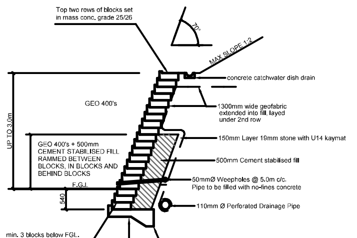
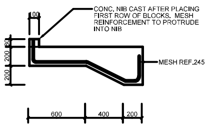

Top two rows of blocks set in mass conc. grade 25/26
70°
MAX SLOPE 1:2
concrete catchwater dish drain
GEO 400's
1300mm wide geofabric extended into fill, layed under 2nd row
UP TO 3.0m
150mm Layer 19mm stone with U14 kaymat
GEO 400's + 500mm CEMENT STABILISED FILL RAMMED BETWEEN BLOCKS, IN BLOCKS AND BEHIND BLOCKS
500mm Cement stabilised fill
50mmØ Weepholes @ 5.0m c/c. Pipe to be filled with no-fines concrete
F.G.L
540
110mm Ø Perforated Drainage Pipe
min. 3 blocks below FGL. Bottom rows of blocks set in mass conc. grade 25/26
BASE TYPE B
Underside foundation compacted to 95% Mod. AASHTO

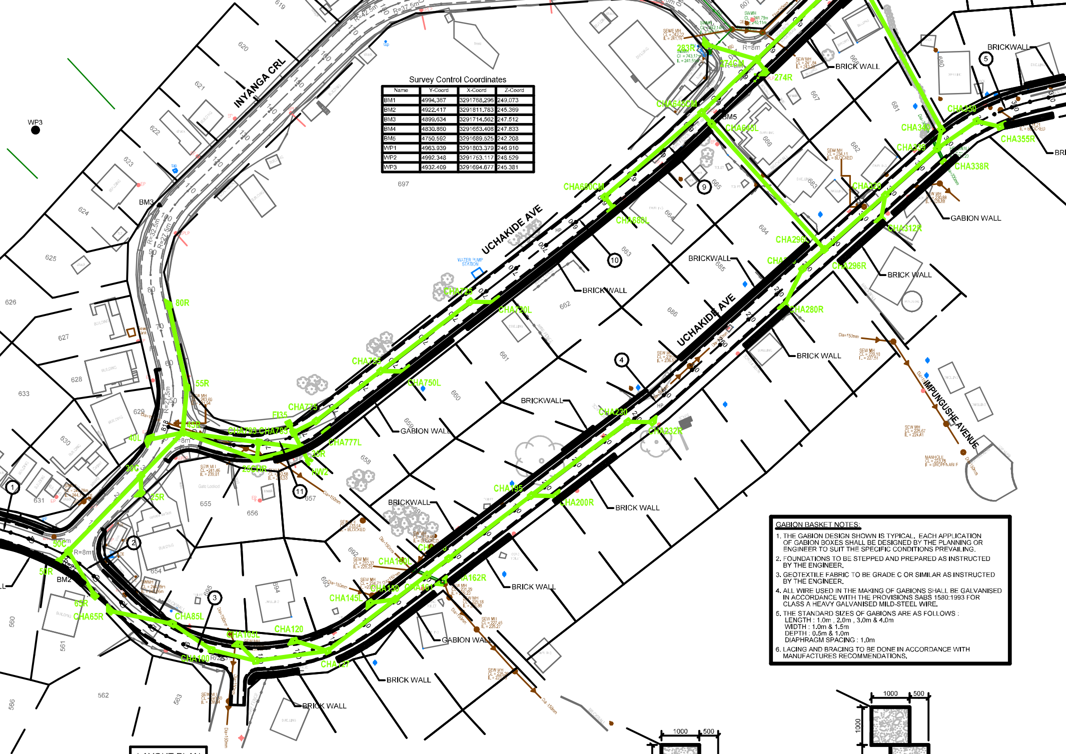
TYPICAL WALL 2.0m TO 3.0m HIGH
Scale 1 : 50


CONC. NIB CAST AFTER PLACING FIRST ROW OF BLOCKS. MESH REINFORCEMENT TO PROTRUDE INTO NIB
100
MESH REF.245
600
400
200

BASE TYPE B
1 : 20

RETAINING WALL NOTES :

1. BLOCK TYPE : GEOLOK BLOCKS OR SIMILAR APPROVED BLOCKS TO BE SANS:508:2012 CERTIFIED.
2. ALL FOUNDATION TRENCHES TO BE APPROVED BY THE ENGINEER ON SITE PRIOR TO CASTING OF CONCRETE.
3. BOTTOM ROW OF BLOCKS TO BE PLACED WHILE THE BASE CONCRETE IS STILL WORKABLE.
4. FILL BEHIND WALL TO BE COMPACTED TO 95% Mod. AASHTO AND AS PER PART DD OF eTHEKWINI'S STANDARD ENGINEERING SPECIFICATIONS (YELLOW PAGES). BENCHING OF EXISTING AND/OR CUT SLOPES MAY BE REQUIRED WHERE NECESSARY.
5. CONCRETE IN WALL BASE - GR. 25/26 OR AS SPECIFIED
6. CEMENT STABILISED FILL- 12:1 CLEAN COARSE SAND : CEMENT , WELL RAMMED BETWEEN BLOCKS, IN BLOCKS AND 500mm BEHIND BLOCKS AS DETAILED.
7. MINIMUM OF 8 BLOCKS TO BE LAID PER SQ M. (OR AS PER THE MANUFACTURES SPECIFICATION).
8. CONTRACTOR TO MAKE ALLOWANCE FOR +/- 73mm "STEP BACK" WITH EACH 200mm STEP UP WHEN SETTING OUT THE BASE. (OR AS PER THE MANUFACTURES SPECIFICATION).
9. CONTRACTOR TO REFER TO DETAILED SURVEY DRAWINGS FOR THE LOCATION OF SERVICES, PROPERTY BOUNDARIES ETC.
10. LEVELS AND DIMENSIONS INDICATED ON THIS DRAWING ARE ONLY A GUIDE AND THESE NEED TO BE CONFIRMED BY THE ENGINEER ON SITE.
11. POSITION OF RETAINING WALLS TO BE CONFIRMED BY ENGINEER ON SITE.
12. ALL RETAINING WALLS AS PER STRUCTURES DEPARTMENT DETAILS (ISSUED SEPARATELY IF REQUIRED).



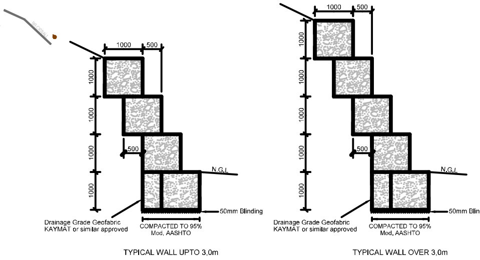
Survey Control Coordinates

Name	Y-Coord	X-Coord	Z-Coord
BM1	4994.367	3291768.296	249.073
BM2	4922.417	3291811.783	245.369
BM3	4899.634	3291714.562	247.512
BM4	4830.860	3291653.408	247.833
BM5	4750.592	3291689.525	242.208
WP1	4963.939	3291803.379	246.910
WP2	4992.348	3291753.117	248.529
WP3	4932.409	3291694.677	245.381

LAYOUT PLAN
Scale 1:500

GABION BASKET NOTES:

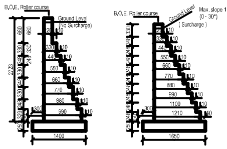
1. THE GABION DESIGN SHOWN IS TYPICAL. EACH APPLICATION OF GABION BOXES SHALL BE DESIGNED BY THE PLANNING OR ENGINEER TO SUIT THE SPECIFIC CONDITIONS PREVAILING.
2. FOUNDATIONS TO BE STEPPED AND PREPARED AS INSTRUCTED BY THE ENGINEER.
3. GEOTEXTILE FABRIC TO BE GRADE C OR SIMILAR AS INSTRUCTED BY THE ENGINEER.
4. ALL WIRE USED IN THE MAKING OF GABIONS SHALL BE GALVANISED IN ACCORDANCE WITH THE PROVISIONS SABS 1580:1993 FOR CLASS A HEAVY GALVANISED MILD-STEEL WIRE.
5. THE STANDARD SIZES OF GABIONS ARE AS FOLLOWS :
   LENGTH : 1.0m , 2.0m , 3.0m & 4.0m
   WIDTH : 1.0m & 1.5m
   DEPTH : 0.5m & 1.0m
   DIAPHRAGM SPACING : 1.0m
6. LACING AND BRACING TO BE DONE IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.


1000
500
N.G.L
50mm Blinding
Drainage Grade Geofabric KAYMAT or similar approved
COMPACTED TO 95% Mod. AASHTO

TYPICAL WALL UPTO 3.0m

TYPICAL WALL OVER 3.0m

TYPICAL DETAILS OF GABION RETAINING WALLS OF VARIOUS HEIGHTS
Scale 1 : 50

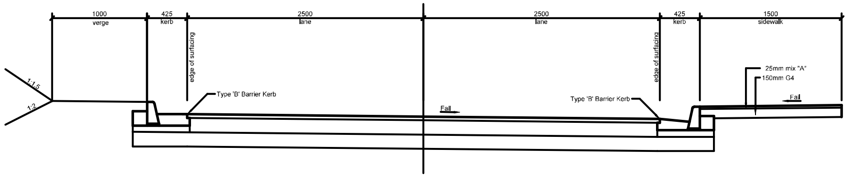


VERTICAL BRICK RETAINING WALL
Scale 1 : 50

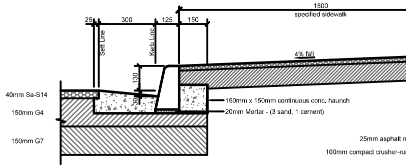
VETICAL RETAINING WALL NOTES:

1. Brickwork to be in English Bond grouted up solid.
2. Weepholes consisting of 75mm Dia. A.C. pipes are to be provided at 1250 cts. hor. & 900 cts vert. Weepholes are to be backed by a 300 X 300 X 300mm no-fines concrete block.
3. Concrete mix. to be Grade 20 / 26.
4. Front face of walls are to consist of first quality red face bricks unless otherwise specified.
5. Face bricks are to be laid in stretcher bond and shall be tied into the rear brickwork with "Brickforce" every 3rd course.
6. Vertical expansion joints are to be formed through the brickwork at +/- 30m centers.

NOTE:
RETAINING WALL DETAILS AS SHOWN ON STANDARD DRAWING No. 38581

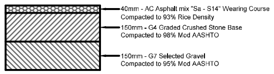


TYPICAL CROSS SECTION
Scale 1 : 20



TYPE 'B' FIG.6 BARRIER KERB CAST IN SITU FILLET/CHANNEL, WITH 1.5m SIDEWALK
Scale 1 : 10

NOTE:
1. Approved weedkiller to asphalted areas to be sprayed on compacted in-situ or imported layer.


40mm - AC Asphalt mix "Sa - S14" Wearing Course Compacted to 93% Rice Density
150mm - G4 Graded Crushed Stone Base Compacted to 98% Mod AASHTO
150mm - G7 Selected Gravel Compacted to 95% Mod AASHTO

PAVEMENT DESIGN LAYERS
Scale 1 : 10

STORMWATER DRAINAGE SCHEDULE

Name	Y	X	Cover	Inlet	Depth	Length	Slope	type	Size	Type
CHA777L	4855.773	3291774.821	240.814	239.125	1.689	7.427	0.500 %	100D Concrete	450 mm	S2
35R	4862.115	3291778.685	240.829	239.088	1.741	3.679	51.534 %	100D Concrete	450 mm	MH
HW2	4860.434	3291781.957	237.681	237.192	0.489					MH
25R	4904.463	3291790.602	244.255	242.566	1.689	4.434	10.172 %	100D Concrete	450 mm	S2
30C	4904.547	3291786.170	243.804	242.115	1.689	15.918	3.016 %	100D Concrete	450 mm	MH POLY
45R	4893.507	3291774.702	243.180	241.635	1.545	20.317	9.258 %	100D Concrete	450 mm	MH POLY
CHA793	4873.352	3291777.259	241.443	239.754	1.689	11.327	5.881 %	100D Concrete	450 mm	MH POLY
35R	4862.115	3291778.685	240.829	239.088	1.741					MH POLY
CHA50	4923.688	3291806.052	245.910	244.221	1.689	27.598	7.631 %	100D Concrete	450 mm	MH POLY
30C	4904.547	3291786.170	243.804	242.115	1.689					MH POLY
4OL	4902.525	3291776.614	243.370	241.681	1.689	9.218	0.500 %	100D Concrete	450 mm	D3
45R	4893.507	3291774.702	243.180	241.635	1.545					D3
80R	4897.133	3291741.180	245.958	244.269	1.689	22.222	9.000 %	100D Concrete	450 mm	S2
55R	4892.383	3291762.888	243.958	242.269	1.689	11.867	5.343 %	100D Concrete	450 mm	S2
45R	4893.507	3291774.702	243.180	241.635	1.545					S2
25CHR	4873.919	3291781.750	241.561	239.872	1.689	4.526	2.607 %	100D Concrete	450 mm	S2
CHA793	4873.352	3291777.259	241.443	239.754	1.689					S2
CHA65R	4912.545	3291821.930	245.008	243.319	1.689	16.784	8.836 %	100D Concrete	450 mm	S2
CHA85L	4896.112	3291825.344	243.525	241.836	1.689	12.261	13.784 %	100D Concrete	450 mm	S2
CHA100	4885.900	3291832.130	241.835	240.146	1.689	12.074	15.388 %	100D Concrete	450 mm	MH POLY
CHA105	4874.197	3291835.102	239.977	238.288	1.689	19.204	16.507 %	100D Concrete	450 mm	MH POLY
CHA127	4855.178	3291832.450	236.807	235.118	1.689	22.449	15.805 %	100D Concrete	450 mm	MH POLY
CHA150	4837.331	3291818.831	233.259	231.570	1.689	10.604	8.855 %	100D Concrete	450 mm	MH POLY
CHA161	4828.901	3291812.398	232.470	230.631	1.839	4.559	0.500 %	100D Concrete	450 mm	MH POLY
CHA162R	4824.736	3291814.251	232.481	230.608	1.873					MH POLY
CHA105L	4878.434	3291830.688	240.776	239.087	1.689	6.118	13.059 %	100D Concrete	450 mm	S2
CHA105	4874.197	3291835.102	239.977	238.288	1.689					S2
CHA120	4863.857	3291829.739	238.097	236.408	1.689	9.093	14.187 %	100D Concrete	450 mm	S2
CHA127	4855.178	3291832.450	236.807	235.118	1.689					S2
CHA145L	4843.790	3291819.709	234.208	232.519	1.689	6.518	14.559 %	100D Concrete	450 mm	S2
CHA150	4837.331	3291818.831	233.259	231.570	1.689					S2
CHA160L	4832.255	3291810.907	232.770	231.081	1.689	3.670	12.260 %	100D Concrete	450 mm	MH
CHA161	4828.901	3291812.398	232.470	230.631	1.839					MH
CHA232R	4769.320	3291771.964	239.276	237.587	1.689	6.403	4.092 %	100D Concrete	450 mm	S2
CHA230	4775.721	3291771.817	239.014	237.325	1.689	32.213	12.445 %	100D Concrete	450 mm	MH POLY
CHA195	4801.330	3291791.359	235.005	233.316	1.689	27.494	9.635 %	100D Concrete	450 mm	MH POLY
CH170	4823.187	3291808.038	232.356	230.667	1.689	7.187	0.500 %	100D Concrete	450 mm	MH POLY
CHA161	4828.901	3291812.398	232.470	230.631	1.839					MH POLY
CHA200R	4794.929	3291791.506	235.838	234.149	1.689	6.403	13.009 %	100D Concrete	450 mm	S2
CHA195	4801.330	3291791.359	235.005	233.316	1.689					S2
CHA398R	4637.109	3291683.574	235.179	233.490	1.689	27.440	4.818 %	100D Concrete	450 mm	S2
CHA425L	4613.406	3291669.749	233.857	232.168	1.689	9.346	0.500 %	100D Concrete	450 mm	D3
CHA429L	4604.834	3291673.472	233.944	232.121	1.823	2.439	29.651 %	100D Concrete	450 mm	MH
CHA426L	4604.768	3291675.910	232.235	231.398	0.837					MH
CHA510L	4639.043	3291632.402	240.439	238.750	1.689	6.377	5.363 %	100D Concrete	450 mm	S2
CHA505	4635.068	3291627.415	240.097	238.408	1.689	21.059	6.971 %	100D Concrete	450 mm	MH POLY
CHA485	4614.504	3291622.877	238.629	236.940	1.689	12.942	6.236 %	100D Concrete	450 mm	MH POLY
CHA472R	4602.049	3291626.392	237.822	236.133	1.689	15.503	10.953 %	100D Concrete	450 mm	MH
CHA460L	4604.648	3291641.675	236.124	234.435	1.689	8.787	12.132 %	100D Concrete	450 mm	S2
CHA450L	4605.408	3291650.429	235.058	233.369	1.689	23.049	5.413 %	100D Concrete	450 mm	S2
CHA429L	4604.834	3291673.472	233.944	232.121	1.823					S2
CHA490L	4619.097	3291627.946	239.061	237.372	1.689	6.840	6.316 %	100D Concrete	450 mm	S2
CHA485	4614.504	3291622.877	238.629	236.940	1.689					S2
CHA645L	4753.568	3291693.046	242.883	241.194	1.689	41.411	15.974 %	100D Concrete	450 mm	MH
CHA296L	4725.918	3291723.873	236.268	234.579	1.689	3.211	7.660 %	100D Concrete	450 mm	MH
CHA296R	4723.782	3291726.272	236.022	234.333	1.689	21.580	9.527 %	100D Concrete	450 mm	MH POLY
CHA320	4707.699	3291711.884	233.966	232.277	1.689	18.406	2.401 %	100D Concrete	450 mm	MH POLY
CHA339	4693.981	3291699.612	233.524	231.835	1.689					MH POLY
CHA280R	4734.280	3291741.046	237.904	236.215	1.689	10.610	10.019 %	100D Concrete	450 mm	S2
CHA290	4729.635	3291731.507	236.841	235.152	1.689	7.853	10.430 %	100D Concrete	450 mm	MH POLY
CHA296R	4723.782	3291726.272	236.022	234.333	1.689					MH POLY
CHA312R	4708.754	3291718.202	234.421	232.732	1.689	6.406	7.103 %	100D Concrete	450 mm	S2
CHA320	4707.699	3291711.884	233.966	232.277	1.689					S2
CHA680L	4779.410	3291715.479	245.279	243.590	1.689	4.002	0.950 %	100D Concrete	450 mm	S2
CHA680CM	4781.939	3291712.377	245.241	243.552	1.689	33.993	7.069 %	100D Concrete	450 mm	MH POLY
CHA645CM	4756.268	3291690.094	242.838	241.149	1.689	20.283	7.347 %	100D Concrete	450 mm	MH POLY
274CM	4741.662	3291676.021	241.468	239.659	1.809	34.500	2.924 %	100D Concrete	450 mm	MH POLY
D338CM	4716.817	3291652.084	240.339	238.650	1.689	4.000	6.800 %	100D Concrete	450 mm	MH POLY
D338	4714.042	3291654.965	240.378	238.378	2.000	44.890	13.919 %	100D Concrete	450 mm	D3
CHA340	4692.861	3291694.544	233.819	232.130	1.689	5.191	5.683 %	100D Concrete	450 mm	MH
CHA339	4693.981	3291699.612	233.524	231.835	1.689					MH
274R	4739.274	3291679.275	241.368	239.679	1.689	4.036	0.500 %	100D Concrete	450 mm	S2
274CM	4741.662	3291676.021	241.468	239.659	1.809					S2
283R	4754.963	3291672.046	242.702	240.113	2.589	13.882	3.272 %	100D Concrete	450 mm	S2
274CM	4741.662	3291676.021	241.468	239.659	1.809					S2
CHA355R	4677.371	3291693.795	234.382	232.693	1.689	6.352	5.715 %	100D Concrete	450 mm	S2
CHA350	4683.542	3291692.292	234.019	232.330	1.689	12.749	3.883 %	100D Concrete	450 mm	MH POLY
CHA339	4693.981	3291699.612	233.524	231.835	1.689					MH POLY
CHA750L	4834.713	3291758.541	242.423	240.734	1.689	6.403	6.528 %	100D Concrete	450 mm	S2
CHA755	4841.115	3291758.434	242.005	240.316	1.689	21.619	5.699 %	100D Concrete	450 mm	MH POLY
CHA775	4858.219	3291771.656	240.773	239.084	1.689	6.677	0.500 %	100D Concrete	450 mm	MH POLY
CHA785	4864.158	3291774.707	240.814	239.051	1.763					MH POLY
CHA720L	4810.978	3291740.192	244.677	242.988	1.689	6.403	6.512 %	100D Concrete	450 mm	S2
CHA725	4817.380	3291740.086	244.260	242.571	1.689	30.000	7.517 %	100D Concrete	450 mm	MH POLY
CHA755	4841.115	3291758.434	242.005	240.316	1.689					MH POLY
FI35	4865.417	3291772.257	241.037	239.348	1.689	2.755	10.794 %	100D Concrete	450 mm	FI
CHA785	4864.158	3291774.707	240.814	239.051	1.763					MH POLY
CHA338R	4692.061	3291703.262	233.561	232.361	1.200					HW

UCHAKIDE AVE CENTRE LINE CURVE DATA DETAILS

Position	Y	X	CH
PI0	4973.608	3291798.640	0
BCC1	4965.948	3291798.107	7.678
PI1	4946.832	3291796.775	26.439
ECC1	4929.419	3291804.776	45.201
BCC2	4925.979	3291806.357	48.987
PI2	4921.406	3291808.458	53.974
ECC2	4917.769	3291811.937	58.960
BCC3	4908.680	3291820.631	71.537
PI3	4877.780	3291850.188	106.913
ECC3	4843.787	3291824.248	142.288
BCC4	4768.276	3291766.627	237.273
PI4	4768.276	3291766.627	237.273
ECC4	4768.276	3291766.627	237.273
BCC5	4694.551	3291700.646	336.212
PI5	4682.973	3291690.285	351.414
ECC5	4667.822	3291686.845	366.617
BCC6	4617.915	3291675.514	417.795
PI6	4603.666	3291672.278	430.414
ECC6	4602.417	3291657.720	443.033
BCC7	4600.911	3291640.175	460.643
PI7	4599.162	3291619.793	474.714
ECC7	4619.127	3291624.253	488.786
BCC8	4697.021	3291641.656	568.600
PI8	4707.971	3291644.103	579.540
ECC8	4716.052	3291651.888	590.479
BCC9	4764.909	3291698.960	658.323
PI9	4764.909	3291698.960	658.323
ECC9	4764.909	3291698.960	658.323
BCC10	4788.617	3291718.344	688.946
PI10	4788.617	3291718.344	688.946
ECC10	4788.617	3291718.344	688.946
BCC11	4857.976	3291771.961	776.613
PI11	4870.242	3291781.443	790.923
ECC11	4885.071	3291776.922	805.232
END	4897.254	3291773.209	817.968

No	Radius	TAN In	TAN out	Deflection
0	0.000	0.000	0.000	0.00.00
1	75.000	19.163	19.163	28.39.56
2	30.000	5.033	5.033	19.02.52
3	50.000	42.760	42.760	81.04.27
4	0.000	0.000	0.000	4.28.49
5	60.000	15.537	15.537	29.02.06
6	20.000	14.612	14.612	72.18.10
7	15.000	20.457	20.457	107.29.59
8	40.000	11.221	11.221	31.20.22
9	0.000	0.000	0.000	4.39.54
10	0.000	0.000	0.000	1.33.47
11	30.000	15.503	15.503	54.39.30
12	0.000	0.000	0.000	0.00.00

Critical Points and Control Coordinates

Name	Y-Coord	X-Coord	Z-Coord
BC16/PT4	4887.806	3291773.475	243.119
BCLU1	4906.952	3291818.824	244.604
BCLU2	4696.218	3291698.783	233.593
BCLU3	4618.469	3291673.076	234.016
BCLU4	4603.384	3291639.947	236.188
BCLU5	4696.475	3291644.096	240.336
BCLU6	4856.447	3291773.939	240.654
BCRU1	4910.408	3291822.437	244.724
BCRU2	4692.883	3291702.509	233.404
BCRU3	4617.362	3291677.952	234.204
BCRU4	4598.402	3291640.375	236.340
BCRU5	4697.566	3291639.217	240.538
BMBC1	4883.551	3291836.145	241.518
BMBC2	4877.293	3291840.851	240.479
BMEC1	4880.273	3291840.221	240.627
BMEC2	4873.354	3291836.993	239.913
EC15/PT3	4889.264	3291778.258	242.925
EC21/PT8	4753.211	3291684.218	242.451
EC8/PT5	4738.075	3291669.648	241.275
ECLU1	4845.303	3291822.260	234.424
ECLU2	4668.376	3291684.407	234.960
ECLU3	4604.907	3291657.504	234.246
ECLU4	4618.565	3291626.689	238.840
ECLU5	4714.317	3291653.689	240.207
ECLU6	4885.800	3291779.314	242.630
ECRU1	4842.270	3291826.235	234.473
ECRU2	4667.269	3291689.283	234.789
ECRU3	4599.929	3291657.975	234.492
ECRU4	4619.655	3291621.810	239.072
ECRU5	4717.786	3291650.088	240.411
ECRU6	4884.230	3291774.565	242.802
ECRU6	4859.505	3291769.983	240.854
PT6	4734.714	3291673.340	241.081
PT7	4749.843	3291687.917	242.262
PTLU1	4769.871	3291764.699	239.241
PTLU2	4763.248	3291700.831	243.797
PTLU3	4787.061	3291720.301	245.538
PTRU1	4766.682	3291768.555	239.057
PTRU2	4766.570	3291697.089	243.845
PTRU3	4790.173	3291716.387	245.592

DRAUGHTING SYMBOLS

DETAIL	Proposed	Existing
CENTERLINE		
WATERMAIN DUCT		
TELKOM CABLE DUCT		
ELECTRIC CABLE DUCT		
ELECTRIC CABLES		
ELECTRIC LIGHT POLE	ELP	ELP
TRAFFIC SIGNAL	TS	TS
CONSUMER DISTRIB. UNIT	CDU	CDU
TELKOM CABLES	TMH	TMH
TELEPHONE POLE	TP	TP
SEWER	S	S
STORMWATER DRAIN	SWD	SWD
STORMWATER INLET		
SCOOP		
KERB AND CHANNEL		
EARTH EMBANKMENT		
WATERMAIN		
VALVE — Valve / Air Valve	V AV	V AV
FIRE PLUG	FP	FP
STANDARD HYDRANT	SH	SH
EXISTING M.H. TO BE CONVERTED TO CATCHPIT		
EXISTING CATCHPIT TO BE CONVERTED TO M.H.		

FOR TENDER PURPOSES ONLY

New Road Area .... m²

Unsurfaced to Surfaced .... km's

AS BUILT

Date .... Sign. ....

eTHEKWINI MUNICIPALITY
ENGINEERING UNIT
ROADS PROVISION DEPARTMENT

PLAN DESCRIPTION	DWG. NO.	
CONTINUED FROM		
CONTINUED ON		
CROSS SECTIONS		
TYPICAL CROSS SECTION		
SURVEY LAYOUT		

REDUCED PLAN USE SCALE BELOW
0 10 20 30 40 50 60 70
70mm ON ORIGINAL PLAN

DRAWN IN ALLYWINDOWS

Revision	Date	Description

NOTE:
No construction work to commence until land and servitude acquisitions have been completed

Acquisitions completed

Date ______ Engineer

NORTH POINT

UNDERGROUND SERVICES CHECKED

SERVICE	DATE	SIGNATURE
S.W.DRAINS		
SEWERS		
WATER MAINS		
G.P.O.CABLES		
ELECTRIC CABLES		
S.A.R. CABLES		
E.S.C. CABLES		
OIL PIPE LINE		

NOTE:
Only underground services affected by new construction work are shown. Care must be taken during excavations for road foundations, trenches etc... to avoid damage to underground services such as sewers, drains, cables, water mains and connections. Wherever possible these must be located before work proceeds.

Contract No
1R-33141

Project Title
UCHAKIDE AVENUE
WARD 45
GRAVEL TO SURFACE

Drawing Title
DIMENSIONS, SETTING OUT
AND SERVICES PLAN
WITH TYPICAL DETAILS

Scales	Reference
AS SHOWN	
Designed: LNJ CLOETE	Date: 14 SEPTEMBER 2026
Checked: B.GOVENDER	Drawn in AllyWindows by: LNJ CLOETE

Manager RD (N)

Deputy Director : RP

Director : Engineering Services

Drawing No 49578

Sheet 01 of 08 Sheets