



SM&LE AND PARTNERS ARCHITECTS				
Checked By JW	Checked Date 2020/09/01	Drawn By TT	Drawn Date 2020/09/01	
Approved By Approver	Approval Date 2020/09/01	SACAP Number 7513		
Building Grid Reference		Scale 1 : 200		
Job No 0046	Discipline ARCH	Type DESIGN	Drawing No. 201	Revision

Job No.	Discipline	Type	Drawing No.	Revision
0046	ARCH	DESIGN	201	



Note:
Do not scale from this drawing. Check all given dimensions and site dimensions and/or levels prior to any pricing, manufacture or construction of any item.
Greater detail drawings take preference.
Please report any discrepancies to the architect.

The copyright for the design and information on this drawing is vested and may not be copied or reproduced without the written authority of the Architects.

C	Repositioning of MCC containers and Site development	2020-10-09		
B	Level of First Floor change	2020-09-30		
A	MCC containers	2020-09-18		

No	Revision Description	Date	By	For
----	----------------------	------	----	-----

Contractor:

PROFESSIONAL TEAM

Project Managers:
LUKHOZI
Engineers
Kwame Lukhozi, Quarante Drive, Selborne, East London, 5201.
P.O. Box 15204, Tecom, 5214.
Tel: 043 721 1321.
Fax: 066 963 7002.
Email: c.lukhozi@lukhozi.co.za
Web: www.lukhozi.co.za

Architect:
S+P Architects
123 Western Ave, Vincent, East London, 5217.
Tel: +27 43 726 9327.
Fax: +27 46 5406 155.
Email: info@spmk.co.za
Web: www.spmk.co.za

Quantity Surveyors:
Imvelo Quantity Surveyors
81 Beaconhurst Drive, Beacon Bay, East London, 5201.
Tel: 043 748 8209.
Fax: 043 748 8203.
Email: mika@imvelo.co.za

Civil Engineers:
HSC CONSULTING
STRUCTURAL AND CIVIL ENGINEERS
18 St Marks Road, Southernwood, East London, 5200.
Tel: +27 43 743 9528.
Fax: +27 43 743 5347.
Email: andrew@hsc.co.za
Web: www.hsc.co.za

Structural Engineers:
HSC CONSULTING
STRUCTURAL AND CIVIL ENGINEERS
18 St Marks Road, Southernwood, East London, 5200.
Tel: +27 43 743 9528.
Fax: +27 43 743 5347.
Email: andrew@hsc.co.za
Web: www.hsc.co.za

Electrical Engineers:
CARIFRO ELECTRICAL & MECHANICAL CONSULTING ENGINEERS
4-6 Belgravia Road, Belgravia, East London, 5213.
Tel: +27 43 743 8266.
Fax: +27 43 743 8599.
Email: ei@carifro.com

Mechanical Engineers:
CARIFRO ELECTRICAL & MECHANICAL CONSULTING ENGINEERS
4-6 Belgravia Road, Belgravia, East London, 5213.
Tel: +27 43 743 8266.
Fax: +27 43 743 8599.
Email: ei@carifro.com

Client:
EAST LONDON IDZ
P.O. Box 5458, Greenfields, East London, 5208.
Lower Chester Road, Summerville, East London, 5201.
Tel: +27 43 702 8200.
Fax: +27 43 798 4405.
Email: info@eldz.co.za

DESIGN

Project Name / Client:

Bushveld Energy

ERF 60936 - East London

Drawing Title:

First Floor and MCC Room Floor

Drawing Originator:

SMALE AND PARTNERS ARCHITECTS

Checked By: JW Checked Date: 09/03/20 Drawn By: TT Drawn Date: 09/03/20

Approved By: - Approval Date: 09/03/20 SACAP Number: 7513

Building Grid Reference: Scale: 1 : 100

Job No	Discipline	Type	Drawing No.	Revision
0046	ARCH	DESIGN	203	C



Note:
Do not scale from this drawing. Check all given dimensions and site dimensions and/or levels prior to any pricing, manufacture or construction of any item.
Greater detail drawings take preference.
Please report any discrepancies to the architect.

The copyright for the design and information on this drawing is vested and may not be copied or reproduced without the written authority of the Architects.

C	Substations design alterations	2020-11-05
B	Address of the Compressor Room	2020-10-09
A	Level of First Floor change	2020-09-30

No.	Revision Description	Rev	By	For
Revision				
Contractor:				

PROFESSIONAL TEAM

Project Managers:
LUKHOZI Consulting Engineers
Kwame LUKHOZI, Quaterly Drive, Selborne, East London, 5201.
P.O. Box 33204, Tecoma, 5214.
Tel: 043 721 1321.
Fax: 043 721 1322.
Email: clukhozi@lukhozi.co.za
Web: www.lukhozi.co.za

Architect:
S+P Architects
123 Western Ave, Vincent, East London, 5207.
Tel: +27 43 726 9327
Fax: +27 43 726 9327
Email: info@s+p.co.za
Web: www.s+p.co.za

Quantity Surveyors:
Imvelo Quantity Surveyors
81 Beaconhurst Drive, Beacon Bay, East London, 5201.
Tel: 043 748 8209
Fax: 043 748 8203
Email: mika@imvelo.co.za

Civil Engineers:
HSC CONSULTING STRUCTURAL AND CIVIL ENGINEERS
18 St Marks Road, Southmead, East London, 5200.
Tel: +27 43 743 9528
Fax: +27 43 743 5347
Email: andrew@hsc.co.za
Web: www.hsc.co.za

Structural Engineers:
HSC CONSULTING STRUCTURAL AND CIVIL ENGINEERS
18 St Marks Road, Southmead, East London, 5200.
Tel: +27 43 743 9528
Fax: +27 43 743 5347
Email: andrew@hsc.co.za
Web: www.hsc.co.za

Electrical Engineers:
CARIFRO ELECTRICAL & MECHANICAL CONSULTING ENGINEERS
4-6 Belgrave Road, Belgrave, East London, 5213.
Tel: +27 43 743 6266
Fax: +27 43 743 6599
Email: ei@carifro.com

Mechanical Engineers:
CARIFRO ELECTRICAL & MECHANICAL CONSULTING ENGINEERS
4-6 Belgrave Road, Belgrave, East London, 5213.
Tel: +27 43 743 6266
Fax: +27 43 743 6599
Email: ei@carifro.com

Client:
EAST LONDON IDZ
P.O. Box 5458, Greenfields, East London, 5208.
Lower Chester Road, Summeridge, East London, 5201.
Tel: +27 43 702 8200
Fax: +27 43 798 4405
Email: info@elidz.co.za

DESIGN

Project Name / Client
Bushveld Energy

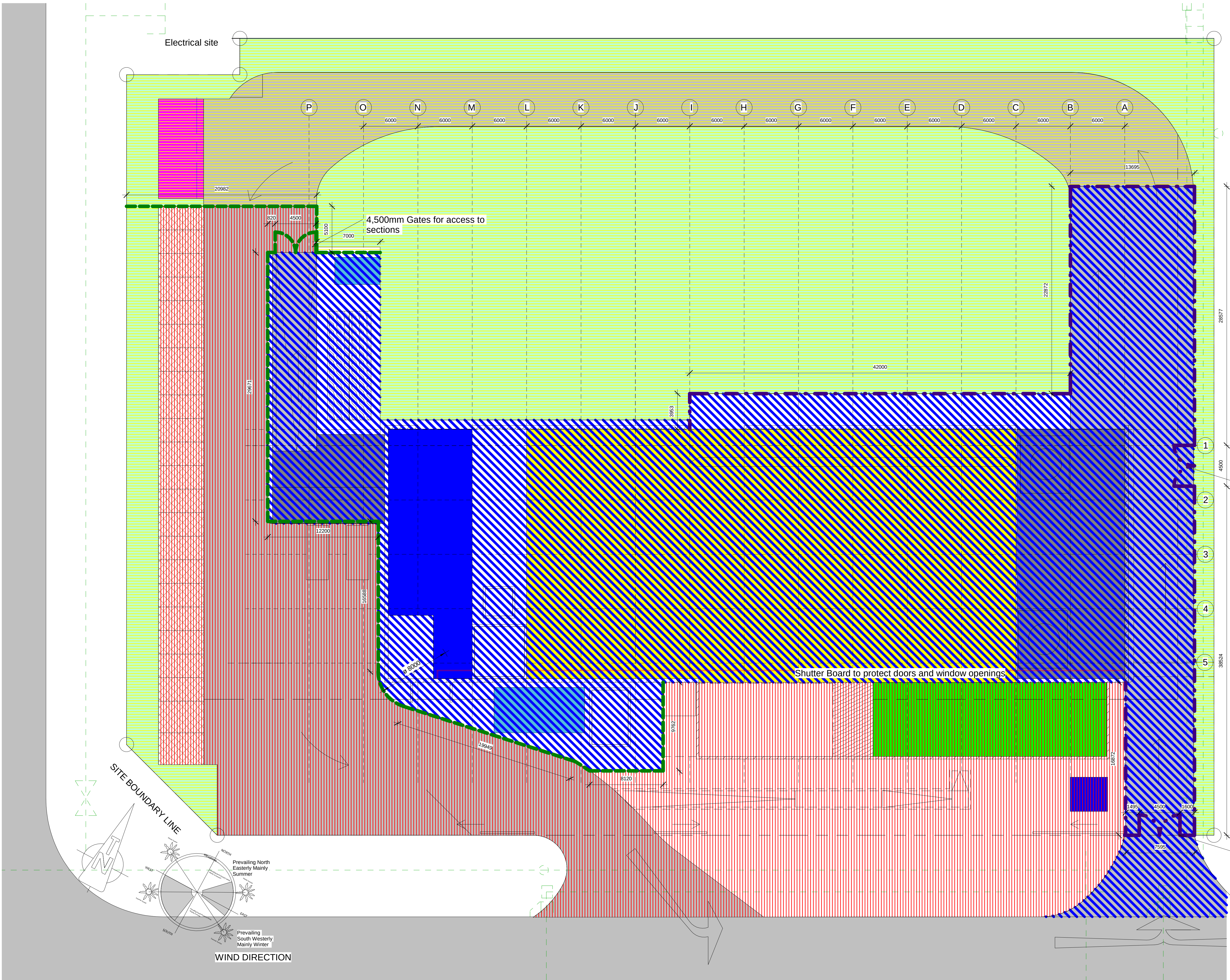
ERF 60936 - East London

Drawing Title
Elevations

Drawing Originator
SMALE AND PARTNERS ARCHITECTS

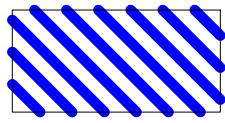
Checked By JW	Checked Date 09/02/20	Drawn By TT	Drawn Date 09/02/20
Approved By -	Approval Date 09/02/20	SACAP Number 7513	Scale 1 : 100

Job No	Discipline	Type	Drawing No.	Revision
0046	ARCH	DESIGN	205	C

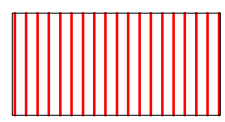


1 Sectional Completion
1 : 200

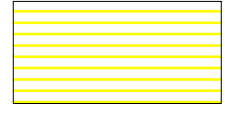
LEGEND



SECTION 1
Sectional Hardstand
Warehouse
Transformer Room
MCC Rooms



SECTION 2
Sectional Hardstand
Office Block
Guard Hut
Ramps



SECTION 3
Fencing/Gates
Remainder of
hardstands
Landscaping
Waste Storage

HOARDING



Phase 1 Hoarding :
1,83m High 'Bonnox Close Mesh 1472/12' fence
fixed to and including 150mm diameter gumpole
posts at 5,0m centres cast in suitable sized
concrete bases and the fence covered with
shadecloth



Phase 1 and 2 Hoarding:

- 19mm shutter board securely fixed, all joints
between boards and betweenboards and
floor/roof to be taped with duct tape etc. protect
doors and window openings of the
Office/Warehouse Wall
- 1,83m High 'Bonnox Close Mesh 1472/12'
fence fixed to and including 150mm diameter
gumpole posts at 5,0m centres cast in suitable
sized concrete bases and the fence covered
with shadecloth

Refer to programs for
completion dates

Note:
Do not scale from this drawing. Check all given
dimensions and site dimensions and/or levels
prior to any pricing, manufacture or construction
of any item.
Greater detail drawings take preference.
Please report any discrepancies to the architect.

The copyright for the design and information on
this drawing is vested and may not be copied or
reproduced without the written authority of the
Architects.

A	Movement of Cooling tower and Scrubber	2020-09-08			
---	---	------------	--	--	--

No	Revision Description	Date	By	For
----	----------------------	------	----	-----

Revision

Contractor:

PROFESSIONAL TEAM

Project Managers :
LUKHOZI
Kwame Lukhozi, Quarantine Drive,
Selborne, East London, 5201.
P.O. Box 13204, Tecoma,
5214.
Tel: 043 721 1321.
Fax: 043 721 1322.
Email: c.lukhozi@lukhozi.co.za
Web: www.lukhozi.co.za

Architect :
S+P Architects
123 Western Ave. Vincent,
East London, 5217.
Tel: +27 43 726 9327
Fax: +27 46 5406 155
Email: info@spmk.co.za
Web: www.spmk.co.za

Quantity Surveyors :
Imvelo Quantity Surveyors
81 Beaconhurst Drive,
Beacon Bay
East London, 5201.
Tel: 043 746 8209
Fax: 043 746 8203
Email: mika@imvelo.co.za

Civil Engineers :
HSC CONSULTING
STRUCTURAL AND CIVIL
ENGINEERS
18 St Marks Road,
Southernwood, East
London, 5200.
Tel: +27 43 743 9528
Fax: +27 43 743 5347
Email: andrew@hsc.co.za
Web: www.hsc.co.za

Structural Engineers :
HSC CONSULTING
STRUCTURAL AND CIVIL
ENGINEERS
18 St Marks Road,
Southernwood, East
London, 5200.
Tel: +27 43 743 9528
Fax: +27 43 743 5347
Email: andrew@hsc.co.za
Web: www.hsc.co.za

Electrical Engineers :
**CARIFRO ELECTRICAL &
MECHANICAL CONSULTING
ENGINEERS**
4-6 Belgrave Road
Belgrave, East London, 5213
Tel: +27 43 743 6266
Fax: +27 43 743 6599
Email: ei@carifro.com

Mechanical Engineers :
**CARIFRO ELECTRICAL &
MECHANICAL CONSULTING
ENGINEERS**
4-6 Belgrave Road
Belgrave, East London, 5213
Tel: +27 43 743 6266
Fax: +27 43 743 6599
Email: ei@carifro.com

Client:
EAST LONDON IDZ
P.O. Box 5458, Greenfields
East London, 5208
Lower Chasler Road
Surreyidge, East London,
5201.
Tel: +27 43 702 8200
Fax: +27 43 726 5405
Email: info@eldz.co.za

DESIGN

Project Name / Client

Bushveld Energy

ERF 60936 - East London

Drawing Title

Sectional Completion

Drawing Originator

SMAL AND PARTNERS ARCHITECTS

Checked By
JW

Checked Date
11/03/20

Drawn By
TT

Drawn Date
11/03/20

Approved By
.

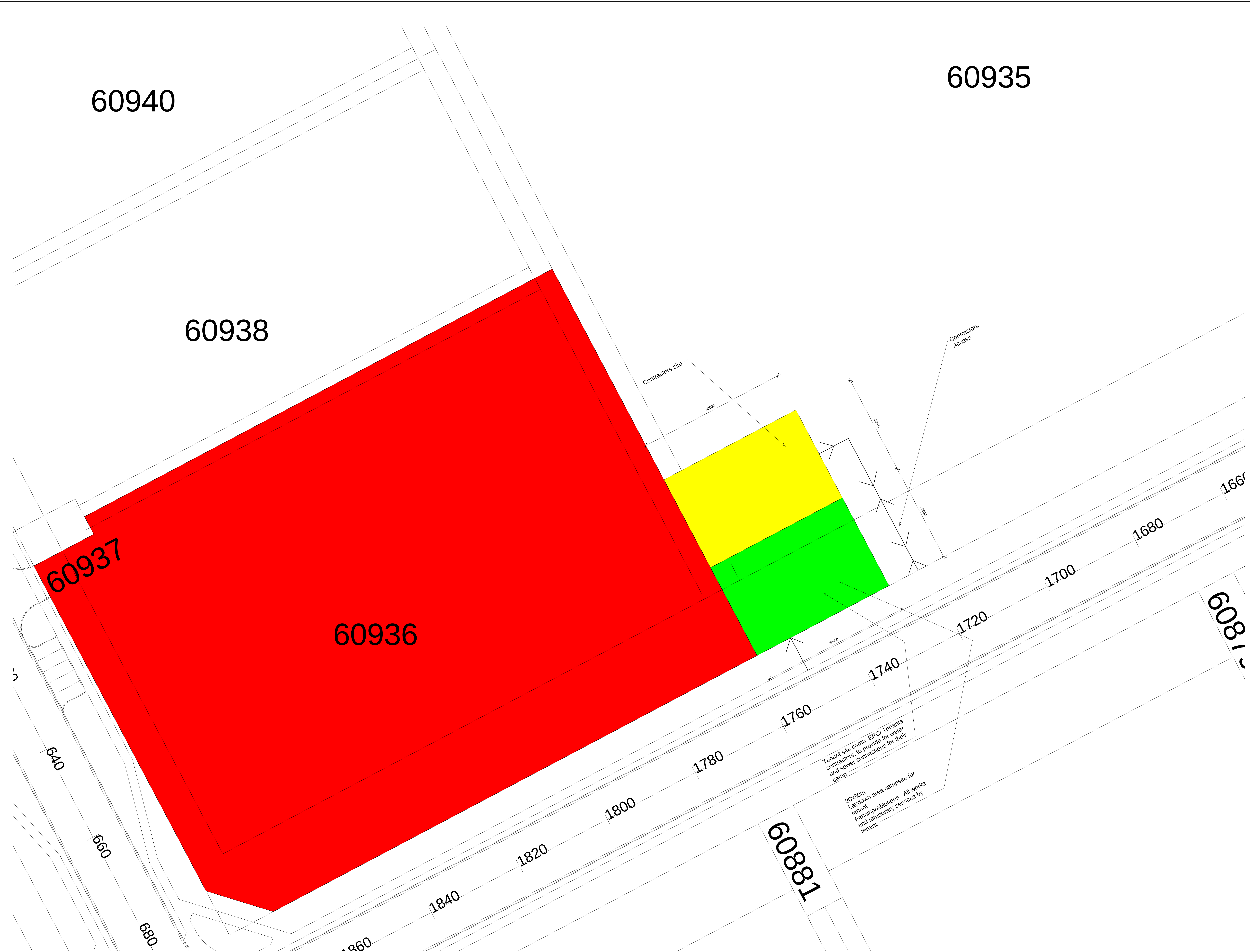
Approval Date
11/03/20

SACAP Number
7513

Building Grid Reference

Scale
1 : 200

Job No	Discipline	Type	Drawing No.	Revision
0046	ARCH	DESIGN	208	A



1 Site Camp Locations
1:250

Note:
Do not scale from this drawing. Check all given dimensions and site dimensions and/or levels prior to any pricing, manufacture or construction of any item.
Greater detail drawings take preference.
Please report any discrepancies to the architect.

The copyright for the design and information on this drawing is vested and may not be copied or reproduced without the written authority of the Architects.

No.	Revision	Description	Date	By	To
Revision					
Contractor:					

PROFESSIONAL TEAM

Project Managers :



LUKHOZI Consulting Engineers
Kwame Lukhozi, Quarantine Drive, Selborne, East London, 5201.
P.O. Box 15204, Tecoma, 5214.
Tel: 043 721 1321.
Fax: 043 746 5202.
Email: c.lukhozi@lukhozi.co.za
Web: www.lukhozi.co.za

Architect :



S+P Architects
123 Western Ave, Vincent, East London, 5217.
Tel: +27 43 726 9327
Fax: +27 46 5406 155
Email: info@smale.co.za
Web: www.smale.co.za

Quantity Surveyors:



Imvelo Quantity Surveyors
81 Beaconhurst Drive, Beacon Bay, East London, 5201.
Tel: 043 748 8209
Fax: 043 748 5203
Email: mika@imveloqp.co.za

Civil Engineers :



HSC CONSULTING STRUCTURAL AND CIVIL ENGINEERS
18 St Marks Road, Southernwood, East London, 5200.
Tel: +27 43 743 9528
Fax: +27 43 743 5347
Email: andrew@hsc.co.za
Web: www.hsc.co.za

Structural Engineers:



HSC CONSULTING STRUCTURAL AND CIVIL ENGINEERS
18 St Marks Road, Southernwood, East London, 5200.
Tel: +27 43 743 9528
Fax: +27 43 743 5347
Email: andrew@hsc.co.za
Web: www.hsc.co.za

Electrical Engineers:



CARIFRO ELECTRICAL & MECHANICAL CONSULTING ENGINEERS
4-6 Belgravia Road, Belgravia, East London, 5213.
Tel: +27 43 743 8266
Fax: +27 43 743 6599
Email: ei@carfro.com

Mechanical Engineers :



CARIFRO ELECTRICAL & MECHANICAL CONSULTING ENGINEERS
4-6 Belgravia Road, Belgravia, East London, 5213.
Tel: +27 43 743 8266
Fax: +27 43 743 6599
Email: ei@carfro.com

Client:

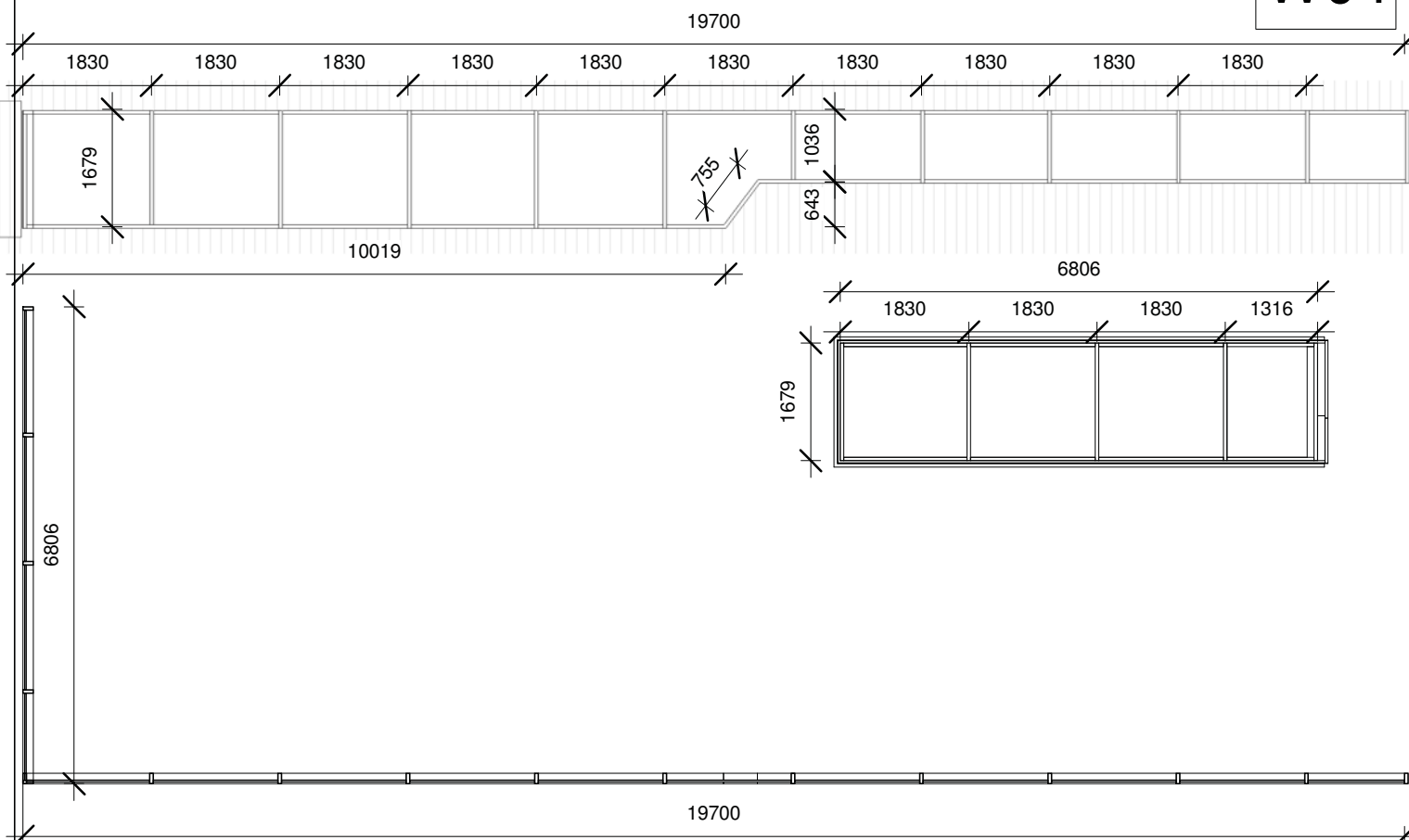


EAST LONDON IDZ
P.O. Box 5458, Greenfields, East London, 5208.
Lower Chester Road, Surridge, East London, 5201.
Tel: +27 43 702 8200
Fax: +27 43 798 4405
Email: info@eldz.co.za

DESIGN

Project Name / Client					
Bushveld Energy					
ERF 60936 - East London					
Drawing Title					
Site Camp Locations					
Drawing Originator					
SMALE AND PARTNERS ARCHITECTS					
Checked By	Checked Date	Drawn By	Drawn Date		
JW	11/04/20	TT	11/04/20		
Approved By	Approval Date	SACAP Number			
-	11/04/20	7513			
Building Grid Reference		Scale			
		1:250			
Job No	Discipline	Type	Drawing No.	Revision	
0046	ARCH	DESIGN	209		

W04

**Location:****Total Number: 1****Window Number/s:**

FRAME / JAMB: Powder Coated Aluminium, to Architects Approval, frame to suit opening as indicated.

Colour: Matt Charcoal to Architects Approval

All sections to be to manufacturers specification, approved by Architect

Sheerline 36 system built into brick walling.

FRAME / JAMB FINISH: Powder Coated Aluminium, Matt Charcoal to Architects Approval

IRONM: No 2 x prs Stainless Steel Friction Pivots.

Approved Pull Locking Handle.

NOTE: ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE ANY WORK IS PUT TO HAND

DOOR / WINDOW: Thickness of glass dictated by manufacturers recommendations, to National Building Regulations

Glass panel sizes all to be in accordance with specialist detail and specification

DOOR / WINDOW FINISH: Powder Coated Aluminium, Matt Charcoal to Architects Approval

FURNITURE: NA

GLASS: Fit clear laminated Safety Glass. All safety glass as per AAMSA, SAGGA and National Building Regulations SABS 0400. Stamp to be visible on glass.

Revision

No	Revision Description	Date	Issued by	Issued to
----	----------------------	------	-----------	-----------

Project:

ELIDZ:Bushveld

Work Stage:

CONSTRUCTION

Date:

10/21/20

Scale:

1 : 100

Drawn:

Author

Checked:

JW

W04

Project No:

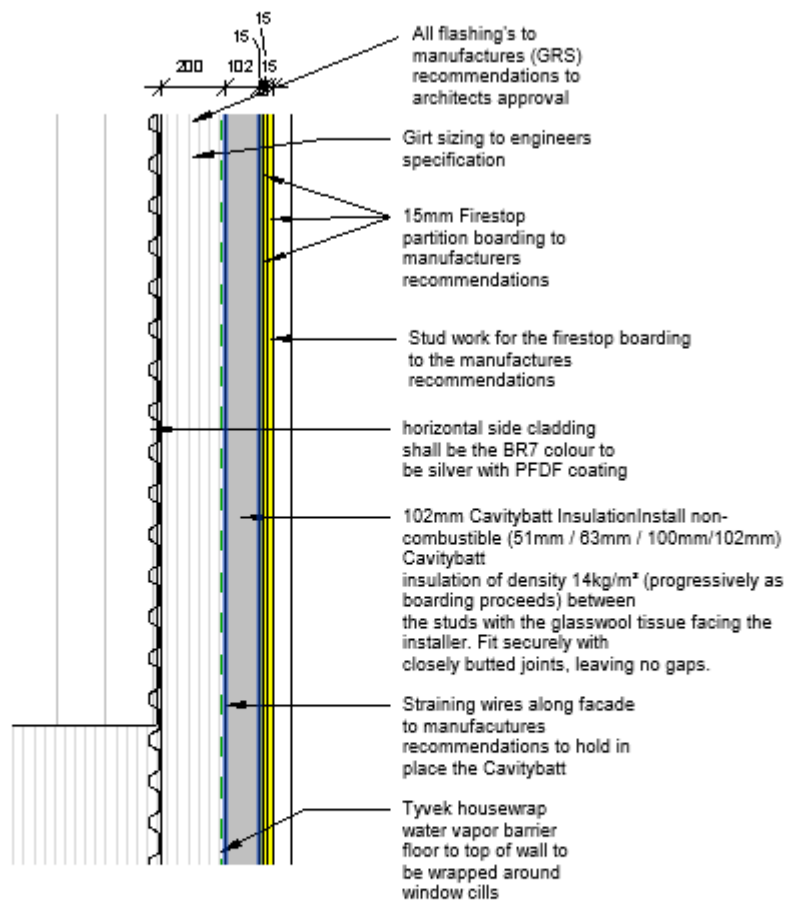
0046

Drawing No:

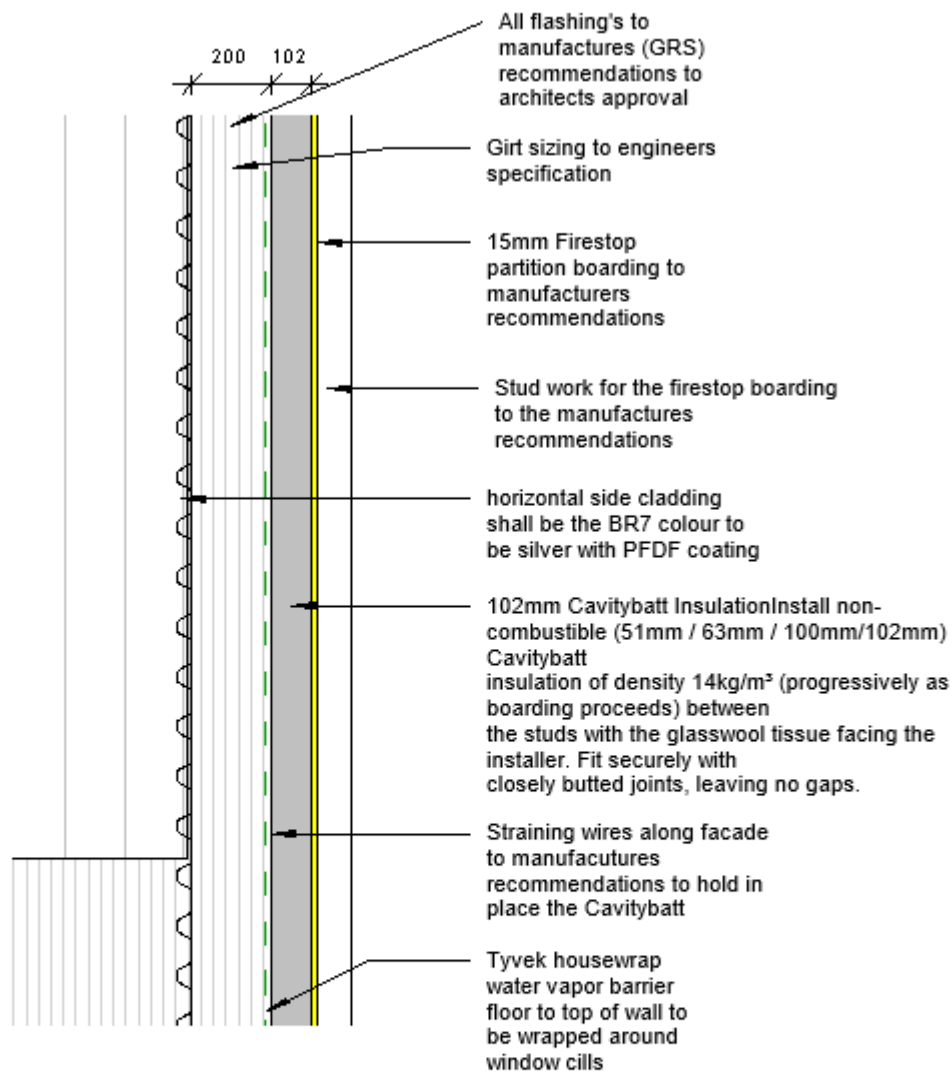
404

Rev:



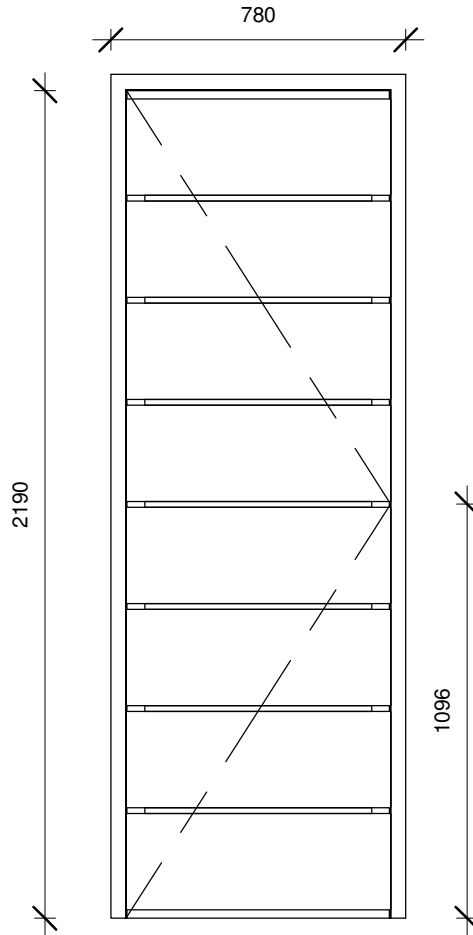


2hr Fire Protection Required 2m total
of the above spec (1m at each end of
office block junction to warehouse)



30min Fire Protection Required on the front facade of the Office block and sides of the office block excluding the 1m on either side

A



Location:

Door Number/s: 07, 16

FRAME / JAMB: 50x50x3mm GALVANIZED WELDED STEEL GATE FRAME, WITH 50x30x3mm MIDRAIL WITH 3x WELDED PIN-HINGED TO GATE AS PER DETAIL. LOCK PLATE WELDED AND BARREL BOLT WELDED TO GATE AS PER DETAIL, ALL GALVANIZED AFTER WELDING AND DRILLING COMPLETE. NO COLD GALV ACCEPTED.

HINGES
AS PER MANUFACTURER SPECIFICATION

FRAME / JAMB FINISH: GALVANIZED STEEL

IRONM: REFER TO IRONMONGERY SCHEDULE

**NOTE: ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE ANY WORK IS PUT TO HAND
REFER TO PLAN FOR SWING DIRECTION**

DOOR / WINDOW: NUTEC FIBRE CEMENT BUILDING PLANKS, 255 x 10 mm PRE-DRILLED AND FIXED USING SELF-TAPPING HEX SCREWS WITH 15 mm WIDE GAPS BETWEEN PLANKS.

DOOR / WINDOW FINISH: DOOR TO BE FINISHED WITH PAINT FINISH, PAINT TO BE CONFIRMED

FURNITURE: REFER TO IRONMONGERY SCHEDULE

GLASS: None

Revision

No	Revision Description	Date	Issued by	Issued to
----	----------------------	------	-----------	-----------

Project:
ELIDZ:
Bushveld

Work Stage:
CONSTRUCTION

Date:
10/21/20

Scale:
1 : 20

Drawn:
TT

Checked:
JW

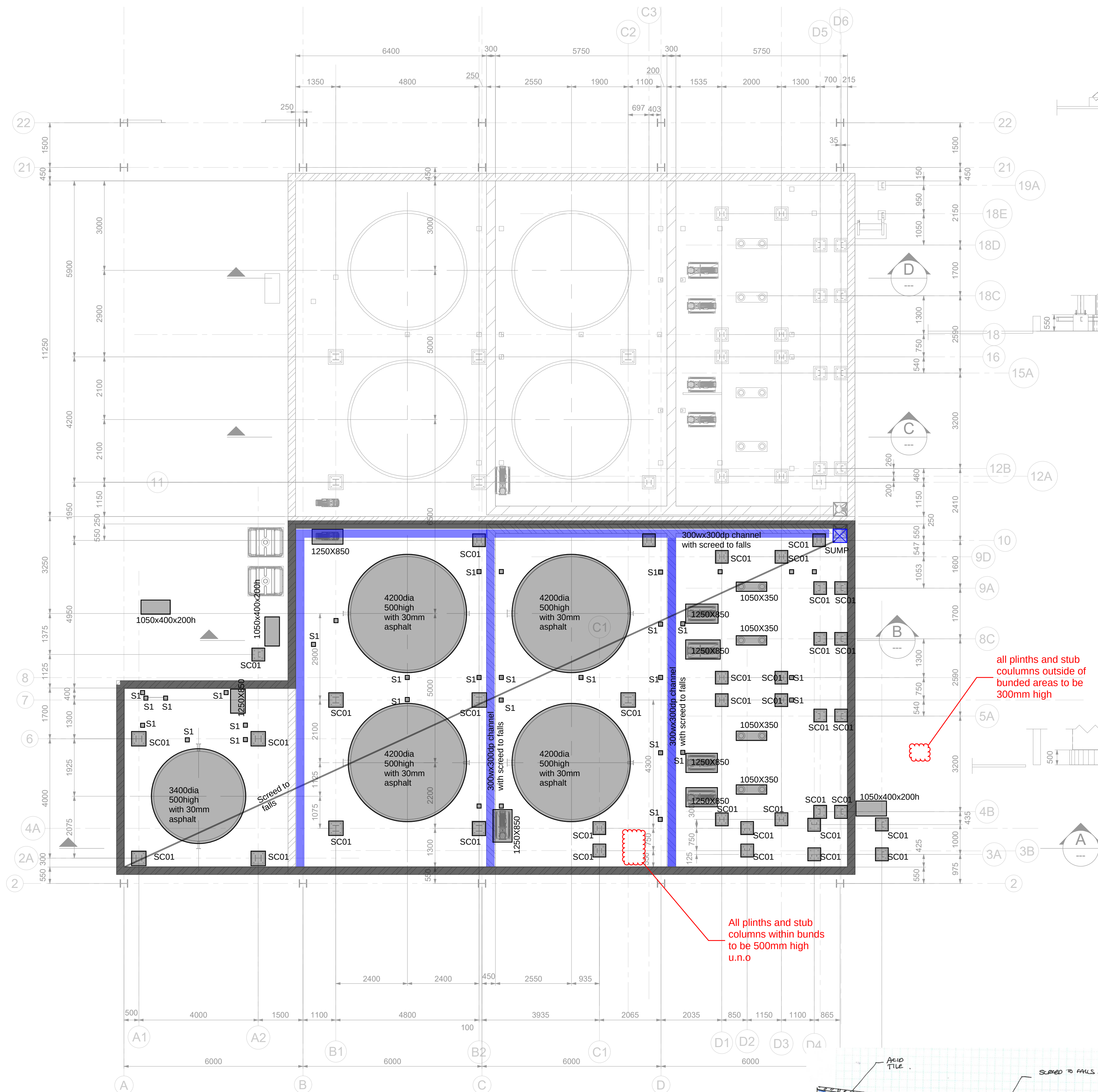
A

Project No:
0046

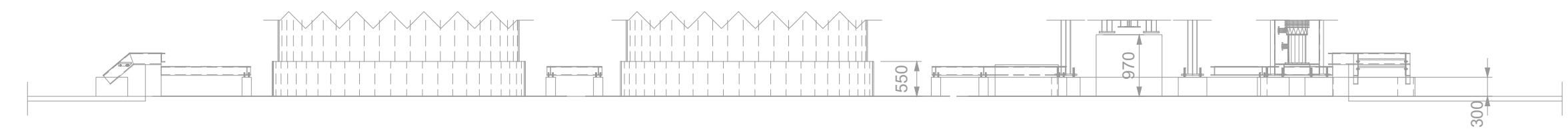
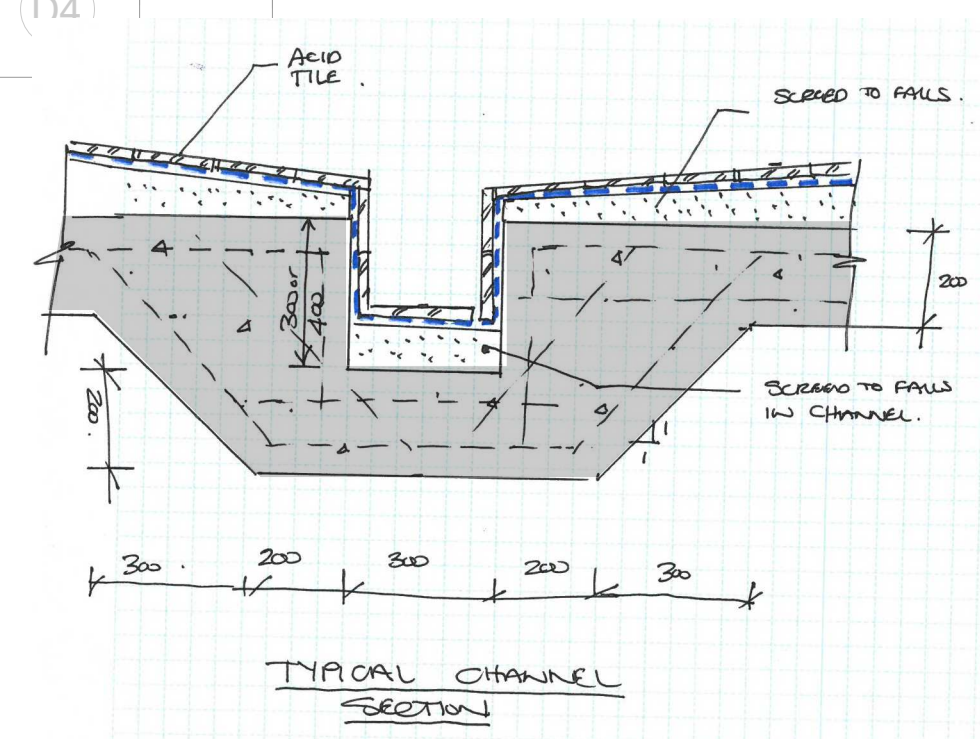
Drawing No:
310

Rev:

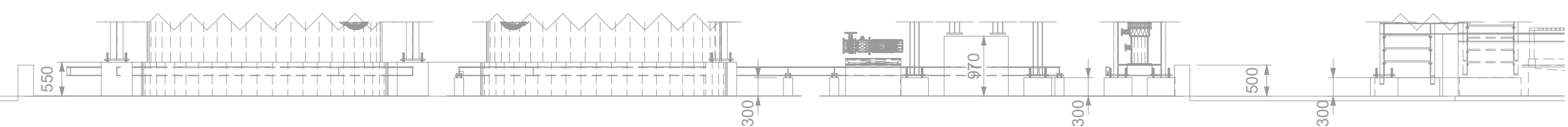




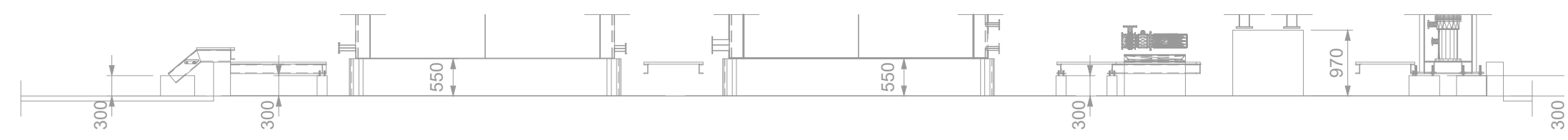
PLAN ON CIVIL FOOTPRINT FOR CATHOLYTE & ANOLYTE AREA



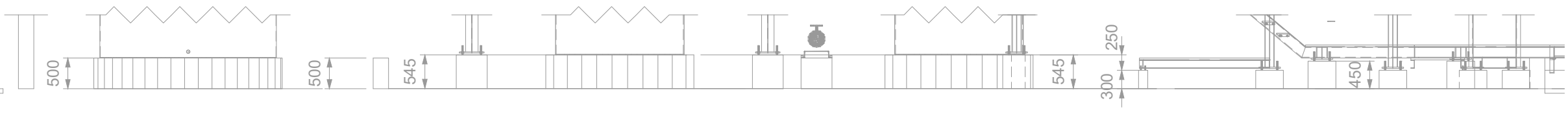
SECTION D



SECTION C



SECTION B



SECTION A

all plinths and stub columns outside of bunded areas to be 300mm high

All plinths and stub columns within bunds to be 500mm high u.n.o

All stub columns to have 4no M16 gr8.8 HDG holding down bolts. Bolts to be J-Bolts with a total length of 550mm

All tanks to have 8no M20 gr8.8 HDG holding down bolts. Bolts to be J-Bolts with a total length of 750mm

SC01 - 450x450 RC Stub Column 6 Y16 drilled and epoxied 170mm into surfacebed with Hilti Hit-hy 200 injection mortar

S1 - 200x200 RC Stub Column 4 Y16 drilled and epoxied 170mm into surfacebed with Hilti Hit-hy 200 injection mortar

All bunded areas to be screeded to fall to sump and minimum fall of 1:80

All sumps to be 500x500x500dp

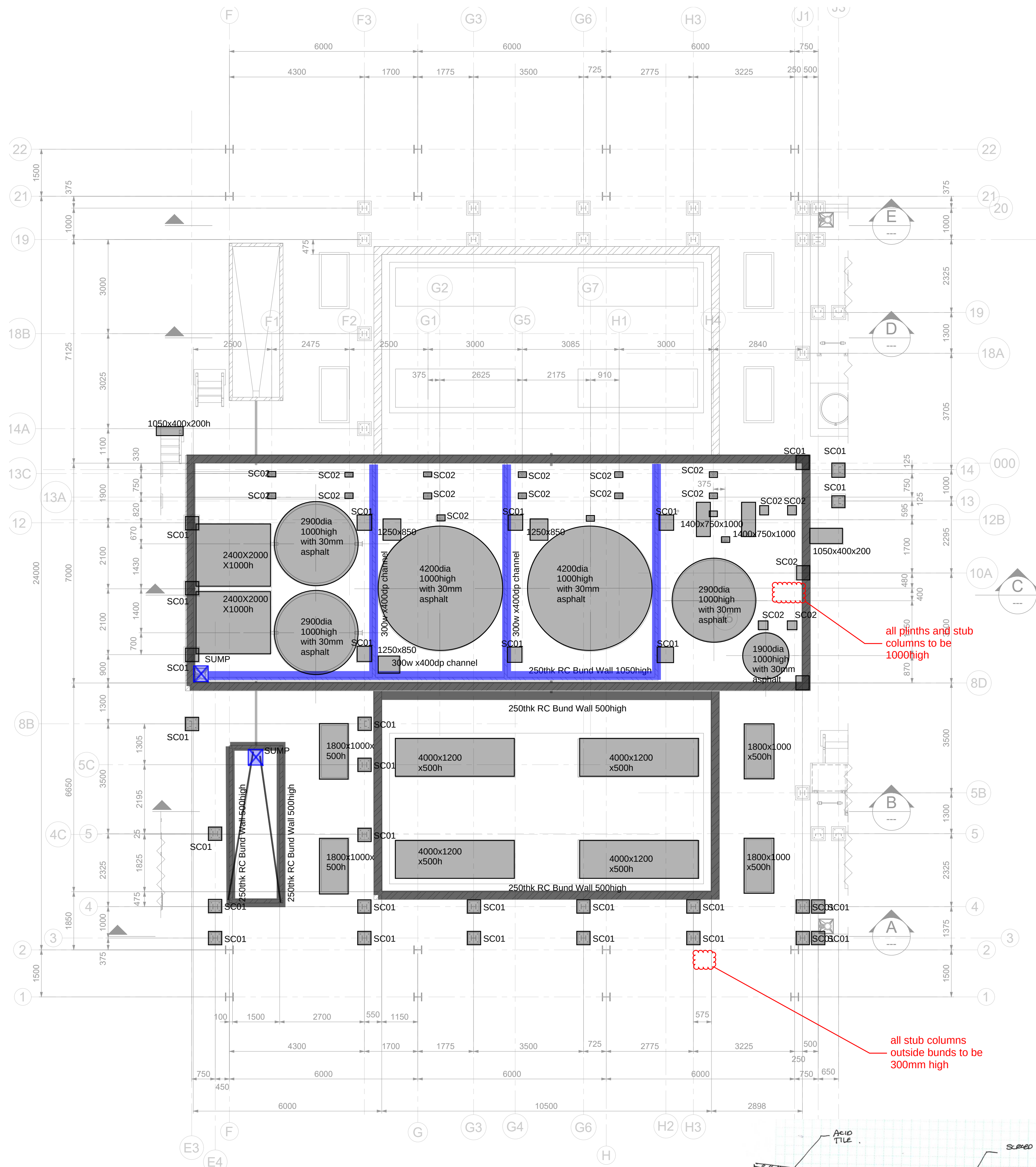
Rebar estimates
 Stub Columns 180kg/m3
 Plinths 100kg/m3
 Bund walls 80kg/m3



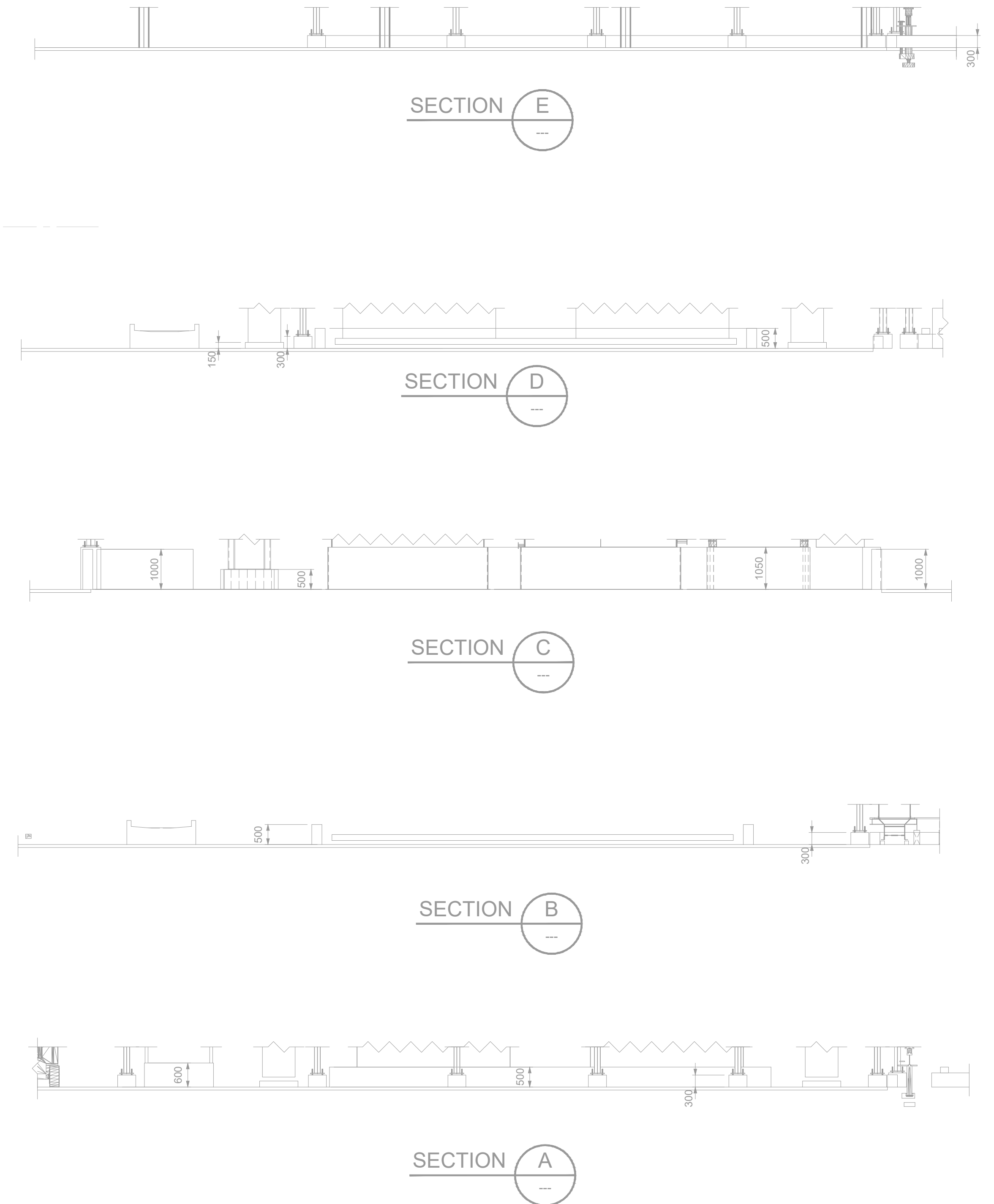
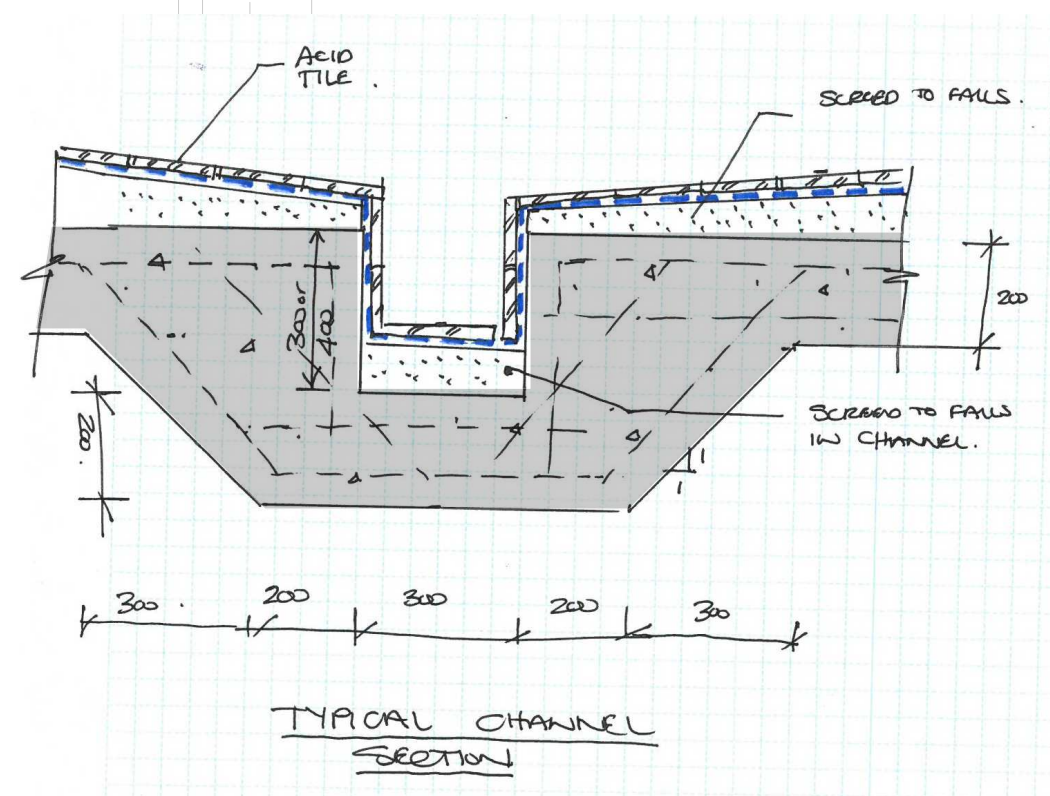
SK-S-001A
Bund and Plinth Layout

Client
Job
Job Number
Date

ELIDZ
Bushveld Energy
P1985
2020.11.10 Rev 3



PLAN ON CIVIL FOOTPRINT OF FILTER FEED AREA



All stub columns to have 4no M16 gr8.8 HDG holding down bolts. Bolts to J-Bolts with a total length of 550mm

All tanks to have 8No M20 gr8.8 HDG holding down bolts. Bolts to be J-Bolts with a total length of 750mm

SC01 - 450x450 RC Stub Column 6 Y16 drilled and epoxied 170mm into surfacebed with Hilti Hit-hy 200 injection mortar

SC02 - 300x300 RC Stub Column 4 Y16 drilled and epoxied 170mm into surfacebed with Hilti Hit-hy 200 injection mortar

S1 - 200x200 RC Stub Column 4 Y16 drilled and epoxied 170mm into surfacebed with Hilti Hit-hy 200 injection mortar

All banded areas to be screeded to fall to sump and minimum fall of 1:80

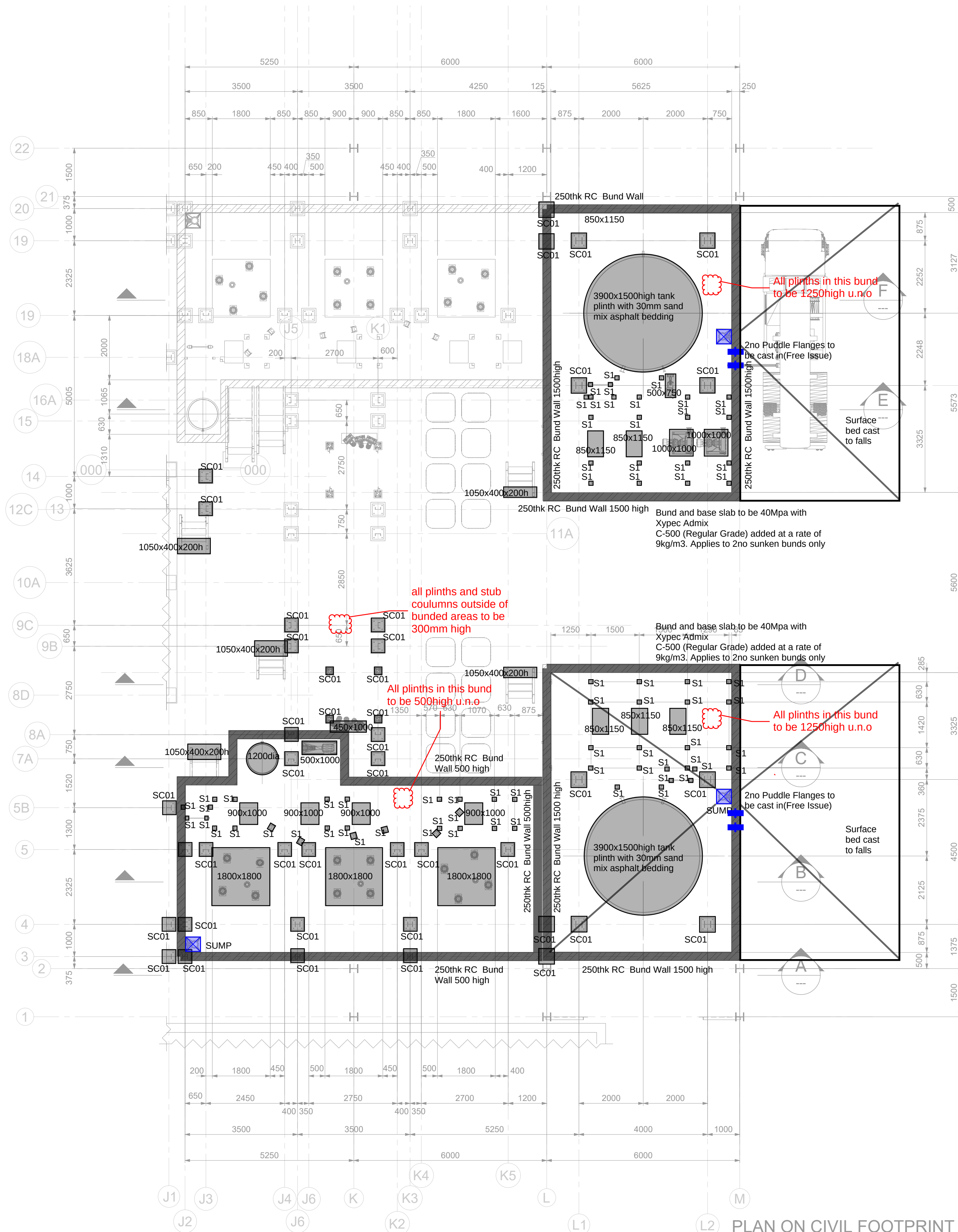
All Sumps to be 500x500x500dp

Rebar estimates
 Stub Columns 180kg/m3
 Plinths 100kg/m3
 Bund walls 80kg/m3

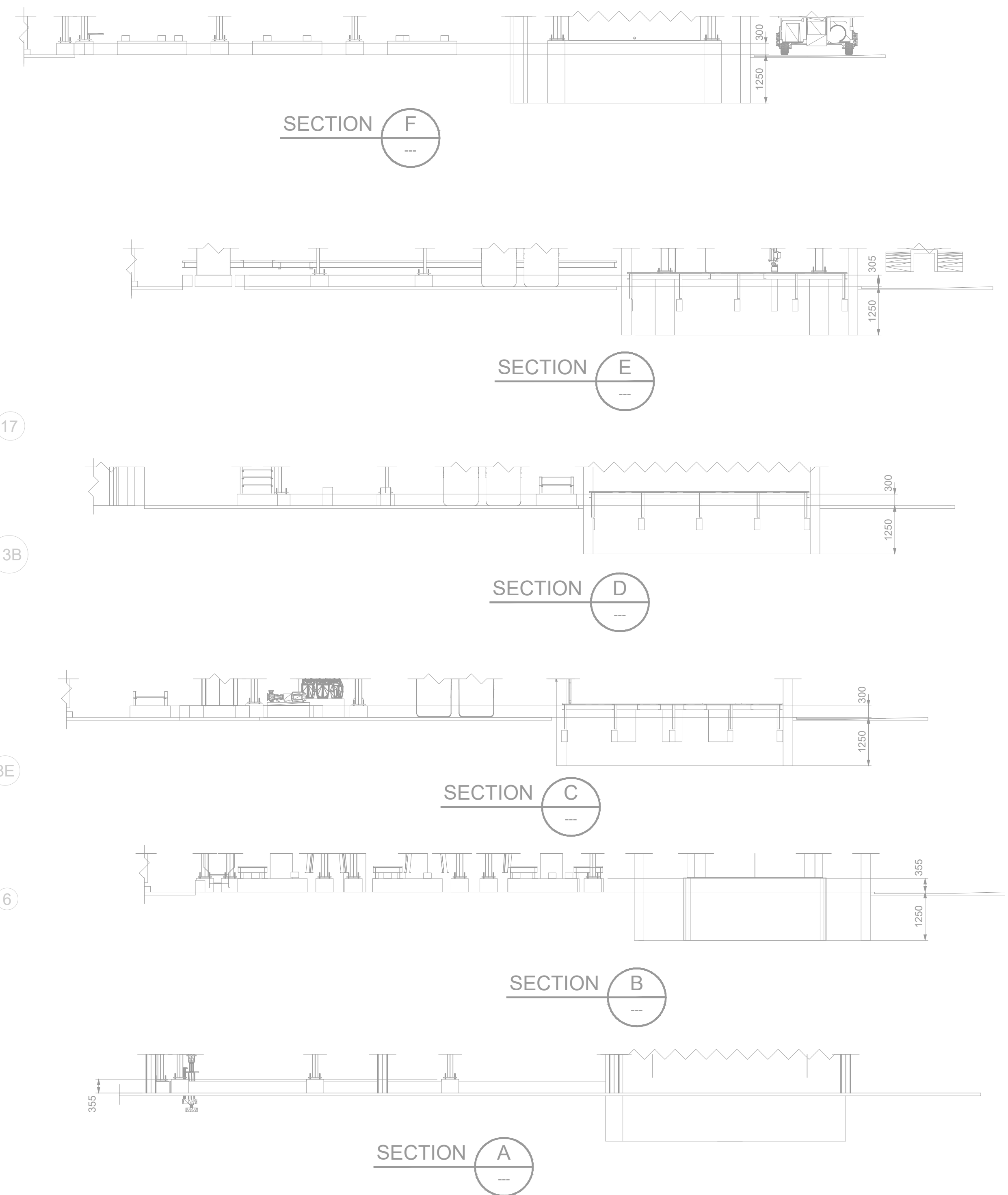


SK-S-001B
Bund and Plinth Layout

Client ELIDZ
 Job Bushveld Energy
 Job Number P1985
 Date 2020.11.10 Rev 3



PLAN ON CIVIL FOOTPRINT FOR REACTOR AREA



All stub columns to have 4no M16 gr8.8 HDG holding down bolts. Bolts to be J-Bolts with a total length of 550mm

All tanks to have 8No M20 gr8.8 HDG holding down bolts. Bolts to be J-Bolts with a total length of 750mm

SC01 - 450x450 RC Stub Column 6 Y16 drilled and epoxied 170mm into surfacedbed with Hilti Hit-hy 200 injection mortar

S1 - 200x200 RC Stub Column 4 Y16 drilled and epoxied 170mm into surfacedbed with Hilti Hit-hy 200 injection mortar

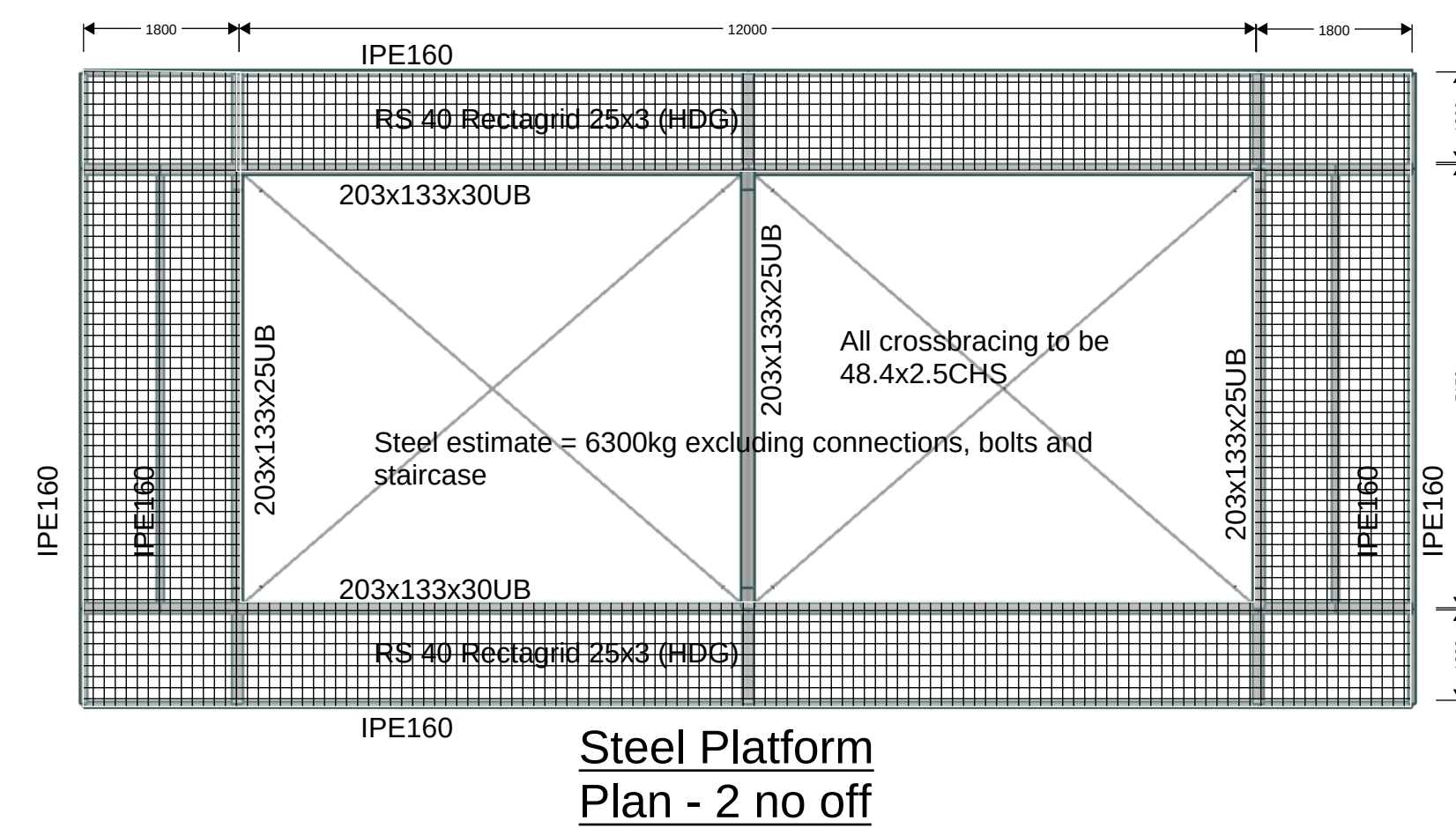
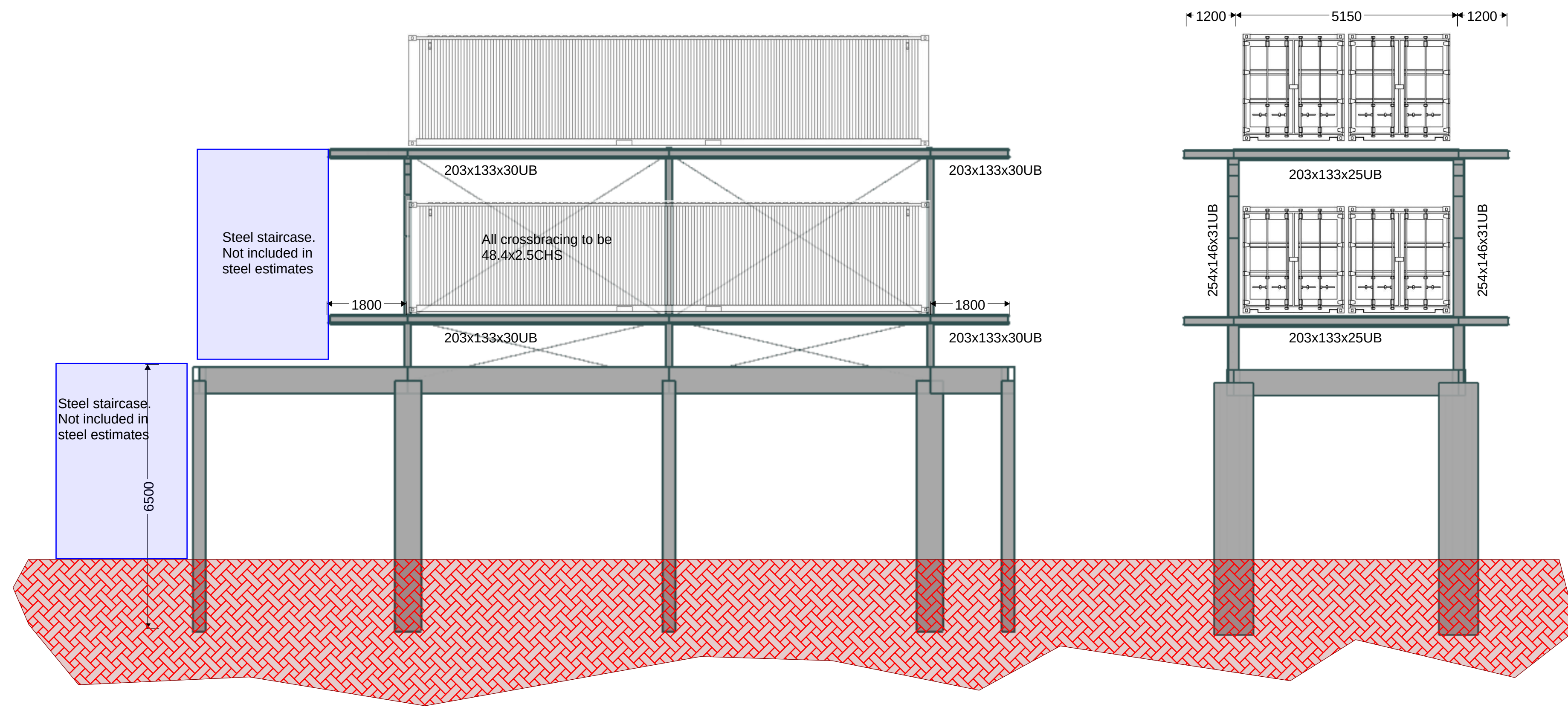
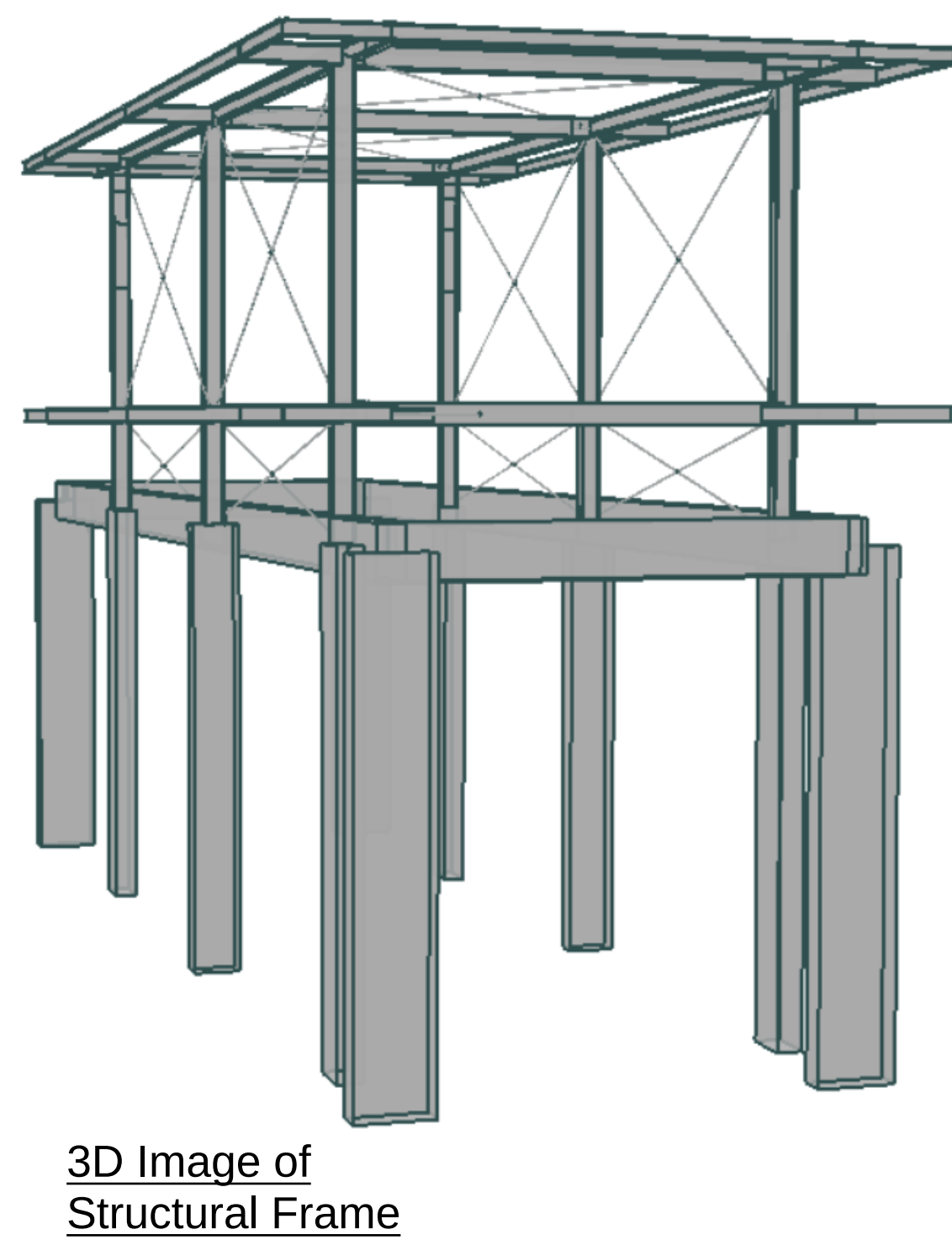
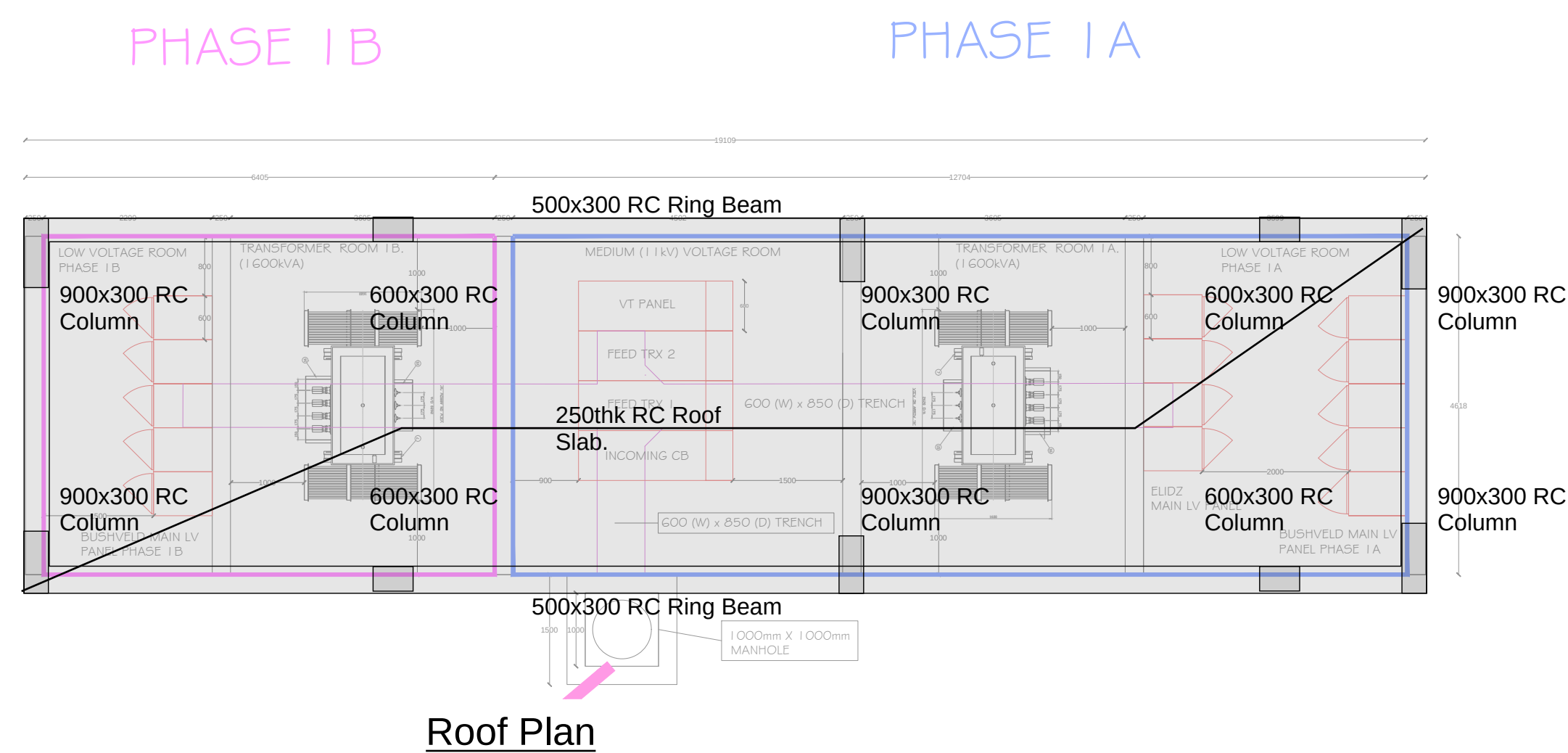
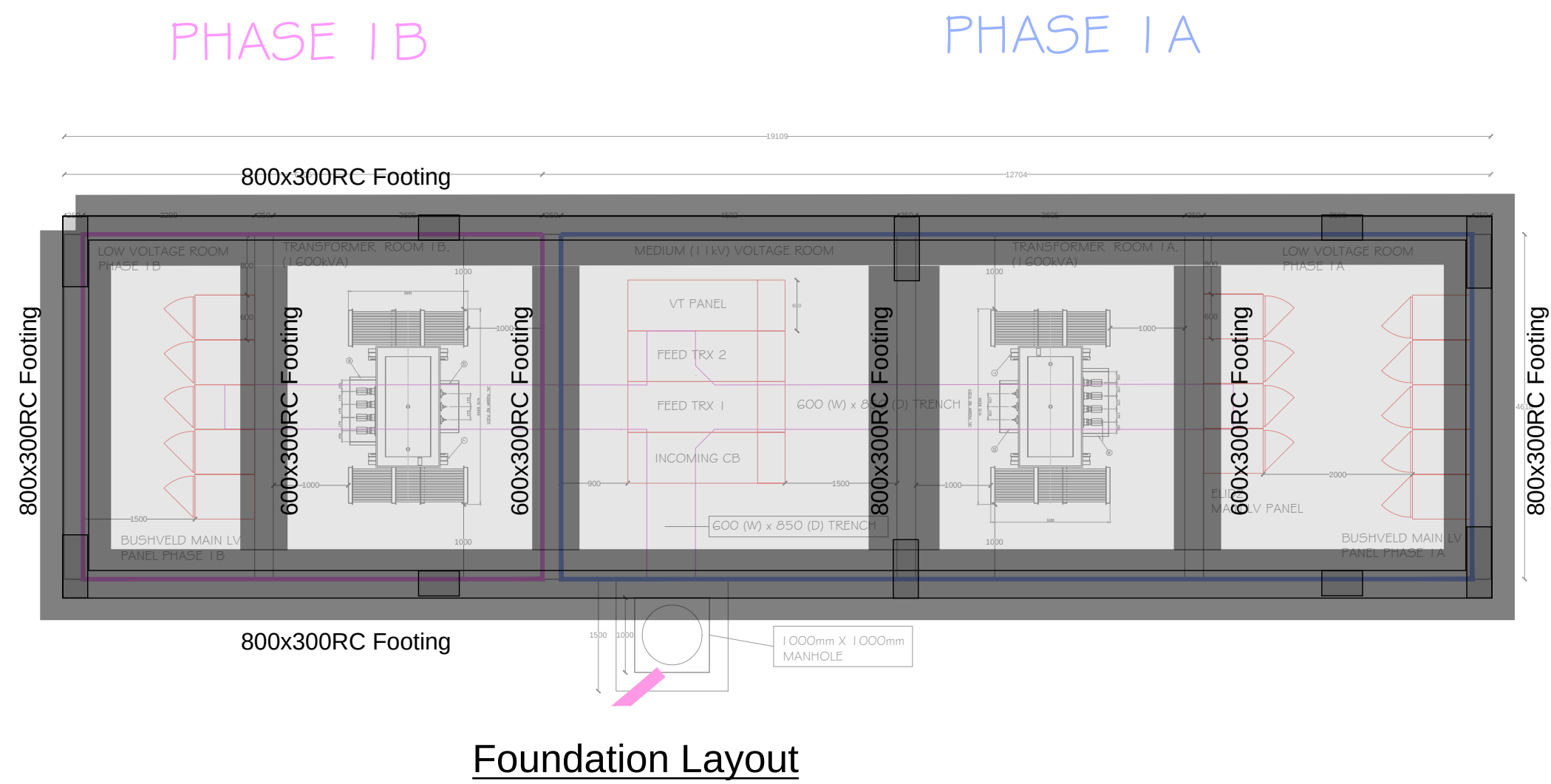
All bunded areas to be screeded to fall to sump and minimum fall of 1:80

All sumps to be 500x500x500dp

Rebar estimates
Stub Columns 180kg/m3
Plinths 100kg/m3
Bund walls 80kg/m3



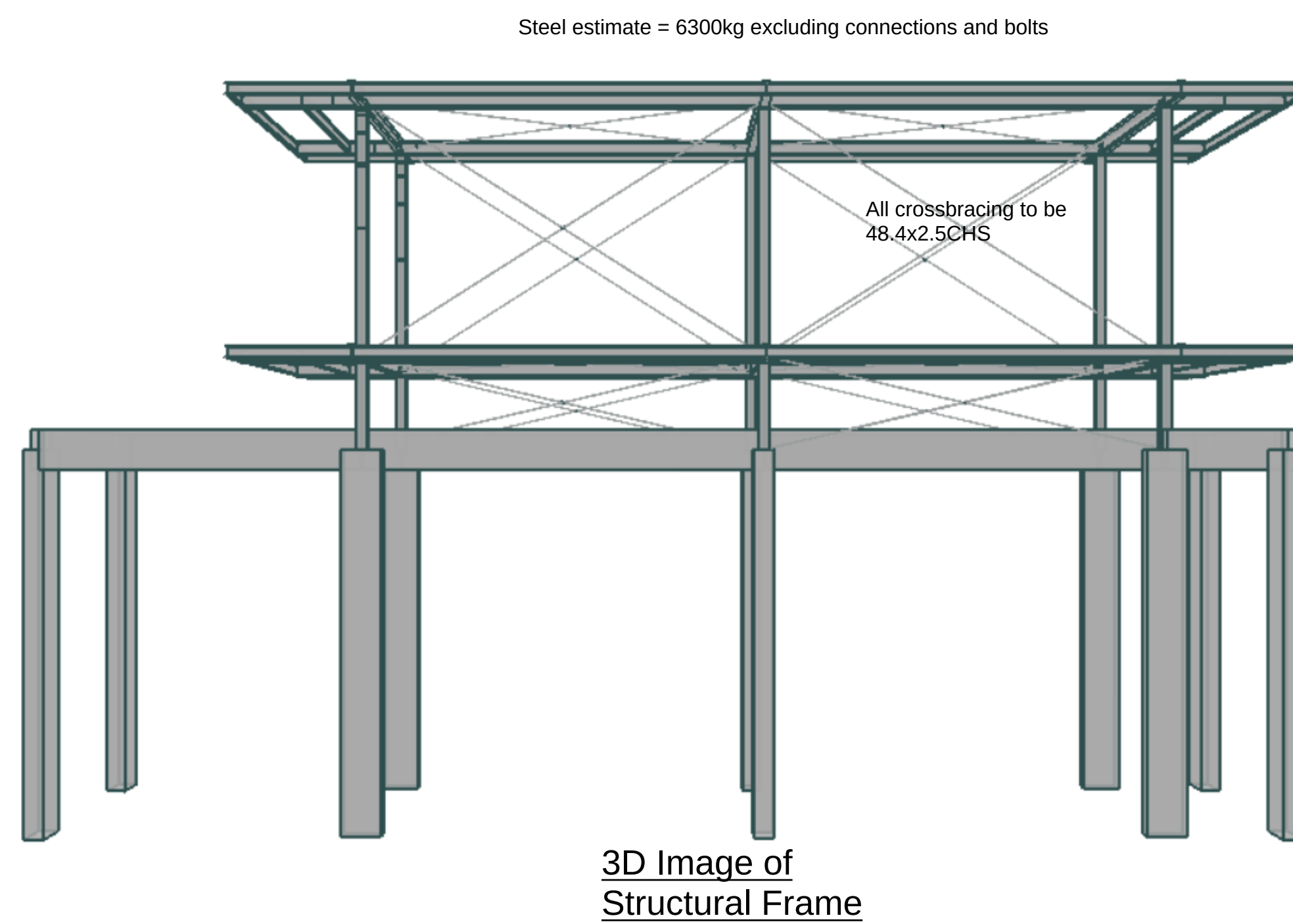
SK-S-001C
Bund and Plinth Layout

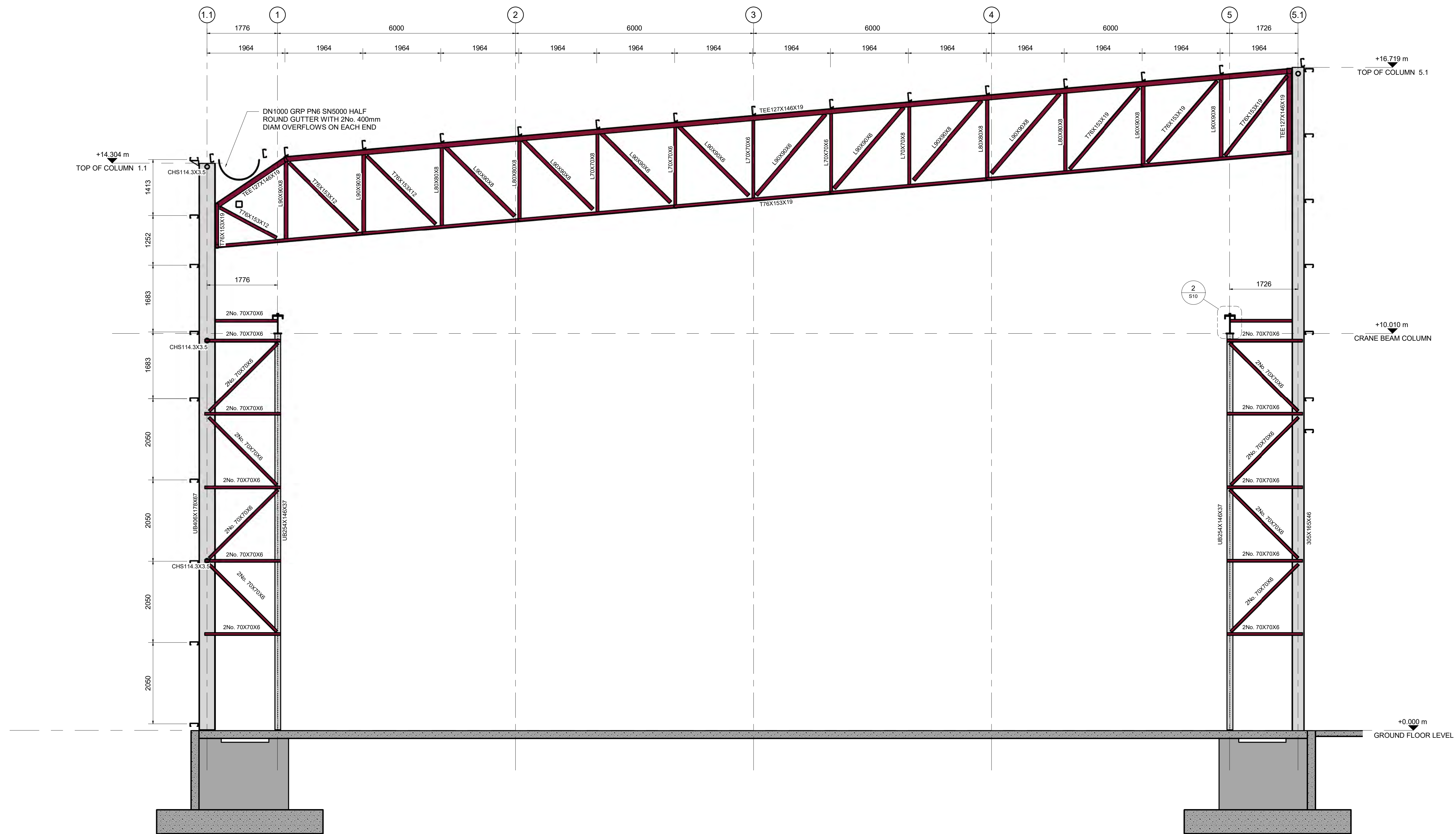


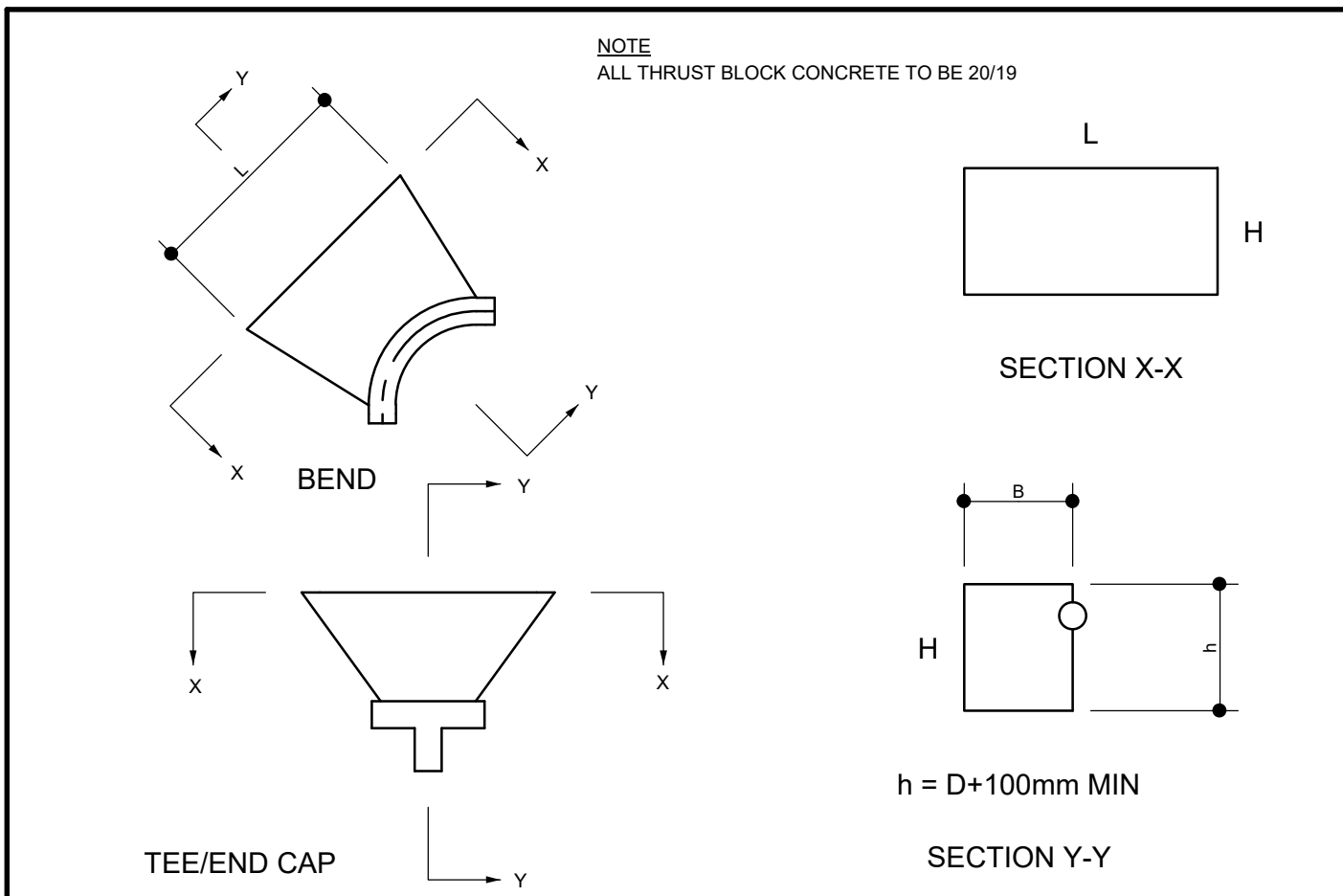
General Notes

All concrete to be 30MPa at 28 Days

All Steel to be HDG including walkway gratings

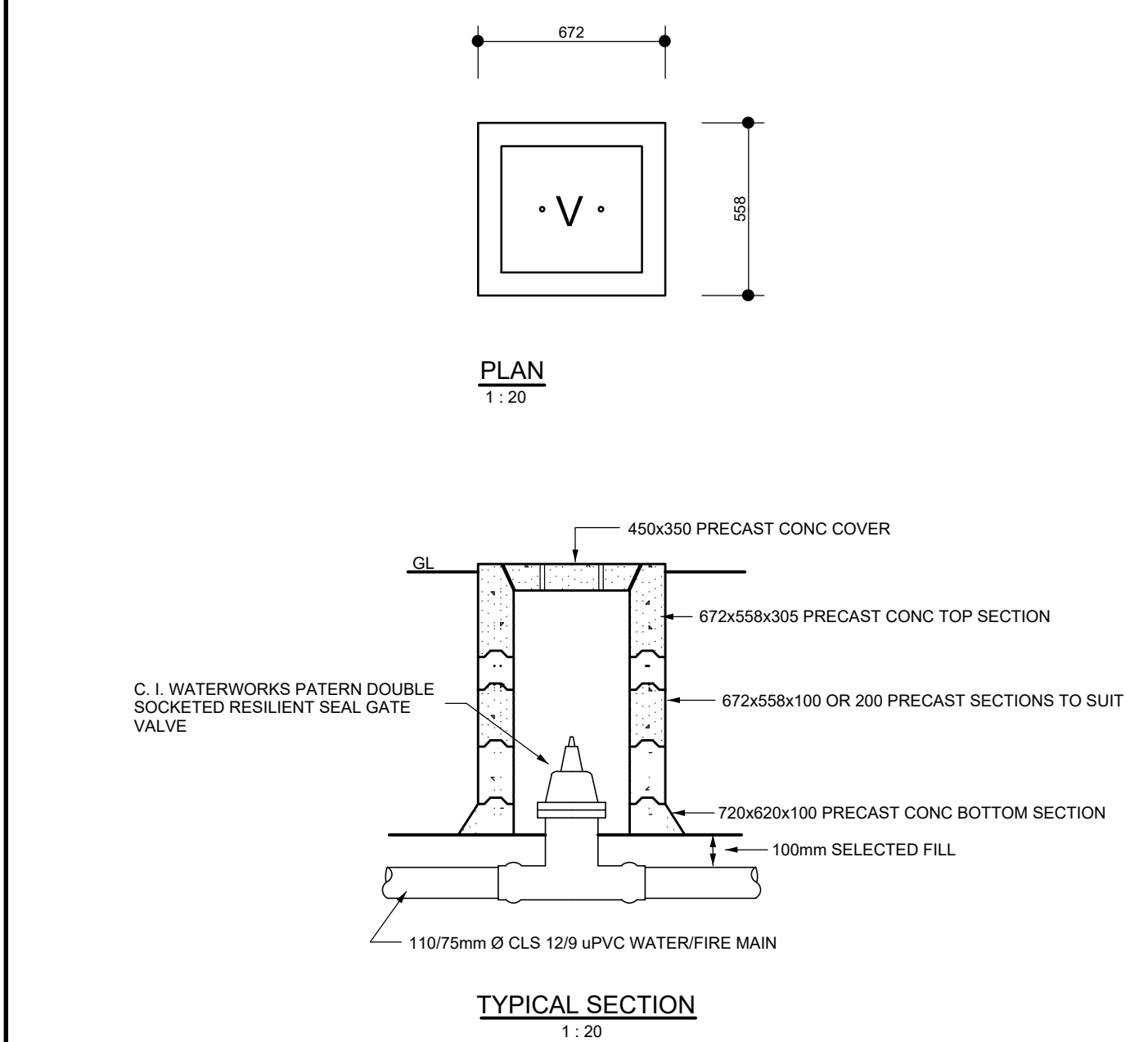




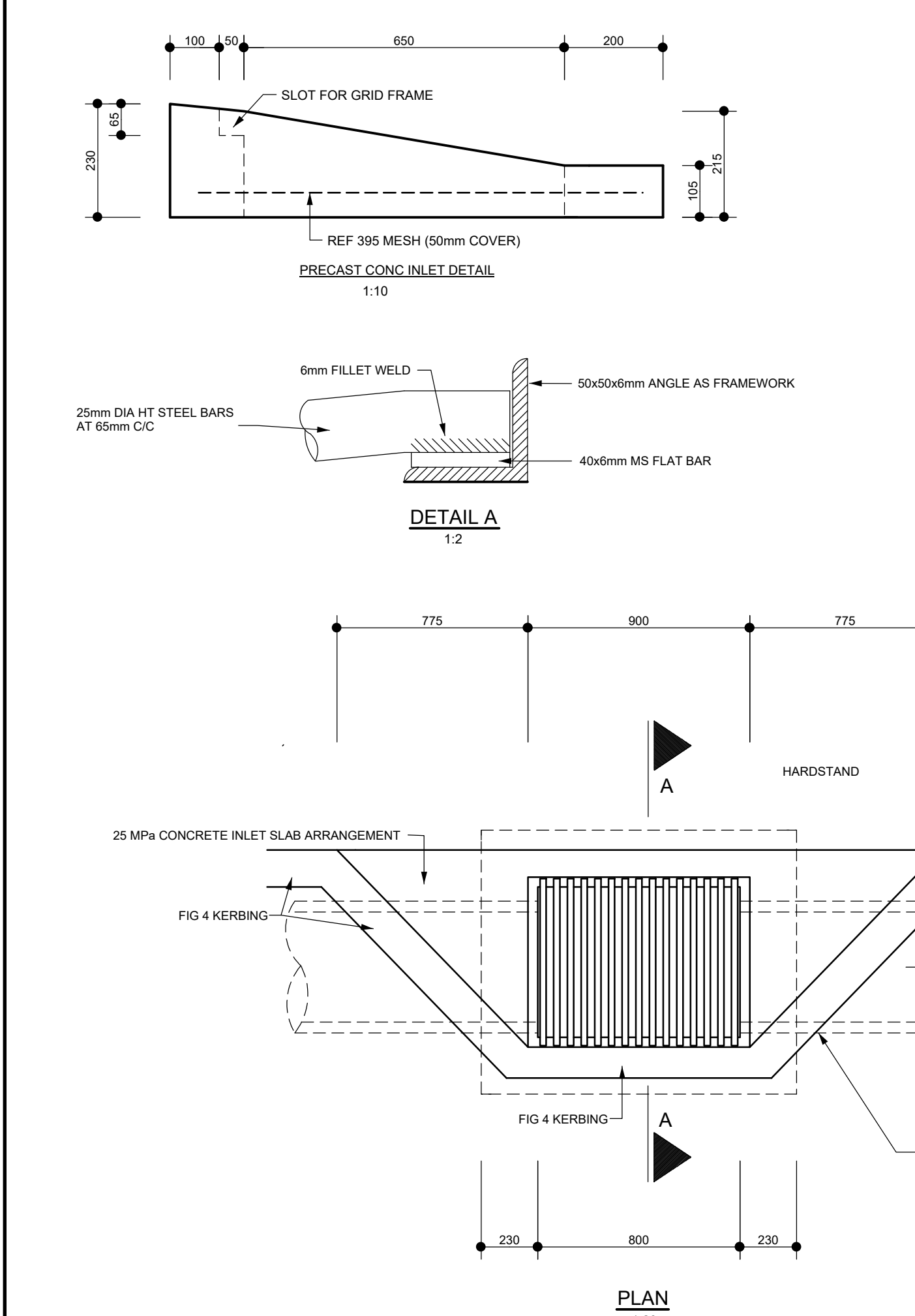


DIMENSIONS FOR TRUST BLOCKS						PAYMENT QUANTITY
BEND	PIPE SIZE	B	L	H	h	m3
11.25	75	300	300	175	175	0.02
	100	300	400	200	200	0.03
	150	300	450	250	250	0.04
	200	300	600	300	300	0.06
22.5	75	300	400	175	175	0.02
	100	300	450	200	200	0.03
	150	300	650	300	250	0.06
	200	340	850	400	300	0.10
45	75	300	450	200	175	0.03
	100	300	600	300	300	0.06
	150	340	850	450	350	0.13
	200	440	1100	600	400	0.24
90	75	300	600	350	275	0.06
	100	320	800	450	300	0.10
	150	440	1100	700	350	0.26
	200	620	1550	800	400	0.63
END CAP	75	300	700	350	275	0.07
	100	360	900	450	300	0.08
	150	560	1400	700	350	0.41
	200	720	1800	900	400	0.84

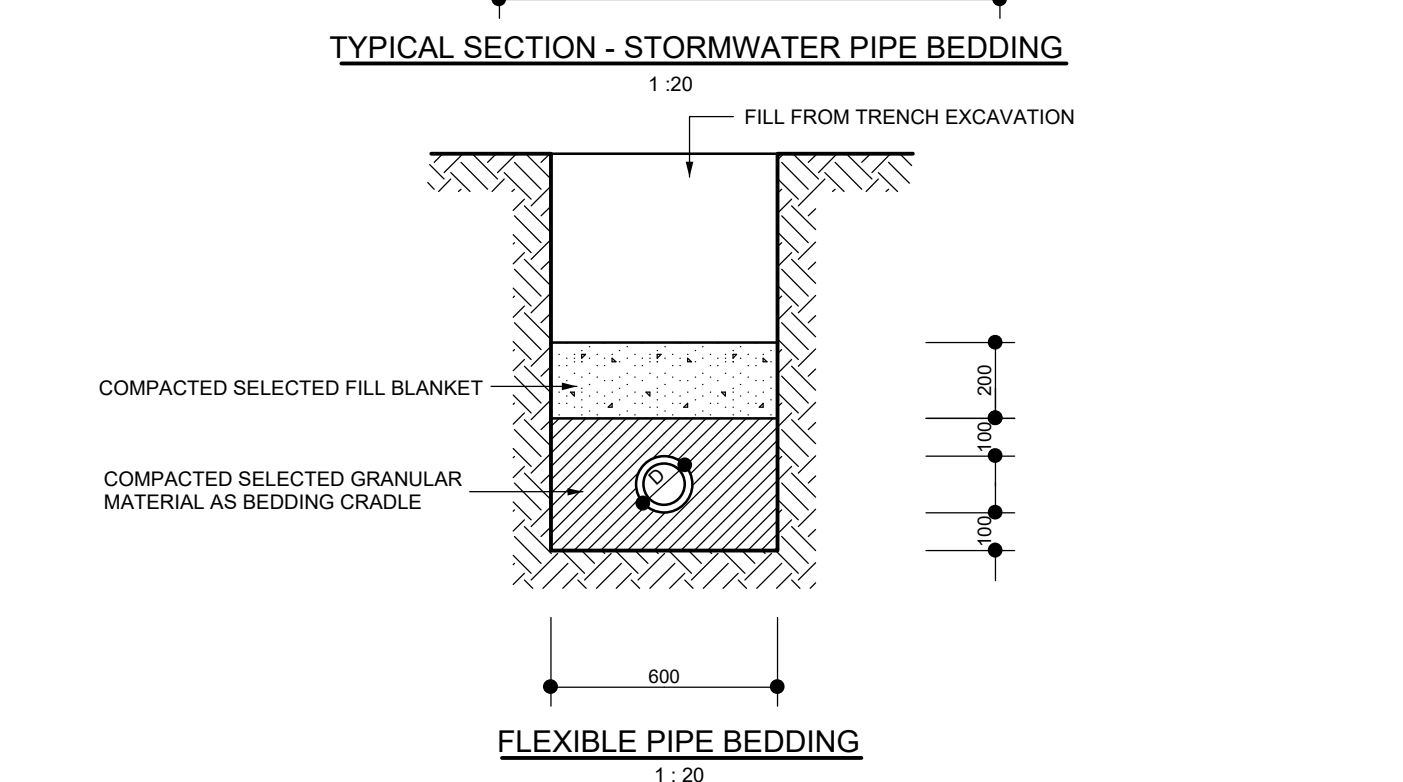
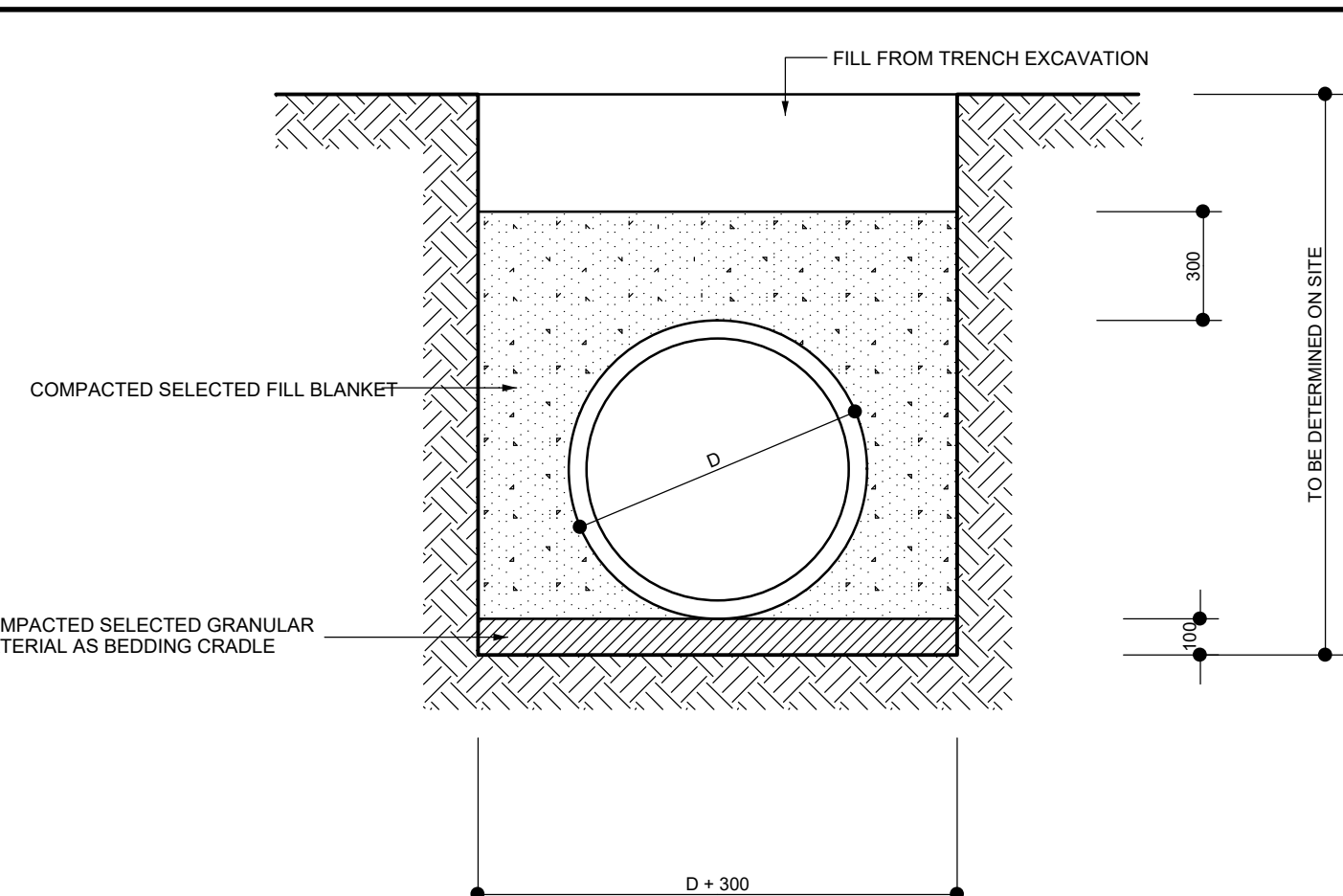
THRUST BLOCK



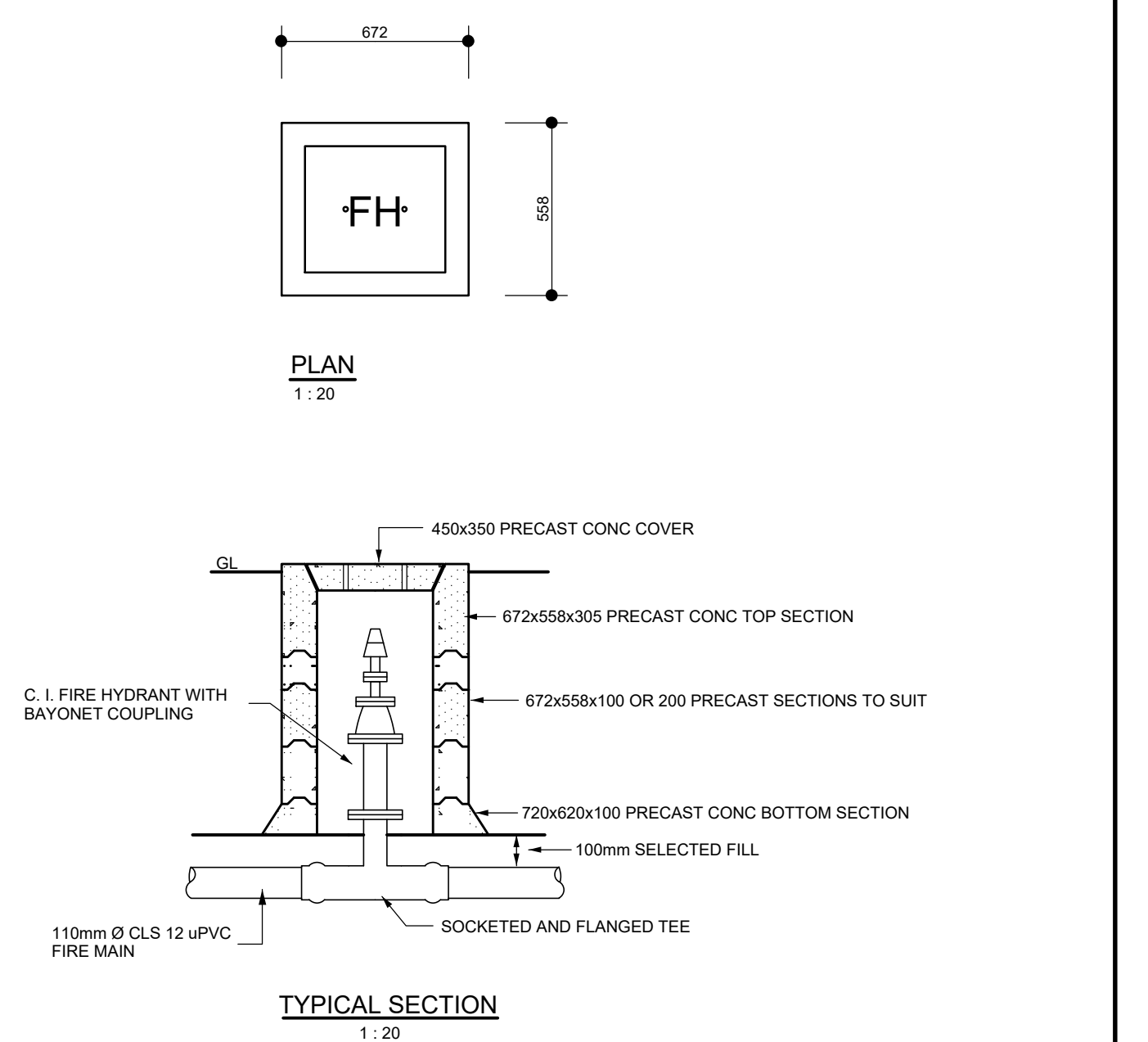
GATE VALVE AND CHAMBER



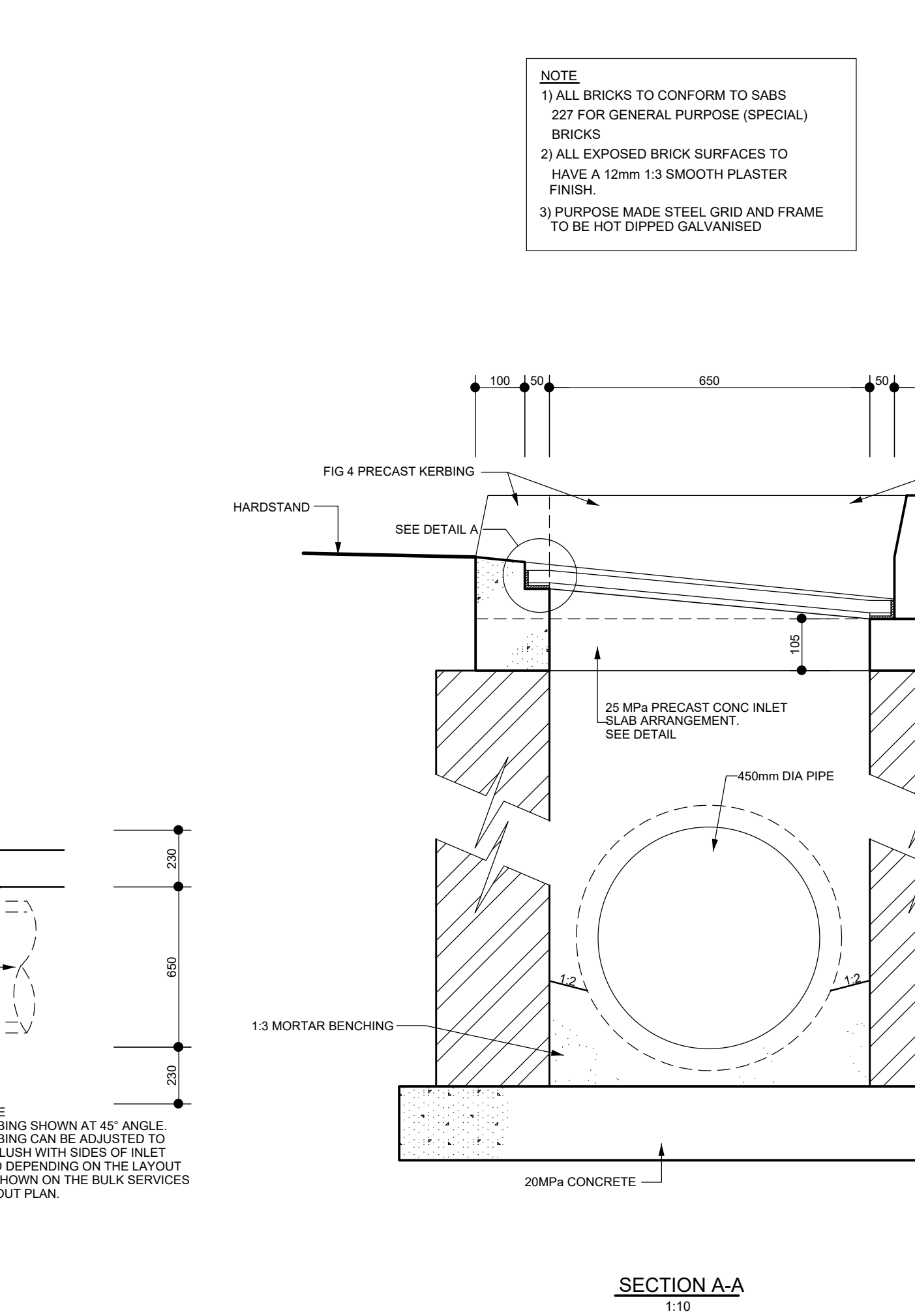
STORMWATER CATCHPIT TYPE A



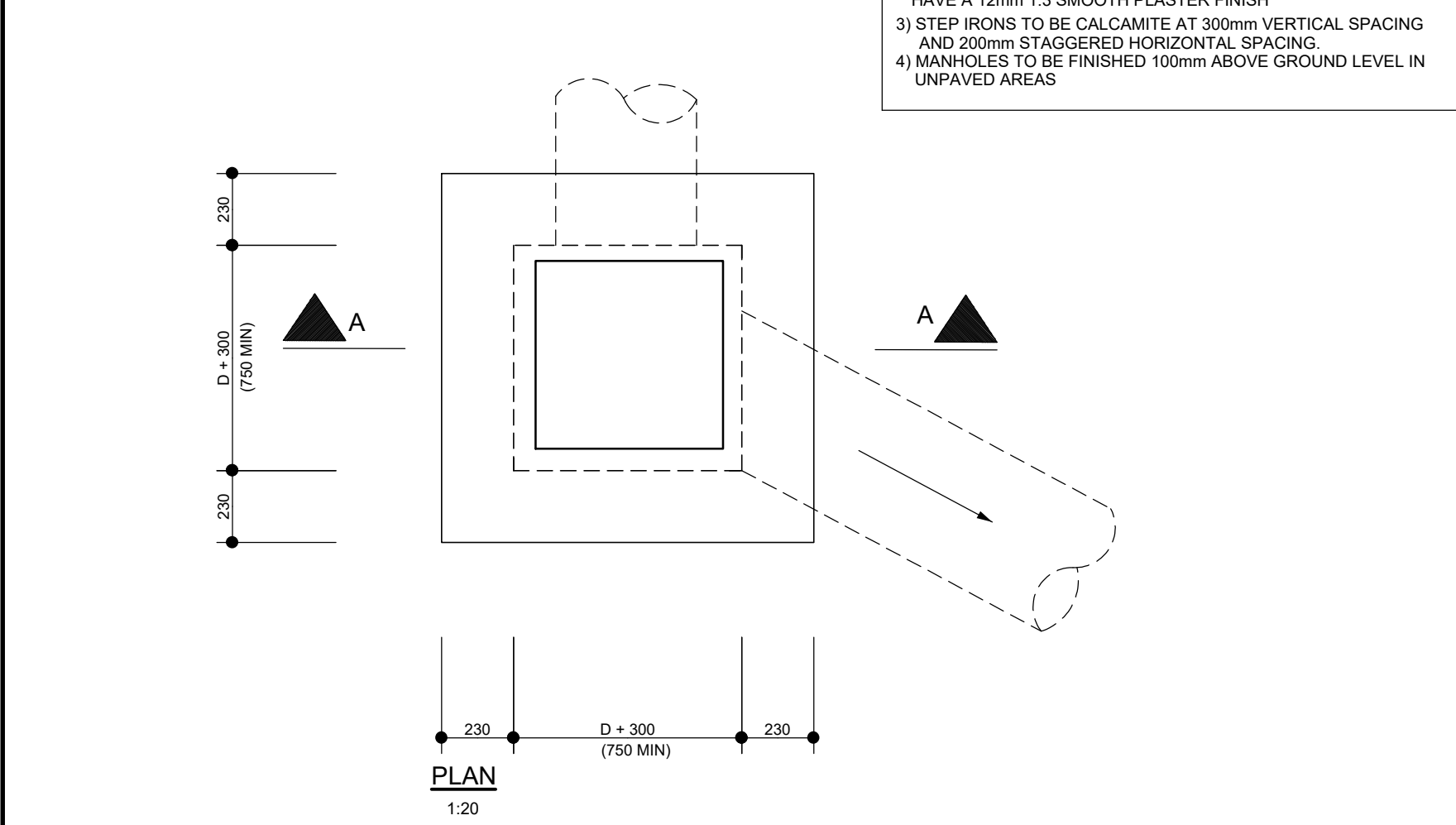
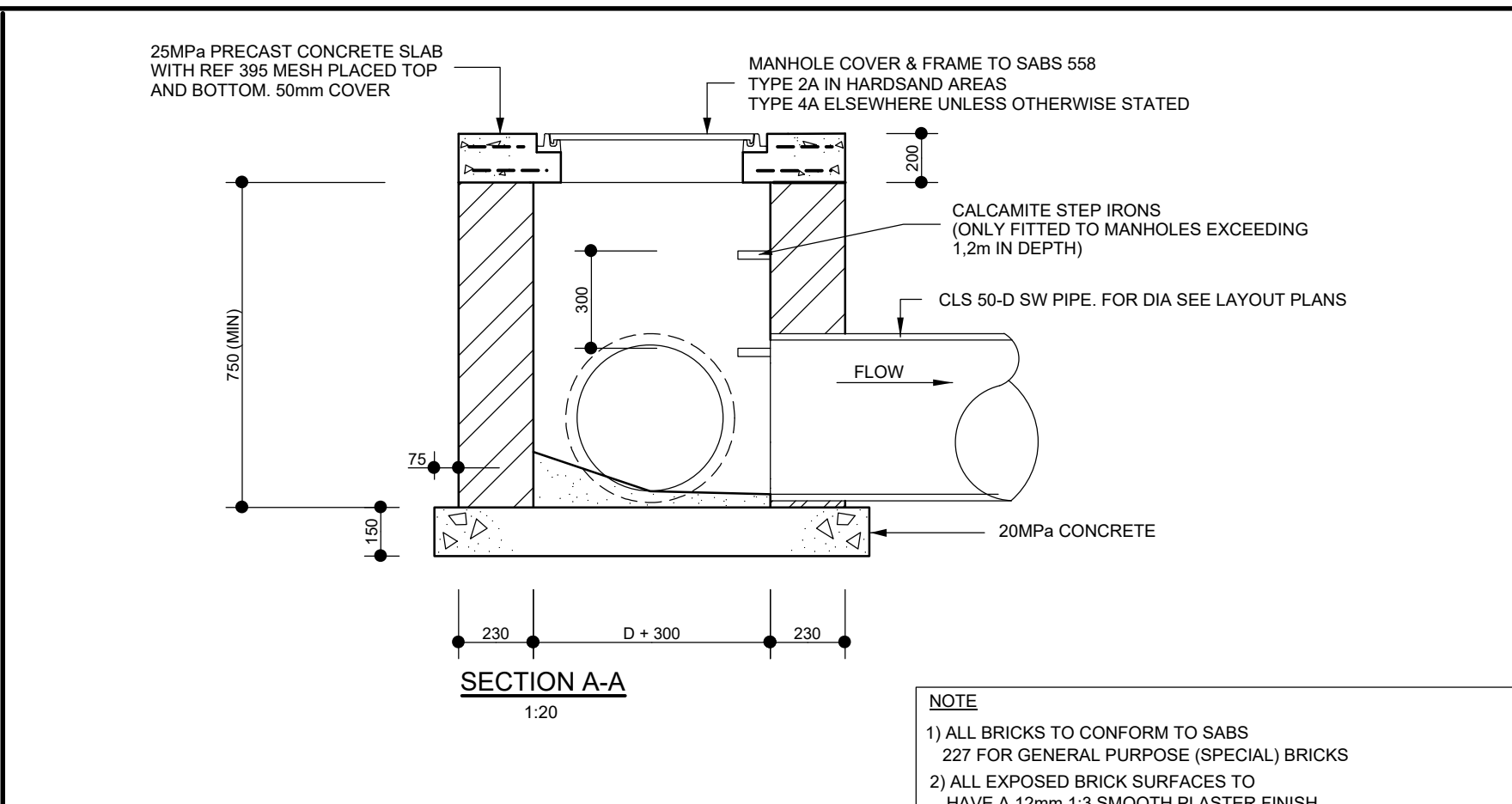
PIPE BEDDING DETAILS



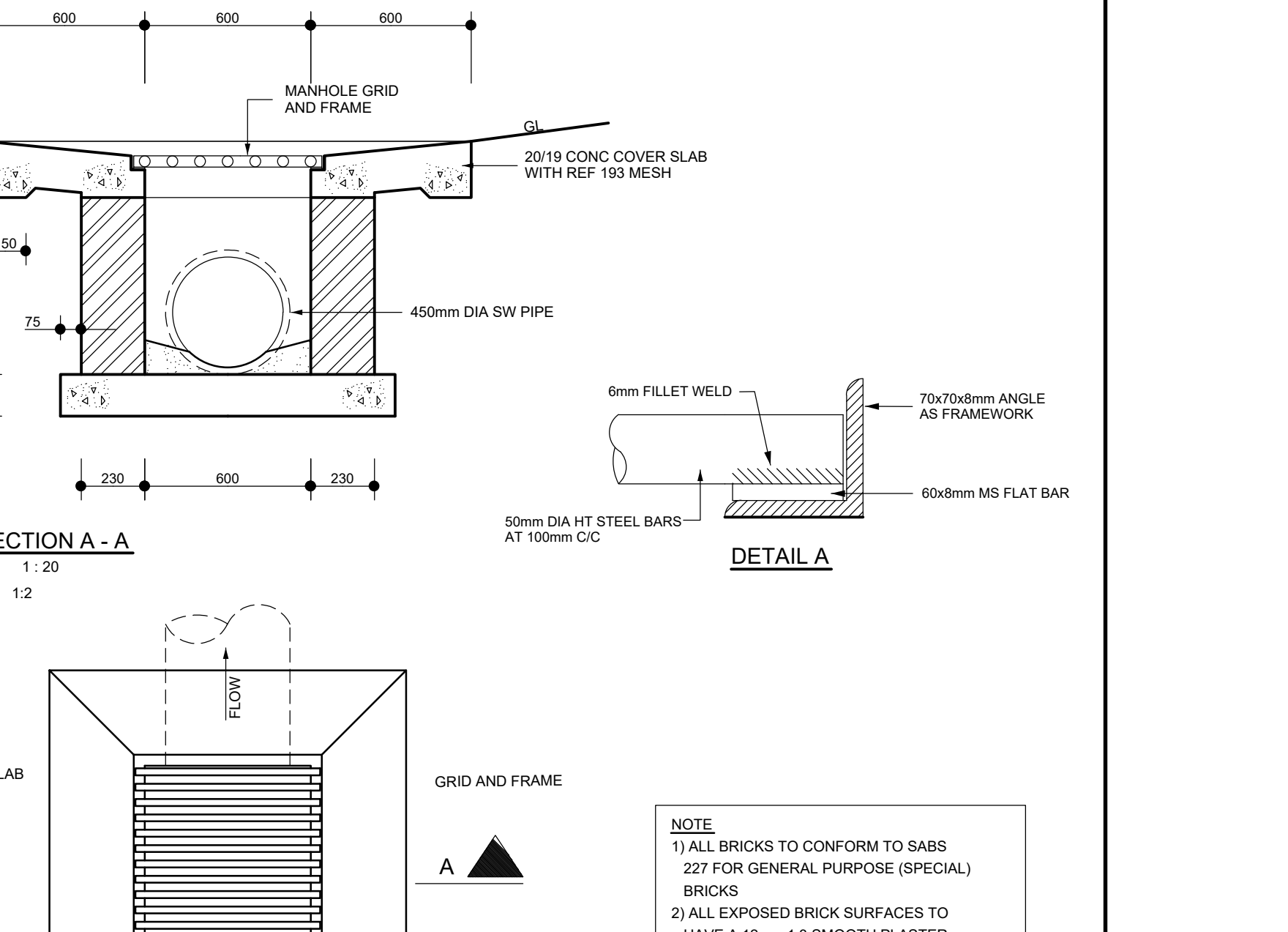
HYDRANT VALVE AND CHAMBER (IF REQUIRED)



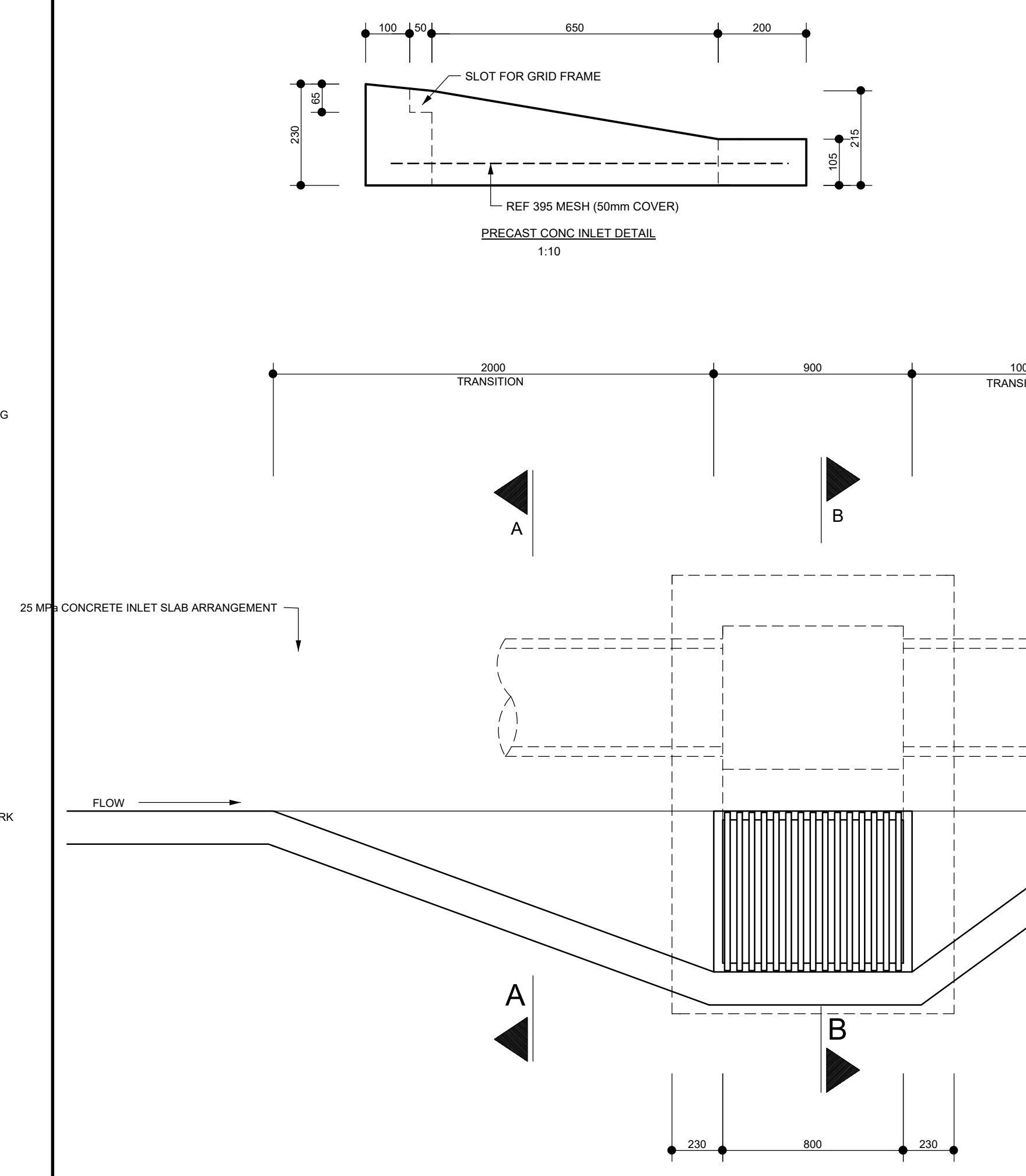
STORMWATER CATCHPIT TYPE A



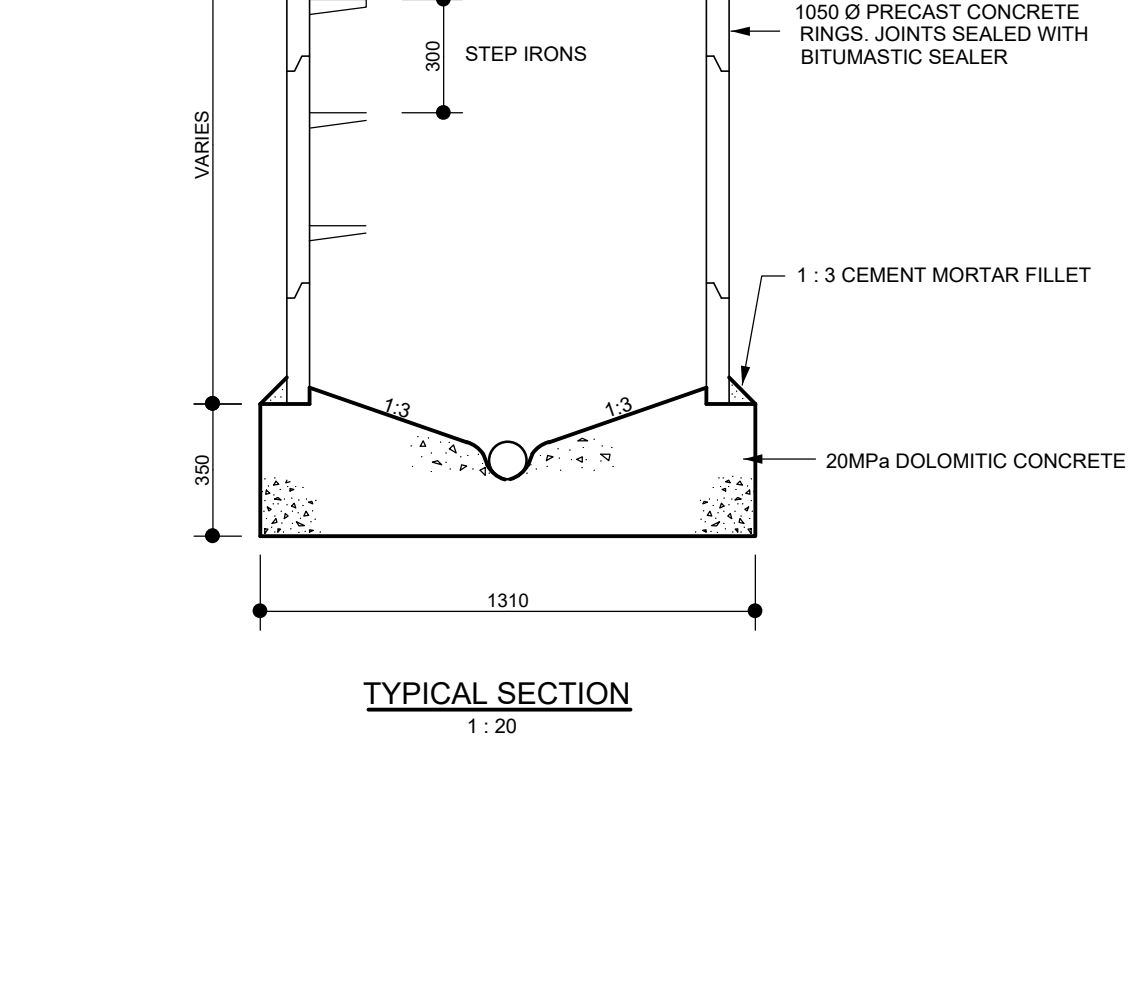
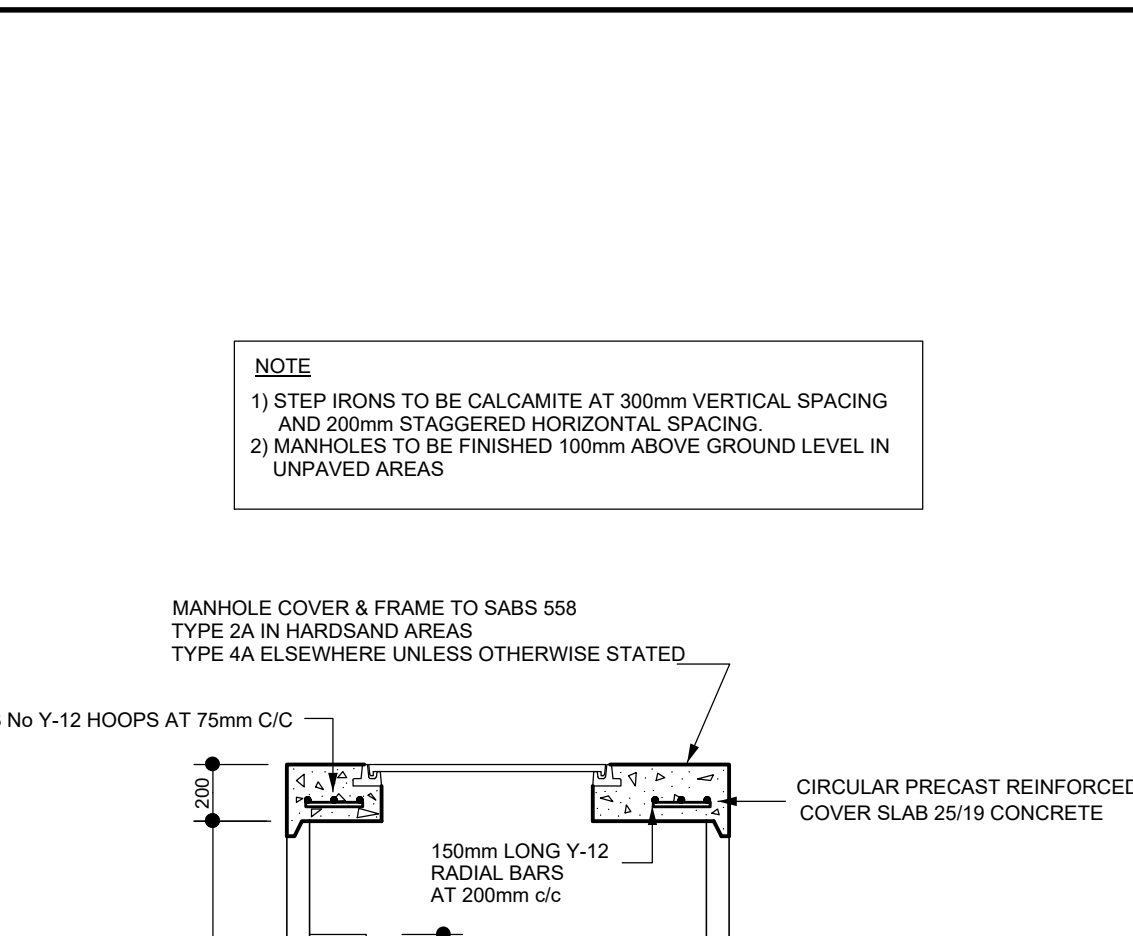
STORMWATER MANHOLE DETAIL



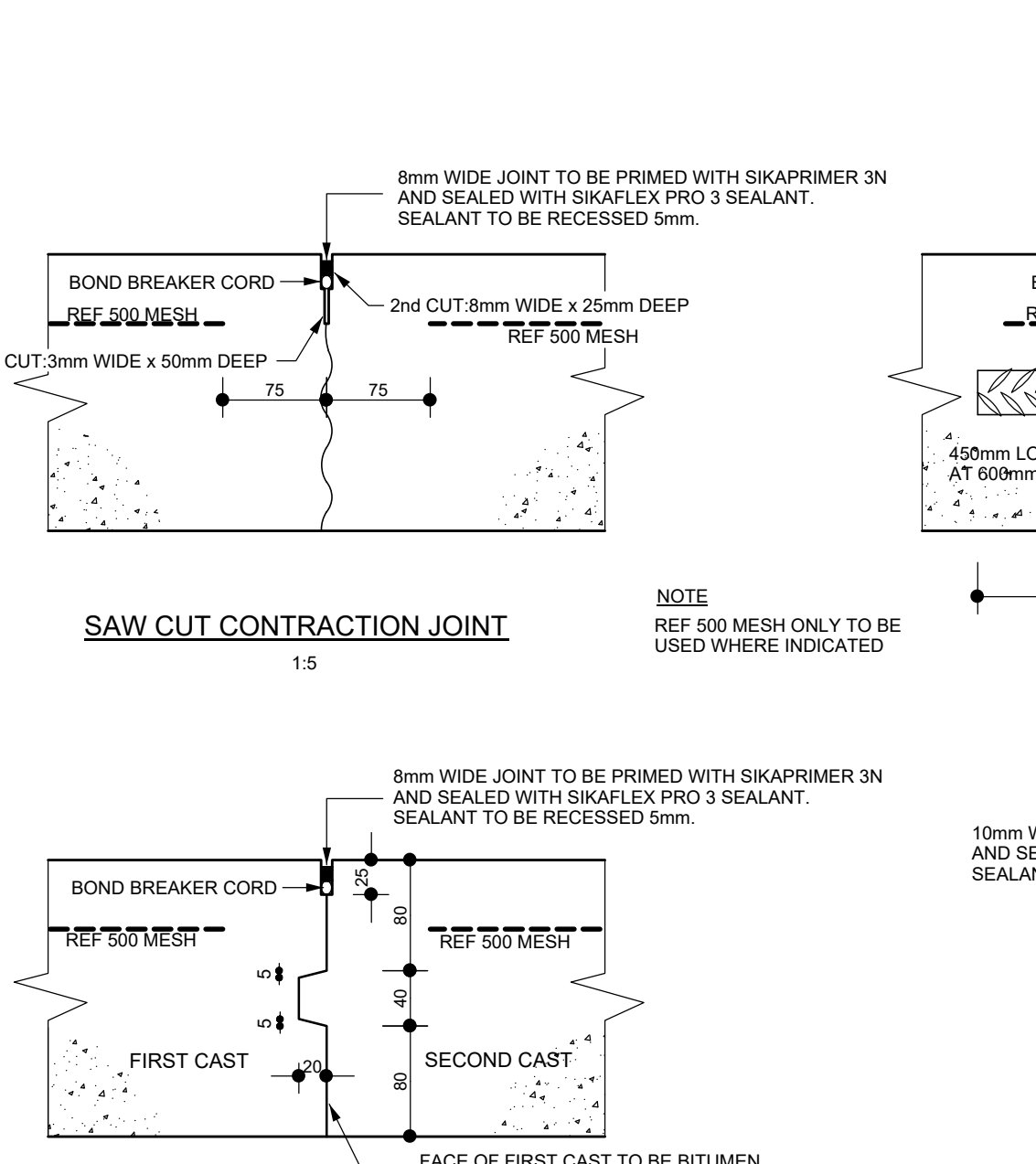
STORMWATER CATCHPIT TYPE B



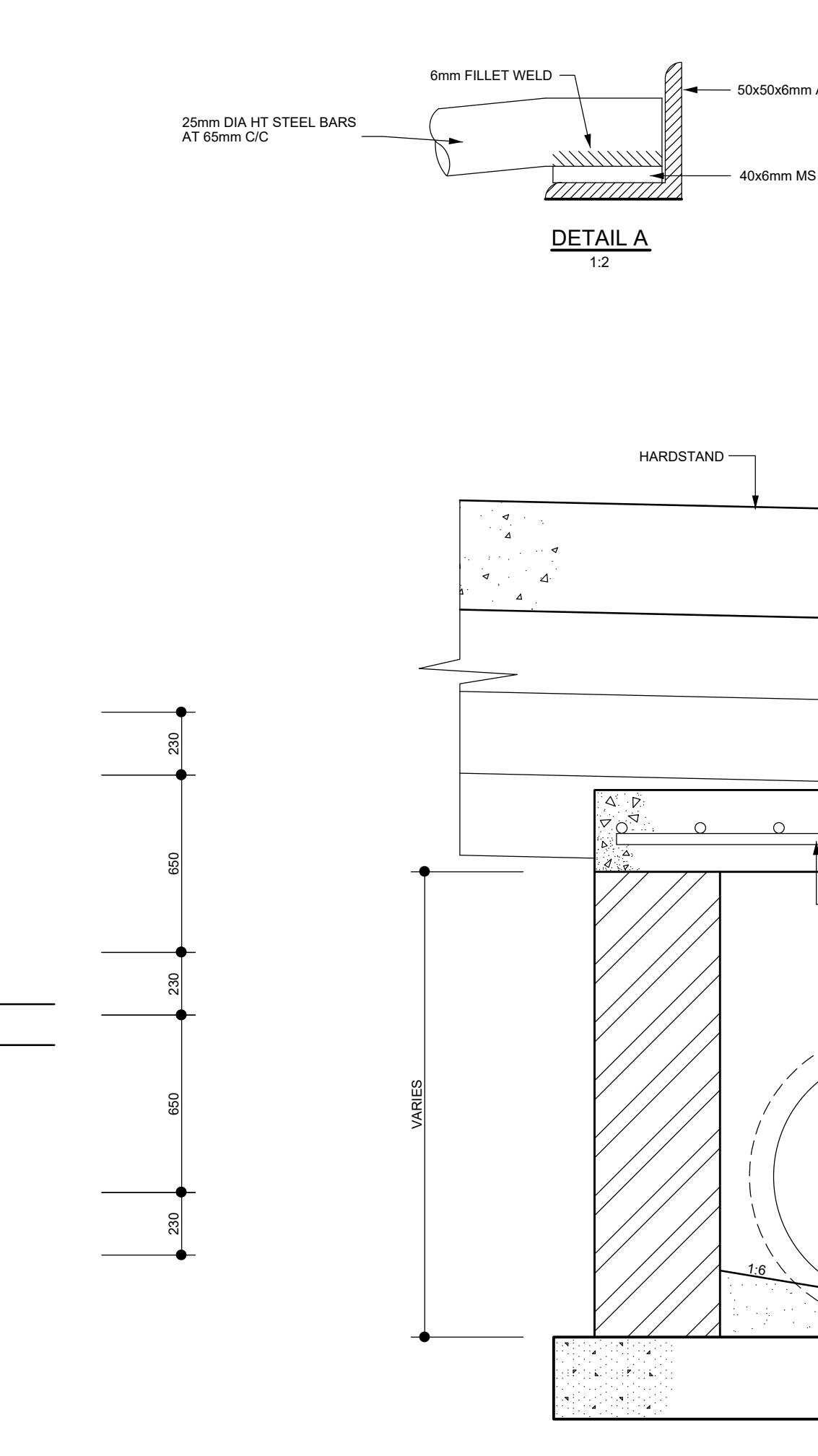
STORMWATER CATCHPIT TYPE C DETAIL



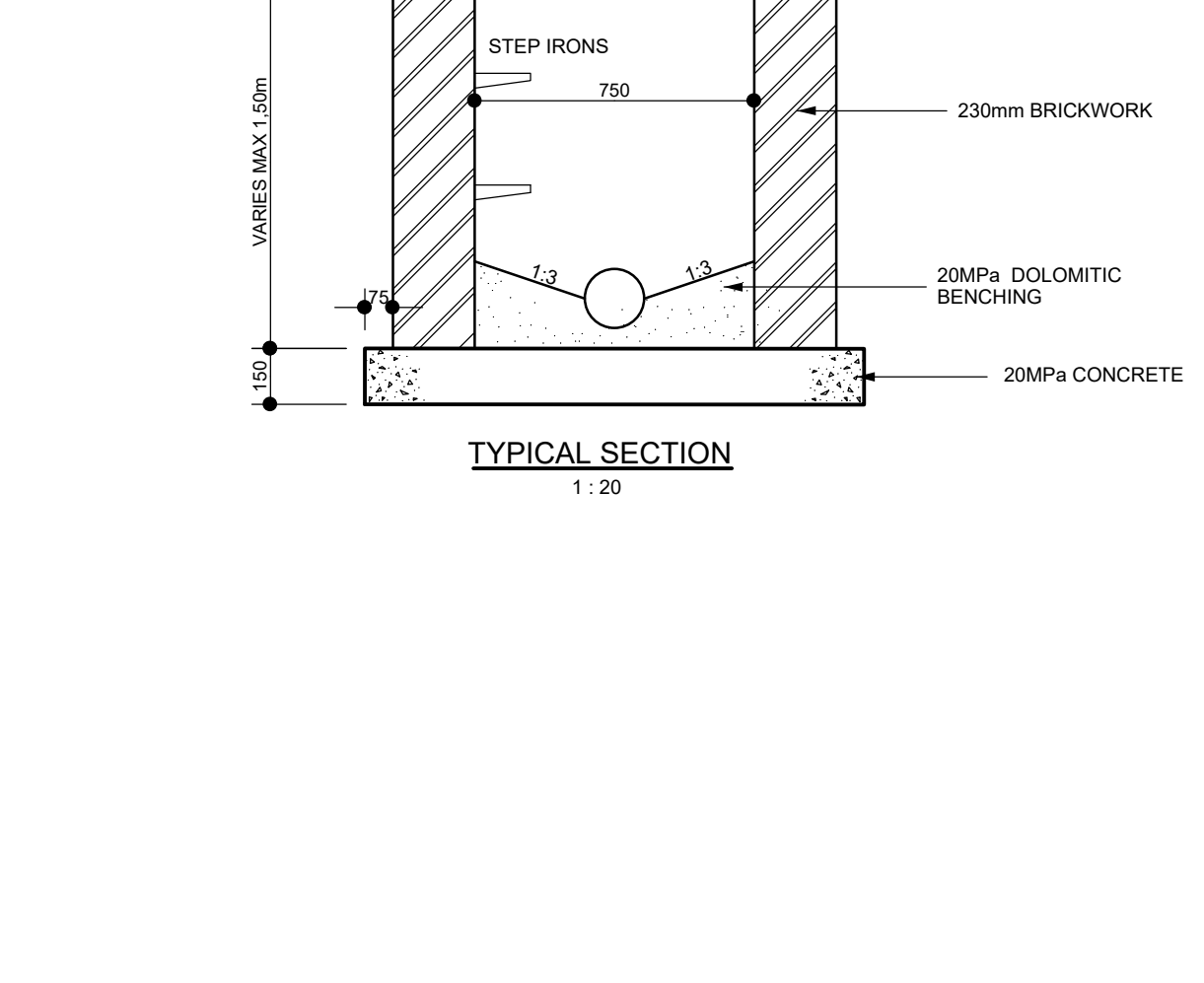
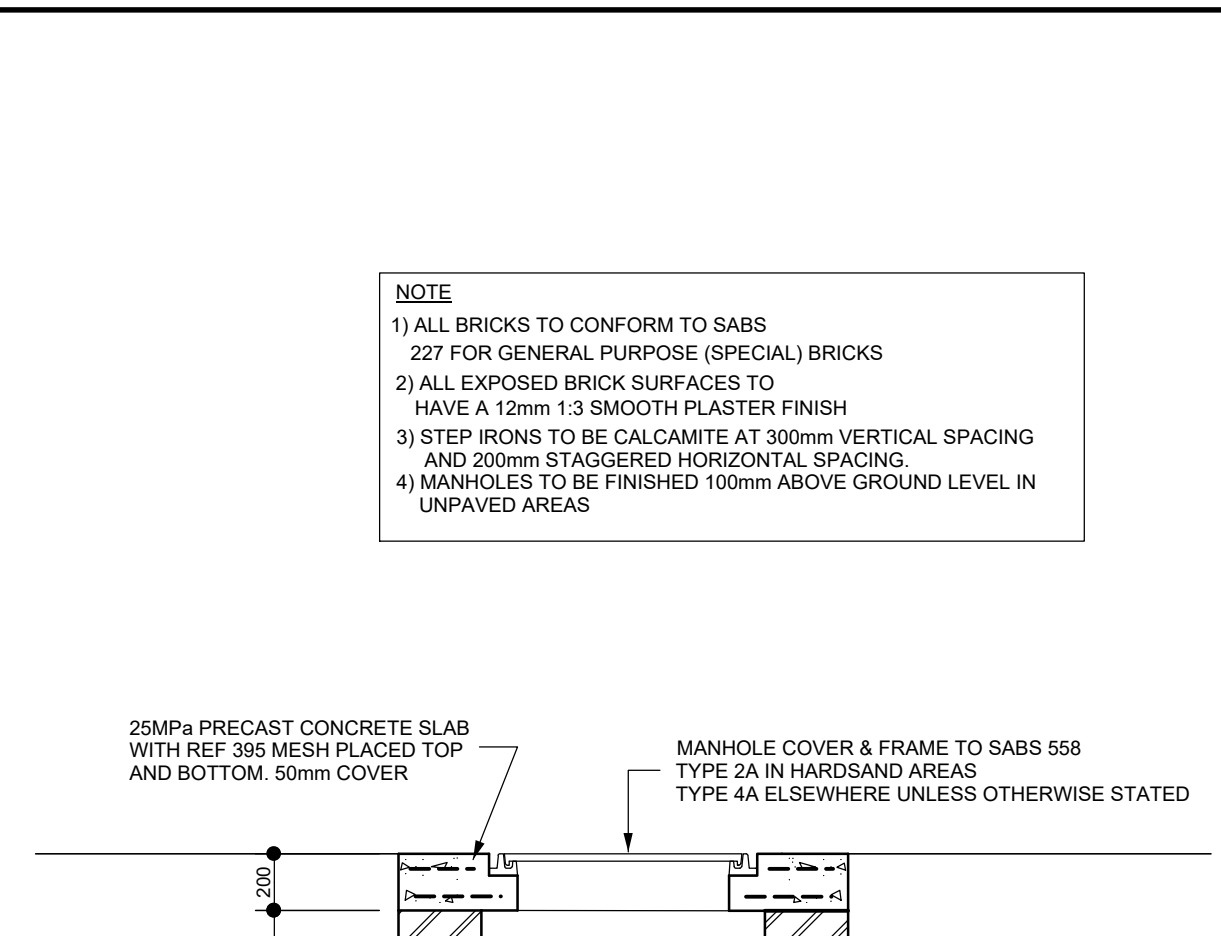
SEWER MANHOLE - OVER 1500mm



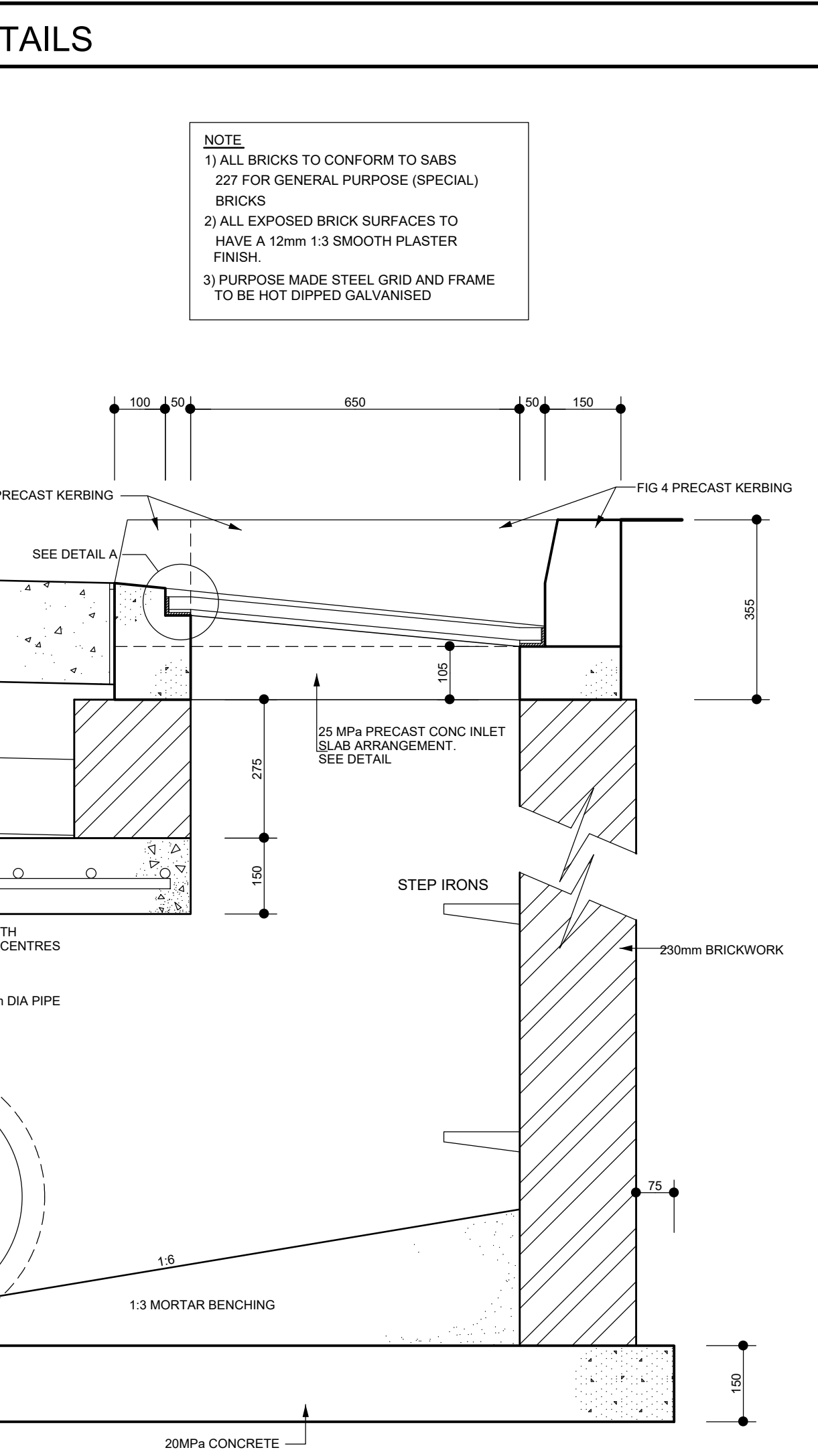
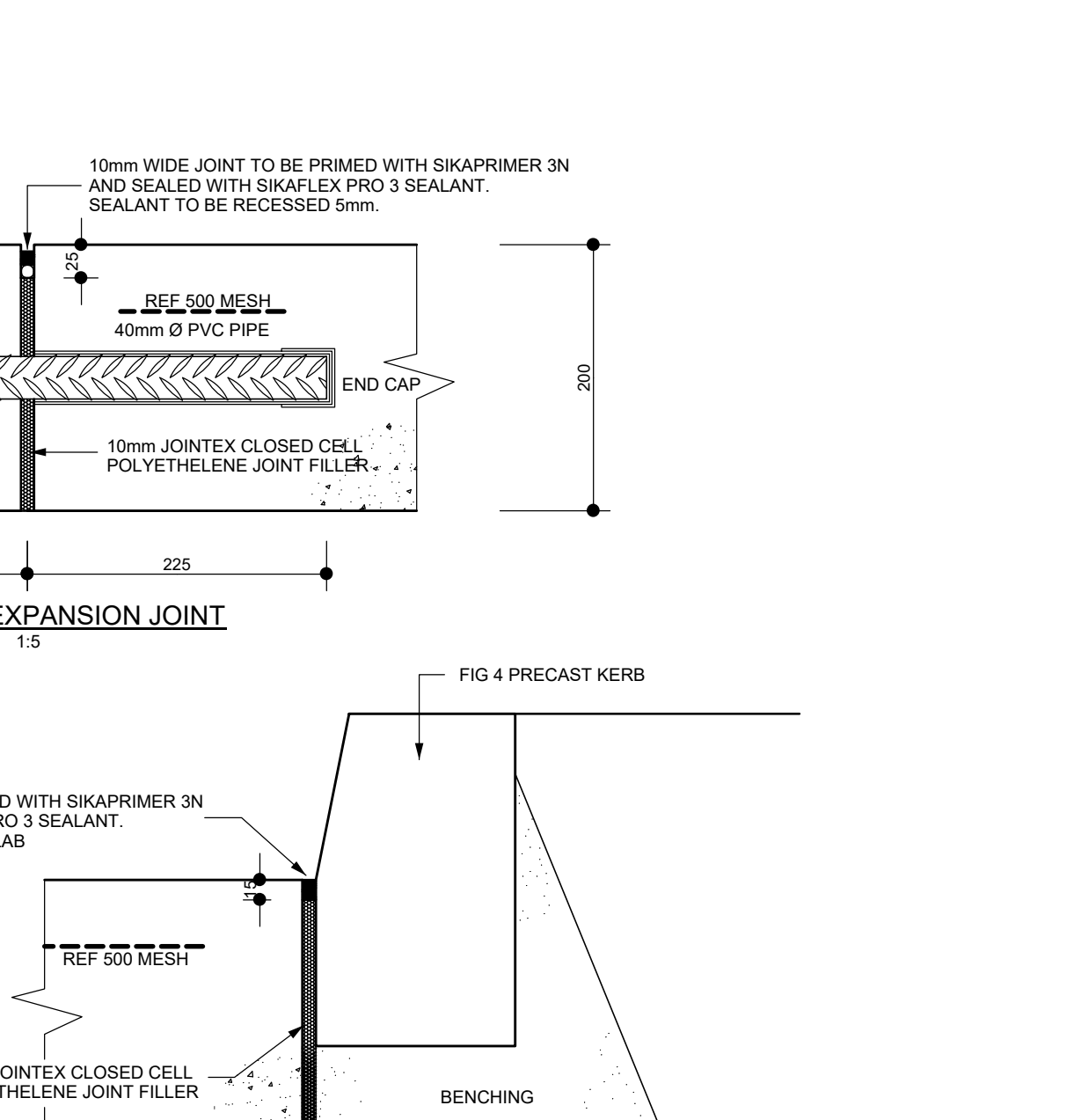
CONCRETE HARDSTAND JOINTING DETAILS



STORMWATER CATCHPIT TYPE C DETAIL



SEWER MANHOLE - UP TO 1500mm



SEWER MANHOLE - UP TO 1500mm

Note:
Do not scale from this drawing. Check all given dimensions and site dimensions and/or levels prior to any pricing, manufacture or construction of any item.
Greater detail drawings take preference.
Please report any discrepancies to the architect.

The copyright for the design and information on this drawing is vested and may not be copied or reproduced without the written authority of the Architects.

Revision Description

Contractor

PROFESSIONAL TEAM

Project Managers :

LUKHOZI Consulting Engineers
Kwa-Lukhozi, Quartette Drive, Seaborn, East London, 5201
P O Box 15004, Tecoma, 5214

Tel: 043 721 1321
Fax: 086 663 7202
Cell: 083 232 0011
Email: info@lukhozi.co.za
Web: www.lukhozi.co.za

Architect :

S+P Architects
123 Western Av, Vincent, East London, 5207

Tel: +27 43 726 9327
Fax: +27 43 726 9327
Email: info@s+p.co.za
Web: www.s+p.co.za

Quantity Surveyors :

Invelo Quantity Surveyors
51 Beaconsfield Drive, Seaborn, East London, 5201
Tel: 043 748 5209
Fax: 043 748 5203
Email: mika@invelo.co.za

Civil Engineers :

HSC CONSULTING
STRUCTURAL AND CIVIL ENGINEERS
18 St Marks Road, Seaborn, East London, 5201

Tel: +27 43 743 9528
Fax: +27 43 743 5347
Email: andrew@hsc.co.za
Web: www.hsc.co.za

Structural Engineers :

HSC CONSULTING
STRUCTURAL AND CIVIL ENGINEERS
18 St Marks Road, Seaborn, East London, 5201

Tel: +27 43 743 9528
Fax: +27 43 743 5347
Email: andrew@hsc.co.za
Web: www.hsc.co.za

Electrical Engineers :

CARIFRO ELECTRICAL & MECHANICAL CONSULTING ENGINEERS
4-6 Belgravia Road, Seaborn, East London, 5201

Tel: +27 43 743 8266
Fax: +27 43 743 0599
Email: info@carifro.com

Mechanical Engineers :

CARIFRO ELECTRICAL & MECHANICAL CONSULTING ENGINEERS
4-6 Belgravia Road, Seaborn, East London, 5201

Tel: +27 43 743 8266
Fax: +27 43 743 0599
Email: info@carifro.com

Client :

EAST LONDON IDZ
P O Box 5458, Greenfields East London, 5208

Lower Chester Road, Sunnyridge, East London, 5201

Tel: +27 43 702 8200
Fax: +27 43 738 6405
Email: info@elidz.co.za

INFORMATION

Project Name / Client

PROPOSED FACTORY ON ERF 78060 EAST LONDON

Drawing Title

GENERAL DETAILS SHEET 1 OF 2

Drawing Originator

HSC CONSULTING

Checked By

AJS

Checked Date

2020.11.04

Drawn By

JDS

Drawn Date

2020.10.29

Approved By

Approval Date

ECSSA Number

Building Grid Reference

Scale

AS SHOWN

Job No

Discipline

Type

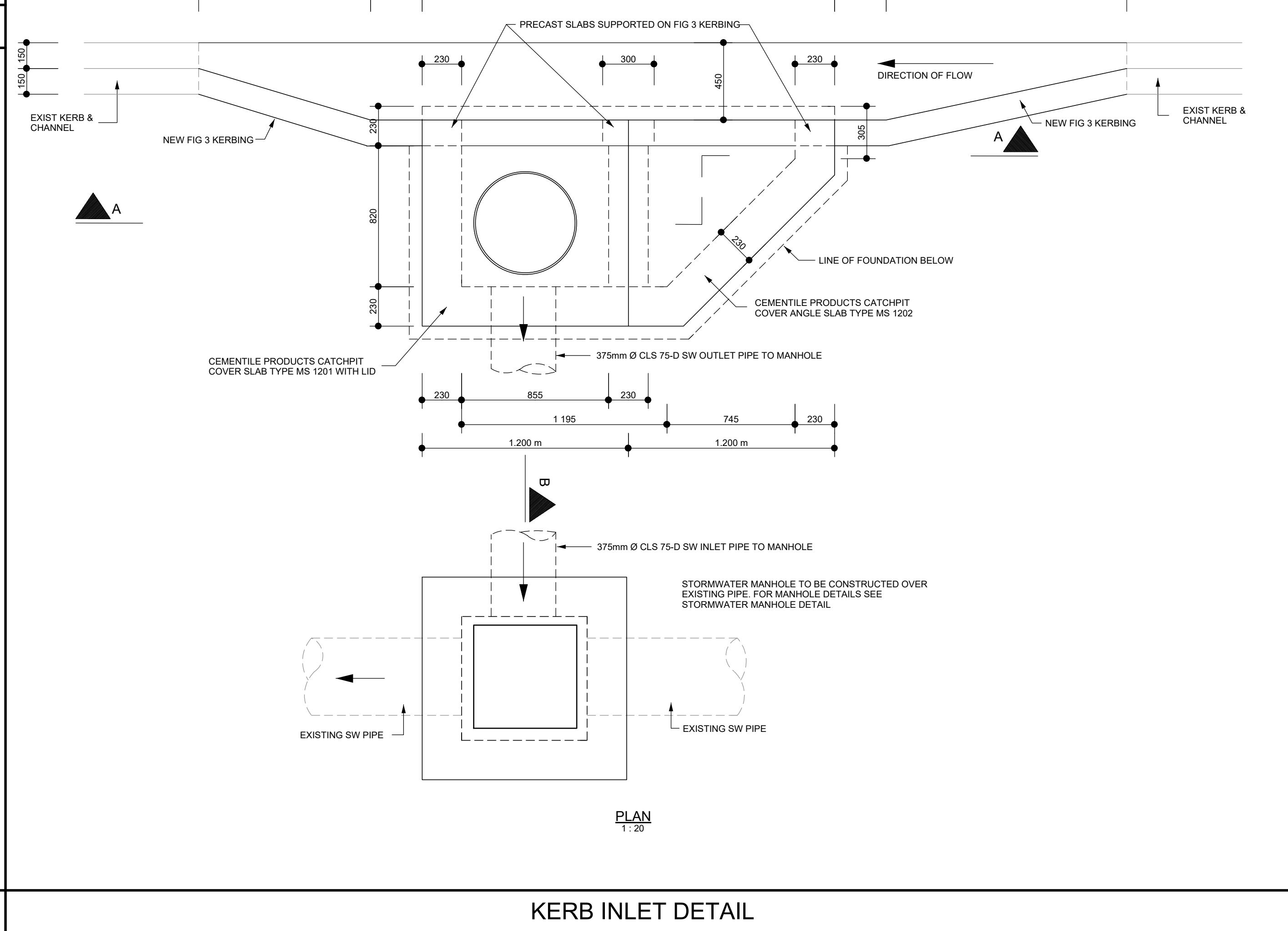
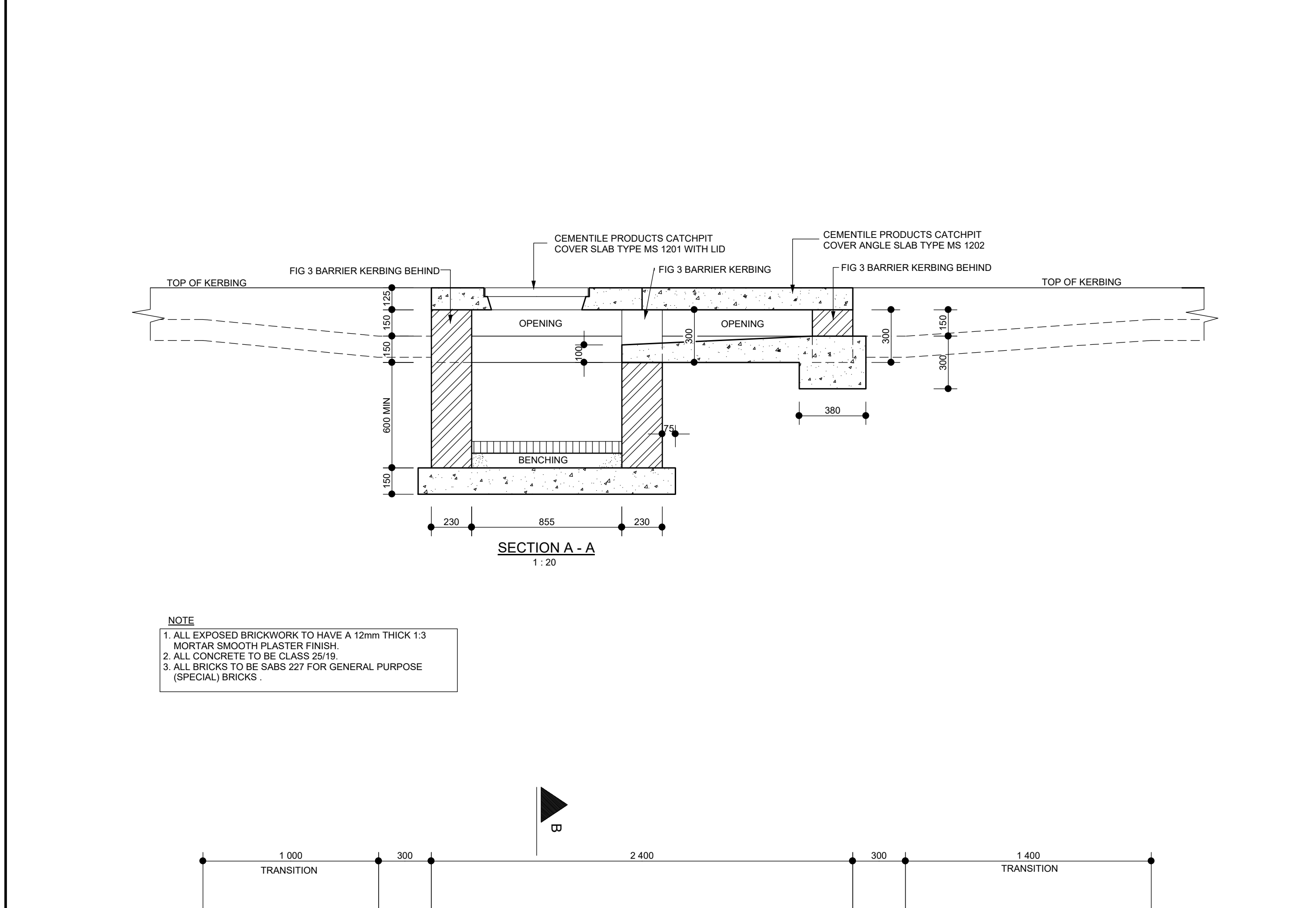
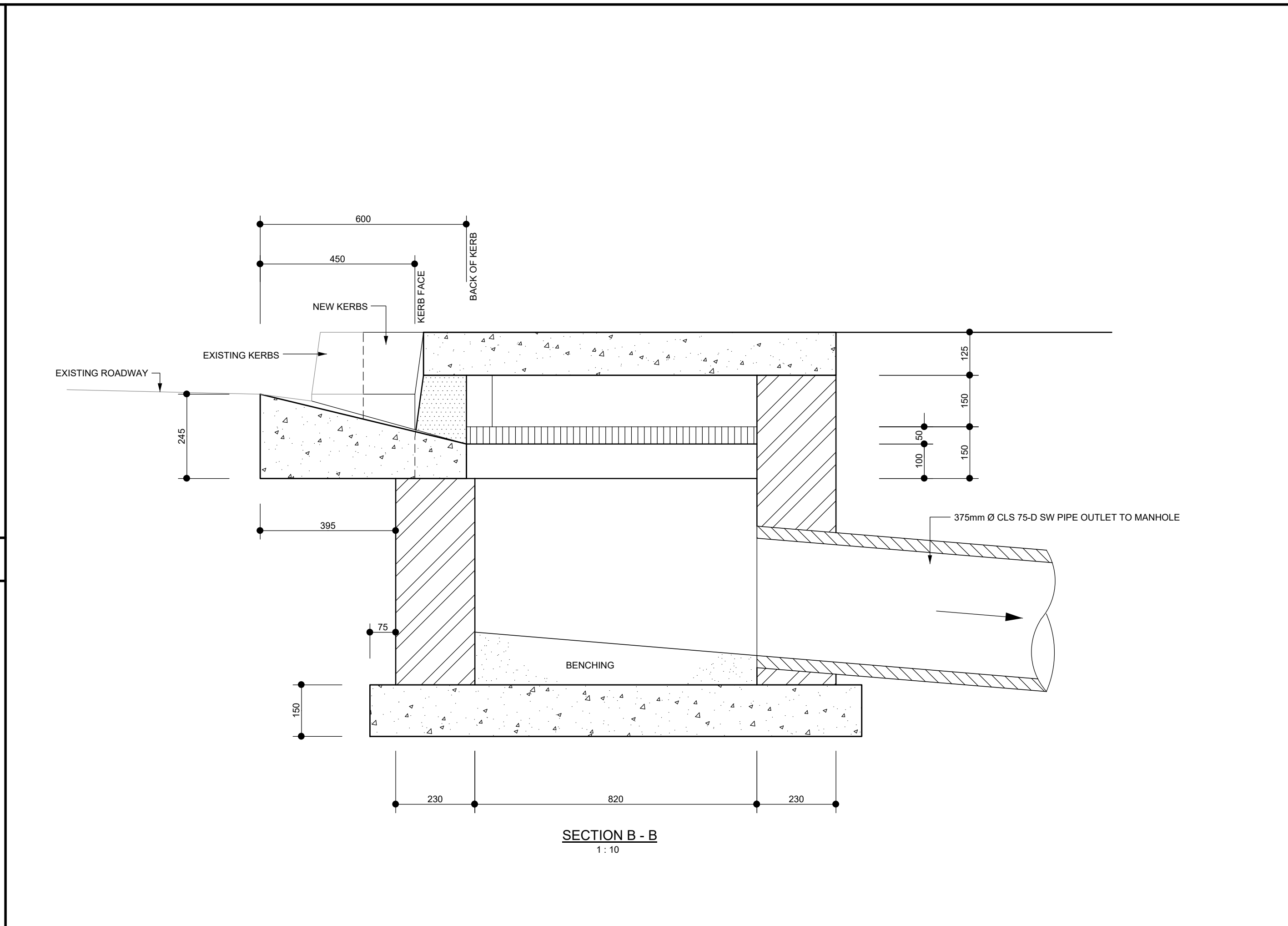
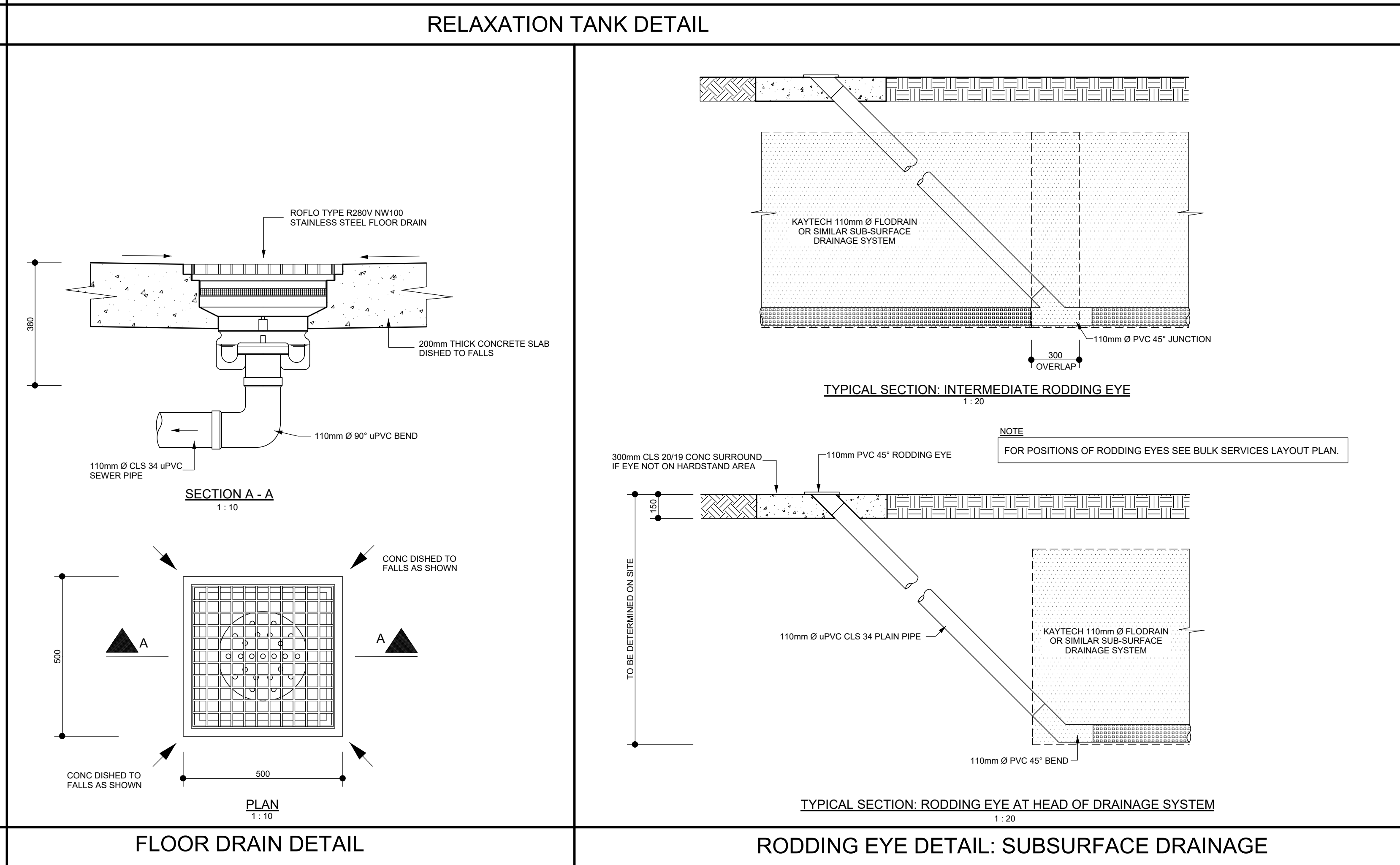
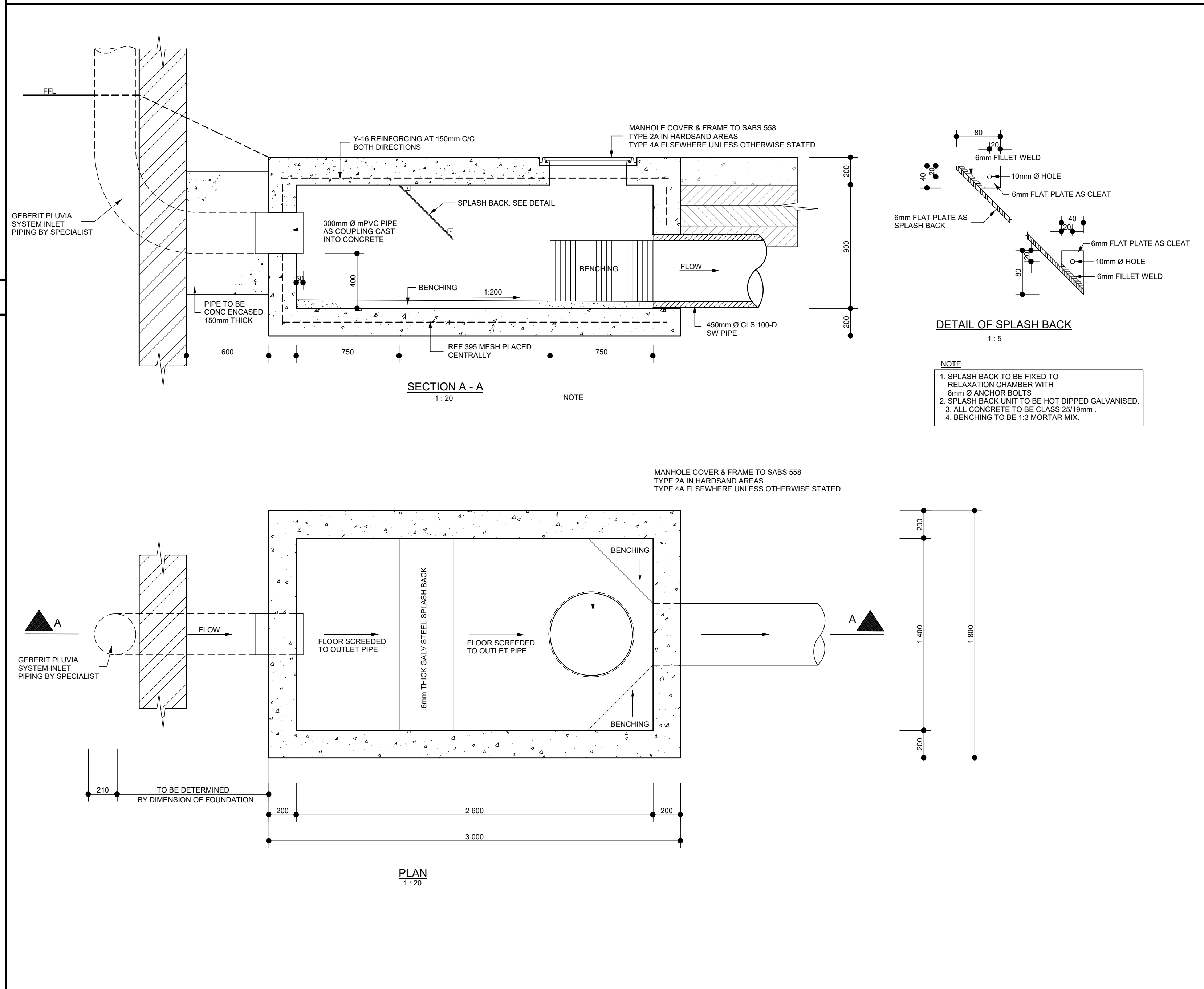
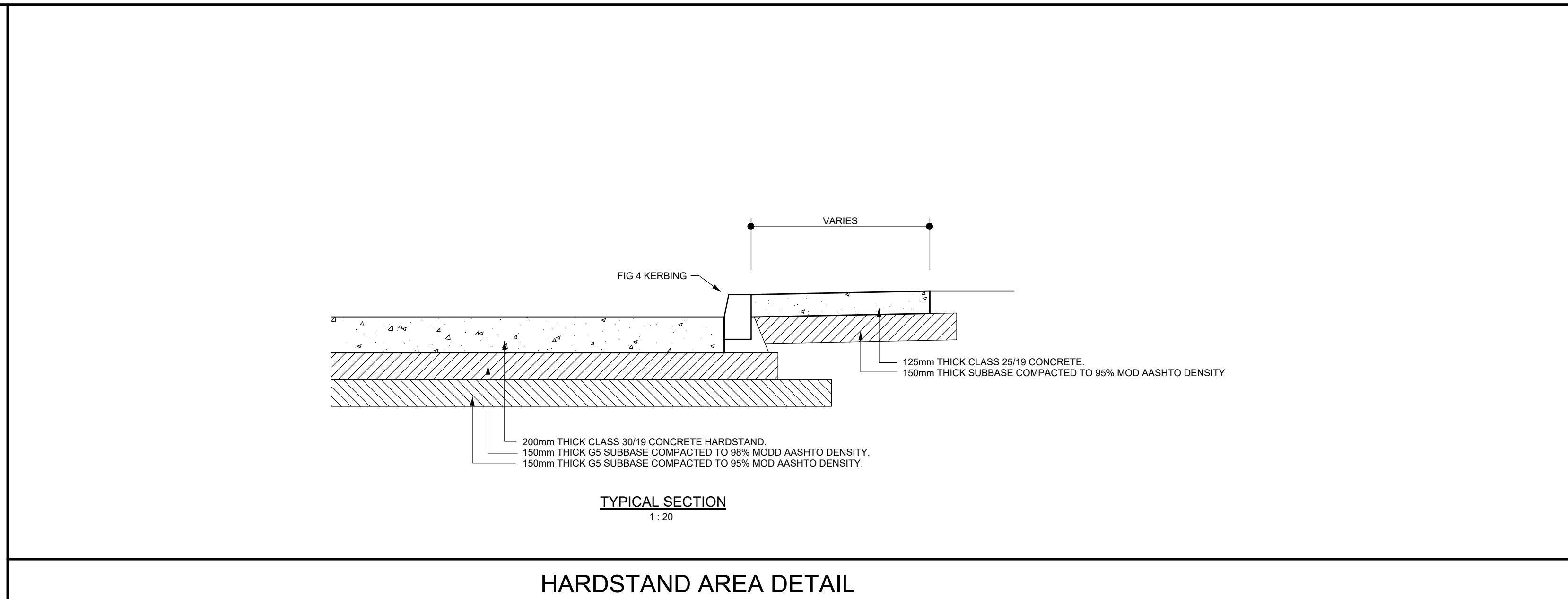
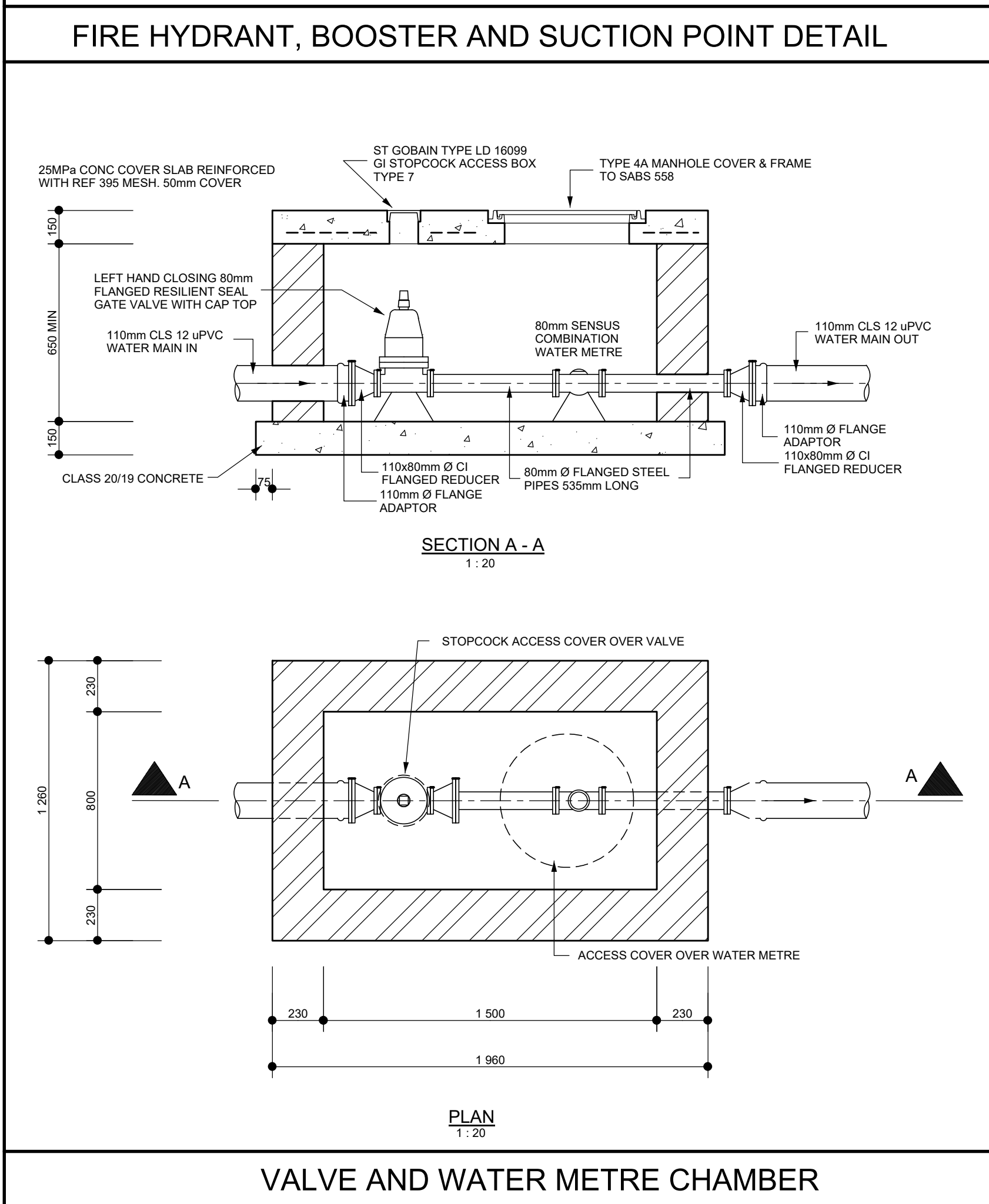
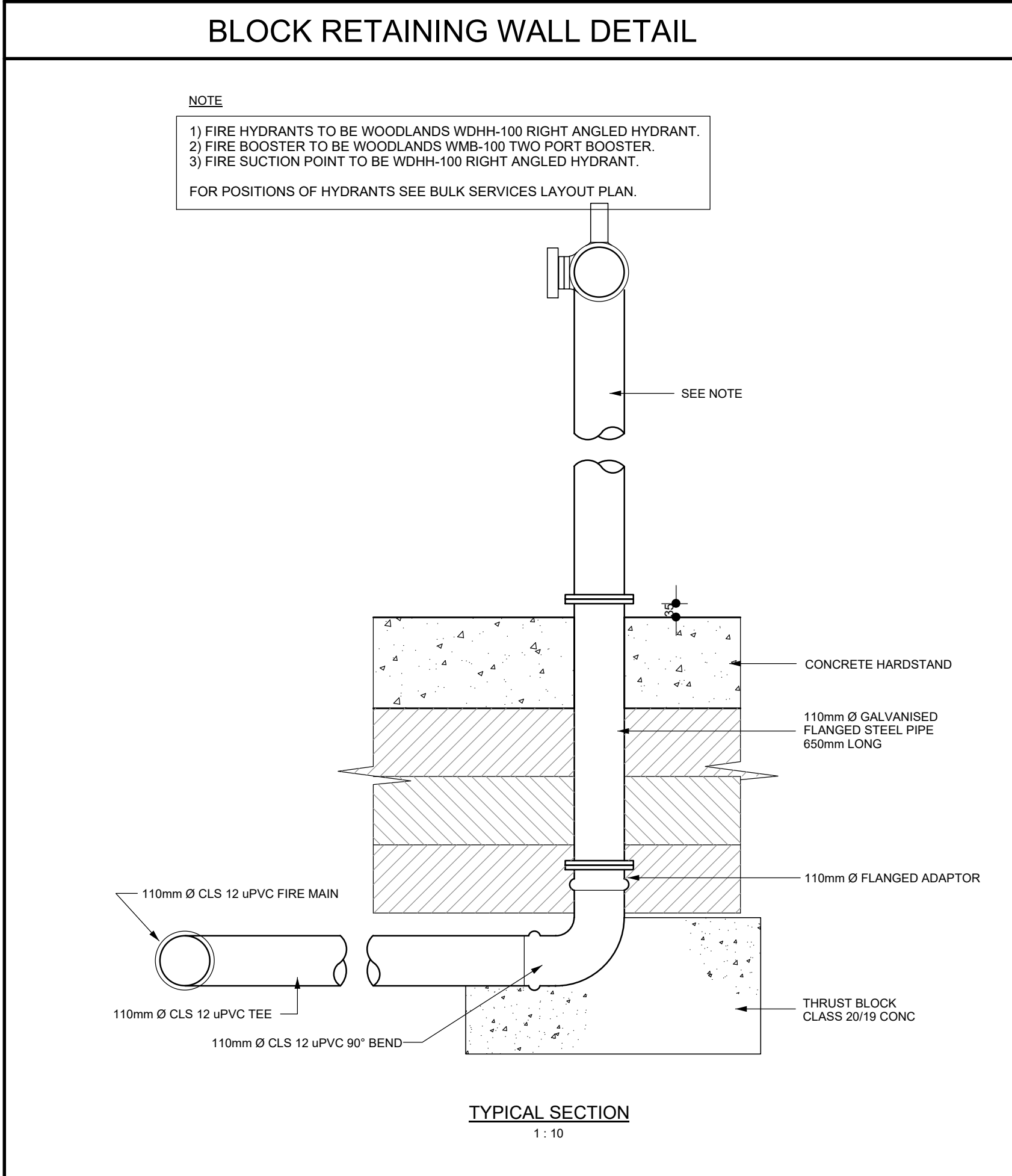
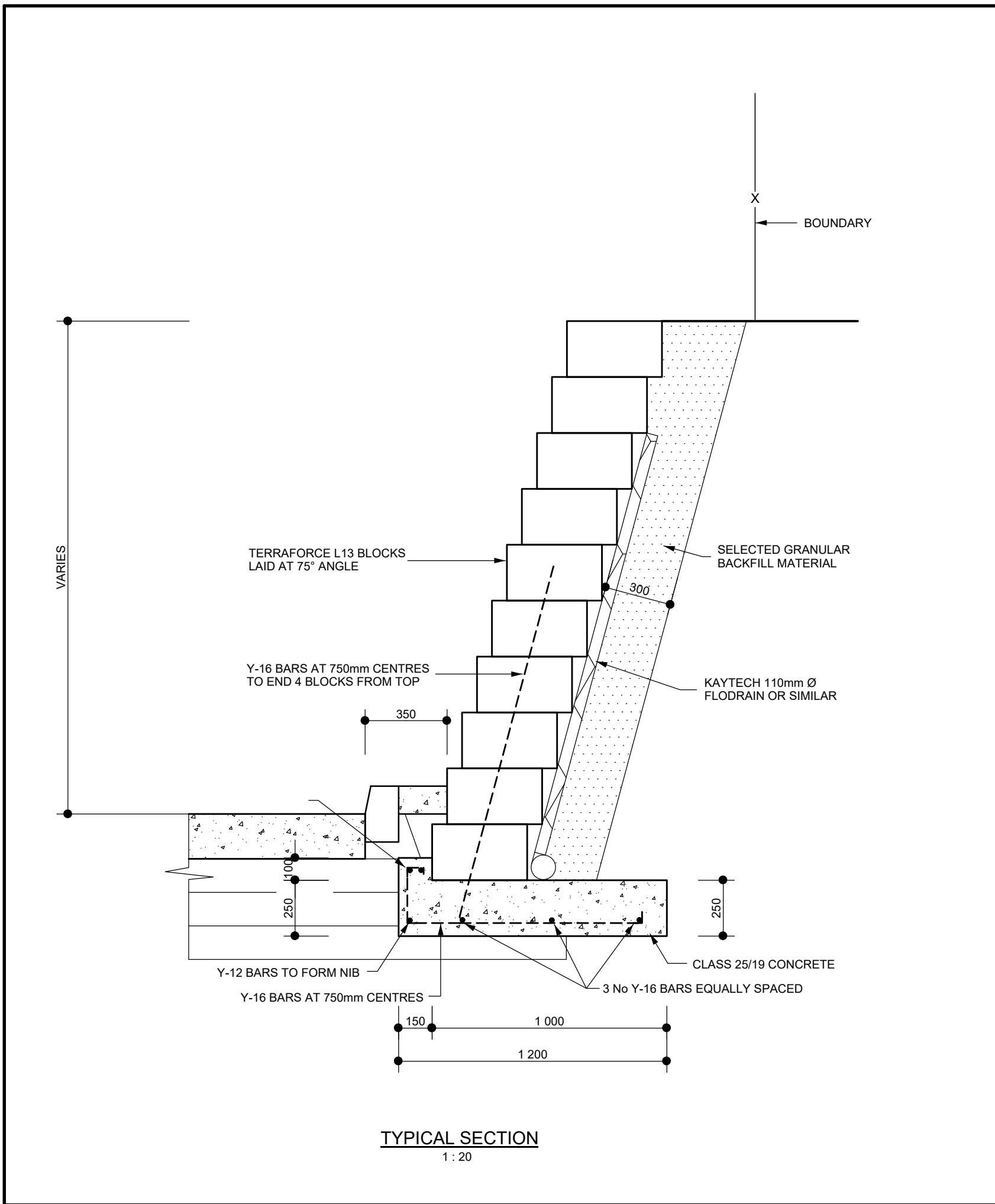
Drawing No

Revision

P1985 CIVIL

C03

01



Note:
Do not scale from this drawing. Check all given dimensions and site dimensions and/or levels prior to any pricing, manufacture or construction of any item.
Greater detail drawings take preference.
Please report any discrepancies to the architect.

The copyright for the design and information on this drawing is vested and may not be copied or reproduced without the written authority of the Architects.

No.	Revision Description	Date	By	For
1	Revision			

Contractor:

PROFESSIONAL TEAM

Project Managers:

LUKHOZI
LUKHOZI Consulting Engineers
Kwa-Lukhozi, Quartile Drive, Seaborn, East London, 5201
P.O. Box 15004, Tlokoeng, 5214
Tel: 043 721 1321
Fax: 086 663 7202
Cell: 083 232 0011
Email: c.lukhozi@lukhozi.co.za
Web: www.lukhozi.co.za

Architect:

S+P Architects
123 Western Av. Vincent, East London, 5207
Tel: +27 43 726 9327
Fax: +27 43 726 9327
Email: info@s+p.co.za
Web: www.s+p.co.za

Quantity Surveyors:

Invelo Quantity Surveyors
51 Beaconhurst Drive, Seaborn, East London, 5201
Tel: 043 748 5209
Fax: 043 748 5203
Email: mika@invelo.co.za

Civil Engineers:

HSC CONSULTING
STRUCTURAL AND CIVIL ENGINEERS
18 St Marks Road, Seaborn, East London, 5200
Tel: +27 43 743 9528
Fax: +27 43 743 5347
Email: andrew@hsc.co.za
Web: www.hsc.co.za

Structural Engineers:

HSC CONSULTING
STRUCTURAL AND CIVIL ENGINEERS
18 St Marks Road, Seaborn, East London, 5200
Tel: +27 43 743 9528
Fax: +27 43 743 5347
Email: andrew@hsc.co.za
Web: www.hsc.co.za

Electrical Engineers:

CARIFRO ELECTRICAL & MECHANICAL CONSULTING ENGINEERS
4-6 Belgravia Road, Belgravia, East London, 5213
Tel: +27 43 743 8266
Fax: +27 43 743 0599
Email: e@carifro.com

Mechanical Engineers:

CARIFRO ELECTRICAL & MECHANICAL CONSULTING ENGINEERS
4-6 Belgravia Road, Belgravia, East London, 5213
Tel: +27 43 743 8266
Fax: +27 43 743 0599
Email: e@carifro.com

Client:

EAST LONDON IDZ
P.O. Box 5458, Greenfields East London, 5208
Lower Chester Road, Sunnyvale, East London, 5201
Tel: +27 43 792 8200
Fax: +27 43 738 6405
Email: info@elidz.co.za

INFORMATION

Project Name / Client: **PROPOSED FACTORY ON ERF 78060 EAST LONDON**

Drawing Title: **GENERAL DETAILS SHEET 2 OF 2**

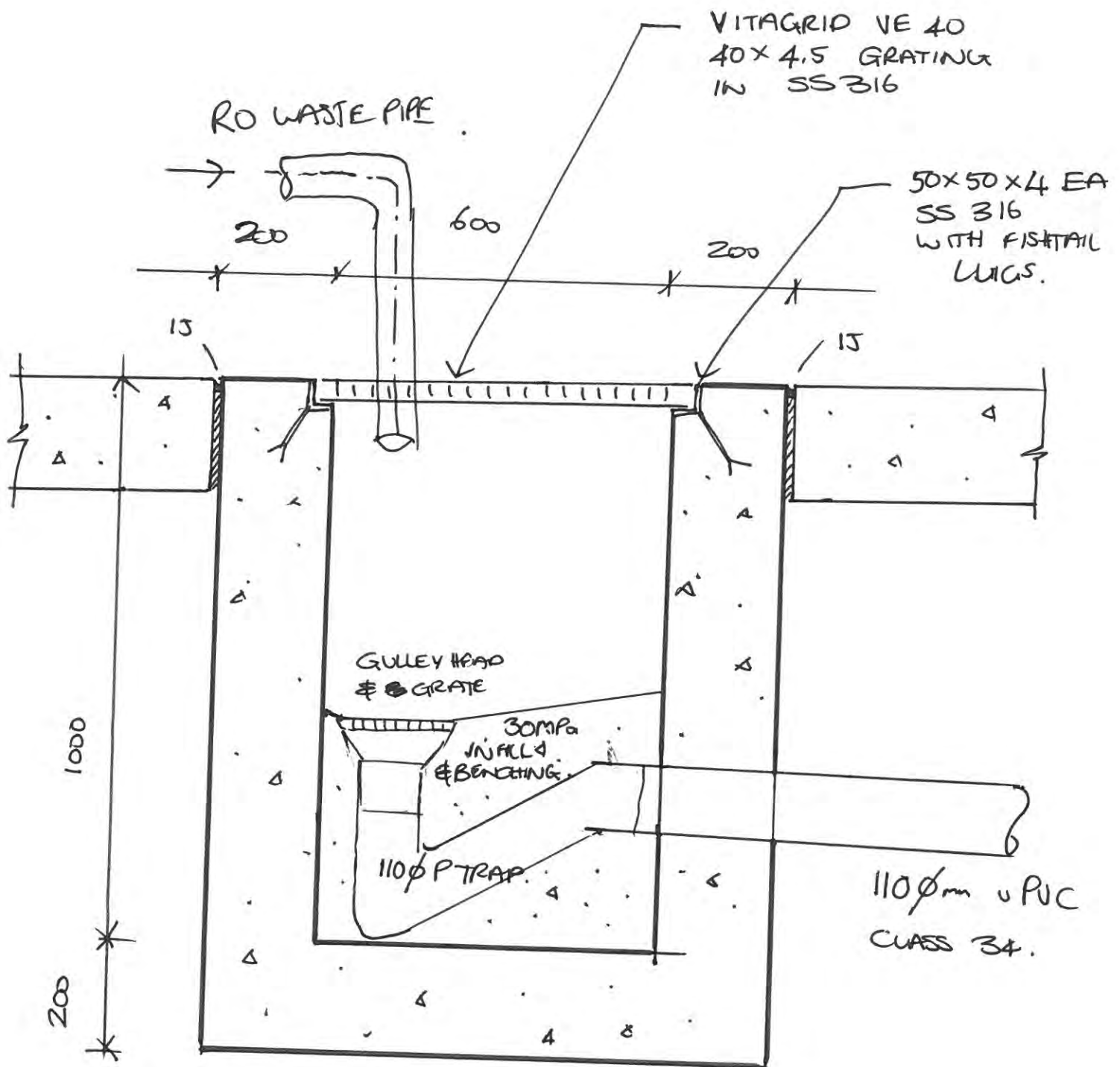
Drawing Originator: **HSC CONSULTING**

Checked By	Checked Date	Drawn By	Drawn Date
AJS	2020.11.04	JDS	2020.10.29

Approved By	Approval Date	ECSSA Number

Building Grid Reference	Scale
	AS SHOWN

Job No	Discipline	Type	Drawing No	Revision
P1985	CIVIL		C04	01



RO PLANT DRAINAGE MANHOLE

600 x 600 RC MANHOLE

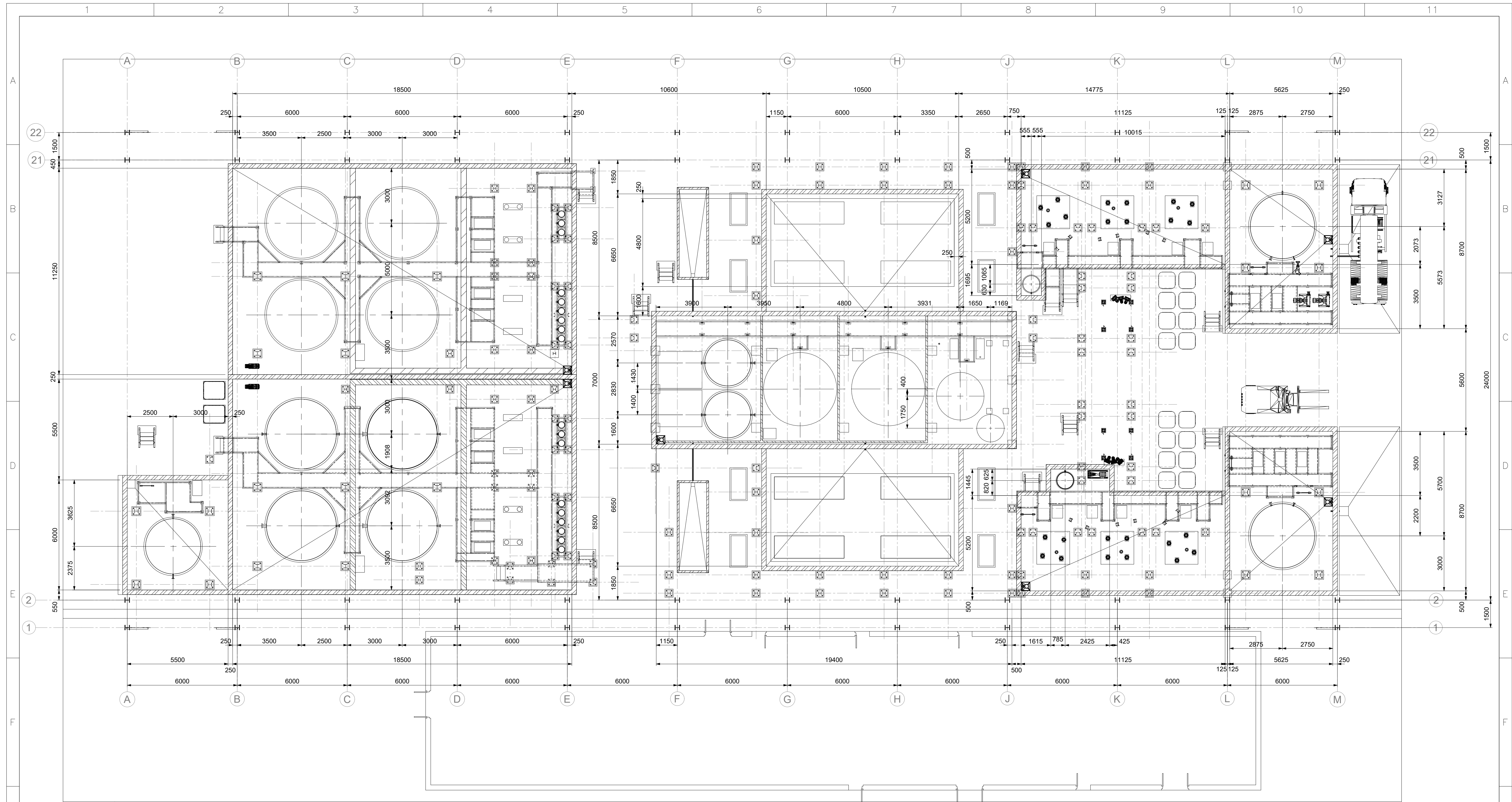
& STAINLESS STEEL GRATING

HSC CONSULTANT

20/11/12

SK-S-012

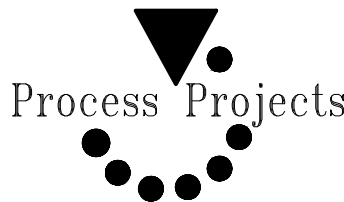
MS



PLAN ON COMPLETE CIVIL FOOTPRINT

AR PROCESS PROJECTS (PTY) LTD.

BLOCK F, LINCOLNWOOD, OFFICE PARK
WOODLANDS DRIVE, WOODMEAD 2192
P.O. BOX 782511, SANDTON 2146



CLIENT BUSHVELD ELECTROLYTE COMPANY

PROJECT VANADIUM ELECTROLYTE PLANT

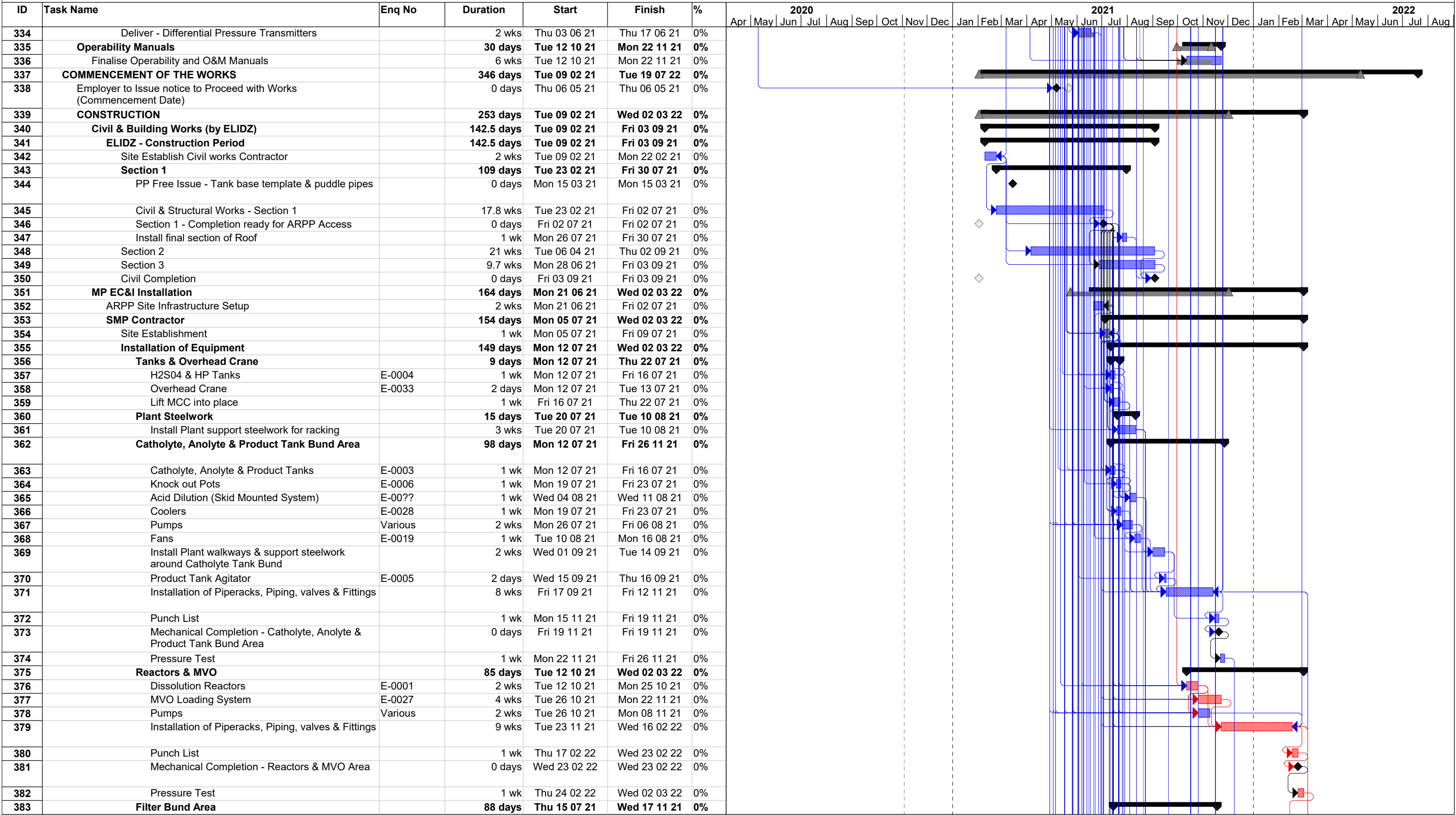
TITLE PROCESS AREA PLOT PLAN
OF COMPLETE CIVIL FOOTPRINT

PC5205-000-0001-0006-01	PLAN ON CIVIL FOOTPRINT OF REACTOR AREA										
PC5205-000-0001-0005-01	PLAN ON CIVIL FOOTPRINT OF ELECTROLIZER AREA										
PC5205-000-0001-0004-01	PLAN ON CIVIL FOOTPRINT OF FILTER FEED AREA										
PC5205-000-0001-0002-01	PLAN ON CIVIL FOOTPRINT OF CATHOLYTE & ANOLYTE AREA										
PC5205-000-0001-0001-01	PLAN ON COMPLETE CIVIL FOOTPRINT	A	ISSUED FOR INFORMATION ONLY	11/10/2020	11/10/2020						
DRAWING NO.	REFERENCE DRAWINGS	REV	DESCRIPTION	DRAWN DATE	LEAD ENG. DATE	E & I ENG. DATE	PROCESS APPR. DATE	PROJECT MNL. DATE			

THIS DRAWING IS THE PROPERTY OF THE AR PROCESS PROJECTS (PTY) LTD. AND IS ISSUED ON THE UNDERSTANDING THAT IT WILL NOT BE REPRODUCED OR COPIED IN WHOLE OR IN PART, NOR MAY THE TECHNICAL CONTENT BE USED FOR ANY REASON WHATSOEVER WITHOUT THE WRITTEN PERMISSION OF THE AR PROCESS PROJECTS (PTY) LTD. THIS DRAWING SHALL BE RETURNED TO AR PROCESS PROJECTS ON ITS REQUEST.

DRAWING SIZE A1		SIGN	DATE	CLIENTS DRG. NO.		
	DRAWN	B.H.J	13/07/2020			
	LEAD ENGINEER	R.O.	13/07/2020			
	E & I ENGINEER					
	PROCESS APPR.					
	PROJECT MANAGER					
				CONTRACT	AREA	TYPE
				NO.	SHT	REV
				PC5205-0000-0001-0001-01-A		

BUSHVELD ENERGY
VANADIUM POLYELECTROLYTE PROJECT

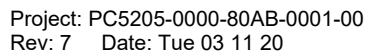


Project: PC5205-0000-80AB-0001-00
Rev: 7 Date: Tue 03 11 20

Task Milestone
Critical Task Summary

Baseline Baseline Summary
Baseline Milestone Progress

Process Projects



Critical Task

© 2006 The Authors

Summary



Baseline Milestone

Progress

