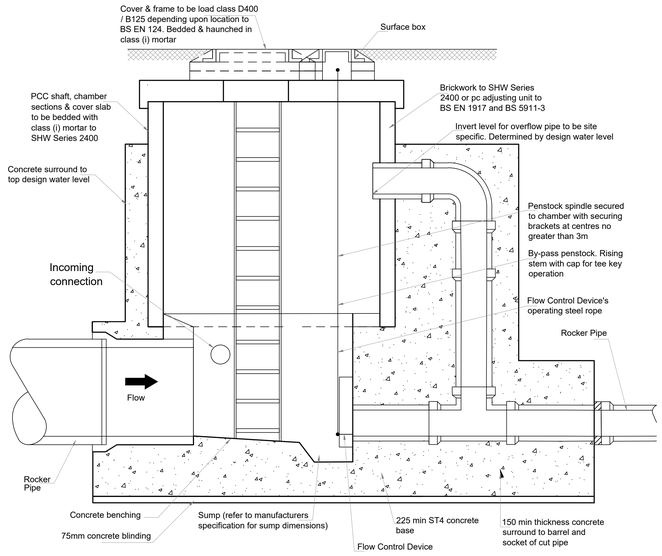
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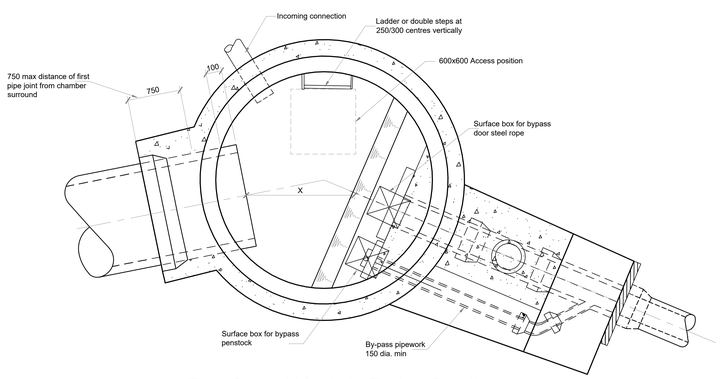
Note: Refer to Manhole types 1 - 3 for manhole size & cover opening requirements.



Backdrop Standard Detail

Scale 1:10





Flow Control Manhole Typical Detail

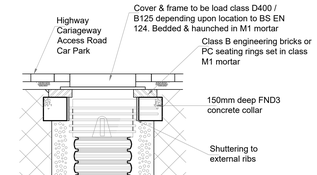
Scale 1:20



PPIC Catch Pit
Standard Detail

Scale 1:20

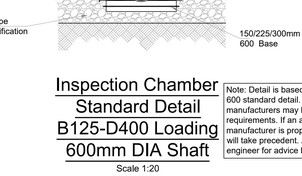
Note: Detail is based upon Osmadrain standard detail. Other manufacturers may have different requirements. If an alternative manufacturer is proposed, their details will take precedent. Always consult the engineer for advice before proceeding

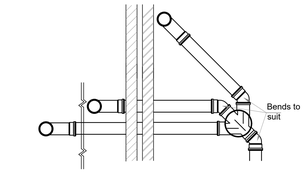


Inspection Chamber Standard Detail B125-D400 Loading 450mm DIA Shaft

Scale 1:20

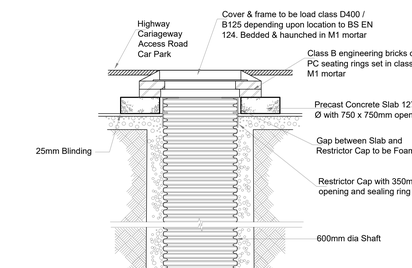
Note: Detail is based upon Osma range 450 standard detail. Other manufacturers may have different requirements. If an alternative manufacturer is proposed, their details will take precedent. Always consult the engineer for advice before proceeding





Inspection Chamber 3-Way Connection Typical Detail

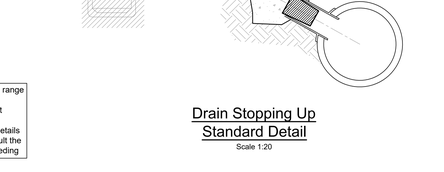
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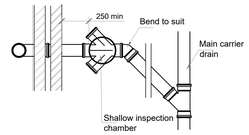


Inspection Chamber Standard Detail B125-D400 Loading 600mm DIA Shaft

Scale 1:20

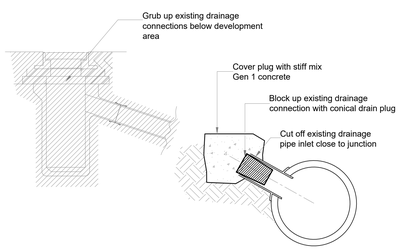
Note: Detail is based upon Osma range 600 standard detail. Other manufacturers may have different requirements. If an alternative manufacturer is proposed, their details will take precedent. Always consult the engineer for advice before proceeding





Soil Pipe to Shallow Inspection Chamber to Main Drainage Run Typical Detail

Scale 1:20



Drain Stopping Up Standard Detail

Scale 1:20

Notes

1. All dimensions are in millimetres unless noted otherwise
2. All levels shown are in metres unless noted otherwise
3. This drawing is to be read in conjunction with all relevant Architectural & Service Engineer drawings
4. Do not scale from this drawing. Figured dimensions to be worked to in all cases. If in doubt, contact the Engineer
5. CDM (2015) - This drawing is to be read in conjunction with the Designers Risk Assessment produced for the project

General Drainage Notes:

1. All SW drainage pipes may be of rigid clayware, or alternatively PVCu (E.g. wavin twinwall or polysewer) up to 375mmØ and concrete from 450mmØ.
2. All pipes to generally run soffits level.
3. Installation of manholes, road gullies, pipes, channels, kerbdrain etc to be as per the manufacturer's instructions and recommendations.
4. For pipes with shallow cover, refer to the pipe bedding notes for concrete encasement requirements.
5. All work to be carried out in accordance with the following documents: (a) - Civil Engineering Specification for the Water Industry 7th Edition, 2011. (b) - MCHW Highway construction details F series. (c) - Specification for Highway Works.
6. A minimum pipe velocity of 1.0 m/s to be achieved to all SW pipes.
7. All SW sewers to be 150mm dia UNO.
8. All drainage is to comply with the requirements of BS EN 752.
9. All catchpits to have a min 350 / max 450mm deep sump below pipe invert levels.
10. All drains to be laid accurately to line and level in strict accordance with the manufacturers recommendations.

Rev	Date	Description	Drawn
P01	07/26	Issued as RIBA 3+	RH

Drawing Status:
RIBA STAGE 3+/S2 - SUITABLE FOR COMMENT

Contract:
PROJECT TAVERNA
MANCHESTER CITY FOOTBALL CLUB

Drawing Title:
DRAINAGE DETAILS (1of2)

Scales	Date	Drawn	Checked
As Shown (A0)	07/2026	RH	SB

Project	Origin	Zone	Level	Type	Role	Number	Rev/n
MCFG	CAL	ZZ	XX	D	C	00559	P01

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