
IMPROVED

FAIRACTION

Sustainable Water Kiosk



FAIRACTION

Chapters

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Introduction

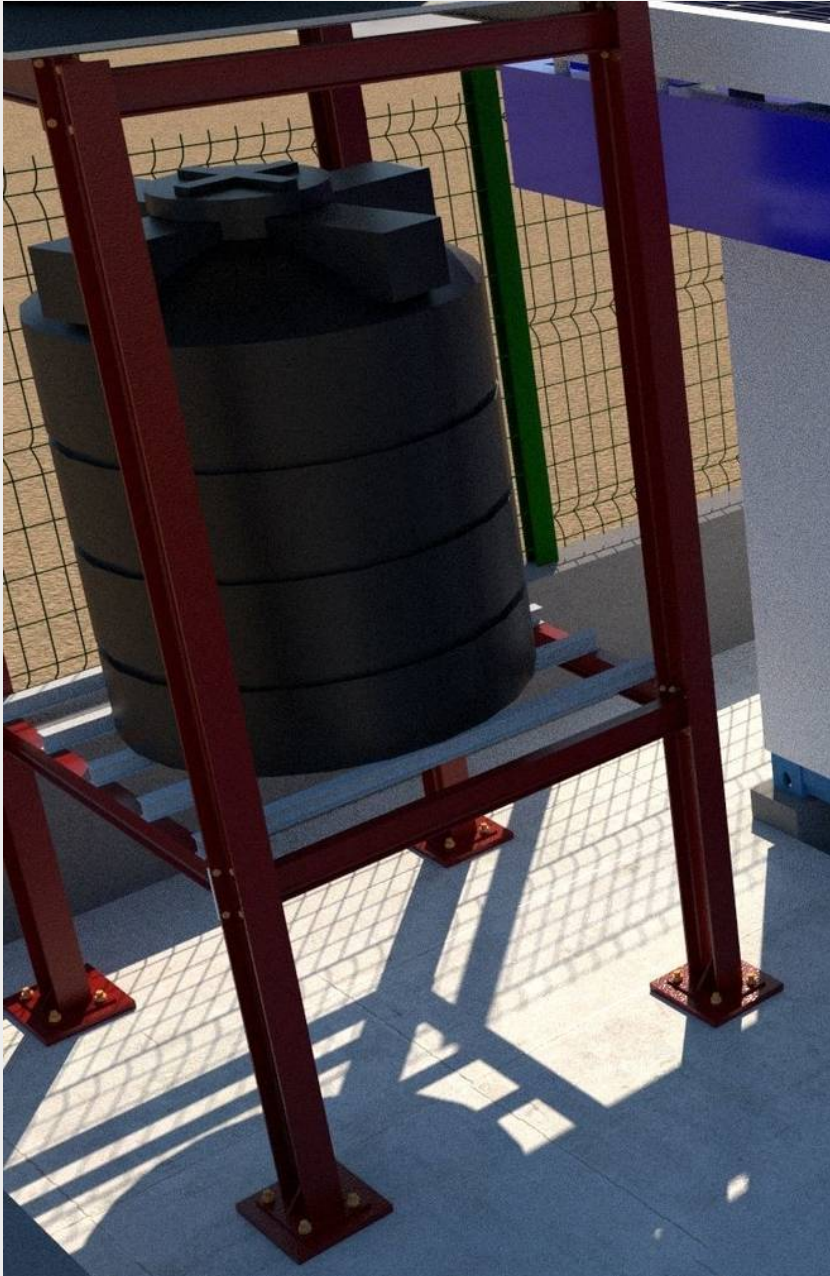
In Africa, a continent of vibrant cultures and breathtaking landscapes, a harsh reality persists: the dire lack of potable water.

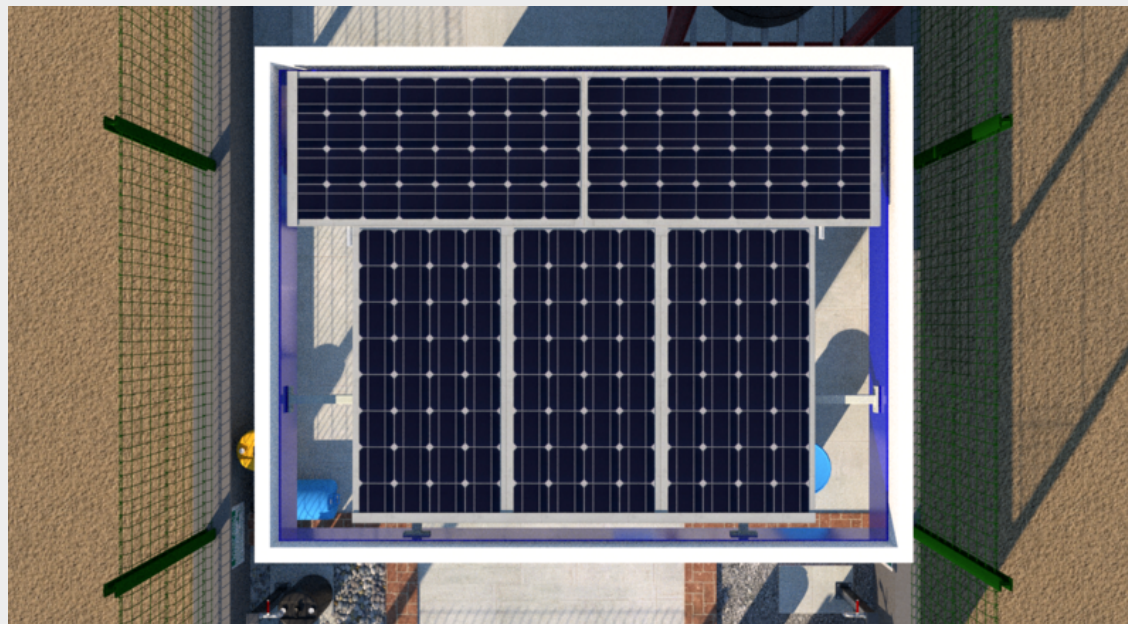
United Nations target 6.1 is part of the Sustainable Development Goals (SDG) and aims to ensure universal and equitable access to safe drinking water for all by 2030. This means that by that year, everyone, regardless of where they live, should have access to clean and safe drinking water sources, helping to improve global health and well-being.

FAIRACTION policies tallies with the United Nations (SDG) to facilitate provision of potable water for all with our newly improved initiative of Sustainable Water Kiosk across Nigeria.

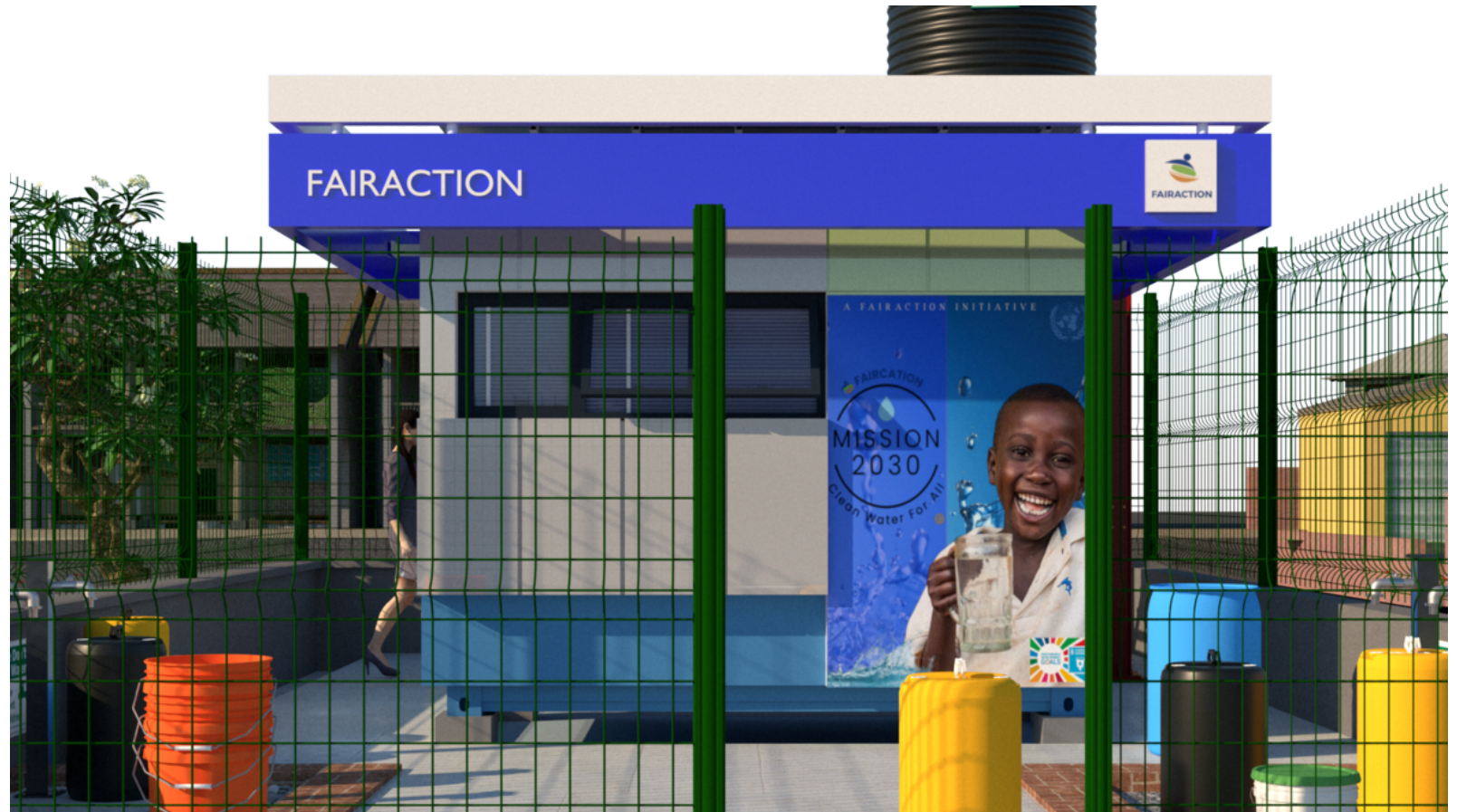
“Thousands have lived without love, not one without water.”

-H. Auden.

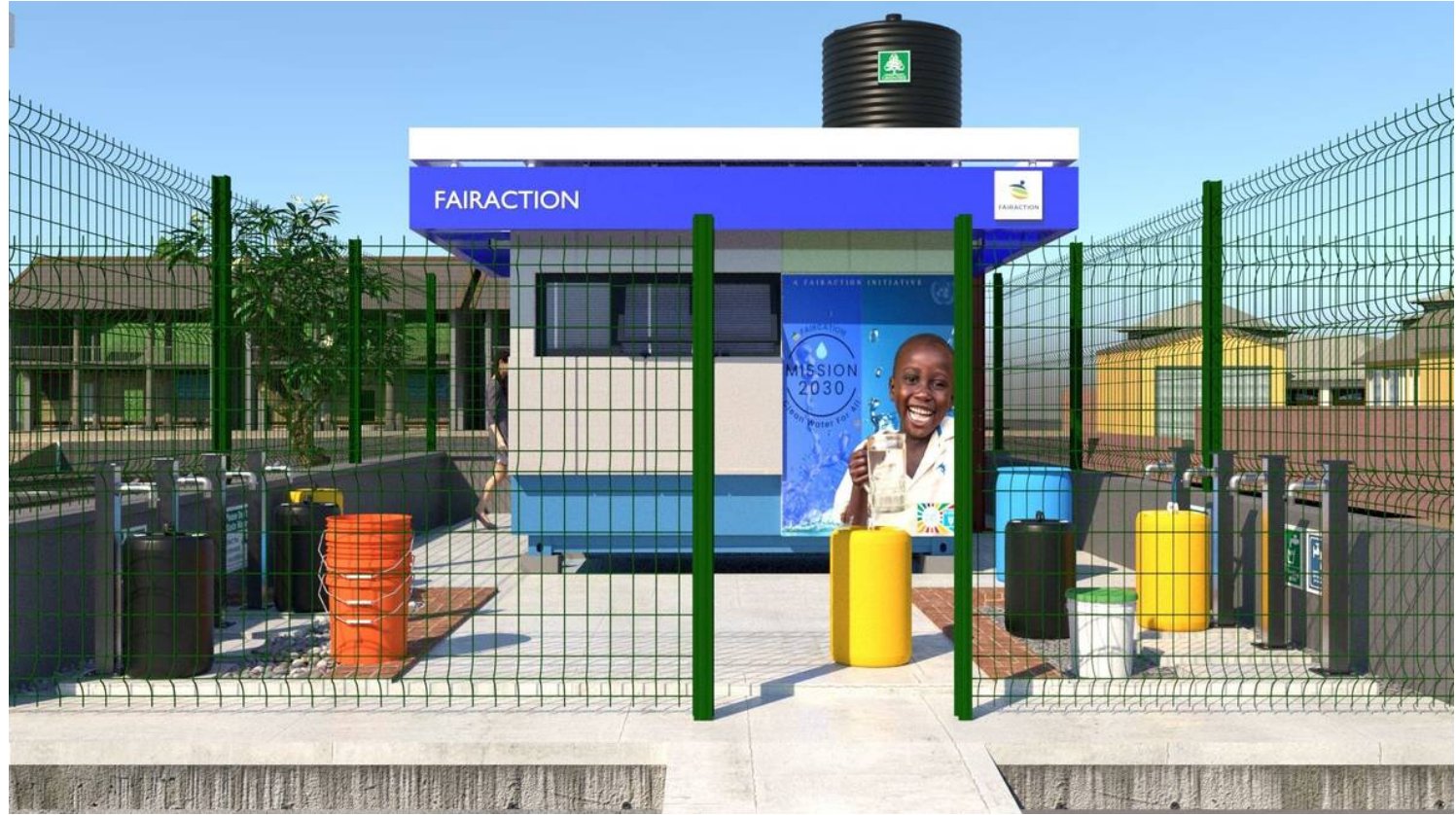




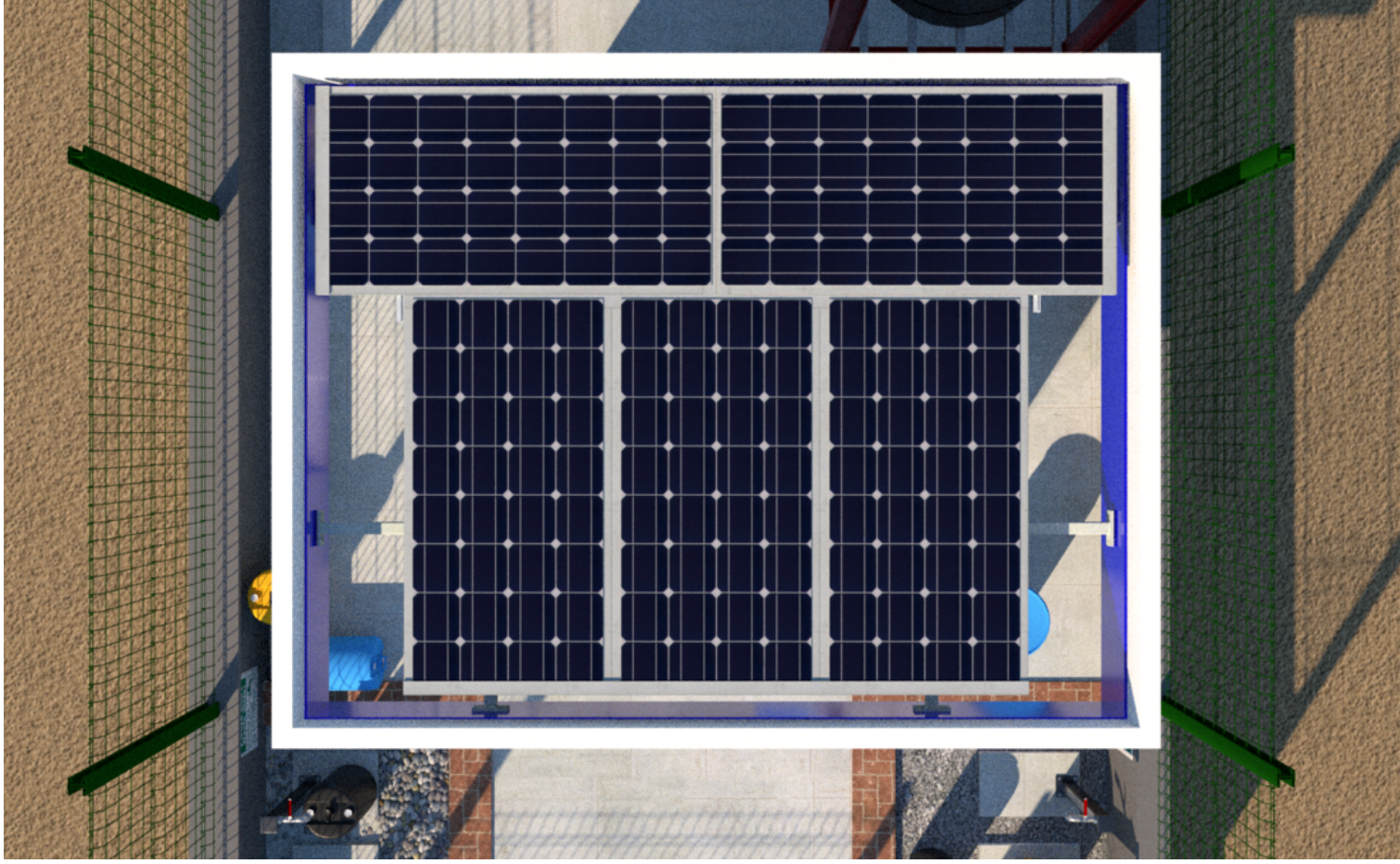
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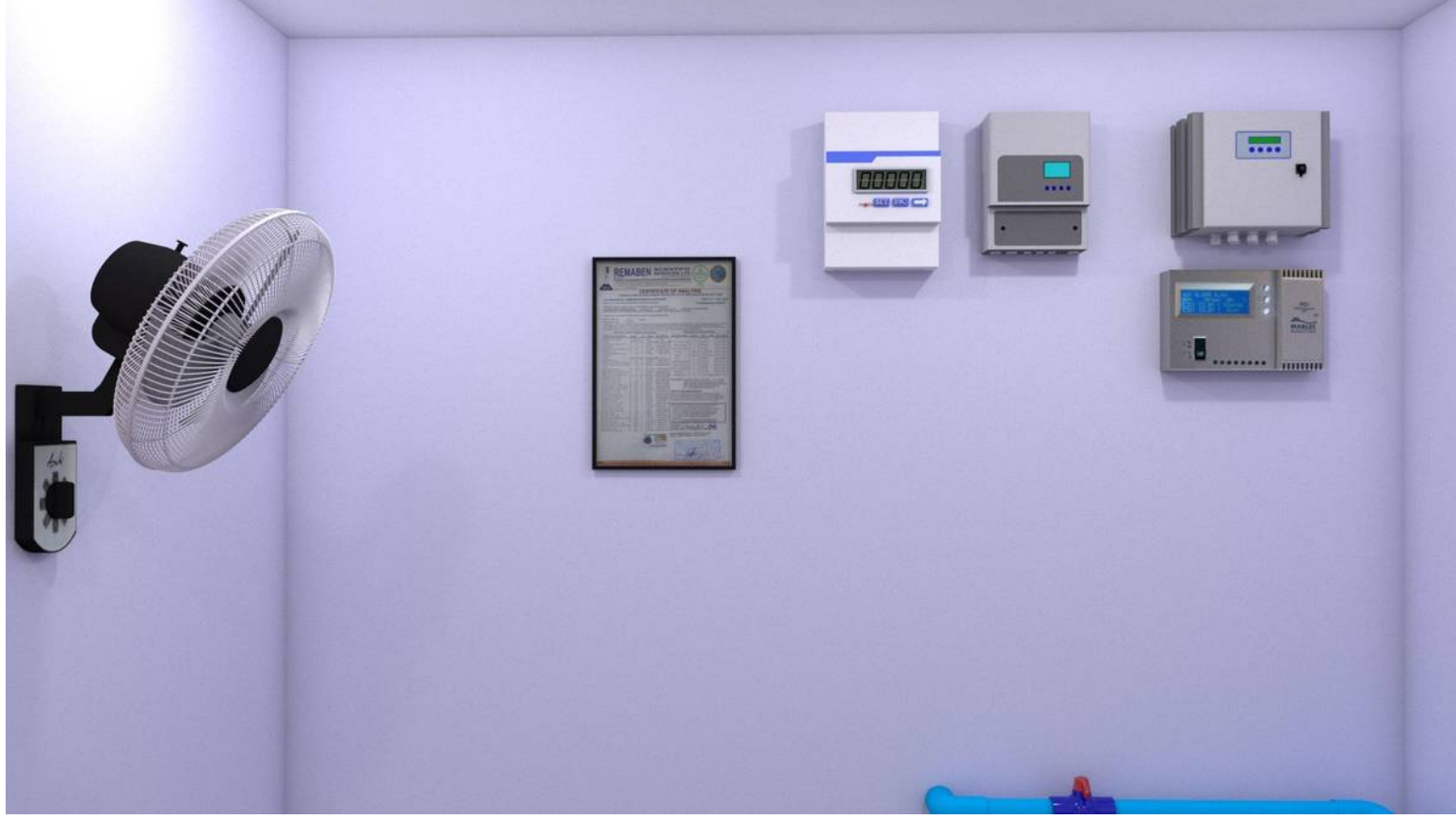
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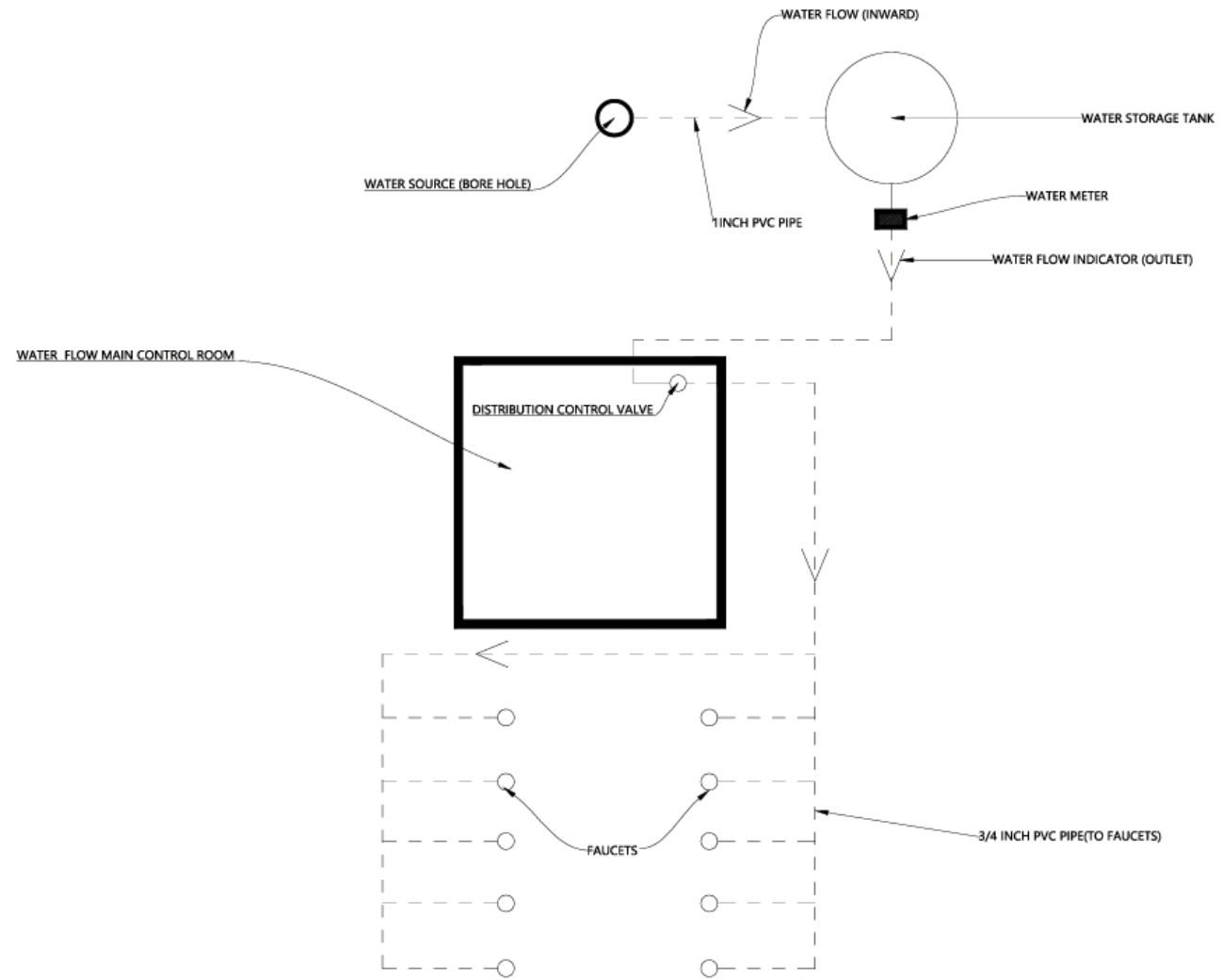
GALLERY



GALLERY



SCHEMATIC DIAGRAM OF WATER FLOW



Components & Materials

1. FABRICATED SHIPPING CONTAINER (10FT)

Shipping containers repurposed for office use offer excellent durability, thanks to their robust steel construction designed to withstand harsh maritime conditions. This durability translates well to office environments, providing long-lasting structures resistant to weather, pests, and wear.

Cost-effectiveness stems from the container's initial affordability compared to traditional construction. Additionally, their modular nature allows for easy customization and scalability, reducing construction time and associated expenses. While modifications may incur extra costs, the overall investment tends to be lower than constructing a traditional office building.

EXPECTED LIFE SPAN: 25YEARS

[Link: shangaimetal.com](http://shangaimetal.com)

2. ALUMINIUM COMPOSITE BOARD (ALUCOBOND)

Aluminium composite boards (ACBs) are known for their durability and cost-effectiveness in cladding applications. The combination of a polyethylene core and aluminum outer layers makes ACBs resilient to weather elements, corrosion, and UV radiation, ensuring a long lifespan with minimal maintenance.

Cost-effectiveness is evident in both material and installation expenses. ACBs are typically more affordable than alternatives like solid aluminum panels, and their lightweight nature simplifies installation, reducing labor costs. Moreover, their durability minimizes the need for frequent repairs or replacements, making them a financially prudent choice for cladding projects.

EXPECTED LIFE SPAN: 20-30yrs (When properly maintained)

[Link : alucobond.com](http://alucobond.com)

3. PLASTIC WATER STORAGE TANK

Plastic water storage tanks are preferred over fabricated aluminum tanks for various reasons. Plastic tanks are lightweight, making transportation and installation easier. They are resistant to corrosion and rust, ensuring a longer lifespan without the need for protective coatings.

Additionally, plastic tanks are cost-effective, require minimal maintenance, and are less prone to dents or damage compared to fabricated aluminum tanks. The inert nature of plastic also ensures that it won't impart any taste or odor to the stored water, making it a reliable and practical choice for water storage needs.

LIFE SPAN: 15-20 YEARS

<https://geepee.com/>

4. POLYSTYRENE (Insulator)

Polystyrene, commonly used as insulation material, offers notable cost-effectiveness and durability. Its lightweight nature simplifies transportation and installation, reducing labor costs. Expanded Polystyrene (EPS) and Extruded Polystyrene (XPS) are two common types, both providing excellent thermal insulation.

Cost-effectiveness stems from the relatively low initial expense of polystyrene insulation. Moreover, its longevity contributes to overall affordability. When properly installed and maintained, polystyrene insulation can last for several decades. This extended lifespan, combined with energy savings from effective insulation, makes it a financially prudent choice for both residential and commercial applications.

<https://www.polystyrene.co.uk/polystyrene>

5. FIBER CEMENT BOARD

Fiber cement boards are renowned for their cost-effectiveness, durability, and extended lifespan in construction applications. Composed of cement, cellulose fibers, and additives, these boards offer a cost-efficient alternative to traditional building materials.

Cost-effectiveness arises from their affordability compared to materials like natural wood or solid stone. Fiber cement boards are resistant to rot, insects, and fire, ensuring durability in various climates and environments. Their lifespan, typically ranging from 30 to 50 years or more, surpasses that of many other siding materials, making them a durable and long-lasting choice for cladding, siding, and roofing applications.

<https://licataltd.co.uk/product/multi-purpose-fibre-cement-board/>

6. P.V.C pipes

PVC (polyvinyl chloride) pipes are widely recognized for their durability, cost-effectiveness, and extended lifespan in various plumbing and water distribution systems. The inherent properties of PVC contribute to its popularity in construction.

Durability is a key feature, as PVC pipes are resistant to corrosion, rust, and chemical degradation, ensuring a longer service life. Their smooth surface also hinders the accumulation of deposits and reduces the likelihood of clogs.

Cost-effectiveness stems from the relatively low initial expense of PVC pipes compared to alternatives like metal pipes. Additionally, their lightweight nature facilitates easy transportation and installation, reducing labor costs.

PVC pipes are known for their impressive lifespan, often exceeding 50 years when installed and maintained properly.

<https://store.veggieconcept.ng/product/1-inch-pvc-pipe/>

7.SOLAR POWER SYSTEM

The usage of solar energy has become increasingly popular due to its remarkable cost-effectiveness, durability, and long lifespan. Solar power systems, including solar panels and related components, offer a sustainable and renewable source of electricity.

Cost-effectiveness is evident in the decreasing prices of solar panels and the long-term savings on electricity bills. While the initial installation cost can be significant, government incentives and decreasing technology costs make solar energy financially viable in the long run.

With proper care, solar panels can generate clean energy for 25-30 years or even more, making them a reliable and sustainable investment in the transition towards renewable energy.

https://www.cat.com/en_ZA/by-industry/electric-power/electric-power-industries/microgrids.html

8. WATER METER

Water meters play a crucial role in water management, offering durability, cost-effectiveness, and a substantial lifespan. Constructed with materials like brass or polymer, modern water meters withstand environmental factors and provide accurate measurement over an extended period.

Accurate measurement aids in identifying and addressing leaks promptly, leading to potential cost savings. While initial installation costs exist, the long-term benefits and reduced operational expenses make water meters a financially prudent investment in effective water management strategies.

<https://www.wwdmag.com/what-is-articles/article/11004163/what-is-water-metering>

9. ENERGY SAVING BULBS (LED)

LED (Light Emitting Diode) bulbs are renowned for their durability, cost-effectiveness, and extended lifespan, making them a popular choice for energy-efficient lighting.

Durability is a standout feature of LED bulbs. Unlike traditional incandescent bulbs, LEDs are solid-state lighting devices, meaning they are more robust and less prone to breakage. This durability contributes to a longer lifespan and reduced need for frequent replacements.

LED bulbs are cost-effective due to their energy efficiency. They consume significantly less electricity than traditional bulbs, translating into lower energy bills over time. The lifespan of LED bulbs is impressive, typically ranging from 25,000 to 50,000 hours or more. lighting needs.

10. AUTOMATIC BATCH METER

Automatic batch meters play a pivotal role in water management systems, offering durability, cost-effectiveness, and a considerable lifespan. These meters are designed to efficiently measure and control the flow of water in predetermined batches, optimizing water distribution processes.

Durability is a key characteristic of automatic batch meters, as they are constructed with materials resistant to corrosion and wear. This robust design ensures longevity and reliability in various environmental conditions, reducing the need for frequent maintenance or replacements.

Components & Materials

Cost-effectiveness is evident in the efficient use of water resources facilitated by automatic batch meters. By accurately measuring and controlling water flow, these meters contribute to minimizing waste and operational costs. The initial investment in these meters is often outweighed by long-term savings and improved efficiency in water distribution.

<https://www.flows.com/automatic-batch-meter-wmv-series/>

11. 1/2" LEVER TAP VALVE

The 1/2" lever tap valve is a commonly used plumbing component known for its durability, cost-effectiveness, and reliable lifespan. Constructed with sturdy materials such as brass or stainless steel, these valves exhibit resistance to corrosion and wear, ensuring long-term durability in various plumbing applications.

Cost-effectiveness is a notable advantage of 1/2" lever tap valves. Their relatively low initial cost, coupled with the durability that reduces the need for frequent replacements, makes them a cost-efficient choice for controlling water flow in domestic and industrial settings.

<https://www.amazon.com/Roadiress-Outside-Garden-Handle-Supply/dp/B08FXLYC7T>

12. 1HP SOLAR PUMP

Solar submersible pumps are cost-effective due to their reliance on solar energy, eliminating the need for grid electricity. Their durability is enhanced by fewer moving parts, reducing wear and tear. With proper maintenance, these pumps can have a long lifespan, providing a sustainable and efficient water pumping solution for remote or off-grid locations.

<https://www.made-in-china.com/manufacturers/solar-pump>
