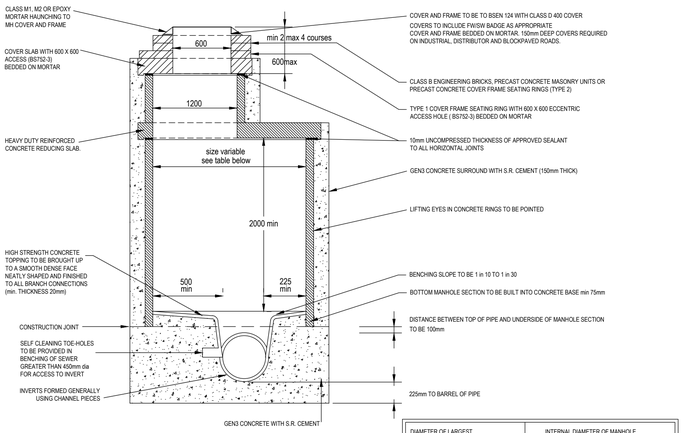
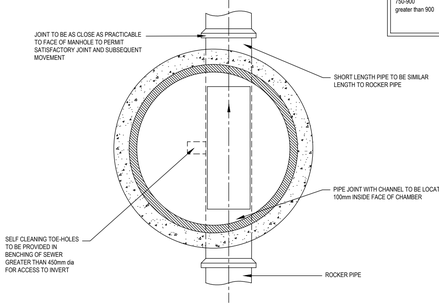
TYPICAL MANHOLE DETAIL - TYPE A

depth to soffit 3m to 6m (measured from finished cover level to soffit of pipe).



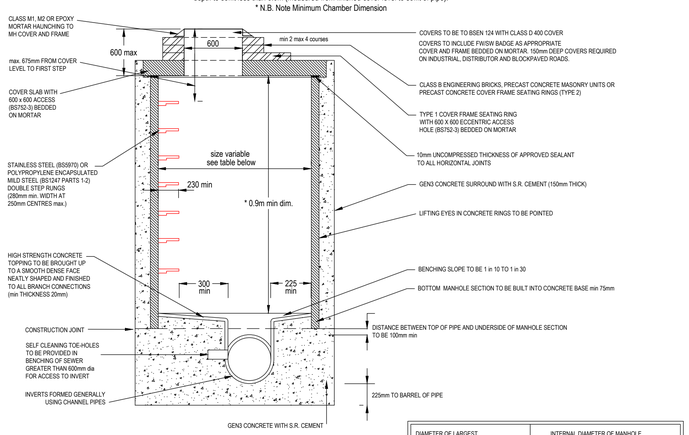
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE
less than 375	1200
375-700	1500
750-900	1800
greater than 900	Consult Sewerage Undertaker



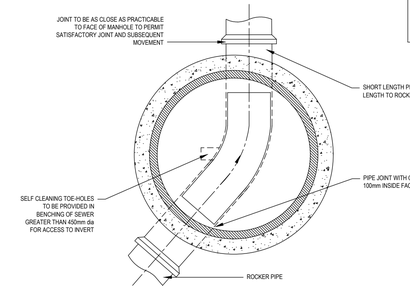
PIPE DIA.	ROCKER PIPE LENGTH
150-600	0.600
675-750	1.000
OVER 750	1.250

TYPICAL MANHOLE DETAIL - TYPE B

depth to soffit less than 3.0m (measured from finished cover level to soffit of pipe).
* N.B. Note Minimum Chamber Dimension



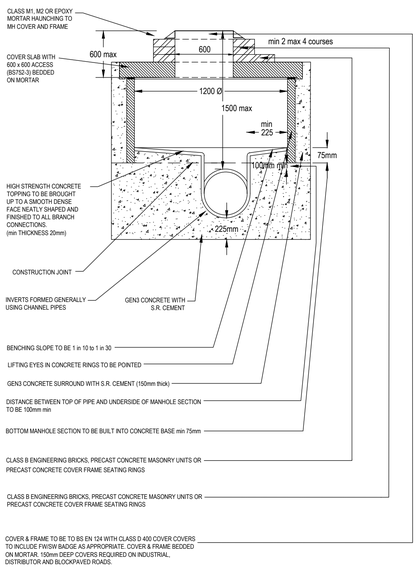
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE
less than 375	1200
375-700	1500
750-900	1800
greater than 900	Consult Sewerage Undertaker



PIPE DIA.	ROCKER PIPE LENGTH
150-600	0.600
675-750	1.000
OVER 750	1.250

TYPICAL MANHOLE DETAIL - TYPE E

depth from finished cover level to soffit of pipe less than 1.50m
(N.B. Approval of the undertaker must be given for the installation of this type of manhole).

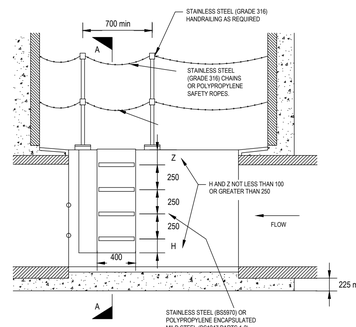


NOTE: IF PIPE DIAMETER EXCEEDS 375mm USE MH TYPE B OR C.

DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE
less than 375 375 & 450	1200 (USE TYPE E DETAIL) 1500 (USE TYPE B DETAIL)

PIPE DIA.	ROCKER PIPE LENGTH
150-450	0.600

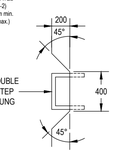
ACCESS TO INVERT FOR PIPES EXCEEDING 600mm Ø.



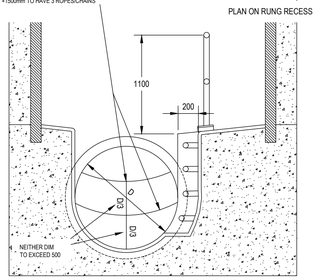
ROPES OR CHAINS TO BE SECURED BY M12 STAINLESS STEEL EYEBOLTS, FIXED WITH EPOXY GROUT.

POLYPROPYLENE SAFETY ROPES OR POLYPROPYLENE COVERED CHAINS FITTED DOWNSTREAM TO ALL PIPES THAT ARE GREATER THAN 600mm dia.

PIPE DIAMETERS:
600-975mm TO HAVE 1 ROPE/CHAIN
975-1500mm TO HAVE 2 ROPES/CHAINS
+1500mm TO HAVE 3 ROPES/CHAINS



PLAN ON RUNG RECESS



SECTION A-A

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NOTES:

MANHOLES WITH AN INCOMING SEWER OF 900mm DIAMETER AND OVER TO BE AS APPROVED BY THE WATER AUTHORITY

CHAMBERS WITH OUTGOING PIPES GREATER THAN 600mm DIAMETER SHALL BE FITTED WITH STAINLESS STEEL SAFETY CHAINS TO SD/S/05 OR POLYPROPYLENE SAFETY ROPES

ALL PRECAST CONCRETE PRODUCTS TO CONTAIN A MINIMUM CLASS 3 SULPHATE RESISTANT CEMENT.

ALL SEWERS TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROCEDURES AND SPECIFICATIONS OF SEWERS FOR ADOPTION 6TH EDITION (MARCH 2006) AND THE SuDS ADOPTION MANUAL.

STORM BRANCH CONNECTIONS TO BE 150mm dia. LAID NO STEEPER THAN 1:10 AND NO FLATTER THAN 1:150.

GULLY CONNECTIONS TO BE 150mm dia. LAID NO FLATTER THAN 1:175.

FOUL BRANCH CONNECTIONS TO BE 150mm dia. LAID NO STEEPER THAN 1:10 AND NO FLATTER THAN 1:150.

ALL PIPEWORK TO BE LAID SOFFIT TO SOFFIT UNLESS OTHERWISE STATED.

ALL PIPES 300mmØ & GREATER WITH COVER EXCEEDING 1.2m TO BE STRENGTH CLASS 120 TO BS5911-1:2002 WITH CLASS S BEDDING (20mm - 5mm GRAVEL BED AND SURROUND).
ALL CLAY PIPES 150mmØ & 225mmØ DITTO TO BE EXTRA STRENGTH WITH CLASS S BEDDING (14mm - 5mm GRAVEL BED AND SURROUND).
ALL PIPES 300mmØ & GREATER WITH COVER LESS THAN 1.2m TO BE STRENGTH CLASS 120 TO BS5911-1:2002 WITH CONCRETE PROTECTION.
ALL CLAY PIPES 150mmØ & 225mmØ DITTO TO BE EXTRA STRENGTH WITH CONCRETE PROTECTION.

PRECAST CONCRETE PRODUCTS AND IN-SITU CONCRETE TO CONTAIN A MINIMUM CLASS 3 S.R.C.

STRUCTURAL CONCRETE TO BE IN ACCORDANCE WITH BS 5328 AND NOT TO BE LESS THAN GRADE FND2 WHEN REINFORCED AND GEN3 IN ALL OTHER SITUATIONS.

CAST CONCRETE SHALL BE FINISHED TO PRODUCE A "FAIR" SURFACE WHERE EXPOSED AND SHALL HAVE A "ROUGH" FINISH IN ALL OTHER SITUATIONS. (FINISHES AS DEFINED IN CIVIL ENGINEERING SPECIFICATION FOR THE WATER INDUSTRY - 5TH EDITION).

STEELWORK SHALL BE IN ACCORDANCE WITH BS4483.

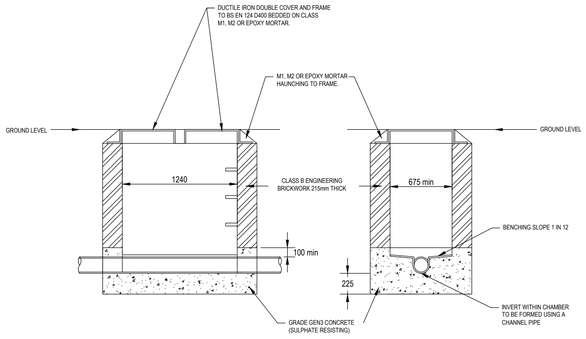
ALL MANHOLE COVERS TO BE 600x600 CLEAR OPENING IN ACCORDANCE WITH B.S. EN124 CLASS D400 AND EMBOSSED FW OR SW AS APPROPRIATE.

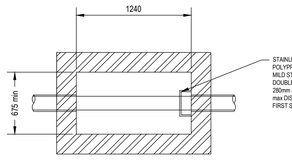
MANHOLES ON SEWERS 600mm DIAMETER AND GREATER TO BE FITTED WITH SAFETY CHAINS TO AWS DRG SD/S/05.

ALL GULLIES WITHIN THE HIGHWAY SHALL CONFORM TO BSEN124,GRP 4 (CLASS D400). ALL GULLIES SHALL BE HINGED BUT NON- REMOVABLE AND SHALL HAVE A NOMINAL WIDTH OF 450mm WITH A MINIMUM AREA OF WATERWAY OF 900cm² FOR CARRIAGEWAYS AND A CLEAR OPENING OF AT LEAST 300mm x 300mm FOR FOOTWAYS. THE UPPER SURFACE OF GULLY GRATINGS SHALL BE FLAT AND SLOTS IN GRATINGS OR BETWEEN GRATINGS AND FRAMES SHALL NOT BE ORIENTATED PARALLEL TO THE DIRECTION OF TRAFFIC EXCEPT WHERE THE SLOTS ARE LESS THAN 150mm LONG OR LESS THAN 20mm WIDE. WHERE GRADIENTS ARE STEEPER THAN 1:50, STORM PATTERN GRIDS SHALL BE PROVIDED.

TYPICAL MANHOLE DETAIL - TYPE C (approved for AWS Section 104 works)

depth to soffit upto 1.45m (measured from finished cover level to soffit of pipe).



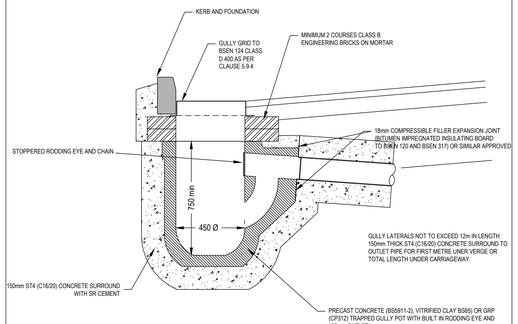


NOTE:
INTERNAL DIMENSIONS OF CHAMBER NORMALLY 1250 x 675 (AS CLEAR OPENING IN FRAME)
BUT CHAMBER WIDTH SHOULD BE INCREASED FOR PIPES LARGER THAN 225 DIA. (max 525mm DIA) TO GIVE A min. 225mm BENCHING EACH SIDE. WITH THE BRICKWORK CORBELLED DOWN TO 675mm.

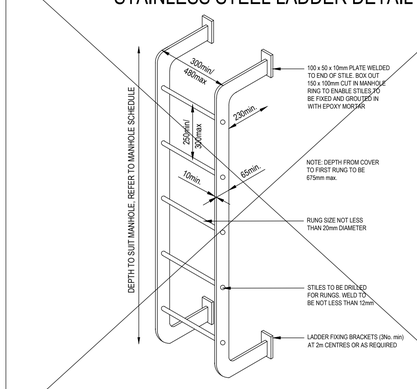
ALL PIPES UP TO AND INCLUDING 525mm DIA ENTERING OR LEAVING MANHOLES SHALL HAVE A FLEXIBLE JOINT WITHIN 600mm OF THE INSIDE FACE OF THE MANHOLE. THE NEXT PIPE SHALL BE A 600mm LONG "ROCKER PIPE"

REDRAWN FROM AWS DRG No SD-S-03 REV F

SECTION THROUGH ROAD GULLY

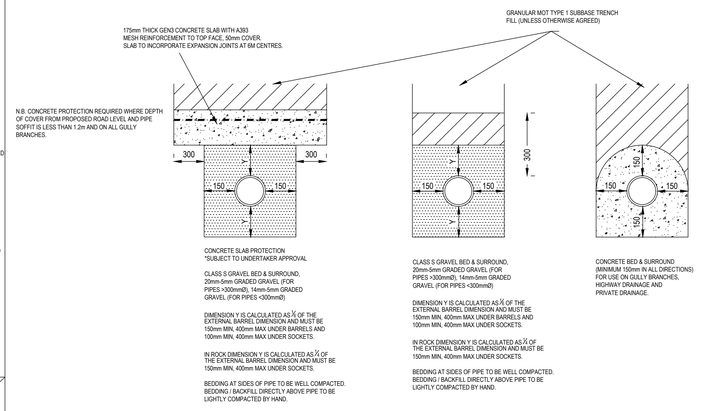


STAINLESS STEEL LADDER DETAIL

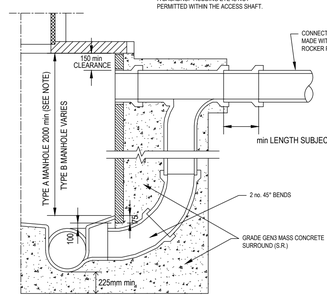


NB: IF A GLASS REINFORCED PLASTIC (GRP) LADDER IS TO BE USED INSTALLATION SHALL BE TO THE MANUFACTURERS INSTRUCTIONS.

PIPE SURROUND DETAILS

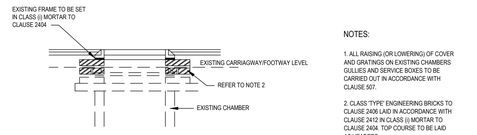


SECTION THROUGH BACKDROP INLET



REDRAWN FROM AWS DRG No SD-S-04

ADJUSTMENT OF COVERS & FRAMES

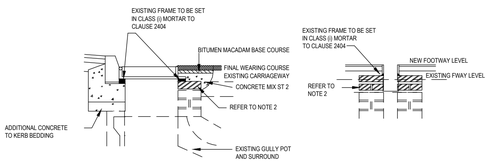


RAISING OF MANHOLE COVER AND FRAME

NOTES:

1. ALL RAISING (OR LOWERING) OF COVER AND GRATINGS ON EXISTING CHAMBERS GULLIES AND SERVICE BOXES TO BE CARRIED OUT IN ACCORDANCE WITH CLAUSE 507.

2. CLASS 'TYPE' ENGINEERING BRICKS TO CLAUSE 2406 LAID IN ACCORDANCE WITH CLAUSE 2412 IN CLASS (i) MORTAR TO CLAUSE 2404. TOP COURSE TO BE LAID AS HEADERS.



RAISING OF GULLY COVER AND FRAME

RAISING OF SERVICE BOX

FSB MEMBER

DO NOT SCALE. USE FIGURED DIMENSIONS ONLY. CHECK ON SITE AND ALL DISCREPANCIES TO BE REPORTED TO HALL Infrastructure DESIGN LTD.

AMENDMENTS:

REF.	DESCRIPTION.	DATE.	BY.
A	Type X detail amended to AWS requirements	25.06.10	GWH
B	GULLY DETAIL UPDATED TO LCC 2010 STANDARDS	15.11.10	GWH
C	Manholes type C & X removed as requested by AWS.	30.08.11	GWH
D	Ladder removed from Type A manhole detail.	06.03.14	GWH
E	Gully detail amended.	30.10.14	GWH
F	Type E manhole detail added.	11.12.15	GWH
G	Type A, B & E accesses reduced to 600x600	02.02.17	GWH
H	Note re lateral gradients amended.	09.01.18	GWH

CLIENT:
SEAGATE HOMES (UK) LTD

PROJECT:
SMALL DROVE
WESTON

TITLE:
SEWERS FOR ADOPTION 6TH EDITION
MANHOLE, GULLY AND BEDDING DETAILS

SCALE: N.T.S.

DATE: OCTOBER 2009

DRAWING No: SD/002-H

DRAWN BY: GWH

CHECKED BY: GWH

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