

NOTES	REF. DRAWINGS	DRWG. No.'s	DESCRIPTION

REV	NATURE OF REVISION	DATE	SIGNED
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE
CHECKED	C DU PREEZ
DRAWN	L POTGIETER
CHECKED	N DU PLESSIS

DESIGN APPROVED:
JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
SIGNATURE
19 AUGUST 2022
DATE

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PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
PROPOSED BULK WATER LOCALITY PLAN

ISSUED FOR TENDER

SHEET 1 OF 1	SCALE 1 : 5000	SIZE A0

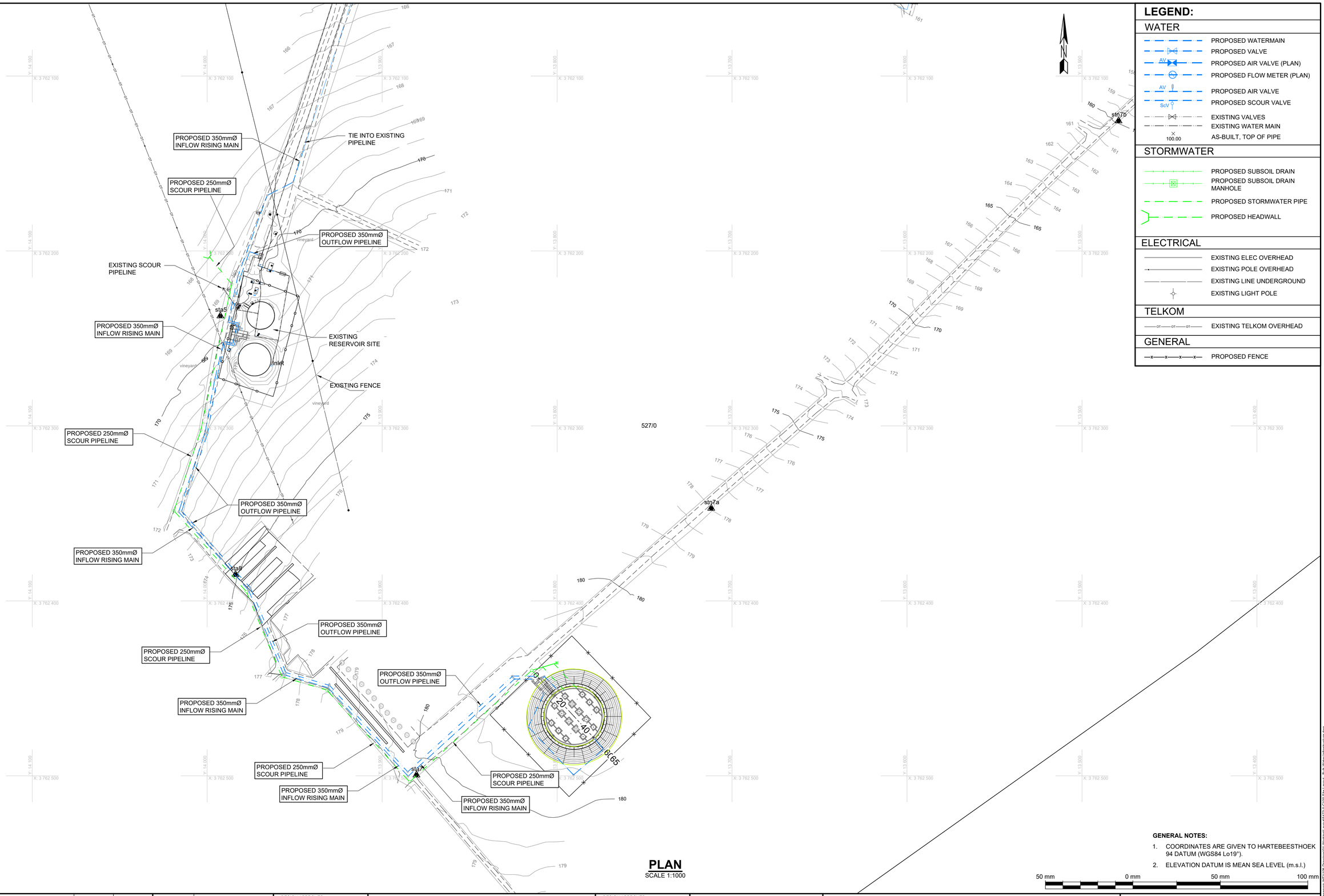
CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No: 5473-0-C001

REVISION A

Bothwell, 19.08.2022

P:\Projects\5473\Drawings\Technical\Civil\5473-0-C001 Locality Plan.dwg



PLAN
SCALE 1:1000

LEGEND:

WATER
- PROPOSED WATERMAIN
- PROPOSED VALVE
- PROPOSED AIR VALVE (PLAN)
- PROPOSED FLOW METER (PLAN)
- PROPOSED AIR VALVE
- PROPOSED SCOUR VALVE
- EXISTING VALVES
- EXISTING WATER MAIN
- AS-BUILT, TOP OF PIPE

STORMWATER
- PROPOSED SUBSOIL DRAIN
- PROPOSED SUBSOIL DRAIN MANHOLE
- PROPOSED STORMWATER PIPE
- PROPOSED HEADWALL

ELECTRICAL
- EXISTING ELEC OVERHEAD
- EXISTING POLE OVERHEAD
- EXISTING LINE UNDERGROUND
- EXISTING LIGHT POLE

TELKOM
- EXISTING TELKOM OVERHEAD

GENERAL
- PROPOSED FENCE

GENERAL NOTES:

1. COORDINATES ARE GIVEN TO HARTEBEESTHOEK 94 DATUM (WGS84 Lo19°).
2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

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PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
SITE LAYOUT - BULK WATER INFRASTRUCTURE

ISSUED FOR TENDER

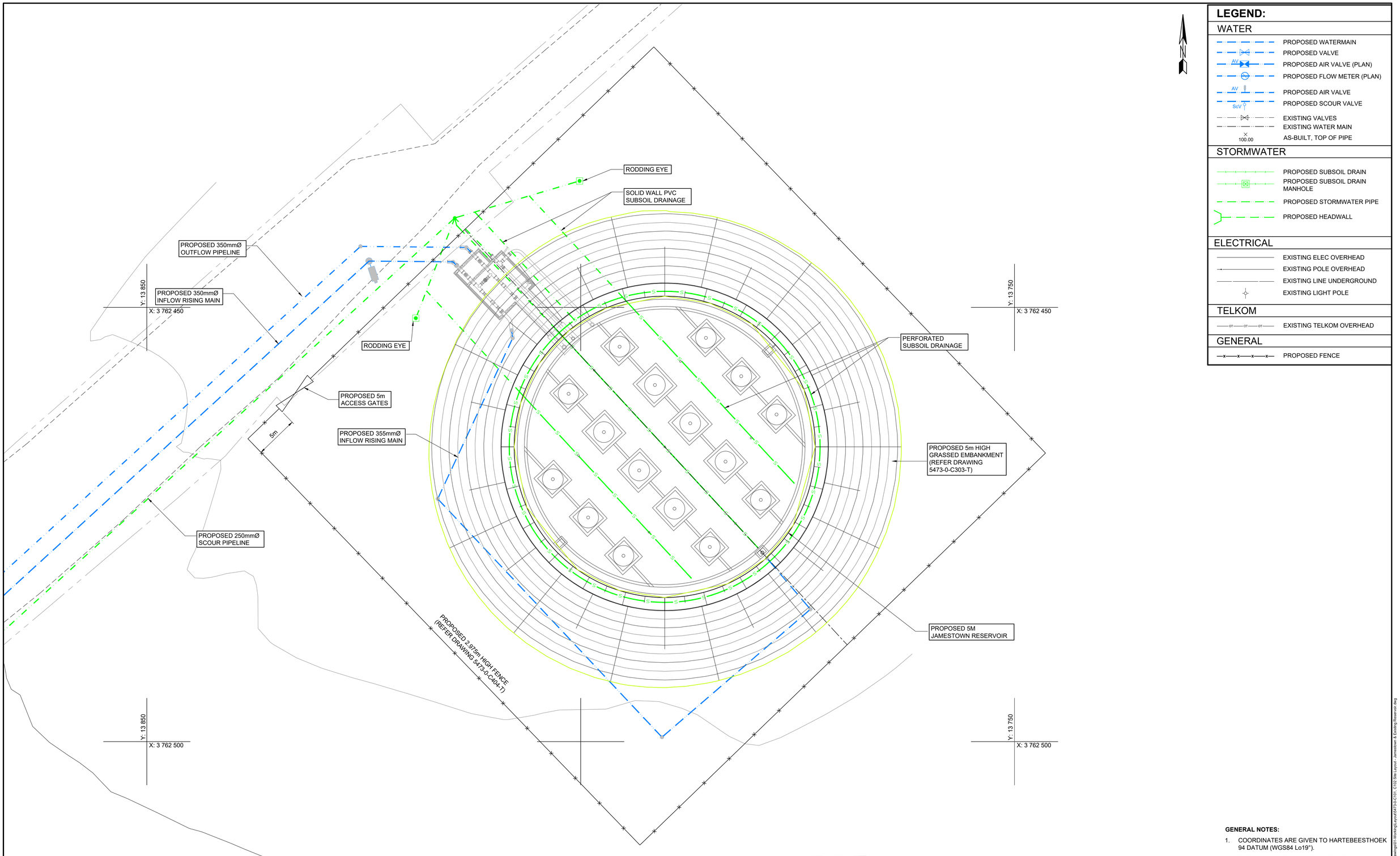
SHEET 1 OF 1	SCALE 1:1000	SIZE A1

CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C100 | REVISION A

X:\Projects - (In-progress)\5473 Jamestown Reservoir (HT)\106-Drawings\01-Working\Layout\5473-0-C100 Site Layout - Bulk Water Infrastructure.dwg

Bothwellg 19.08.2022



LEGEND:

WATER

- PROPOSED WATERMAIN
- PROPOSED VALVE
- PROPOSED AIR VALVE (PLAN)
- PROPOSED FLOW METER (PLAN)
- PROPOSED AIR VALVE
- PROPOSED SCOUR VALVE
- EXISTING VALVES
- EXISTING WATER MAIN
- AS-BUILT, TOP OF PIPE (100.00)

STORMWATER

- PROPOSED SUBSOIL DRAIN
- PROPOSED SUBSOIL DRAIN MANHOLE
- PROPOSED STORMWATER PIPE
- PROPOSED HEADWALL

ELECTRICAL

- EXISTING ELEC OVERHEAD
- EXISTING POLE OVERHEAD
- EXISTING LINE UNDERGROUND
- EXISTING LIGHT POLE

TELKOM

- EXISTING TELKOM OVERHEAD

GENERAL

- PROPOSED FENCE

GENERAL NOTES:

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50 mm 0 mm 50 mm 100 mm

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PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
SITE LAYOUT - JAMESTOWN RESERVOIR

ISSUED FOR TENDER

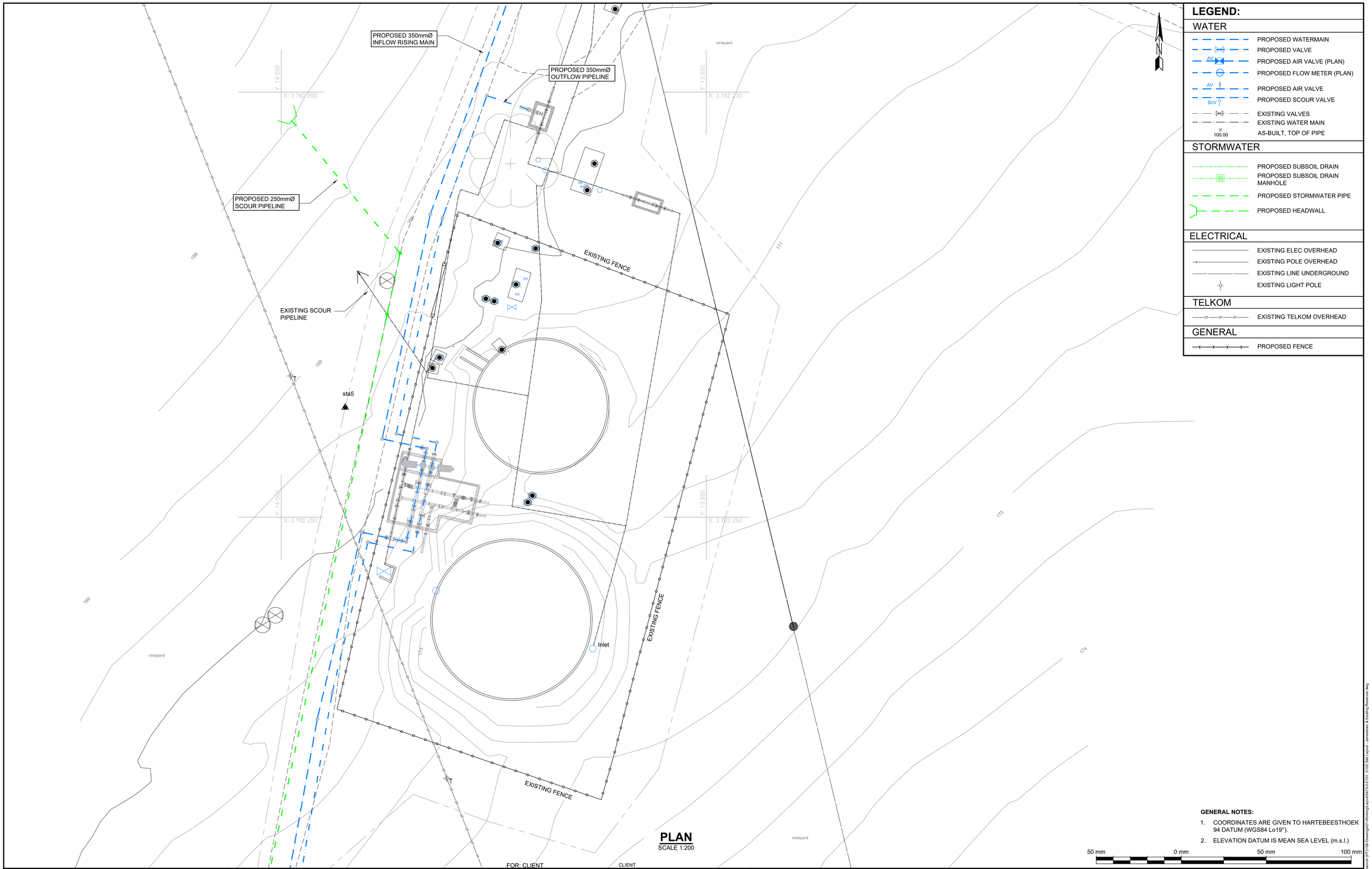
SHEET 1 OF 1	SCALE 1 : 200	SIZE A1

CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No	REVISION
5473-0-C101	A

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X:\Projects_1\In-progress\5473 Jamestown Reservoir (RT)\100-Drawings\01-Working\Layout\5473-C100_C102 Site Layout - Jamestown & Existing Reservoir.dwg



LEGEND:

WATER
- PROPOSED WATERMAIN
- PROPOSED VALVE
- PROPOSED AIR VALVE (PLAN)
- PROPOSED FLOW METER (PLAN)
- PROPOSED AIR VALVE
- PROPOSED SCOUR VALVE
- EXISTING VALVES
- EXISTING WATER MAIN
- AS-BUILT, TOP OF PIPE

STORMWATER
- PROPOSED SUBSOIL DRAIN
- PROPOSED SUBSOIL DRAIN MANHOLE
- PROPOSED STORMWATER PIPE
- PROPOSED HEADWALL

ELECTRICAL
- EXISTING ELEC OVERHEAD
- EXISTING POLE OVERHEAD
- EXISTING LINE UNDERGROUND
- EXISTING LIGHT POLE

TELKOM
- EXISTING TELKOM OVERHEAD

GENERAL
- PROPOSED FENCE

GENERAL NOTES:

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2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

PLAN
SCALE 1:200

FOR: CLIENT

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A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE	
CHECKED	C DU PREEZ	
DRAWN	L POTGIETER	
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PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
SITE LAYOUT - DECOMMISSION EXISTING RESERVOIR

ISSUED FOR TENDER

SHEET 1 OF 1	SCALE 1 : 200	SIZE A1

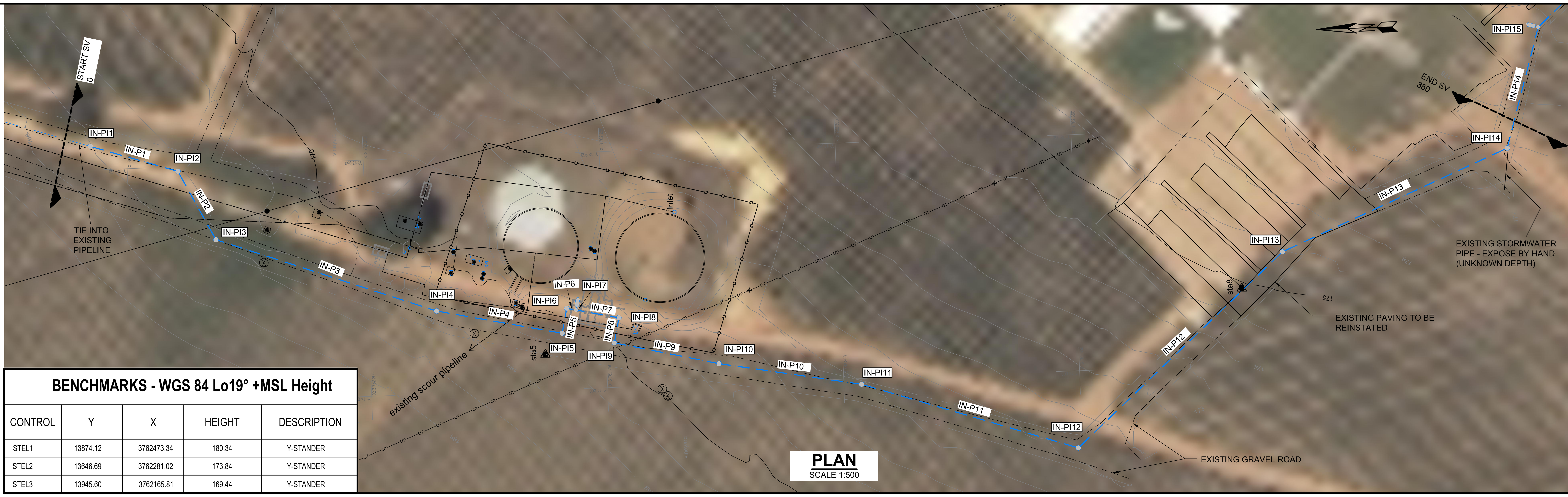
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JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C102

REVISION A

Bothwella 19.08.2022

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PLAN
SCALE 1:500

BENCHMARKS - WGS 84 Lo19° +MSL Height

CONTROL	Y	X	HEIGHT	DESCRIPTION
STEL1	13874.12	3762473.34	180.34	Y-STANDER
STEL2	13646.69	3762281.02	173.84	Y-STANDER
STEL3	13945.60	3762165.81	169.44	Y-STANDER

LEGEND:

WATER
- PROPOSED WATERMAIN
- PROPOSED VALVE
- PROPOSED AIR VALVE (PLAN)
- PROPOSED FLOW METER (PLAN)
- PROPOSED AIR VALVE
- PROPOSED SCOUR VALVE
- EXISTING VALVES
- EXISTING WATER MAIN
- 100.00 AS-BUILT, TOP OF PIPE

STORMWATER
- PROPOSED SUBSOIL DRAIN
- PROPOSED SUBSOIL DRAIN MANHOLE
- PROPOSED STORMWATER PIPE
- PROPOSED HEADWALL

ELECTRICAL
- EXISTING ELEC OVERHEAD
- EXISTING POLE OVERHEAD
- EXISTING LINE UNDERGROUND
- EXISTING LIGHT POLE

TELKOM
- EXISTING TELKOM OVERHEAD

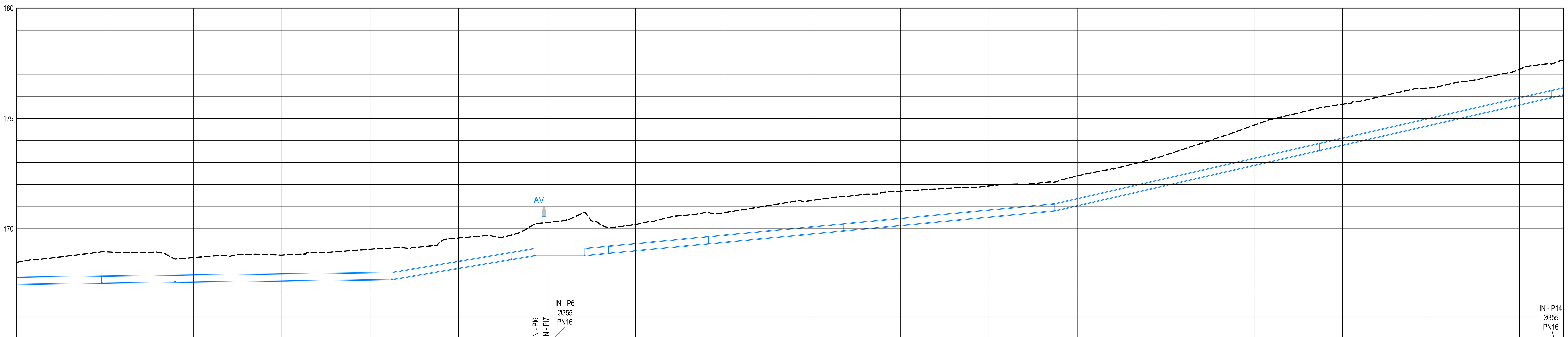
GENERAL
- PROPOSED FENCE

GENERAL NOTES:
1. COORDINATES ARE GIVEN TO HARTEBEESTHOEK 94 DATUM (WGS84 Lo19°).
2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

NGL - - - - - -

SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 165.000



REFERENCE	DISTANCE (m)	GROUND LEVEL	PIPE INVERT LEVEL	DEPTH TO INVERT
IN - PI1	0.000	168.482	167.500	0.982
IN - PI2	19.264	168.956	167.550	1.406
	20.000	168.953	167.552	1.402
IN - PI3	35.830	168.627	167.590	1.037
	40.000	168.694	167.600	1.093
	60.000	168.808	167.649	1.158
	80.000	169.071	167.698	1.373
IN - PI4	84.924	169.124	167.710	1.414
	100.000	169.578	168.218	1.361
IN - PI5	111.938	169.713	168.619	1.094
IN - PI6	117.304	170.227	168.800	1.427
IN - PI7	119.323	170.269	168.800	1.469
	120.000	170.283	168.800	1.483
IN - PI8	128.532	170.751	168.800	1.950
IN - PI9	133.921	170.033	168.903	1.131
	140.000	170.199	169.018	1.180
IN - PI10	156.505	170.746	169.333	1.413
	160.000	170.726	169.399	1.326
	180.000	171.285	169.780	1.504
IN - PI11	187.030	171.452	169.914	1.538
	200.000	171.705	170.161	1.543
	220.000	171.940	170.542	1.397
IN - PI12	234.857	172.114	170.825	1.289
	240.000	172.394	171.060	1.334
	260.000	173.344	171.974	1.370
	280.000	174.698	172.888	1.810
IN - PI13	294.783	175.481	173.563	1.918
	300.000	175.644	173.801	1.843
	320.000	176.387	174.715	1.672
	340.000	177.224	175.628	1.595
IN - PI14	347.194	177.464	175.957	1.507
	350.000	177.648	176.085	1.563
	373.633		177.165	

REFERENCE	SLOPE / LENGTH		
IN - P1 Ø355 PN16	-0.26%	-1:385.3	19.26m
IN - P2 Ø355 PN16	-0.24%	-1:414.2	16.57m
IN - P3 Ø355 PN16	-0.24%	-1:409.1	49.09m
IN - P4 Ø355 PN16	-3.37%	-1:29.7	27.01m
IN - P5 Ø355 PN16	-3.37%	-1:29.7	5.36m
IN - P6 Ø355 PN16			2.02m
IN - P7 Ø355 PN16			9.21m
IN - P8 Ø355 PN16	-1.91%	-1:52.5	5.39m
IN - P9 Ø355 PN16	-1.91%	-1:52.5	22.58m
IN - P10 Ø355 PN16	-1.91%	-1:52.5	30.52m
IN - P11 Ø355 PN16	-1.91%	-1:52.5	47.83m
IN - P12 Ø355 PN16	-4.57%	-1:21.9	59.93m
IN - P13 Ø355 PN16	-4.57%	-1:21.9	52.41m
IN - P14 Ø355 PN16	-4.57%	-1:21.9	26.44m

Horizontal

LONGSECTION 355 HDPE INFLOW
FROM 0.000 TO 350.000

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE
CHECKED	C DU PREEZ
DRAWN	L POTGIETER
CHECKED	N DU PLESSIS

DESIGN APPROVED: JG AFRIKA (Pty) Ltd
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PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
PROPOSED 355mmØ HDPE INFLOW RISING MAIN LAYOUT AND LONG SECTION

ISSUED FOR TENDER

SHEET 1 OF 2 | SCALE AS SHOWN | SIZE A1

CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C200 | REVISION A

Bothwellg 19.08.2022

X:\Projects - (In-progress)\5473 Jamestown Reservoir (HT)\08-Drawings\01-Working\Layout\5473-0-C200, C201 Proposed 335 Inflow Rising Main LS.dwg

BENCHMARKS - WGS 84 Lo19° +MSL Height

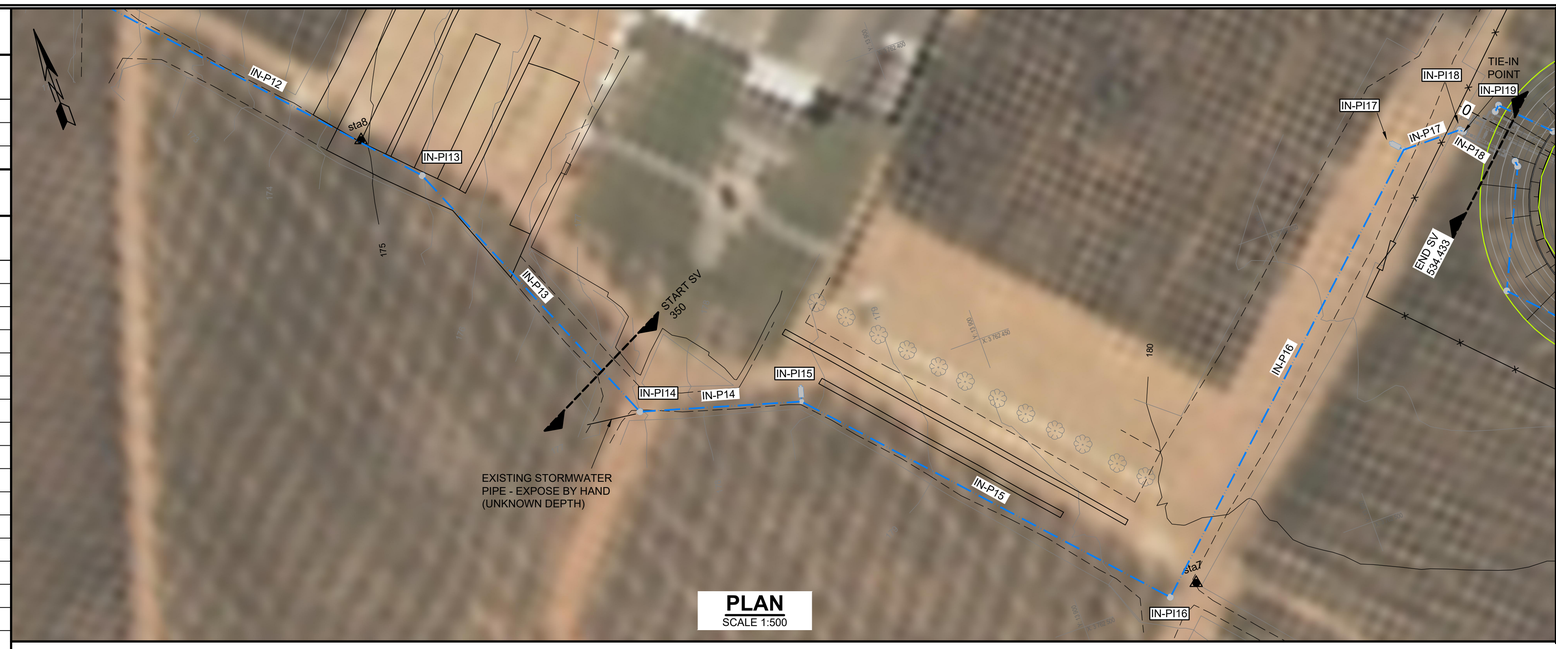
CONTROL	Y	X	HEIGHT	DESCRIPTION
STEL1	13874.12	3762473.34	180.34	Y-STANDER
STEL2	13646.69	3762281.02	173.84	Y-STANDER
STEL3	13945.60	3762165.81	169.44	Y-STANDER

STRUCTURE TABLE-355 HDPE Inflow

STRUCTURE NAME	Y	X	GROUND ELEVATION	INVERT ELEVATION	RIM TO SUMP DEPTH
IN - PI1	13 945.004	3 762 142.377	168.482	167.500	0.982
IN - PI2	13 950.944	3 762 160.701	168.956	167.550	1.406
IN - PI3	13 965.701	3 762 168.231	168.627	167.590	1.037
IN - PI4	13 982.468	3 762 214.372	169.124	167.710	1.414
IN - PI5	13 988.129	3 762 240.787	169.713	168.619	1.094
IN - PI6	13 982.889	3 762 241.933	170.227	168.800	1.427
IN - PI7	13 983.319	3 762 243.906	170.269	168.800	1.469
IN - PI8	13 985.289	3 762 252.902	170.751	168.800	1.951
IN - PI9	13 990.554	3 762 251.752	170.033	168.903	1.131
IN - PI10	13 995.755	3 762 273.729	170.746	169.333	1.413
IN - PI11	14 001.211	3 762 303.762	171.452	169.914	1.538
IN - PI12	14 016.323	3 762 349.139	172.114	170.825	1.289
IN - PI13	13 976.401	3 762 393.830	175.481	173.563	1.918
IN - PI14	13 956.179	3 762 442.184	177.464	175.957	1.507
IN - PI15	13 930.817	3 762 449.651	178.454	177.165	1.289
IN - PI16	13 885.177	3 762 500.233	179.626	177.897	1.729
IN - PI17	13 824.385	3 762 444.664	180.846	178.821	2.025
IN - PI18	13 814.701	3 762 444.754	180.771	178.893	0.324
IN - PI19	13 814.263	3 762 445.200	180.792	178.900	0.324

PIPE LIST-355 HDPE Inflow

PIPE NAME	START INVERT LEVEL	END INVERT LEVEL	3D LENGTH TO INSIDE EDGES	SLOPE	DIAMETER AND CLASS
IN - P1	167.500	167.550	19.233	-0.260%	355mm Class PN16
IN - P2	167.550	167.590	16.527	-0.241%	355mm Class PN16
IN - P3	167.590	167.710	49.056	-0.244%	355mm Class PN16
IN - P4	167.710	168.619	27.011	-3.366%	355mm Class PN16
IN - P5	168.619	168.800	5.349	-3.366%	355mm Class PN16
IN - P6	168.800	168.800	1.989	0.000%	355mm Class PN16
IN - P7	168.800	168.800	9.179	0.000%	355mm Class PN16
IN - P8	168.800	168.903	5.367	-1.905%	355mm Class PN16
IN - P9	168.903	169.333	22.565	-1.905%	355mm Class PN16
IN - P10	169.333	169.914	30.507	-1.905%	355mm Class PN16
IN - P11	169.914	170.825	47.812	-1.905%	355mm Class PN16
IN - P12	170.825	173.563	59.971	-4.568%	355mm Class PN16
IN - P13	173.563	175.957	52.451	-4.568%	355mm Class PN16
IN - P14	175.957	177.165	26.445	-4.568%	355mm Class PN16
IN - P15	177.165	177.897	68.102	-1.075%	355mm Class PN16
IN - P16	177.897	178.821	82.341	-1.122%	355mm Class PN16
IN - P17	178.821	178.893	9.649	-0.741%	355mm Class PN16
IN - P18	178.893	178.900	0.588	-1.118%	355mm Class PN16



PLAN
SCALE 1:500

LEGEND:

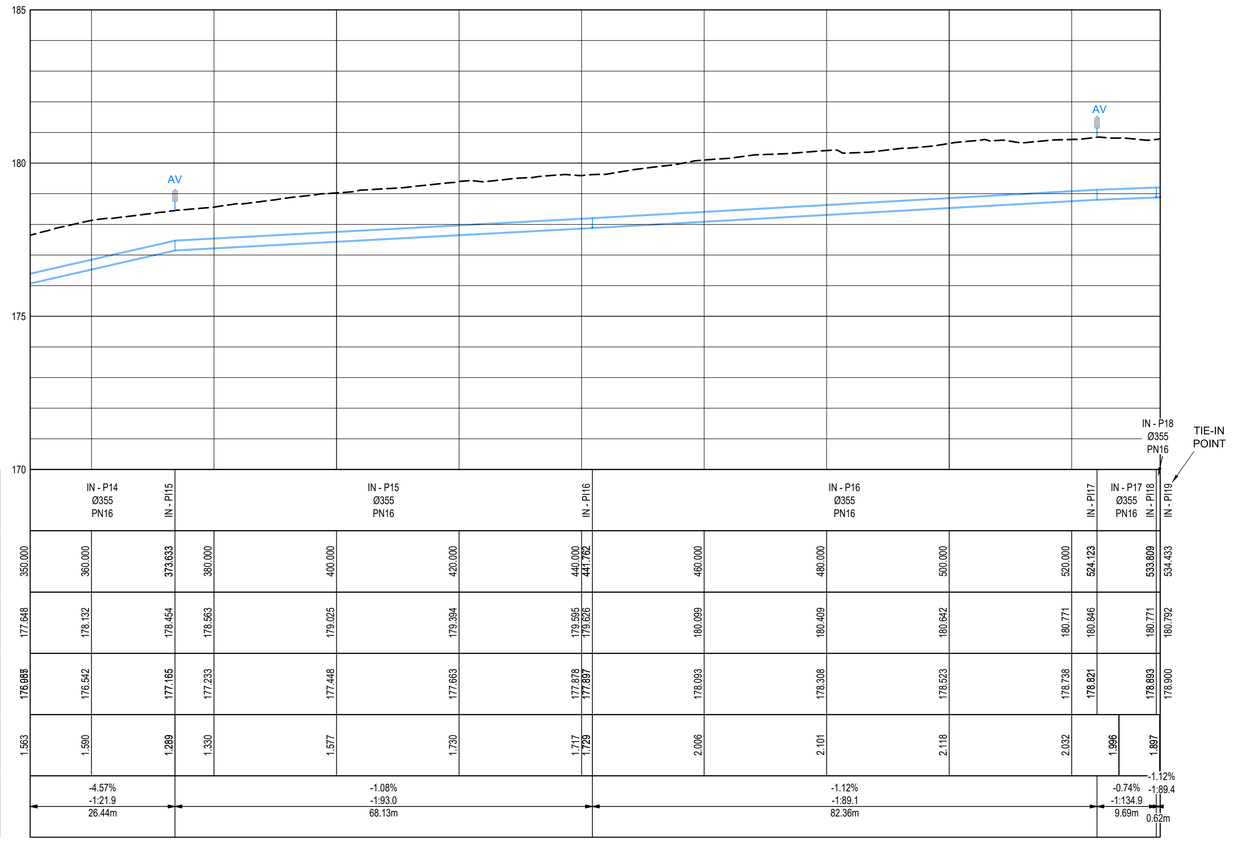
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- PROPOSED AIR VALVE
- PROPOSED SCOUR VALVE
- EXISTING VALVES
- EXISTING WATER MAIN
- AS-BUILT, TOP OF PIPE (100.00)

STORMWATER
- PROPOSED SUBSOIL DRAIN
- PROPOSED SUBSOIL DRAIN MANHOLE
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- PROPOSED HEADWALL

ELECTRICAL
- EXISTING ELEC OVERHEAD
- EXISTING POLE OVERHEAD
- EXISTING LINE UNDERGROUND
- EXISTING LIGHT POLE

TELKOM
- EXISTING TELKOM OVERHEAD

GENERAL
- PROPOSED FENCE



NGL – – – – –

SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 165.000

REFERENCE	IN - P14 Ø355 PN16	IN - PI15	IN - P15 Ø355 PN16			IN - PI16	IN - P16 Ø355 PN16				IN - PI17	IN - P17 Ø355 PN16	IN - PI18	IN - PI19
DISTANCE (m)	350.000	360.000	373.633	380.000	400.000	420.000	440.000 441.762	460.000	480.000	500.000	520.000	524.123	533.809	534.433
GROUND LEVEL	177.648	178.132	178.454	178.563	179.025	179.394	179.595 179.626	180.099	180.409	180.642	180.771	180.846	180.771	180.792
PIPE INVERT LEVEL	176.885	176.542	177.165	177.233	177.448	177.663	177.878 177.897	178.093	178.308	178.523	178.738	178.821	178.893	178.900
DEPTH TO INVERT	1.563	1.590	1.289	1.330	1.577	1.730	1.717 1.729	2.006	2.101	2.118	2.032	1.996	1.897	
SLOPE / LENGTH		-4.57% -1:21.9 26.44m			-1.08% -1:93.0 68.13m			-1.12% -1:89.1 82.36m				-0.74% -1:134.9 9.69m	-1.12% -1:89.4 0.62m	

GENERAL NOTES:

1. COORDINATES ARE GIVEN TO HARTEBEESTHOEK 94 DATUM (WGS84 Lo19°).
2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

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PROJECT
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CONTRACT No. :

DRAWING TITLE
PROPOSED 355mmØ HDPE INFLOW RISING MAIN LAYOUT AND LONG SECTION

ISSUED FOR TENDER

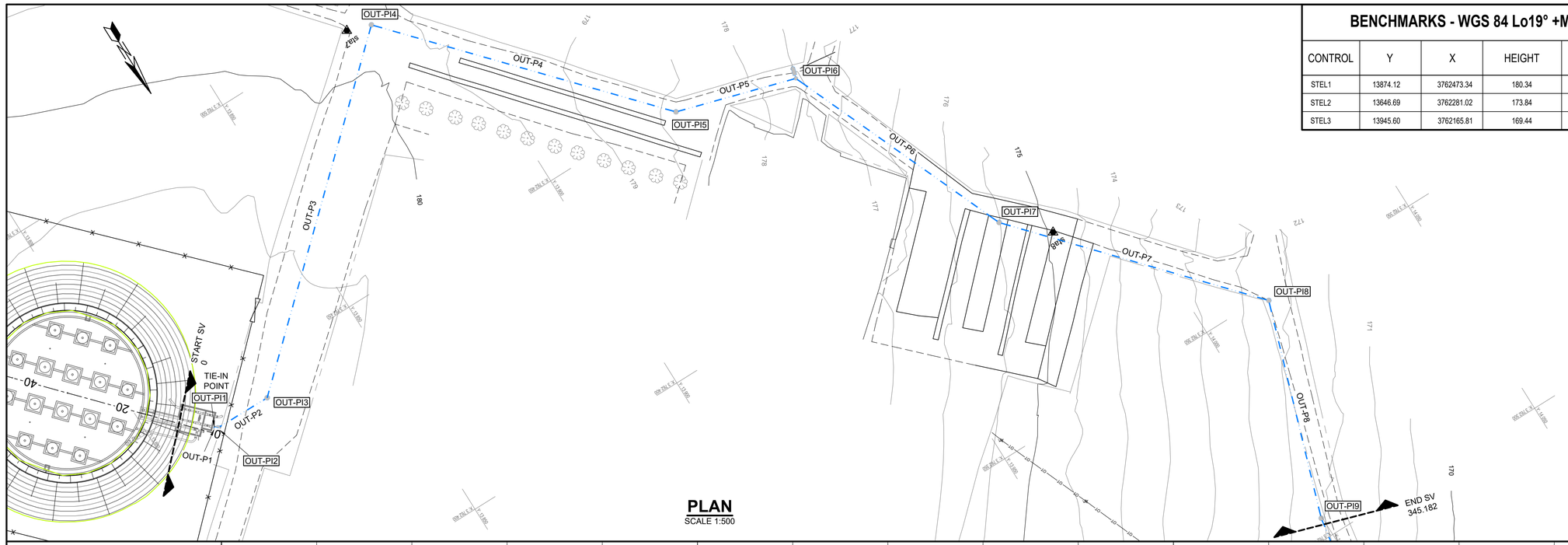
SHEET 2 OF 2 | SCALE AS SHOWN | SIZE A1

CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C201 | REVISION A

Bothwellig 19.08.2022

X:\Projects - Bhongweni\5473 Jamestown Reservoir (HT1)\05 Drawings\01 Working\Layout\5473-0-C200_C201 Proposed 335 Inflow Rising Main LS.dwg



PLAN
SCALE 1:500

BENCHMARKS - WGS 84 Lo19° +MSL Height

CONTROL	Y	X	HEIGHT	DESCRIPTION
STEL1	13874.12	3762473.34	180.34	Y-STANDER
STEL2	13646.69	3762281.02	173.84	Y-STANDER
STEL3	13945.60	3762165.81	169.44	Y-STANDER

LEGEND:

WATER
- PROPOSED WATERMAIN
- PROPOSED VALVE
- PROPOSED AIR VALVE (PLAN)
- PROPOSED FLOW METER (PLAN)
- PROPOSED AIR VALVE
- PROPOSED SCOUR VALVE
- EXISTING VALVES
- EXISTING WATER MAIN
- AS-BUILT, TOP OF PIPE

STORMWATER
- PROPOSED SUBSOIL DRAIN
- PROPOSED SUBSOIL DRAIN MANHOLE
- PROPOSED STORMWATER PIPE
- PROPOSED HEADWALL

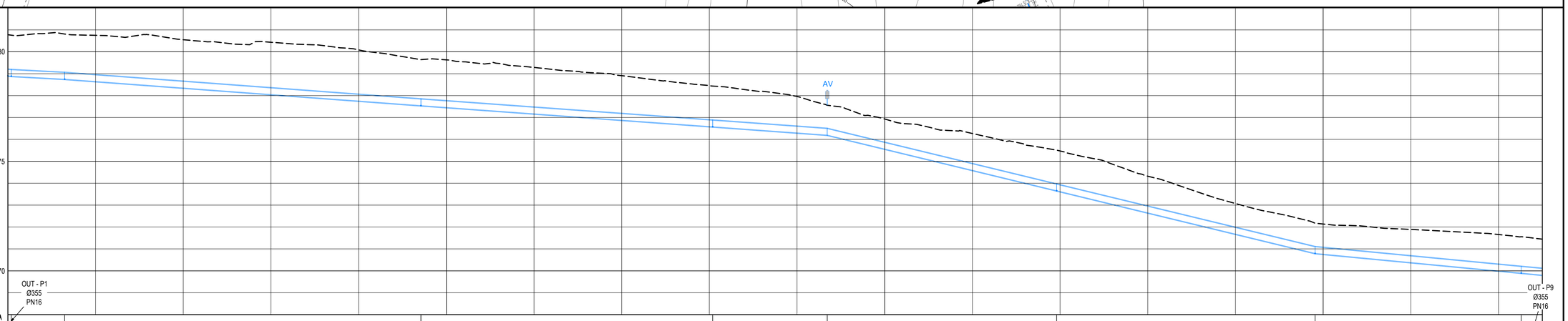
ELECTRICAL
- EXISTING ELEC OVERHEAD
- EXISTING POLE OVERHEAD
- EXISTING LINE UNDERGROUND
- EXISTING LIGHT POLE

TELKOM
- EXISTING TELKOM OVERHEAD

GENERAL
- PROPOSED FENCE

GENERAL NOTES:

1. COORDINATES ARE GIVEN TO HARTEBEESTHOEK 94 DATUM (WGS84 Lo19°).
2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)



	OUT - PI1	OUT - PI2	OUT - P2 Ø355 PN16	OUT - PI3	OUT - P3 Ø355 PN16	OUT - PI4	OUT - P4 Ø355 PN16	OUT - PI5	OUT - P5 Ø355 PN16	OUT - PI6	OUT - P6 Ø355 PN16	OUT - PI7	OUT - P7 Ø355 PN16	OUT - PI8	OUT - P8 Ø355 PN16	OUT - PI9	
DISTANCE (m)	0.000	0.754	12.947	20.000	40.000	60.000	80.000	94.205	100.000	120.000	140.000	160.000	160.746	180.000	186.889	200.000	220.000	239.219	240.000	260.000	280.000	298.174	300.000	320.000	340.000	345.182	350.000	379.238
GROUND LEVEL	180.780	180.757	180.811	180.753	180.552	180.436	180.084	179.641	179.632	179.287	178.909	178.458	178.437	177.958	177.560	176.932	176.270	175.507	175.472	174.319	173.075	172.174	172.137	171.891	171.658	171.555	171.445	
PIPE INVERT LEVEL	178.900	178.889	178.754	178.633	178.343	178.053	177.763	177.545	177.472	177.182	176.892	176.602	176.579	176.311	176.200	175.602	174.631	173.661	173.661	172.690	171.720	170.800	170.760	170.388	170.016	169.902	169.825	169.251
DEPTH TO INVERT	1.838	1.855	2.101	2.119	2.269	2.383	2.321	2.108	2.160	2.104	2.018	1.856	1.847	1.647	1.341	1.330	1.638	1.811	1.628	1.355	1.358	1.357	1.494	1.643	1.642	1.620		
SLOPE / LENGTH	1.50% 1:66.7 0.75m	1.10% 1:90.8 12.19m			1.49% 1:67.2 81.26m				1.45% 1:68.9 66.54m				1.45% 1:68.9 26.14m			4.85% 1:20.6 52.33m			4.85% 1:20.6 58.95m				1.91% 1:52.3 47.01m			1.91% 1:52.3 34.06m	

LONGSECTION 355 HDPE OUTFLOW
FROM 0.000 TO 350.000

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE	
CHECKED	C DU PREEZ	
DRAWN	L POTGIETER	
CHECKED	N DU PLESSIS	

DESIGN APPROVED:
JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
SIGNATURE
19 AUGUST 2022
DATE

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DESIGN APPROVED:
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NAME
SIGNATURE
DATE

CLIENT

PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
PROPOSED 355mmØ HDPE OUTFLOW
PIPELINE LAYOUT AND LONG SECTION

ISSUED FOR TENDER

SHEET 1 OF 2	SCALE AS SHOWN	SIZE A1

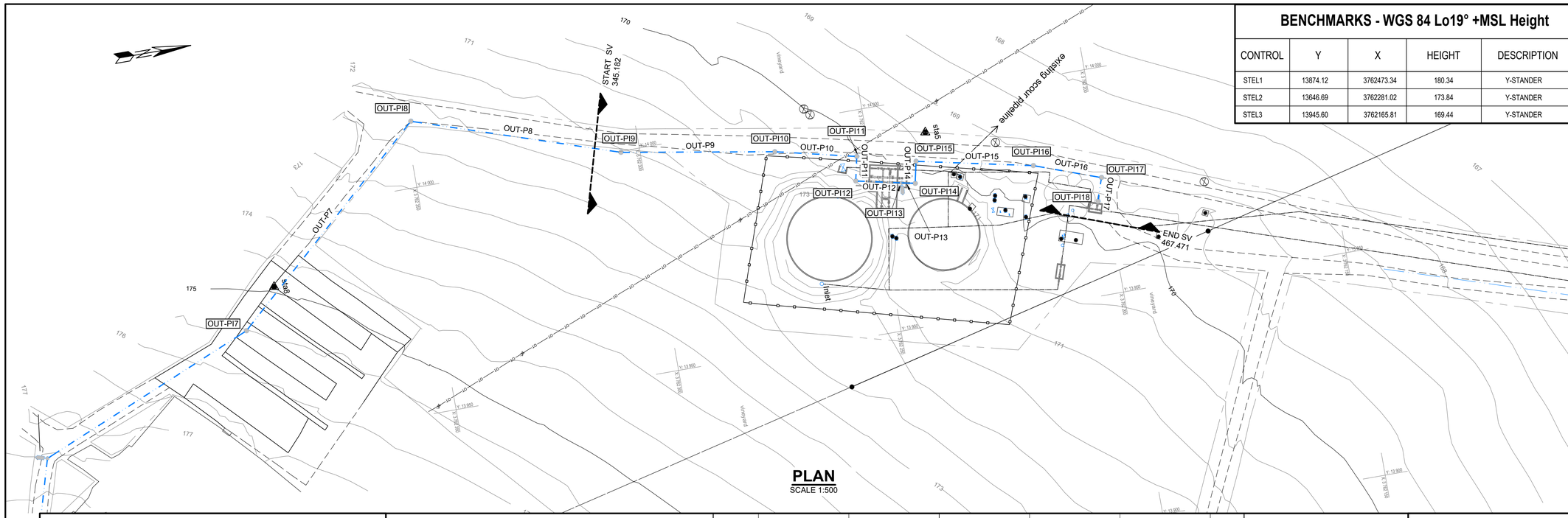
CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C202

REVISION A

Bothwellg 19.08.2022

X:\Projects - (In-Progress)\5473 Jamestown Reservoir\PT1\05\Drawings\01 Working\Layouts\5473-A-C202_C203 Proposed 355 Outflow Pipeline LS.dwg



PLAN
SCALE 1:500

BENCHMARKS - WGS 84 Lo19° +MSL Height

CONTROL	Y	X	HEIGHT	DESCRIPTION
STEL1	13874.12	3762473.34	180.34	Y-STANDER
STEL2	13646.69	3762281.02	173.84	Y-STANDER
STEL3	13945.60	3762165.81	169.44	Y-STANDER

LEGEND:

WATER
- PROPOSED WATERMAIN
- PROPOSED VALVE
- PROPOSED AIR VALVE (PLAN)
- PROPOSED FLOW METER (PLAN)
- PROPOSED AIR VALVE
- PROPOSED SCOUR VALVE
- EXISTING VALVES
- EXISTING WATER MAIN
- 100.00 AS-BUILT, TOP OF PIPE

STORMWATER
- PROPOSED SUBSOIL DRAIN
- PROPOSED SUBSOIL DRAIN MANHOLE
- PROPOSED STORMWATER PIPE
- PROPOSED HEADWALL

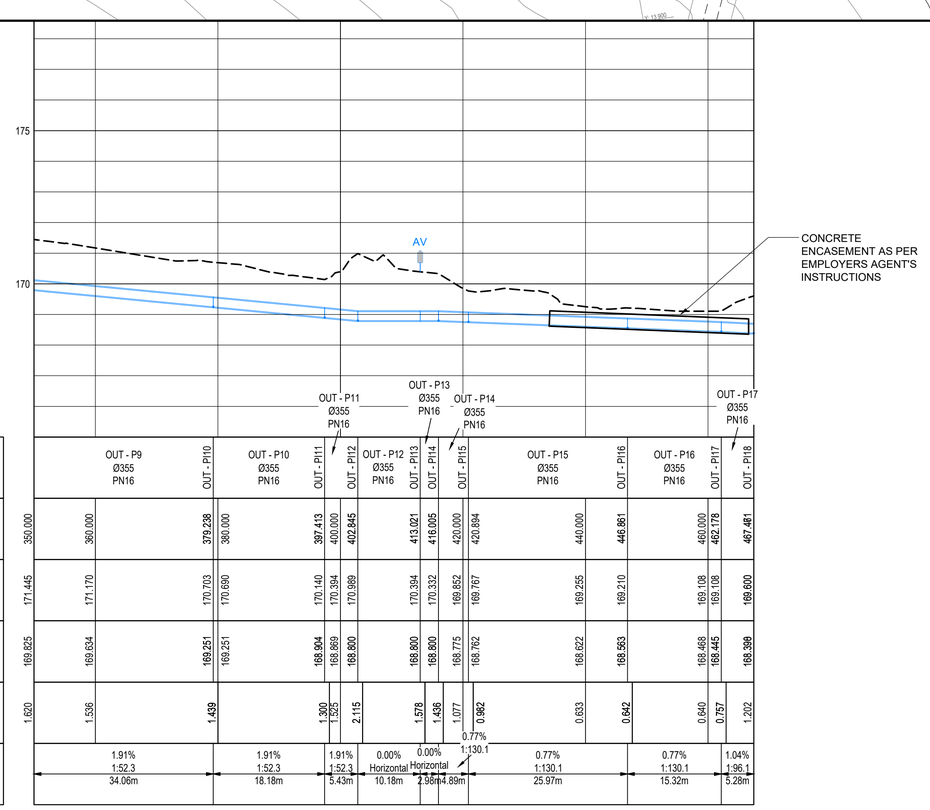
ELECTRICAL
- EXISTING ELEC OVERHEAD
- EXISTING POLE OVERHEAD
- EXISTING LINE UNDERGROUND
- EXISTING LIGHT POLE

TELKOM
- EXISTING TELKOM OVERHEAD

GENERAL
- PROPOSED FENCE

STRUCTURE TABLE-355 HDPE Outflow

STRUCTURE NAME	Y	X	GROUND ELEVATION	INVERT ELEVATION	RIM TO SUMP DEPTH
OUT - PI1	13 812.656	3 762 443.626	180.780	178.900	1.880
OUT - PI2	13 813.184	3 762 443.088	180.757	178.889	1.868
OUT - PI3	13 825.376	3 762 442.975	180.811	178.754	2.057
OUT - PI4	13 885.410	3 762 497.735	179.641	177.545	2.096
OUT - PI5	13 929.987	3 762 448.331	178.437	176.579	1.858
OUT - PI6	13 955.065	3 762 440.948	177.560	176.200	1.360
OUT - PI7	13 975.254	3 762 392.670	175.507	173.661	1.846
OUT - PI8	14 014.625	3 762 348.788	172.174	170.800	1.374
OUT - PI9	13 999.772	3 762 304.187	171.555	169.902	1.653
OUT - PI10	13 993.993	3 762 270.626	170.703	169.251	1.452
OUT - PI11	13 989.807	3 762 252.939	170.140	168.904	1.237
OUT - PI12	13 984.501	3 762 254.098	170.989	168.800	2.189
OUT - PI13	13 982.329	3 762 244.156	170.394	168.800	1.594
OUT - PI14	13 981.692	3 762 241.241	170.332	168.800	1.532
OUT - PI15	13 986.469	3 762 240.197	169.767	168.762	1.005
OUT - PI16	13 981.030	3 762 214.807	169.210	168.563	0.647
OUT - PI17	13 975.799	3 762 200.411	169.108	168.445	0.663
OUT - PI18	13 970.790	3 762 202.092	169.600	168.390	1.210



LONGSECTION 355 HDPE OUTFLOW
FROM 350.000 TO 467.471

PIPE LIST-355 HDPE Outflow

PIPE NAME	START INVERT LEVEL	END INVERT LEVEL	3D LENGTH TO INSIDE EDGES	SLOPE	DIAMETER AND CLASS
OUT - P1	178.900	178.889	0.719	1.499%	355mm Class PN16
OUT - P2	178.889	178.754	12.158	1.102%	355mm Class PN16
OUT - P3	178.754	177.545	81.233	1.488%	355mm Class PN16
OUT - P4	177.545	176.579	66.524	1.451%	355mm Class PN16
OUT - P5	176.579	176.200	26.116	1.451%	355mm Class PN16
OUT - P6	176.200	173.661	52.372	4.852%	355mm Class PN16
OUT - P7	173.661	170.800	59.010	4.852%	355mm Class PN16
OUT - P8	170.800	169.902	46.990	1.911%	355mm Class PN16
OUT - P9	169.902	169.251	34.038	1.911%	355mm Class PN16
OUT - P10	169.251	168.904	18.155	1.911%	355mm Class PN16
OUT - P11	168.904	168.800	5.409	1.911%	355mm Class PN16
OUT - P12	168.800	168.800	10.146	0.000%	355mm Class PN16
OUT - P13	168.800	168.800	2.953	0.000%	355mm Class PN16
OUT - P14	168.800	168.762	4.862	0.769%	355mm Class PN16
OUT - P15	168.762	168.563	25.940	0.769%	355mm Class PN16
OUT - P16	168.563	168.445	15.290	0.769%	355mm Class PN16
OUT - P17	168.445	168.390	5.258	1.041%	355mm Class PN16

GENERAL NOTES:

1. COORDINATES ARE GIVEN TO HARTEBEESTHOEK 94 DATUM (WGS84 Lo19°).
2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE	
CHECKED	C DU PREEZ	
DRAWN	L POTGIETER	
CHECKED	N DU PLESSIS	

DESIGN APPROVED:
JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
SIGNATURE
19 AUGUST 2022
DATE

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CLIENT
NAME
SIGNATURE
DATE

CLIENT

PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
PROPOSED 355mmØ HDPE OUTFLOW
PIPELINE LAYOUT AND LONG SECTION

ISSUED FOR TENDER

SHEET 2 OF 2	SCALE AS SHOWN	SIZE A1

CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C203

REVISION A

X:\Projects - Eng\projects\5473 Jamestown Reservoir (HT)\105 Drawings\01 Working\Layout\5473-0-C202_C203 Proposed 355 Outflow Pipeline LS.dwg

Bothwellg 19.08.2022

BENCHMARKS - WGS 48 Lo19 +MSL Height

CONTROL	Y	X	HEIGHT	DESCRIPTION
STEL1	13874.12	3762473.34	180.34	Y-STANDER
STEL2	13646.69	3762281.02	173.84	Y-STANDER
STEL3	13945.60	3762165.81	169.44	Y-STANDER

LEGEND:

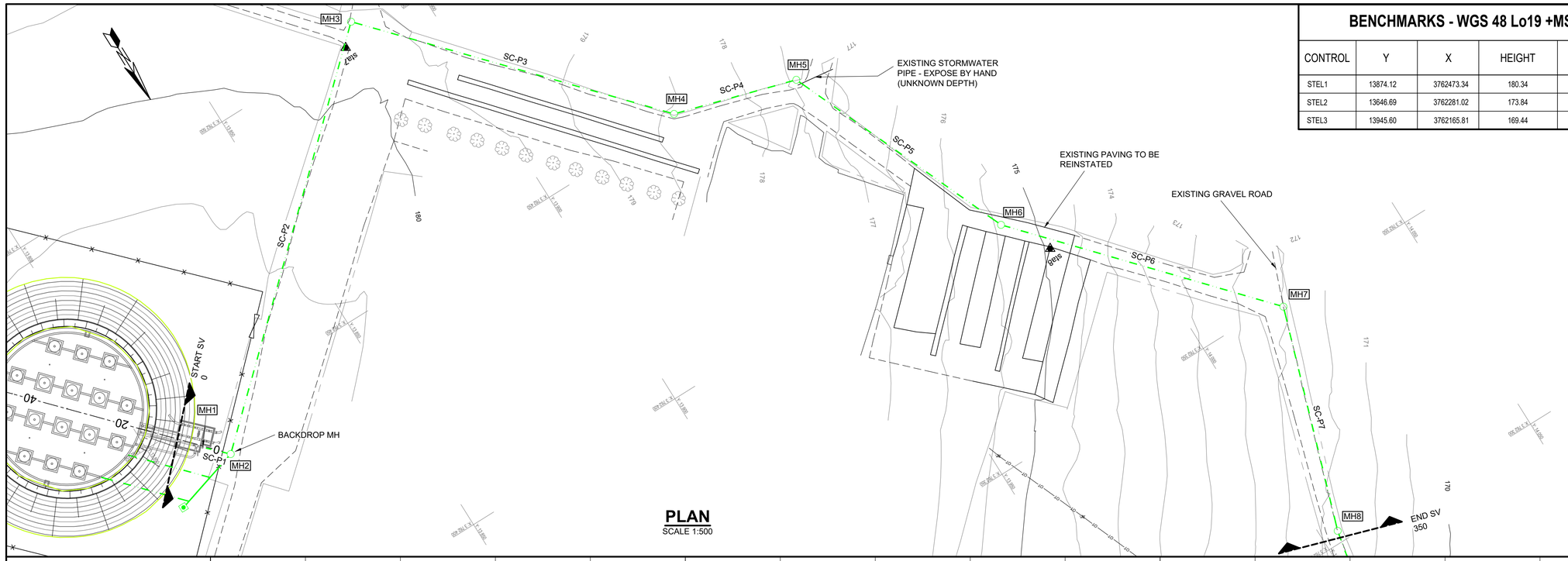
WATER
- PROPOSED WATERMAIN
- PROPOSED VALVE
- PROPOSED AIR VALVE (PLAN)
- PROPOSED FLOW METER (PLAN)
- PROPOSED AIR VALVE
- PROPOSED SCOUR VALVE
- EXISTING VALVES
- EXISTING WATER MAIN
- AS-BUILT, TOP OF PIPE

STORMWATER
- PROPOSED SUBSOIL DRAIN
- PROPOSED SUBSOIL DRAIN MANHOLE
- PROPOSED STORMWATER PIPE
- PROPOSED HEADWALL

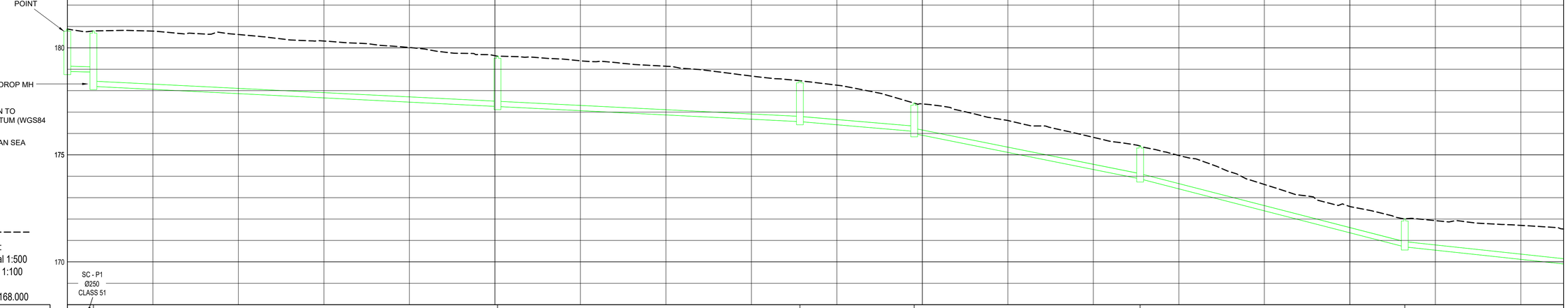
ELECTRICAL
- EXISTING ELEC OVERHEAD
- EXISTING POLE OVERHEAD
- EXISTING LINE UNDERGROUND
- EXISTING LIGHT POLE

TELKOM
- EXISTING TELKOM OVERHEAD

GENERAL
- PROPOSED FENCE



PLAN
SCALE 1:500



GENERAL NOTES:

1. COORDINATES ARE GIVEN TO HARTEBEESTHOEK 94 DATUM (WGS84 Lo19°).
2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 168.000

REFERENCE	MH 1	MH 2	SC - P2 Ø250 CLASS 51	MH 3	SC - P3 Ø250 CLASS 51	MH 4	SC - P4 Ø250 CLASS 51	MH 5	SC - P5 Ø250 CLASS 51	MH 6	SC - P6 Ø250 CLASS 51	MH 7	SC - P7 Ø250 CLASS 51
DISTANCE (m)	0.000	6.100		100.626		171.358		198.093		250.933		312.850	361.440
GROUND LEVEL	180.879	180.791		179.612		178.465		177.417		175.418		172.012	
PIPE INVERT LEVEL	178.900	178.870 178.200		177.262 177.262		176.554 176.554		176.100 175.994		173.880 173.880		170.700 170.700	169.660
SLOPE / LENGTH		0.50% 1:200.0 6.10m		0.99% 1:100.7 94.53m		1.00% 1:100.0 70.73m		1.70% 1:58.9 26.74m		4.00% 1:25.0 52.84m		5.14% 1:19.5 61.92m	2.14% 1:46.7 48.59m

LONGSECTION 250 PVC SCOUR
FROM 0.000 TO 350.000

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
A	ISSUED FOR APPROVAL	19-08-2022	

DESIGNED	V PARAZEE	
CHECKED	C DU PREEZ	
DRAWN	L POTGIETER	
CHECKED	N DU PLESSIS	

DESIGN APPROVED:
JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
SIGNATURE
19 AUGUST 2022
DATE

JG AFRIKA

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DESIGN APPROVED:
CLIENT
NAME
SIGNATURE
DATE

CLIENT

PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
PROPOSED 250mmØ uPVC SCOUR PIPELINE
LAYOUT AND LONG SECTION

ISSUED FOR TENDER

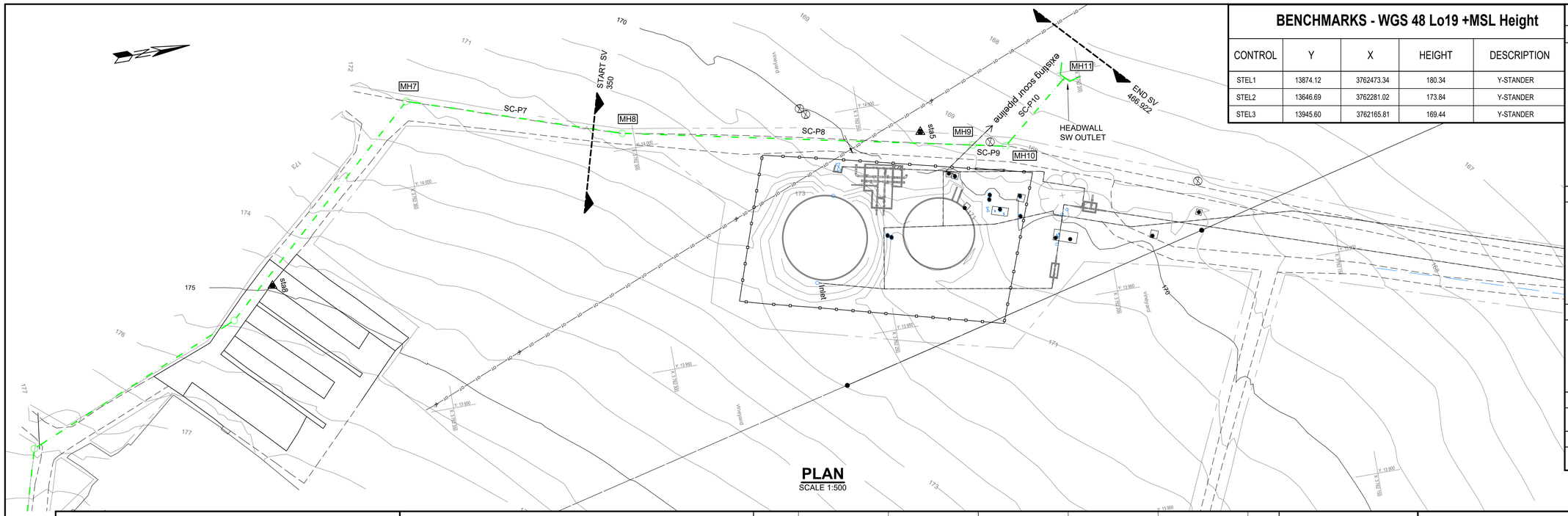
SHEET 1 OF 2 | SCALE AS SHOWN | SIZE A1

CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C204 | REVISION A

X:\Projects\5473 Jamestown Reservoir (WT)\100-Drawings\01-Working\Layout\5473-0-C204_C001 Proposed 250 Scour Pipeline LS.dwg

Bothwellig 19.08.2022



BENCHMARKS - WGS 48 Lo19 +MSL Height

CONTROL	Y	X	HEIGHT	DESCRIPTION
STEL1	13874.12	3762473.34	180.34	Y-STANDER
STEL2	13646.69	3762281.02	173.84	Y-STANDER
STEL3	13945.60	3762165.81	169.44	Y-STANDER

LEGEND:

WATER
- PROPOSED WATERMAIN
- PROPOSED VALVE
- PROPOSED AIR VALVE (PLAN)
- PROPOSED FLOW METER (PLAN)
- PROPOSED AIR VALVE
- PROPOSED SCOUR VALVE
- EXISTING VALVES
- EXISTING WATER MAIN
- 100.00 AS-BUILT, TOP OF PIPE

STORMWATER
- PROPOSED SUBSOIL DRAIN
- PROPOSED SUBSOIL DRAIN MANHOLE
- PROPOSED STORMWATER PIPE
- PROPOSED HEADWALL

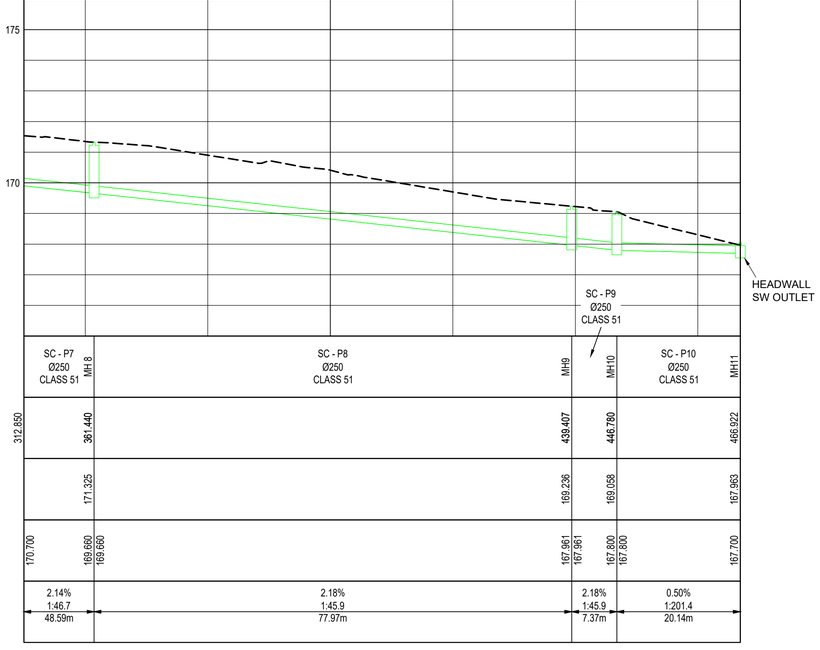
ELECTRICAL
- EXISTING ELEC OVERHEAD
- EXISTING POLE OVERHEAD
- EXISTING LINE UNDERGROUND
- EXISTING LIGHT POLE

TELKOM
- EXISTING TELKOM OVERHEAD

GENERAL
- PROPOSED FENCE

STRUCTURE TABLE-250 PVC Scour

STRUCTURE NAME	Y	X	GROUND ELEVATION	INVERT ELEVATION	RIM TO SUMP DEPTH
MH 1	13 810.232	3 762 444.050	180.879	178.900	1.979
MH 2	13 814.505	3 762 439.697	180.791	178.200	2.591
MH 3	13 884.263	3 762 503.485	179.612	177.262	2.351
MH 4	13 931.647	3 762 450.970	178.465	176.554	1.910
MH 5	13 957.294	3 762 443.420	177.417	175.994	1.423
MH 6	13 977.667	3 762 394.665	175.418	173.880	1.538
MH 7	14 018.971	3 762 348.538	172.012	170.700	1.312
MH 8	14 003.641	3 762 302.430	171.325	169.660	1.665
MH9	13 987.541	3 762 226.143	169.236	167.961	1.275
MH10	13 986.018	3 762 218.929	169.058	167.800	1.258
MH11	13 998.767	3 762 203.335	167.963	167.700	0.346



NGL – – – – –

SCALES:
Horizontal 1:500
Vertical 1:100

DATUM 165.000

REFERENCE
DISTANCE (m)
GROUND LEVEL
PIPE INVERT LEVEL
SLOPE / LENGTH

LONGSECTION 250 PVC SCOUR
FROM 350.000 TO 466.922

PIPE LIST-250 PVC Scour

PIPE NAME	START INVERT LEVEL	END INVERT LEVEL	3D LENGTH TO INSIDE EDGES	SLOPE	DIAMETER AND CLASS
SC - P1	178.900	178.870	4.601	0.500%	250 mm Class 51
SC - P2	178.200	177.262	93.033	0.993%	250 mm Class 51
SC - P3	177.262	176.554	69.238	1.000%	250 mm Class 51
SC - P4	176.554	176.100	25.243	1.699%	250 mm Class 51
SC - P5	175.994	173.880	51.391	4.000%	250 mm Class 51
SC - P6	173.880	170.700	60.509	5.136%	250 mm Class 51
SC - P7	170.700	169.660	47.106	2.140%	250 mm Class 51
SC - P8	169.660	167.961	76.491	2.180%	250 mm Class 51
SC - P9	167.961	167.800	5.879	2.180%	250 mm Class 51
SC - P10	167.800	167.700	18.644	0.496%	250 mm Class 51

GENERAL NOTES:

1. COORDINATES ARE GIVEN TO HARTEBEESTHOEK 94 DATUM (WGS84 Lo19°).
2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
A	ISSUED FOR APPROVAL	19-08-2022	

DESIGNED	V PARAZEE
CHECKED	C DU PREEZ
DRAWN	L POTGIETER
CHECKED	N DU PLESSIS

DESIGN APPROVED:
JG AFRIKA(Pty) Ltd
D PETERSEN
NAME
SIGNATURE
19 AUGUST 2022
DATE

JG AFRIKA

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DESIGN APPROVED:
CLIENT
NAME
SIGNATURE
DATE

CLIENT

PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
PROPOSED 250mmØ uPVC SCOUR PIPELINE
LAYOUT AND LONG SECTION

ISSUED FOR TENDER

SHEET 2 OF 2	SCALE AS SHOWN	SIZE A1

CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C205

REVISION A

X:\Projects - (In progress)\5473 Jamestown Reservoir (HPC)\06 Drawings\01 Working Layout\5473-0-C204_C205 Proposed 250 Scour Pipeline LS.dwg

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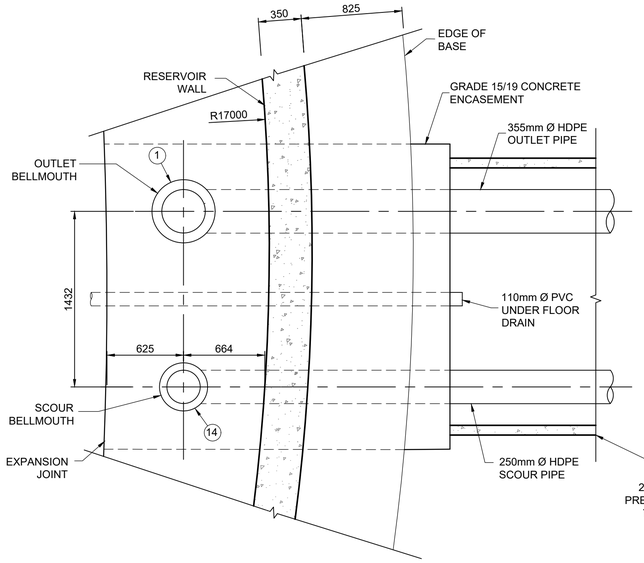
PIPEWORK DETAILS:

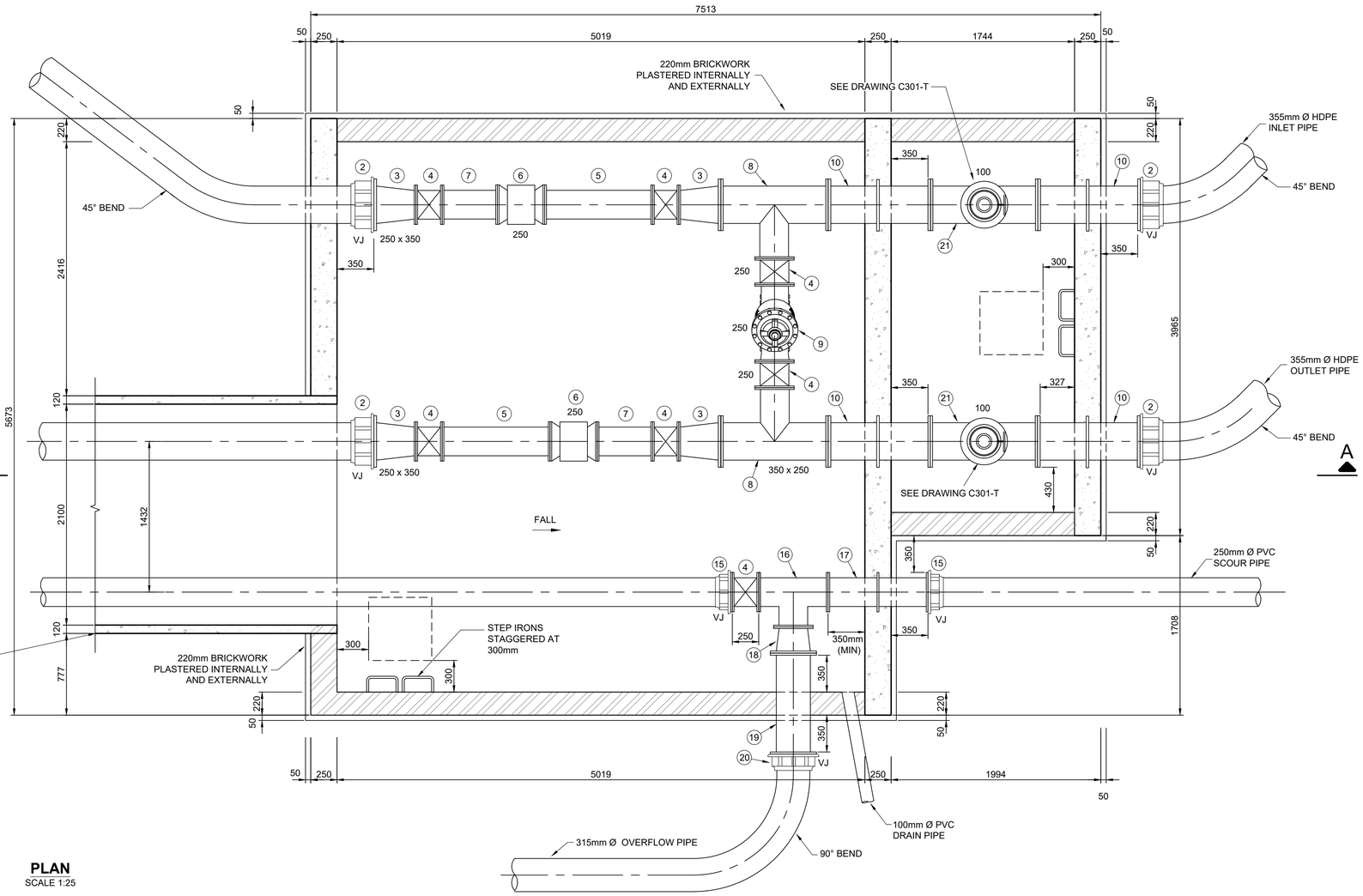
1. DN 355 HDPE FABRICATED COMBINATION BEND AND BELLMOUTH AS SHOWN
2. DN 350 MECH. FLANGE ADAPTOR TO SUIT DN 355 HDPE PIPE
3. 350 x 250 x 400mm FBE CONCENTRIC REDUCER
4. DN 250 FBE GATE VALVE
5. DN 250 ST STRAIGHT PIPE FBE (L = 1025mm)
6. DN 250 FBE ELECTROMAGNETIC FLOW METER
7. DN 250 ST STRAIGHT PIPE FBE (L = 525mm)
8. DN 350 x 250 ST FLANGED REDUCING TEE
9. DN 250 PRESSURE REDUCING VALVE
10. DN 350 ST FBE PUDDLE PIPE (L = 950mm)
11. DN 100 ST STRAIGHT PIPE FBE (SEE DETAIL)
12. DN 100 FBE GATE VALVE
13. DN 100 FLANGED VENT-O-MAT RBX AIR VALVE (OR SIMILAR APPROVED BY EA)
14. DN 250 HDPE FABRICATED COMBINATION BEND AND BELLMOUTH AS SHOWN
15. DN 250 MECH. FLANGE ADAPTOR TO SUIT DN 250 HDPE PIPE
16. DN 250 FLANGED EQUAL TEE
17. DN 250 ST FBE PUDDLE PIPE (L = 950mm)
18. DN 300 x DN 250 ECCENTRIC REDUCER FBE
19. DN 300 STRAIGHT PIPE FBE
20. DN 300 MECH. FLANGE ADAPTOR TO SUIT DN 315 HDPE
21. DN 350 ST FLANGED EQUAL TEE

DI = DUCTILE IRON
ST = 304 STAINLESS STEEL
FBE = FLANGED BOTH ENDS
FOE = FLANGED ONE END
PE = PLAIN ENDED

GENERAL NOTES:

1. LENGTHS TO BE CHECKED ON SITE.
2. ALL PIPES AND FITTINGS ARE TO BE MANUFACTURED FROM 304 STAINLESS STEEL UNLESS OTHERWISE STATED.
3. ALL DIMENSIONS ARE FOR NOMINAL DIAMETERS UNLESS OTHERWISE STATED.
4. WROUGHT STEEL FLANGES AS PER SANS 1123, TYPE NP/3, 600kPa.
5. FOR SECTION A-A SEE DRAWING No. 5743-0-C301





PLAN
SCALE 1:25

GENERAL NOTES:

1. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
B	ISSUED FOR TENDER	09-11-2022	
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE	
CHECKED	C DU PREEZ	
DRAWN	L POTGIETER	
CHECKED	N DU PLESSIS	

DESIGN APPROVED:
JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
pp
SIGNATURE
09 NOVEMBER 2022
DATE

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DESIGN APPROVED:
CLIENT
NAME
SIGNATURE
DATE

CLIENT
STELLENBOSCH MUNICIPALITY
ENGINEERING SERVICES DEPARTMENT

PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
OUTLET AND SCOUR DETAILS

ISSUED FOR TENDER

SHEET 1 OF 2	SCALE AS SHOWN	SIZE A1

CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C300

REVISION B

Bothwellg 09.11.2022

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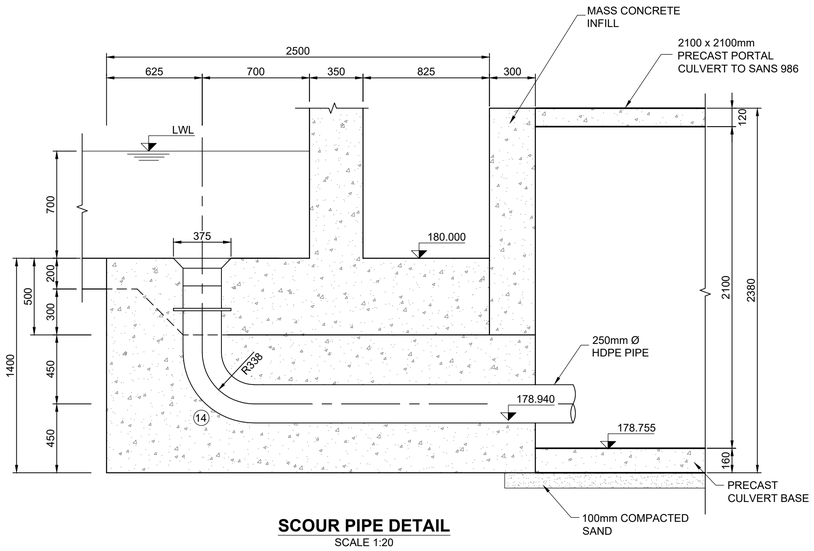
PIPEWORK DETAILS:

1. DN 355 HDPE FABRICATED COMBINATION BEND AND BELLMOUTH AS SHOWN
2. DN 350 MECH. FLANGE ADAPTOR TO SUIT DN 355 HDPE PIPE
3. 350 x 250 x 400mm FBE CONCENTRIC REDUCER
4. DN 250 FBE GATE VALVE
5. DN 250 ST STRAIGHT PIPE FBE (L = 1025mm)
6. DN 250 FBE ELECTROMAGNETIC FLOW METER
7. DN 250 ST STRAIGHT PIPE FBE (L = 525mm)
8. DN 350 x 250 ST FLANGED REDUCING TEE
9. DN 250 PRESSURE REDUCING VALVE
10. DN 350 ST FBE PUDDLE PIPE (L = 950mm)
11. DN 100 ST STRAIGHT PIPE FBE (SEE DETAIL)
12. DN 100 FBE GATE VALVE
13. DN 100 FLANGED VENT-O-MAT RBX AIR VALVE (OR SIMILAR APPROVED BY EA)
14. DN 250 HDPE FABRICATED COMBINATION BEND AND BELLMOUTH AS SHOWN
15. DN 250 MECH. FLANGE ADAPTOR TO SUIT DN 250 HDPE PIPE
16. DN 250 FLANGED EQUAL TEE
17. DN 250 ST FBE PUDDLE PIPE (L = 950mm)
18. DN 300 x DN 250 ECCENTRIC REDUCER FBE
19. DN 300 STRAIGHT PIPE FBE
20. DN 300 MECH. FLANGE ADAPTOR TO SUIT DN 315 HDPE
21. DN 350 ST FLANGED EQUAL TEE

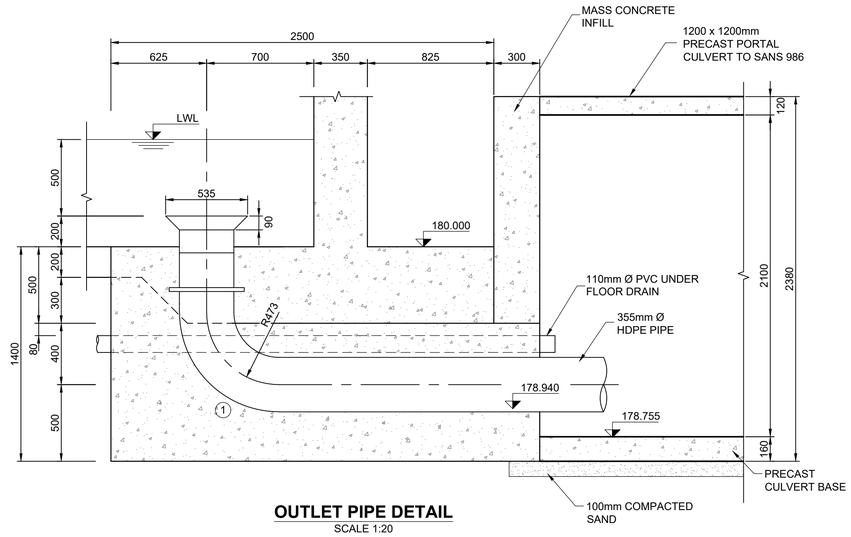
DI = DUCTILE IRON
ST = 304 STAINLESS STEEL
FBE = FLANGED BOTH ENDS
FOE = FLANGED ONE END
PE = PLAIN ENDED

GENERAL NOTES:

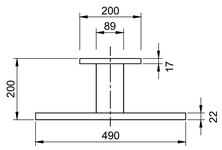
1. LENGTHS TO BE CHECKED ON SITE.
2. ALL PIPES AND FITTINGS ARE TO BE MANUFACTURED FROM 304 STAINLESS STEEL UNLESS OTHERWISE STATED.
3. ALL DIMENSIONS ARE FOR NOMINAL DIAMETERS UNLESS OTHERWISE STATED.
4. WROUGHT STEEL FLANGES AS PER SANS 1123, TYPE NP/3, 600kPa.



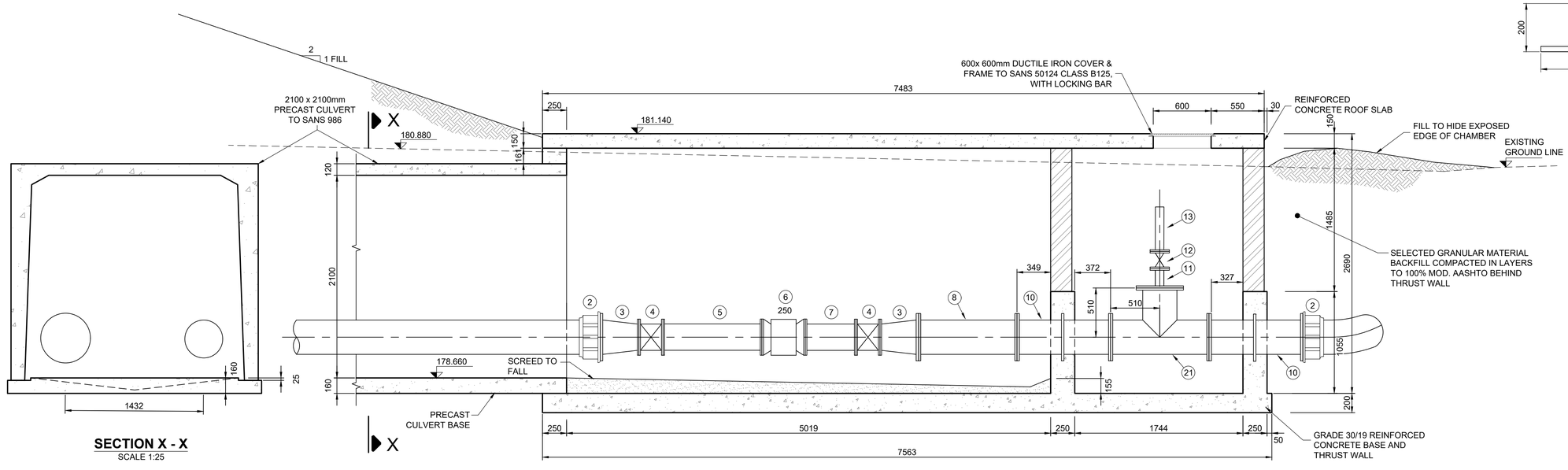
SCOUR PIPE DETAIL
SCALE 1:20



OUTLET PIPE DETAIL
SCALE 1:20



11
SCALE 1:10



SECTION X - X
SCALE 1:25

SECTION A - A
SCALE 1:25

OUTLET VALVE CHAMBER DETAILS

GENERAL NOTES:

1. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
B	ISSUED FOR TENDER	09-11-2022	
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE	
CHECKED	C DU PREEZ	
DRAWN	L POTGIETER	
CHECKED	N DU PLESSIS	

DESIGN APPROVED: JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
pp
SIGNATURE
09 NOVEMBER 2022
DATE

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DATE

CLIENT
STELLENBOSCH MUNICIPALITY
ENGINEERING SERVICES DEPARTMENT

PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
OUTLET AND SCOUR DETAILS

ISSUED FOR TENDER

SHEET 2 OF 2	SCALE AS SHOWN	SIZE A1
CLIENT DRAWING No.		
JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C301		REVISION B

Bothwellig 09.11.2022

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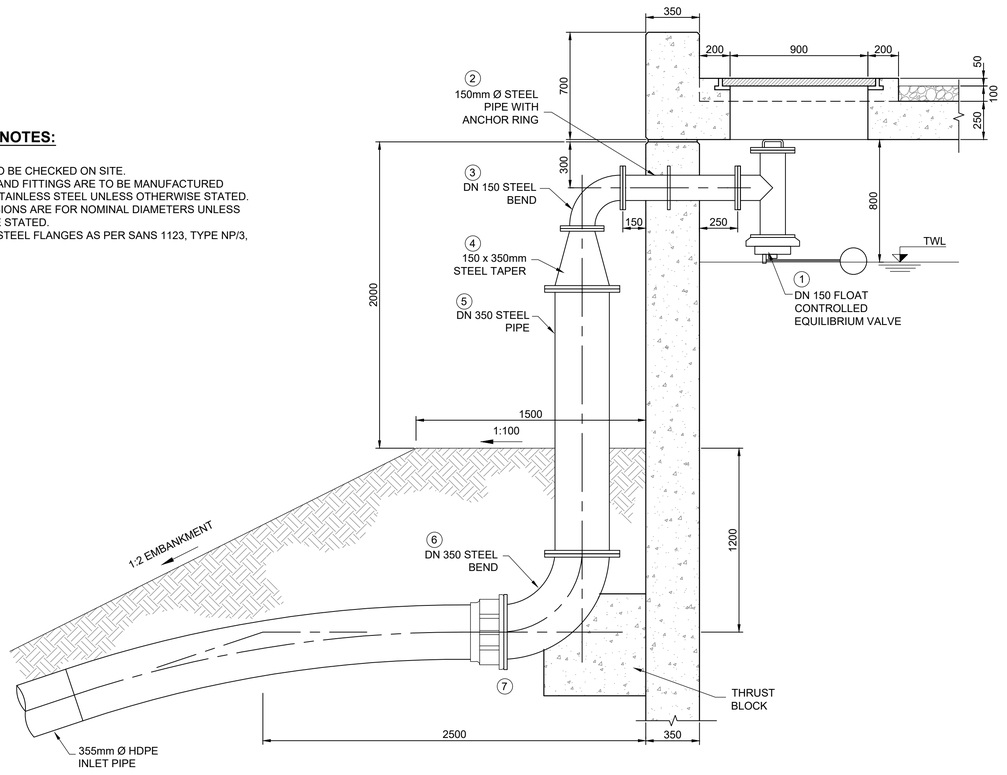
PIPEWORK DETAILS:

1. DN 150 FLOAT CONTROLLED EQUILIBRIUM VALVE - LEVELDEX OR EQUAL APPROVED
2. DN 150 ST FBE PUDDLE PIPE
3. DN 150 ST FBE LR BEND
4. DN 150 x 350 x 400mm LONG ST FBE CONCENTRIC TAPER
5. DN 350 x 1730mm ST FBE PIPE
6. DN 350 ST FBE LR BEND
7. DN 350 MECH. FLANGE ADAPTOR TO SUIT DN 355 HDPE PIPE

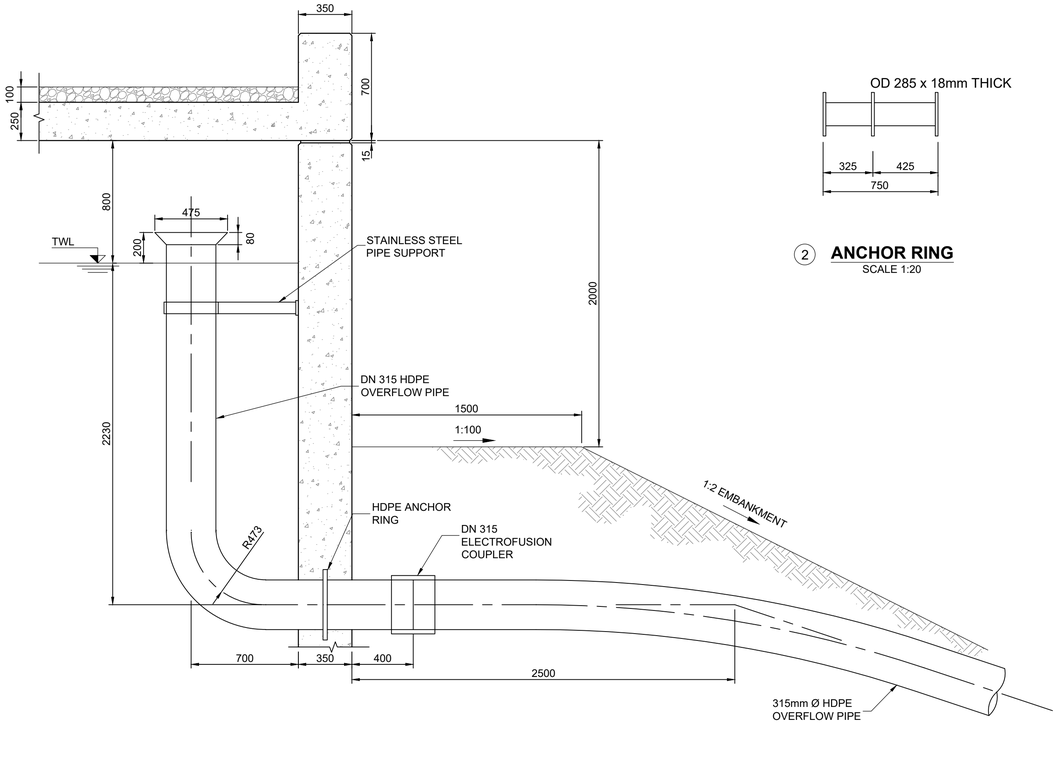
DI = DUCTILE IRON
ST = 304 STAINLESS STEEL
FBE = FLANGED BOTH ENDS
FOE = FLANGED ONE END
PE = PLAIN ENDED

GENERAL NOTES:

1. LENGTHS TO BE CHECKED ON SITE.
2. ALL PIPES AND FITTINGS ARE TO BE MANUFACTURED FROM 304 STAINLESS STEEL UNLESS OTHERWISE STATED.
3. ALL DIMENSIONS ARE FOR NOMINAL DIAMETERS UNLESS OTHERWISE STATED.
4. WROUGHT STEEL FLANGES AS PER SANS 1123, TYPE NP/3, 600kPa.



INLET PIPE DETAIL
SCALE 1:20



OVERFLOW DETAIL
SCALE 1:20

2 ANCHOR RING
SCALE 1:20

GENERAL NOTES:

1. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
B	ISSUED FOR TENDER	09-11-0200	
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE	DESIGN APPROVED: JG AFRIKA (Pty) Ltd
CHECKED	C DU PREEZ	D PETERSEN (NAME) pp E. EPKEY (SIGNATURE) 09 NOVEMBER 2022 (DATE)
DRAWN	L POTGIETER	
CHECKED	N DU PLESSIS	

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DESIGN APPROVED: CLIENT
NAME
SIGNATURE
DATE

CLIENT
STELLENBOSCH MUNICIPALITY
ENGINEERING SERVICES DEPARTMENT

PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
INLET AND OVERFLOW DETAILS

ISSUED FOR TENDER

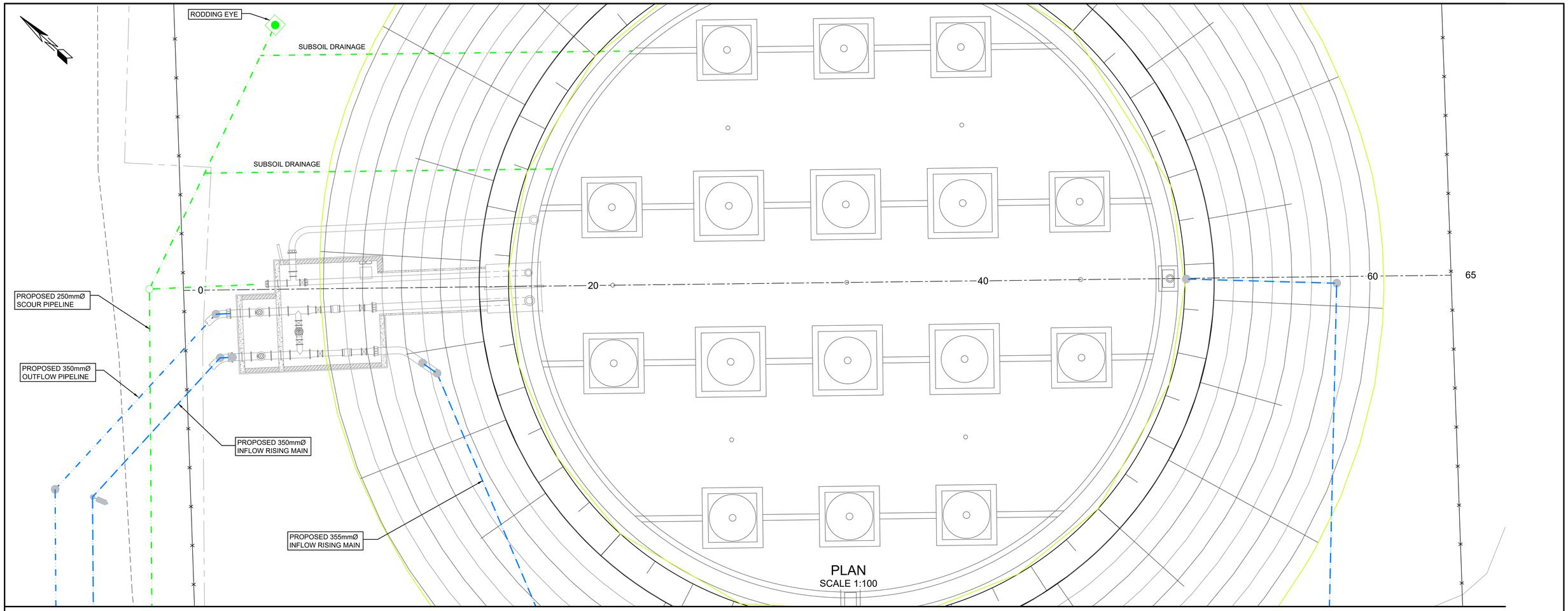
SHEET 1 OF 3	SCALE AS SHOWN	SIZE A1

CLIENT DRAWING No.

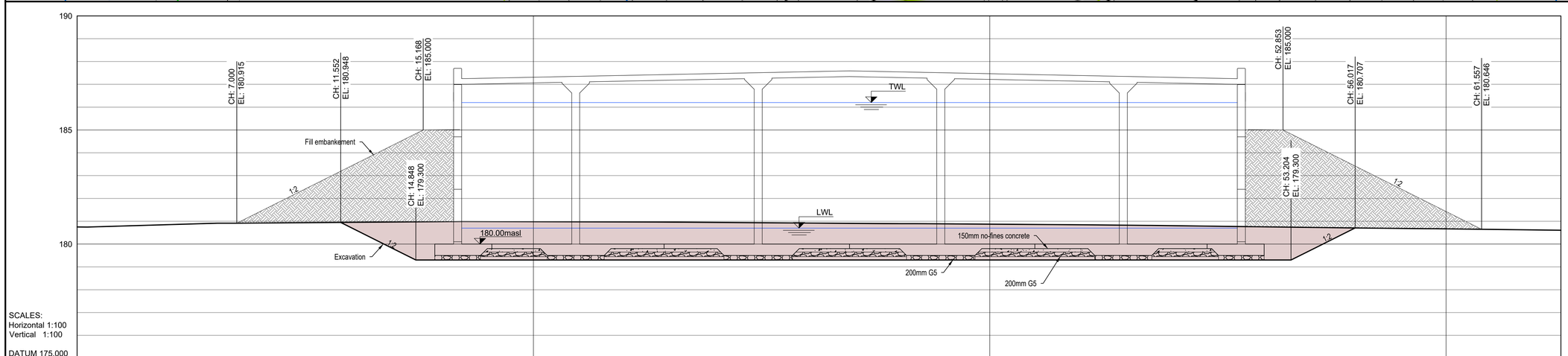
JG AFRIKA (Pty) Ltd. DRAWING No: 5473-0-C302 | REVISION: B

Bothaveilig 09.11.2022

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PLAN
SCALE 1:100



SCALES:
Horizontal 1:100
Vertical 1:100

DATUM 175.000

LONGSECTION RESERVOIR SECTION FROM 0.000 TO 65.031
SCALE 1:100

GENERAL NOTES:

1. COORDINATES ARE GIVEN TO HARTEBEESTHOEK 94 DATUM (WGS84 Lo19°).
2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE	
CHECKED	C DU PREEZ	
DRAWN	L POTGIETER	
CHECKED	N DU PLESSIS	

DESIGN APPROVED:
JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
SIGNATURE
19 AUGUST 2022
DATE

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PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
RESERVOIR PLAN AND LONGSECTION

ISSUED FOR TENDER

SHEET 1 OF 1 | SCALE AS SHOWN | SIZE A1

CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C303 | REVISION A

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Bothwellg 19.08.2022

PIPE SCHEDULE NOTES

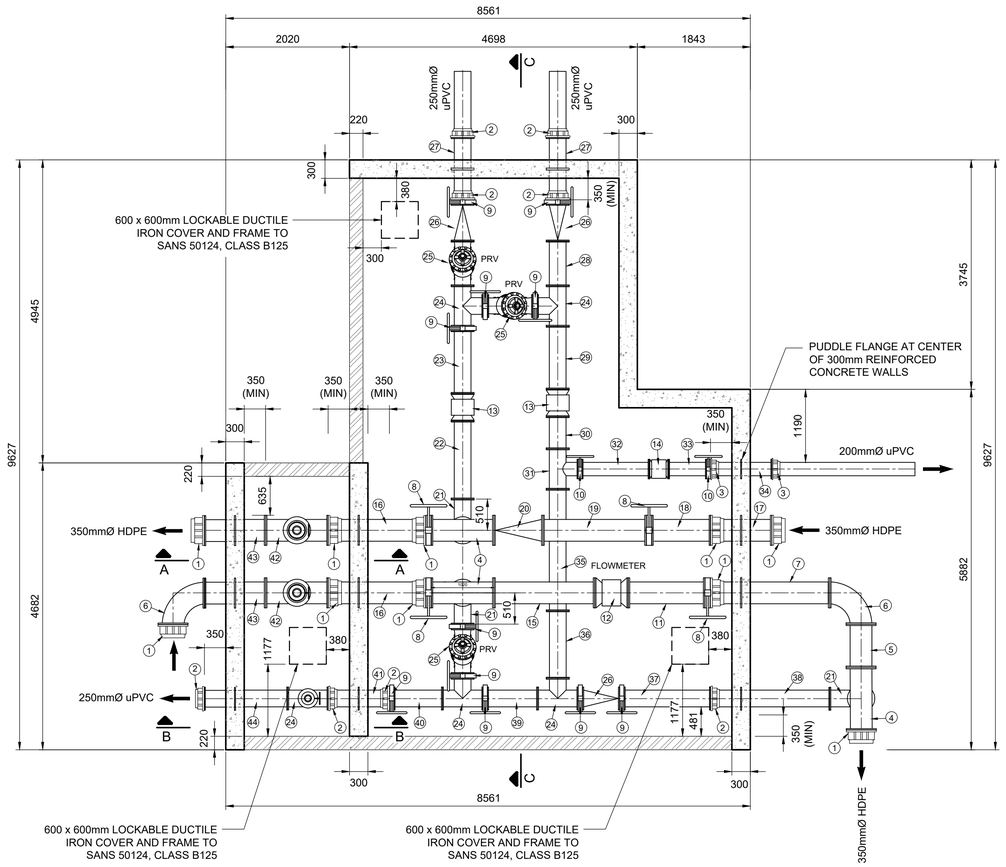
ID No.	DESCRIPTION	No.	LENGTH (mm)
1	350mmØ FLANGE ADAPTOR	10	218
2	250mmØ FLANGE ADAPTOR	8	146
3	200mmØ FLANGE ADAPTOR	2	134
4	350mmØ x 250mmØ FLANGED REDUCING TEE	3	510 x 510
5	350mmØ FLANGED STRAIGHT PIPE	1	785
6	350mmØ FLANGED 90° BEND	2	710 x 710
7	350mmØ STRAIGHT PIPE FLANGED AT ONE END, INCLUDING PUDDLE FLANGE (SEE DETAIL)	1	1915
8	350mmØ WAFER BUTTERFLY VALVE (WITH GEARBOX AND HAND WHEEL)	4	80
9	250mmØ WAFER BUTTERFLY VALVE (WITH GEARBOX AND HAND WHEEL)	11	68
10	200mmØ WAFER BUTTERFLY VALVE (WITH GEARBOX AND HAND WHEEL)	2	60
11	350mmØ FLANGED STRAIGHT PIPE	1	1245
12	350mmØ FLANGED ELECTROMAGNETIC FLOW METER	1	± 550
13	250mmØ FLANGED ELECTROMAGNETIC FLOW METER	2	± 450
14	200mmØ FLANGED ELECTROMAGNETIC FLOW METER	1	± 350
15	350mmØ FLANGED STRAIGHT PIPE	1	1645
16	350mmØ PUDDLE PIPE	2	1530
17	350mmØ STRAIGHT PIPE FLANGED AT ONE END, INCL. PUDDLE FLANGE	1	970
18	350mmØ FLANGED STRAIGHT PIPE	1	960
19	350mmØ FLANGED STRAIGHT PIPE	1	1685
20	350mmØ FLANGED BALL CHECK VALVE	1	800
21	250mmØ FLANGED 90° BEND	3	510 x 510
22	250mmØ FLANGED STRAIGHT PIPE	1	1275
23	250mmØ FLANGED STRAIGHT PIPE	1	1025
24	250mmØ FLANGED EQUAL TEE	5	330 x 330
25	250mmØ PRESSURE REDUCING VALVE	3	730
26	250mmØ FLANGED BALL CHECK VALVE	3	600
27	250mmØ STRAIGHT PIPE FLANGED AT ONE END, INCLUDING PADDLE FLANGE	2	985
28	250mmØ FLANGED STRAIGHT PIPE	1	730
29	250mmØ FLANGED STRAIGHT PIPE	1	1025
30	250mmØ FLANGED STRAIGHT PIPE	1	525
31	250mmØ x 200mmØ FLANGED REDUCING TEE	1	330 x 330
32	200mmØ FLANGED STRAIGHT PIPE	1	1090
33	200mmØ FLANGED STRAIGHT PIPE	1	615
34	200mmØ STRAIGHT PIPE FLANGED AT ONE END, INCL. PUDDLE FLANGE	1	985
35	250mmØ FLANGED STRAIGHT PIPE	1	1985
36	250mmØ FLANGED STRAIGHT PIPE	1	1100
37	250mmØ FLANGED STRAIGHT PIPE	1	1410
38	250mmØ STRAIGHT PIPE FLANGED AT ONE END INCL. PUDDLE FLANGE	1	1715
39	250mmØ FLANGED STRAIGHT PIPE	1	815
40	250mmØ FLANGED STRAIGHT PIPE	1	790
41	250mmØ PUDDLE PIPE	1	945
42	350mmØ FLANGED EQUAL TEE	2	510 x 510
43	350mmØ FLANGED STRAIGHT PIPE	2	1000
44	250mmØ FLANGED STRAIGHT PIPE	1	1360

PIPE SCHEDULE NOTES

ID No.	DESCRIPTION	No.	LENGTH (mm)
45	100mmØ FLANGED STRAIGHT PIPE (SEE DETAIL)	2	200
46	100mmØ FLANGED GATE VALVE	2	190
47	100mm FLANGED VENT - O - MAT SERIES RBxb AIR VALVE (OR SIMILAR APPROVED BY EA)	2	475
48	80mmØ FLANGED STRAIGHT PIPE	1	200
49	80mmØ FLANGED GATE VALVE	1	180
50	80mm FLANGED VENT - O - MAT SERIES RBxb AIR VALVE (OR SIMILAR APPROVED BY EA)	1	460

GENERAL NOTES:

1. LENGTHS TO BE CHECKED ON SITE.
2. ALL PIPES AND FITTINGS ARE TO BE MANUFACTURED FROM 304 STAINLESS STEEL UNLESS OTHERWISE STATED.
3. ALL DIMENSIONS ARE FOR NOMINAL DIAMETERS UNLESS OTHERWISE STATED.
4. WROUGHT STEEL FLANGES AS PER SANS 1123, TYPE NP/3, 600kPa.
5. FOR SECTION A-A, B-B AND C-C SEE DRAWING 5473-0-C401 AND 5473-0-C402



PLAN
SCALE 1:50

GENERAL NOTES:

1. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
B	ISSUED FOR TENDER	09-11-2022	
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE
CHECKED	C DU PREEZ
DRAWN	L POTGIETER
CHECKED	N DU PLESSIS

DESIGN APPROVED:
JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
pp
SIGNATURE
09 NOVEMBER 2022
DATE

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ENGINEERING SERVICES DEPARTMENT

PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
SITE WORKS DETAILS

ISSUED FOR TENDER

SHEET 1 OF 6	SCALE AS SHOWN	SIZE A1
CLIENT DRAWING No.		
JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C400		REVISION B

Bothaelig 09.11.2022

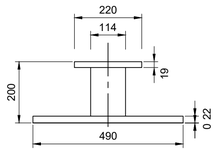
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PIPE SCHEDULE NOTES

ID No.	DESCRIPTION	No.	LENGTH (mm)
1	350mmØFLANGE ADAPTOR	10	218
2	250mmØ FLANGE ADAPTOR	8	146
3	200mmØ FLANGE ADAPTOR	2	134
4	350mmØ x 250mmØ FLANGED REDUCING TEE	3	510 x 510
5	350mmØ FLANGED STRAIGHT PIPE	1	785
6	350mmØ FLANGED 90° BEND	2	710 x 710
7	350mmØ STRAIGHT PIPE FLANGED AT ONE END, INCLUDING PUDDLE FLANGE (SEE DETAIL)	1	1915
8	350mmØ WAFER BUTTERFLY VALVE (WITH GEARBOX AND HAND WHEEL)	4	80
9	250mmØ WAFER BUTTERFLY VALVE (WITH GEARBOX AND HAND WHEEL)	11	68
10	200mmØ WAFER BUTTERFLY VALVE (WITH GEARBOX AND HAND WHEEL)	2	60
11	350mmØ FLANGED STRAIGHT PIPE	1	1245
12	350mmØ FLANGED ELECTROMAGNETIC FLOW METER	1	± 550
13	250mmØ FLANGED ELECTROMAGNETIC FLOW METER	2	± 450
14	200mmØ FLANGED ELECTROMAGNETIC FLOW METER	1	± 350
15	350mmØ FLANGED STRAIGHT PIPE	1	1645
16	350mmØ PUDDLE PIPE	2	1530
17	350mmØ STRAIGHT PIPE FLANGED AT ONE END, INCL. PUDDLE FLANGE	1	970
18	350mmØ FLANGED STRAIGHT PIPE	1	960
19	350mmØ FLANGED STRAIGHT PIPE	1	1685
20	350mmØ FLANGED BALL CHECK VALVE	1	800
21	250mmØ FLANGED 90° BEND	3	510 x 510
22	250mmØ FLANGED STRAIGHT PIPE	1	1275
23	250mmØ FLANGED STRAIGHT PIPE	1	1025
24	250mmØ FLANGED EQUAL TEE	5	330 x 330
25	250mmØ PRESSURE REDUCING VALVE	3	730
26	250mmØ FLANGED BALL CHECK VALVE	3	600
27	250mmØ STRAIGHT PIPE FLANGED AT ONE END, INCLUDING PADDLE FLANGE	2	985
28	250mmØ FLANGED STRAIGHT PIPE	1	730
29	250mmØ FLANGED STRAIGHT PIPE	1	1025
30	250mmØ FLANGED STRAIGHT PIPE	1	525
31	250mmØ x 200mmØ FLANGED REDUCING TEE	1	330 x 330
32	200mmØ FLANGED STRAIGHT PIPE	1	1090
33	200mmØ FLANGED STRAIGHT PIPE	1	615
34	200mmØ STRAIGHT PIPE FLANGED AT ONE END, INCL. PUDDLE FLANGE	1	985
35	250mmØ FLANGED STRAIGHT PIPE	1	1985
36	250mmØ FLANGED STRAIGHT PIPE	1	1100
37	250mmØ FLANGED STRAIGHT PIPE	1	1410
38	250mmØ STRAIGHT PIPE FLANGED AT ONE END INCL. PUDDLE FLANGE	1	1715
39	250mmØ FLANGED STRAIGHT PIPE	1	815
40	250mmØ FLANGED STRAIGHT PIPE	1	790
41	250mmØ PUDDLE PIPE	1	945
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43	350mmØ FLANGED STRAIGHT PIPE	2	1000
44	250mmØ FLANGED STRAIGHT PIPE	1	1360

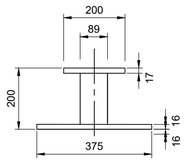
PIPE SCHEDULE NOTES

ID No.	DESCRIPTION	No.	LENGTH (mm)
45	100mmØ FLANGED STRAIGHT PIPE (SEE DETAIL)	2	200
46	100mmØ FLANGED GATE VALVE	2	190
47	100mm FLANGED VENT - O - MAT SERIES RBxb AIR VALVE (OR SIMILAR APPROVED BY EA)	2	475
48	80mmØ FLANGED STRAIGHT PIPE	1	200
49	80mmØ FLANGED GATE VALVE	1	180
50	80mm FLANGED VENT - O - MAT SERIES RBxb AIR VALVE (OR SIMILAR APPROVED BY EA)	1	460



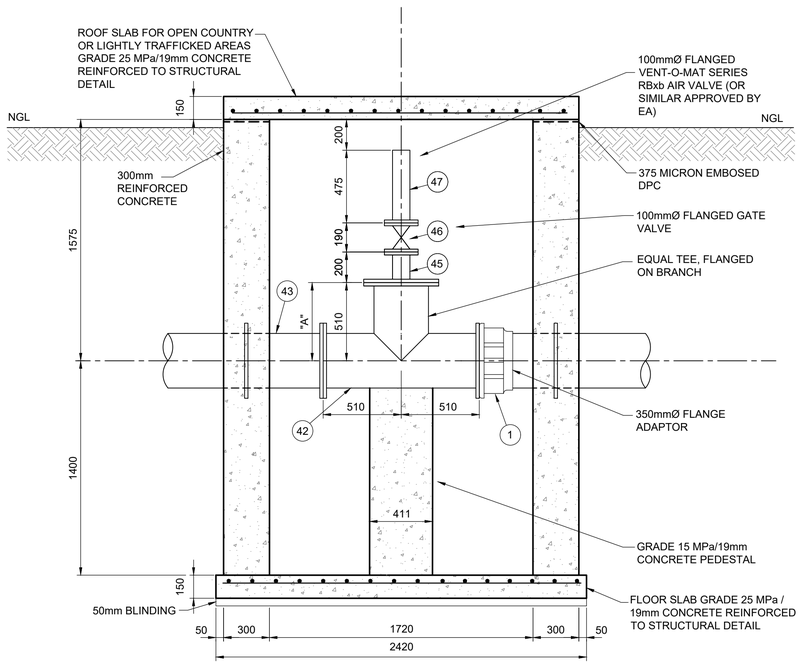
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SCALE 1:10



48

SCALE 1:10

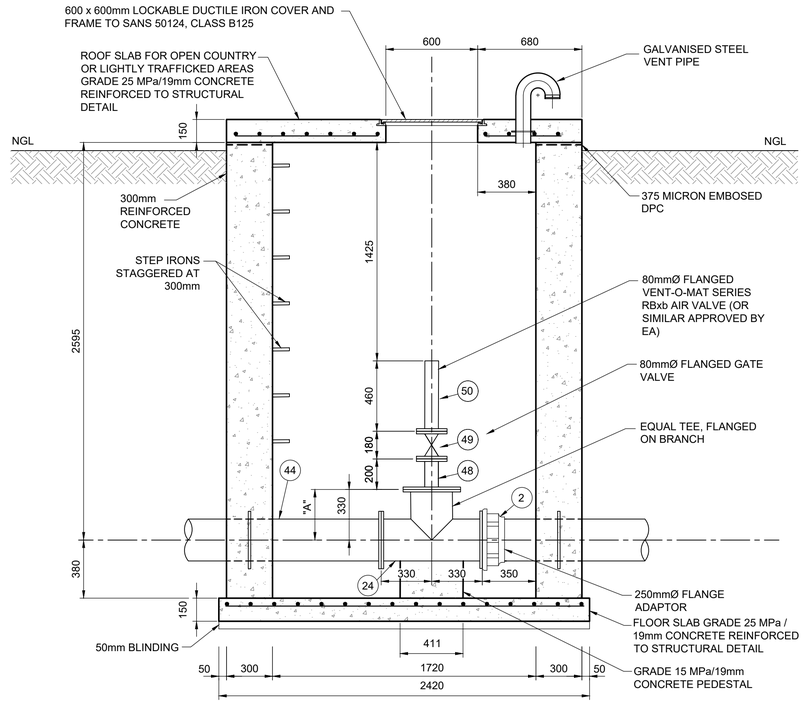


SECTION A-A

SCALE 1:20

NOTES:

1. DIMENSION "A" NOT LESS THAN PIPE DIAMETER
2. ISOLATING VALVE, RISER PIPE AND VENT PIPE INTERNAL DIAMETER TO MATCH AIR VALVE NOMINAL DIAMETER.



SECTION B-B

SCALE 1:20

NOTES:

1. DIMENSION "A" NOT LESS THAN PIPE DIAMETER
2. ISOLATING VALVE, RISER PIPE AND VENT PIPE INTERNAL DIAMETER TO MATCH AIR VALVE NOMINAL DIAMETER.

GENERAL NOTES:

1. COORDINATES ARE GIVEN TO HARTEBEESTHOEK 94 DATUM (WGS84 Lo19°).
2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE	
CHECKED	C DU PREEZ	
DRAWN	L POTGIETER	
CHECKED	N DU PLESSIS	

DESIGN APPROVED: JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
SIGNATURE
19 AUGUST 2022
DATE

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PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
SITE WORKS DETAILS

ISSUED FOR TENDER

SHEET 2 OF 6 | SCALE AS SHOWN | SIZE A1

CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C401 | REVISION A

Bothwellg 19.08.2022

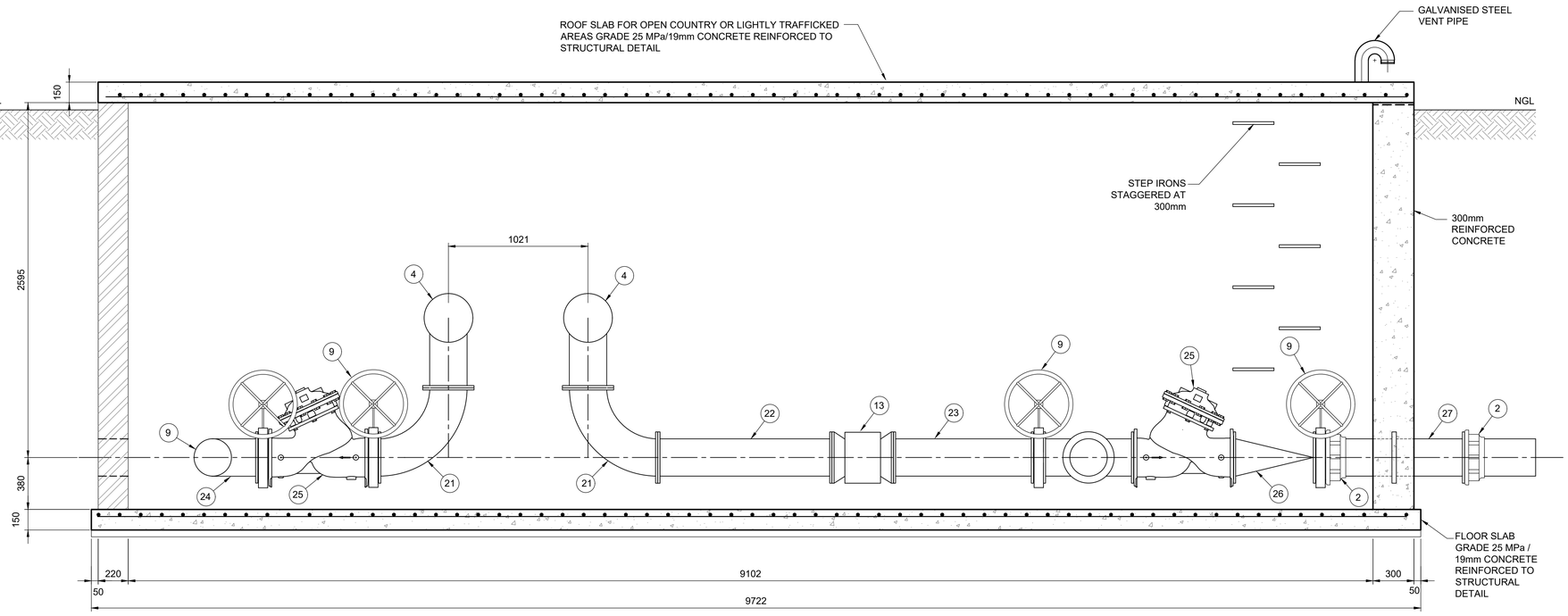
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PIPE SCHEDULE NOTES

ID No.	DESCRIPTION	No.	LENGTH (mm)
1	350mmØFLANGE ADAPTOR	10	218
2	250mmØ FLANGE ADAPTOR	8	146
3	200mmØ FLANGE ADAPTOR	2	134
4	350mmØ x 250mmØ FLANGED REDUCING TEE	3	510 x 510
5	350mmØ FLANGED STRAIGHT PIPE	1	785
6	350mmØ FLANGED 90° BEND	2	710 x 710
7	350mmØ STRAIGHT PIPE FLANGED AT ONE END, INCLUDING PUDDLE FLANGE (SEE DETAIL)	1	1915
8	350mmØ WAFER BUTTERFLY VALVE (WITH GEARBOX AND HAND WHEEL)	4	80
9	250mmØ WAFER BUTTERFLY VALVE (WITH GEARBOX AND HAND WHEEL)	11	68
10	200mmØ WAFER BUTTERFLY VALVE (WITH GEARBOX AND HAND WHEEL)	2	60
11	350mmØ FLANGED STRAIGHT PIPE	1	1245
12	350mmØ FLANGED ELECTROMAGNETIC FLOW METER	1	± 550
13	250mmØ FLANGED ELECTROMAGNETIC FLOW METER	2	± 450
14	200mmØ FLANGED ELECTROMAGNETIC FLOW METER	1	± 350
15	350mmØ FLANGED STRAIGHT PIPE	1	1645
16	350mmØ PUDDLE PIPE	2	1530
17	350mmØ STRAIGHT PIPE FLANGED AT ONE END, INCL. PUDDLE FLANGE	1	970
18	350mmØ FLANGED STRAIGHT PIPE	1	960
19	350mmØ FLANGED STRAIGHT PIPE	1	1685
20	350mmØ FLANGED BALL CHECK VALVE	1	800
21	250mmØ FLANGED 90° BEND	3	510 x 510
22	250mmØ FLANGED STRAIGHT PIPE	1	1275
23	250mmØ FLANGED STRAIGHT PIPE	1	1025
24	250mmØ FLANGED EQUAL TEE	5	330 x 330
25	250mmØ PRESSURE REDUCING VALVE	3	730
26	250mmØ FLANGED BALL CHECK VALVE	3	600
27	250mmØ STRAIGHT PIPE FLANGED AT ONE END, INCLUDING PADDLE FLANGE	2	985
28	250mmØ FLANGED STRAIGHT PIPE	1	730
29	250mmØ FLANGED STRAIGHT PIPE	1	1025
30	250mmØ FLANGED STRAIGHT PIPE	1	525
31	250mmØ x 200mmØ FLANGED REDUCING TEE	1	330 x 330
32	200mmØ FLANGED STRAIGHT PIPE	1	1090
33	200mmØ FLANGED STRAIGHT PIPE	1	615
34	200mmØ STRAIGHT PIPE FLANGED AT ONE END, INCL. PUDDLE FLANGE	1	985
35	250mmØ FLANGED STRAIGHT PIPE	1	1985
36	250mmØ FLANGED STRAIGHT PIPE	1	1100
37	250mmØ FLANGED STRAIGHT PIPE	1	1410
38	250mmØ STRAIGHT PIPE FLANGED AT ONE END INCL. PUDDLE FLANGE	1	1715
39	250mmØ FLANGED STRAIGHT PIPE	1	815
40	250mmØ FLANGED STRAIGHT PIPE	1	790
41	250mmØ PUDDLE PIPE	1	945
42	350mmØ FLANGED EQUAL TEE	2	510 x 510
43	350mmØ FLANGED STRAIGHT PIPE	2	1000
44	250mmØ FLANGED STRAIGHT PIPE	1	1360

PIPE SCHEDULE NOTES

ID No.	DESCRIPTION	No.	LENGTH (mm)
45	100mmØ FLANGED STRAIGHT PIPE (SEE DETAIL)	2	200
46	100mmØ FLANGED GATE VALVE	2	190
47	100mm FLANGED VENT - O - MAT SERIES RBxb AIR VALVE (OR SIMILAR APPROVED BY EA)	2	475
48	80mmØ FLANGED STRAIGHT PIPE	1	200
49	80mmØ FLANGED GATE VALVE	1	180
50	80mm FLANGED VENT - O - MAT SERIES RBxb AIR VALVE (OR SIMILAR APPROVED BY EA)	1	460



SECTION C-C
SCALE 1:20

GENERAL NOTES:

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50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE	
CHECKED	C DU PREEZ	
DRAWN	L POTGIETER	
CHECKED	N DU PLESSIS	

DESIGN APPROVED: JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
SIGNATURE
19 AUGUST 2022
DATE

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DRAWING TITLE
SITE WORKS DETAILS

ISSUED FOR TENDER

SHEET 3 OF 6 | SCALE AS SHOWN | SIZE A1

CLIENT DRAWING No.

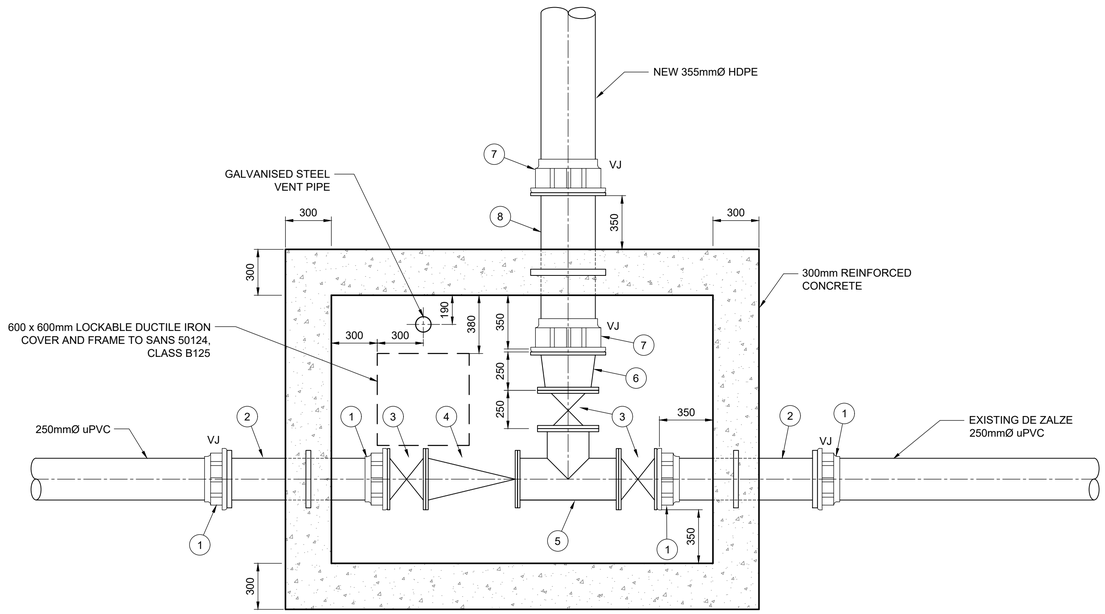
JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C402 | REVISION A

Bothwellig 19.08.2022

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PIPE SCHEDULE NOTES

ID No.	DESCRIPTION	No.	LENGTH (mm)
1	250mmØ FLANGE ADAPTOR	4	146
2	250mmØ STRAIGHT PIPE FLANGED AT ONE END, INCL. PUDDLE FLANGE	2	1000
3	250mmØ FLANGED GATE VALVE	3	250
4	250mmØ FLANGED BALL CHECK VALVE	1	600
5	250mmØ FLANGED EQUAL TEE	1	330 x 330
6	350mmØ x 250mmØ FLANGED CONCENTRIC REDUCER	1	250
7	350mmØ FLANGE ADAPTOR	2	218
8	350mmØ STRAIGHT PIPE FLANGED AT ONE END, INCL. PUDDLE FLANGE	1	950



PLAN - VALVE CHAMBER

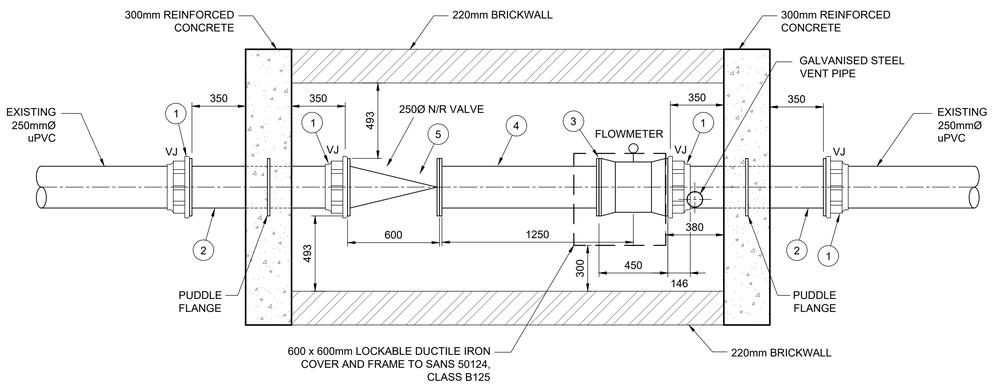
SCALE 1:20

GENERAL NOTES:

1. LENGTHS TO BE CHECKED ON SITE.
2. ALL PIPES AND FITTINGS ARE TO BE MANUFACTURED FROM 304 STAINLESS STEEL UNLESS OTHERWISE STATED.
3. ALL DIMENSIONS ARE FOR NOMINAL DIAMETERS UNLESS OTHERWISE STATED.
4. WROUGHT STEEL FLANGES AS PER SANS 1123, TYPE NP/3, 600kPa.

PIPE SCHEDULE NOTES

ID No.	DESCRIPTION	No.	LENGTH (mm)
1	250mmØ FLANGE ADAPTOR	4	146
2	250mmØ STRAIGHT PIPE FLANGED AT ONE END, INCL. PUDDLE FLANGE (SEE DETAIL)	2	1000
3	250mmØ FLANGED ELECTROMAGNETIC FLOW METER	1	± 450
4	250mmØ FLANGED STRAIGHT PIPE	1	1025
5	250mmØ FLANGED BALL CHECK VALVE	1	600



PLAN - METER CHAMBER

SCALE 1:20

GENERAL NOTES:

1. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
B	ISSUED FOR TENDER	09-11-2022	
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE	
CHECKED	C DU PREEZ	
DRAWN	L POTGIETER	
CHECKED	N DU PLESSIS	

DESIGN APPROVED:
JG AFRIKA (Pty) Ltd
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STELLENBOSCH MUNICIPALITY
ENGINEERING SERVICES DEPARTMENT

PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
SITE WORKS DETAILS

ISSUED FOR TENDER

SHEET 4 OF 6	SCALE AS SHOWN	SIZE A1

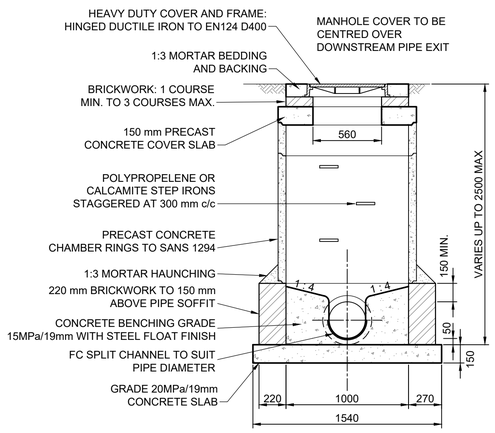
CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C403

REVISION B

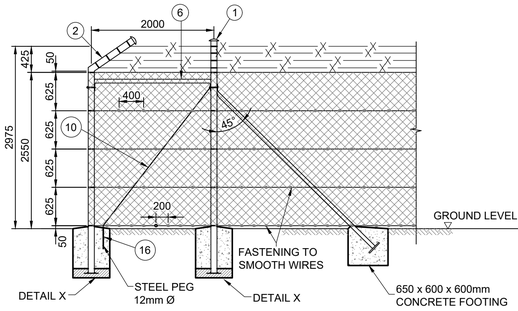
Bothwellig 09.11.2022

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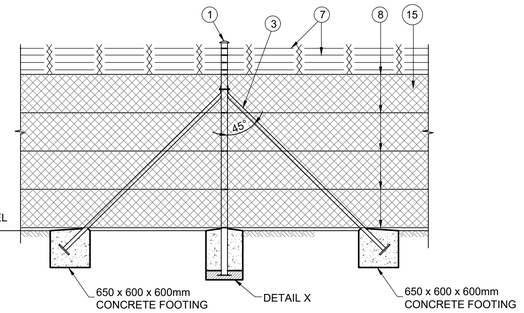


1. ALL JOINTS TO BE SEALED WITH SIKAFLEX-PRO 2HP OR EQUAL APPROVED.
2. ALL EXTERNAL JOINTS BETWEEN CONCRETE RINGS TO BE WRAPPED WITH 300 mm DENSO TAPE OR EQUAL APPROVED.
3. ALL BRICKWORK TO BE PLASTERED INTERNALLY AND EXTERNALLY (MIN. 13 mm THICK) AND SEALED WITH TWO COATS ABE FLINTKOTE 3 AND ONE COAT ABE SILVAKOTE OR EQUAL APPROVED.

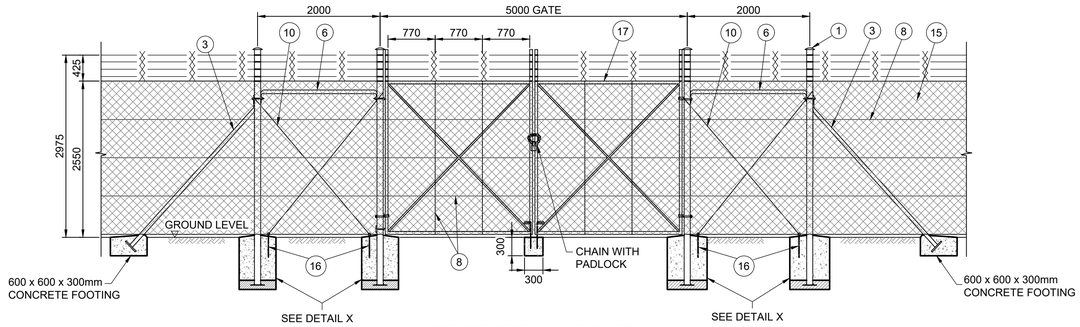
SW MANHOLE
SCALE 1:25



CORNER POST
SCALE 1:50

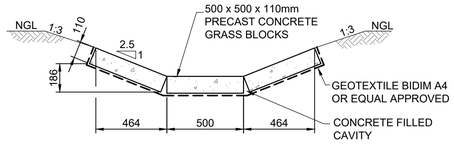


DETAIL OF STRAINING POST
SCALE 1:50



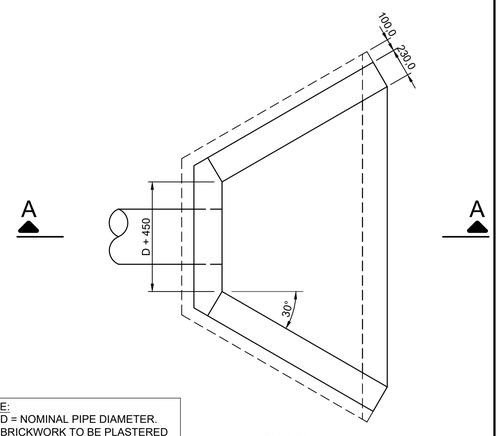
FENCE DETAIL AT GATE
SCALE 1:50

NOTES
1. STRAINING POSTS:
   3875 X 100 Ø X 3mm MILD STEEL TUBING WITH STEEL CAP AND 230 X 230 X 3mm BASE PLATE, FULLY GALVANIZED (SANS 121/ISO 1461)
2. STRAINING POSTS (CORNER POSTS):
   4100 X 100 Ø X 3mm MILD STEEL TUBING WITH STEEL CAP AND 230 X 230 X 3mm BASE PLATE, FULLY GALVANIZED (SANS 121/ISO 1461)
3. STAYS:
   3900 X 60 Ø X 3mm MILD STEEL TUBING BENT AND FLATTENED AS SHOWN WITH 230 X 230 X 3mm BASE PLATE, FULLY GALVANIZED (SANS 121/ISO1461).
4. STANDARDS:
   3875 X 60 Ø X 3mm MILD STEEL TUBING WITH STEEL CAP AND 230 X 230 X 3mm BASE PLATE, FULLY GALVANIZED (SANS 121/ISO 1461).
5. DROPPERS: NONE
6. CROSS BRACE SUPPORT :
   2000 X 60 Ø X 3mm MILD STEEL TUBING BENT AND FLATTENED AS SHOWN, FULLY GALVANIZED (SANS 121/ISO 1461),ENDS PRESSED FLAT TO ± 8mm.
7. BARBED WIRE:
   3,2X 2,5mm OVAL HIGH TENSILE GRADE SINGLE STRAND (SANS 675), FULLY GALVANIZED.
8. SMOOTH WIRE:
   3,0mm Ø HIGH TENSILE GRADE SINGLE STRAND (SANS 675) FULLY GALVANIZED.
9. TYING WIRE:
   2,5mm Ø MILD STEEL (SANS 675), FULLY GALVANIZED FOR TYING TO STANDARDS.
   1,6mm Ø MILD STEEL (SANS 675), FULLY GALVANIZED FOR TYING MESH TO SMOOTH WIRES.
10. STRAINING WIRE :
    4mm Ø MILD STEEL (SANS 675), FULLY GALVANIZED . (4 STRANDS, DOUBLED AND TWISTED TO TAKE STRAIN).
11. BOLTS FOR STAYS:
    12mm Ø MILD STEEL, INCLUDING NUTS AND WASHERS, FULLY GALVANIZED.
12. MAXIMUM SPACING OF:
    STRAINING POSTS 30m c/c
    STANDARDS 3m c/c
13. ALL WIRES TO BE ERECTED ON THE ROAD SIDE OF THE FENCE UNLESS OTHERWISE INSTRUCTED.
14. MINIMUM CONCRETE STRENGTH OF FOOTINGS 20 MPa AT 28 DAYS.
15. DIAMOND MESH:
    50mm X 2,2mm Ø FULLY GALVANIZED (CKS 229).
16. STEEL PEG:
    12mm Ø MILD STEEL FULLY GALVANIZED.
17. GATE :
    42mm Ø x 2mm MILD STEEL TUBING FRAME 21,4mm Ø X 2mm MILD STEEL TUBE BRACING,COMPLETE WITH WITH HINGES, WASHERS, BOLTS AND LOCKING CHAIN ATTACHED TO GATE (COMPLYING WITH CKS 146). FULLY GALVANIZED (SANS 121/ ISO 1461) AFTER FABRICATION.
18. ALL FENCING COMPONENTS IN ACCORDANCE WITH CKS 82.



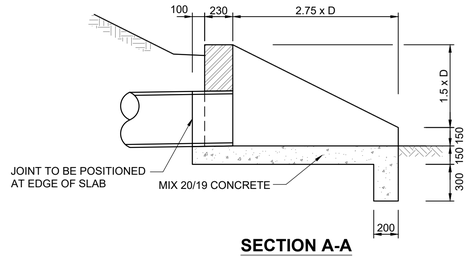
TYPICAL CHANNEL DETAIL
SCALE 1:20

NOTE:
GRASS BLOCK CAVITIES TO BE FILLED WITH TOPSOIL FROM APPROVED SOURCE



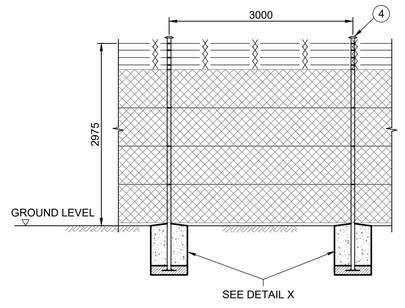
NOTE:
1. D = NOMINAL PIPE DIAMETER.
2. BRICKWORK TO BE PLASTERED ON VISIBLE SURFACES.

PLAN

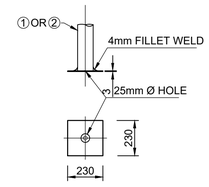


SECTION A-A

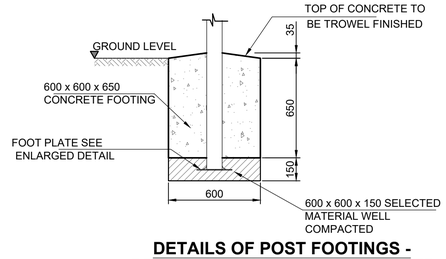
STANDARD HEADWALL
SCALE 1:25



DETAIL OF STANDARD
SCALE 1:50



DETAIL OF FOOT PLATE
SCALE 1:20



DETAILS OF POST FOOTINGS - DETAIL "X" 600 x 600 x 650mm DEEP
SCALE 1:20

GENERAL NOTES:
1. COORDINATES ARE GIVEN TO HARTEBEESTHOEK 94 DATUM (WGS84 Lo19°).
2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
A	ISSUED FOR TENDER	19-08-2022	

DESIGNED V PARAZEE
CHECKED C DU PREEZ
DRAWN L POTGIETER
CHECKED N DU PLESSIS

DESIGN APPROVED:
JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
SIGNATURE
19 AUGUST 2022
DATE

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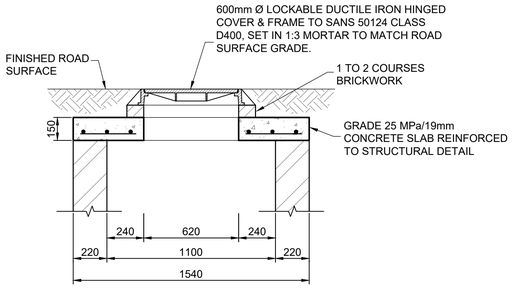
SHEET 5 OF 6 | SCALE AS SHOWN | SIZE A1

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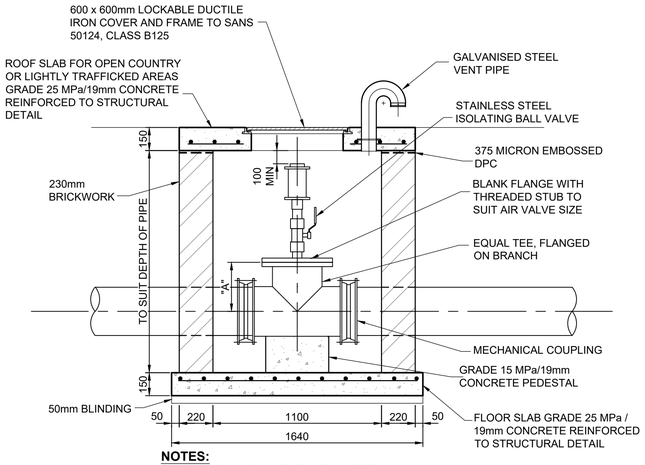
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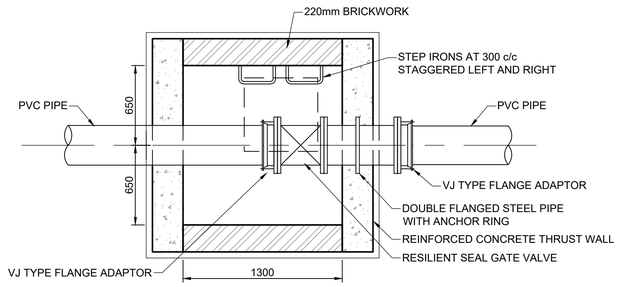


ROOF SLAB DETAIL FOR ROADWAY
SCALE 1:20

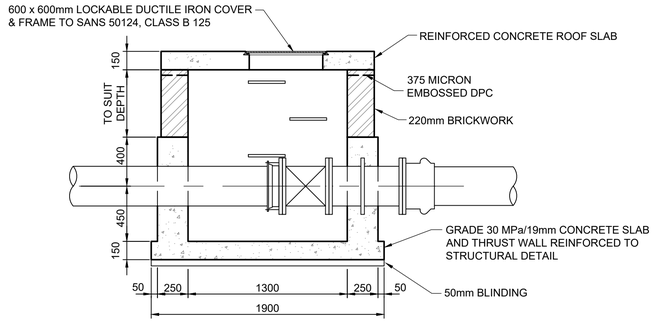


NOTES:
1. DIMENSION "A" NOT LESS THAN PIPE DIAMETER
2. ISOLATING VALVE, RISER PIPE AND VENT PIPE INTERNAL DIAMETER TO MATCH AIR VALVE NOMINAL DIAMETER.

TYPICAL AIR VALVE INSTALLATION
SCALE 1:20

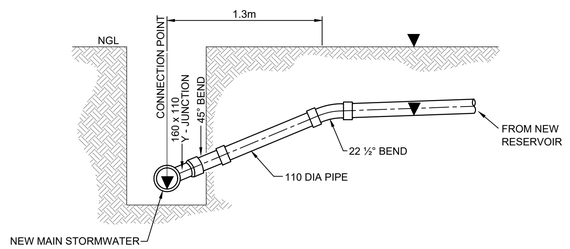


PLAN
SCALE 1:25



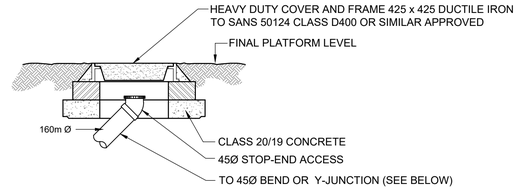
TYPICAL VALVE CHAMBER (IN-LINE)
SCALE 1:25

FOR VAVLES UP TO 350mm Ø

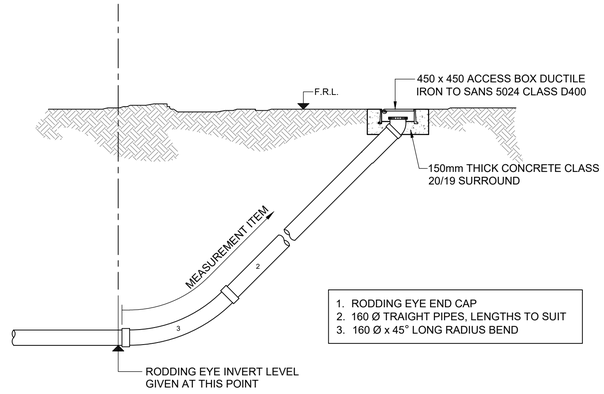


FOR DEPTHS FROM 400 to 800mm
N.T.S.

TYPE 2
ERF CONNECTION DETAIL



ACCESS BOX IN UNSURFACED AREAS
N.T.S



ELEVATION



PLAN VIEW

RODDING EYE DETAILS
NTS

GENERAL NOTES:
1. COORDINATES ARE GIVEN TO HARTEBEESTHOEK 94 DATUM (WGS84 Lo19°).
2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

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A	ISSUED FOR TENDER	19-08-2022	

DESIGNED	V PARAZEE	
CHECKED	C DU PREEZ	
DRAWN	L POTGIETER	
CHECKED	N DU PLESSIS	

DESIGN APPROVED: JG AFRIKA (Pty) Ltd
C WISE
NAME
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19 AUGUST 2022
DATE

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SITE WORKS DETAILS

ISSUED FOR TENDER

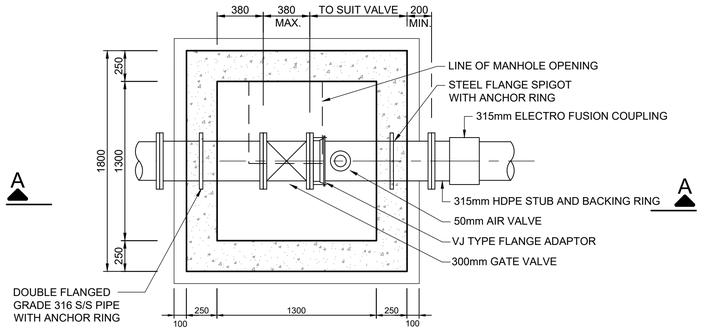
SHEET 6 OF 6 | SCALE AS SHOWN | SIZE A1

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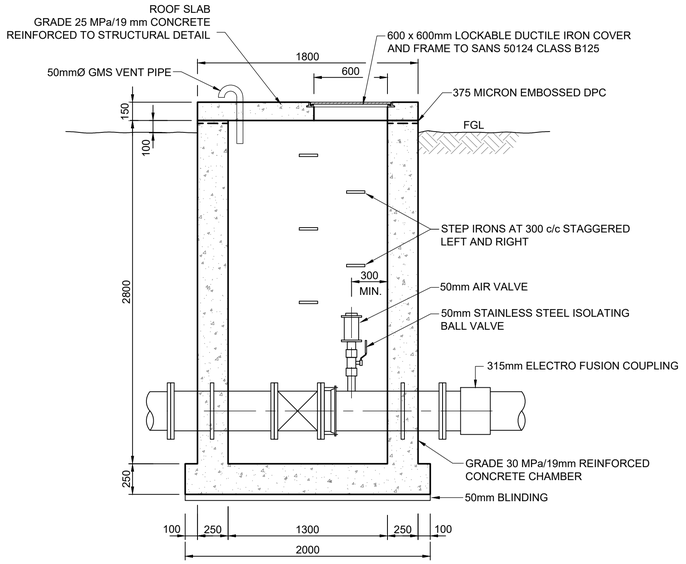
JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C405 | REVISION A

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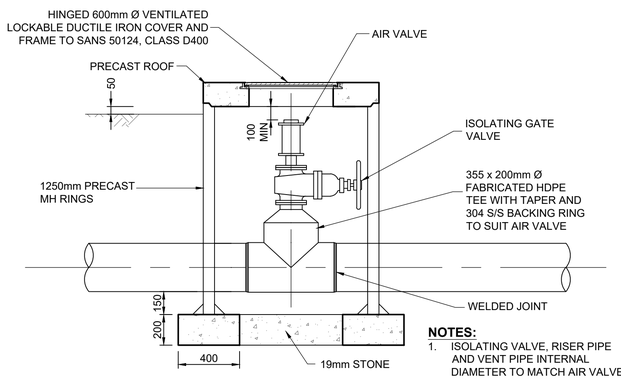


PLAN
SCALE 1:25



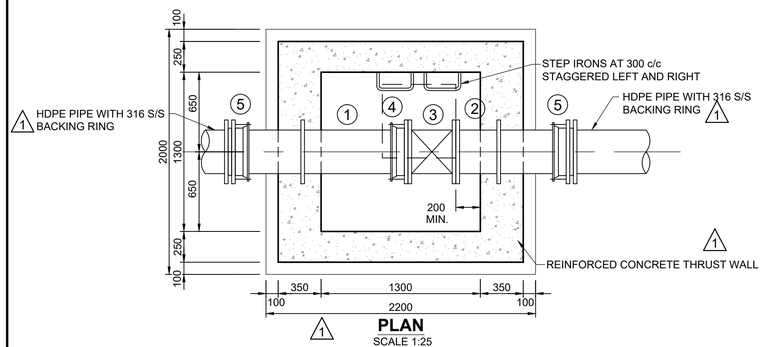
SECTION A-A

DETAIL 1 - CONNECTION MANHOLE
SCALE 1:25

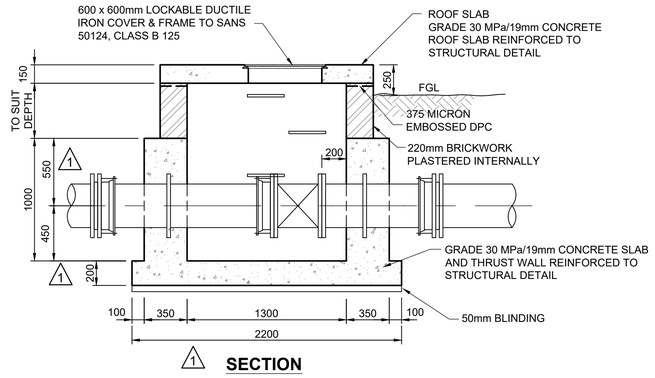


NOTES:
1. ISOLATING VALVE, RISER PIPE AND VENT PIPE INTERNAL DIAMETER TO MATCH AIR VALVE NOMINAL DIAMETER.

TYPICAL AIR VALVE INSTALLATION
SCALE 1:20



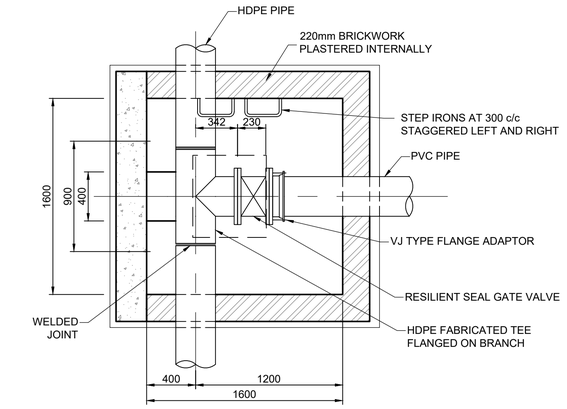
PLAN
SCALE 1:25



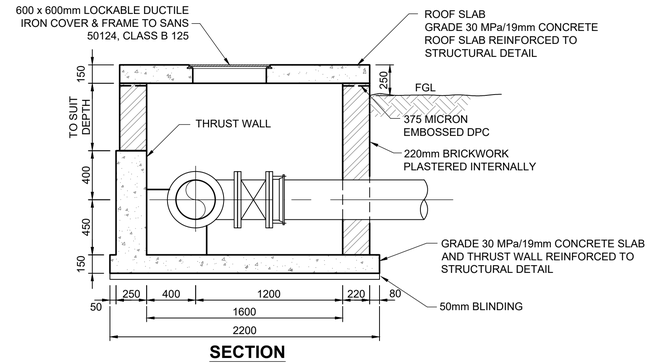
SECTION

DETAIL 3
TYPICAL VALVE CHAMBER (IN-LINE)
SCALE 1:25

FOR VALVES UP TO 350mm Ø



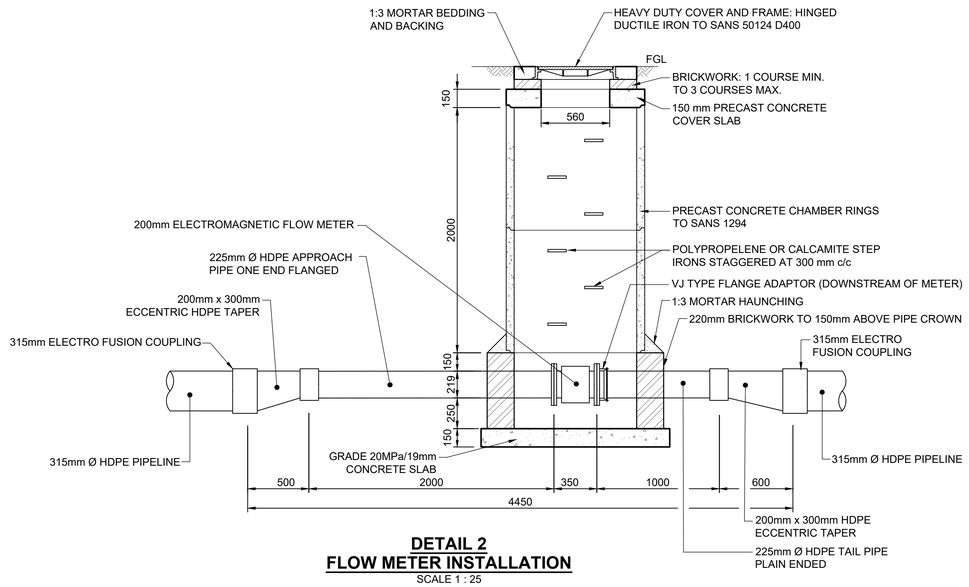
PLAN
SCALE 1:25



SECTION

DETAIL 4
TYPICAL VALVE CHAMBER (TEE)
SCALE 1:25

FOR VALVES UP TO 350mm Ø



DETAIL 2
FLOW METER INSTALLATION
SCALE 1 : 25

GENERAL NOTES:

CONCRETE
UNLESS NOTED OTHERWISE :
1. CONCRETE GRADE :
   REINFORCED : 30 MPa/19mm
   ENCASEMENT : 15 MPa/19mm
2. MINIMUM COVER TO REINFORCEMENT : 40mm

BRICKWORK
1. BRICKWORK SHALL BE IN ACCORDANCE WITH SANS 1200L.

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
A	ISSUED FOR TENDER	23-09-2022	

DESIGNED	C DU PREEZ	
CHECKED	D PETERSEN	
DRAWN	T FATSHA	
CHECKED	N DU PLESSIS	

DESIGN APPROVED:
JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
SIGNATURE
SEPTEMBER 2022
DATE

JG AFRIKA

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DESIGN APPROVED:
CLIENT
NAME
SIGNATURE
DATE

CLIENT

PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
TYPICAL DETAILS

ISSUED FOR TENDER

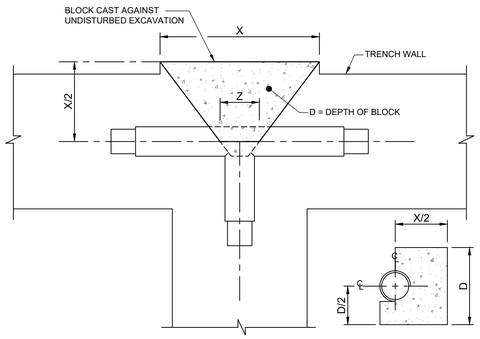
SHEET 1 OF 1 | SCALE AS SHOWN | SIZE A1

CLIENT DRAWING No.

JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C600 | REVISION A

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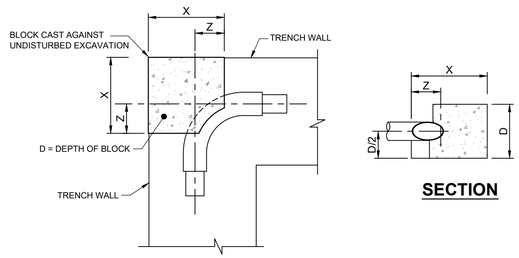


PLAN **SECTION**

PIPE DIAMETER	X	D	Z	FACE AREA (m2)	VOLUME CONCRETE (m3)
350	1700	1000	500	1.70	0.94
300	1500	850	375	1.25	0.60
250	1400	650	350	0.87	0.40
200	1100	550	325	0.55	0.22
150	800	400	275	0.30	0.09
100	450	350	175	0.14	0.02

THRUST BLOCK IN PRESSURE PIPELINES FOR TEES

SCALE 1:25

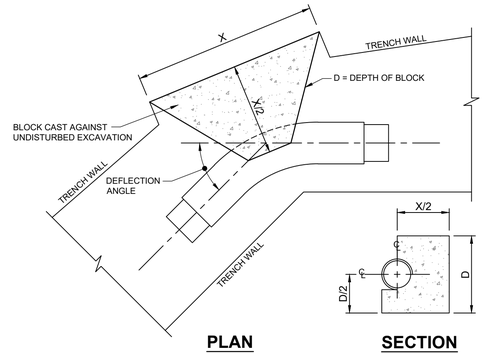


PLAN **SECTION**

PIPE DIAMETER	X	D	Z	FACE AREA (m2)	VOLUME CONCRETE (m3)
350	1700	1000	500	1.70	2.89
300	1500	850	375	1.25	1.91
250	1400	650	350	0.87	1.27
200	1100	550	325	0.55	0.67
150	800	400	275	0.31	0.26
100	450	350	175	0.14	0.07

THRUST BLOCK IN PRESSURE PIPELINES FOR 90° BENDS

SCALE 1:25



PLAN **SECTION**

TABLE FOR 45° BENDS

PIPE DIAMETER	X	D	Z	FACE AREA (m2)	VOLUME CONCRETE (m3)
350	1500	900	500	1.30	0.68
300	1200	800	375	0.96	0.38
250	1100	650	350	0.66	0.26
200	900	500	325	0.42	0.14
150	500	500	275	0.24	0.05
100	350	350	175	0.11	0.02

TABLE FOR 22½° BENDS

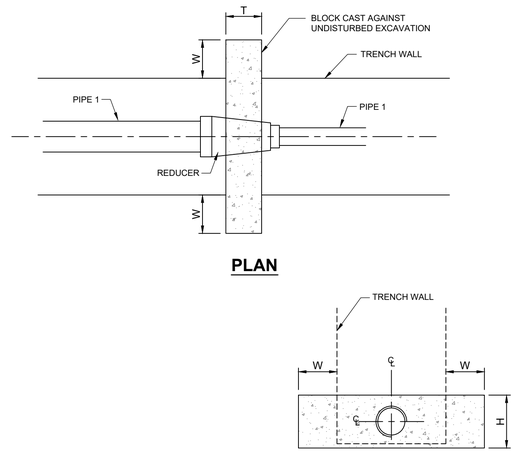
PIPE DIAMETER	X	D	Z	FACE AREA (m2)	VOLUME CONCRETE (m3)
350	1200	600	500	0.66	0.31
300	1050	500	375	0.49	0.19
250	700	500	350	0.34	0.09
200	600	400	325	0.22	0.06
150	350	350	275	0.12	0.02
100	250	250	175	0.05	0.01

TABLE FOR 11¼° BENDS

PIPE DIAMETER	X	D	Z	FACE AREA (m2)	VOLUME CONCRETE (m3)
350	500	700	500	0.33	0.09
300	400	650	375	0.24	0.05
250	350	500	350	0.17	0.03
200	300	400	325	0.11	0.02
150	250	250	275	0.06	0.01
100	150	200	175	0.03	0.00

THRUST BLOCK IN PRESSURE PIPELINES FOR <90° BENDS

SCALE 1:25

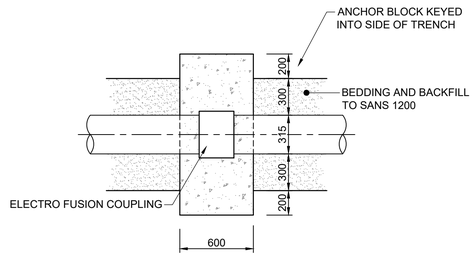


PLAN **SECTION**

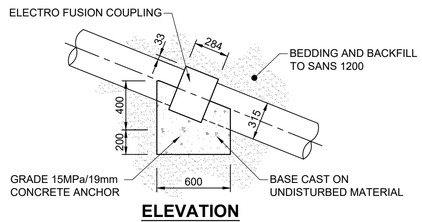
PIPE 1 DIAMETER	PIPE 2 DIAMETER	W	H	T	FACE AREA (m2)	CONCRETE VOLUME (m3)
350	300	500	500	350	0.45	0.34
300	250	500	400	300	0.38	0.23
300	200	500	700	300	0.69	0.40
250	200	400	400	250	0.31	0.17
250	150	400	700	250	0.55	0.29

THRUST BLOCK IN PRESSURE PIPELINES IN-LINE REDUCERS

SCALE 1:25



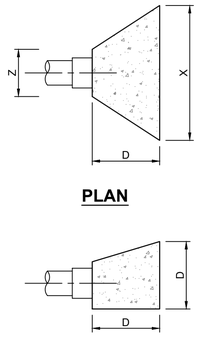
PLAN



ELEVATION

315mm HDPE PIPE ANCHOR ON STEEP INCLINE

SCALE 1:25



PLAN **SECTION**

PIPE DIAMETER	X	D	Z	FACE AREA (m2)	VOLUME CONCRETE (m3)
350	1700	1000	600	1.70	1.00
300	1500	850	400	1.25	0.50
250	1400	650	350	0.90	0.30
200	1100	550	325	0.55	0.20
150	800	400	275	0.30	0.08
100	450	350	175	0.14	0.03

THRUST BLOCK IN PRESSURE PIPELINES FOR END CAPS

SCALE 1:25

NOTE:

1. TO BE USED WHEN ALLOWABLE BEARING PRESSURE IS 100kPa OR BETTER AND TEST PRESSURE HEAD IN PIPELINE IS 180m OR LESS.
2. CONCRETE TO BE CLASS 15MPa/19mm
3. COUPLINGS TO REMAIN FLEXIBLE AND ACCESSIBLE.
4. THESE DIMENSIONS AND THE FORM OF THE BLOCK ARE INTENDED AS A GUIDE ONLY AND THE FINAL SHAPE MAY ALTER TO SUIT CONDITIONS UNDER THE DIRECTION OF THE ENGINEER.

GENERAL NOTES:

1. COORDINATES ARE GIVEN TO HARTEBEESTHOEK 94 DATUM (WGS84 Lo19°).
2. ELEVATION DATUM IS MEAN SEA LEVEL (m.s.l.)

50 mm 0 mm 50 mm 100 mm

REV	NATURE OF REVISION	DATE	SIGNED
A	ISSUED FOR TENDER	23-09-2022	

DESIGNED	C DU PREEZ	
CHECKED	D PETERSEN	
DRAWN	T FATSHA	
CHECKED	N DU PLESSIS	

DESIGN APPROVED:
JG AFRIKA (Pty) Ltd
D PETERSEN
NAME
SIGNATURE
SEPTEMBER 2022
DATE

JG AFRIKA

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DESIGN APPROVED:
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NAME
SIGNATURE
DATE

CLIENT

PROJECT
JAMESTOWN RESERVOIR
CONTRACT No. :

DRAWING TITLE
THRUST BLOCK DETAILS

ISSUED FOR TENDER

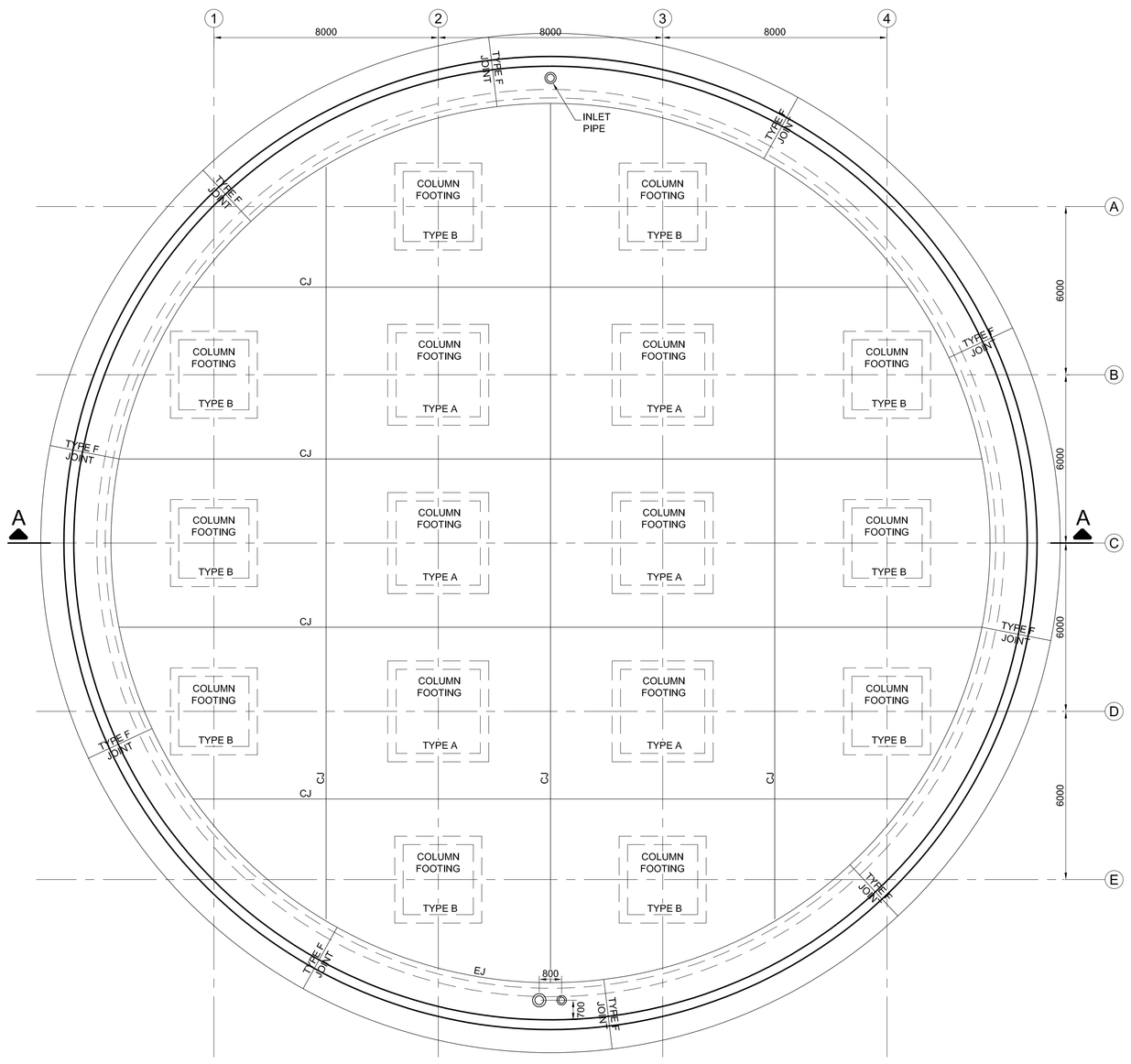
SHEET 1 OF 1 | SCALE AS SHOWN | SIZE A1

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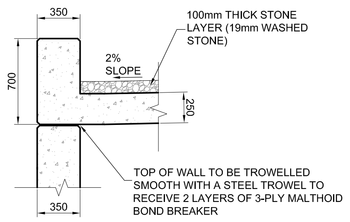
JG AFRIKA (Pty) Ltd. DRAWING No 5473-0-C601 | REVISION A

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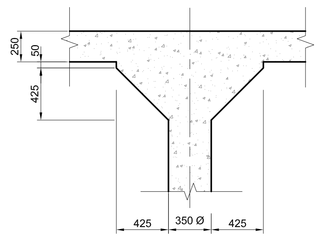
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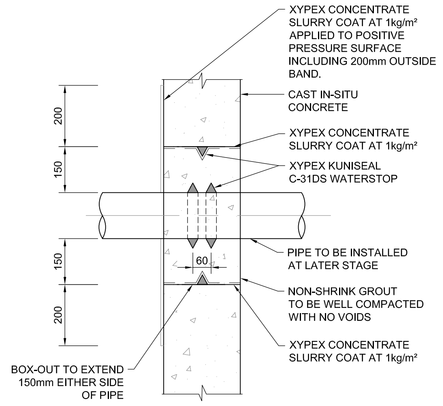
FOUNDATION AND FLOOR PLAN LAYOUT
SCALE 1:100



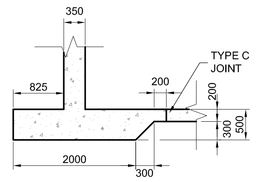
DETAIL 1
ROOF RING BEAM
SCALE 1:25



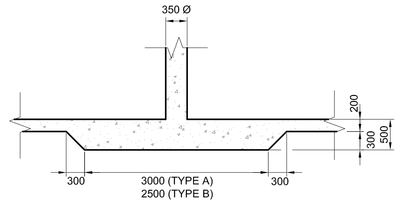
DETAIL 2
COLUMN HEAD
SCALE 1:25



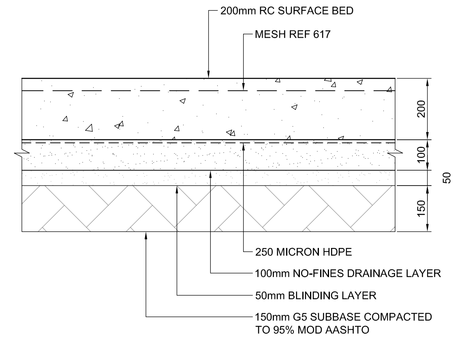
TYPICAL PIPE PENETRATION BOX-OUT DETAIL
SCALE 1:10



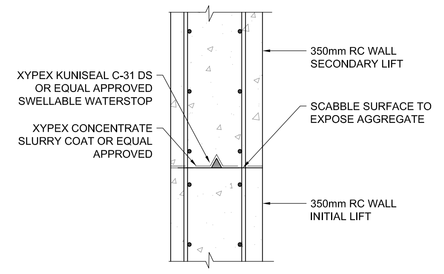
DETAIL 3
WALL FOOTING
SCALE 1:50



DETAIL 4
COLUMN FOOTING
SCALE 1:50

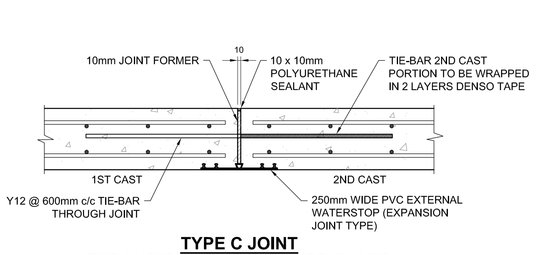


TYPICAL LAYERWORKS DETAIL
SCALE 1:10

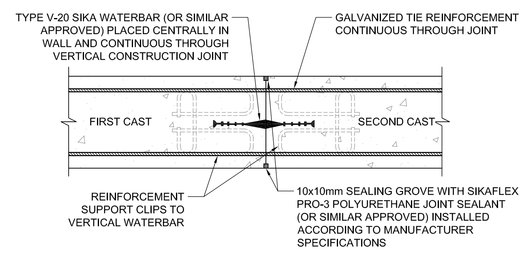


TYPE A JOINT
HORIZONTAL CONSTRUCTION JOINT IN WALLS
SCALE 1:10

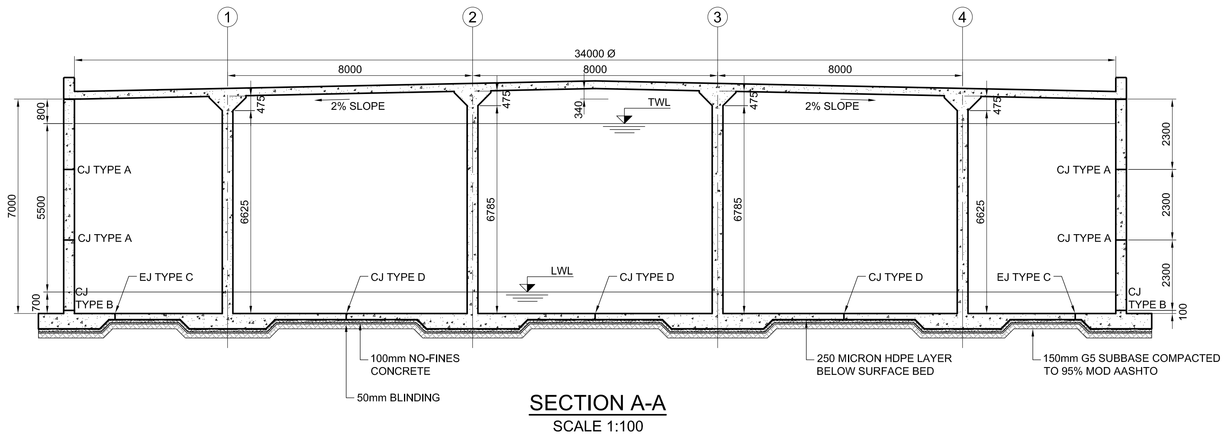
NOTE:
VERTICAL BARS OMITTED IN WALL FOR CLARITY



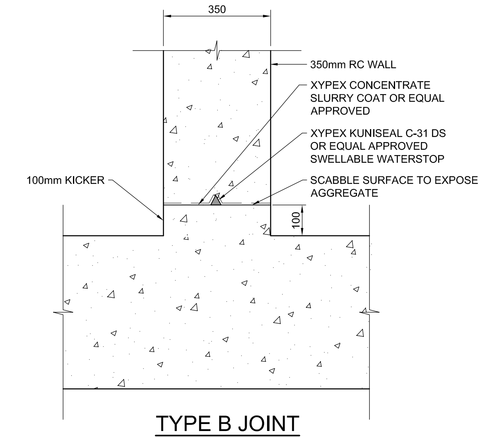
TYPE C JOINT
EXPANSION JOINT IN FLOOR SLABS
SCALE 1:10



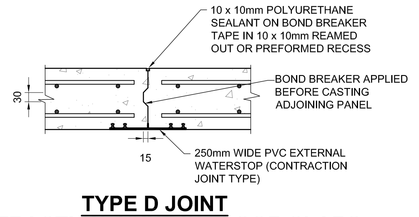
TYPE E JOINT
VERTICAL CONSTRUCTION JOINT IN WALLS
SCALE 1:10



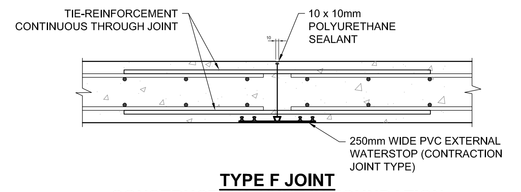
SECTION A-A
SCALE 1:100



TYPE B JOINT
CONSTRUCTION JOINT IN BASE OF WALLS
SCALE 1:10



TYPE D JOINT
CONTRACTION JOINT IN FLOOR SLABS
SCALE 1:10



TYPE F JOINT
CONSTRUCTION JOINT IN FOUNDATION
SCALE 1:10

GENERAL NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE DONE IN ACCORDANCE WITH SANS 10400, SANS 1200, SANS 2001 AND ALL OTHER APPLICABLE SANS CODES OF PRACTICE.
2. THE CONTRACTOR SHALL COMPLY WITH ALL RELEVANT MUNICIPAL REGULATIONS AND BYLAWS IN THE AREA OF THE SITE.
3. THE CONTRACTOR SHALL KEEP A FULL SET OF DRAWINGS ON SITE.
4. GRIDLINES AND SITE BOUNDARIES ARE TO BE SET OUT ON SITE BY A QUALIFIED AND PROFESSIONALLY REGISTERED LAND SURVEYOR WHO HAS ADEQUATE PROFESSIONAL INDEMNITY COVER.
5. ALL DIMENSIONS, LEVELS AND EXISTING STRUCTURES SHALL BE CHECKED ON SITE AND CORRELATED WITH THE RELEVANT DRAWINGS BEFORE CONSTRUCTION COMMENCES.
6. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ANY RELEVANT CIVIL OR OTHER DRAWINGS.
7. ANY ERRORS OR DISCREPANCIES SHALL BE REPORTED IMMEDIATELY FOR CLARIFICATION BEFORE WORK COMMENCES.
8. ALL PRODUCTS SPECIFIED FOR USE ARE TO BE USED STRICTLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.

CONCRETE NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE DONE IN ACCORDANCE WITH SANS 1200 G, SANS 2001-CC1 AND ALL OTHER APPLICABLE SANS CODES OF PRACTICE.
2. FORMWORK SHALL REMAIN IN PLACE FOR THE APPROPRIATE MINIMUM PERIOD OF TIME GIVE IN SANS 1200 G TABLE 2.
3. EXPOSED CONCRETE CORNERS SHALL HAVE 20mm CHAMFERS.
4. NO HOLES OR CHASES, OTHER THAN THOSE SHOWN ON THE DRAWINGS OR APPROVED BY THE ENGINEER, SHALL BE CUT OR OTHERWISE FORMED IN THE CONCRETE. THE MANNER OF ATTACHING FIXTURES TO BE EMBEDDED IN THE CONCRETE SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.
5. COMPACTION SHALL BE CARRIED OUT BY MECHANICAL VIBRATION. OVER-VIBRATION RESULTING IN SEGREGATION, SURFACE LAITANCE OR LEAKAGE SHALL NOT BE PERMITTED.
6. ALL CONCRETE SHALL BE PROTECTED FROM CONTAMINATION AND LOSS OF MOISTURE FOR AT LEAST 7 DAYS AFTER CASTING.
7. COMPRESSIVE STRENGTH TESTS OF 3 CUBES SHALL BE TAKEN FOR EACH BATCH OF CONCRETE.
8. NOMINAL AGGREGATE SIZE SHALL BE 19mm U.N.O.
9. CEMENT TO MEET THE REQUIREMENTS OF CEM III/V 42.5
10. MINIMUM 300kg/m³ CEMENTITIOUS CONTENT WITH A MAXIMUM W/C RATIO OF 0.55
11. CONCRETE MIXES:
    - FOUNDATIONS: 35MPa
    - SURFACE BED: 35MPa
    - WALLS: 35MPa
    - ROOF AND BEAMS: 35MPa
    - COLUMNS : 35MPa
    - BLINDING: 20MPa
    - NO-FINES BLINDING: 20MPa

REINFORCEMENT NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE DONE IN ACCORDANCE WITH SANS 1200 G, SANS 2001-CC1 AND ALL OTHER APPLICABLE SANS CODES OF PRACTICE.
2. ENGINEER SHALL INSPECT REINFORCING BEFORE CONCRETE IS POURED. THE ENGINEER SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE BEFORE REINFORCEMENT INSPECTIONS AND THE WORK SHALL BE 100% COMPLETE ON ARRIVAL.
3. THE CONTRACTORS SHALL ENSURE THAT ALL REINFORCEMENT AND COVER BLOCKS ARE CORRECTLY AND ACCURATELY FIXED AND REMAIN IN PLACE DURING POURING.
4. COVER TO REINFORCING:
    - FOUNDATIONS: 75 mm BOTTOM, 40 mm TOP & SIDES
    - SURFACE BED: 40 mm ALL ROUND
    - ROOF SLAB: 40 mm ALL ROUND
    - BEAMS: 40 mm ALL ROUND
    - COLUMNS: 40 mm ALL ROUND
    - WALLS: 40 mm ALL ROUND

STRUCTURAL STEELWORK NOTES:

1. ALL CONSTRUCTION METHODS AND MATERIALS TO BE DONE IN ACCORDANCE WITH SANS 1200 SECTIONS H AND HC.
2. ALL STRUCTURAL STEEL TO BE GRADE 355JR TO SANS 1431 U.N.O.
3. ALL STRUCTURAL STEELWORK TO BE HOT DIP GALVANISED U.N.O.
4. ALL BOLTS TO BE M16 GRADE 8.8 AND HOT DIP GALVANISED, U.N.O.
5. ALL WELDS TO BE 6mm CONTINUOUS FILLET WELD, U.N.O.
6. ALL SHOP DRAWINGS TO BE APPROVED BY THE ENGINEER PRIOR TO FABRICATION.
7. ALL STRUCTURAL STEELWORK TO RECEIVE CORROSION PROTECTION COATING SYSTEM FOR CLASS C3, AS DESCRIBED IN ISO 9223.

   CLASS C3 (MEDIUM)
   INTERIOR: HIGH HUMIDITY, SOME AIR POLLUTION
   EXTERIOR: URBAN INLAND OR MILD COASTAL

FOR TENDER PURPOSES ONLY

NO.	NATURE OF REVISION	DATE
A	ISSUED FOR TENDER	01/07/2021

	SIG. / NAME
DESIGNED	D. MNTHAMBALA
CHECKED	B. JARRATT
DRAWN	N. DIEN
CHECKED	M. DU PLESSIS

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SCALE BAR: 0 — 70 — 70mm ON ORIGINAL DRAWING

CLIENT: STELLENBOSCH MUNICIPALITY

APPROVED: O. Davis Pr Tech Eng — FOR JG AFRIKA (PTY) LTD — DESIGNATION: Technical Director — 2021.07.13 16:10:11 +02'00' — DATE

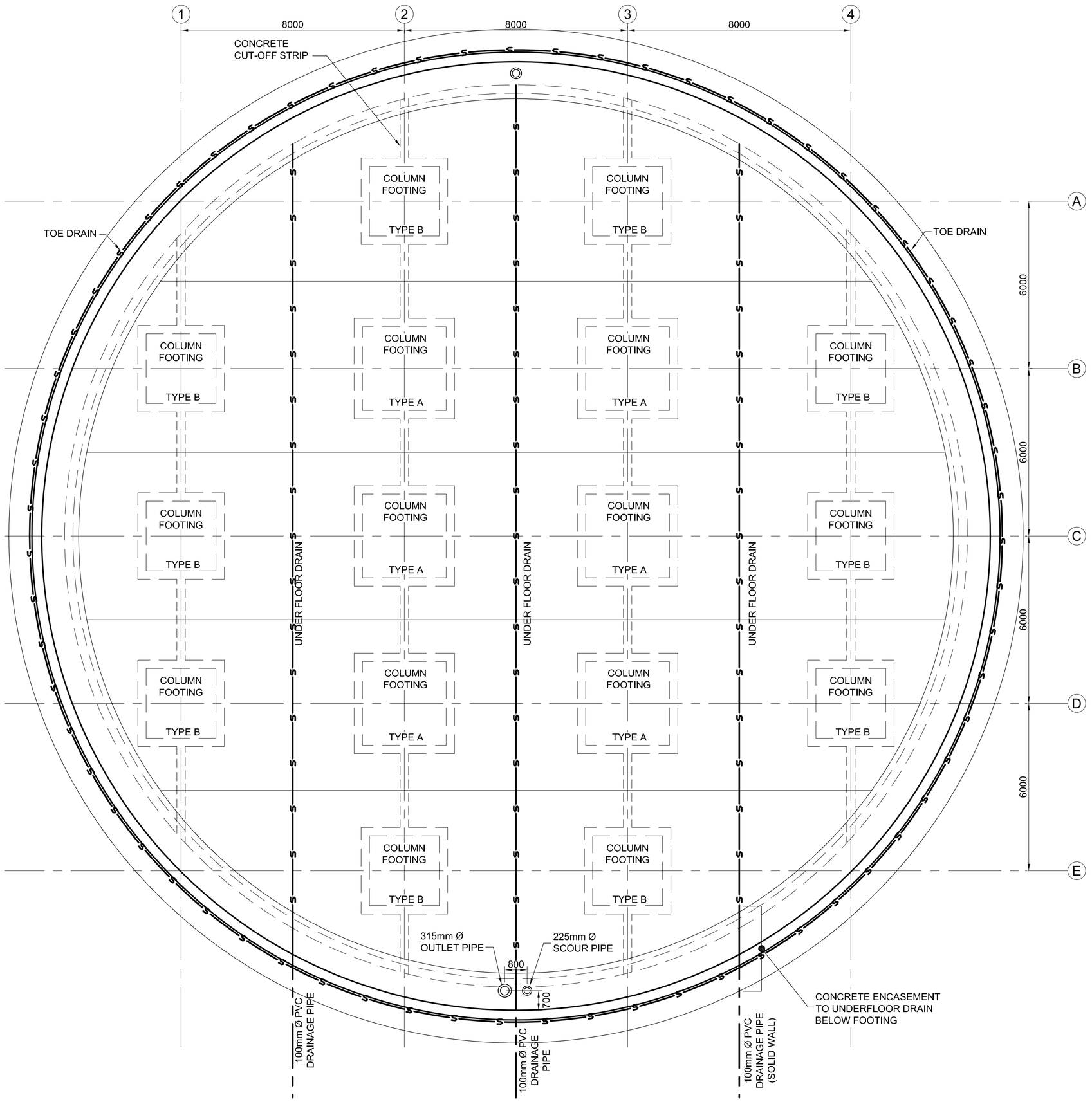
APPROVED: ____ FOR CLIENT — DESIGNATION: ____ — DATE: ____

PROJECT: CONTRACT: B/SM 273 / 10
BULK SERVICES FOR JAMESTOWN

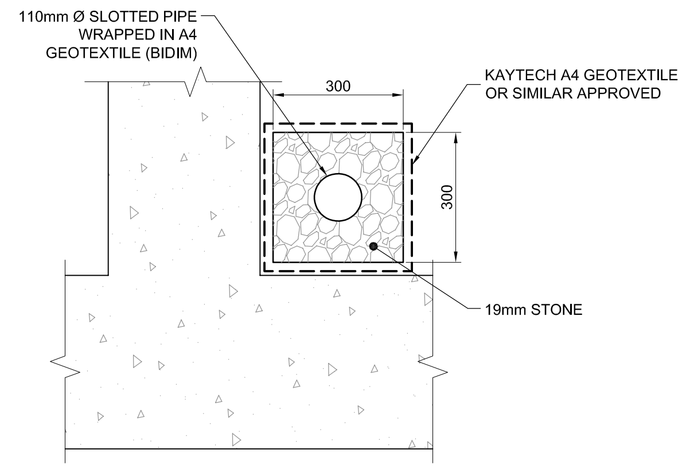
TITLE: JAMESTOWN 5.0 ML RESERVOIR
GENERAL ARRANGEMENT

DATE:	01 JULY 2021
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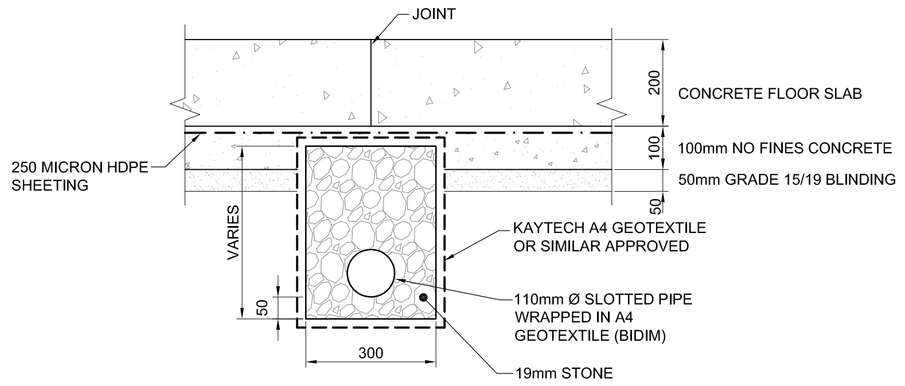
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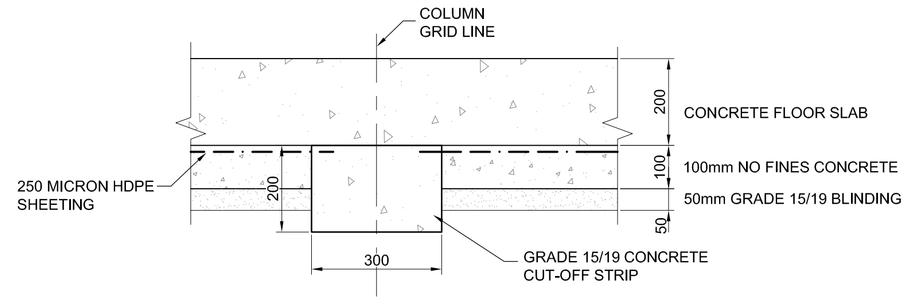
PLAN
SCALE 1:100



TOE DRAIN DETAIL
SCALE 1:10



UNDER FLOOR DRAIN
SCALE 1:10



CONCRETE CUT-OFF STRIP
SCALE 1:10

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NO.	NATURE OF REVISION	DATE
A	ISSUED FOR TENDER	01/07/2021

DESIGNED — SIG./NAME: D. MNTHAMBALA
CHECKED — SIG./NAME: B. JARRATT
DRAWN — SIG./NAME: N. DIEN
CHECKED — SIG./NAME: N. DU PLESSIS

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SCALE BAR: 0 — 70
70mm ON ORIGINAL DRAWING

CLIENT: STELLENBOSCH MUNICIPALITY

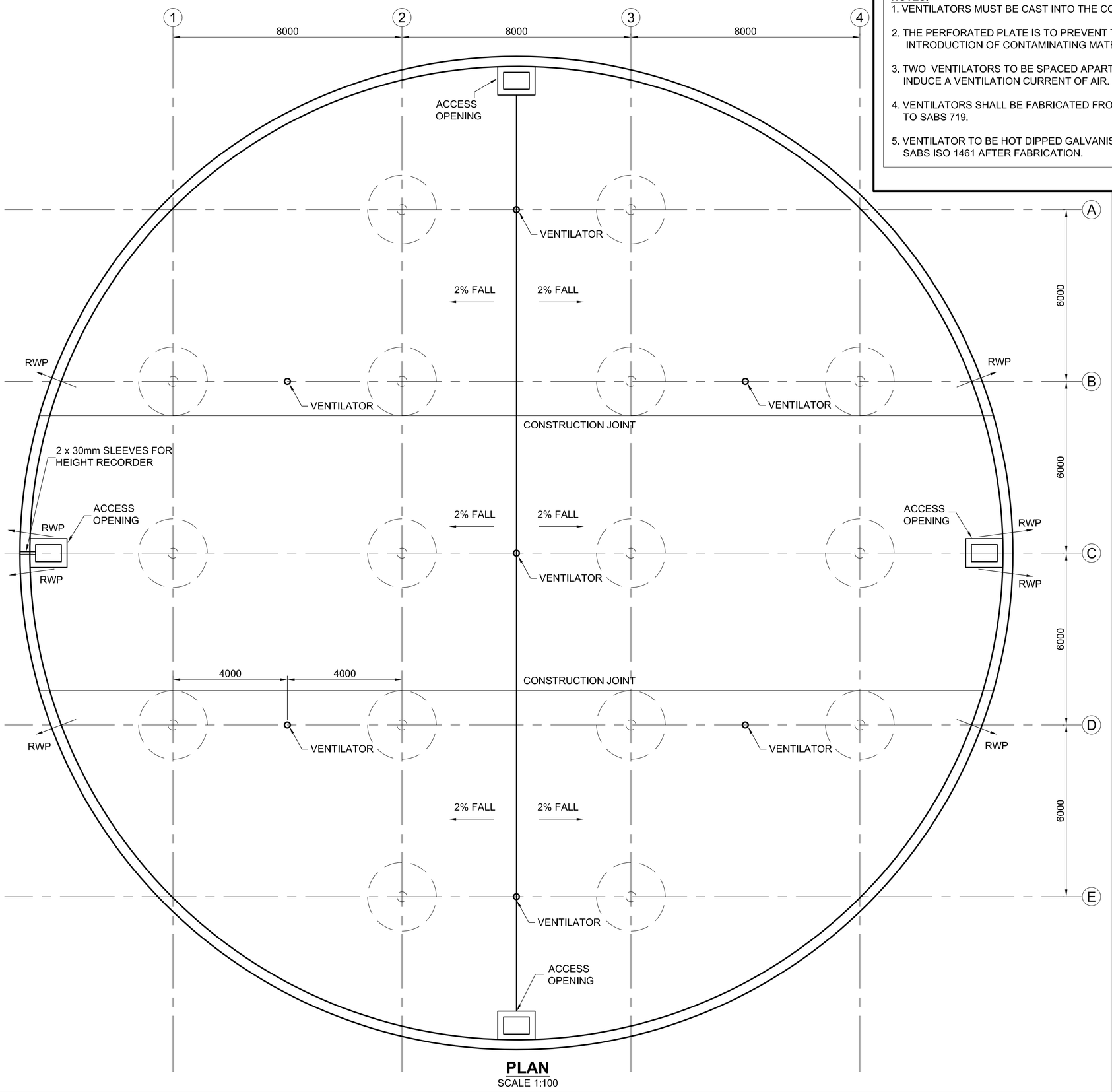
APPROVED: O. Davis for Tom Ewes — FOR JG AFRIKA (PTY) LTD — DESIGNATION: Technical Director — 2021.07.13 16:02:14 +02'00' — DATE
APPROVED: FOR CLIENT — DESIGNATION: — DATE

PROJECT: CONTRACT: B/SM 273 / 10
BULK SERVICES FOR JAMESTOWN

TITLE: JAMESTOWN 5.0 ML RESERVOIR
UNDERFLOOR DRAINAGE DETAILS

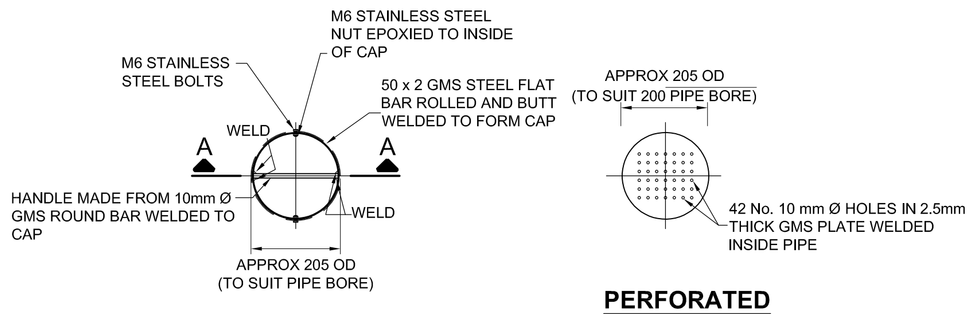
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REVISION: A
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JarrattB01.07.2021



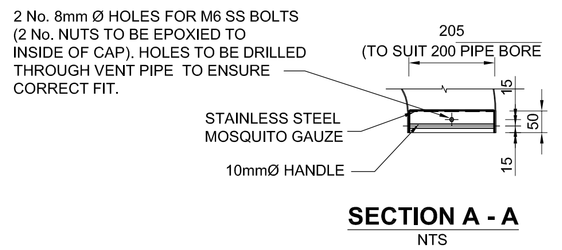
PLAN
SCALE 1:100

NOTES:
1. VENTILATORS MUST BE CAST INTO THE CONCRETE.
2. THE PERFORATED PLATE IS TO PREVENT THE EASY INTRODUCTION OF CONTAMINATING MATERIALS.
3. TWO VENTILATORS TO BE SPACED APART TO INDUCE A VENTILATION CURRENT OF AIR.
4. VENTILATORS SHALL BE FABRICATED FROM GMS TO SABS 719.
5. VENTILATOR TO BE HOT DIPPED GALVANISED TO SABS ISO 1461 AFTER FABRICATION.

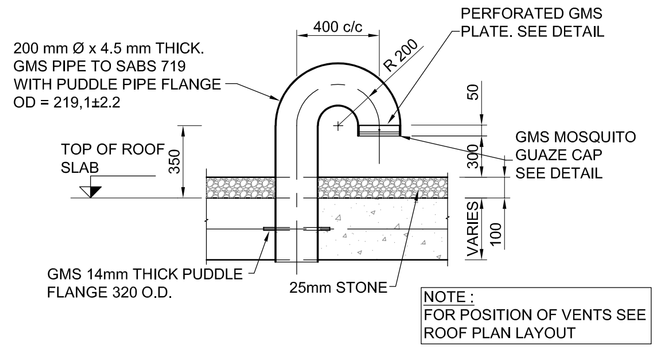


PERFORATED PLATE DETAIL

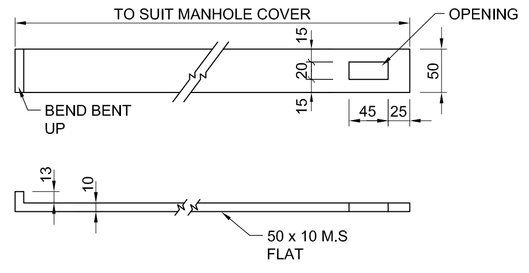
PLAN
NTS



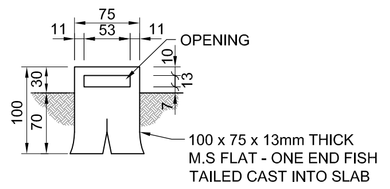
SECTION A - A
NTS



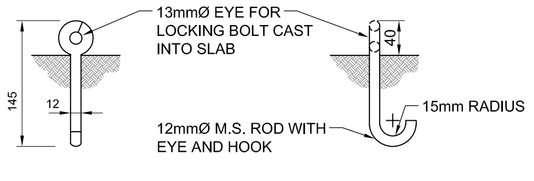
200mm Ø VENTILATOR DETAILS



LOCKING BAR
SCALE 1:5



ANCHOR
SCALE 1:5



EYE BOLT
SCALE 1:5

LOCKING DEVICES FOR MANHOLE COVERS

NOTES :
1. ALL MILD STEEL COMPONENTS TO BE HOT DIP GALVANISED TO SANS 121.
2. EACH LOCKING DEVICE MUST BE PROVIDED WITH AN APPROVED WEATHERPROOF BRASS PADLOCK WITH MIN 8mm Ø HARDENED STEEL SHACKLE (ALL KEYED ALIKE)

ACCESS LADDER DETAIL
SCALE 1:50

RUNG FIXING
SCALE 1:1

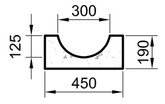
SECTION A - A
SCALE 1:50

SECTION B - B
SCALE 1:50

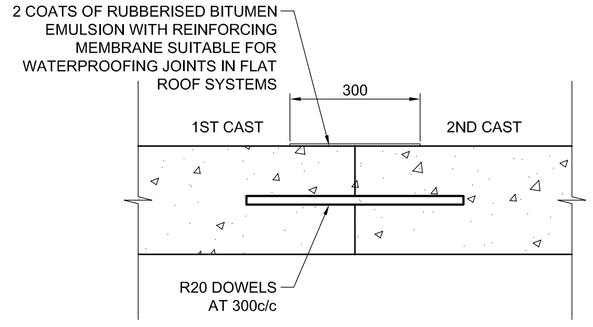
PLAN
SCALE 1:50

SECTION A - A
SCALE 1:50

DETAIL OF ROOF RAINWATER PIPE
SCALE 1:50



DETAILS OF ACCESS OPENING



TYPICAL ROOF CONSTRUCTION JOINT
SCALE 1:10

FOR TENDER PURPOSES ONLY

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A	ISSUED FOR TENDER	01/07/2021

	SIGNATURE	NAME
DESIGNED		D. MNTHAMBALA
CHECKED		B. JARRATT
DRAWN		N. DIEN
CHECKED		N. DU PLESSIS

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SCALE BAR: 0 70
70mm ON ORIGINAL DRAWING

CLIENT: STELLENBOSCH MUNICIPALITY

APPROVED: O. Davis Pr. Tech Eng
FOR JG AFRIKA (PTY) LTD
DESIGNATION: Technical Director
2021.07.13 16:01:35 +02'00'
DATE

APPROVED:
FOR CLIENT
DESIGNATION:
DATE

PROJECT:
CONTRACT: B/SM 273 / 10
BULK SERVICES FOR JAMESTOWN

TITLE:
JAMESTOWN 5.0 ML RESERVOIR
ROOF LAYOUT AND DETAILS

DATE:	01 JULY 2021
SCALE:	AS SHOWN
DRAWING No.	5473-ST-CO-102
REVISION	A
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SIZE	A1

JarratB01.07.2021