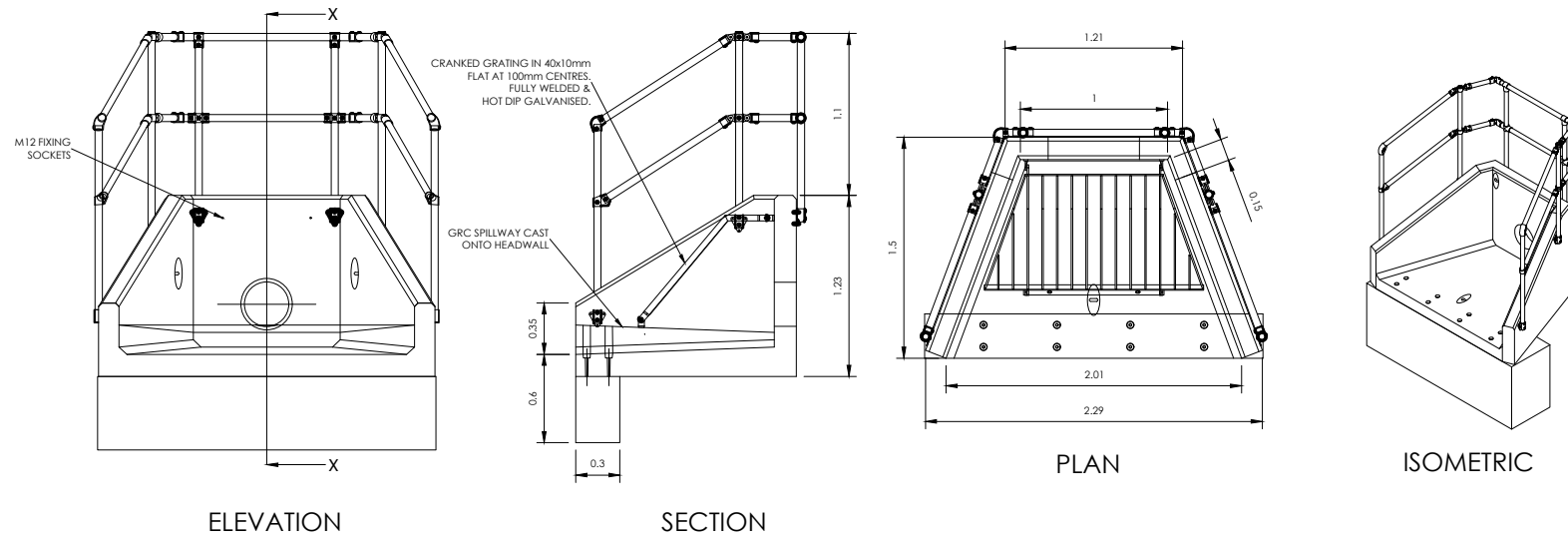
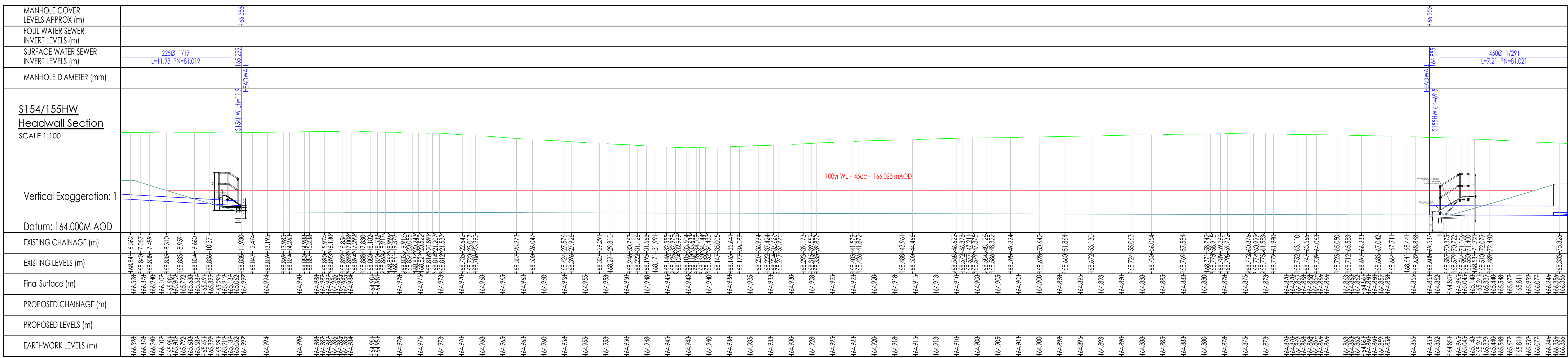




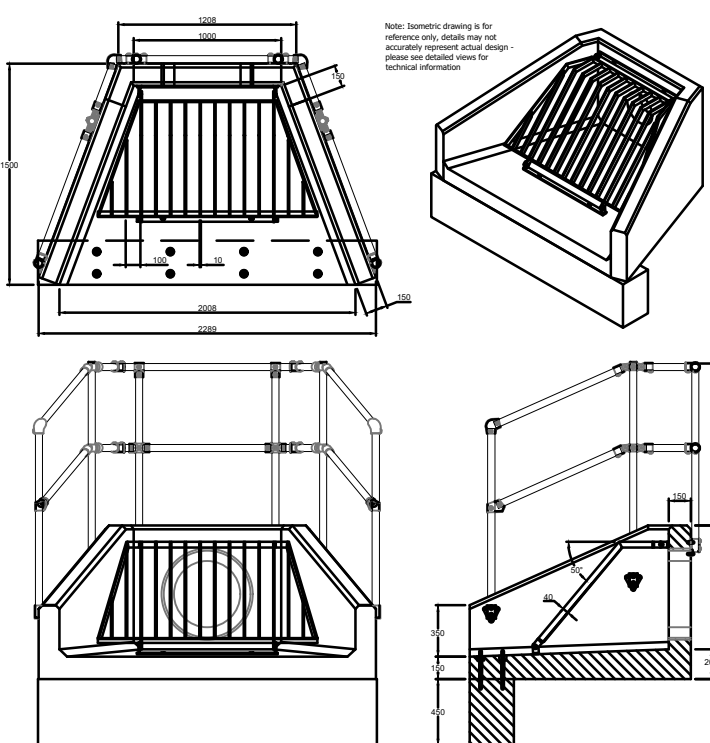
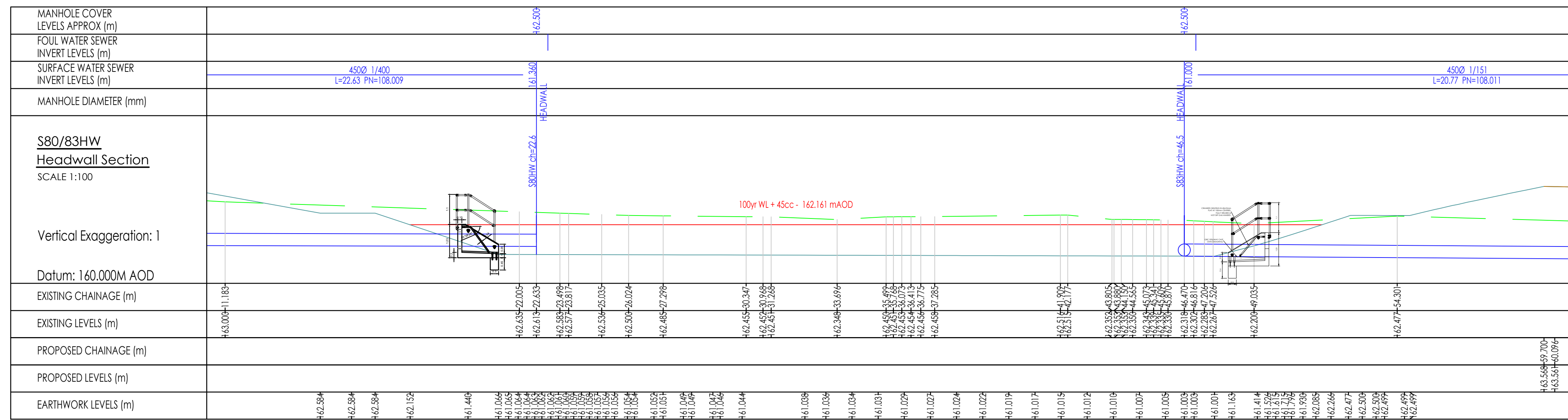
ALTHON SFA6A
BASE OUTLET HEADWALL S154HW
SCALE 1:50

ALTHON SFA10C+CRANKED GRILLE+CAST ON GRC SPILLWAY
BASIN INLET HEADWALL S155HW
SCALE 1:50

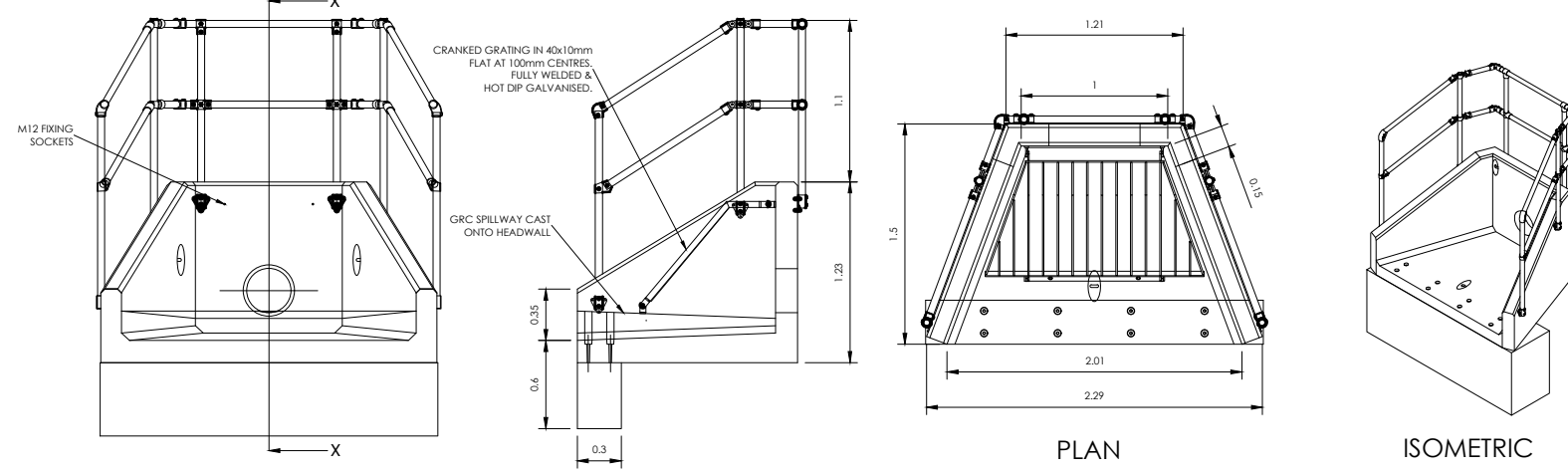
- Notes**
- This drawing is to be read in conjunction with the standard details, the layouts, schedules and specifications for the development.
 - A 1:15 gradient represents a rise of 1m in 100m.
 - Left and right hand channels are on the left and right hand side respectively, when standing at zero change and looking along the road.
 - A level at any point 'x' m from the start of a vertical curve is given by the formula:
$$\text{level} = \text{level at start of curve} + \frac{10 - 10}{100} \times \frac{x^2}{200}$$
where 'x' and 'y' are the gradients at the start and end of the curve respectively and having the appropriate sign +/-.
 - Pipe sizes are stated in millimetres and levels are shown in metres A.O.D.
 - All pipes to have flexible joints with granular bedding (class 1) unless stated otherwise. Where 150mm concrete bed and surround is specified the concrete must be broken at the joint positions by the insertion of a 'flexo-cell' collar.
 - Connections to existing sewers are to be stiff to stiff unless noted otherwise.
 - All vitrified CLAY to be extra strength to B.S. 45. 1991.
 - WV is equal to the rate of change of gradient and is calculated from the formula:
$$WV = \frac{100}{L} \times \frac{A - B}{L}$$
Where A and B are as in note 4 above.
 - Existing levels to be confirmed on site prior to commencement of works.
 - All CONCs to be class 'M'.
 - Refer to Betts Associates drainage layout drawing B456-1001-1002 for further drainage notes.
 - All adaptable drainage is to be designed and constructed in accordance with Sewers for Adoption 6th edition and United Utilities standard details.

- Legend**
- Existing Ground Level
 - Proposed Ground Level
 - Foul Water Sewer
 - Surface Water Sewer

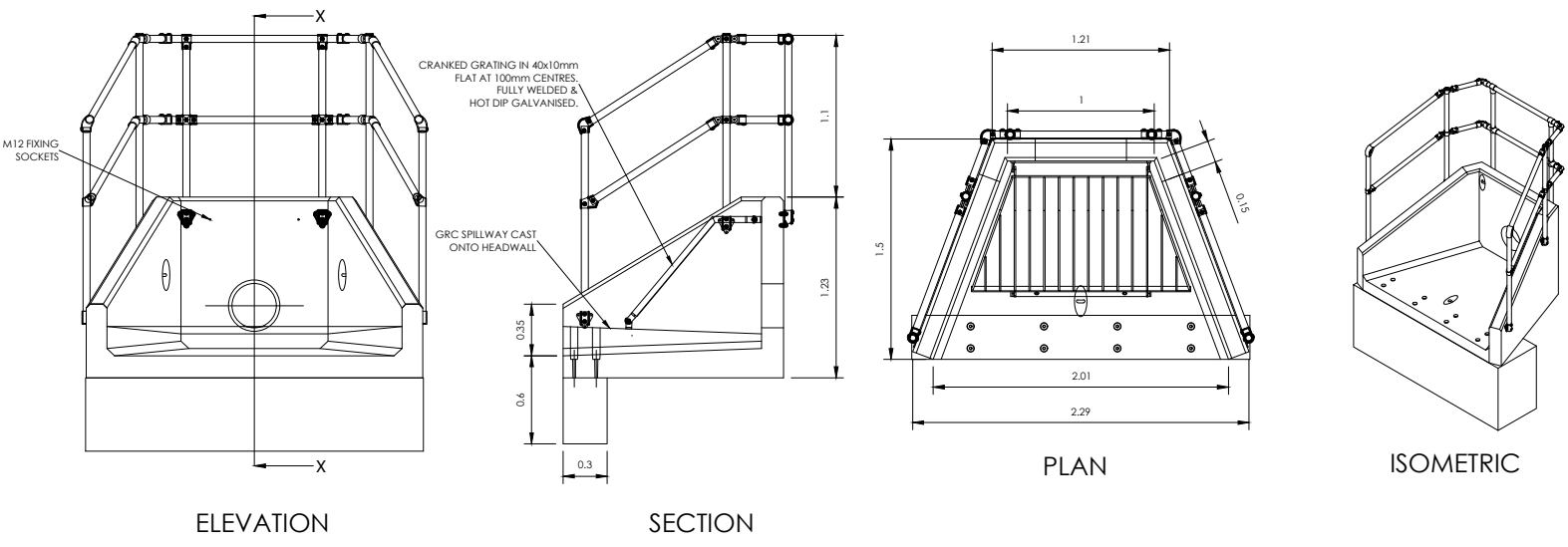
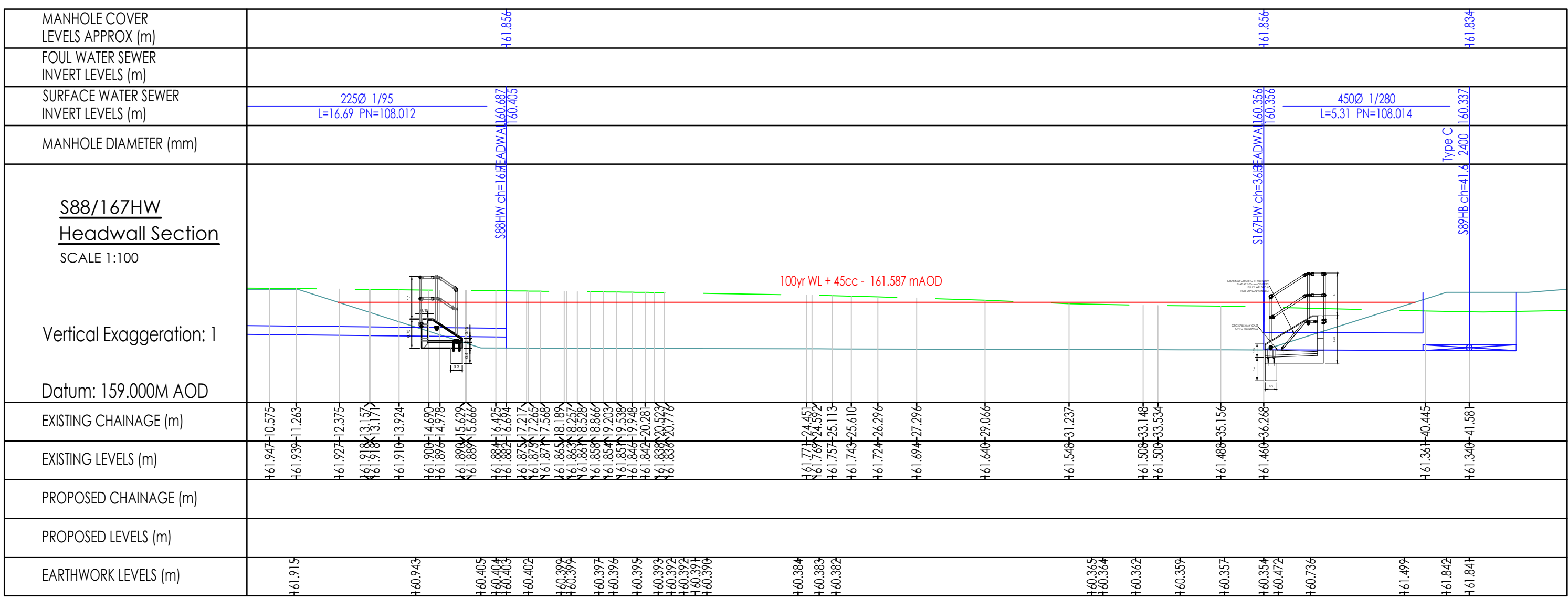
NOTE
DETAILS ON THIS DRAWING ARE
SUBJECT TO TECHNICAL APPROVALS



ALTHON SFA10B + CRANKED GRILLE
BASE OUTLET HEADWALL S80HW
SCALE 1:50

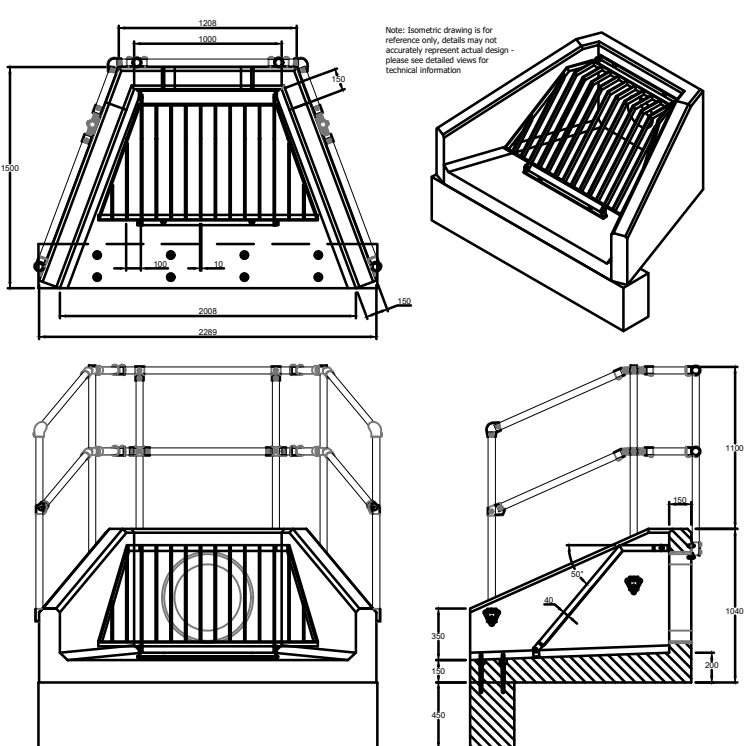
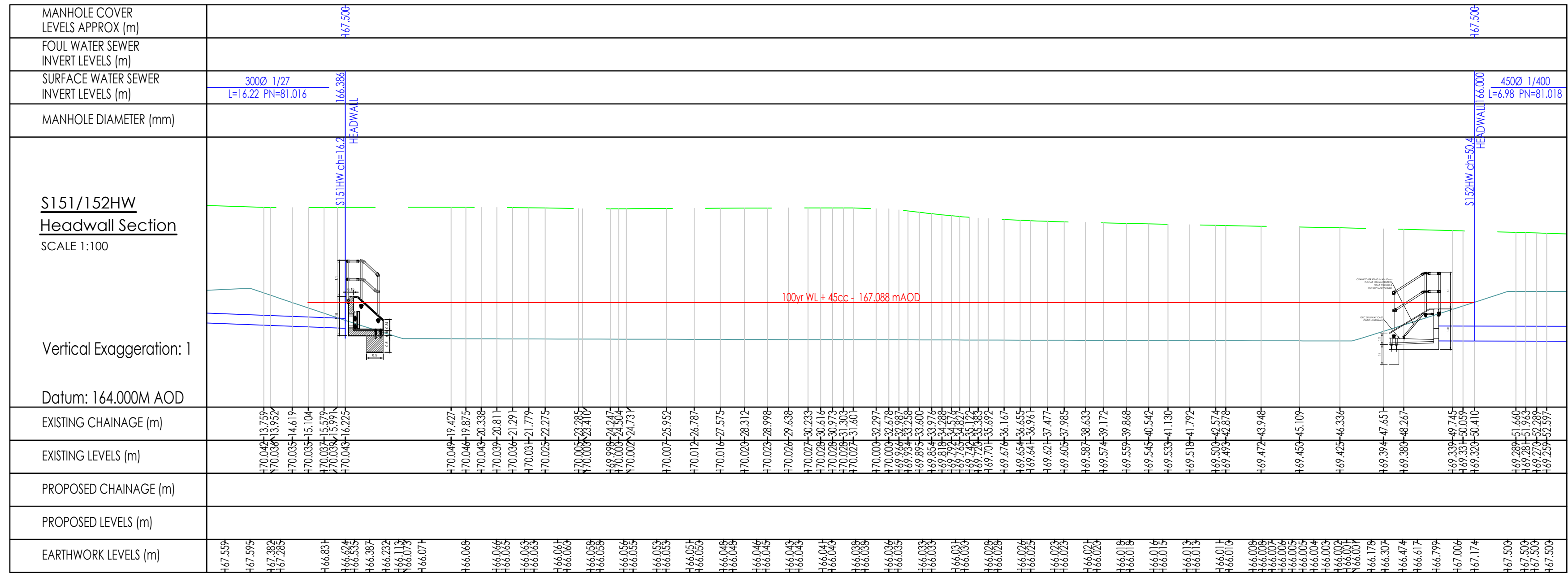


ALTHON SFA10C+CRANKED GRILLE+CAST ON GRC SPILLWAY
BASIN INLET HEADWALL S83HW
SCALE 1:50

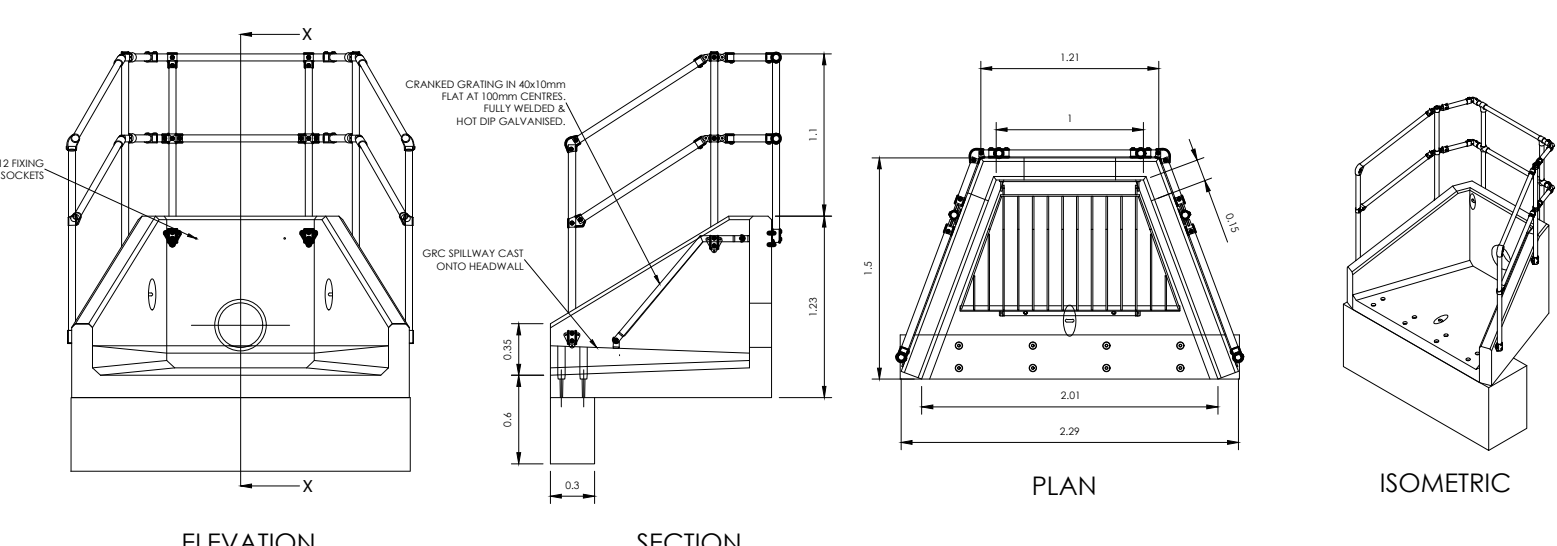


ALTHON SFA6A
BASE OUTLET HEADWALL S88HW
SCALE 1:50

ALTHON SFA10C+CRANKED GRILLE+CAST ON GRC SPILLWAY
BASIN INLET HEADWALL S167HW
SCALE 1:50



ALTHON SFA10B + CRANKED GRILLE
BASE OUTLET HEADWALL S151HW
SCALE 1:50



ALTHON SFA10C+CRANKED GRILLE+CAST ON GRC SPILLWAY
BASIN INLET HEADWALL S83HW
SCALE 1:50