



PHOKWANE LOCAL MUNICIPALITY

TENDER NR: PL11/PS/0123

NEW PUMP STATION AND RELATED BULK SEWER OUTFALL LINES IN MASAKENG (JAN KEMP DORP)

TENDER DRAWINGS

Issued by:

PHOKWANE Local Municipality
24 Hertzog Street
Hartswater
8570

Contact:

Name: Mr. L Jange
Telephone: 053 474 9700

Prepared by

Phethogo Consulting
122 Nelson Mandela Drive
Bloemfontein
9301

Contact:

Name: Mr. R Viljoen
Telephone: 051 448 6006



REVISIONS		
NO.	DESCRIPTION	DATE

CLIENT'S APPROVAL			
NAME:	_____	SIGNATURE:	_____
PROF. REG.	_____	ENGINEER'S APPROVAL	_____
NAME:	R. VILJOEN	SIGNATURE:	_____
PROF. REG.	200970081		



PHOKWANE
LOCAL
MUNICIPALITY



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CONSULTING
(Pty) Ltd

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 122 Nelson Mandela Drive
Wentworth (Bx 930)
103 Jon 4208 | Johannesburg 1932

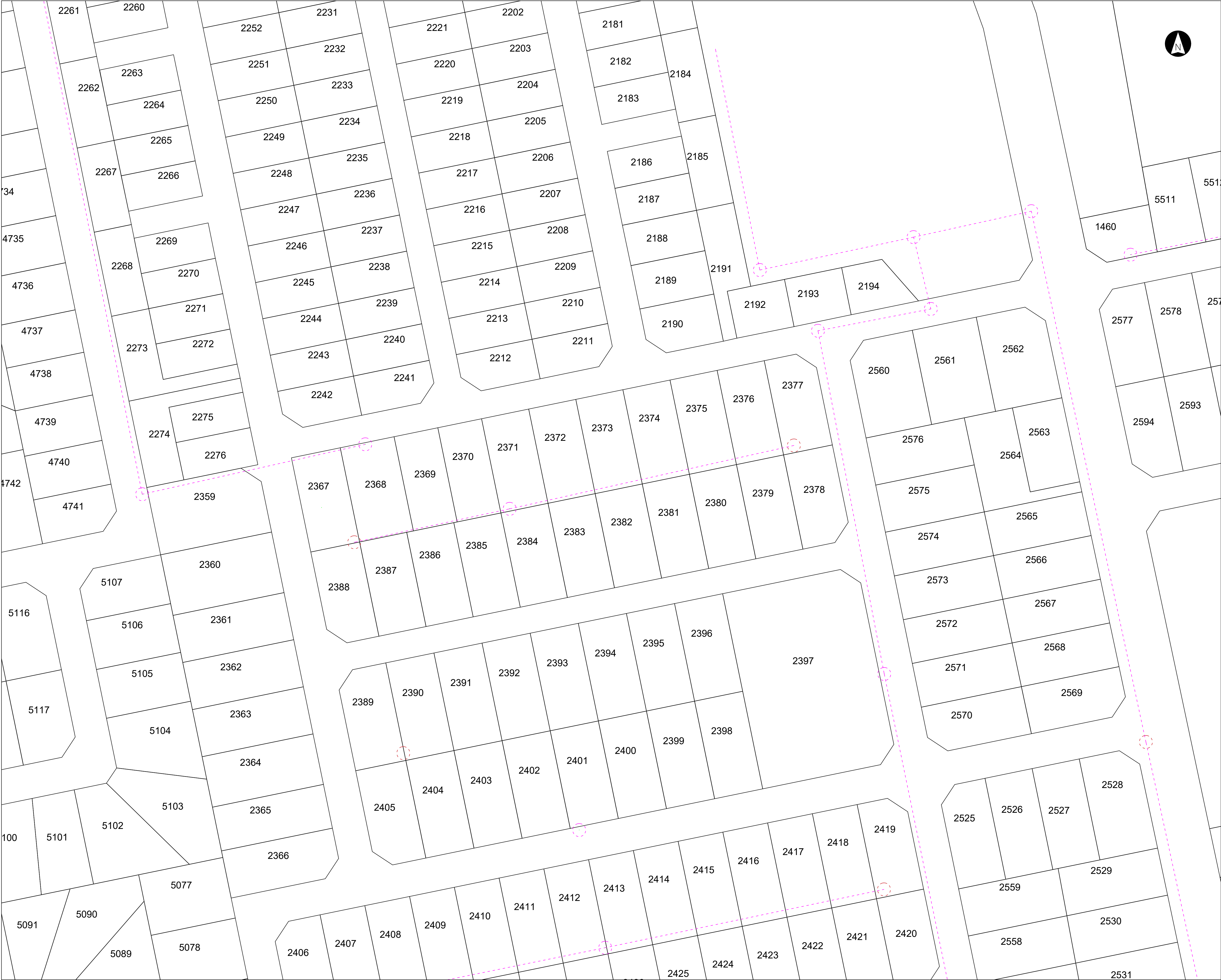
PROJECT TITLE

NEW PUMP STATION AND
RELATED BULK SEWER
OUTFALL IN LINES IN
MASAKENG

DRAWING DESCRIPTION

SEWER KEY PLAN

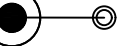
SCALE:	AS SHOWN	DESIGNED:	R. VILJOEN
DATE:	16 NOVEMBER 2022	DRAWN:	R. VILJOEN
DRW. SIZE:	A1	CHECKED:	R. VILJOEN
FILE REF:	Z:\2022\2203 Masakeng Sewer Pump\08 Drawings\02 Tender Drawings\RV Nov 2022		
DRAWING NUMBER:	2203	— KP — 01	REV: 00



LEGEND



RCBM4
1434.275



Escrow / Telkom pole



Surveyed Valve



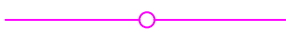
Surveyed Manhole



New Sewer Line



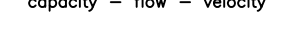
Existing Sewer Line



New Manhole



Existing Manhole



Link information



Erf Connection

NOTES:

All sewer lines to be 2.250m from erf boundary.

REVISIONS		
NO.	DESCRIPTION	DATE

CLIENT'S APPROVAL

NAME: _____

PROF. REG. _____ SIGNATURE: _____

ENGINEER'S APPROVAL

NAME: R VILJOEN

PROF. REG. 200970081 SIGNATURE: _____

CLIENT



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132 Nelson Mandela Drive
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1601 Jonh KDSB | Harareway 9332

PROJECT TITLE

NEW PUMP STATION AND
RELATED BULK SEWER
OUTFALL IN LINES IN
MASAKENG

DRAWING DESCRIPTION

SEWER LAYOUT 1

SCALE: 1:500

DESIGNED: R VILJOEN

DATE: 16 NOVEMBER 2022

DRAWN: R VILJOEN

DRW SIZE: A1

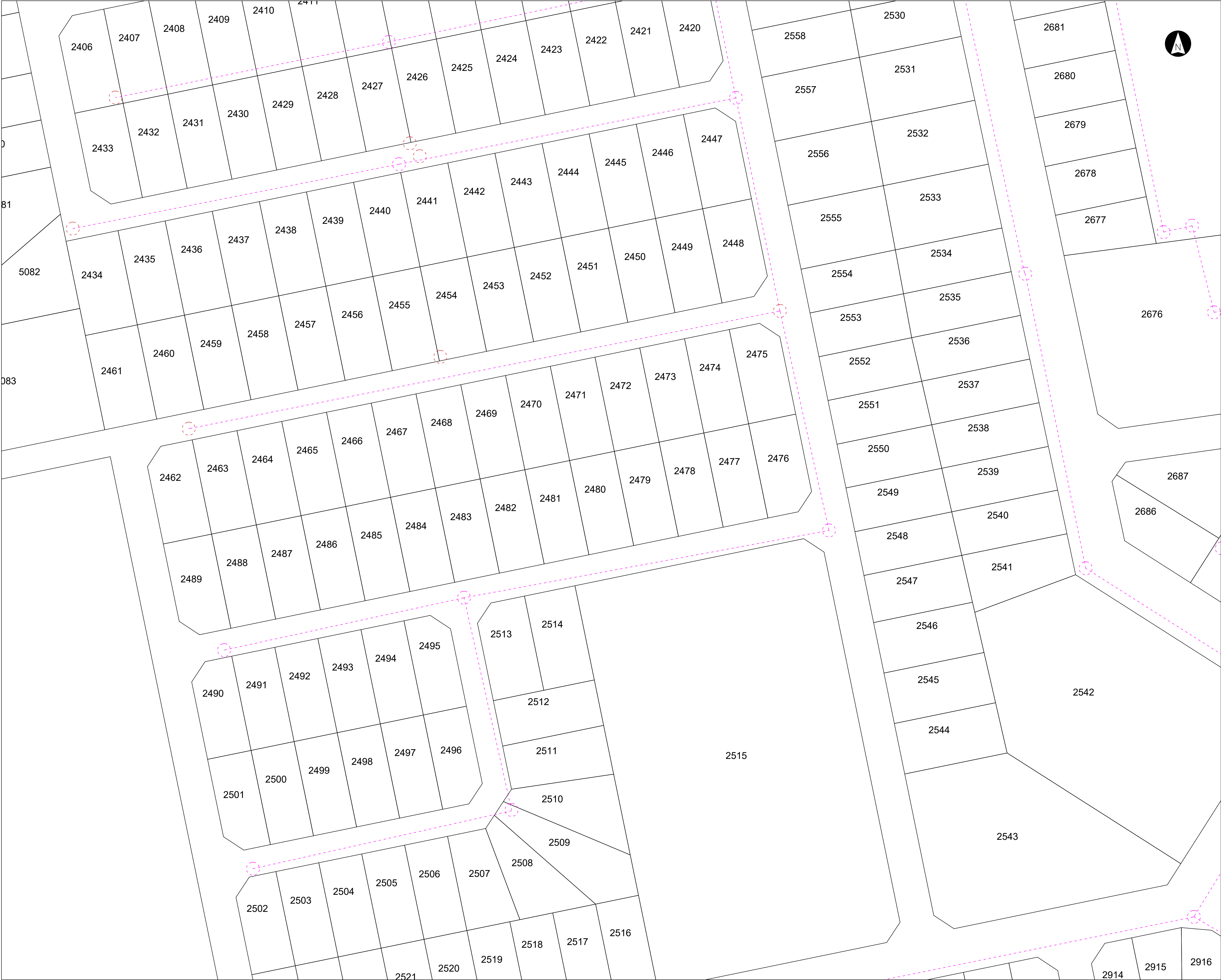
CHECKED: R VILJOEN

FILE REF: Z:\2022\2203 Masakeng Sewer Pump\08 Drawings\02
Tender Drawings\RV Nov 2022

DRAWING NUMBER:
2203

REV:

00



LEGEND

Benchmark

Escrow / Telkom pole

Surveyed Valve

Surveyed Manhole

New Sewer Line

Existing Sewer Line

New Manhole

Existing Manhole

Link information

Erf Connection

NOTES:
All sewer lines to be 2.250m from erf boundary.

REVISIONS		
NO.	DESCRIPTION	DATE

CLIENT'S APPROVAL

NAME: _____

PROF. REG. _____ SIGNATURE: _____

ENGINEER'S APPROVAL

NAME: R. VILJOEN

PROF. REG. 200970081 SIGNATURE: _____

CLIENT



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PROJECT TITLE

NEW PUMP STATION AND
RELATED BULK SEWER
OUTFALL IN LINES IN
MASAKENG

DRAWING DESCRIPTION

SEWER LAYOUT 2

SCALE: 1:500

DESIGNED: R. VILJOEN

DATE: 16 NOVEMBER 2022

DRAWN: R. VILJOEN

DRW SIZE: A1

CHECKED: R. VILJOEN

FILE REF: Z:\2022\2203 Masakeng Sewer Pump\08 Drawings\02
Tender Drawings\RV Nov 2022

DRAWING NUMBER:
2203

REV:
02



RCBM4
1434.275

Benchmark

Escom / Telkom pole

Surveyed Valve

Surveyed Manhole

New Sewer Line

Existing Sewer Line

New Manhole

Existing Manhole

Link information

Erf Connection

slope — length — slope
capacity — flow — velocityNOTES:
All sewer lines to be 2.250m from erf boundary.

REVISIONS		
NO.	DESCRIPTION	DATE

CLIENT'S APPROVAL

NAME: _____
PROF. REG. _____

SIGNATURE: _____

ENGINEER'S APPROVAL

NAME: R. VILJOEN
PROF. REG. 200970081

SIGNATURE: _____



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PROJECT TITLE

NEW PUMP STATION AND
RELATED BULK SEWER
OUTFALL IN LINES IN
MASAKENG

DRAWING DESCRIPTION

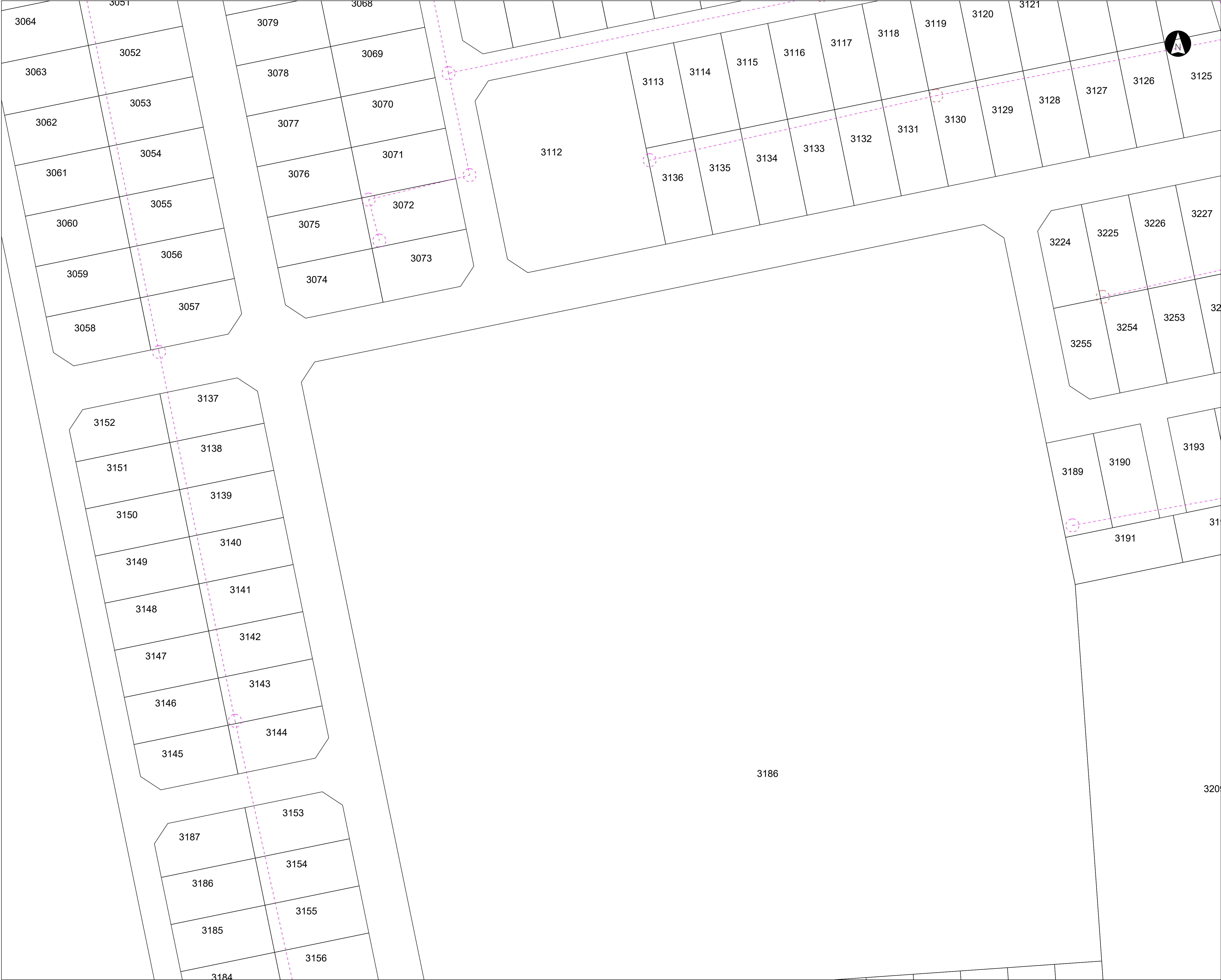
SEWER LAYOUT 3

SCALE: 1:500
DATE: 16 NOVEMBER 2022
DRW SIZE: A1
FILE REF: Z:\2022\2203 Masakeng Sewer Pump\08 Drawings\02
Tender Drawings\RV Nov 2022

DESIGNED: R. VILJOEN
DRAWN: R. VILJOEN
CHECKED: R. VILJOEN

DRAWING NUMBER:
2203

REV:
00

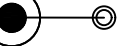


LEGEND



RCBM4
1434.275

Benchmark



Escrow / Telkom pole



Surveyed Valve



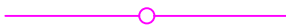
Surveyed Manhole



New Sewer Line



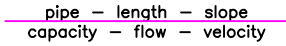
Existing Sewer Line



New Manhole



Existing Manhole



Link information



Erf Connection

NOTES:
All sewer lines to be 2.250m from erf boundary.

REVISIONS		
NO.	DESCRIPTION	DATE

CLIENT'S APPROVAL

NAME: _____

PROF. REG. _____

SIGNATURE: _____

ENGINEER'S APPROVAL

NAME: R. VILJOEN

PROF. REG. 200970081

SIGNATURE: _____



PHOKWANE LOCAL MUNICIPALITY



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PROJECT TITLE

NEW PUMP STATION AND RELATED BULK SEWER OUTFALL IN LINES IN MASAKENG

DRAWING DESCRIPTION

SEWER LAYOUT 4

SCALE: 1:500

DESIGNED: R. VILJOEN

DATE: 16 NOVEMBER 2022

DRAWN: R. VILJOEN

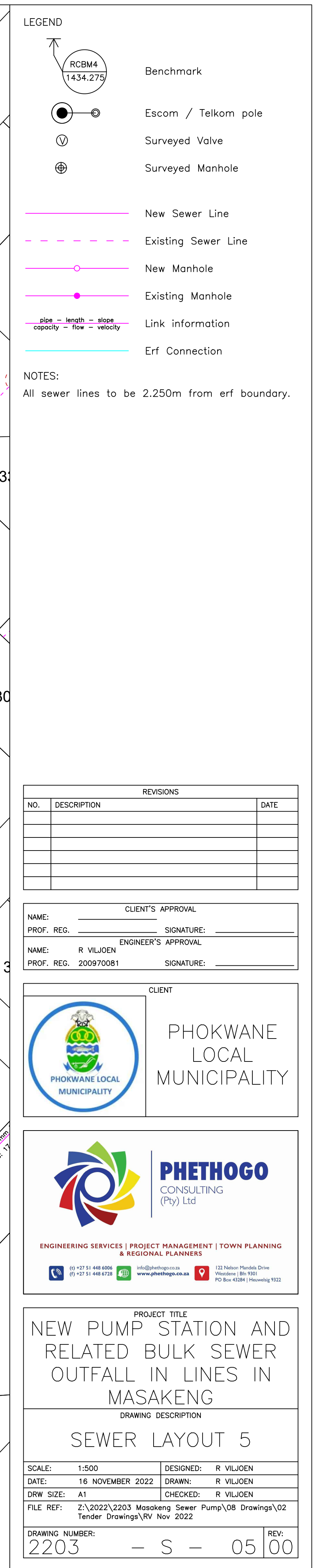
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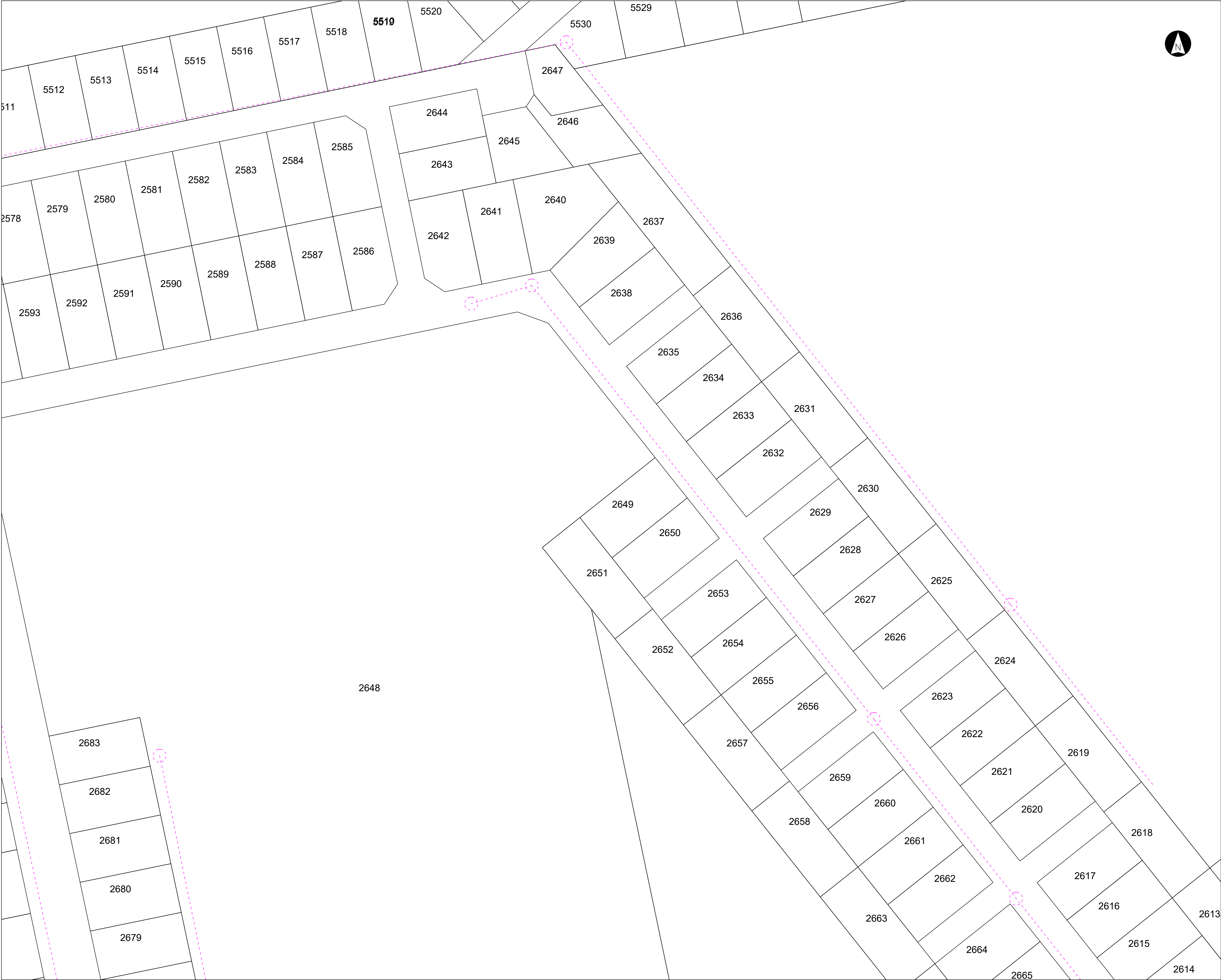
CHECKED: R. VILJOEN

FILE REF: Z:\2022\2203 Masakeng Sewer Pump\08 Drawings\02 Tender Drawings\RV Nov 2022

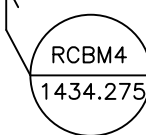
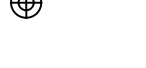
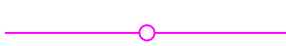
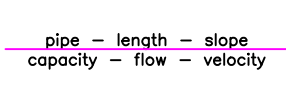
DRAWING NUMBER: 2203

REV: 04





LEGEND

-  Benchmark
-  Escrom / Telkom pole
-  Surveyed Valve
-  Surveyed Manhole
-  New Sewer Line
-  Existing Sewer Line
-  New Manhole
-  Existing Manhole
-  Link information
-  Erf Connection

NOTES:
All sewer lines to be 2.250m from erf boundary.

REVISIONS		
NO.	DESCRIPTION	DATE

CLIENT'S APPROVAL	
NAME: _____	SIGNATURE: _____
PROF. REG. _____	ENGINEER'S APPROVAL
NAME: R VILJOEN	SIGNATURE: _____
PROF. REG. 200970081	



PHOKWANE
LOCAL
MUNICIPALITY



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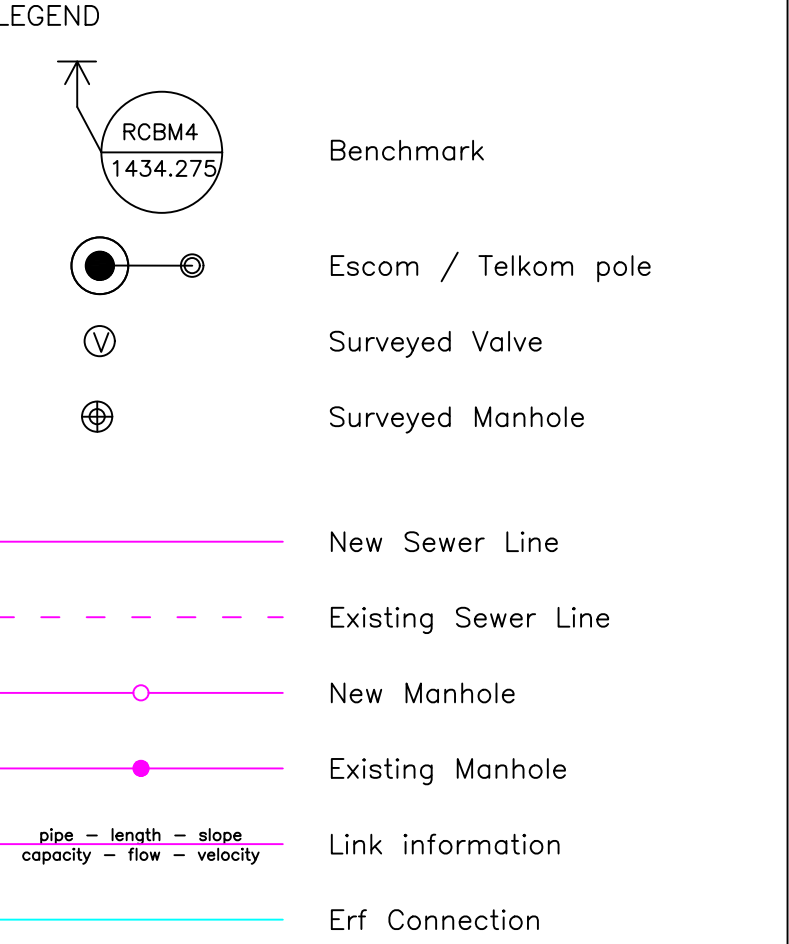
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100 Box 42084 | Harareway 9322

PROJECT TITLE	
NEW PUMP STATION AND RELATED BULK SEWER OUTFALL IN LINES IN MASAKENG	
DRAWING DESCRIPTION	
SEWER LAYOUT 6	
SCALE: 1:500	DESIGNED: R VILJOEN
DATE: 16 NOVEMBER 2022	DRAWN: R VILJOEN
DRW SIZE: A1	CHECKED: R VILJOEN
FILE REF: Z:\2022\2203 Masakeng Sewer Pump\08 Drawings\02 Tender Drawings\RV Nov 2022	
DRAWING NUMBER: 2203	REV: 00

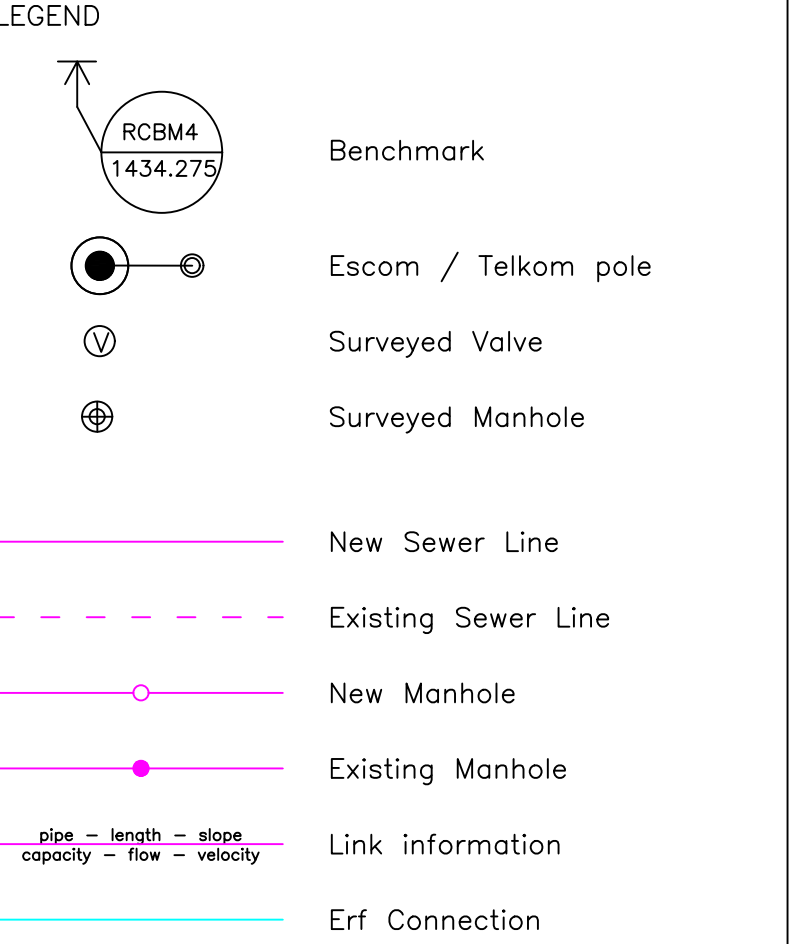


REVISIONS		
NO.	DESCRIPTION	DATE

CLIENT'S APPROVAL	
NAME: _____	
PROF. REG. _____	SIGNATURE: _____
ENGINEER'S APPROVAL	
NAME: R. VILJOEN	
PROF. REG. 200970081	SIGNATURE: _____

 PHOKWANE LOCAL MUNICIPALITY	CLIENT PHOKWANE LOCAL MUNICIPALITY
--	--

NEW PUMP STATION AND RELATED BULK SEWER OUTFALL IN LINES IN MASAKENG	
DRAWING DESCRIPTION	
SEWER LAYOUT 7	
SCALE: 1:500	DESIGNED: R VILJOEN
DATE: 16 NOVEMBER 2022	DRAWN: R VILJOEN
DRW SIZE: A1	CHECKED: R VILJOEN
FILE REF: Z:\2022\2203 Masakeng Sewer Pump\08 Drawings\02 Tender Drawings\RV Nov 2022	
DRAWING NUMBER: 2203	— S — 07
	REV: 00



NOTES:

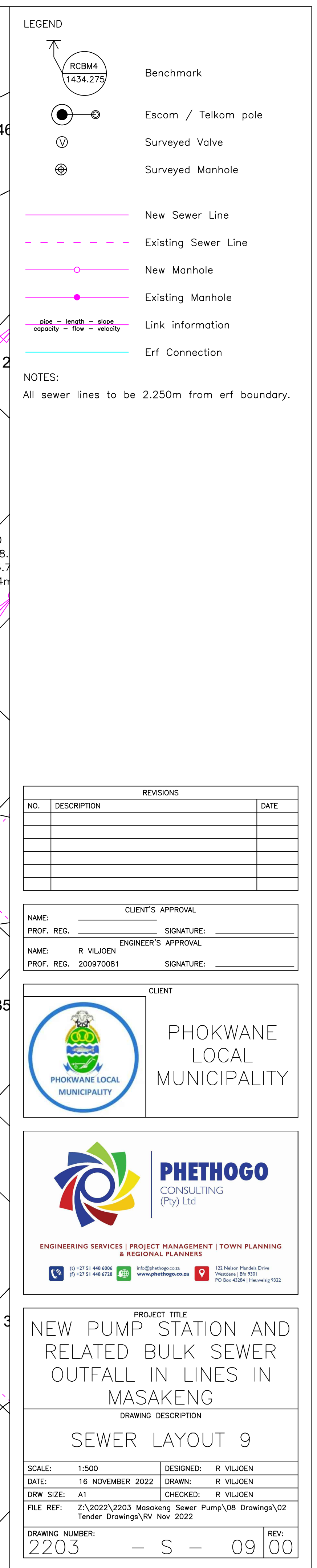
All sewer lines to be 2.250m from erf boundary.

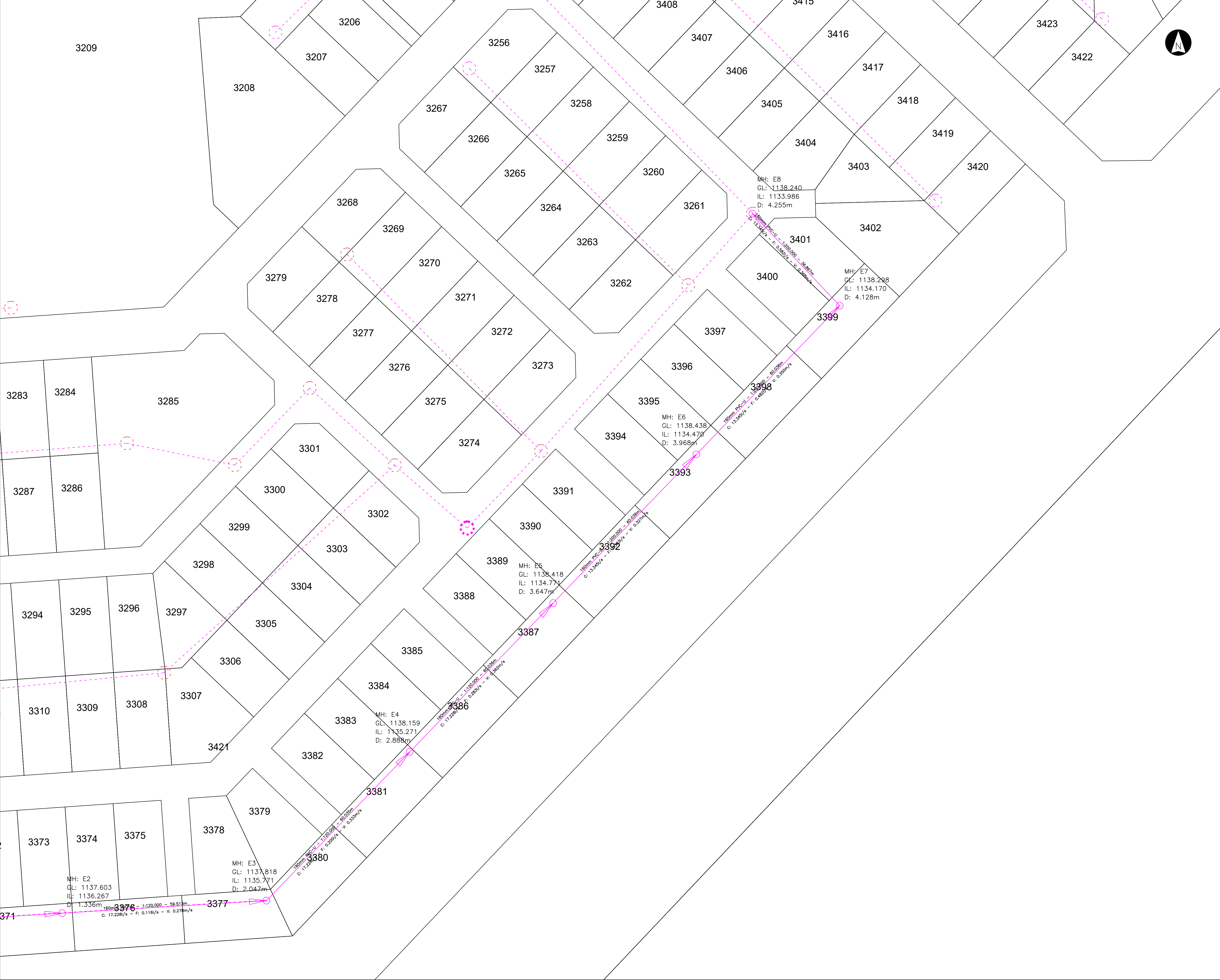
REVISIONS		
NO.	DESCRIPTION	DATE

CLIENT'S APPROVAL	
NAME: _____	
PROF. REG. _____	SIGNATURE: _____
ENGINEER'S APPROVAL	
NAME: R. VILJOEN	
PROF. REG. 200970081	SIGNATURE: _____

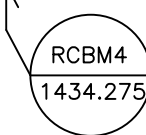
 PHOKWANE LOCAL MUNICIPALITY	CLIENT PHOKWANE LOCAL MUNICIPALITY
--	--

NEW PUMP STATION AND RELATED BULK SEWER OUTFALL IN LINES IN MASAKENG	
DRAWING DESCRIPTION	
SEWER LAYOUT 8	
SCALE: 1:500	DESIGNED: R VILJOEN
DATE: 16 NOVEMBER 2022	DRAWN: R VILJOEN
DRW SIZE: A1	CHECKED: R VILJOEN
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DRAWING NUMBER: 2203	REV: — S — 08 00





LEGEND



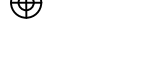
RCBM4
1434.275



Escrow / Telkom pole



Surveyed Valve



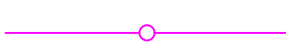
Surveyed Manhole



New Sewer Line



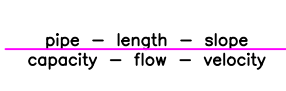
Existing Sewer Line



New Manhole



Existing Manhole



Link information
slope — length — slope
capacity — flow — velocity



Erf Connection

NOTES:
All sewer lines to be 2.250m from erf boundary.

REVISIONS		
NO.	DESCRIPTION	DATE

CLIENT'S APPROVAL	
NAME: _____	SIGNATURE: _____
PROF. REG. _____	ENGINEER'S APPROVAL
NAME: R VILJOEN	SIGNATURE: _____
PROF. REG. 200970081	SIGNATURE: _____



PHOKWANE
LOCAL
MUNICIPALITY



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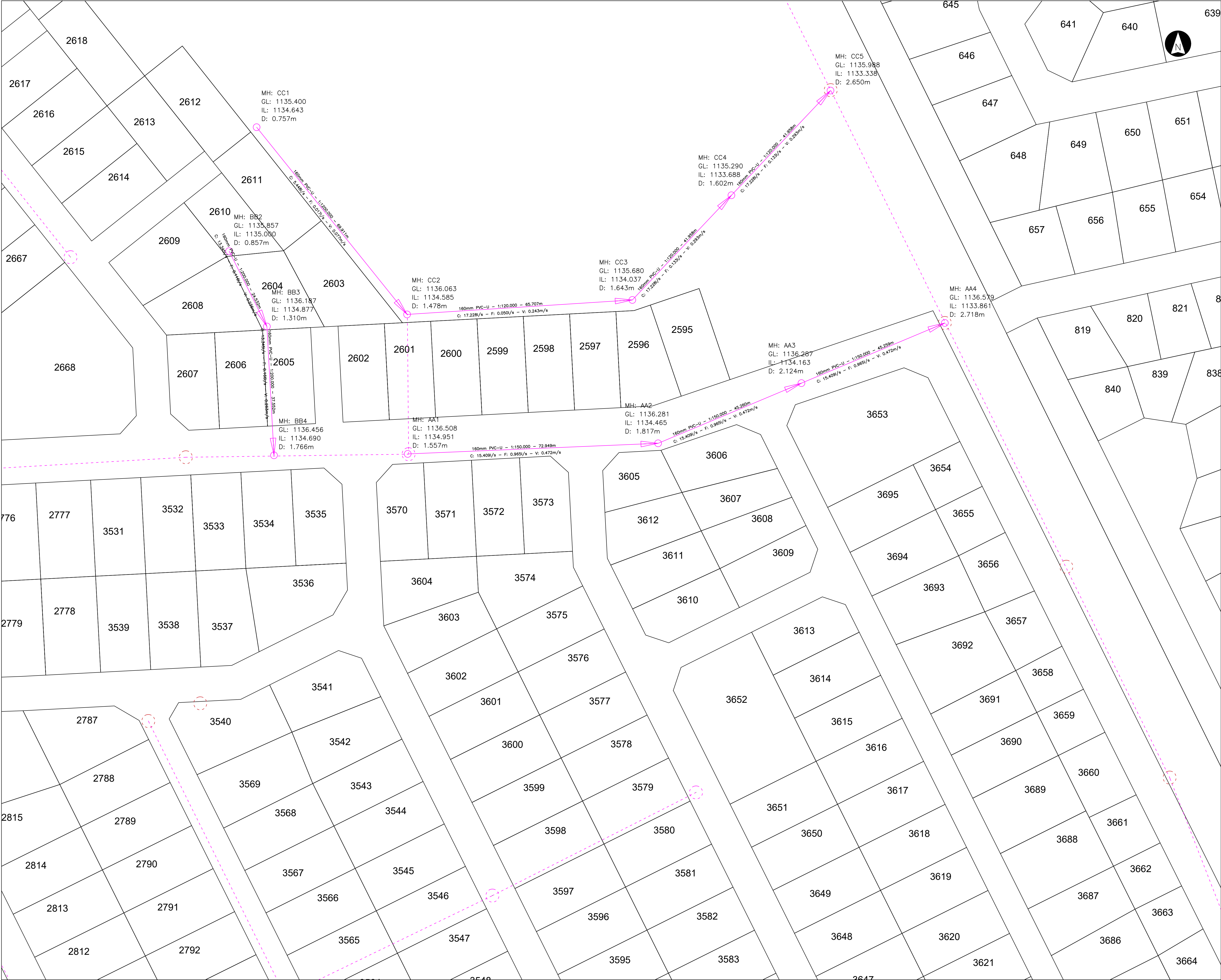


122 Nelson Mandela Drive
Wentworth (Bx 930)
PO Box 43261 | Harareway 932

PROJECT TITLE
NEW PUMP STATION AND
RELATED BULK SEWER
OUTFALL IN LINES IN
MASAKENG

DRAWING DESCRIPTION
SEWER LAYOUT 10

SCALE: 1:500	DESIGNED: R VILJOEN
DATE: 16 NOVEMBER 2022	DRAWN: R VILJOEN
DRW SIZE: A1	CHECKED: R VILJOEN
FILE REF: Z:\2022\2203 Masakeng Sewer Pump\08 Drawings\02 Tender Drawings\RV Nov 2022	REV:
DRAWING NUMBER: 2203 — S — 10	00



LEGEND

- Benchmark
- Escrom / Telkom pole
- Surveyed Valve
- Surveyed Manhole
- New Sewer Line
- Existing Sewer Line
- New Manhole
- Existing Manhole
- Link information
- Erf Connection

NOTES:
All sewer lines to be 2.250m from erf boundary.

REVISIONS		
NO.	DESCRIPTION	DATE

CLIENT'S APPROVAL	
NAME: _____	SIGNATURE: _____
PROF. REG. _____	ENGINEER'S APPROVAL
NAME: R VILJOEN	SIGNATURE: _____
PROF. REG. 200970081	

CLIENT

PHOKWANE LOCAL MUNICIPALITY

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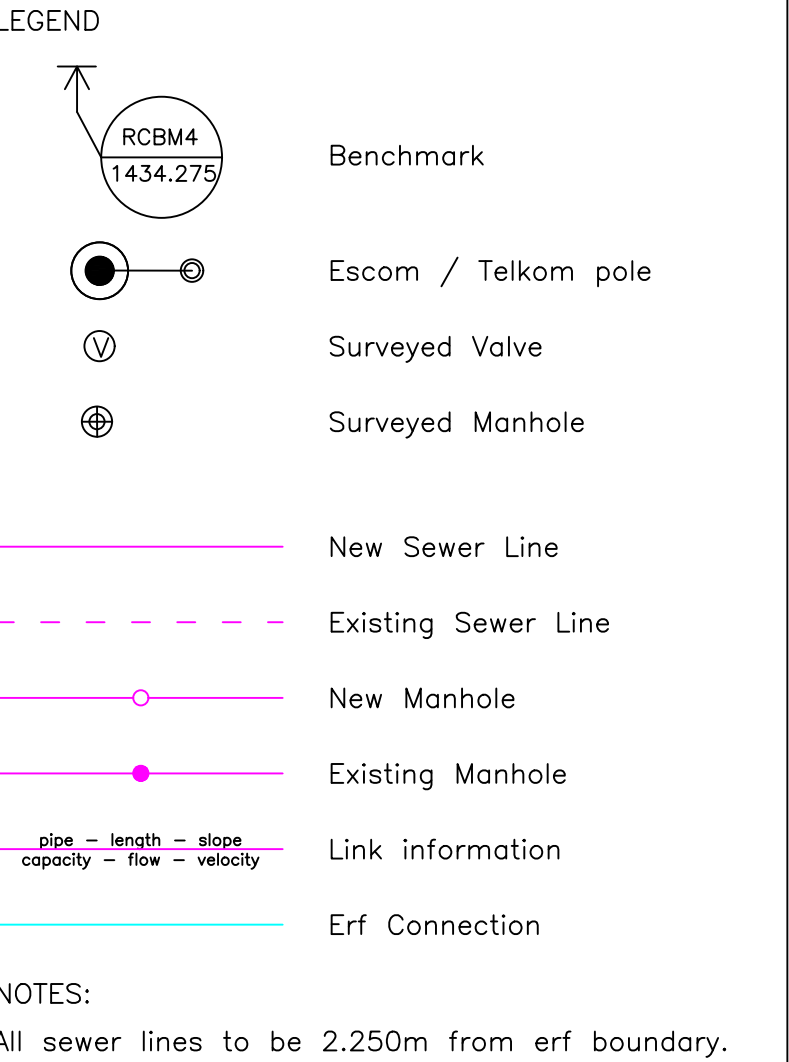
PROJECT TITLE

NEW PUMP STATION AND RELATED BULK SEWER OUTFALL IN LINES IN MASAKENG

DRAWING DESCRIPTION

SEWER LAYOUT 11

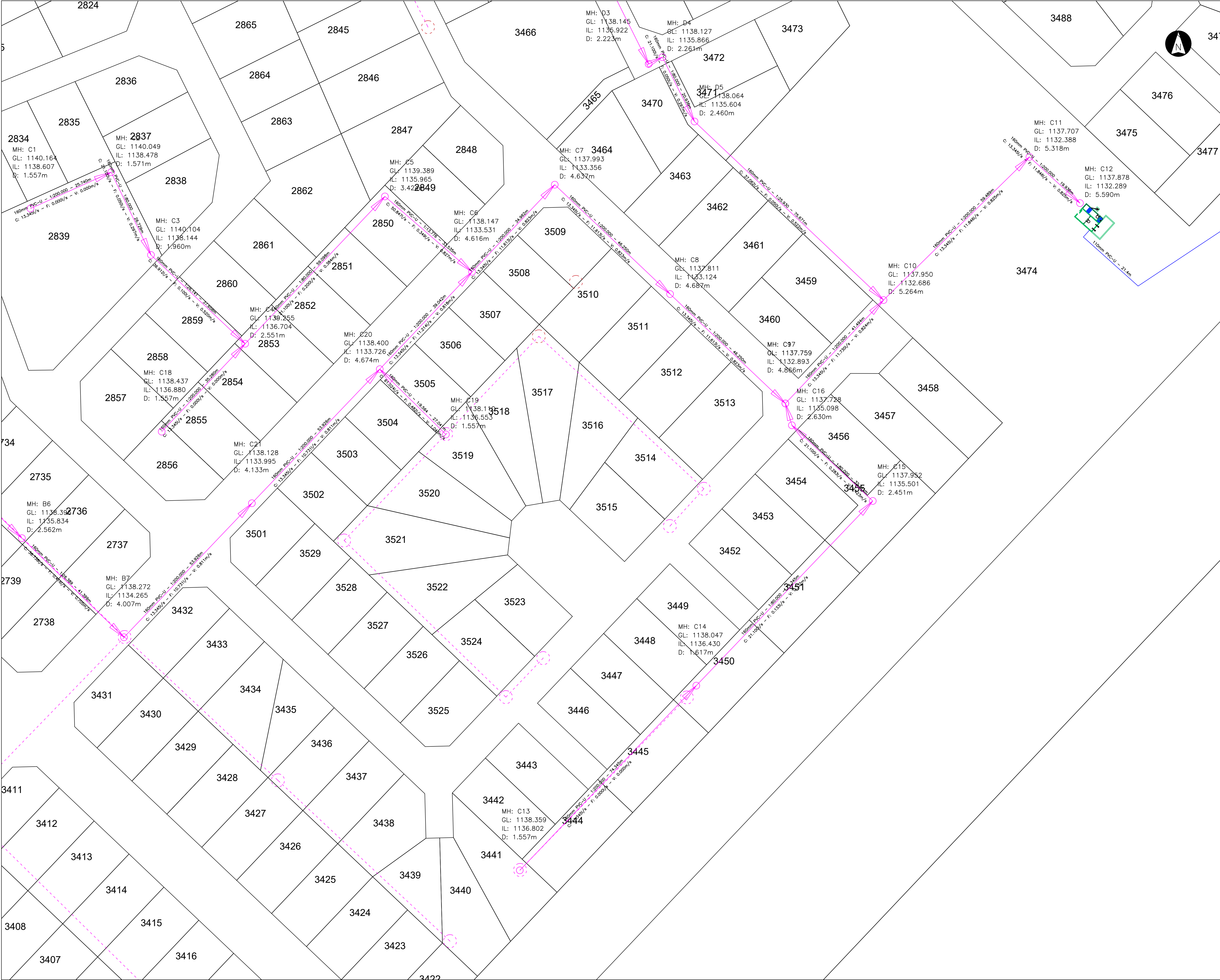
SCALE: 1:500	DESIGNED: R VILJOEN
DATE: 16 NOVEMBER 2022	DRAWN: R VILJOEN
DRW SIZE: A1	CHECKED: R VILJOEN
FILE REF: Z:\2022\2203 Masakeng Sewer Pump\08 Drawings\02 Tender Drawings\RV Nov 2022	
DRAWING NUMBER: 2203	REV: 11



REVISIONS		
NO.	DESCRIPTION	DATE

NAME: _____		CLIENT'S APPROVAL	
PROF. REG. _____		SIGNATURE: _____	
NAME: R VIJJOEN		ENGINEER'S APPROVAL	
PROF. REG. 200970081		SIGNATURE: _____	

PROJECT TITLE			
NEW PUMP STATION AND RELATED BULK SEWER OUTFALL IN LINES IN MASAKENG			
DRAWING DESCRIPTION			
SEWER LAYOUT 12			
SCALE:	1:500	DESIGNED: R. VILJOEN	
DATE:	16 November 2022	DRAWN: R. VILJOEN	
DRW. SIZE:	A1	CHECKED: R. VILJOEN	
FILE REF: 22\2022\2203 Masakeng Sewer Pump\08 Drawings\02 Tender Drawings\RV Nov 2022			
DRAWING NUMBER:	2203 — S — 12		REV: 00



LEGEND

Benchmark

Escrom / Telkom pole

Surveyed Valve

Surveyed Manhole

New Sewer Line

Existing Sewer Line

New Manhole

Existing Manhole

Link information

Erf Connection

NOTES:
All sewer lines to be 2.250m from erf boundary.

REVISIONS		
NO.	DESCRIPTION	DATE

CLIENT'S APPROVAL	
NAME: _____	SIGNATURE: _____
PROF. REG. _____	ENGINEER'S APPROVAL
NAME: R. VILJOEN	SIGNATURE: _____
PROF. REG. 200970081	SIGNATURE: _____

CLIENT
**PHOKWANE
LOCAL
MUNICIPALITY**

PHETHOGO
CONSULTING
(Pty) Ltd

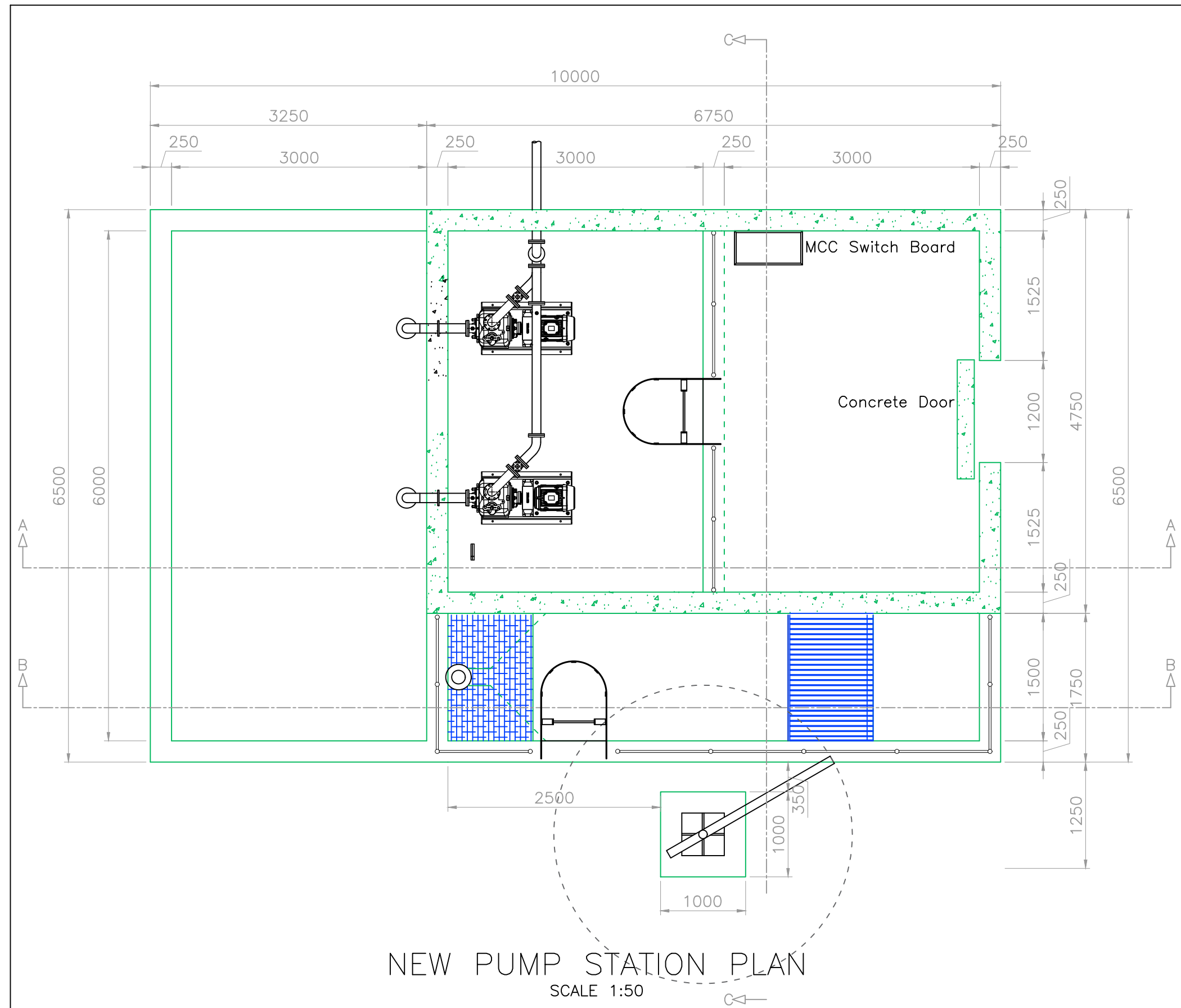
ENGINEERING SERVICES | PROJECT MANAGEMENT | TOWN PLANNING
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(f) +27 51 448 4728

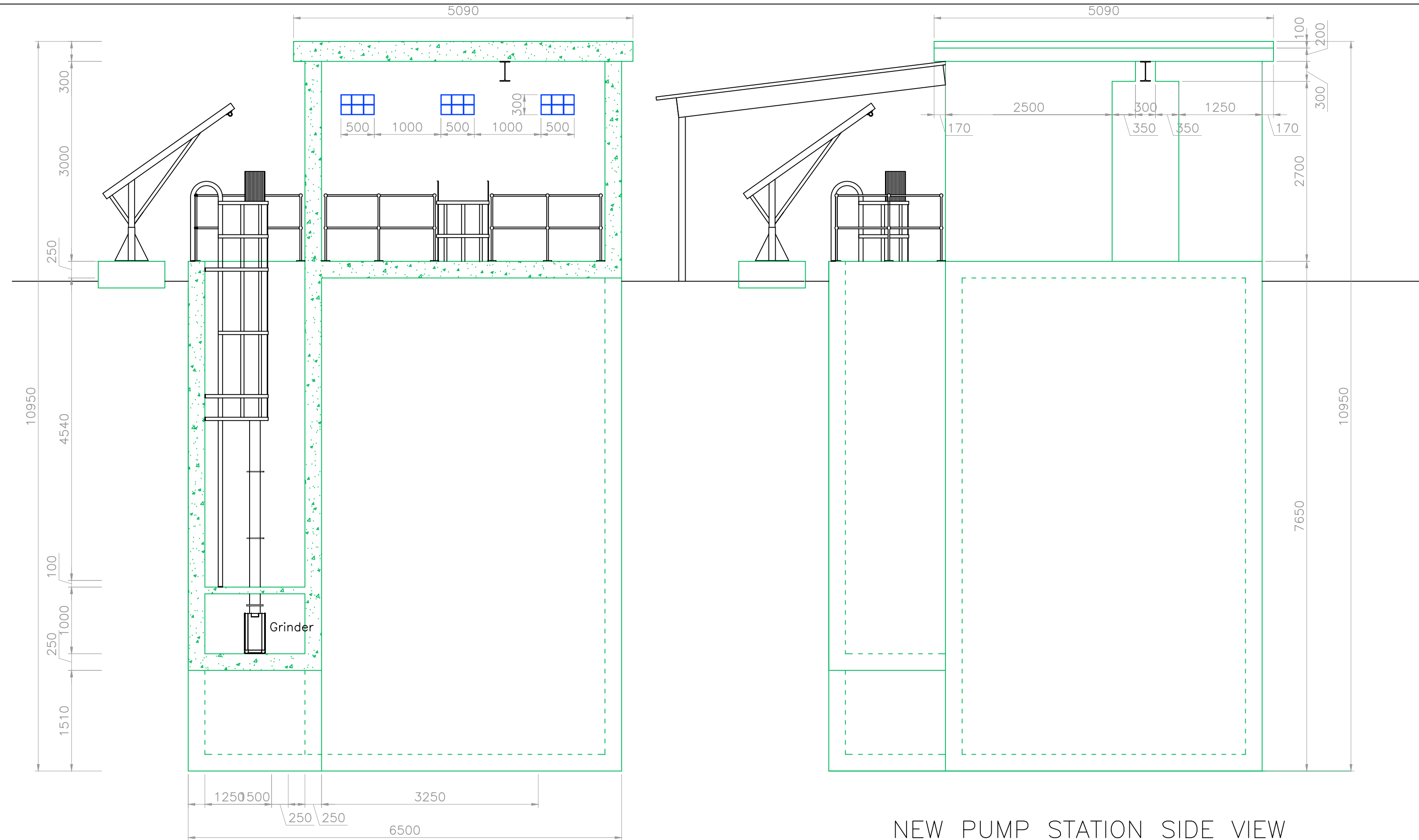
info@phethogo.co.za
www.phethogo.co.za

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Wentworth (Bx 930)
PO Box 42084 | Johannesburg 2022

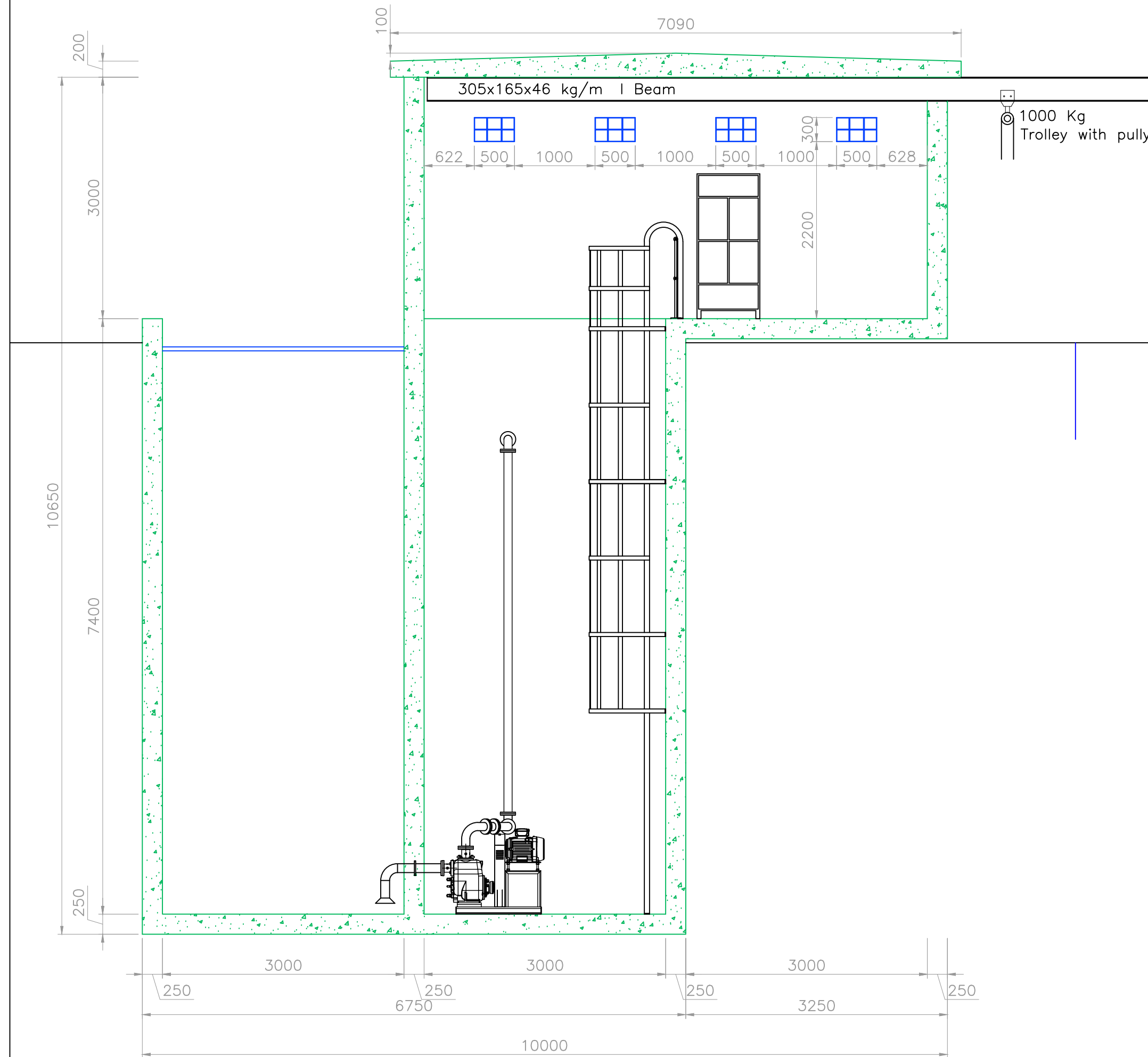
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NEW PUMP STATION AND RELATED BULK SEWER OUTFALL IN LINES IN MASAKENG	
DRAWING DESCRIPTION	
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SCALE: 1:500	DESIGNED: R. VILJOEN
DATE: 16 NOVEMBER 2022	DRAWN: R. VILJOEN
DRW SIZE: A1	CHECKED: R. VILJOEN
FILE REF: Z:\2022\2203 Masakeng Sewer Pump\08 Drawings\02 Tender Drawings\RV Nov 2022	
DRAWING NUMBER: 2203	REV: 00



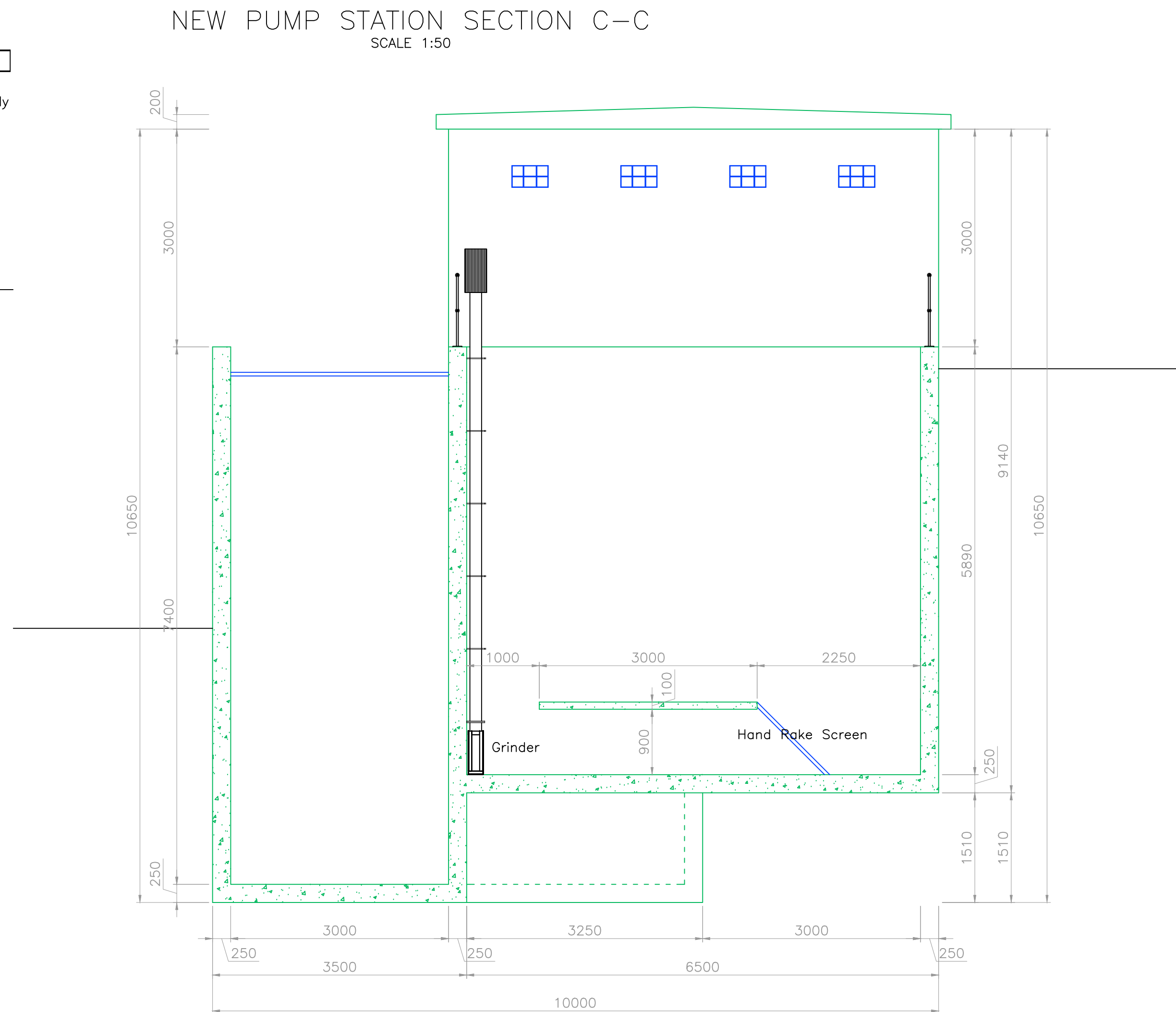
NEW PUMP STATION PLAN
SCALE 1:50



NEW PUMP STATION SIDE VIEW
SCALE 1:50



NEW PUMP STATION SECTION A-A
SCALE 1:50



NEW PUMP STATION SECTION B-B
SCALE 1:50

REVISIONS		
NO.	DESCRIPTION	DATE

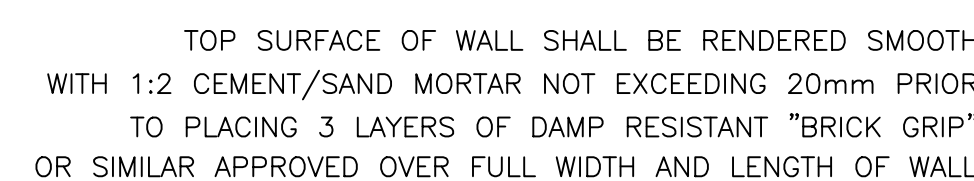
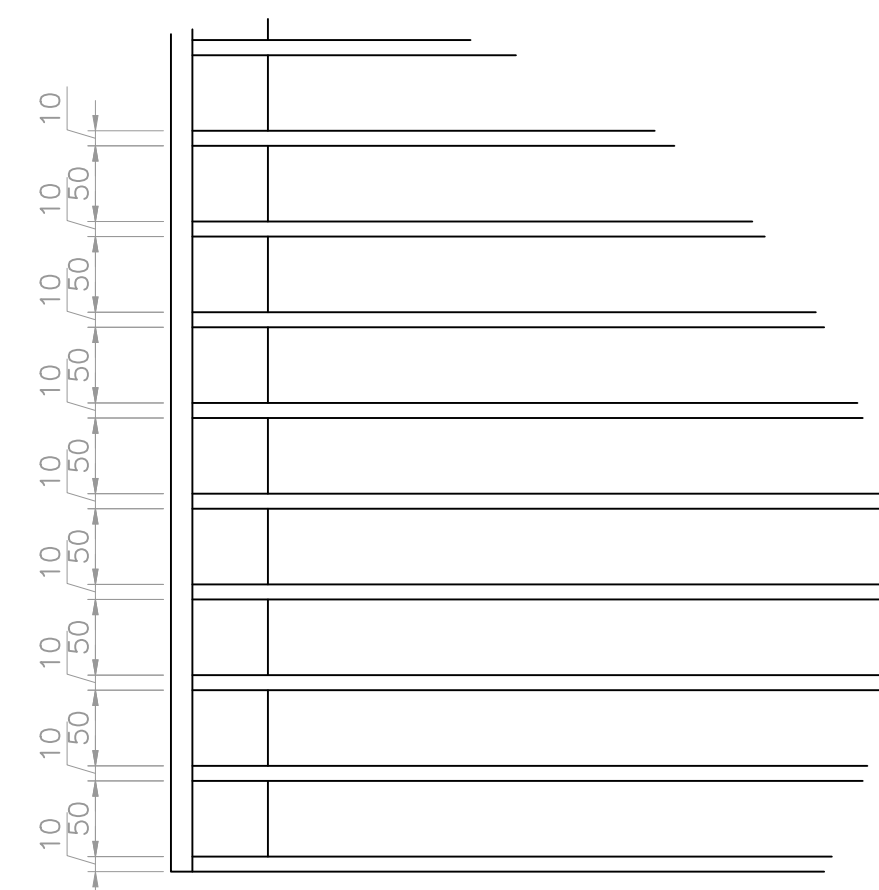
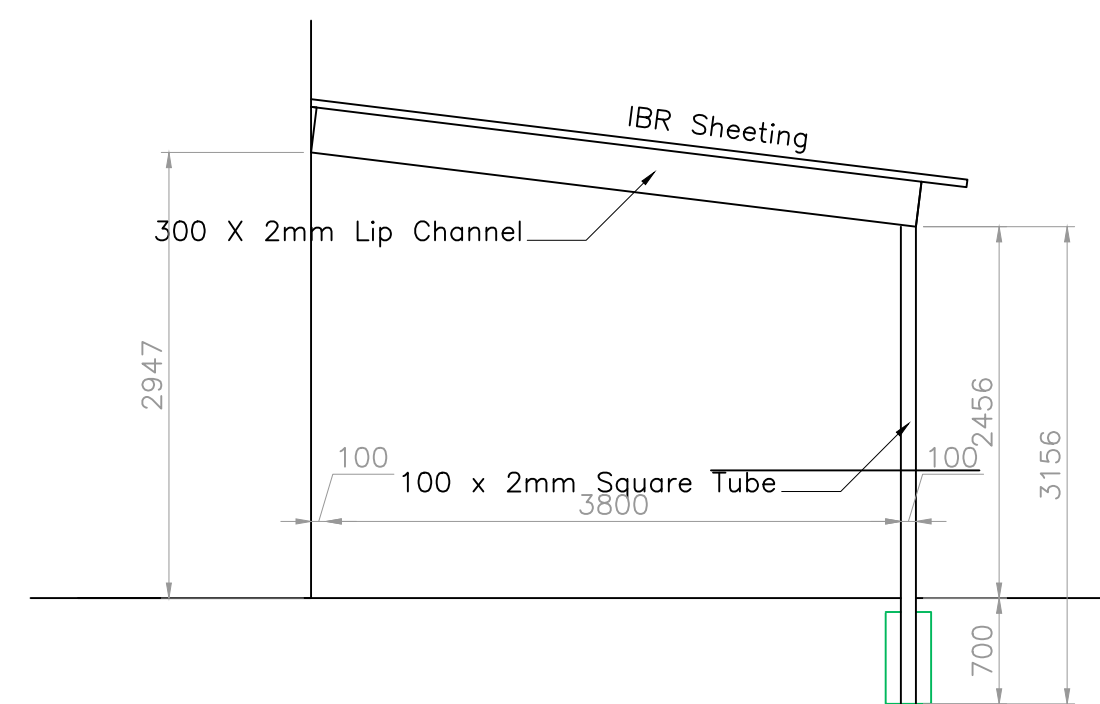
CLIENT'S APPROVAL	
NAME: _____	SIGNATURE: _____
PROF. REG. _____	ENGINEER'S APPROVAL
NAME: R VILJOEN	SIGNATURE: _____
PROF. REG. 200970081	



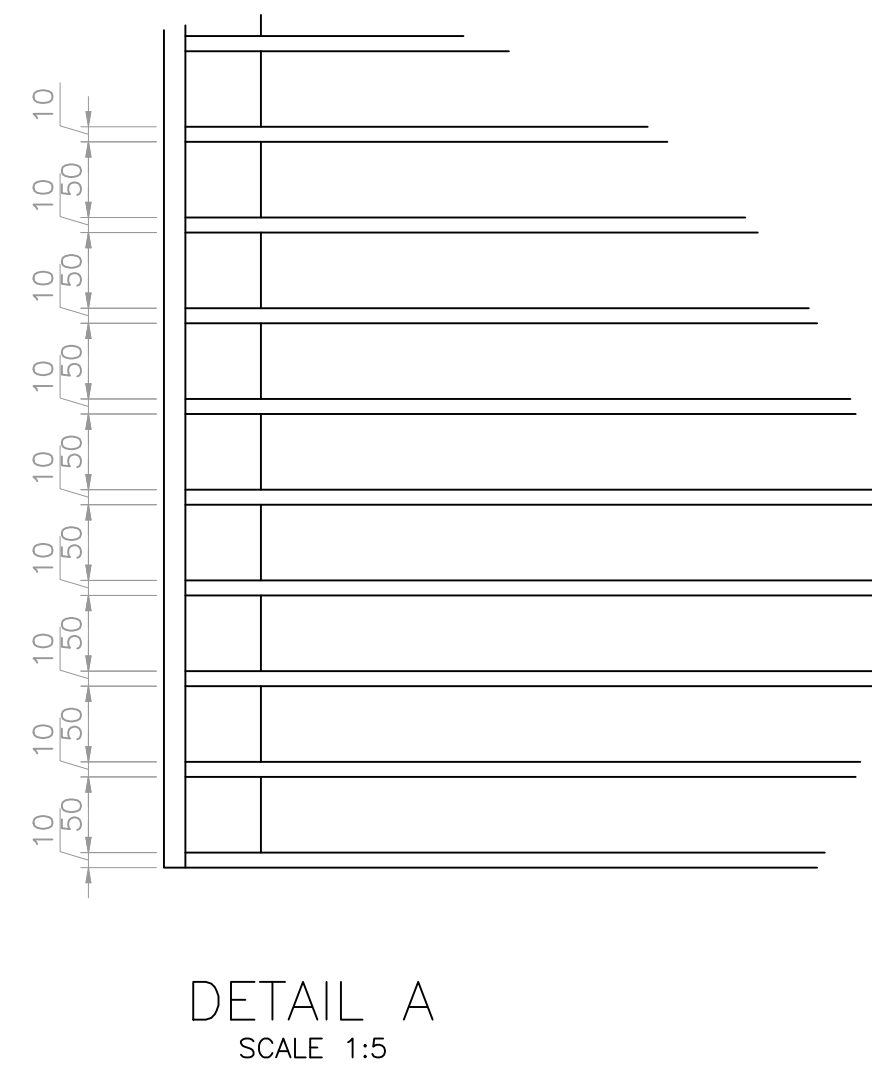
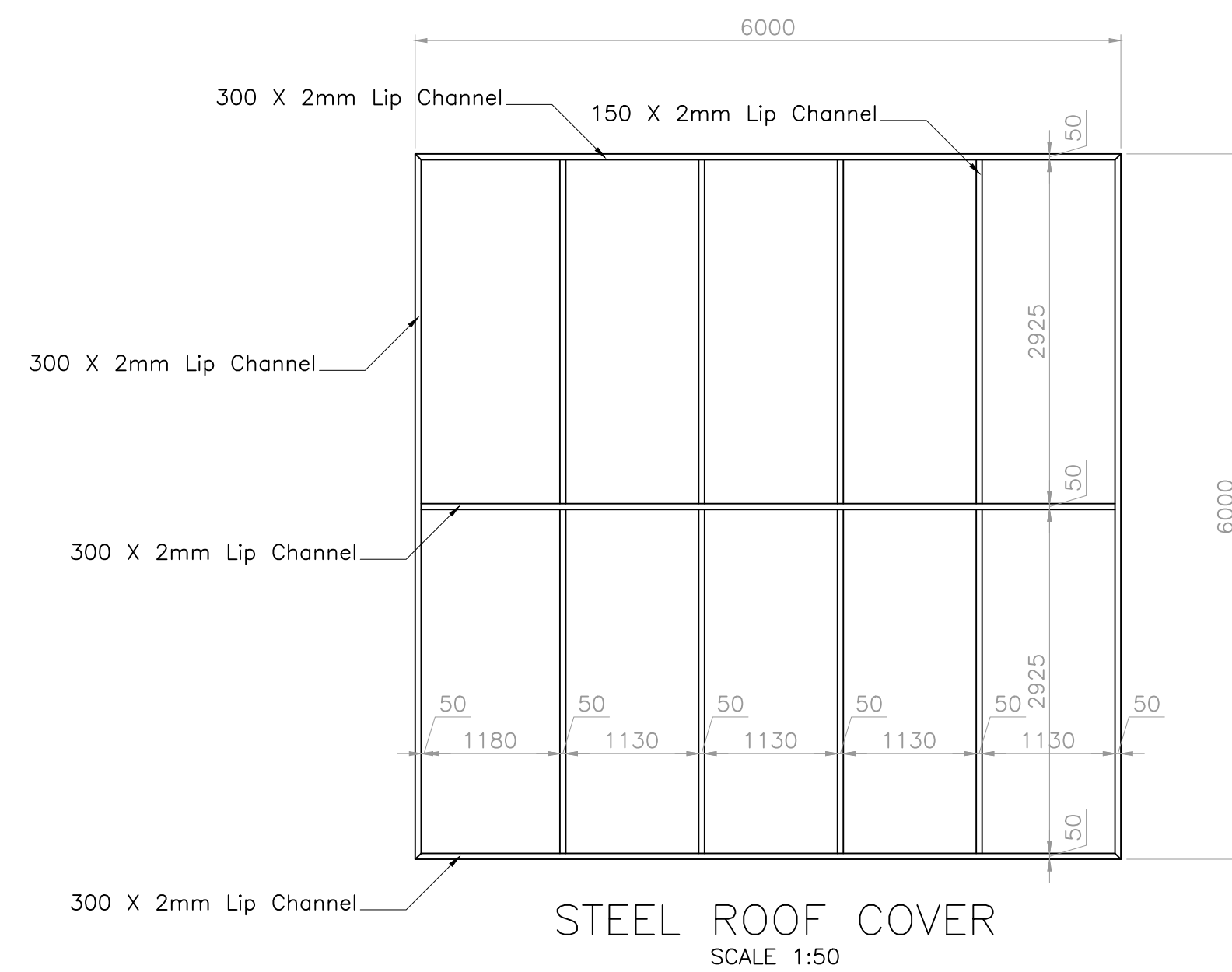
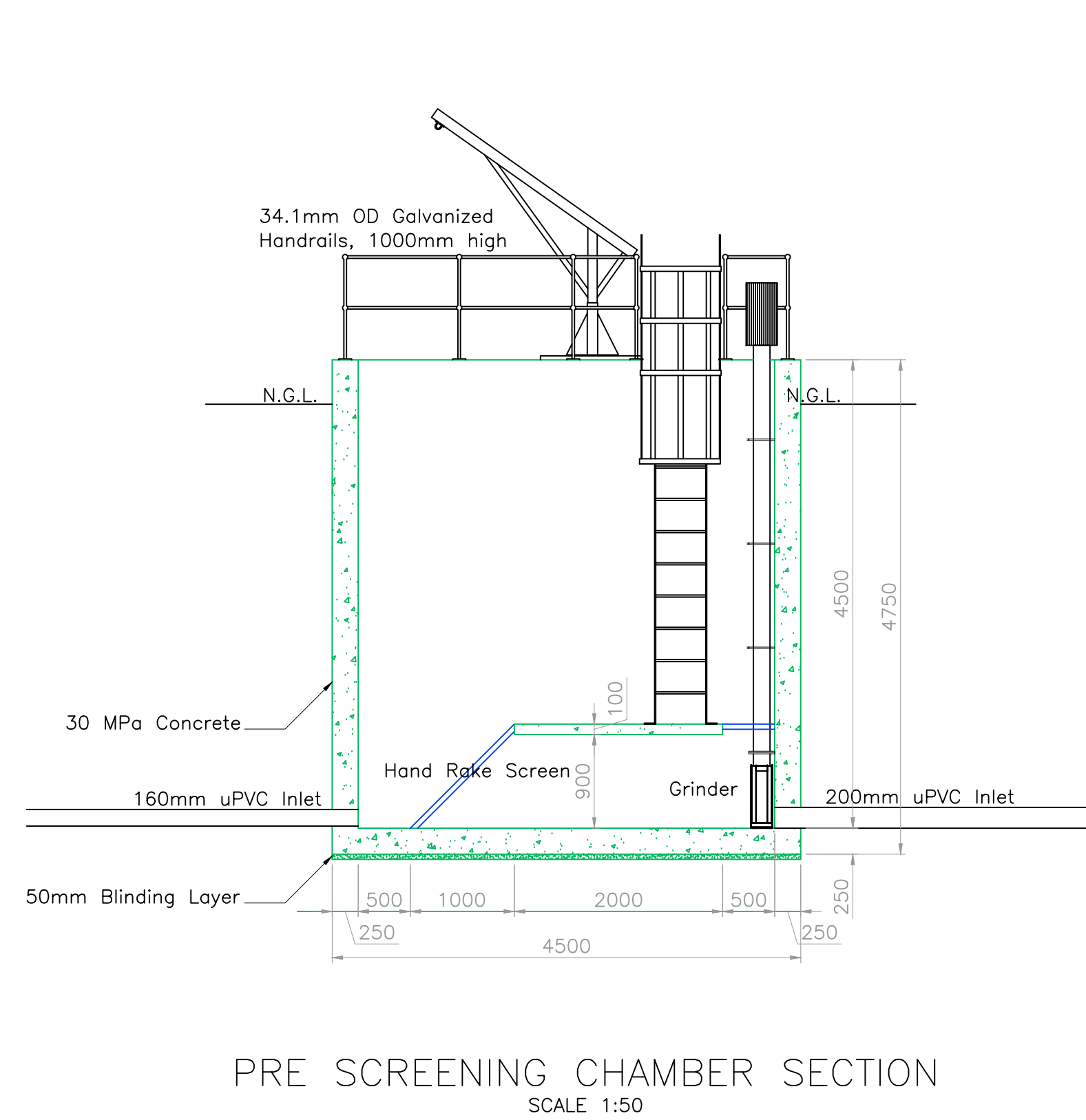
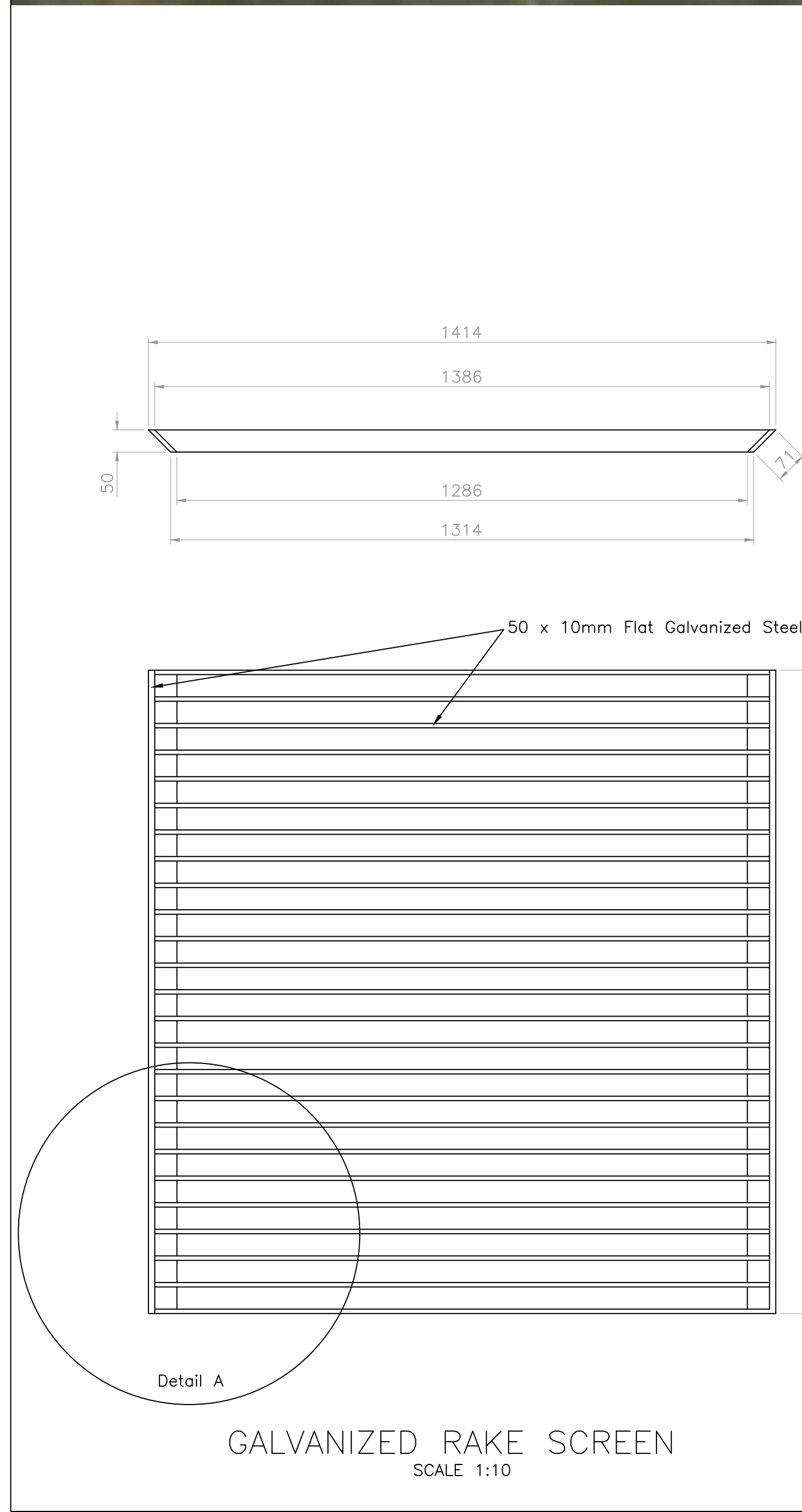
PROJECT TITLE
NEW PUMP STATION AND
RELATED BULK SEWER
OUTFALL IN LINES IN
MASAKENG

DRAWING DESCRIPTION
NEW PUMP STATION

SCALE: AS SHOWN	DESIGNED: R VILJOEN
DATE: 16 NOVEMBER 2022	DRAWN: R VILJOEN
DRW SIZE: A1	CHECKED: R VILJOEN
FILE REF: Z:\2022\2203 Masakeng Sewer Pump\08 Drawings\02 Tender Drawings\RV Nov 2022	
DRAWING NUMBER: 2203 - PSP - 01	REV: 00

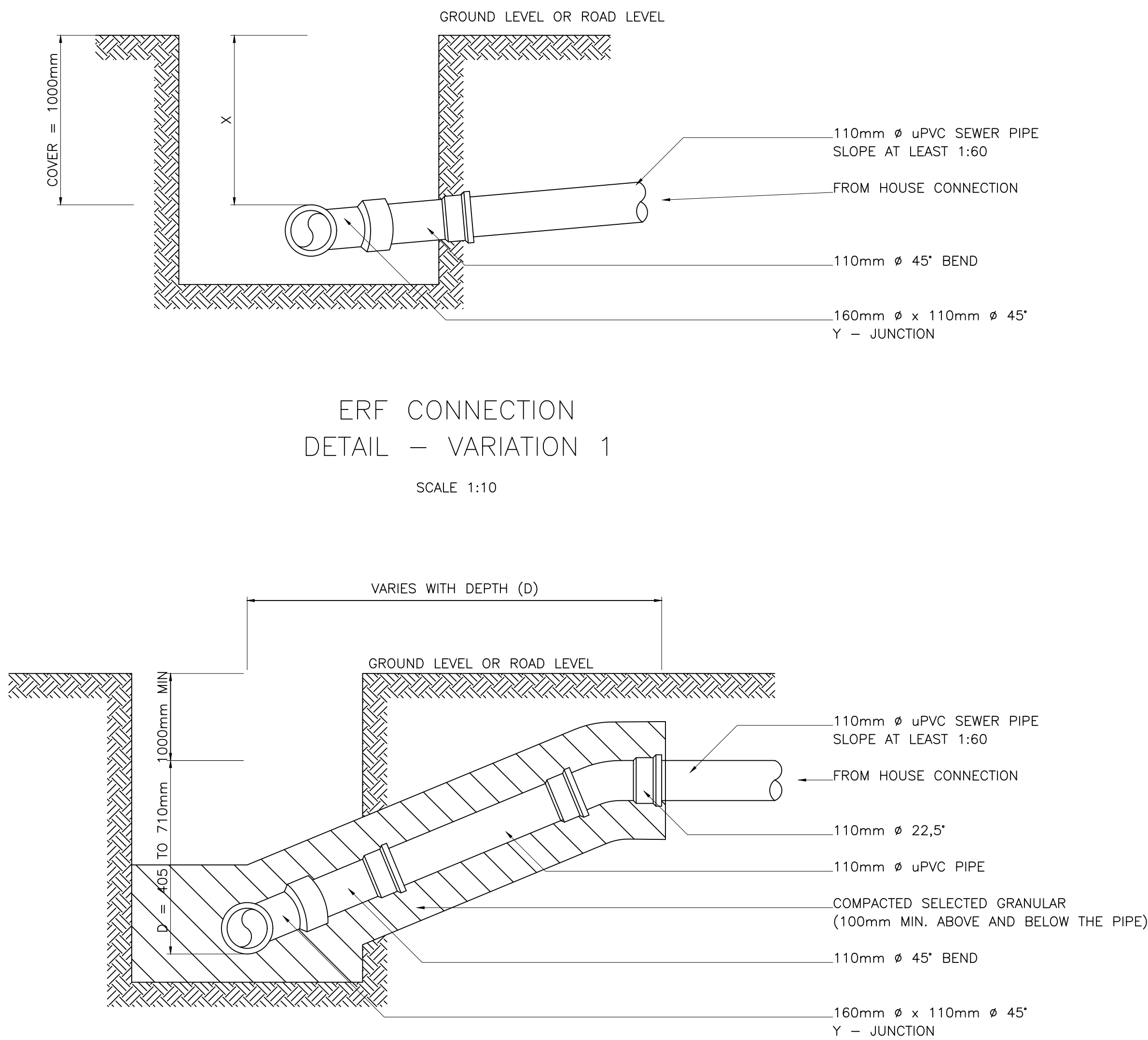


DRAWING DESCRIPTION			
NEW PUMP STATION			
SCALE:	AS SHOWN	DESIGNED:	R VIJJOEN
DATE:	16 NOVEMBER 2022	DRAWN:	R VIJJOEN
DRW. SIZE:	A1	CHECKED:	R VIJJOEN
FILE REF:	Z:\2022\2203 Mosakenk Sewer Pump\08 Drawings\02 Tender Drawings\RP Nov 2022		
DRAWING NUMBER:		REV.	
2203		00	
DRAWING - RSP		- 02	

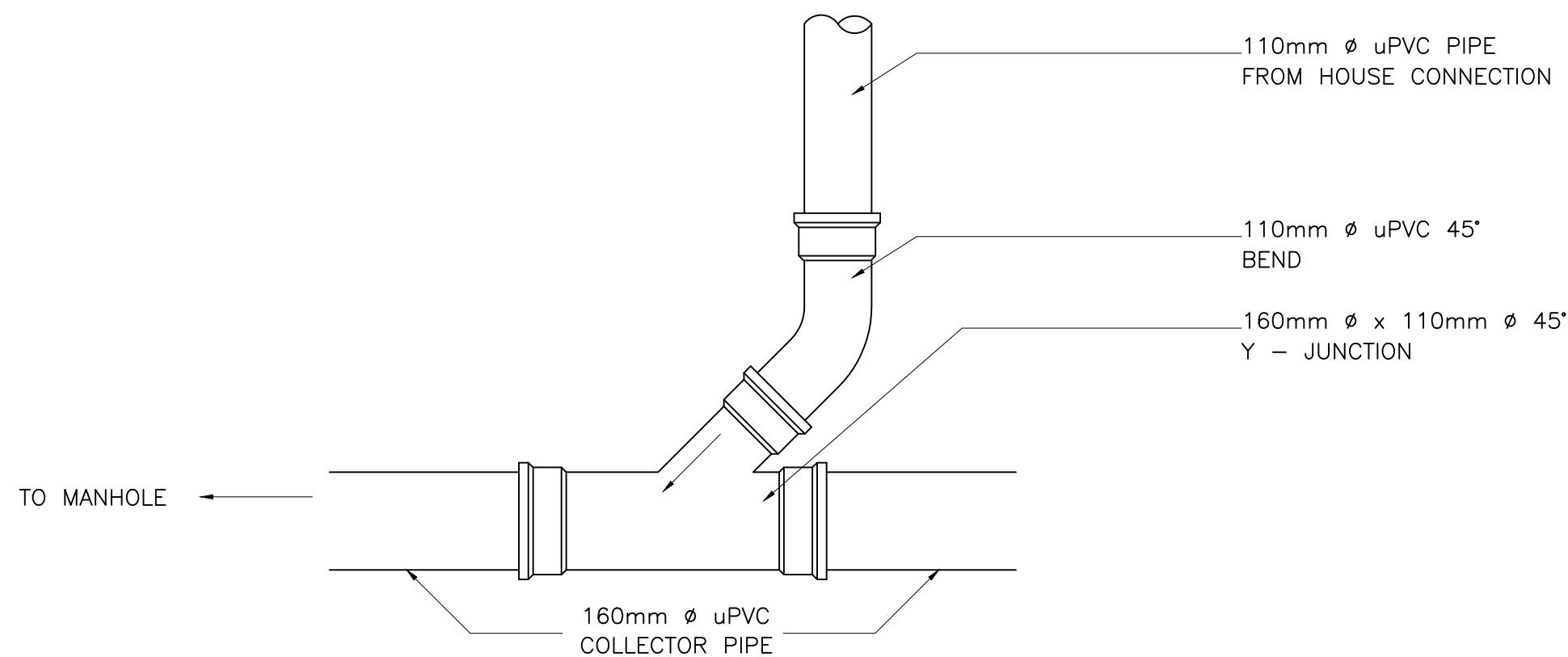
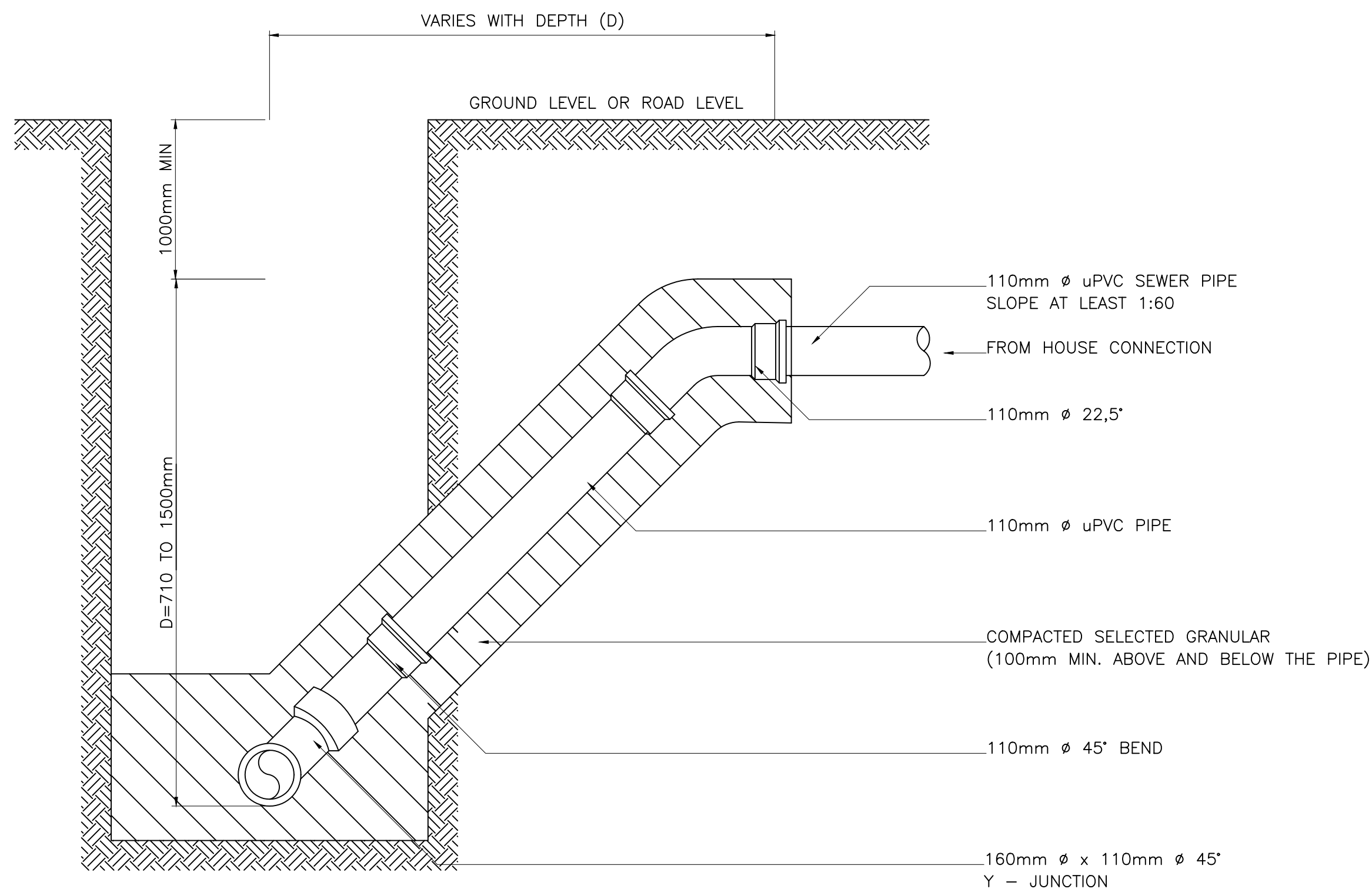
[illegible]

NAME: _____		CLIENT'S APPROVAL	
PROF. REG. _____	_____	SIGNATURE: _____	_____
NAME: R VILJOEN		ENGINEER'S APPROVAL	
PROF. REG. 200970081	_____	SIGNATURE: _____	_____

PROJECT TITLE NEW PUMP STATION AND RELATED BULK SEWER OUTFALL IN LINES IN MASAKENG	
DRAWING DESCRIPTION PRE-SCREENING	
SCALE: AS SHOWN	DESIGNED: R. VILOJEN
DATE: 16 NOVEMBER 2022	DRAWN: R. VILOJEN
DRW. SIZE: A1	CHECKED: R. VILOJEN
FILE REF: Z:\2022\2203 Masokeng Sewer Pump\08 Drawings\02 Tender Drawings\RV Nov 2022	
DRAWING NUMBER: 2203 — P S P — 03	



TRENCH EXCAVATION	
ERF CONNECTION	
X	WIDTH
0–1m	450mm
>1m	600mm



NOTES

THIS COMPLETE CONNECTION WILL BE MEASURED UNDER ITEM B.09.01 IN THE SCHEDULE OF QUANTITIES

REVISIONS		
NO.	DESCRIPTION	

CLIENT'S APPROVAL	
NAME: _____	SIGNATURE: _____
PROF. REG. _____	ENGINEER'S APPROVAL
NAME: R VILJOEN	SIGNATURE: _____
PROF. REG. 200970081	



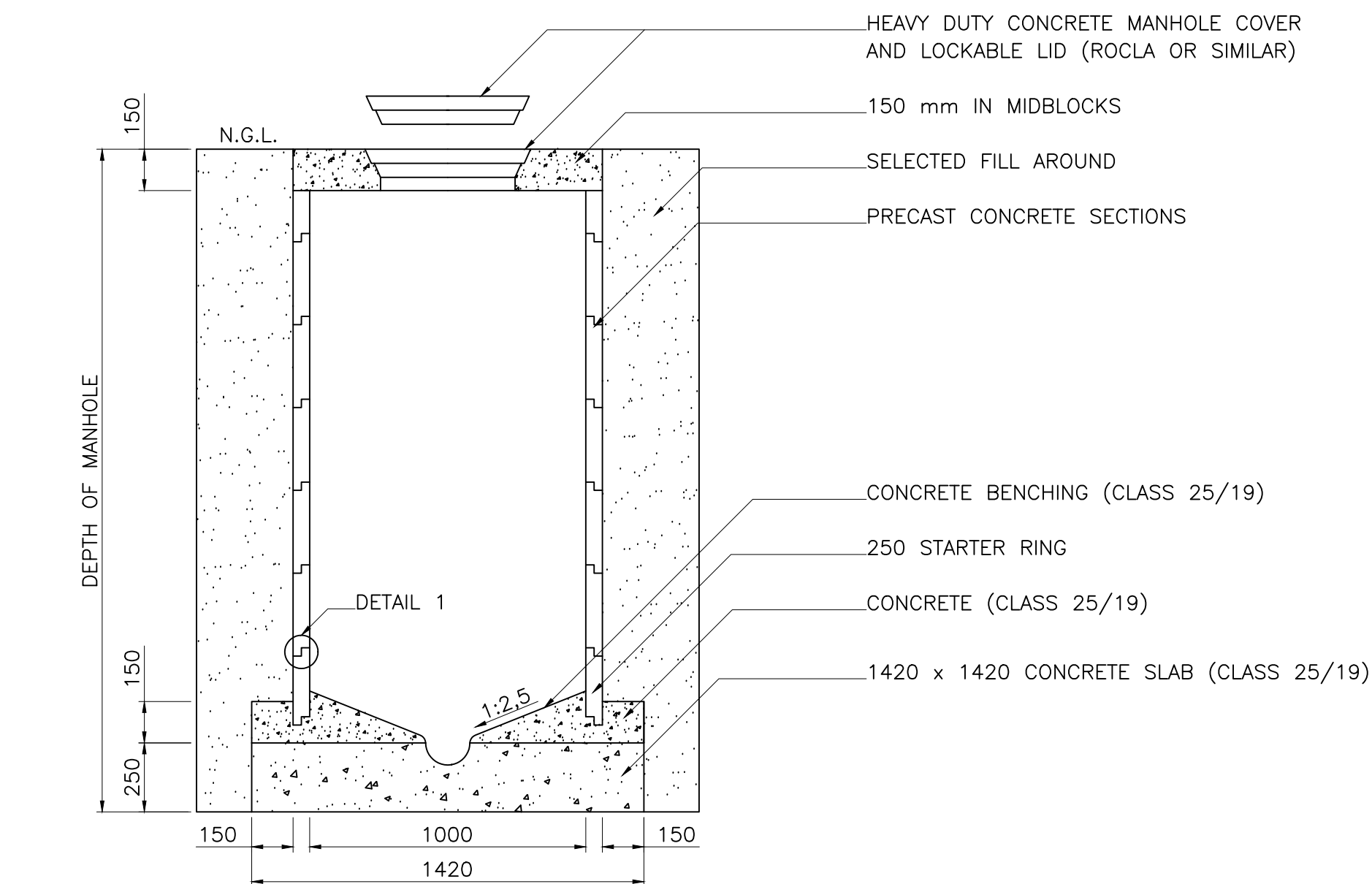
PROJECT TITLE	
NEW PUMP STATION AND RELATED BULK SEWER OUTFALL IN LINES IN MASAKENG	
DRAWING DESCRIPTION	
SEWER ERF CONNECTIONS	
SCALE: AS SHOWN	DESIGNED: R VILJOEN
DATE: 16 NOVEMBER 2022	DRAWN: R VILJOEN
	CHECKED: R VILJOEN
DRAWING NUMBER: 2203-DD-01	REV: 00



SCALE 1:10

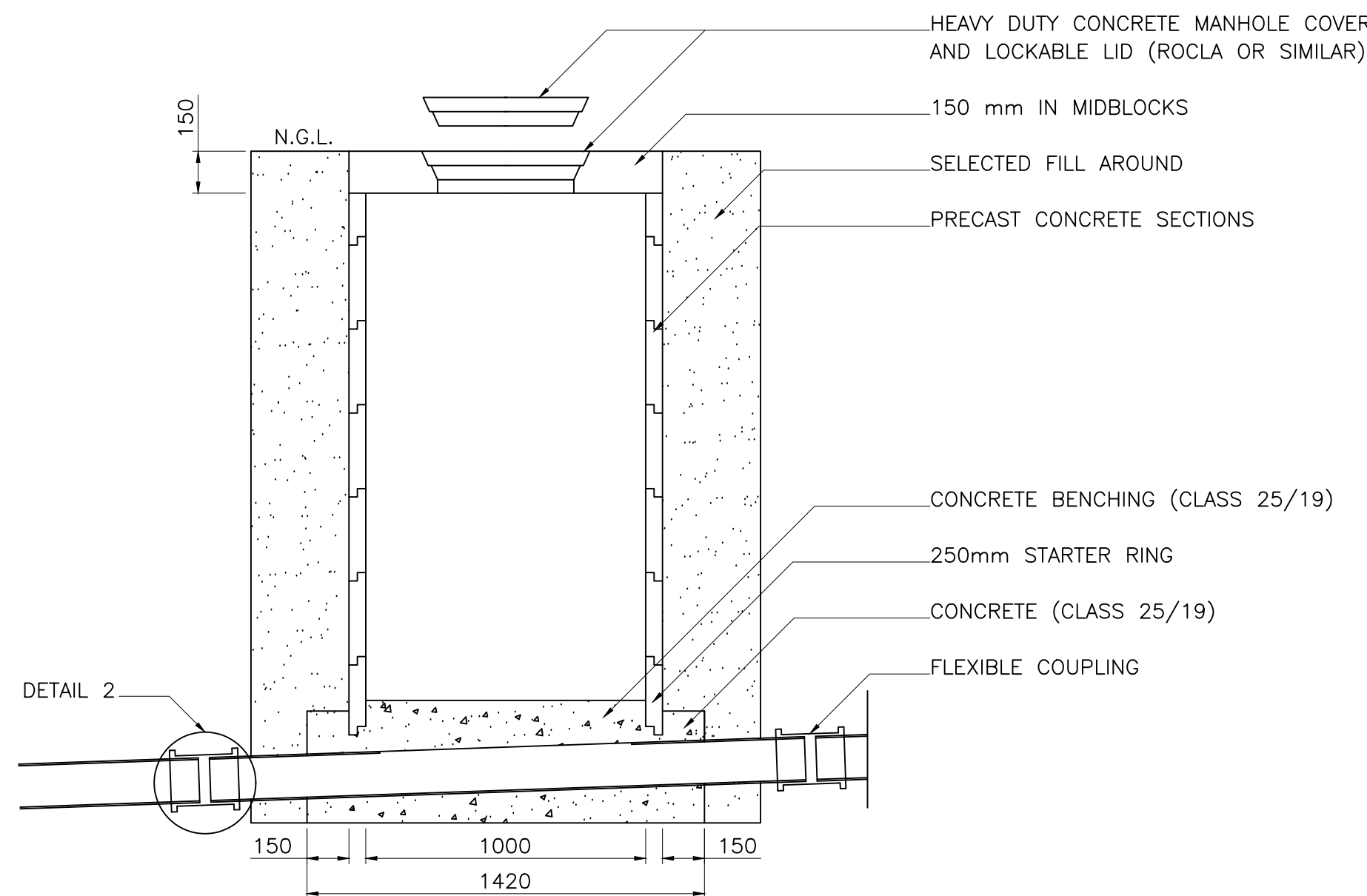


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2203-DD-02		REV: 00



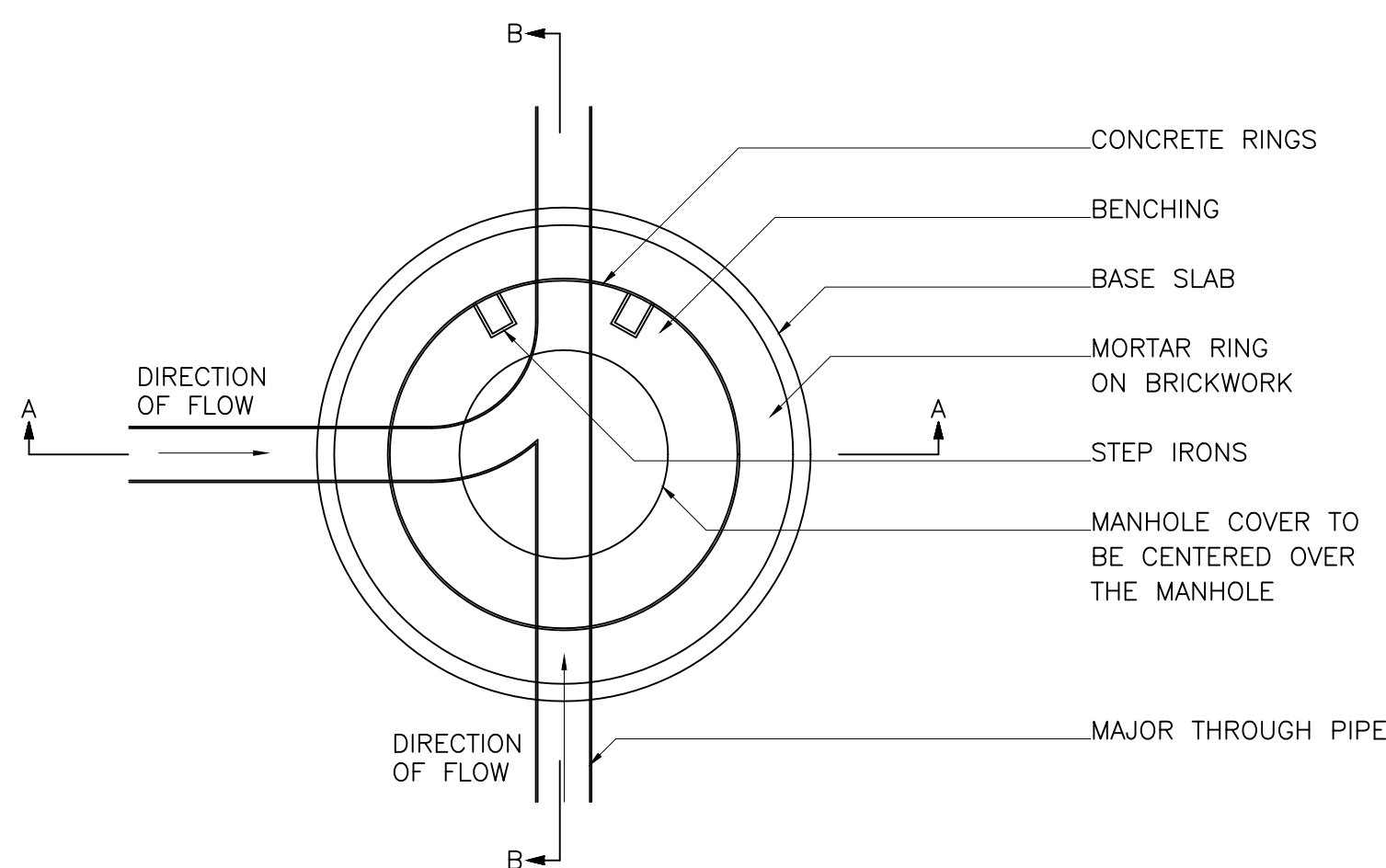
SECTION A-A

SCALE 1:20



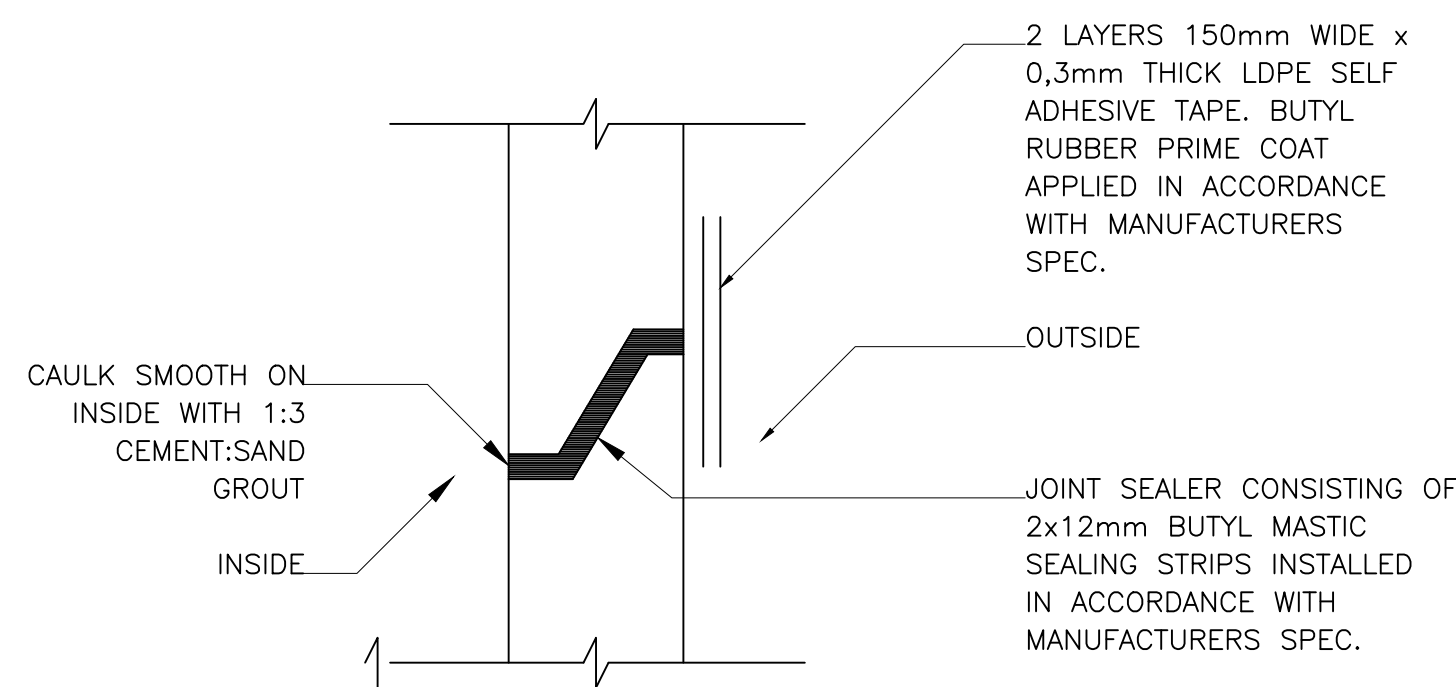
SECTION B-B

SCALE 1:20



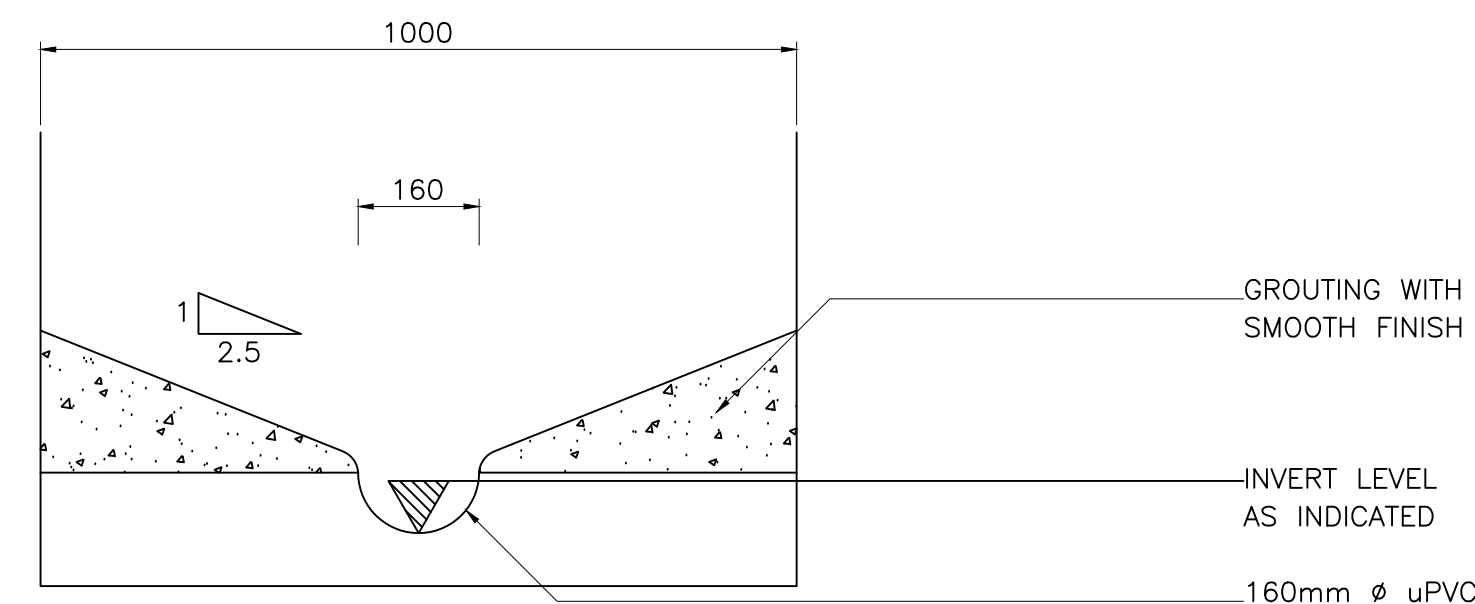
MANHOLE PLAN

SCALE 1:20



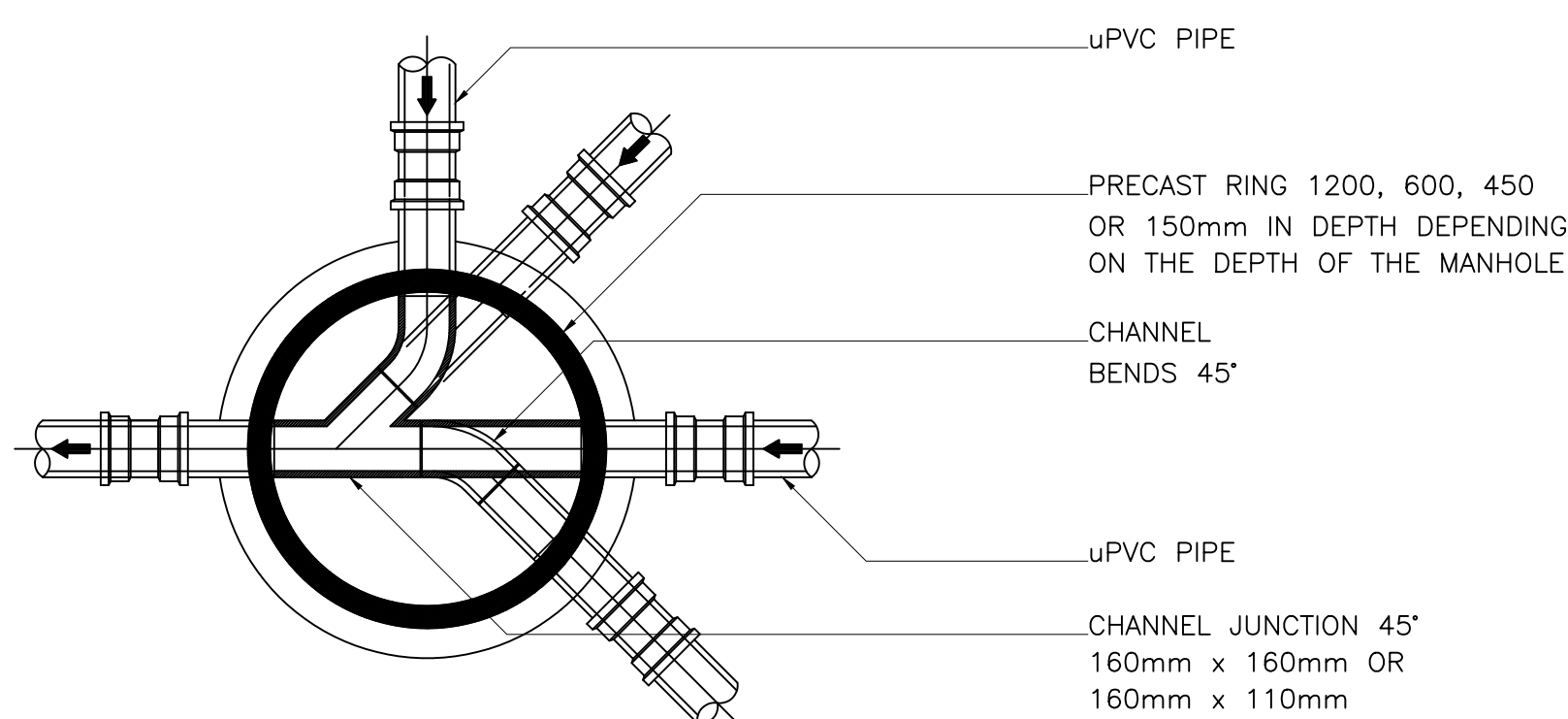
DETAIL 1

NOT TO SCALE



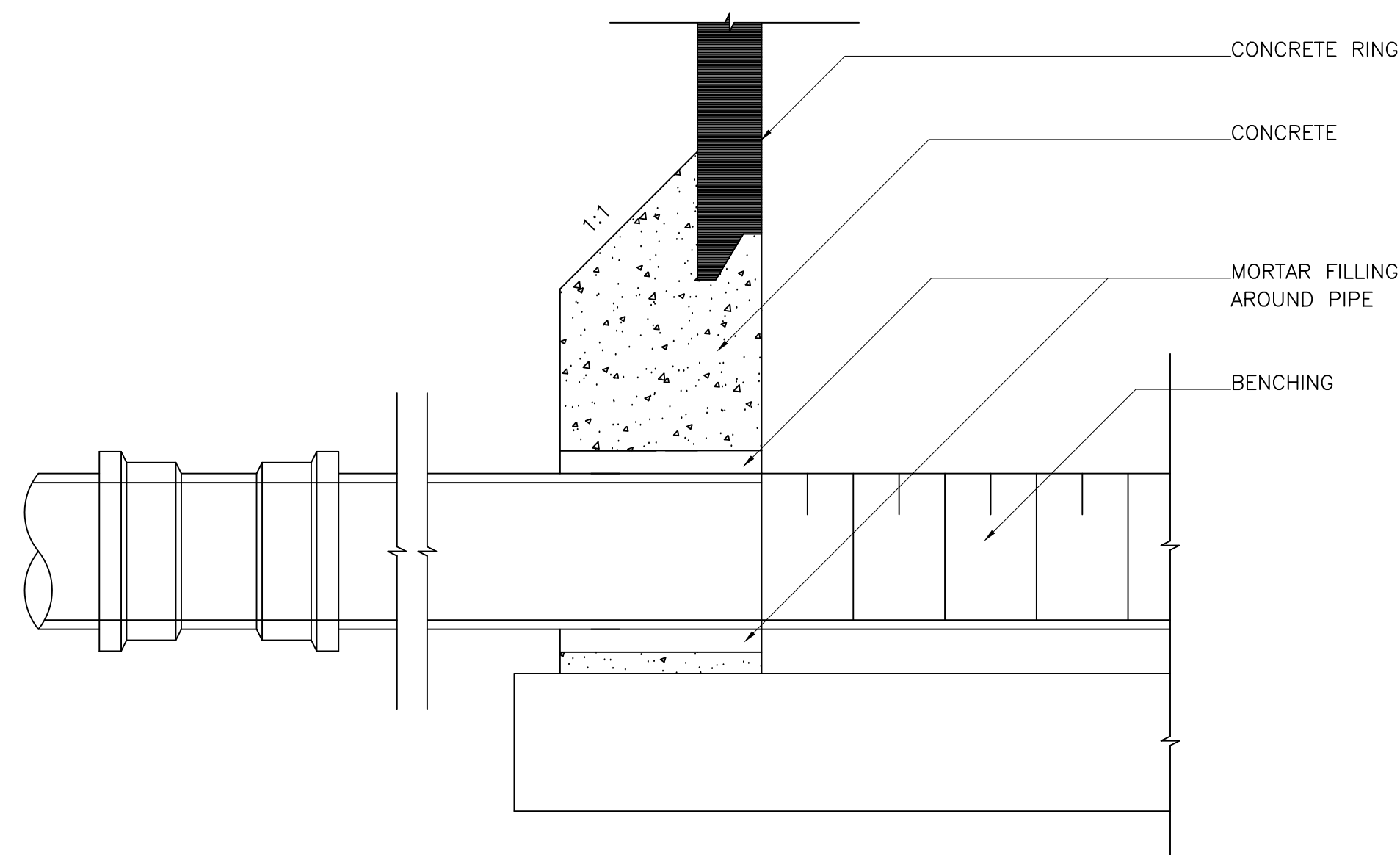
PROFILE IN MANHOLE

SCALE 1:10



MANHOLE DETAILS
90° AND 45° CONNECTIONS

SCALE 1:20



DETAIL 2

NOT TO SCALE

REVISIONS		
NO.	DESCRIPTION	

CLIENT'S APPROVAL	
NAME: _____	SIGNATURE: _____
PROF. REG. _____	ENGINEER'S APPROVAL
NAME: R VILJOEN	SIGNATURE: _____
PROF. REG. 200970081	



PHOKWANE LOCAL MUNICIPALITY



PHETHOGO CONSULTING (Pty) Ltd

ENGINEERING SERVICES | PROJECT MANAGEMENT | TOWN PLANNING & REGIONAL PLANNERS

(t) +27 51 418 6006 info@phethogo.co.za 122 Nelson Mandela Drive
(f) +27 51 418 6728 www.phethogo.co.za Phokwane 18th 19th
PO Box 43264 | Heerling 9322

PROJECT TITLE	
NEW PUMP STATION AND RELATED BULK SEWER OUTFALL IN LINES IN MASAKENG	
DRAWING DESCRIPTION	
MANHOLE DETAILS	
SCALE: AS SHOWN	DESIGNED: R VILJOEN
DATE: 16 NOVEMBER 2022	DRAWN: R VILJOEN
	CHECKED: R VILJOEN
DRAWING NUMBER: 2203-DD-03	REV: 00