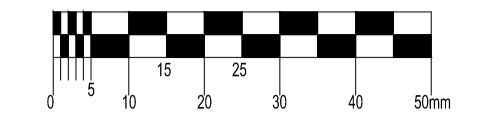
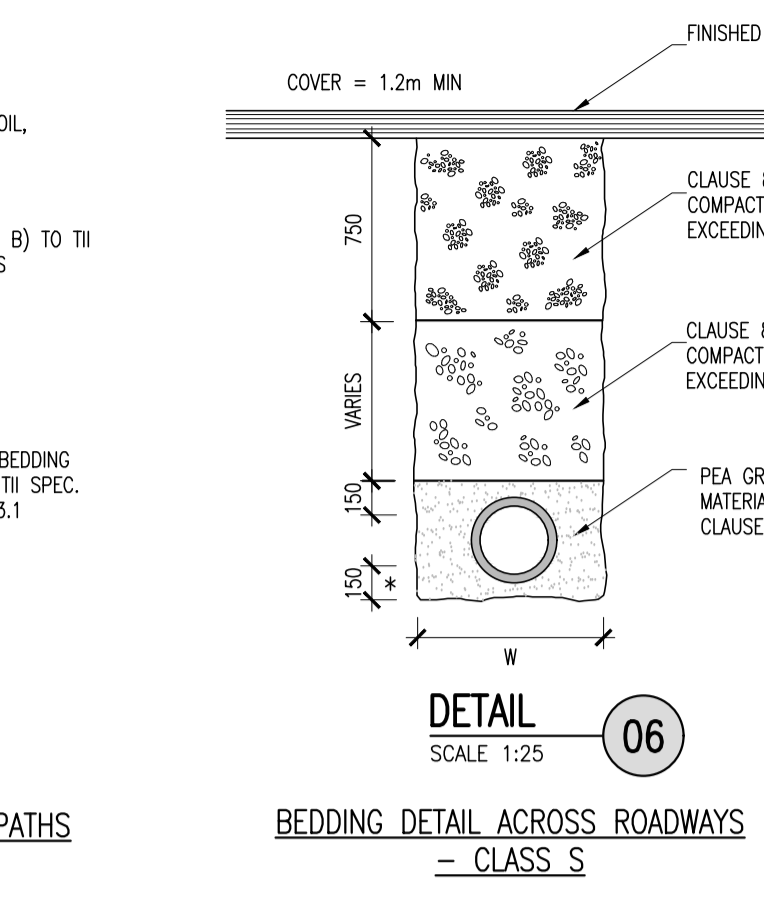
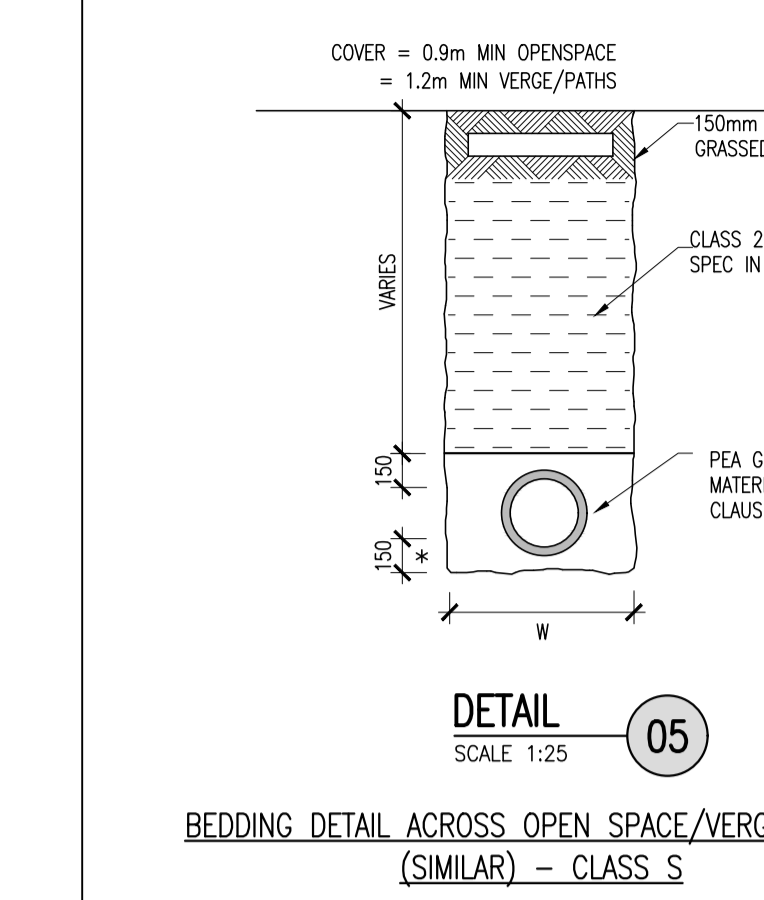
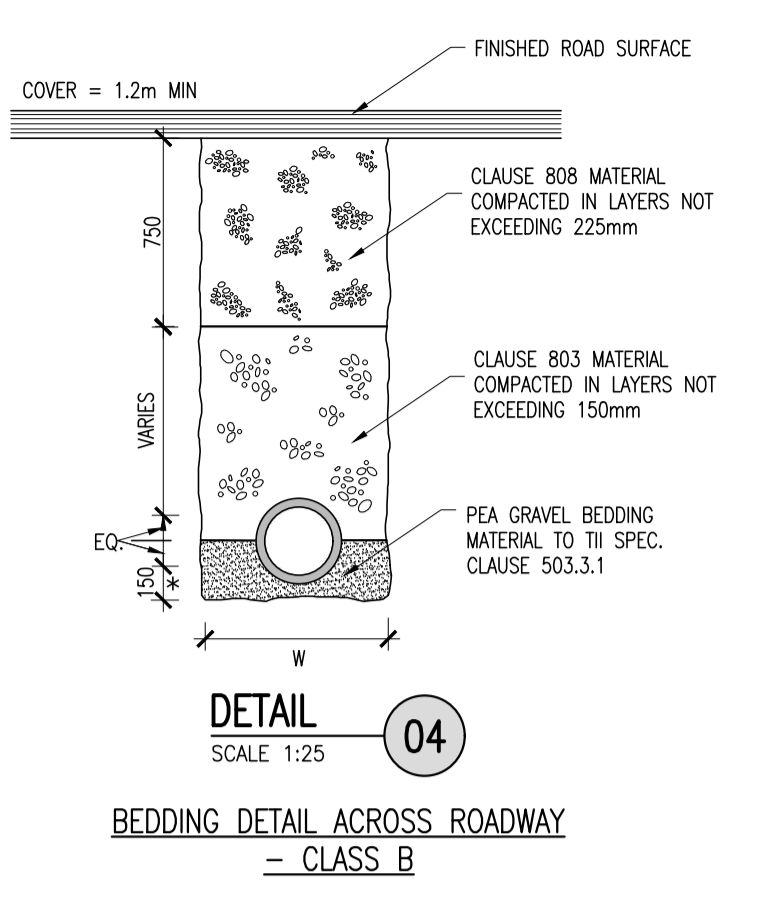
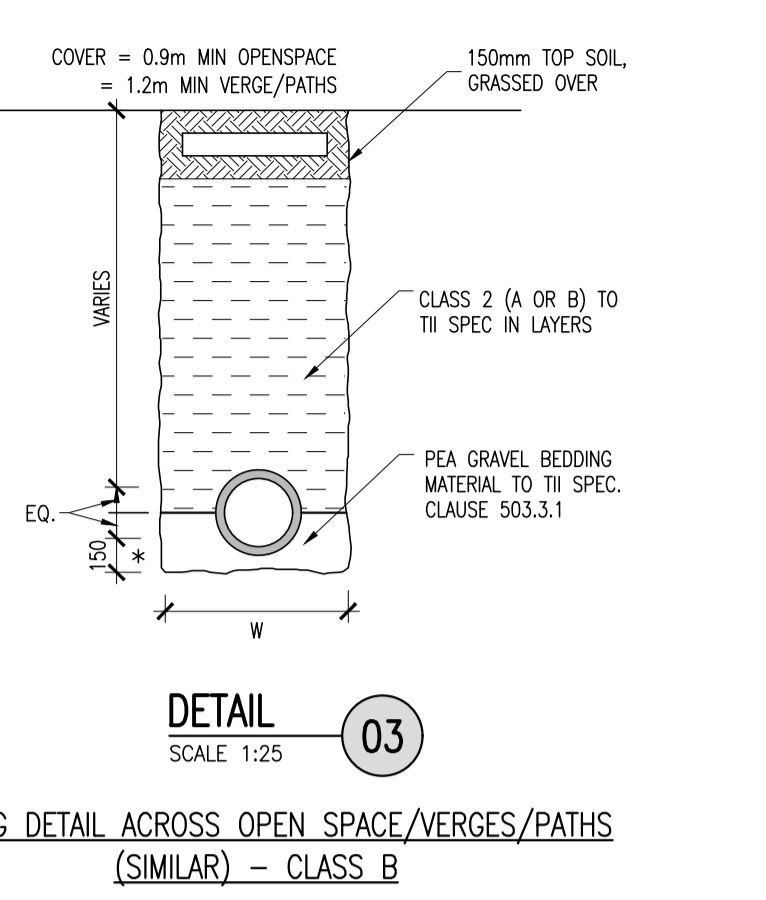
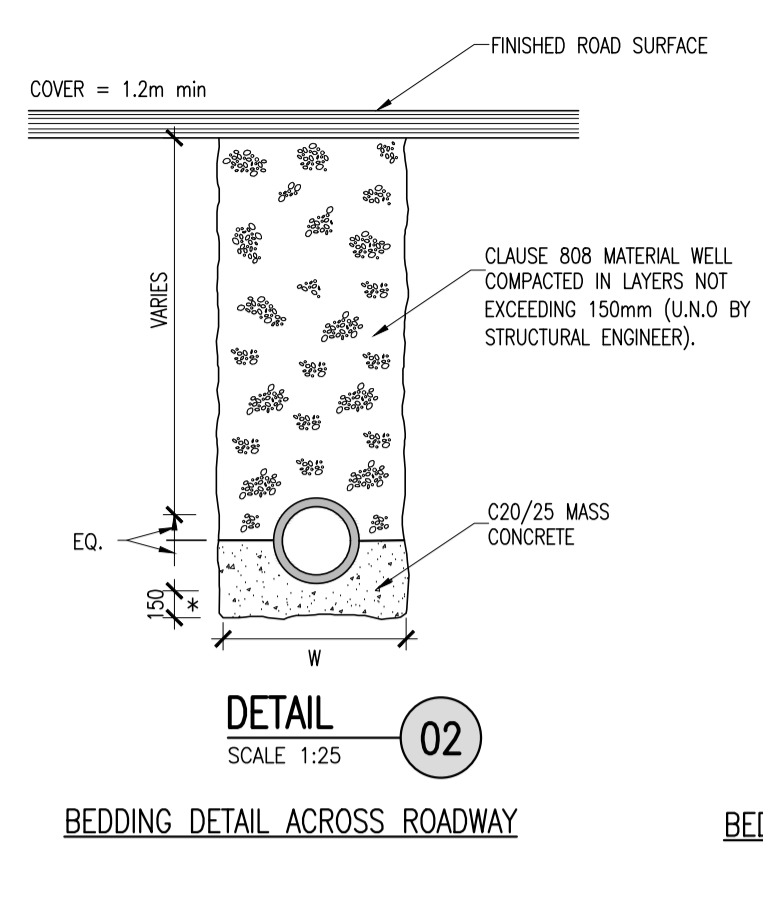
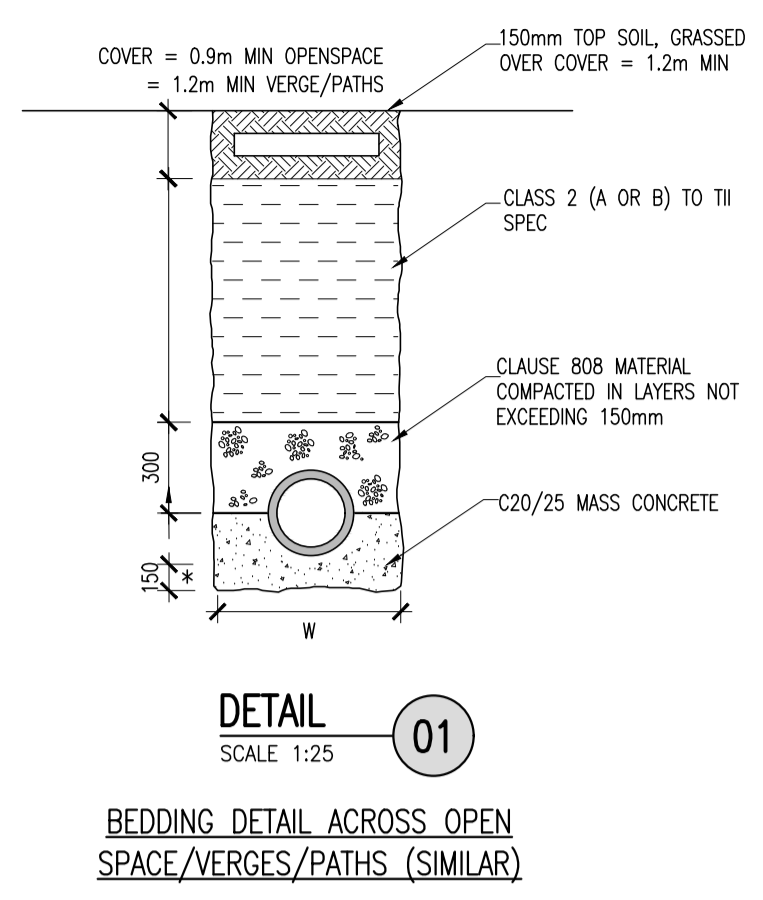


ON ORIGINAL



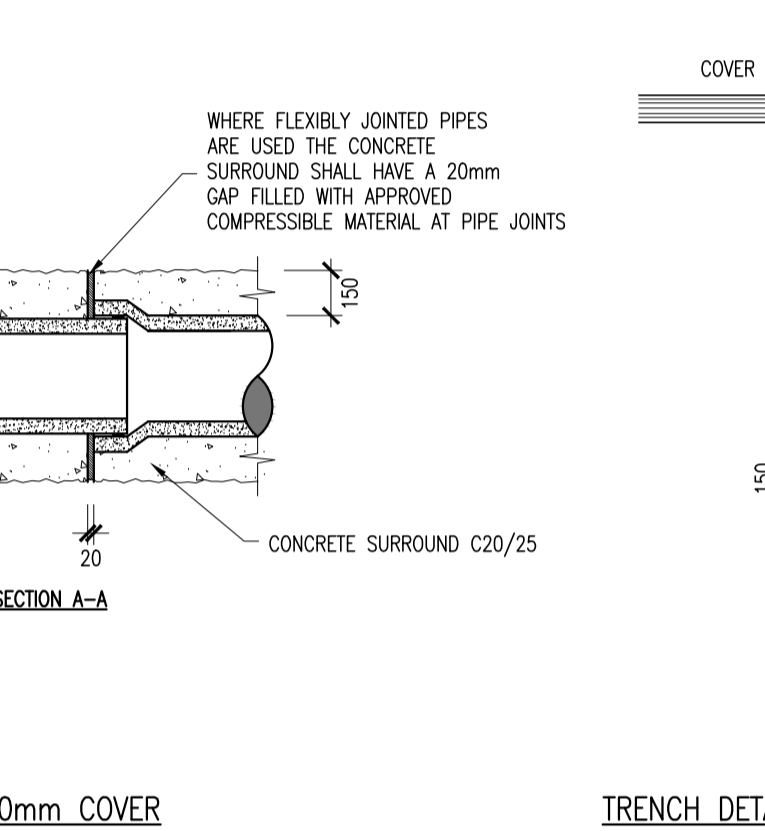
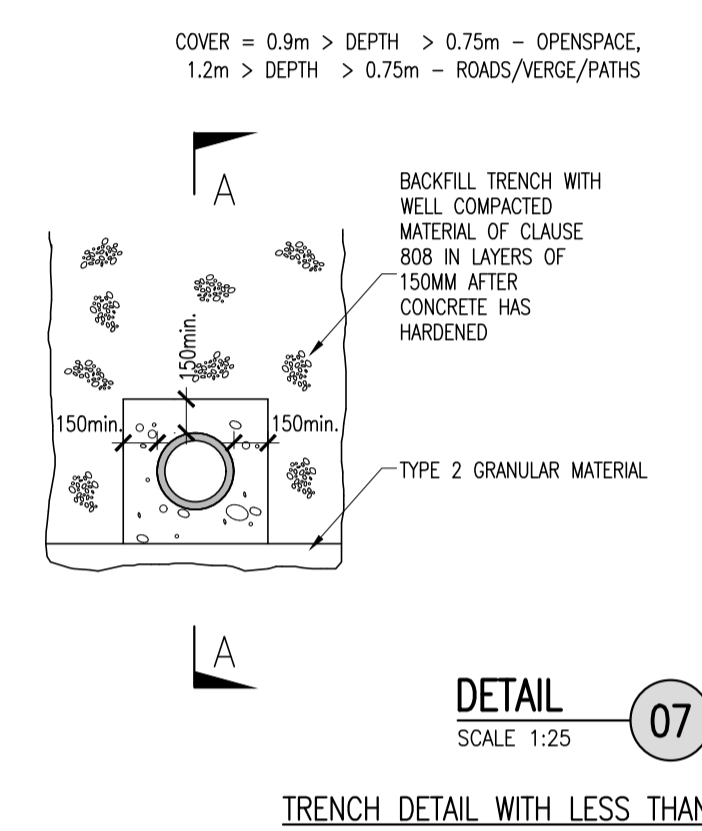
- NOTES:
- RIGID PIPES SHALL MEAN CAST OR SPUN IRON, CONCRETE OR CLAY.
  - FLEXIBLE PIPES SHALL MEAN PIPES OF STEEL, PVC, OTHER PLASTIC OR DUCTILE IRON.
  - CONCRETE C20/25 TO HAVE COVER = 50mm MIN. WITH A MINIMUM CEMENT CONTENT OF 280 kg/m<sup>3</sup>, MAXIMUM W/C RATIO OF 0.65 AND SLUMP CLASS S2.
  - C25/30 CONCRETE TO HAVE A MINIMUM CEMENT CONTENT OF 280kg/m<sup>3</sup>, MAXIMUM WATER/CEMENT RATIO OF 0.65 AND SLUMP CLASS S2.
  - FOR DETAILS OF TRENCH REINSTATEMENT TO PIPES IN THE VICINITY OF BUILDINGS, WALLS & FOUNDATION, REFER TO STRUCTURAL DRAWINGS.
  - ALL PIPES WITH LESS THAN 1.2m COVER UNDER GRASSED AREAS AND FOOTPATHS TO BE SURROUNDED IN 150mm MINIMUM OF C20/25 CONCRETE.
  - LEAN-MIX BACKFILL TO TRENCHES IN EXISTING ROADS, WHERE REQUIRED BY THE LOCAL AUTHORITY TO BE GRADE C20/25 CONCRETE.
  - TRENCH DETAILS ARE REFERENCED FROM:
    - GREATER DUBLIN REGIONAL CODE OF PRACTICE FOR DRAINAGE WORKS.
    - TI ROAD CONSTRUCTION DETAILS.
    - DOE RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS.
    - BUILDING REGULATIONS.
  - WHERE ROCKS OR OTHER HARD TRENCH BOTTOM IS ENCOUNTERED, THE FIGURE DENOTED BY \* IS TO BE DOUBLED.
  - GRANULAR BACKFILL MATERIAL SHALL BE IN COMPLIANCE WITH CLAUSE 808 (GRANULAR MATERIAL TYPE B) OF THE TI SPECIFICATION FOR ROAD WORKS. GRANULAR BACKFILL SHOULD BE PLACED UNIFORMLY ON EITHER SIDE OF THE PIPE IN LAYERS NOT EXCEEDING 100mm. EACH LAYER BEING COMPACTED BY HAND TAMPING UNTIL THE PIPE HAS MINIMUM OF 300mm COMPACTED COVER. CARE SHOULD BE TAKEN THAT THE PROCESS OF COMPACTING DOES NOT DISPLACE THE PIPE FROM ITS CORRECT LINE AND LEVEL. SUBSEQUENT LAYERS OF GRANULAR FILL TO BE WELL COMPACTED IN 150mm THICK LAYERS TO THE LOCAL AUTHORITY ROAD DIVISION SPECIFICATION. MECHANICAL COMPACTOR EQUIPMENT SHOULD NOT BE USED UNTIL THERE IS A MINIMUM OF 450mm COMPACTED COVER OVER THE CROWN OF THE PIPE.
  - SELECTED FILL SHOULD BE FREE FROM STONES LARGER THAN 37mm, LUMPS OF CLAY OVER 75mm, TIMBER, FROZEN MATERIAL AND VEGETABLE OR FOREIGN MATTER. SELECTED FILL SHOULD BE PLACED UNIFORMLY ON EITHER SIDE OF THE PIPE IN LAYERS NOT EXCEEDING 100mm. EACH LAYER BEING COMPACTED BY HAND TAMPING UNTIL THE PIPE HAS A MINIMUM OF 150mm COMPACTED COVER. CARE SHOULD BE TAKEN THAT THE PROCESS OF COMPACTING DOES NOT DISPLACE THE PIPE FROM ITS CORRECT LINE AND LEVEL. SUBSEQUENT SELECTED FILL CAN BE PLACED AND COMPACTED IN 150mm THICK LAYERS.
  - GENERAL BACKFILL MATERIAL SUITABLE FOR BACKFILL ABOVE SELECTED FILL MATERIAL SHOULD BE FREE FROM BOULDERS, LUMPS OF CONCRETE, TIMBER AND VEGETABLE OR FOREIGN / CONTAMINATED MATTER. GENERAL BACKFILL SHOULD BE PLACED IN LAYERS NOT EXCEEDING 300mm, EACH LAYER BEING WELL COMPACTED. MECHANICAL COMPACTOR EQUIPMENT SHOULD NOT BE USED UNTIL THERE IS A MINIMUM OF 450mm COMPACTED COVER OVER THE PIPE.
  - TRENCH ABOVE PIPES WITH LESS THAN 750mm COVER TO BE BACKFILLED WITH C20/25 CONCRETE TO FORMATION LEVEL.
  - SURFACING TO BE IN ACCORDANCE WITH THE ROAD SPECIFICATION AND, IF APPROPRIATE, LOCAL AUTHORITY REQUIREMENTS.
  - WHERE CLASS G1 / G2 CAPPING MATERIAL IS PROPOSED WITHIN 500mm OF CONCRETE OR STEEL, CLASS B1 IS TO BE USED INSTEAD.



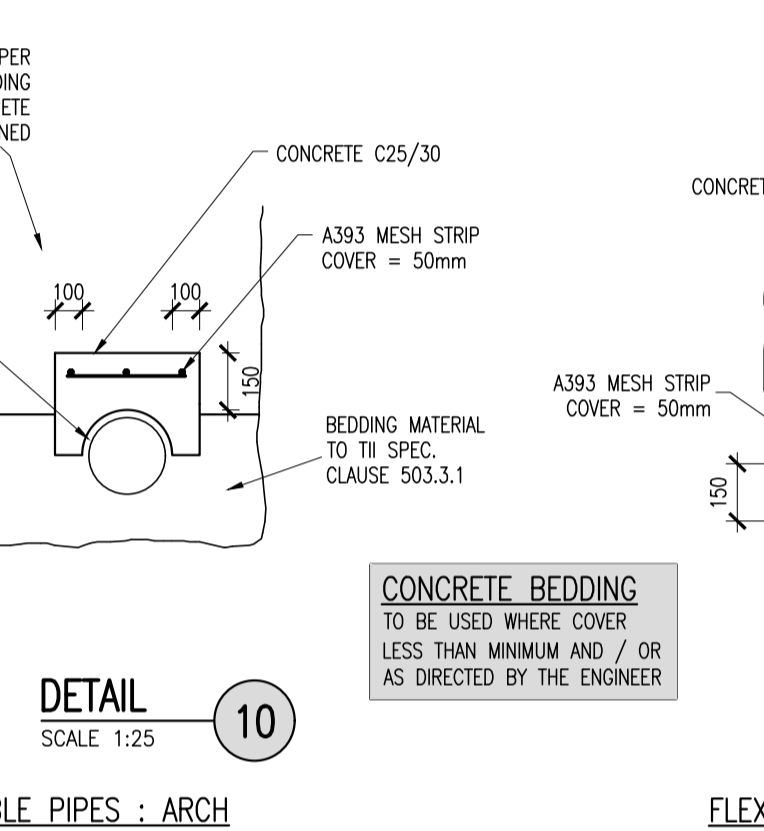
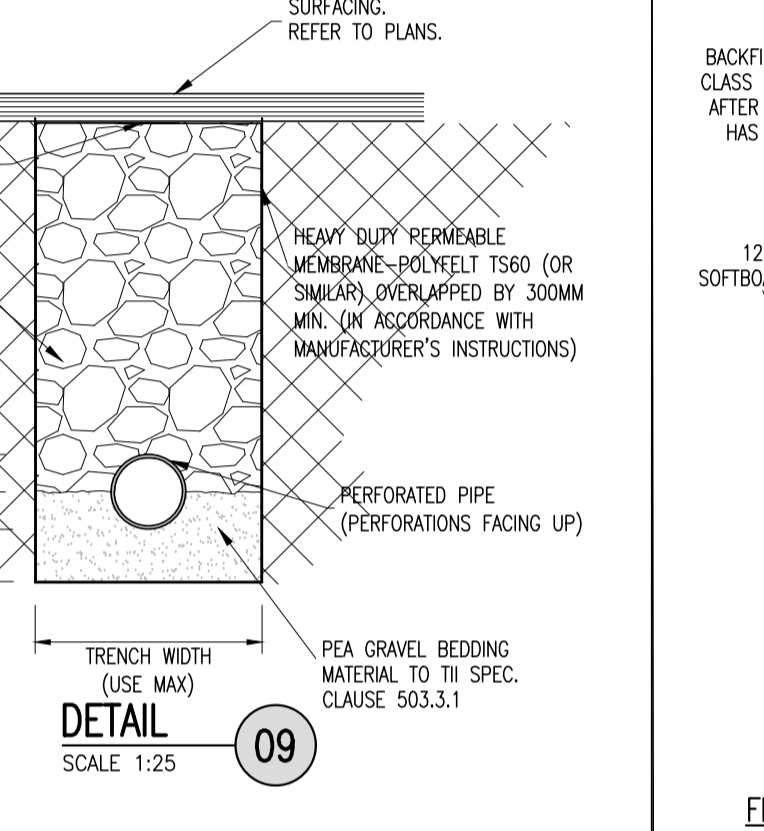
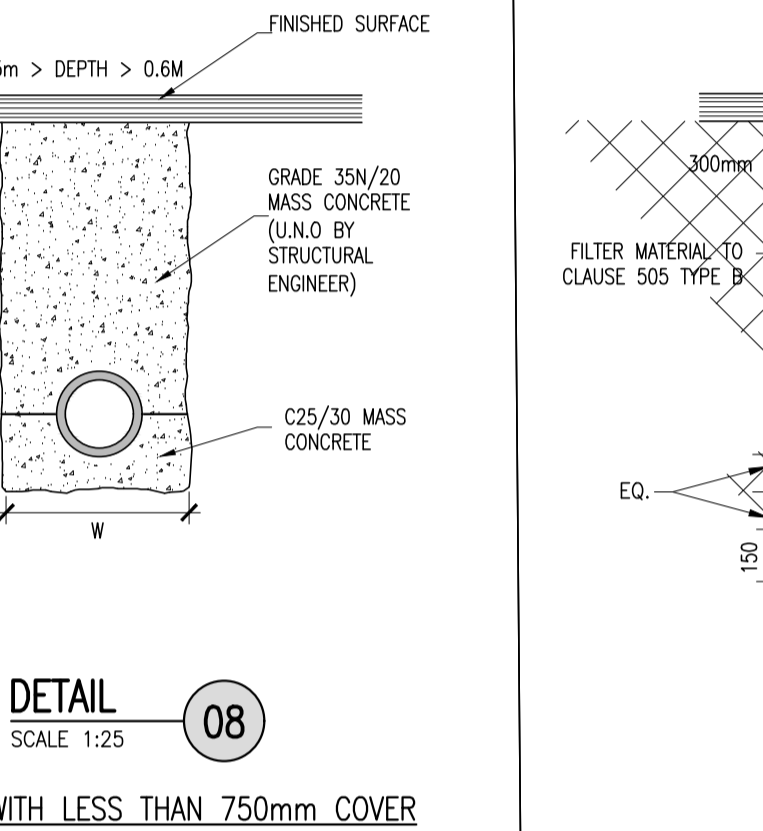
BEDDING FOR RIGID PIPES

BEDDING FOR FLEXIBLE PIPES

TABLE 1: TRENCH WIDTH LIMITS (W)		
NOMINAL INTERNAL Ø (mm)	MINIMUM TRENCH WIDTH mm	MAXIMUM TRENCH WIDTH mm
100	450	650
150	500	700
225	600	800
300	700	900
375	950	1150
450	1050	1250
525	1150	1350
600	1250	1450
675	1350	1550
750	1400	1600
825	1500	1700
900	1950	2150
1050	2100	2300
1200	2300	2500
ABOVE 1200	OUTSIDE Ø OF PIPE PLUS 800mm	OUTSIDE Ø OF PIPE PLUS 1000mm

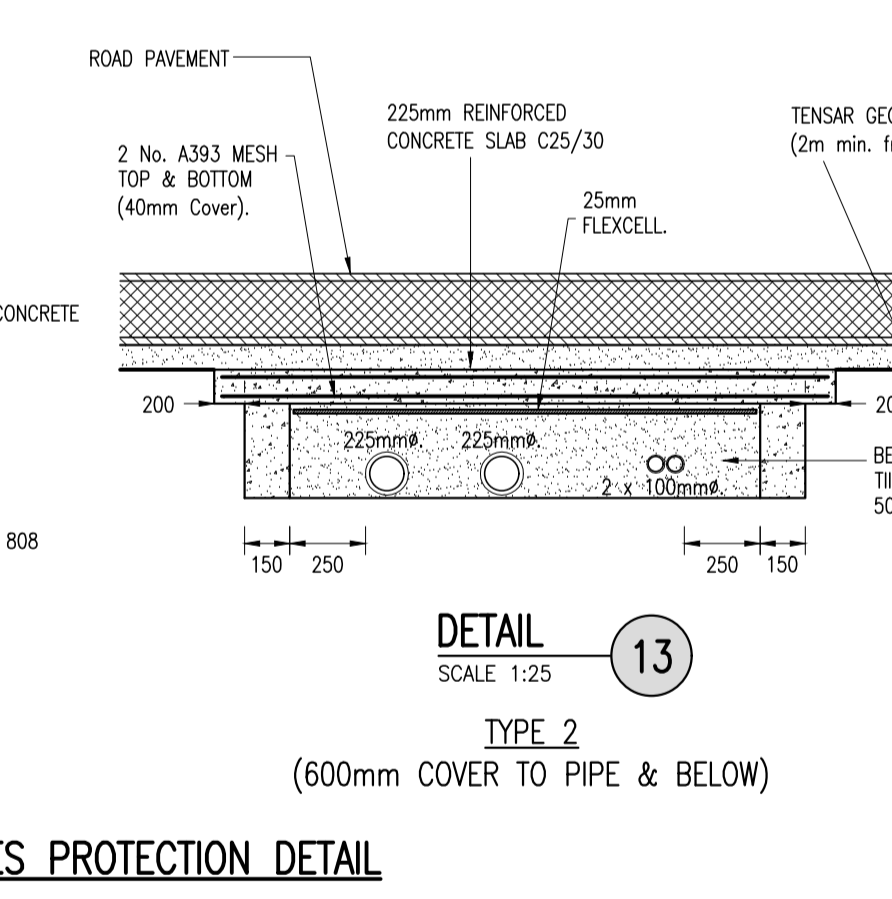
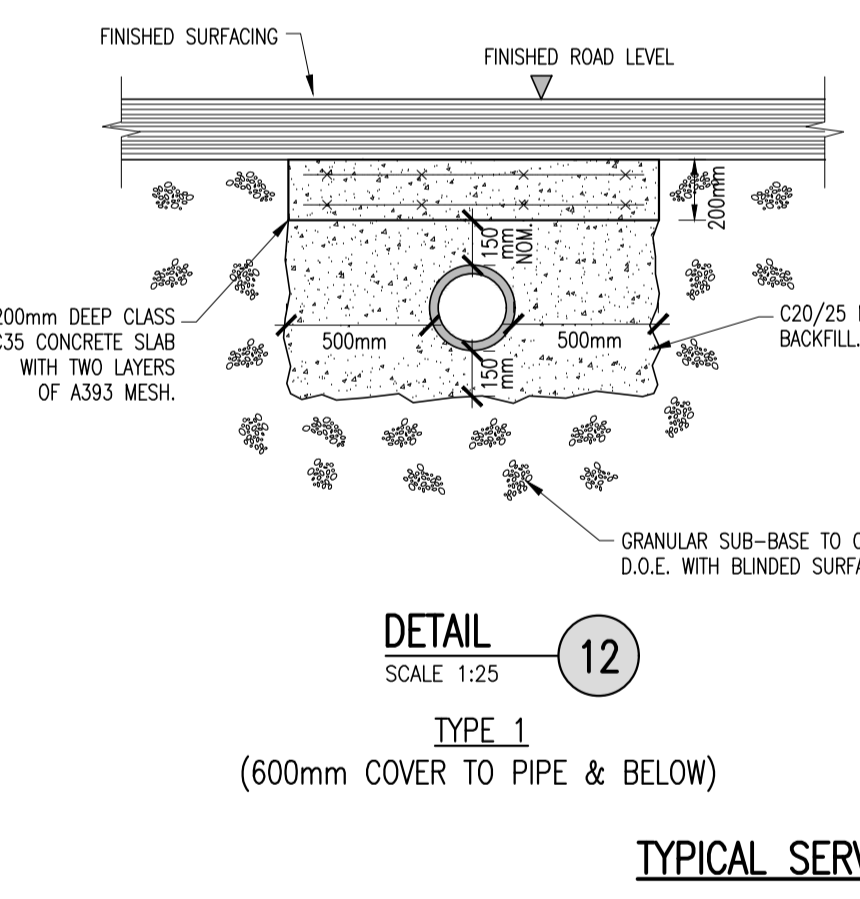


BEDDING FOR RIGID AND FLEXIBLE PIPES WITH LIMITED COVER

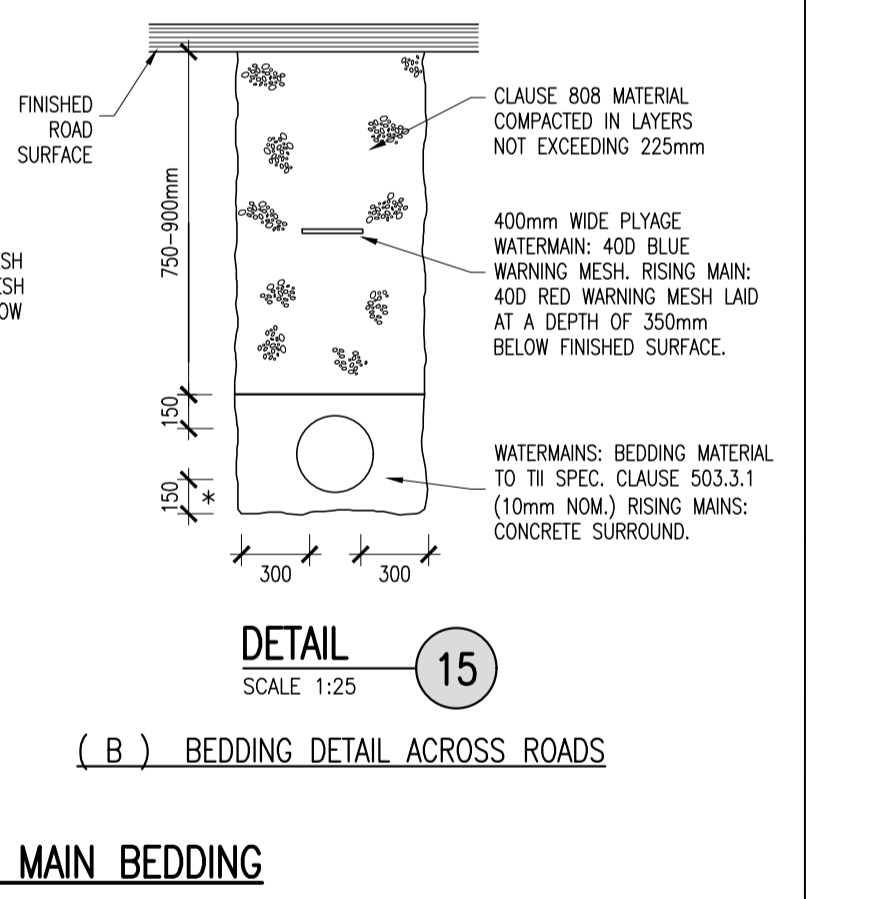
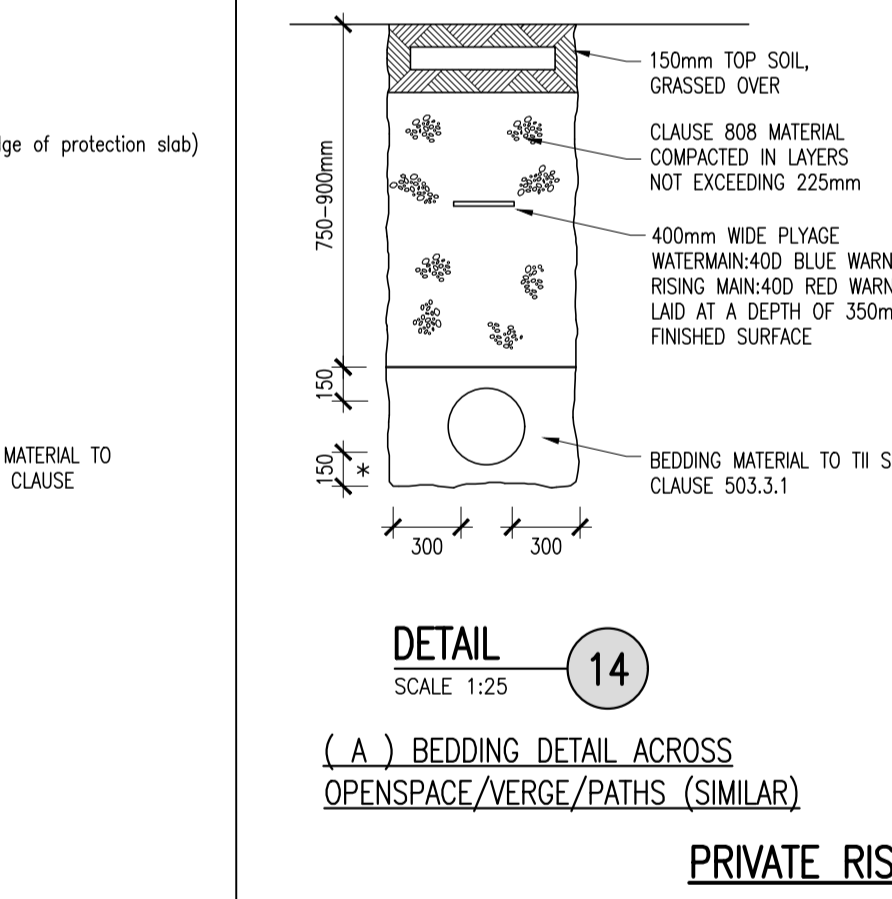


TYPICAL FILTER DRAIN DETAIL

ALTERNATIVE BEDDING



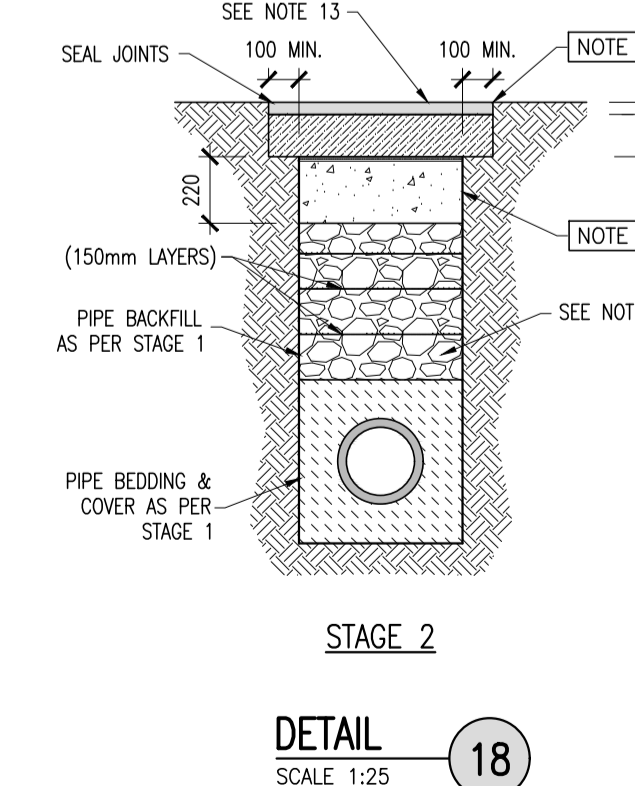
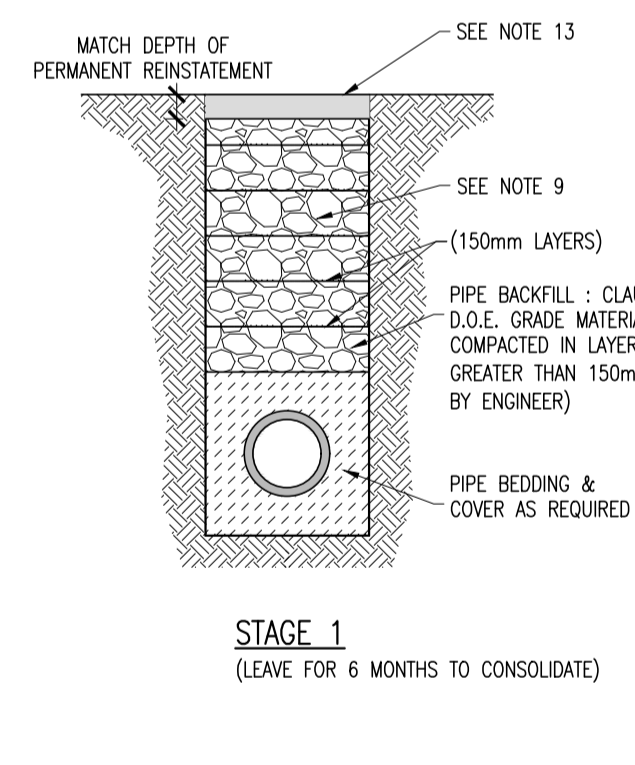
TYPICAL SERVICES PROTECTION DETAIL



PRIVATE RISING MAIN BEDDING

- NOTES: [FOR PERMANENT REINSTATEMENT]
- FORM A SAW CUT 100mm DEEP AT A MIN. OF 100mm FROM SIDES OF EXCAVATION PRIOR TO PERMANENT REINSTATEMENT. WHERE ANY TRIM LINES ARE WITHIN 400mm OF ROAD EDGE, JOINT, OTHER REINSTATEMENT, OR IRONWORK, THE TRIM LINE SHOULD BE EXTENDED TO THE INTERFACE OF SUCH SITUATIONS.
  - DIG OUT SURFACING & TOP 220mm OF CL808 MATERIAL & REPLACE WITH NEW WIDER SURFACING ON 220 LAYER OF LEAN-MIX CONCRETE.
  - LEAN-MIX SURFACE TO BE SPRAYED PER CLAUSE 920 (TI SPEC.) PRIOR TO APPLICATION OF BINDER COURSE MACADAM.
  - 100°C HOT BITUMEN BINDER 50 PEN OR COLD THIXOTROPIC BITUMEN 50 - 70 PEN TO BE APPLIED TO ALL VERTICAL CUTS IN ACCORDANCE WITH B.S.594 PRIOR TO APPLICATION OF BITUMINOUS MATERIAL.
  - JOINTS SEALED WITH HOT BITUMEN AND TOPPED WITH FINE SAND / GRIT TO GET A MINIMUM 55 SKID RESISTANCE VALUE AS DETERMINED BY THE PORTABLE SKID RESISTANCE PENDULUM USED IN ACCORDANCE WITH ROAD NOTE 27 AND SHALL NOT EXCEED 3mm THICKNESS AND 25mm WIDTH.

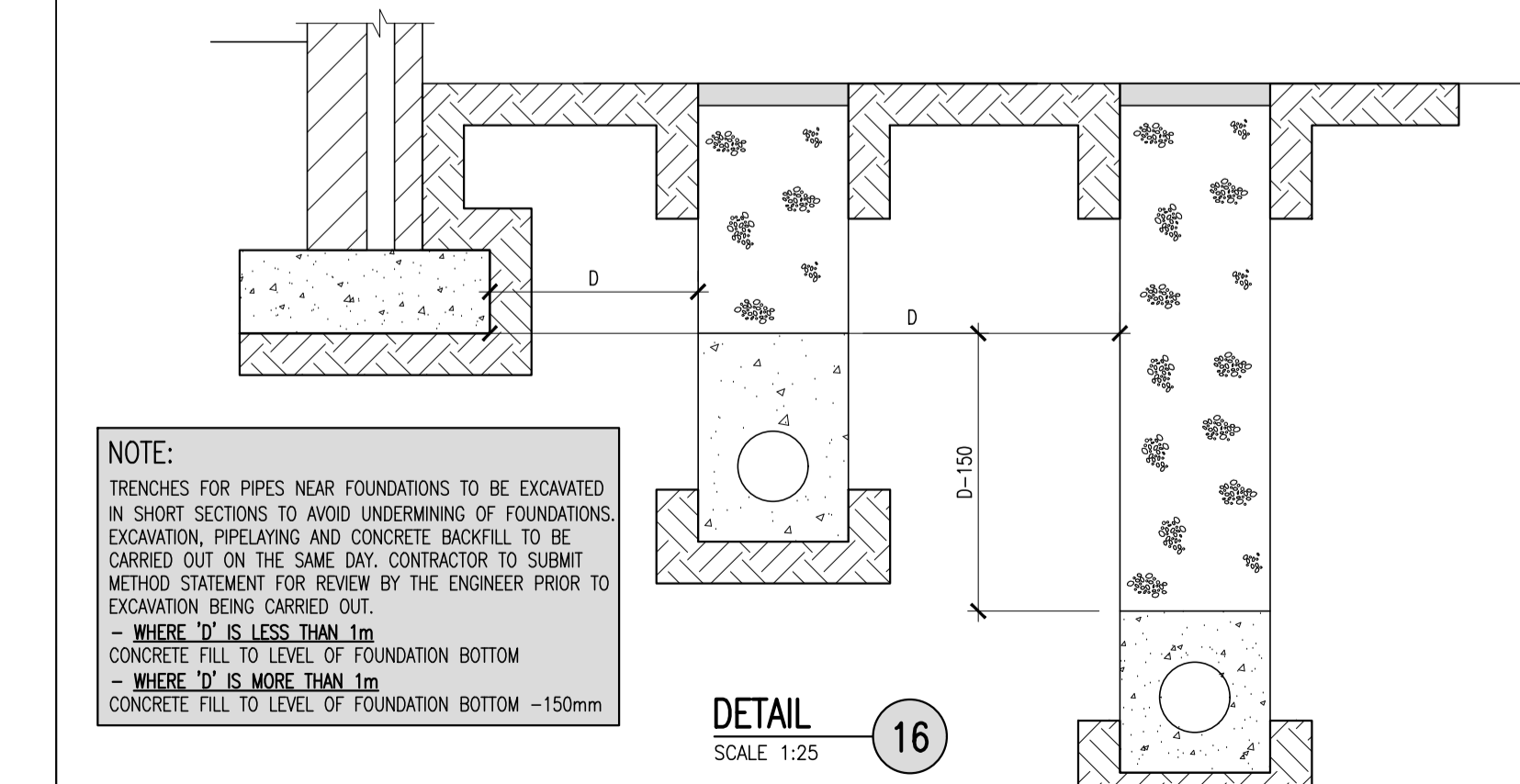
TEMPORARY & PERMANENT REINSTATEMENT



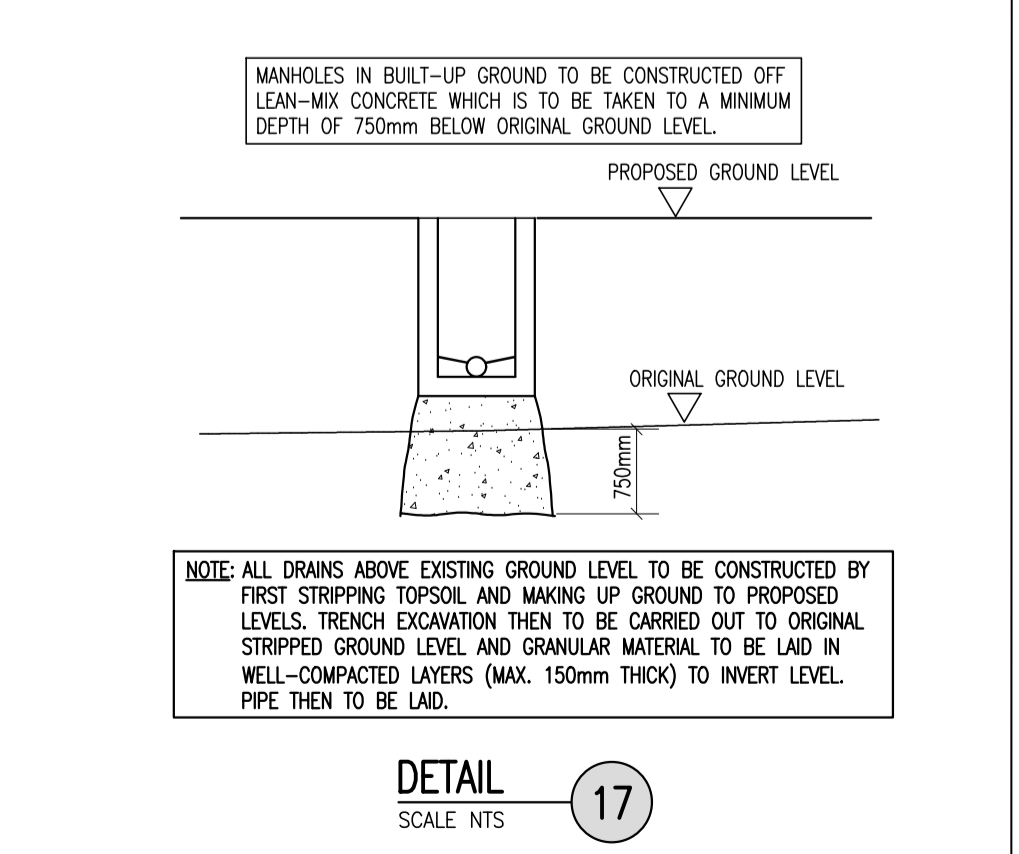
REINSTATEMENT OF PIPE TRENCH IN EXISTING ROAD

TABLE 2	LANDSCAPED AREAS	ROADWAYS/ FOOTPATHS	NOTES
CONCRETE PIPE (>1.2m COVER)	1,3	2,4	A, DETAIL 4 NOT ACCEPTABLE IN DCC AREA
CONCRETE PIPE (1.2m > D > 0.9m)	1,3	7	A
CONCRETE PIPE (0.9m > D > 0.75m)	7	7	A
CONCRETE PIPE (0.75m > D > 0.60m)	8	8	A
CONCRETE PIPE (0.6m > D > 0.45m)	12,13	12,13	C
FLEXIBLE PIPE (>1.2m COVER)	5	6	B
FLEXIBLE PIPE (1.2m > D > 0.9m)	5	7	B
FLEXIBLE PIPE (0.9m > D > 0.75m)	7	7	B
FLEXIBLE PIPE (0.75m > D > 0.6m)	8	8	B
FLEXIBLE PIPE (0.6m > D > 0.45m)	12,13	12,13	B, C
WATERMANS (D > 0.75m)	14	15	A
RIISING MAIN (D > 0.75m)	14	15	A
REINSTATEMENT OF PIPES IN EXISTING ROADS.	N/A	18	A

NOTES: A. APPLIES THROUGHOUT GSDS AUTHORITY REGIONS  
B. APPLIES THROUGHOUT GSDS AUTHORITY REGIONS EXCEPT DCC  
C. AGREEMENT FROM AUTHORITY REQUIRED



CONCRETE PIPE LAID NEAR FOUNDATIONS



DRAINS IN BUILT-UP GROUND

PO1	25/01/21	ISSUED FOR PLANNING	APW	LM/L
rev	date	description	by	chkd.
		A - Approved		
		B - Approved with comments		
		C - Do not use		
client approval				
subtality		issue purpose		
S2 - INFORMATION		PLANNING		

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project ref.  
LISSYWOLLEN RESIDENTIAL DEVELOPMENT AT BRAUNY ROAD, LISSYWOLLEN ATHLONE, CO. WESTMEATH

drawing title  
STANDARD DETAILS SHEET 1 OF 4

architect  
DELPHI ARCHITECTS

designed by	author	scale	sheet size
LM/L	KGO	AS	A1
drawing no.			revision
180176-DBFL-XX-DR-C-5002			P01