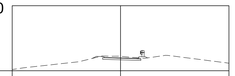
CHAINAGE 60

DATUM = 223



OFFSET	-10.000	-9.603	-3.811	-1.702	-1.171	1.167	2.167	4.155	10.000
ELEVATION	223.185	223.561	223.835	224.359	224.335	224.223	224.147	224.417	223.696

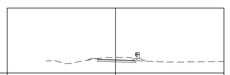
CHAINAGE 130

DATUM = 225

OFFSET	-10.000	-6.485	-5.715	-3.868	-3.668	-2.502	-0.829	0.774	2.551	3.925	5.237	5.947	7.261
ELEVATION	226.247	226.165	226.157	226.148	226.088	226.045	226.012	225.958	225.908	225.910	225.315	225.048	225.082

CHAINAGE 50

DATUM = 223



OFFSET	-6.428	-5.631	-4.677	-3.691	-1.393	-0.784	0.245	1.341	2.213	4.715	5.777	10.000
ELEVATION	224.114	224.154	223.856	223.986	224.393	224.439	224.442	224.455	224.120	224.016	224.012	224.064

CHAINAGE 120

DATUM = 225

OFFSET	-9.000	-6.400	-4.339	-3.209	-1.866	-1.593	1.083	2.617	3.065	3.795	6.742
ELEVATION	226.263	226.314	226.185	225.927	226.252	226.242	226.217	251.979	225.808	225.624

CHAINAGE 40

DATUM = 224

OFFSET	-10.000	-4.355	-2.478	-2.078	-0.353	1.159	2.398	4.664	5.447	9.371	10.000
ELEVATION	225.150	225.127	224.824	224.824	224.768	224.944	224.487	224.281	224.548	224.886	224.991

CHAINAGE 110

DATUM = 225

OFFSET	-9.154	-6.673	-3.749	-2.732	-2.137	-1.433	-0.882	-0.646	1.399	2.696	4.184	4.884	5.907
ELEVATION	225.529	225.598	225.737	225.793	225.937	225.958	225.953	225.955	225.878	225.711	225.831	225.831	225.577

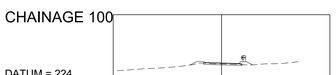
CHAINAGE 30

DATUM = 225

OFFSET	-8.412	-3.782	-2.405	-1.678	-0.821	2.252	3.555	6.650	6.950	7.661	8.691	9.541
ELEVATION	226.778	225.999	225.578	225.569	225.413	225.251	225.320	225.318	225.307	225.148	225.294	225.474

CHAINAGE 100

DATUM = 224



OFFSET	-9.630	-6.929	-5.343	-4.171	-2.618	-1.709	-0.498	-0.098	1.542	2.590	4.053	5.531	7.065
ELEVATION	224.805	225.023	225.094	225.185	225.384	225.531	225.457	225.450	225.408	225.342	225.457	225.462	225.665

CHAINAGE 20

DATUM = 226

OFFSET	-10.000	-8.967	-8.217	-3.127	-1.978	-1.874	0.014	1.864	4.201	10.000
ELEVATION	227.267	227.268	227.168	226.992	226.783	226.532	226.352	226.308	226.178	226.162

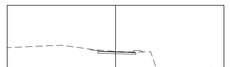
CHAINAGE 90

DATUM = 224

OFFSET	-10.000	-9.653	-4.883	-3.016	-2.176	-1.250	-0.002	1.408	2.583	6.436	7.167
ELEVATION	224.194	224.234	224.415	224.465	224.352	224.002	225.006	224.989	225.023	225.267	225.283

CHAINAGE 10

DATUM = 226



OFFSET	-10.000	-9.000	-6.100	-5.125	-1.963	-0.042	2.058	3.235	4.397	6.003	7.898	8.977	10.000
ELEVATION	228.192	228.192	228.272	228.302	227.905	227.731	227.675	227.713	226.181	226.216	226.250	226.269	226.091

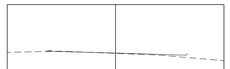
CHAINAGE 80

DATUM = 223

OFFSET	-8.982	-6.715	-5.611	-3.418	-2.698	-1.542	0.156	0.699	2.008	3.784	4.498
ELEVATION	223.535	223.753	223.763	223.955	224.258	224.421	224.522	224.521	224.511	224.594	224.632

CHAINAGE 2

DATUM = 227



OFFSET	-10.000	-5.142	3.546	10.000
ELEVATION	228.889	228.703	228.356	227.825

CHAINAGE 70

DATUM = 222

OFFSET	-10.000	-8.323	-6.797	-4.186	-3.066	-1.389	-0.081	0.672	3.815	3.811
ELEVATION	222.863	223.197	223.289	223.574	224.255	224.305	224.336	224.311	224.252	224.253

CHAINAGE 134

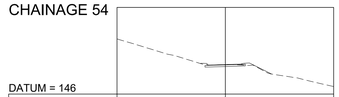
DATUM = 225

OFFSET	-10.000	-8.882	-8.682	-4.665	-1.078	-0.152	3.504	4.905	6.398
ELEVATION	226.119	226.064	226.064	226.063	225.935	225.906	225.916	225.628	225.065

ROAD 1

CHAINAGE 54

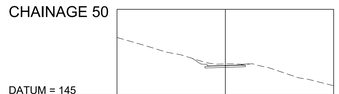
DATUM = 146



OFFSET	-10.000	-8.842	-5.347	-4.712	-2.383	-1.475	-0.271	2.220	3.883	6.656	8.164	10.000
ELEVATION	151.083	150.748	149.680	148.983	148.836	148.665	148.731	148.637	147.952	147.483	147.104	146.893

CHAINAGE 50

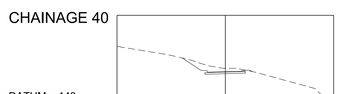
DATUM = 145



OFFSET	-10.000	-7.693	-5.454	-4.133	-2.720	-1.798	-0.814	0.006	0.843	2.554	4.041	6.803	7.598	10.000
ELEVATION	150.407	149.739	149.055	148.811	148.374	148.080	147.930	147.867	147.904	147.904	147.600	146.672	146.552	145.947

CHAINAGE 40

DATUM = 143



OFFSET	-10.000	-5.316	-3.438	-2.193	-1.468	-0.201	0.206	2.717	8.325	8.963	9.941
ELEVATION	148.133	147.389	146.942	146.844	146.112	146.103	146.103	145.762	144.220	143.590	143.711

CHAINAGE 30

DATUM = 141

OFFSET	-10.000	-9.048	-5.125	-4.250	-1.437	-0.217	1.425	2.888	4.216	7.013	8.466	10.000
ELEVATION	146.318	146.065	145.052	144.834	144.192	144.104	143.569	142.578	141.962	141.912	141.903	141.967

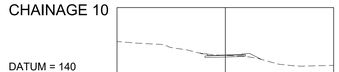
CHAINAGE 20

DATUM = 141

OFFSET	-10.000	-7.282	-5.742	-2.238	-0.993	-0.256	1.567	2.690	3.975	4.790	7.980	10.000
ELEVATION	144.197	143.590	143.256	142.821	142.636	142.537	141.835	141.958	141.885	141.808	141.673	141.556

CHAINAGE 10

DATUM = 140



OFFSET	-10.000	-8.295	-5.683	-5.083	-3.500	-2.568	-1.593	-0.998	-0.113	1.118	2.908	4.911	6.121	6.933	10.000
ELEVATION	142.873	142.729	142.500	142.300	142.002	141.838	141.694	141.606	141.515	141.525	141.331	140.779	140.643	140.592	140.671

ROAD 2

FOR TENDER

GENERAL NOTES

NOTES :

1. PROVE ALL SERVICES PRIOR TO CONSTRUCTION.
2. ALL LEVELS, DIMENSIONS AND SETTING OUT TO BE VERIFIED ON SITE.
3. ALL SETTING OUT TO BE UNDERTAKEN BY A REGISTERED PROFESSIONAL LAND SURVEYOR.
4. ALL SURVEY AND SETTING OUT DATA PROVIDED IS BASED ON (WGS 84).
5. ALL WORK AREAS TO BE REINSTATED (PREMIX, CONCRETE, ETC.)
6. MUNICIPALITY TO EXECUTE ALL CONNECTIONS INTO MUNICIPAL LINES.
7. UNLESS OTHERWISE AGREED WITH ENGINEER, CONTRACTOR TO SUPPLY ENGINEER WITH RESULTS OF COMPACTION TESTS, AND WHEN APPLICABLE, PERCENTAGE STABILIZATION TESTS ON BACKFILL.
8. ALL WORKS IN ACCORDANCE WITH UMNGENI LOCAL MUNICIPALITY SPECIFICATIONS,SANS 1200 AND COTO 2020.
9. THE ENGINEER REQUIRES 24 HOURS NOTICE FOR ALL INSPECTIONS.
10. THIS DRAWING IS FOR INFORMATION PURPOSES IN ORDER TO ASSIST THE CONTRACTOR FOR THE SETTING OUT AND CONSTRUCTION OF THE WORKS. IT MUST BE NOTED THAT SITE CONDITIONS MAY CHANGE ON SITE AND CONSTRUCTION OF WORKS MAY BE AFFECTED. THE CONTRACTOR IS TO TIMEOUSLY INFORM THE ENGINEER OF ANY CHANGES ENCOUNTERED ON SITE PRIOR TO UNDERTAKING ANY WORK.

MATERIAL COMPLIANCE TESTING :

1. RESULTS OF COMPACTION AND CBR TESTS ON INSITU SUB-BASE MATERIAL AND FILLED SUB-BASE MATERIAL MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE THE UPPER LAYER WORKS ARE IMPORTED TO THE SITE AND PLACED.
2. CONCRETE CUBE TEST RESULTS FOR 7 AND 28 DAYS FOR EACH SEPERATE CONCRETE ITEM TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
3. PRIOR TO IMPORTING ANY MATERIAL ONTO SITE, MATERIALS CLASSIFICATIONS AND OR ASPHALT MIS DESIGNS AND OR CONCRETE FOR THE ALL REQUIRED MATERIALS ARE TO BE FIRST SUBMITTED TO THE ENGINEER FOR APPROVAL.
4. ALL MATERIALS TESTING ARE TO BE UNDERTAKEN BY AN ACCREDITED SANAS ACREDITED LABORATORY.

FREQUENCY OF TESTS :

1. CBR TESTS 1 PER 50m².
2. COMPACTION TESTS 1 PER 50m² NOTE : COMPACTION TESTS WILL BE REQUIRED FOR EACH OF THE VARYING LAYER THAT IS INSITU OR IMPORTED AND COMPACTED IN PLACE.

RETAINING WALL :

1. ALL LEVELS AND DIMENSIONS TO BE CHECKED ON SITE.
2. ALL CONCRETE WORK IS TO COMPLY WITH SANS 1200G.
3. CONCRETE GRADE: - FOUNDATION 25 / 19
4. ALL FOUNDATION EXCAVATIONS ARE TO BE INSPECTED BY THE ENGINEER PRIOR TO CASTING OF CONCRETE.
5. ALL REINFORCING FIXING IS TO BE INSPECTED BY THE ENGINEER PRIOR TO CASTING OF CONCRETE.
6. SIX CONCRETE CUBES TO BE TAKEN PER BATCH. THREE CUBES TO BE TESTED AT SEVEN DAYS, THE REMAINDER AT TWENTY EIGHT DAYS. THE RESULTS ARE TO BE FORWARDED TO THE ENGINEER FOR REVIEW AND APPROVAL.
7. SET BOTTOM ROW OF BLOCKS IN WET CONCRETE.
8. ALL BACKFILL TO BE COMPACTED TO 93% MOD AASHTO DENSITY
9. STORM WATER BEHIND THE TOP OF THE WALL TO BE MANAGED IN SUCH A MANNER AS TO OBVIATE SCOUR BEHIND OR OVER - TOPPING OF THE WALL.

SIDEWALKS :

1. ALL LEVELS, DIMENSIONS AND SETTING OUT DETAILS TO BE VERIFIED BY CONSULTANT AND CONTRACTORS ON SITE PRIOR TO CONSTRUCTION.
2. THE POSITIONS OF DRIVEWAY ACCESSES ARE TO BE DETERMINED IN CONSULTATION WITH THE LOCAL COMMUNITY / RESIDENTS AS EXACT POSITIONS MAY VARY ONSITE.
3. CONCRETE WEDGES ACCORDING TO CIVIL ENGINEERS DETAILS AND SPECIFICATIONS MAY BE USED IN PLACE OF SURFACED BELL-MOUTHS FOR ACCESSES SERVING SINGLE RESIDENTIAL PROPERTIES.
4. EXISTING ROAD SIGNS, SERVICES AND FENCING AFFECTED BY CONSTRUCTION ARE TO BE REMOVED/RELOCATED ON INSTRUCTION BY THE CIVIL ENGINEER.
5. NEW FILLS AND EXPOSED CUTS ARE TO BE TOP-SOILED AND VEGETATED IMMEDIATELY AFTER CONSTRUCTION TO PREVENT EROSION.

KERBS :

1. ALL CAST IN SITU CONCRETE IS TO BE GRADE 20 / 19.
2. THE SURFACES OF THE CAST IN SITU CHANNEL / FILLET ARE TO HAVE A STEEL FLOAT FINISH.
3. EXPANSION JOINTS TO BE FORMED THROUGH THE KERBING, CHANNEL / FILLET AND FOUNDATIONS AT INTERVALS NOT EXCEEDING 18.0m.
4. CONTRACTION JOINTS TO BE FORMED THROUGH THE CHANNEL / FILLET AT 20m INTERVALS.
5. WHERE KERB RADIUS IS LESS THAN 25m THE KERB LENGTH SHALL BE 300mm. WHERE THE KERB RADIUS IS LESS THAN 2m THE KERBING SHALL BE CAST IN SITU.
6. PRECAST KERBS ARE TO BE LAID WITH A 13mm GAP BETWEEN KERBS, WHICH SHALL THEN BE FILLED WITH A CEMENT MORTAR.
7. EXTRUDED KERBS.

a) ASPHALT KERB:
1. ASPHALT TO COMPLY WITH THE REQUIREMENTS OF SANS.
b) CONCRETE KERB:
1. THE CONCRETE IS TO HAVE A CUBE STRENGTH OF 20MPa AT 28 DAYS.
2. THE CONCRETE MIX DESIGN IS TO BE APPROVED BY THE ENGINEER.
3. CONTRACTION JOINTS TO BE FORMED AT 2.0m INTERVALS.
4. EXPANSION JOINTS ARE TO FORMED AT 6.0m INTERVALS ON STRAIGHTS AND 2.0m INTERVALS WHERE THE KERB RADIUS IS LESS THAN 50m.

SCALE (mm)

No.	REFERENCE DRAWINGS
631/RICH/904	TYPICAL DRY STACK RETAINING WALLS
631/RICH/903	TYPICAL DETAILS
631/RICH/902-3	ROADS CROSS SECTIONS
631/RICH/902-1	FOOTPATHS CROSS SECTIONS
631/RICH/901-3	ROADS LONG SECTIONS
631/RICH/901-2	ROADS LONG SECTIONS
631/RICH/901-1	FOOTPATHS LONG SECTIONS
631/RICH/900	ROADS & FOOTPATHS LAYOUT & DETAILS

REV	DESCRIPTION	BY	DATE
T1	ISSUED FOR TENDER	Y.R.	11/02/2026

Professional person : L Singh — Registration : 201370301

CLIENT

ETHEKWINI MUNICIPALITY

PROJECT

eTHEKWINI: PROVISION OF INCREMENTAL SERVICES TO INFORMAL SETTLEMENTS: RICHMOND FARM B

DETAILS

ROADS 1 & 2
CROSS SECTION

MAP AFRICA CONSULTING
SABS ISO 9001 CESA
SUITE GR01A,GROUND FLOOR BUSINESS PARTNERS CENTRE, 23 JAN HOFMEYR ROAD, WESTVILLE
e-mail : admin@mapafrica.co.za
website : www.mapafrica.co.za
FAX (031) 3092929 TEL. (031) 3095831

DESIGNED	L.S	COPYRIGHT RESERVED	SCALES AS SHOWN
DRAWN	Y.R.		
APPROVED	L.S	PL DATE 11/02/2026	

CONTRACT No. 4V-34029

DRAWING No. 631/RICH/902-2 REV T1