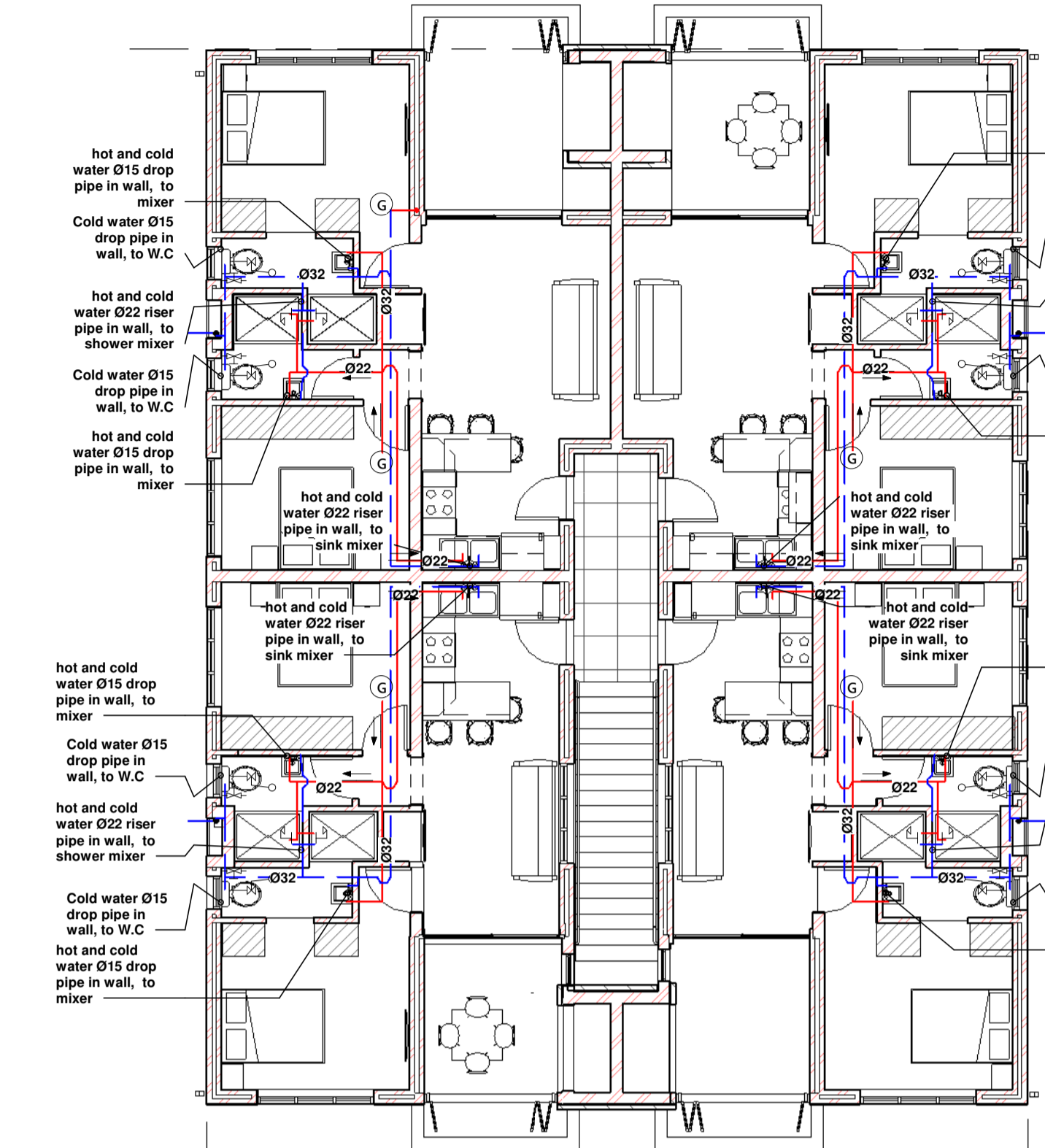
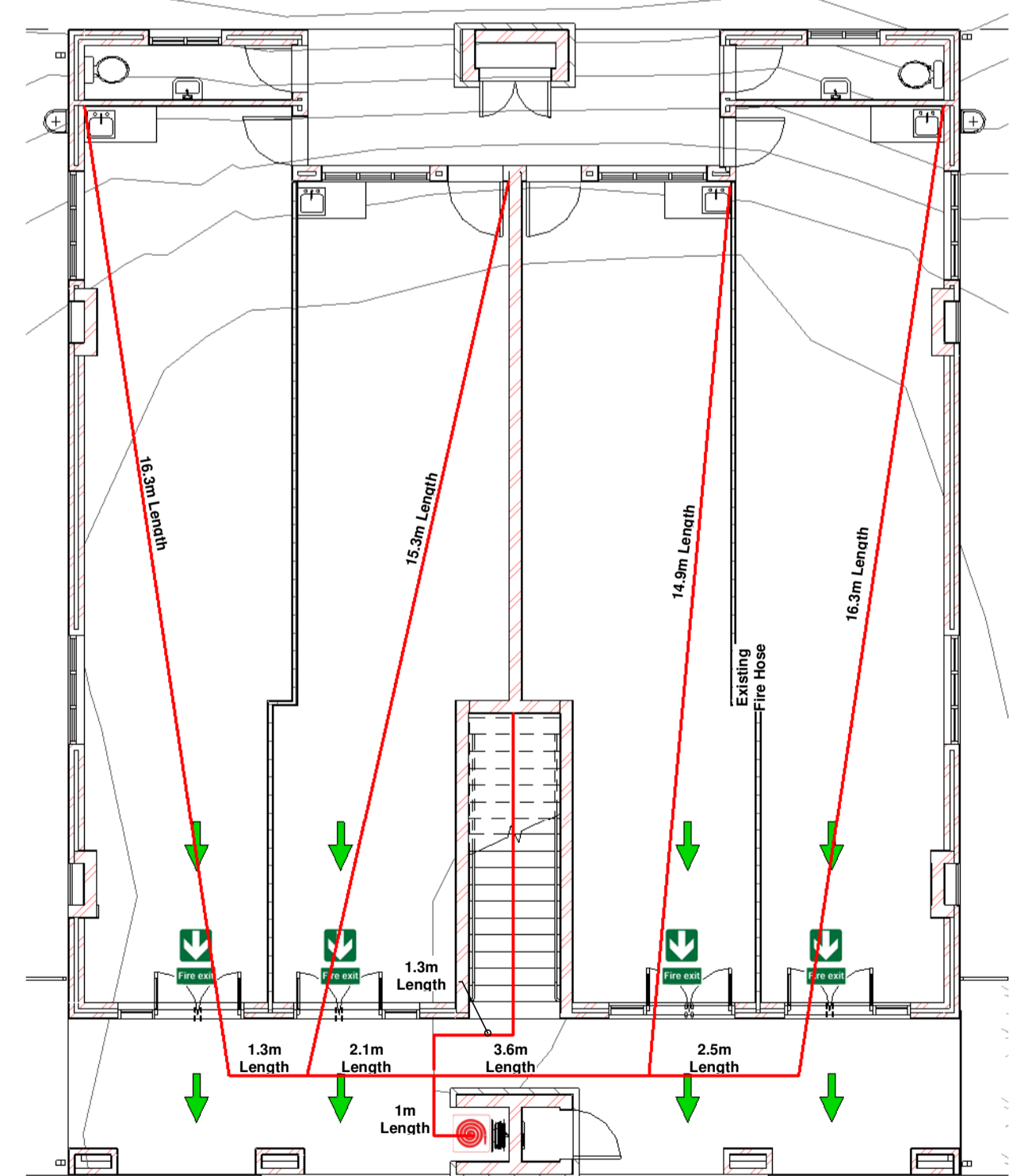


500-Ground Floor Water Layout  
1 : 100

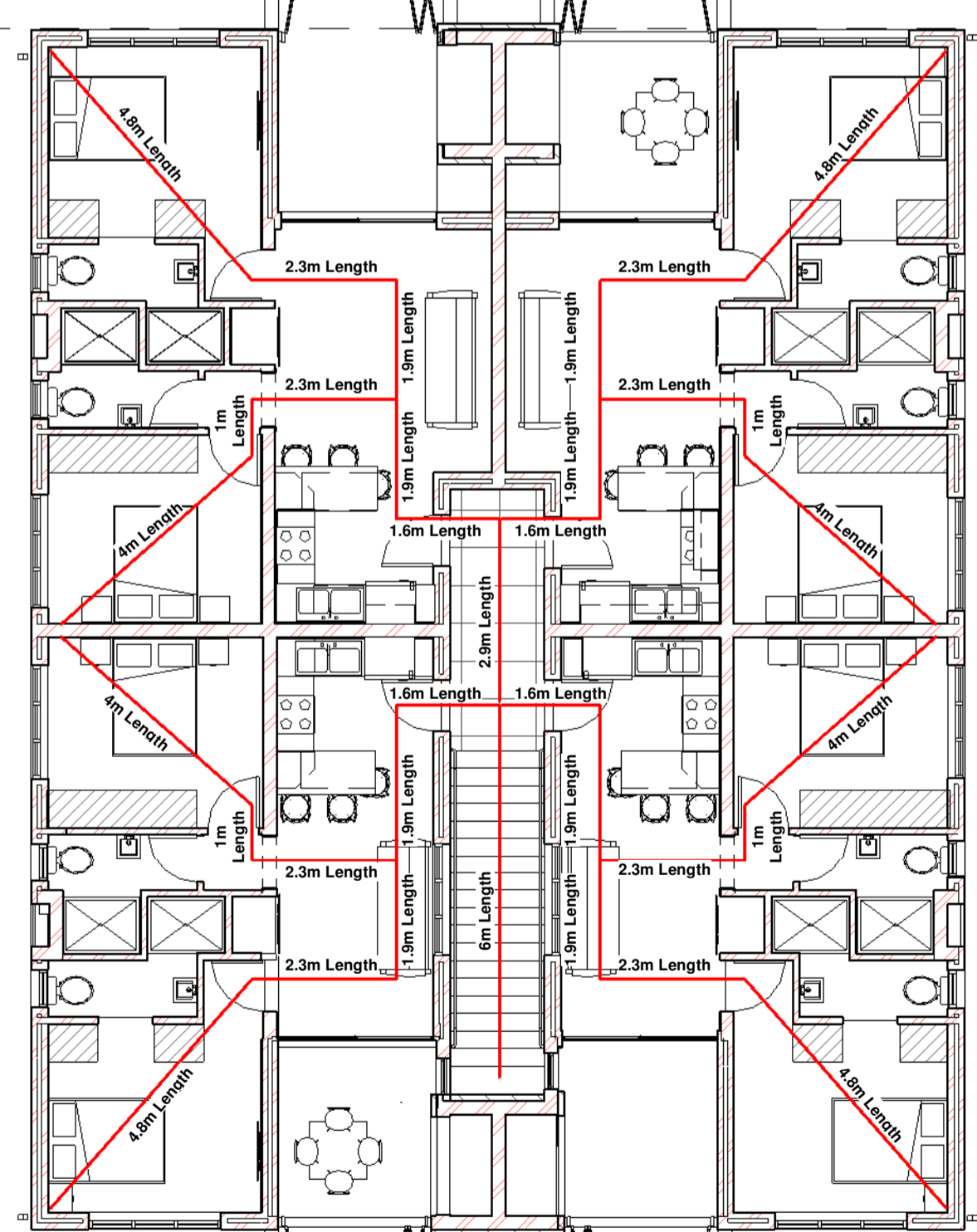
- Any hose reel installed in such building shall comply with the requirements in SANS 543, shall be installed in accordance with SANS 10105-1 and SANS 10400-W, and shall be maintained in accordance with the requirements in SANS 1475-2.
- Where no water supply is available, two 9 kg or equivalent fire extinguishers that comply with the requirements of 4.37 shall be provided in place of each required hose reel.
- Portable fire extinguishers installed in a building shall comply with the requirements in SANS 1910, and shall be installed, maintained and serviced by competent persons in accordance with SANS 1475-1 and SANS 10105-1.
- The extinguishing medium complies with the appropriate requirements of SANS 1151 or SANS 1910, as relevant.
- Drywall to comply with SANS 082
- All work to comply with SANS 10400 of Part T
- The placement, installation and use of machinery, extractor fans, Air Conditioning compressor units, Etc. That radiate noise on he premises are subject to requirements and acoustic screening measures, as determined by an approved acoustic engineer. An acoustic compliance certificate drawn up by said engineer must accompany the building and/or tenant layout plan. No noise will be generated from the premises.
- This premises will Comply to the Tobacco Products control at SANS 83 of 199
- Emergency lighting required.



501-First Floor Water Layout  
1 : 100



502-Ground Floor Fire Layout  
1 : 100



503-First Floor Fire Layout  
1 : 100

**NOTE**

- All drainage to be in accordance with local building regulations
- Adequate access to be provided for inspection testing and maintenance
- All drainage to have access every 25m
- Long radius bends to be used at base of stacks
- Deep seal traps to be used throughout
- vent pipes to rise throughout their lengths and discharges at atmosphere
- Manholes or prodding eyes to be installed at all change of drainage direction
- All waste fittings to be provided with anti-Vac traps with integral vent valves as per NBR P.P. 18.5
- Minimum fall for 100mm drains to be 1:60 fall; and for 160mm drains to be 1:200 fall.
- All waste pipes longer than 6m to increase one nominal pipe size to a max. of 10m to omit vent pipes as per NBR P.P. 18.4
- All relevant details, levels, dimensions must be checked on site before commencement of work

Cold Water Reticulation Specification  
 Ø56 to be H.D.P.E Plasson type material to be used. SANS approved and installed strictly in accordance to manufacturers requirements

Hot and Cold water pipe specification  
 Ø40 to Ø15 to be galvanized steel pipe material to be used. SANS approved and installed in strict accordance to manufacturers requirements.

Both Hot water flow return and cold water to be insulated with Thermalflex preformed pipe insulation  
 CW zip lock all elbows to be neatly taped with adhesive tape supplied by manufacturer.

**Water Reticulation Symbols acc to SANS 10252-1**

FLOAT VALVE	
MIXER-2 MANUAL CONTROLS	
NORMAL DIRECTION FLOW	
PIPE CARRYING COLD WATER	
PIPE CARRYING HOT WATER	
PIPE CARRYING HOT RETURN WATER	
PIPE CROSSING NOT COECTED	
RISER PIPE (PLAN VIEW)	
TEMPERATURE AND PRESSURE SAFETY VALVE	
SHOWER HEAD	
STORAGE WATER HEATER	
STOPCOCK	
STRAINER	
IAP- EXTERNAL	
TAP- INTERNAL	
VACUUM RELIEF VALVE	
WATER METER	

**HOT WATER SYSTEMS**  
 CALCULATED AS PER SANS 10252-1:2004  
 HOT WATER SYSTEM TO BE ENDORSED BY SPECIALIST

TYPE OF ACCOMMODATION: DWELLING HOUSE - HIGH RENTAL: 115-140L/CAPITA/DAY

ASSUMED WATER CONSUMPTION: 115L PER DAY

NO. OF PERSONS PER UNIT: 4

ASSUMED DAILY HOT WATER CONSUMPTION: 460 L

50% OF DAILY HOT WATER CONSUMPTION: 230 L

**INSULATION REQUIREMENTS**

INTERN DIAMETER OF HOT WATER SERVICE PIPES: LESS THAN 80mm

MINIMUM REQUIREMENT= R-VALUE OF PIPE INSULATION: 1.0 (AS PER SANS 204 (4.5.2))

**HOT WATER VESSELS/TANKS**

MINIMUM REQUIREMENT R-VALUE FOR VESSEL/TANK: 2.0 (ADDITIONAL INSULATION TO MANUFACTURER'S INSULATION MAY BE REQUIRED)

HOT WATER SYSTEM	TYPE	ROOM TO SERVE
GEYSER A	250L SOLAR	UNIT 1
GEYSER B	250L SOLAR	UNIT 2
GEYSER C	250L SOLAR	UNIT 3
GEYSER D	250L SOLAR	UNIT 4
GEYSER E	100L SOLAR	SHOPS

**CONCLUSION**  
 THE DESIGN COMPLIES WITH THE REQUIREMENTS OF SANS 10400-XX:2011 AND SANS 10252-1:2004 FOR HOT WATER CALCULATION

**DESIGN FLOW RATE**

FIXTURE	QUANTITY	FLOW as per Table 3	COLD WATER $Q_p = (\sum Q)^n$
SHOWER:	4	15l/min	$Q_p = (310) N=0.7$ (as per Table 4) $Q_p = 55.4l/min$
CISTERN:	6	5l/min	
H.W.B MIXER:	6	10l/min	<b>HOT WATER</b> $Q_p = (\sum Q)^n$ $Q_p = (280) N=0.7$ (as per Table 4) $Q_p = 51.6l/min$
BATH MIXER:	0	25l/min	
SINK	8	20l/min	
DISH WASHER	0	15l/min	
PREP	0	10l/min	
W.MACHINE	0	15L/min	
W.T	0	20L/min	

Local Authority maximum Flow provided is 833.06 L/ Per Minute  
 Local Authority minimum Flow provided is 721.45 L/ Per Minute

ALL PIPES FOR HOUSEHOLD WATER DISTRIBUTION INSIDE THE BUILDING WALL SHALL BE HARD DRAWN CLASS 'O' COPPER TUBING ACCORDING TO SABS 460. THESE PIPES SHALL NOT BE BENT.  
 ALL PIPES INSTALLED UNDERGROUND SHALL BE CLASS 16 HDPE PIPES WITH COMPRESSION FITTINGS TRENCHED WITH 800mm COVER.  
 PROPER ALLOWANCE SHALL BE PROVIDED TO ALLOW FOR FREE MOVEMENT PIPES SHALL BE SUPPORTED AS FOLLOWS

TUBE SIZE	VERTICAL PIPES m	HORIZONTAL PIPES m
15	2.0	1.5
22	2.5	2.0
28	2.5	2.0
38	3.0	2.5
42	3.0	2.5
50/54	3.0	2.5

ISOLATING GASKETS SHALL BE PROVIDED TO SEPARATE DISSIMILAR MATERIALS AT SUPPORT AND JOINTS  
 ALL OUTSIDE PIPE WORK TO BE INSTALLED ACCORDINGLY TO THE REQUIREMENTS OF SABS 1200, LD AND RELATED SECTIONS  
 EACH GEYSER SHALL BE INSTALLED WITH A GALVANIZED METAL DRIP TRAY MANUFACTURED TO PROTRUDE 300mm BEYOND THE EDGE OF THE GEYSER AND 100mm UPSTAND  
 THE EXPANSION RELIEF FROM GEYSER SHOULD BE DISCHARGED VISIBLY FOR EXAMPLE TO ROOF GUTTER.  
 GEYSER INSTALLATION ACCORDING TO SANS 10252-1

W.C: ALL TOILETS MUST HAVE A DUAL FLUSH CAPABILITY  
 FLUSH RATE NOT TO EXCEED 4.5L (1/2 FLUSH) OR 9L (FULL FLUSH)

H.W.B: THE FLOW RATE OF H.W.B TAPS SHOULD NOT EXCEED 6L/MINUTE

BATH: A SHOWER FITTING SHOULD BE PROVIDED WHERE THERE IS NO SHOWER PROVIDED IN BATHROOM

SHOWER: FLOW RATE MUST NOT EXCEED 10L/MINUTE

HOT WATER PIPES: MAY NOT EXCEED 8 RUNNING METERS CONNECTION FITTINGS

BATH	SHOWER	WASH BASIN	SINK AND WT	WC	PREP	WM	DISH
2 X 203	2 X 150	2 X 150	2 X 150	1 X 150	1 X 150	1 X 150	1 X 150
H + C	H + C	H + C	H + C	C	C	C	C

**Note:**

- The design on this drawing is copyright and remains the property of Urban Concept Architects CK 2005/005530/23.
- All work to be carried out in strict accordance with local authority requirements. National Building Regulations and SANS Standards. This drawing may not be scaled. Only figured dimensions and levels may be used.
- All relevant details, levels and dimensions must be checked on site before commencement of work. Any discrepancies to be reported to the architect's office immediately.

No.	Description	Date

SEWER CONNECTION  
 WATER NETWORK CONNECTION  
 ELECTRICAL CONNECTION  
 NATURAL GAS CONNECTION  
 LIGHT BULLARD/ STREET LIGHT  
 GROUND WORK TO BE CUT

**Paul Boshoff**  
 6576

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 ERF 369  
 HOOF STRAAT  
 STRUISBAAI

**DRAWING:**  
 SERVICE PLAN

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