

Dia (mm)	Bd (m)	GRANULAR MATERIAL TO NOMINAL SINGLE SIZED AS FOLLOWS.
100	0.5	100 DIA. 10mm
150	0.6	150 DIA. 10mm/ 14mm.
225	0.7	200 DIA. & ABOVE 10mm/ 14mm/ 20mm.
300	0.85	
375	1.05	
450	1.15	
525	1.20	
600	1.35	
1050	1.80	

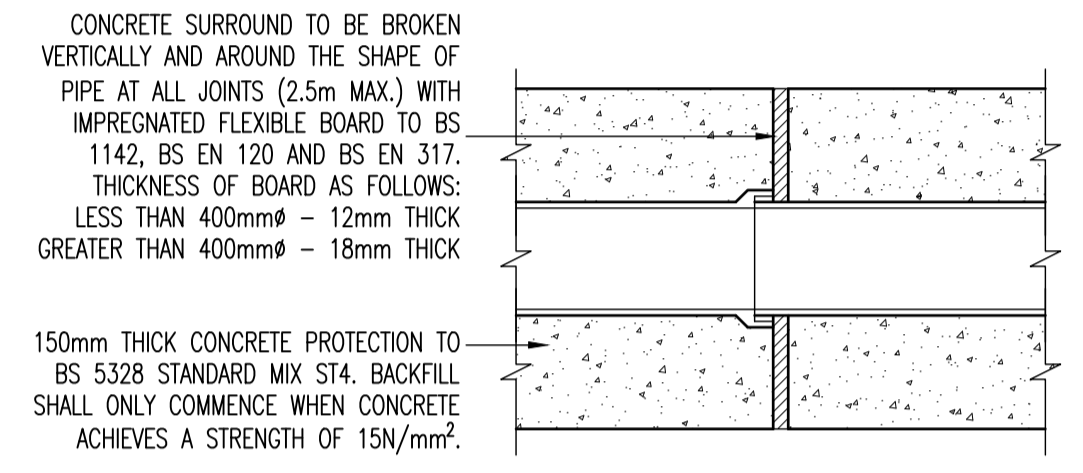
NOTE 1
 Bd = TRENCH WIDTH AT CROWN OF PIPE - (NARROW TRENCH WIDTH CONDITIONS)
 Bc = OUTSIDE DIAMETER OF PIPE

CLASS '2' & CLASS 'S' FOR PIPE DIAMETERS 100 TO 525. GENERAL CASE CLASS 'S'. CLASS '2' FOR USE WHERE CROWN OF PIPE IS WITHIN 0.9m OF U/S OF PAVING IN TRAFFICKED AREAS AND 0.6m IN NON TRAFFICKED AREAS.

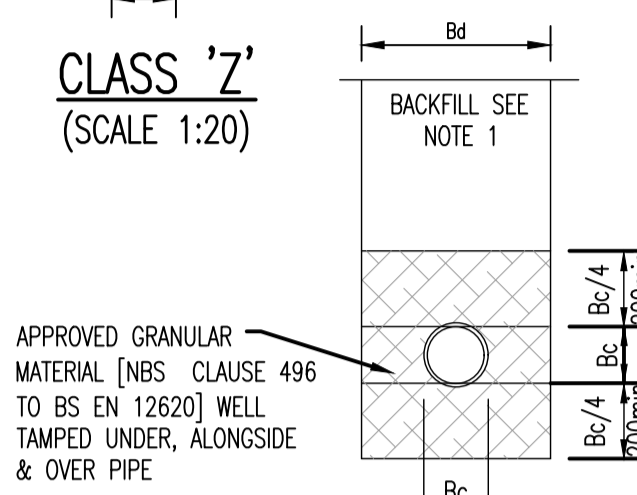
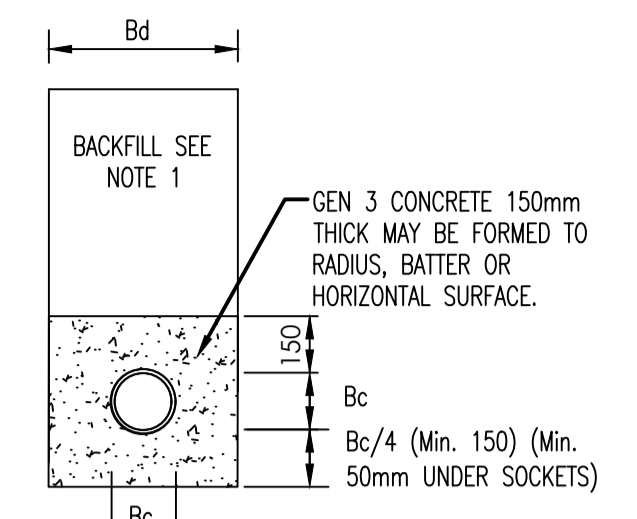
1. BACK FILL TO TRENCHES TO BE SELECTED GRANULAR MATERIAL. MAX. PARTICLE SIZE NOT EXCEEDING 75mm, AND NOT MORE THAN 10% PASSING 75mm SIEVE. MATERIAL SHALL NOT CONTAIN ANY CLAY LUMPS OR ANY OTHER FOREIGN MATTER.

2. PIPES TO BE VITRIFIED CLAY TO BSEN 295 OR PVC-U TO BSEN 1404-1:1998 TO CONTRACTOR CHOICE

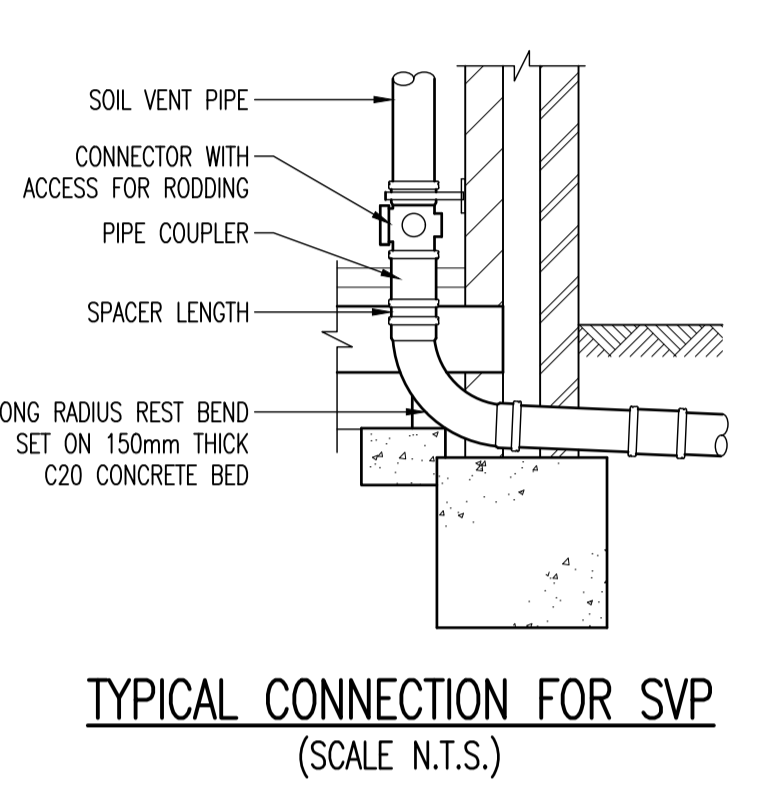
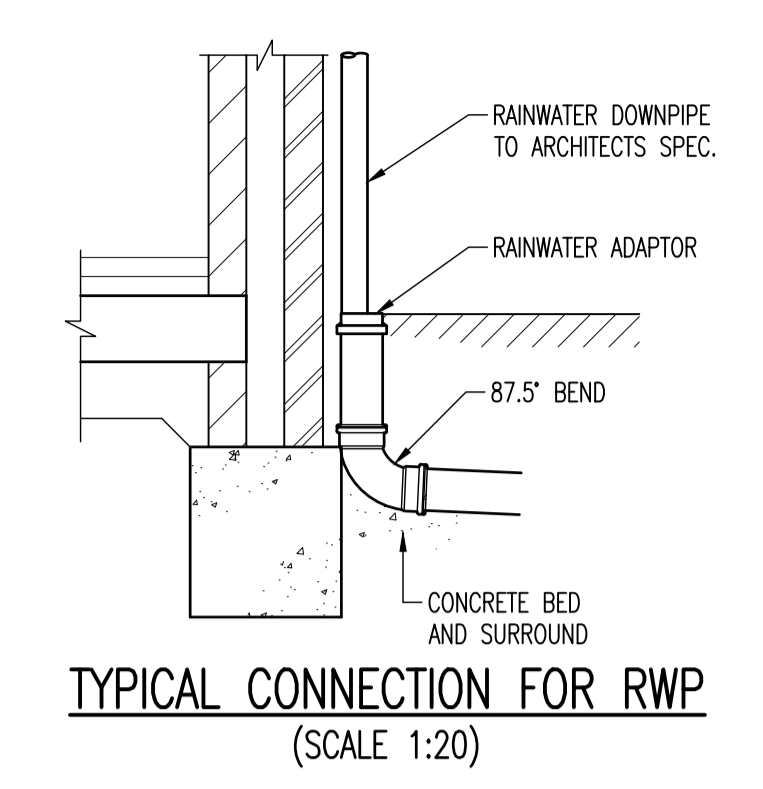
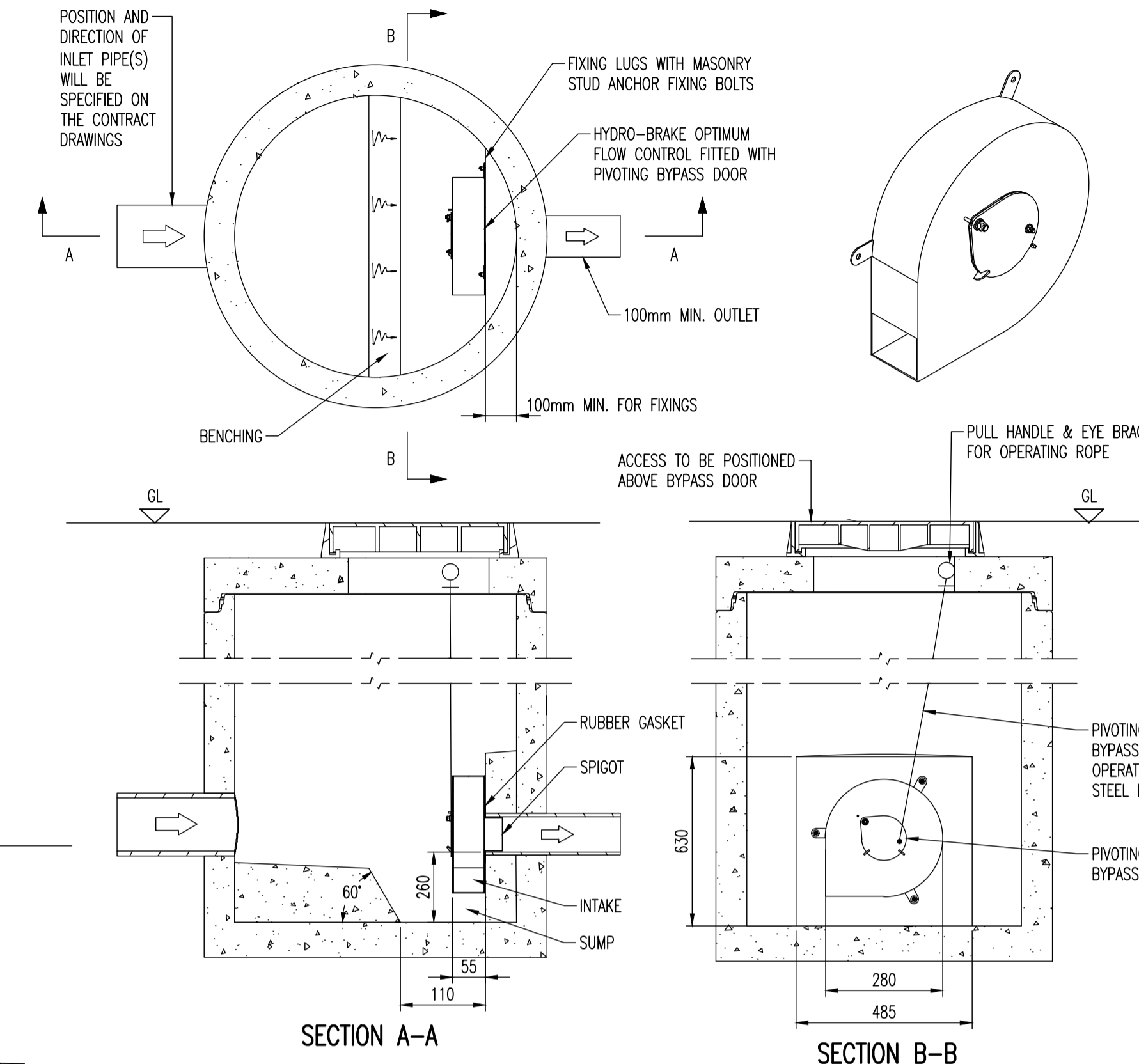
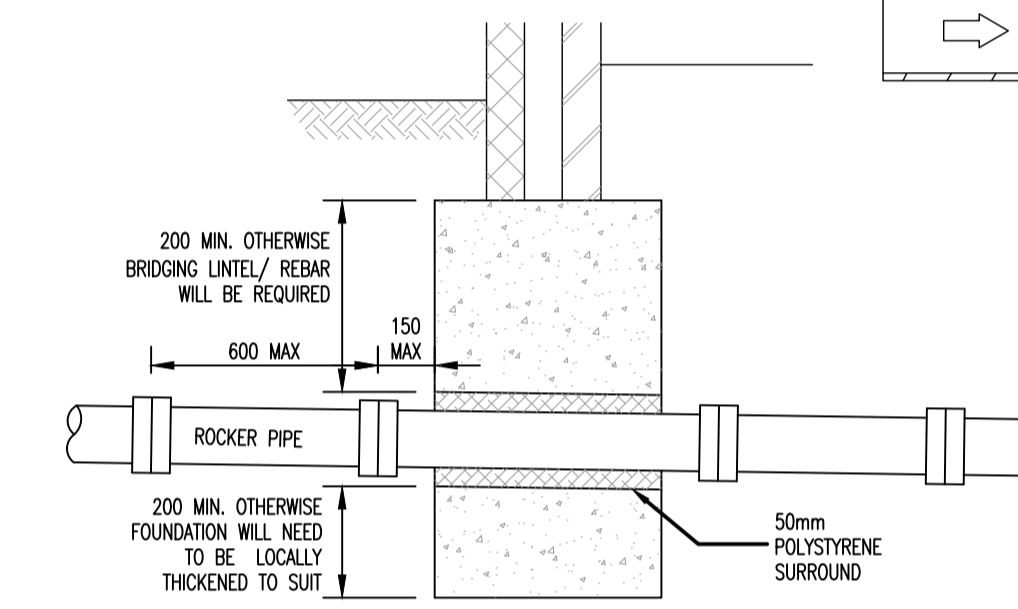
EXTERNAL PIPE BEDDING DETAILS



CONCRETE PROTECTION - FLEXIBLE JOINT DETAIL
 (SCALE 1:20)

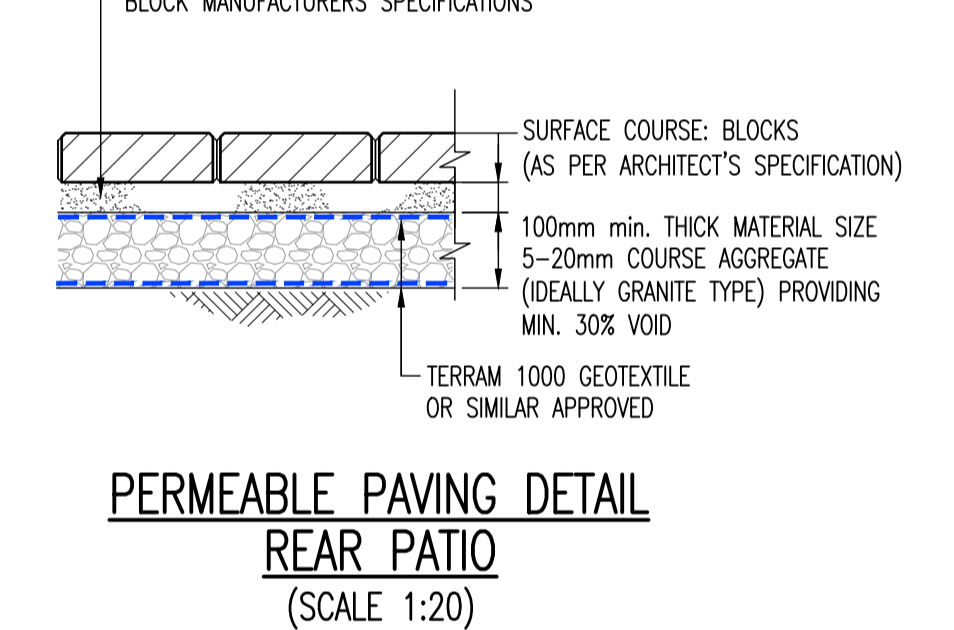
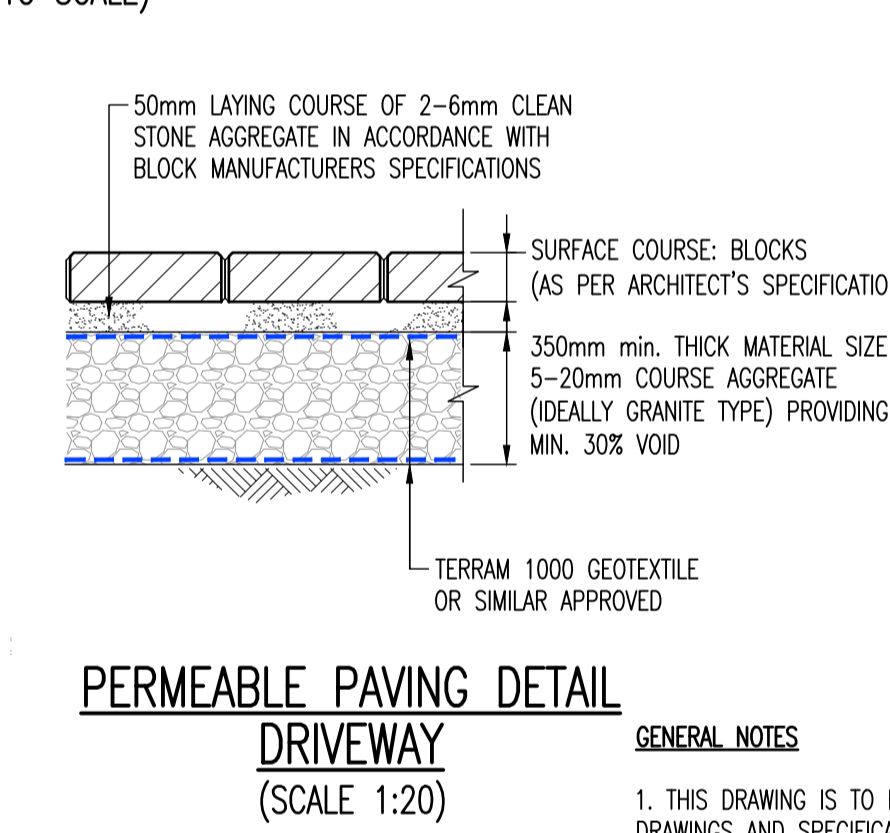
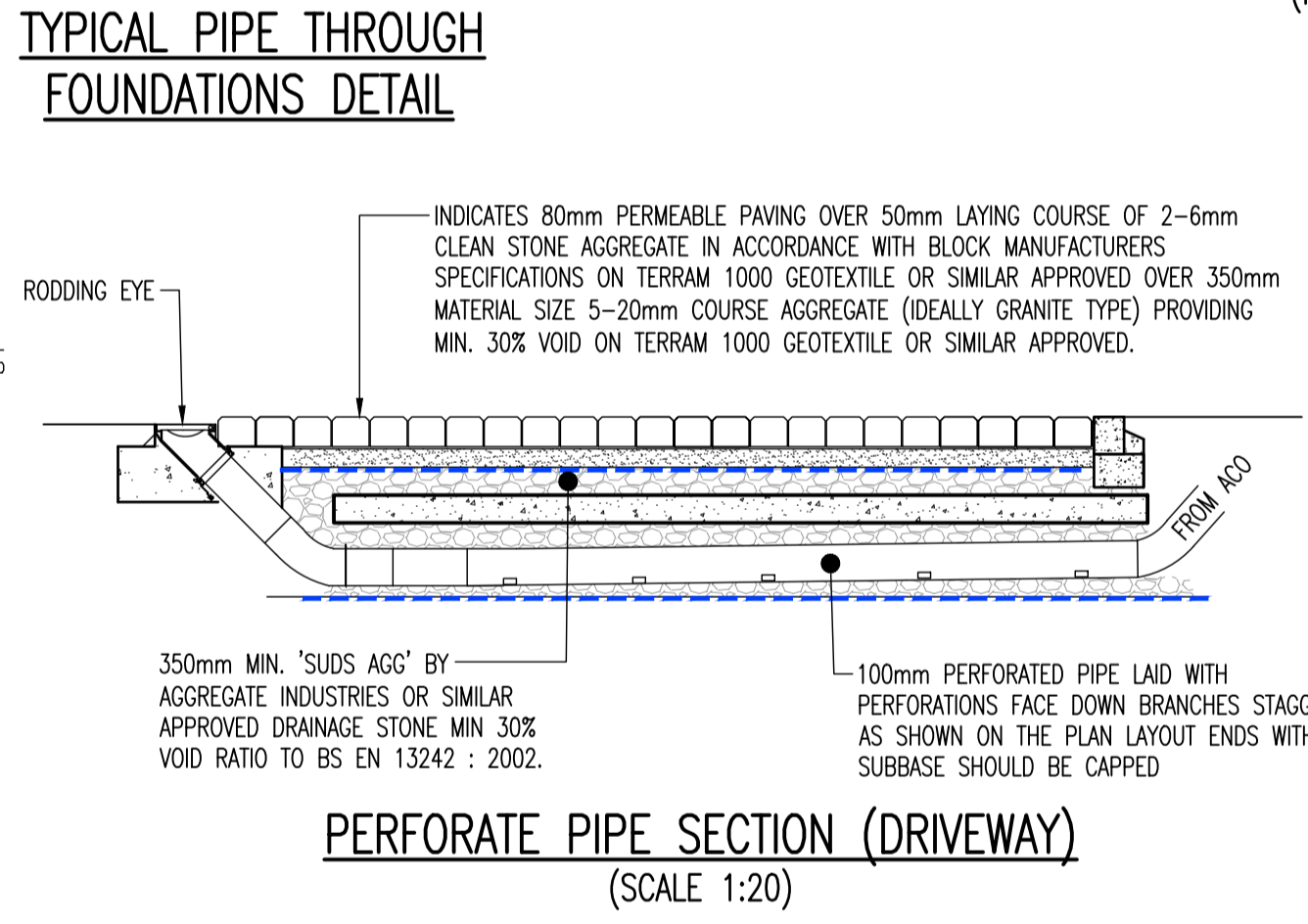
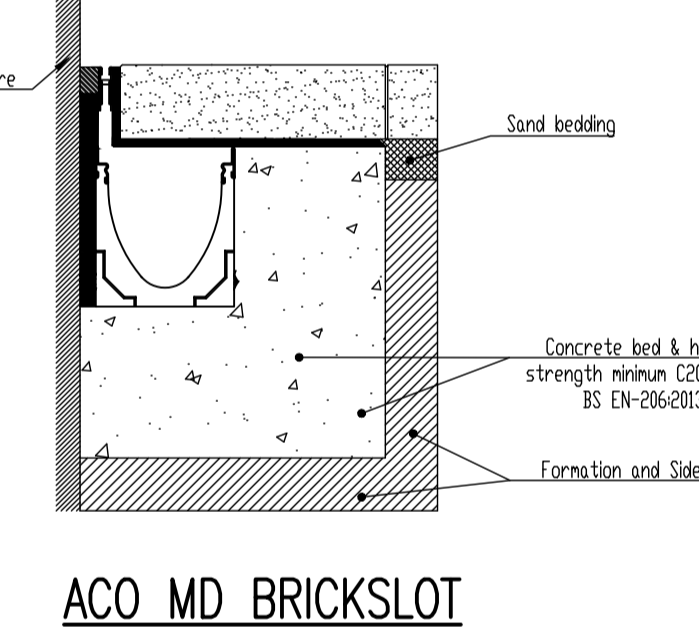
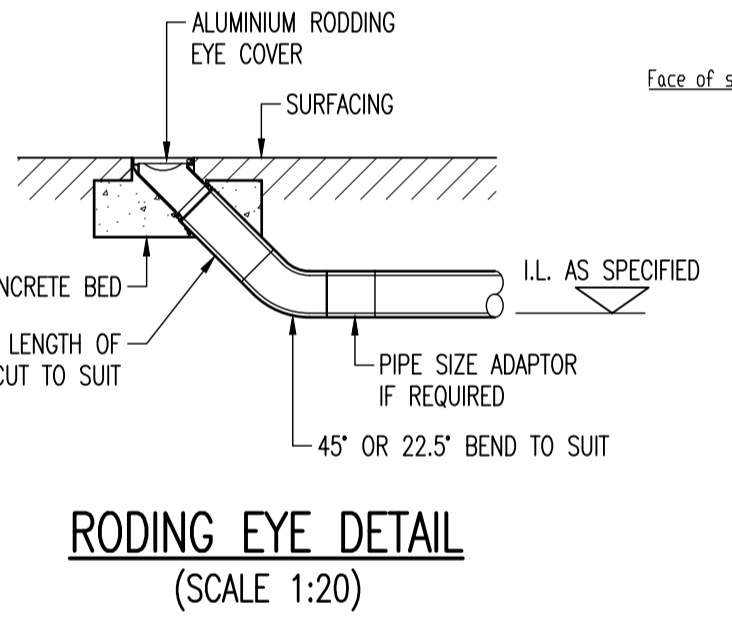


TYPICAL PIPE THROUGH FOUNDATIONS DETAIL



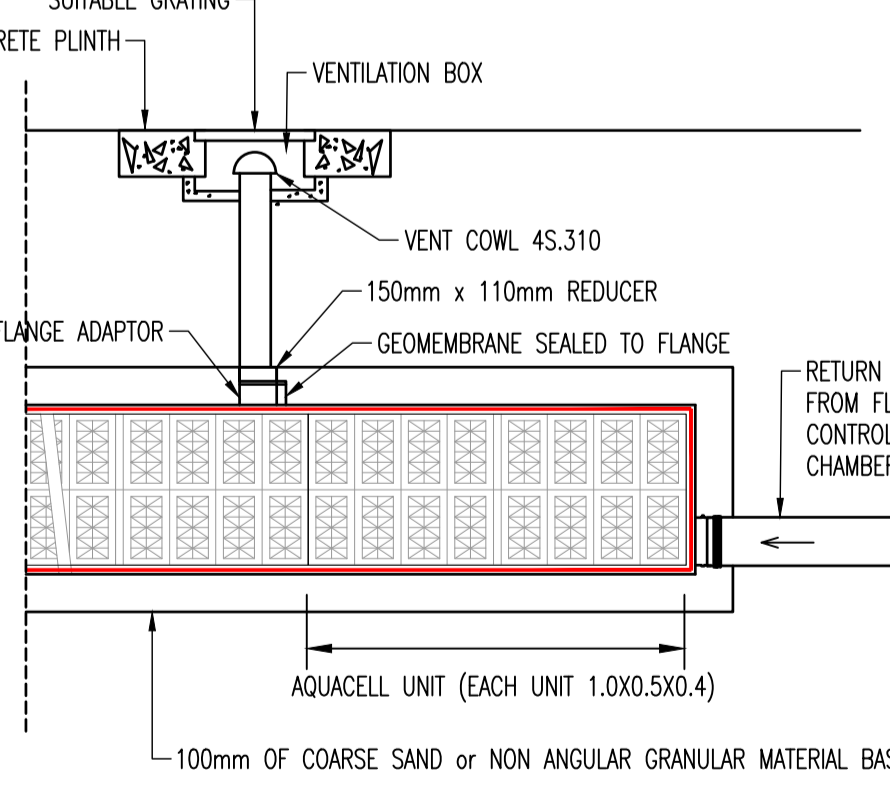
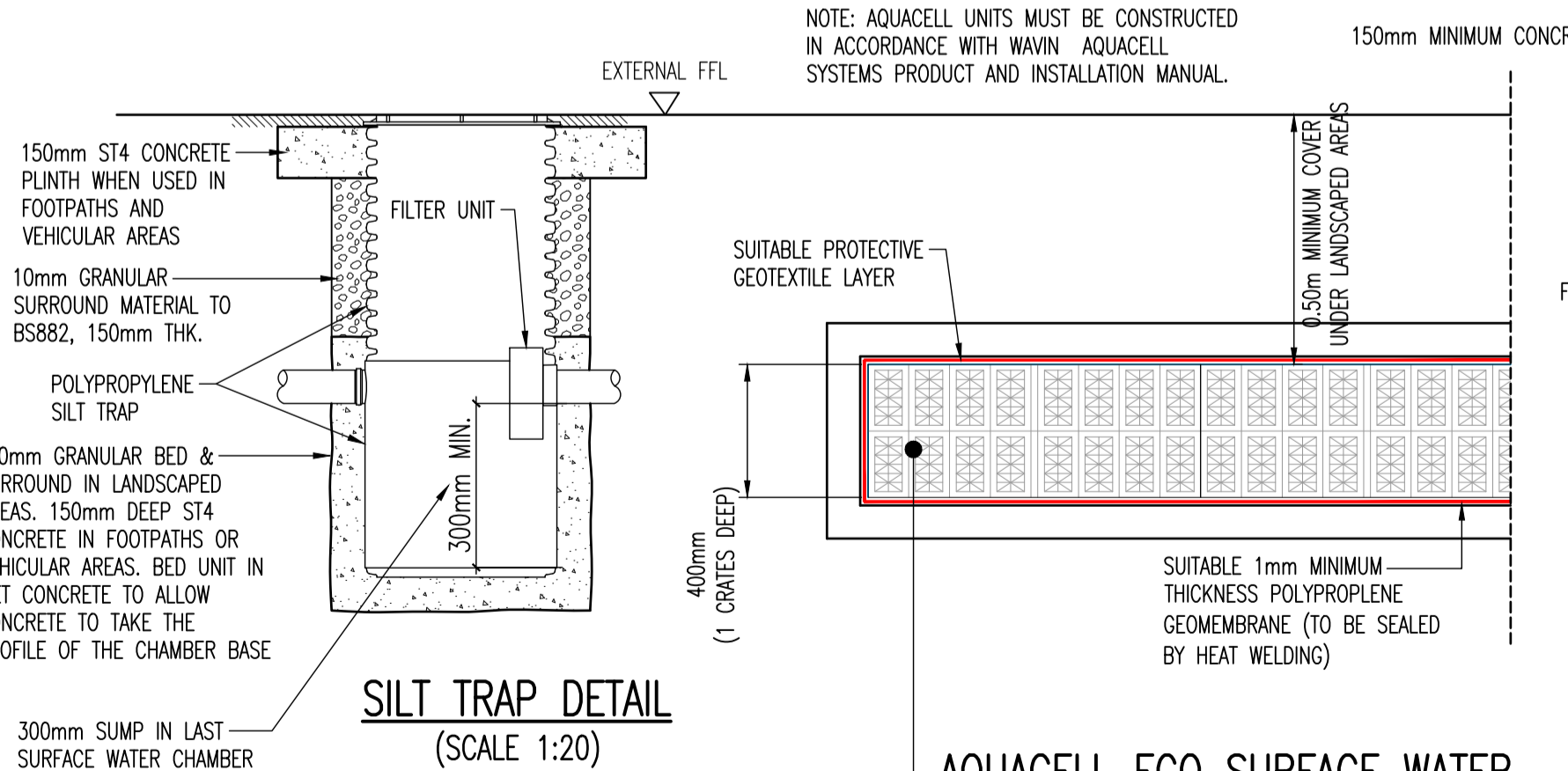
CAST/DUCTILE IRON MANHOLE COVER WEIGHT CLASSES TO BS EN 124

- CLASS A15 TO BE USED IN PEDESTRIAN AREAS LIKE GARDENS AND PATIOS
- CLASS B125 TO BE USED IN DOMESTIC DRIVEWAYS
- CLASS C250 TO BE USED IN LIGHT TRAFFICKED ROAD AND SMALL PRIVATE CAR-PARKS
- CLASS D400 TO BE USED IN AREAS SUBJECT TO HEAVY LOAD (HGV'S)



GENERAL NOTES

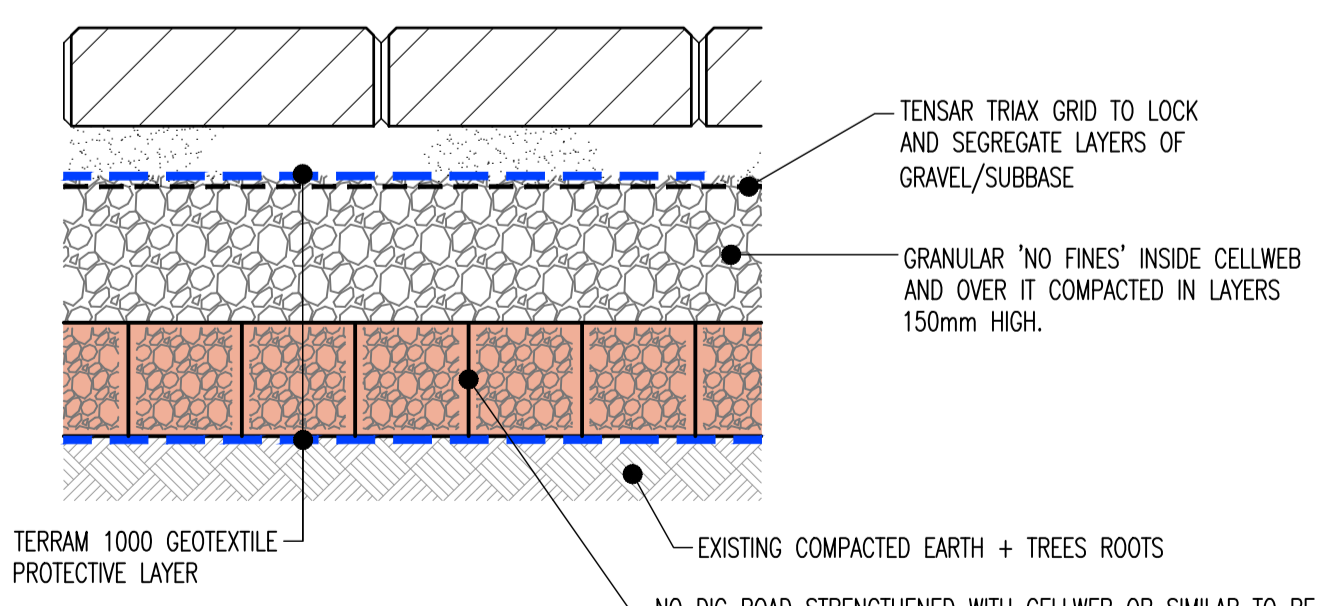
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ENGINEERS, ARCHITECTS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
- ANY GRID LINES, BUILDING LINES, ETC. ARE TO BE SET OUT IN ACCORDANCE WITH THE RELEVANT ARCHITECT'S PLAN. DIMENSIONS ARE NOT TO BE SCALED FROM THIS DRAWING, EITHER MANUALLY OR ELECTRONICALLY.
- DIMENSIONS MARKED * ARE SUBJECT TO CONFIRMATION BY SITE MEASUREMENT BEFORE CONSTRUCTION COMMENCES.
- ANY DIMENSIONAL DISCREPANCIES ON THIS DRAWING ARE TO BE REFERRED TO THE ENGINEER BEFORE THE AFFECTED WORK PROCEEDS.
- ALL CALCULATIONS AND DRAWINGS ARE PREPARED ON THE ASSUMPTION THAT THE WORKS WILL BE UNDERTAKEN BY A WELL-ESTABLISHED COMPETENT BUILDING CONTRACTOR, FULLY EXPERIENCED IN CARRYING OUT PROJECTS OF THIS NATURE AND THAT THE WORKS ON SITE WILL BE SUPERVISED AND ADMINISTERED BY A SUITABLY EXPERIENCED PERSON.
- ALL WORKS SHOULD BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF:
 - RELEVANT BRITISH STANDARDS AND CODES OF PRACTICE.
 - NATIONAL SPECIFICATION FOR STRUCTURAL STEELWORK.
 - NHBC STANDARDS
 - AS APPLICABLE AND IN ACCORDANCE WITH GOOD BUILDING PRACTICE.
- IN PARTICULAR, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CARRYING OUT THE WORKS IN A SAFE MANNER, ALL DUE ATTENTION BEING GIVEN TO STABILITY DURING DEMOLITION AND NEW BUILDING WORK. ADEQUATE SHORING, PROPPING AND THE LIKE SHOULD BE PROVIDED, WHICH SHOULD REMAIN IN PLACE UNTIL THE NEW STRUCTURE IS IN PLACE AND MORTAR PACKING AND MASONRY MORTAR HAS HARDENED.



UNITS TO BE WRAPPED IN A GEOMEMBRANE AS RECOMMENDED AND SPECIFIED BY THE MANUFACTURER IN APPENDIX SD OF WAVIN'S 'STORMWATER MANAGEMENT- DESIGN & INSTALLATION' GUIDE, INCLUDING PROTECTIVE FLEECE OVER THE GEOMEMBRANE.
 UNITS TO BE PLACED ON 100mm DEEP OF SHARP SAND. PIPE ENTRY POINTS AND GEOTEXTILE TO BE SEALED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, INCLUDING WELDED DOUBLE SEAMS. WAVIN (01249 766600) AQUACELL UNITS TO BE USED UNLESS SPECIFIED AGREEMENT GIVEN BY CLIENT FOR ALTERNATIVE APPROVED PRODUCT.

AQUACELL NOTES
 AQUACELLS TO HAVE TYPE 1 OR TYPE 2 SUBBASE BACKFILL TO THE SIDES AND OVER THE CELLS ONLY. MATERIAL TO BE COMPACTED IN ACCORDANCE WITH TABLE 5/4 OR 5/5 OF THE SPECIFICATION FOR HIGHWAY WORKS TAKING INTO ACCOUNT MAXIMUM ROLLERS WEIGHTS AS ADVISED BY WAVIN.

CONSTRUCTION PLANT NOT TO TRAFFIC NEAR OR OVER AQUACELL LOCATIONS UNLESS SPECIFICALLY AUTHORISED BY THE ENGINEER.



P2	08/04/24	SUB-BASE DEPTH AMENDED FOR PARKING AREAS. CHANNEL DRAIN DETAIL ADDED.
P1	03/04/24	PRELIMINARY ISSUE FOR COMMENTS
Rev	Date	Description
STATUS		
PRELIMINARY		
AFP ANDREW FIREBRACE PARTNERSHIP STRUCTURAL & CIVIL ENGINEERING CONSULTANTS Stable Barn, Park End, Swaytham Bulbeck, Cambridge CB25 0NA. Tel: 01223 811572 Fax: 01223 812179 E-mail: info@afpconsult.co.uk		
CLIENT		
PROJECT 77 HAUXTON ROAD LITTLE SHELFORD		
TITLE BELOW GROUND DRAINAGE DETAILS		
DRAWN CV	CHECKED HP	DRG No.
SCALES AS SHOWN@A1	DATE APR'24	23/0692/110
Andrew Firebrace Partnership Limited		ACAD FILE No. 23.0692.1008.110.DWG
		REV
		P2
		©Copyright