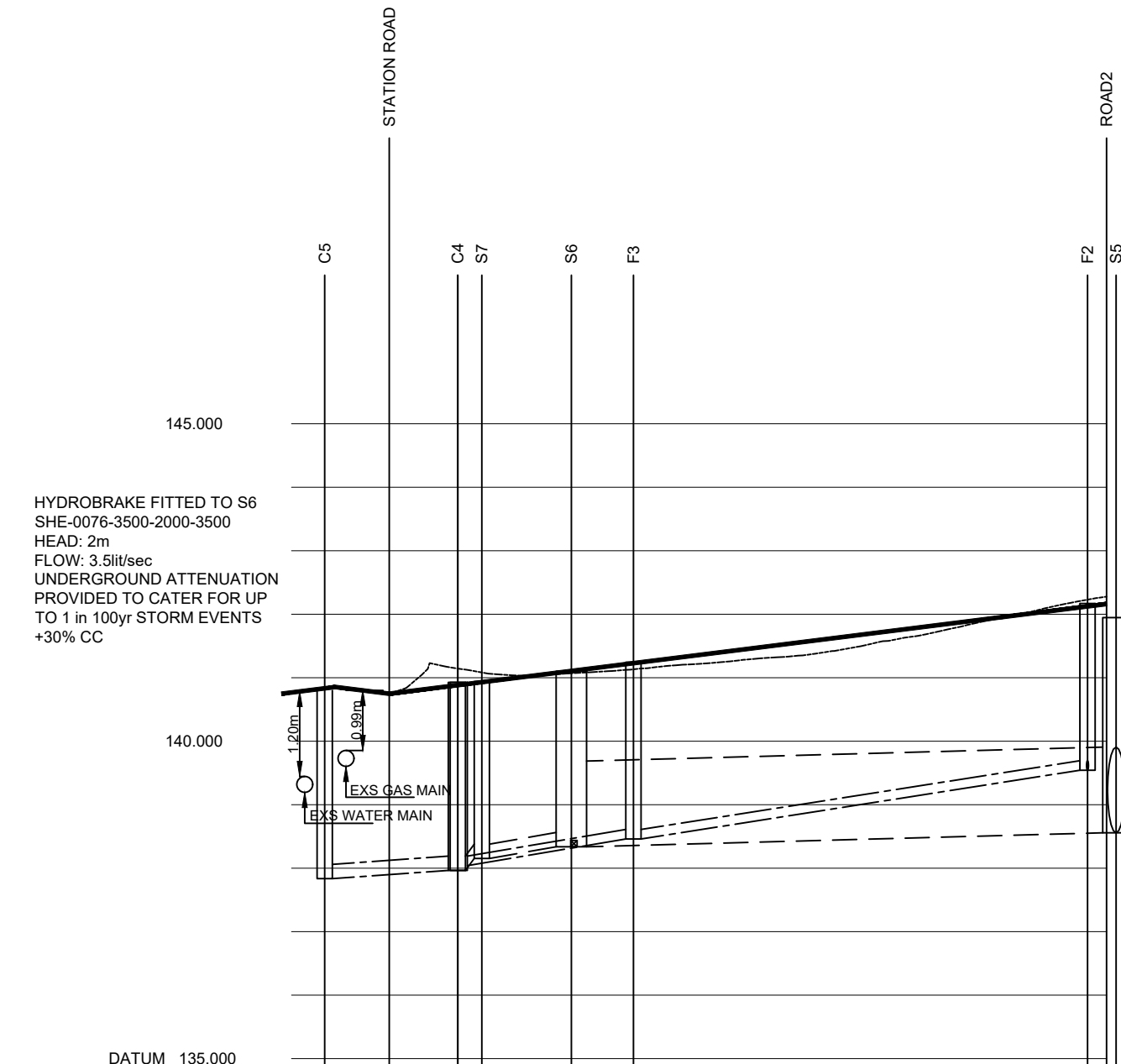
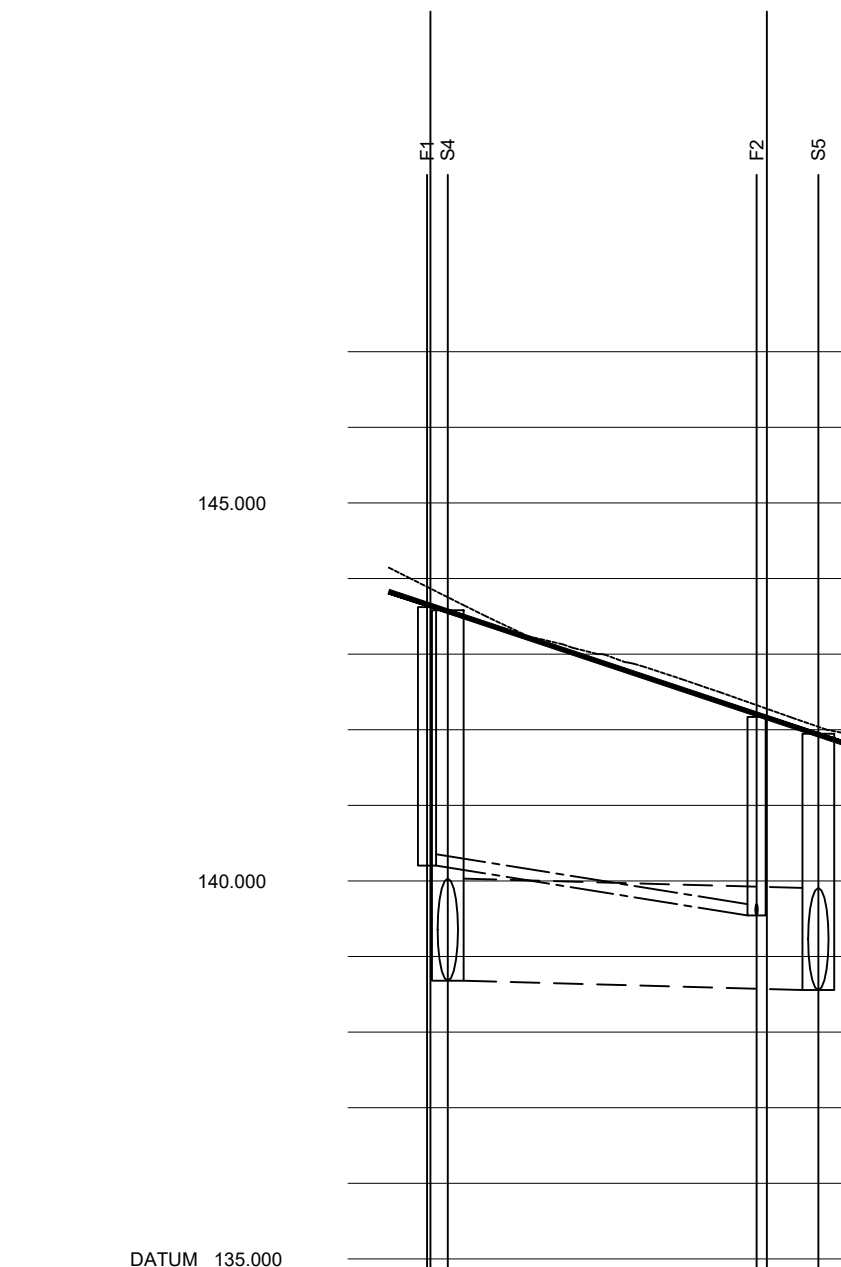
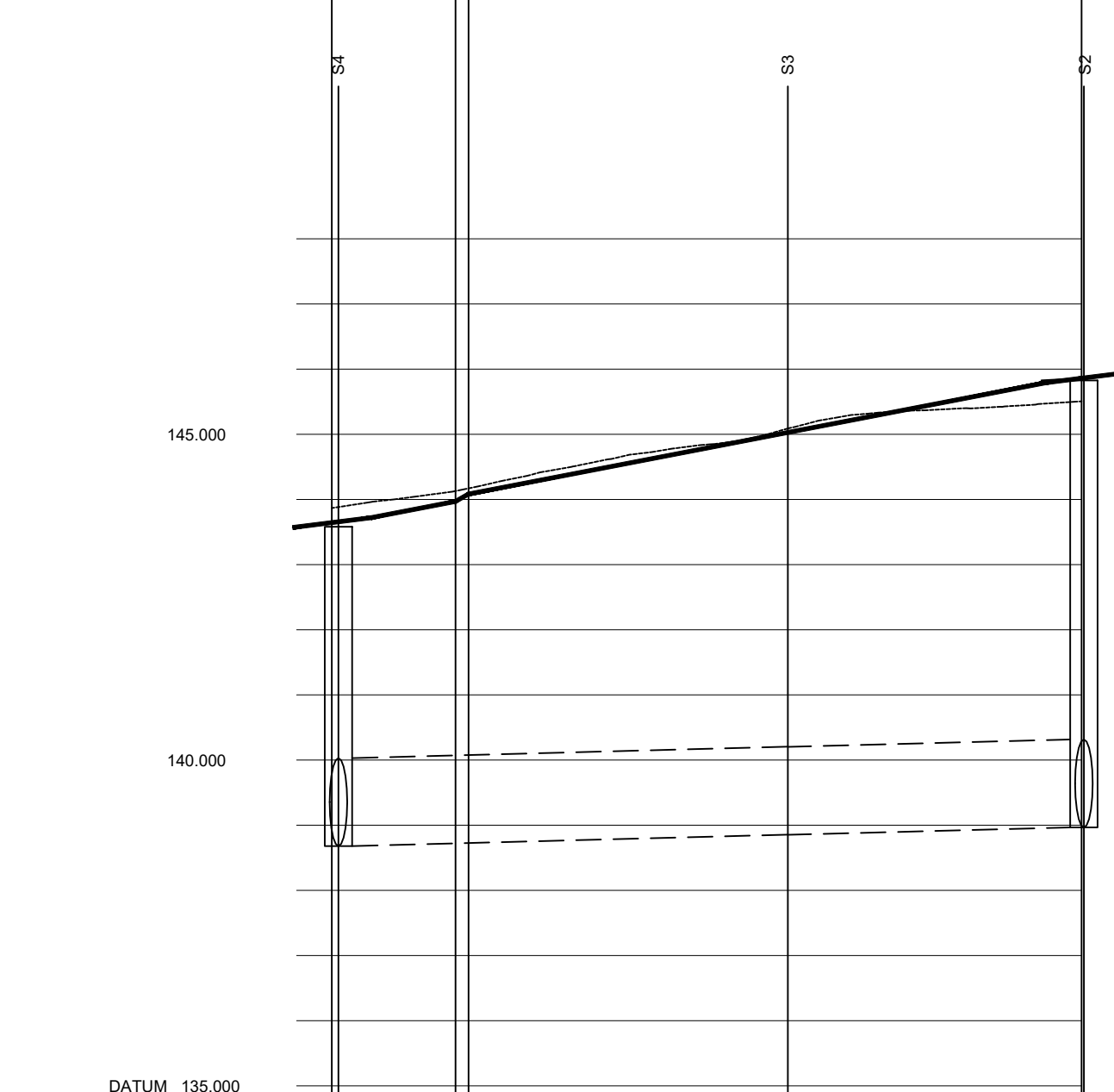




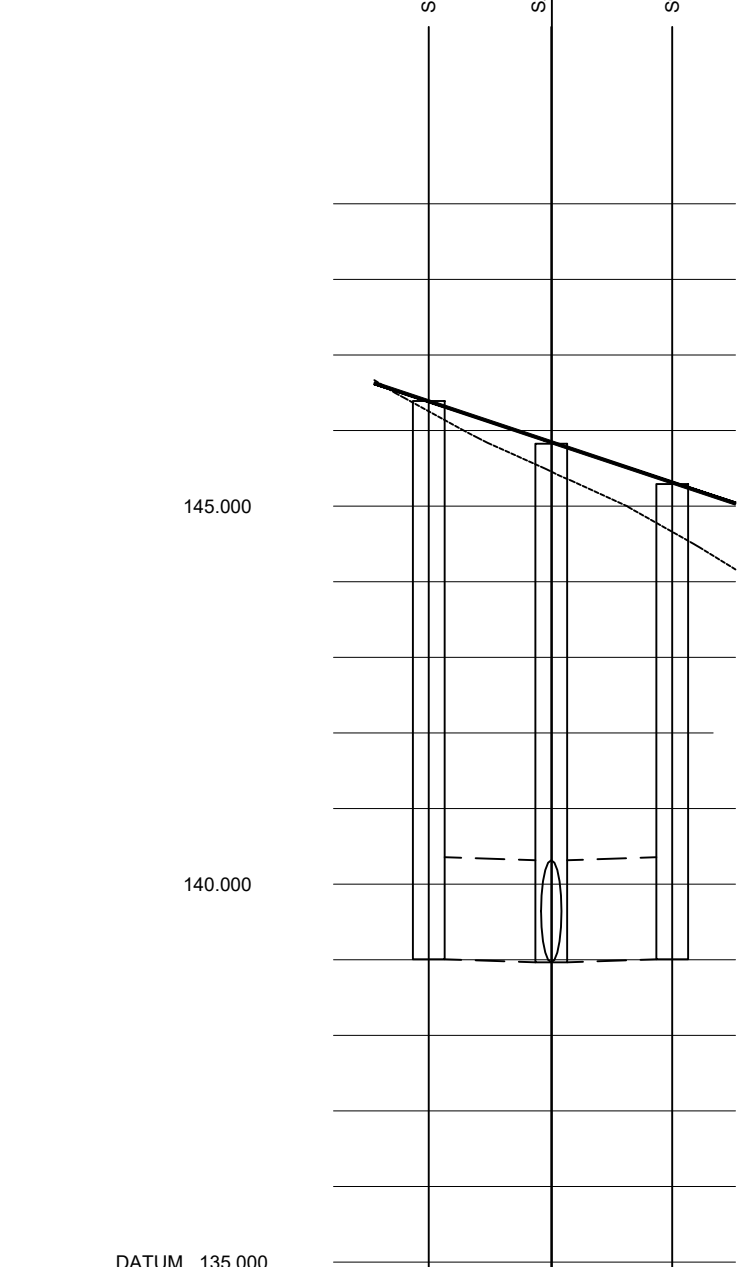
ROAD1									
CHAINAGE		1.200	10.000	5.401	7.294	10.000	14.344	17.947	22.881
EXISTING GROUND LEVEL		140.736	140.748	140.748	141.036	141.036	141.316	141.607	141.611
ALIGNMENT LEVEL		140.748	140.748	140.748	141.036	141.036	141.316	141.607	141.611
VERTICAL ALIGNMENT		G= 2.500% 1: 40.0							
HORIZONTAL ALIGNMENT									
STORMWATER COVER LEVEL			140.927	140.927	141.005	141.005	141.347	141.347	141.347
STORMWATER INVERT			138.153	138.153	138.337	138.337	138.557	138.557	138.557
STORMWATER DETAILS			Pipe 1.006 Dia 150 Circular CLAY 1 in 80	Pipe 1.005 Dia 150 Circular CLAY 1 in 44	Pipe 1.004 Dia 1350 Circular Concrete 1 in 195				
STORMWATER LENGTHS			2.866	8.100	42.906				
FOULWATER COVER LEVEL		140.800	140.927	140.927	141.244	141.244	142.169	142.169	142.169
FOULWATER INVERT		137.855	137.855	137.855	138.460	138.460	139.543	139.543	139.543
FOULWATER DETAILS			Pipe 1.003 Dia 225 Circular CLAY 1 in 80	Pipe 1.002 Dia 150 Circular CLAY 1 in 33	Pipe 1.001 Dia 150 Circular CLAY 1 in 33				
FOULWATER LENGTHS			10.363	13.852	35.750				



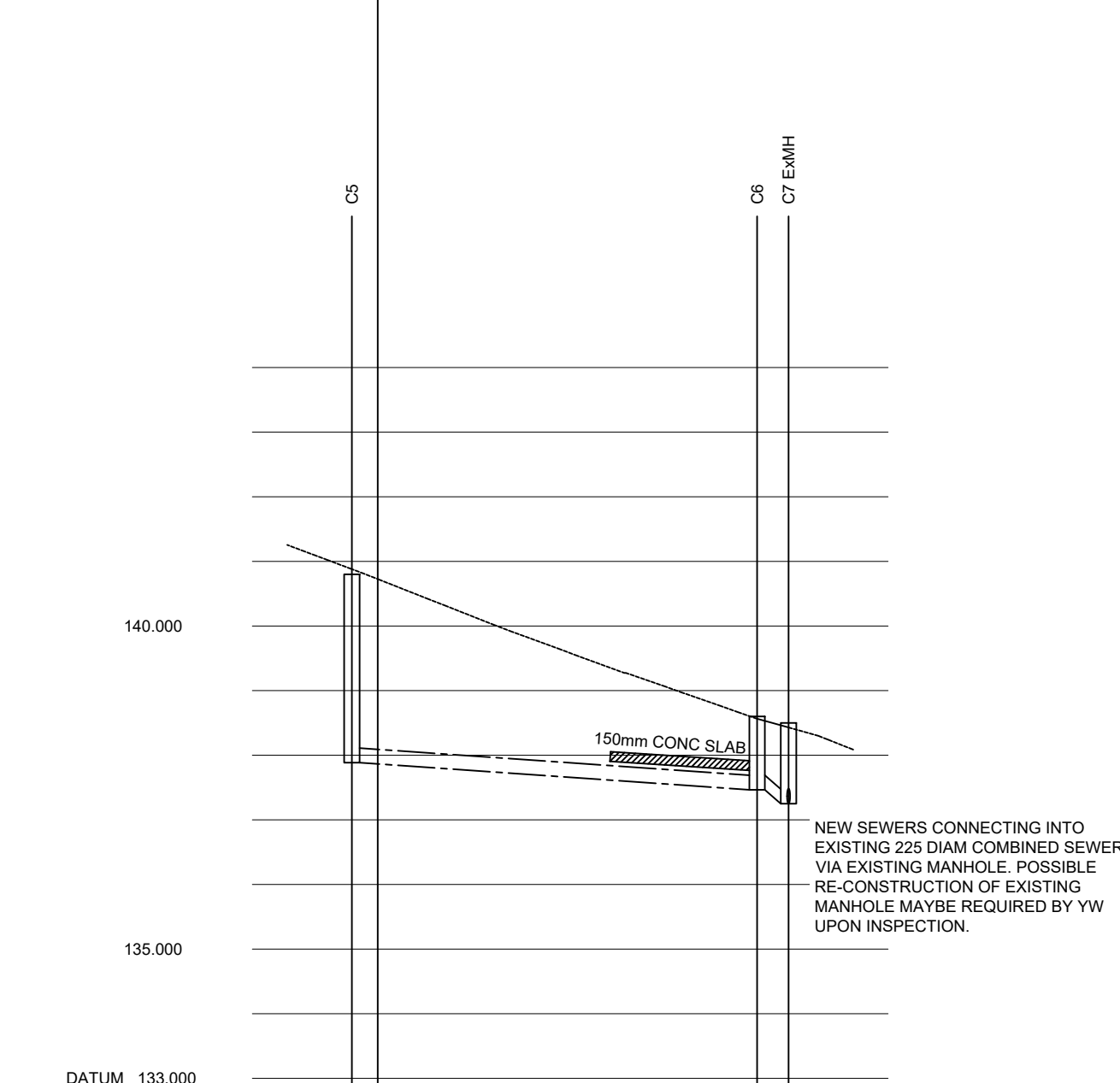
ROAD2									
CHAINAGE		0.000	2.527	3.858	10.000	20.000	24.323	25.000	29.407
EXISTING GROUND LEVEL		144.144	143.828	143.828	143.200	142.826	141.949	141.949	141.949
ALIGNMENT LEVEL		143.828	143.828	143.828	143.200	142.826	141.949	141.949	141.949
VERTICAL ALIGNMENT		G= -6.667% 1: -15.0							
HORIZONTAL ALIGNMENT									
STORMWATER COVER LEVEL			143.981	143.981	143.981	141.947	141.947	141.947	141.947
STORMWATER INVERT			138.680	138.680	138.680	138.680	138.680	138.680	138.680
STORMWATER DETAILS			Pipe 1.003 Dia 1350 Circular Concrete 1 in 200	Pipe 1.003 Dia 1350 Circular Concrete 1 in 200					
STORMWATER LENGTHS			24.508	24.508					
FOULWATER COVER LEVEL		143.922	143.922	143.922	142.169	142.169	142.169	142.169	142.169
FOULWATER INVERT		140.203	140.203	140.203	138.543	138.543	138.543	138.543	138.543
FOULWATER DETAILS			Pipe 1.000 Dia 150 Circular CLAY 1 in 33	Pipe 1.000 Dia 150 Circular CLAY 1 in 33					
FOULWATER LENGTHS			21.796	21.796					



ROAD3									
CHAINAGE		3.000	2.982	0.000	6.500	7.500	10.000	20.000	28.205
EXISTING GROUND LEVEL		143.898	143.898	143.898	144.282	144.282	144.282	144.282	144.282
ALIGNMENT LEVEL		143.719	143.719	143.719	144.282	144.282	144.282	144.282	144.282
VERTICAL ALIGNMENT		G= 3.855% 1: 25.9				G= 3.855% 1: 25.9			
HORIZONTAL ALIGNMENT									
STORMWATER COVER LEVEL		143.581	143.581	143.581	145.028	145.028	145.028	145.028	145.028
STORMWATER INVERT		138.680	138.680	138.680	138.680	138.680	138.680	138.680	138.680
STORMWATER DETAILS			Pipe 1.002 Dia 1350 Circular Concrete 1 in 200	Pipe 1.002 Dia 1350 Circular Concrete 1 in 200	Pipe 1.001 Dia 1350 Circular Concrete 1 in 200	Pipe 1.001 Dia 1350 Circular Concrete 1 in 200	Pipe 1.001 Dia 1350 Circular Concrete 1 in 200	Pipe 1.001 Dia 1350 Circular Concrete 1 in 200	Pipe 1.001 Dia 1350 Circular Concrete 1 in 200
STORMWATER LENGTHS			34.705	22.573	22.573				



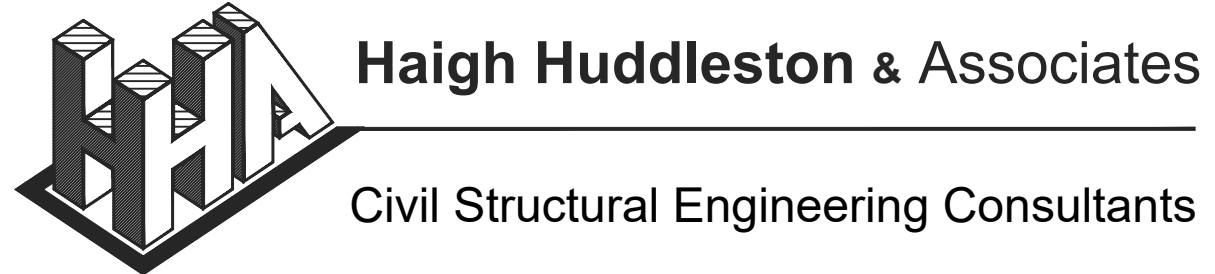
ROAD3A									
CHAINAGE		0.000	10.000	11.742	20.000	22.887	144.224	144.224	144.224
EXISTING GROUND LEVEL		146.741	146.741	146.741	146.741	146.741	146.741	146.741	146.741
ALIGNMENT LEVEL		146.627	146.627	146.627	146.627	146.627	146.627	146.627	146.627
VERTICAL ALIGNMENT		G= -6.667% 1: -15.0							
HORIZONTAL ALIGNMENT									
STORMWATER COVER LEVEL		146.391	146.391	146.391	146.391	146.391	146.391	146.391	146.391
STORMWATER INVERT		139.006	139.006	139.006	139.006	139.006	139.006	139.006	139.006
STORMWATER DETAILS			Pipe 1.000 Dia 1350 Circular Concrete 1 in 200	Pipe 1.000 Dia 1350 Circular Concrete 1 in 200	Pipe 1.000 Dia 1350 Circular Concrete 1 in 200	Pipe 1.000 Dia 1350 Circular Concrete 1 in 200	Pipe 1.000 Dia 1350 Circular Concrete 1 in 200	Pipe 1.000 Dia 1350 Circular Concrete 1 in 200	Pipe 1.000 Dia 1350 Circular Concrete 1 in 200
STORMWATER LENGTHS			8.000	8.000	8.000				



STATION ROAD									
GROUND LEVEL		141.255	140.490	139.724	139.013	138.430	137.250	136.430	135.430
FOULWATER COVER LEVEL		140.800	140.800	140.800	140.800	140.800	140.800	140.800	140.800
FOULWATER INVERT		137.835	137.835	137.835	137.835	137.835	137.835	137.835	137.835
FOULWATER DETAILS		Pipe 1.004 Dia 225 Circular CLAY 1 in 85				Pipe 1.005 Dia 225 Circular CLAY 1 in 10			
FOULWATER LENGTHS		31.348				2.150			

1. ALL ADOPTABLE SEWER WORKS AND MATERIAL TO BE IN ACCORDANCE WITH 'CODES FOR ADOPTION', THE RELEVANT BRITISH/EUROPEAN AND YORKSHIRE WATER'S STANDARDS/REQUIREMENTS/ADDENDUM TO THE MECHANICAL AND ELECTRICAL SPECIFICATION AND KITEMARKED.
2. MANHOLE COVERS SHALL HAVE A CLEAR OPENING OF 600mm AND SHALL BE CLASS D400 TO BS EN 124 WITH 150mm DEEP FRAMES IN HIGHWAYS.
3. FILLED GROUND MUST BE FILLED AND CONSOLIDATED UNDER THE SUPERVISION AND TO THE SATISFACTION OF YORKSHIRE WATER BEFORE ANY SEWER WORKS ARE CARRIED OUT.
4. YORKSHIRE WATER IS NOT OBLIGED TO ACCEPT FILTER DRAIN/LAND DRAINAGE RUNOFF INTO THE PUBLIC SEWER NETWORK OR ADOPTABLE DRAINAGE SYSTEM (DIRECTLY OR INDIRECTLY). AN ALTERNATIVE METHOD OF DISPOSAL OF THE LAND DRAINAGE RUNOFF WILL THEREFORE BE REQUIRED AND YOU WILL HAVE TO LIAISE WITH THE LOCAL AUTHORITY, LAND DRAINAGE SECTION WITH REGARD TO THE DISPOSAL OF THE FILTER DRAIN/LAND DRAINAGE RUNOFF.
5. COVER SLABS MUST CARRY THE BSI KITEMARK OR WILL BE REJECTED BY YORKSHIRE WATER INSPECTOR. WHERE THE CLEAR OPENING OF THE KITEMARKED PRODUCT IS DIFFERENT TO THAT OF THE COVER AND FRAME, A LOADING BEARING SLAB SHOULD BE FITTED ABOVE THE COVER SLAB TO BRING THE SIZE DOWN TO 600x600mm FOR THE YORKSHIRE WATER SPECIFIED COVER SIZE. PLEASE REFER TO CONCRETE PIPE SYSTEMS ASSOCIATION (CPSA), 'TECHNICAL BULLETIN' ISSUED AUTUMN 2004 FOR KITEMARKED COVER SLAB OPENING SIZES.
6. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.
7. THE ADOPTABLE SEWERS SHOULD BE A MINIMUM OF 1m AND MANHOLES 0.5m FROM KERB FACES.
8. SEWERS MUST HAVE 5m CLEARANCE FROM TREES AND HEDGES.
9. SEWERS TO BE LAID IN CLASS 'S' BEDDING (150mm GRANULAR BED AND SURROUND), WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN 1.2m IN HIGHWAYS AND VERGES (OR LESS THAN 900mm IN NONE VEHICULAR ACCESS AREAS) THEN A 175mm CONCRETE SLAB OVER SEWER SHALL BE PROVIDED.
10. ALL PIPEWORK 300mm DIAM. OR LESS TO BE VITRIFIED CLAY CONFORMING WITH BS 65. MINIMUM CRUSHING STRENGTHS TO BE AS FOLLOWS: 100mm DIA. 40kN/m, 150mm DIA 40kN/m, 225mm DIA 45kN/m, 300mm DIA 72kN/m.
11. ALL PIPEWORK 375mm DIAM. OR GREATER TO BE CONCRETE CLASS 120 TO EN 1916/ BS 5911-1: 2002.
12. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
13. YORKSHIRE WATER POLICY IS NOT TO ACCEPT TYPE 'C' BRICK MANHOLES AND 1050mm DIAM. MANHOLE RINGS. INSTEAD IT IS PREFERRED THAT YOU USE A TYPE 'B' MANHOLE WITH 1200mm DIAM. OR 1500mm DIAM. RINGS, WITH THE OPENING SIGHTED OVER THE CHANNEL WHERE DEPTH OF COVER TO PIPE SOFFIT IS 1-1.5m.
14. ALL HIGHWAY WORKS AND MATERIAL TO CONFORM WITH KIRKLEES COUNCIL SPECIFICATION.
15. GULLY COVER AND FRAMES SHALL BE D400 DUCTILE IRON AND COMPLY WITH EUROPEAN STANDARD BS EN 124. THOSE SIGHTED IN ACCESSWAYS AND MEWS COURTS MUST BE SUITABLE FOR USE IN PEDESTRIAN AREAS.
16. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENT OF WATER INDUSTRY SPECIFICATION 4-08-2 (TABLE A2).
17. PLASTIC CHAMBER SECTIONS IN MANHOLES ARE NOT ACCEPTABLE AND YORKSHIRE WATER WOULD PREFER CLAYWARE CHANNELS IN MANHOLES. YORKSHIRE WATER HAVE FOUND THAT PLASTIC CHANNELS ARE DIFFICULT TO SET IN CONCRETE AS THEY FLOAT AND A SATISFACTORY FINISH CANNOT BE OBTAINED ON BENCHING.
18. WHERE A B125 COVER AND FRAME HAS BEEN APPROVED, THIS **MUST NOT** BE COATED IN PLASTIC AND MUST HAVE LIFTING EYES SUITABLY SIZED TO ACCOMMODATE STANDARD LIFTING KEYS. SCREW DOWN COVERS ARE NOT ACCEPTABLE.
19. THERE SHOULD BE ENOUGH CLEARANCE TO ACCOMMODATE THE BEDDING FOR BOTH PIPES, APPROX 300mm : IF CROSSOVER IS NEAR THE ROCKER THEN THE CLEARANCE NEEDED MAY BE INCREASED.

Rev E S5-S7 and Road 3A amended. Rumble strips omitted 26.05.22 HH
Rev D Node S3 (road 3) amended 03.05.22 HH
Rev C Node S3 (road 3) amended 03.05.22 HH
Rev C C4-C7 amended to suit existing services 18.03.22 HH
Rev B YW reference added along with notes amended to suit YW comments. 14.12.21 CM
Manhole S2 added to road 3, manholes S5 & C5 added to road 1.
Rev A Offsite sewer section added 13.07.21 HH



Firth Buildings, 99 - 101 Leeds Rd, Dewsbury, WF12 7BU t 01924 464342 f 01924 450662
e trevor.haigh@haighhuddleston.co.uk

Client
YORKSHIRE COUNTRY PROPERTIES

Project
STATION ROAD, SKELMANTHORPE

Detail
ROAD AND SEWER LONG SECTIONS

Dwn Chkd Date Scale Dwg No.
CM HH June'21 1:500Hor 1:100Ver E18/7366/005_01E

ALL PIPEWORK 300mm DIAM OR LESS TO BE VITRIFIED CLAY CONFORMING WITH BS 65. MINIMUM CRUSHING STRENGTHS TO BE AS FOLLOWS: 100mm DIA 40kN/m, 150mm DIA 40kN/m, 225mm DIA 45kN/m and 300mm DIA 72kN/m.
ALL PIPEWORK 375mm DIAM OR GREATER TO BE CONCRETE CLASS 120, TO EN 1916 / BS 5911-1:2002.
ADOPTABLE SEWERS TO BE LAID IN CLASS 'S' GRANULAR BED & SURROUND.

RISK ASSESSMENT: SIGNIFICANT RISKS THAT CANNOT BE DESIGNED OUT		
RISK	LEVEL OF RISK (H/M/L)	SUGGESTED ACTION
DEEP EXCAVATIONS ASSOCIATED WITH NEW DRAINAGE WORKS	HIGH	ENSURE ALL EXCAVATIONS HAVE ADEQUATE TRENCH SUPPORTS
HANDLING LARGE DIAMETER MANHOLE RINGS AND CIRCULAR PIPES	HIGH	USE CORRECT LIFTING EQUIPMENT AND ENSURE OPERATIVES WEAR APPROPRIATE PROTECTIVE CLOTHING/HARD HATS/CORRECT PPE
CONTACT WITH SEWAGE	MED	OPERATIVES TO USE CORRECT BREATHING EQUIPMENT/CORRECT PPE
NOISE	MED	OPERATIVES TO USE CORRECT EAR PROTECTION/CORRECT PPE
DRAINAGE EXCAVATIONS ADJACENT EXISTING BOUNDARY STRUCTURES	HIGH	ENSURE CORRECT SUPPORTS ARE PROVIDED TO TRENCHES AND BUILDINGS WHERE REQUIRED
DRAINAGE EXCAVATION IN PUBLIC HIGHWAY	HIGH	ENSURE CORRECT USE OF TRENCH SUPPORTS IN EXCAVATION AND SCREEN BARRIERS TO PROTECT MEMBERS OF THE PUBLIC
MAINTAIN ACCESS TO ADJACENT PROPERTIES AND OCCUPERS	HIGH	ENSURE WORKS ARE PROTECTED WITH BARRIERS AND SIGNS TO GUIDE THE PUBLIC AWAY FROM THE WORKS
DRAINAGE EXCAVATIONS NEAR TO EXISTING SERVICES	HIGH	ENSURE WORKS ARE PROTECTED WITH BARRIERS AND SIGNS TO GUIDE MEMBERS OF THE PUBLIC AWAY FROM THE AREA
WORKING IN CONFINED SPACES, WORKING IN DRAINS AND MANHOLES	HIGH	CONFINED SPACES WORKING TRAINED PERSONNEL ONLY TO CARRY OUT WORKS UNDER A PERMIT TO WORK SCHEME IMPLEMENTED BY CONTRACTOR. GAS TESTING TO TAKE PLACE BEFORE ALL ENTRIES TO CONFINED SPACES.
WORKING IN HIGHWAYS / RISKS FROM VEHICLE AND PLANT	HIGH	ALL WORKS TO BE SIGNED AND FENCED FROM NORMAL VEHICULAR TRAFFIC. ALL WORKERS TO WEAR HIGH VISIBILITY CLOTHING. ALL PLANT TO HAVE VISUAL AND AUDIO WARNING SYSTEMS.
ROAD AND DRAINAGE CONSTRUCTION	HIGH	ALL EXCAVATIONS TO BE ADEQUATELY FENCED OFF AND SUPPORTED DURING CONSTRUCTION. ALL OPERATIVES TO BE TRAINED IN CORRECT METHODS OF LIFTING AND WORK IN ACCORDANCE WITH LOLER REGS.
IT IS ASSUMED THAT WORKS ASSOCIATED WITH THIS DESIGN WILL BE UNDERTAKEN BY A PERSON OR PERSONS WHO ARE COMPETENT AND HAVE THE REQUIRED LEVEL OF EXPERIENCE AND EXPERTISE		