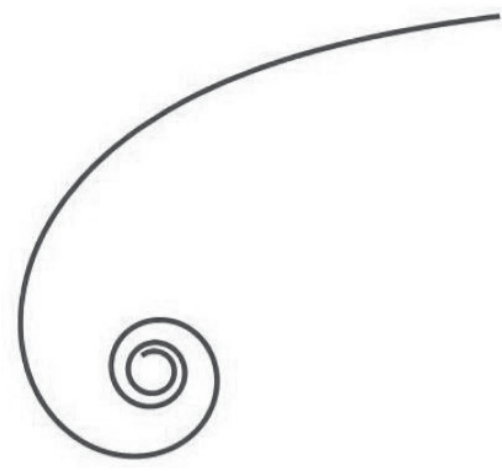


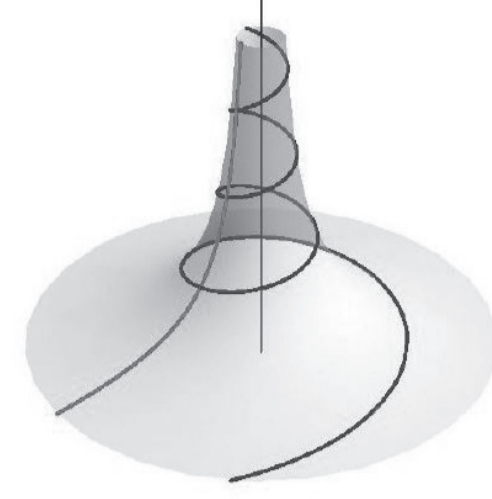
CONCEPTUAL PROTOTYPE

TO OVERCOME THE CONSTRAINT OF COMPACT DEVELOPABLE LAND AREA, OUR CREATIVE AND INNOVATIVE **SOLAR VORTEX** DESIGN PROPOSES FOR VERTICAL BEAM-DOWN SOLAR THERMAL CONCENTRATOR (V-BDSTC) WITH VERTICAL ARRANGEMENT OF THE ELLIPTICAL LAYOUT OF FLAT HELIOSTAT MIRRORS, GRADUALLY SPIRALING UP INTO THREE-DIMENSIONAL HYPERBOLIC HELICOID GEOMETRY.

HYPERBOLIC SPIRAL



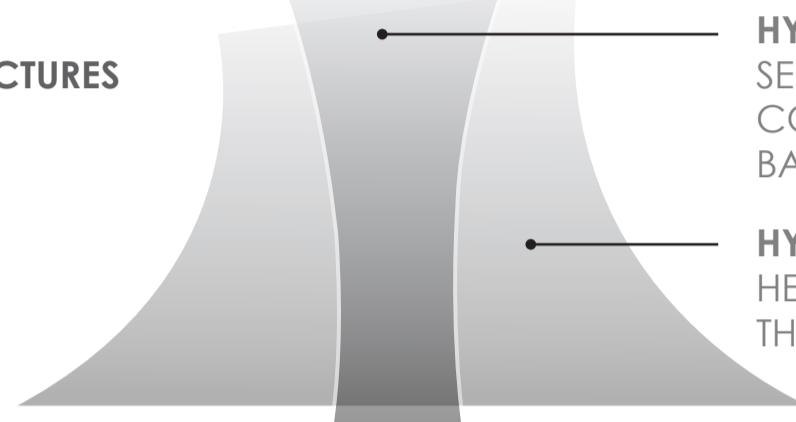
3D HYPERBOLIC SPIRAL



HYPERBOLIC HELICOID

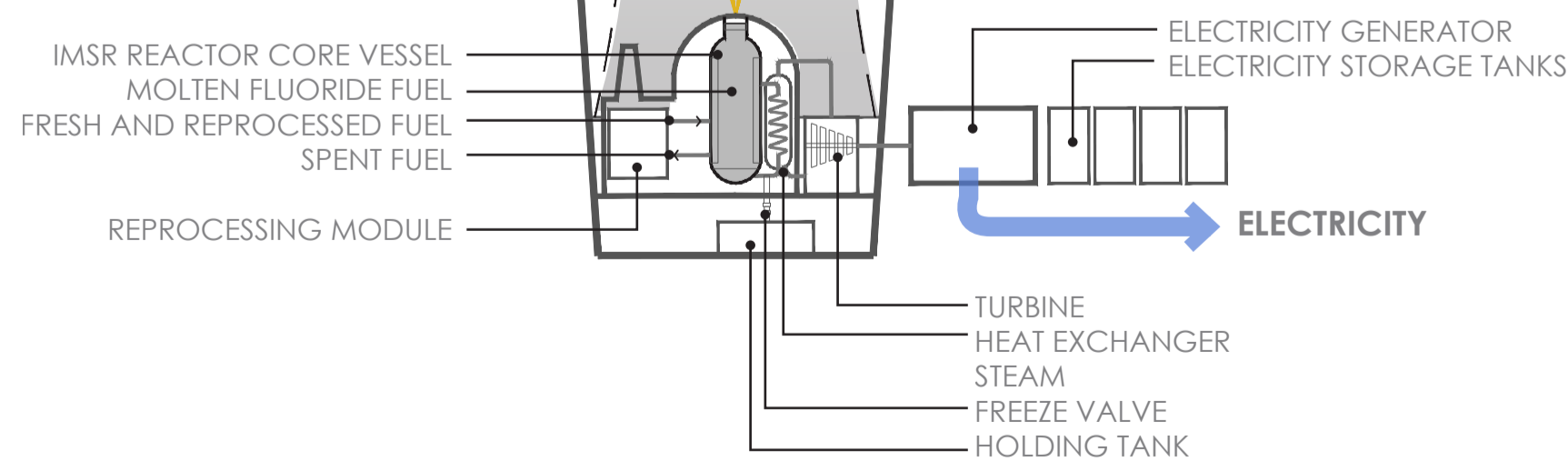
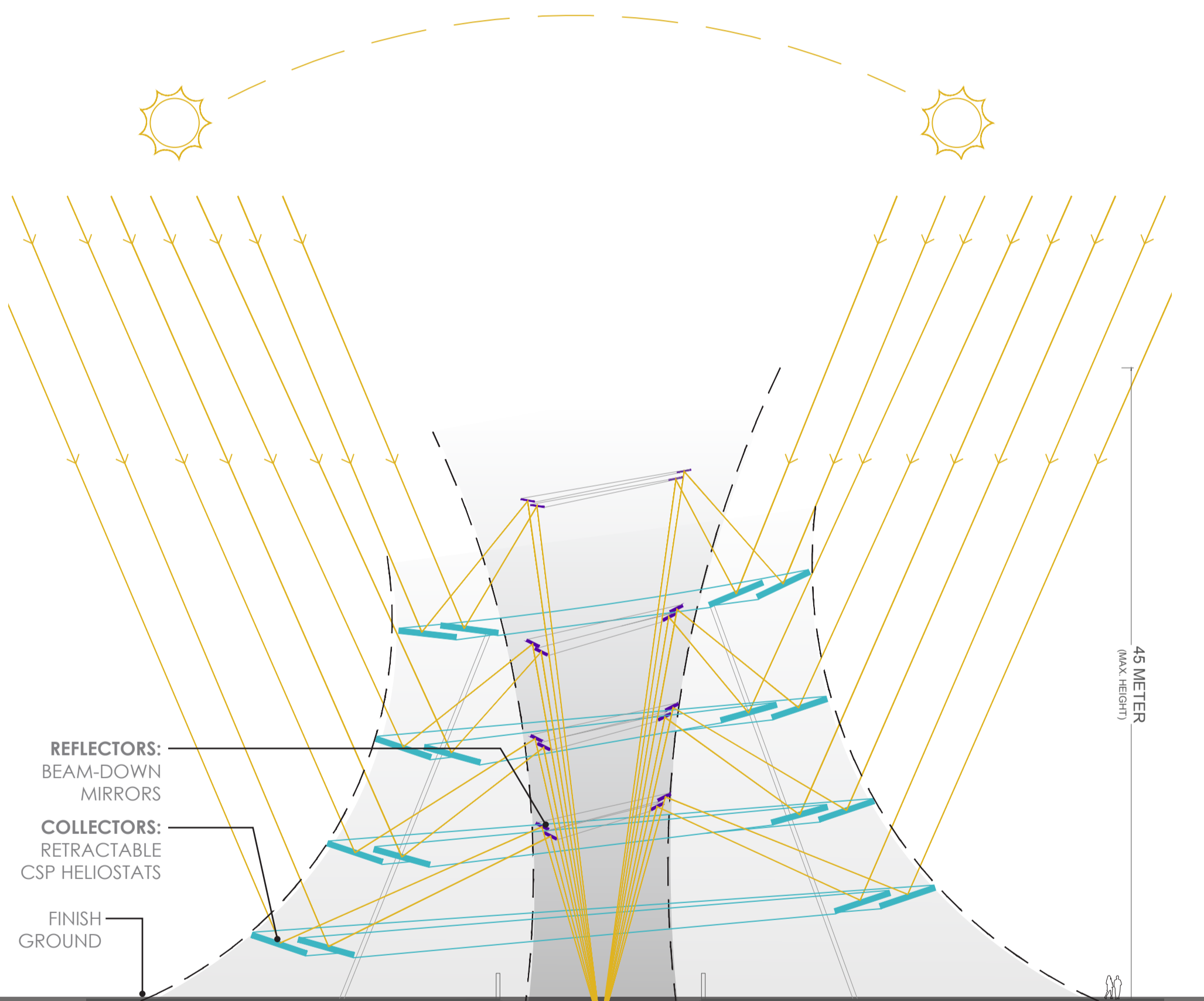


DUAL SYSTEM OF HYPERBOLIC HELICOID STRUCTURES



HYPERBOLIC HELICOID 2: REFLECTOR
SECONDARY REFLECTOR MIRRORS, CONVERGING HEAT RADIATION BACK TO THE LOWER FOCAL POINT

HYPERBOLIC HELICOID 1: COLLECTOR
HELIOSTAT MIRRORS AS SOLAR THERMAL COLLECTOR



IN HARNESSING THE ENERGY OF THE SUN, **SOLAR VORTEX** IS DESIGNED NOT ONLY TO CAPTURE THE HEAT AS SOLAR THERMAL CONCENTRATOR, BUT ALSO FUNCTIONS AS FUSION REACTOR TO GENERATE POWER, A POETIC APPROACH TO SYMBOLIZE WHAT THE SUN IS INHERENTLY ALL ABOUT.

A HYBRID AND CREATIVE ADVANCEMENT OF CONCENTRATED SOLAR POWER (CSP) TECHNOLOGY, **SOLAR VORTEX** COMBINES VERTICAL BEAM-DOWN SOLAR THERMAL CONCENTRATOR (V-BDSTC) TECHNOLOGY, WITH THE INTEGRAL MOLTEN SALT REACTOR (IMSR) TECHNOLOGY.



SOLAR VORTEX 08

D-25 POWER PLANT
NAMEPLATE CAPACITY : 15 MWe
CAPACITY FACTOR : 27%
ANNUAL CAPACITY : 35,478 MWh

SOLAR VORTEX 07

D-40 POWER PLANT
NAMEPLATE CAPACITY: 25 MWe
CAPACITY FACTOR : 27%
ANNUAL CAPACITY : 56,765 MWh

SOLAR VORTEX 06

D-25 POWER PLANT
NAMEPLATE CAPACITY: 15 MWe
CAPACITY FACTOR : 27%
ANNUAL CAPACITY : 35,478 MWh

SOLAR VORTEX 05

D-40 POWER PLANT
NAMEPLATE CAPACITY: 25 MWe
CAPACITY FACTOR : 27%
ANNUAL CAPACITY : 56,765 MWh

SOLAR VORTEX 04

D-40 POWER PLANT
NAMEPLATE CAPACITY: 25 MWe
CAPACITY FACTOR : 27%
ANNUAL CAPACITY : 56,765 MWh

SOLAR VORTEX 03

D-25 POWER PLANT
NAMEPLATE CAPACITY: 15 MWe
CAPACITY FACTOR : 27%
ANNUAL CAPACITY : 35,478 MWh

SOLAR VORTEX 02

D-30 POWER PLANT
NAMEPLATE CAPACITY: 18 MWe
CAPACITY FACTOR : 27%
ANNUAL CAPACITY : 42,574 MWh

SOLAR VORTEX 01

D-50 POWER PLANT
NAMEPLATE CAPACITY: 30 MWe
CAPACITY FACTOR : 27%
ANNUAL CAPACITY : 70,956 MWh

SOLAR VORTEX

@ MASDAR CITY OASIS

VERTICAL BEAM-DOWN SOLAR THERMAL CONCENTRATOR (V-BDSTC)

INTEGRAL MOLTEN SALT REACTOR (IMSR)