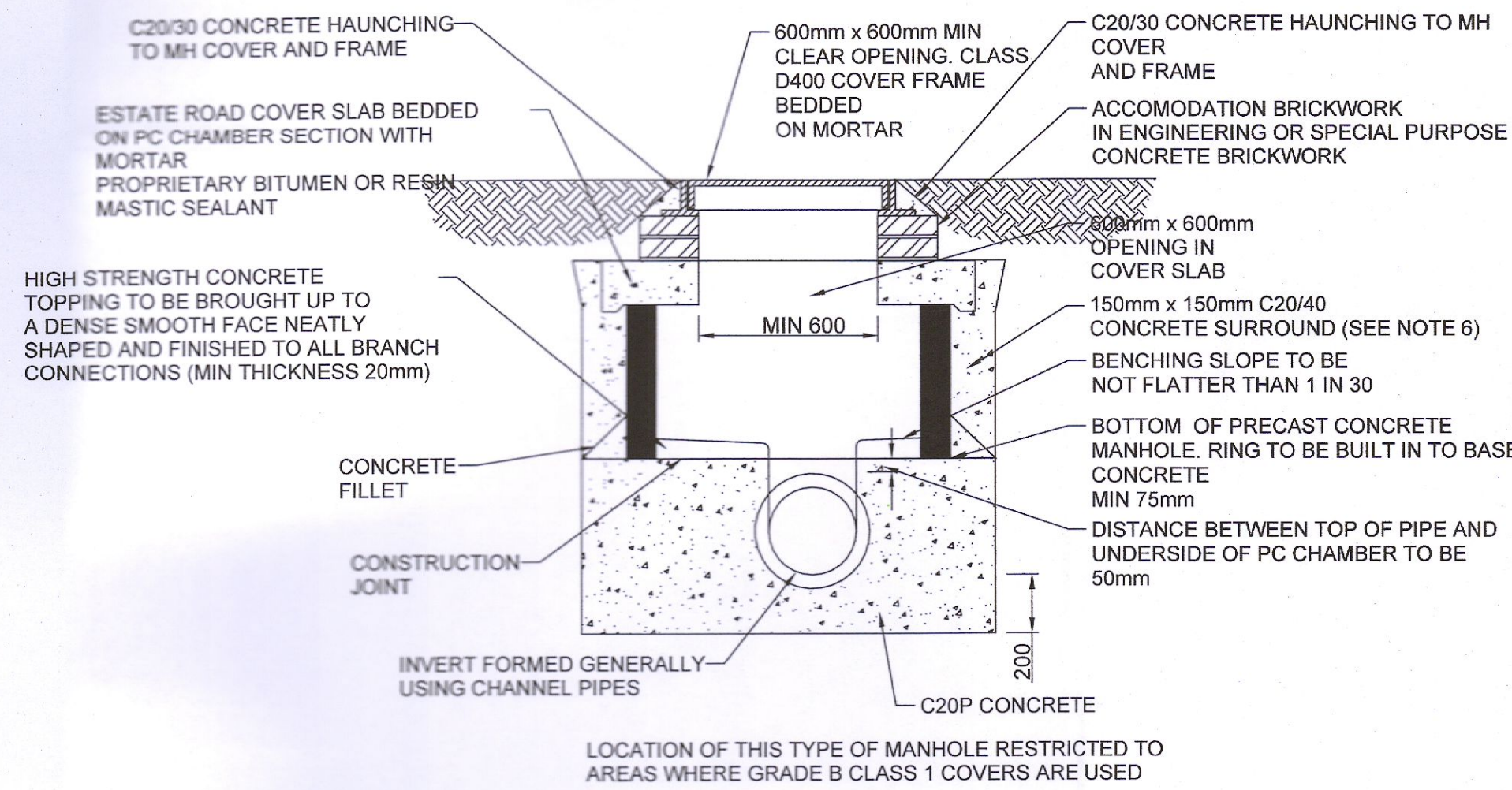


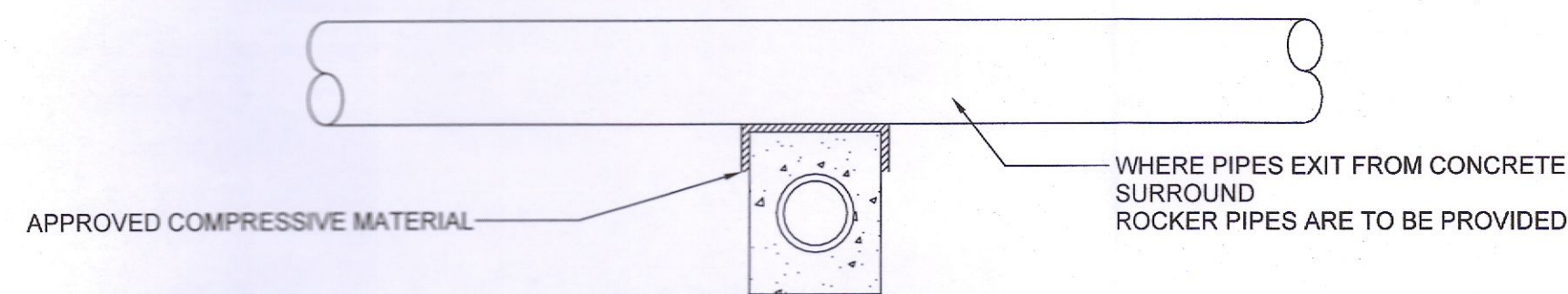
Notes:

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
- DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- FOR GENERAL NOTES REFER TO DRAWING.
- ALL FOUL DRAINAGE WORKS TO BE IN ACCORDANCE WITH IRISH WATERS' CODE OF PRACTICE FOR WASTEWATER SUPPLY AND WASTEWATER INFRASTRUCTURE STANDARD DETAILS.
- FOUL SEWERS TO BE THERMOPLASTIC STRUCTURED WALL PIPES (COMPLYING WITH THE PROVISIONS OF IS EN 13476 AND WS 4-35-012000 AND COMPLY WITH THE REQUIREMENTS OF THE IRISH WATER CODE OF PRACTICE.
- WATERMAIN INSTALLATION AND ALL WATER SUPPLY WORKS TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF IRISH WATERS CODE OF PRACTICE FOR WATER SUPPLY AND WATER INFRASTRUCTURE STANDARD DETAILS.
- WATERMANS TO BE TYPE HPPE, PE-100, SDR-17 RATED AND SHALL CONFORM TO IS EN 12201 (PART 1, PART 2, & PART 3).
- WATERMAIN SERVICE CONNECTION PIPES TO BE HDPE (PE-80) MATERIAL WITH SDR-17 RATING).



TYPICAL PRECAST SHALLOW MANHOLE DETAIL

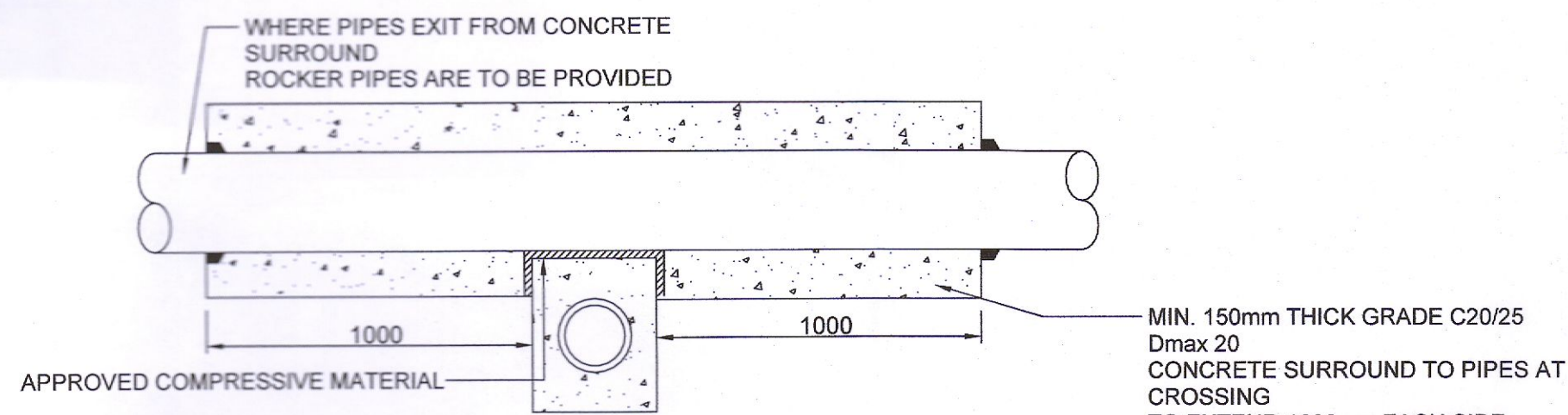
SCALE 1:20/1:40



TYPICAL DETAIL AT PIPE CROSSING WITH ADEQUATE COVER

<1200mm COVER IN PAVED AREAS
<900mm COVER IN LANDSCAPED AREAS

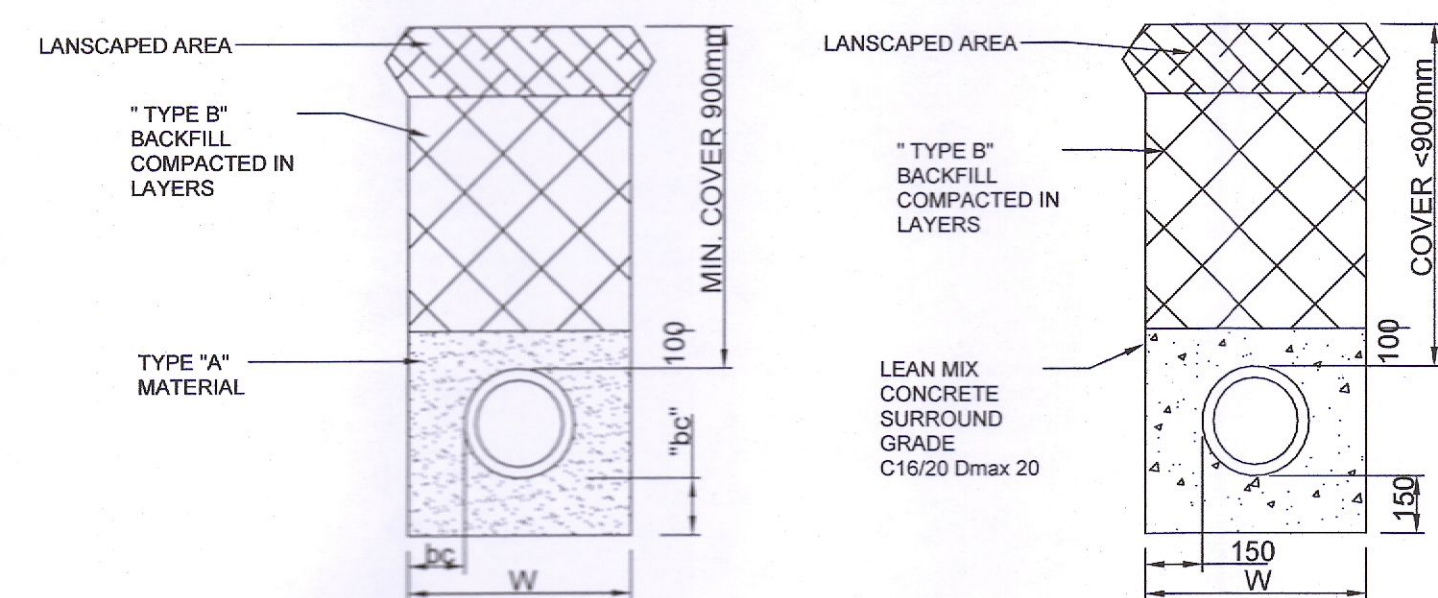
(FOR GAPS BETWEEN PIPES OF LESS THAN 300mm)
SCALE 1:20/1:40



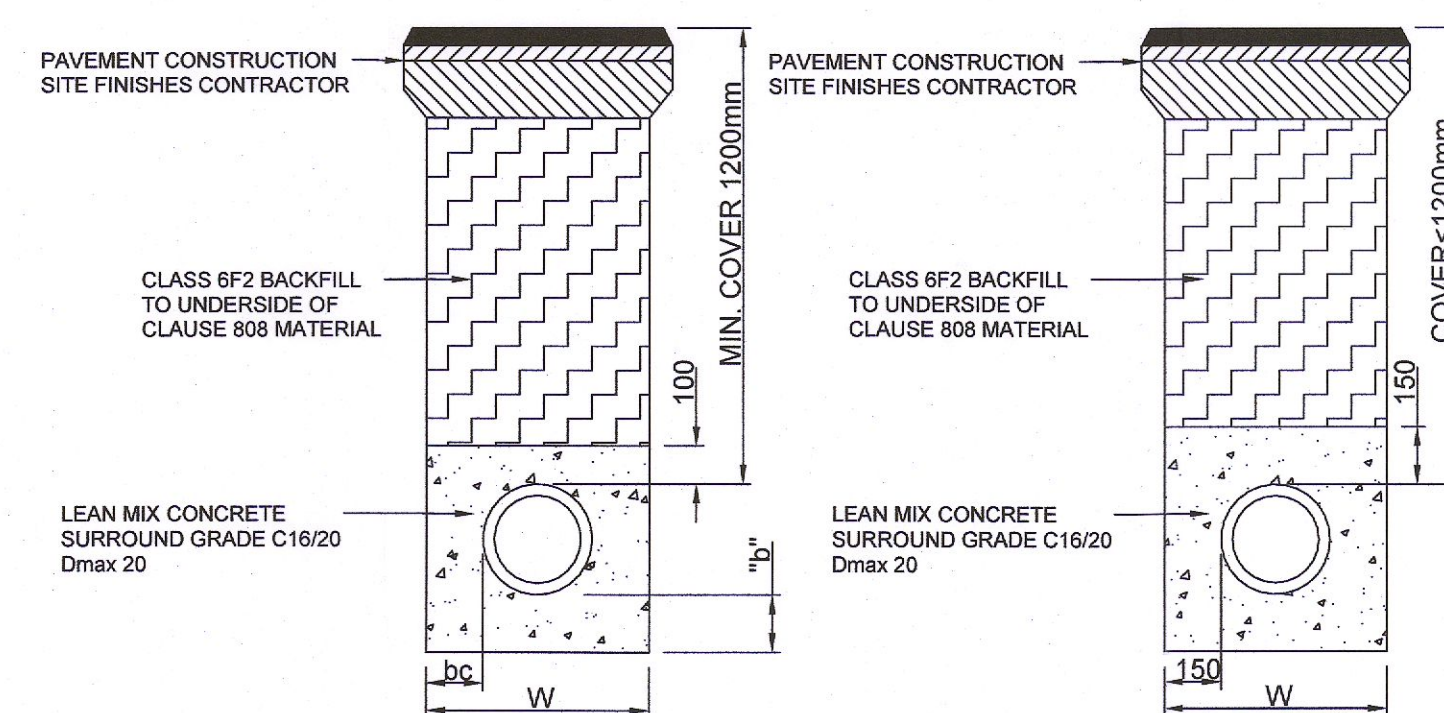
TYPICAL DETAIL AT PIPE CROSSING WITH SHALLOW COVER

<1200mm COVER IN PAVED AREAS
<900mm COVER IN LANDSCAPED AREAS

(FOR GAPS BETWEEN PIPES OF LESS THAN 300mm)
SCALE 1:20/1:40



UNPAVED AREAS



PAVED AREAS

PIPE TRENCH DETAILS

SCALE 1:20

NOTE:
(ON MANHOLES <1.5mØ, REDUCING SLAB NOT TO BE USED & PCC RINGS TO CONTINUE UP TO COVER SLAB)

- ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS NOTED OTHERWISE.
- PRE-CAST MANHOLES UNITS: COMPLYING WITH REQUIREMENTS OF IS EN 1917 AND BS 5911-PART 3.
- THICKER MANHOLE BASES REQUIRED FOR SEWERS IN EXCESS OF 3m DEEP WHERE THE SIZE IS GREATER THAN THE STANDARD MINIMUM SIZE.
- APPROVED PRE-CAST CONCRETE BASES MAY BE USED INCORPORATING CHANNELS, BENCHING ETC. SUBJECT TO IRISH WATER REVIEW AND COMPLYING WITH BS 5911-PART 4 2002.
- STRUCTURAL DESIGN AND REINFORCEMENT DETAILS TO BE PROVIDED BY THE DEVELOPER AND SUBMITTED TO IRISH WATER FOR REVIEW.
- MANHOLES GREATER THAN 3m IN DEPTH WILL REQUIRE A DETAILED STRUCTURAL DESIGN AND BE SUBJECT TO IRISH WATER REVIEW.
- MANHOLE ROOFS SHALL CONSIST OF A RE-INFORCED CONCRETE SLAB OF IN-SITU CONCRETE, C30/37, WITH A MINIMUM THICKNESS OF 225mm DESIGNED TO CARRY ALL LIVE AND DEAD LOADS. ALTERNATIVELY, APPROVED PRE-CAST CONCRETE ROOF SLABS MAY BE USED SUBJECT TO IRISH WATER REVIEW AND COMPLIANCE WITH BS 5911 PART 4: 2002.
- COVERS AND FRAMES SHALL BE SUITABLE FOR ROAD AND TRAFFIC CONDITIONS SUBJECT TO REVIEW BY IRISH WATER.
- 200mm ALL AROUND, 100mm DEEP CONCRETE PLINTH AROUND COVERS IN GREEN AREAS.
- ALL CHAMBERS TO BE CHECKED FOR UPLIFT BY THE DEVELOPER BASED ON GROUND CONDITIONS WITHIN THE SITE. SHOULD ANTI FLOTATION MEASURES BE REQUIRED THEY SHALL BE SUBJECT TO REVIEW BY IRISH WATER.
- ALL CONCRETE TO BE IN ACCORDANCE WITH IS EN 206: 2013.
- ANY SPECIAL ROAD REINSTATEMENT AROUND COVER & FRAME SHALL BE TO ROAD AUTHORITY'S REQUIREMENTS.
- NEW ROAD CONSTRUCTION & SURFACE FINISH TO BE TO ROAD AUTHORITY REQUIREMENTS.
- 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.
- IF DEPTH FROM GROUND TO PIPE SOFFIT IS GREATER THAN 6m DEEP, A SITE SPECIFIC ENGINEERED SOLUTION FOR ACCESS SHALL BE PROVIDED.
- PROPRIETARY WATERTIGHT PCC MANHOLE RING SYSTEMS WITH A WALL THICKNESS > 125mm, & A WATER TIGHT JOINT SEALING SYSTEM, MAY BE USED WITHOUT CONCRETE SURROUND, SUBJECT TO THE GROUND WATER LEVEL AT THE MANHOLE BEING LOW, & SUBJECT TO REVIEW BY IRISH WATER.

MINIMUM MANHOLE DIAMETER "D"	
DIAMETER OF LARGEST PIPE IN MANHOLE (mm)	INTERNAL DIAMETER OF MANHOLE (mm)
LESS THAN 375	1200
375 TO 450	1350
500 TO 750	1500

ROCKER PIPE LENGTH	
PIPE DIAMETER (mm)	ROCKER PIPE LENGTH (mm)
150 TO 600	600
GREATER THAN 600 TO 750	1000
GREATER THAN 750	1250

NORMAL PIPE DIAMETER (mm)	100	150	225	300	375	450	525	600	750	900	1050	1200	1350
TRENCH WIDTH MIN (mm) (W)	450	500	600	700	950	1050	1150	1250	1400	1950	2100	2300	2450
TRENCH WIDTH MAX (mm) (W)	650	700	800	900	1150	1250	1350	1450	1600	2150	2300	2500	2650

TRENCH WIDTHS-FLEXIBLE PIPES

NOMINAL PIPE DIAMETER (mm)	100	150	200	250	300
TRENCH WIDTH MIN (mm) (W)	450	450	600	700	700
TRENCH WIDTH MAX (mm) (W)	600	600	700	700	850

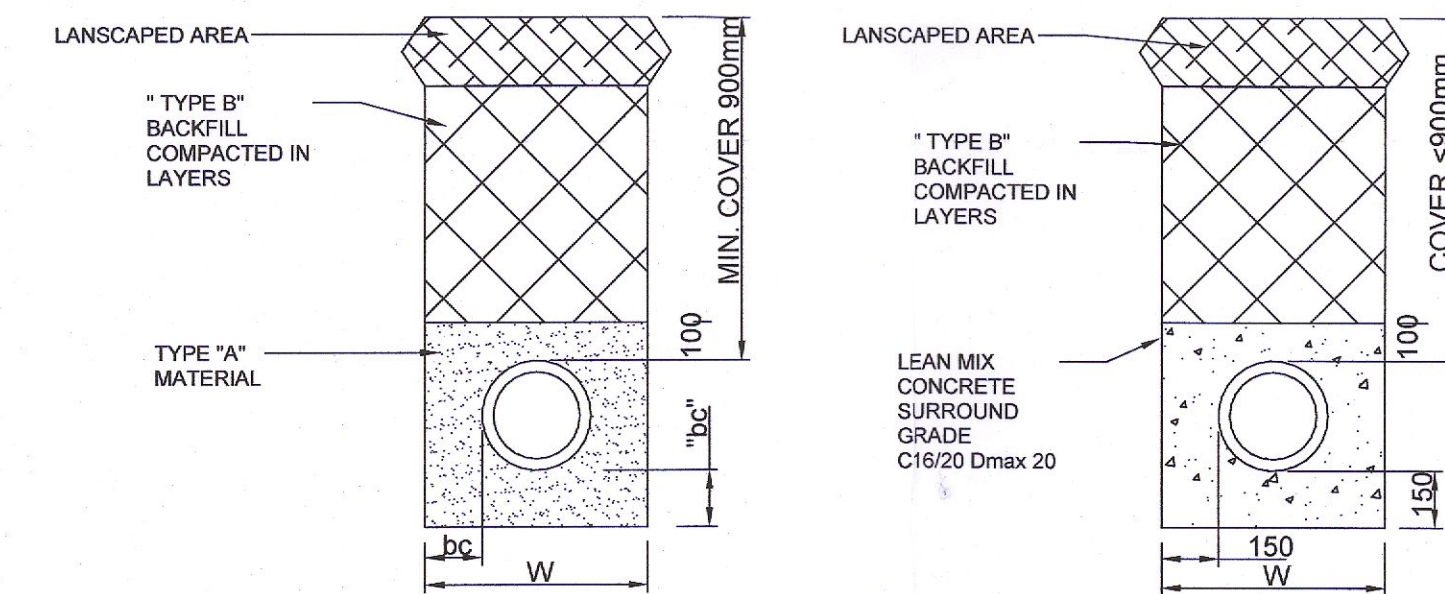
DIMENSIONS-"bc"

NOMINAL PIPE DIAMETER (mm)	100-450 incl.	525-600 incl.	750	900	1050	1200
bc (mm)	100	150	200	225	250	300

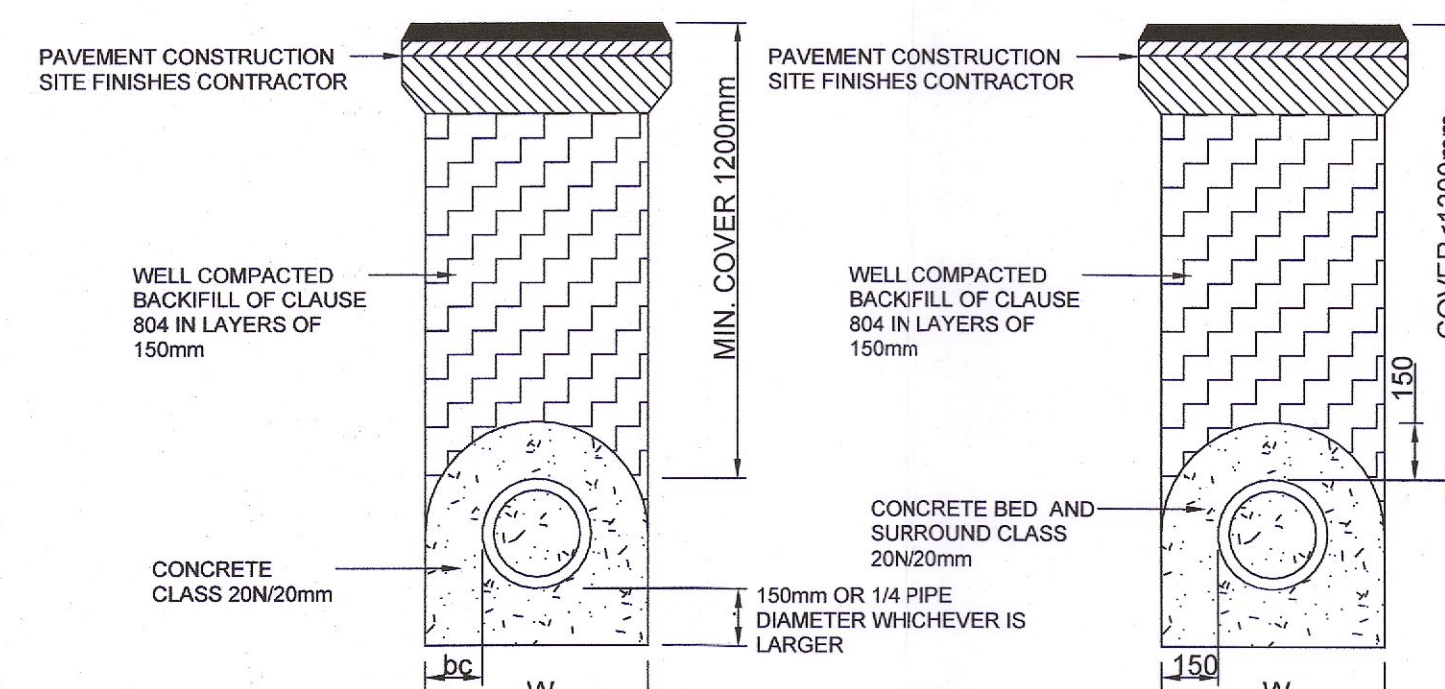
DIMENSION-"b"	PIPES UP TO AND INCL 600mm DIA	PIPES GREATER THAN 600mm DIA
UNIFORM SOIL	100mm	200mm
ROCK	200mm	300mm

- TYPE "A" MATERIAL:
BROKEN STONE OR GRAVEL, GRADING AS FOLLOWS:-
1) RIGID PIPES - PIPE DIAMETER UP TO AND INCLUDING 600mm
:SIEVE SIZE GREATER THAN 5mm AND LESS THAN 12mm
- PIPE DIAMETER GREATER THAN 600mm DIA
:SIEVE SIZE GREATER THAN 5mm AND LESS THAN 19mm
2) FLEXIBLE PIPES : SIEVE SIZE GREATER THAN 5mm AND LESS THAN 10mm

- TYPE "B" MATERIAL:
SELECTED FILL UNIFORM READILY COMPACTABLE MATERIAL.
FREE FROM : CLAY LUMPS RETAINED ON 75mm SIEVE, STONES RETAINED ON 25mm SIEVE, TREE ROOTS, VEGETABLE MATTER, BUILDING RUBBISH AND FROZEN SOIL.



UNPAVED AREAS

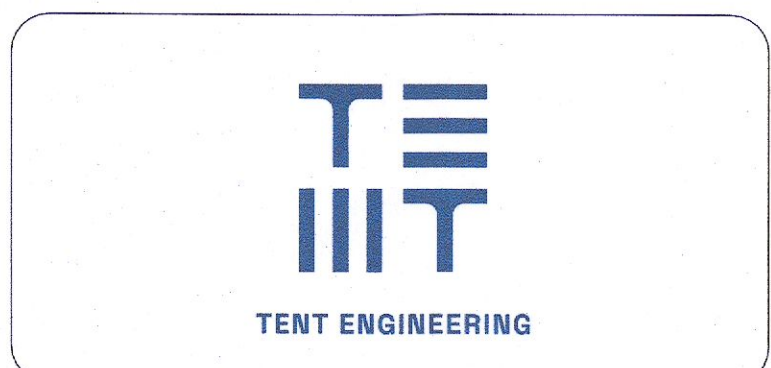


PAVED AREAS

PIPE TRENCH DETAILS (SDDC AREA)

SCALE 1:20

PO1 ISSUED FOR PLANNING	RPH	13.07.22
REV	DESCRIPTION	BY DATE
STATUS: PLANNING		



PROJECT: HOSTED KITCHENS BROOMHILL PLANNING
TITLE: TYPICAL DRAINAGE DETAILS

SCALE AT A1: 1:20	DATE: JULY 22	DRAWN: RPH	CHECKED: EH
DRAWING NO: 22066-TNT-XX-FN-DR-C-92010	REVISION:	PO1	