

TABLE OF MANHOLE/INSPECTION CHAMBER COVER GRADES AND AREAS OF USE

COVER GRADE TO BS EN-124	LOCATION
D400	FOR USE IN INDUSTRIAL ROADS AND PARKING AREAS ACCESSIBLE TO ALL TYPES OF ROAD VEHICLES INCLUDING HGV'S.
C250*	FOR USE IN PRIVATE ROADS OR PARKING AREAS eg. CAR PARKS AND MINOR PRIVATE ROADS ACCESSIBLE TO RECREATION VEHICLES, FIRE APPLIANCES ETC. WITH POSSIBLE OCCASIONAL HGV USE.
B125	FOR USE IN FOOTWAYS, PEDESTRIAN AREAS, DRIVEWAYS AND CAR PARKS ACCESSIBLE BY LIGHT VEHICLES ONLY.
A15	FOR USE IN AREAS WHICH CAN ONLY BE USED BY PEDESTRIANS AND PEDAL CYCLISTS.

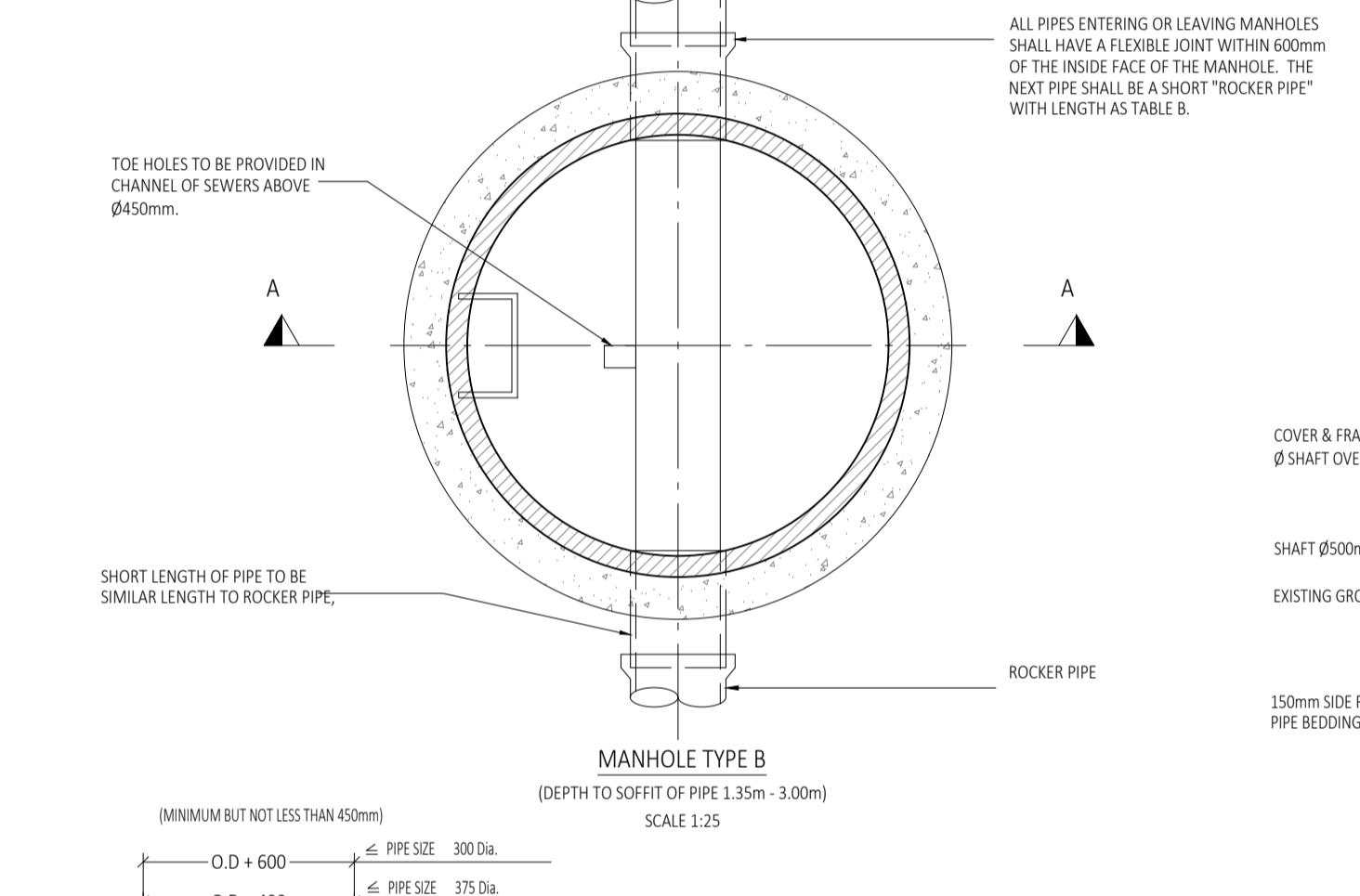
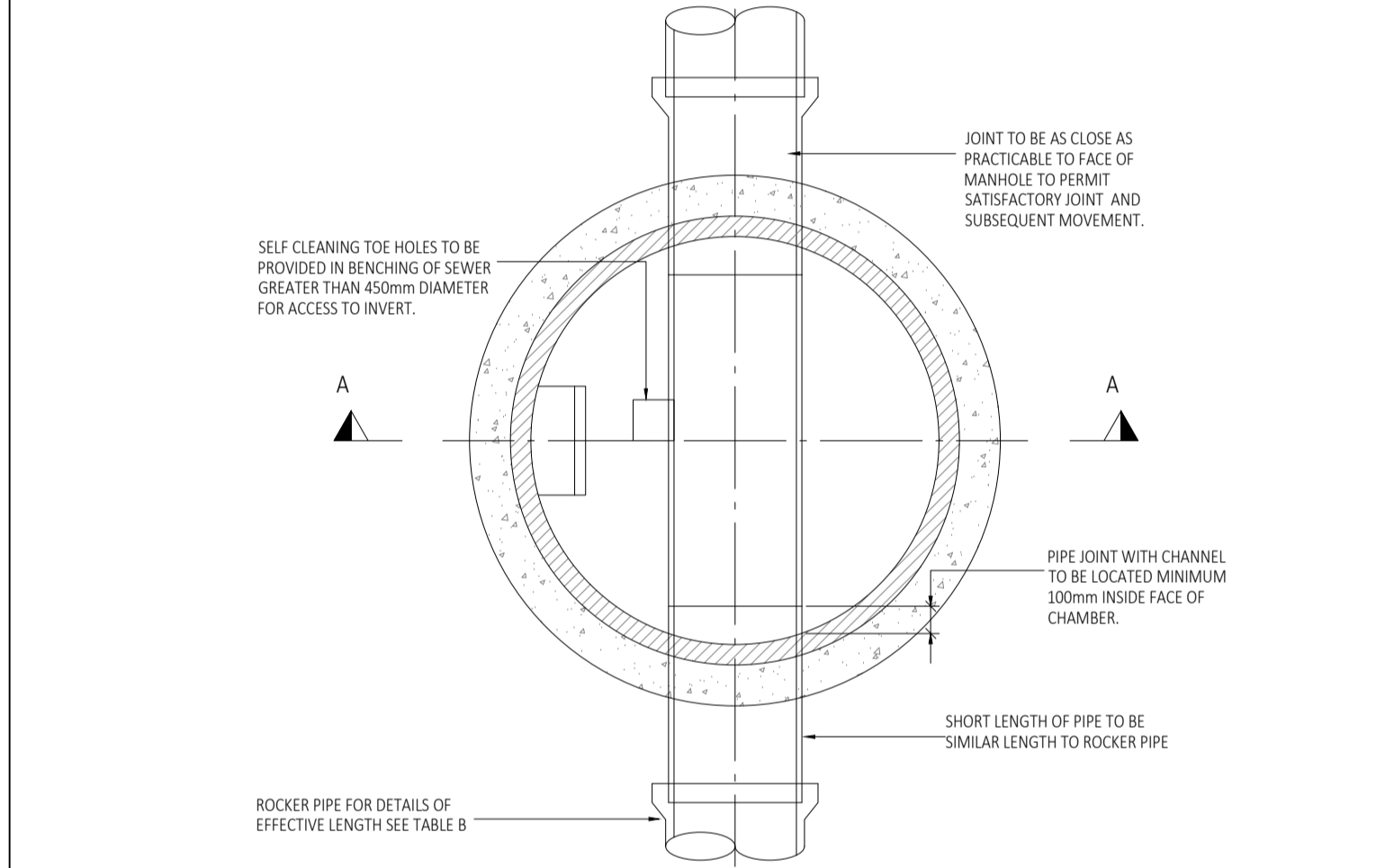
* D400 MAY BE USED IN LIEU OF C250 IF PREFERRED.

MINIMUM DIMENSIONS FOR ACCESS FITTINGS AND INSPECTION CHAMBERS

TYPE OF ACCESS	DEPTH TO INVERT FROM COVER LEVEL (m)	MINIMUM INTERNAL DIMENSIONS ⁽¹⁾		MINIMUM CLEAR OPENING SIZE ⁽²⁾	
		LENGTH x WIDTH (mm x mm)	CIRCULAR (mm)	LENGTH x WIDTH (mm x mm)	CIRCULAR (mm)
RODDING EYE		AS DRAM BUT MINIMUM 100mm.			SAME SIZE AS PIPEWORK
ACCESS FITTING					
SMALL 150mm DIA.	0.6m OR LESS EXCEPT WHERE SITUATED IN A CHAMBER	150 x 100	150	150 x 100 (1)	SAME SIZE AS ACCESS FITTING
LARGE 225x100mm		225 x 100	225	225 x 100 (1)	
INSPECTION CHAMBER					
SHALLOW	0.6m OR LESS	225 x 100	190 (2)		190 (1)
MEDIUM	1.2m OR LESS	450 x 450	450	MIN 430 x 430	430
DEEP	GREATER THAN 1.2m	450 x 450	450	MAX 300 x 300 (3)	ACCESS RESTRICTED TO MAX 350 (3)

DRAWING NOTES:

- This Drawing is to be read in conjunction with the relevant Specifications & other Architectural & Engineering Drawings. Engineers to be informed immediately of any discrepancies before work proceeds.
- Do Not Scale from this Drawing. -Metric Figured Dimension only are to be used.
- It is "The Contractors" responsibility to ensure that all works are carried out in accordance with the requirements of the current Building Regulations and all other statutory documents relating to this project including the grant of planning permission, Fire Safety Certificate and Disability Access Certificate.
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NOTE: SULPHATE RESISTING PORTLAND CEMENT SHALL BE USED IN ALL CONCRETE (INCLUDING PRECAST CONCRETE PRODUCTS), IN ACCORDANCE WITH CLAUSE 4.2.9 OF "SEWERS FOR ADOPTION" 7TH EDITION

NOTE: ALL PIPES LEAVING OR ENTERING MANHOLES SHALL HAVE A FLEXIBLE JOINT WITHIN 600mm OF THE INSIDE FACE OF THE MANHOLE. THE NEXT PIPE SHALL BE A SHORT "ROCKER PIPE" 600mm LONG.

NOTE: ALL PIPE BEDDING MATERIAL TO BE IMPORTED GRANULAR MATERIAL.

CHAMBERS WITH OUTGOING PIPES GREATER THAN 600mm DIAMETER SHALL BE FITTED WITH REMOVABLE STAINLESS STEEL (GRADE 316) SAFETY CHAINS OR POLYPROPYLENE ROPE. MANHOLES GREATER THAN 6m DEPTH SHALL BE SUBJECT TO SPECIFIC DESIGN.

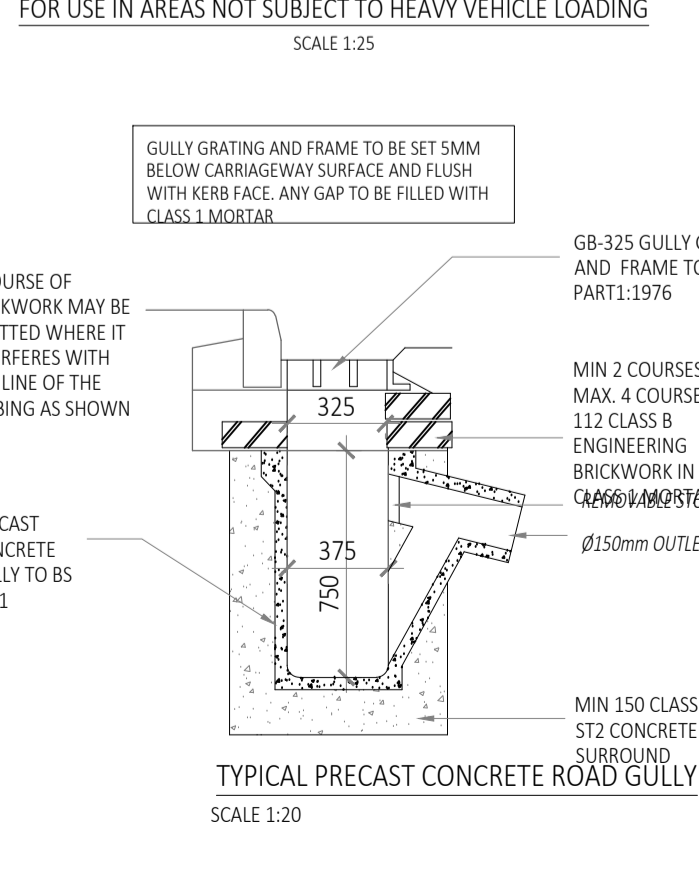
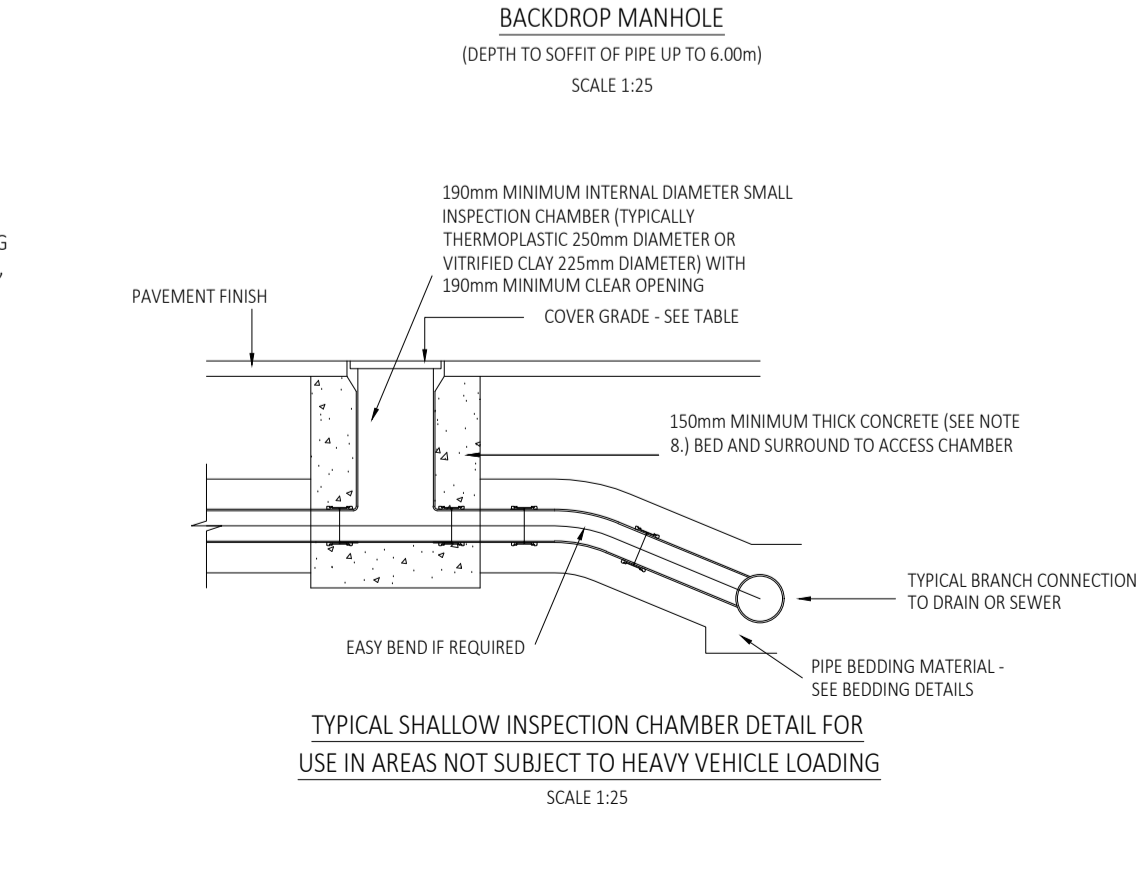
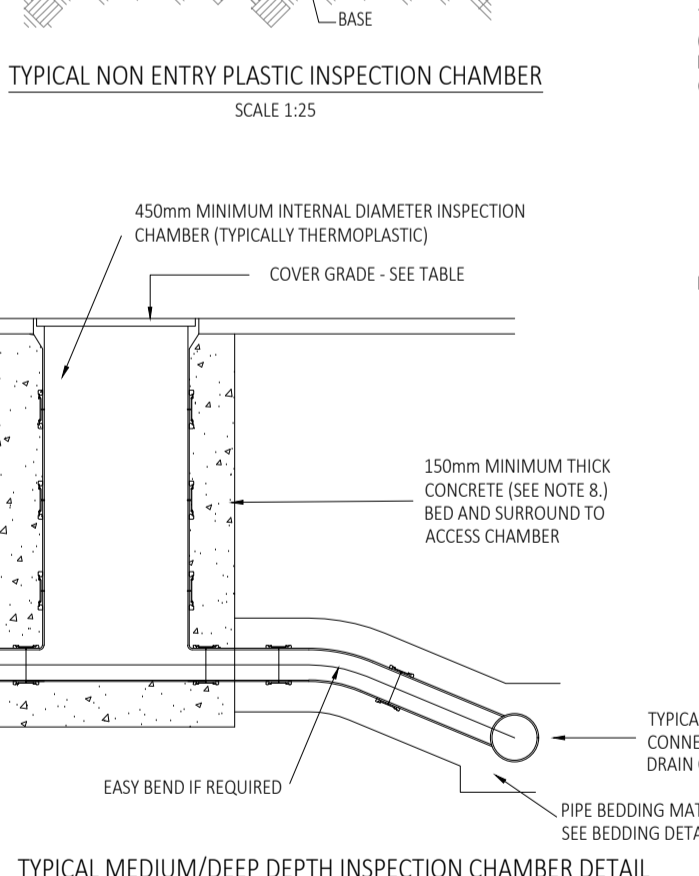
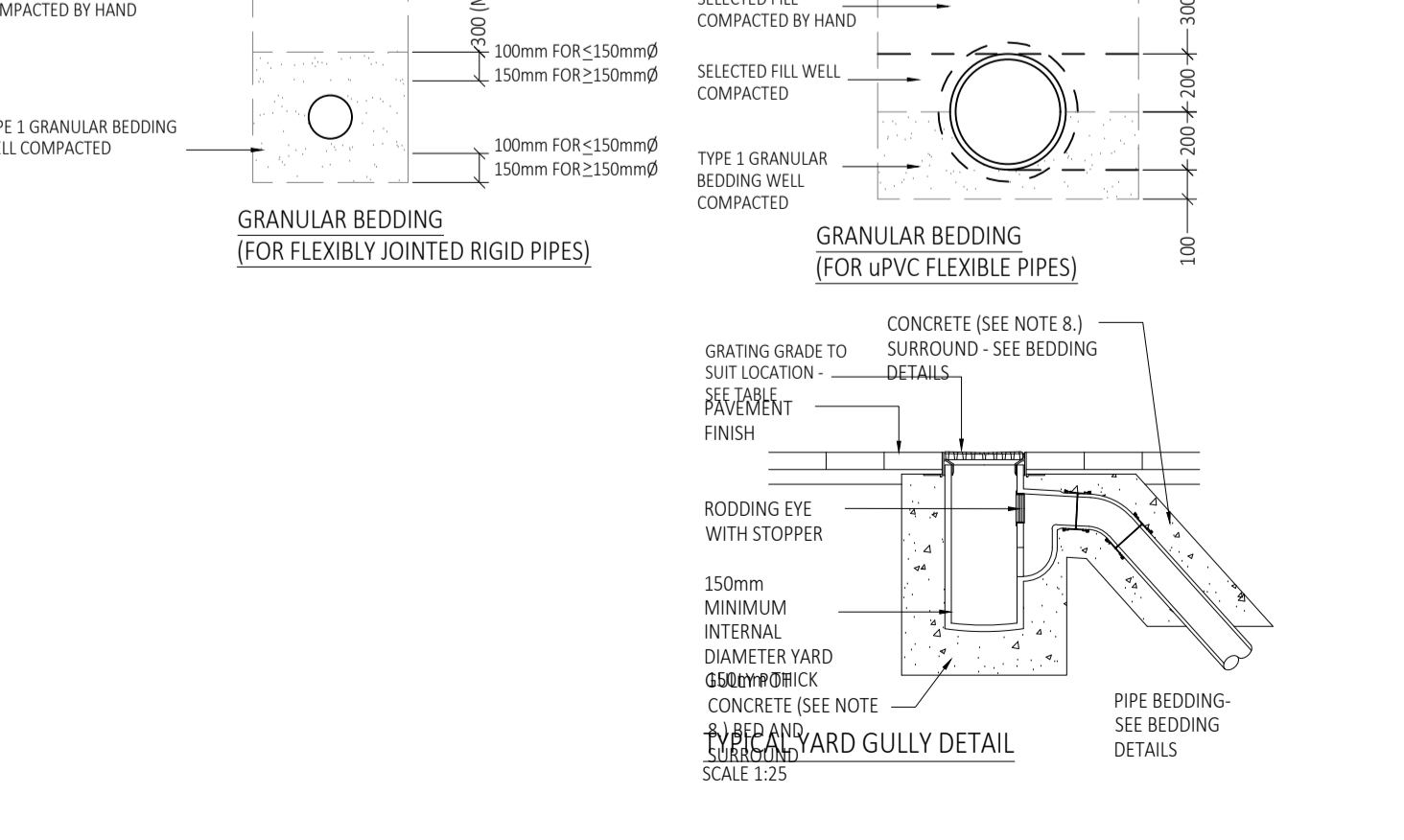
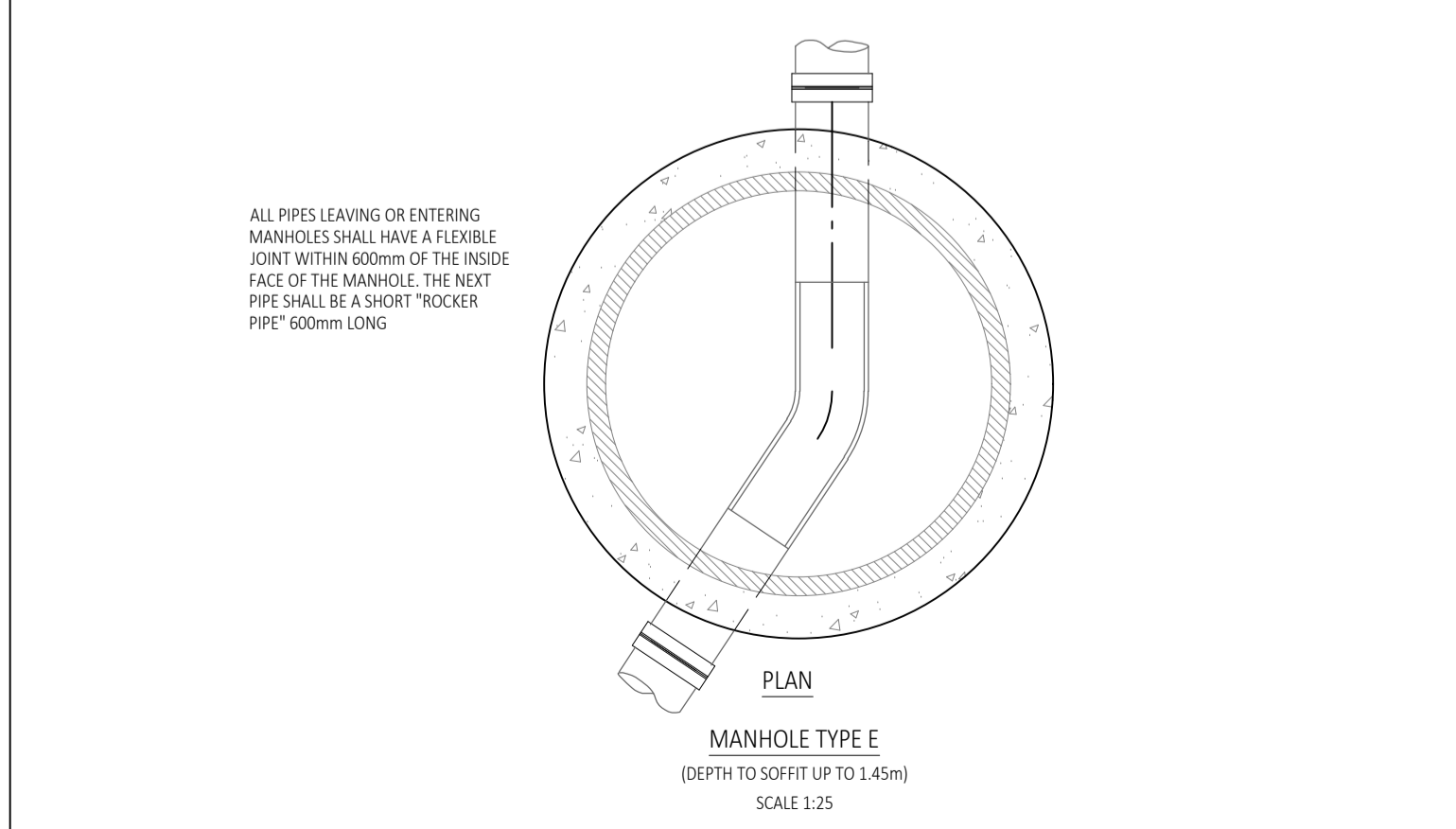
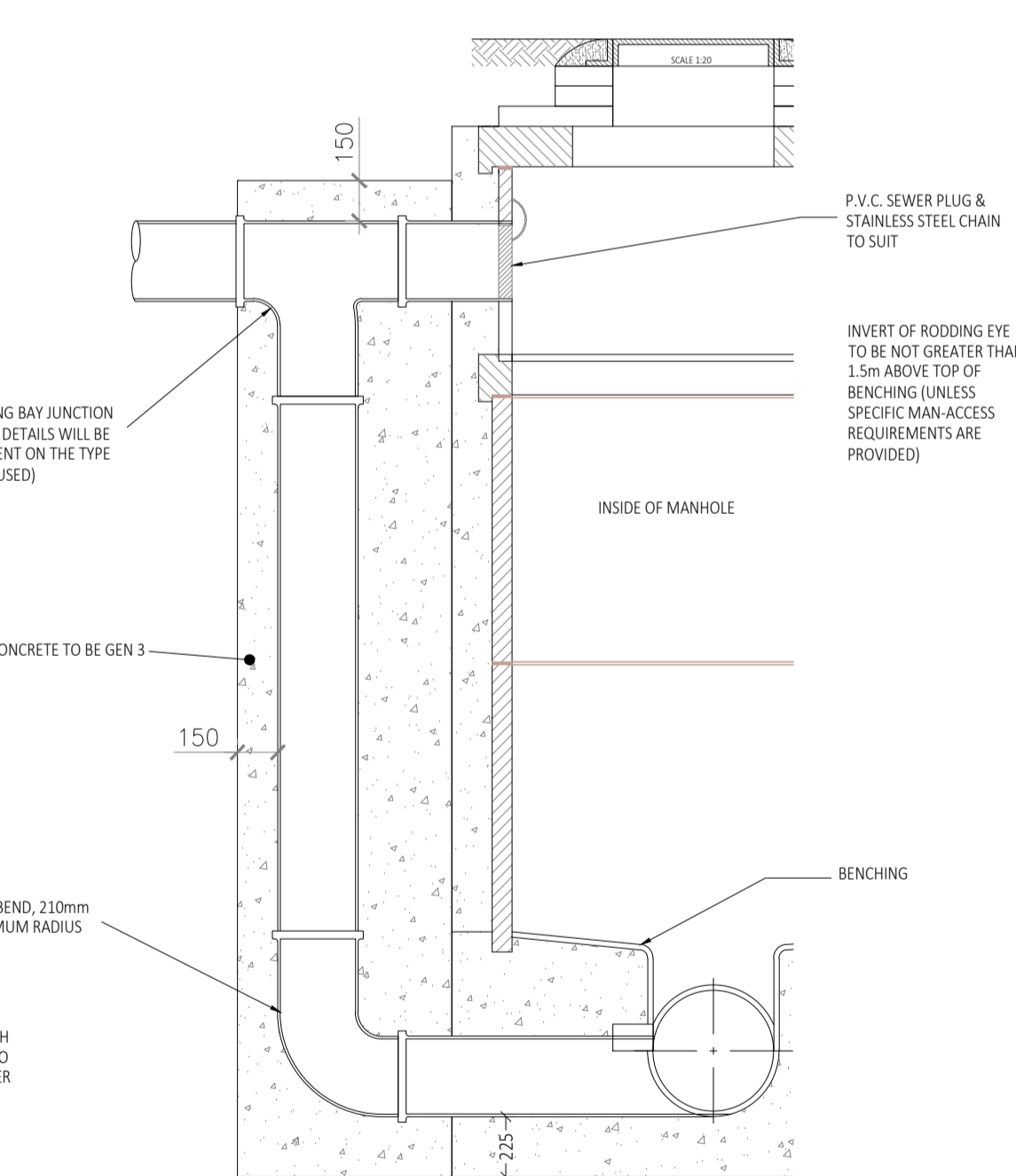
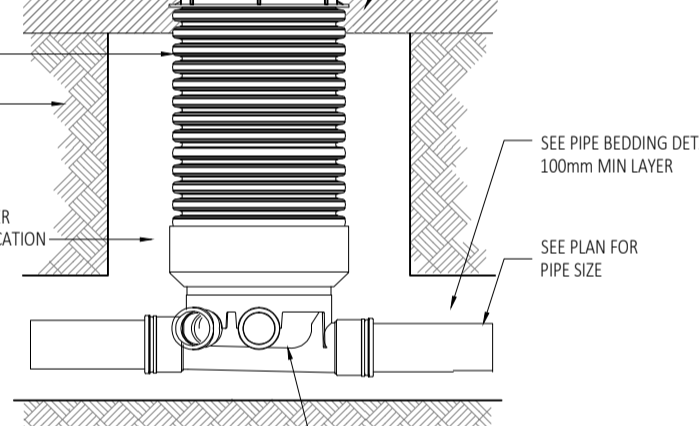
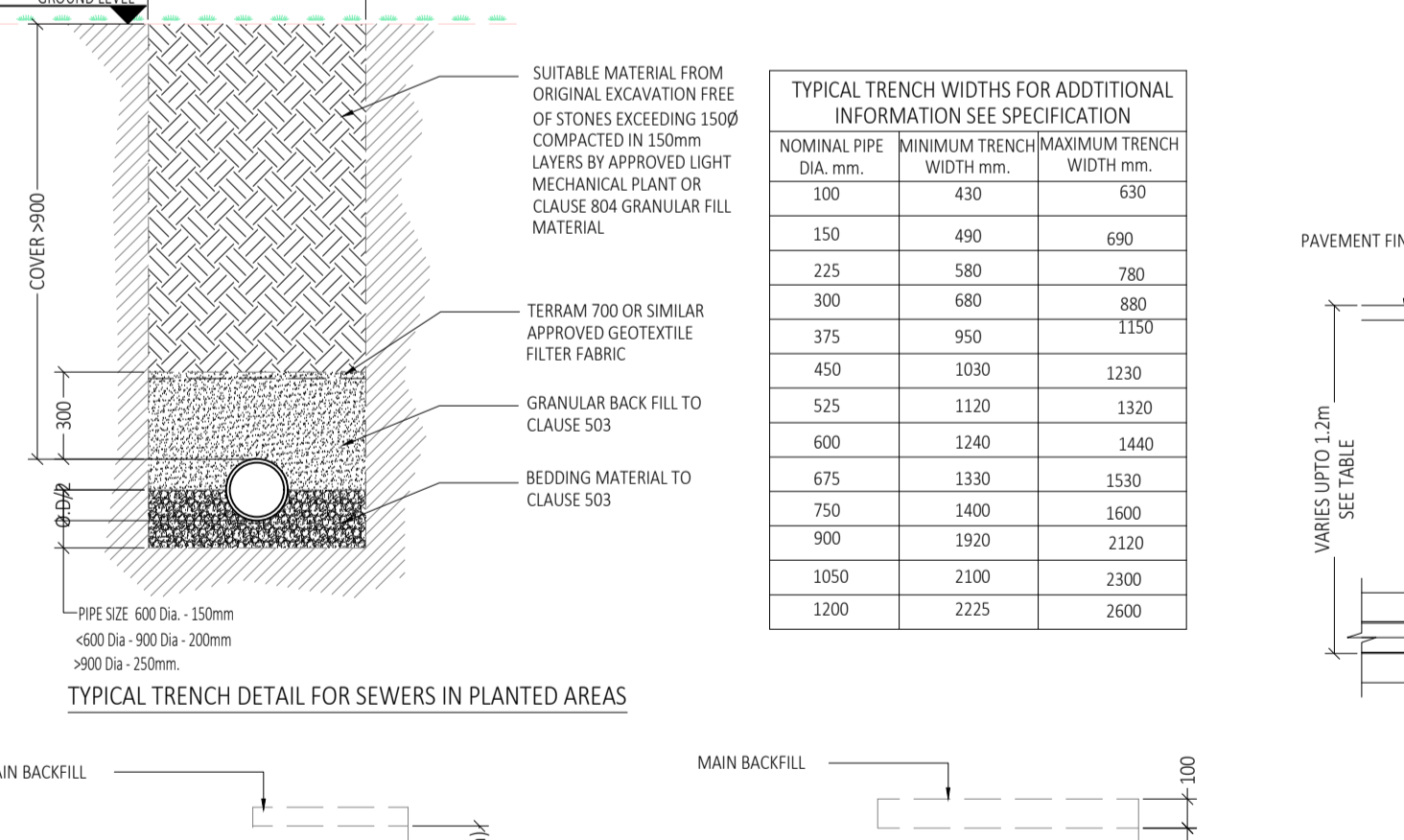
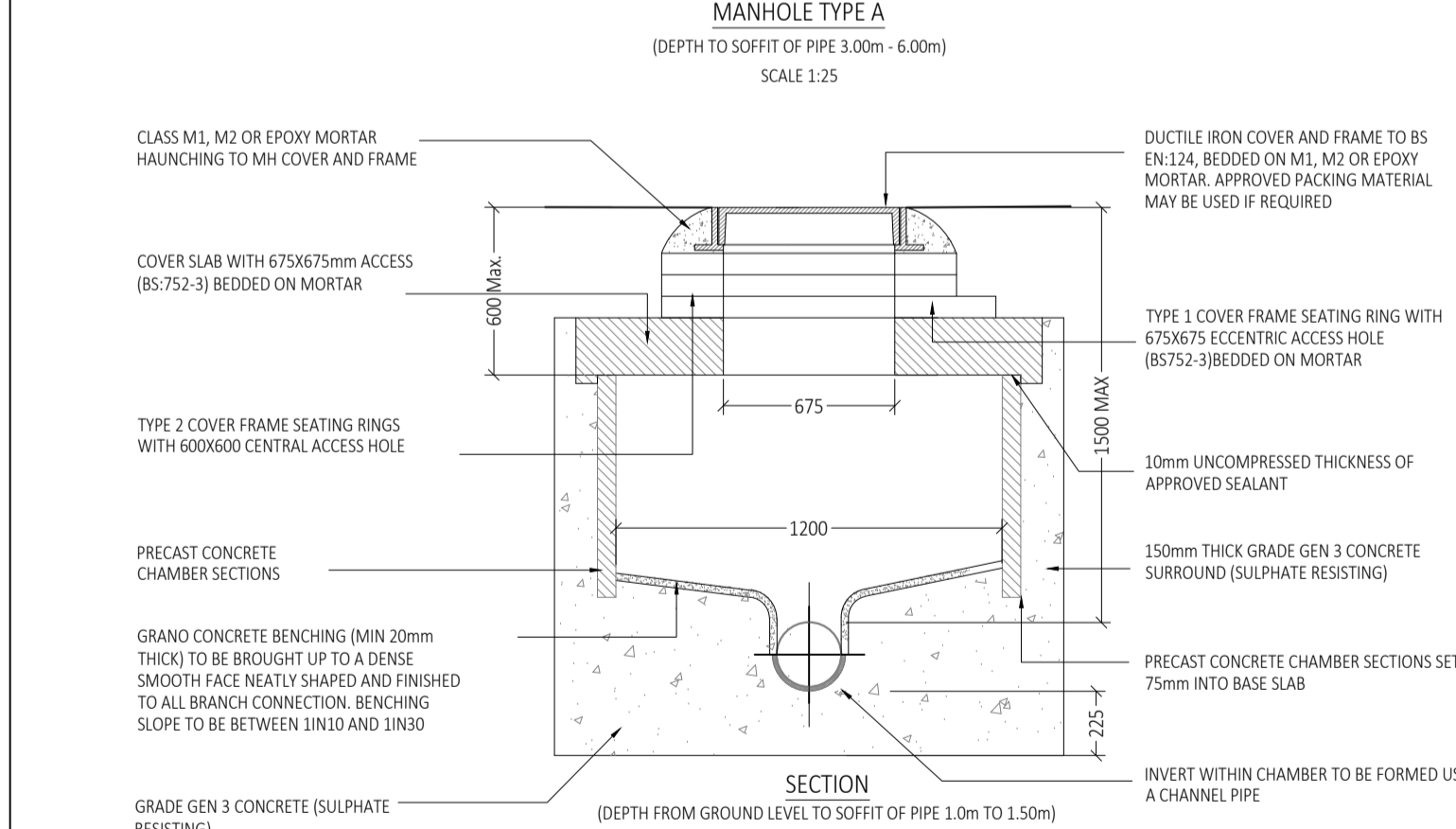
ALL MANHOLE COVERS AND FRAMES ARE TO BE DUCTILE IRON (CLASS D400 FOR CARRIAGEWAYS, HARD SHOULDERS AND PARKING AREAS, CLASS B125 FOR PEDESTRIAN AREAS, SOFT LANDSCAPED AREAS ETC) COMPLYING WITH BS EN-124:1994 AND BADGED 'P' OR 'SW' AS APPROPRIATE.

MINIMUM DIMENSIONS FOR MANHOLES

TYPE OF ACCESS	SIZE OF LARGEST PIPE (DN)	MINIMUM INTERNAL DIMENSIONS ⁽¹⁾		MINIMUM CLEAR OPENING SIZE ⁽²⁾	
		RECTANGULAR LENGTH x WIDTH (mm x mm)	CIRCULAR DIAMETER (mm)	RECTANGULAR LENGTH x WIDTH (mm x mm)	CIRCULAR DIAMETER (mm)
MANHOLE LESS THAN 1.5m DEEP TO SOFFIT	LESS THAN OR EQUAL TO 150	750 x 675 (7)	1000 (7)	750 x 675 (2)	N/A (3)
	225	1200 x 675	1200	1200 x 675 (2)	
	300	1200 x 750	1200		
	GREATER THAN 300	1800 x (DN+450)	THE LARGER OF 1800 or (DN+450)		
MANHOLE GREATER THAN 1.5m DEEP TO SOFFIT	LESS THAN OR EQUAL TO 225	1200 x 1000	1200	600 x 600	600
	300	1200 x 1075	1200		
	375-450	1350 x 1225	1200		
MANHOLE GREATER THAN 450	GREATER THAN 450	1800 x (DN+775)	THE LARGER OF 1800 or (DN+775)		
	MANHOLE SHAFT (4) GREATER THAN 3.0m DEEP TO SOFFIT OF PIPE	STEPS (5)	1050 x 800	1050	600 x 600
	LADDER (5)	1200 x 800	1200		
	WINCH (6)	900 x 800	900		

NOTES:

- LARGER SIZES MAY BE REQUIRED FOR MANHOLES ON BENDS OR WHERE THERE ARE JUNCTIONS.
- MAY BE REDUCED TO 600x600mm WHERE REQUIRED BY HIGHWAY LOADING CONSIDERATIONS, SUBJECT TO A SAFE SYSTEM OF WORK BEING SPECIFIED.
- NOT APPLICABLE DUE TO WORKING SPACE NEEDED.
- MINIMUM HEIGHT OF CHAMBER IN SHAFTED MANHOLE 2m FROM BENCHING TO UNDERSIDE OF REDUCING SLAB.
- MINIMUM CLEAR SPACE BETWEEN LADDER OR STEPS AND THE OPPOSITE FACE OF THE SHAFT SHOULD BE APPROXIMATELY 900mm.
- WINCH ONLY - NO STEPS OR LADDERS, PERMANENT OR REMOVABLE.
- THE MINIMUM SIZE OF ANY MANHOLE SERVING A SEWER (i.e. ANY DRAIN SERVING MORE THAN ONE PROPERTY) SHOULD BE 1200x750mm RECTANGULAR OR 1200mm DIAMETER.



DRAINAGE NOTES:

- ALL BUILDING DRAINAGE TO BE INSTALLED AND TESTED IN COMPLIANCE WITH THE CURRENT BUILDING REGULATIONS FOR DRAINAGE AND WASTE DISPOSAL.
- ALL COMPONENTS AND MATERIALS ARE TO BE MANUFACTURED AND SUPPLIED IN ACCORDANCE WITH THE RELEVANT BS, AND LAID AND BACKFILLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.
- THE CONTRACTOR SHALL, BEFORE COMMENCING THE WORKS, VERIFY ALL SITE AND SETTING OUT DIMENSIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRUE AND PROPER SETTING OUT OF THE WORKS AND FOR THE CORRECTNESS OF THE POSITION, LEVELS, DIMENSIONS, AND ALIGNMENT OF ALL PARTS OF THE WORKS.
- SMALL LIGHTWEIGHT ACCESS COVERS SHOULD BE SECURED (FOR EXAMPLE WITH SCREWS) TO DETER UNAUTHORISED ACCESS.
- INSPECTION CHAMBERS AND MANHOLES IN BUILDINGS TO HAVE MECHANICALLY FIXED ARTIGHT COVERS UNLESS THE DRAIN ITSELF HAS WATERTIGHT ACCESS COVERS.
- MANHOLES DEEPER THAN 3m TO HAVE GALVANISED STEEL STEP IRONS OR FIXED LADDERS PROVIDED.
- ALL ABOVE GROUND DRAINAGE TO INCORPORATE APPROPRIATE RODDING ACCESS FACILITIES.
- IN SITU CONCRETE FOR USE IN GENERAL DRAINAGE WORKS SHALL BE IN ACCORDANCE WITH BS8500, AND IN ACCORDANCE WITH BRE DIGEST 1 "CONCRETE IN AGGRESSIVE GROUND" TO MEET ANY EXPECTED SULPHATE CONDITIONS.
- MANHOLE COVERS WITHIN BLOCK PAVED AREAS SHALL BE RECESSED WITH INFILL TO MATCH ADJACENT SURFACE FINISHES.

PRELIMINARY - FOR PRE-PLANNING PURPOSES ONLY

REV.	DATE	BY	DESCRIPTION
PL1	17.02.2020	CD	Issued

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Client: **CONDORF INVESTMENTS ICVA**

Project Title: **HOUSING DEVELOPMENT AT BALLINDERRY RD., MULLINGAR, CO. WESTMEATH**

Drawing Title: **Typical Manhole Details**

Scale: 1:200, 1:10	Page Size: A1	Status: Tender
Drw By: FL	Checked: CD	Date: FEBRUARY 2020
Project No: 18262	Drawing No: C140	Rev: PL1