

CONTRACT NUMBER: COM 30/2023



PROJECT:

UPGRADING OF SAKHELE CAFÉ ROAD, MALEKUTU WARD 37

BOOK OF DRAWINGS

FEBRUARY 2023

ISSUED ON BEHALF OF:



Civic Centre
1 Nel Street
Mbombela, 1201
South Africa

Contact: Mr. Velly Mapaila
Telephone: +27 (0) 13 759 2041
Fax: +27 (0) 13 759 2274

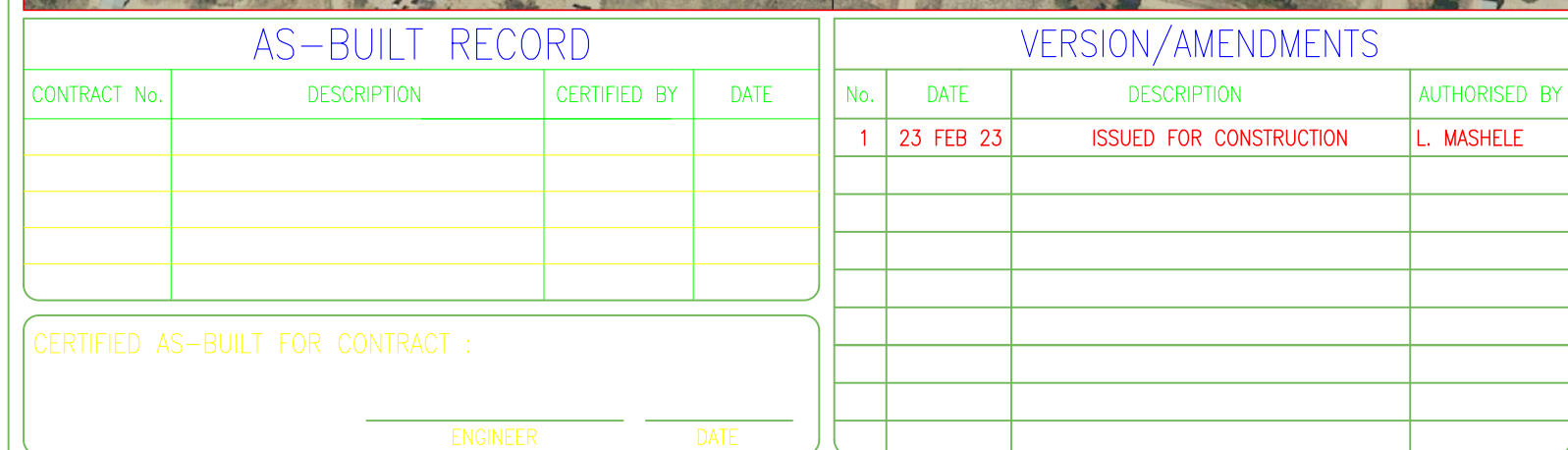
ISSUED BY:



HOXANA CONSULTING
ENGINEERS

Unit 1, Ground Floor Sonheuwel Central,
45 Marloth Street,
Mbombela, 1201

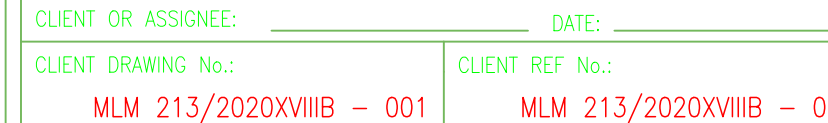
Contact: Mr L. Mashele
Telephone: +27 (0) 13 010 1261
Email: mashelel@hoxanaholdings.co.za



Tel: +27(0) 13 010 1261
Fax: 086 663 1259

DRAWING TITLE:

KEYPLAN ROAD LAYOUT, SHEET 1 OF 1



MARK	EASTING	NORTHING	Z LEVEL
BM 1			
BM 2	19263.2860	-277796.3590	549.6430
BM 3	19266.3910	-2779670.2470	550.8600
BM 4	19255.4360	-2797544.8653	550.7420
BM 5	19257.0680	-2777424.2873	550.4139
BM 6	19228.5590	-2797290.5383	549.8001
BM 7	19228.5590	-2797290.5383	549.8001
BM 8	19469.4730	-2797219.3733	565.2062
BM 9	19466.9680	-2797092.9323	569.2680
BM 10	19455.7990	-2796930.6105	569.2130
BM 11	19459.0310	-2796817.5310	569.2230
BM 12	19534.6520	-2796818.5873	575.9979
BM 13	19559.8090	-2796836.8863	580.9590
BM 14	19843.4840	-2796966.5970	592.7200

ALIGNMENT DATA: FIRST STREET						
SEGMENT	CHANGELINE	EASTING	NORTHING	RADIUS	Δ / BEARING	LENGTH
C33	BC KM 0.002	10285.904	1027793.148	400.00 m	0.8742° 20'	20.09 m
	BC KM 0.002	10285.904	1027794.363			
	BC KM 0.002	10285.904	1027794.122			
L45	10277.547	10285.904	1027793.148	148° 36' 10"	2.357 m	
	10277.547	10285.904	1027793.148			
L46	KM 0.022 to KM 0.087	10285.904	1027794.122	177° 22' 40"	64.684 m	
	KM 0.087	10285.904	1027794.122			
C34	EC KM 0.087	10285.904	1027794.122	177° 22' 40"		
	EC KM 0.087	10285.904	1027794.122			
C34	EC KM 0.124	10285.904	1027794.122	788.835 m	Δ 7° 52' 30"	37.276 m
	EC KM 0.124	10285.904	1027794.122			
L47	KM 0.124 to KM 0.211	10285.904	1027795.320	179° 22' 30"	86.490 m	
	KM 0.211	10285.904	1027795.320			
C35	EC KM 0.211	10285.904	1027795.320	200.246 m	Δ 3° 18' 50"	15.915 m
	EC KM 0.227	10285.904	1027795.320			
C35	EC KM 0.227	10285.904	1027795.320	179° 22' 30"		
	EC KM 0.227	10285.904	1027795.320			
C36	KM 0.227 to KM 0.306	10285.904	1027795.320	178° 48' 50"	50.332 m	
	KM 0.306	10285.904	1027795.320			
C36	KM 0.306	10285.904	1027795.320	178° 48' 50"		
	KM 0.306	10285.904	1027795.320			
C36	KM 0.306	10285.904	1027795.320	883.808 m	Δ 2° 48' 30"	28.626 m
	KM 0.306	10285.904	1027795.320			
L49	KM 0.306 to KM 0.429	10285.904	1027794.514	174° 00' 50"	122.653 m	
	KM 0.429	10285.904	1027794.514			
C37	EC KM 0.429	10285.904	1027794.514	174° 00' 50"		
	EC KM 0.429	10285.904	1027794.514			
C37	EC KM 0.439	10285.904	1027794.514	187.827 m	Δ 0° 18' 20"	10.057 m
	EC KM 0.439	10285.904	1027794.514			
L50	KM 0.439 to KM 0.474	10285.904	1027793.786	173° 55' 20"	35.077 m	
	KM 0.474	10285.904	1027793.786			
C38	EC KM 0.474	10285.904	1027793.786	215.014 m	Δ 3° 10' 40"	11.301 m
	EC KM 0.483	10285.904	1027793.786			
C38	EC KM 0.483	10285.904	1027793.786			
	EC KM 0.483	10285.904	1027793.786			
L51	KM 0.483 to KM 0.507	10285.904	1027792.864	170° 56' 10"	30.760 m	
	KM 0.507	10285.904	1027792.864			
C39	EC KM 0.507	10285.904	1027792.864			
	EC KM 0.507	10285.904	1027792.864			

ALIGNMENT DATA: SECOND STREET						
SEGMENT	CHAINAGE	EASTING	NORTHING	RADIUS	D.A. / BEARING	LENGTH
L52	Km 0.000 to Km 0.084	18208.167 19290.408	-7797266.293 -7797251.216		25° 06'50"	83.739 m
C39	BC: Km 0.084 EC: Km 0.119	BC: 19290.408 PI: 19307.811 EC: 19324.701	BC: -7797251.213 PI: -7797247.915 EC: -7797244.070	100.000 m	Δ: 14° 30"	35.031 m
L53	Km 0.119 to Km 0.265	19324.701 19467.082	-7797244.070 -7797212.043		25° 19'20"	145.938 m

ALIGNMENT DATA: THIRD STREET						
SEGMENT	CHAINAGE	EASTING	NORTHING	RADIUS	Δ / BEARING	LENGTH
L54	Km 0.000 to Km 0.124	18466.530	-7797225.138		182°37'00"	123.844 m
		18472.182	-7797101.423			
C40	ECm 1.824 to ECm 1.076	18472.182	-7797101.423	200.000 m	Δ 14°52'00"	51.793 m
		18472.371	-7797075.008			
		18467.858	-7797049.958			
C41	ECm 1.076 to ECm 3.305	18454.643	-7796988.483	200.000 m	Δ 15°11'20"	66.960 m
		18454.643	-7796988.483			
		18451.587	-7796922.351			
		18451.587	-7796922.351			
L55	Km 3.305 to Km 4.114	18467.858	-7797049.958		187°40'40"	62.422 m
		18454.643	-7796988.483			
		18451.587	-7796922.351			
L56	Km 4.114 to Km 4.114	18465.159	-779664.134		187°00'10"	109.005 m

ALIGNMENT DATA: FOURTH STREET						
SEGMENT	CHANGIANO	EASTING	NORTHING	RADIUS	Δ / BEARING	LENGTH
L57	BC 0.118 BC 0.118	19451.995 19568.602	-2796321.464 -2796267.739		277°29'10"	117.659 m
C42	BC 0.118 BC 0.121	19568.602 PI 19571.704	BC -2796287.739 PI -2796321.464	200.000 m	Δ 0°54'50"	3.162 m
L58	BC 0.121 to BC 0.297	19571.704 19747.248	-2796287.739 -2796437.248		270°32'40"	176.639 m
C43	BC 0.297 BC 0.303	BC 19747.248 PI 19750.175	BC -2796437.248 PI -2796480.734	200.000 m	Δ 1°14'20"	5.892 m
L59	BC 0.303 to BC 0.539	19753.990 19986.602	-2796480.734 -2796769.539		278°14'40"	235.569 m

DRAWN	C. TAKAVARASHA	CHECKED	F. MURWIRA
DESIGNED	F. MURWIRA	APPROVED	L. MASHELE
CO-ORDINATE SYSTEM:		WGS 84/31	Pr. Eng No: 2018300248
APPROVED ON BEHALF OF HOXANA CONSULTING ENGINEERS:			
ENGINEER'S SIGNATURE: _____		DATE: _____	
DRAWING No.: MLM 213/2020XVIIIB - 001		VERSION:	01

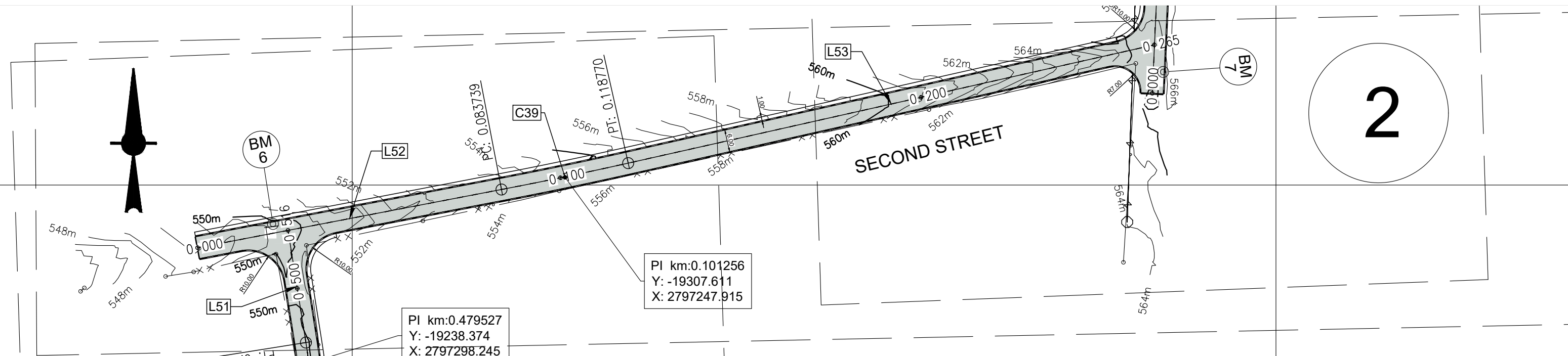
DRAWN	C. TAKAVARASHA	CHECKED	F. MURWIRA
DESIGNED	F. MURWIRA	APPROVED	L. MASHELE
CO-ORDINATE SYSTEM:		WGS 84/31	Pr. Eng No: 2018300248

APPROVED ON BEHALF OF HOXANA CONSULTING ENGINEERS:

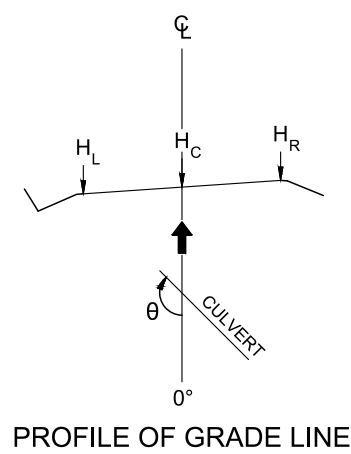
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DRAWING No.: MLM 213/2020XVIII - 002

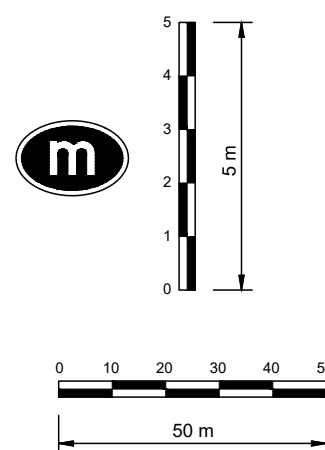
VERSION: 01



SECOND STREET

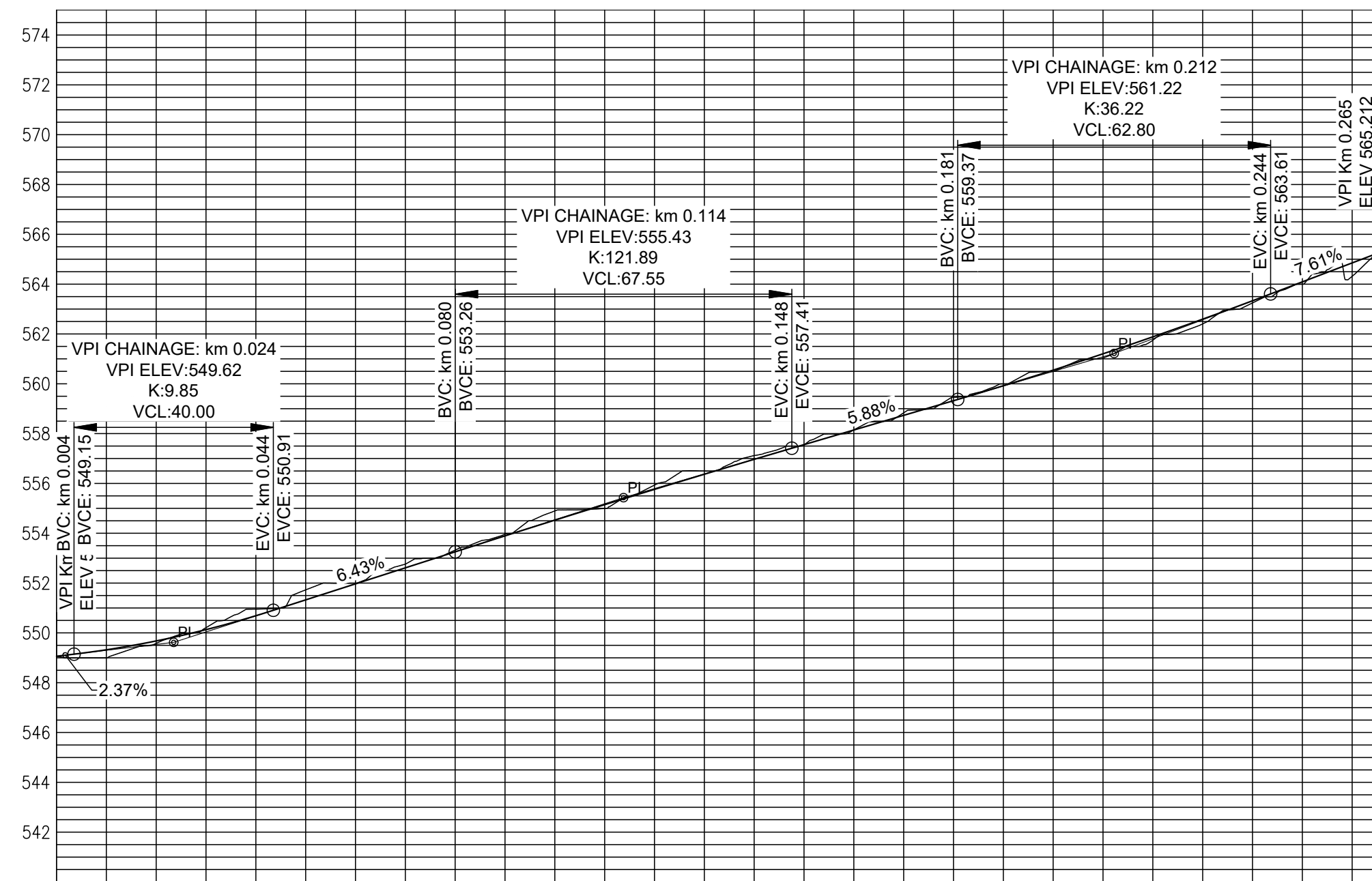


PROFILE OF GRADE LINE



SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 540.000



VERTICAL CURVES GRADE																	
FINAL ROAD LEVELS	H _L	3.00 m LEFT	548.973	549.231	549.585	550.041	550.598	551.235	551.878	552.522	553.165	553.804	554.435	555.068	555.703	556.339	556.977
	H _C	0.00 m ON CL	549.063	549.321	549.675	550.131	550.688	551.325	551.968	552.612	553.255	553.894	554.525	555.148	555.763	556.369	556.967
	H _R	3.00 m RIGHT	549.153	549.411	549.765	550.221	550.778	551.415	552.058	552.702	553.345	553.984	554.615	555.238	555.853	556.459	557.057
SUPER ELEVATION																	
GROUND LEVELS AT GRADE LINE																	
KILOMETER DISTANCE																	
CUT / FILL																	
GUARDRAIL LEFT																	
KERB LEFT																	
SHOULDER LEFT																	
GUARDRAIL RIGHT																	
KERB RIGHT																	
SHOULDER RIGHT																	
HORIZONTAL ALIGNMENT																	

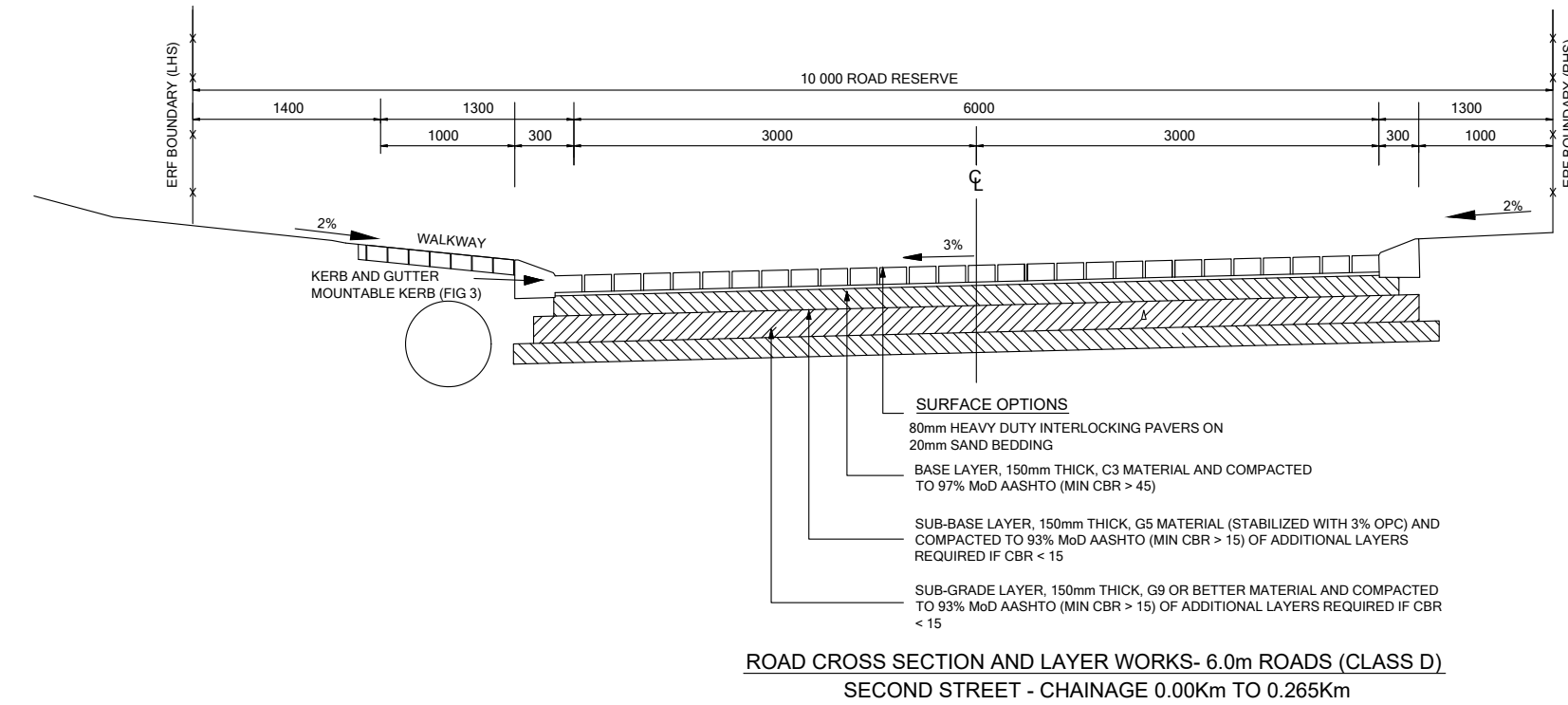
LONGSECTION SECOND STREET
FROM 0.000 TO 264.708

NOTES AND SPECIFICATIONS:

- THE X AND Y CO-ORDINATES OF OF THE INFORMATION INDICATED ON THIS DRAWING ARE BASED ON THE WORLD GEODETIC SYSTEM 1984 ELLIPSOID (WGS 84).
- ALL Z CO-ORDINATES SHOWN ON THE DRAWING ARE BASED ON THE LOCAL ORTHOMETRIC HEIGHT SYSTEM AND ON THE DATUM PEG WITH AN ELEVATION AS INDICATED IN WRITING TO THE CONTRACTOR AT THE COMMENCEMENT OF THE PROJECT.
- ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS
- ALL DIMENSIONS ARE IN METERS (UNLESS OTHERWISE SPECIFIED)
- AS SHOWN ON THE DRAWING

ALIGNMENT DATA: SECOND STREET

SEGMENT	CHAINAGE	EASTING	NORTHING	RADIUS	D.A. / BEARING	LENGTH
L52	Km 0.000 to Km 0.084	19208.167 19290.408	-2797266.980 -2797251.213		259°08'50"	83.739 m
C39	BC: Km 0.084 EC: Km 0.119	BC: 19290.408 PI: 19307.611 EC: 19324.701	BC: -2797251.213 PI: -2797247.915 EC: -2797244.070	1100.000 m	Δ: 1°49'30"	35.031 m
L53	Km 0.119 to Km 0.265	19324.701 19467.082	-2797244.070 -2797212.043		257°19'20"	145.938 m



NTS

AS-BUILT RECORD			
CONTRACT No.	DESCRIPTION	CERTIFIED BY	DATE
CERTIFIED AS-BUILT FOR CONTRACT :			
ENGINEER		DATE	

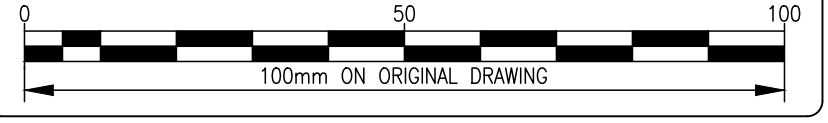
VERSION/AMENDMENTS			
No.	DATE	DESCRIPTION	AUTHORISED BY
01	31 Mar 23	ISSUED FOR TENDERING	L. MASHELE


HOXANA CONSULTING ENGINEERS
Unit No. 1, Ground Floor
45 Marlloth Park
Sonheuwel
1201
Tel: +27(0) 13 010 1261
Fax: 086 663 1259

PROJECT TITLE:
**UPGRADING OF SAKHELE CAFE ROAD
MALEKUTU, WARD 37**

DRAWING TITLE:
**SECOND STREET ROAD LAYOUT, LONG SECTION
AND CROSS SECTION, SHEET 2 OF 4**


CITY OF MBOMBELA MUNICIPALITY
P O Box 45,
NELSPRUIT,
1200
Tel: +27(0) 13 759 2181
Fax: +27(0) 13 759 2259


ORIGINAL DRAWING SCALE: 1 : 1000
ORIGINAL DRAWING SHEET SIZE: A1

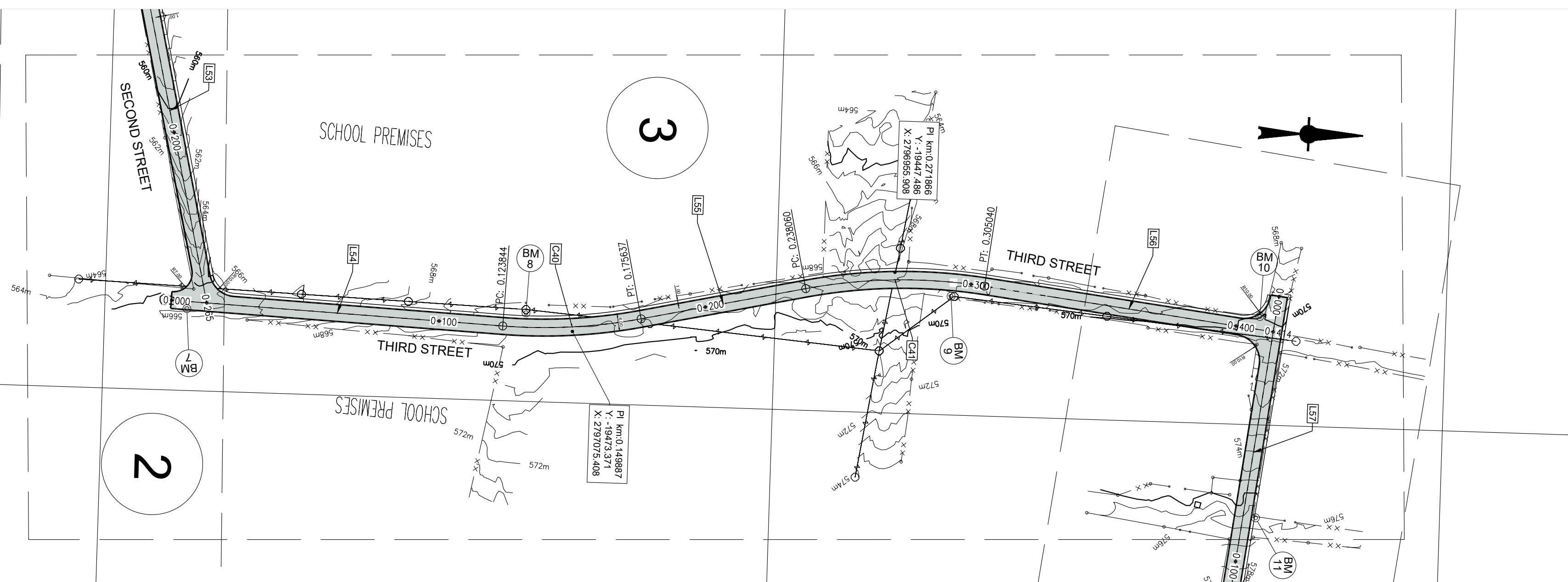
APPROVED:
CLIENT OR ASSIGNEE: _____ DATE: _____
CLIENT DRAWING No.: MLM 213/2020XVIIIIB - 002
CLIENT REF No.: MLM 213/2020XVIIIIB - 002

DRAWN: C. TAKAVARASHA
DESIGNED: F. MURWIRA

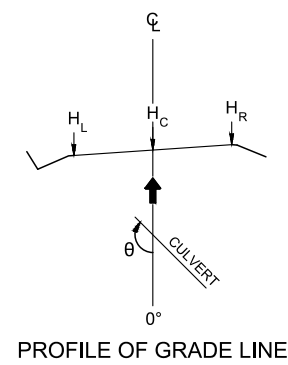
CHECKED: F. MURWIRA
APPROVED: L. MASHELE

CO-ORDINATE SYSTEM: WGS 84/31
Pr. Eng No: 2018300248

APPROVED ON BEHALF OF HOXANA CONSULTING ENGINEERS:
ENGINEER'S SIGNATURE: _____ DATE: _____
DRAWING No.: MLM 213/2020XVIIIIB - 002
VERSION: **01**



THIRD STREET

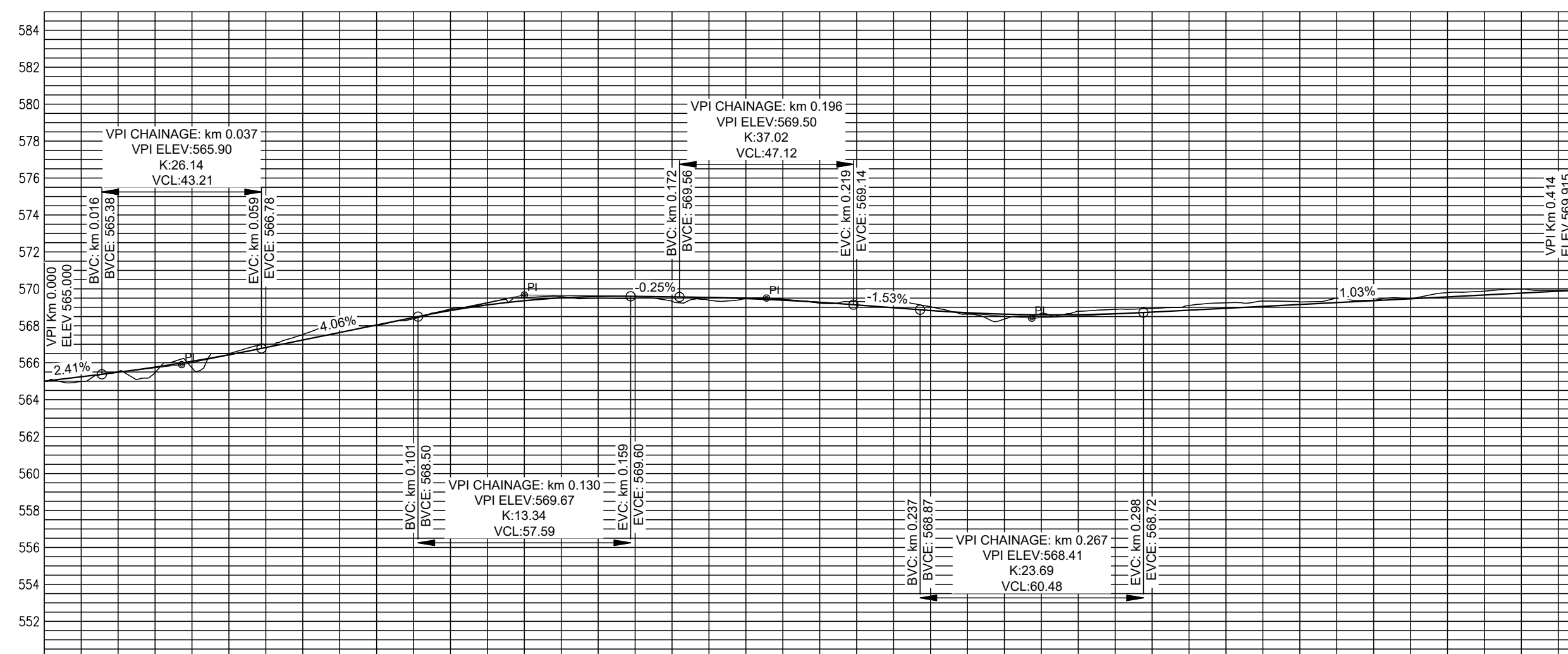


PROFILE OF GRADE LINE



DATUM 550.000

SCALES:
Horizontal 1:1000
Vertical 1:200



VERTICAL CURVES GRADE		VCL=43 m K=26.1		VCL=58 m K=13.3		VCL=47 m K=37.0		VCL=60 m K=23.7		VCL=60 m K=23.7		VCL=60 m K=23.7	
FINAL	H _L 3.00 m LEFT	564.910	565.151	565.241	565.151	565.241	565.151	565.241	565.151	565.241	565.151	565.241	565.151
ROAD	H _C 0.00 m ON CL	565.000	565.000	565.000	565.000	565.000	565.000	565.000	565.000	565.000	565.000	565.000	565.000
LEVELS	H _R 3.00 m RIGHT	565.090	565.331	565.486	565.396	565.486	565.396	565.486	565.396	565.486	565.396	565.486	565.396
SUPER ELEVATION		L-2.8% R-2.8% km 0.124											
GROUND LEVELS AT GRADE LINE		565.000	564.993	565.519	565.519	565.519	565.519	565.519	565.519	565.519	565.519	565.519	565.519
KILOMETER DISTANCE		0.000	0.010	0.020	0.030	0.040	0.050	0.060	0.070	0.080	0.090	0.100	0.110
CUT / FILL		0.000	0.248	-0.033	0.303	0.040	0.066	-0.170	-0.288	-0.375	0.043	0.067	-0.095
GUARDRAIL LEFT		-123.84											
KERB LEFT		-123.84											
SHOULDER LEFT		-123.84											
GUARDRAIL RIGHT		-123.84											
KERB RIGHT		-123.84											
SHOULDER RIGHT		-123.84											
HORIZONTAL ALIGNMENT		STRAIGHT L=123.844m 182° 36' 57"											

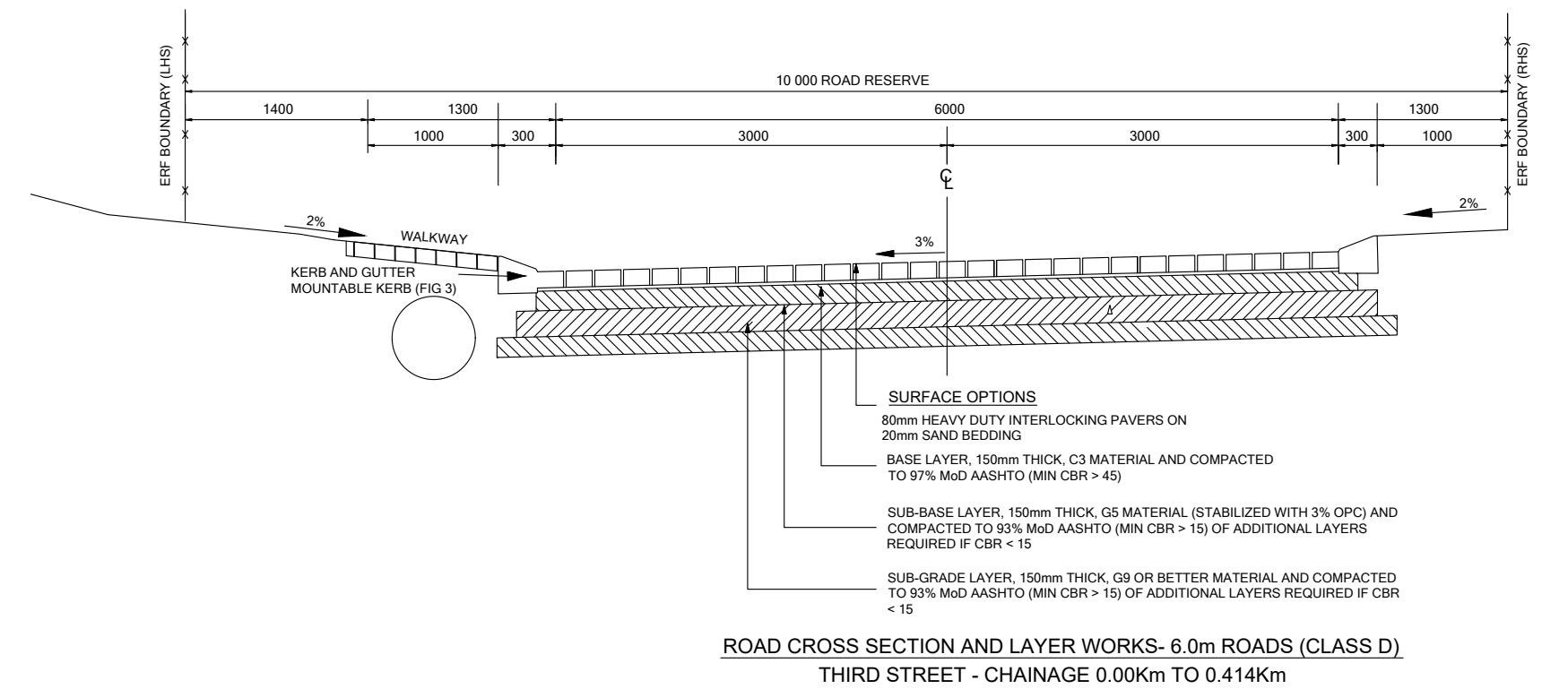
LONGSECTION THIRD STREET
FROM 0.000 TO 0.414

NOTES AND SPECIFICATIONS:

- THE X AND Y CO-ORDINATES OF OF THE INFORMATION INDICATED ON THIS DRAWING ARE BASED ON THE WORLD GEODETIC SYSTEM 1984 ELLIPSOID (WGS 84).
- ALL Z CO-ORDINATES SHOWN ON THE DRAWING ARE BASED ON THE LOCAL ORTHOMETRIC HEIGHT SYSTEM AND ON THE DATUM PEG WITH AN ELEVATION AS INDICATED IN WRITING TO THE CONTRACTOR AT THE COMMENCEMENT OF THE PROJECT.
- ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS
- ALL DIMENSIONS ARE IN METERS (UNLESS OTHERWISE SPECIFIED)
- AS SHOWN ON THE DRAWING

ALIGNMENT DATA: THIRD STREET

SEGMENT	CHAINAGE	EASTING	NORTHING	RADIUS	D.A. / BEARING	LENGTH
L54	Km 0.000 to Km 0.124	19466.530 19472.182	-2797225.138 -2797101.423		182°37'00"	123.844 m
C40	BC: Km 0.124 EC: Km 0.176	BC: 19472.182 EC: 19467.858	BC: -2797101.423 EC: -2797049.956	200.000 m	Δ: 14°50'20"	51.793 m
C41	BC: Km 0.238 EC: Km 0.305	BC: 19454.643 EC: 19451.587	BC: -2796988.948 EC: -2796922.351	200.000 m	Δ: 19°11'20"	66.980 m
L55	Km 0.176 to Km 0.238	19467.858 19454.643	-2797049.956 -2796988.948		167°46'40"	62.422 m
L56	Km 0.305 to Km 0.414	19451.587 19465.159	-2796922.351 -2796814.194		187°09'10"	109.005 m



ROAD CROSS SECTION AND LAYER WORKS- 6.0m ROADS (CLASS D)
THIRD STREET - CHAINAGE 0.00Km TO 0.414Km

NTS

AS-BUILT RECORD

CONTRACT No.	DESCRIPTION	CERTIFIED BY	DATE

CERTIFIED AS-BUILT FOR CONTRACT :
ENGINEER DATE

VERSION/AMENDMENTS

No.	DATE	DESCRIPTION	AUTHORISED BY
01	31 Mar 23	ISSUED FOR TENDERING	L. MASHELE



HOXANA CONSULTING ENGINEERS
Unit No. 1, Ground Floor
45 Marlloth Park
Sonheuwel
1201
Tel: +27(0) 13 010 1261
Fax: 086 663 1259

PROJECT TITLE:

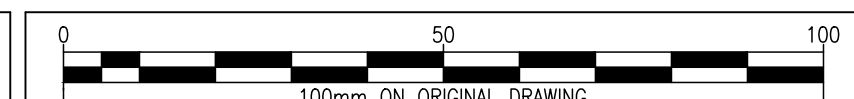
UPGRADING OF SAKHELE CAFE ROAD
MALEKUTU, WARD 37

DRAWING TITLE:

THIRD STREET ROAD LAYOUT, LONG SECTION
AND CROSS SECTION, SHEET 3 OF 4



CITY OF MBOMBELA MUNICIPALITY
P O Box 45,
NELSPRUIT,
1200
Tel: +27(0) 13 759 2181
Fax: +27(0) 13 759 2259



ORIGINAL DRAWING SCALE: 1 : 1250 ORIGINAL DRAWING SHEET SIZE: A1

APPROVED:

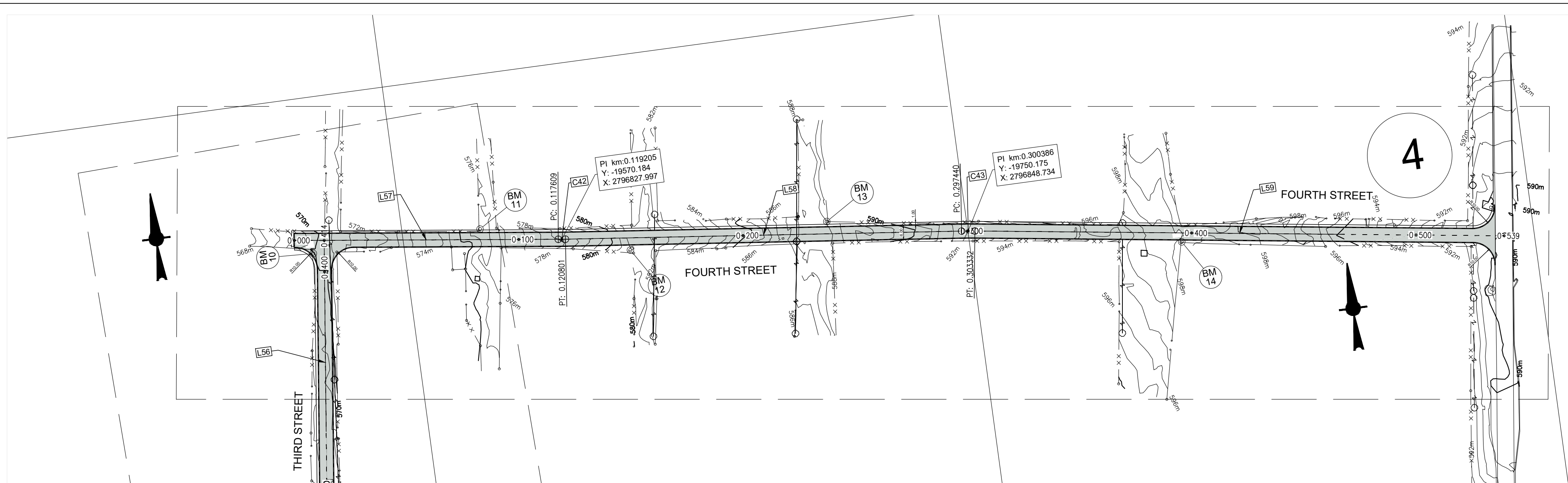
CLIENT OR ASSIGNEE: DATE: CLIENT DRAWING No.: DATE: MLM 213/2020XVIIIIB - 002 MLM 213/2020XVIIIIB - 002

DRAWN: C. TAKAVARASHA CHECKED: F. MURWIRA DESIGNED: F. MURWIRA APPROVED: L. MASHELE

CO-ORDINATE SYSTEM: WGS 84/31 Pr. Eng No: 2018300248

APPROVED ON BEHALF OF HOXANA CONSULTING ENGINEERS:

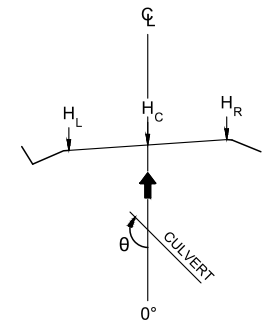
ENGINEER'S SIGNATURE: DATE: DRAWING No.: VERSION: 01



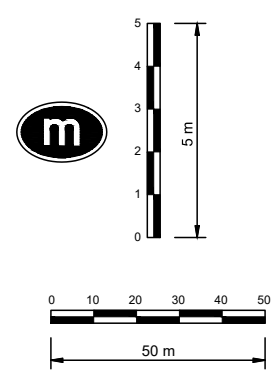
NOTES AND SPECIFICATIONS:

1. THE X AND Y CO-ORDINATES OF OF THE INFORMATION INDICATED ON THIS DRAWING ARE BASED ON THE WORLD GEODETIC SYSTEM 1984 ELLIPSOID (WGS 84).
2. ALL Z CO-ORDINATES SHOWN ON THE DRAWING ARE BASED ON THE LOCAL ORTHOMETRIC HEIGHT SYSTEM AND ON THE DATUM PEG WITH AN ELEVATION AS INDICATED IN WRITING TO THE CONTRACTOR AT THE COMMENCEMENT OF THE PROJECT.
3. ALL MATERIAL AND WORKMANSHIP MUST COMPLY WITH THE REQUIREMENTS OF THE LATEST RELEVANT SABS REQUIREMENTS
4. ALL DIMENSIONS ARE IN METERS (UNLESS OTHERWISE SPECIFIED)
5. AS SHOWN ON THE DRAWING

FOURTH STREET

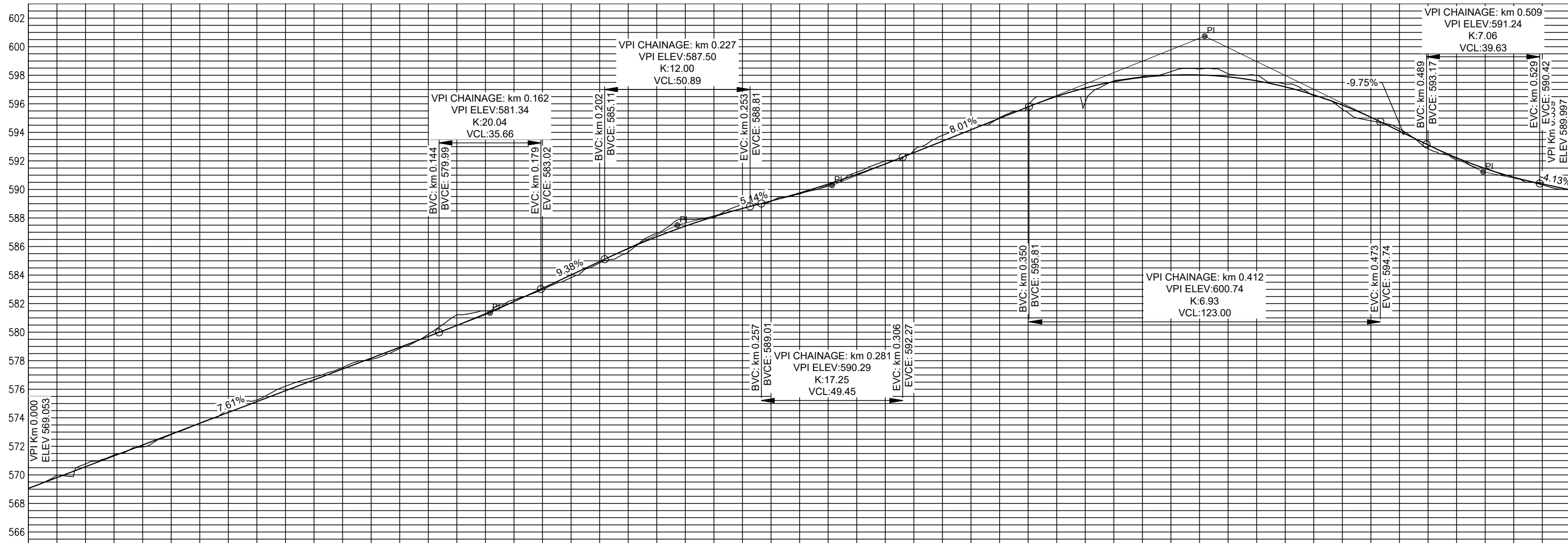


PROFILE OF GRADE LINE



SCALES:
Horizontal 1:1000
Vertical 1:200

DATUM 565.000

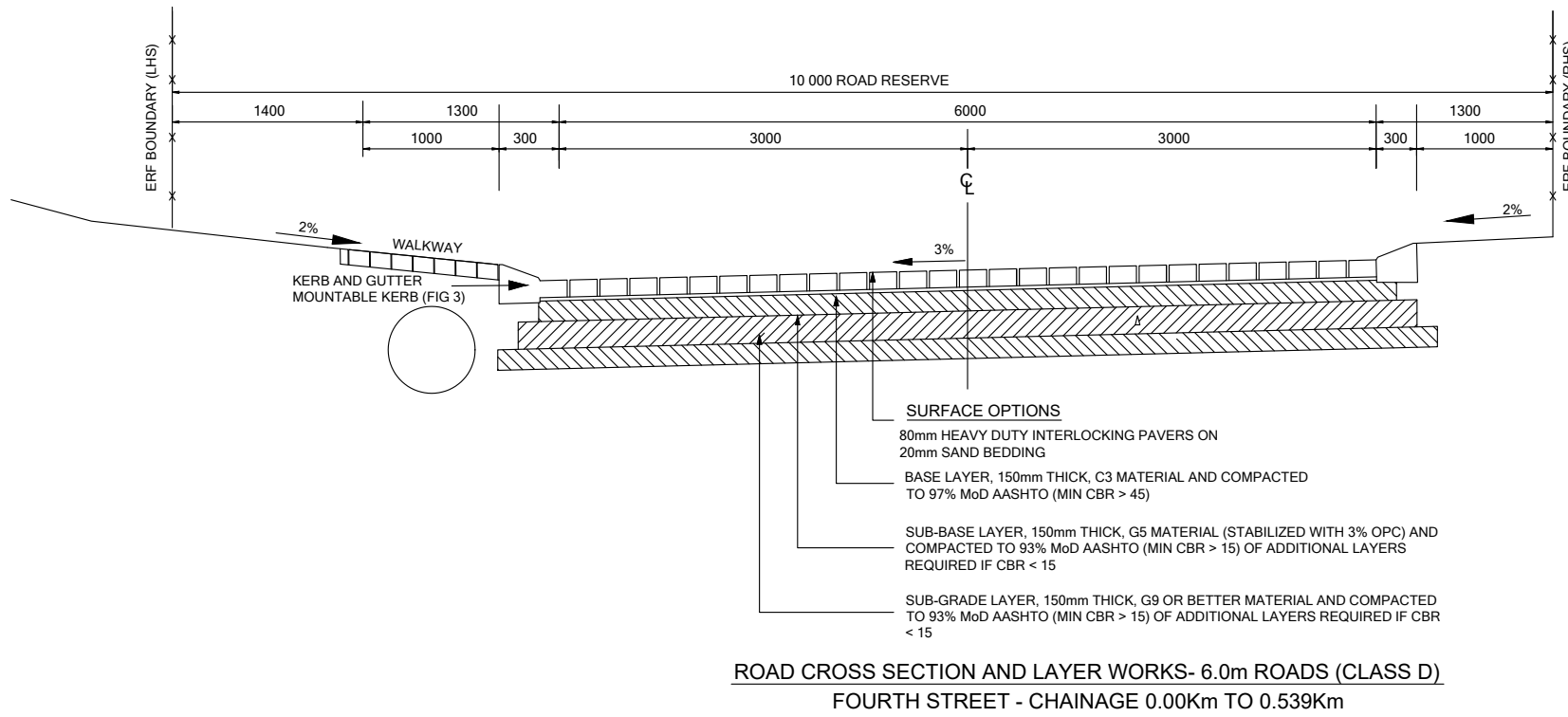


ALIGNMENT DATA: FOURTH STREET

SEGMENT	CHAINAGE	EASTING	NORTHING	RADIUS	D.A. / BEARING	LENGTH
L57	Km 0.000 to Km 0.118	19451.995 19568.602	-2796812.464 -2796827.789		277°29'10"	117.609 m
C42	BC: Km 0.118 EC: Km 0.121	BC: 19568.602 PI: 19570.184 EC: 19571.770	BC: -2796827.789 PI: -2796827.997 EC: -2796828.179	200.000 m	Δ: 0°54'50"	3.192 m
L58	Km 0.121 to Km 0.297	19571.770 19747.248	-2796828.179 -2796848.397		276°34'20"	176.639 m
C43	BC: Km 0.297 EC: Km 0.303	BC: 19747.248 PI: 19750.175 EC: 19753.090	BC: -2796848.397 PI: -2796848.734 EC: -2796849.158	200.000 m	Δ: 1°41'20"	5.892 m
L59	Km 0.303 to Km 0.539	19753.090 19986.602	-2796849.158 -2796883.058		278°15'40"	235.959 m

VERTICAL CURVES GRADE			7.61%		9.38%		5.14%		8.01%		-9.75%		-4.13%	
FINAL ROAD LEVELS			H _L 3.00 m LEFT		H _C 0.00 m ON CL		H _R 3.00 m RIGHT							
SUPER ELEVATION														
GROUND LEVELS AT GRADE LINE														
KILOMETER DISTANCE			0.000		0.010		0.020		0.030		0.040		0.050	
CUT / FILL			0.000		-0.160		-0.200		-0.062		0.134		0.030	
GUARDRAIL LEFT														
KERB LEFT														
SHOULDER LEFT														
GUARDRAIL RIGHT														
KERB RIGHT														
SHOULDER RIGHT														
HORIZONTAL ALIGNMENT			STRAIGHT L=117.609m 277° 29' 12"		R=200.00m L=3.19m Δ=0° 54' 50"		STRAIGHT L=176.639m 276° 34' 20"		R=200.00m L=5.89m Δ=1° 41' 20"		STRAIGHT L=235.959m 278° 15' 37"			

LONGSECTION FOURTH STREET
FROM 0.000 TO 0.539/292



SURFACE OPTIONS
80mm HEAVY DUTY INTERLOCKING PAVERS ON
20mm SAND BEDDING
BASE LAYER, 150mm THICK, C3 MATERIAL AND COMPACTED
TO 97% MOD AASHTO (MIN CBR > 45)
SUB-BASE LAYER, 150mm THICK, C3 OR BETTER MATERIAL AND COMPACTED
TO 97% MOD AASHTO (MIN CBR > 15) OF ADDITIONAL LAYERS
REQUIRED IF CBR < 15
SUB-GRADE LAYER, 150mm THICK, C3 OR BETTER MATERIAL AND COMPACTED
TO 97% MOD AASHTO (MIN CBR > 15) OF ADDITIONAL LAYERS
REQUIRED IF CBR < 15

ROAD CROSS SECTION AND LAYER WORKS- 6.0m ROADS (CLASS D)
FOURTH STREET - CHAINAGE 0.00Km TO 0.539Km

AS-BUILT RECORD

CONTRACT No.	DESCRIPTION	CERTIFIED BY	DATE

CERTIFIED AS-BUILT FOR CONTRACT :

ENGINEER DATE

VERSION/AMENDMENTS

No.	DATE	DESCRIPTION	AUTHORISED BY
01	31 Mar 23	ISSUED FOR TENDERING	L. MASHELE



HOXANA CONSULTING ENGINEERS
Unit No. 1, Ground Floor
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Sonheuwel
1201
Tel: +27(0) 13 010 1261
Fax: 086 663 1259

PROJECT TITLE:

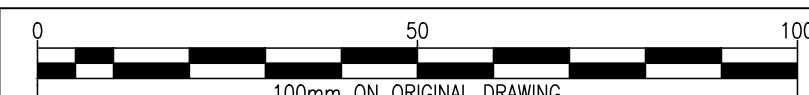
UPGRADING OF SAKHELE CAFE ROAD
MALEKUTU, WARD 37

DRAWING TITLE:

FOURTH STREET ROAD LAYOUT, LONG SECTION
AND CROSS SECTION, SHEET 4 OF 4



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1200
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ORIGINAL DRAWING SCALE: 1 : 1250 ORIGINAL DRAWING SHEET SIZE: A1

APPROVED:

CLIENT OR ASSIGNEE: _____ DATE: _____
CLIENT DRAWING No.: _____ CLIENT REF No.: _____
MLM 213/2020XVIIIIB - 002 MLM 213/2020XVIIIIB - 002

DRAWN BY: C. TAKAVARASHA CHECKED BY: F. MURWIRA

DESIGNED BY: F. MURWIRA APPROVED BY: L. MASHELE

CO-ORDINATE SYSTEM: WGS 84/31 Pr. Eng No: 2018300248

APPROVED ON BEHALF OF HOXANA CONSULTING ENGINEERS:

ENGINEER'S SIGNATURE: _____ DATE: _____
DRAWING No.: _____ VERSION: 01
MLM 213/2020XVIIIIB - 002

NTS