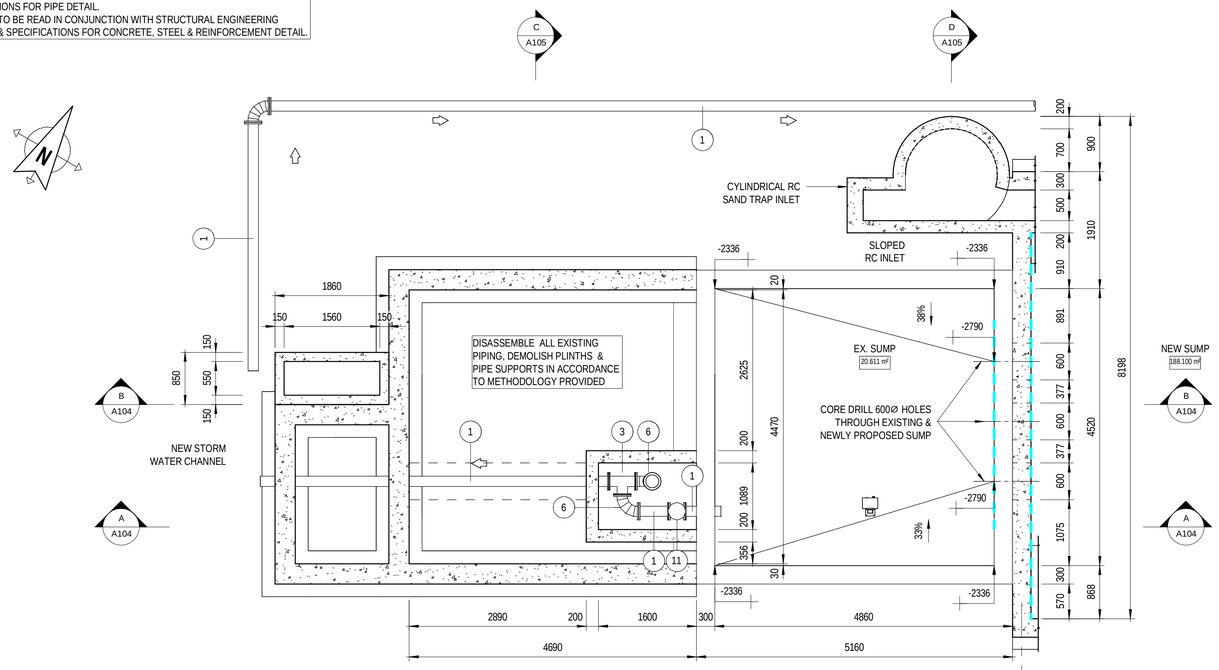
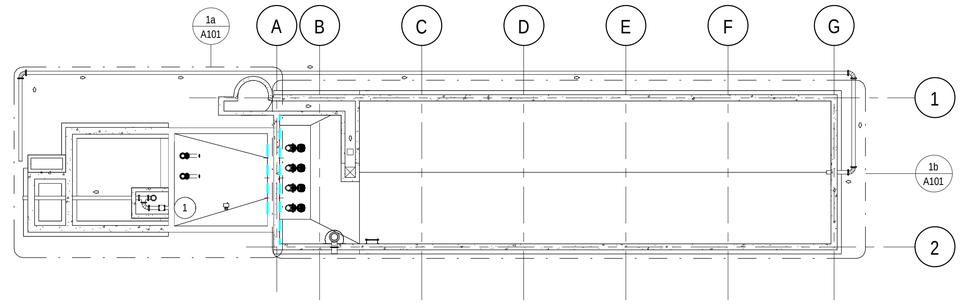
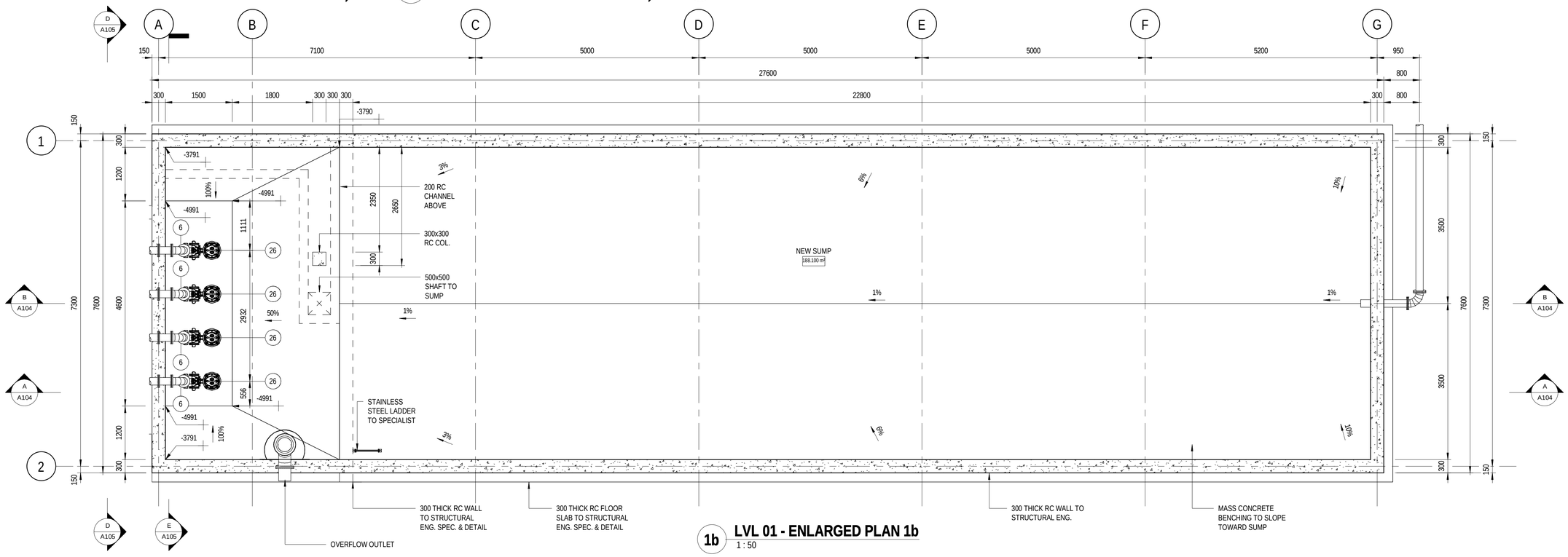
NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



1a LVL 01 - ENLARGED PLAN 1a
1 : 50



1 KEY PLAN LVL 01
1 : 150



1b LVL 01 - ENLARGED PLAN 1b
1 : 50

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL
2			-	-
1			-	-
			-	-

TITLE	NAME
DRAFTER	G. MAREDI
DRAFTING CHECK	G. WHALLEY
DESIGNER	S. FAUSTINO
DESIGN CHECK	G. WHALLEY
PROJECT MANAGER	T.CRONJE
PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
SMEC South Africa
Member of the Surbana Jurong Group
SABS ISO 9001

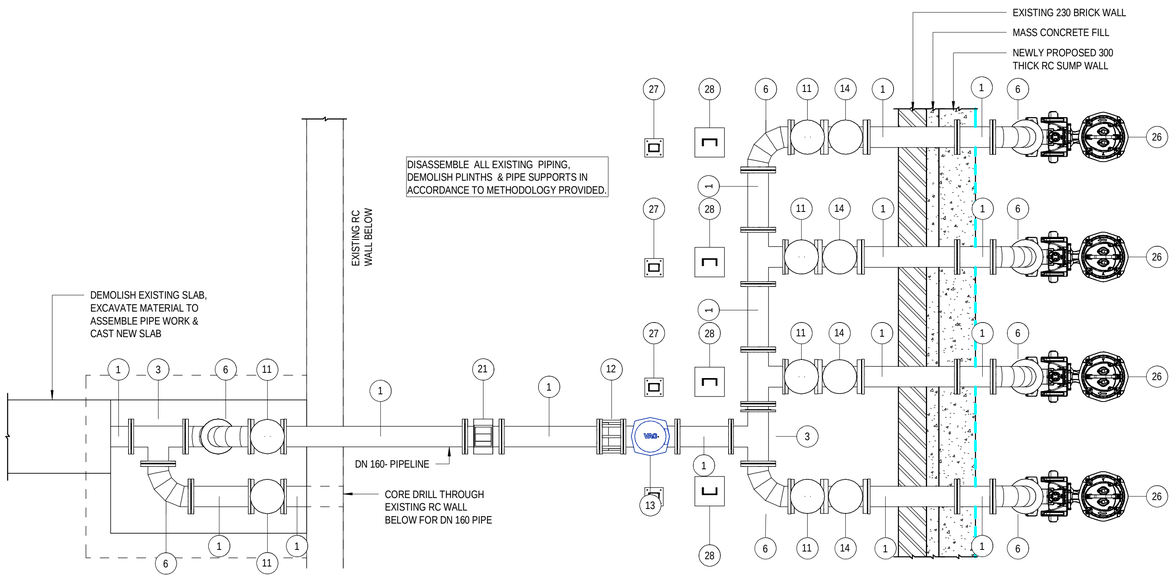
CLIENT
GEORGE
THE CITY FOR ALL REASONS

GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION
PUMPSTATION 1 ADDITIONS & ALTERATIONS - LVL 01 PLAN SECTIONS

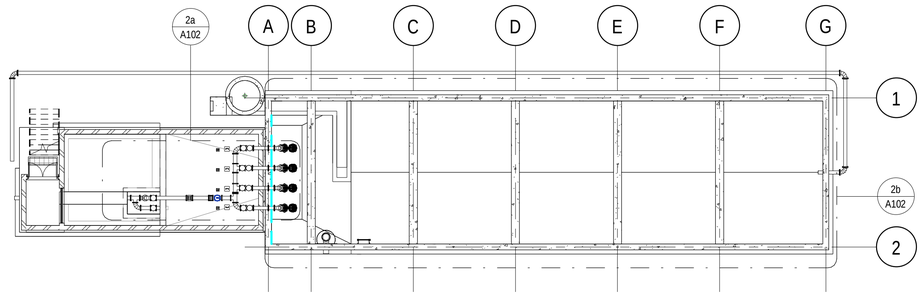
PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A101	

PLOT DATE TIME 2024/07/19 15:20:03
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

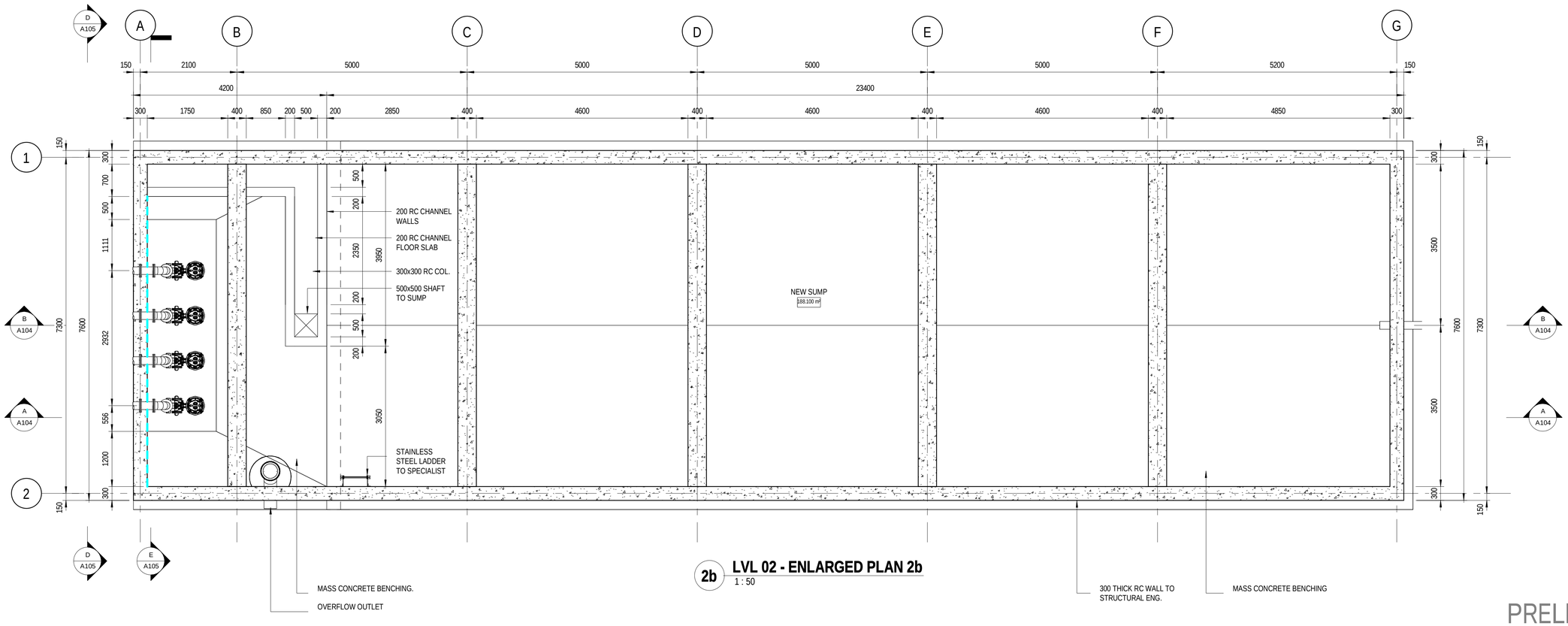
NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



2a LVL 02 - ENLARGED PLAN 2a
1 : 25



2 KEY PLAN LVL 02
1 : 150



2b LVL 02 - ENLARGED PLAN 2b
1 : 50

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
SMEC South Africa
Member of the Surbana Jurong Group
SABS ISO 9001

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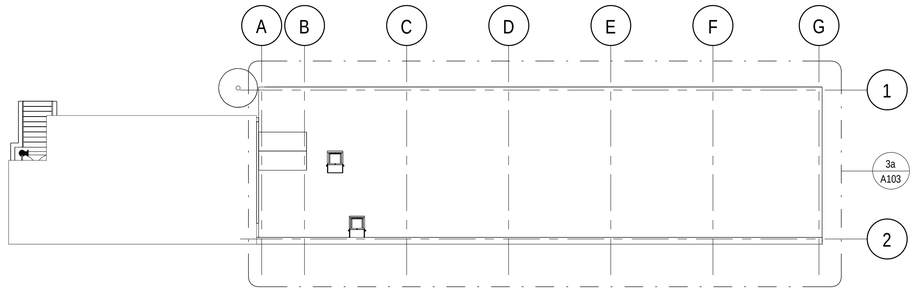
GEORGE THE CITY FOR ALL REASONS

GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION
PUMPSTATION 1 ADDITIONS & ALTERATIONS - LEVEL 02
PLAN SECTIONS

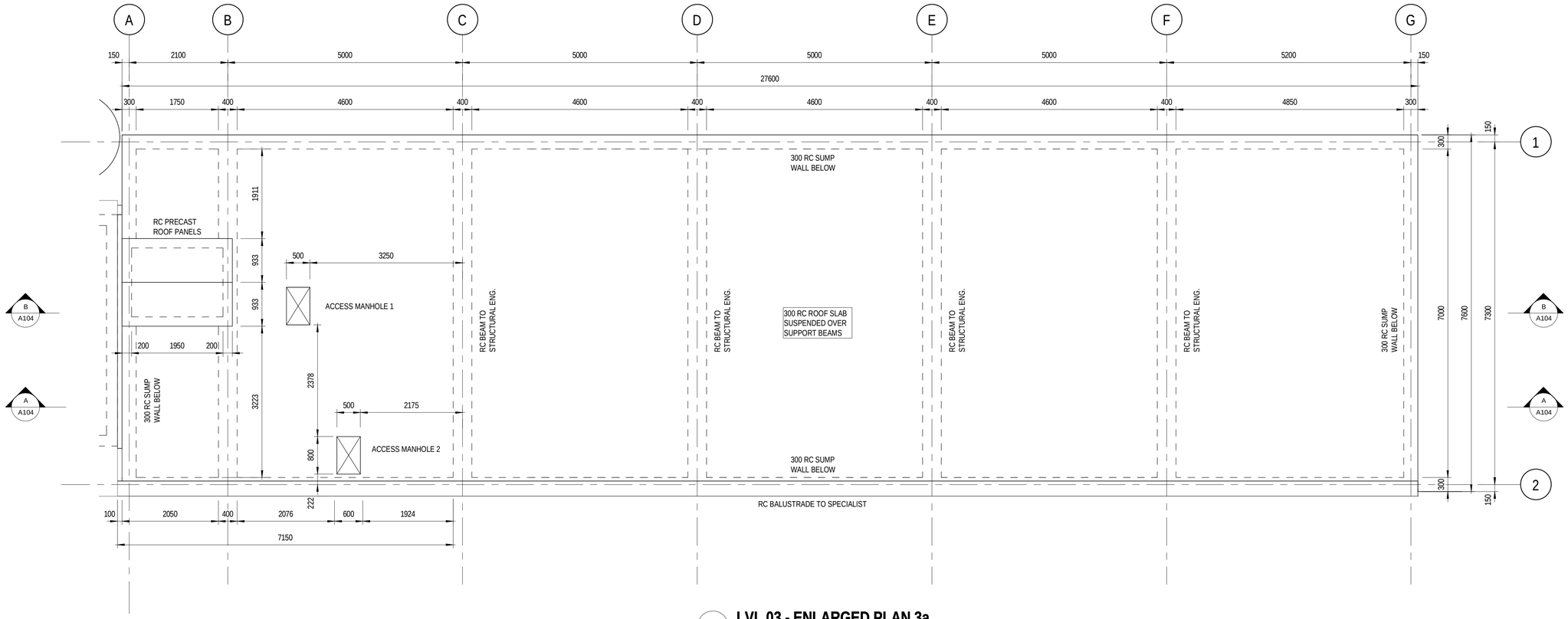
PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A102	

PLOT DATE TIME 2024/07/19 15:20:16
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



3 KEYPLAN LVL 03
1 : 150



3a LVL 03 - ENLARGED PLAN 3a
1 : 50

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
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GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION
PUMPSTATION 1 ADDITIONS & ALTERATIONS - LEVEL 03
PLAN SECTION

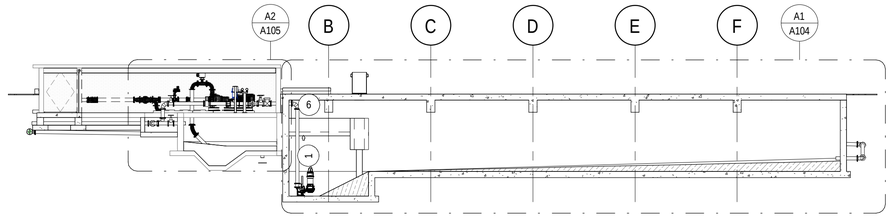
PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A103	

PLOT DATE TIME
2024/07/19 15:20:21

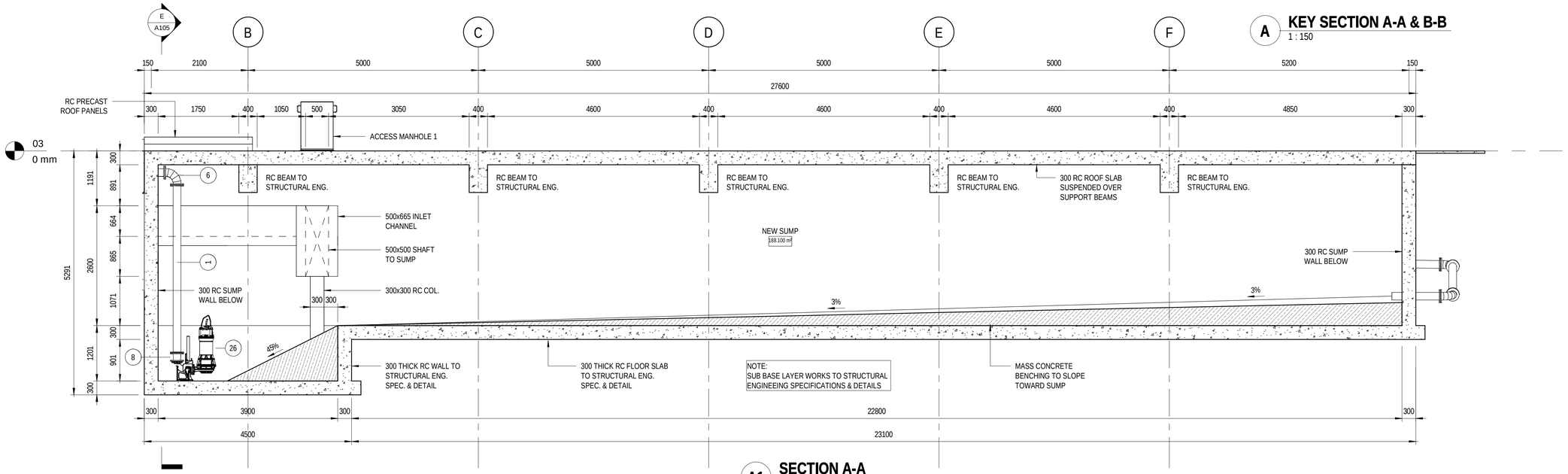
DRAWING FILE LOCATION / NAME

150 mm ON ORIGINAL
A1
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

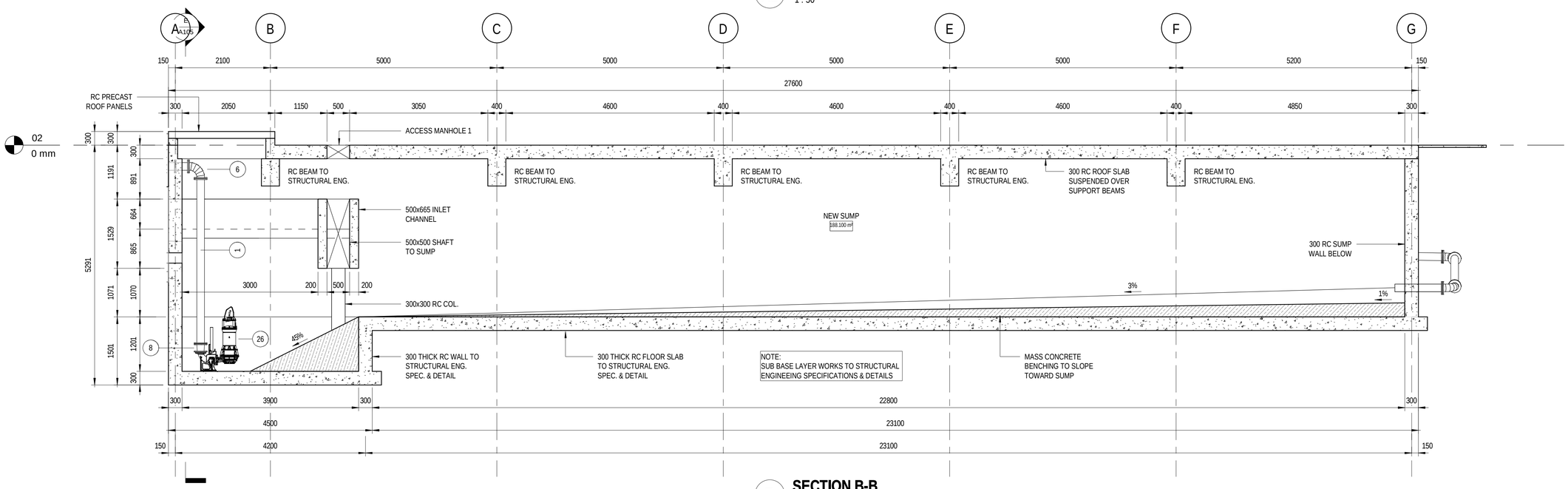
NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



A KEY SECTION A-A & B-B
1 : 150



A1 SECTION A-A
1 : 50



B SECTION B-B
1 : 50

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL
2			-	-
1			-	-
			-	-

TITLE	NAME
DRAFTER	G. MAREDI
DRAFTING CHECK	G. WHALLEY
DESIGNER	S. FAUSTINO
DESIGN CHECK	G. WHALLEY
PROJECT MANAGER	T.CRONJE
PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
SMEC South Africa
Member of the Surbana Jurong Group
SABS ISO 9001

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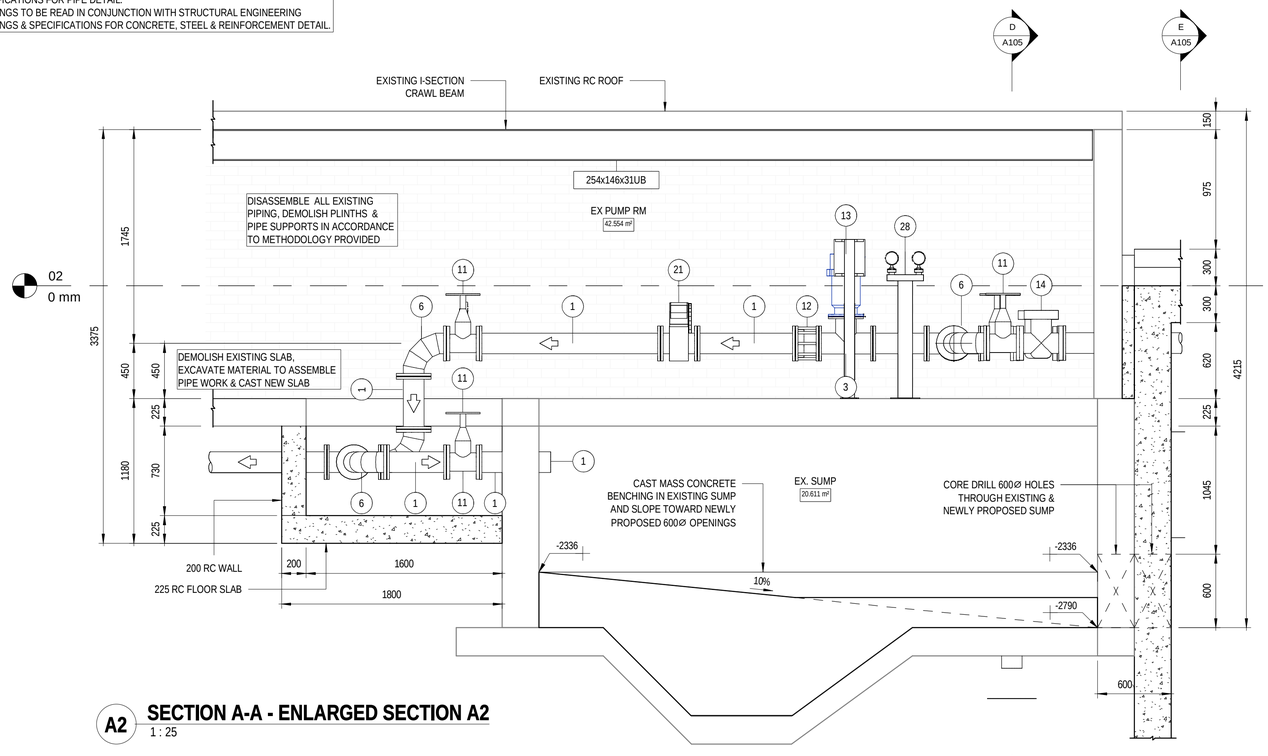
GEORGE
THE CITY FOR ALL REASONS

GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION
PUMPSTATION 1 ADDITIONS & ALTERATIONS - SECTIONS A-A & B-B

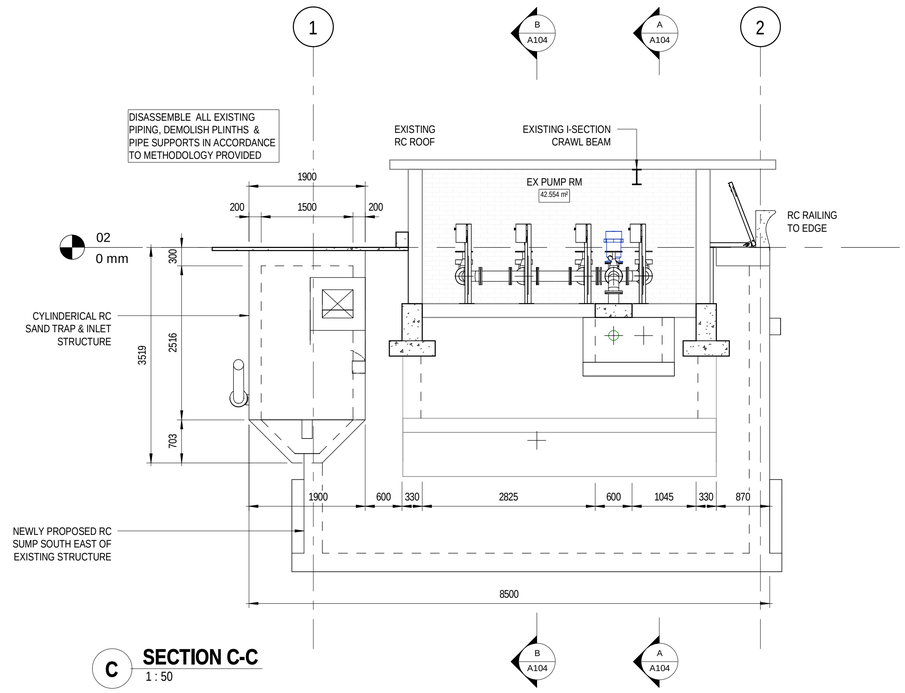
PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A104	

PLOT DATE 2024/07/19 TIME 15:20:57
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

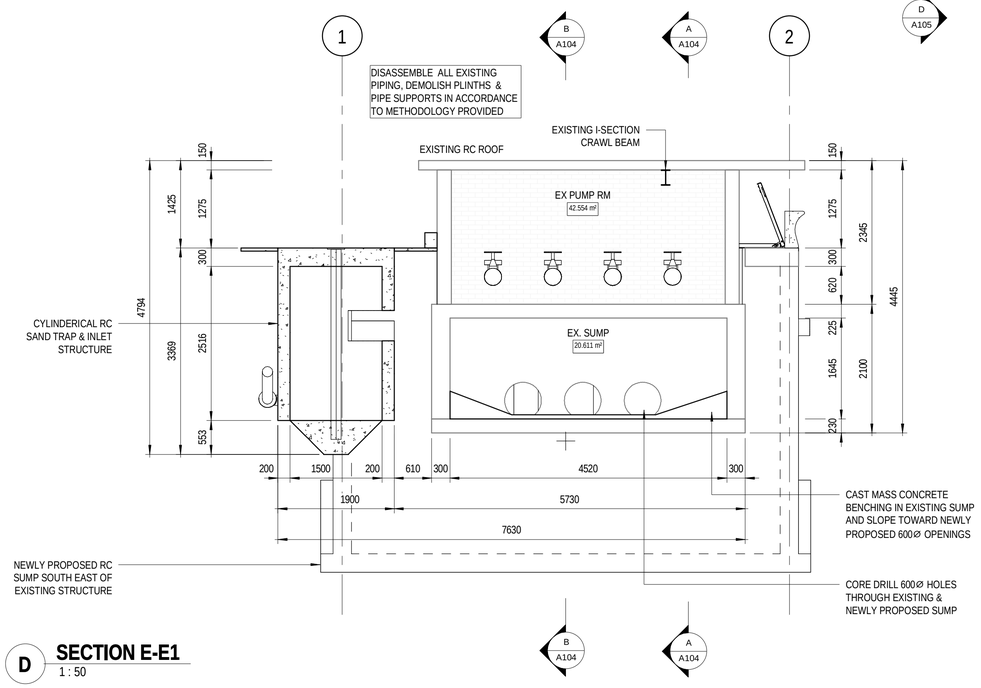
NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



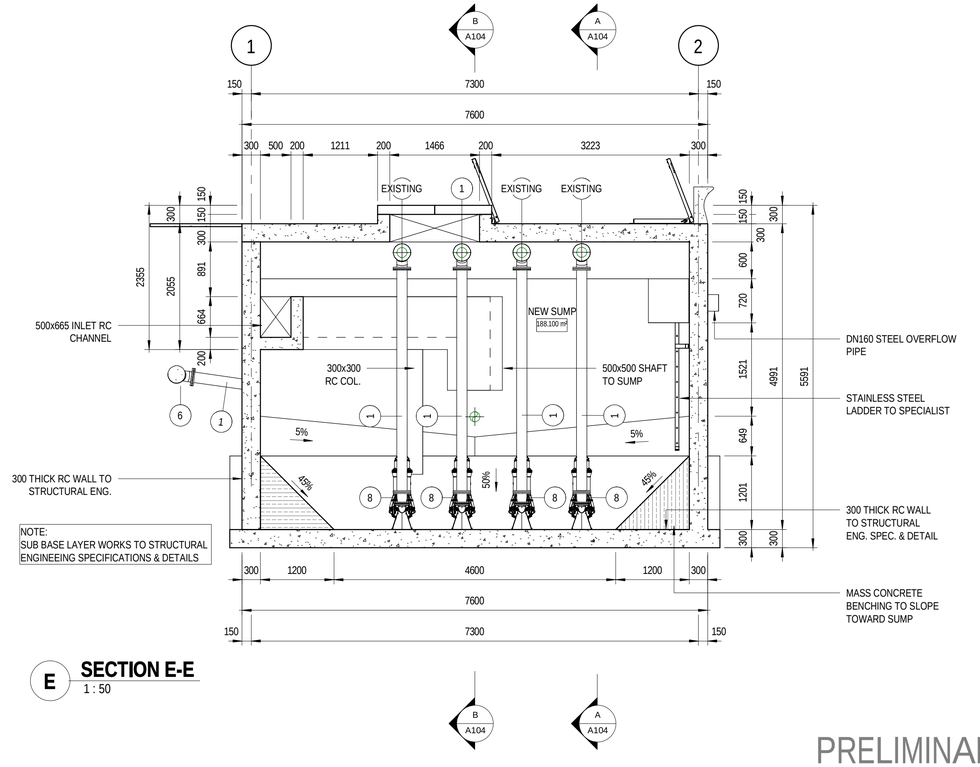
A2 **SECTION A-A - ENLARGED SECTION A2**
1 : 25



C **SECTION C-C**
1 : 50



D **SECTION E-E1**
1 : 50



E **SECTION E-E**
1 : 50

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
SMEC South Africa
Member of the Surbana Jurong Group
SABS ISO 9001

CLIENT
GEORGE THE CITY FOR ALL REASONS

GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION
PUMPSTATION 1 ADDITIONS & ALTERATIONS - SECTIONS C-C, D-D & E-E

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A105	

PLOT DATE TIME 2024/07/19 15:21:03
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.

TABLE 3 - PIPE ACCESSORY SCHEDULE

Mark	Description	Count	Diameter (NB)	Lining	Material	Coating	Color	Pressure Class 1
11	GATE VALE	6	<varies>	EPOXY	STAINLESS STEEL	EPOXY	BLUE	<varies>
12	DISMANTLING JOINTS	1	150	EPOXY	STAINLESS STEEL	EPOXY	BLUE	PN12
14	CHECK VALVE	5	150	EPOXY	STAINLESS STEEL	EPOXY	BLUE	PN12
21	FLOW METER	1	150	EPOXY	STAINLESS STEEL	EPOXY	BLUE	PN12
EXISTING	AIR RELEASE VALVE TO BE DISASSEMBLED FROM EXISTING ASSEMBLY	1	150	EPOXY	STAINLESS STEEL	EPOXY	BLUE	PN12
EXISTING	GATE VALE TO BE DISASSEMBLED FROM EXISTING ASSEMBLY	2	150	EPOXY	STAINLESS STEEL	<varies>	BLUE	PN12
EXISTING	NON RETURN VALVE TO BE DISASSEMBLED FROM EXISTING ASSEMBLY	1	150	EPOXY	STAINLESS STEEL	EPOXY	BLUE	PN12

Grand total: 17

TABLE 4 - MECHANICAL EQUIPMENT SCHEDULE

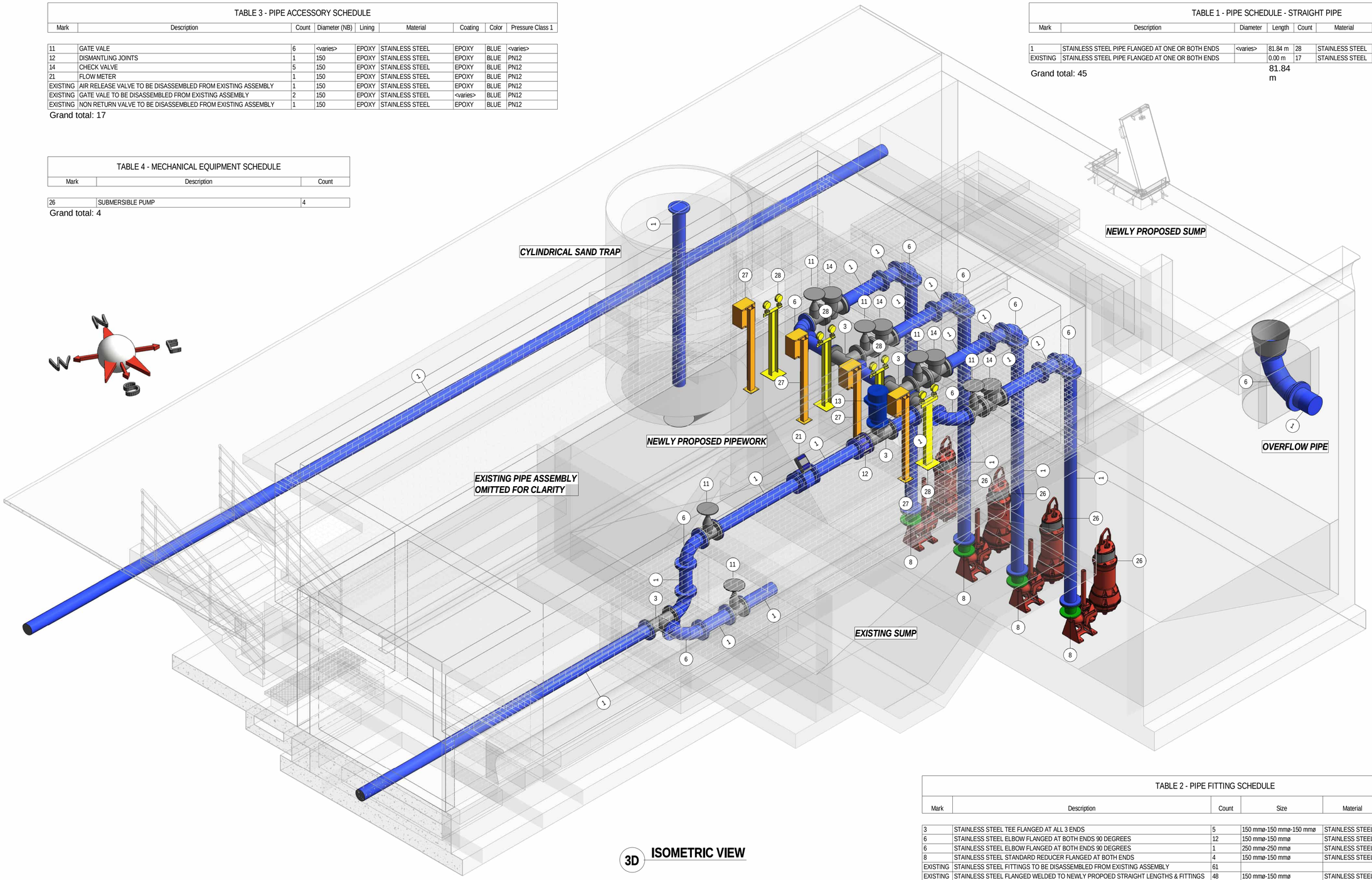
Mark	Description	Count
26	SUBMERSIBLE PUMP	4

Grand total: 4

TABLE 1 - PIPE SCHEDULE - STRAIGHT PIPE

Mark	Description	Diameter	Length	Count	Material	Lining	Coating	Color	Pressure Class 1
1	STAINLESS STEEL PIPE FLANGED AT ONE OR BOTH ENDS	<varies>	81.84 m	28	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
EXISTING	STAINLESS STEEL PIPE FLANGED AT ONE OR BOTH ENDS		0.00 m	17	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12

Grand total: 45 81.84 m



3D ISOMETRIC VIEW

TABLE 2 - PIPE FITTING SCHEDULE

Mark	Description	Count	Size	Material	Lining	Coating	Color	Pressure Class 1
3	STAINLESS STEEL TEE FLANGED AT ALL 3 ENDS	5	150 mmø-150 mmø-150 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	<varies>
6	STAINLESS STEEL ELBOW FLANGED AT BOTH ENDS 90 DEGREES	12	150 mmø-150 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	<varies>
6	STAINLESS STEEL ELBOW FLANGED AT BOTH ENDS 90 DEGREES	1	250 mmø-250 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
8	STAINLESS STEEL STANDARD REDUCER FLANGED AT BOTH ENDS	4	150 mmø-150 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
EXISTING	STAINLESS STEEL FITTINGS TO BE DISASSEMBLED FROM EXISTING ASSEMBLY	61						
EXISTING	STAINLESS STEEL FLANGED WELDED TO NEWLY PROPOED STRAIGHT LENGTHS & FITTINGS	48	150 mmø-150 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	<varies>
EXISTING	STAINLESS STEEL FLANGED WELDED TO NEWLY PROPOED STRAIGHT LENGTHS & FITTINGS	1	250 mmø-250 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12

Grand total: 132

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
SMEC South Africa
Member of the Surbana Jurong Group
SABS ISO 9001

CLIENT
GEORGE THE CITY FOR ALL REASONS

GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION
PUMPSTATION 1 ADDITIONS & ALTERATIONS - ISOMETRIC VIEW

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A106	

PLOT DATE 20/24/07/19 TIME 15:21:14
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

Annexure B PS 4 Drawings

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.

NOTE:
1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE ANY WORK IS PUT IN HAND. REFER ANY DISCREPANCIES TO THE ENGINEER.

NEWLY PROPOSED SITE BOUNDARY COORDINATES

POINT	X COORDINATES	Y COORDINATES
A	-56214.0864	-3769681.4297
B	-56206.9553	-3769693.9078
C	-56197.2560	-3769690.3610
D	-56183.8550	-3769683.4060
E	-56183.9561	-3769680.7640
F	-56185.7544	-3769677.6174
G	-56181.4561	-3769675.1057
H	-56187.1353	-3769665.0095

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED

ENGINEER: .....

PR ENG NR: .....

SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING

SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05

SCALE 1:50 — 0.5 0 1 2

SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER

SMEC South Africa
Member of the Surbana Jurong Group

SABS ISO 9001

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THE CITY FOR ALL REASONS

GEORGE MUNICIPALITY

HEROLD'S BAY PUMP STATION

NEW PUMP STATION 4 SITE PLAN LAYOUT

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A100	

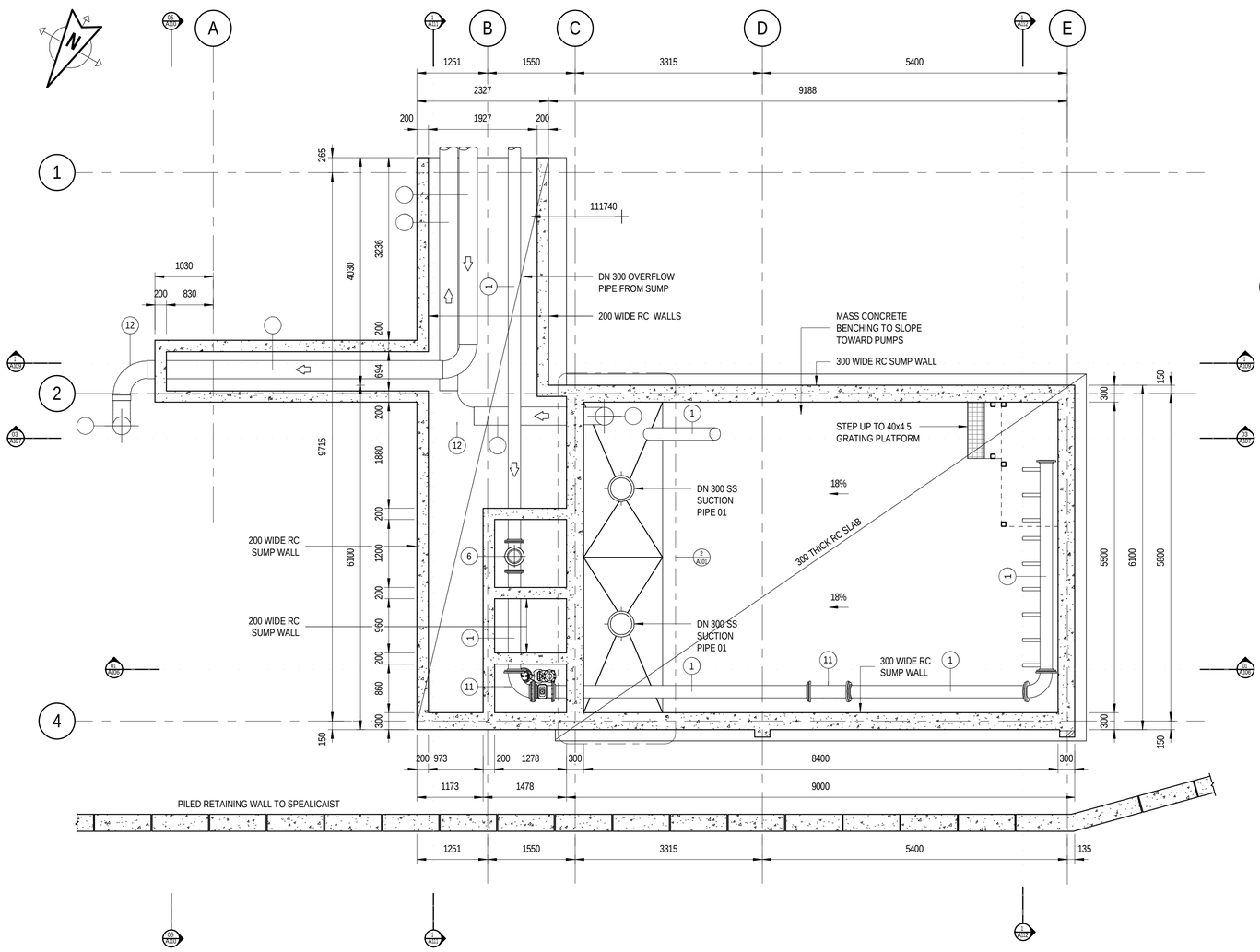
PLOT DATE TIME 2024/08/12 09:58:50

DRAWING FILE LOCATION / NAME

150 mm ON ORIGINAL

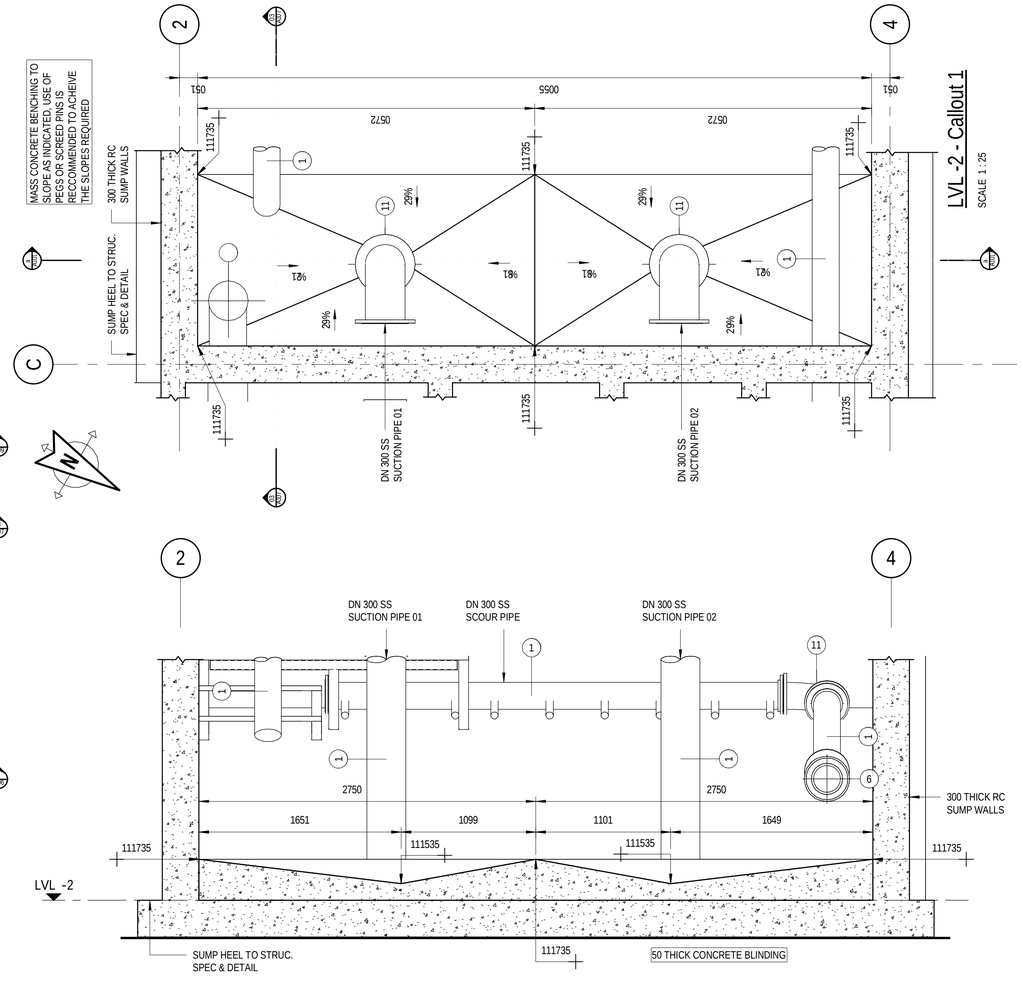
A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



LVL -2

SCALE 1 : 50



LVL -2 - Callout 1

SCALE 1 : 25

LVL-2 SECTION a-a

SCALE 1 : 25

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL
2			-	-
1			-	-
			-	-

TITLE	NAME
DRAFTER	G. MAREDI
DRAFTING CHECK	G. WHALLEY
DESIGNER	S. FAUSTINO
DESIGN CHECK	G. WHALLEY
PROJECT MANAGER	T.CRONJE
PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
SMEC South Africa
Member of the Surbana Jurong Group
SABS ISO 9001

CLIENT
GEORGE THE CITY FOR ALL REASONS

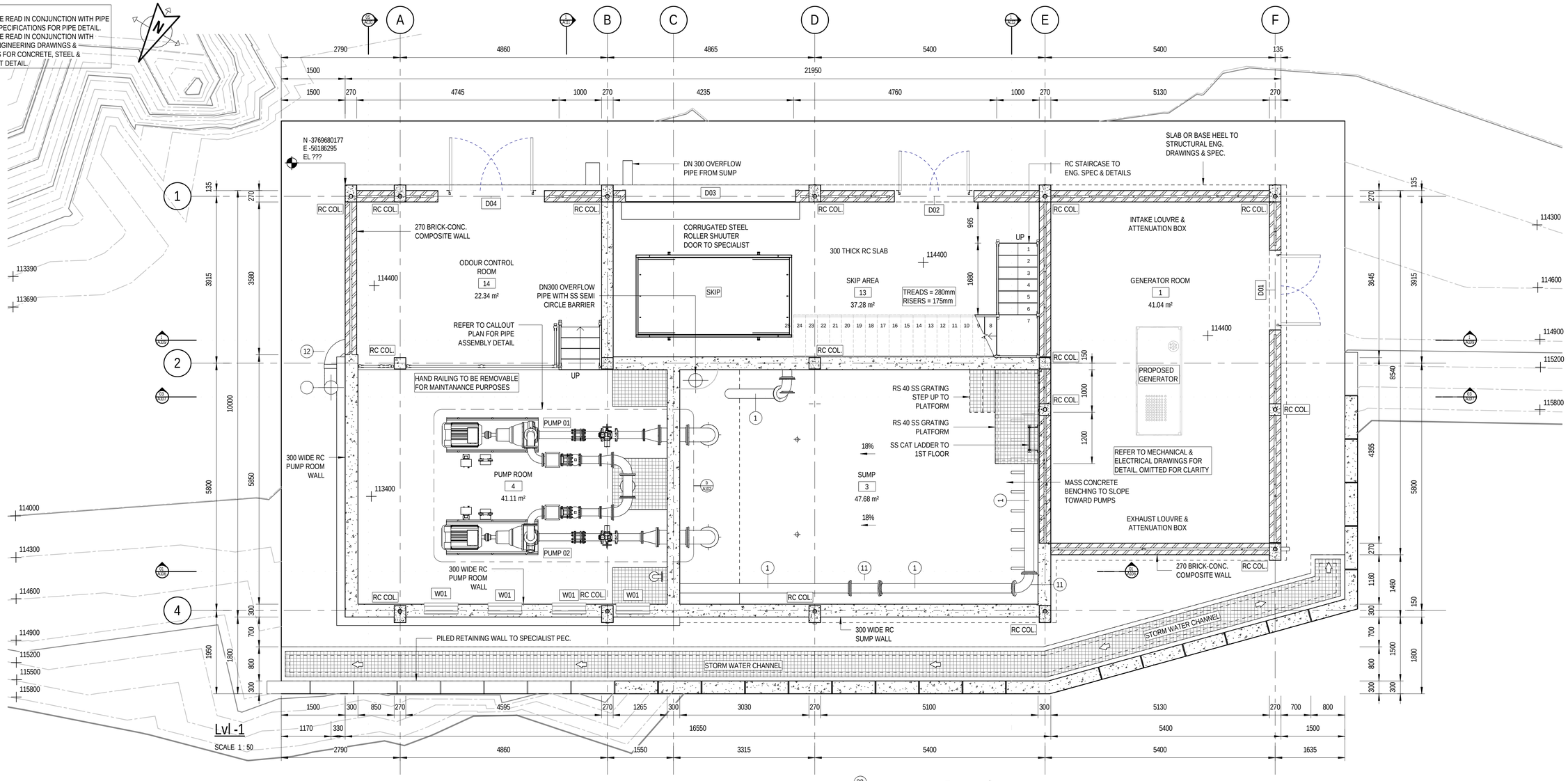
GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION

PLAN SECTION 1-1, & SUMP ENLARGED DETAILS

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A101	

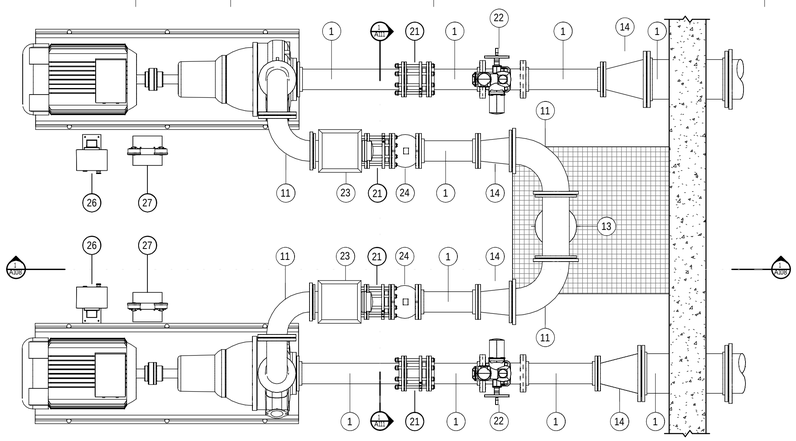
PLOT DATE TIME 2024/08/09 20:00:06
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



Lvl -1

SCALE 1 : 50



Lvl -1 - Callout 1

SCALE 1 : 25

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED

ENGINEER: .....

PR ENG NR: .....

SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING

SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05

SCALE 1:50 — 0.5 0 1 2

SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER

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SABS ISO 9001

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GEORGE THE CITY FOR ALL REASONS

GEORGE MUNICIPALITY

HEROLD'S BAY PUMP STATION

PLAN SECTION 2-2 & ENLARGED PUMPROOM PLAN

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A102	

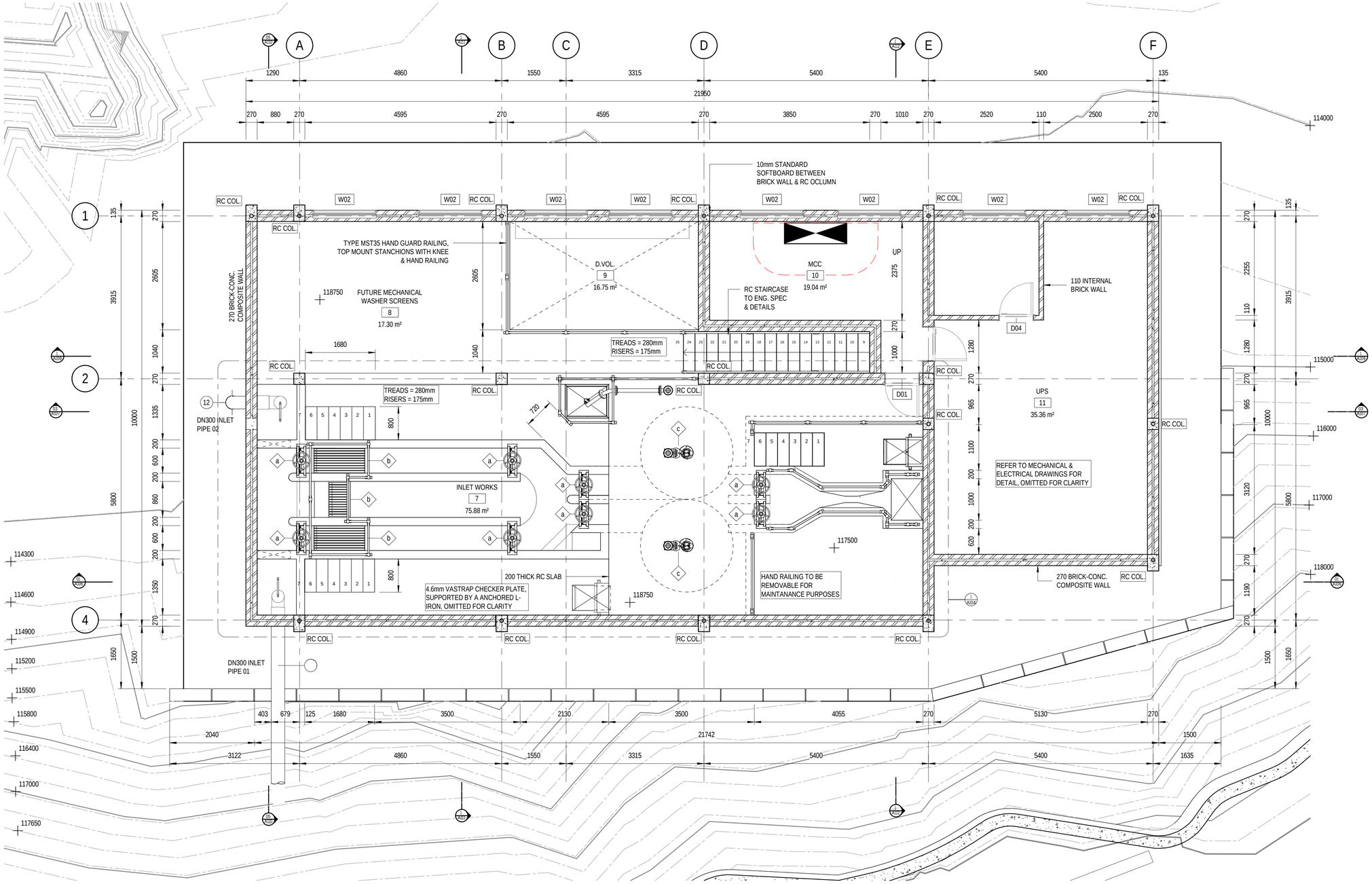
PLOT DATE 2024/08/09 TIME 20:00:13

DRAWING FILE LOCATION / NAME

150 mm ON ORIGINAL

A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

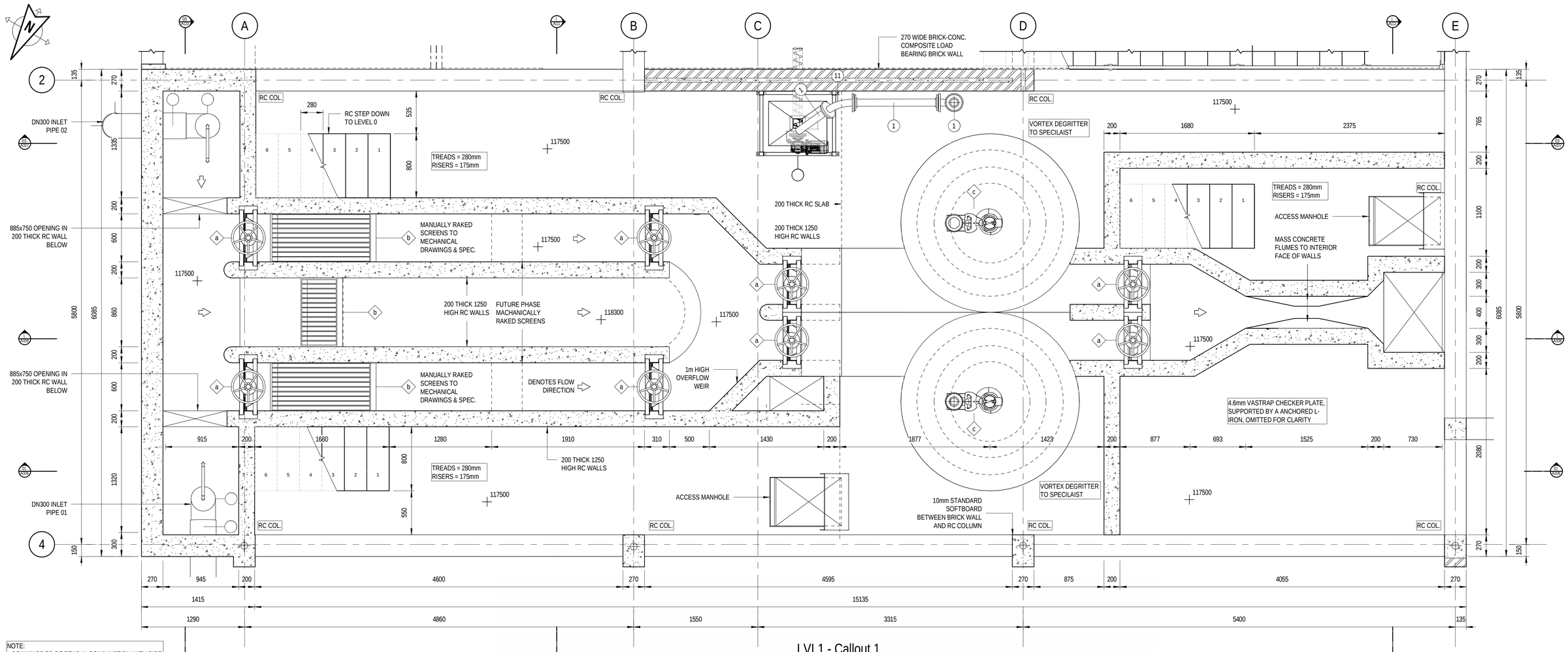
DESIGNER
SMEC South Africa
Member of the Surbana Jurong Group
SABS ISO 9001

CLIENT
GEORGE
THE CITY FOR ALL REASONS

GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION
FIRST FLOOR PLAN

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A103	

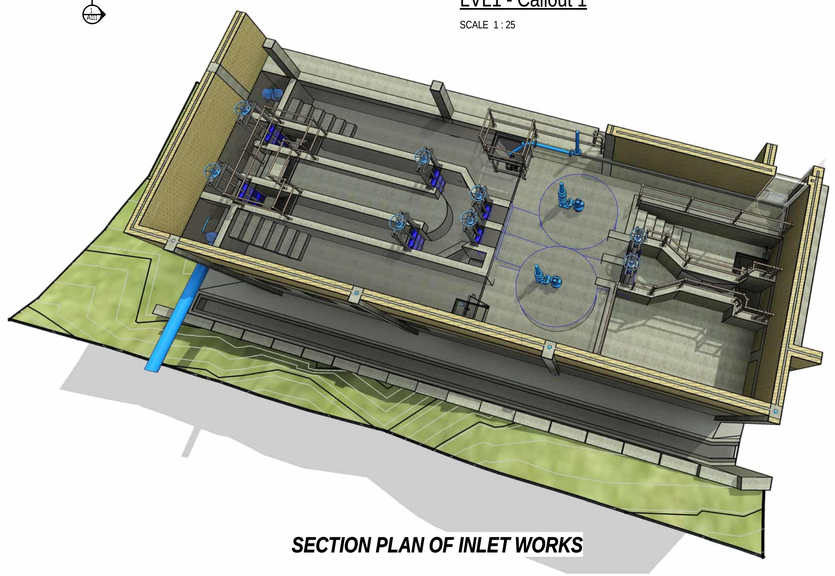
PLOT DATE TIME 2024/08/09 20:00:20
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1



NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.

LVL1 - Callout 1

SCALE 1 : 25



SECTION PLAN OF INLET WORKS

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED

ENGINEER: .....

PR ENG NR: .....

SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING

SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05

SCALE 1:50 — 0.5 0 1 2

SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER

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GEORGE MUNICIPALITY

HEROLD'S BAY PUMP STATION

ENLARGED INLET WORKS PLAN & INLET WORKS PERSPECTIVE VIEW

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A104	

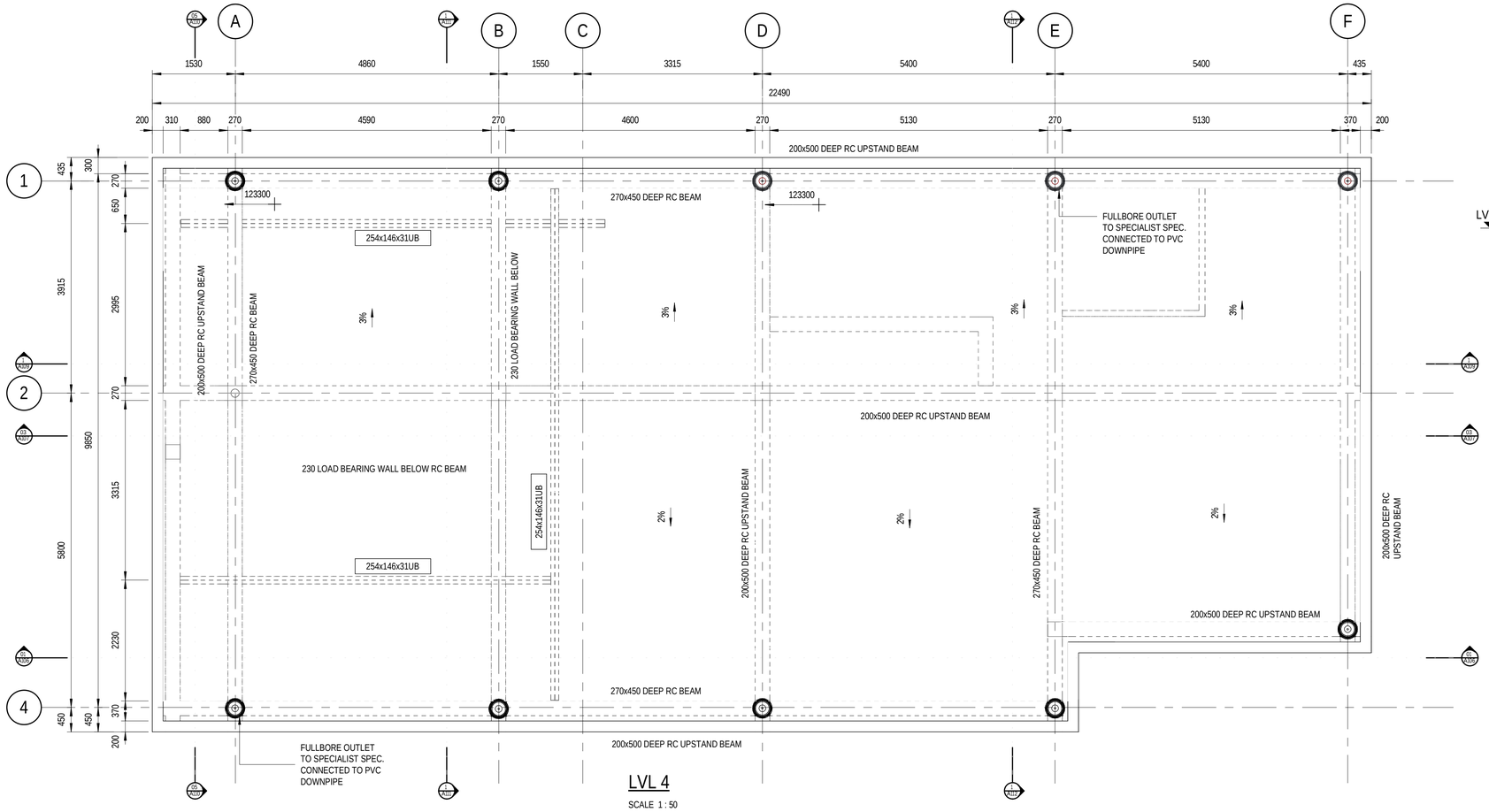
PLOT DATE TIME 2024/08/09 20:00:53

DRAWING FILE LOCATION / NAME

150 mm ON ORIGINAL

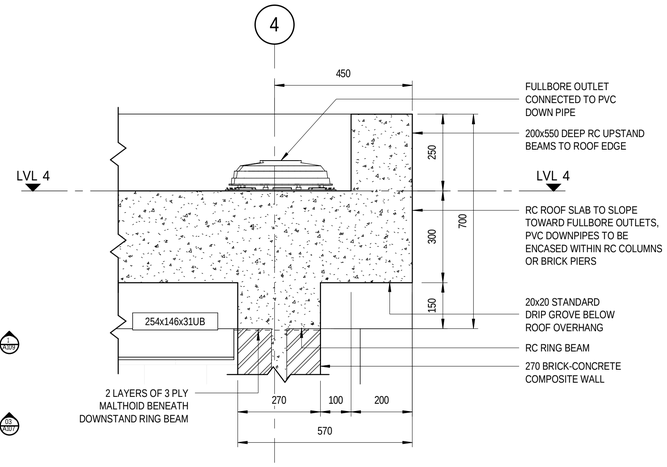
A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



LVL 4

SCALE 1 : 50



SECTION 1 (A111)

SCALE 1 : 10

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED

ENGINEER: .....

PR ENG NR: .....

SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING

SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05

SCALE 1:50 — 0.5 0 1 2

SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER

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HEROLD'S BAY PUMP STATION

ROOF PLAN

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A105	

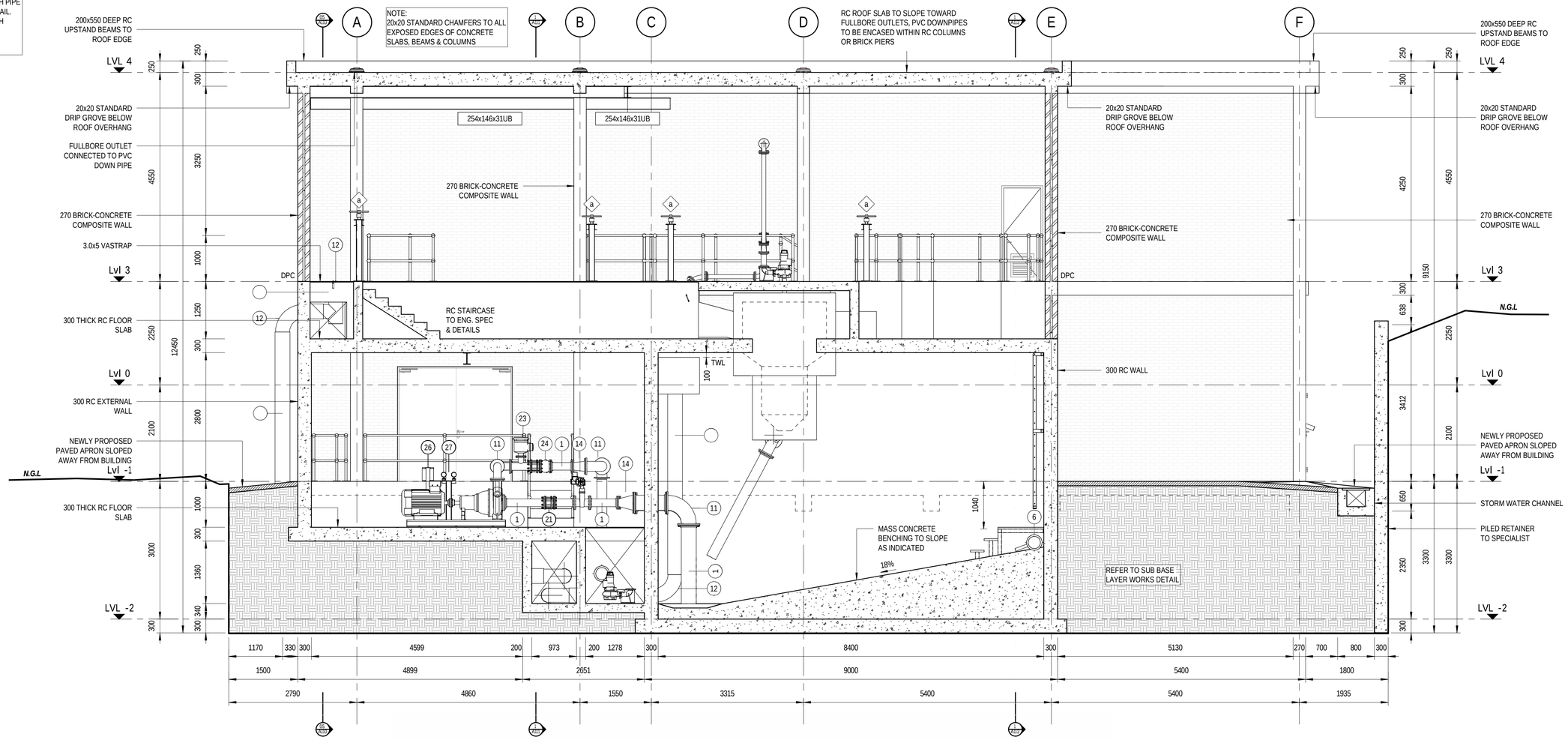
PLOT DATE 2024/08/09 TIME 20:00:57

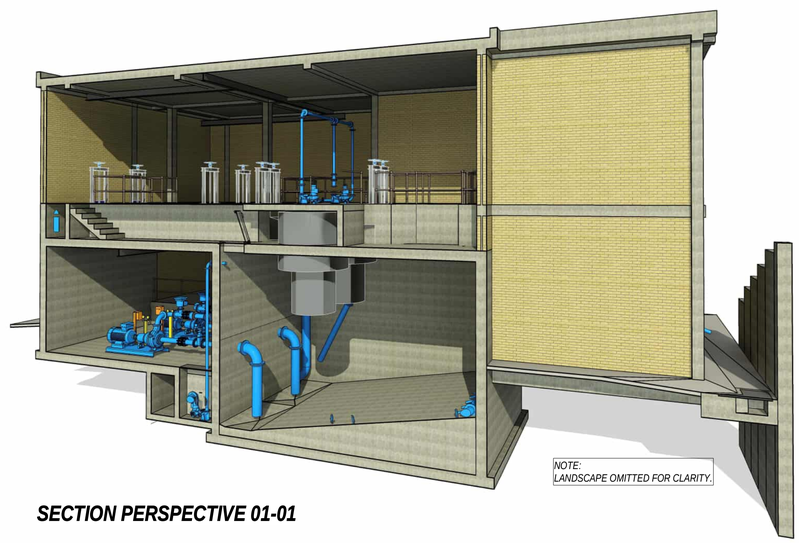
DRAWING FILE LOCATION / NAME

150 mm ON ORIGINAL

A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.





NOTE:
LANDSCAPE OMITTED FOR CLARITY.

SECTION PERSPECTIVE 01-01

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
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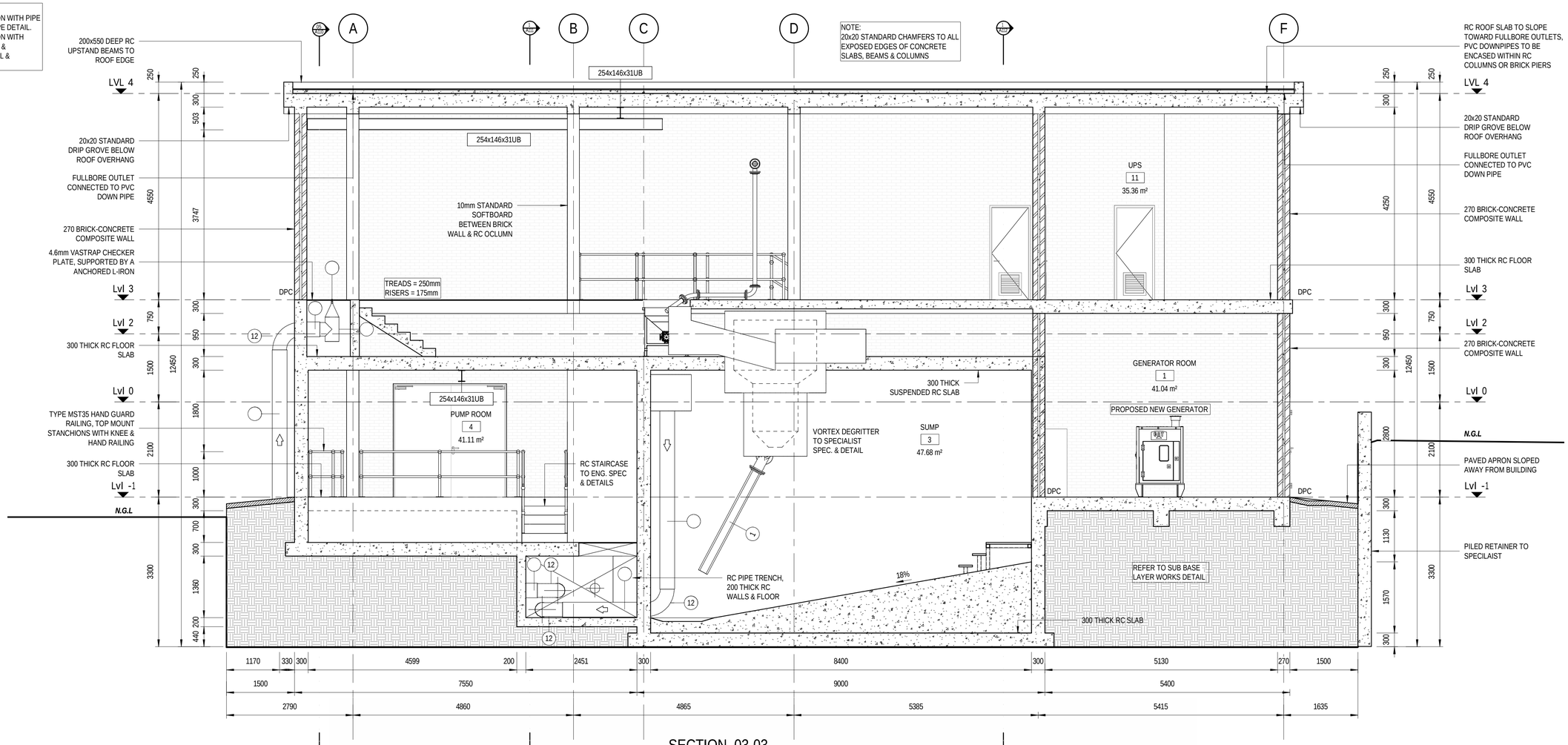
HEROLD'S BAY PUMP STATION
SECTION 01-01

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A106	

PLOT DATE TIME 2024/08/09 20:01:09
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

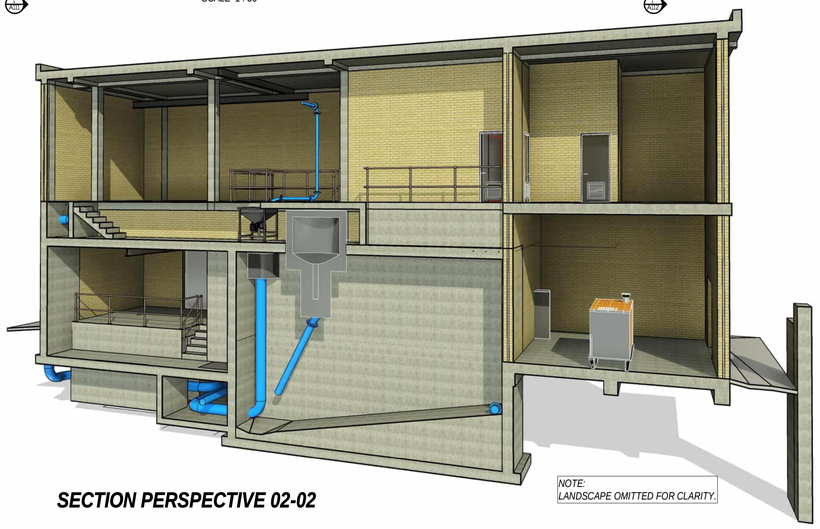
NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.

NOTE:
20x20 STANDARD CHAMFERS TO ALL EXPOSED EDGES OF CONCRETE SLABS, BEAMS & COLUMNS



SECTION 03-03

SCALE 1 : 50



NOTE:
LANDSCAPE OMITTED FOR CLARITY.

SECTION PERSPECTIVE 02-02

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
SMEC South Africa
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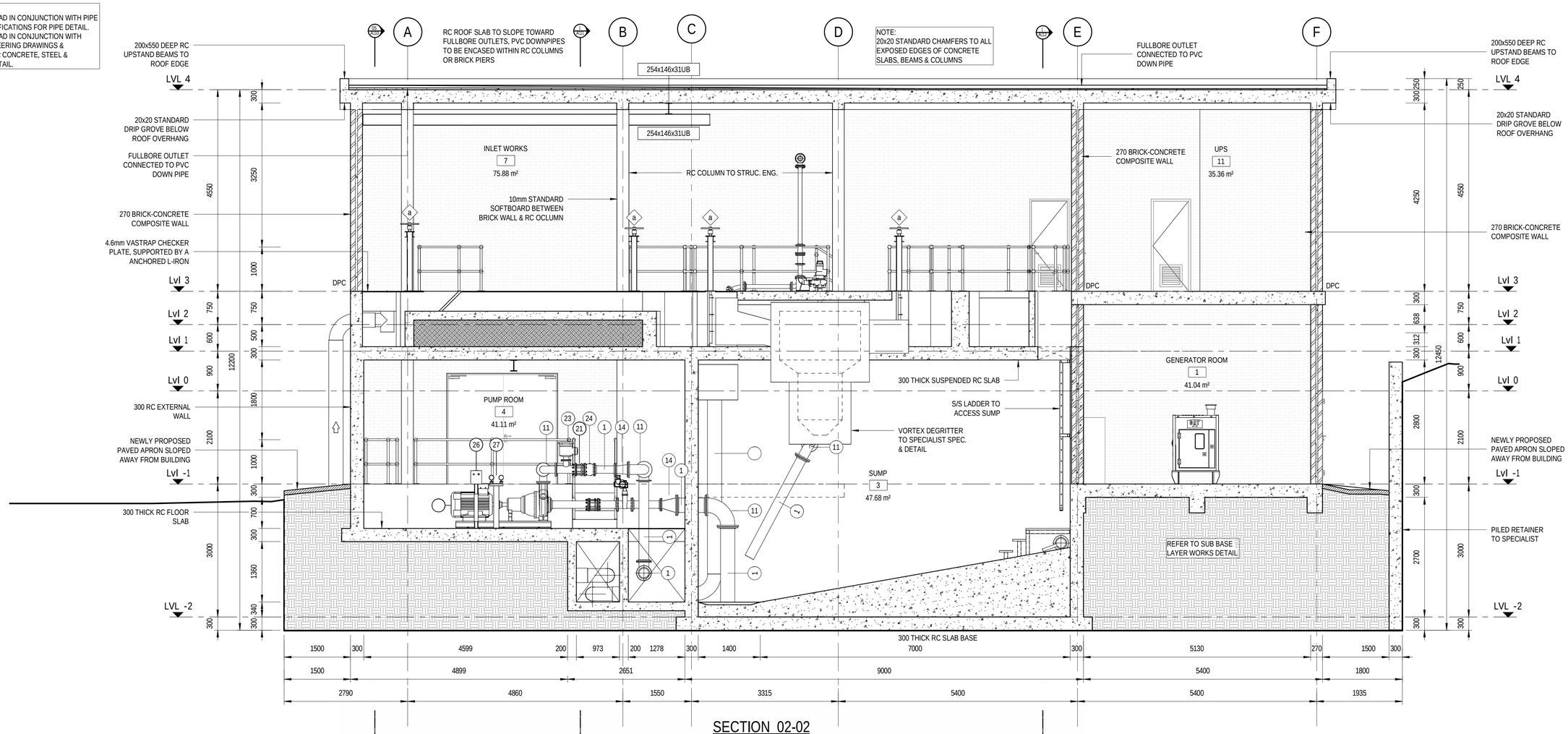
GEORGE THE CITY FOR ALL REASONS

GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION
SECTION 02-02

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A107	

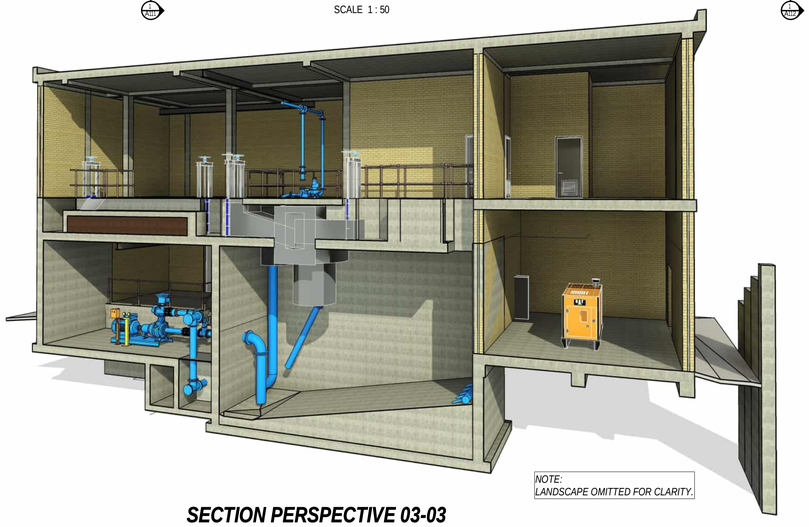
PLOT DATE TIME 2024/08/09 20:01:23
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



SECTION 02-02

SCALE 1 : 50



NOTE:
LANDSCAPE OMITTED FOR CLARITY.

SECTION PERSPECTIVE 03-03

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
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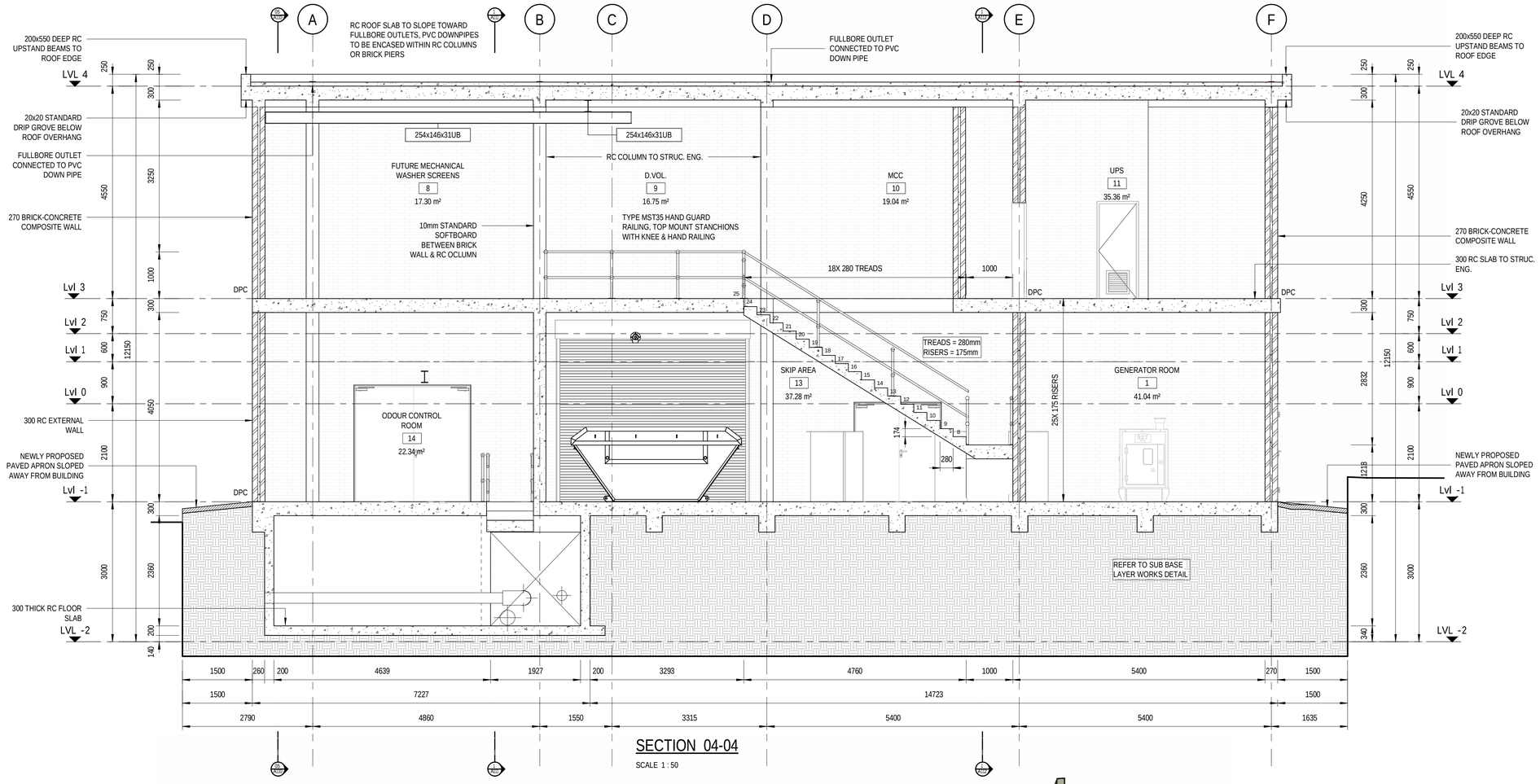
HEROLD'S BAY PUMP STATION

SECTION 03-03

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A108	

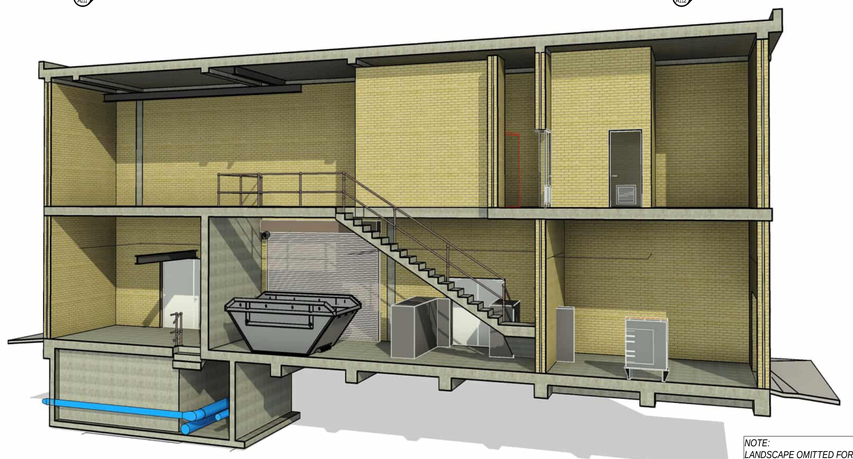
PLOT DATE TIME 2024/08/09 20:01:36
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



SECTION 04-04

SCALE 1 : 50



NOTE:
LANDSCAPE OMITTED FOR CLARITY.

SECTION PERSPECTIVE 04-04

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
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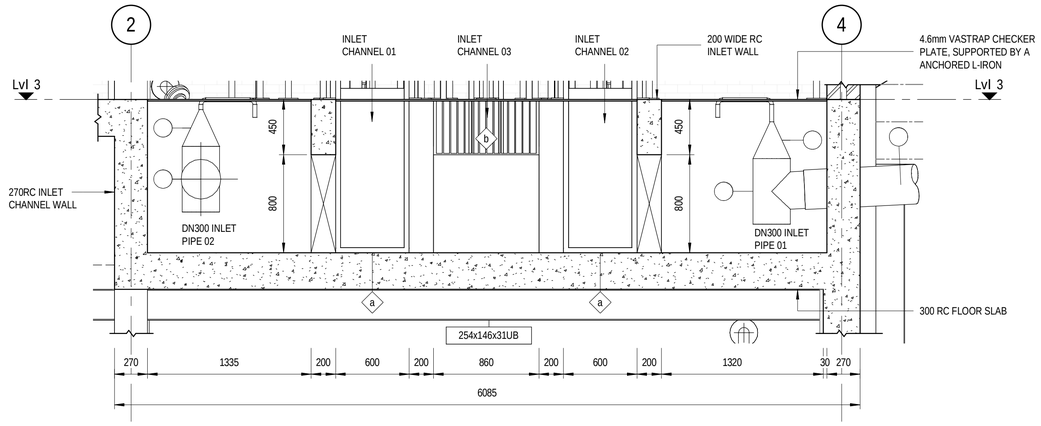
HEROLD'S BAY PUMP STATION

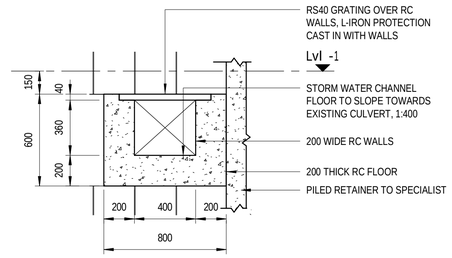
SECTION 04-04

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A109	

PLOT DATE TIME 2024/08/09 20:01:55
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

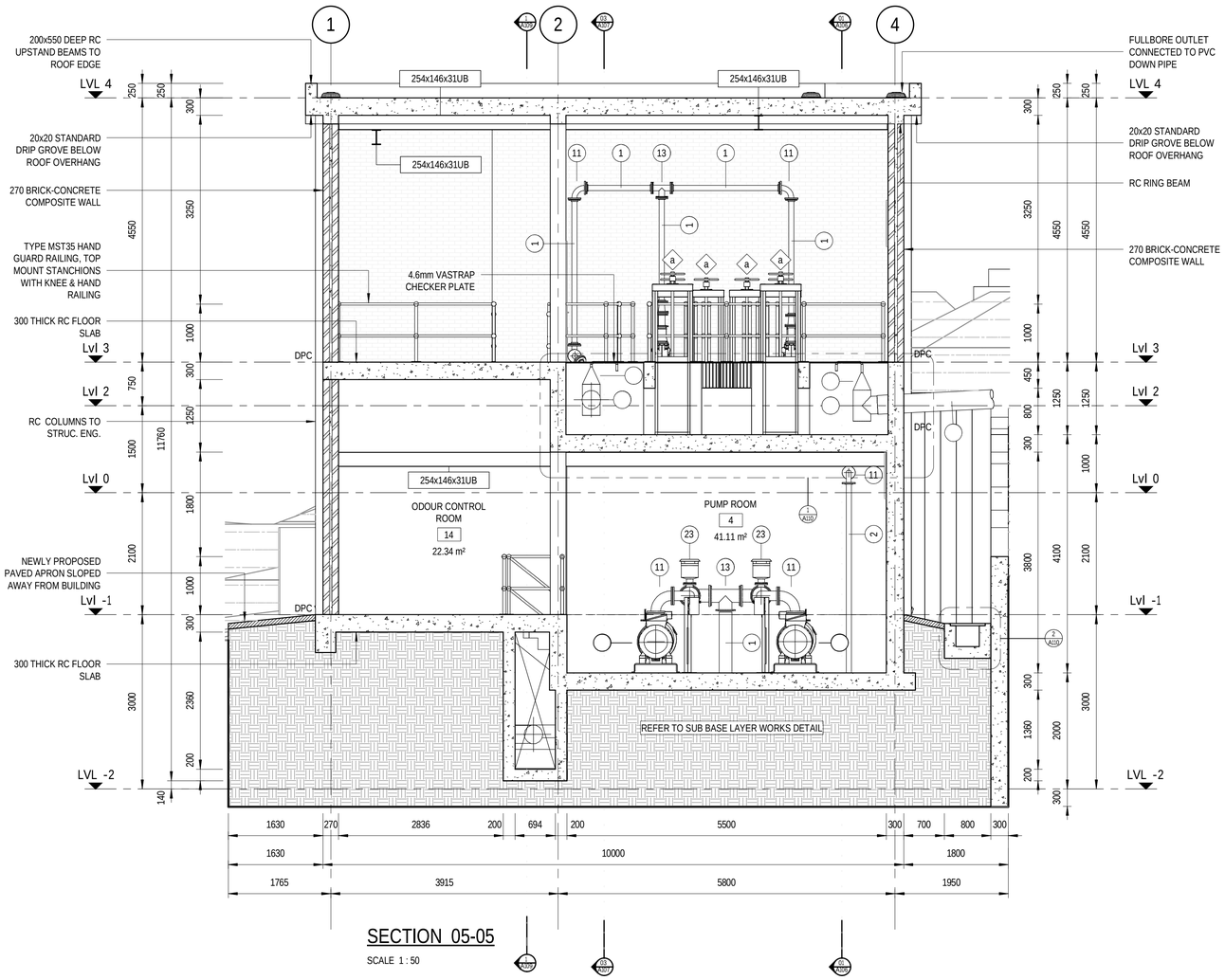
NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.





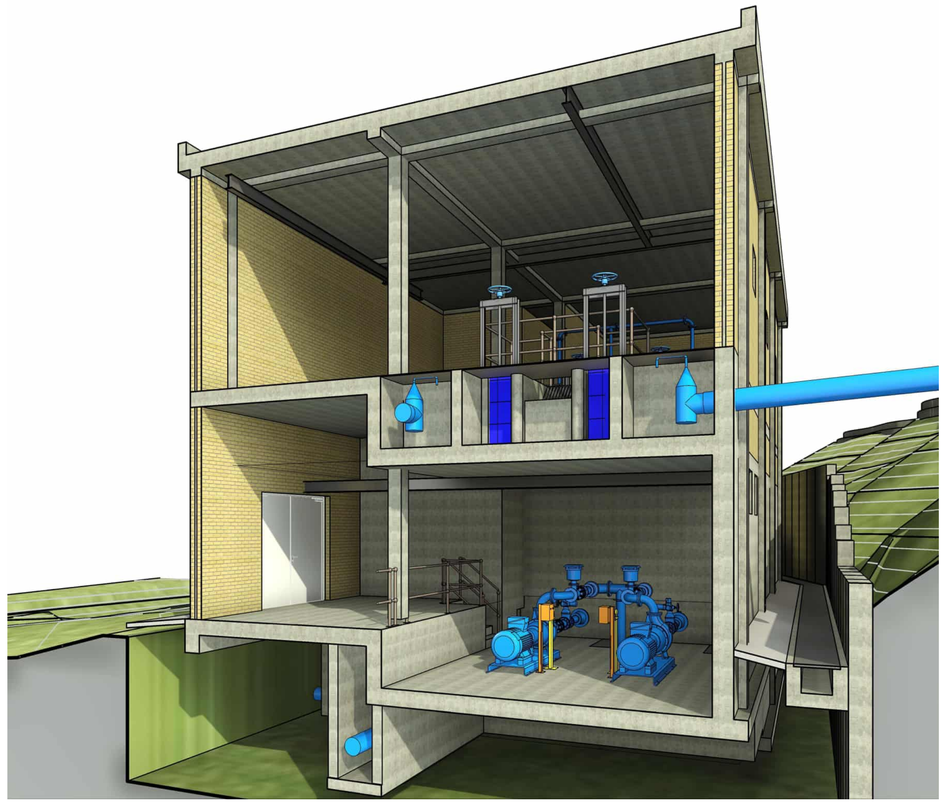
SECTION 05-05 - Callout 2

SCALE 1 : 20



SECTION 05-05

SCALE 1 : 50



SECTION PERSPECTIVE 05-05

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
SMEC South Africa — Member of the Surbana Jurong Group
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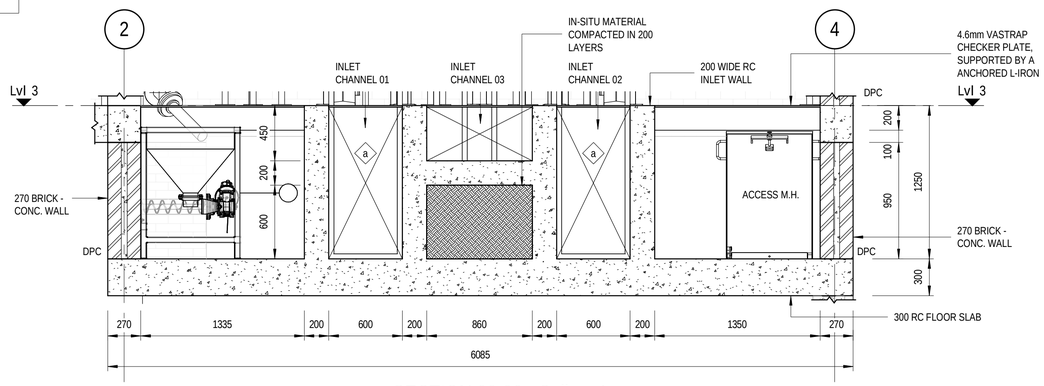
GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION

SECTION 05-05

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A110	

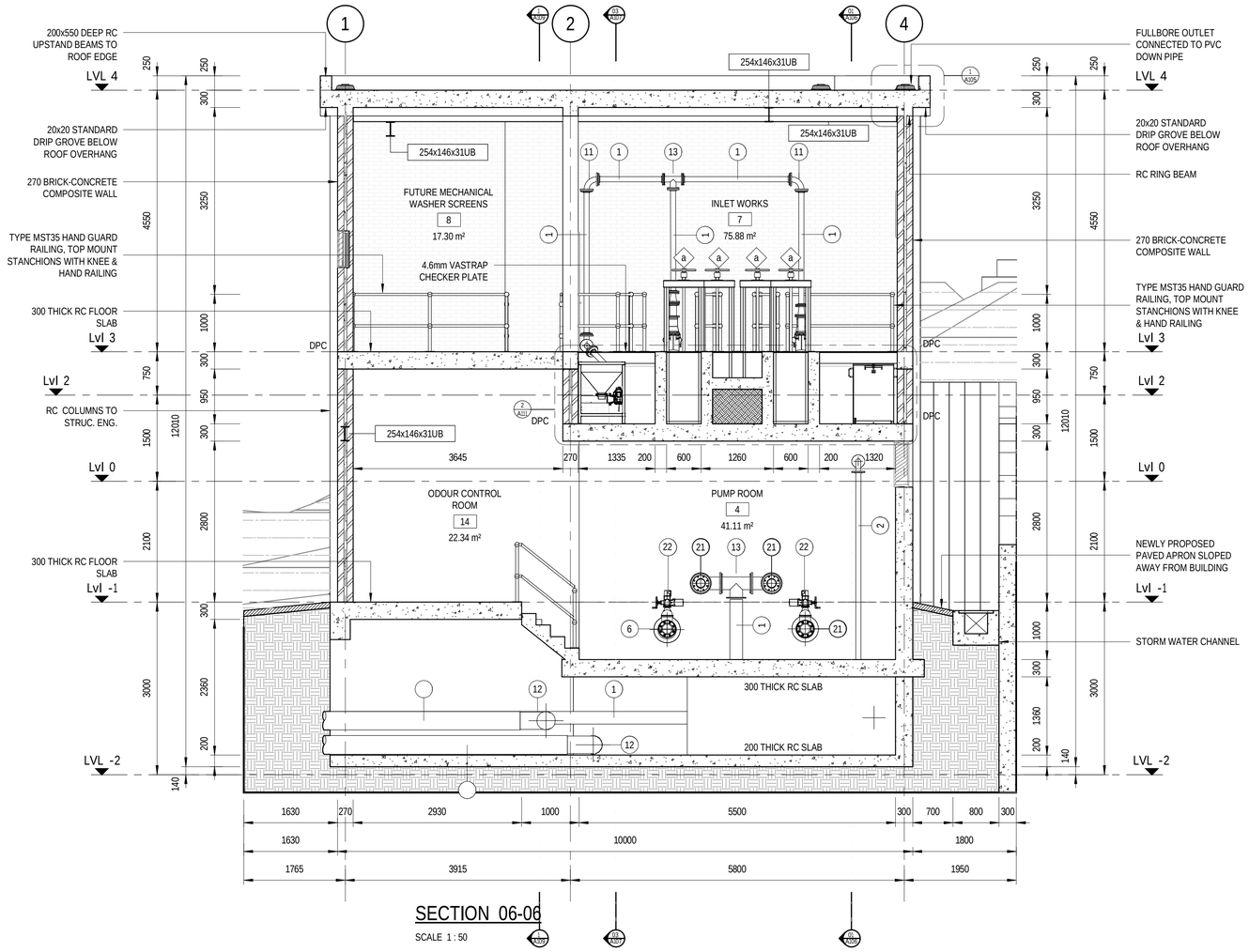
PLOT DATE 2024/08/09 TIME 20:12:13
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



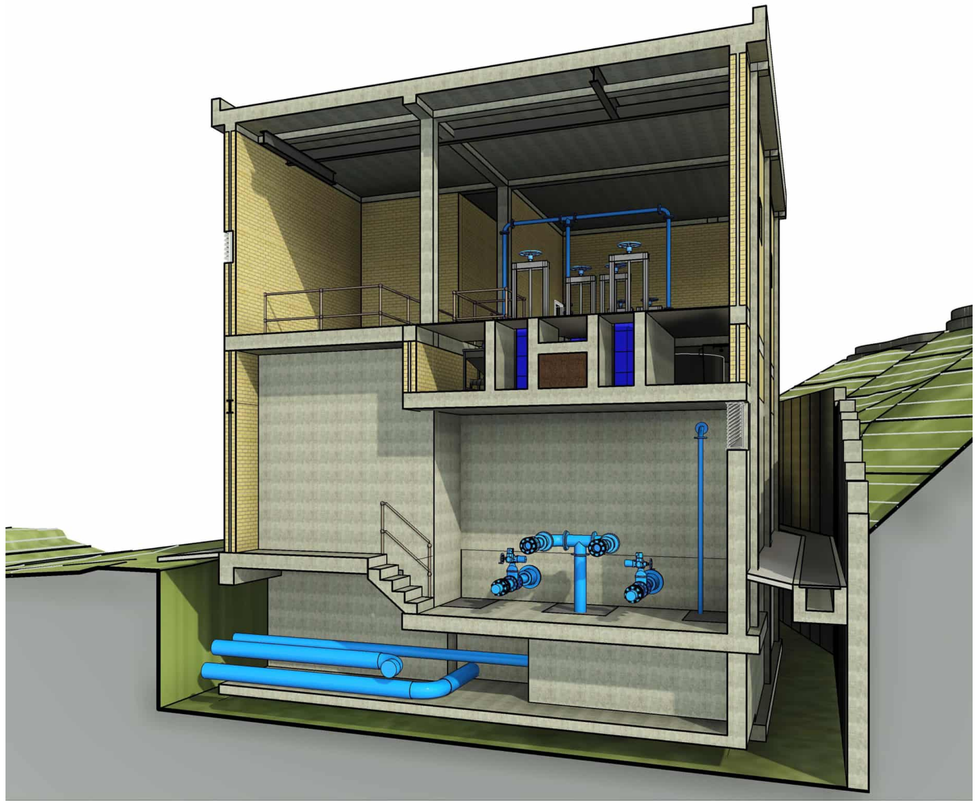
SECTION 06-06 - Callout 1

SCALE 1 : 25



SECTION 06-06

SCALE 1 : 50



SECTION PERSPECTIVE 06-06

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
SMEC South Africa
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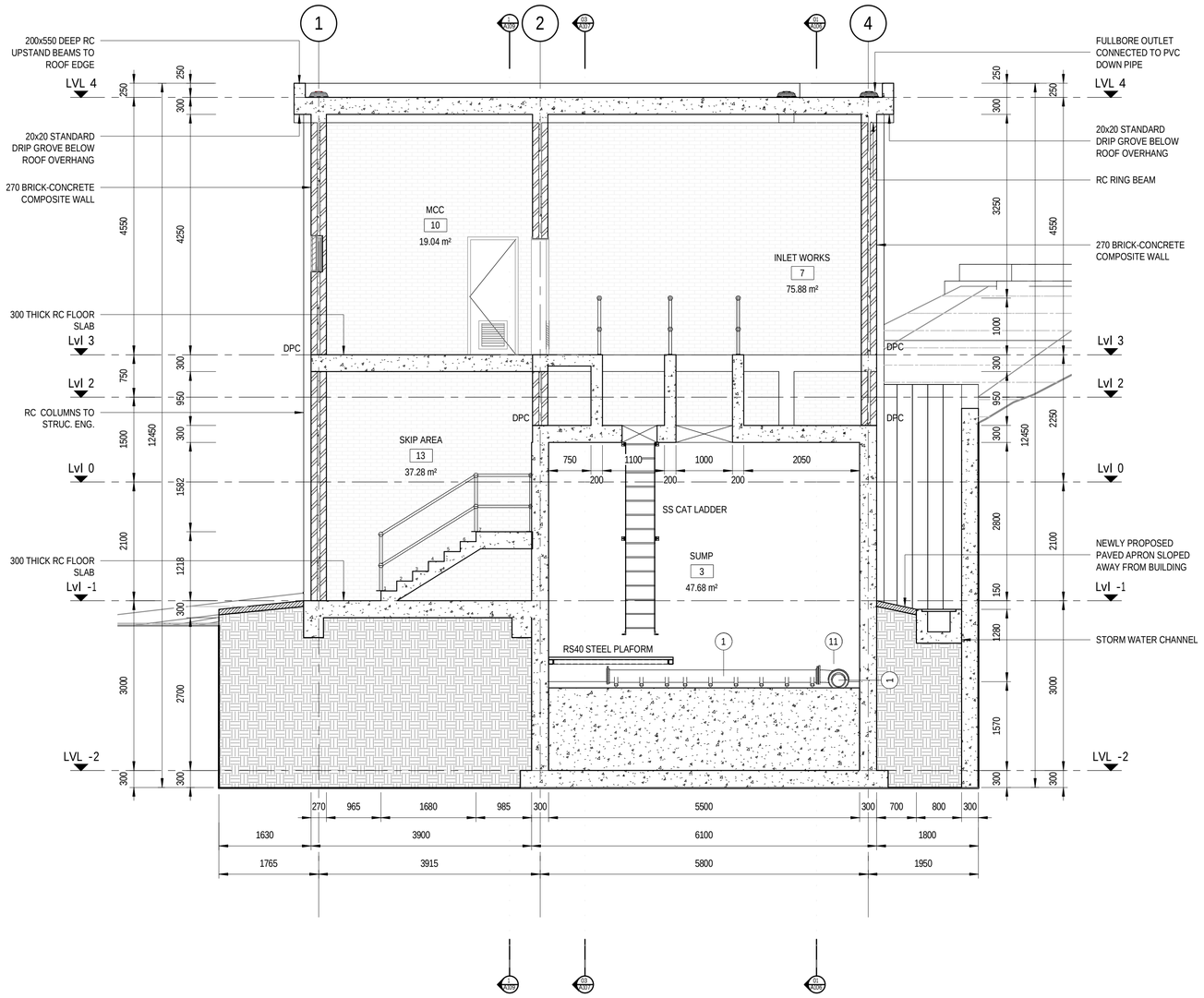
GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION

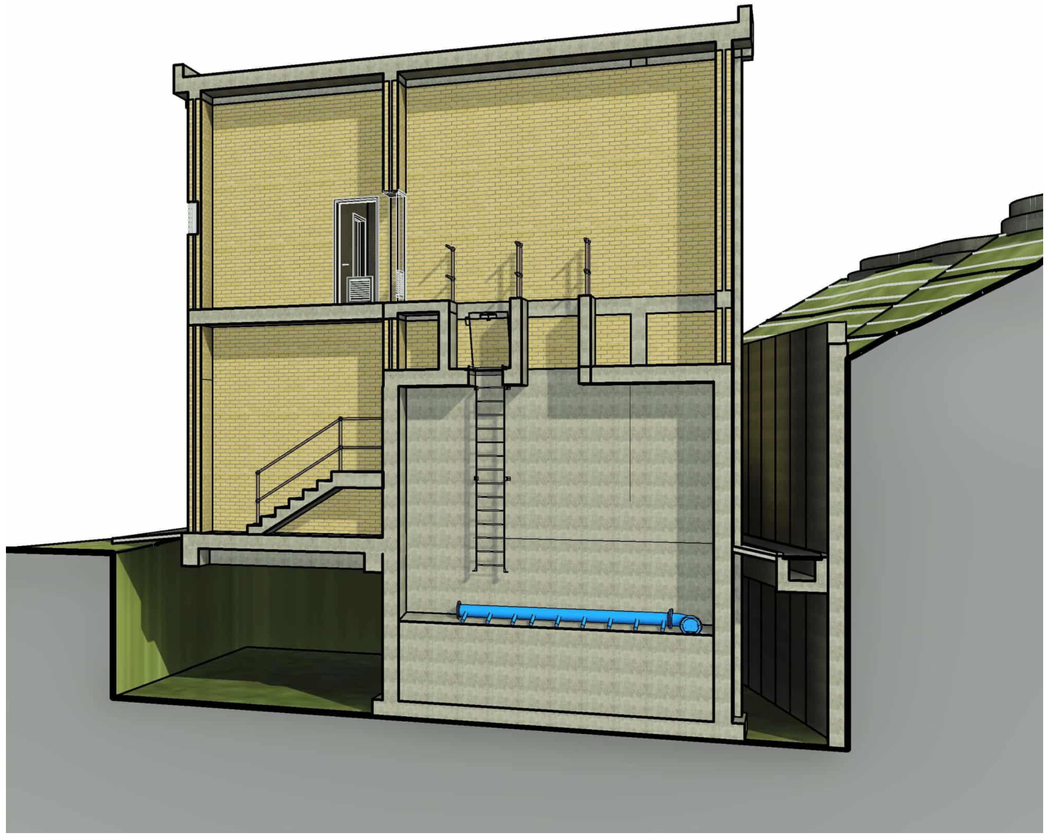
SECTION 06-06

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A111	

PLOT DATE 2024/08/09 TIME 20:03:38
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.





SECTION PERSPECTIVE 07-07

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
SMEC South Africa
Member of the Surbana Jurong Group
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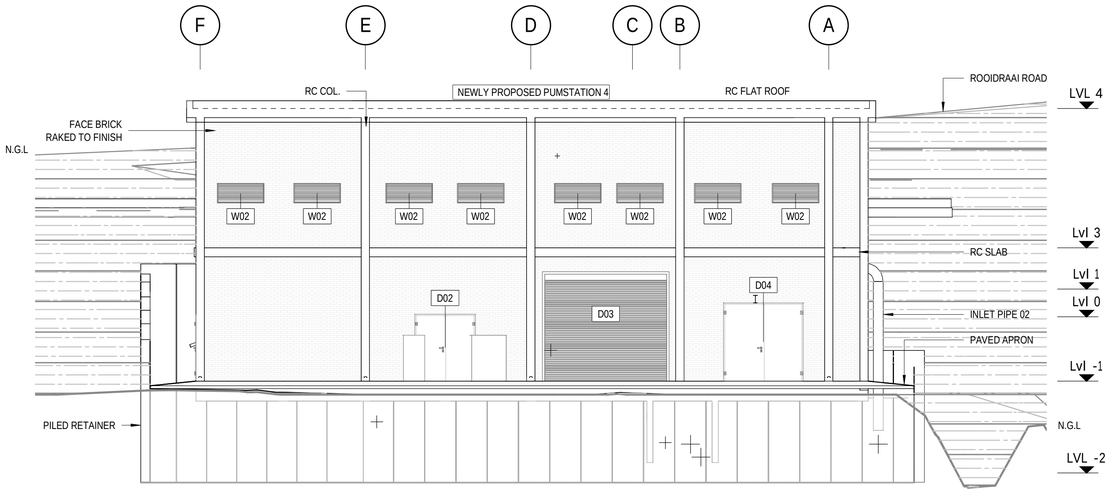
HEROLD'S BAY PUMP STATION

SECTION 07-07

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A112	

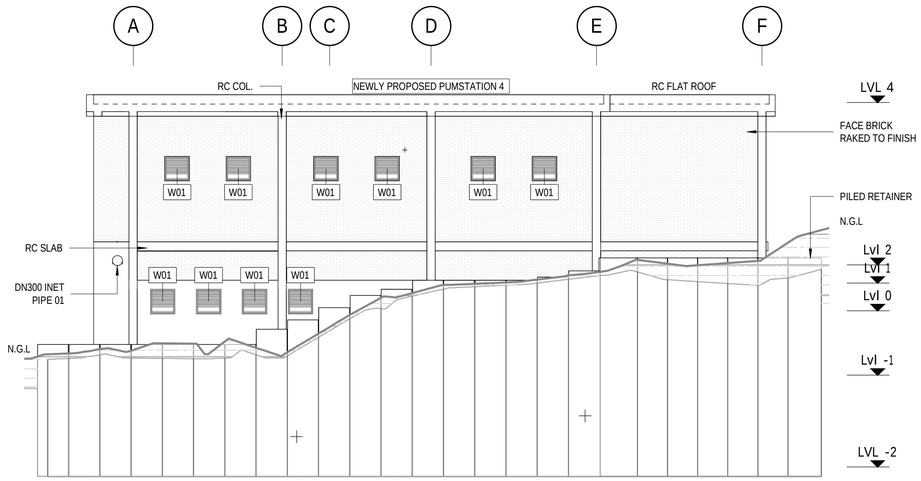
PLOT DATE 2024/08/09 TIME 20:03:46
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.



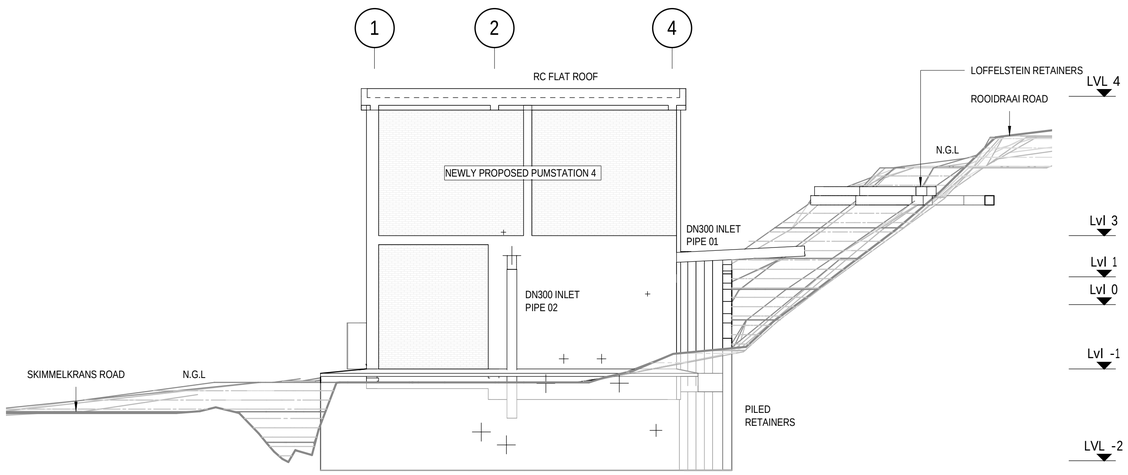
SOUTH EAST ELEVATION

SCALE 1 : 100



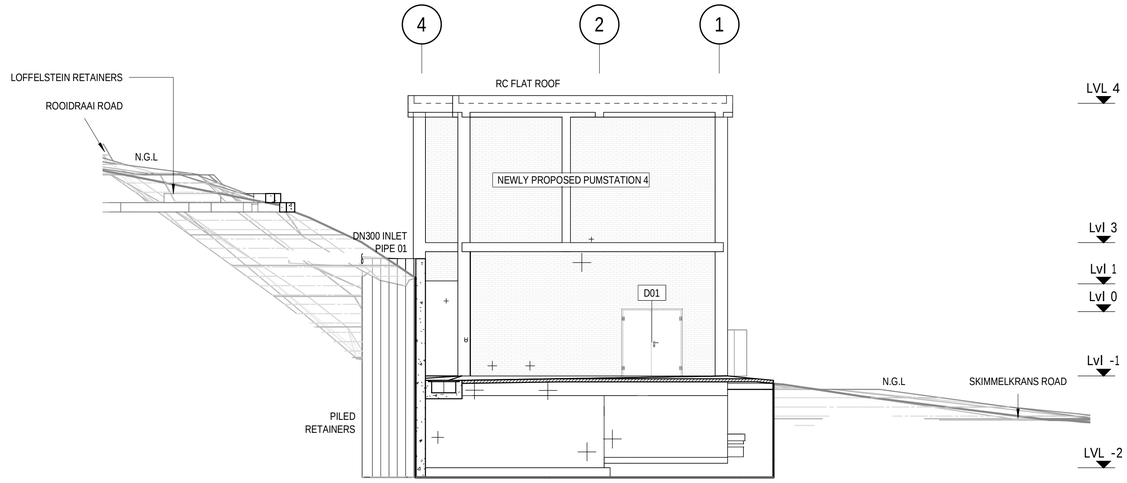
NORTH WEST ELEVATION

SCALE 1 : 100



NORTH EAST ELEVATION

SCALE 1 : 100



SOUTH WEST ELEVATION

SCALE 1 : 100

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
SMEC South Africa
Member of the Surbana Jurong Group
SABS ISO 9001

CLIENT
GEORGE THE CITY FOR ALL REASONS

GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION
ELEVATIONS

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A113	

PLOT DATE 2024/08/09 TIME 20:03:54
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

NOTE:
- DRAWINGS TO BE READ IN CONJUNCTION WITH PIPE SCHEDULES & SPECIFICATIONS FOR PIPE DETAIL.
- DRAWINGS TO BE READ IN CONJUNCTION WITH STRUCTURAL ENGINEERING DRAWINGS & SPECIFICATIONS FOR CONCRETE, STEEL & REINFORCEMENT DETAIL.

TABLE 1 - PIPE SCHEDULE - STRAIGHT PIPE

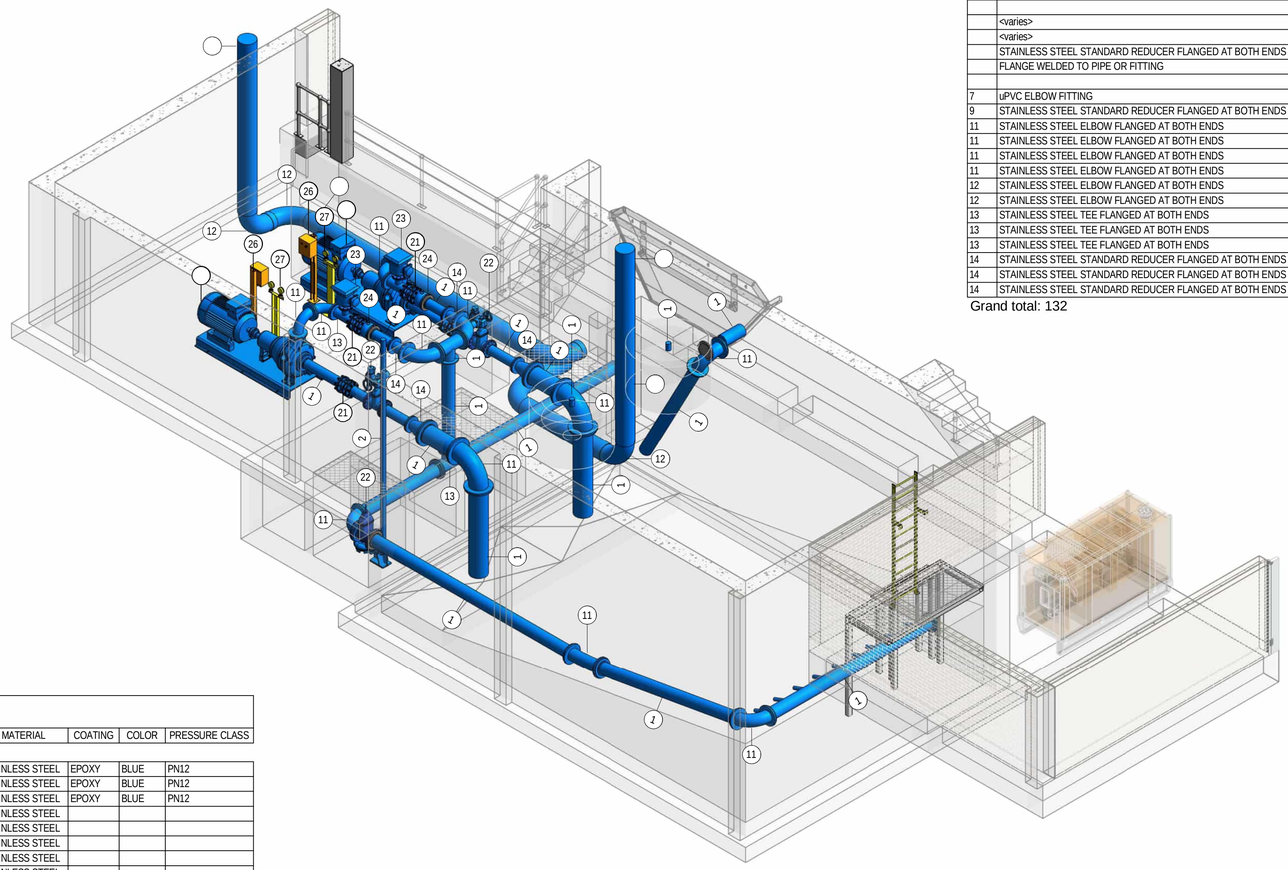
MARK	DESCRIPTION	DIAMETER	LENGTH	COUNT	MATERIAL	LINING	COATING	COLOR	PRESSURE CLASS
	STAINLESS STEEL PIPE FLANGED AT ONE OR BOTH ENDS	25 mm	1.13 m	6	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
	uPVC ROOF DRAINAGE PIPE - STRAIGHT LENGTHS	80 mm	24.40 m	6	UNPLASTICIZED POLYVINYL CHLORIDE	-	-	CHARCOAL GREY	-
	STAINLESS STEEL PIPE FLANGED AT ONE OR BOTH ENDS	300 mm	30.13 m	9	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
1	STAINLESS STEEL PIPE FLANGED AT ONE OR BOTH ENDS	50 mm	3.96 m	9	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
1	STAINLESS STEEL PIPE FLANGED AT ONE OR BOTH ENDS	80 mm	16.20 m	10	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
1	STAINLESS STEEL PIPE FLANGED AT ONE OR BOTH ENDS	100 mm	0.42 m	2	STAINLESS STEEL	EPOXY	EPOXY	BLUE	
1	STAINLESS STEEL PIPE FLANGED AT ONE OR BOTH ENDS	150 mm	4.16 m	8	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
1	STAINLESS STEEL PIPE FLANGED AT ONE OR BOTH ENDS	200 mm	25.25 m	8	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
1	STAINLESS STEEL PIPE FLANGED AT ONE OR BOTH ENDS	300 mm	4.52 m	4	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
2	STAINLESS STEEL PIPE FLANGED AT ONE OR BOTH ENDS	80 mm	5.02 m	2	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
3	uPVC ROOF DRAINAGE PIPE - STRAIGHT LENGTHS	80 mm	51.02 m	12	UNPLASTICIZED POLYVINYL CHLORIDE	-	-	CHARCOAL GREY	-

Grand total: 76 166.2
2 m

TABLE 2 - PIPE FITTING SCHEDULE

MARK	DESCRIPTION	COUNT	SIZE	MATERIAL	LINING	COATING	COLOR	PRESSURE CLASS
	<varies>	21	80 mmø-80 mmø	STAINLESS STEEL	<varies>	<varies>	<varies>	<varies>
	<varies>	7	100 mmø-100 mmø	STAINLESS STEEL	EPOXY	<varies>	<varies>	
		10	125 mmø-80 mmø	STAINLESS STEEL	EPOXY			
	<varies>	24	150 mmø-150 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	<varies>
	<varies>	17	200 mmø-200 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	<varies>
	STAINLESS STEEL STANDARD REDUCER FLANGED AT BOTH ENDS	2	300 mmø-25 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
	FLANGE WELDED TO PIPE OR FITTING	6	300 mmø-300 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	<varies>
		2	300 mmø-300 mmø-300 mmø					
7	uPVC ELBOW FITTING	4	80 mmø-80 mmø	STAINLESS STEEL	-	-	CHARCOAL GREY	
9	STAINLESS STEEL STANDARD REDUCER FLANGED AT BOTH ENDS	1	100 mmø-80 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
11	STAINLESS STEEL ELBOW FLANGED AT BOTH ENDS	5	80 mmø-80 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	<varies>
11	STAINLESS STEEL ELBOW FLANGED AT BOTH ENDS	4	150 mmø-150 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
11	STAINLESS STEEL ELBOW FLANGED AT BOTH ENDS	6	200 mmø-200 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	<varies>
11	STAINLESS STEEL ELBOW FLANGED AT BOTH ENDS	2	300 mmø-300 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
12	STAINLESS STEEL ELBOW FLANGED AT BOTH ENDS	4	25 mmø-25 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
12	STAINLESS STEEL ELBOW FLANGED AT BOTH ENDS	6	300 mmø-300 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	<varies>
13	STAINLESS STEEL TEE FLANGED AT BOTH ENDS	1	80 mmø-80 mmø-80 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	
13	STAINLESS STEEL TEE FLANGED AT BOTH ENDS	2	150 mmø-150 mmø-100 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
13	STAINLESS STEEL TEE FLANGED AT BOTH ENDS	2	200 mmø-200 mmø-200 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	<varies>
14	STAINLESS STEEL STANDARD REDUCER FLANGED AT BOTH ENDS	2	100 mmø-80 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	
14	STAINLESS STEEL STANDARD REDUCER FLANGED AT BOTH ENDS	2	200 mmø-150 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12
14	STAINLESS STEEL STANDARD REDUCER FLANGED AT BOTH ENDS	2	300 mmø-150 mmø	STAINLESS STEEL	EPOXY	EPOXY	BLUE	PN12

Grand total: 132



ISOMETRIC

SCALE

MECHANICAL EQUIPMENT SCHEDULE

FAMILY & TYPE	DESCRIPTION	COUNT
75_ME_ME_S_CHANNEL SLUICE GATE: TOP WHEEL	SLUICE GATE	8
Hand Screen1: Hand Screen	SEWER HAND SCREEN	1
Hand Screen2: Hand Screen	SEWER HAND SCREEN	1
Hand Screen4: Hand Screen	SEWER HAND SCREEN	1
Huber Mechanical Screen2: Huber Mechanical Screen	MECHANICAL SCREEN	1
Huber Mechanical Screen3: Huber Mechanical Screen	MECHANICAL SCREEN	1
SumpPump: Amarex Drainage Pump - 80mm Dia - PN16	MECHANICAL SCREEN	3

Grand total: 16

TABLE 3 - PIPE ACCESSORY SCHEDULE

MARK	DESCRIPTION	COUNT	DIAMETER	LINING	MATERIAL	COATING	COLOR	PRESSURE CLASS
22	VALVE - GATE	3	150	EPOXY	STAINLESS STEEL	EPOXY	BLUE	PN12
23	VALVE - AIR VALVE	2	150	EPOXY	STAINLESS STEEL	EPOXY	BLUE	PN12
24	NON RETURN VALVE AXIAL GUIDED DN15	2	150	EPOXY	STAINLESS STEEL	EPOXY	BLUE	PN12
31	FULL BORE OUTLET	7	80	EPOXY	STAINLESS STEEL			
32	FULL BORE OUTLET	1	80	EPOXY	STAINLESS STEEL			
33	FULL BORE OUTLET	1	80	EPOXY	STAINLESS STEEL			
34	FULL BORE OUTLET	1	80	EPOXY	STAINLESS STEEL			
35	FULL BORE OUTLET	1	80	EPOXY	STAINLESS STEEL			
36	FULL BORE OUTLET	1	80	EPOXY	STAINLESS STEEL			
38	FULL BORE OUTLET	1	80	EPOXY	STAINLESS STEEL			

Grand total: 20

GENERIC MODEL SCHEDULE

FAMILY & TYPE	COUNT
45 PRESSURE GAGES AZ01: 45 PRESSURE GAGES AZ01	2
45 Stop Start Box 2: 45 Stop Start Box 2	2
DismantlingJoint_DN150-PN16: DismantlingJoint_DN150-PN16	4
Family3: Family3	1
KSB Sewatec K150-503G: KSB Sewatec K150-503G	2
LADDER WITHOUT RAILS 3400 mm HEIGHT: LADDER WITHOUT RAILS 3400 mm HEIGHT	1
TD 49 Manhole Cover & Frame C: TD 49 Manhole Cover & Frame C	2
WasteContainer: WasteContainer	1

PRELIMINARY

REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL	TITLE	NAME
			-	-	DRAFTER	G. MAREDI
			-	-	DRAFTING CHECK	G. WHALLEY
			-	-	DESIGNER	S. FAUSTINO
					DESIGN CHECK	G. WHALLEY
2					PROJECT MANAGER	T.CRONJE
1					PROJECT DIRECTOR	T.CRONJE

DRAWING APPROVED
ENGINEER: .....
PR ENG NR: .....
SIGNATURE: .....

SCALES AT AN A1 SIZE DRAWING
SCALE 1:1 — 0.01 0 0.01 0.02 0.03 0.04 0.05
SCALE 1:50 — 0.5 0 1 2
SCALE 1:100 — 1 0 1 2 3 4 5

DESIGNER
SMEC South Africa
Member of the Surbana Jurong Group
SABS ISO 9001

CLIENT
GEORGE THE CITY FOR ALL REASONS

GEORGE MUNICIPALITY
HEROLD'S BAY PUMP STATION

ISOMETRIC VIEW & SCHEDULES

PROJECT NO.	PHASE	DRAWING NUMBER	REVISION
C1924		A114	

PLOT DATE 2024/08/09 TIME 20:06:46
DRAWING FILE LOCATION / NAME
150 mm ON ORIGINAL
A1

Annexure C Rising Main Drawings

NOTE:
1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE ANY WORK IS PUT IN HAND. REFER ANY DISCREPANCIES TO THE ENGINEER.

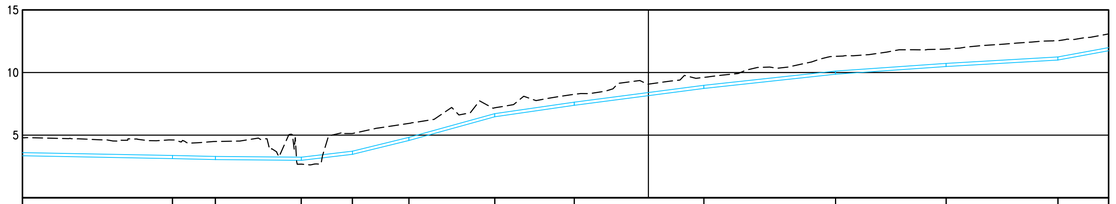
SEWER RISING MAIN PIPE TABLE

NAME	SIZE	LENGTH	SLOPE	MATERIAL
P(32)	250 mm	24.0 m	-0.95%	uPVC
P(33)	250 mm	6.9 m	-1.14%	uPVC
P(34)	250 mm	13.7 m	-0.43%	uPVC
P(35)	250 mm	8.2 m	5.88%	uPVC
P(36)	250 mm	9.0 m	-12.25%	uPVC
P(37)	250 mm	13.7 m	13.80%	uPVC
P(38)	250 mm	12.7 m	7.22%	uPVC
P(39)	250 mm	20.7 m	6.51%	uPVC
P(40)	250 mm	21.0 m	5.40%	uPVC
P(41)	250 mm	17.7 m	3.47%	uPVC
P(42)(0)	250 mm	17.9 m	2.89%	uPVC
P(43)	250 mm	8.1 m	9.19%	uPVC

NGL
PIPE

SCALES:
Horizontal 1:500
Vertical 1:250

DATUM 0.000



REFERENCE	P(32) 200ø CLASS	P(33) 200ø CLASS	P(34) 200ø CLASS	P(35) 200ø CLASS	P(36) 200ø CLASS	P(37) 200ø CLASS	P(38) 200ø CLASS	P(39) 200ø CLASS	P(40) 200ø CLASS	P(41) 200ø CLASS	P(42)(0) 200ø CLASS	P(43) 200ø CLASS
DISTANCE (m)	0.000, 23.973	30.829	44.545	52.712	61.738	75.450	88.151	108.856	129.896	147.556	165.422	???
GROUND LEVEL												
PIPE INVERT LEVEL	3.353	3.125, 3.125	3.047, 3.047	2.987, 2.987	3.467, 3.467	4.573, 4.573	6.465, 6.465	7.382, 7.382	8.729, 8.729	9.865, 9.865	10.478, 10.478	10.995, 10.995, 11.740
DEPTH TO INVERT												
SLOPE / LENGTH	−0.95% −1:105.0 23.97m	−1.14% −1:88.0 6.86m	−0.43% −1:230.0 13.72m	5.88% 1:17.0 8.15m	−12.25% −1:8.2 9.03m	13.80% 1:7.2 13.71m	7.22% 1:13.9 12.70m	6.51% 1:15.4 20.71m	5.40% 1:18.5 21.04m	3.47% 1:28.8 17.66m	2.89% 1:34.5 17.87m	9.19% 1:10.9 8.11m

LONGSECTION PROPOSED RISING MAIN 1
FROM 0.000 TO 173.527

LEGEND:
- FIRE HYDRANT/ MARKER
- TREE
- GATE
- LAMP POLE
- WATER METER/ WATER VALVES
- TELEPHONE POLE
- ROCK OUTCROP
- BENCH MARKS
- ELECTRICITY BOX
- EXISTING SEWERLINE
- EXISTING MANHOLE
- EXISTING MANHOLE
- STORMWATER
- PROPOSED RISING PIPELINE
- SERVITUDE 4m WIDE
- EMERGENCY STORAGE TANK

FOR DISCUSSION

REVISIONS			
0B	07-07-2023	FOR DISCUSSION	WA
NO.	DATE	DESCRIPTION	INITIAL

DESIGNED	T CRONJE
CHECKED	J HOUGH
DRAWN	M GQWETHA
CHECKED	W ANNANDALE

SIGNED
SMEC South Africa
DATE

smec an ASX company
PO Box 10633 George 6530
13 Progress St George 6529
e-mail: george@smec.com
website: www.smec.com
Tel (044) 873-5029
Fax (044) 873-5086

GEORGE THE CITY FOR ALL REASONS
PO Box 19 George 6530
c/o York & Market Street George 6530
e-mail: civilinfo@george.org.za
website: www.george.org.za
Tel (044) 801 9496
Fax (086) 529 9872

SIGNED
George Municipality
DATE

Upgrading of Herolds Bay Pumpstation

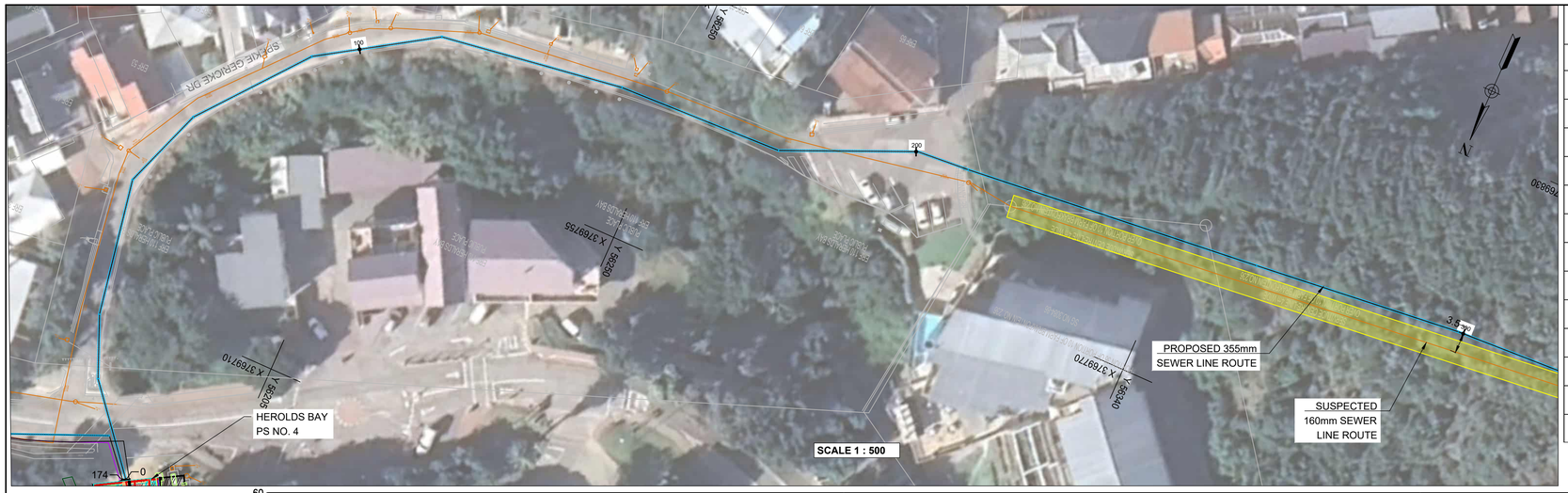
Sewer Rising Main From Herolds Bay PS No. 1 to Herolds Bay PS No. 4 SV 0 to SV 171

SIZE	SCALE
A1	AS SHOWN

PROJECT DRAWING NUMBER
C1936 - 520 - 001

REV	SHEET No.
OB	01 OF 05

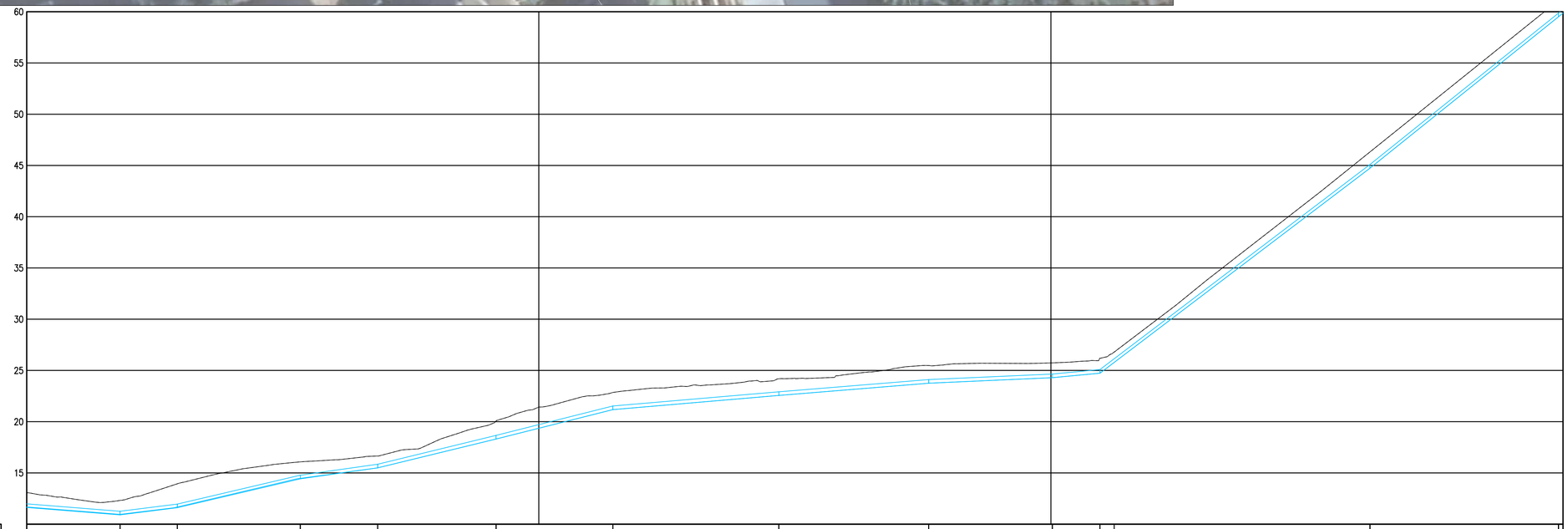
SCALE BAR 1 : 1000
0 10m 25m 50m 100m



SEWER RISING MAIN PIPE TABLE

NAME	SIZE	LENGTH	SLOPE	MATERIAL
P(1)	355 mm	18.2 m	-3.97%	uPVC
P(2)	355 mm	11.2 m	6.26%	uPVC
P(3)	355 mm	24.0 m	11.73%	uPVC
P(4)	355 mm	15.1 m	7.09%	uPVC
P(5)	355 mm	23.1 m	12.18%	uPVC
P(6)	355 mm	22.8 m	12.58%	uPVC
P(7)	355 mm	32.4 m	4.27%	uPVC
P(8)	355 mm	29.3 m	4.07%	uPVC
P(9)	355 mm	24.1 m	2.23%	uPVC
P(10)	355 mm	9.3 m	4.72%	uPVC
P(11)	355 mm	52.7 m	37.95%	uPVC
P(12)	355 mm	36.8 m	40.13%	uPVC
P(13)	355 mm	27.3 m	40.48%	uPVC

NOTE:
1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE ANY WORK IS PUT IN HAND. REFER ANY DISCREPANCIES TO THE ENGINEER.



NGL
PIPE

SCALES:
Horizontal 1:500
Vertical 1:250

DATUM 10.000

LEGEND:
- FIRE HYDRANT/ MARKER
- TREE
- GATE
- LAMP POLE
- WATER METER/ WATER VALVES
- TELEPHONE POLE
- ROCK OUTCROP
- BENCH MARKS
- ELECTRICITY BOX
- EXISTING SEWERLINE
- EXISTING MANHOLE
- EXISTING MANHOLE
- STORMWATER
- PROPOSED RISING PIPELINE
- SERVITUDE 4m WIDE

REFERENCE	P(1) 355ø CLASS	P(2) 355ø CLASS	P(3) 355ø CLASS	P(4) 355ø CLASS	P(5) 355ø CLASS	P(6) 355ø CLASS	P(7) 355ø CLASS	P(8) 355ø CLASS	P(9) 355ø CLASS	P(10) 355ø CLASS	P(11) 355ø CLASS	P(12) 355ø CLASS	P(13) 355ø CLASS
DISTANCE (m)	0.000 / 18.223	29.409	53.422	68.541	91.645	114.452	146.879	176.137	200.280	209.581	262.293	299.106 / 326.485	
GROUND LEVEL	13.079 / 12.318	13.939	16.078	16.645	20.057	22.851	24.184	25.476	25.736	26.182	46.315	61.000	
PIPE INVERT LEVEL	11.626 / 10.904	10.904 / 11.604	11.604 / 14.420	14.420 / 15.492	15.493 / 18.306	18.306 / 21.175	21.175 / 22.561	22.561 / 23.753	23.753 / 24.291	24.291 / 24.730	24.730 / 44.733	44.733 / 58.506	58.506 / 58.560
DEPTH TO INVERT	1.400 / 1.361	2.238	1.625	1.152	1.751	1.676	1.623	1.723	1.446	1.453	1.582	1.602	
SLOPE / LENGTH	−3.97% −1:25.2 18.22m	6.26% 1:16.0 11.19m	11.73% 1:8.5 24.01m	7.09% 1:14.1 15.12m	12.18% 1:8.2 23.10m	12.58% 1:7.9 22.81m	4.27% 1:23.4 32.43m	4.07% 1:24.5 29.26m	2.23% 1:44.9 24.14m	4.72% 1:21.2 9.30m	37.95% 1:2.6 52.71m	40.13% 1:2.5 36.81m	40.48% 1:2.5 27.35m

LONGSECTION PROPOSED RISING MAIN 2
FROM 0.000 TO 300.000

FOR DISCUSSION

REVISIONS				
0B	07-07-2023	FOR DISCUSSION	WA	
NO.	DATE	DESCRIPTION	INITIAL	

DESIGNED	T CRONJE
CHECKED	J HOUGH
DRAWN	M GQWETHA
CHECKED	W ANNANDALE

SIGNED
SMEC South Africa
DATE

smec an company
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13 Progress St George 6529
e-mail: george@smec.com
website: www.smec.com
Tel (044) 873-5029
Fax (044) 873-5086

GEORGE THE CITY FOR ALL REASONS
PO Box 19 George 6530
c/o York & Market Street George 6530
e-mail: civilinfo@george.org.za
website: www.george.org.za
Tel (044) 801 9496
Fax (086) 529 9872

SIGNED
George Municipality
DATE

Upgrading of Herolds Bay Pumpstation

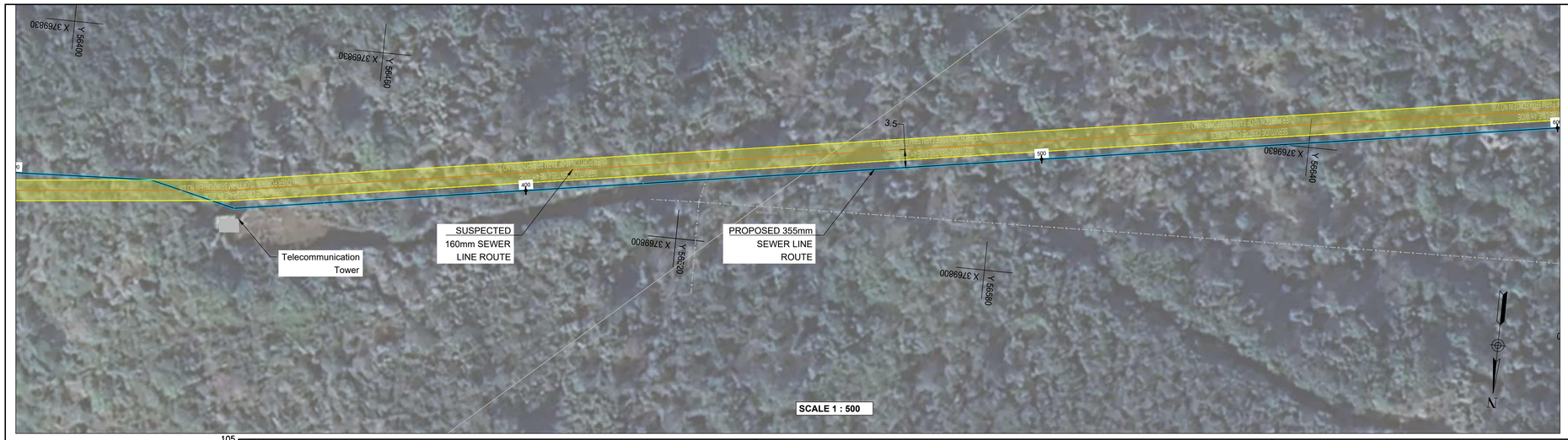
Sewer Rising Main from Herolds Bay PS No. 4 to Existing WWTW SV 0 to SV 300

SIZE	SCALE
A1	AS SHOWN

PROJECT DRAWING NUMBER
C1936 - 520 - 002

REV	SHEET No.
OB	02 OF 05

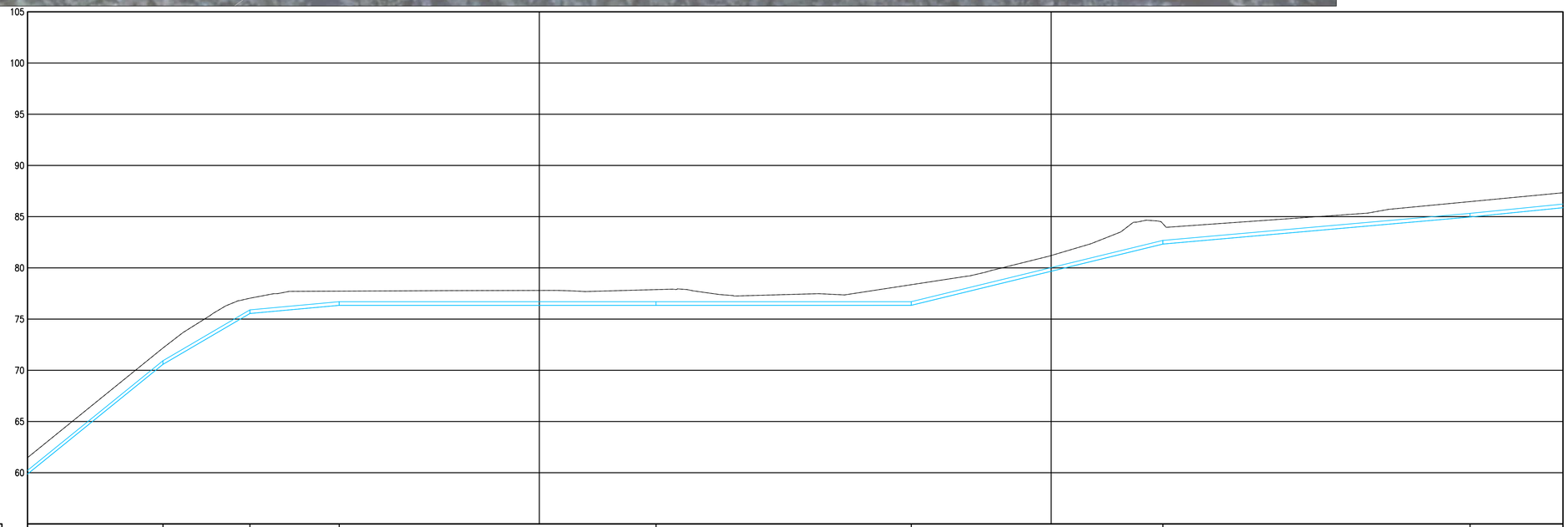
SCALE BAR 1 : 1000
0 10m 25m 50m 100m



NOTE:
1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE ANY WORK IS PUT IN HAND. REFER ANY DISCREPANCIES TO THE ENGINEER.

SEWER RISING MAIN PIPE TABLE

NAME	SIZE	LENGTH	SLOPE	MATERIAL
P(13)	355 mm	27.3 m	40.48%	uPVC
P(14)	355 mm	17.0 m	29.23%	uPVC
P(15)	355 mm	17.4 m	4.57%	uPVC
P(16)	355 mm	61.9 m	0.00%	uPVC
P(17)	355 mm	49.9 m	0.00%	uPVC
P(18)	355 mm	49.2 m	12.17%	uPVC
P(19)	355 mm	60.0 m	4.40%	uPVC
P(20)	355 mm	23.5 m	5.00%	uPVC



NGL
PIPE

SCALES:
Horizontal 1:500
Vertical 1:250

DATUM 55.000

REFERENCE	P(13) 355ø CLASS	P(14) 355ø CLASS	P(15) 355ø CLASS	P(16) 355ø CLASS	P(17) 355ø CLASS	P(18) 355ø CLASS	P(19) 355ø CLASS	P(20) 355ø CLASS
DISTANCE (m)	299.106 / 326.453	343.446	360.888	422.797	472.653	521.825	581.835	605.350
GROUND LEVEL	72.173	77.036		77.877	78.354	84.314	86.469	
PIPE INVERT LEVEL	59.506 / 70.576	70.576 / 75.543	75.543 / 76.341	76.341 / 76.341	76.341 / 76.341	76.341 / 82.324	82.324 / 84.965	84.965 / 86.141
DEPTH TO INVERT	1.602 / 1.597	1.493	1.385	1.536	2.013	1.990	1.504	1.459
SLOPE / LENGTH	40.48% 1:2.5 27.35m	29.23% 1:3.4 16.99m	4.57% 1:21.9 17.44m	0.00% Horizontal 61.91m	0.00% 1:110311.6 49.86m	12.17% 1:8.2 49.17m	4.40% 1:22.7 60.01m	5.00% 1:20.0 23.52m

LONGSECTION PROPOSED RISING MAIN 2
FROM 300.000 TO 600.000

LEGEND:
- FIRE HYDRANT/ MARKER
- TREE
- GATE
- LAMP POLE
- WATER METER/ WATER VALVES
- TELEPHONE POLE
- ROCK OUTCROP
- BENCH MARKS
- ELECTRICITY BOX
- EXISTING SEWERLINE
- EXISTING MANHOLE
- EXISTING MANHOLE
- STORMWATER
- PROPOSED RISING PIPELINE
- SERVITUDE 4m WIDE

FOR DISCUSSION

REVISIONS			
0B	07-07-2023	FOR DISCUSSION	WA
NO.	DATE	DESCRIPTION	INITIAL

DESIGNED	T CRONJE
CHECKED	J HOUGH
DRAWN	M GQWETHA
CHECKED	W ANNANDALE

SIGNED
SMEC South Africa
DATE

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website: www.smec.com
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SIGNED
George Municipality
DATE

Upgrading of Herolds Bay Pumpstation

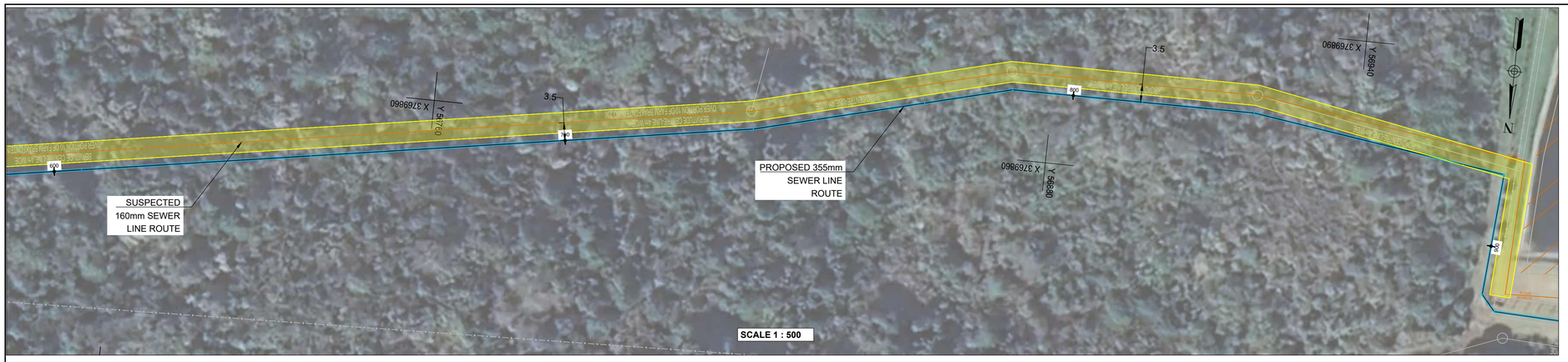
Sewer Rising Main from Herolds Bay PS No. 4 to Existing WWTW SV 300 to SV 600

SIZE	SCALE
A1	AS SHOWN

PROJECT DRAWING NUMBER: C1936 - 520 - 003

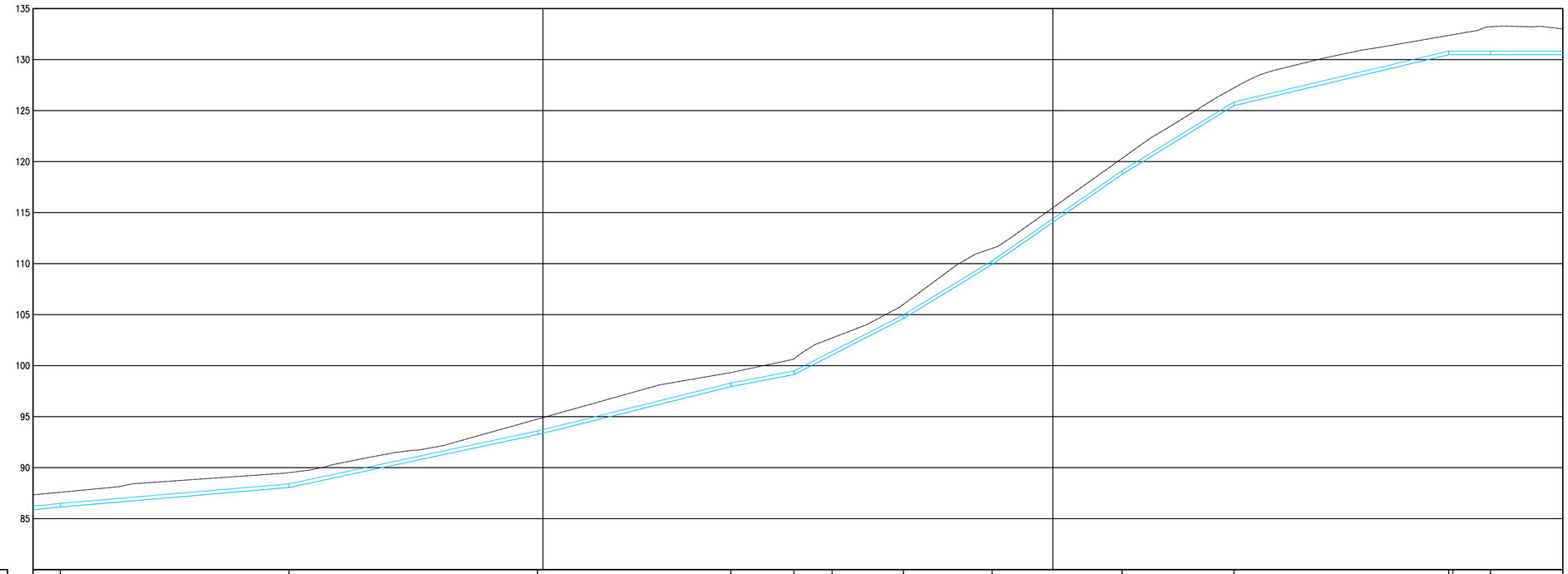
REV	SHEET No.
OB	03 OF 05

SCALE BAR 1 : 1000
0 10m 25m 50m 100m



SEWER RISING MAIN PIPE TABLE

NAME	SIZE	LENGTH	SLOPE	MATERIAL
P(20)	355 mm	23.5 m	5.00%	uPVC
P(21)	355 mm	44.8 m	4.26%	uPVC
P(22)	355 mm	48.8 m	10.64%	uPVC
P(23)	355 mm	37.9 m	12.39%	uPVC
P(24)	355 mm	12.4 m	9.60%	uPVC
P(25)	355 mm	21.5 m	25.61%	uPVC
P(26)	355 mm	17.4 m	30.48%	uPVC
P(27)	355 mm	25.5 m	34.64%	uPVC
P(28)	355 mm	21.9 m	30.71%	uPVC
P(29)	355 mm	42.1 m	11.84%	uPVC
P(30)	355 mm	8.2 m	0.00%	uPVC



NGL
PIPE

SCALES:
Horizontal 1:500
Vertical 1:250

DATUM 80.000

REFERENCE		P(20) 355ø CLASS	P(21) 355ø CLASS		P(22) 355ø CLASS		P(23) 355ø CLASS		P(24) 355ø CLASS		P(25) 355ø CLASS		P(26) 355ø CLASS		P(27) 355ø CLASS		P(28) 355ø CLASS		P(29) 355ø CLASS		P(30) 355ø CLASS		P(31) 355ø CLASS
DISTANCE (m)	581.835	605.350		650.183		698.946		736.852		749.225		770.691		788.088		813.560		835.501		877.637		885.797		909.576
GROUND LEVEL		87.655				94.759		99.319		100.648				111.502				127.222		132.369		133.216		
PIPE INVERT LEVEL	84.965 86.14	86.141		88.053 88.053		93.244 93.244		97.939 97.939		99.126 99.126		104.624 104.624		109.926 109.926		118.750 118.750		125.489 125.489		130.479 130.479		130.479 130.479		130.479
DEPTH TO INVERT	1.459	1.445		1.454		1.516		1.381		1.521		1.384		1.576		1.565		1.733		1.890		2.737		2.525
SLOPE / LENGTH		5.00% 1:20.0 23.52m	4.26% 1:23.4 44.83m		10.64% 1:9.4 48.76m		12.39% 1:8.1 37.91m		9.60% 1:10.4 12.37m		25.61% 1:3.9 21.47m		30.48% 1:3.3 17.40m		34.64% 1:2.9 25.47m		30.71% 1:3.3 21.94m		11.84% 1:8.4 42.14m		0.00% Horizontal 8.16m		0.00% Horizontal 23.78m

LONGSECTION PROPOSED RISING MAIN 2
FROM 600.000 TO 900.000

LEGEND:

- FIRE HYDRANT/ MARKER
- TREE
- GATE
- LAMP POLE
- WATER METER/ WATER VALVES
- TELEPHONE POLE
- ROCK OUTCROP
- BENCH MARKS
- ELECTRICITY BOX
- EXISTING SEWERLINE
- EXISTING MANHOLE
- EXISTING MANHOLE
- STORMWATER
- PROPOSED RISING PIPELINE
- SERVITUDE 4m WIDE
- EMERGENCY STORAGE TANK

NOTE:
1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE ANY WORK IS PUT IN HAND. REFER ANY DISCREPANCIES TO THE ENGINEER.

FOR DISCUSSION

SCALE BAR 1 : 1000: 0, 10m, 25m, 50m, 100m

REVISIONS			
0B	07-07-2023	FOR DISCUSSION	WA
NO.	DATE	DESCRIPTION	INITIAL

DESIGNED	T CRONJE
CHECKED	J HOUGH
DRAWN	M GQWETHA
CHECKED	W ANNANDALE

SIGNED
SMEC South Africa
DATE

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SIGNED
George Municipality
DATE

Upgrading of Herolds Bay Pumpstation

Sewer Rising Main from Herolds Bay PS No. 4 to Existing WWTW SV 600 to SV 900

SIZE	SCALE
A1	AS SHOWN

PROJECT DRAWING NUMBER
C1936 - 520 - 004

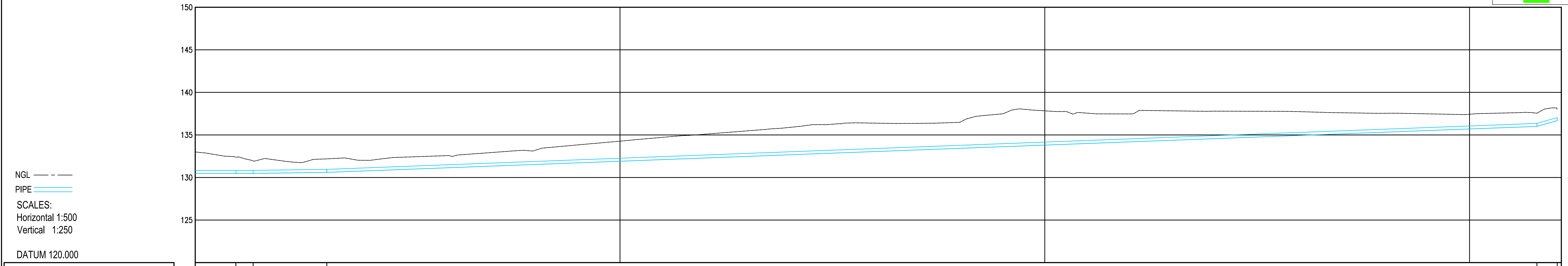
REV	SHEET No.
OB	04 OF 05

SEWER RISING MAIN PIPE TABLE

NAME	SIZE	LENGTH	SLOPE	MATERIAL
P(31)	355 mm	23.8 m	0.00%	uPVC
P(32)	355 mm	4.1 m	-0.01%	uPVC
P(33)	355 mm	17.3 m	0.71%	uPVC
P(34)	355 mm	284.9 m	1.90%	uPVC
P(37)	355 mm	4.8 m	14.25%	uPVC

LEGEND:

▢	FIRE HYDRANT/ MARKER
✿	TREE
⋈	GATE
⊗	LAMP POLE
◎	WATER METER/ WATER VALVES
⊗	TELEPHONE POLE
#	ROCK OUTCROP
▲	BENCH MARKS
⊠	ELECTRICITY BOX
—	EXISTING SEWERLINE
○	EXISTING MANHOLE
□	EXISTING MANHOLE
—	STORMWATER
═	PROPOSED RISING PIPELINE
🟨	SERVITUDE 4m WIDE
🟩	EMERGENCY STORAGE TANK



SCALES:
Horizontal 1:500
Vertical 1:250

DATUM 120.000

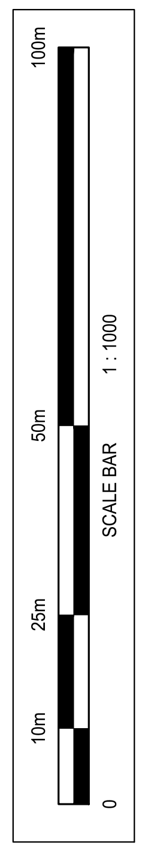
REFERENCE	P(31) 355ø CLASS	P(32) 355ø CLASS	P(33) 355ø CLASS	P(34) 355ø CLASS	P(37) 355ø CLASS
SLOPE / LENGTH	0.00% Horizontal 23.78m	-0.01% 1:11333.0 4.06m	0.71% 1:141.1 17.31m	1.90% 1:52.8 284.88m	14.25% 1:7.0 4.79m

DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT
885.797		130.479	2.525
909.576	132.394	130.479 130.479	1.915
913.631	131.941	130.479 130.479	1.470
930.977	132.186	130.601 130.601	1.585
1215.858	137.548	136.001 136.001	1.547
1220.646	138.017	136.684	1.343

LONGSECTION PROPOSED RISING MAIN 2
FROM 900.000 TO 1221.608

NOTE:
1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE ANY WORK IS PUT IN HAND. REFER ANY DISCREPANCIES TO THE ENGINEER.

FOR DISCUSSION



REVISIONS

NO.	DATE	DESCRIPTION	INITIAL
0B	07-07-2023	FOR DISCUSSION	WA

DESIGNED	B BARTLETT
CHECKED	J HOUGH
DRAWN	M GQWETHA
CHECKED	W ANNANDALE

SIGNED
SMEC South Africa
DATE

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an SJ company

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SIGNED
George Municipality
DATE

Upgrading of Herolds Bay Pumpstation

Sewer Rising Main From Herolds Bay PS No. 4 to Exisiting WWTW SV 900 to SV 1227

SIZE	SCALE
A1	AS SHOWN

PROJECT DRAWING NUMBER
C1936 - 520 - 005

REV	SHEET No.
AB	05 OF 05