

TRUE ZERO ENERGY DESIGN

SELF-GENERATED ELECTRICITY
SELF-SUFFICIENT HABITAT
CLIMATE DURABLE CONSTRUCTION

HOURS OF SUNRISE TO SUNSET. THE BUILDING IS MEANT TO HAVE NO ELECTRICAL LIGHTING OR MACHINERY USED DURING THE DARK HOURS OF THE EVENING. HUMAN LIFE IS THUS STRUCTURED BY THE LIGHT OF THE SUN AND NOT BY MECHANICAL MEANS.

2) ALL WORK REQUIRING ELECTRONIC DEVICES ARE DONE ON A STATIONARY BICYCLE OR RUNNING TREADMILL TO CREATE ELECTRICITY TO POWER THE COMPUTER. OTHER DEVICES SUCH AS WASHING MACHINES AND BLENDERS ARE ALSO POWERED BY THESE TECHNOLOGIES.

3) DESIGN/ILLUSTRATION/PUBLICATION WORK: THE SECOND LEVEL HAS A BUILT-IN LIGHTED TABLE, 4 FEET WIDE AND 8 FEET LONG, OF CLEAR GLASS WITH A LIGHTED UNDERSIDE USING REFLECTED MIRRORS OF DAYLIGHT WHEN REQUIRED.

4) IN THE BUILDING'S "OPEN" POSITION, WHEN NINE WALL SECTIONS ARE IN FULLY OPEN POSITION, SUNLIGHT FALLS DIRECTLY ON PLANTED GARDENS

OF VEGETABLES AND FRUITS. THERE IS A SUNKEN CELLAR USED TO STORE EDIBLE ITEMS.

5) THE INTERIOR SPACES CAN SLEEP 8 PERSONS ON HEMP AND COTTON CLOTH BEDDING. WAX CANDLES ARE OFTEN USED FOR NIGHT LIGHTING WHEN NEEDED.

6) A SINGLE SHOWER IS LOCATED AT THE CENTER OF THE GROUND LEVEL LIVING AREA. WATER COES FROM THE 1000-FOOT-LONG BLACK RUBBER HOSE TUBE THAT WRAPS THE UPPER PORTION OF THE BUILDING'S SPHERE.

7) COOKING TAKES PLACE EITHER ON A WOOD STOVE (DURING COLD WINTER MONTHS) OR A SOLAR STOVE THAT IS WHEELED OUT ONTO THE ENTRANCE RAMP AND DIRECTED INTO THE SOUTH-FACING SUN.

8) RESEARCH AND DEVELOPMENT LABORATORY: THIS BUILDING IS A PROTOTYPE FOR NO-ELECTRICITY LIVING/ADAPTABLE CLIMATE LIVING. THE BUILDING IS IMMEDIATELY ADAPTABLE TO

CHANGING WIND VELOCITIES, CLIMATIC CHANGES FROM SUN, TO RAIN, TO SNOW, AND HOT, DRY TEMPERATURE EXTREMES.

9) VEGAN WAY OF LIFE: THE MOST HARMFUL HUMAN ACTIVITY ON OUR PLANET IS THE FARMING AND CONSUMPTION OF ANIMALS AND MARINE LIFE. THIS BUILDING NURTURES A VEGETABLE AND FRUIT ENVIRONMENT AND EMPHASIZES A "DO NO HARM" OUTLOOK OF LIVING LIGHTLY ON THE PLANET. IT REQUIRES STEWARDSHIP AND RESEARCH PARTNERSHIPS WITH THE ORGANISMS, FLORA, AND FAUNA OF THE AREA AND ITS CLIMATIC CHARACTERISTICS.

WHAT IS REQUIRED TO OPERATE THE BUILDING ON AN ANNUAL BASIS?

THE GREATEST PORTION OF THE BUILDING IS MADE OF WOOD SHEATHED IN GIGACRETE AND THIS PORTION REQUIRES NO MAINTENANCE AT ALL. IT IS FIREPROOF, WATERPROOF, MOLD-AND-MILDREW PROOF, AND WOULD REQUIRE A DIAMOND SAW TO BREAK IT APART. THIS PORTION REQUIRES NO MAINTENANCE.

THE SHEATHING OF THE OPENING/CLOSING PORTION OF THE BUILDING IS THE ONLY PORTION THAT REQUIRES MAINTENANCE. THERE ARE TRANSPARENT COATINGS THAT CAN BE USED TO SEAL TRANSPARENT FABRIC FOR MANY YEARS, AND THIS WOULD REQUIRE FURTHER RESEARCH. AT PRESENT, THE TRANSPARENT SAIL CLOTH WOULD HAVE TO BE REPLACED EVERY FIVE TO TEN YEARS SIMILAR TO A SAILBOAT.

ALL OTHER ASPECTS OF THE BUILDING REQUIRE MINIMAL MAINTENANCE SUCH AS OILING, CLEANING, AND PARTS CHANGING. ONLY HUMAN DILIGENCE IS REQUIRED TO OPERATE THIS BUILDING.

SYSTEMS OUTPUTS

THIS BUILDING USES NO ELECTRICAL/MECHANICAL POWER.

HUMAN FECAL AND URINE WASTE IS WEEKLY COMPOSTED IN THE BUILDING'S GARDEN. THE BUILDING ITSELF GENERATES NO WASTE. SHOWER AND DRINKING WATER IS USED TO WATER THE VEGETABLE AND FRUIT GARDEN OF THE BUILDING. EXCESS WATER IS RETAINED IN A HOLDING TANK WHICH IS ACCESSIBLE BY LIFESTRAW CLEAN DRINKING WATER TECHNOLOGY.

IN CLOSED POSITION, THE MOBILE WALL PANELS ACT AS WATER RUN-OFF FEATURES THAT DIRECT RAINWATER TO A CATCH GUTTER TO A WATER CATCH BASIN.

DIMENSIONS OF THE DESIGN

SPHERICAL HABITAT STRUCTURE: 700 SQUARE FEET AT THE EQUATOR LEVEL AND 200 SQUARE FEET AT THE LOWER LEVEL.

SPHERE IS 30 FEET IN DIAMETER STANDING 30 FEET IN HEIGHT. AN OUTSIDE TERRACE, AT THE EQUATOR OF THE SPHERE, IS UNIFORMLY 6 FEET IN WIDTH CIRCUMSCRIBING THE SPHERE. THE OPENING/CLOSING ALUMINUM TUBE WALL STRUCTURES ARE 10 FEET IN WIDTH AND 30 FEET IN LENGTH.

ORDER OF MAGNITUDE CONCEPTUAL COST ESTIMATE

THE FIRST PROTOTYPE TO BE CONSTRUCTED IS ESTIMATED TO COST \$250,000 TO \$350,000 AND THIS DEPENDS ON THE BID AND HOURLY WAGE OF THE BUILDERS. SUBSEQUENT REPRODUCTION OF THIS DESIGN WOULD REDUCE THE CONSTRUCTION COST BY 30 TO 50%.

IT SHOULD BE MENTIONED HERE THAT THIS DESIGN IS NOT MEANT TO BE REPLICATED AD INFINITUM. IT IS MEANT TO BE A STUDIED PROTOTYPE BY WHICH OTHER VARIATIONS CAN BE CONSTRUCTED. THE IMPORTANCE OF THE DESIGN IS TO SHOW THE WAYS AND MEANS TO CREATE TRUE ZERO ENERGY HABITATS THAT CAN ADAPT TO A VARIETY OF SITE AND CLIMATE ENVIRONMENTS.

ON-SITE PROTOTYPE DEVELOPMENT

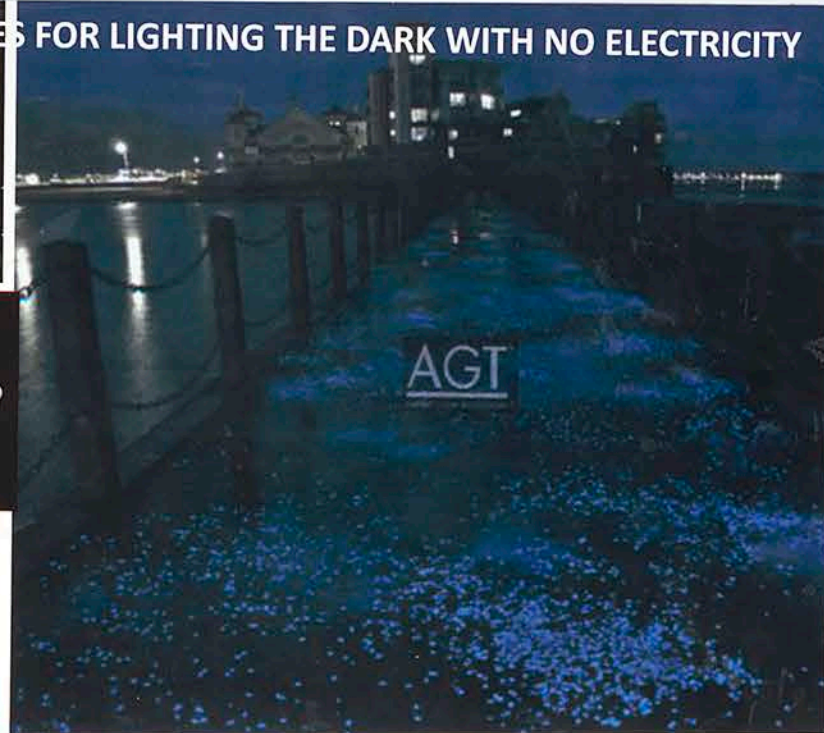
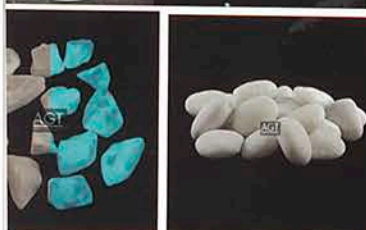
THE MATERIALS USED FOR THIS STRUCTURE, ARE EASY TO BE FOUND IN THE AREA, AND CONSTRUCTION PROFESSIONALS SUCH AS WELDERS, SOILCRETE WORKERS (CONCRETE WORKERS), WOOD FRAMERS, STONE MASONS AND HANDY PERSONS, WILL FIND THIS STRUCTURE A SIMPLE PROJECT. I BUILT A PROTOTYPE AND THE GEODESIC SPHERE TOOK ME ONLY THREE DAYS TO ERECT.

ALL MATERIALS NEEDED CAN BE CATEGORIZED AND GROUPED ON-SITE. THE CONSTRUCTION PROCESS IS A PREFABRICATED SYSTEM WHICH LENDS ITSELF TO QUICK ORGANIZATION AND CONSTRUCTION.

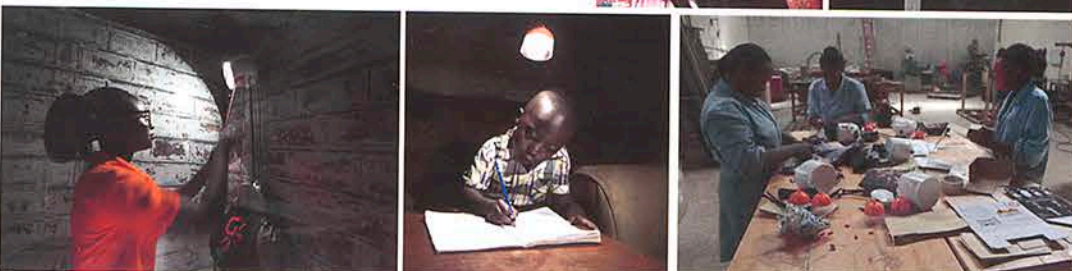
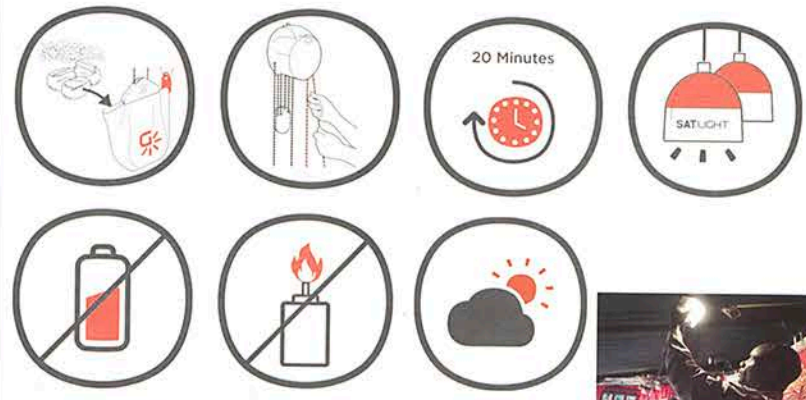
SEQUENCE OF CONSTRUCTION:

LUMINESCENT STONES FOR LIGHTING THE DARK WITH NO ELECTRICITY

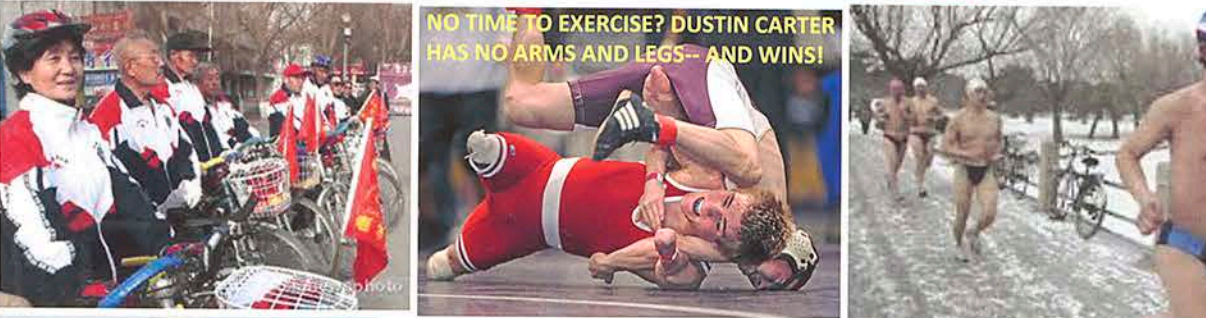
PANEL TWO



GRAVITY ELECTRIC GENERATOR AND LIGHT



AN ATHLETIC LIFE IS NECESSARY FOR HUMAN HEALTH MENTALLY AND PHYSICALLY



NO TIME TO EXERCISE? DUSTIN CARTER HAS NO ARMS AND LEGS-- AND WINS!



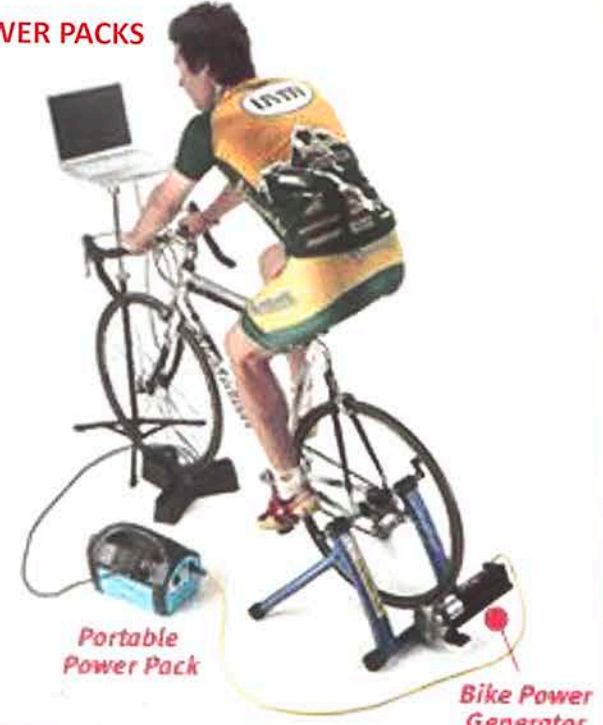
JUST DO IT! NO EXCUSES!



BICYCLE POWERED APPLIANCES



BICYCLE POWERED RECHARGEABLE BATTERY POWER PACKS



Portable Power Pack

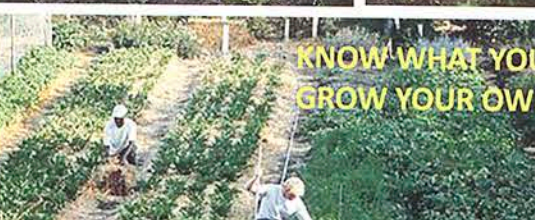
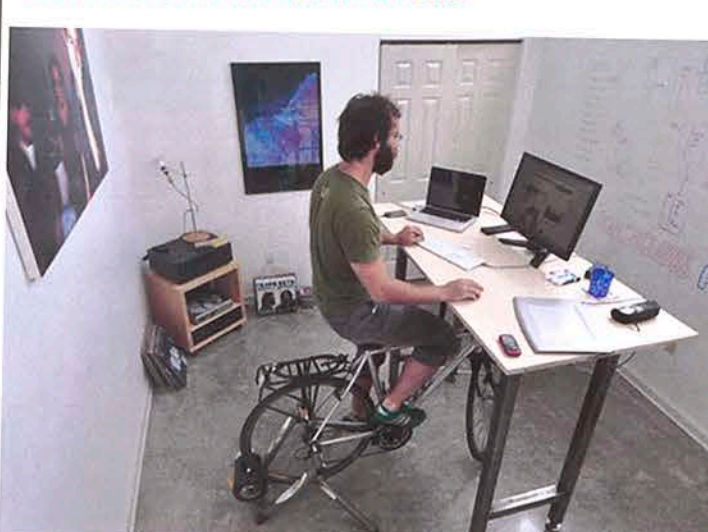
Bike Power Generator



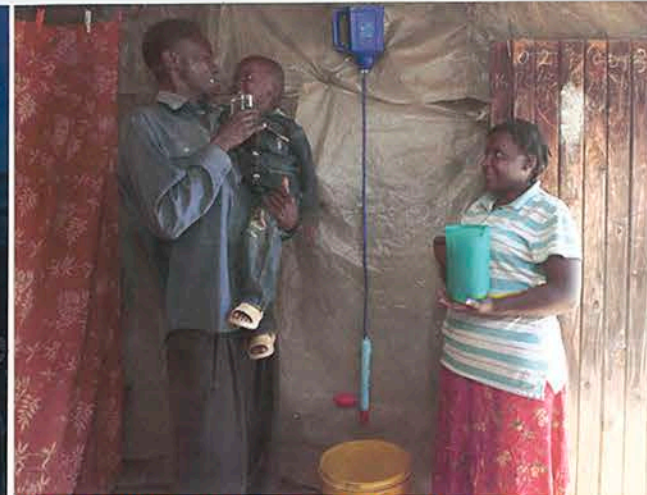
BICYCLE POWERED WASHING MACHINES



BICYCLE POWERED COMPUTERS



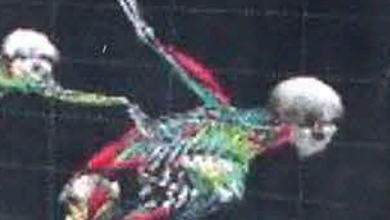
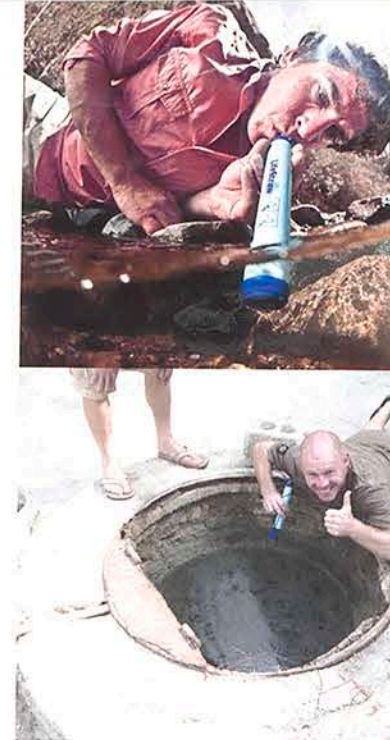
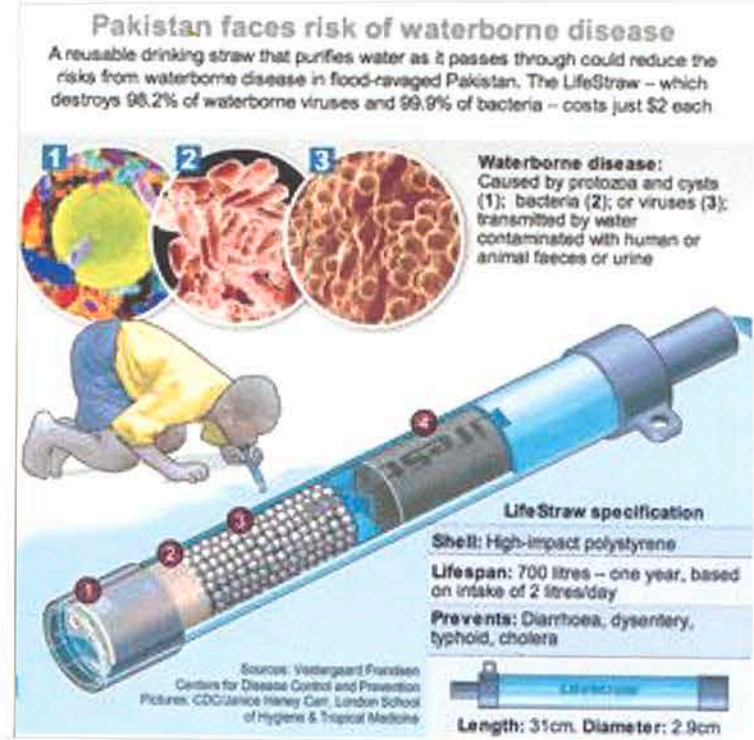
KNOW WHAT YOU ARE EATING: GROW YOUR OWN FOOD



CLEAN DRINKING WATER FROM ANY SOURCE OF POLLUTED WATER, I.E., PUDDLES, RAIN, CREEKS, STREAMS, RIVERS, LAKES, ETC.



LifeStraw is Saving Lives with Clean Water



HUMAN-POWERED TECHNOLOGY IS RESTORATIVE TECHNOLOGY DOING NO HARM TO THE PLANET

