

- General Notes:
- DO NOT USE THIS DRAWING IN ISOLATION. This drawing has been prepared as part of a set, and must therefore be read in conjunction with all other drawings. Any discrepancies or design queries must be reported to the engineer prior to completion of tender and commencement of works. Following completion of tender it is assumed that developer and contractor are in full agreement with the design drawings (with the exception of pre tender queries only).
 - Third party information is used to prepare the engineering design (including, architectural layout, ground investigation, existing utilities records, and specialist design items). The engineering design must therefore be read in conjunction with all third party information prior to commencing work. Queensberry Design Ltd are not responsible for any third party information or details.
 - House type working drawings are to be used in conjunction with the plot setting out drawing.
 - Drawing status will remain preliminary until full technical approval is received from local authority and sewerage undertaker. Works commenced prior to technical approval are done so at risk and may be subject to change.
 - The contractor is expected to prepare appropriate construction method statements for all aspects of appointed work. This should include any temporary protection works.
 - Land drainage is not permitted to discharge into the public sewer network. Any need for land drainage should be assessed by the ground worker and landscaper during construction and placement of gardens on an individual plot basis. If land drainage designs are required, they should be appointed prior to plot completion.
 - The contractor is expected to cross check all drainage inverts prior to commencing work, this may involve completion of trial holes if invert levels have been interpolated.
 - The contractor must monitor the "as build" progress of each construction stage (roads/sewer/plot works etc), to enable the next stages of construction to be checked before installation. For this reason the design of, floor levels, external works, retaining walls, and plot drainage are to be read as guidance only.

- Highways
- All highway works to be carried out in accordance with the current local authority design guide and specification.
 - All excavations below proposed and existing highways to be back filled with granular Type 1 sub base and well compacted in layers not exceeding 150mm, unless otherwise agreed.
 - Highway authority to be notified by the contractor prior to the commencement of works.

- Adoptable Drainage
- All adoptable drainage works to be in accordance with the water authorities publication "Sewerage Sector Guidance" aswell as the approved drawings.
 - Precast concrete manhole rings to comply with the relevant provisions of BS5911: Part 200.
 - All brickwork to be Class B engineering complying with the relevant provisions of BS 3921. Concrete bricks may be used if their specification is the same as Class B engineering bricks. Please seek approval from relevant water authority before using.
 - Manhole covers and frames shall comply with the relevant provisions of BS EN 124 and be of a non-rocking, non-ventilating design.
 - Ladders that are required in Type A manholes are to comply with "Sewerage Sector Guidance".
 - Concrete must be either C20 sulphate resistant portland cement with high strength concrete topping to the benching or C35 ordinary portland cement.
 - Sewers to be laid in class "x" 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 granular bed and surround.
 - The location of existing drainage that is within close proximity to the proposed site works, which is not to be diverted, should be confirmed by the contractor and reported to the developer to ensure it corresponds to that shown on the engineering layout and that no proposed works are affected.
 - The position, line and diameter of all existing drainage apparatus should be confirmed on site prior to the commencement of the works. Any discrepancies must be reported to the engineer immediately.
 - The connection of foul and surface water drainage to the existing public sewer system shall be subject to the approval of the local sewerage undertaker. The contractor is expected to apply for relevant permits prior to commencing the work.
 - Roads and sewers contractor must inform water authority prior to works commencing.

Existing Services
Any existing services which may be affected by the proposed works should be located by means of a hand dig in close liaison with the statutory service authorities. The contractor shall inform the developer of any services that may affect the proposed design.
Contractor to notify statutory service authorities prior to commencement of work.

As Constructed Information
Refer to note H above. It is the contractors responsibility to provide the following as constructed drawings to the developer upon the completion of the works covered by the contract:

- Position/co-ordinates of all adoptable manholes.
- Invert and cover levels of all adoptable manholes.
- New gully positions and connections.
- Position and depth of service ducts for water, gas, electric, BT, cable and street lighting, stating size and number of ducts.

Rev.	A	02.06.26	Updated to S104 comments.	JP	AL
	Date		Revision Details	Drawn	Checked

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Client: MILLER HOMES

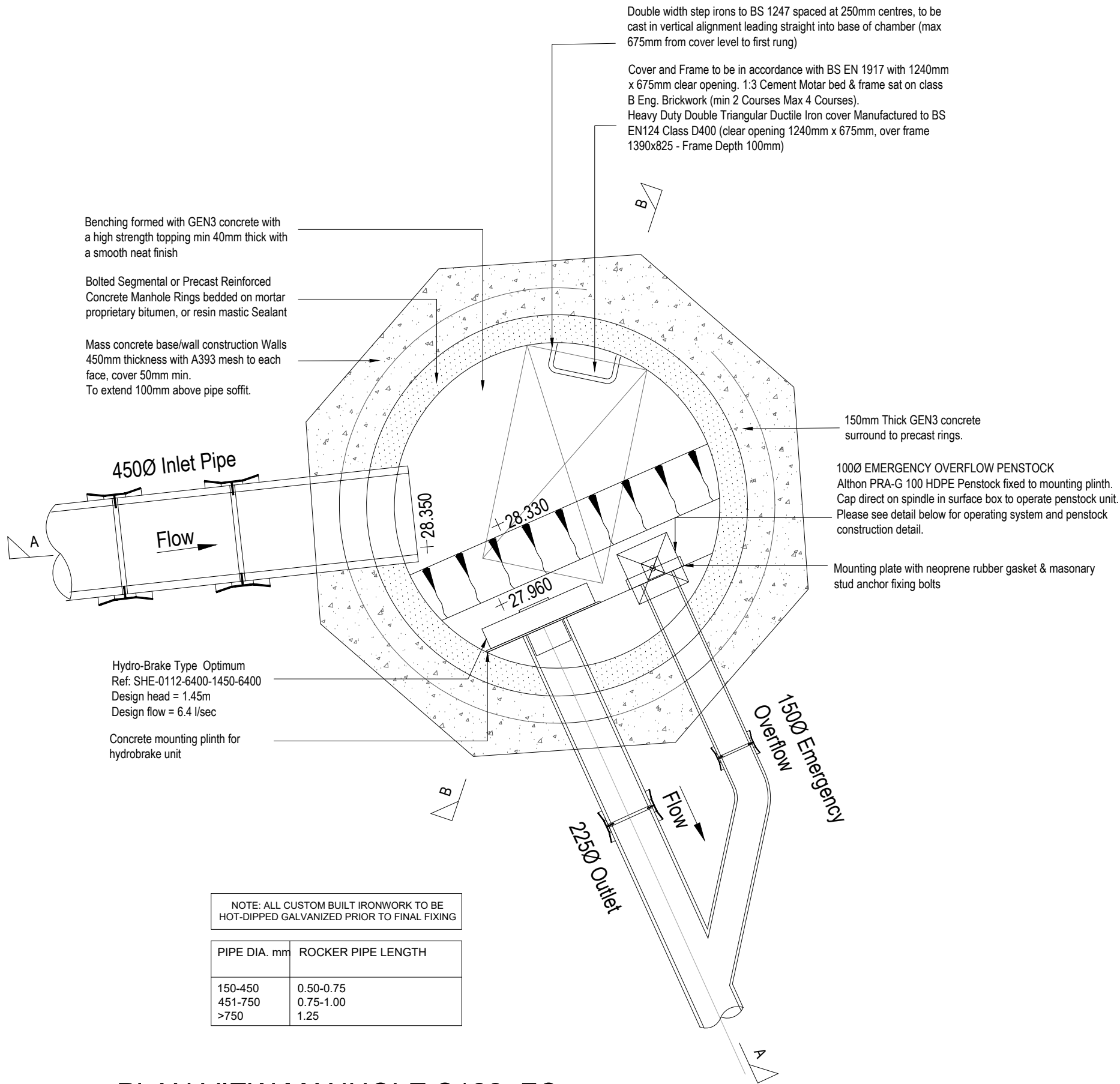
Project: SOUTH TYNESIDE COLLEGE

Title: HYDROBRAKE DETIAL S122_FC

Drawn: FA Checked: - Date: MARCH 2026

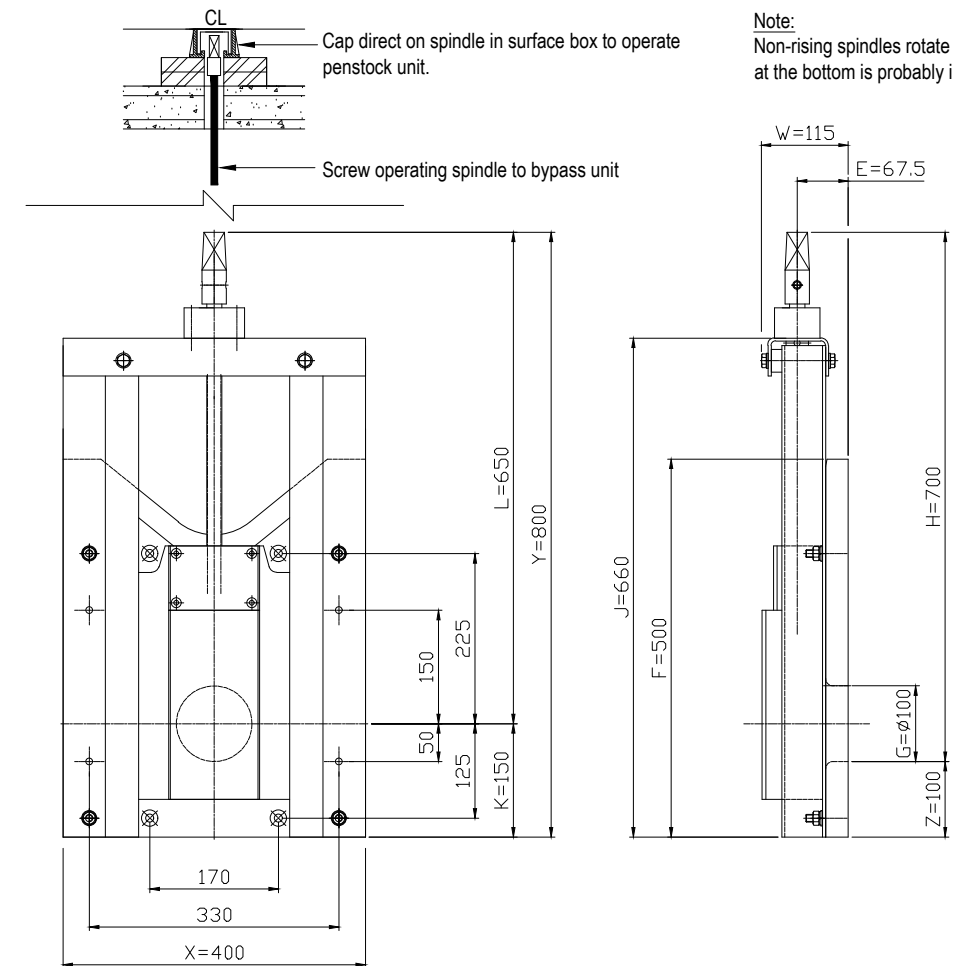
Drawing Number: QD2438-08-02

Drawing Status: PRELIMINARY Scale: 1:25 - A2 Rev: A

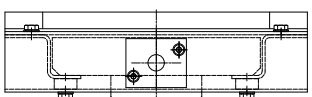


PLAN VIEW MANHOLE S122_FC

OVERFLOW PENSTOCK OPERATING SYSTEM



PENSTOCK DETAIL

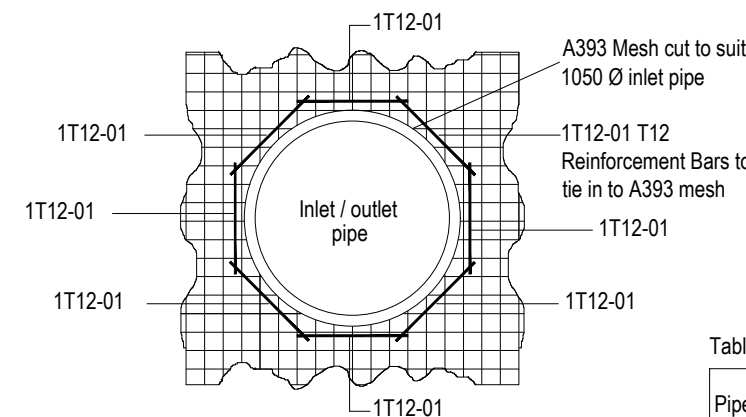
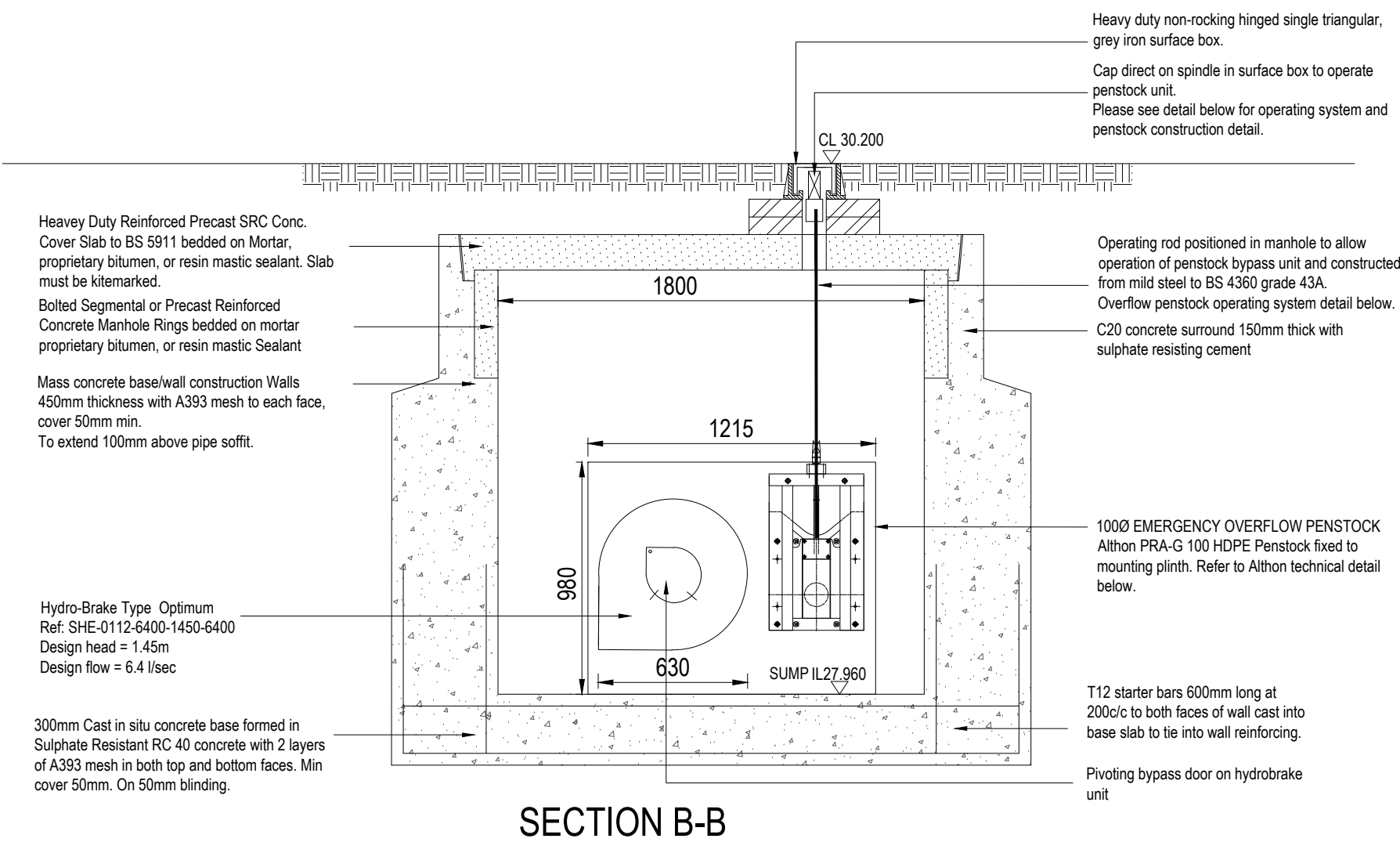
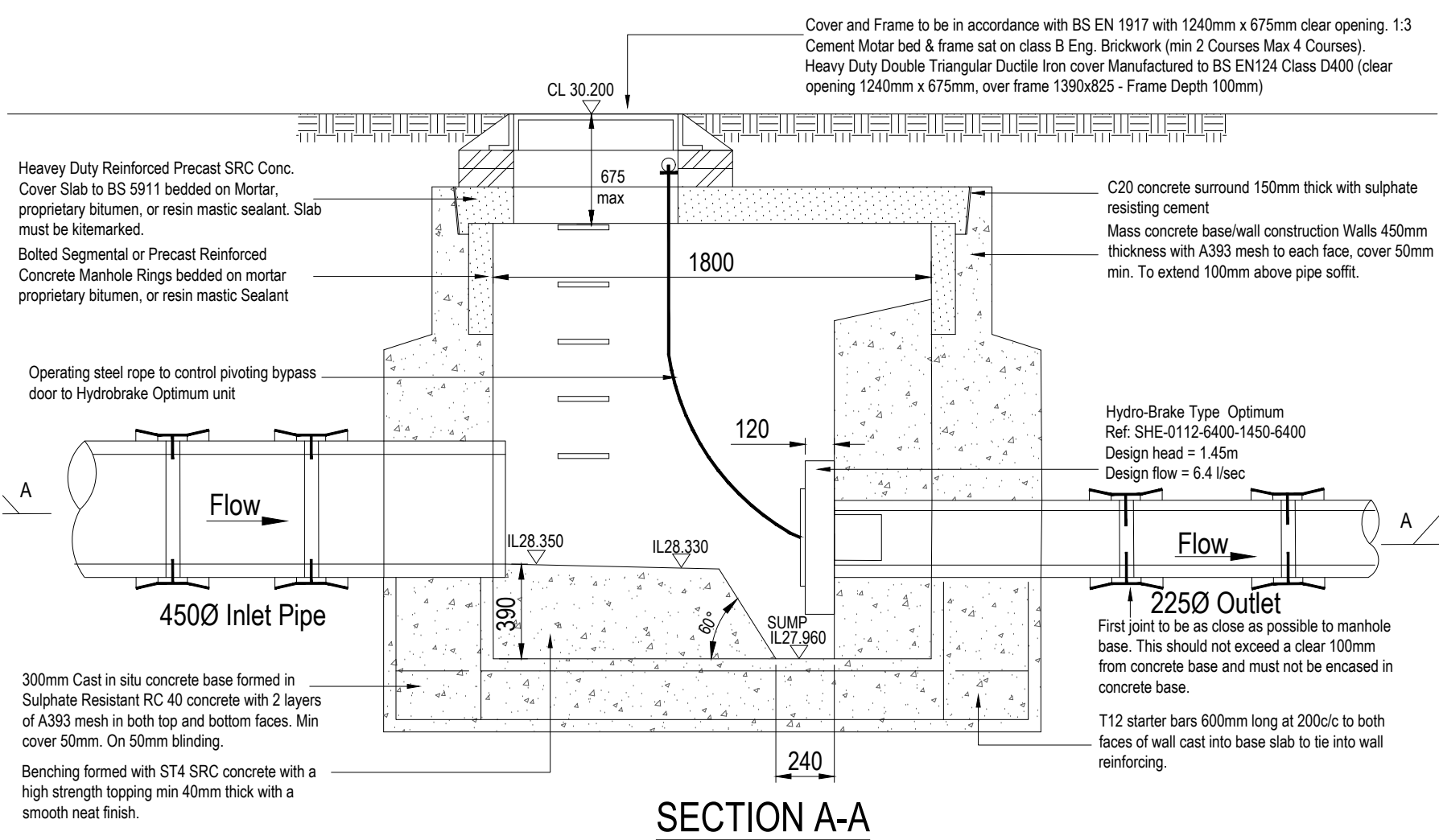


Althon PRA-G 100 HDPE/SS Penstock Specification Information

- The penstock is supplied with a non-rising spindle as standard
- It has an OLG spindle bearing and an HDPE back plate
- It has an HDPE moving plate provided with RVS316L stiffeners with POM spindle block
- The mounting material and the spindle are made of SS316
- The seal between the moving and back plate consists of an integral EPDM lip seal, which does not require any adjustment after installation

Material: HDPE, SS316, EPDM and POM
Max. load (on/off sealing): 5 MWC from bottom invert level (B.I.L)
Number of chemical anchors: M8 4pcs
Number of countersunk head screws: M10 4pcs
Bare shaft: Ø20mm
Conical square socket removed when using spindle extension

All dimensions in mm



Section Thro' Reinforcement To Inlet / Outlet Pipe (1:10)

See Table 1 For Bar Sizes Required

Pipe size	Bar size
1050 - 1200mm	T12
1350 - 1500mm	T16
< 1500mm	T20