

Cost effective use of Lighting Designers

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STUDIO LITE

AIA congress Jeddah 2012

Presentation



Content

Introduction

- What is lighting design
- Background lighting designers
- The design process

Case study

- How to use lighting designers cost effectively
Case study KACC Dammam
Briefly explain the project, and focus on the methodology

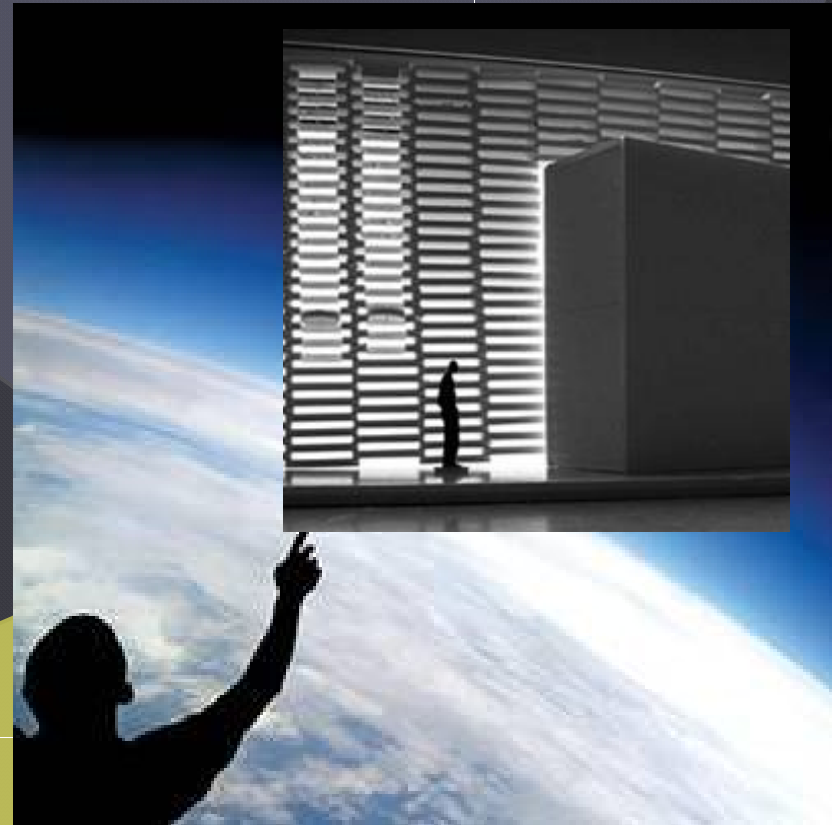
Learning Objectives

At the end of this program, participants will be able to:

- 1. Understand what lighting designers do*
- 2. What is the process of lighting design and typical deliverables per phase*
- 3. How to leverage on the lighting design expertise for large projects*
- 4. Be inspired by the magic that light can do for you*

Lighting Design

- Art & Science of creating the desired ambience with light
- Select the products and the equipment to control the light
- Producing documentation to
 - purchase the lights
 - position the lights
 - control the lights



Back ground lighting designers

- Master degree in Science, Architecture, or Design
- 2 years Master in lighting design
- KTH, Sweden, Hochschule Wismar Germany , Bartlett school of design, London

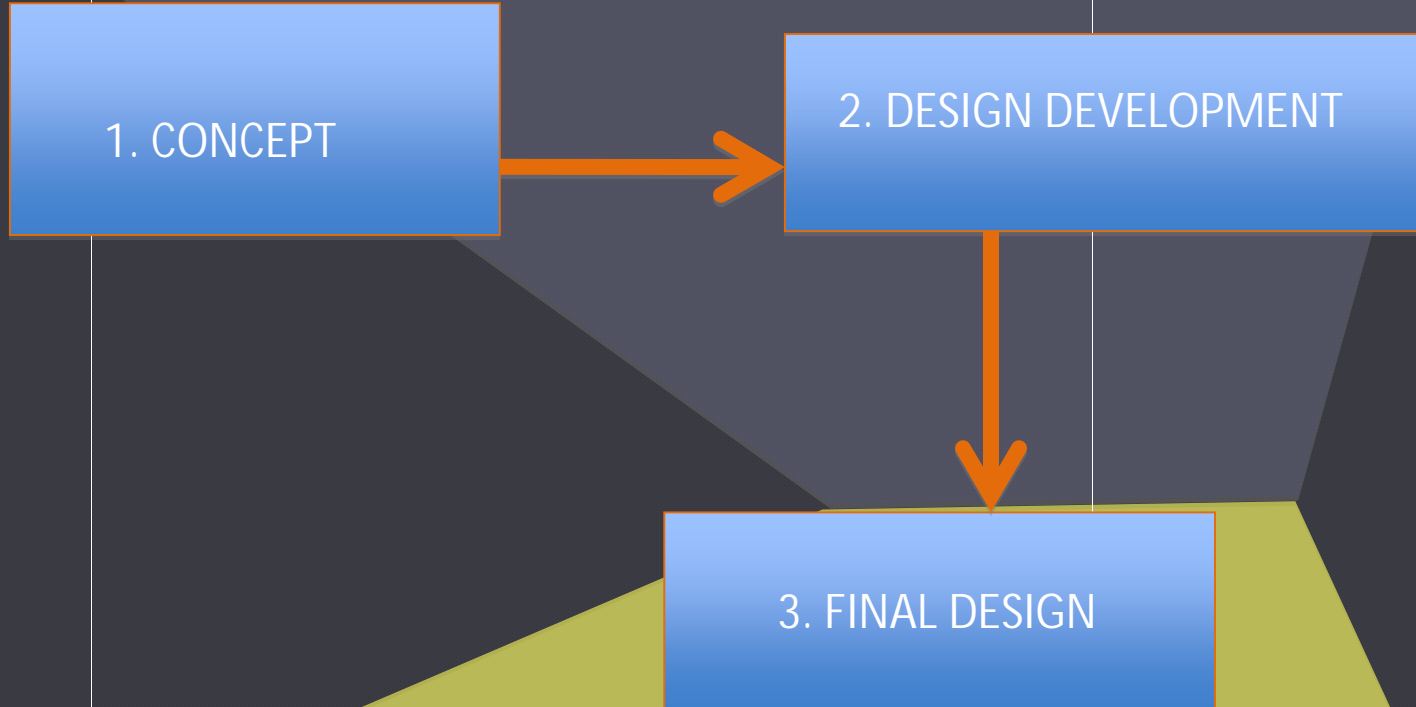
Combination of visual, physical and biological knowledge applied to design, technology and health.

The Lighting Design Process pre-contract

1. CONCEPT

2. DESIGN DEVELOPMENT

3. FINAL DESIGN



The Lighting Design Process post-contract

1. CONCEPT



2. DESIGN DEVELOPMENT



3. FINAL DESIGN



4. TENDER
ASSISTANCE

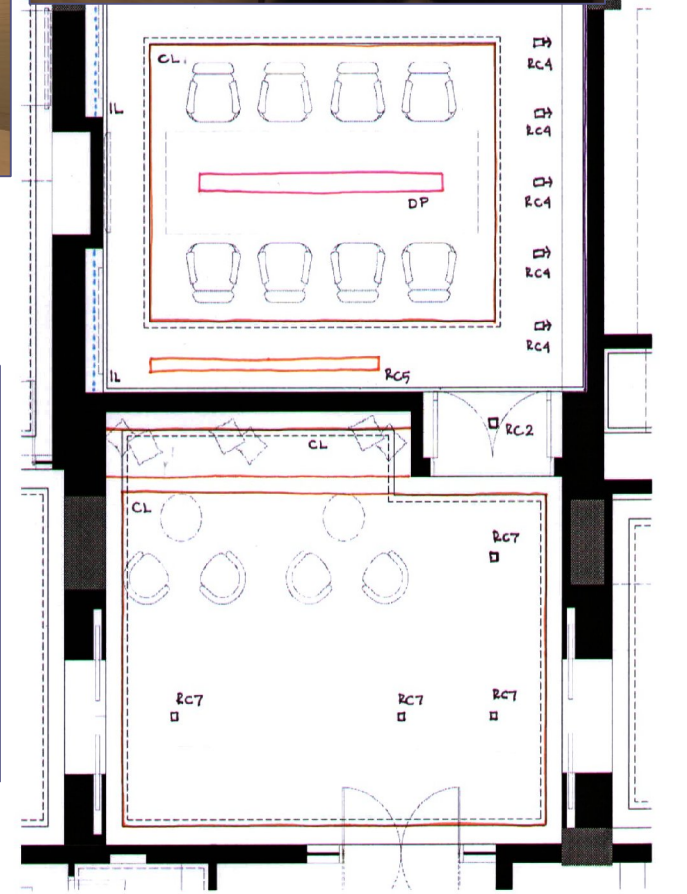


5. COMMISSIONING



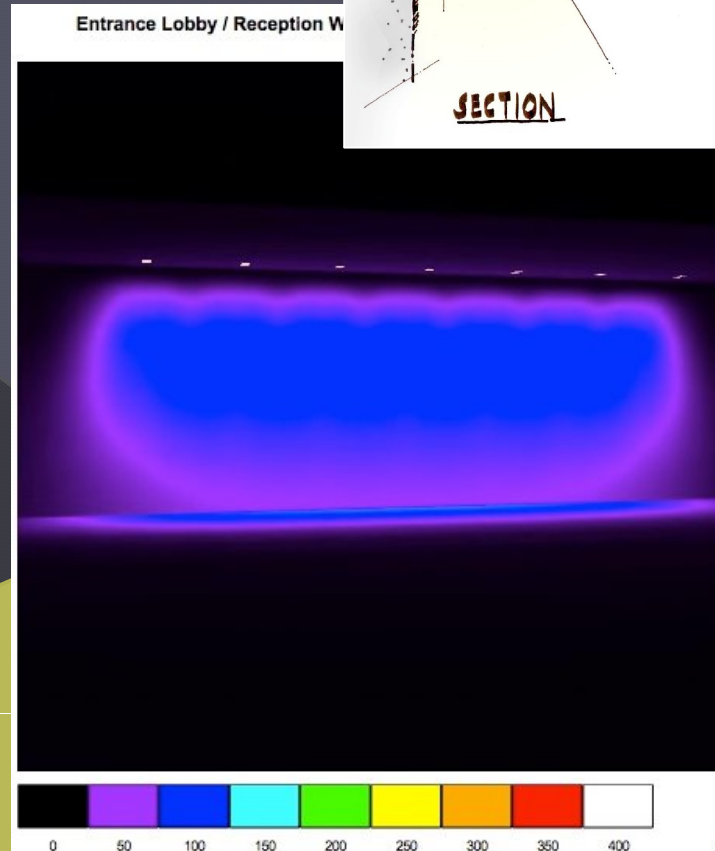
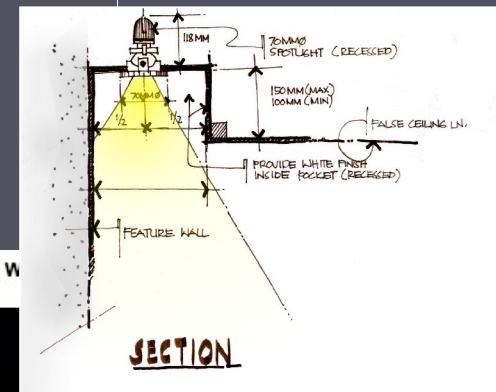
Concept phase deliverables

- Concept sketches
- Concept reference images
- Concept renderings
- Initial lighting layout
- Generic product selection



Design development deliverables

- Lighting Layout in cad
- Preliminary product selection
- Preliminary Budget indication
- Light calculations
- Sketches special mounting situations for structural implications



Final design

- Lighting layout.
- Fixture specification booklet
- Final budget
- Final power load
- Architectural Lighting Controls
- Detailed mounting details



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info@studiolite.com - www.

FEATURE DESCRIPTION:
Housing: corrosion-resistant cast aluminum. No-fine surface treatment.
Daylight reflector: aluminum, silver, bright anodized.
Cut-off angle 60°

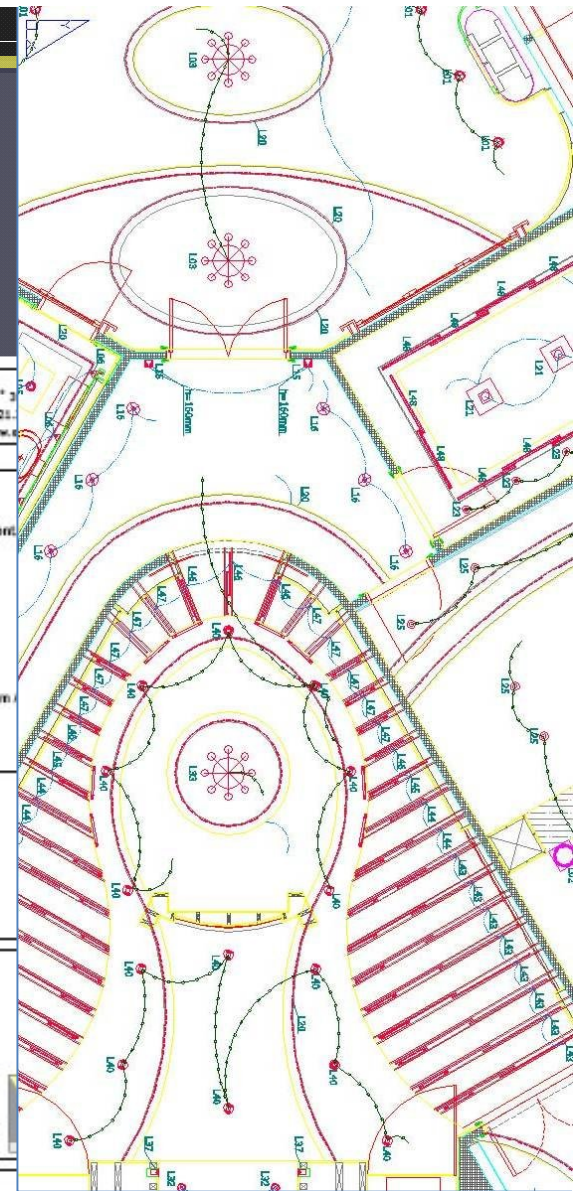
DIMENSIONS AND WEIGHT:
Diameter external: 297mm / Diameter internal: 277mm / Depth: 410mm
Weight: 5.7kg
SUPPLIER CODE: TESIS IN-GROUND

LIGHT SOURCE DESCRIPTION:
1x HIT-CE - TM 150W / G12 / 14000lm

QUANTITY OF LIGHTSOURCE PER LUMINAIRE: 1
BRAND: ERCO TESIS IN-GROUND 33709.000
LAMP CODE: OSRAM HIT-CE 150W

IMAGES

ACCESSORIES / CONTROL GEARS
CONTROL GEAR:

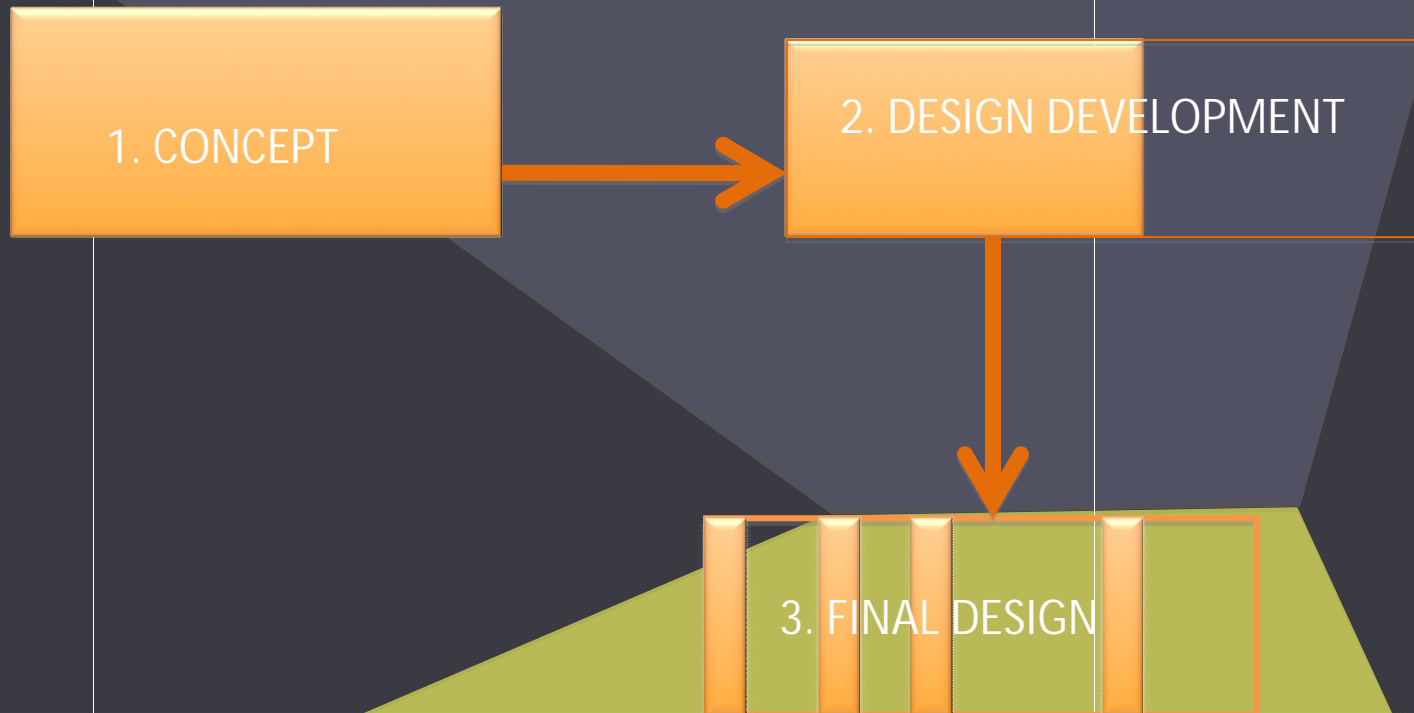


Big Developments, Big Team



- Lighting designer one of the many subcons
- Use the specialist consultants in the most critical phase
 - Concept
 - Development of design (schematic +)
- Architect develops to final design with input during workshops from the lighting designers

The Lighting Design Process time involvement per phase



King Abdullah Civic Centre



LIFANG

Methodology

PART I

Develop overall design vision for the whole area (master vision)

Typical (repetitive) situations, choose lighting treatment and product palette

Important areas, show implementation of vision and light treatment, rendering, for approval

PART II

Typical situations, work out layout and fixture selection, for the architects to put in drawings

Atypical structures, situations of important elements, work out way of lighting and construction details

VISION

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PART II

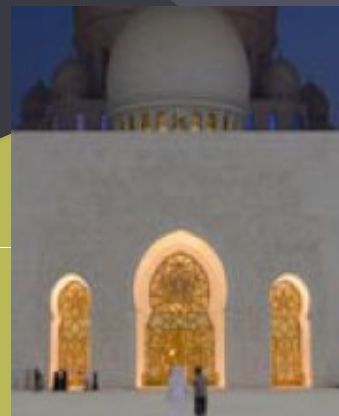
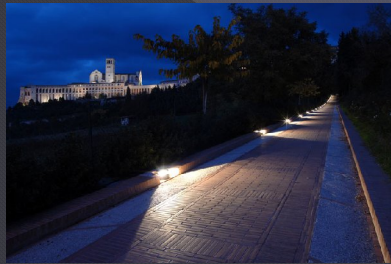
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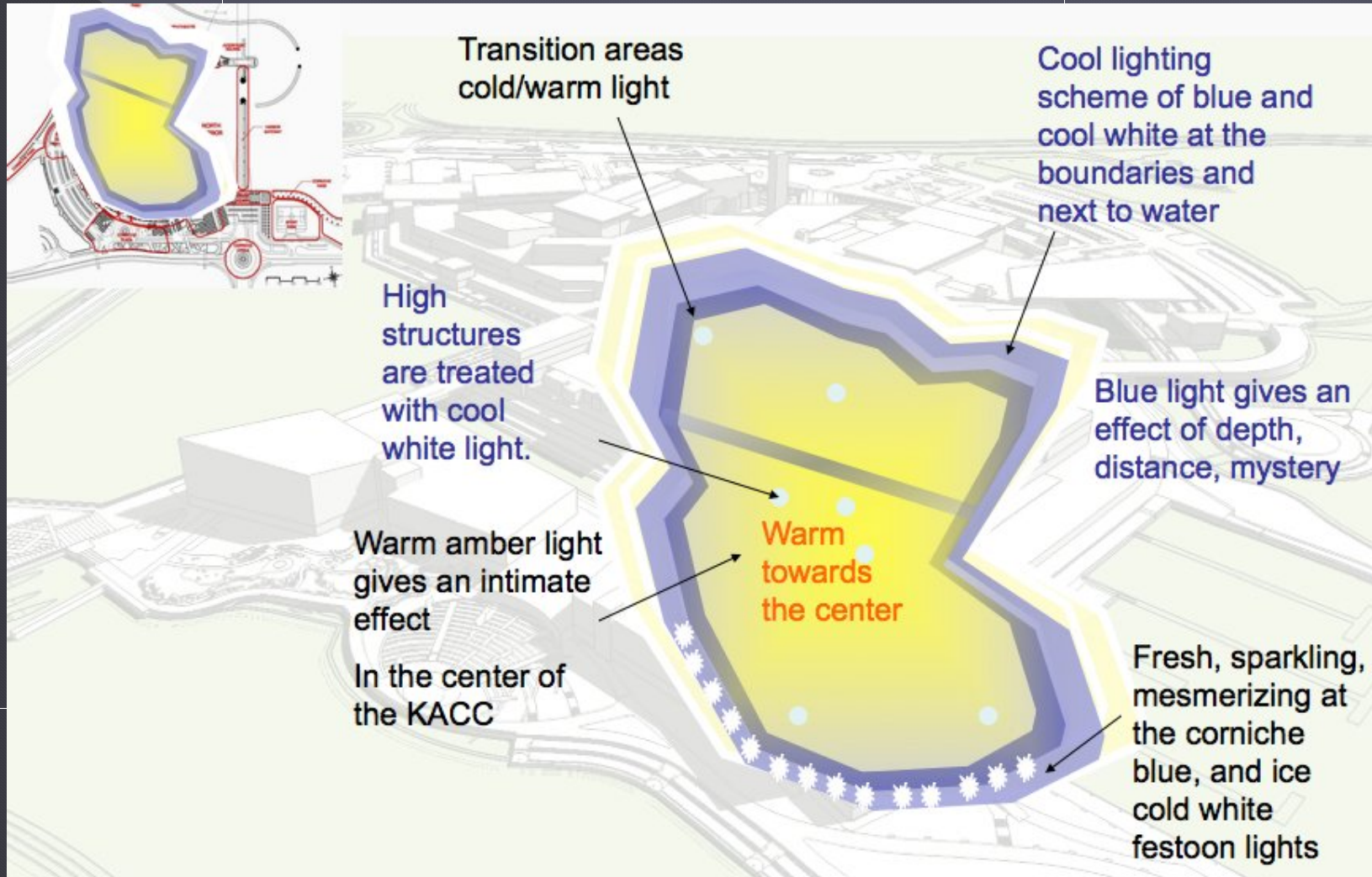


• vision

Mood board lighting concept KACC



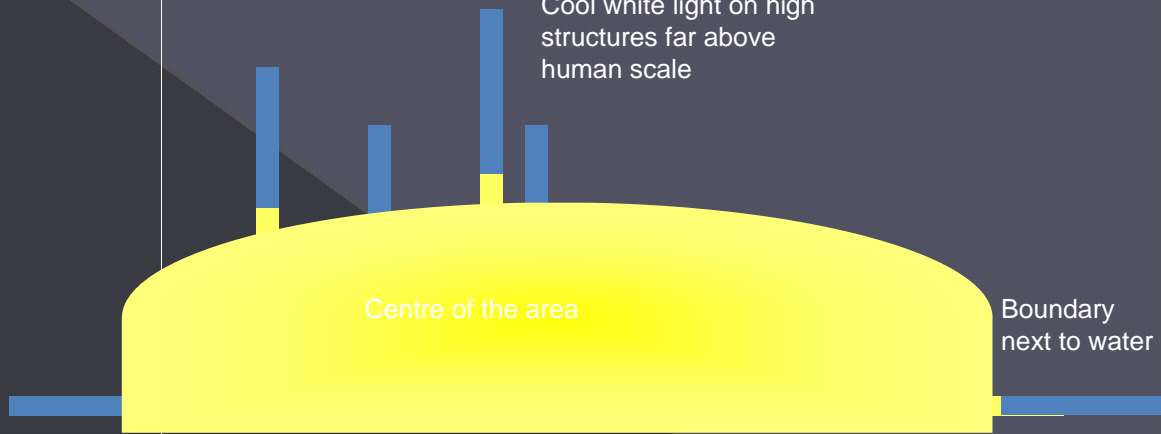
Design vision horizontal plane



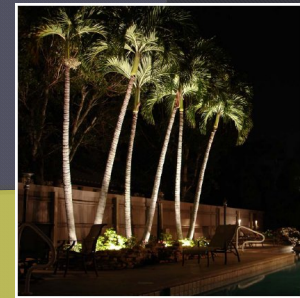
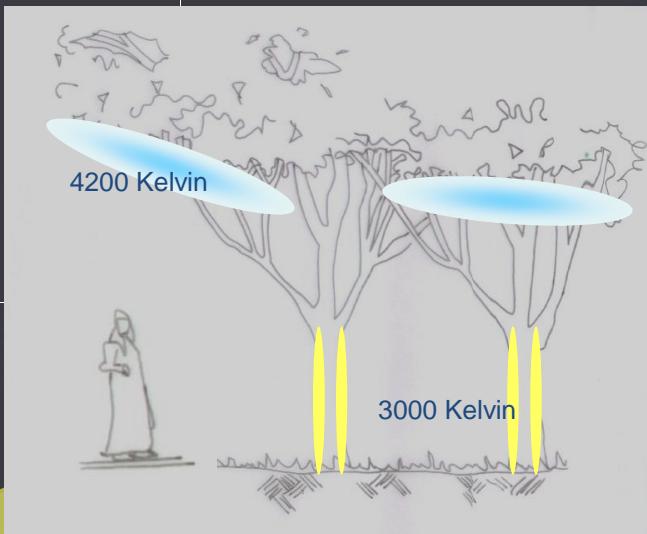
Vertical light plan

Design vision vertical plane

Cool white light on high structures far above human scale



Schematic cross section of vertical light distribution



Part I: lighting treatment & product palette example

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Develop overall design vision for the whole area (master vision)

Typical (repetitive) situations, choose lighting treatment and product palette

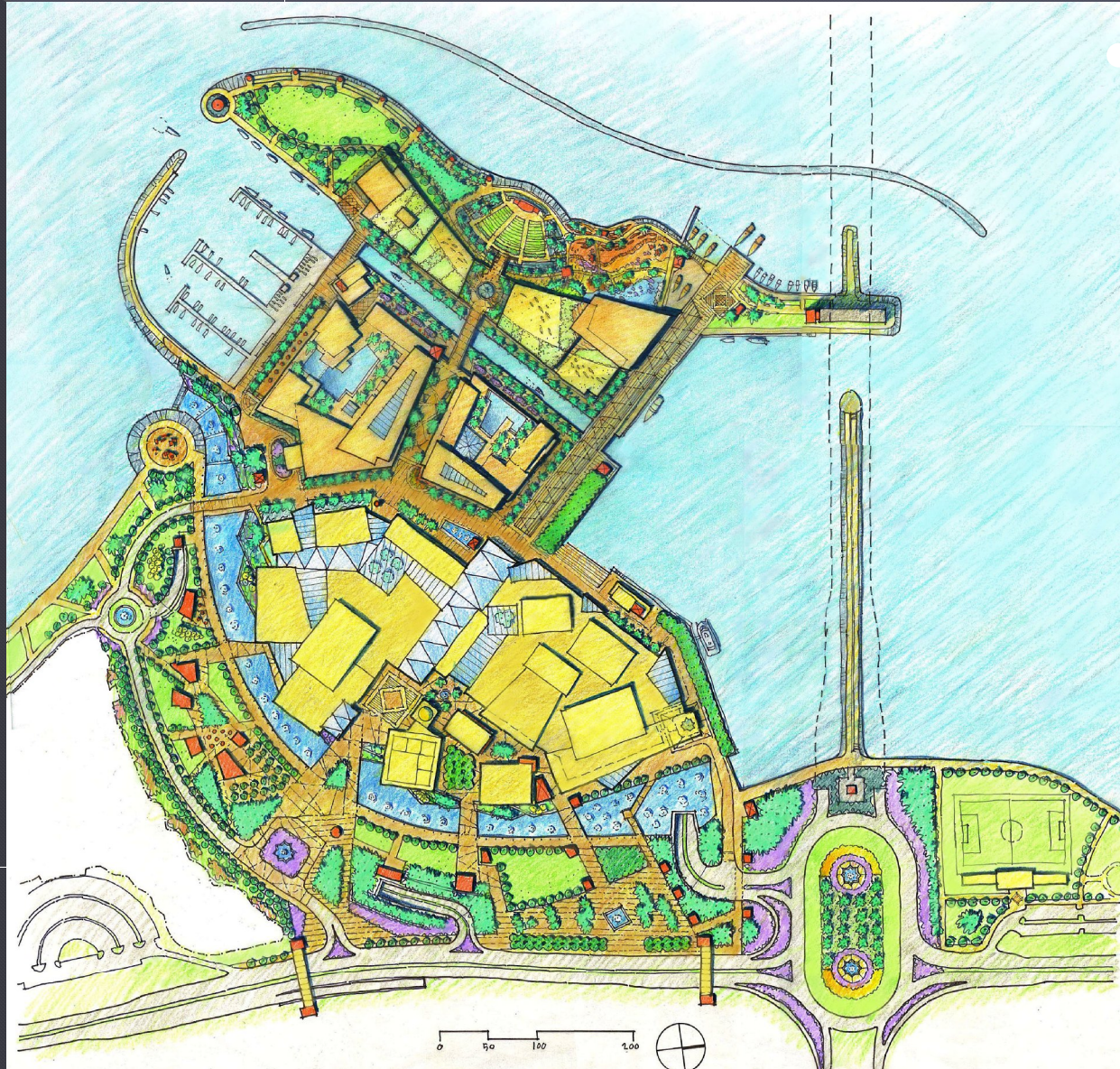
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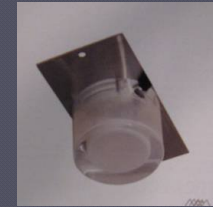
• snapshots



Generic lighting principles: areas next to water-blue lighting effect

- Bridges ,quays and docks
 - Fiber optic spots
 - LED spots

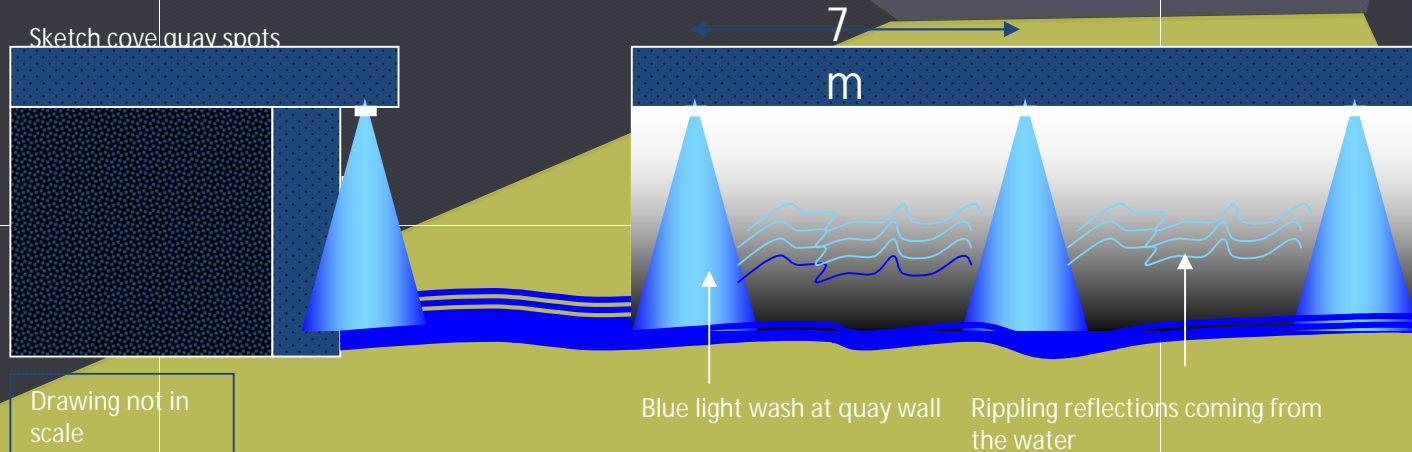
General remark: Studio Lite recommends to use Fiber optic lighting to light up the areas next to water that have a chance to be underwater due to storm, waves or high tides.



IP 68 LED 1W-wall/floor mounted lighting
LED node



Wall mounted LED spot IP67



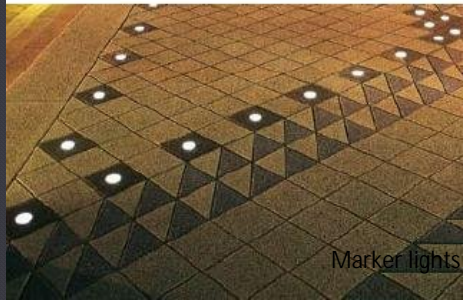
Generic lighting principles: pedestrian areas-walkways

(not directly next to the water)

Walkways

- Lighting selection

- Marker lights LED, dots or lines
- Poles 3 meter height
- Compact bollards



Marker lights LED

Insta marker lights



Intra LED lines mounted flush with pavement



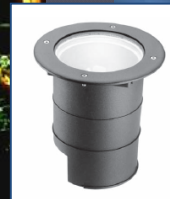
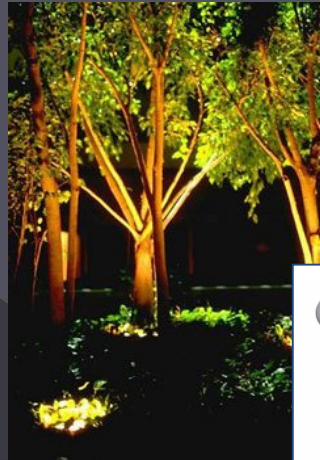
Compact bollard, one direction beam
Castaldi-ZACK



Poles 3 meter- Leipziger
Leuchten

Generic lighting principles: tall mature trees

- Festoon lighting hanging from branches
- Uplighting
- projector



Ares



LED festoon MK lighting-MK lighting



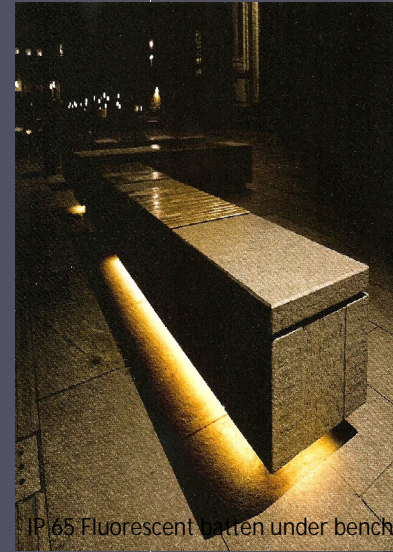
Erco projector spot

Generic Lighting Principles: Benches

- Concealed LED line or fluorescent batten
- Ready made catalogue benches with integrated light



DAP-spain
bench with light integrated



IP65 Fluorescent batten under bench



IP65- LED line- only to be used
in warm white 3000K close to
the floor

Part I: show implementation

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Atypical structures, situations of important elements, work out way of lighting and construction details

Concept implemented in KACC key areas

Royal arrival court-main hall*
Fountain Square
Waterfront park*
Cornice canal section AA



Main hall entrance



Waterfront park



Part II: layout of typical sections

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PART II

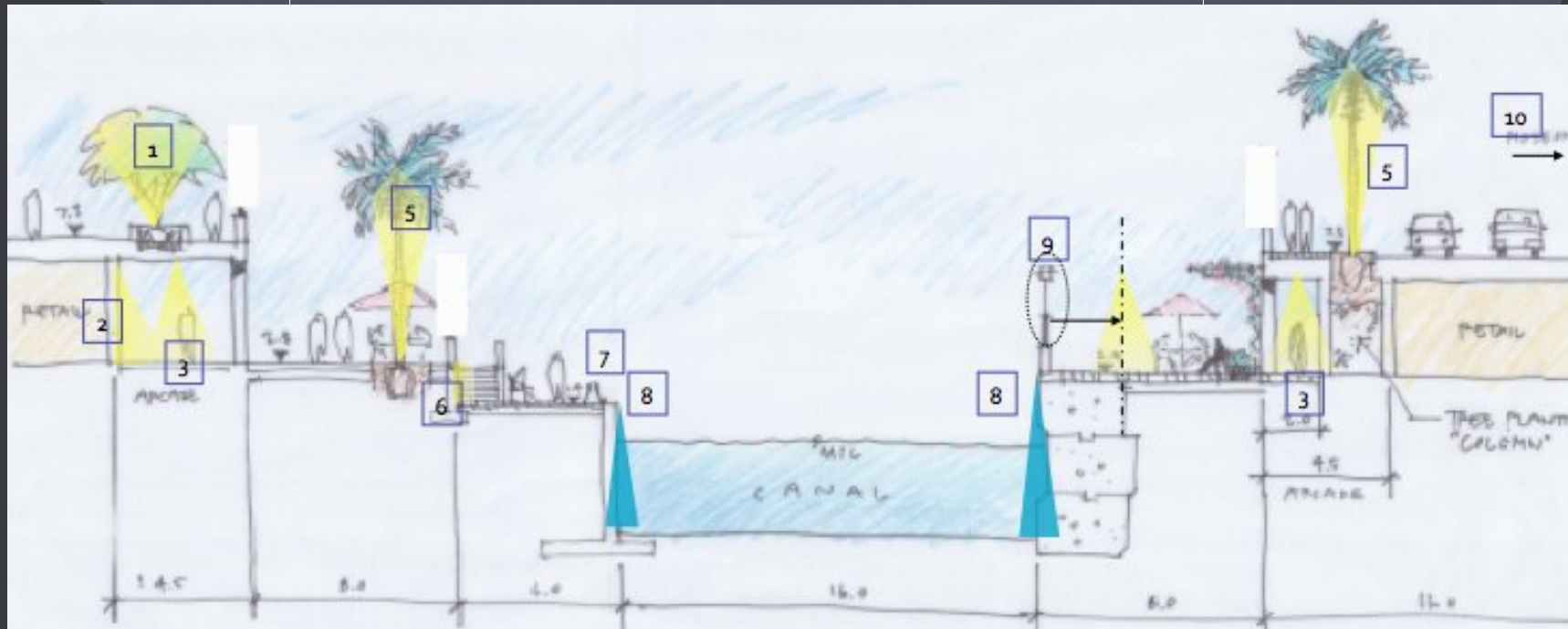
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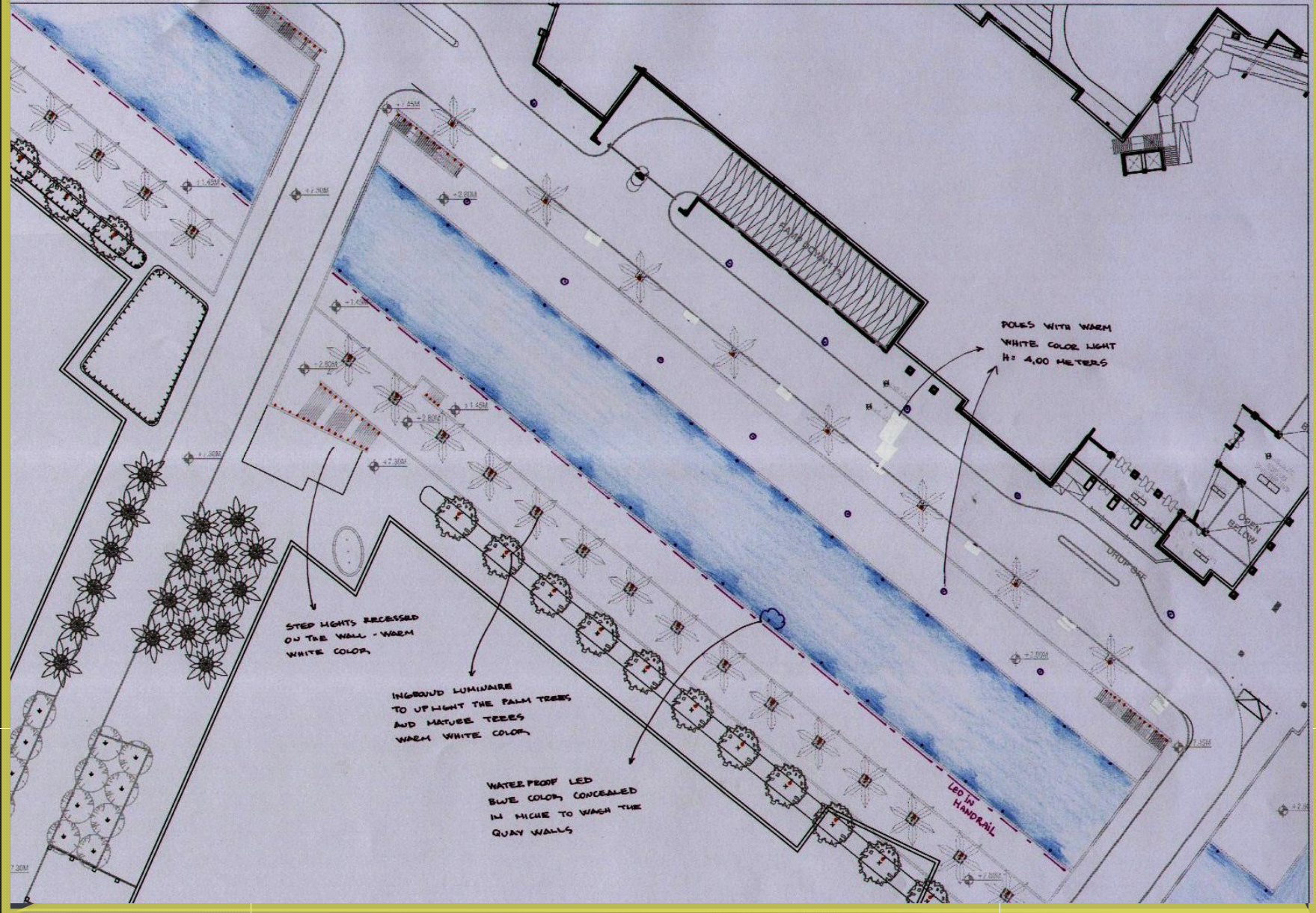
Canal



Canal-lighting treatment+ fixture selection



- 1 & 5. Uplights on (palm) trees
2. Spill light from shops
3. Spot ceiling mounted
5. Uplight palm trees
6. Steplights
7. Integrated light in handrail-white cool
8. Blue LED lights at quay wall
9. Light pole in middle of pavement
10. Poles spaced on pavement in front of museum, see plan



Part II: Special structures

PART I

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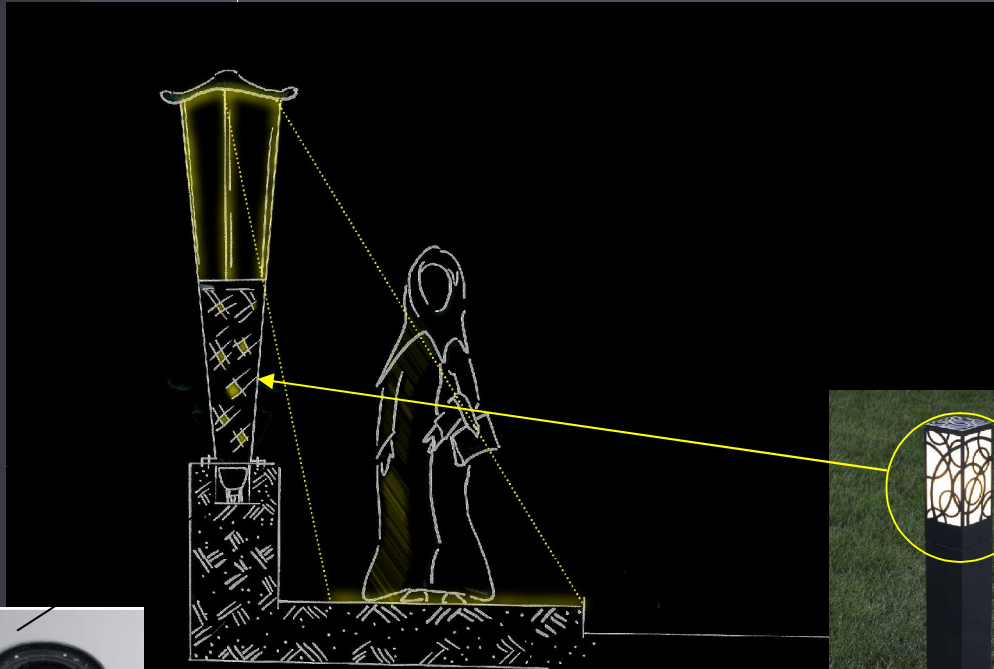
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Customized light for bridges – Gateways to the area



Color and pattern
reference
Aluminium matt



light effect of base

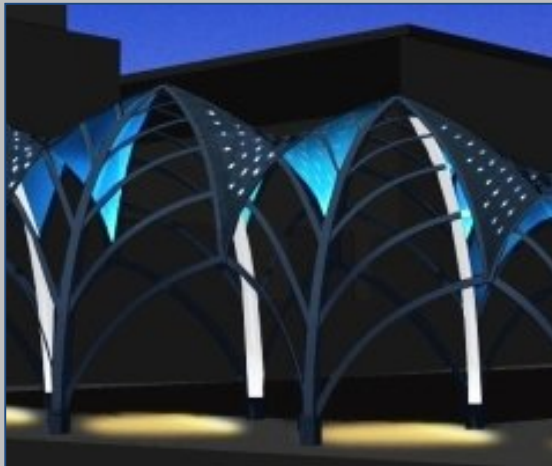
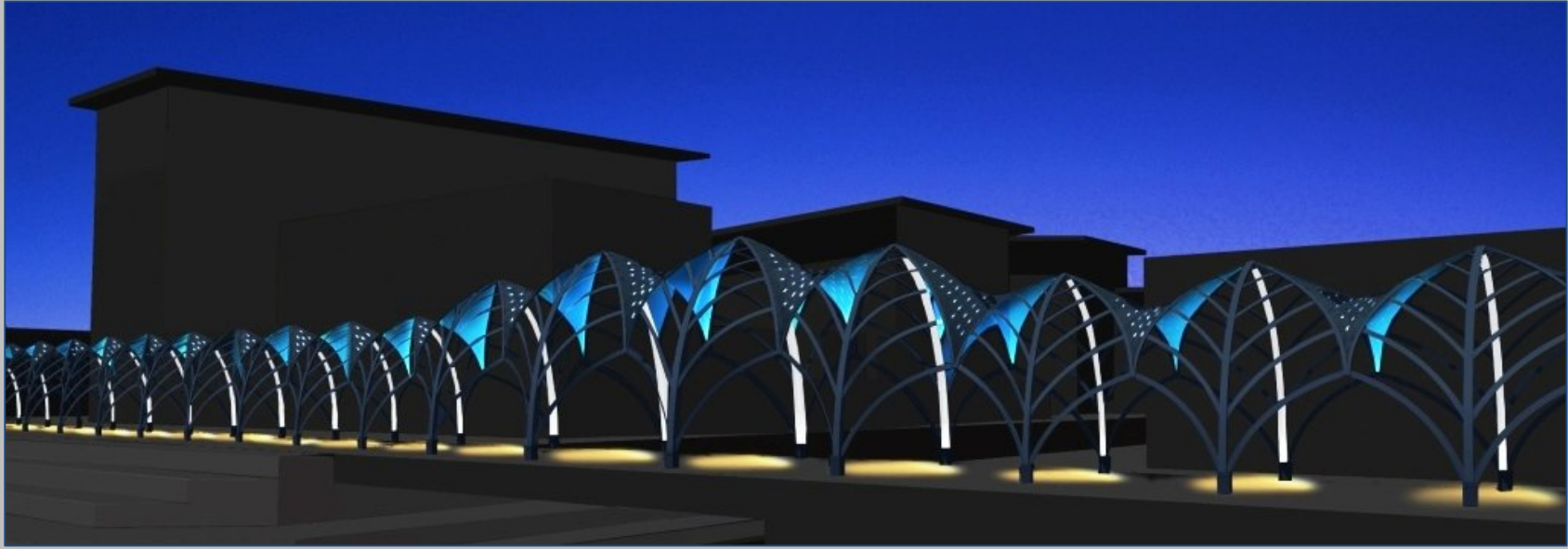


Use for these bridges



centre of the bridge
marked with a taller
version of the custom
made lighting

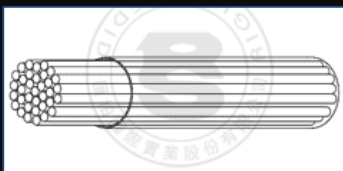
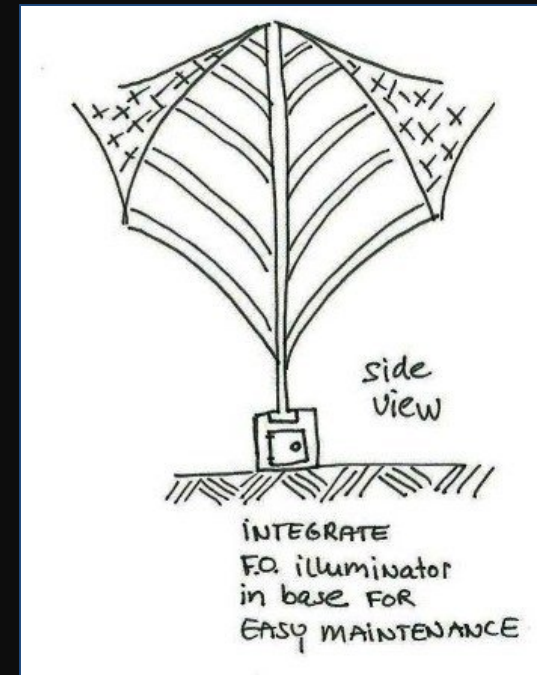
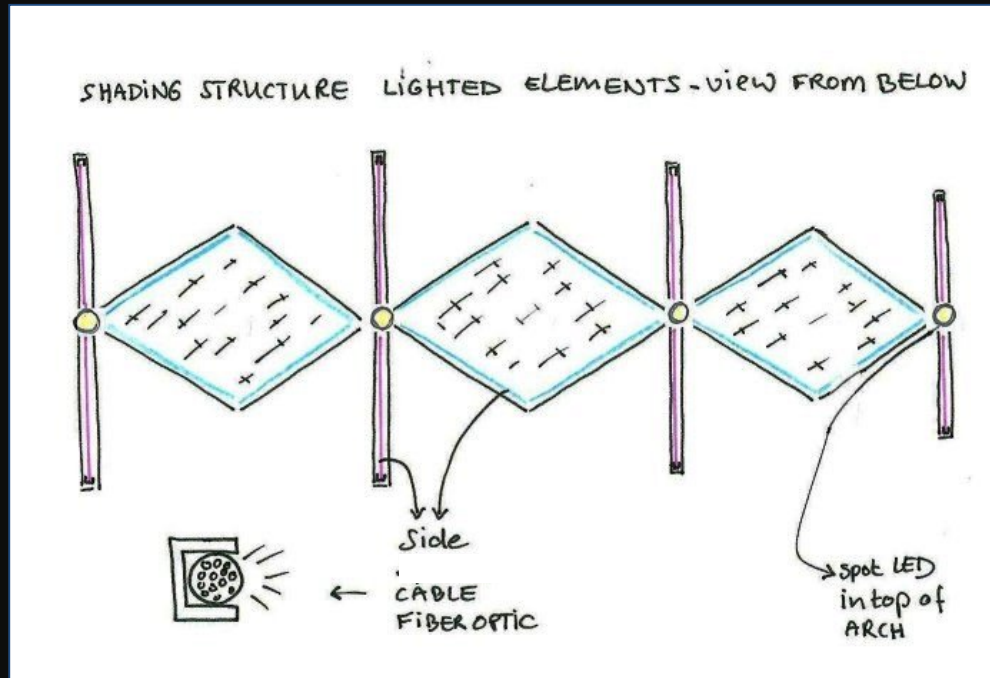




The shading arcade will play with color and perspective. During the night the arches are the main elements and will form a strong perspective that can be experienced while walking through the arcade. But also from a far distance the view will be different when the viewer drives or walks by.

The cool white and blue continue the concept of KACC, where we use cool whites and blues for areas close to the water.

Shading structure Harbor side promenade-plan

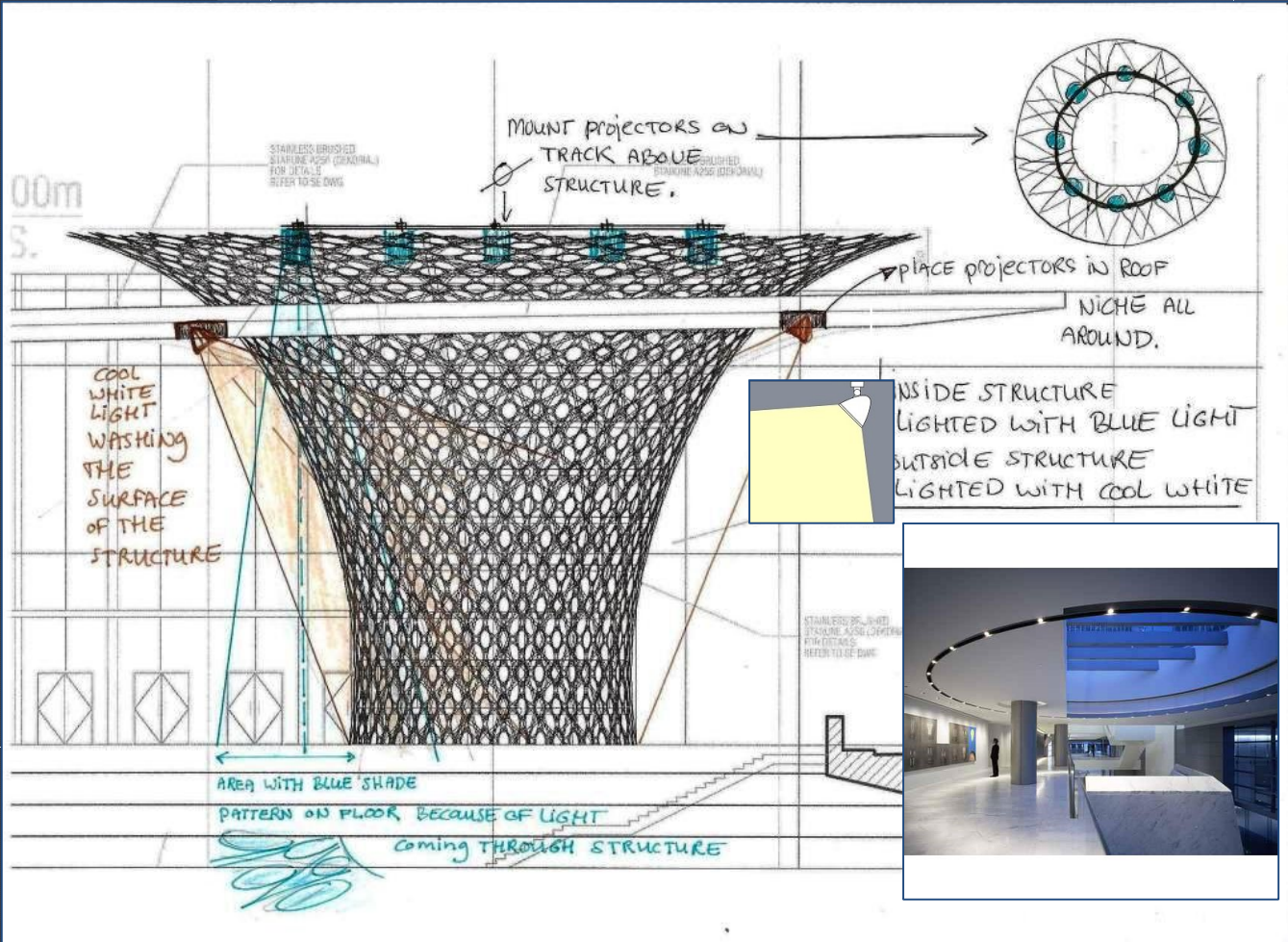


Side Lite cable emits lighting to the side

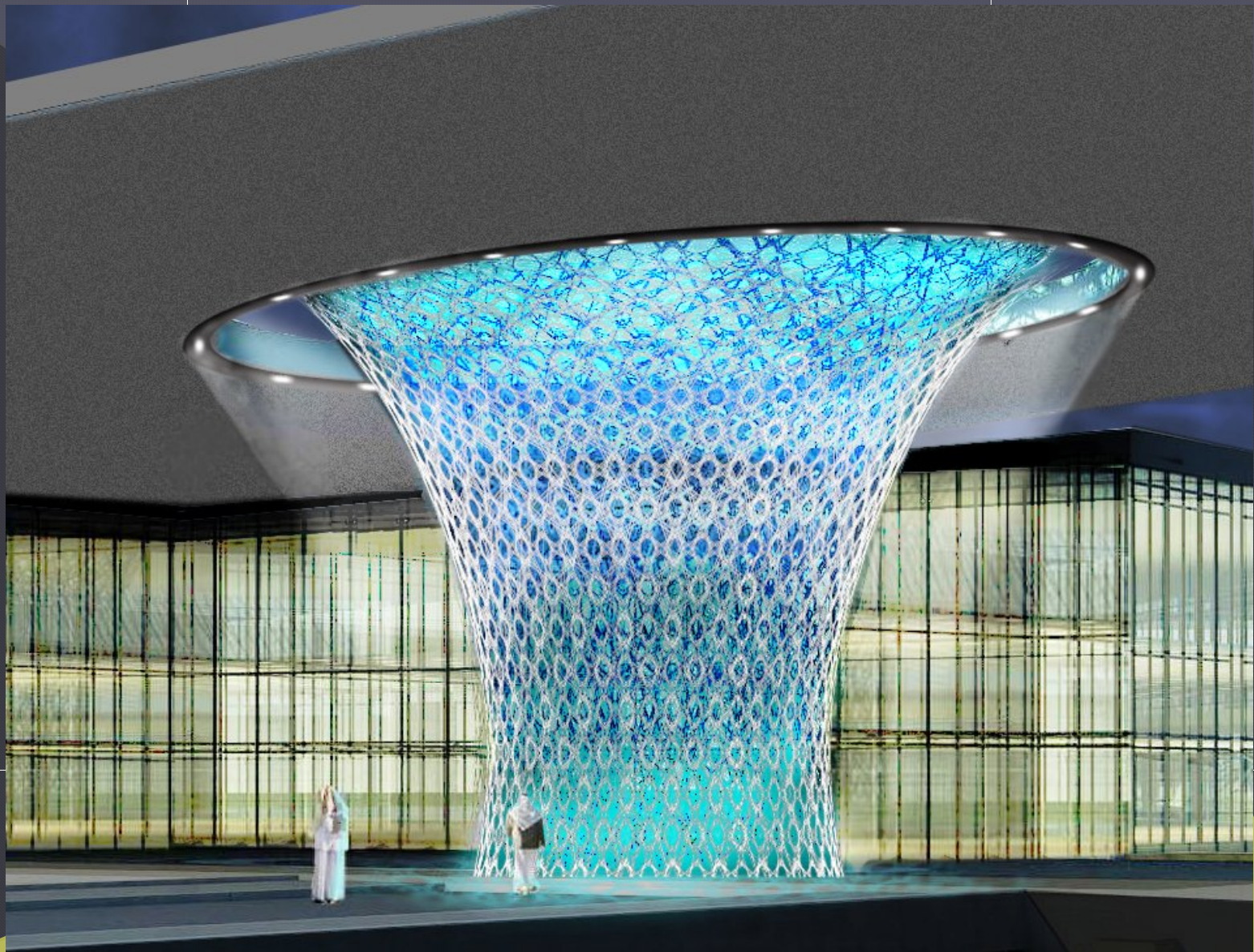


Shading structure will be equipped with fiber optic lighting integrated in the structure combined with LED spots in the top of the structure.

Special roof main hall- concept



Erco focal flood



summary

- Why Lighting designers
- Process of lighting design
- Method for large developments
- Use the LD expertise in the critical phase
- Call assistance when required
- Use your own resources for production work of cad plans
- Design fee 55% lower

Questions???

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