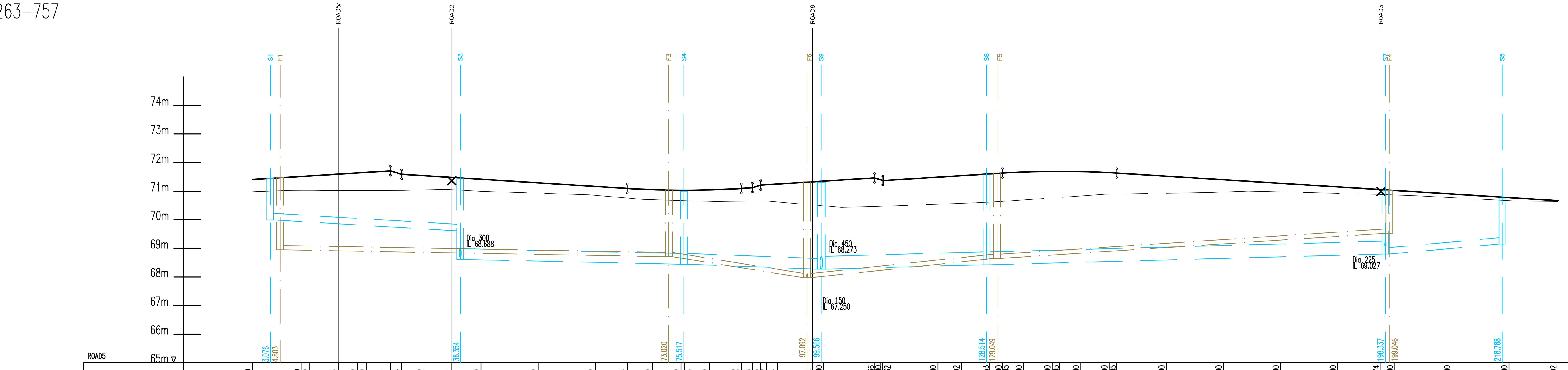
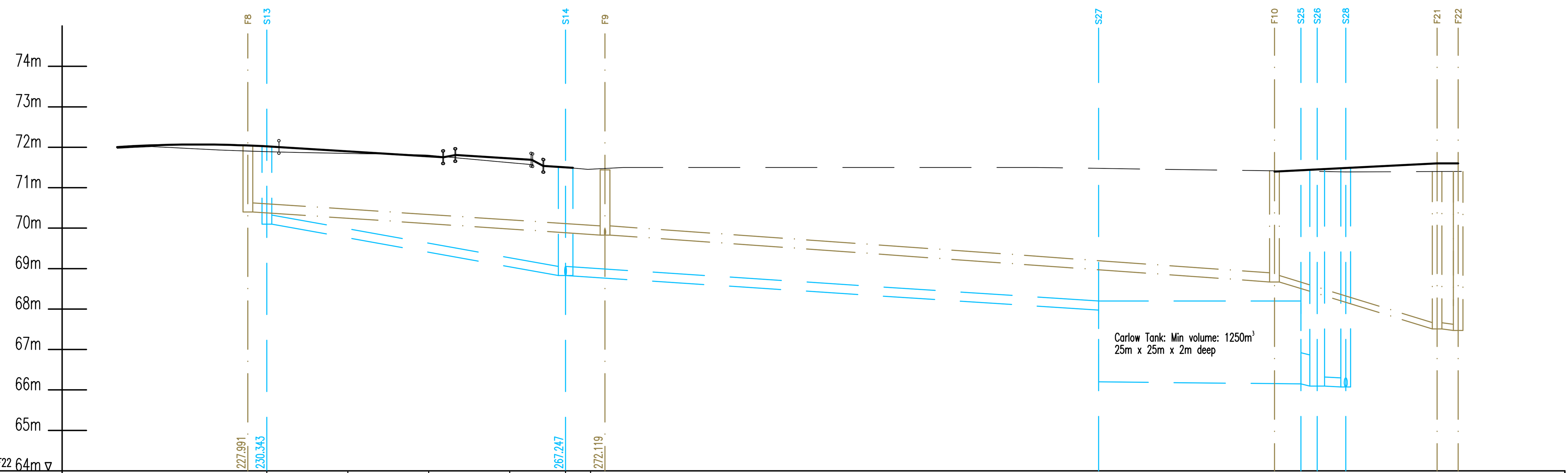
H-3-263-757

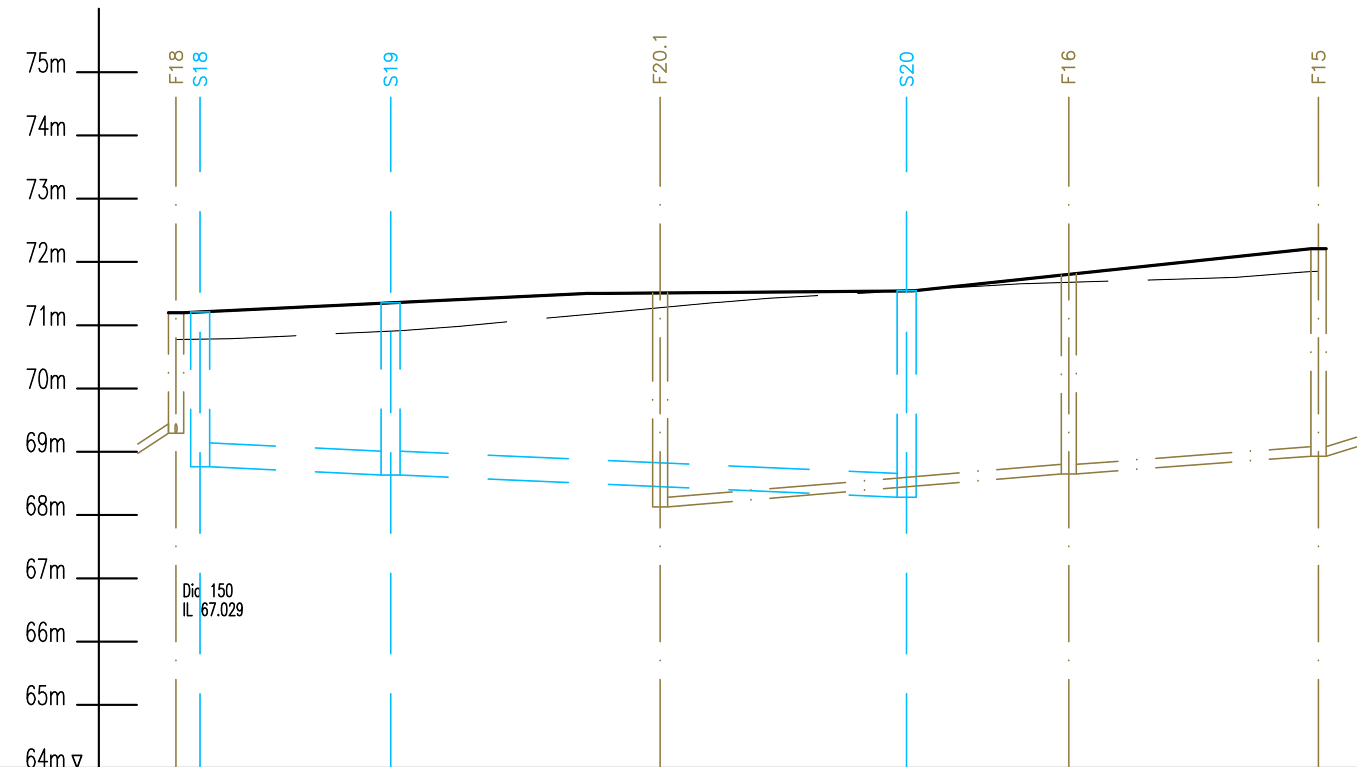


CHAINAGE	0.000 | 8.619 | 10.000 | 14.983 | 18.350 | 20.000 | 24.157 | 26.074 | 30.000 | 34.874 | 40.000 | 50.000 | 60.000 | 65.606 | 70.000 | 75.000 | 75.606 | 80.000 | 85.000 [illegible] | 87.538 | 88.938 | 90.000 | 91.934 | 98.062 | 100.000 | 108.966 | 110.000 | 110.332 | 120.000 | 124.092 | 129.053 | 130.000 | 131.305 | 135.000 | 140.000 | 141.305 | 145.000 | 150.000 | 151.305 | 160.000 | 170.000 | 180.000 | 190.000 | 197.574 | 200.000 | 210.000 | 220.000 | 228.592
EXISTING GROUND LEVEL	70.983 | 71.019 | 71.023 | 71.047 | 70.995 | 70.930 | 70.855 | 70.704 | 70.644 | 70.655 | 70.488 | 70.471 | 70.546 | 70.629 | 70.765 | 70.897 | 70.929 | 70.972 | 70.977 | 70.925 | 70.868 | 70.777 | 70.671 | 70.637
ALIGNMENT LEVEL	71.411 | 71.536 | 71.661 | 71.709 | 71.594 | 71.543 | 71.418 | 71.293 | 71.168 | 71.097 | 71.055 | 71.035 | 71.035 | 71.047 | 71.090 | 71.097 | 71.124 | 71.212 | 71.227 | 71.352 | 71.461 | 71.396 | 71.372 | 71.492 | 71.617 | 71.633 | 71.671 | 71.695 | 71.696 | 71.687 | 71.649 | 71.633 | 71.525 | 71.400 | 71.275 | 71.150 | 71.025 | 70.900 | 70.775 | 70.882
VERTICAL ALIGNMENT	G= 1.250% 1: 80.0 | G= -1.250% 1: -80.0 | KF= 8.0 L= 20.000 | G= 1.250% 1: 80.0 | G= 1.250% 1: 80.0 | L= 20.000 KF= -8.0 | G= -1.250% 1: -80.0
HORIZONTAL ALIGNMENT	R= 100.000 | R= 75.250 | R= 54.750
SURFACE WATER – SW DETAILS / CL	71.421 | Dia 225 Circular UPVC 1 in 140.3 | 71.433 | Dia 375 Circular CONC 1 in 240.0 | 71.004 | Dia 375 Circular CONC 1 in 240 | 71.316 | Dia 450 Circular CONC 1 in 187.3 | 71.570 | Dia 450 Circular CONC 1 in 186.7 | 71.014 | Dia 225 Circular UPVC 1 in 166.3 | 70.763
SURFACE WATER – SW LENGTH / IL	69.996 | 33.278 Pipe 1.000 | 69.613 | 68.613 | 39.365 Pipe 1.001 | 68.449 | 24.257 Pipe 1.002 | 68.348 | 68.273 | 29.035 Pipe 3.002 | 68.428 | 69.834 Pipe 3.001 | 68.802 | 69.027 | 20.452 Pipe 3.000 | 69.150
FOUL WATER – FW DETAILS / CL	71.476 | Dia 150 Circular UPVC 1 in 80 | 71.056 | Dia 150 Circular UPVC 1 in 50 | 71.332 | Dia 150 Circular UPVC 1 in 80 | 71.637 | Dia 150 Circular UPVC 1 in 80 | 71.028
FOUL WATER – FW LENGTH / IL	68.700 | 68.038 Pipe 1.001 | 68.710 | 68.710 | 24.215 Pipe 1.002 | 67.973 | 67.973 | 33.263 Pipe 2.001 | 68.650 | 68.650 | 69.692 Pipe 2.000 | 69.53



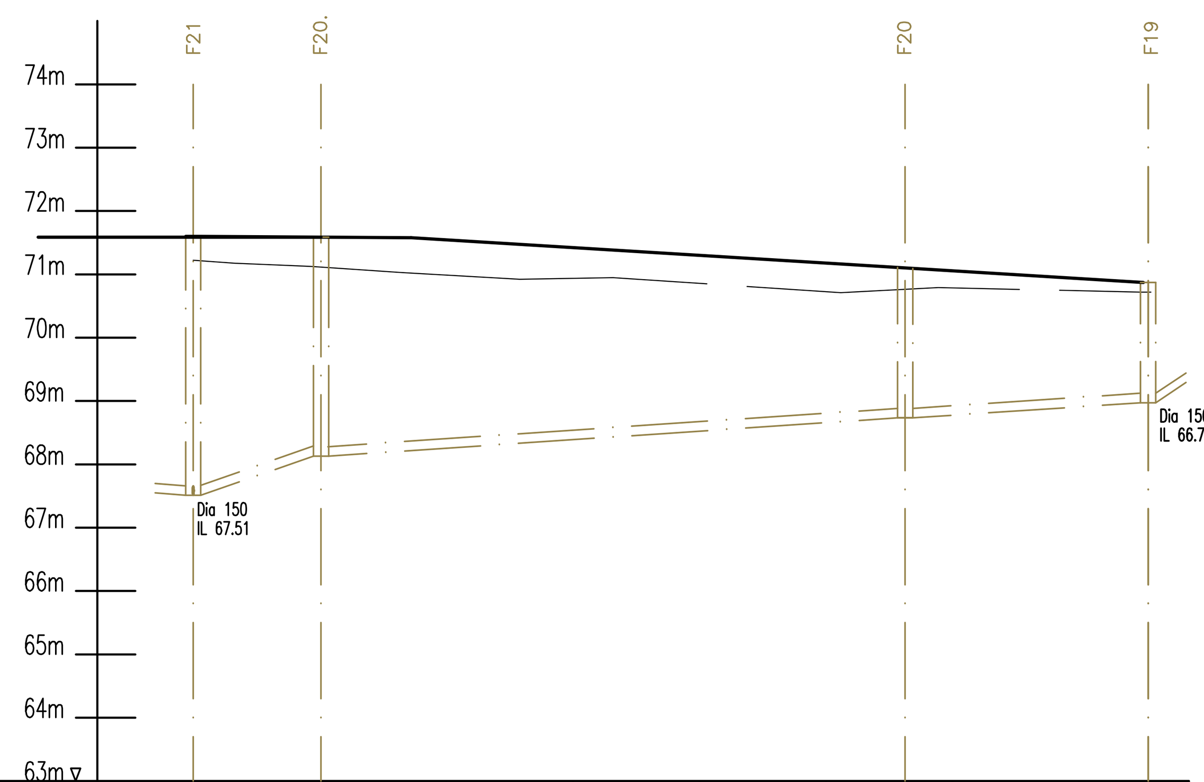
MH S13–S28, F8=F22

CHAINAGE	0.000 | 10.000 | 20.000 | 30.000 | 36.905 | 40.000
EXISTING GROUND LEVEL	71.976 | 71.891 | 71.849 | 71.806 | 71.624 | 71.455 | 71.500 | 71.500 | 71.392 | 71.400
ALIGNMENT LEVEL	72.068 | 72.062 | 72.026 | 72.005 | 71.903 | 71.778 | 71.754 | 71.806 | 71.728 | 71.679 | 71.542 | 71.500 | 71.600 | 71.661 | Dia 750 Conc 1 in 335.8 | Dia 225 Circular UPVC 1 in 167.4
SURFACE WATER – SW DETAILS / CL	72.306 | Dia 225 Circular UPVC 1 in 102.10 | 71.750 | Dia 225 Circular UPVC 1 in 102.10 | 71.468 | Carlow Tank 2000mm High 1 in 500 | 71.468 | 71.400 | 71.400
SURFACE WATER – SW LENGTH / IL	70.100 | 39.207 Pipe 5.000 | 69.713 | 65.843 Pipe 5.001 | 67.974 | 66.199 | 25.000m Perpendicular distance | 66.149 | 66.143 | 66.093 | 66.072 | 3.516 Pipe 1.008
FOUL WATER – FW DETAILS / CL	72.068 | Dia 150 Circular UPVC 1 in 80 | 71.468 | Dia 150 Circular UPVC 1 in 74 | 2.015 Pipe 1.007 | 71.327 | Dia 150 Circular UPVC 1 in 17.24 | 71.600 | 71.600 | Dia 150 Circular UPVC 1 in 80
FOUL WATER – FW LENGTH / IL	70.400 | 44.931 Pipe 3.000 | 69.830 | 85.849 Pipe 3.001 | 68.670 | 20.004 Pipe 3.002 | 67.510 | 67.470 | 2.607



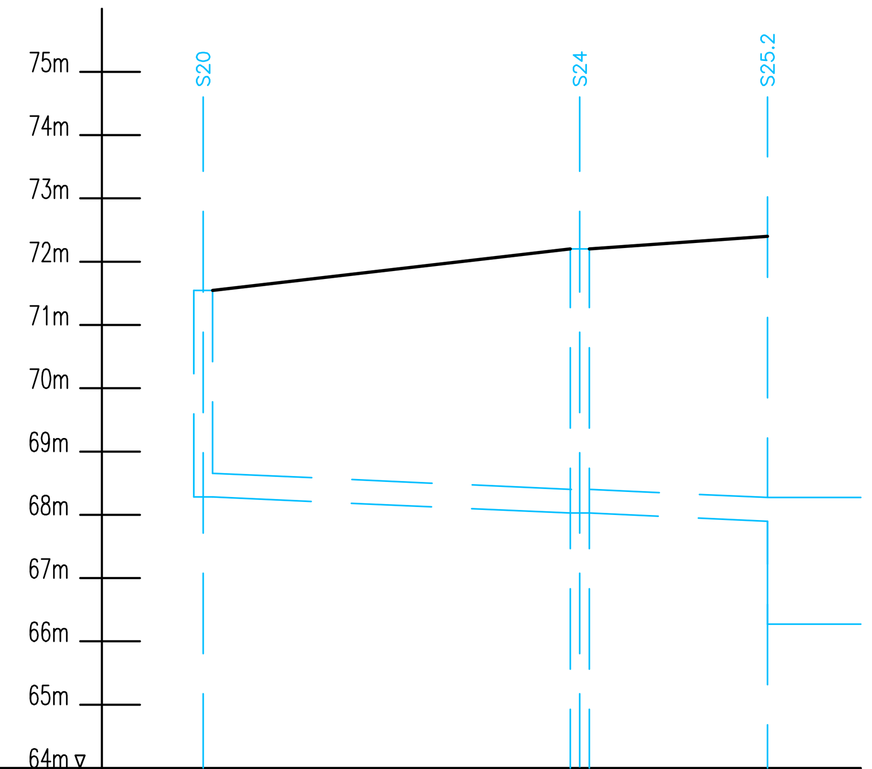
MH F15–F20.1

GROUND LEVEL	70.773 | 70.785 | 70.825 | 70.866 | 71.311 | 71.460 | 71.558 | 71.608 | 71.656 | 71.681
STORMWATER COVER LEVEL	71.110 | Dia 375 Circular UPVC 1 in 99.77 | 71.300 | Dia 375 Circular UPVC 1 in 116.53 | 71.546
STORMWATER INVERT	68.783 | 15.066 Pipe 6.001 | 68.632 | 40.783 Pipe 6.002 | 68.282
FOULWATER COVER LEVEL	71.197 | 71.550 | Dia 150 Circular UPVC 1 in 58.72 | 71.550 | Dia 150 Circular UPVC 1 in 80 | 72.209
FOULWATER INVERT	69.292 | 68.130 | 32.298 Pipe 5.003 | 68.650 | 19.735 Pipe 5.002 | 68.930



MH F19–F21

GROUND LEVEL	71.224 | 71.116 | 71.002 | 70.929 | 70.944 | 70.886 | 70.801 | 70.716
FOULWATER COVER LEVEL	71.224 | Dia 150 Circular UPVC 1 in 16.28 | XX.XXX | Dia 150 Circular UPVC 1 in 76 | XX.XXX | Dia 150 Circular UPVC 1 in 80 | XX.XXX
FOULWATER INVERT	67.510 | 10.099 Pipe 4.004 | 68.130 | 46.158 Pipe 4.003 | 68.773 | 19.207 Pipe 4.004 | 68.973



MH S20–S22

GROUND LEVEL	
STORMWATER COVER LEVEL	71.546 | Dia 375 Circular UPVC 1 in 116.60 | 71.68 | Dia 375 Circular UPVC 1 in 116 | 72.400
STORMWATER INVERT	68.282 | 29.757 Pipe 6.003 | 68.027 | 14.831 Pipe 6.004 | 67.899 | 66.274

N O T E S

Yorkshire Water General Notes

1. All adoptable sewer works and material to be in accordance with "Sewers for Adoption" 6th Edition, the relevant British/European and Yorkshire Water's Standards/Requirements/Addendum to the Mechanical and Electrical Specification and Kitemarked.
2. Manhole covers shall/must 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. Cover slabs must carry the BSI Kitemark or will be rejected by the 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 the Concrete Pipe Systems Association (CPSA), 'Technical Bulletin' issued autumn 2004 for kitemarked cover slab opening sizes.
5. The adoptable sewers should be a minimum of 1m and manholes 0.5m from kerb faces and service margins.
6. Sewers must have 5 metres clearance from trees and hedges, (please also refer to Figure 2.3 on page 33 in "Sewers for Adoption" 6th Edition for restrictions on tree planting adjacent to Sewers).
7. 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 concrete slab should be provided above the granular bed and surround.
8. Adoptable plastic sewer pipes to be BSI Kitemarked (Certified to WIS 4-35-01 and BS/EN13476). Adoptable sewer pipes to be laid in maximum 3 metre lengths unless there is a specific operational need to lay longer.
9. Plastic channel sections in manholes are not acceptable and clayware is preferable. Plastic channels are difficult to set in concrete and a satisfactory finish cannot be obtained on the benching.
10. 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.
11. Yorkshire Water policy is not to accept Type "C" brick manhole and 1050mm dia manhole rings. Instead it is preferred that you use a type "B" manhole with 1200mm dia or 1500mm dia. rings, with the opening sited over the channel where depth of cover to pipe soffit is 1-1.5m.
12. Surface water and foul rising mains to be provided with marker tape above the rising mains.
13. If plastic pipes are to be used then the following should apply:-
    a. All adoptable sewers to be BSI Kitemark (certified to WIS 4-35-01).
    b. Bedding and backfill material to conform to the requirements of Water industry Specification 4-08-02 (Table A2)
14. Where plastic pipes are proposed for adoptable sewers, structural calculations for the plastic pipes and a site investigation report to prove that the ground condition is suitable for the plastic pipes are to be produced.
15. Where plastic pipes are installed into the ground prior to getting full technical approval, the developer must provide a CCTV survey of the prospectively adoptable sewers and a deformation test (Light-Line test) of the plastic pipes.
16. Demarcation chambers to be a min. 450mmø chamber for 100mmø foul & 150mmø surface water pipes up to 1.2m deep. For depths greater than 1.2m, restricted access opening to 350mm is required for safety reasons.
17. Maximum depth of demarcation chamber to be 2m, where depth exceeds 2m, manhole to be constructed as type B manhole.
18. Yorkshire Water is not obliged to accept filter drain/land drainage runoff into the public sewer network or adoptable drainage system (directly or in-directly). An alternative method of disposal of the land drainage runoff will therefore be required and you will have to liaise with the Land Drainage Authority/Land Drainage Section with regard to the disposal of the filter drain/land drainage runoff is required.
19. Sulphate resisting cement (C20-DC2) and precast concrete products must be used or a laboratory report provided proving that such precautions are not necessary.
20. Strength of vitrified clay pipes (if used) to be 40KN/m for 100ø, 40KN/m for 150ø, 45KN/m for 225ø and 72KN/m for 300ø. All concrete pipes to be Class 120 concrete to EN 1916/BS 5911-1:2002.
21. All levels of existing drainage to be confirmed prior to work commencing on site.
22. The contractor must allow for any fee's required for road and sewer opening permits, sewer connections and make the appropriate applications.

SUBJECT TO THE APPROVAL OF ALL RELEVANT AUTHORITIES

Rev	By	Date	Revision	Chk
D	JMG	29.11.17	Additional Information added	ANB
C	JMG	28.11.17	Updated to suit YW comments	ANB
B	ANB	31.08.17	Gradients Amended	
A	ANB	18.08.17	Sections updated following new layout Rev D	
/	JMG	16.03.17	Issued for approval	MI

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TITLE
LONGITUDINAL SECTIONS
SHEET 3 OF 4

PROJECT
LEE LANE, ROYSTON

CLIENT
BDW YORKSHIRE WEST

Scale	Date	Drawn	Chk.
1:500H 1:100V @ A1	MAR 17	JMG	MI

Drg. No. 1048/88/06.03 Rev D