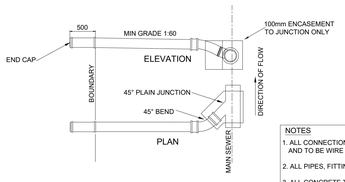
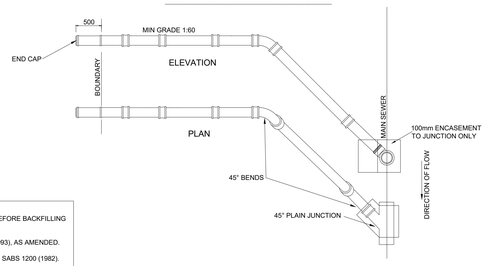
ON GRADE CONNECTION



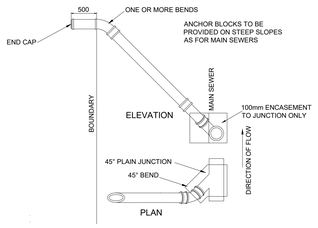
DEPTH DIFFERENCE 1m & LESS



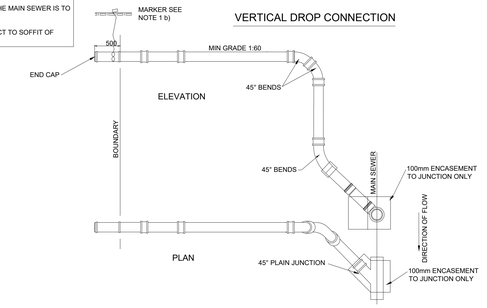
NOTES

1. ALL CONNECTIONS TO BE CAPPED BEFORE BACKFILLING AND TO BE WIRE MARKED.
2. ALL PIPES, FITTINGS TO SABS 559 (1993), AS AMENDED.
3. ALL CONCRETE TO BE 15MPa AS PER SABS 1200 (1982).
4. THE MINIMUM GRADE OF THE SEWER CONNECTION IS TO BE 1 IN 60.
5. IN ALL CASES THE JUNCTION INTO THE MAIN SEWER IS TO BE ENCASED.
6. INVERT OF CONNECTION TO CONNECT TO SOFFIT OF SEWER

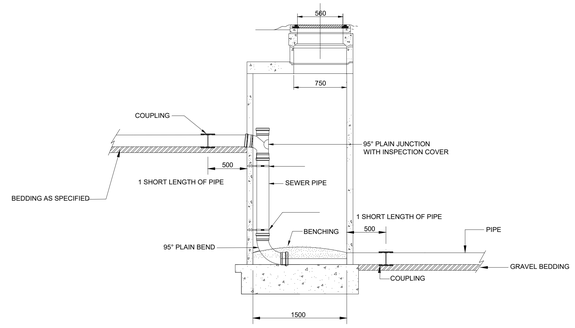
SLOPING DROP CONNECTION



VERTICAL DROP CONNECTION



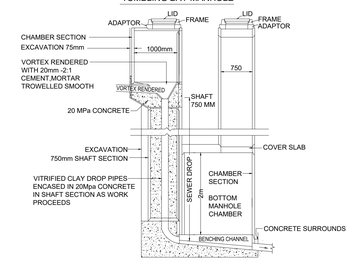
BACKDROP MANHOLE FOR PIPES UP TO Ø300mm



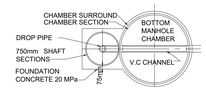
NOTES:

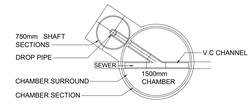
1. PIPES 150mm TO 300mm USE 1500mm PRE-CAST CONCRETE SECTIONS. MIN.
2. PIPES 350mm TO 450mm USE 1750mm PRE-CAST CONCRETE SECTIONS. MIN.

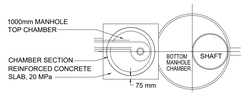
TUMBLING BAY MANHOLE



SECTIONAL ELEVATION
TUMBLING BAY MANHOLE
DROPS OF 3.4m AND DEEPER



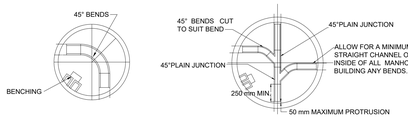


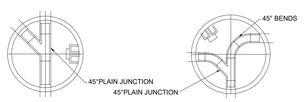


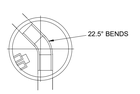
NOTES

1. PRECAST CONCRETE MANHOLES AND SLABS ARE TO COMPLY WITH SABS 1294 (1993)
2. PIPE SECTIONS AND SLABS ARE TO BE BEDDED ON A 2 :1 CEMENT MORTAR GROUT TO FORM A COMPACTED WATER TIGHT JOINT OF APPROXIMATELY 5mm.
3. MANHOLE SHAFTS ARE TO BE PLACED OVER THE LARGEST LANDING ON THE DOWN STREAM SIDE.
4. STEPS TO BE LOCATED OVER LARGEST LANDING ON DOWNSTREAM SIDE.
5. MANHOLE COVER AND FRAMES TO BE HEAVY DUTY PRECAST CONCRETE COVER WITH STEEL LIP RING AND FRAME.
6. THE MAXIMUM PROTRUSION OF PIPES INTO MANHOLES TO BE 50mm.
7. CHANNEL INSERTS BETWEEN STANDARD FITTINGS TO BE 100mm MINIMUM.
8. THE VERTICAL DISTANCE BETWEEN STEP IRONS IS 250mm + or - 12mm. THE HORIZONTAL DISTANCE BETWEEN THE CENTRES OF THE TREADS IS 150mm + or - 12mm.
9. ALL PIPES AND FITTINGS TO BE uPVC HEAVY DUTY CLASS 34 AND COMPLY WITH SABS 791.

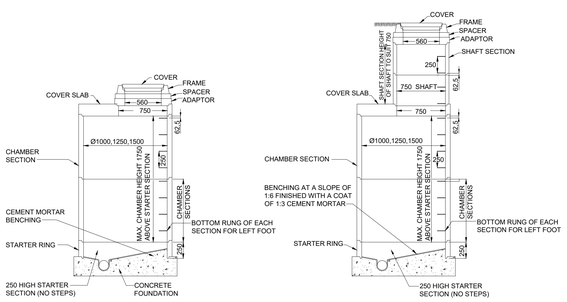
MANHOLE CHAMBER DIAMETERS			
TYPE OF MH STRAIGHT	ANGLE > 45°	SINGLE JUNCTION	DOUBLE JUNCTION
PIPE DIAMETER: 150 200 250 300	150 200 250 300	150 200 250 300	150 200 250 300
1000 1000 1000 1000	1000 1000 1250 1250	1250 1250 1250 1250	1250 1250 1500 1500







TYPICAL PLAN LAYOUT OF MANHOLES
Ø1000 , 1250 AND 1500 CHAMBERS



GENERAL NOTES

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ALL DIMENSIONS, LEVELS, ETC ARE TO BE CHECKED BEFORE ANY WORK IS COMMENCED AND ANY DICREPANCIES NOTED TO BE BROUGHT TO THE ARCHITECT'S ATTENTION.

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GEOTECH INFORMATION

SOIL TYPE: CLAYEY SILT; RESIDUAL ANDESTE

ASSUMED SOIL BEARING CAPACITY: EASBP = 150 kPa

RECOMMENDED FOUNDATION TYPE: CONCRETE RAFT

RECOMMENDED FOUNDATION DEPTH: 600MM

REV. NO.	DATE	DESCRIPTION

DBSA APPROVAL

NAME:.....

SIGNATURE:.....DATE:.....

DBSA APPROVAL

NAME:.....

SIGNATURE:.....DATE:.....

DEPARTMENT OF EDUCATION APPROVAL

NAME:.....

SIGNATURE:.....DATE:.....

DEPARTMENT OF EDUCATION APPROVAL

NAME:.....

SIGNATURE:.....DATE:.....

DEPARTMENT OF EDUCATION APPROVAL

NAME:.....

SIGNATURE:.....DATE:.....

MUNICIPAL APPROVAL

NAME:.....

SIGNATURE:.....DATE:.....

CLIENT

DBSA

PRINCIPAL AGENT

KUMA CONSULTING ENGINEERS (PTY) LTD

COMPETENT CONTACT PERSON:	CONT. No: 0126650614, 078 879 2332
KUDA NYABADZA	FIRM REG No: 2015/200682/07

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NORTH-WEST DEPARTMENT OF BASIC EDUCATION

DISCIPLINE

ARCHITECTURAL

PROJECT NAME

LETLAMORENG DAM RESORT

PROJECT STATUS

STAGE 1-3		STAGE 4		STAGE 5-6	
CONCEPT		TENDER	X	CONSTRUCTION	

DESCRIPTION

LETLAMORENG DAM: SEWER RETICULATION DETAILS

SCALE:

DRAWN:

CHECKED:

NAME OF COMPETENT PERSON: Gabriel K Bushe, Stephen Tshuma

NAME OF COMPETENT PERSON:

REG No: PAT 34983284

SIGNATURE

SIGNATURE

PROJECT NUMBER

DATE: 03 November 2021

DWG No: KUMA-LTL-SEW-DET-01

OCCUPANCY CLASSIFICATION **A3**

REV No: 0

SANS 10400 & XA COMPLIANCE

	Rational Des.		Standard Cal	
CONDUTANCE	Y	N	Y	N
SOLAR HEAT GAIN	Y	N	Y	N
GEOGRAPHICAL ZONE				

NBRs COMPLIANCE

	Yes	No
SITE PLAN	X	
OTHER DRAWINGS	X	

OTHER APPROVALS

	Mark with X		
	Yes	No	N/A
Enviromental Impact Assesment (EIA)		X	
South African Heritage Resources Agency (SAHRA)		X	
Department of Water and Sanitation (DWS)		X	
South African National Roads Agency (SANRAL)		X	
Other			

WATER SUPPLIER

	Yes	No	
MUNICIPALITY		X	MARULENG
BOREHOLE	X		WATER USE LISENCE
PRESSURE			BARS
TANKS	Number	Total Capacity	LITERS
OTHER STORE	Yes	No	Specify below

SANITATION/ SEWER

	Yes	No	
MUNICIPALITY		X	MARULENG
SEPTIC TANKS	X		CAPACITY M3
PIT LATRINES		X	
OTHER			SPECIFY:

SITE INFORMATION

ERF No.	
COVERAGE	***
VILLAGE NAME	HOEDSPRUIT
DISTRICT	MOPANI
COORDINATES	26°18'26.7" S
	25°08'11.9 "E

STAGES

SIPDM	SACAP	Mark with X
0		
1		
2		
3	1	X
4	2	
5	3	
6	4	
7	5	
8		
9	6	

PROJECT TEAM

	COMPETENT CONTACT PERSON	CONTACT No.	REGISTRATION No.	COMPANY NAME
ARCHITECT	GABRIEL K BUSHE	071 059 1714	PAT 34983284	KUMA CONSULTING
Q. SURVEYOR	SIYABULELA LIWANI	078 662 6830	SACQSP 3285	KUMA CONSULTING
STRUCT. ENG	KUDA NYABADZA	078 879 2332	ECSA 201770127	KUMA CONSULTING
CIVIL ENG	BUSISO NYONI	073 470 8728	ECSA	KUMA CONSULTING
MECH. ENG	MICHAEL TSAHA	071 896 4674	ECSA 20140130	KUMA CONSULTING
ELECT. ENG	MICHAEL TSAHA	071 896 4674	ECSA 20140130	KUMA CONSULTING
OHS	RANGARIRAI MUSWERE	083 733 7689	SACPCMP CHSA/ 192/2020	KUMA CONSULTING
CONTRACTOR				