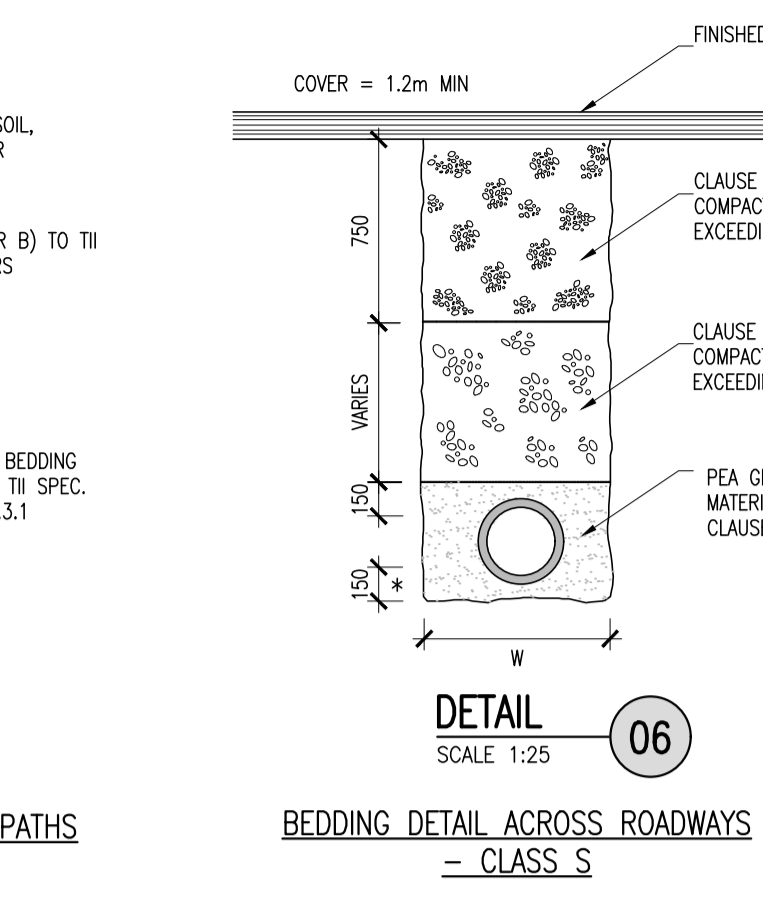
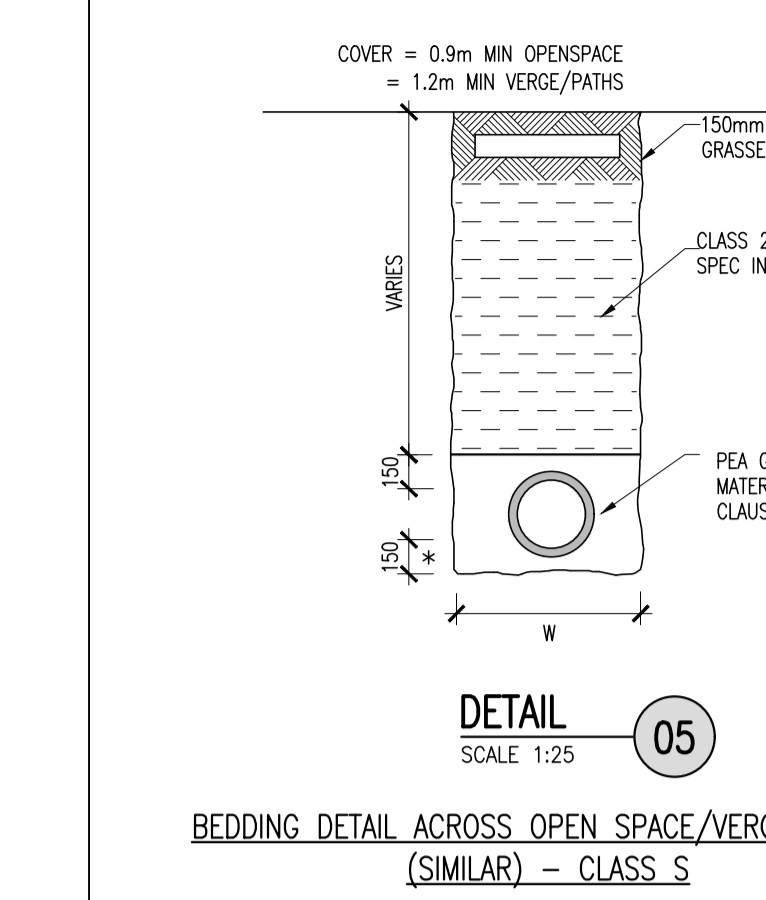
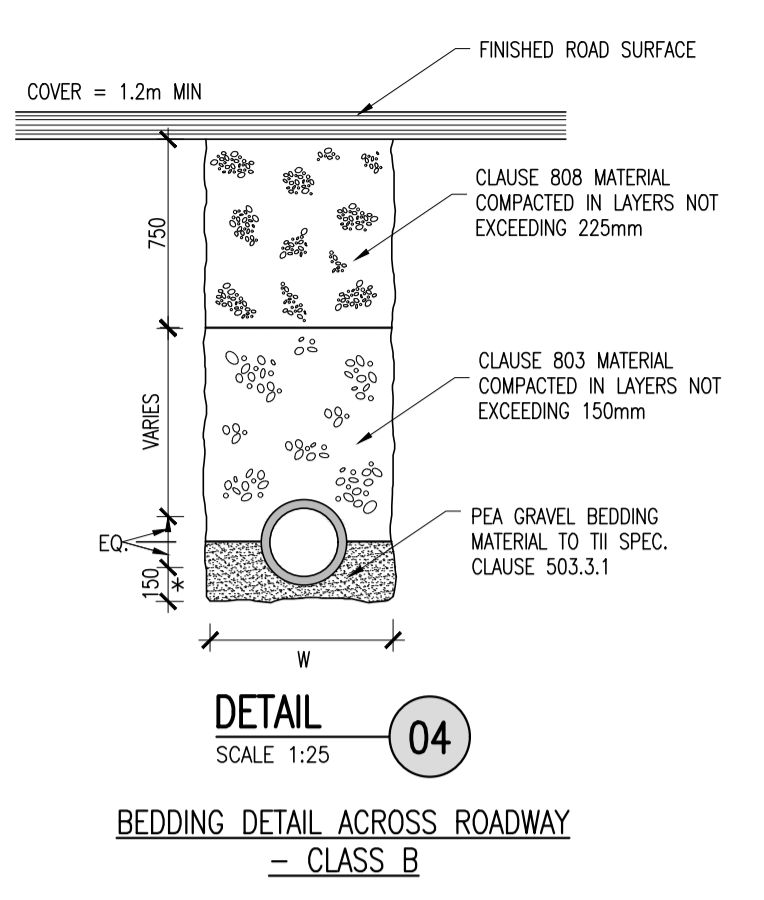
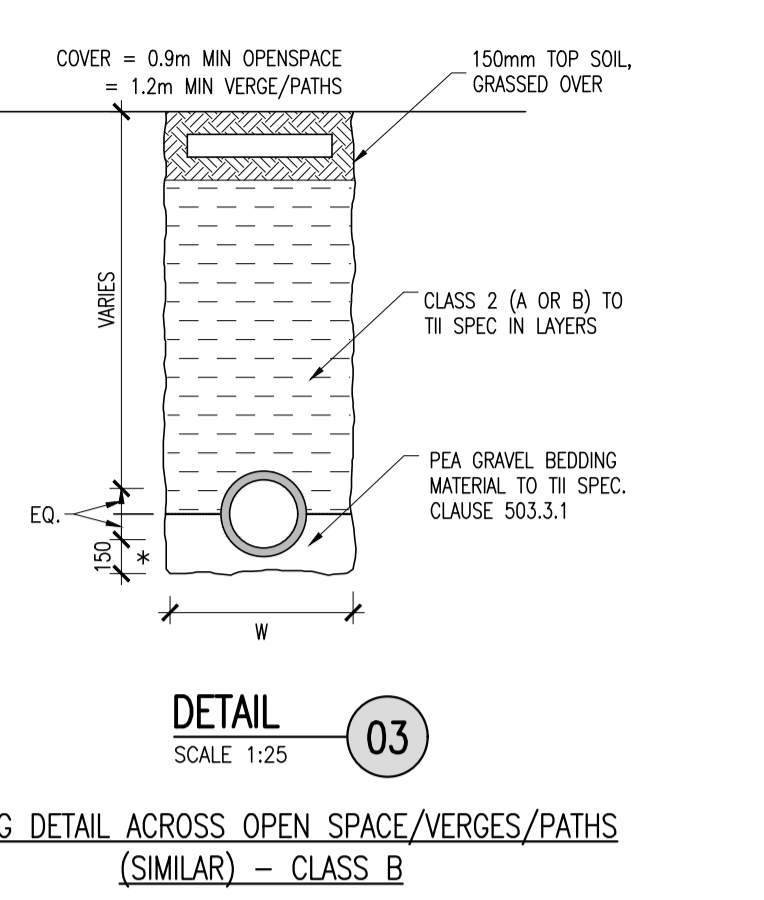
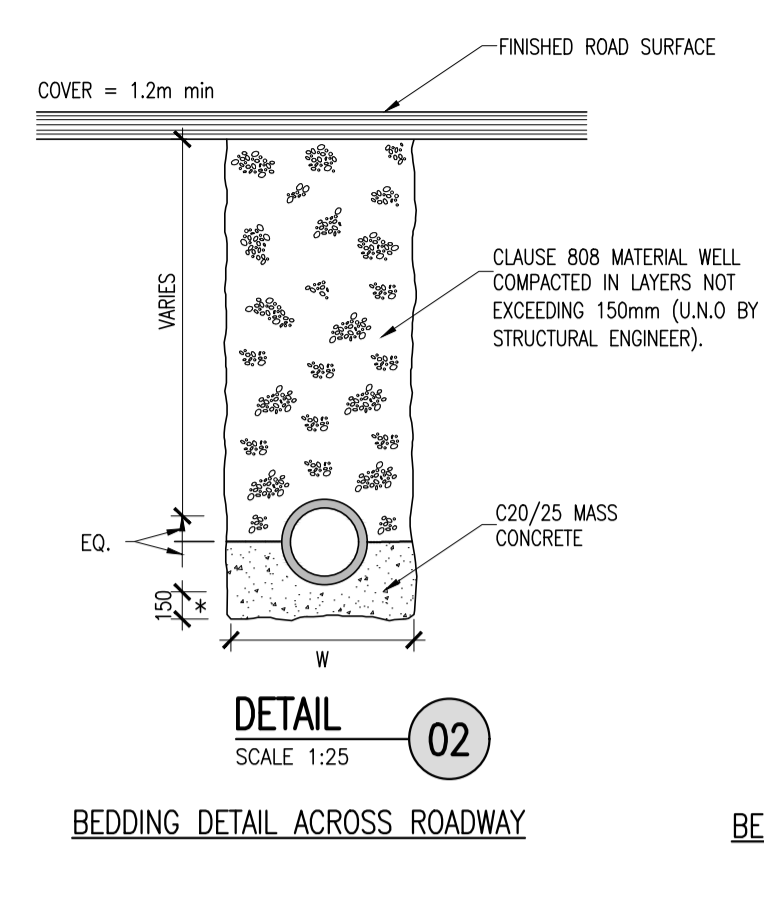
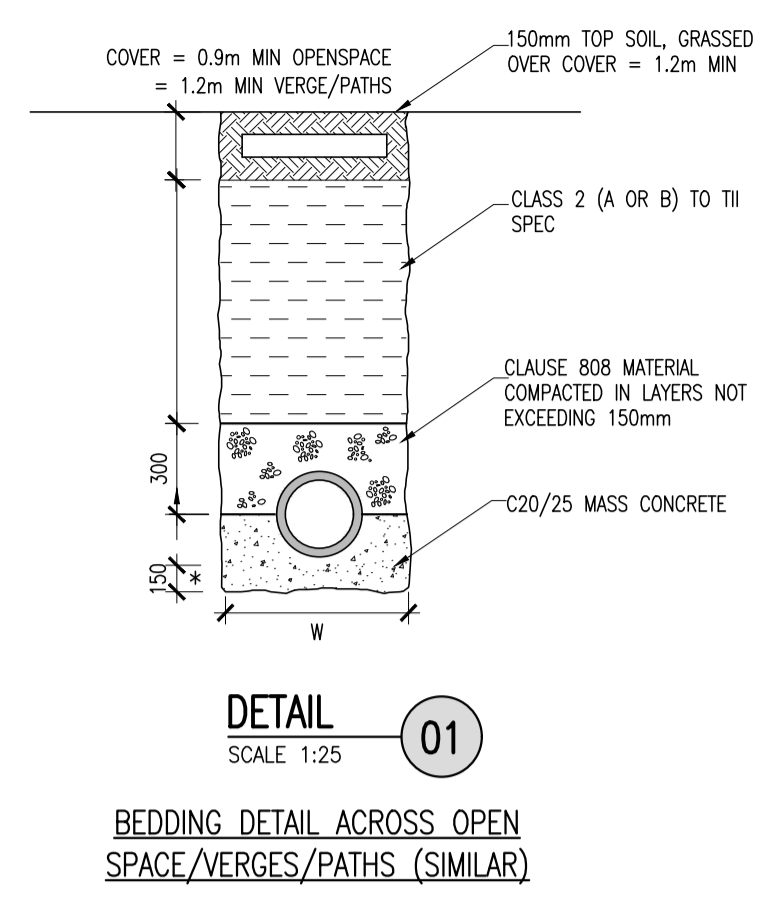


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NO CHANGES OF WHATSOEVER NATURE ARE TO BE MADE TO ANY DETAILS SET OUT OR CONTAINED IN ANY DBFL SPECIFICATIONS OR DRAWINGS UNLESS THE EXPRESS CONSENT HAS BEEN OBTAINED IN ADVANCE, IN WRITING, FROM DBFL.

- 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 260 kg/m³, MAXIMUM W/C RATIO OF 0.65 AND SLUMP CLASS S2.
 - C25/30 CONCRETE TO HAVE A MINIMUM CEMENT CONTENT OF 280kg/m³, 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.
 - TII ROAD CONSTRUCTION DETAILS
 - DOE RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS
 - BUILDING REGULATIONS
 - WHERE ROCKS OR OTHER HARD TRENCH BOTTOM IS ENCOUNTERED, THE FIGURE DENOTED BY '1' IS TO BE DOUBLED.
 - GRANULAR BACKFILL MATERIAL SHALL BE IN COMPLIANCE WITH CLAUSE 808 (GRANULAR MATERIAL TYPE B) OF THE TII 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 COMPACTION 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 COMPACTION 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, TWIGS, 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 THICK COVER. CARE SHOULD BE TAKEN THAT THE PROCESS OF COMPACTION 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, TWIGS AND VEGETABLE OR FOREIGN CONTAMINATED MATTER. GENERAL BACKFILL SHOULD BE PLACED IN LAYERS NOT EXCEEDING 300mm, EACH LAYER BEING WELL COMPACTED. MECHANICAL COMPACTION EQUIPMENT SHOULD NOT BE USED UNTIL THERE IS A MINIMUM OF 450mm COMPACTED COVER OVER THE CROWN OF 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 6F1 / 6F2 CAPPING MATERIAL IS PROPOSED WITHIN 500mm OF CONCRETE OR STEEL, CLASS 6V IS TO BE USED INSTEAD.



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 900mm	OUTSIDE Ø OF PIPE PLUS 1000mm

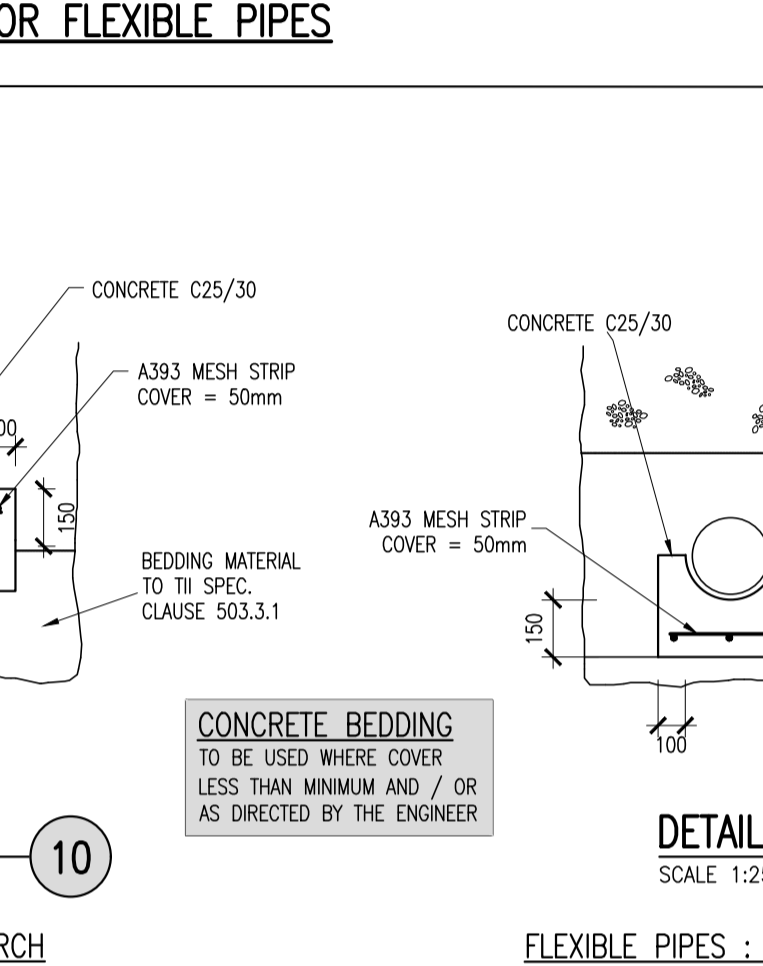
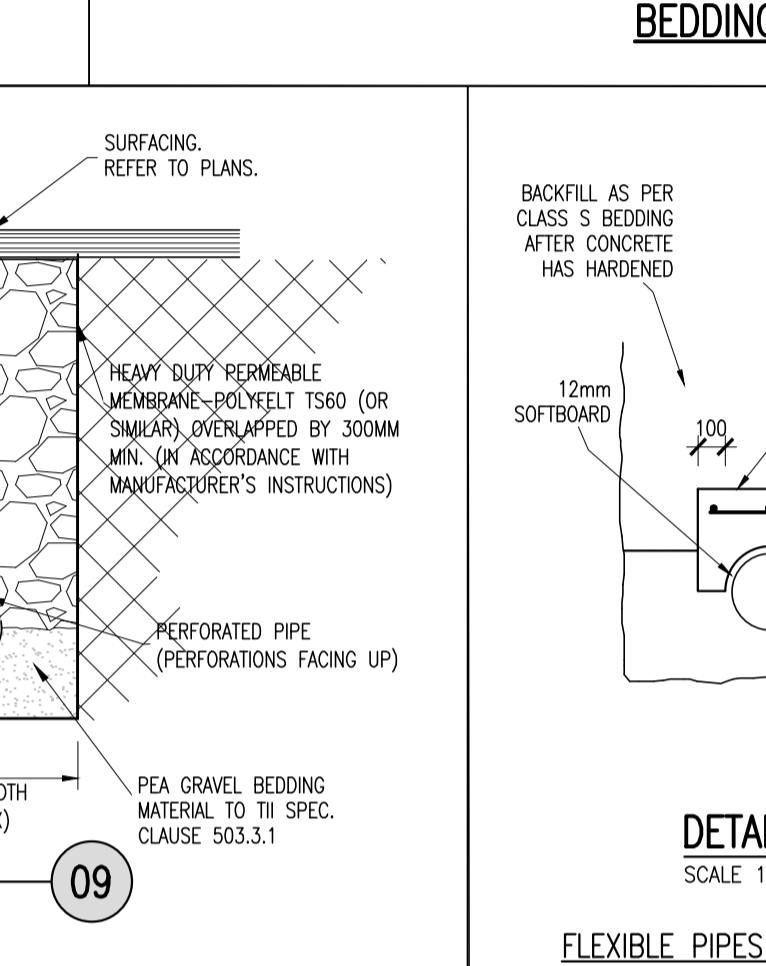
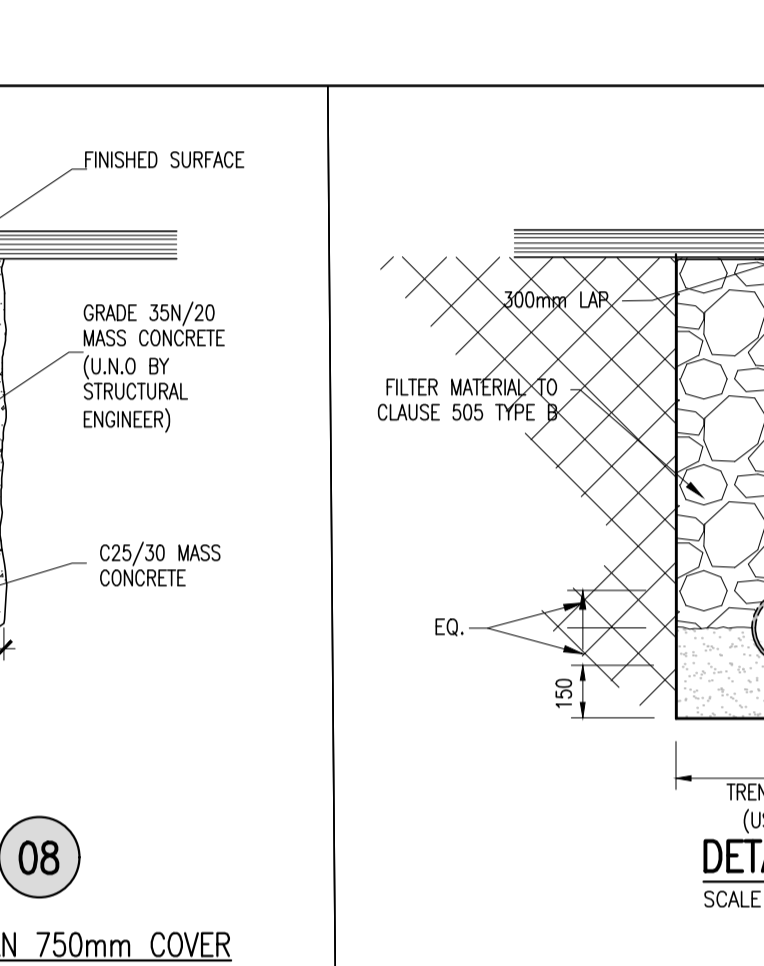
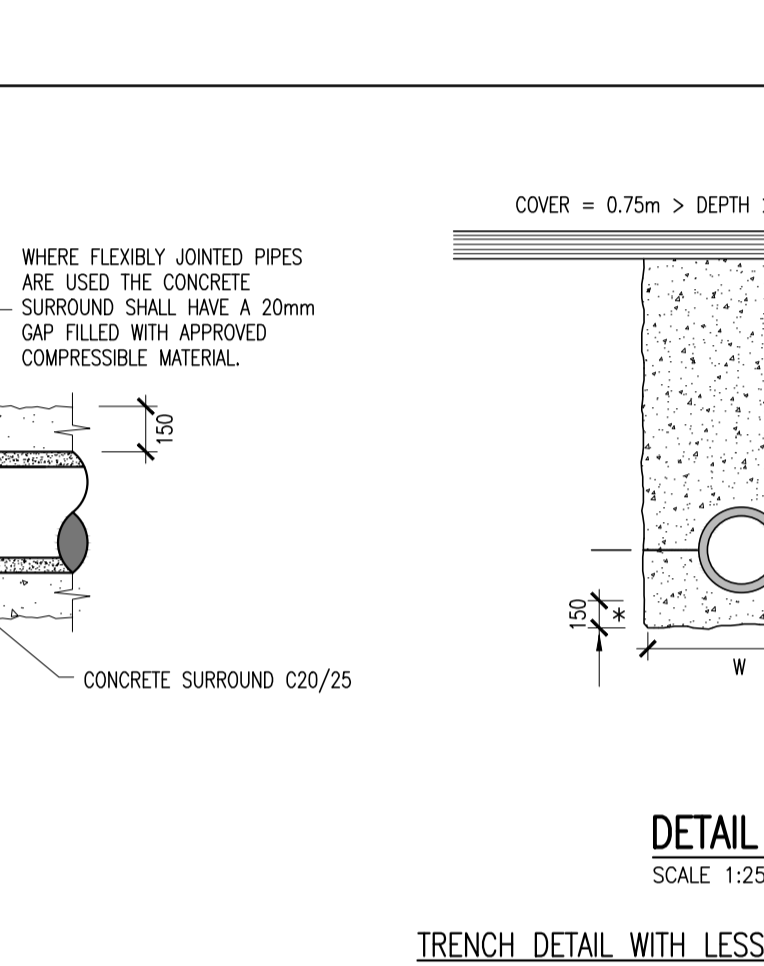
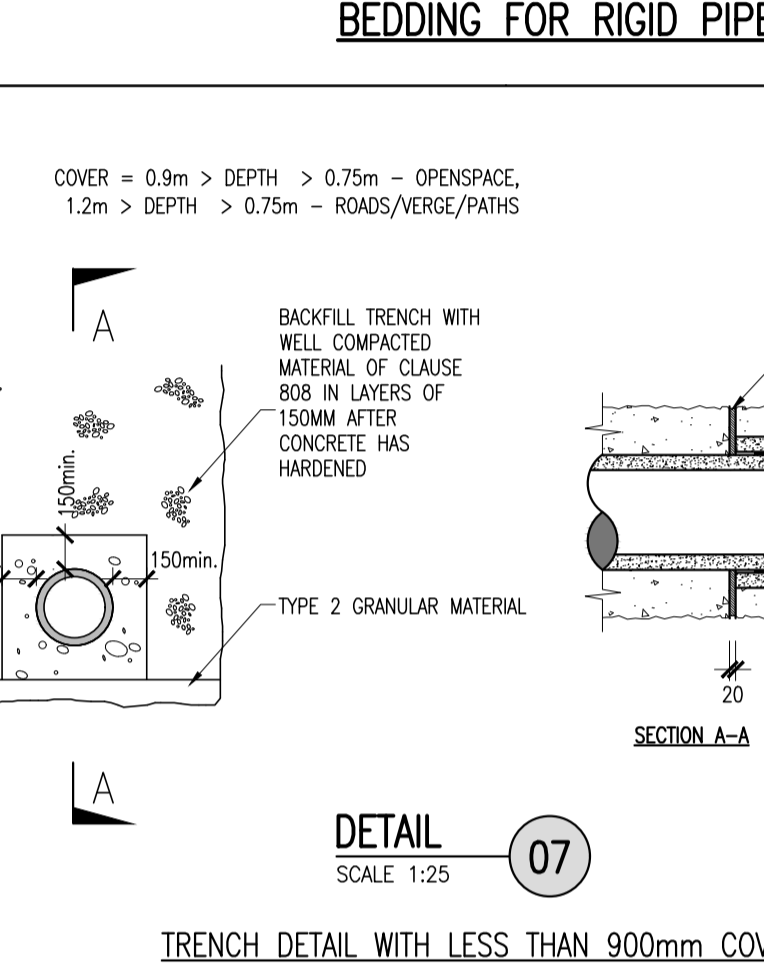


TABLE 1: TRENCH WIDTH LIMITS (W)

DETAIL 07: TRENCH DETAIL WITH LESS THAN 900mm COVER

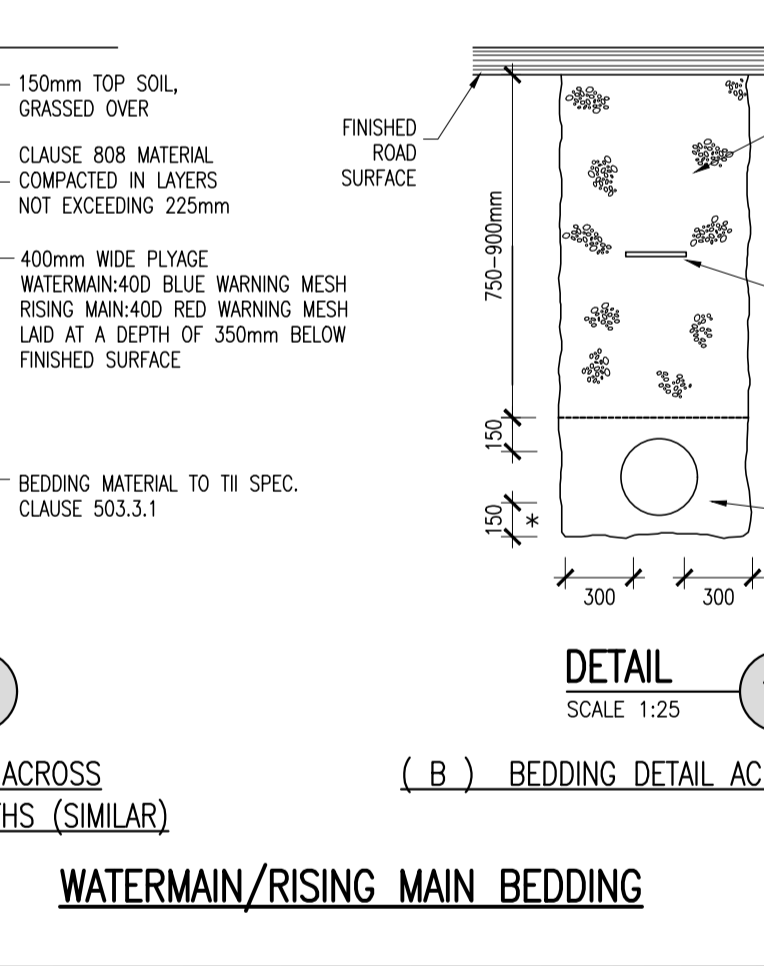
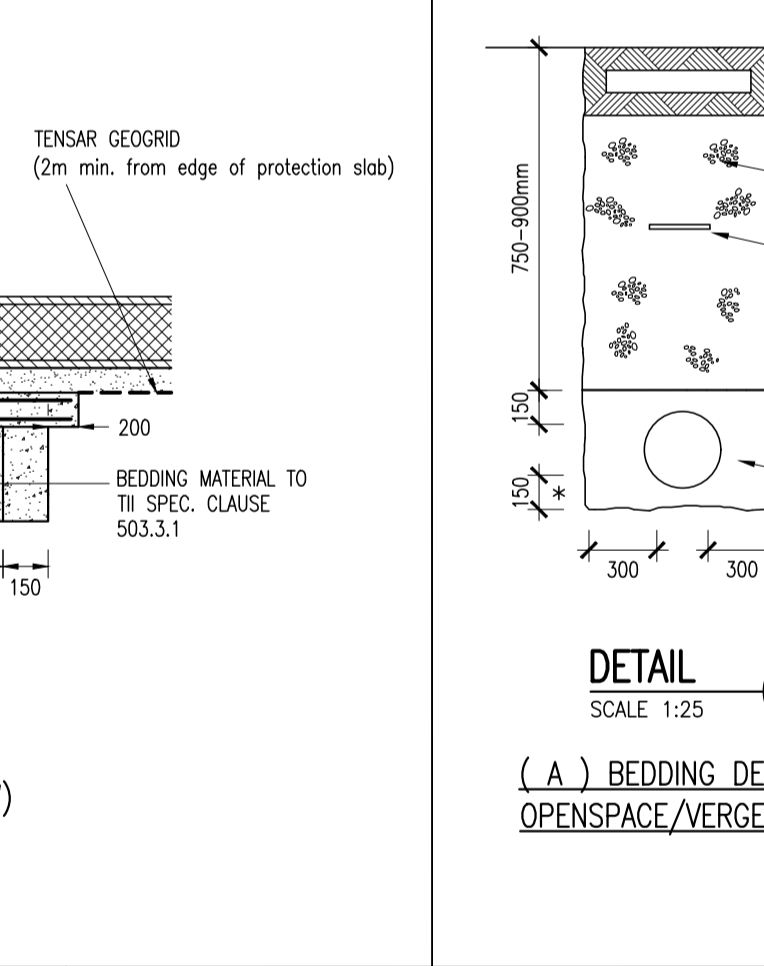
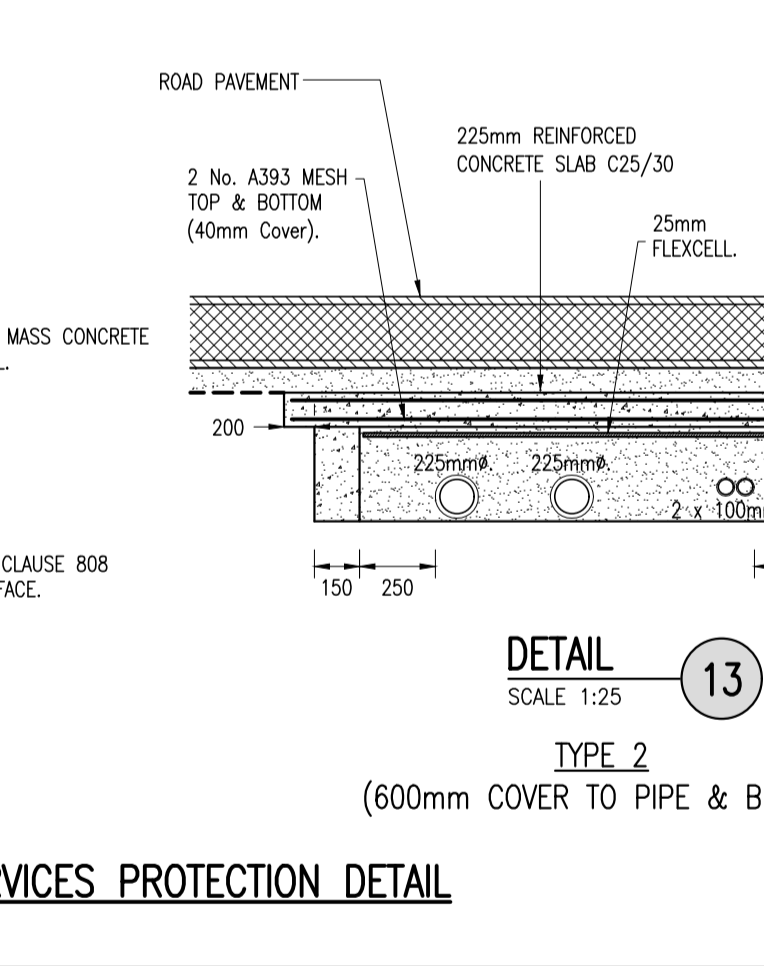
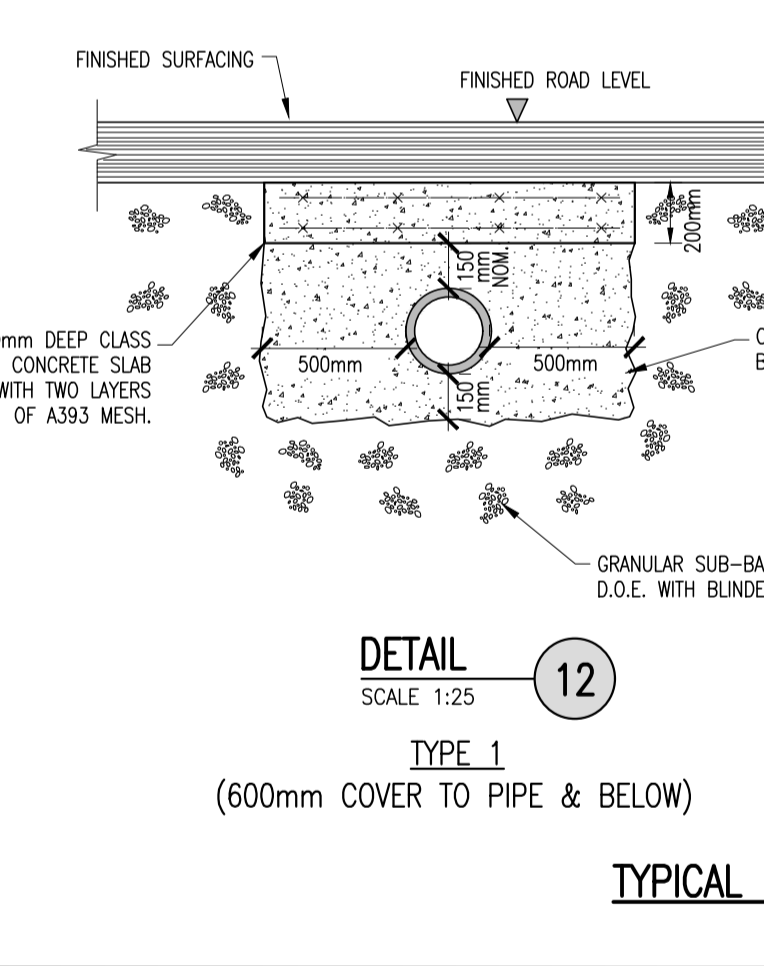
DETAIL 08: TRENCH DETAIL WITH LESS THAN 750mm COVER

DETAIL 09: TYPICAL FILTER DRAIN DETAIL

DETAIL 10: FLEXIBLE PIPES: ARCH

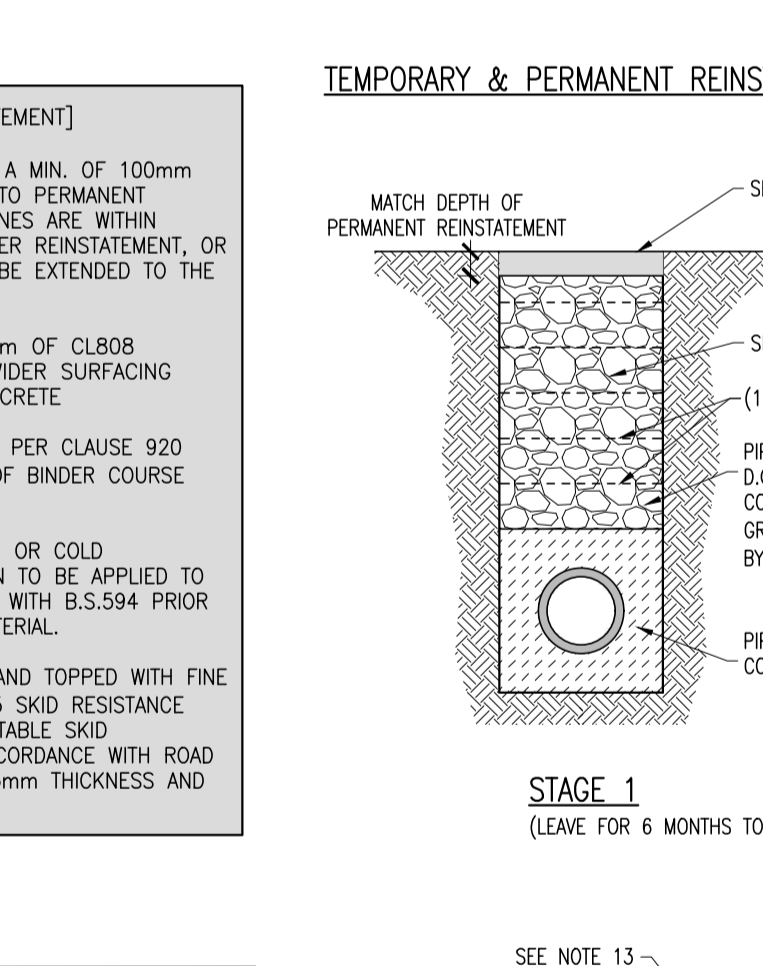
DETAIL 11: FLEXIBLE PIPES: CRADLE

BEDDING FOR RIGID AND FLEXIBLE PIPES WITH LIMITED COVER



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 220mm LAYER OF LEAN-MIX CONCRETE.
- LEAN-MIX SURFACE TO BE SPRAYED PER CLAUSE 920 (TII 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.5.594 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.



	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
RISING MAIN (D > 0.75m)	14	15	A
REINSTATEMENT OF PIPES IN EXISTING ROADS.	N/A	18	A

NOTES:

A. APPLIES THROUGHOUT GOSD'S AUTHORITY REGIONS

B. APPLIES THROUGHOUT GOSD'S AUTHORITY REGIONS EXCEPT DCC

C. AGREEMENT FROM AUTHORITY REQUIRED

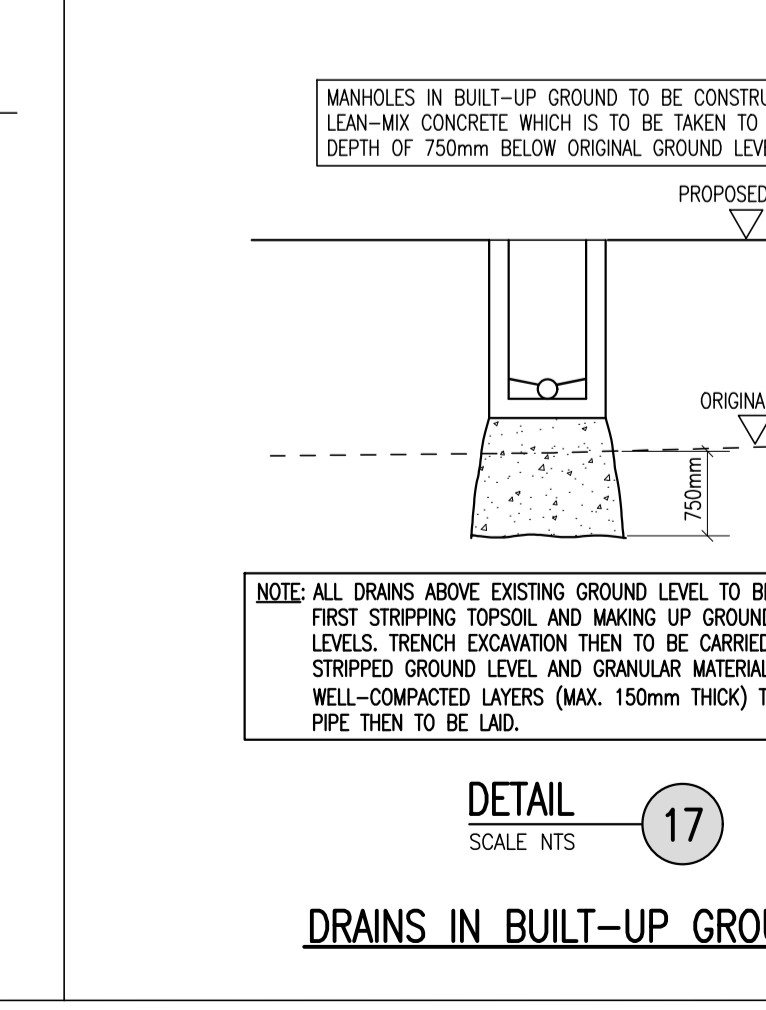
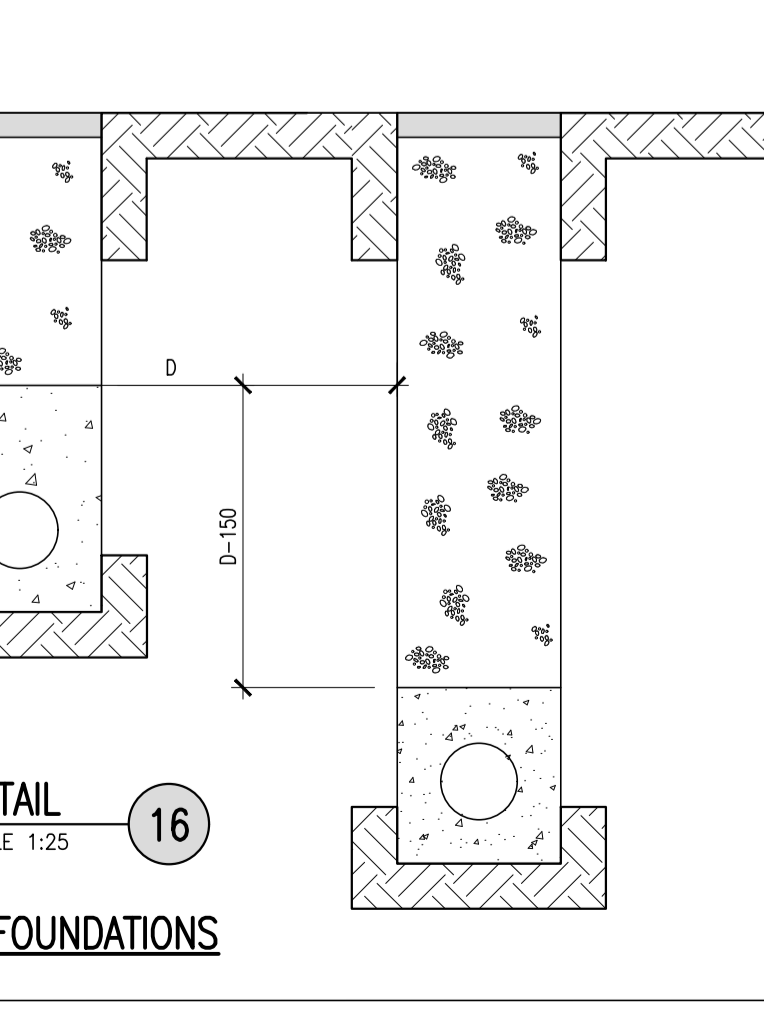
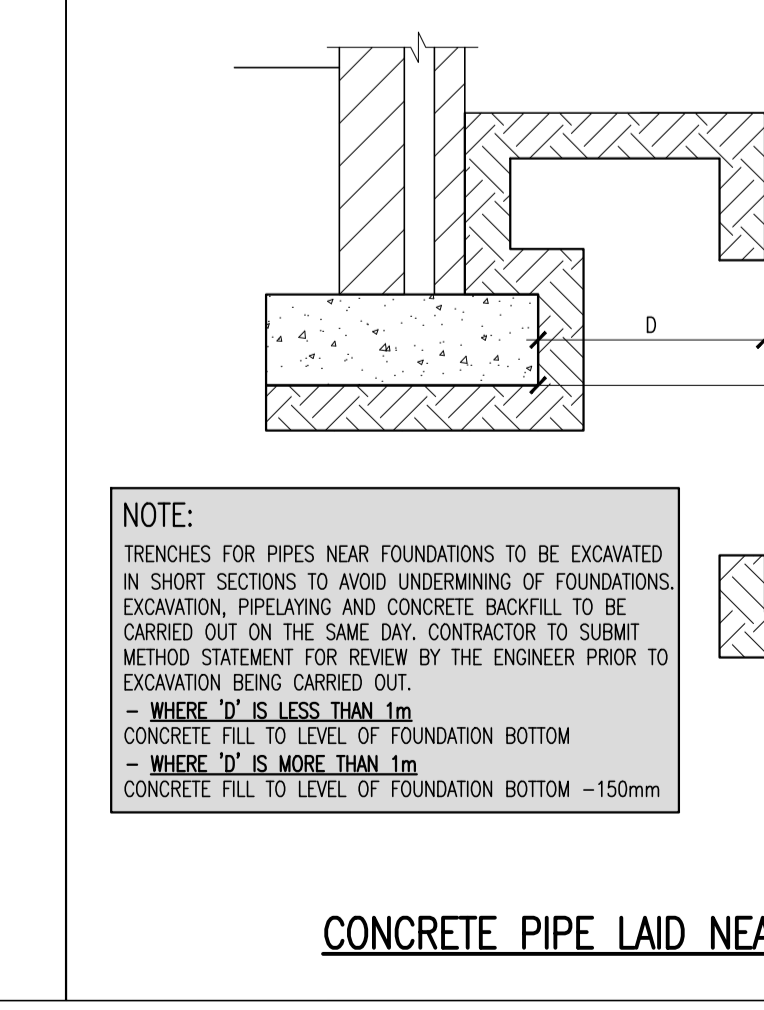


TABLE 2

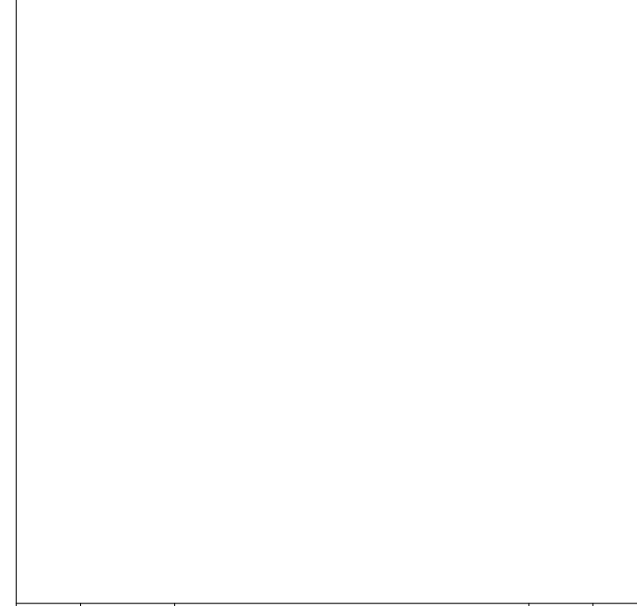
DETAIL 16: CONCRETE PIPE LAID NEAR FOUNDATIONS

DETAIL 17: DRAINS IN BUILT-UP GROUND

DETAIL 18: REINSTATEMENT OF PIPE TRENCH IN EXISTING ROAD

NOTE: ALL WORKS & SPECIFICATIONS TO BE UNDERTAKEN IN ACCORDANCE WITH TII SPECIFICATION FOR ROADWORKS

- GREATER DUBLIN CODE OF PRACTICE FOR DRAINAGE WORKS
- RECOMMENDATIONS FOR SITE DEVELOPMENT WORKS



PO2	21/03/22	ISSUED FOR PLANNING	RSP	LML
PO1	29/09/20	ISSUED FOR PRE-PLANNING	APW	BJM
rev	date	description	by	chkd.
		A - Approved		
		B - Approved with comments		
		C - Do not use		
client approval				
subtality		issue purpose		
S2 - FOR INFORMATION		PLANNING		
DBFL OFFICE: Ormond House, Upper Ormond Quay, Dublin 7, D07 W704 PHONE: +353 1 400 4000 CORK OFFICE: 14 South Mall, Cork, T12 CT91 PHONE: +353 21 2024538 WATERFORD OFFICE: 54a-56 The Arcade, Maritime Quay, Castle Street, Waterford, X91 W028 PHONE: +353 51 309 500				
project ref.	RESIDENTIAL DEVELOPMENT AT HACKETTSTOWN, SKERRIES, CO. DUBLIN			
drawing title	SURFACE WATER STANDARD DETAILS - SHEET 1			
client	LAND DEVELOPMENT AGENCY			
designed by	author	scale	sheet size	
BJM	APW	AS SHOWN	A1	
drawing no.	190170-DBFL-SW-SP-DR-C-5012			revision
				P02