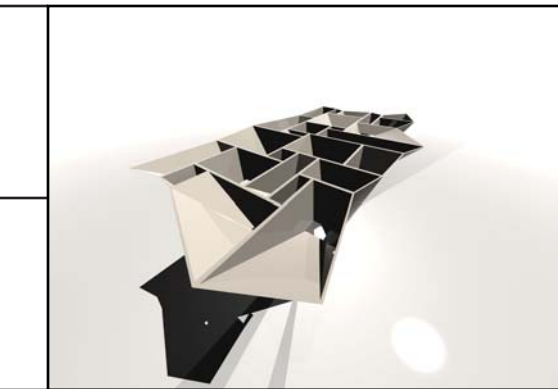
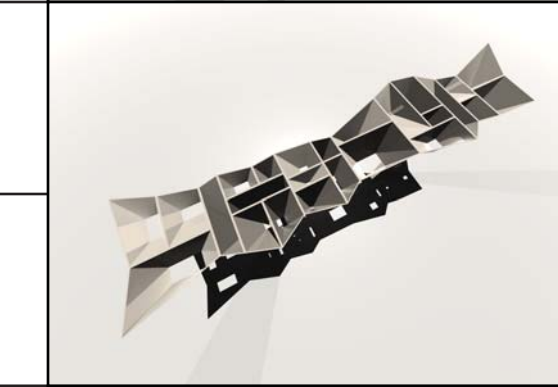


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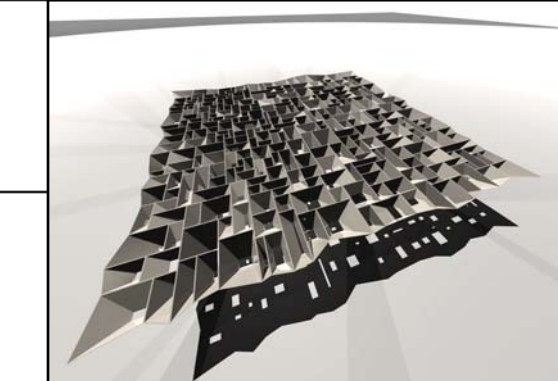
TYPICAL UNIT - 13' X 23'



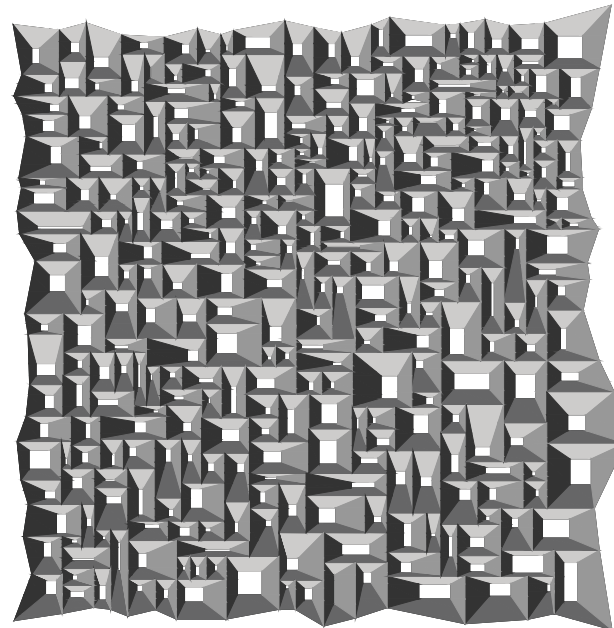
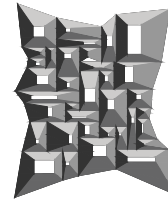
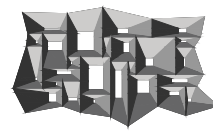
LINE



SQUARE



LARGE FIELD



SUN SHELTER

THE PREMISE OF THIS DESIGN PROPOSAL IS NOT FOR A SPECIFIC SINGULAR DESIGN, BUT AN ADAPTABLE SYSTEM. THE FUNNEL FIELD IS ABLE TO BE UNIQUELY TAILORED TO MULTIPLE SITES RESPONDING TO THE DIVERSE CONTEXTUAL AND FUNCTIONAL REQUIREMENTS OF EACH SCENARIO. THE PREMISE OF THE CONFIGURATION IS AS AN AGGREGATED FIELD, COMPRISED OF AN ARRAY OF FUNNELED STEEL EXTRUSIONS, THE FIELD IS VARIABLE IN WIDTH, BREADTH AND DEPTH, RESPONDING TO SUN ANGLES, SOUND, VISUAL AND CONTEXTUAL FORCES, EACH FUNNEL CAN BE SPECIFICALLY CONFIGURED TO PRODUCE A LOCALIZED EFFECT AND COLLECTIVELY THE FIELD CAN ASSEMBLE TO PRODUCE A COMPOSED EFFECT. POROUS BUT PROTECTIVE IN PREMISE, THE FIELD ALLOWS FOR THE PROVISION OF AN ENVIRONMENTALLY PROTECTIVE UMBRELLA WHILE MAINTAINING AN OPEN CONNECTION TO THE ENVIRONMENT.

IN ADDITION TO THE STANDARD FUNNEL FIELD, A SERIES OF "ADD-ONS" HAVE BEEN DESIGNED. THESE CAN BE INTEGRATED INTO THE SYSTEM BASED UPON BUDGET, NEED, AND CONTEXT. THE ADD-ONS INCLUDE: SOLAR PANELS FOR ENERGY GENERATION, A MISTING SYSTEM FOR ENVIRONMENTAL COOLING, A WATER RECLAMATION SYSTEM FOR IRRIGATION, INTEGRATED PLANTERS FOR VINES, VEGETATION CAGES [CONTAINING POMEGRANATE TREES] FOR GROUND FOLIAGE, AND INTEGRATED SEATING.

THE FOLLOWING SLIDES BRIEFLY REPRESENT FOUR POSSIBLE CONFIGURATIONS (A STANDARD, A LINE, A SQUARE, AND A LARGER FIELD) AND EXPLICATE THE ADD-ONS AND THEIR INTEGRATED RELATIONSHIP TO THE FUNNEL FIELD SYSTEM. THE LAST IMAGE ILLUSTRATES SOME LIGHT STUDIES IN A STEREO-LITHOGRAPHY MODEL PRODUCED OF THE LARGER FIELD TO ILLUSTRATE PERFORMANCE AND EFFECT.

VARIABLE CONFIGURATIONS

THE AGGREGATED SYSTEM OF THE SUNSHADE ALLOWS FOR A SITE RESPONSIVE VARIABILITY. THE DIMENSIONS OF THE SUNSHADE CAN RESPOND TO THE LOCAL NEEDS AND RESPONSIBILITIES OF SITE AND INTENDED EVENTS FOR ITS USE. THE FLEXIBILITY OF THE FUNNEL FIELD ALLOWS FOR CALIBRATION BASED ON THE TOPOGRAPHY, CONTEXTUAL, FUNCTIONAL AND PRACTICAL HEIGHTS AND WIDTHS.

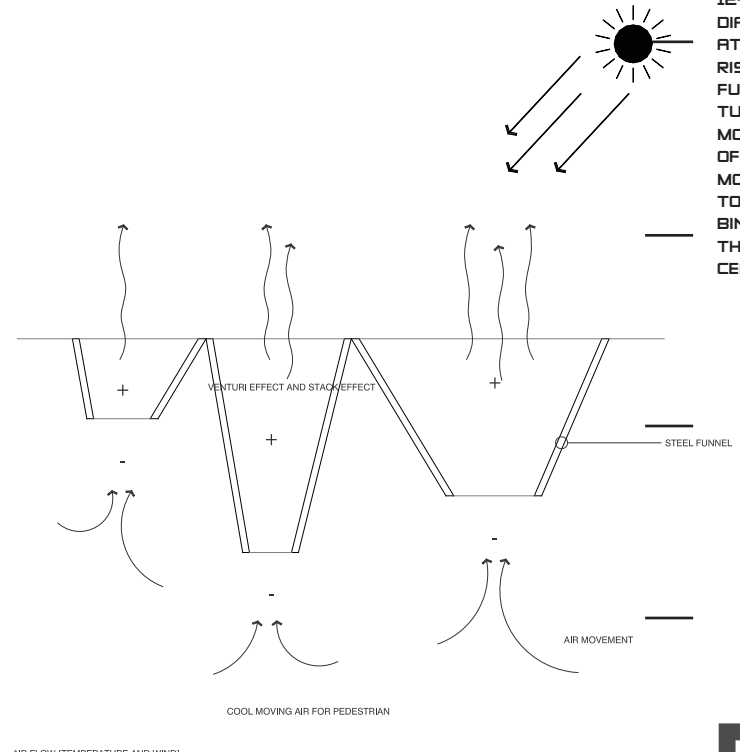
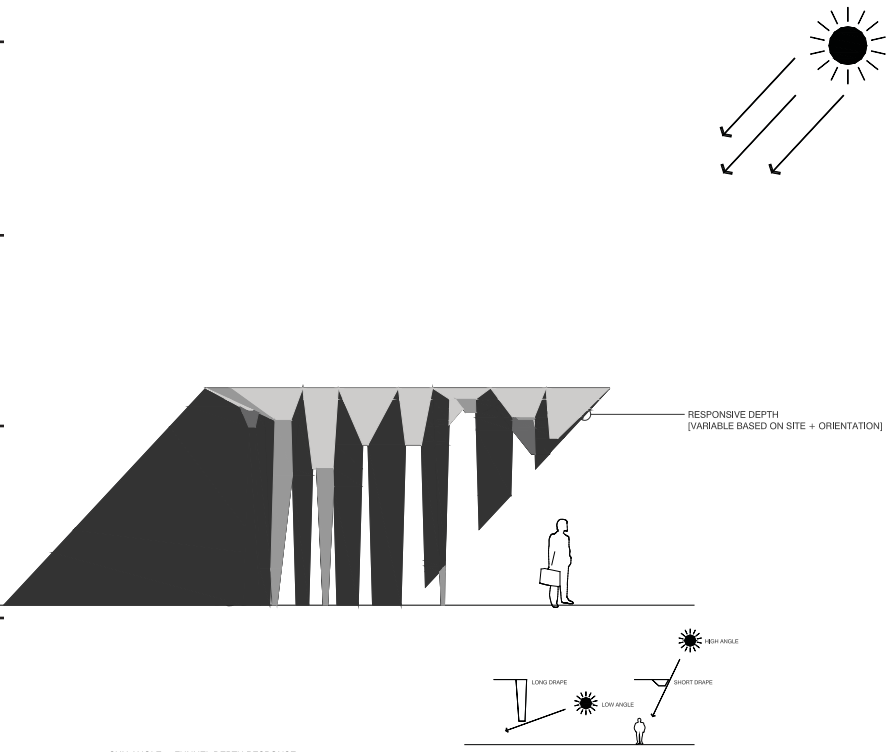


FUNNEL

THE FUNNEL FIELD ALLOWS FOR A VARIABLE SURFACE. LIGHT IS BLOCKED BY THE BODY OF THE CANOPY, BUT THE PERFORATED OPENINGS ALLOW FOR DISTINCT SHAFTS OF LIGHT TO COME THROUGH THE CANOPY. THE MOVEMENT OF THE SUN PRODUCES A DYNAMIC DIALOGUE WITH THE PRISMATIC FUNNEL FIELD REGISTERING IN THE LIGHT UPON THE SURFACE. THE RESULTING CONDITION IS A DAPPLED LIGHT SIMILAR TO THAT PRODUCED BY A TREE.

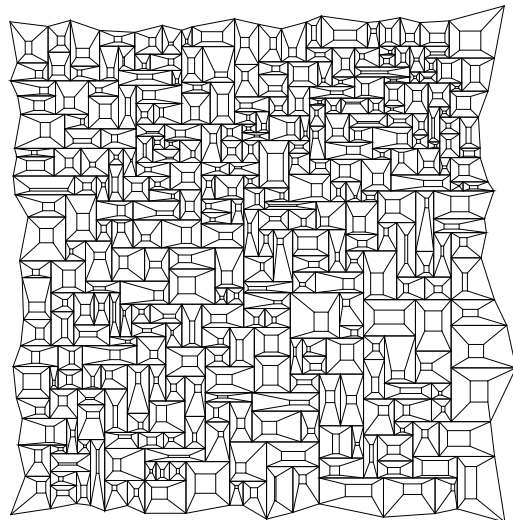
TO ADDRESS THE LIGHT, EACH FUNNEL HAS THE ABILITY TO EXTRUDE TO VARIABLE LENGTHS. DEPENDENT UPON ORIENTATION AND SUN ANGLES, THE DEPTH OF THE FUNNEL CAN BE TAILORED TO PRODUCE THE SHAPE AND SHADOW DESIRED. LONGER EXTRUSIONS ADDRESS LOW SUN ANGLES, WHILE SHORTER EXTRUSIONS ADDRESS HIGHER ANGLES. LIKE GEOLOGICAL STALACTITES, THE FUNNELS HANG IN RESPONSE TO THEIR ENVIRONMENTAL CONDITIONS.

THE FUNNEL SHAPE COLLABORATES WITH THE METAL MATERIAL TO USE BOTH THE STACK AND VENTURI EFFECTS. THE STACK EFFECT [MOVEMENT OF AIR BASED ON TEMPERATURE] WILL BE AIDED BY THE METAL CANOPY SUSPENDED [EXCEPTIONALLY HIGH 12-15' OVERHEAD] WILL HEAT WITH THE RADIATION OF THE SUN. THE RISE IN TEMPERATURE WILL PRODUCE HOT AIR THAT WILL RISE THROUGH THE HOLES AND VENT. THE FUNNEL SHAPE WILL THEN USE THE VENTURI EFFECT [THE ACCELERATION OF AIR MOVEMENT BASED ON THE CONSTRICTION OF THE PATH OF MOTION] TO TAKE THE AIR MOVEMENT THROUGH THE FUNNEL SHAPE TO ACCELERATE THE ACTIVITY. THE COMBINATION WILL DRAW COOL AIR THROUGH THE SUNSHADE PRODUCING A NATURAL CEILING FAN.

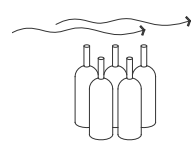


AIR FLOW | WIND | HEAT

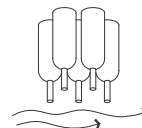
IN CONJUNCTION WITH THE PERFORMATIVE ENGAGEMENT OF THE FUNNEL FIELD WITH THE WIND THROUGH THE AFOREMENTIONED STACK AND VENTURI EFFECTS, THE MOVEMENT OF WIND ACROSS THE UPPER AND LOWER SURFACES OF THE FUNNEL FIELD WILL PRODUCE A DELICATE ACOUSTICAL SYMPHONY. SIMILAR TO THE EFFECT OF BLOWING AIR ACROSS A BOTTLE, THE AIR MOVEMENT WILL CAUSE REVERBERATION WITHIN THE FUNNELED SURFACE. THE FUNNEL FIELD WILL RESPOND TO THE ENVIRONMENT BY TALKING BACK.



WHISTLE OF AIR
AIR FLOW

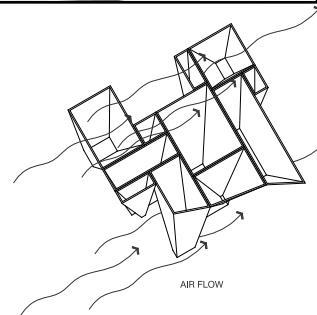


BOTTLE



AIR FLOW
WHISTLE OF AIR

INVERTED



AIR FLOW

WHISTLE OF AIR

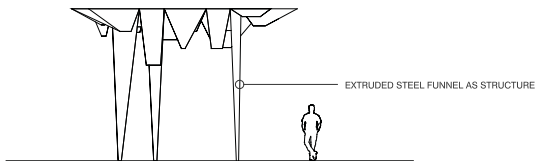
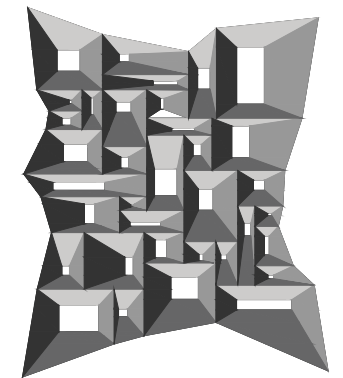
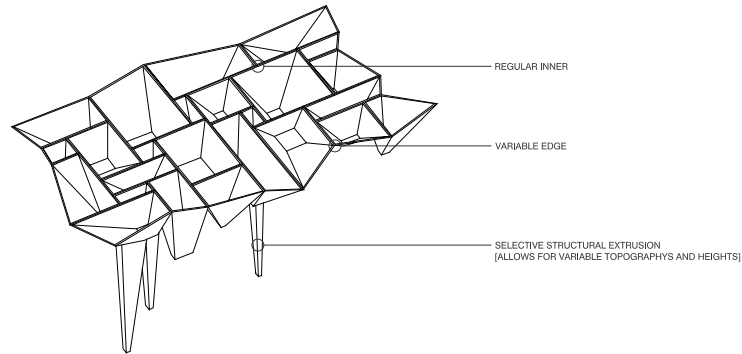
FUNNEL NECK

SOUND [WIND MOVEMENT]

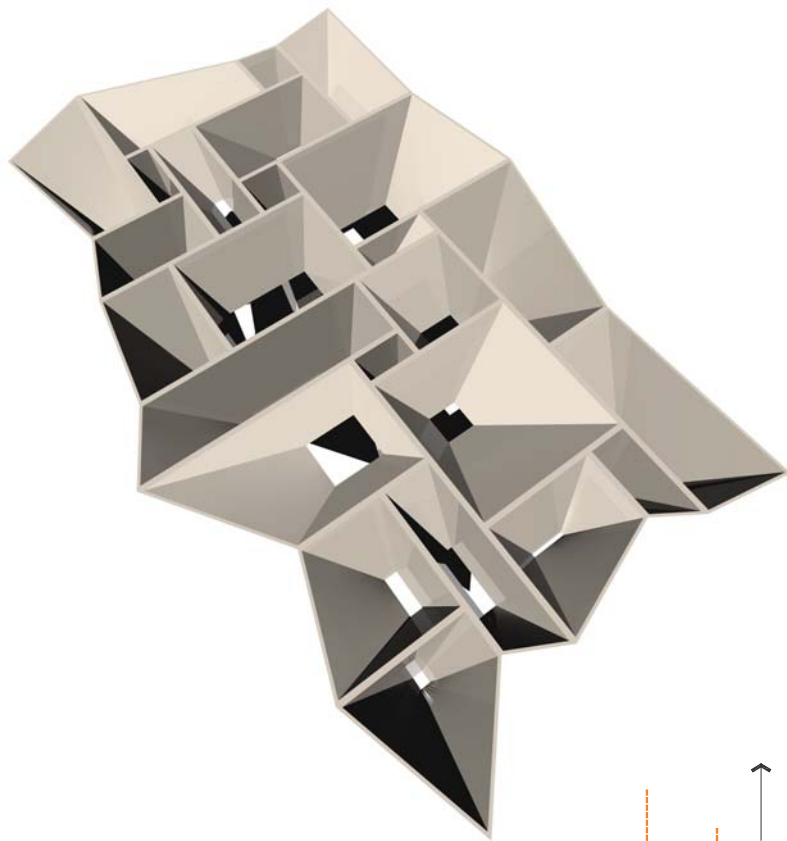
STRUCTURE, MATERIAL + COMPOSITION

THE STRUCTURE IS ESTABLISHED THROUGH THE EXTRUSION OF A SELECTION OF FUNNEL BAYS. PULLING THE FUNNEL TO AN EXAGGERATED HEIGHT, THE LEGS CAN ADJUST TO VARIABLE TOPOGRAPHIC CONDITIONS TO PROVIDE A LEVEL CANOPY DESPITE AN IRREGULAR GROUND PLANE. THE HOLLOW EXTRUSION ENGAGES THE STRUCTURE THROUGH THE CONTINUITY OF THE MATERIAL AND THE WELDED CONNECTION. THE VOID IN THE INTERIOR OF THE LEG PROVIDES ROOM TO HOUSE THE NECESSARY INFRASTRUCTURE FOR THE MISTER SYSTEM OR THE SOLAR COLLECTION SYSTEM AS REQUIRED. THIS CONCEALED AND PROTECTED LOCATION PROVIDES SECURITY AND PREVENTS VANDALISM OR UNWANTED ACCESS TO THE SUSPENDED CANOPY.

FABRICATED OF WELDED 1/2" CORTEN STEEL PLATE, THE FUNNELS CAN BE EXTRUDED AS NECESSARY TO PRODUCE A POROSITY ALLOWING VARIABLE LIGHT THROUGH. THE MATERIAL ALLOWS FOR INTENSE STRENGTH WITH MINIMAL DIMENSIONS AND HYPER FLEXIBLE CONFIGURATIONS ALLOWING THE FORM TO DEFAULT TO ENVIRONMENTALLY PERFORMATIVE DETERMINANTS.



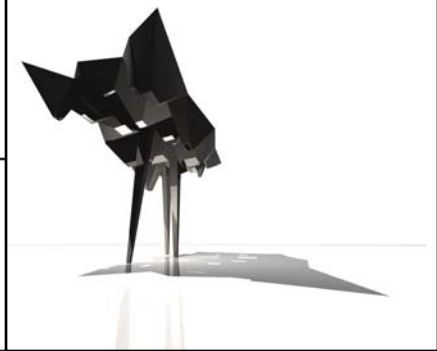
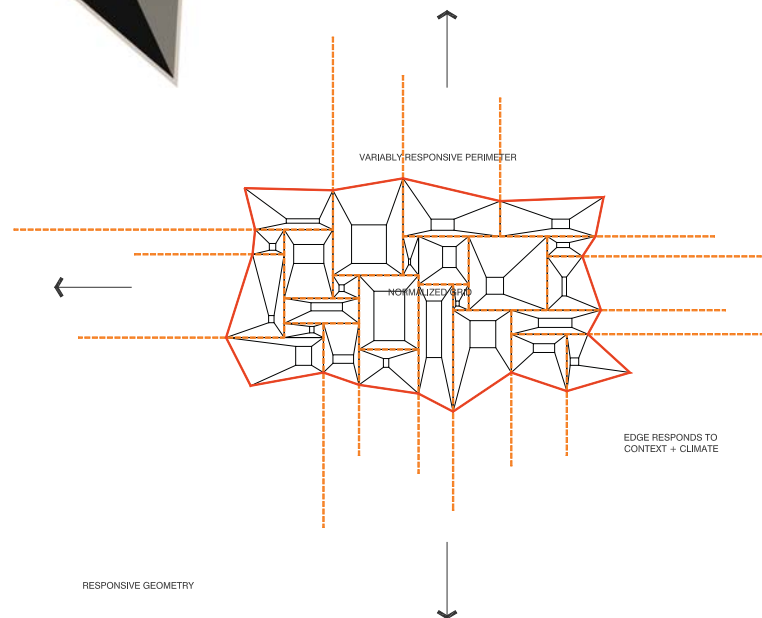
STRUCTURAL RESPONSIVENESS + FLEXIBILITY

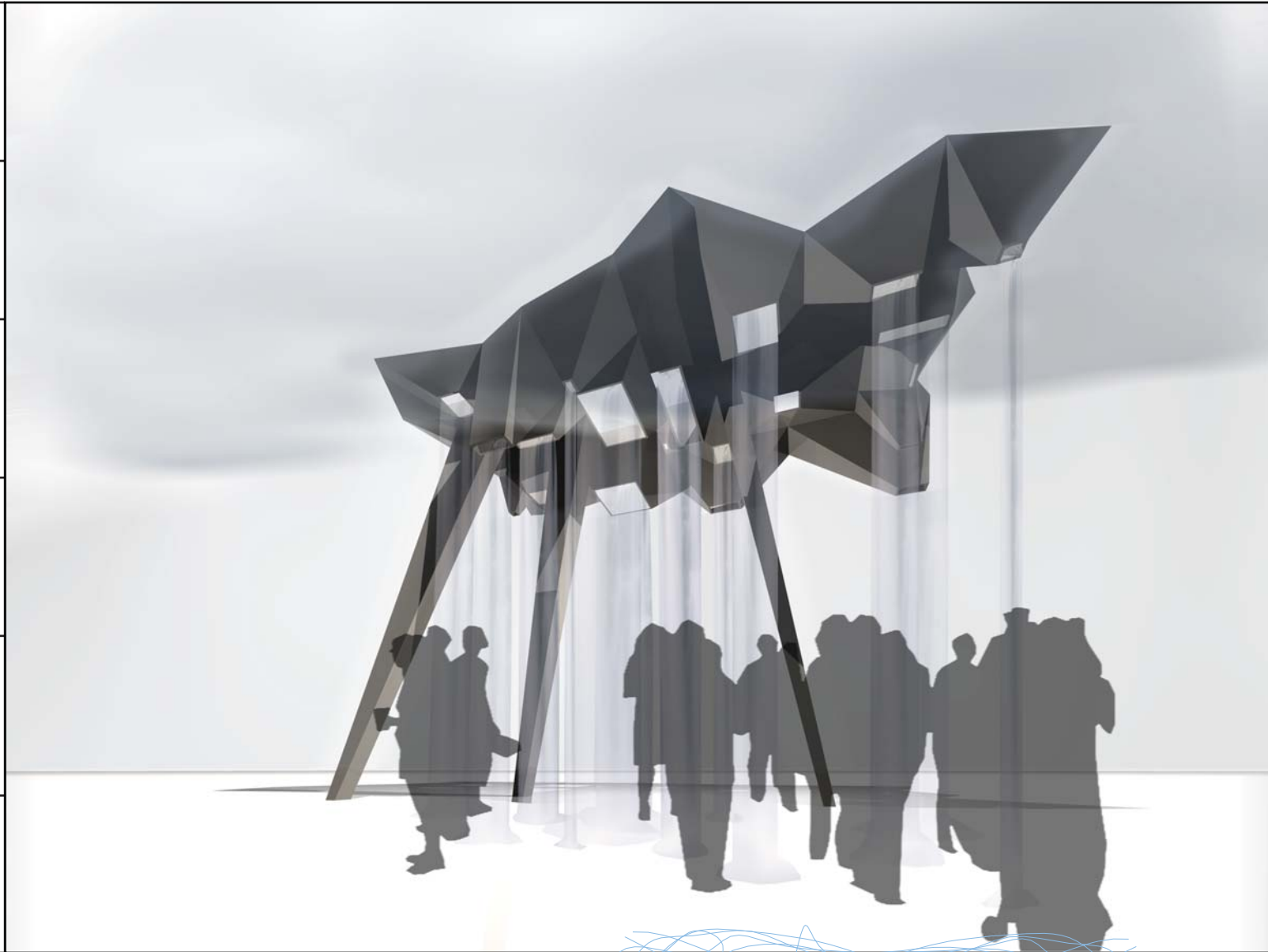


GOMETRY

THE GEOMETRY OF THE FUNNEL IS ESTABLISHED BY RECTILINEAR COLLECTION. VARYING IN DIMENSION, BUT KEEPING THE PARALLEL CONDITION AND GEOMETRY, AN IRREGULAR DIMENSIONAL VARIETY ESTABLISHED A CONTROLLED INNER PATTERN FOR THE FUNNEL FIELD. THIS REGULARIZED INNER EVOLVES TO A DIVERGENT EDGE. THE PERIMETER HAS A VARIABLE EDGE ALLOWING FOR A DYNAMIC AND RESPONSIVE FIGURATION. THE EDGE AND CORNERS ESTABLISH A FORMAL AND GESTURAL DIRECTIONALITY AND RESPONSIVE DYNAMISM. LEANING TOWARDS AND AWAY FROM CONTEXTUAL CONDITIONS, THE COMPOSITION BREAKS THE UNIFORMITY.

THE PATTERN OF THE FUNNELS SUSPENDED ABOVE ARE MIMICKED IN THE GROUND PLANE. GRATES TO AN "ADD-ON" CISTERN / WATER COLLECTION SYSTEM PROVIDE PERMANENT REGISTRATIONS OF THE LIGHT. MATERIAL MARKS IN THE GROUND SURFACE ESTABLISH EACH GROUND TO FUNNEL CONNECTION AS A SUNDIAL, IMPREGNATING A RELATIONSHIP BETWEEN THE CANOPY AND THE SITE TO ESTABLISH A METRIC OF TIME.

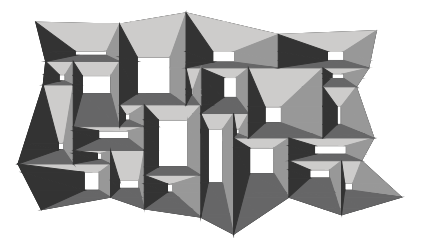
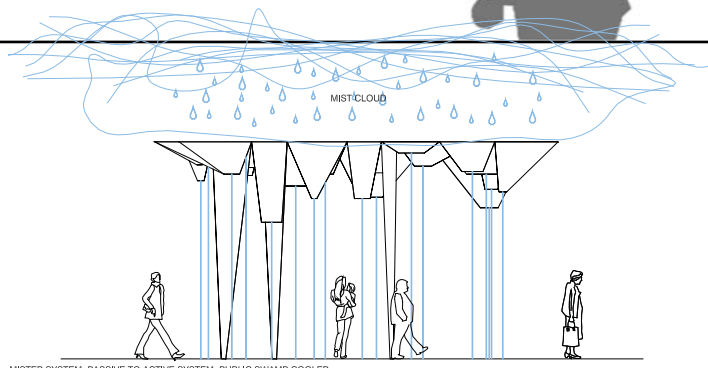




MISTER SYSTEM

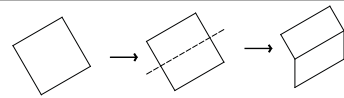
A MISTER SYSTEM IS AN ADD-ON TO PROVIDE MORE ACTIVE CLIMATE CONTROL. FOR SUN SHADES THAT MIGHT BE LOCATED IN SCENARIOS WHERE PEOPLE ARE INCREMENTALLY RESIDING (SUCH AS A BUS STOP) THE MISTER SYSTEM WOULD USE EVAPORATIVE COOLING TO CREATE A MICROCLIMATE. A SERIES OF MISTERS LOCATED ABOVE THE FUNNEL FIELD WOULD ALLOW FOR A LARGE CLOUD OF AEROSOLIZED WATER TO ENGULF THE SUNSHADE. THE WATER IN CONTACT WITH THE BODY AND THE FUNNEL FIELD WOULD PRODUCE A COOLING EFFECT.

THE URBAN OASIS WOULD BE FED THROUGH PIPES RUNNING INSIDE THE HOLLOW STRUCTURAL LEG OF THE FUNNEL FIELD. THE WATER THAT CONDENSES ON THE SURFACE WOULD GATHER IN A PARALLEL DRAINAGE SYSTEM GATHERING THE WATER INTO AN UNDERGROUND CISTERN FOR IRRIGATION OF THE VEGETATION. THE CLOUD WOULD SERVICE BOTH PEOPLE AND PLANTS TO PRODUCE A LOCAL YET INTERDEPENDENT RELATIONSHIP. THE DURABLE CORTEN STEEL WOULD BE UNAFFECTED BY THE MOISTURE.

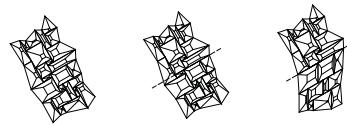


FUNNEL FOLD

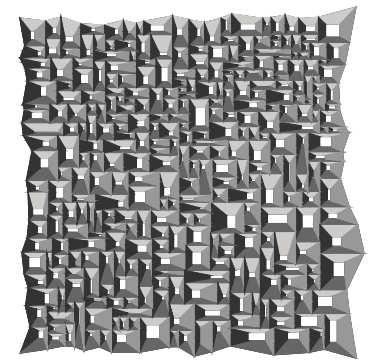
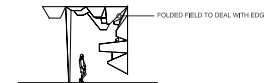
DEPENDING UPON THE SPECIFIC SITE CONDITIONS AND SUN ANGLES, THE FUNNEL FIELD HAS THE ABILITY TO FOLD ITSELF. IF THE DRAPE OF THE SUSPENDED FUNNELS CANNOT PROVIDE ADEQUATE SUN, SOUND, OR VISUAL PROTECTION FROM THE LOCAL ENVIRONMENT, THE CANOPY CAN BEND TO DEFINE WALLS FOR ENCLOSURE AND BOUNDARY. BY EXTENDING THE SAME MATERIAL AND TECTONIC, THE FUNNELS BECOME VISUAL FRAMES AND HORIZONTAL PROJECTIONS. THE FOLD CAN HAPPEN ON MULTIPLE FACES, THOUGH THE DESIRE FOR LATERAL POROSITY PREFERENCES IT REMAIN AS A CEILING AND ARTIFICIAL SKY AS MUCH AS POSSIBLE.



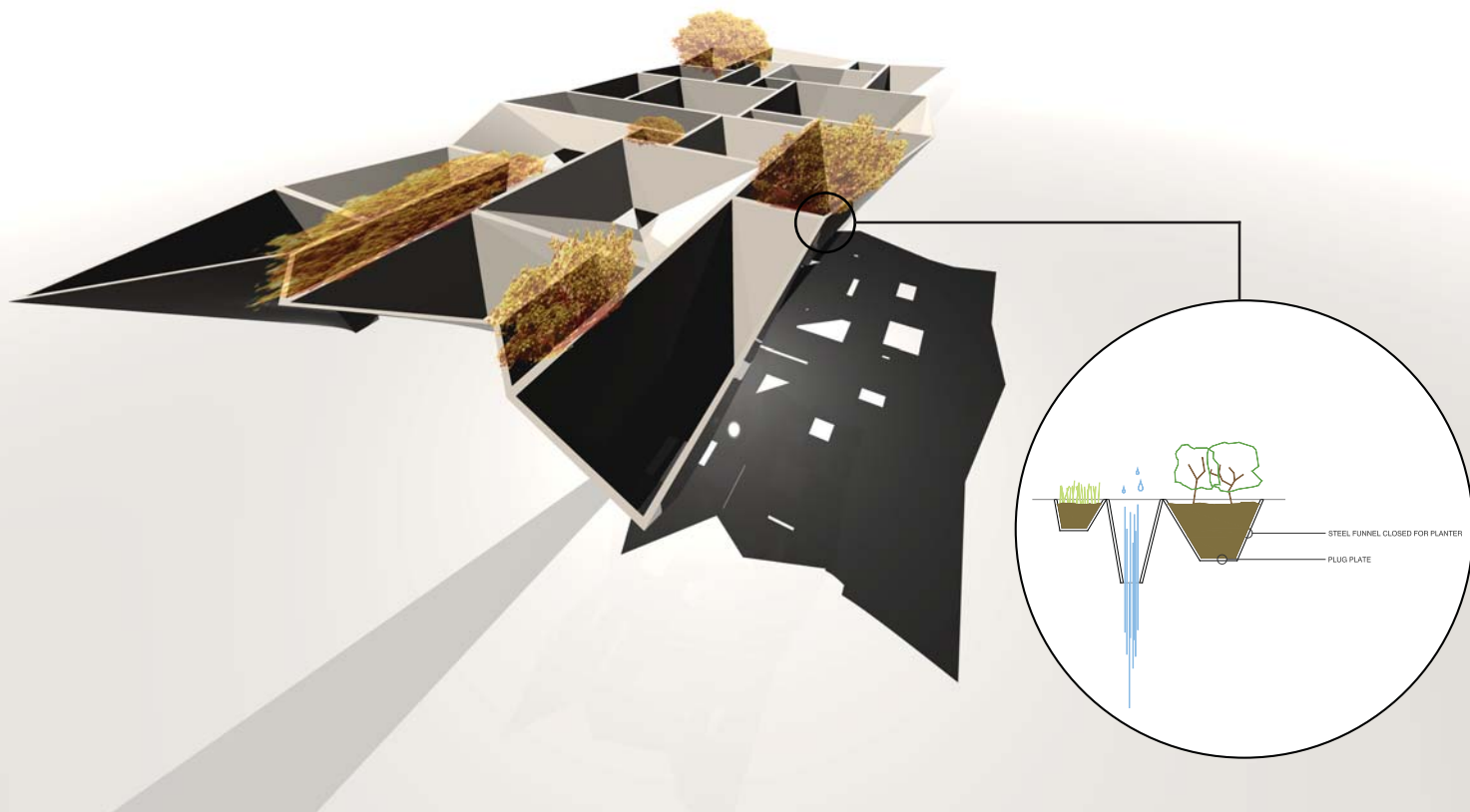
FOLD



FUNNEL FIELD FOLD



HORIZONTAL + VERTICAL RESPONSE

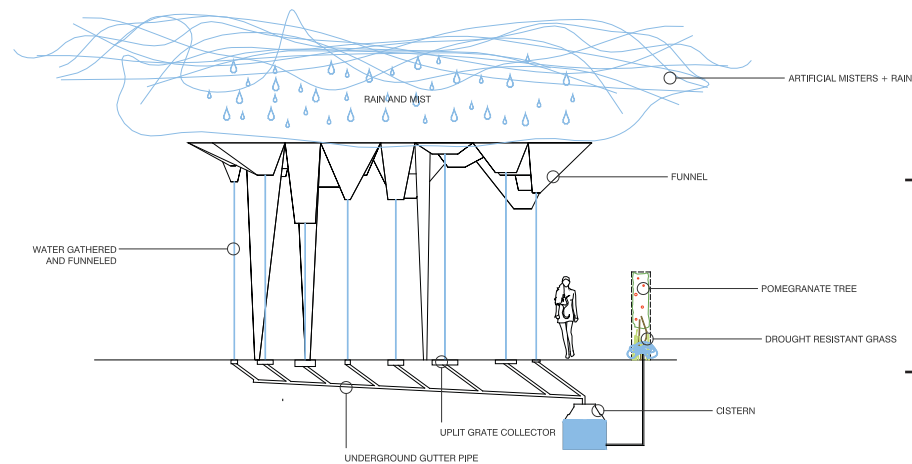
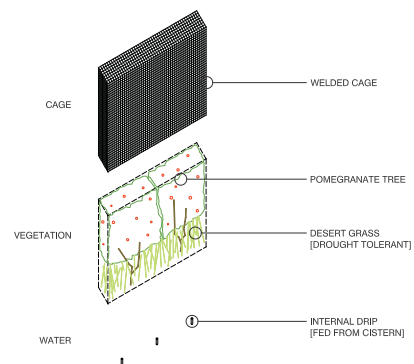


VEGETATION

VEGETATION IS AN IMPORTANT ADD-ON TO CREATE A MICROCLIMATE AND BRIDGE BETWEEN THE MAN-MADE AND THE NATURAL. THERE ARE TWO POSSIBLE CONFIGURATIONS FOR THE ADDITION.

THE FIRST IS IN A SECONDARY GROUND CAGE. SET INSIDE A GRIDDED METAL CAGE, AN UPPER CANOPY OF POMEGRANATE TREES AND LOWER BASE OF DESERT GRASSES PRODUCE A NATURAL PRISMATIC VOLUME. FED THROUGH THE RECLAMATION SYSTEM OF EITHER NATURAL PRECIPITATION FUNNELED BY THE CANOPY OR THE RE-GATHERED MOISTURE FROM THE MISTER SYSTEM, THE WATER FROM THE UNDERGROUND CISTERN FEEDS THROUGH A PRESSURE SYSTEM TO PROVIDE DRIP IRRIGATION. THE PLANT SPECIES ARE SELECTED FOR THEIR INDIGENOUS QUALITY. THE POMEGRANATE TREE IS A HEARTY PLANT THAT THRIVES IN THE PHOENIX CLIMATE. THE FRUIT BEARING TREES CAN BE HARVESTED BY PASSERSBY. THE CAGE FRAME ALLOWS FOR EASY MAINTENANCE MANICURING THE PLANTS AT THE FACE OF THE FRAME AND PREVENTING DAMAGE FROM INTRUDERS.

THE SECONDARY USES THE UPPER FUNNEL SYSTEM. BY WELDING A BASE PLUG INTO THE TIP OF SELECT FUNNELS, THEY CAN BE CAPPED AND FILLED WITH ROCK AND SOIL FOR PLANTINGS. HOUSING GRASSES OR VINES, THE PLANTS WOULD BE IRRIGATED BY THE MISTER SYSTEM, AND PROVIDE A SECONDARY CANOPY TO THE FUNNEL FIELD TO SHADE NATURALLY. VINES WOULD HANG TO ALLOW FOR SHADING OF LOW ANGLE SUN.

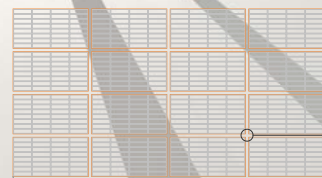
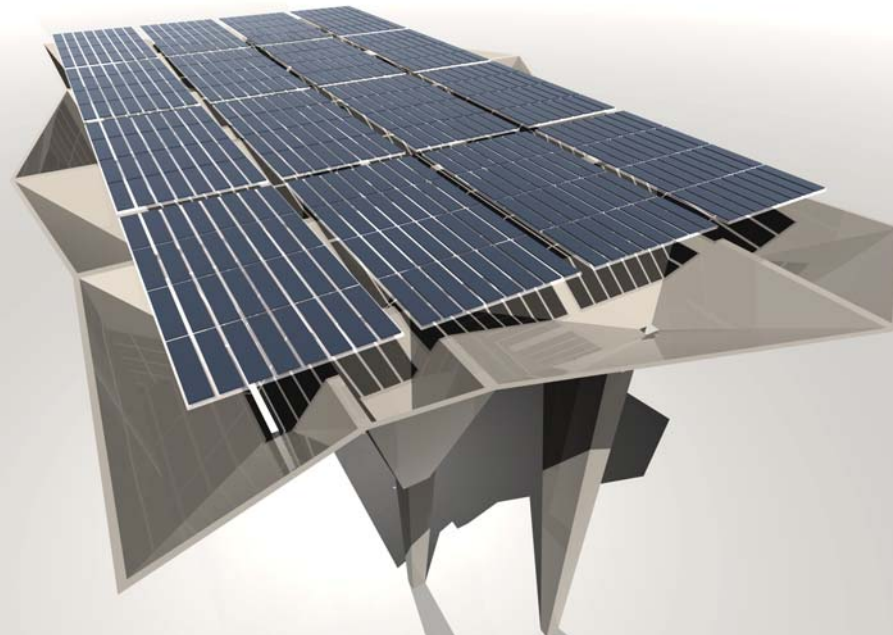


VEGETAL *ADD-ON*

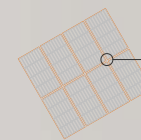
WATER COLLECTION + DISTRIBUTION

SOLAR PANELS

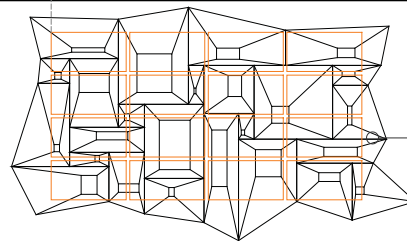
THE ADDITION OF A SOLAR CANOPY WOULD ALLOW FOR THE ADDED BENEFIT (AND ASSOCIATED COST EFFECT (LONG AND SHORT TERM)) OF ENERGY GENERATION. AS A SECONDARY PLANE, THE SOLAR PANELS ARE CONFIGURED AS A SUSPENDED BUT OPEN JOINTED FIELD ALLOWING FOR AIR AND WATER MOVEMENT. THE USE OF TRANSPARENT POLYCARBONATE BASED SOLAR PANELS WOULD ALLOW FOR THE LIGHT TO STILL PENETRATE AND NOT EFFECT THE LOWER LEVEL LIGHT PENETRATION AND VISUAL EFFECT. THE HOLLOW STRUCTURAL LEG EXTRUSIONS WOULD PROVIDE THE NECESSARY ROOM FOR THE STORAGE AND TRANSMISSION ASSOCIATED WITH SOLAR CELLS.



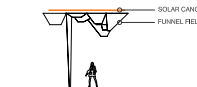
TRANSLUCENT SOLAR PANEL



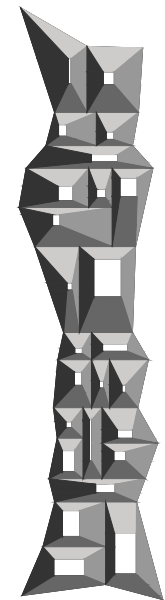
OPEN JOINTS FOR WATER AND AIR MOVEMENT



FUNNEL FIELD



SOLAR CANOPY FUNNEL FIELD



SOLAR FIELD (ENERGY 'ADD-ON')



MODEL STUDY: LIGHT AND EFFECT

A THREE DIMENSIONAL STEREO-LITHOGRAPHIC MODEL (THREE DIMENSIONALLY PRINTED IN ABS PLASTIC) ILLUSTRATES ONE OF THE LARGEST CONFIGURATIONS. THE FUNNELED LIGHT EFFECT ALLOWS FOR A DIFFUSED SHADE STUDED WITH THE SPOTLIGHTS OF THE FOCUSED FUNNELS.

BENEATH THE STALAGTITE CEILING THE CONTOURED ROOF ALLOWS FOR THE PERMEATION OF LIGHT WHILE PRODUCING AN EFFECTUAL SPACE.

BETWEEN FILTER AND SCULPTURE - ARCHITECTURE AND OBJECT, THE SHADE STRUCTURE PRODUCES AN EXPERIENCE THAT IS SIMULTANEOUSLY FUNCTIONAL, FIGURAL AND EMOTIVE.

