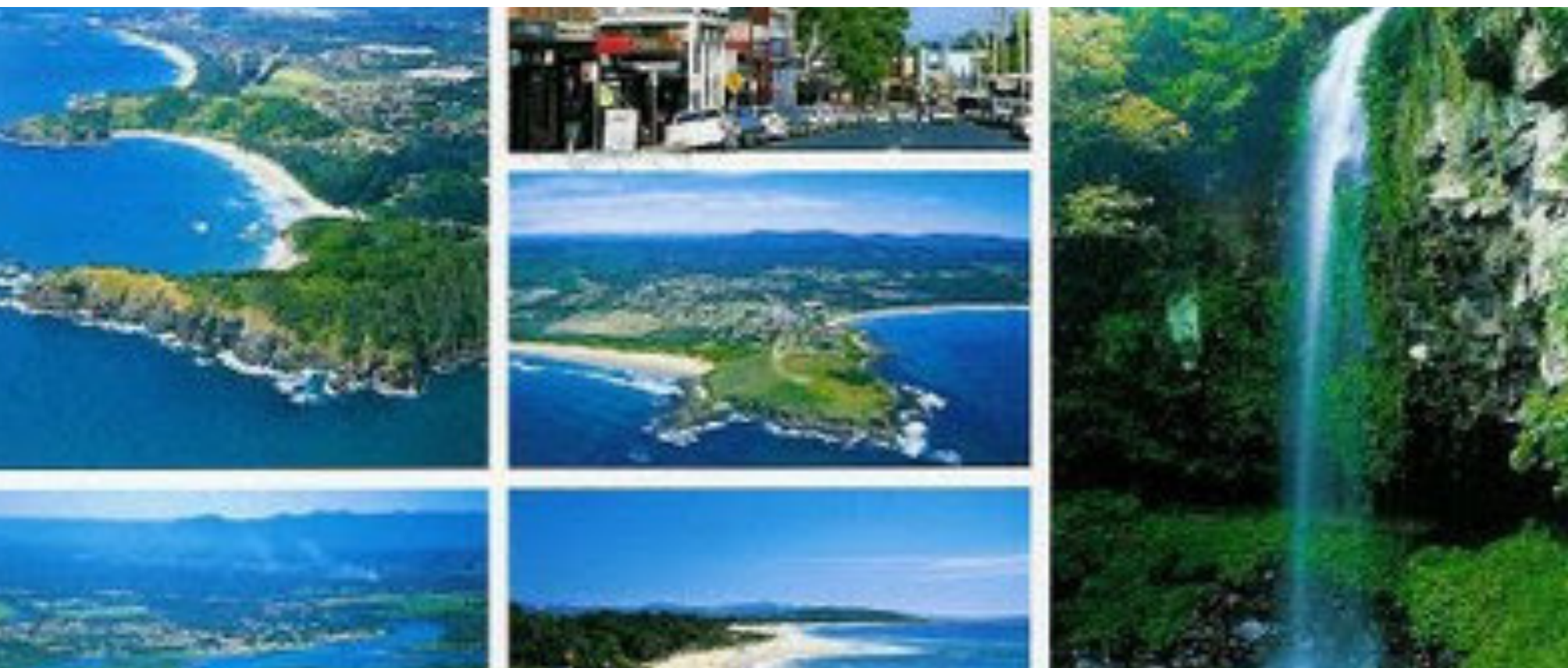
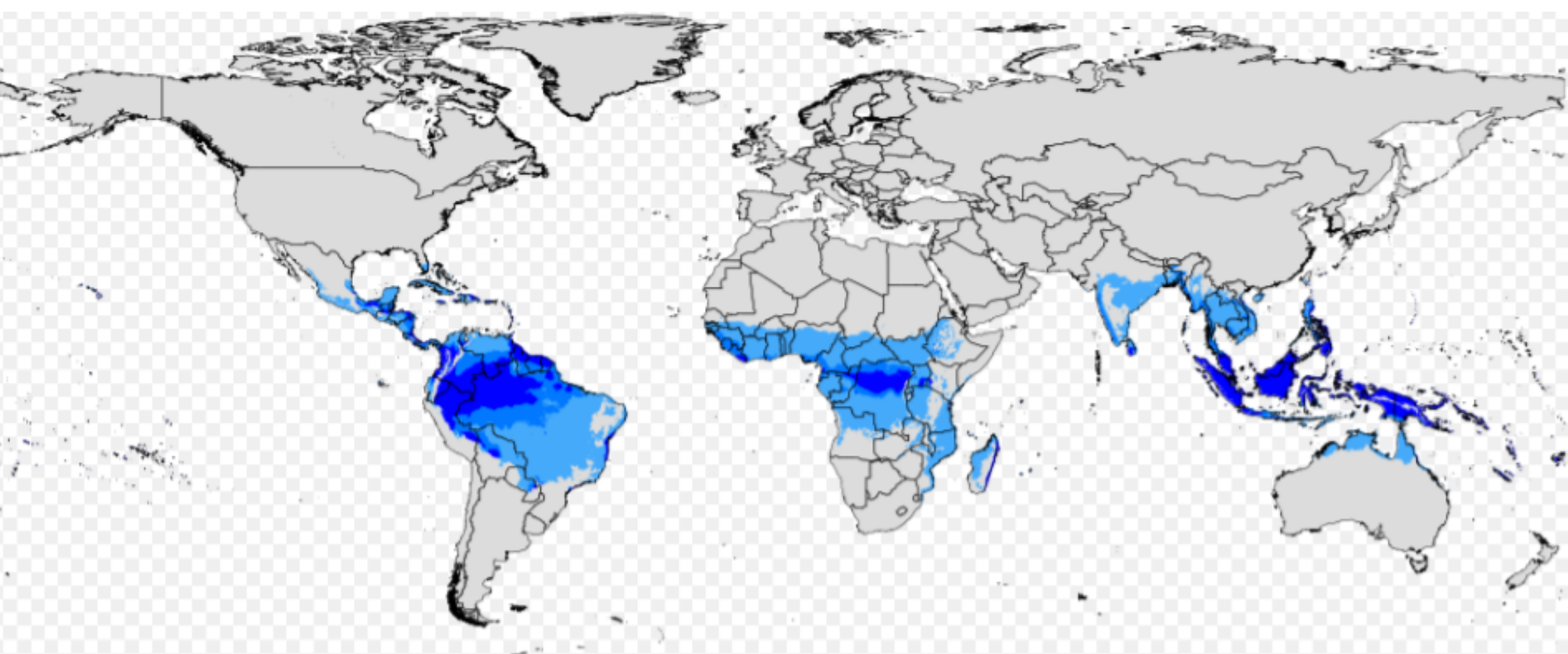


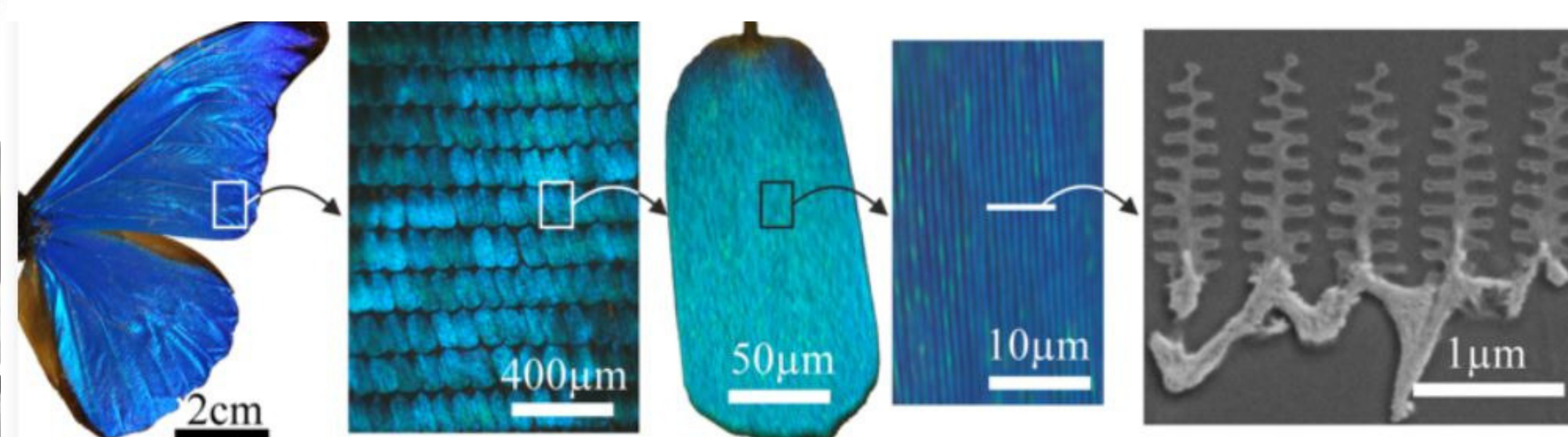
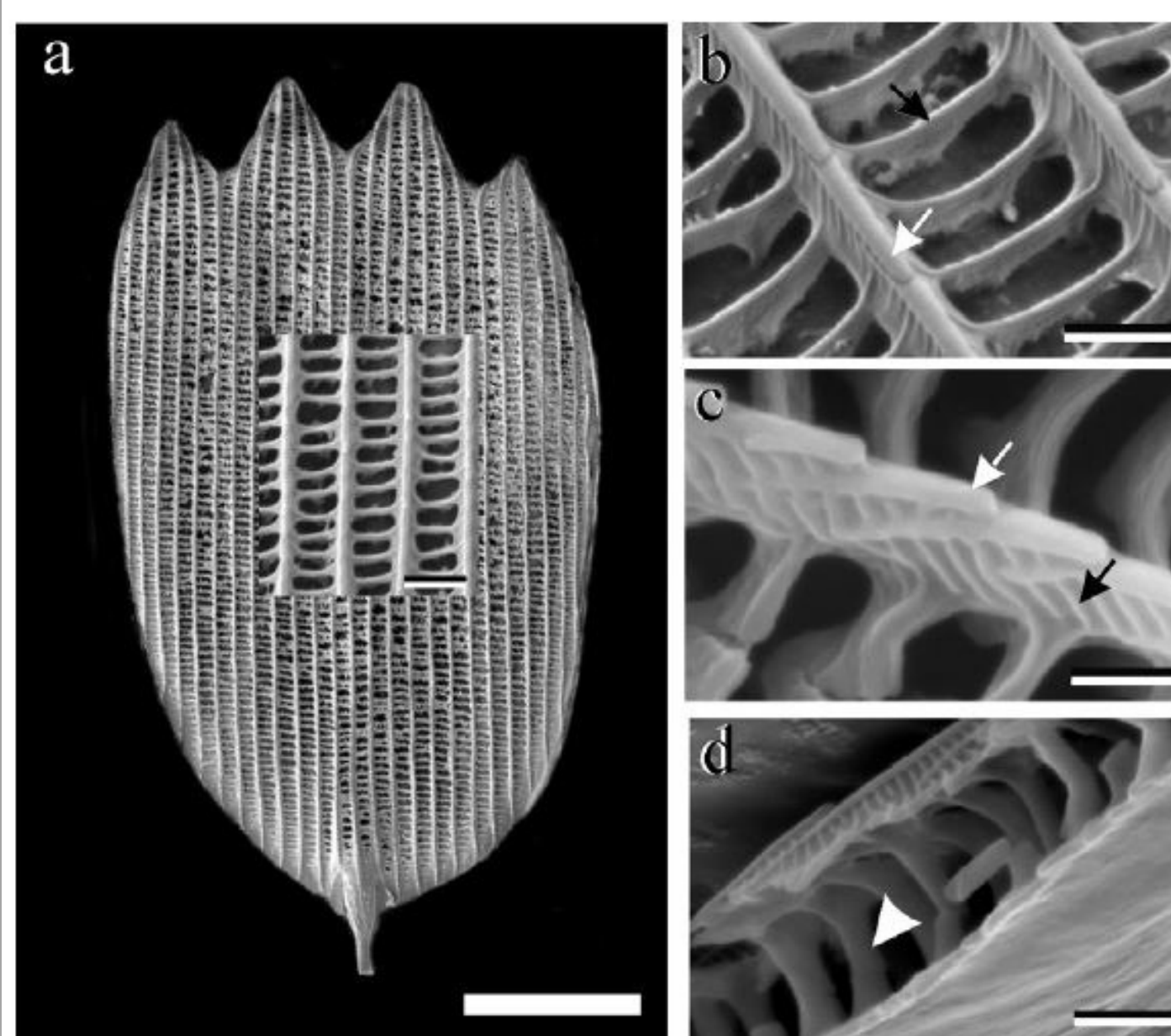
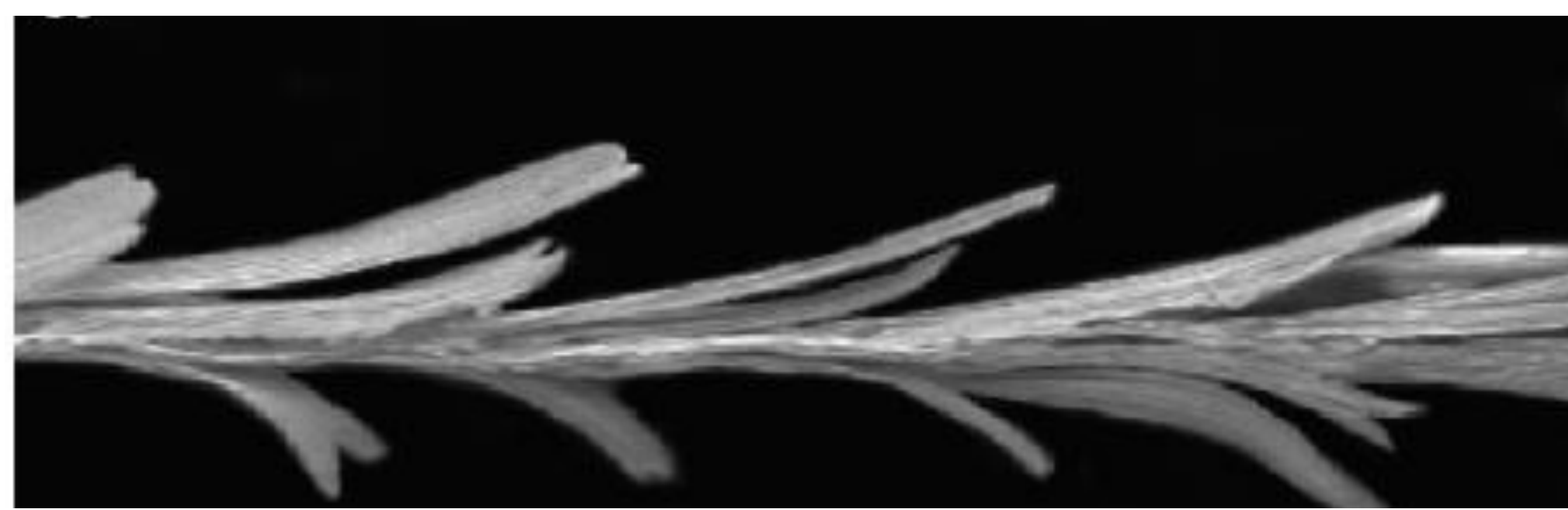
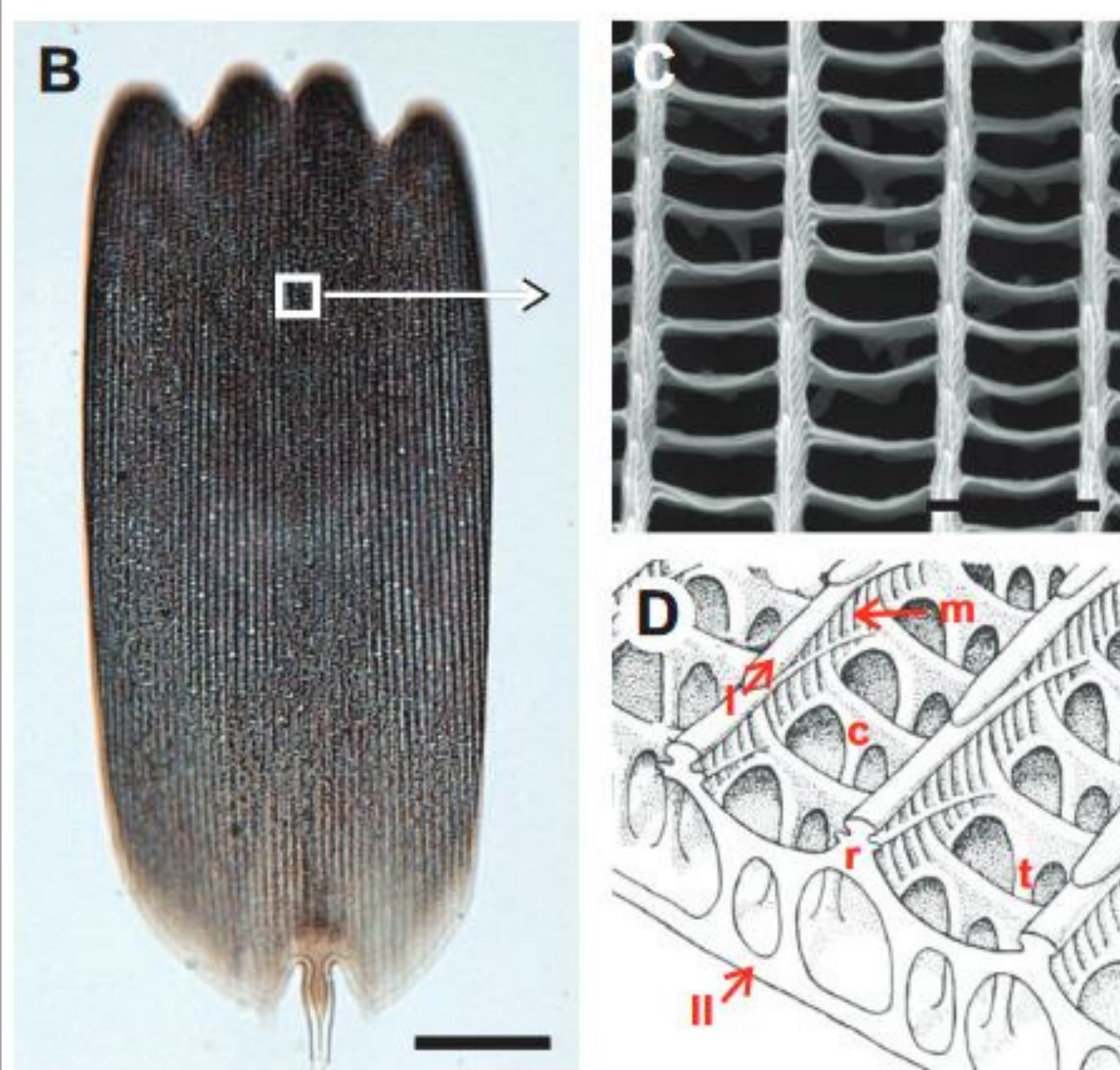
CLIMAT TROPICAL



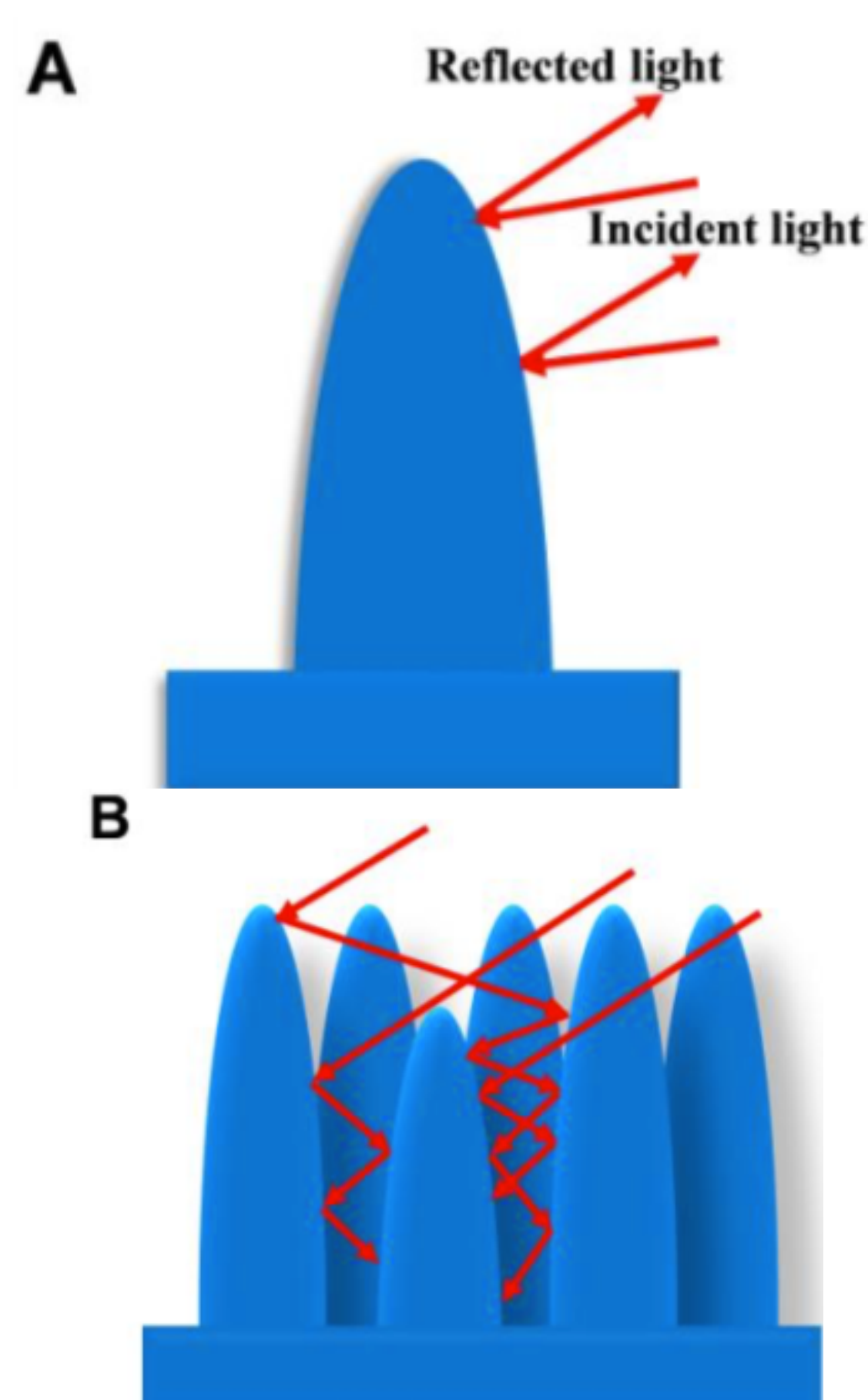
- Présent entre **les tropiques**;
- La température moyenne mensuelle ne descend pas **en dessous de 18 °C (64,4 °F) tout au long de l'année**;
- Existe une **saison sèche** (faibles températures, précipitations quasiment nulles) et une **saison humide** (hautes températures, très fortes précipitations);
- Un climat **non aride**.



MORPHO PELEIDES



P R I N C I P E



Pour l'unité de macrostructure dont les dimensions sont beaucoup plus grandes que la longueur d'onde de la lumière, la lumière incidente sur celle-ci produirait généralement la réflexion et la diffusion de la lumière après avoir été absorbée en partie (figure A).
Lorsque l'espacement et la profondeur possèdent les mêmes contraintes dimensionnelles de longueur d'onde de la lumière entre la topographie de la surface de la structure, les rayons lumineux sont piégés dans l'espace, ce qui génère de multiples réflexions internes (figure B). L'absorption maximale du rayonnement incident peut donc être réalisée, ce qui minimise la réflexion de la lumière à son niveau bas.

MOT CLÉ

Antireflet

CAPACITÉ DE DÉTECTION CHIMIQUE

ANTI-BUÉE

AUTONETTOYANT

SUPERHYDROPHOBIE

PIÈGE À LA LUMIÈRE

multi scale structure

COULEUR STRUCTURELLE

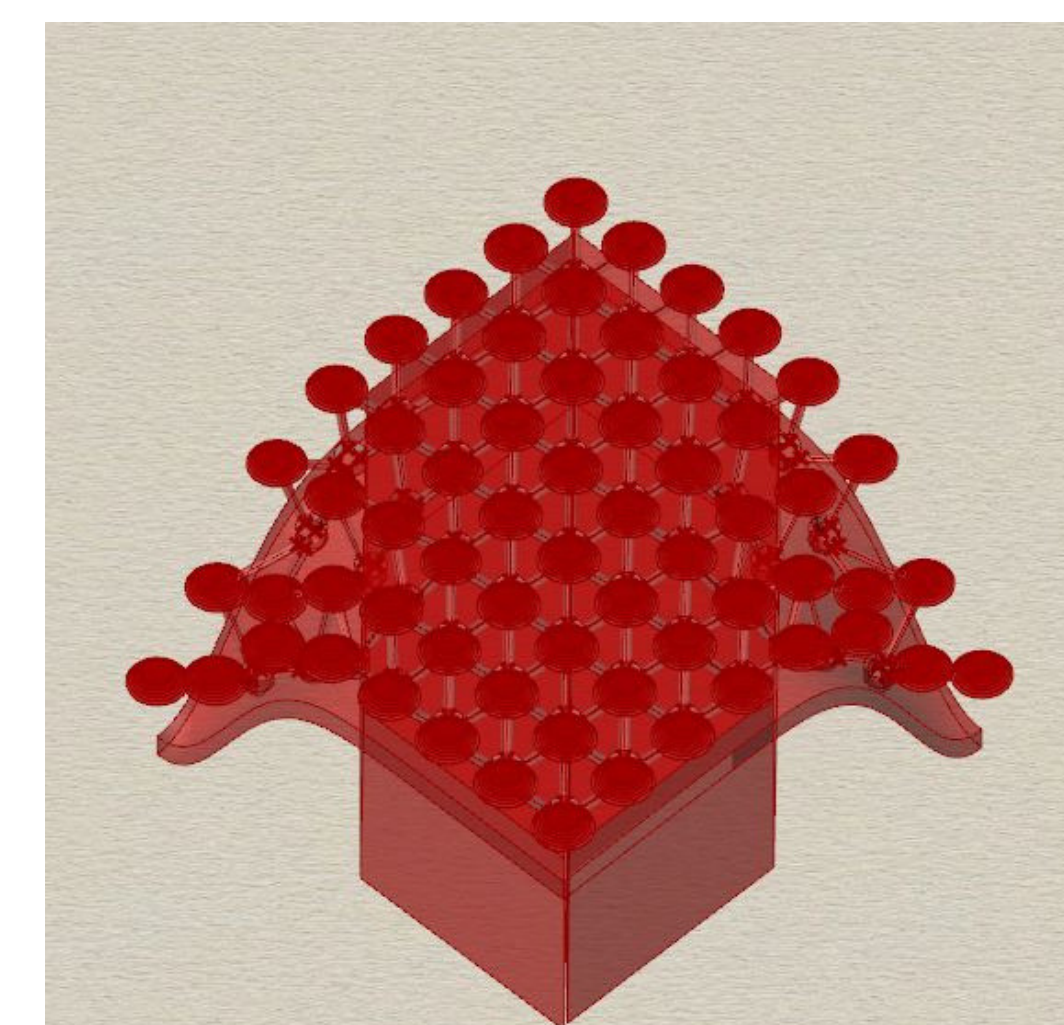
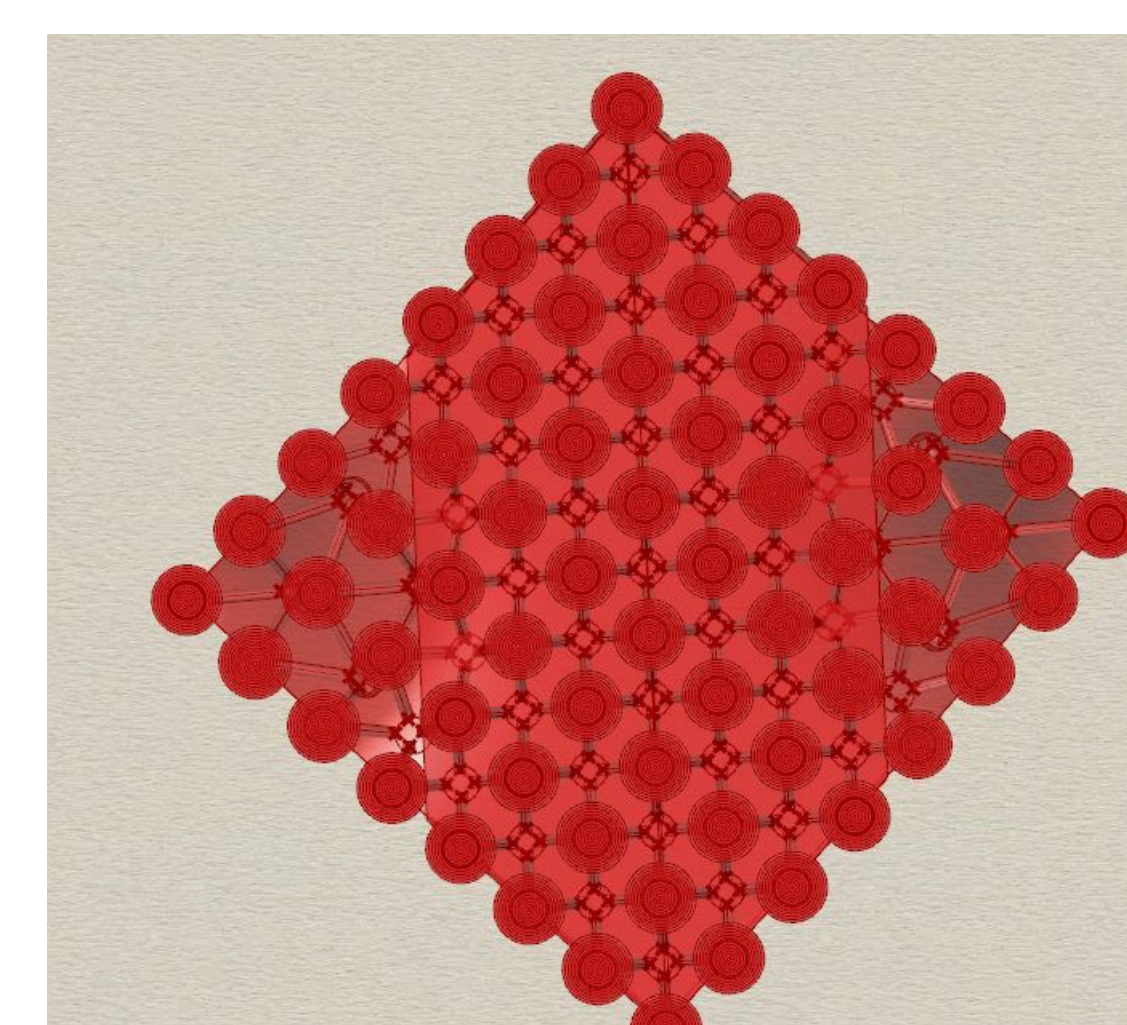
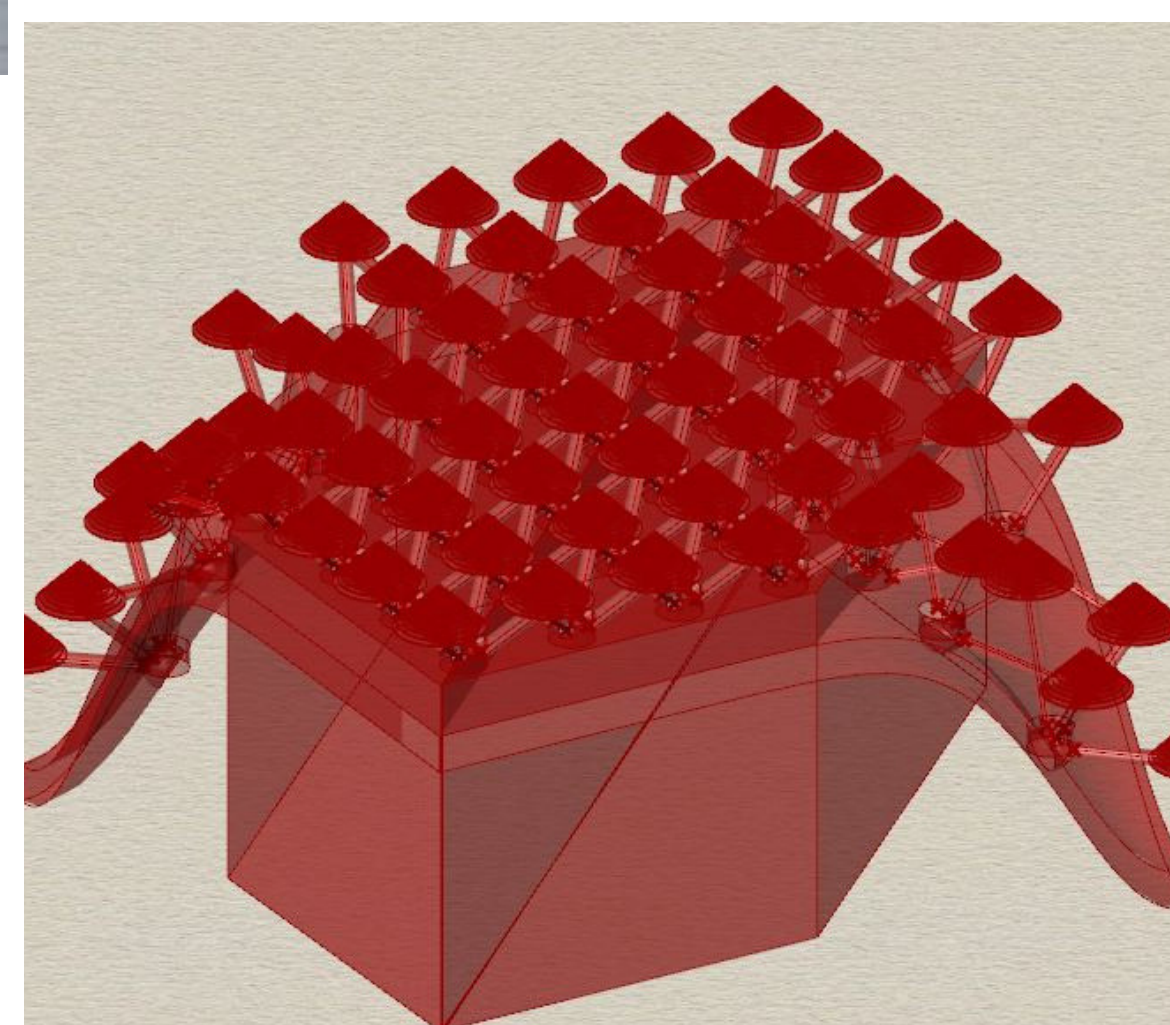
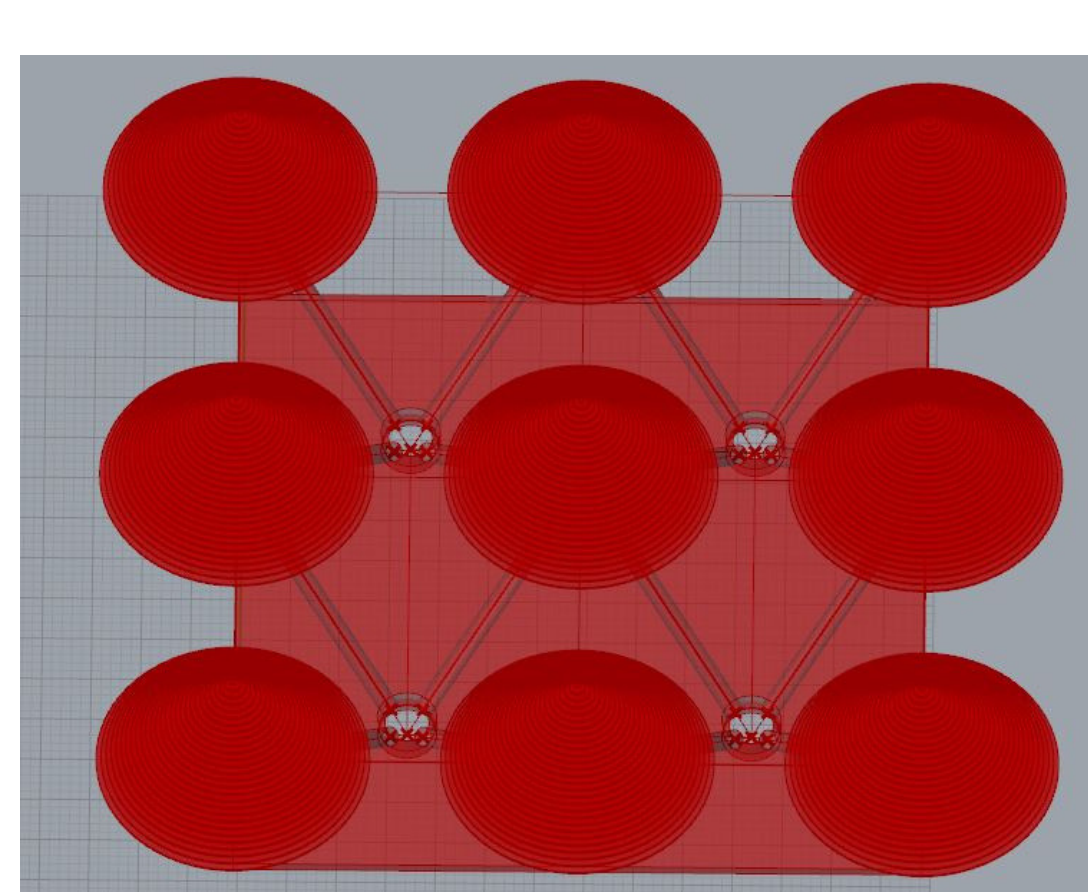
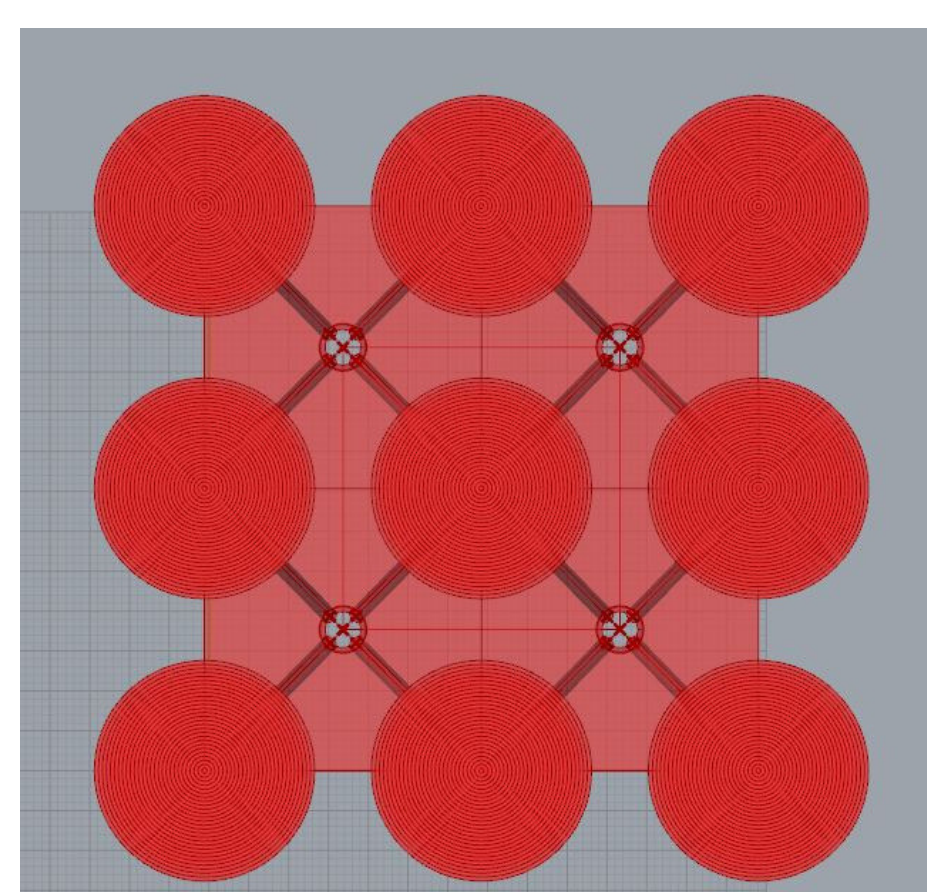
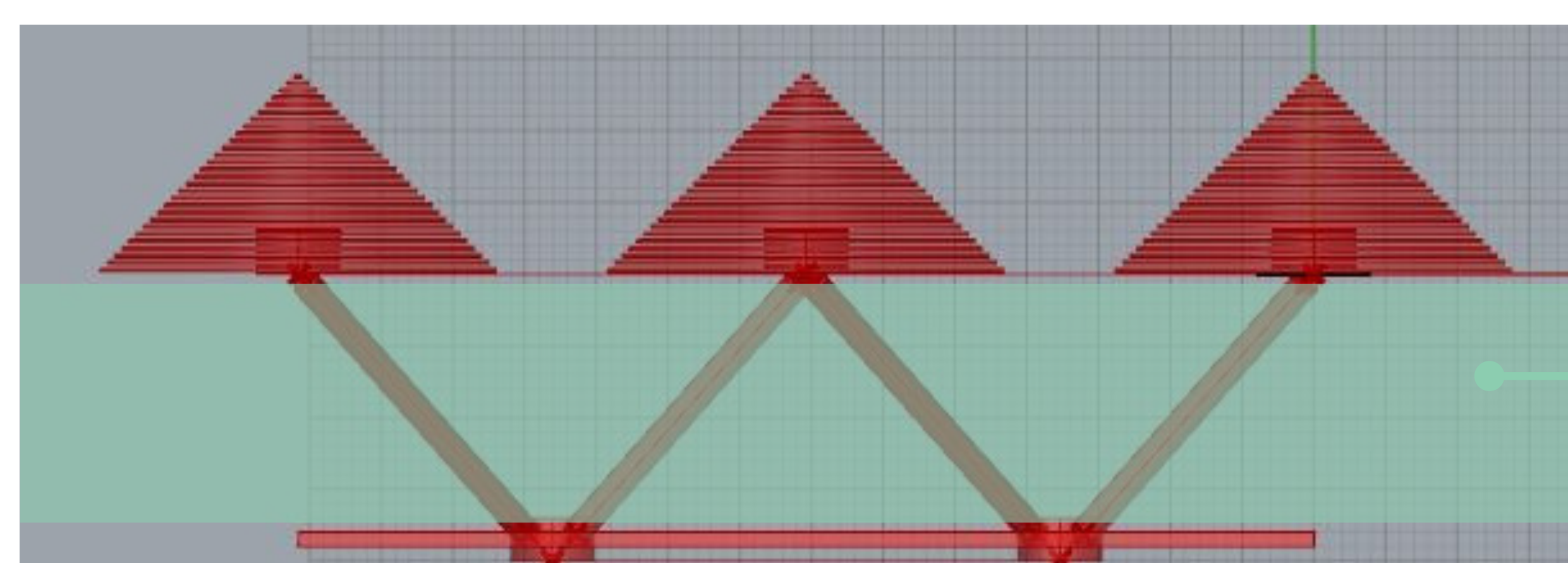
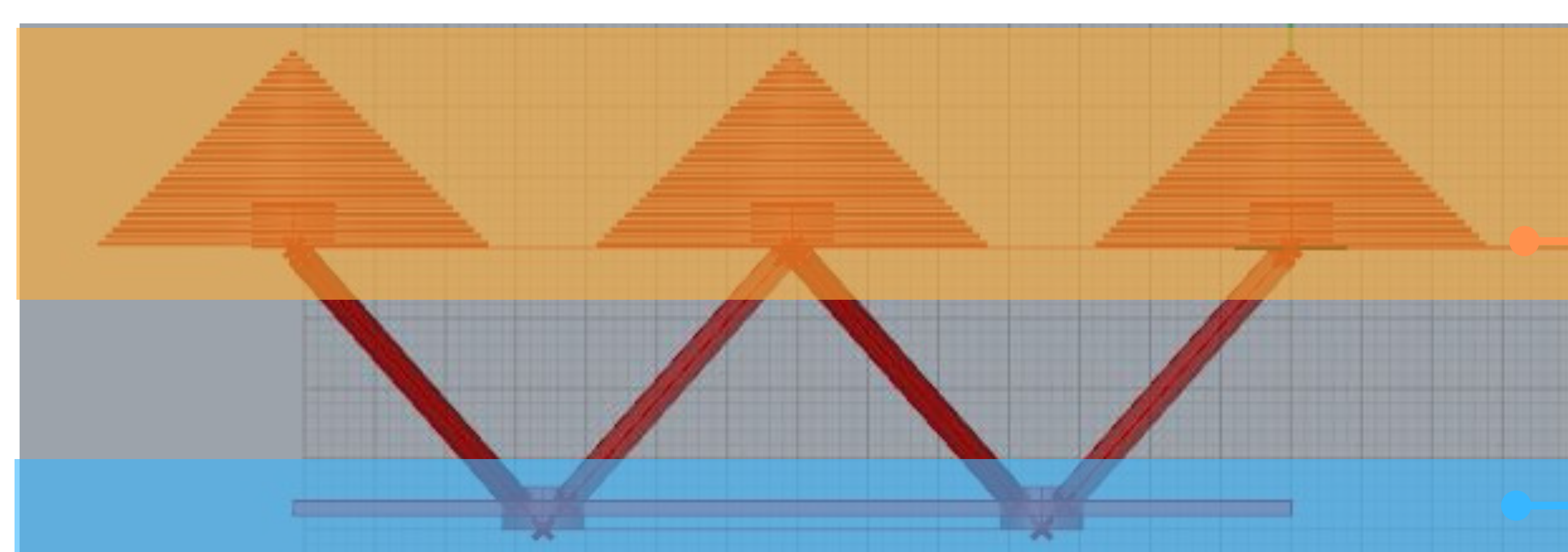
light travel between through space

ADHÉSION DIRECTIONNELLE

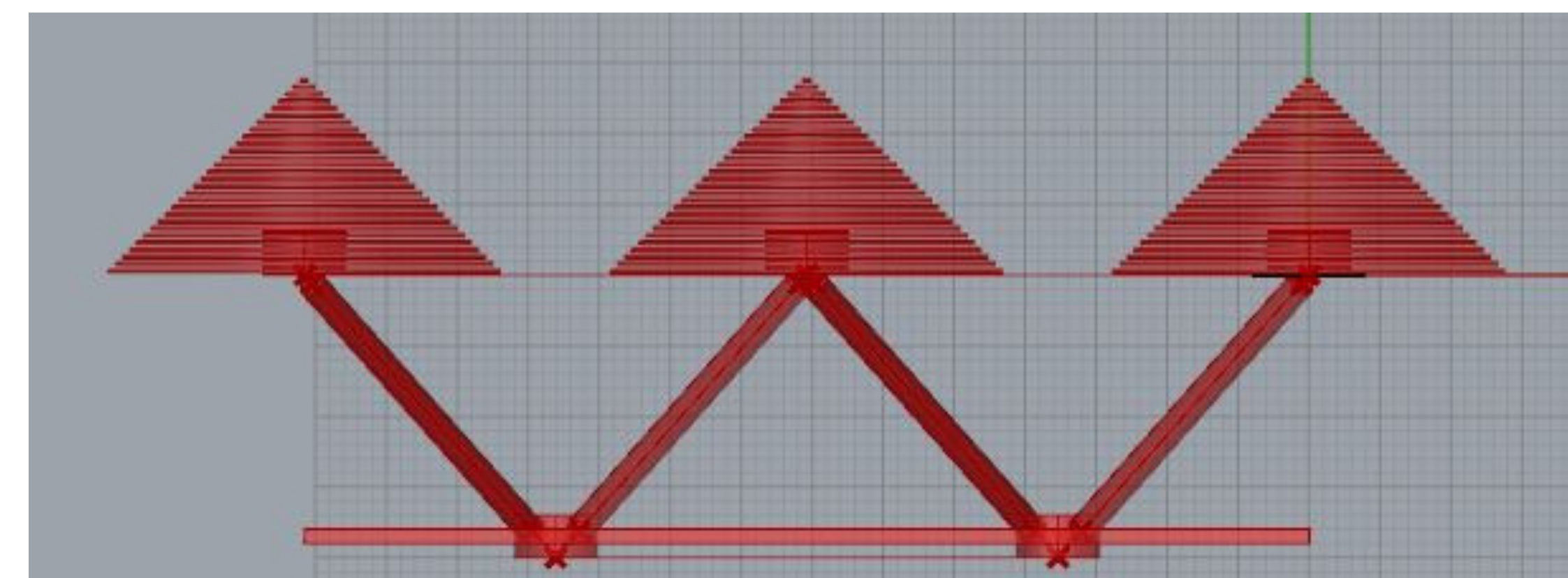
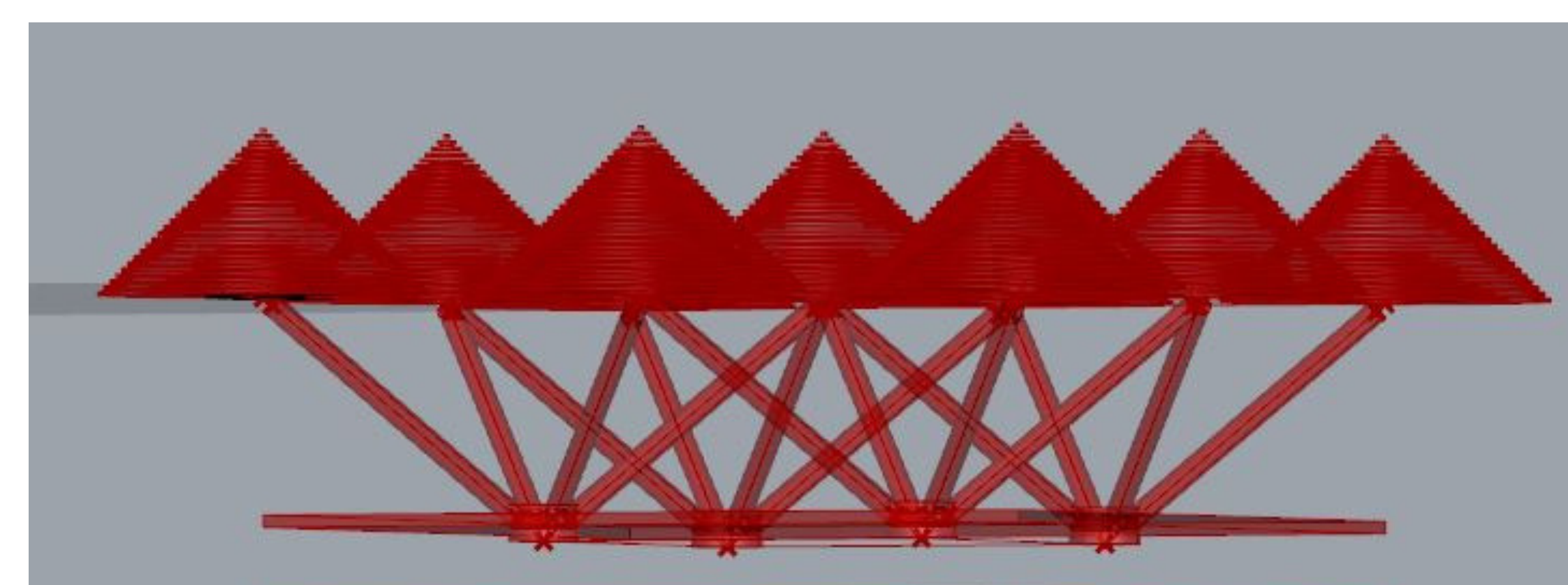
Concept de design d'enveloppe bio-inspiré :

CAPTUREZ L'ENERGIE SOLAIRE DE MANIÈRE PLUS EFFICACE POUR LA REUTILISER DANS LE BATIMENT

Han, Z., Jiao, Z., Niu, S., Ren, L., Ascendant Bioinspired Antireflective Materials: Opportunities and Challenges Coexist, Progress in Materials Science (2019), doi: <https://doi.org/10.1016/j.pmatsci.2019.01.004>



S Y S T È M E

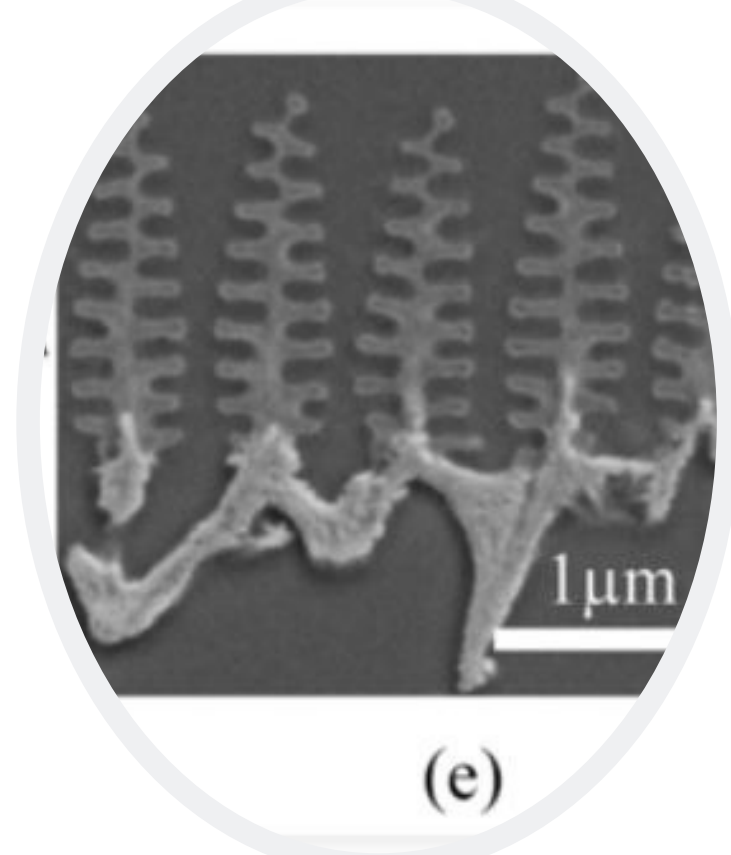


MATÉRIEL

LES CELLULES SOLAIRES À ROTATION EN FORME DE CÔNE GÉNÈRENT 20 FOIS PLUS D'ÉLECTRICITÉ QUE LE PHOTOVOLTAÏQUE PLAT

LA SPIN CELL UTILISERA LES MATÉRIEAUX PV EXISTANTS, EN MAINTENANT LE PRIX BAS ET LA DISPONIBILITÉ DES COMPOSANTS CLÉS FACILEMENT ACCESSIBLE

CONCEPTION DE SON MODULE SPIN CELL D'UN MÈTRE DE HAUT ET D'UN MÈTRE DE LARGE



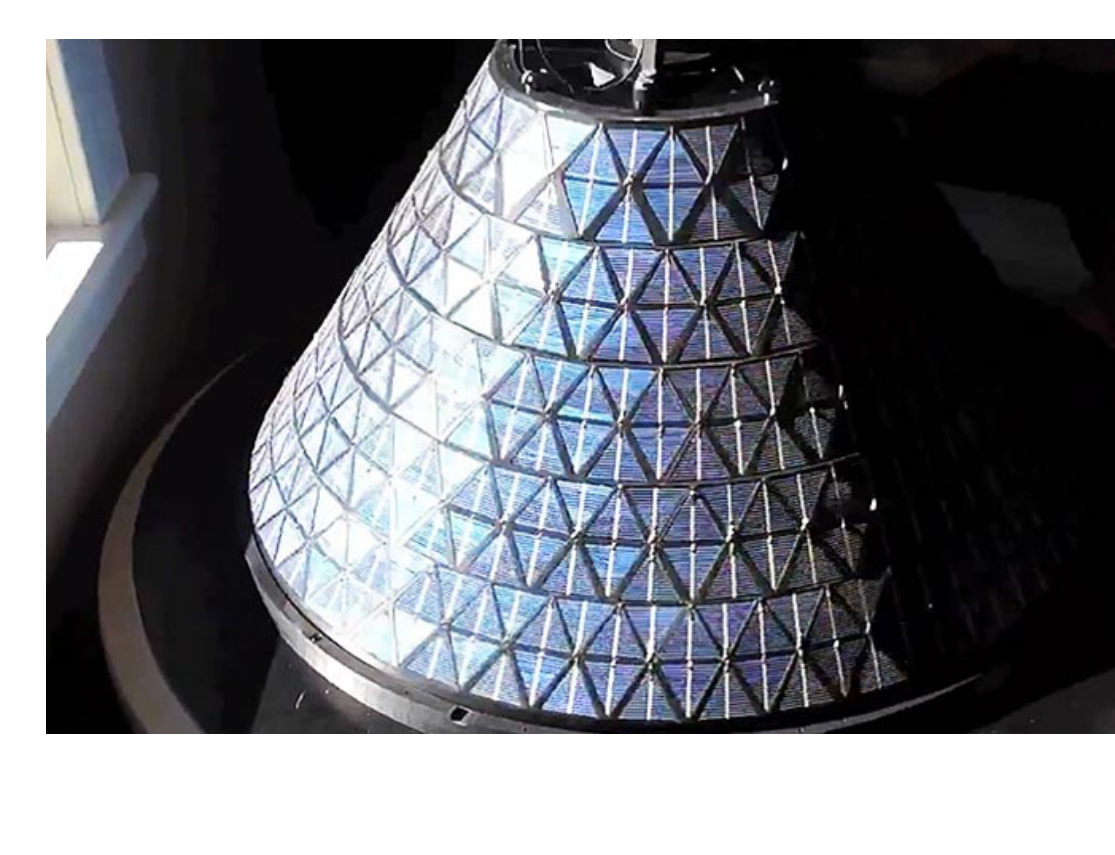
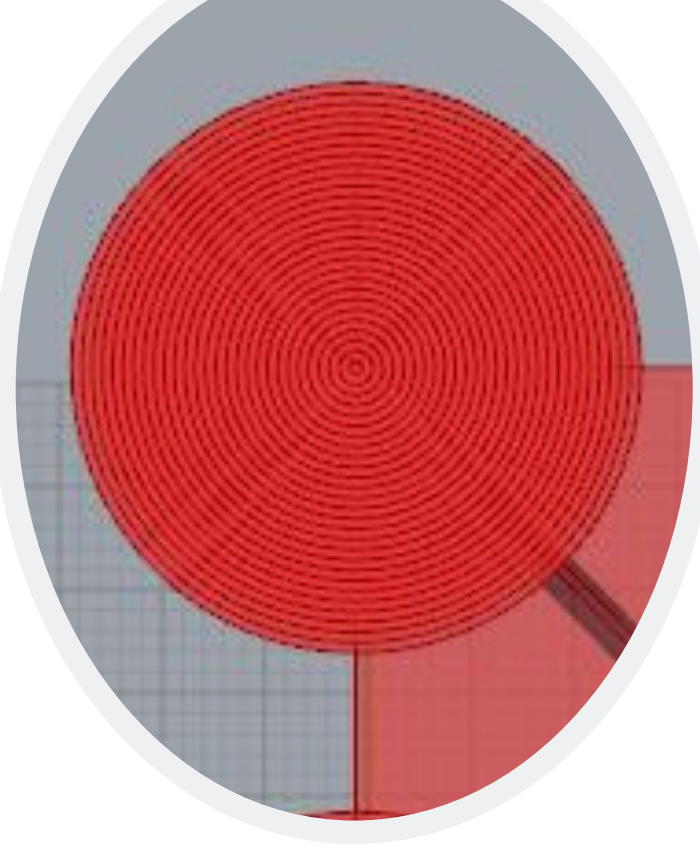
MORPHO PELEIDES



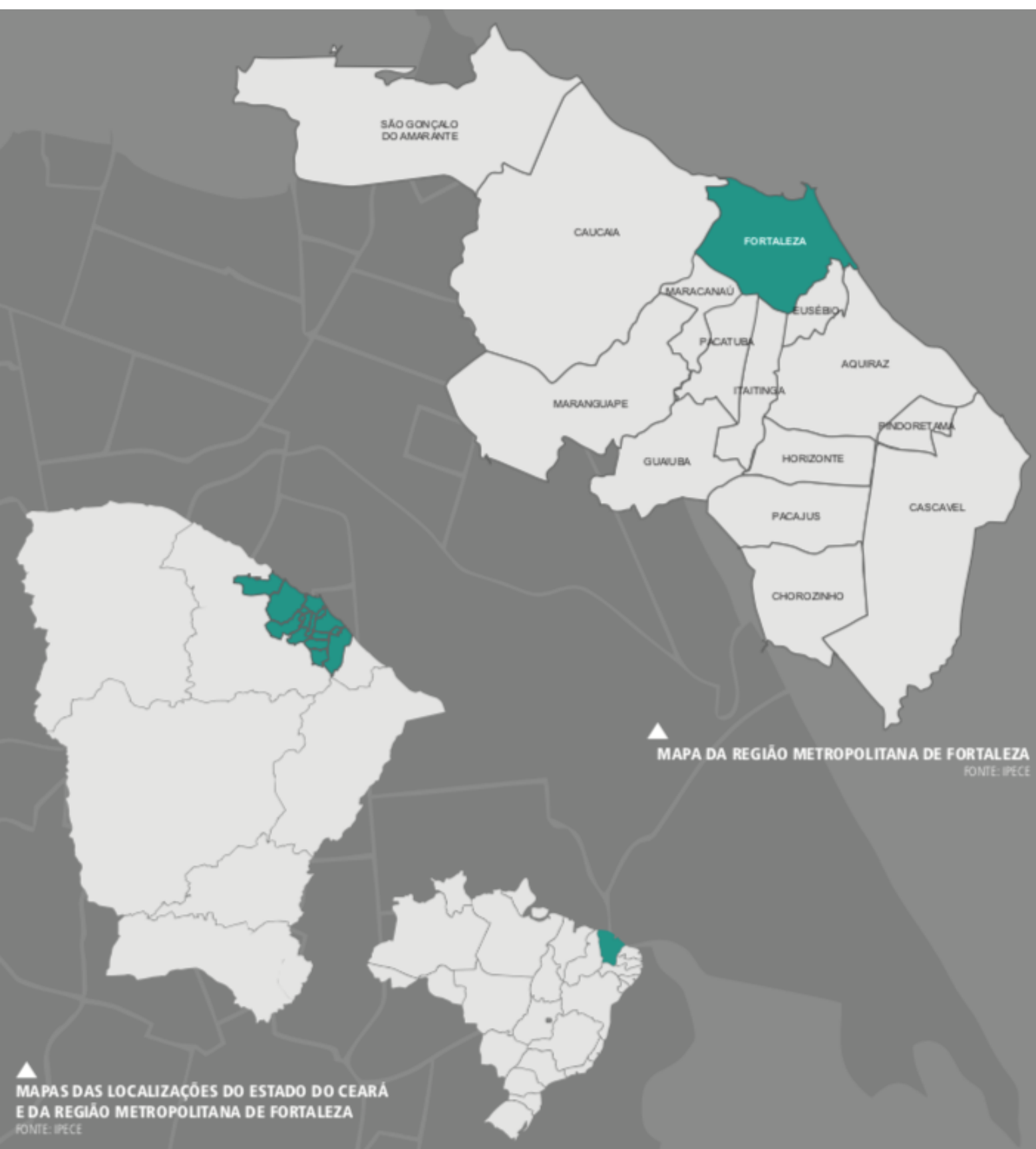
GRASSHOPPER



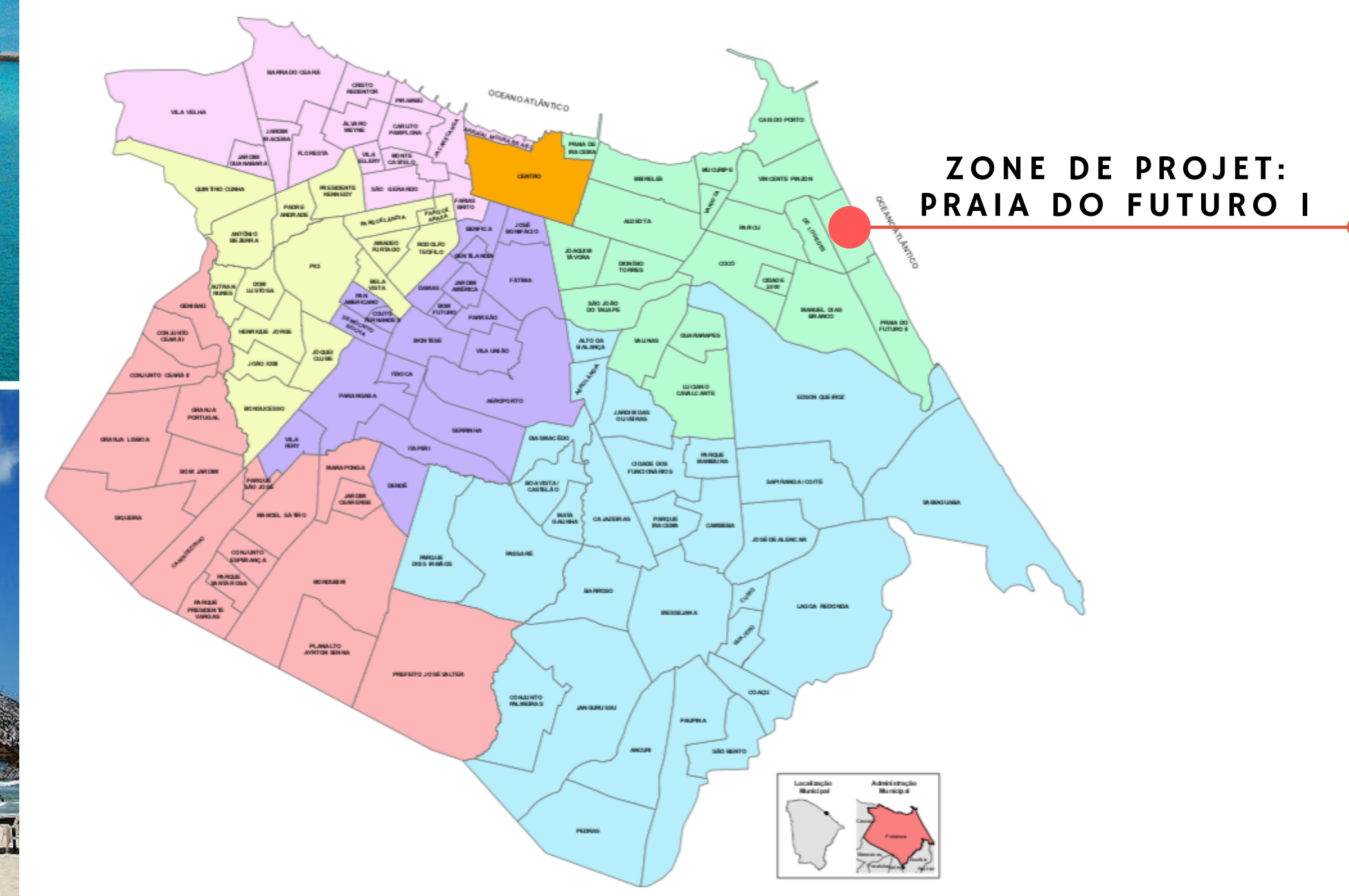
MATÉRIEL



LOCALIZATION



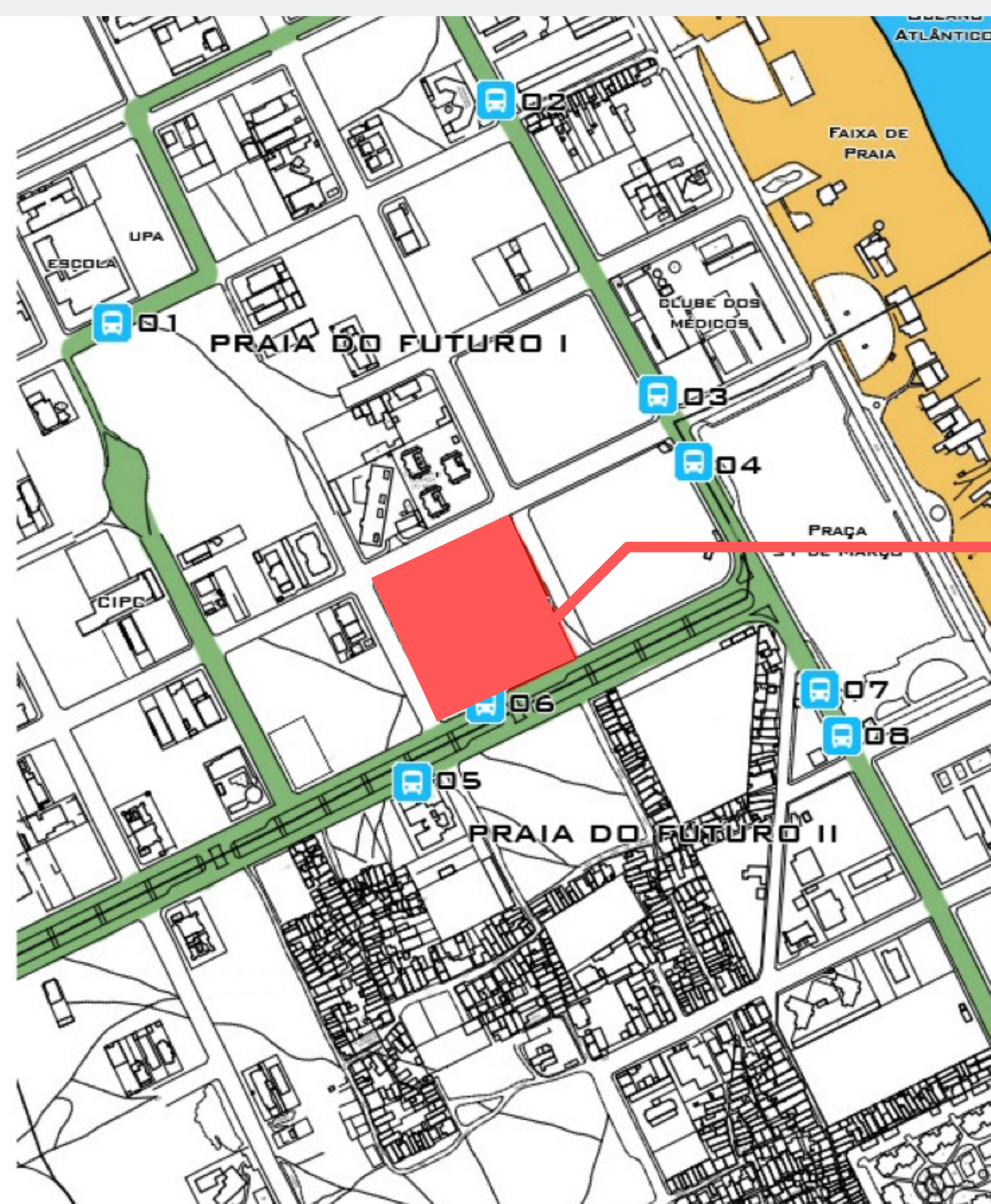
FORTALEZA



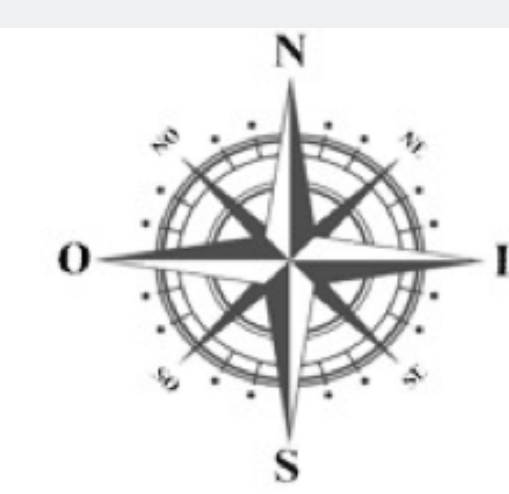
ZONE DE PROJET: PRAIA DO FUTURO I

Terrain

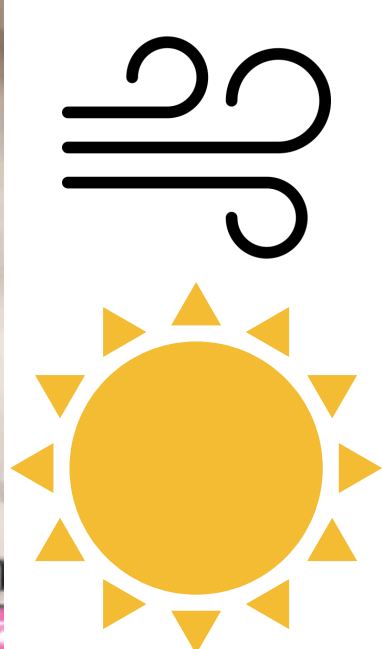
- ZONE TOURISTIQUE;
- PRÈS DE LA MER;
- PROCHE D'UNE COMMUNAUTÉ À FAIBLE REVENU;
- PROPOSITION: MARCHÉ POUR AIDER LE REVENU DE LA COMMUNAUTÉ;
- LOCALIZATION: BRASIL, CE, FORTALEZA, PRAIA DO FUTURO.



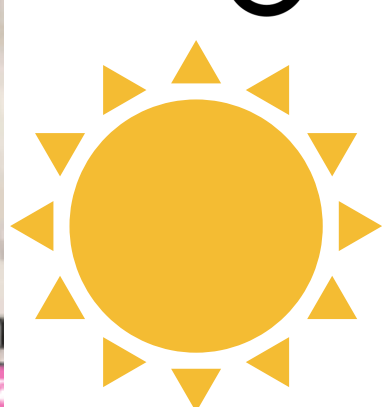
TERRAIN 100 X 100M



FONCTIONNALITE : MARCHÉ

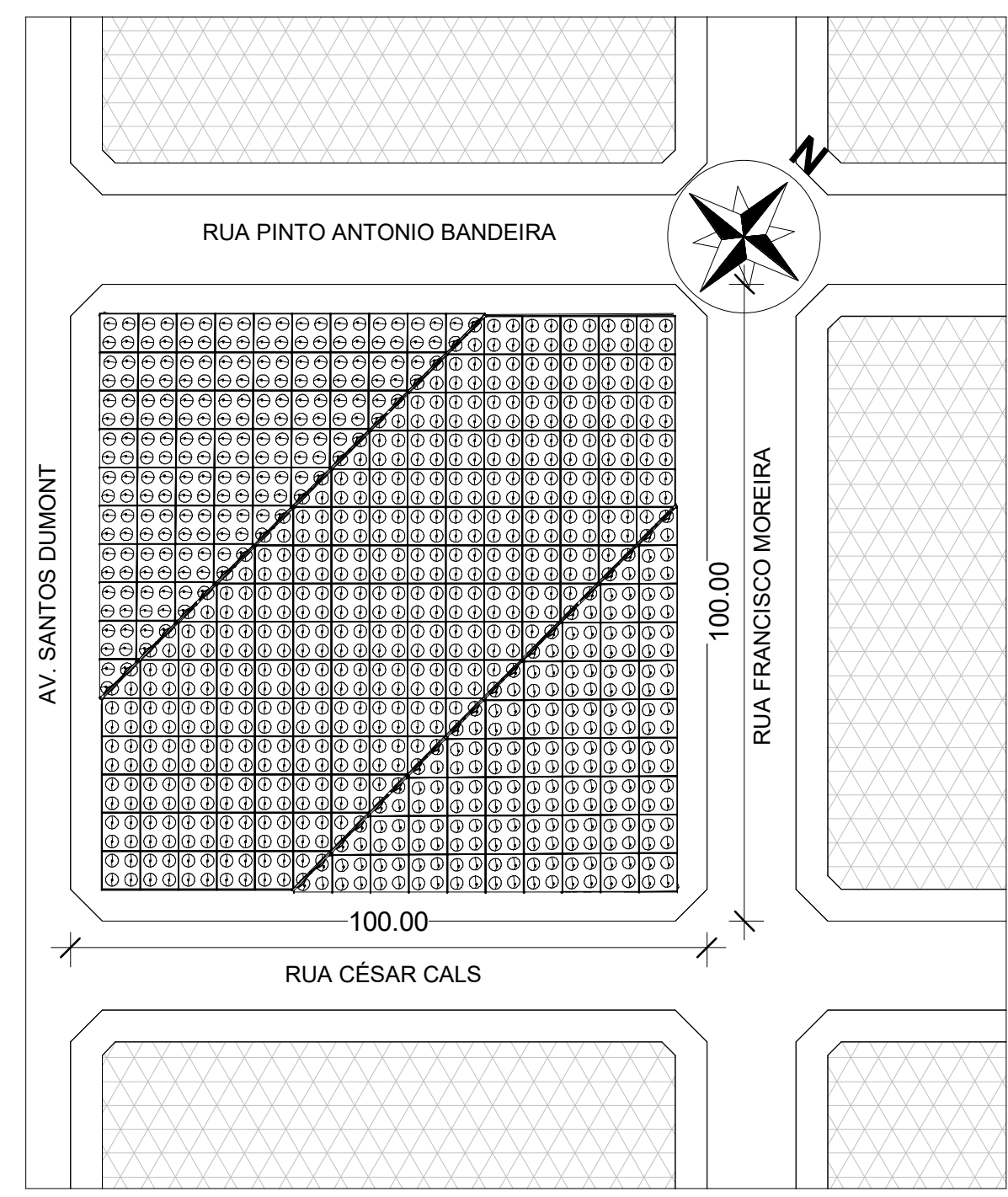


VENT

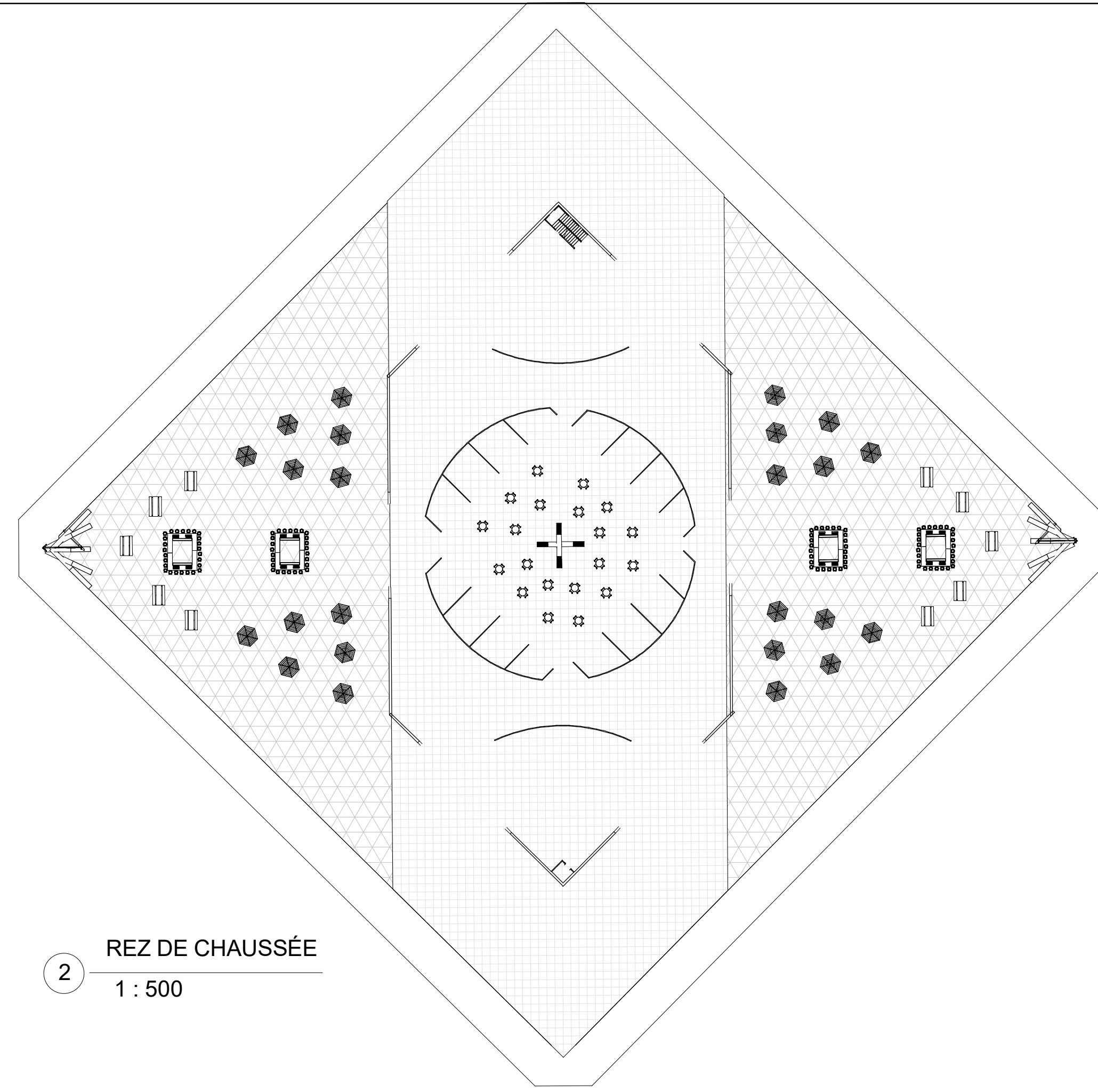


SOLEIL

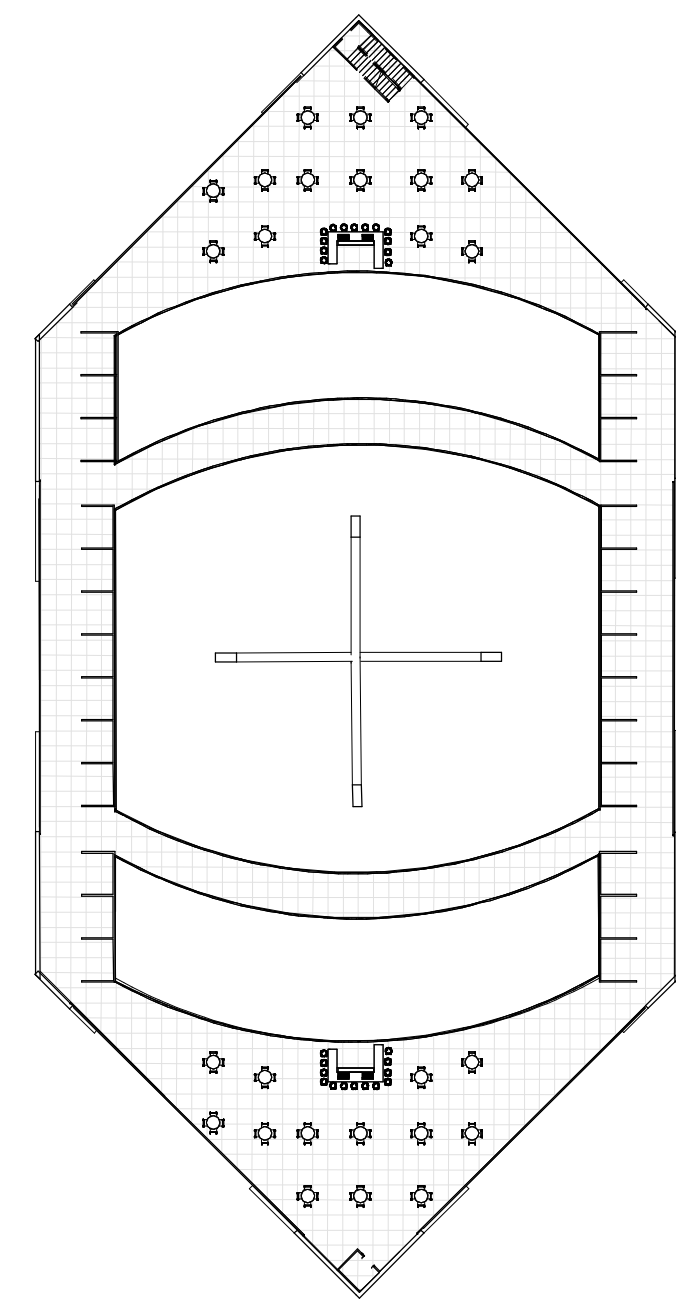
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 Bio-Inspired Photonic Materials: Prototypes and Structural Effect Designs for Applications in Solar Energy Manipulation Han Zhou, Jun Xu, Xianghui Liu, Haiwen Zhang, Dantong Wang, Zhihan Chen, Di Zhang, Tongxiang Fan Advanced Functional Materials 2018 28 (24), 1705309
 Han, Z., Jiao, Z., Niu, S., Ren, L., Ascendant Bioinspired Antireflective Materials: Opportunities and Challenges Coexist, Progress in Materials Science (2019), doi: <https://doi.org/10.1016/j.pmatsci.2019.01.004>
<https://offgridworld.com/cone-shaped-spinning-solar-cells-generate-20-times-more-electricity-than-flat-photovoltaics/>
<https://newatlas.com/v3solar-spin-cell/24352/>



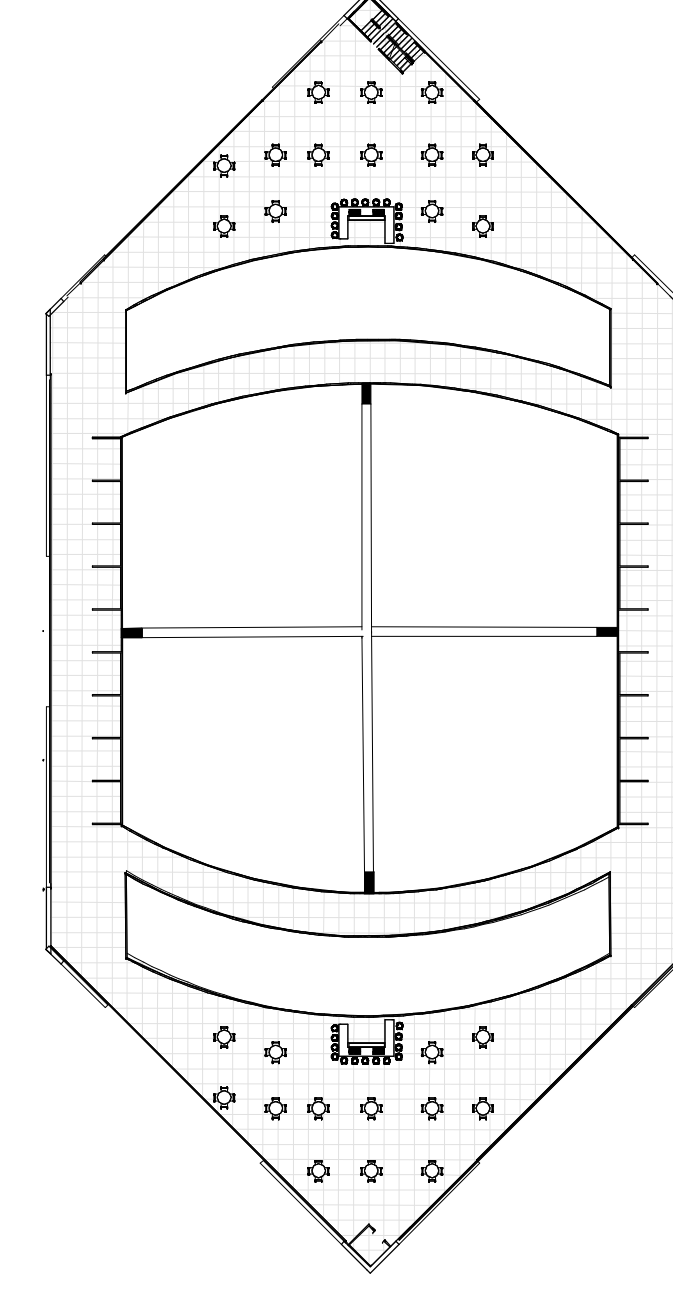
1 IMPLANTATION
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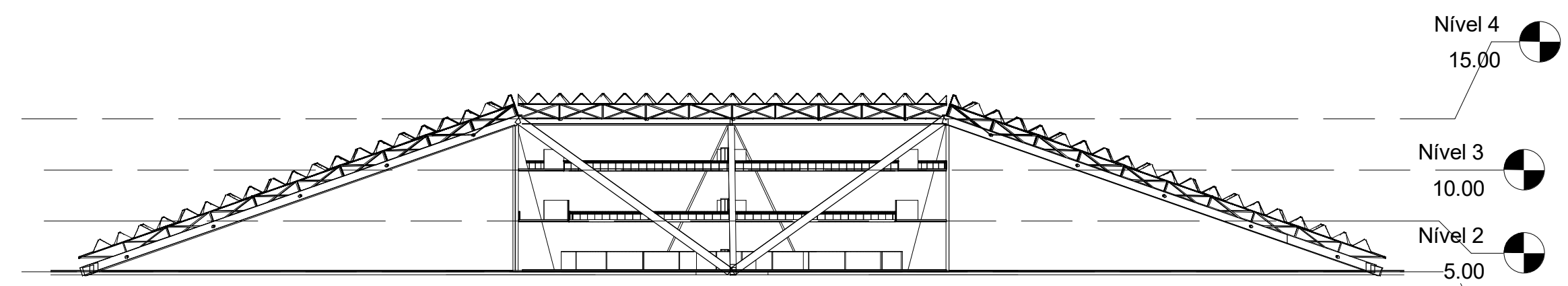
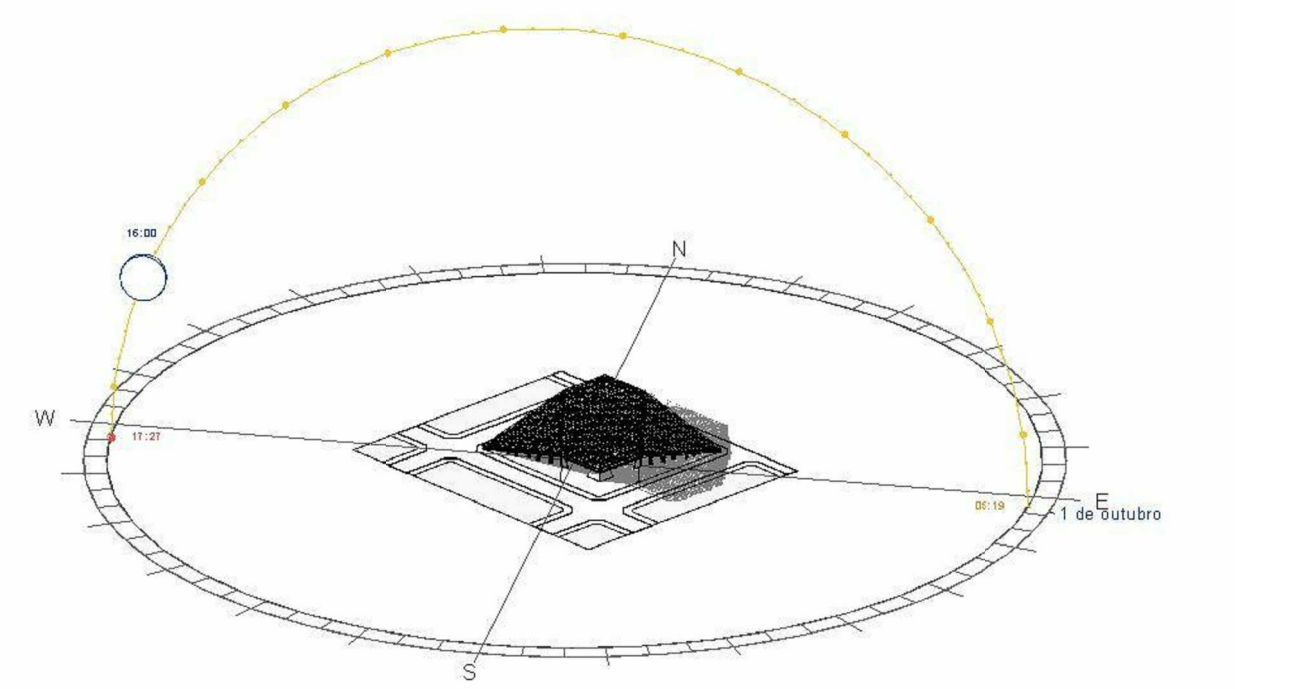
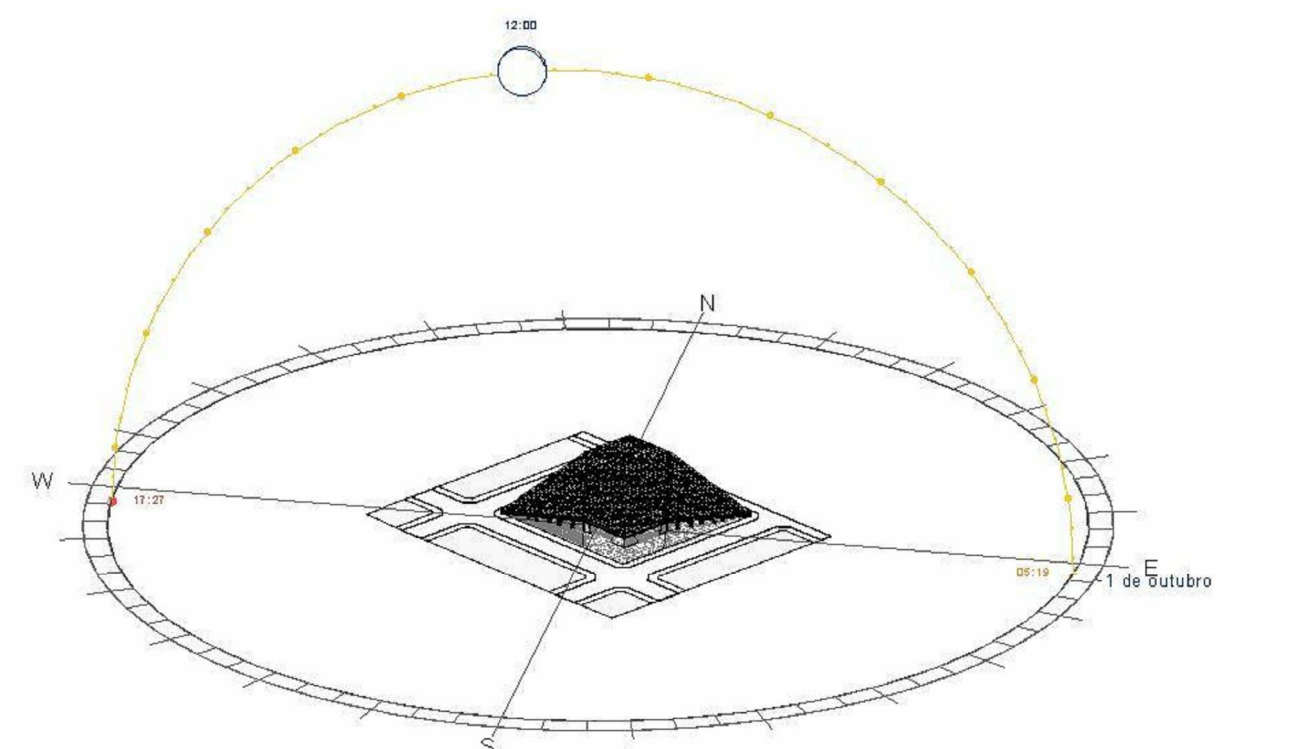
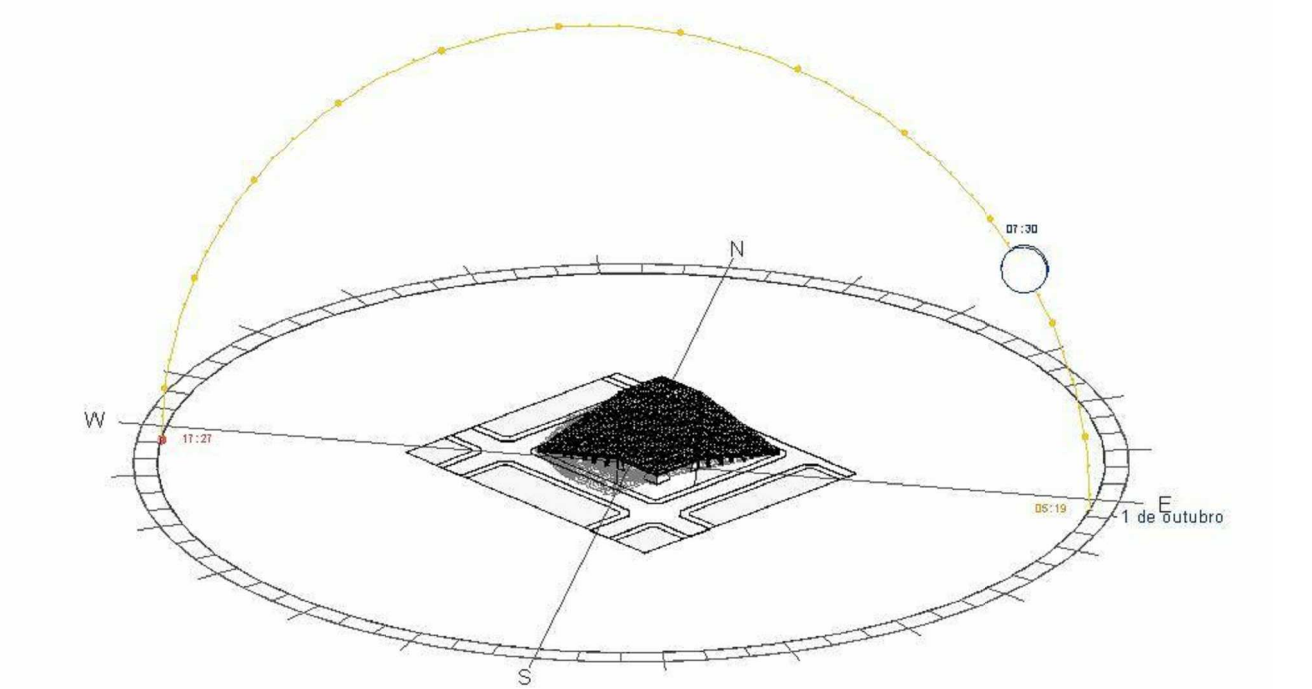
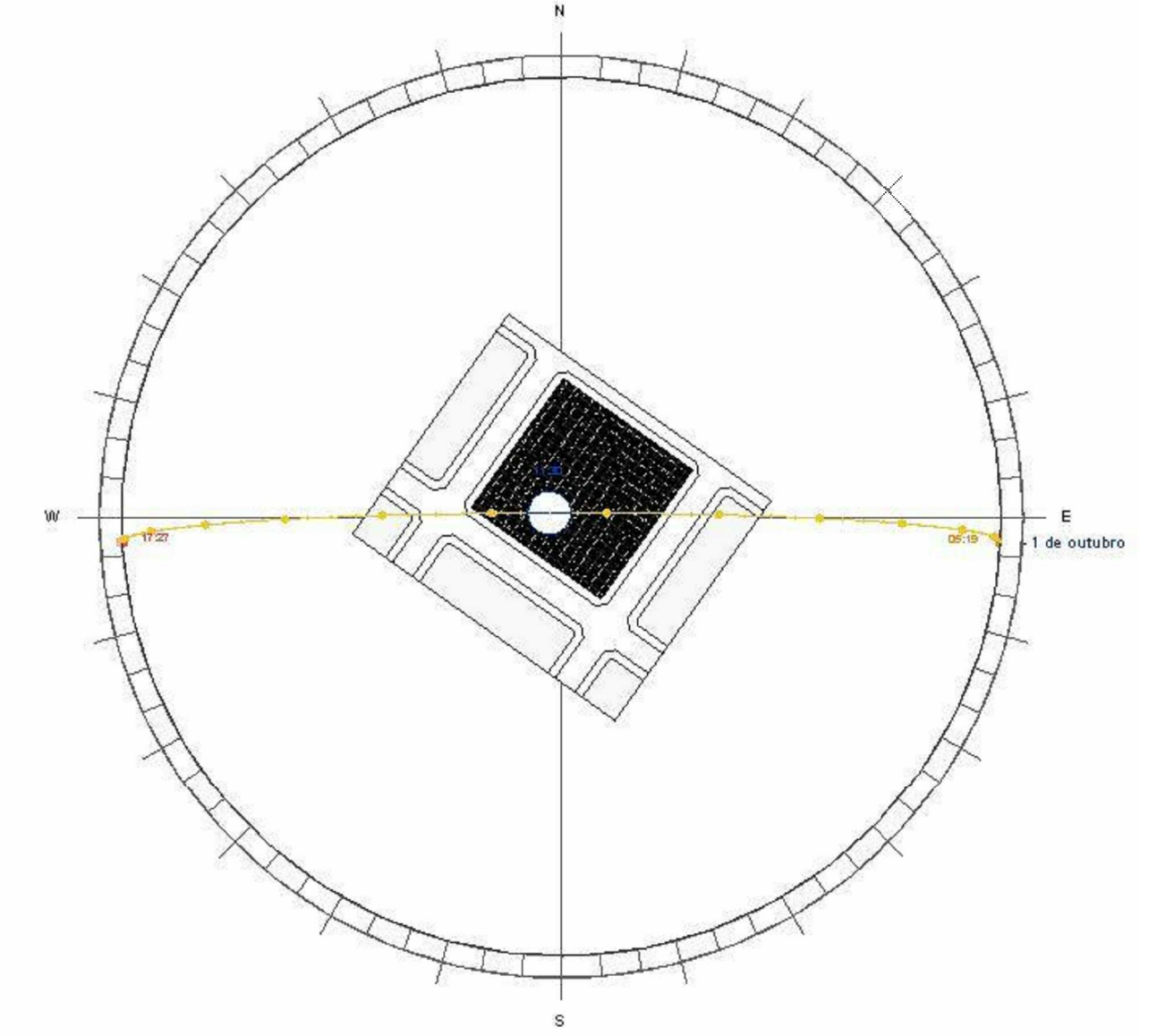
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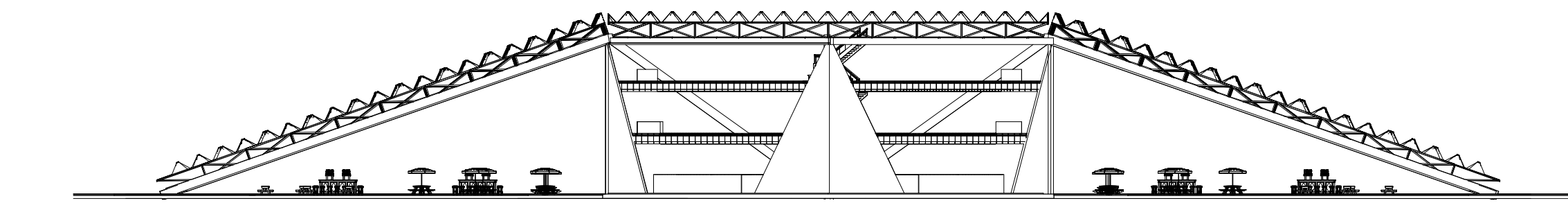
3 NIVEAU 2
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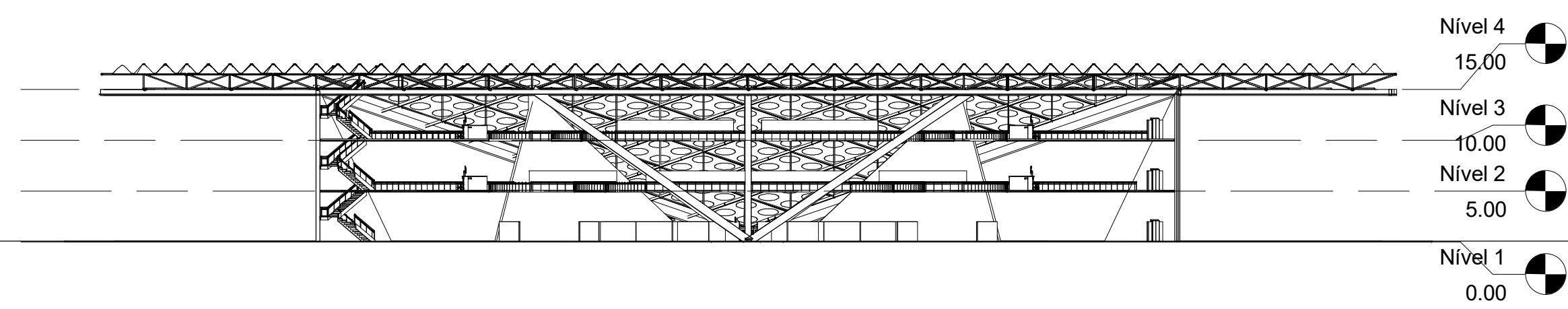
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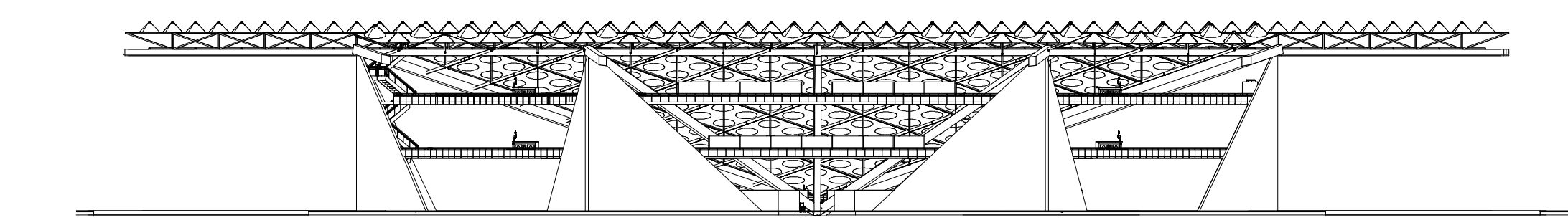
5 COUPE 1
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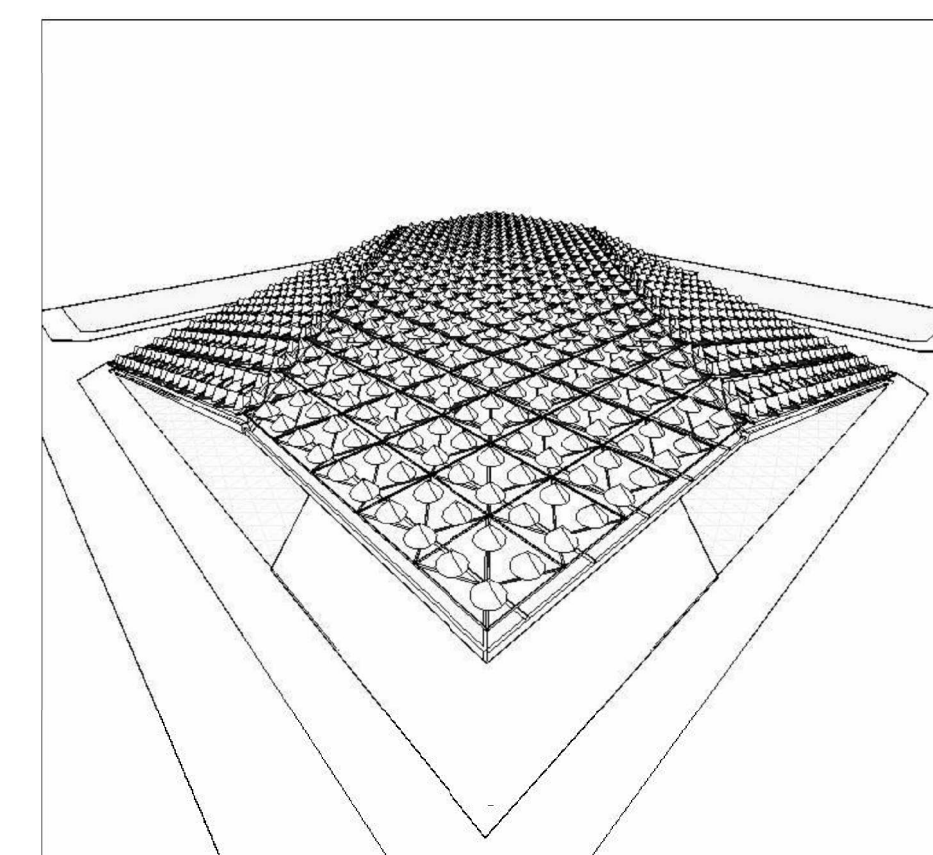
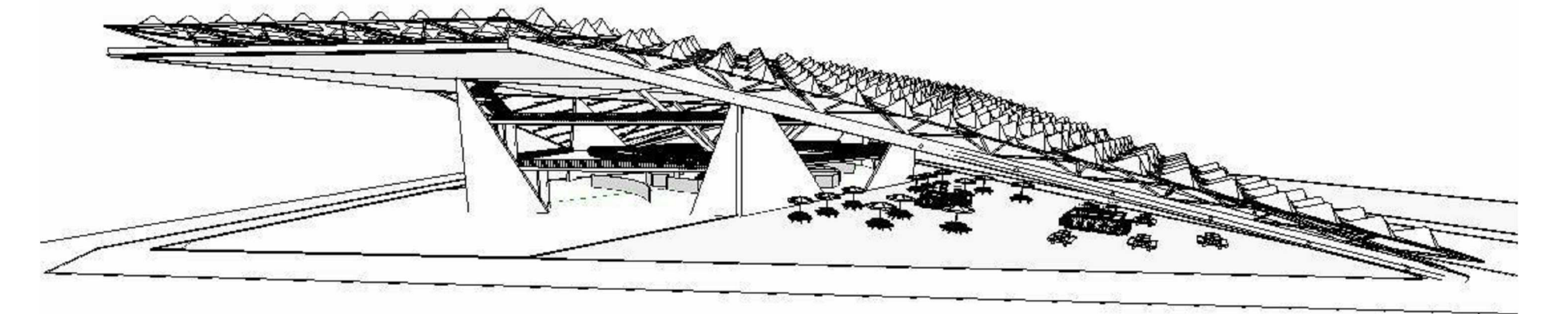
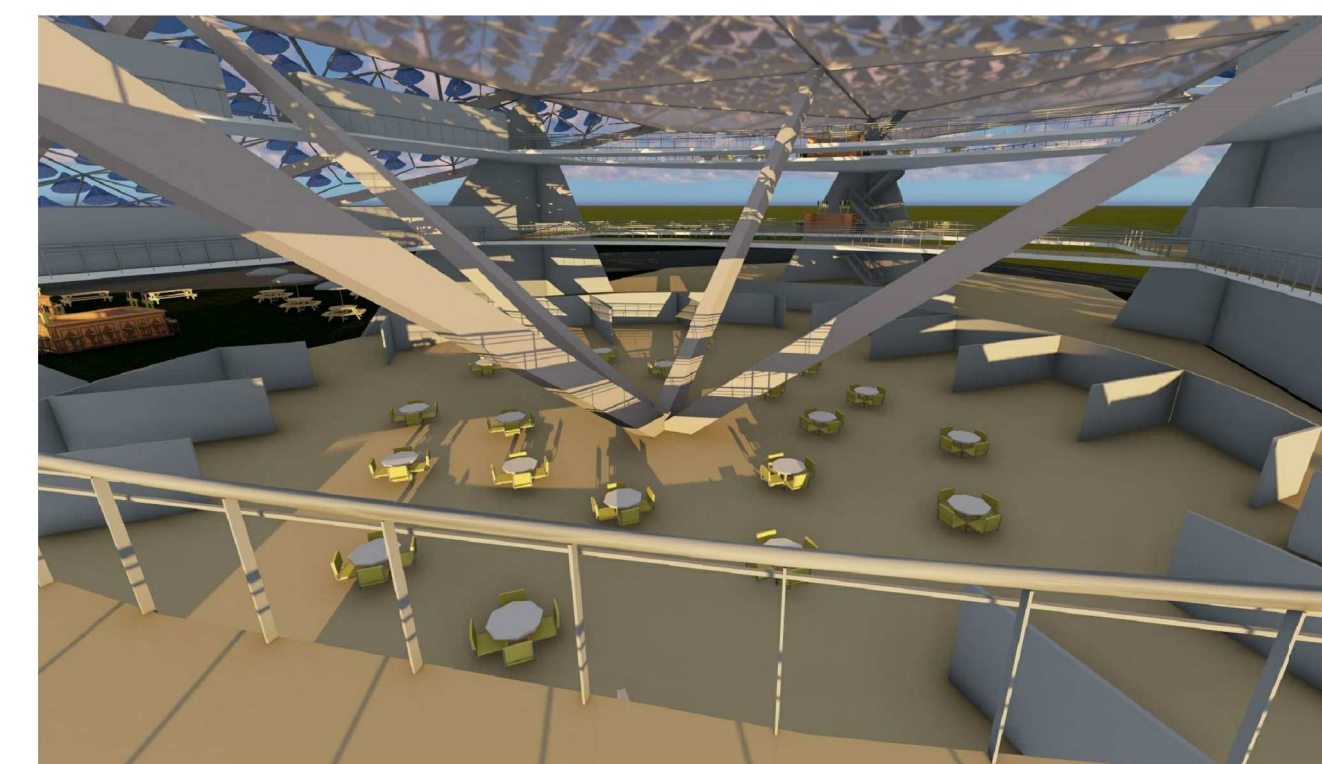
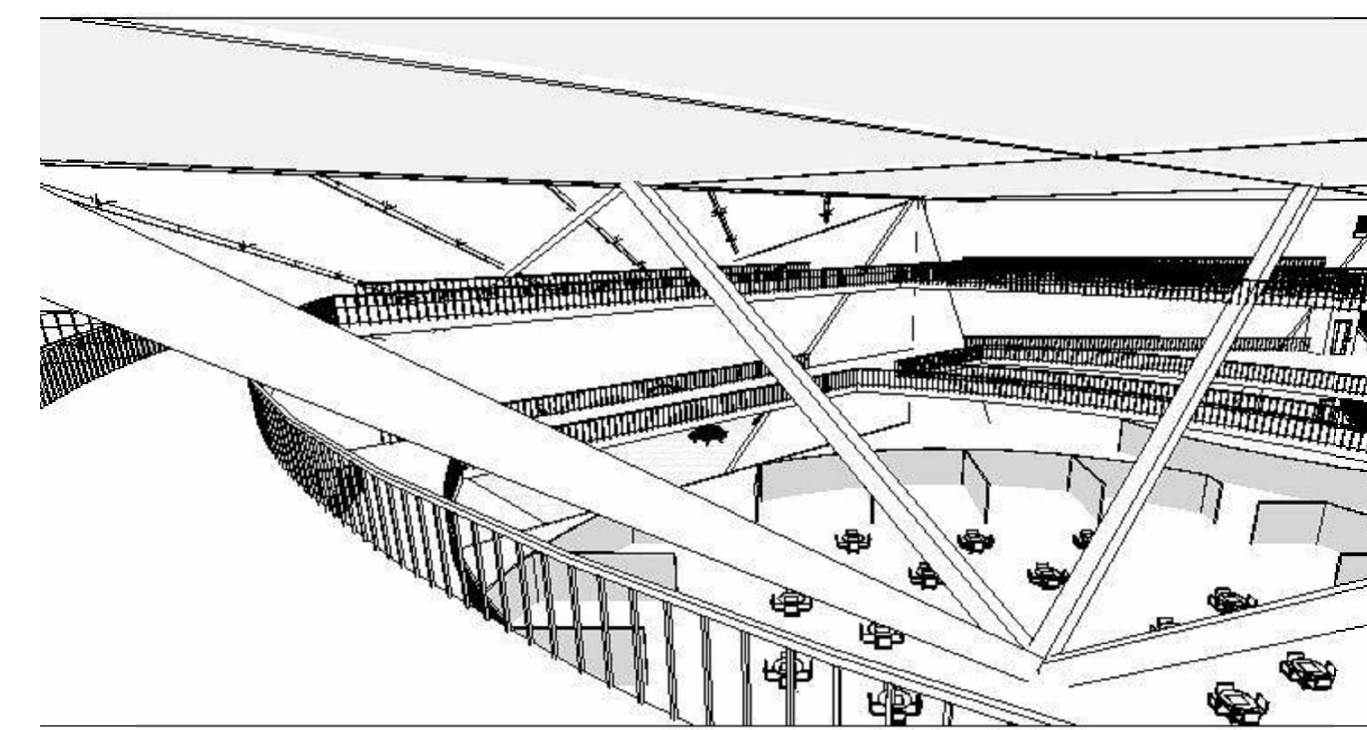
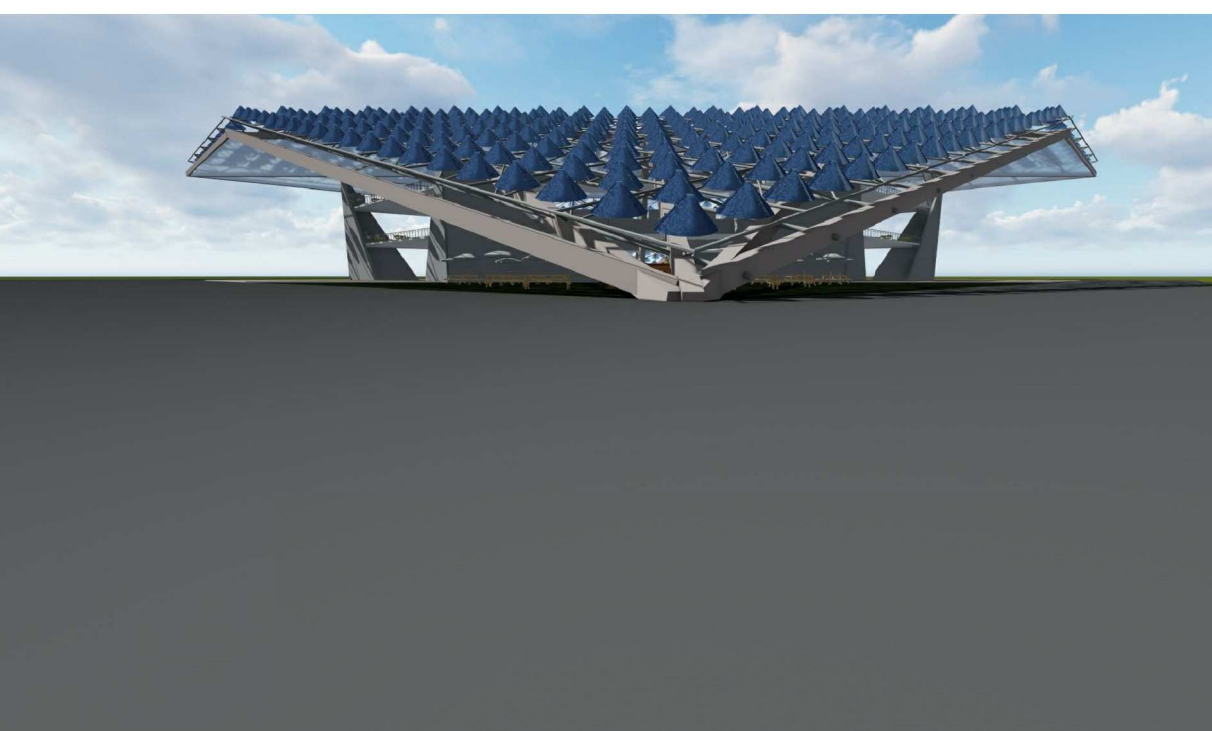
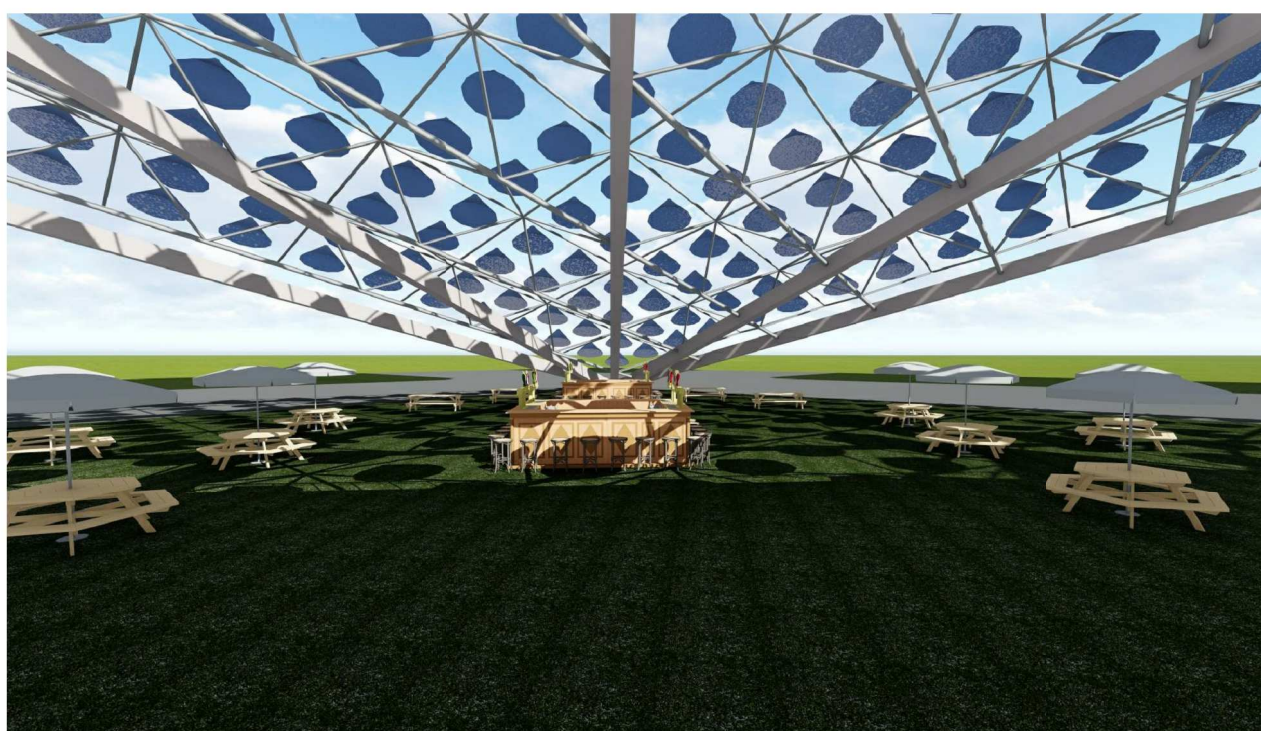
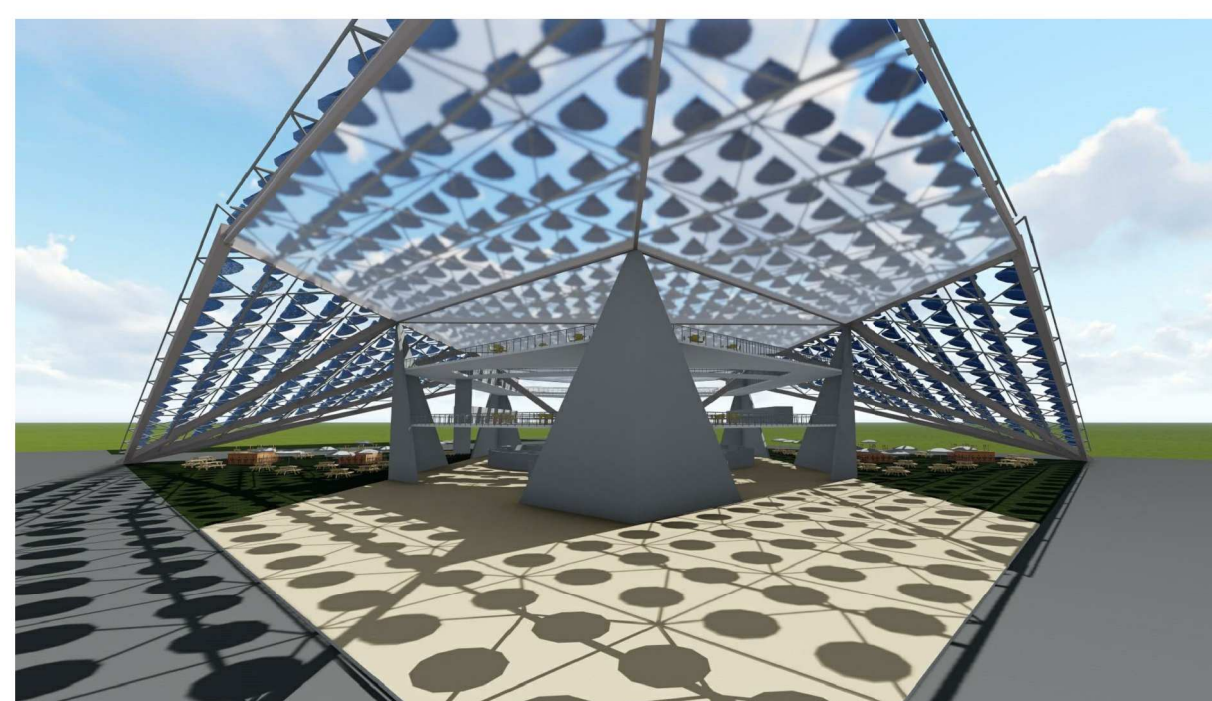
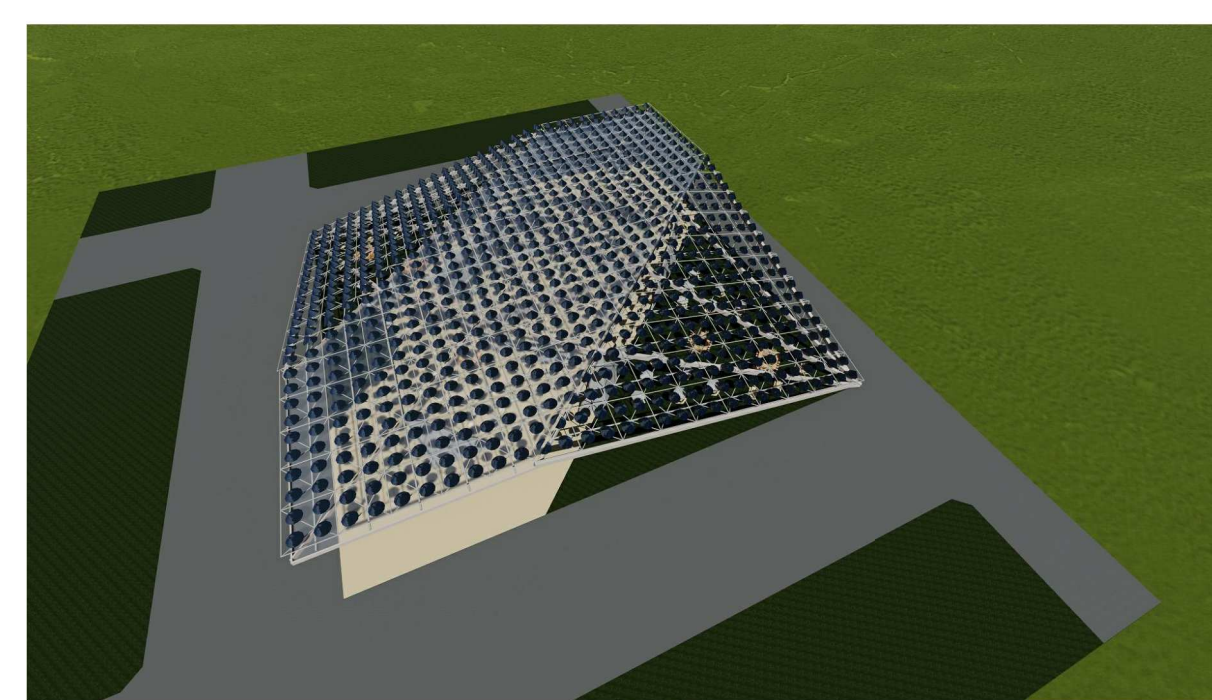
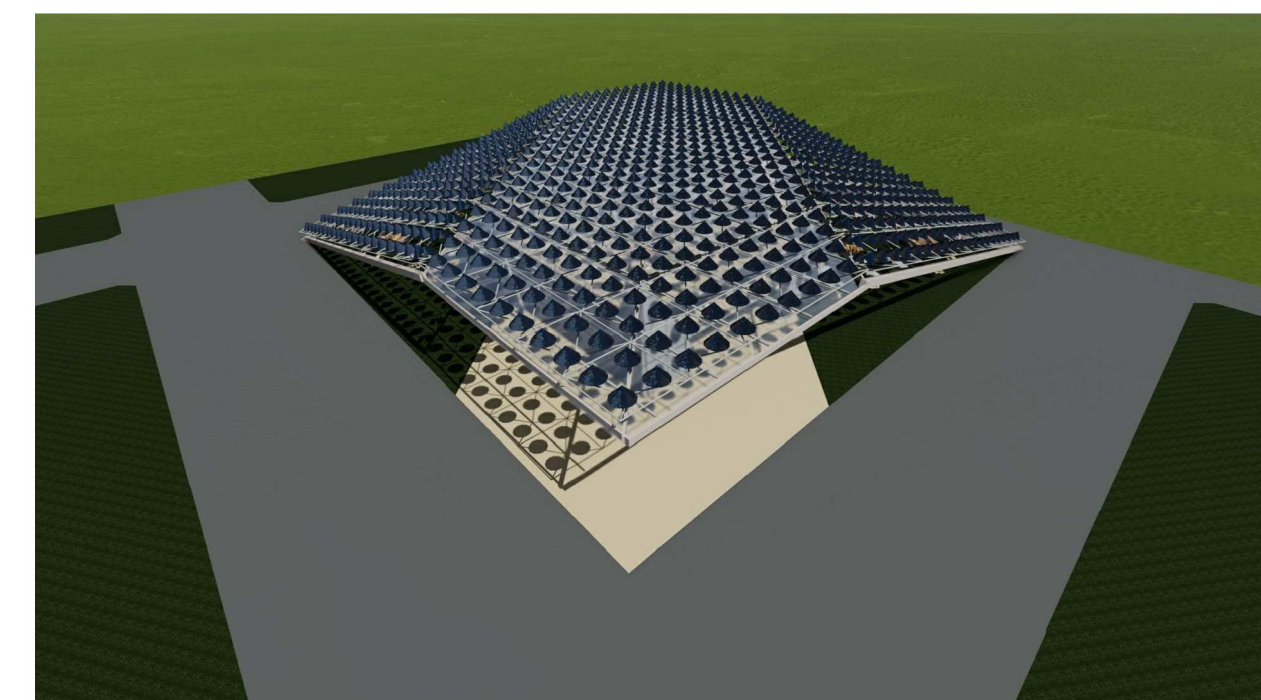
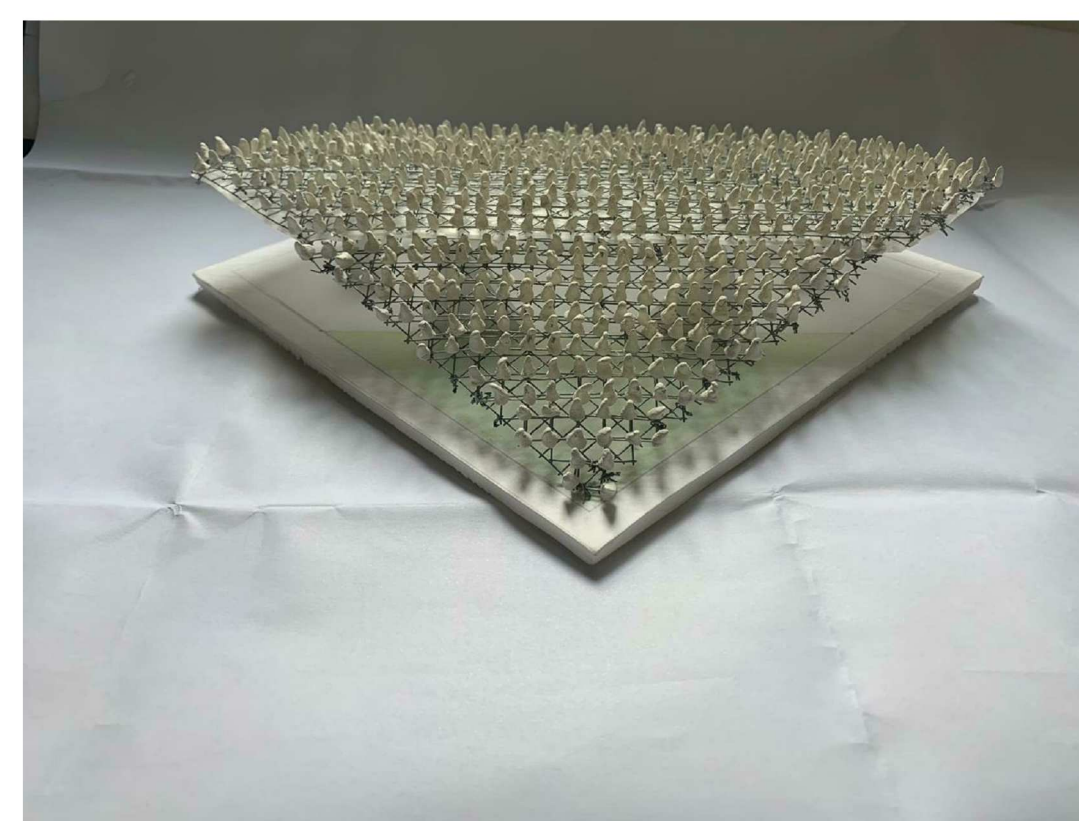
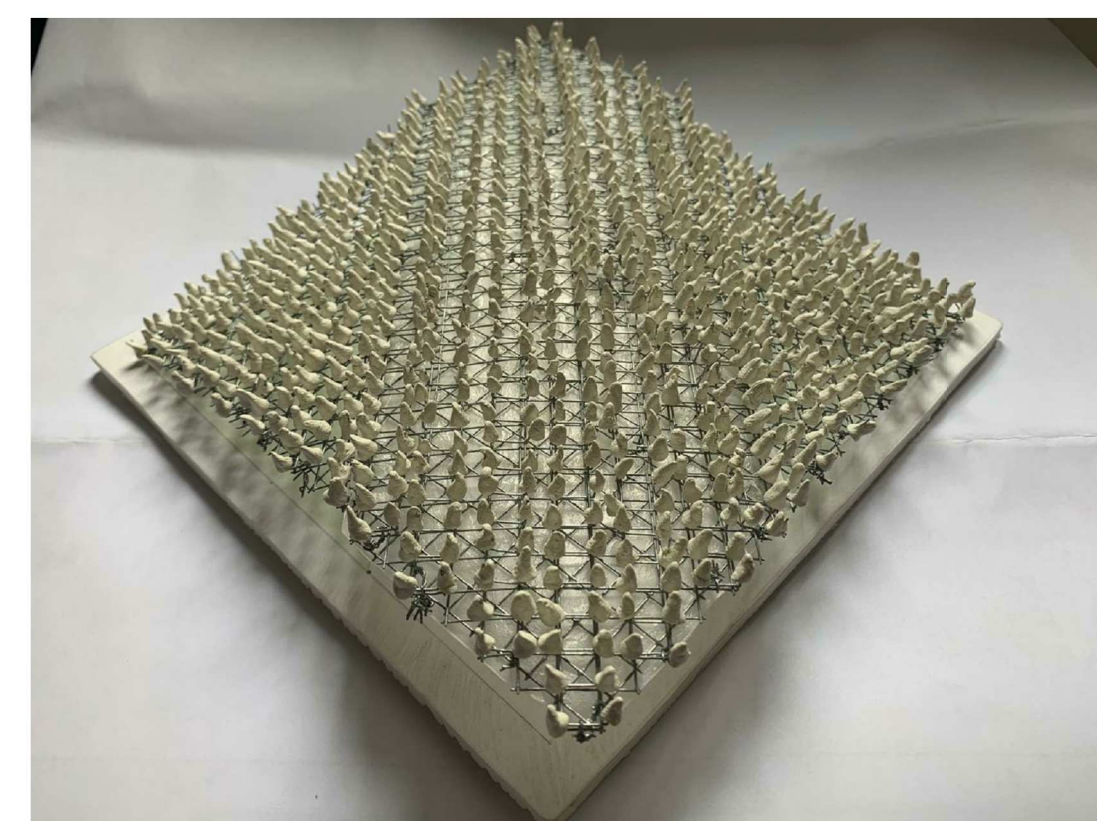
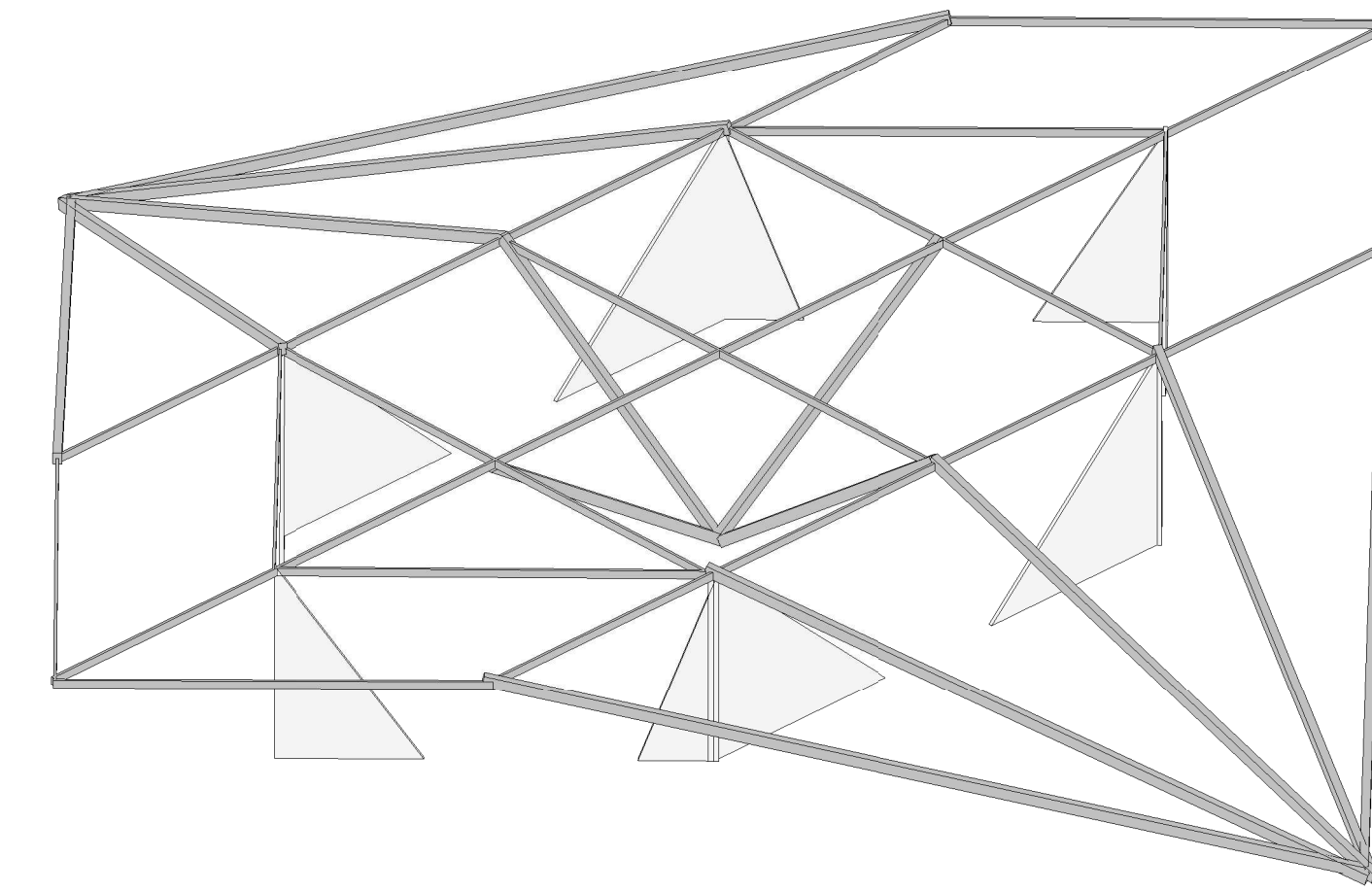
6 FAÇADE 1
1 : 500



7 COUPE 2
1 : 500



8 FAÇADE 2
1 : 500



MP820 - CONCEPTION ARCHITECTURALE NUMÉRIQUE PROF: N.HEIL/F.GUENA / E.LOCICERO / J.SILVESTRE ETUDIANT: SARAH PINHEIRO BARROSO	
PROJECT MORPHO PELEIDES	
SCALE (@A0) As indicated	DATE 02/07/2019
DRAWING NUMBER 1	