WATER METER NOTES
1) Where not provided by the water meter a strainer shall be installed up-stream from the meter and a non-return valve shall be installed immediately down-stream from the meter.
2) A meter box shall be supplied and installed as the housing for the water meter.
3) The water meter installed shall be capable of supplying a pulse output per 100 litres.
4) Provision shall be made for the discharge of water fro the pipe on which the water meter is installed.
5) For larger developments with ablution facilities, these shall be supplied with individual meters for every bank of 3 or more whb's or showers.

HEAT PUMP NOTES
1) Where heat pumps are selected as alternative water heating sources they must be sized and supplied so as to provide 100% of the hot water demand.
2) A backup water heating system must be installed.

PIPE INSTALLATION NOTES
1) Pipes not installed vertically shall at least be installed with an upward slope of at least 1:100 in the direction of flow.
2) Pipes supplying fittings must ideally come from a riser or dropper. Horizontal chasing must be kept to an absolute
minimum.
3) All pipes must be as hidden as possible. Pipes inside rooms shall be chased into brickwork. Pipes externally shall be buried below ground. External rising pipes shall be chased into brickwork and plastered over where external walls are plastered OR where there is going to be cladding.Where there is facebrick riser pipes shall be chased into the inner skin of brickwork.
4) Pipes underslabs shall be installed inside a 50mm PVC sleeve and laid in a straight run and single length of pipe so as to be easily replaceable in the future.
5) Where pipes cannot be suitably installed then they must be provided with vent pipe at the highest position.
6) During commissioning, the plumber must avoid trapping air in the pipes, avoid airlocks during operation and ensure the removal of air during filling.
7) The plumber must ensure that all pipes are suitably fixed in position and fixings are not loose on completion.
8) The plumber must check that there is no noise or water hammer on completion of the installation.
9) All hot water pipes not chased into walls or encased in floors to be insulated to a minimum r-value of 1.

GENERAL WATER SUPPLY NOTES
1) A certified plumber is to be appointed to install water supply and drainage. The plumber is to issue a completion certificate on completion and obtain the required Local Authority water and drainage completion certificate.
2) Only materials of the highest quality, tested and certified by the SABS are to be used.
3) Where relevant, materials and products installed must comply with the requirements of the JASWIC approved list of materials.
4) The supplied schedule of fittings are generic based on their intended purpose. For a more detailed list of fittings, please review the sanitary schedule by the archi. tect/client.
5) The entire water supply and drainage installation must comply with all the requirements of SANS 10252-1:2012 and/or futue amendments to this standard.
6) The installation shall be so done so as to avoid any induced pressure surges.
7) All rubber components installed must not promote the growth of microbiological bacteria.
8) All hot water pipes shall be insulated with a minimum 1 R-value lagging. This includes surface mounted pipes and pipes in roof voids. The cold water supply pipe shall also be lagged for a minimum of 1m prior to entry of a water heater storage appliance (e.g. geyser)
9) All hot water storage appliances shall be insulated to a minimum 2 R-value.
10) All copper alloy components shall comply wih SANS 6509.
11) Copper tubes recommended in SANS 460 along with methods of flux or soldering in SANS 460 shall be acceptable.
12) Copper pipes shall be protected against corrosion.
13) Fibre Cement pipes shall comply wh SANS 1223.
14) All varieties of plastic pipes must comply with the relevant standards governing plastic pipes. An exhaustive list can be obtained in SANS 10252-1:2012.
15) Any water appliance that is dependent on electrical power must be supplied with a timer, set so as to aviod peak electrical demand times and synchronised with other such devices so that no appliance runs concurrently with any other.
16) Where water pipes are installed close to gas, sewer, treatment plants or any other potential contaminant, this must be brought to the attention of the designer to avoid the contamination of the water supply.
17) All reticulation layouts are indicative. All pipes fittings, appliances and sanitaryware shall be laid out and installed as measured by the plumber on site.

TERMINAL WATER FITTINGS NOTES
1) Non-residential external taps must incorporate
a) a self-closing device
b) a removable handle
c) a locking mechanism to prevent unauthorised use
d) a demand control mechanism per operation
2) All flushing devices and WC cisterns must meet the requirements of SANS 10252-1:2012 clause 5.3.2
3) It recommended that all WC cisterns be installed with dual-flush mechanisms.
4) WC cistern overflows cannot discharge into the WC pan. They must discharge externally to an area that is visible and therefore attract attention for the purpose of repairs and maintenance.
5) Urinals shall not be capable of discharging 2 litres per flush.
6) Taps, mixers and showers shall meet the requirements of all the standards listed in clause 5.3.3 of SANS 10252-1:2012.
7) Float valves shall comply with SANS 752. 8) Plastic ball valves shall comply with SANS 1006.
9) All WC's shall be installed with individual isolating valves.
10) An isolating valve must be installed every 30m along a pipe length.

WATER HEATER NOTES
1) Storage tanks must have safety trays intalled and have a drainage system to safely redirect leaks externally. The exit point of such leak overflow pipe must be easily visible externally to draw attention for the purpose of effecting repairs and maintenance. Diverting such overflow into a roof gutter defeats the purpose and will cause plastic gutters to warp over time.
2) Shall be insulated to a minimum 2 R-value.
3) Must comply with either SANS 151 or SANS 1356, whichever is relevant.
4) All hot water storage heaters must have timers installed and set to disconnect electical supply during peak electrical demand periods. Where 2 or more geysers are installed, the timers shall be set so that the electrical resistance element of only one hot water storage appliance is active at any given time.
5) The recommended temperature setting is 60C. Changing this setting lower than 55C creates a low risk environment for microbiological bacterial growth in the system.
Setting the temperature lower than 45C increases the risk of Legionairres disease.
6) Thermostats, pressure valves and other safety devices shall comply with the detailed provisions of SANS 10252-1:2012.
7) Domestic solar water heaters shall comply with SANS 1307.

ENERGY EFFICIENCY

1. occupancy classification = h4
2. climatic zone 5 = subtropical coastal
3. orientation and shading = north to south
4. external walls

4.1 external wall to have min. r-value of 0.35
ie. >= 140mm thick with 20mm plaster internally and externally.

5. roof assemblies

approved insulation shall be installed so that it abutts, overlaps adjoining insulation or is sealed and shall be installed in accordance with the manufacturers instructions.

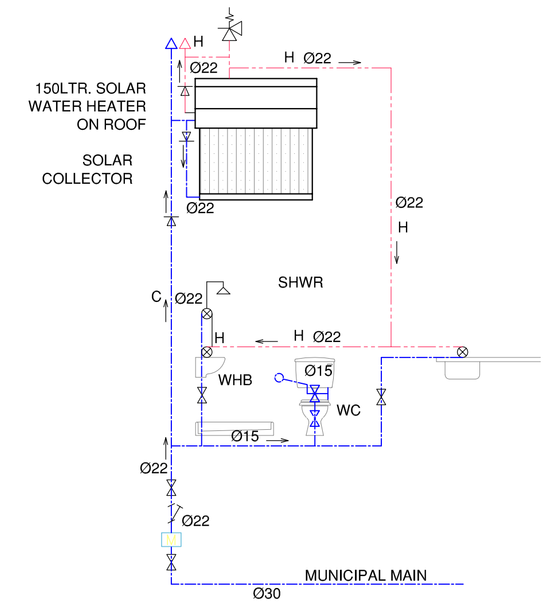
5.1 roof assemblies to have min. r-value of 2.7
5.2 clay tiled roof assemblies:
5.2.1 direction of heat flow - down
5.2.2 r-value of roof covering material = 0.48
5.2.3 r-value of approved insulation = 2.17
5.2.4 r-value of ceiling = 0.05
TOTAL = 2.7

6. hot water supply

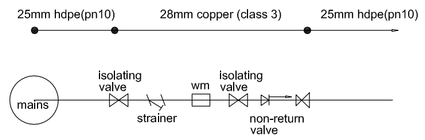
thermal insulation shall be installed in accordance with the manufacturers instructions.

6.1 water installations in buildings shall be in accordance with sans 10252-1 and sans 10254.
6.2 dwelling to be supplied with 100 litre full pressure geyser which is supported across the bath room walls in the roof space above the bathroom.
6.3 a heat pump or solar geyser is also to be installed according to manufacturers instructions as the 50% alternate water heating requirements next to the geyser.
6.4 all hot water service ppes to be max. 22mm dia copper and shall be cladded with an approved insulation with a minimum r-value of 1.00
6.5 dwelling house : total hot water demand : storage vol @ 60° c : heater power
low rental : 80 - 115 l/capita/d : 100 - 150 l/unit : 2-3 kw/unit
medium - high : 115 -140 l/capita/d : 40 - 50 l/capita : 2-5 kw/unit

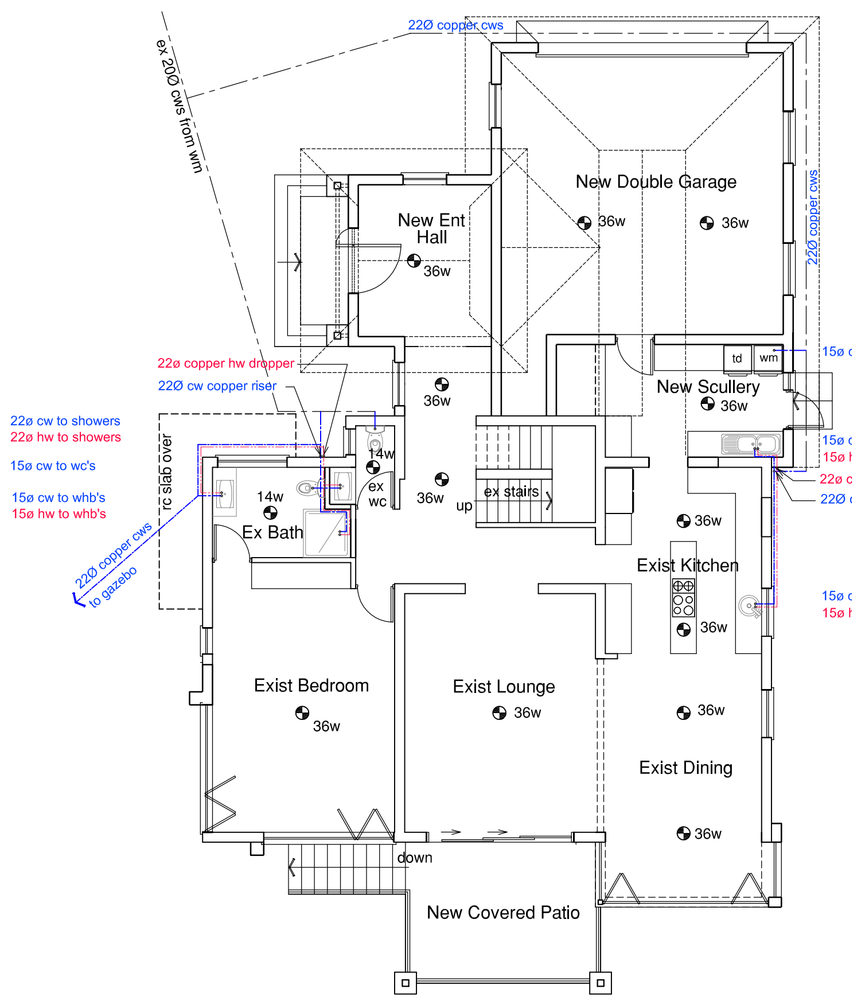
For energy efficiency calculation, refer to attached document.




Typical Solar Geyser Installation

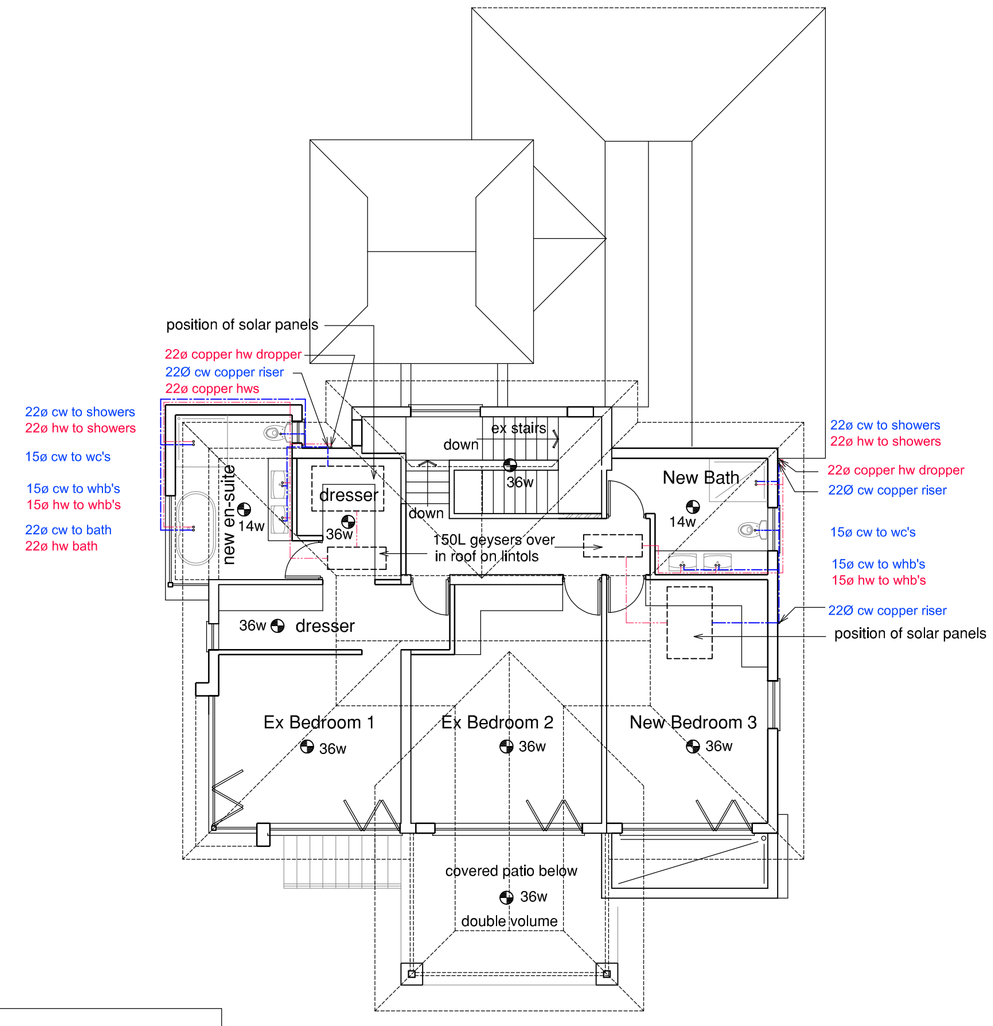



typical meter installation
nts

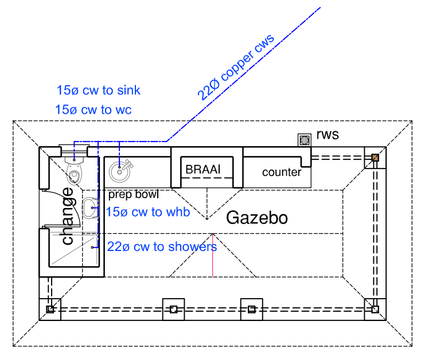



ground storey plan
Scale 1:100

Lighting:
Total Floor Area = 355.54 sqm
Lighting provided = (19 x 36w) + (3 x 14w) = 870w
Max. Lighting Allowed = 355.54 x 5w = 1777.7w
726w < 1777.7w
Therefore Lighting acceptable




first storey plan
Scale 1:100




gazebo plan
Scale 1:100

Occupancy : H4

CONSULTANT:
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CLIENT / OWNER DETAILS:
L. Pillay & S. Soobrathi

CLIENT'S / OWNER'S SIGNATURE:

PROJECT TITLE:
Proposed Additions & Alterations to Existing Dwelling , Gazebo & Swimming Pool
on Lot 2038 Durban North
at 23 Dorrington Crescent

DRAWING TITLE:
Submission Drawing

DRAWING DESCRIPTION:
Water Reticulation & Lighting

| SCALE: | REVISION: | DRAWN BY: |
|---|---|---|
| 1:100 (A1) | | HK. |

| PROJECT NO. | ISSUED DATE: |
|---|---|
| 23_010_06 | 18-06-2023 |