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EXTARORDINARY BUILDINGS CHINA

GIANT IGP CAMPUS

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Edited by Oscar Riera Ojeda  
Foreword by Thomas Fisher  
Introduction by Daniel S. Friedman

# GIANT IGP CAMPUS



OSCAR RIERA OJEDA  
PUBLISHERS



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There is, however, ample evidence that land-use practices have tremendous impact on atmospheric carbon levels. "Post-coal re-growth of eastern forests measurably offset atmospheric carbon emissions in the last century." And tilling and cultivation of temperate soils reduces soil carbon by an average of 30%. (Both comments, Compton et al 1998) Re-vegetation of degraded land with grasses, legumes shrubs and trees increases carbon stocks in soil with low organic content and provides eco-system and land use benefits. (Arnalds 2004) While Eastern forests remain valuable for their sink capacity, they are now mature and their sink activity is diminished. An infrastructure for urban carbon storage offers a mechanism to revive sink activity at the source of carbon emissions, urbanized territory, and to raise awareness of carbon cycling in climate change. Design of ecological urban landscapes necessitates rethinking fundamental policies for urban land use. City Sink rejects a position of 'climate fatalism' that constrains the landscape response to problematics of rising sea levels. Urban landscape practices will shape the global climate future.

The 2001 Kyoto Protocol of the United Nations Framework Convention on Climate Change (UNFCCC) initiated consideration of criteria for establishing carbon sinks, defined as "any process, activity or mechanism which removes a greenhouse gas from the atmosphere." The Clean Development Mechanism (IPCC) defines protocols for managing rural land development to limit emissions and sink carbon. It could also apply to revised land use practices to sink carbon in soil and plant biomass in urban areas. This initiative is significant because working with source and sink represents a systemic engagement with ecological life-cycles rather than a piecemeal response to isolated phenomena. If landscape architects seek to communicate ecological ideas to the public, they must frame the discourse in terms of process life-cycles rather than singular conditions or environmental artifacts. After all, ecological systems are the networks, the systemic relationships, sustaining a biotic organism over time.

City Sink research was geared towards establishing landscape design strategies that could overcome the hurdles of unclear carbon-storage metrics and lack of economic mechanisms to support redesign of urban landscapes. The design logic that was developed in the process was grounded in the need to establish new relationships across existing urban infrastructural systems (easy retrofit), and across finance sectors (facilitated investment scenarios). (PLATE 4) City Sink is described here as a 'meta park'; it manifests beyond segregated zones of recreation and 'natural' context to encompass habits of daily life. Human contact and the capacity to multiply, to increase additively, were deemed essential characteristics for a new typology of urban carbon infrastructure. (PLATE 5)

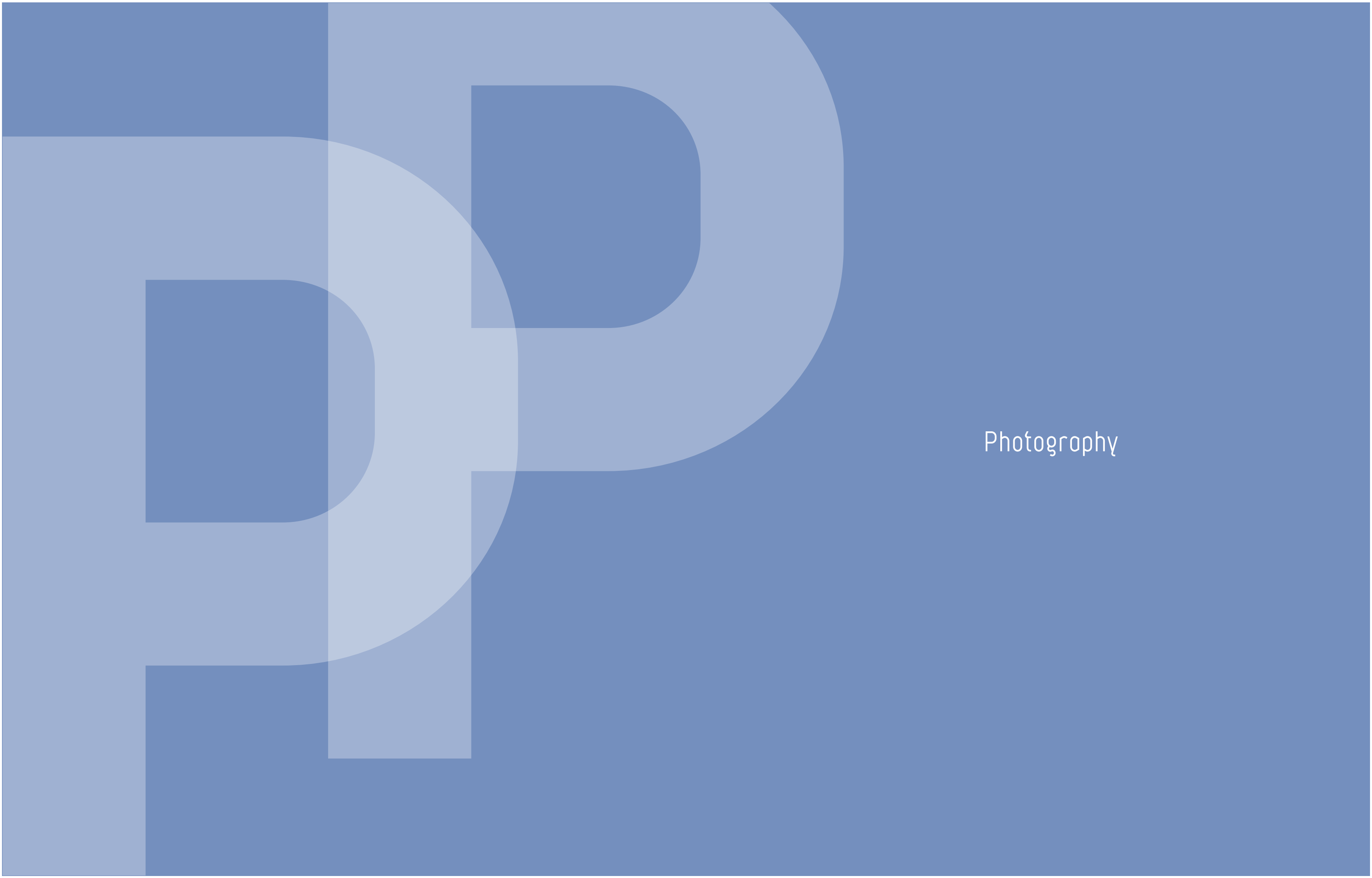
Carbon sink infrastructure can infiltrate diverse urban support networks: circulation, waste, communication and energy networks. Linking the carbon sink system to existing networks enables re-assessment and upgrade of those structures, and provides an opportunity for the carbon sinks to aggregate to reach a meaningful scale of carbon storage. Design strategies that enable carbon sink structures to disperse across cities and regions to latch onto existing physical structures, policy or funding mechanisms, are going to be inherently more robust than stand-alone projects. A multiform network that can insinuate itself into diverse urban

morphologies and encompass an array of additional performance criteria will be more quickly adopted than a traditional infrastructure system. To coalesce carbon storage capacity City Sink takes advantage of tactics like retrofit and multi-purposing.

The methodology of this project was to establish a strategic framework for an ecological infrastructure system, and then test the idea through developing specific implementable propositions in design case studies. The necessity to link general assessments of carbon storage opportunities with a study of new formats for vibrant urban landscapes; mandated a design research process that could jump scales and speak to both carbon science and city life. Two avenues of speculation emerged:

**Working Policy:** The rules of the game determine our urban landscapes as much or more than built structures. Policy implications were researched through design scenarios based on case study sites in New York City and Long Island. Working Policy 'structures' operate at the macro-scale, orchestrating regional urban ecological systems; and at the micro-scale, directing construction and management practices that shape intimate experience. Maintenance impacts activate plant-soil systems as atmospheric carbon sources rather than capitalizing on their potential as sinks. Cities are currently seeking to decrease atmospheric carbon emissions, and plantings are emblematic of those efforts. When it comes to urban landscape however, green is not always really green. Working policy design research investigated potential for: Eco-easements, and 'Open' Space, strategic establishment of sinks in relatively inactive, or single-use urban zones. These included: Leftover Land (PLATE 6), Greenroof Fields (PLATE 7), Bonusable Sinks (PLATE 8), Max-Bio Parklands and Phyto-Labs.





Photography



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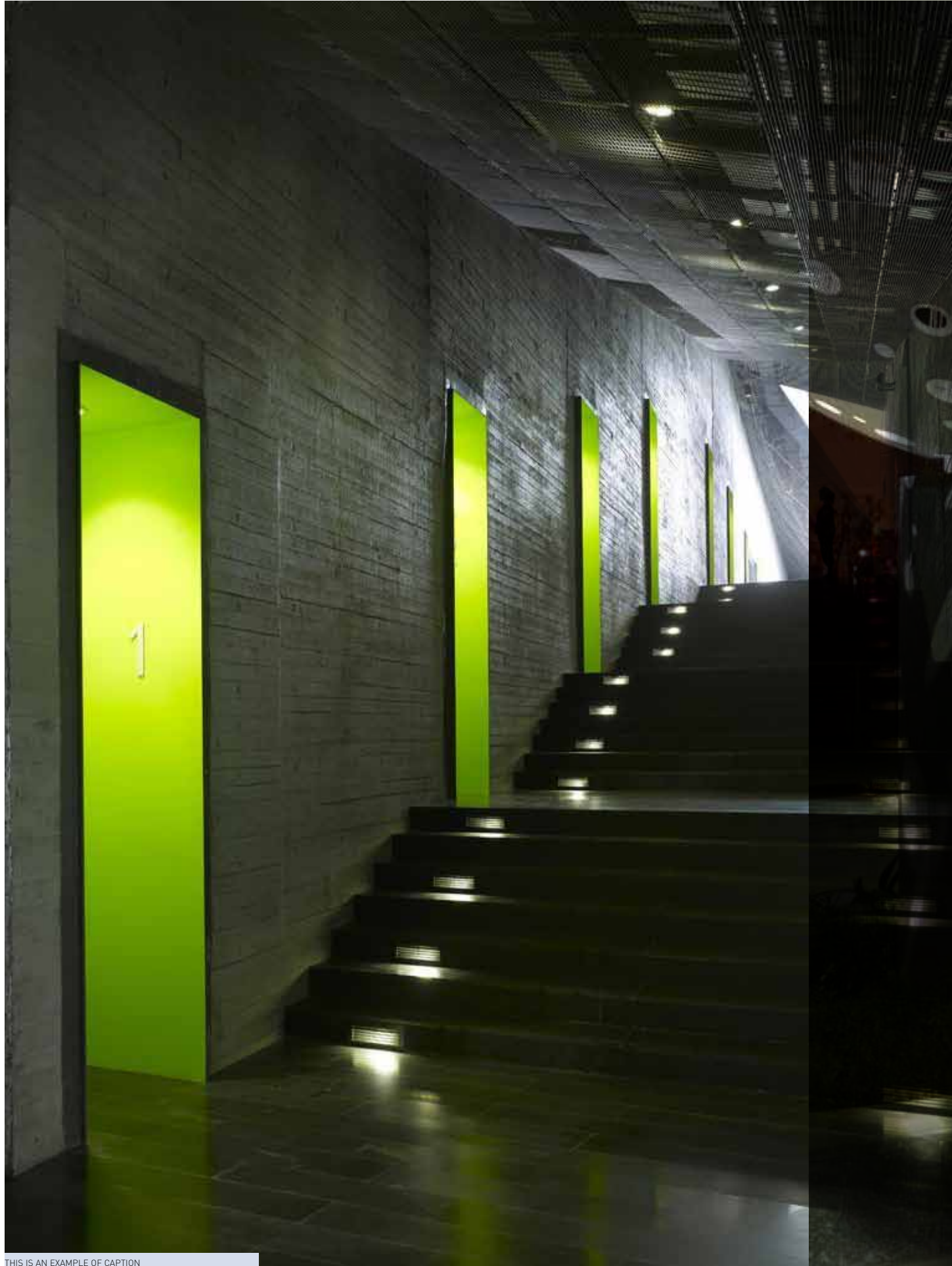


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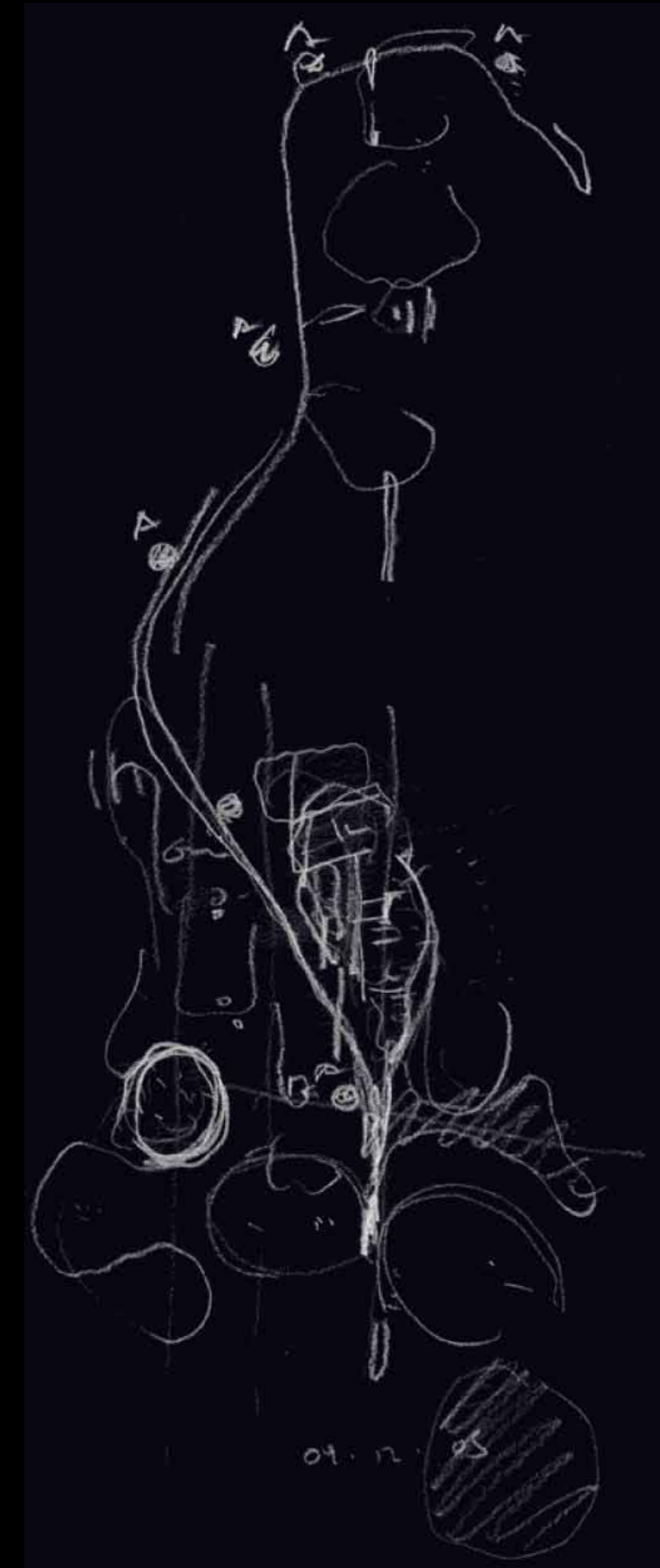
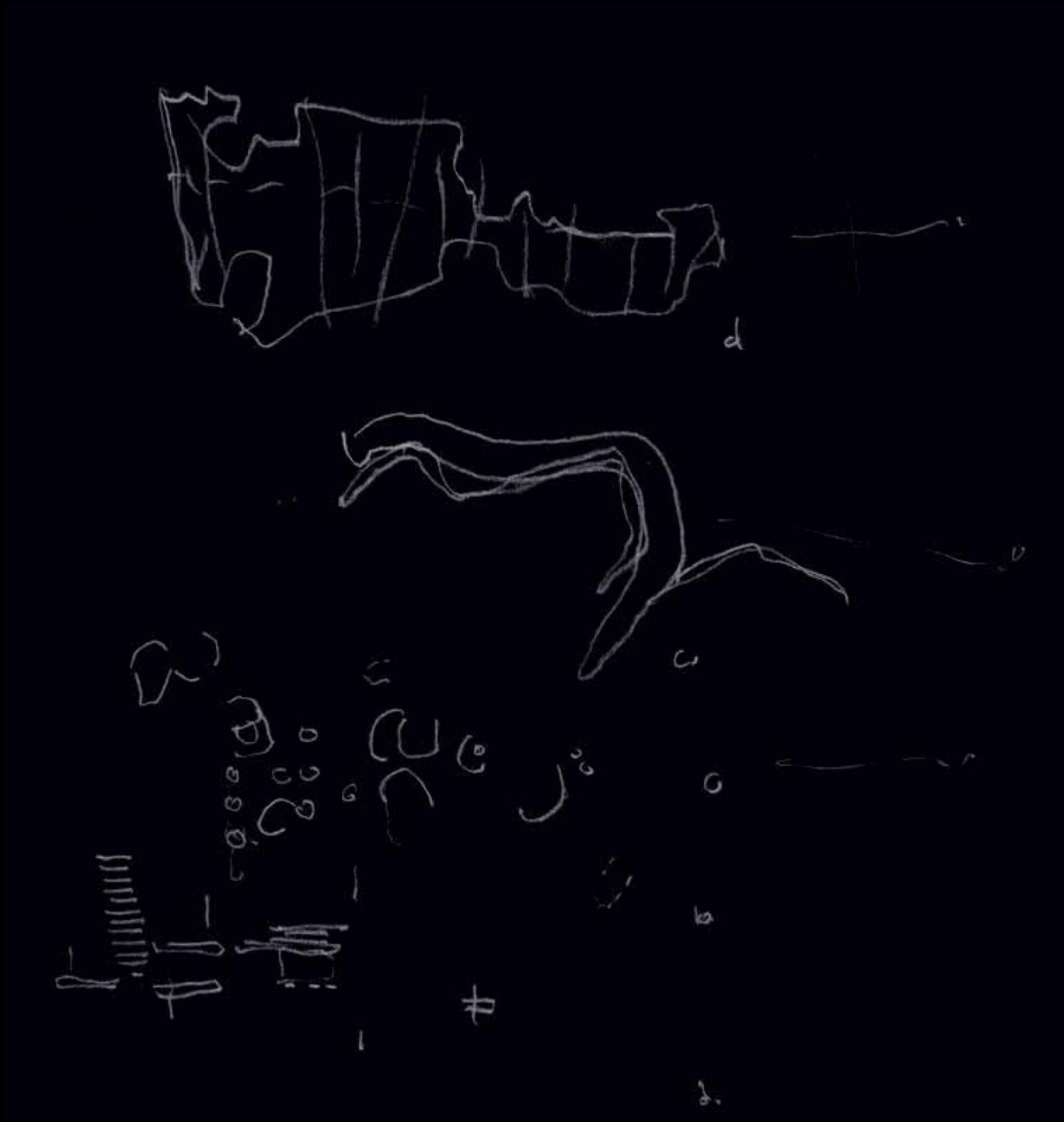






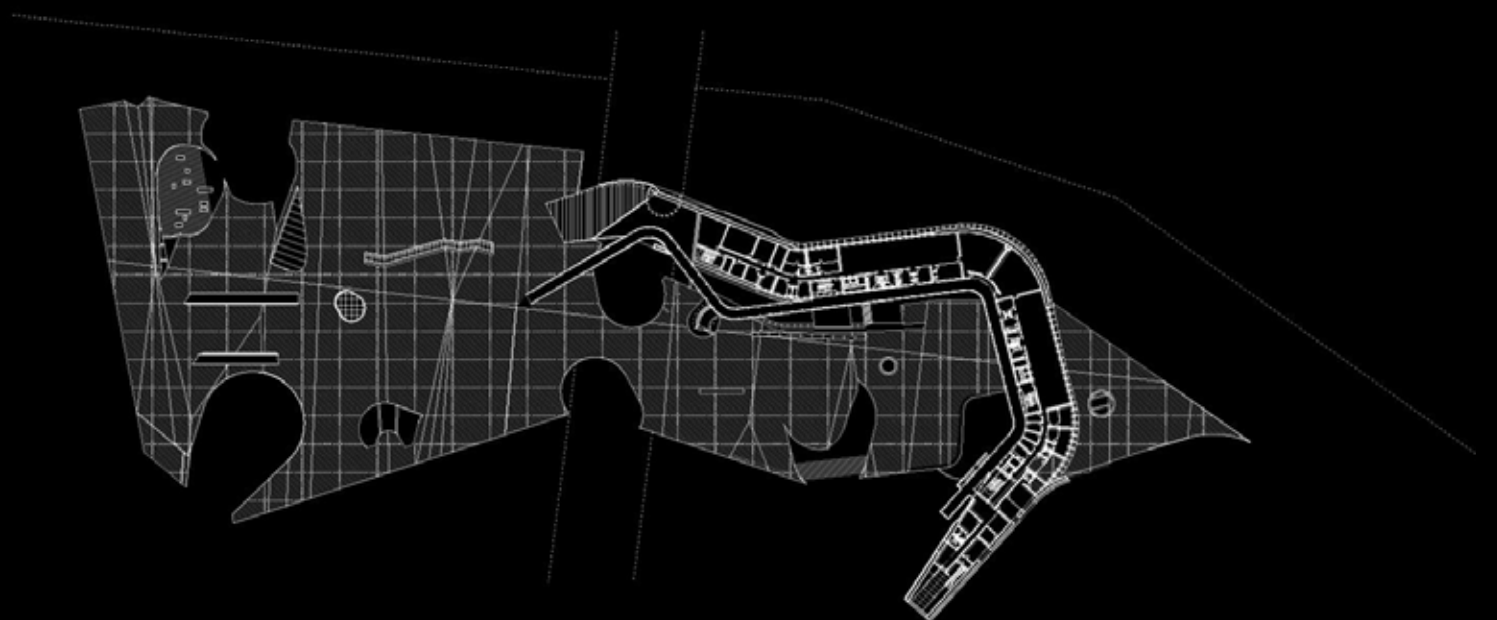
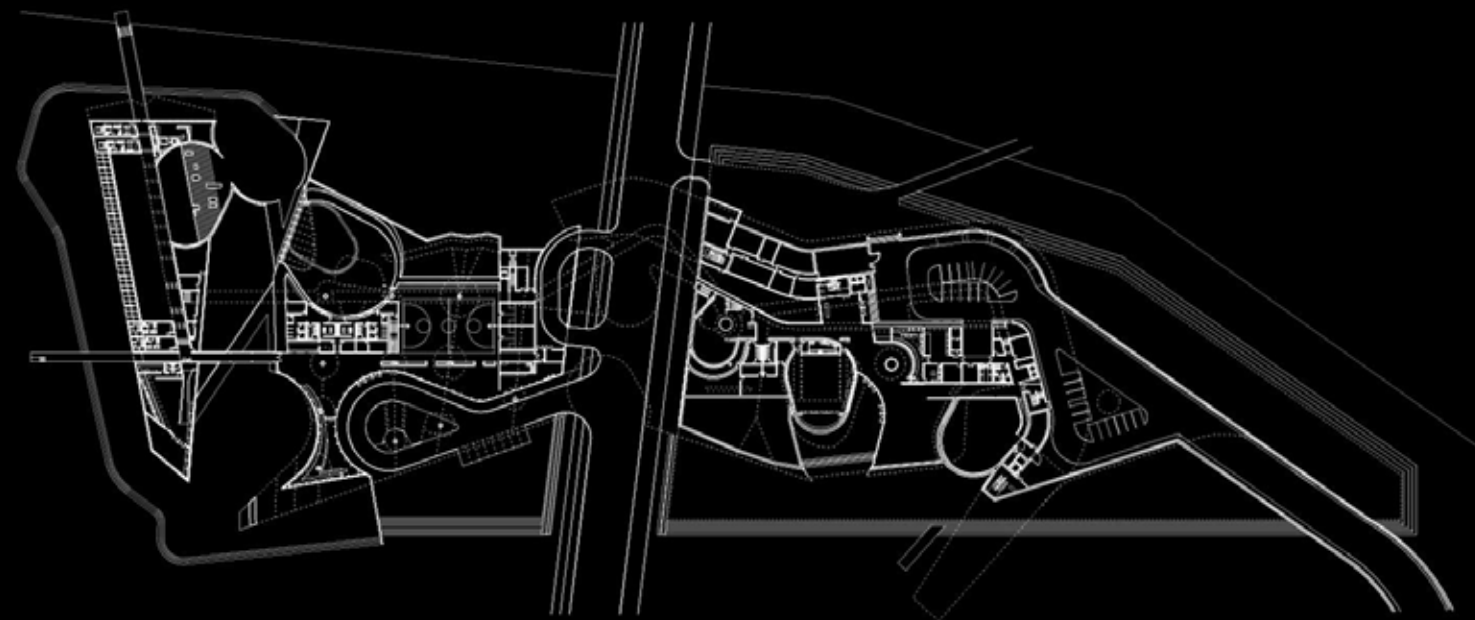
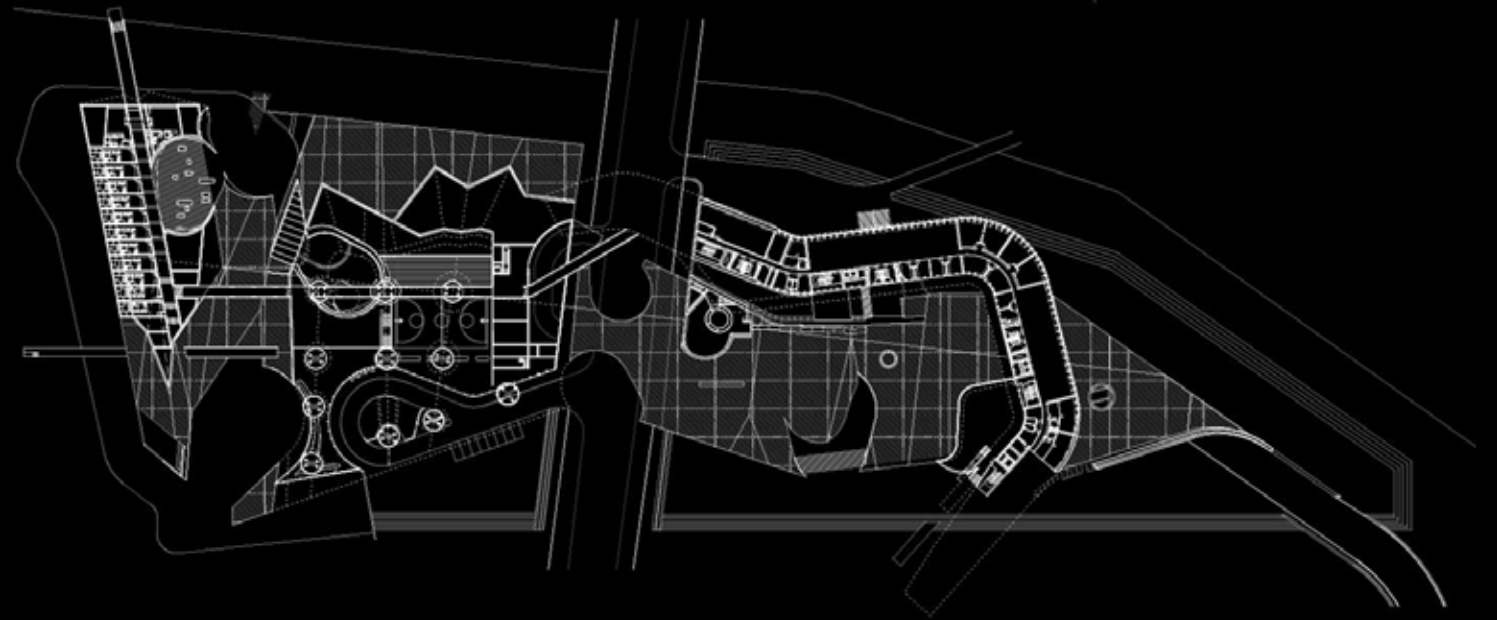
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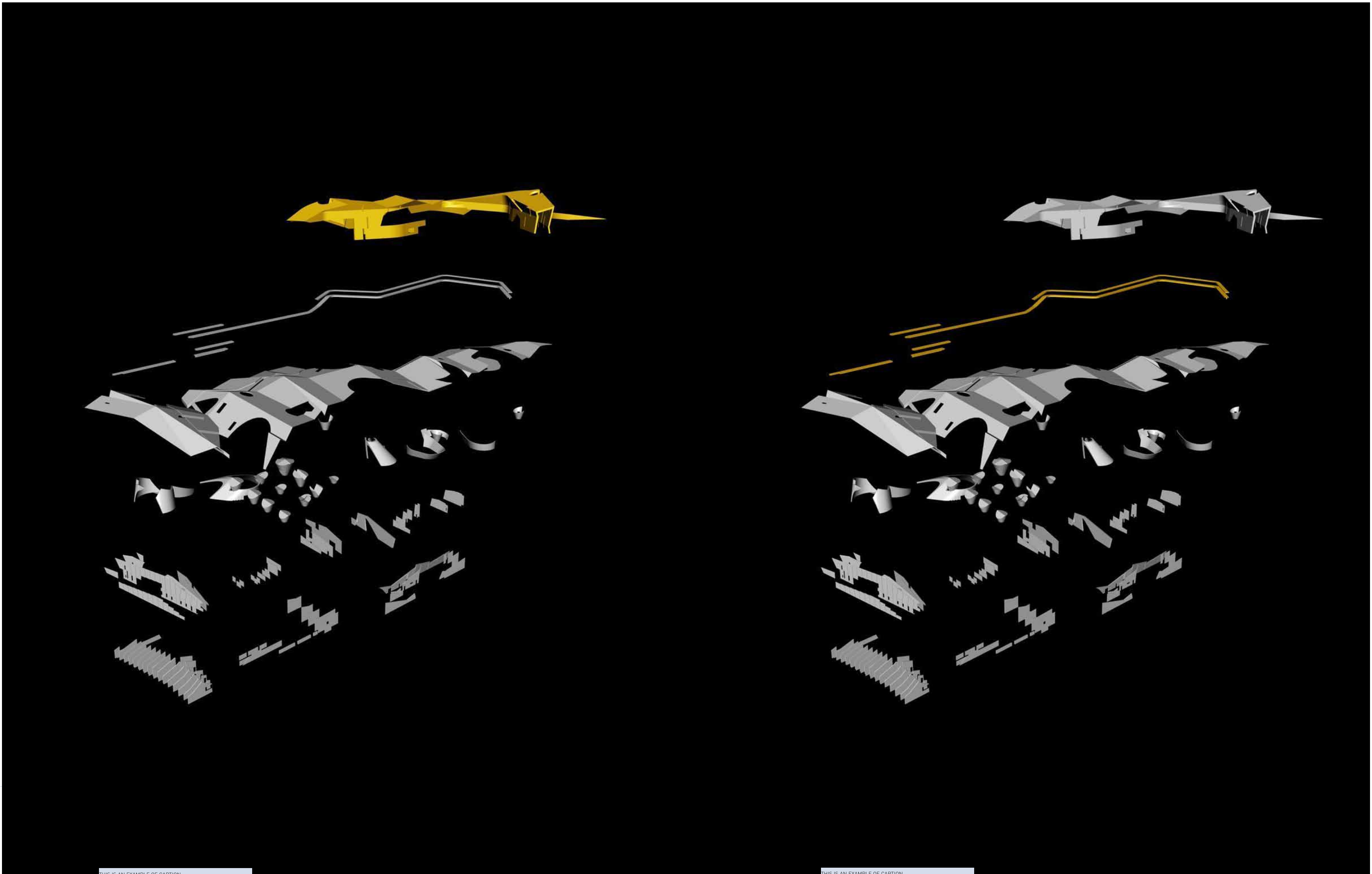
Drawings





SHANGHAI

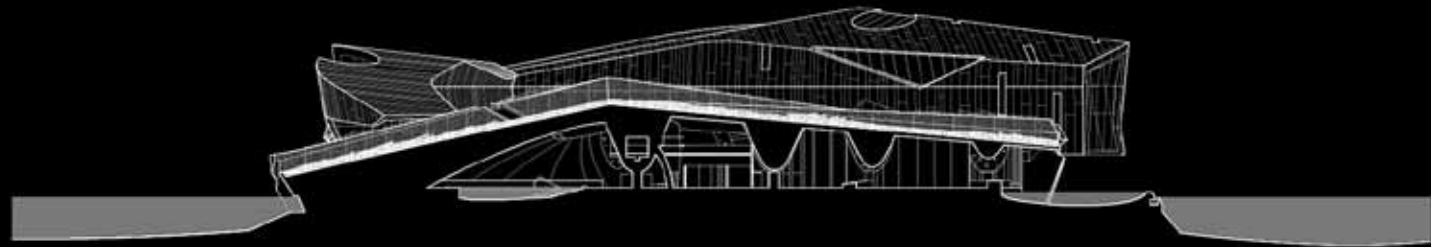
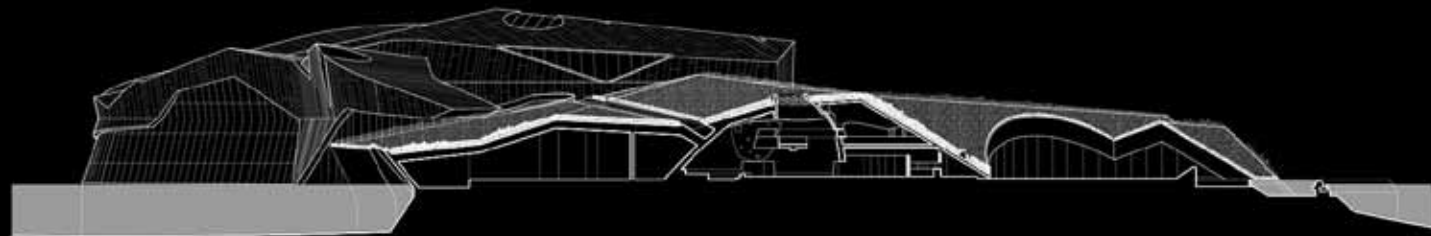
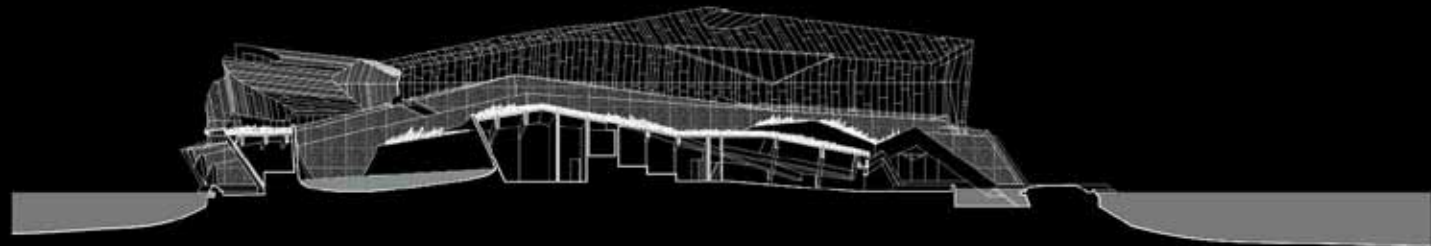
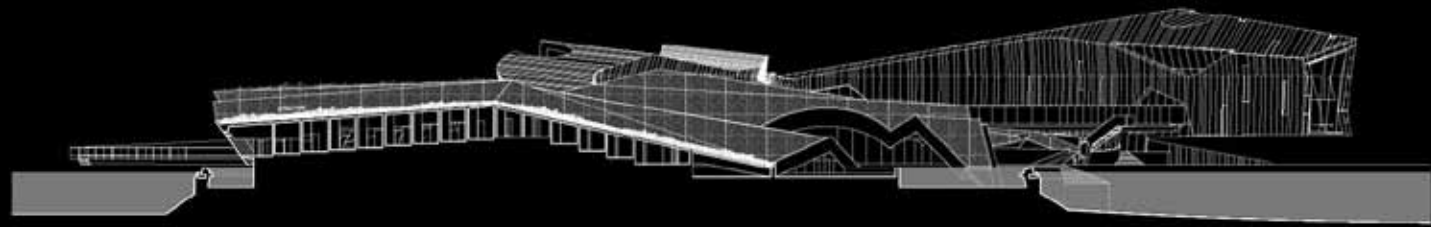




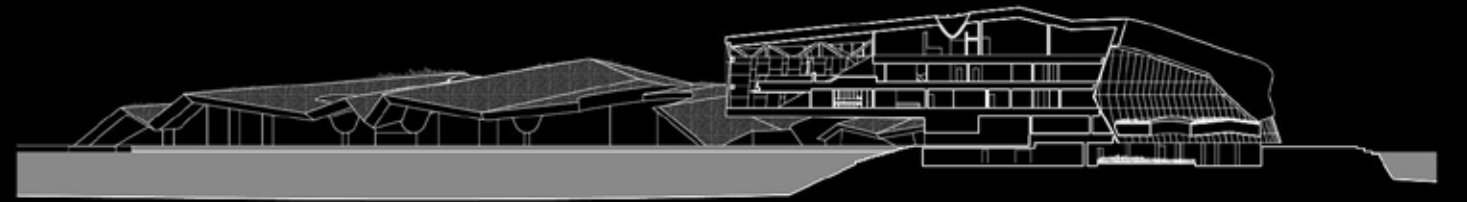
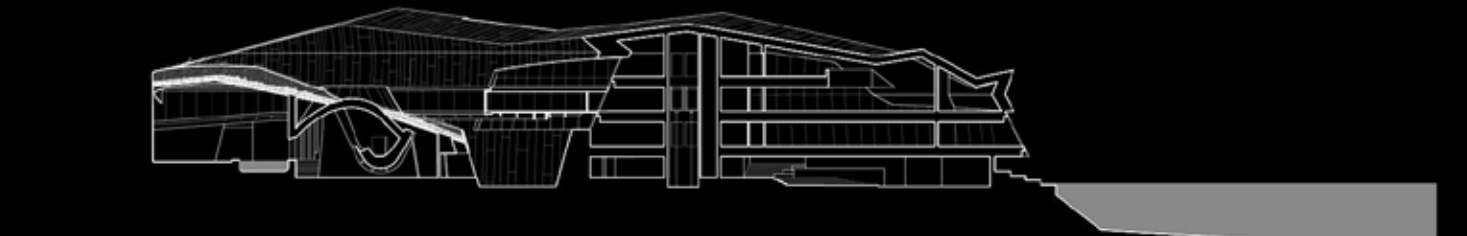
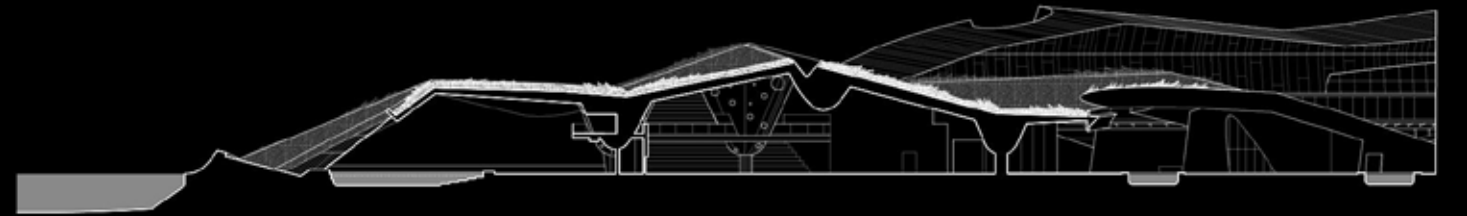
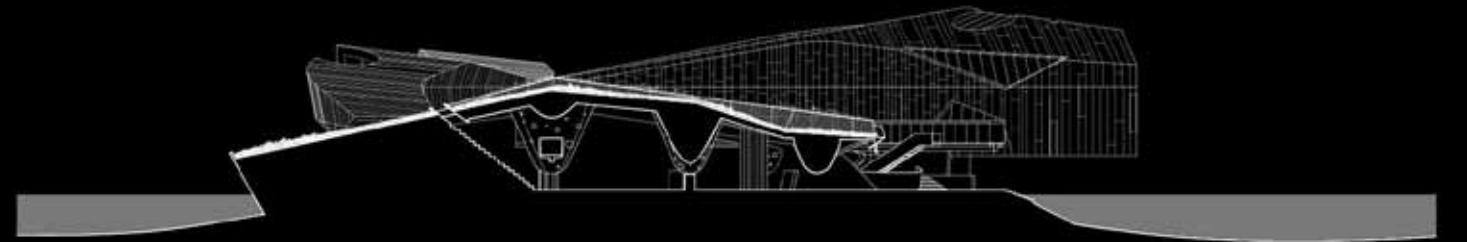
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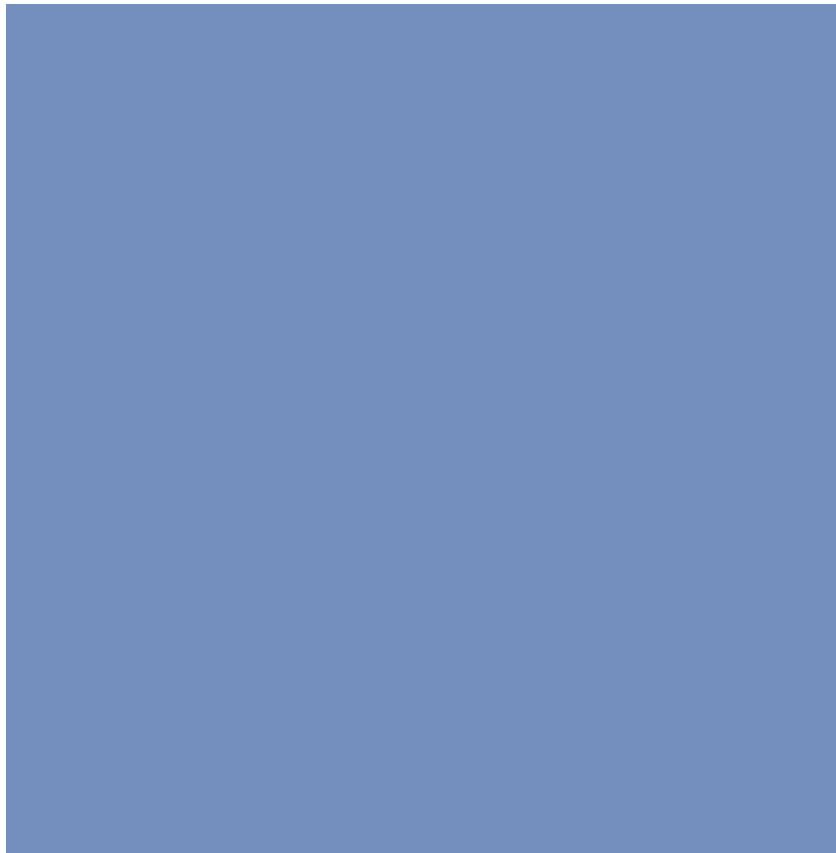




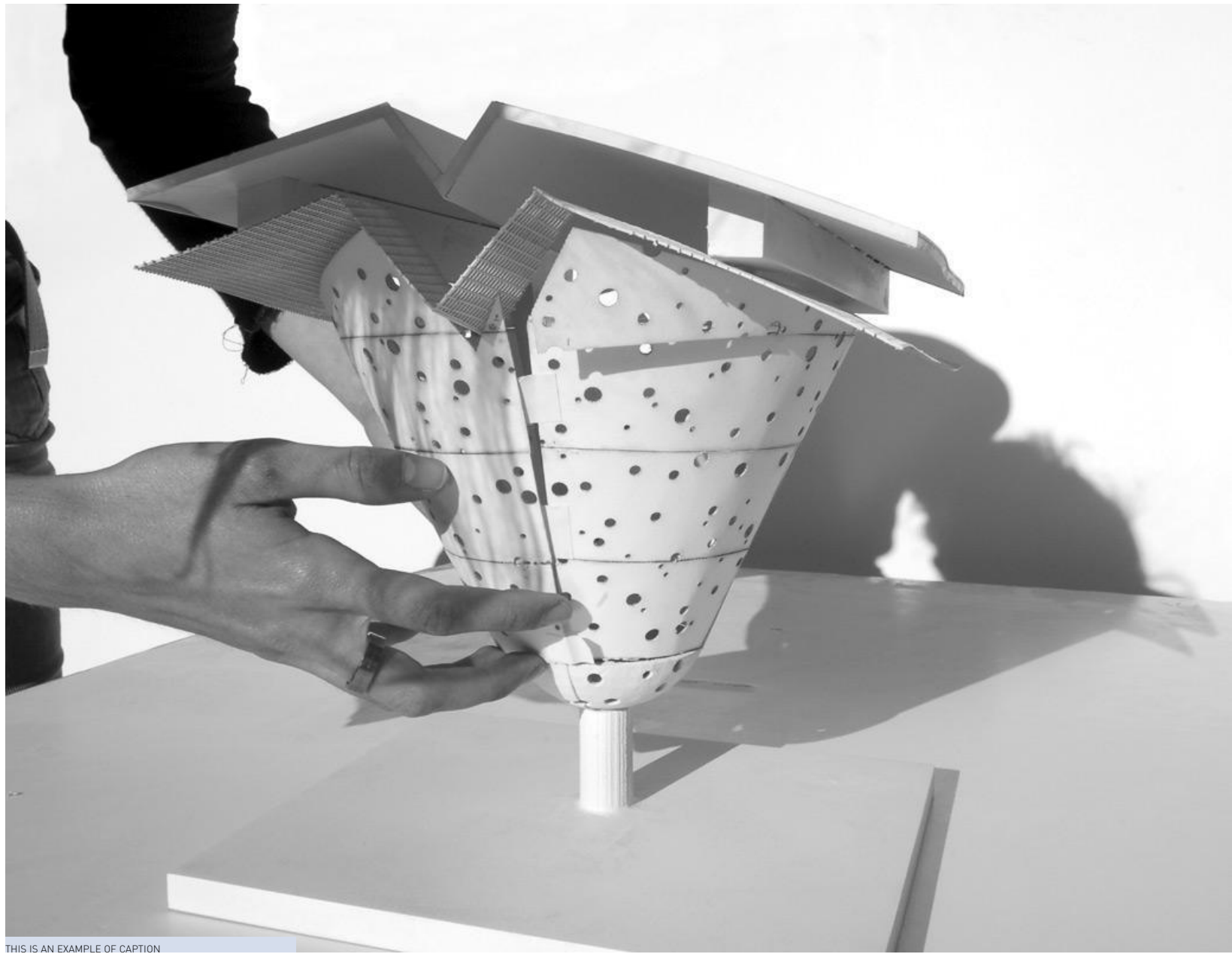
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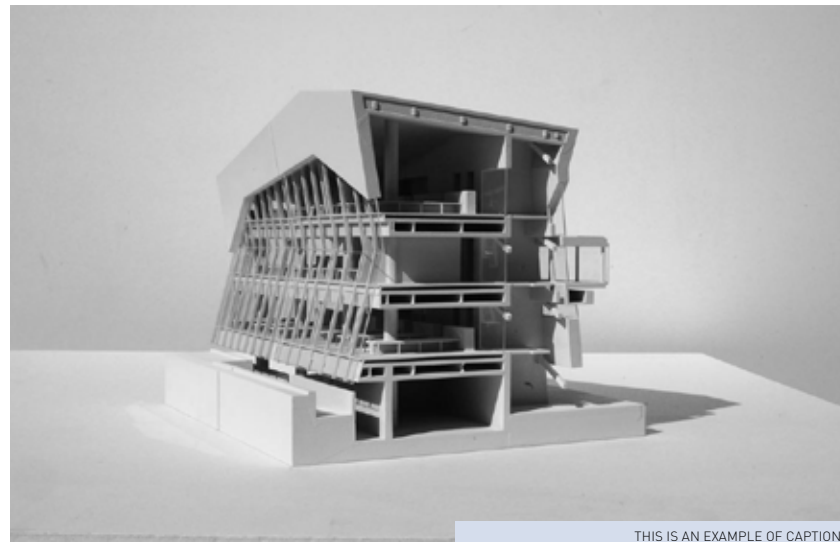
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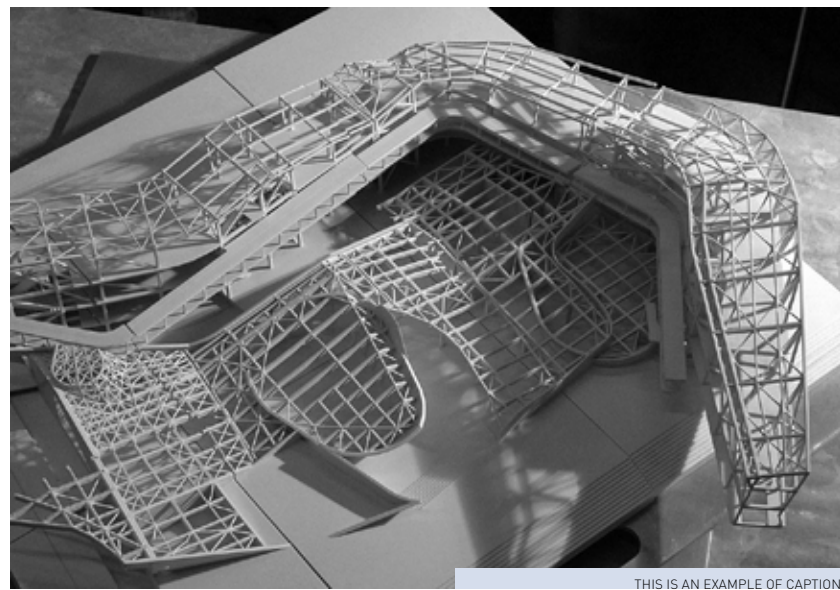
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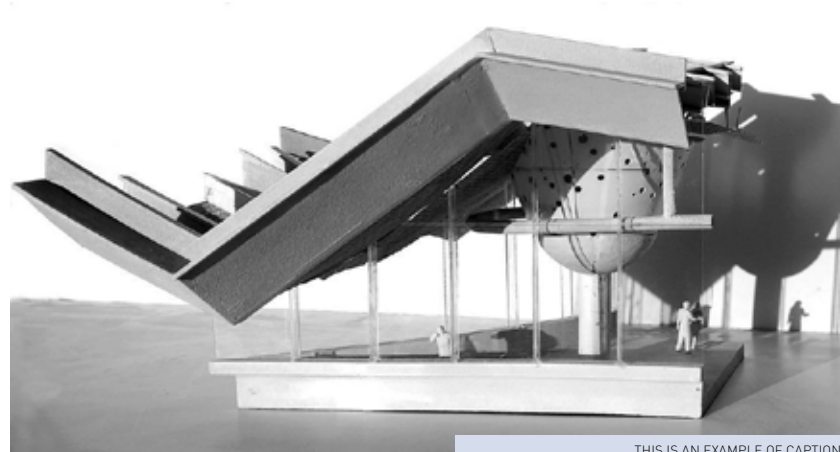
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# Description

**Location**  
Shanghai,  
China

**Client**  
Giant Interactive  
Group

**Site Area**  
7.9 acres /  
3.2 hectares

**Size**  
258,300 gross sq ft /  
23,996 gross sq m

**Program**  
Corporate headquarters office building, exhibition hall, conference rooms, auditorium, library, gymnasium, hotel, clubhouse, and pool

**Design**  
2005 - 2006

**Construction**  
2006 - 2010

**Type**  
Commercial

The Giant Campus project is a compact village that accommodates diverse functions in a flexible framework of forms that move in and out of a folded landscape plane. Situated amid existing canals and a new man made lake, the undulating office building interacts with an augmented ground plane, joining architecture to landscape and environment to site. The East Campus office building contains three zones: open, non-hierarchical office space; private offices, and executive suites, which cantilever dramatically over the lake. Additional program is integrated into the lifted landscape, including a library, an auditorium, an exhibition space, and a café on the east campus. On the West Campus, additional program space-submerged below an expansive, undulating green roof- includes a pool, a multi-purpose sports court, and additional relaxation and fitness spaces for employees. The landform culminates to the west at a company guest hotel where glass-floored private bedroom suites project over a wildlife pond.

Several plazas, carved from the landscape, provide outdoor break and recreational spaces for employees. At the south edge of the campus, a pedestrian plaza steps down to the water's edge in a continuous outdoor walkway that provides pedestrian access to the lake. The main circulation spine, an enclosed walkway located outboard of the office building, bridges over the street connecting the east and west campuses.

A range of features on the project maximize both energy efficiency and occupant comfort. The West Campus's landscaped green roof provides thermal mass that limits the heat gain and reduces cooling expenditures. The façade's double skin and insulated glass curtain wall minimize solar heat gain and improve overall efficiency. The central circulation spine, along with the recreational amenities and plazas provide opportunities for chance encounters and places for employees to gather without the confines of cubicles or unnecessary divisions. The narrow profile of the office building combined with a system of skylights ensure that employees have continuous access to natural daylight.

## Emerging Organically from Complexity

The Giant Campus is a compact village that accommodates diverse programmatic functions in a flexible framework of architectural forms that move into and out of a sculpted landscape. An undulating office building and an augmented ground plane marry architecture to landscape and environment to site. Liberated from a primary ordering device such as figure-ground, competing layers disperse, fragment, and integrate. The once clear delineation of man-made and nature blurs into a wet palimpsest, and familiar distinctions between city and landscape, site and non-site, imagined and real bleed into one another. Landscape, once the blank canvas for architecture and urbanism, becomes an active tool, shaped by complex urban forces but also, reciprocally, shaping its context.

## Project Credits

### MORPHOSIS TEAM

#### Design Institute

MAA Engineering Consultants (Shanghai) Co., Ltd.

#### Local Architect

SURV

#### Structural Engineer

Bao Ye

MAA Engineers

Thornton Tomasetti Group, Inc.

#### Mechanical Engineer

IBE Consulting Engineers

MAA Engineers

#### Electrical Engineer

IBE Consulting Engineers

MAA Engineers

#### Interior Design

Morphosis

#### Landscape Architect

SWA Group

#### Local Landscape Architect

TOPO Design Group

#### Architectural Lighting

Luminesce Design

#### General Contractor

China State Construction Engineering Company 3rd Bureau

#### Project Team

Marty Doscher



# Morphosis

Founded in 1972, Morphosis is an interdisciplinary practice involved in rigorous design and research that yields innovative, iconic buildings and urban environments. With founder Thom Mayne serving as design director, the firm today consists of a group of more than 50 professionals, who remain committed to the practice of architecture as a collaborative enterprise. With projects worldwide, the firm's work ranges in scale from residential, institutional, and civic buildings to large urban planning projects. Named after the Greek term, morphosis, meaning to form or be in formation, Morphosis is a dynamic and evolving practice that responds to the shifting and advancing social, cultural, political and technological conditions of modern life. Over the past 30 years, Morphosis has received 25 Progressive Architecture awards, over 100 American Institute of Architects (AIA) awards, and numerous other honors.

