
SYNTRIVANOU SQUARE
Metro
Egnatia St.
Hotel
Taxi dropoff
Multi-purpose hall
Drop off
Underground parking
Emergency vehicle free clearance 6m
Loading Exit from Site
Sector III
Sector I.1
Loading
Egnatia St.
ARISTOTLE UNIVERSITY OF THESSALONIKI
Aggelaki Av.
Running and bicycle track
Restaurant
Outdoor exhibition 1000sqm
Truck entrance
Loading
Sector II
Outdoor exhibition 2000sqm
Truck entrance
Loading entrance 6m clearing
Emergency vehicle route
MMCA
YMCA Arch
Water feature
Amphitheatre
Agricultural Bank Pavilion
AAMTH
G. Lampraki St.
Emergency vehicle free clearance 6m
Underground parking
Underground Loading area entrance
OTE Tower
Sector IV
Sector I.2
Truck entrance
Incoming
Park
Ruins
Ruins
3rd Septemvriou St.
Running and bicycle track
L. Stratou St.
Sport fields
Underground parking
Loading
ARCHEOLOGICAL MUSEUM
MUSEUM OF BYZANTINE CULTURE

ARCHIPELAGO IN THE CITY

Archipelago is a connector of the two major regions of Thessaloniki - South and North. Located in the center of the city, this new urban amenity transforms the site into a crucial node for connecting the elements around: universities, cultural spaces, historical buildings, the mountains and the sea.

Thessaloniki is characterized by a vibrant urban network of diverse spaces for interaction and leisure. Archipelago proposes to continue this rich quality within TIF Site. A network of islands are connected together with a single continuous canopy. This element of the park binds the whole site together into a continuous public space blurring elements of retail, commercial, leisure, culture and fitness into a single innovative urban typology.

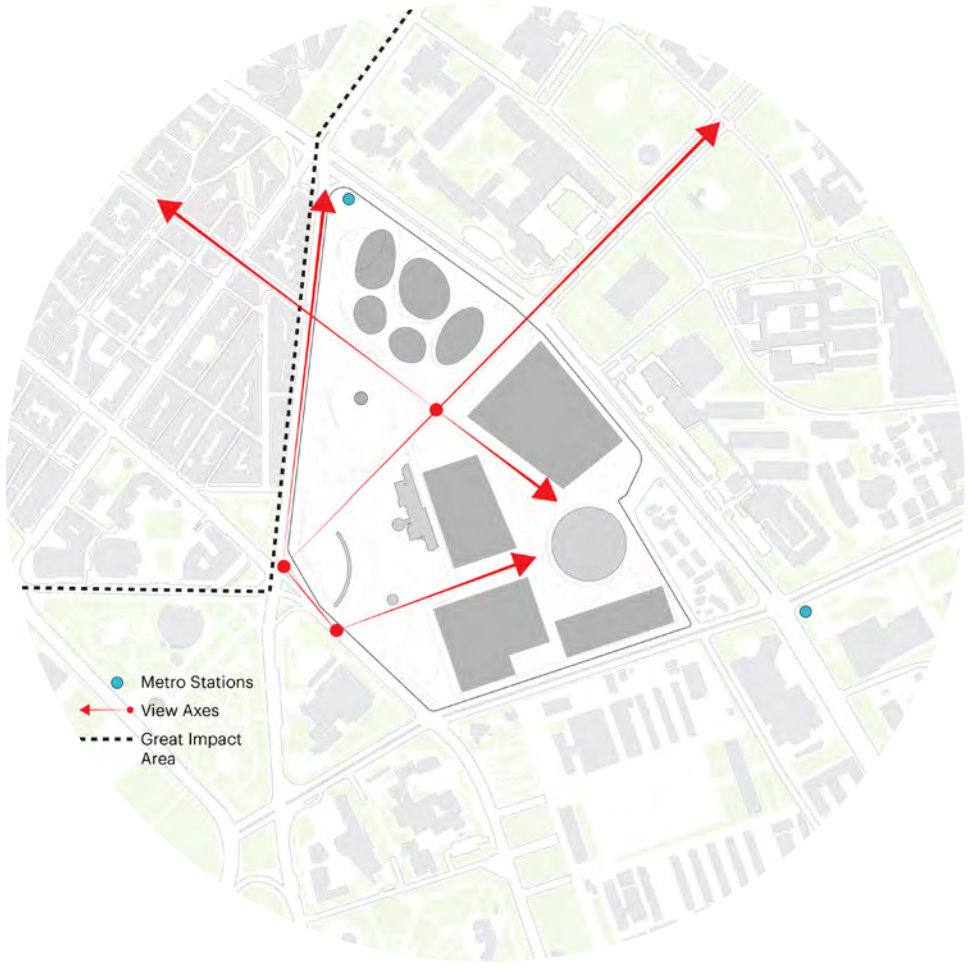
The design is formed with a diverse range of spaces and qualities both interior and exterior. A collection of "living rooms" for the city each with different use and functions. The spaces are designed to operate continuously all year around - quickly adapting to the change in weather and the change in usage. The existing urban routes and axes flow through site perpetuating a new type continuity.

A CLUSTER OF LIVING ROOMS

Thessaloniki Confex park will stitch the fabric of this rooted trading metropolis back together, reconnecting lost pedestrian routes between city and sea and providing a dynamic series of spaces to enrich the community it sits within. The park's sinuous forms draw people from existing routes and encourage exploration around a new archipelago of landscape rooms, each with its own character and focus.

The largest of these rooms is centred around the YMCA archway and will be home to a multi-functional mirror water feature that transforms into an events plaza or ice-rink, depending on the season. Adjacent terraced lawns offer families a place to unwind and relax whilst offering elevated views of the activities beyond. Thessaloniki is a dynamic city, and with its many universities, a well-known centre for learning and development, the arts and cultural island will enhance this by providing opportunities for local creatives to display or perform their craft. Intimate stages nestled within the landscape will host painters and musicians, whilst informative and interactive displays will provide an understanding of the park's ecological and environmental credentials. Situated in the South-Eastern corner of the park, a sports island will host a multi-purpose court and skate park, encouraging exercise and giving the local youth a space to come together.

While engaging the outdoor exhibition areas, the fluid open space provides large flexible stages for ever-evolving public events, offerings and activities best suited for a dynamic community. In addition, the landscape upgrades the surrounding streetscape with a tree-lined promenade and a bicycle lane allowing a dedicated corridor for walkers, joggers and cyclists along the site boundaries.



Integrating the City Network

A Cluster of Amenities

MAXIMUM FLEXIBILITY

The Exhibition Center is designed as the most functional and flexible work of architecture. It will provide a timeless state-of-the art showroom. Expressed through a minimal envelope the buildings use a sophisticated and innovative structural system to achieve large spans without any columns. This effort is used to establish a generous uninterrupted space for exhibitions sandwiched by two volumes of leisure, support and circulation spaces. The exhibitions are always connected to the outside using massive sliding doors that allow the interior exhibition to be seamlessly integrated with the outdoor programs. This system opens up more possibilities for exhibitions and event types by extending. This achieves a all-year round exhibition calendar making use of the always beautiful weather in the region. The program is divided between three buildings to minimize envelope and maximize interior efficiency. The three buildings are connected together by above ground bridges. Some of these land on the neighboring roofs due to elevations change - creating the opportunity for breakout spaces to exist above the city - opening beautiful vistas of the sea and the mountains. This network of buildings can operate as a single unit providing a wide range of exhibition spaces and relationships. At ground level the three are united by a covered plaza space adding more exhibition potential while protecting larger scale event under a single canopy.

AN URBAN VILLAGE

The Business Center is a manifestation of the diverse and dense nature of Thessaloniki's urban fabric. The buildings are designed as a collection of islands acting like an urban village. The landscape is a series of terraces which blur the scale between Egnatia street and the newly designed park. The architecture is porous and open to allow flexible entries and multiple path possibilities. All ground level retail are connected together with outdoor space creating a sense of a village in a park. The hotel is located facing Sintrivaniou Square, establishing an iconic landmark at the corner. It project's out as the tallest island - this corner piece attracts the public to the vast and diverse public space located within the site.

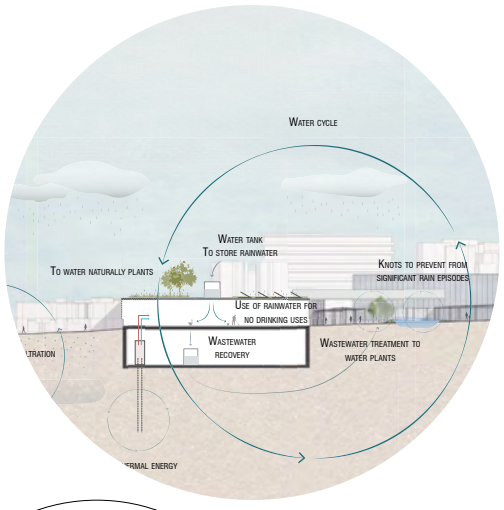
At the core of Archipelago is a carefully calibrated network that creates a flow of energy and resources allowing the building systems to operate in high standards of sustainability. A combination of passive and active systems allow the landscape and architecture to co-exist and positively respond at three scales: global, local and human.

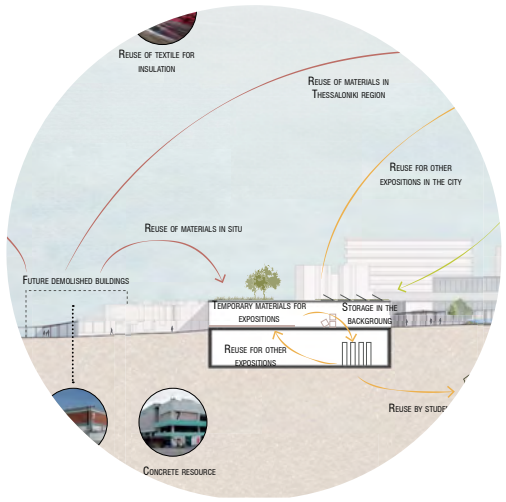
Our approach for a SUSTAINABLE CONFEX PARK relies on the crossing of three strong responsabilities carried by the project, refering to three scales of thinking.

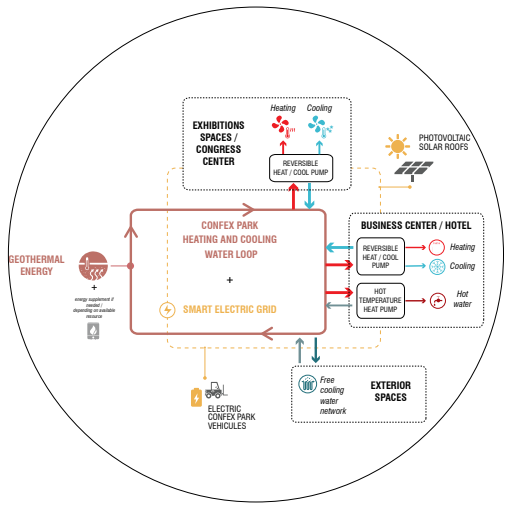
GLOBAL SCALE RESPONSE: LOW ENVIRONMENTAL IMPACT
As a project of the XXIst century, Thessaloniki ConfEx Park must answer to the now well-known environmental issues of our living world. Our project aims to reduce its environmental impact, in a net zero target : zero energy, zero carbon, zero water. Reducing buildings' energy consumption thanks to passive and bioclimatic strategies ; developing of a smart and shared energy network powered by renewable energy; using low carbon materials and offering a reused material plateform; developing a zero water cycle from rainwater to greywater to plant water; are some of the strategies of our project.

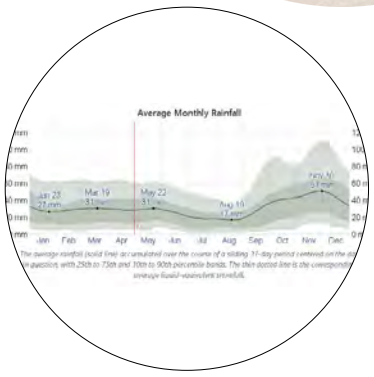
LOCAL SCALE RESPONSE: POSITIVE TERRITORIAL IMPACT
The ConfEx Park project is a unique opportunity to rethink the role of this urban piece into the city of Thessaloniki, and its surrounding region. Our intuition is that the project has strong assets to generate positive impacts on its territory. In our vision, ConfEx Park can become a microclimatic shelter in summer, where one could find freshness in the city ; it stands has a relay in the ecological corridor from Mount Chortiartis to Aegean Sea ; it may reload underground water resource and enhance local materials and technics.

HUMAN SCALE RESPONSE: COMFORTABLE AND RESILIENT BUILDINGS
Last but not least, Thessaloniki ConfEx Park must aswer to the human scale, that is to say offering comfortable and resilient buildings, that can be properly used today but also tomorrow, for a diversity of users and uses. In this perspective, our projects relies on a precise analysis of Thessalonik climate from today to 2050, to offer adaptable buildings, facades and systems.





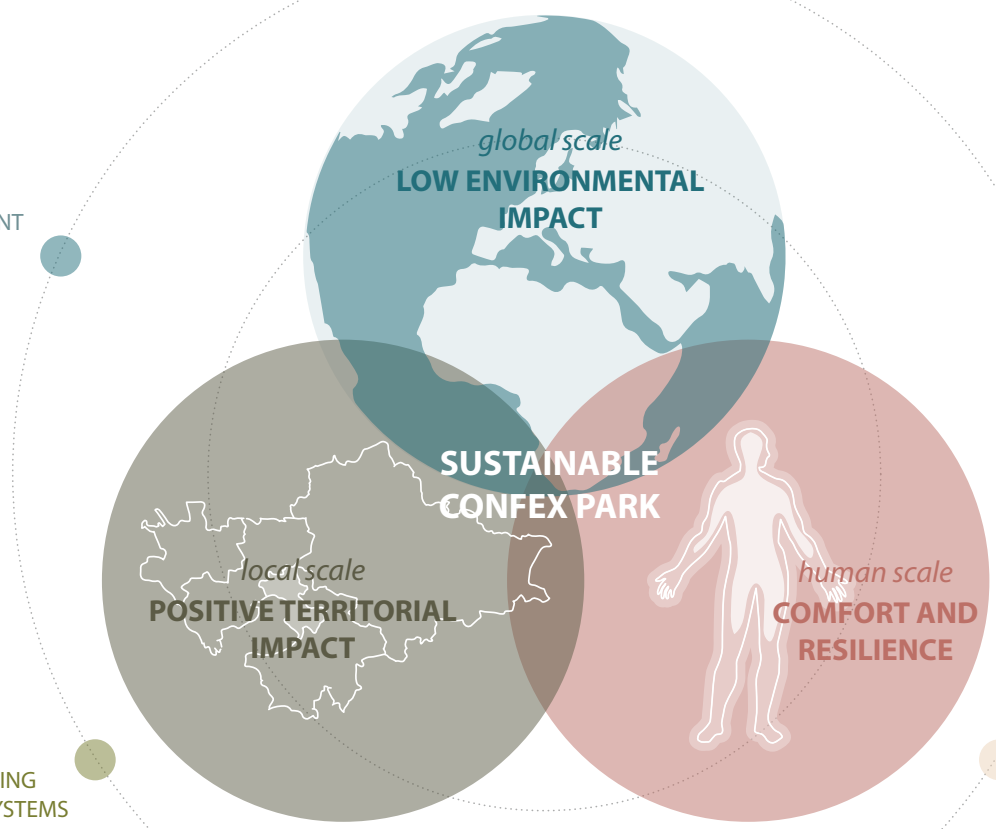




MATERIALS
CYCLES

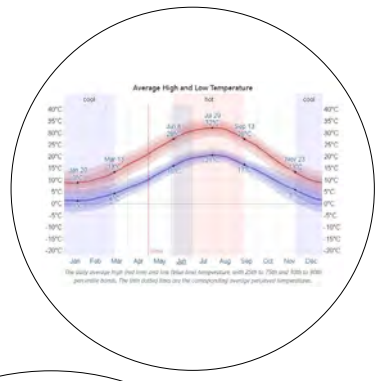
WATER
MANAGEMENT

ENERGY
EFFICIENCY

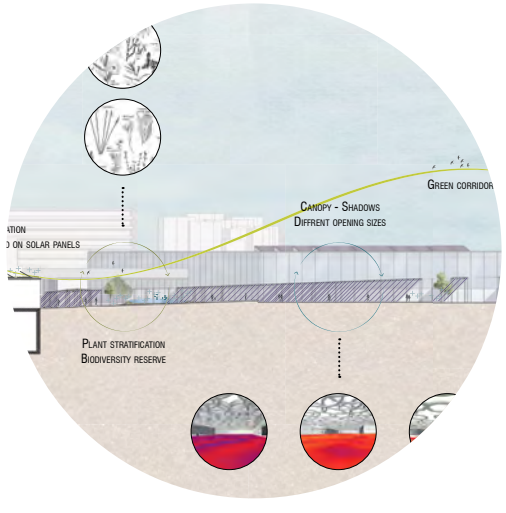


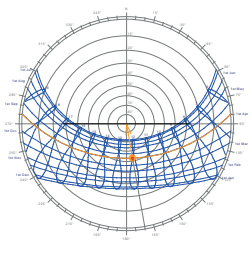
LIVING
ECOSYSTEMS

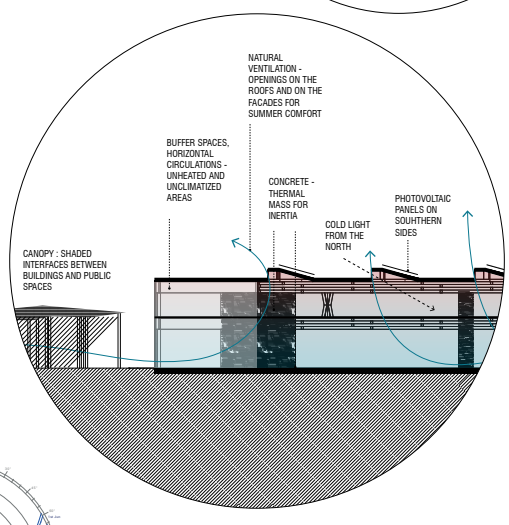
INTERIOR
SPACES



EXTERIOR
SPACES



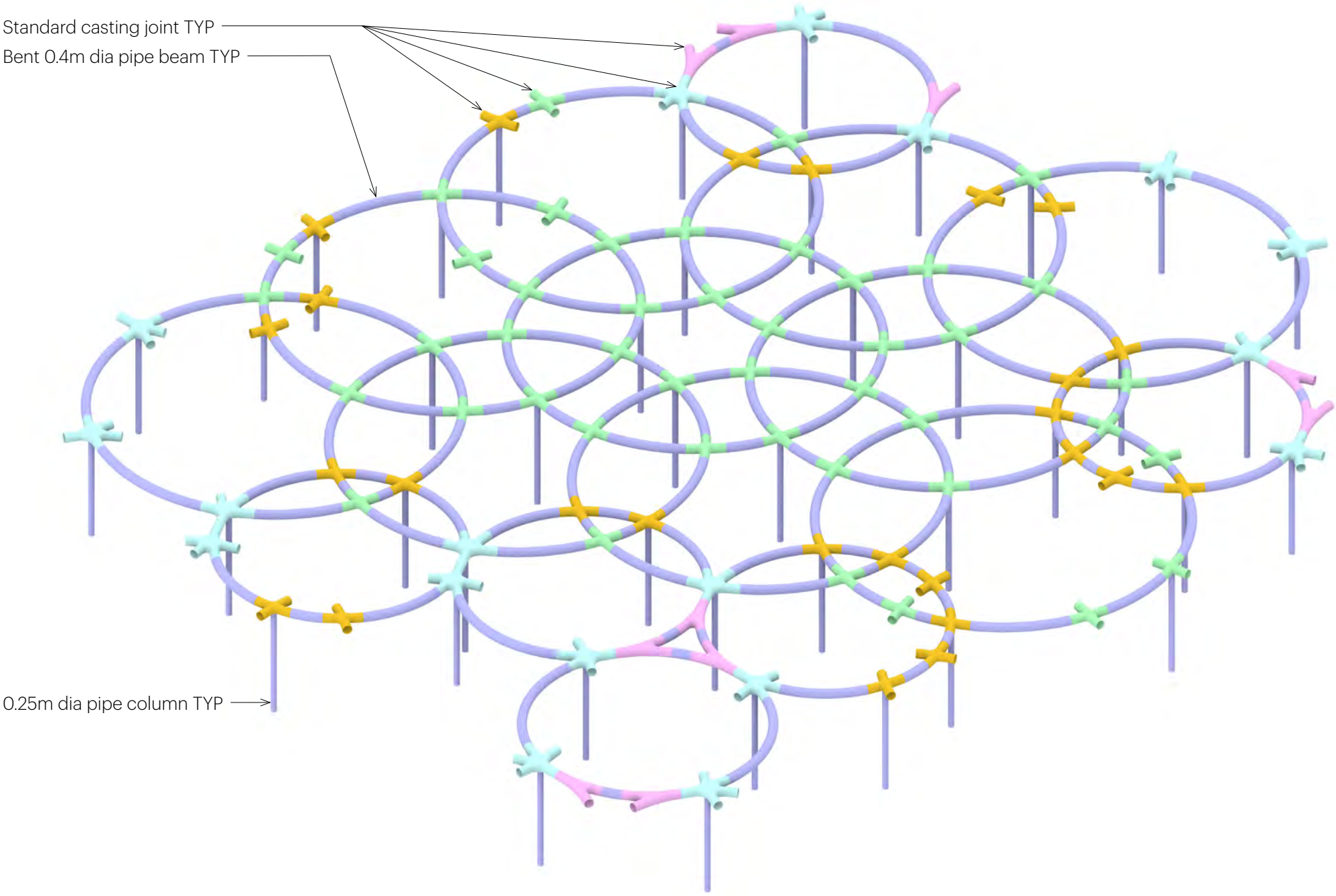




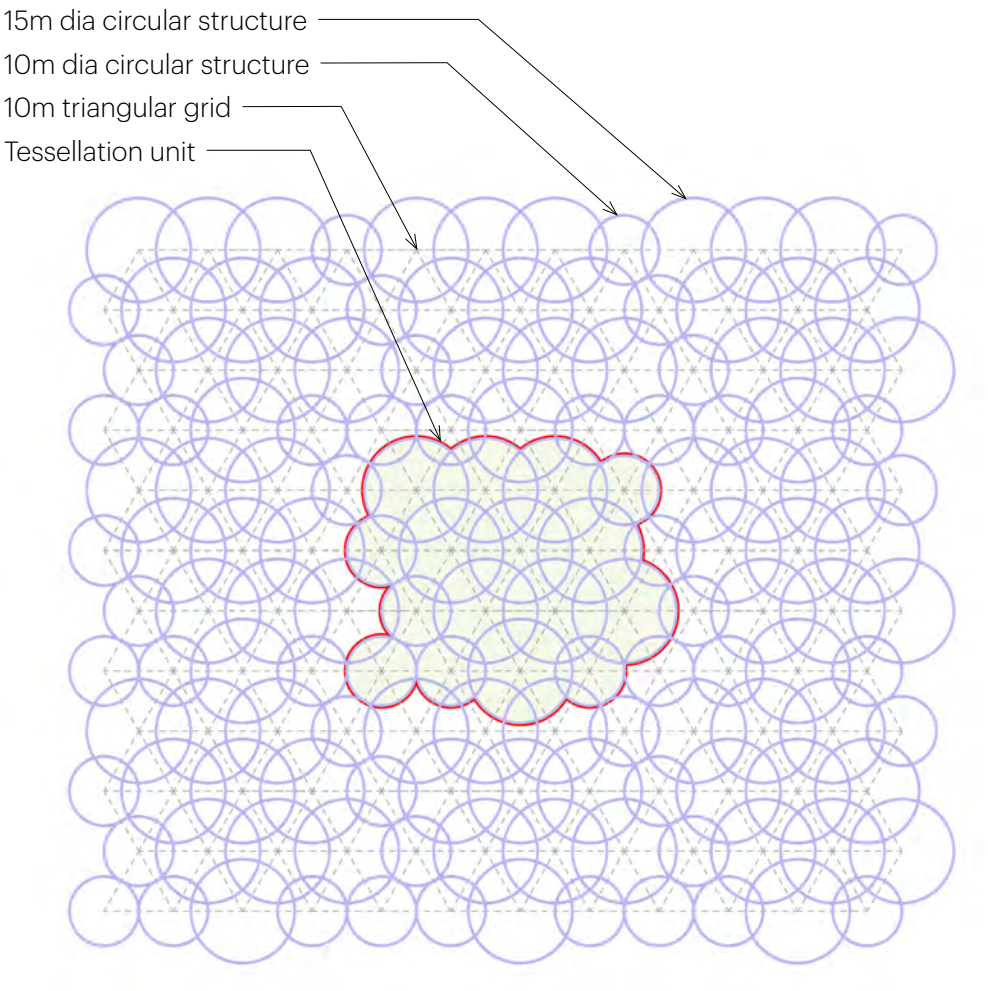
The structural system for the canopy is developed through the tiling of a typical canopy unit. The tiling pattern has a random, homogenized appearance when assembled, but is actually made up of a minimum number of standard elements including columns, curved pipe beams bent at two standard diameters, and castings at beam intersections.

A series of bent 40cm diameter steel pipe beams span between four typical joint intersections which are assumed to be cast steel. The canopy is supported on 0.25m diameter pipe columns spaced approximately 10m apart and the full canopy assembly acts together as a rigid frame to resist lateral loads.

The moment-connected bent beams work effectively together to carry gravity loads as indicated in the bending moment diagram below. Laterally, the beams and columns are moment connected to behave as moment frames, transferring lateral loads imposed on the structure to the foundation.

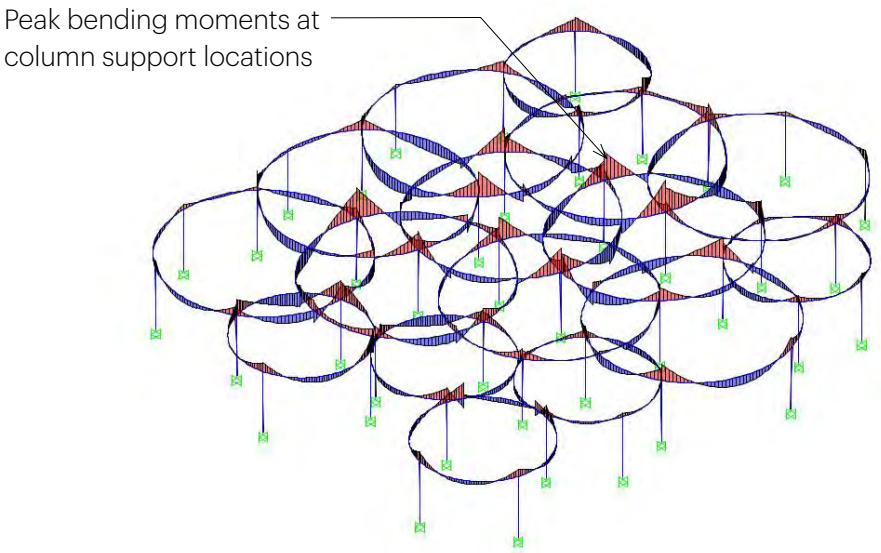


Axonometric view of canopy unit structural assembly



Basic unit within canopy structural system

Joint type A Joint type B Joint type C Joint type D

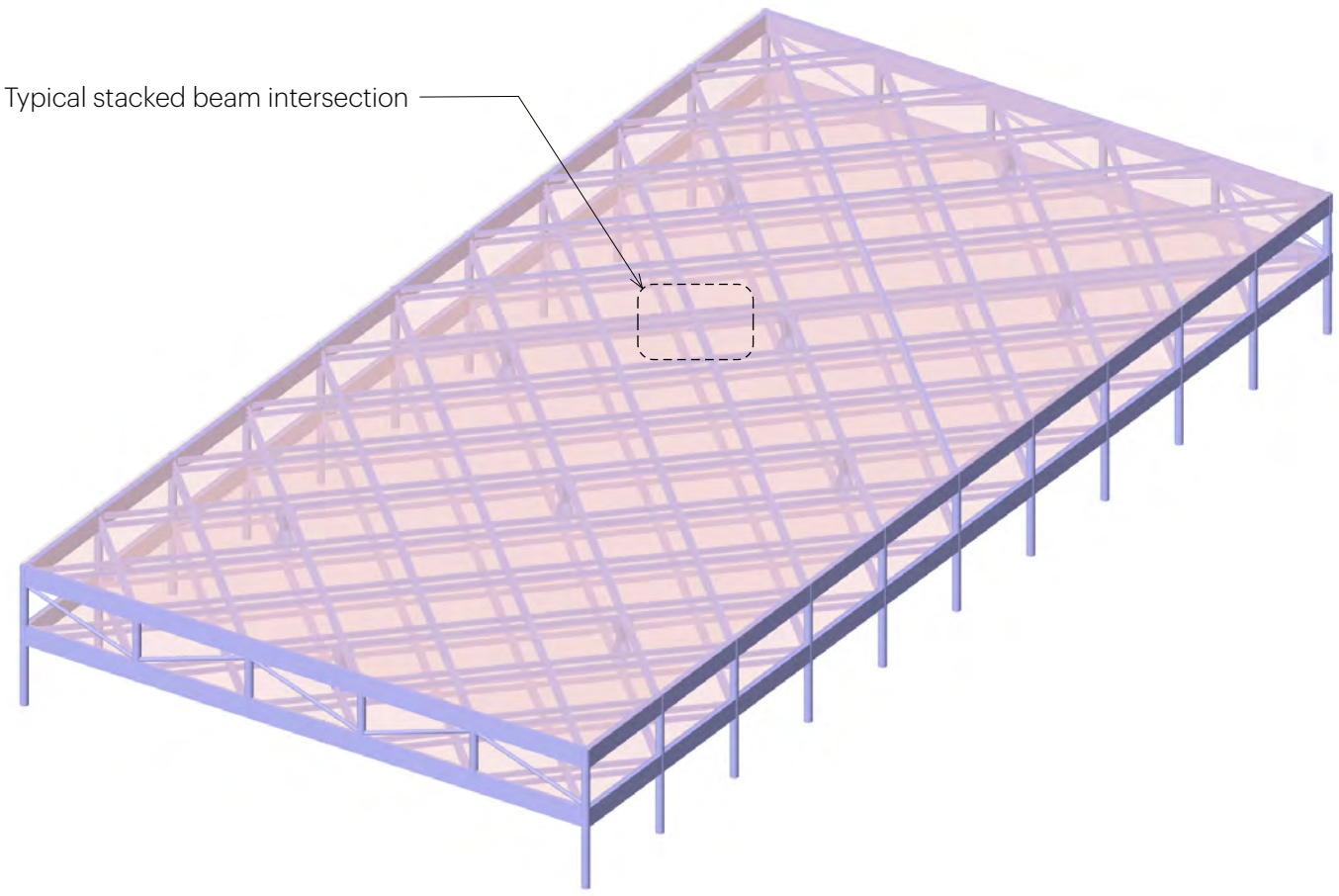


Beam bending moment diagram under gravity loads for a typical unit

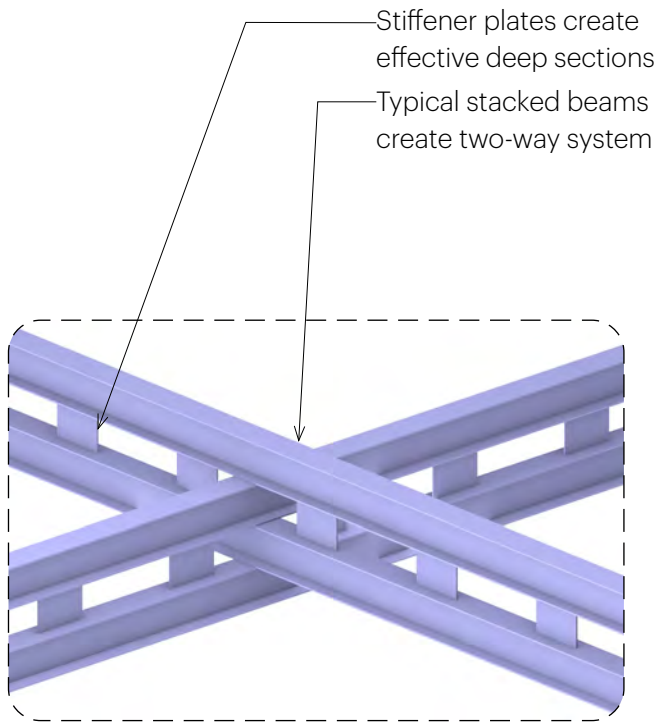
Each of the exhibition buildings features a dramatic, longspan structure to create a flexible, open floor plan that can accommodate different future uses. To minimize the structural depth, a system of stacked, interwoven wide flange beams, tied together with stiffener plates, effectively create a two-way span floor system with limited structural steel.

A limited number of columns span between the ground and the roof or the ground and the second level. For sectors 1.1 and 1.2 where a clear span is desirable at the ground level, a series of fabricated, tapered columns turn the full structure into a Vierendeel truss that allows for a clear span below. The columns are tapered to increase the section size at the top and bottom where the structural need is greatest. Each of the exhibition buildings has a series of concrete cores at the perimeter of the long-span structure to complete the building lateral system.

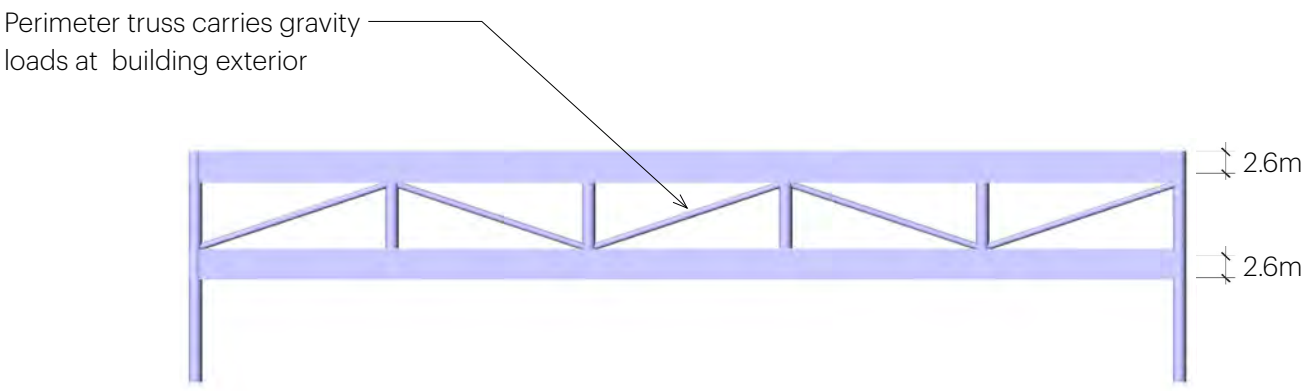
The interlaced stacked beams work as a two-way system to carry the gravity loads. As indicated in the bending moment diagram below, bending moments are symmetrically distributed under gravity loads reflecting the effective two-way behavior. Peak moments happen at interior column support locations.



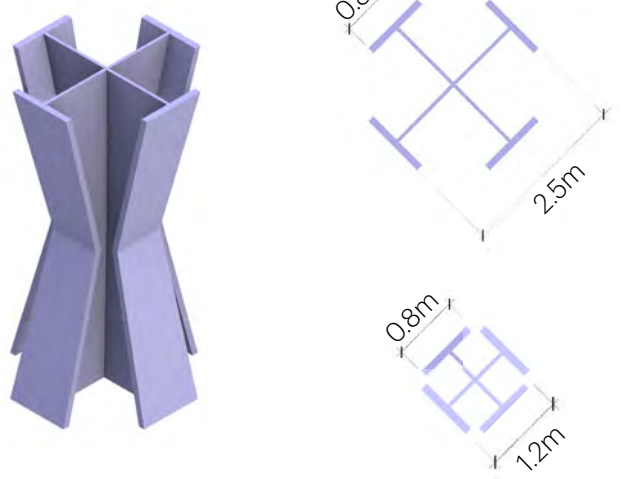
Typical long-span structural system for exhibition buildings



Typical stacked beam assembly for long-span two-way floor system

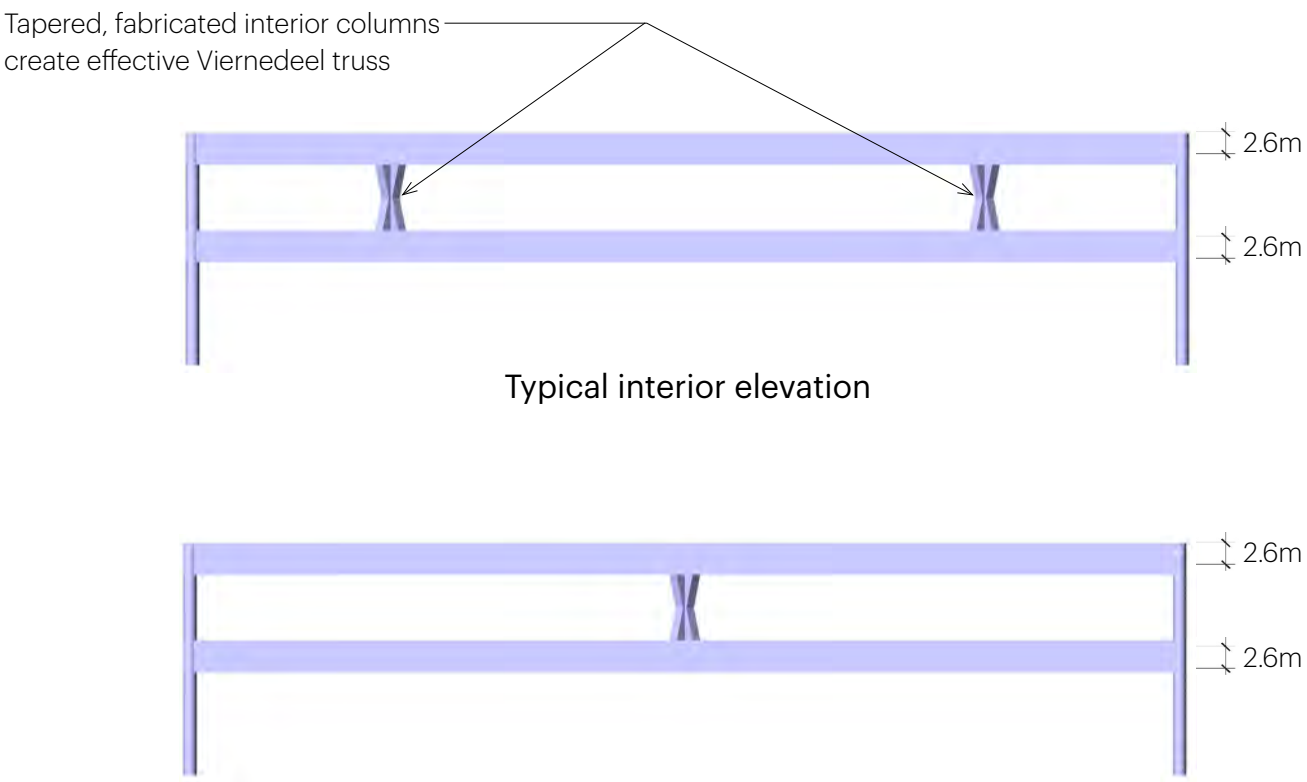


Typical exterior elevation



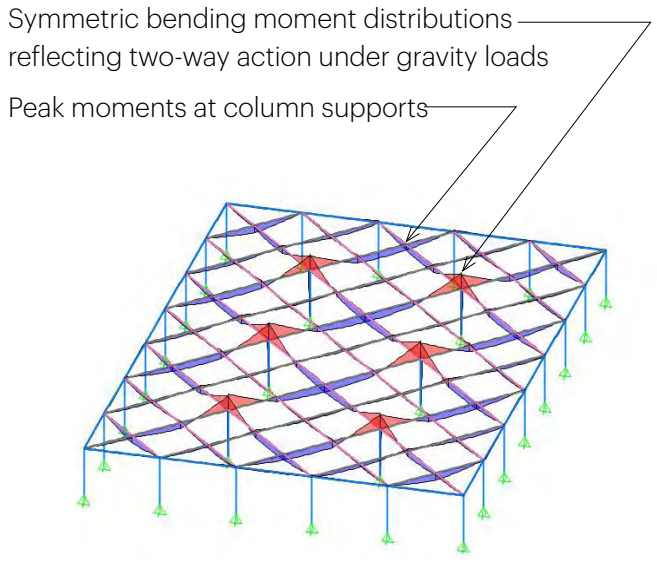
Typical Vierendeel truss column 3D view

Vierendeel truss column plan sections



Typical interior elevation

Typical interior elevation 2

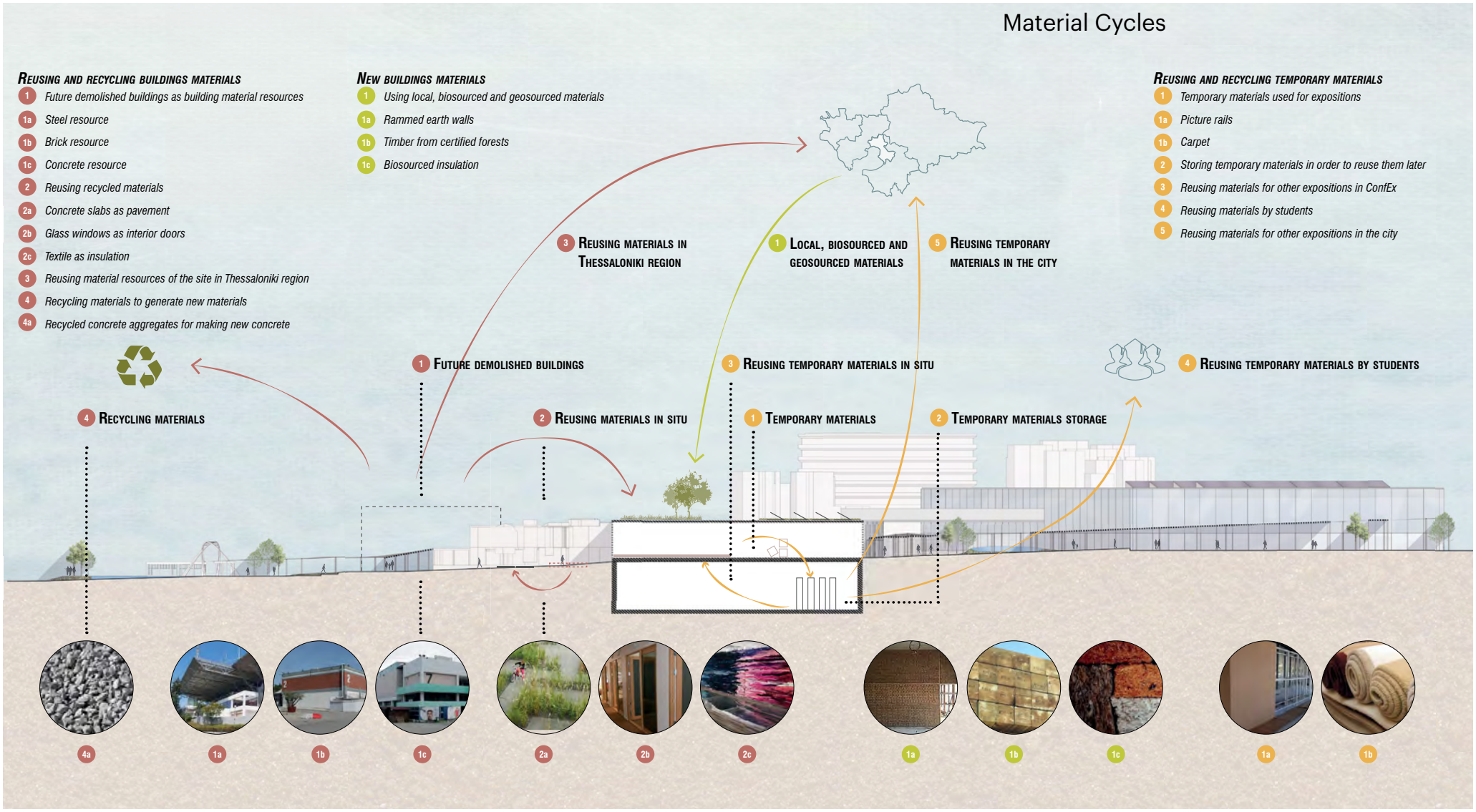


Bending moment diagram under gravity loads for long-span stacked beams

The project was designed with a high sense of economy and sensibility to resourcefulness and sustainability. The intention is to create an architectural node that can make use of timeless materials with a long life span. This creates a highly flexible and human environment. Today more than ever it is crucial to design structures with a long life span in mind and Archipelago achieves that by making use of local and existing resources as much as possible. Additionally the new structures developed on site are created using materials and assemblies that can continue to exist and be useful beyond the buildings long lifespan.

The budget provided in the brief was used as a guide to dictate the economy of materials and spaces.The architecture and the landscape was designed with the budget in mind and the resources were guided to provide a high level of amenities for the general public and at the same time a state-of-the-art exhibition space with high building performance in terms of energy resources and flexibility of use.

Material Cycles



Preliminary Cost Budget

Sector	Program	Space Type	Area Measured (m^2)	price per unit (m^2/€)	Total price	remarks
Sector 1.1	Exhibition Space				**40,296,000.00**	
		Exhibition Space GF	12,420.00	1,200.00	14,904,000.00	
		Exhibition Space 1st	11,840.00	1,200.00	14,208,000.00	
		Café + Reception	400.00	1,400.00	560,000.00	
		VIP Mezzanine	1,140.00	1,600.00	1,824,000.00	
		Back of House	4,000.00	1,000.00	4,000,000.00	
		Underground	6,000.00	800.00	4,800,000.00	
Sector 1.2	Exhibition Space				**19,438,000.00**	
		Exhibition Space GF	5,100.00	1,200.00	6,120,000.00	
		Exhibition Space 1st	4,900.00	1,200.00	5,880,000.00	
		Café + Reception	370.00	1,400.00	518,000.00	
		Back of House	1,800.00	1,000.00	1,800,000.00	
		Underground	6,400.00	800.00	5,120,000.00	
Sector 2	Exhibition Space				**26,260,000.00**	
		Exhibition Space GF	8,000.00	1,200.00	9,600,000.00	
		Café + Reception	900.00	1,400.00	1,260,000.00	
		Back of House	1,800.00	1,000.00	1,800,000.00	
		Underground	17,000.00	800.00	13,600,000.00	
Sector 3	Bussiness Center				**41,355,000.00**	
	Hotel					
		Primary Space	4,860.00	2,500.00	12,150,000.00	
		Back of House	3,310.00	1,500.00	4,965,000.00	
	Multipurpose Hall					
		Primary Space	2,400.00	2,100.00	5,040,000.00	
		Back of House	1,100.00	1,000.00	1,100,000.00	
	Retail					
		Primary Space	6,000.00	1,100.00	6,600,000.00	Cold Shell
		Back of House	3,000.00	1,000.00	3,000,000.00	
	Office					
		Primary Space	5,000.00	1,300.00	6,500,000.00	Warm Shell
		Back of House	2,000.00	1,000.00	2,000,000.00	
Sector 4	Congress Center				**34,150,000.00**	
		Conference Rooms	6,000.00	1,800.00	10,800,000.00	
		Luxury Exhibition Hall	6,500.00	1,500.00	9,750,000.00	
		Underground Space	17,000.00	800.00	13,600,000.00	
Sector 5					**17,615,000.00**	
	Café	Café	400.00	1,400.00	560,000.00	
	Canopy	Canopy	51,000.00	180.00	9,180,000.00	
	Landscape	Hardscape	69,000.00	75.00	5,175,000.00	
		Softscape	60,000.00	45.00	2,700,000.00	
MISC					**2,080,000.00**	
	Elevated Bridges		800.00	2,600.00	2,080,000.00	
				Grand Total :	**181,194,000.00**	

Notes:

(1) The above prices include Main Construction Contractor's general expenses and profit.

(2) The above prices do not include VAT

International Architectural Design Competition for the Thessaloniki ConfEx Park

Data Sheet for the evaluation of the Economy of the Project

No	Description	SECTORS I & II Plot Area (I) = 39.397,11 m² Plot Area (II) = 16.339,68 m²			SECTOR III Plot Area = 20.034,00 m²		SECTOR IV Plot Area = 13.971,22 m²		SECTOR V Plot Area = 58.900,71 m²		TOTAL Plot Area = 161.769,04 m²	
		Proposed by Competitor (SECTOR I)	Proposed by Competitor (SECTOR II)	Programme Requirements (SECTOR I & II)	Proposed by Competitor	Programme Requirements	Proposed by Competitor	Programme Requirements	Proposed by Competitor	Programme Requirements	Proposed by Competitor	Programme Requirements
A. General Metrics												
A1	Above Ground GFA (m²)	40,162	8,289	max 48.500	25,688	max 26.750	15,697	max 16.500	247	max 250		max 92.000 excl. preserved bldgs
A2	Below Ground Parking use GFA (m²)	13,828	0	-	24,500	-	16,400	-	0	-		-
A3	Below Ground other Aux uses GFA (m²)	7,020	4,880	-	3,635	-	2,260	-	0	-		-
A4	Net Floor Area NFA (m²)	39,879	8,210	-	25,117	-	15,584	-	240	-		-
A5	Building Coverage ratio (%) & Area (m²)	58.3% 22,992	55.6% 9,089	-	59% 12,000	max 60% - 12.020,40	83% 11,629	-	0.4% 247	-		max 45% - 64.000 excl. AAMTH – pres.bld
A6	Gross Volume above Ground (m³)	281,164	72,080	-	110,176	-	111,772	-	864	-		-
A7	Foundations Footprint (m²)	22,290	9,089	-	17,686	-	10,740	-	247	-	-	-
A8	Façade (m²)	15,856	4,130	-	11,365	-	7,014	-	225	-	-	-
A9	Exterior Openings (m²)	646	319	-	560	-	209	-	11	-	-	-
A10	Accessible Roof surface (m²)	2,530	880	-	1,731	-	0	-	0	-	-	-
A11	Inaccessible Roof surface (m²)	17,489	7,113	-	10,273	-	11,082	-	247	-	-	-
A12	Green Roof surface (m²)	700	300	-	2,100	-	1,300	-	0	-	-	-
A13	Balconies / Open Covered Areas (m²)	0	0	-	858	Hotel: max 40% of GFA	0	-	0	-	-	-
B. Programme Area												
B1	Exhibition Center Area (m²)	37,415	8,336	47.000	-	-	-	-	-	-	-	-
B2	Administration Offices Area (m²)	1,590	0	1.500	-	-	-	-	-	-	-	-
B3	Hotel (m²)	-	-	-	6,900	7.250	-	-	-	-	-	-
B4	Commercial Complex / Retail–Recreation (m²)	-	-	-	8,922	9.000	-	-	-	-	-	-
B5	Commercial Complex / Offices (m²)	-	-	-	6,860	7.000	-	-	-	-	-	-
B6	Multi-purpose Hall (m²)	-	-	-	3,527	3.500	-	-	-	-	-	-
B7	Conference Center Area (m²)	-	-	-	-	-	10,504	10.500	-	-	-	-
B8	Luxury Exhibition Hall Area (m²)	-	-	-	-	-	5,902	6.000	-	-	-	-
B9	Cafeteria (m²)	-	-	-	-	-	-	-	247	250	-	-
B10	Underground Parking Area (m²)	12,700	0	12.500	24,120	25.000	16,400	15.000	-	-	-	-
B11	Underground Storage Area (m²)	6,930	4,870	12.000	3,304	3.500	1,920	2.000	-	-	-	-
C. Open Areas												
C1	Provide Area of Roadways (m²)	-	-	-	-	-	-	-	11,850	-	-	-
C2	Provide Area of Pedestrian Pathways (m²)	-	-	-	-	-	-	-	73,990	-	-	-
C3	Provide Area of other Hardscape (m²)	-	-	-	-	-	-	-	1,570	-	-	-
C4	Provide Area of green Landscape without underground buildings (m²)	-	-	-	-	-	-	-	27,475	-	-	-
C5	Provide Area of green Landscape over underground buildings (m²)	-	-	-	-	-	-	-	3,150	-	-	-
C6	Provide Area of other Landscape (m²)	-	-	-	-	-	-	-	5,340	-	-	-
C7	Provide Area of Water Features (m²)	-	-	-	-	-	-	-	2,147	-	-	-
C8	Provide Area of other structures (m²)	-	-	-	-	-	-	-	49,950	-	-	-

MASTERPLAN OVERVIEW

ARCHIPELAGO

A CLUSTER OF LIVING ROOMS FOR THE CITY

Archipelago is a connector of the two major regions of Thessaloniki - South and North. Located in the center of the city, this new urban amenity transforms the site into a crucial node for connecting the elements around: universities, cultural spaces, historical buildings, the mountains and the sea.

Thessaloniki is characterized by a vibrant urban network of diverse spaces for interaction and leisure. Archipelago proposes to continue this rich quality within TIF Site. A network of islands are connected together with a single continuous canopy. This element of the park binds the whole site together into a continuous public space blurring elements of retail, commercial, leisure, culture and fitness into a single innovative urban typology.

The design is formed with a diverse range of spaces and qualities both interior and exterior. A collection of "living rooms" for the city each with different use and functions. The spaces are designed to operate continuously all year around - quickly adapting to the change in weather and the change in usage. The existing urban routes and axes flow through site perpetuating a new type continuity.

At the core of Archipelago is a carefully calibrated network that creates a flow of energy and resources allowing the building systems to operate in high standards of sustainability. A combination of passive and active systems allow the landscape and architecture to co-exist and positively respond at three scales: global, local and human.

ARCHIPELAGO IN THE CITY

SUSTAINABILITY STRATEGY

TERRITORIAL ECOLOGICAL CONNECTIONS

AERIAL VIEW FROM YMCA SQUARE

URBAN STITCHING

Metro Stations
View Axes
Great Impact Area

CIRCULATION LINKS

Metro Stations
Pedistrian Walkways
Great Impact Area

ARISTOTLE UNIVERSITY OF THESSALONIKI

Egnatia St.

Sector I.1
Column free exhibition space

Double ceiling height exhibition space

Loading Exit from site

Underground parking

Emergency vehicle free clearance 8m

Loading

Multipurpose hall Drop off

Hotel Taxi drop off

Big multipurpose hall

Small multipurpose hall

Lobby

Hotel lobby

Restaurant

Cafe

Retail

Entrance

Sector III

Outdoor exhibition 1000sqm

Metro

Restaurant

Running and bicycle track

Aggelaki Av.

SINTRIVANIOU SQUARE

0 10 100 m

OVERALL GROUND FLOOR PLAN
SCALE: 1:500

UNIVERSITY OF MACEDONIA

ARISTOTLE UNIVERSITY OF THESSALONIKI

G. Lampraki St.

3rd Septemvriou St.

L. Stratou St.

Loading site entrance

Underground parking

Emergency vehicle route

Emergency vehicle free clearance 8m

Truck entrance to 8m opening

Truck entrance

Outdoor exhibition 2000sqm

AAMTH

Sector I.2
Column free exhibition space

Entrance

Sector II
Column free exhibition space

Sector IV
Column free exhibition space

Park

Ruins

Loading

Agricultural Bank Pavilion

Café OTE Tower

Sport fields

MMCA

Amphitheatre

Running and bicycle track

YMCA Arch

Water feature

YMCA

ARCHEOLOGICAL MUSEUM

MUSEUM OF BYZANTINE CULTURE

THESSALONIKI CITY HALL

PUBLIC AND PRIVATE BLEND

Hotel / Private Offices

Multi-Purpose Hall

Commercial Complex Retail & Offices

Cafe

Art & Culture Zone

Exhibition Center

Sculpture Zone

Canopy – Connecting The Existing Fabric

Event Plaza

Luxury Exhibition Hall

Sports Zone

AMENITIES FOR THE CITY

Urban Village

Smart Performance Space

Cafe

Culture Meadows

Outdoor Exhibition Space

Museum of Contemporary Art

Water Plaza + Event Plaza

Small Event Pavilion

Cafe Tower

Sports Area

Bicycle Route

OVERALL GROUND FLOOR PLAN
SCALE: 1:500

0 10 100 m

ARCHIPELAGO OVERLOOK

PUBLIC PARK

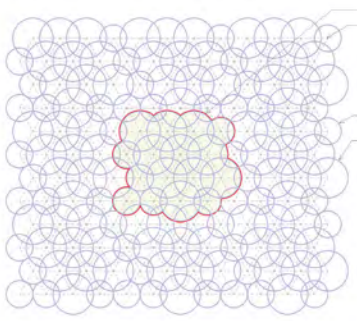
SECTOR 5

Thessaloniki Confex park will stitch the fabric of this rooted trading metropolis back together, reconnecting lost pedestrian routes between city and sea and providing a dynamic series of spaces to enrich the community it sits within. The park's sinuous forms draw people from existing routes and encourage exploration around a new archipelago of landscape rooms, each with its own character and focus.

The largest of these rooms is centred around the YMCA archway and will be home to a multi-functional mirror water feature that transforms into an events plaza or ice-rink, depending on the season. Adjacent terraced lawns offer families a place to unwind and relax whilst offering elevated views of the activities beyond. Thessaloniki is a dynamic city, and with its many universities, a well-known centre for learning and development, the arts and cultural island will enhance this by providing opportunities for local creatives to display or perform their craft. Intimate stages nestled within the landscape will host painters and musicians, whilst informative and interactive displays will provide an understanding of the park's ecological and environmental credentials. Situated in the South-Eastern corner of the park, a sports island will host a multi-purpose court and skate park, encouraging exercise and giving the local youth a space to come together.

While engaging the outdoor exhibition areas, the fluid open space provides large flexible stages for ever-evolving public events, offerings and activities best suited for a dynamic community. In addition, the landscape upgrades the surrounding streetscape with a tree-lined promenade and a bicycle lane allowing a dedicated corridor for walkers, joggers and cyclists along the site boundaries.

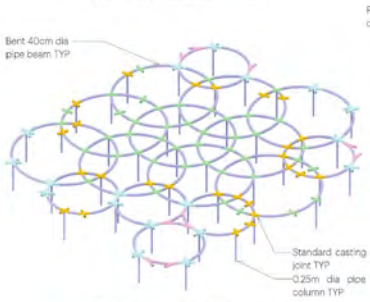
CANOPY STRUCTURAL SYSTEM



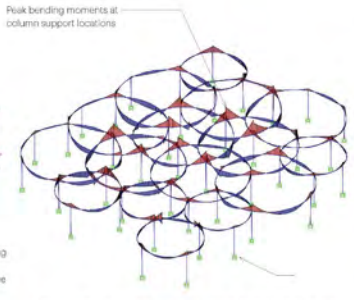
Basic unit within canopy structural system

The structural system for the canopy is developed through the tiling of a typical canopy unit. The tiling pattern has a random, homogenized appearance when assembled, but is actually made up of a minimum number of standard elements including columns, curved pipe beams bent at two standard diameters, and castings at beam intersections.

A series of bent 40cm diameter steel pipe beams span between four typical joint intersections which are assumed to be cast steel. The canopy is supported on 0.25m diameter pipe columns spaced approximately 10m apart and the full canopy assembly acts together as a rigid frame to resist lateral loads.



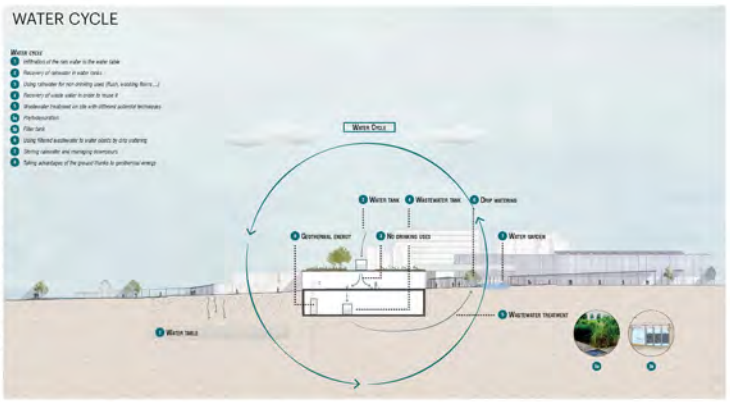
3D view of canopy unit structural assembly



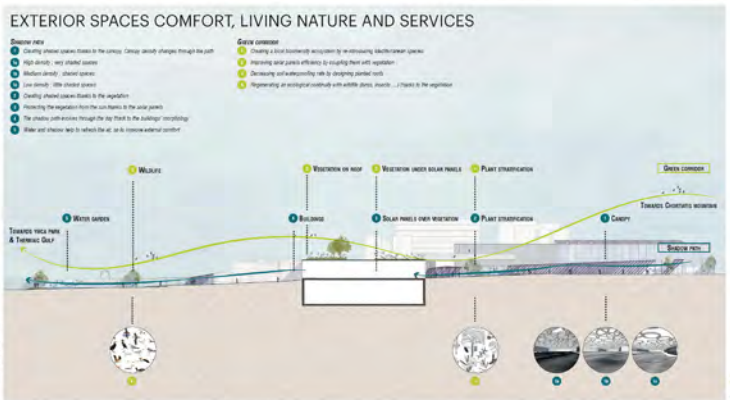
Beam bending moment diagram under gravity loads for a typical unit

The moment-connected bent beams work effectively together to carry gravity loads. Laterally, the beams and columns are moment connected to behave as moment frames, transferring lateral loads imposed on the structure to the foundation.

WATER CYCLE



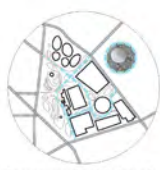
EXTERIOR SPACES COMFORT, LIVING NATURE AND SERVICES



Landscape Rooms Zoning Diagram

Site Mobility
Sinuous park forms draw people from existing routes to expore the landscape rooms within.

Views and Green Connections
The new Confex park links existing green spaces and maximises existing landmark buildings



Emergency access through the site is unobtrusively demarcated using stainless steel studs over shared surface paving.

Water usage on the site will be minimised through the specification of drought tolerant species and rainfall capture systems.

Bicycle parking is located throughout the site to encourage against the use of cars

Precast concrete pavers in off-whites and greys will be constructed from demolition rubble, reducing the builds landfill requirement.

Flowering perennials will celebrate the seasonality of the park whilst also providing valuable food for bees and other pollinators.

Local trees that are perfectly adapted to the site are to be retained and transplanted wherever possible.

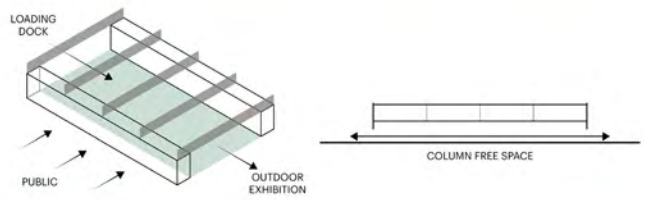
Tree Palette | Alnus jullorinsis, Catalpa bignonioides, Cerco siliquastrum, Olea europa, Pinus pinaster, Prunus dulcis, Prunus cerifera, Washingtonia robusta, Quercus ilex **Planting Palette |** Allium sphaerocephalon, Callamagrostis x acutiflora, Carex oshimensis evergold, Euphorbia characias, Festuca glauca, Gaura lindheimeri, Lavandula intermedia grosso, Myrtus communis compacta, Nepeta Walkers Low, Pennisetum alopecuroides, Pittosporum tobira nana, Rosmarinus officinalis prostratus, Sanguisorba officinalis tanna, Salvia nemorosa, Spiroboluis heterolepis, Stipa tenuissima, Teucrium x lucidrys, Thymus serpyllum

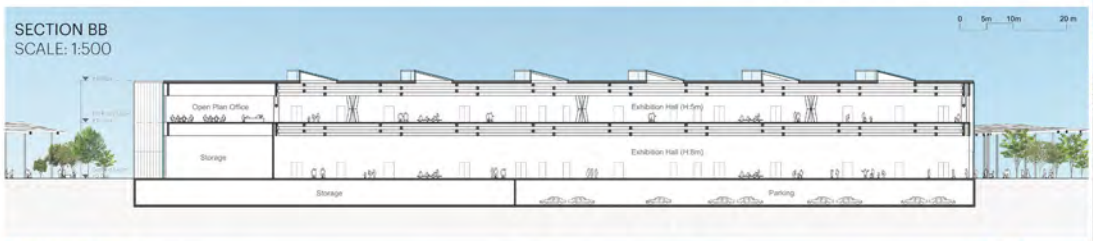
APPROACHING THE EXHIBITION PLAZA

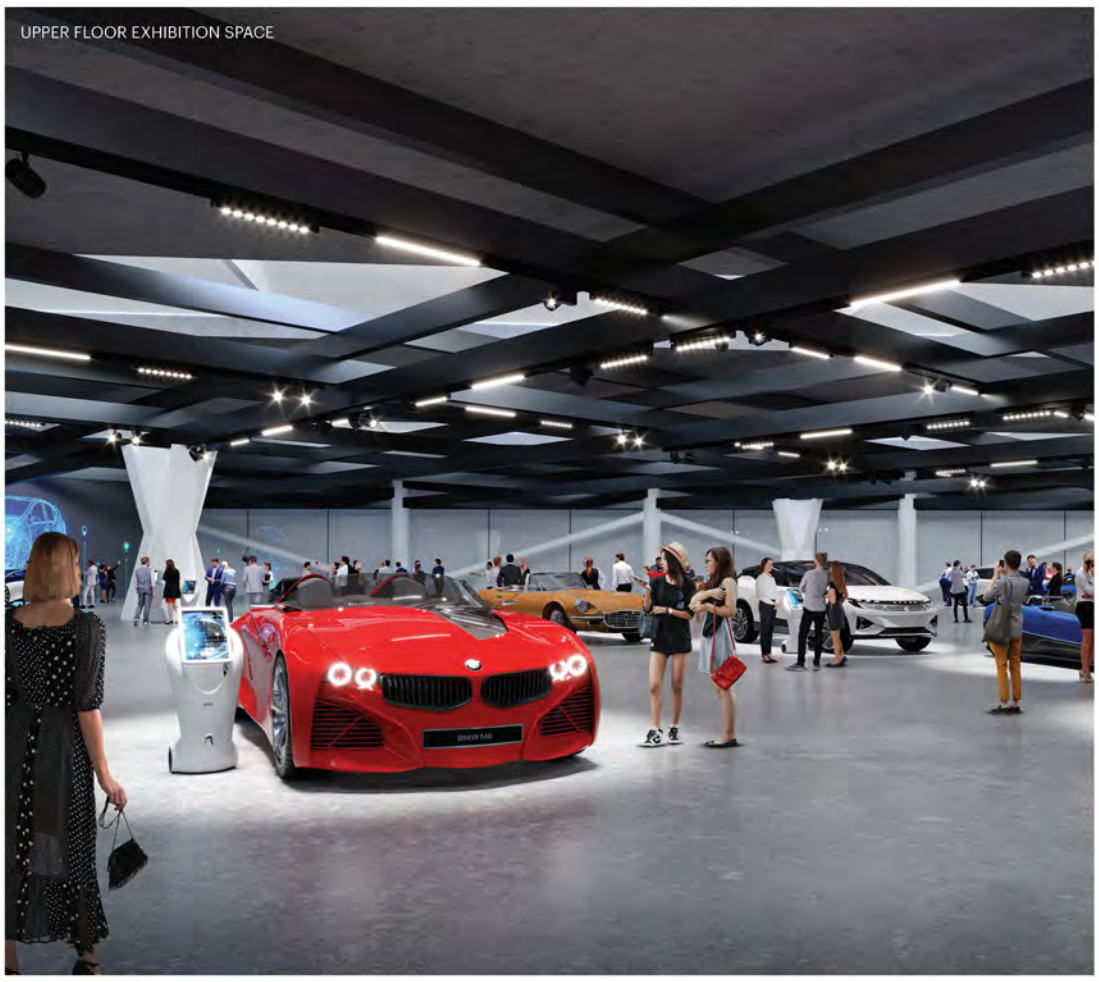
EXHIBITION CENTER

SECTOR 1 AND 2

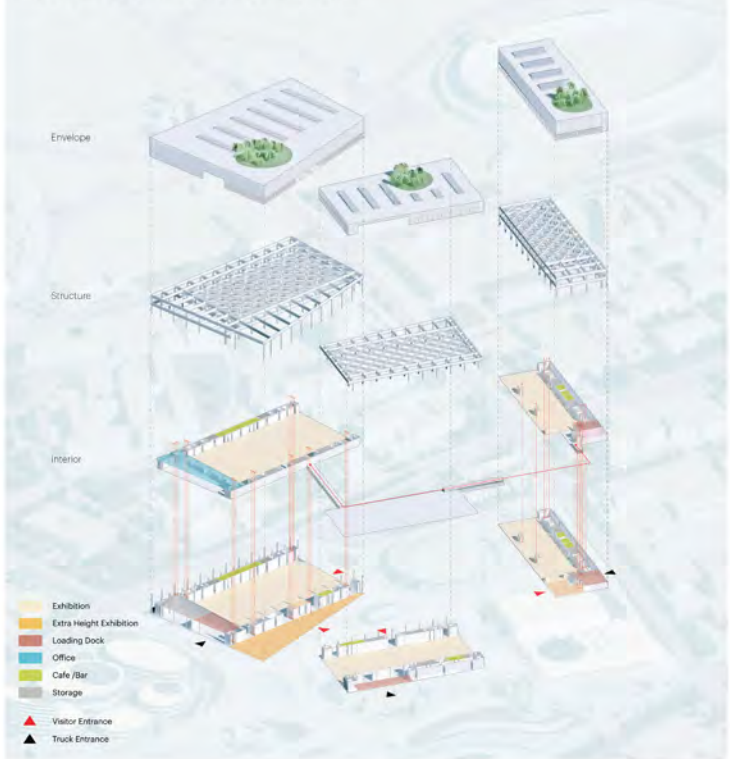
The Exhibition Center is designed as the most functional and flexible work of architecture. It will provide a timeless state-of-the art showroom. Expressed through a minimal envelope the buildings use a sophisticated and innovative structural system to achieve large spans without any columns. This effort is used to establish a generous uninterrupted space for exhibitions sandwiched by two volumes of leisure, support and circulation spaces. The exhibitions are always connected to the outside using massive sliding doors that allow the interior exhibition to be seamlessly integrated with the outdoor programs. This system opens up more possibilities for exhibitions and event types by extending. This achieves a all-year round exhibition calendar making use of the always beautiful weather in the region.







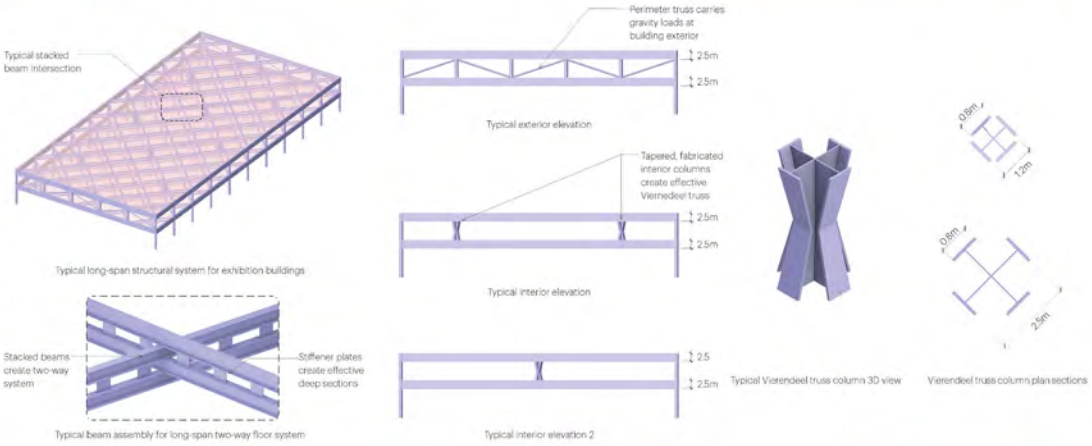
PROGRAM AND CIRCULATION COMPONENTS



EXHIBITION HALL STRUCTURAL SYSTEM

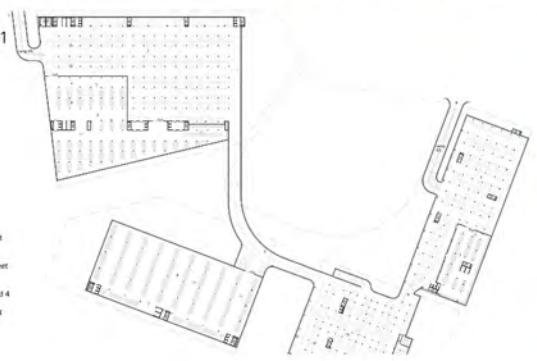
Each of the exhibition buildings features a dramatic, long-span structure to create a flexible, open floor plan that can accommodate different future uses. To minimize the structural depth, a system of stacked, interwoven wide flange beams, tied together with stiffener plates, effectively create a two-way span floor system with limited structural steel.

A limited number of columns span between the ground and the roof or the ground and the second level. For sectors 1.1 and 1.2 where a clear span is desirable at the ground level, a series of fabricated, tapered columns turn the full structure into a Vierendeel truss that allows for a clear span below. The columns are tapered to increase the section size at the top and bottom where the structural need is greatest. Each of the exhibition buildings has a series of concrete cores at the perimeter of the long-span structure to complete the building lateral system.

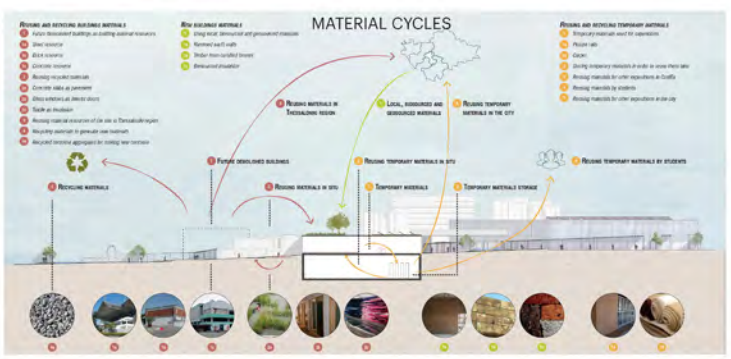


EXHIBITION CENTER BASEMENT -1

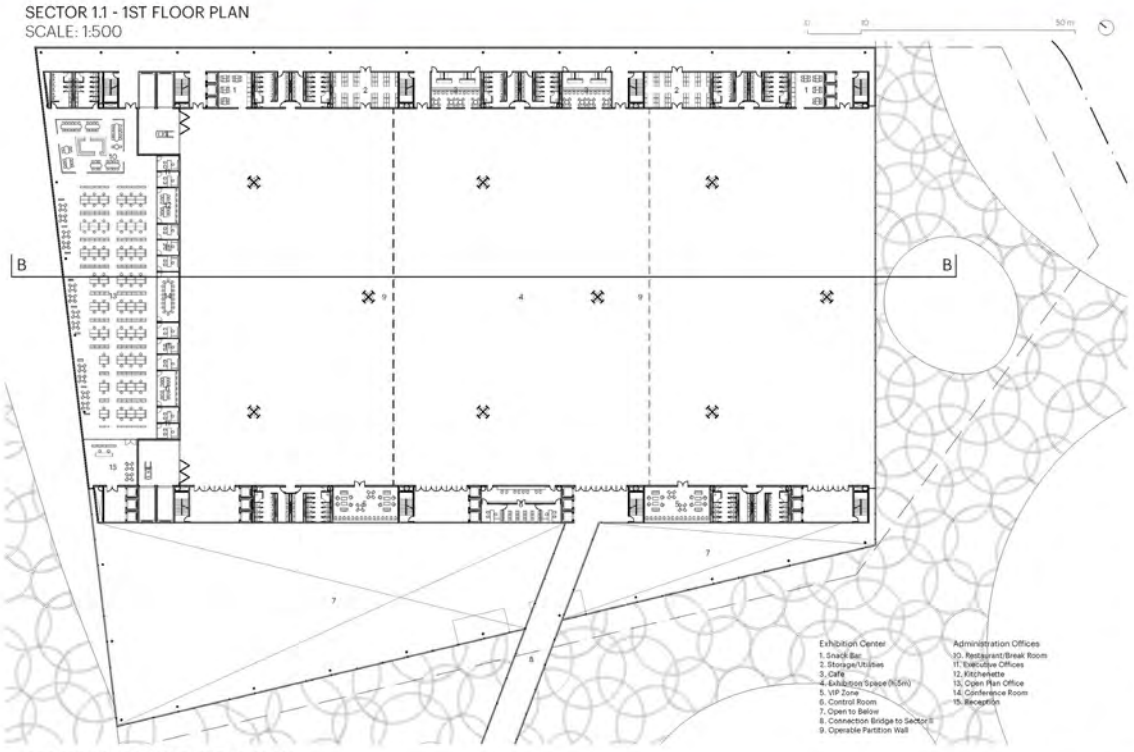
SCALE: 1:2000



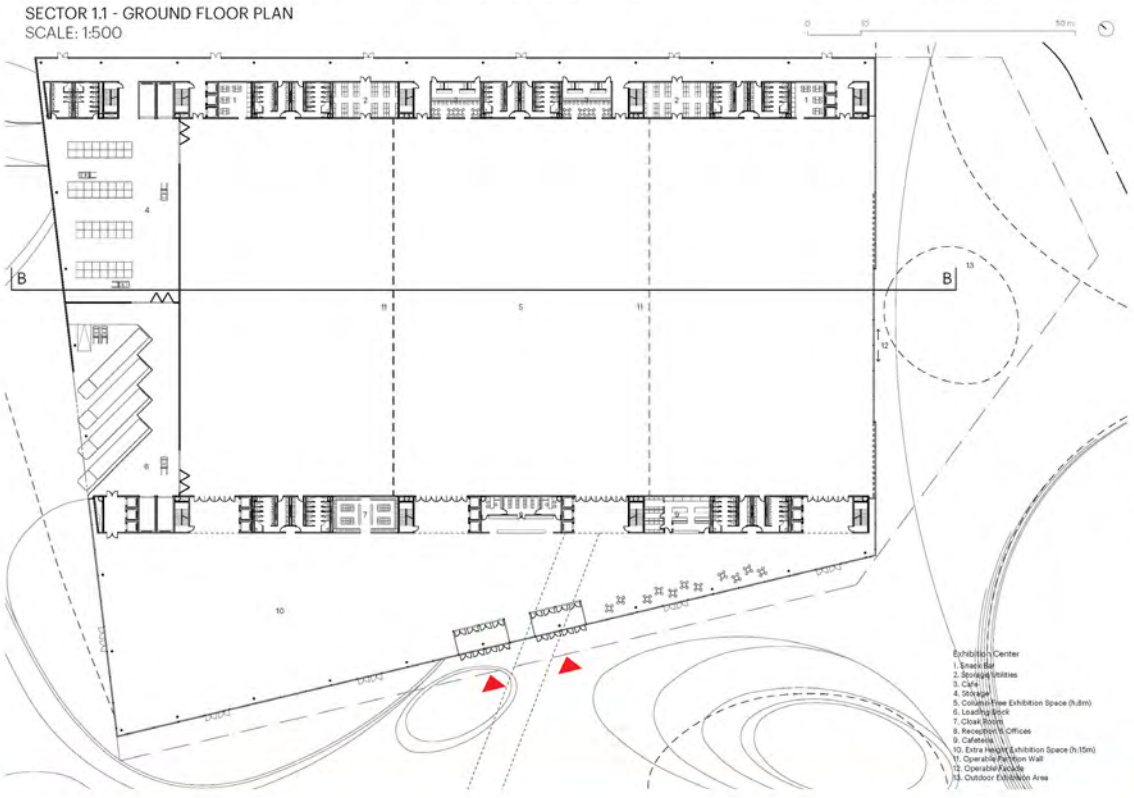
Exhibition Center
1. Sector 1.1 - Access ramp from Egnatia Street
2. Sector 1.1 - Storage space
3. Sector 1.1 parking - 342 pl.
4. Sector 1.2 - Access ramp from Lampraki Street
5. Sector 1.2 - Storage space
6. Sector 1.2 parking - 172 pl.
7. Connection tunnel between Sector 1.1, 2 and 4
8. Sector 2 - Storage space
9. Connection tunnel between Sector 1.2 and 4
10. Sector 4 - parking



SECTOR 1.1 - 1ST FLOOR PLAN
SCALE: 1:500

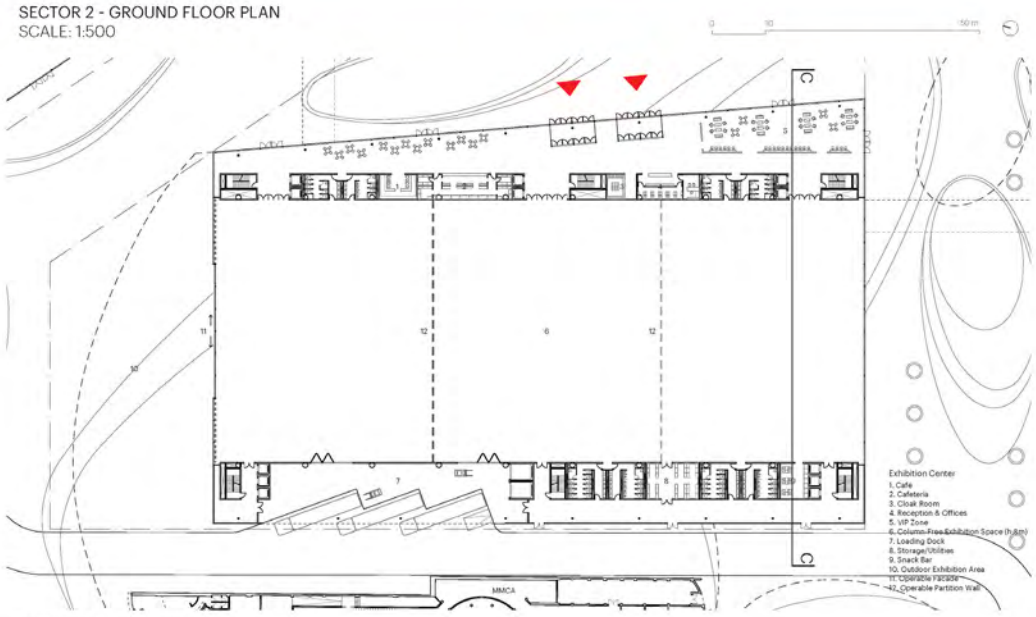


SECTOR 1.1 - GROUND FLOOR PLAN
SCALE: 1:500

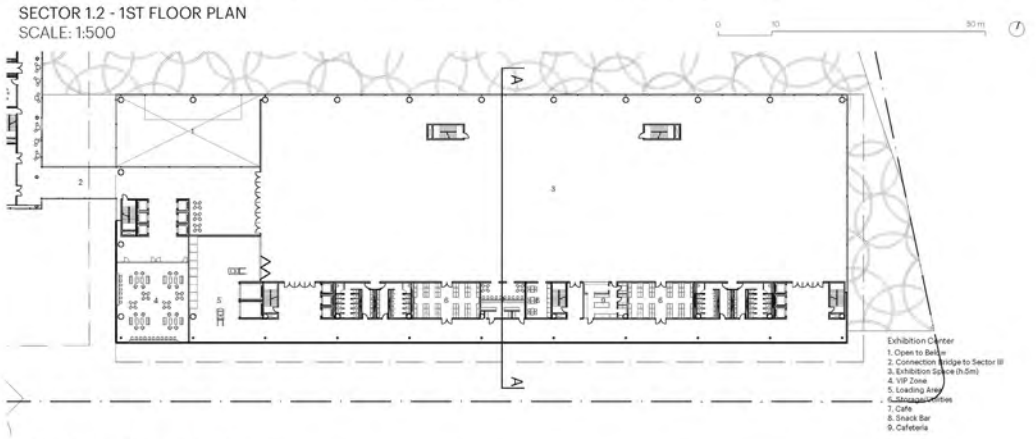


SECTOR 1.1 - SOUTH ELEVATION
SCALE: 1:500

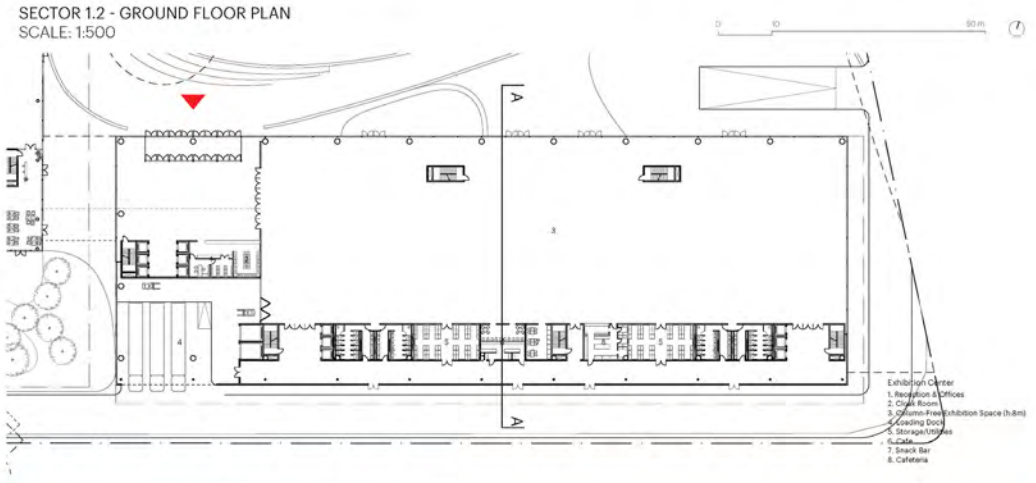
SECTOR 2 - GROUND FLOOR PLAN
SCALE: 1:500



SECTOR 1.2 - 1ST FLOOR PLAN
SCALE: 1:500



SECTOR 1.2 - GROUND FLOOR PLAN
SCALE: 1:500



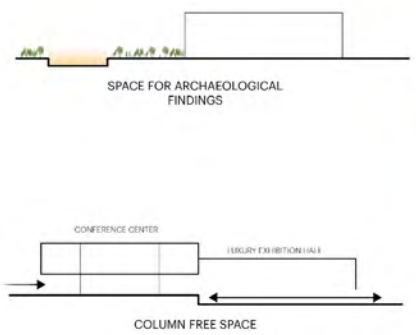
SECTOR 1.1 - EAST ELEVATION
SCALE: 1:500

CONGRESS CENTER

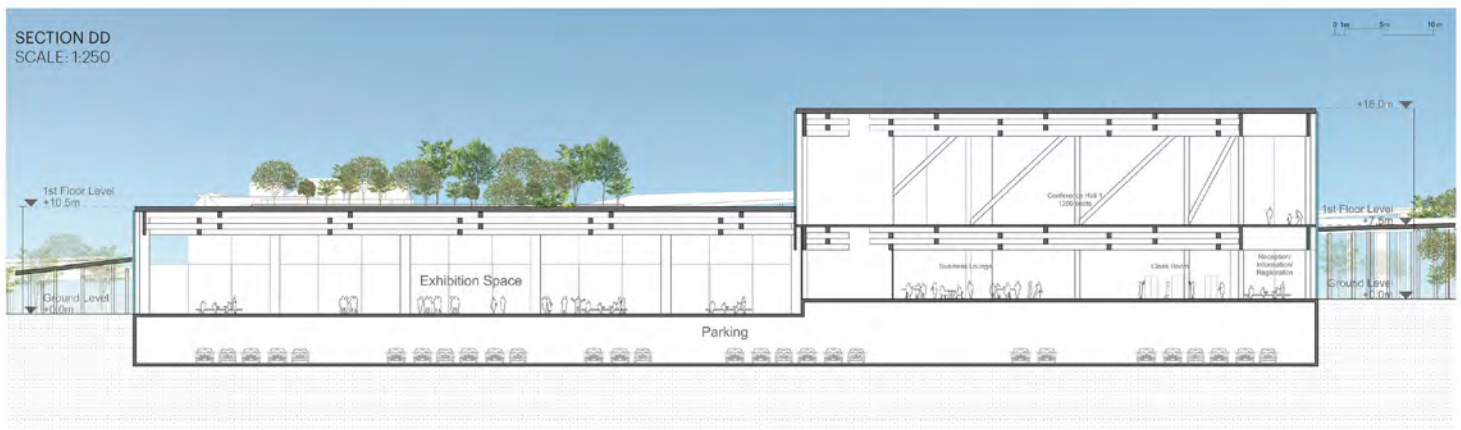
SECTOR 4

The Congress Center is connected to the Exhibition Center network - but can function separately. The building is designed similar to the Exhibition Center - with a simple facade of clear glass on ground level and opaque glass on the second floor. The very light and open structural system allows for maximum flexibility of the spaces inside. The building is divided into two major components for the Conference function and the Luxury Hall function. The two sides can simultaneously operate independent events and gatherings. The Luxury Hall provides a roof garden which can be used to experience panoramic views of the surroundings.

A fragment of the site is allocated to the potential archaeological findings and allows these to become part of the unique nature of the site and this architecture.



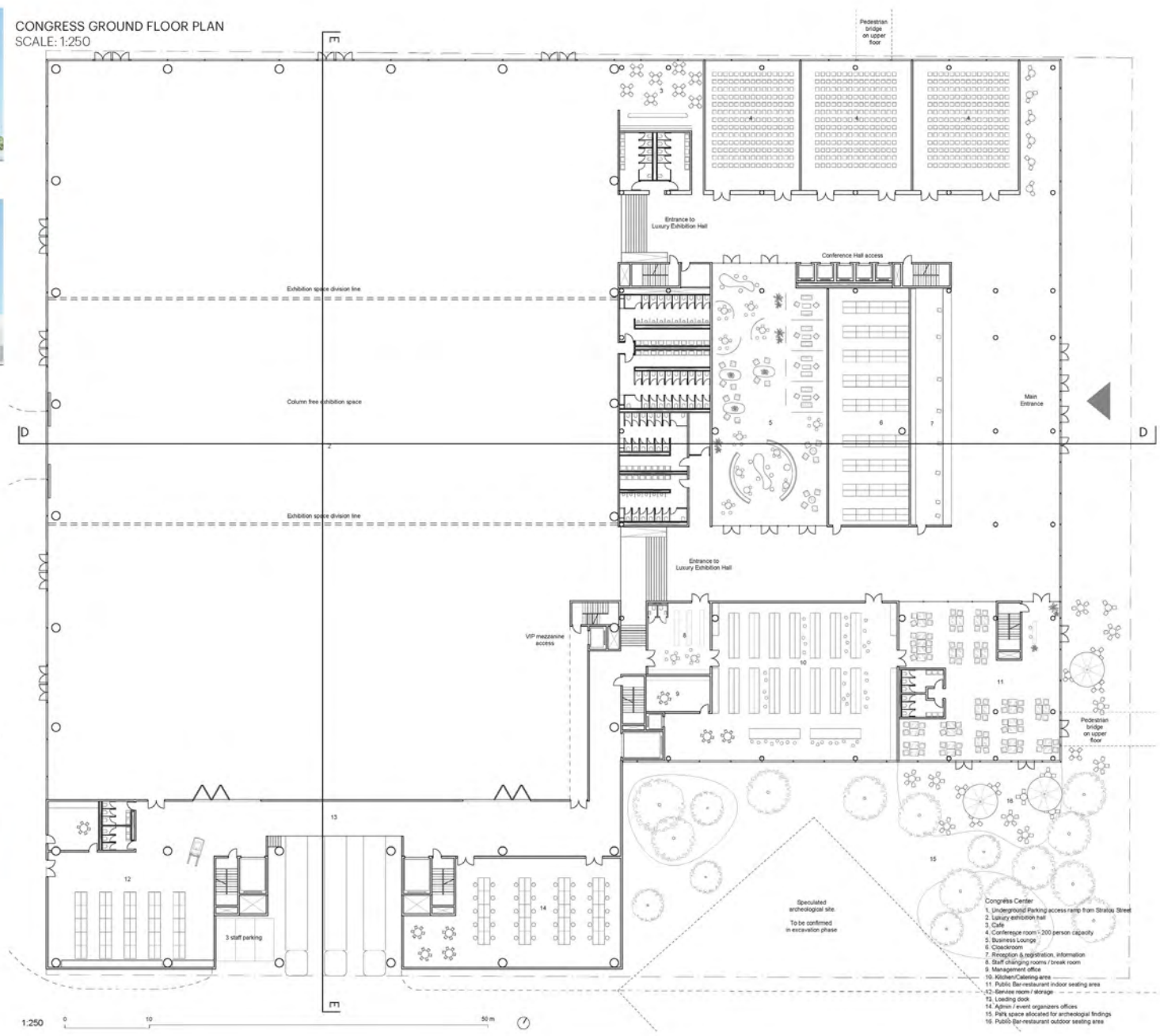
SECTION DD
SCALE: 1:250



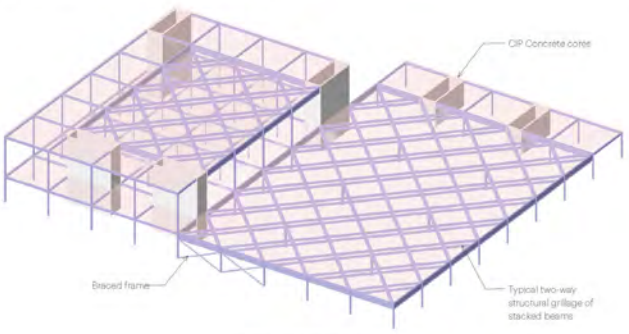
CONGRESS CENTER WEST ELEVATION
SCALE: 1:750

CONGRESS CENTER NORTH ELEVATION
SCALE: 1:750

CONGRESS GROUND FLOOR PLAN
SCALE: 1:250



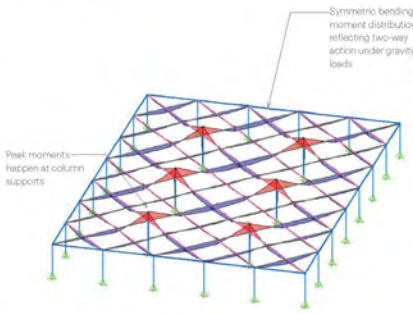
CONGRESS CENTER STRUCTURAL SYSTEM



Congress Center structural system

The structure for the congress center utilizes a two-way beam grillage strategy, similar to the system deployed in the exhibition spaces, where long-spans are required for programmatic purposes at the ground and second floor levels.

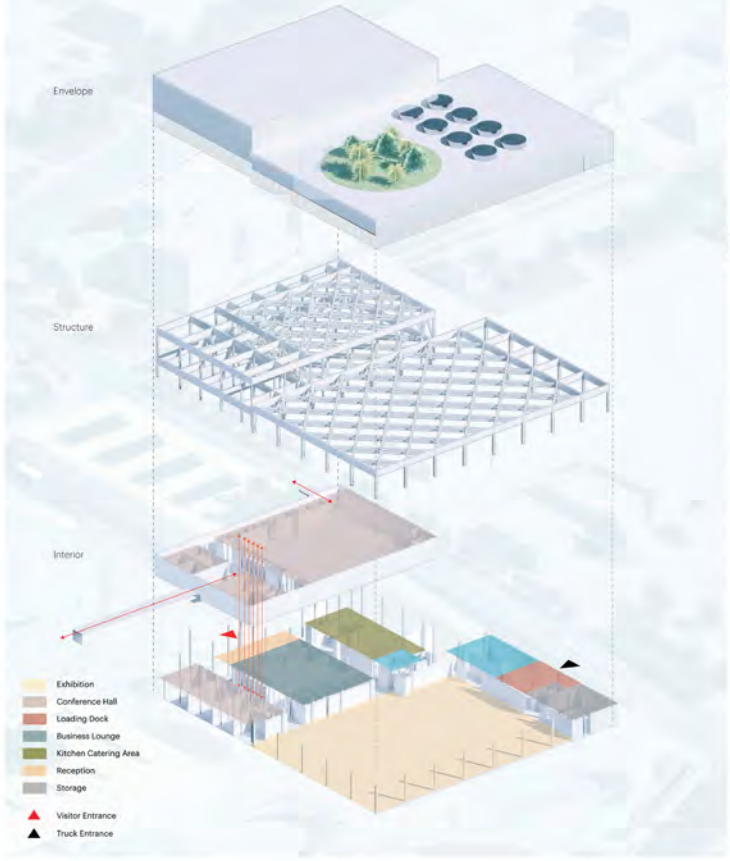
Perimeter columns are spaced 13m apart and a simplified two-way floor system of wide flange beams and CIP concrete slabs is implemented where long spans are not necessary architecturally. The lateral system is comprised of a series of structural cores and braced frames balanced across the building structure to avoid torsional irregularities in the lateral behavior.



Bending moment diagram under gravity loads for long-span stacked beams

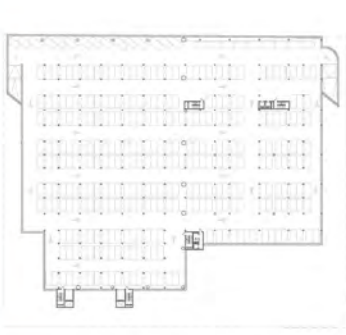
CONGRESS CENTER MAIN ENTRY PLAZA

PROGRAM AND CIRCULATION COMPONENTS



SECTION EE
SCALE: 1:250

CONGRESS CENTER BASEMENT -2
SCALE: 1:1000

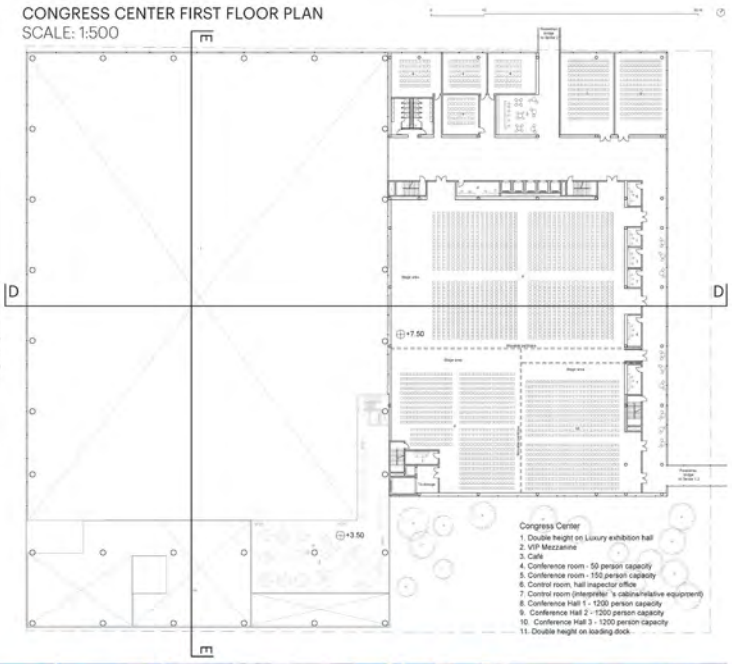


Congress Center
1. Parking - 332 pl.
2. Connection ramp to upper floor
3.Connection ramp from upper floor

CONGRESS CENTER BASEMENT -1
SCALE: 1:1000

Congress Center
1. Access ramp from Stratou Street
2. Parking - 268 pl.
3. Connection ramp from lower floor
4.Connection ramp to lower floor
5. Connection tunnel between Sector 1.1, 2 and 4
6. Connection tunnel between Sector 1.2 and 4
7. Storage/freezers/dish washing/waste disposal rooms
8. Production and preparation
9. Staff changing rooms
10. Storage space

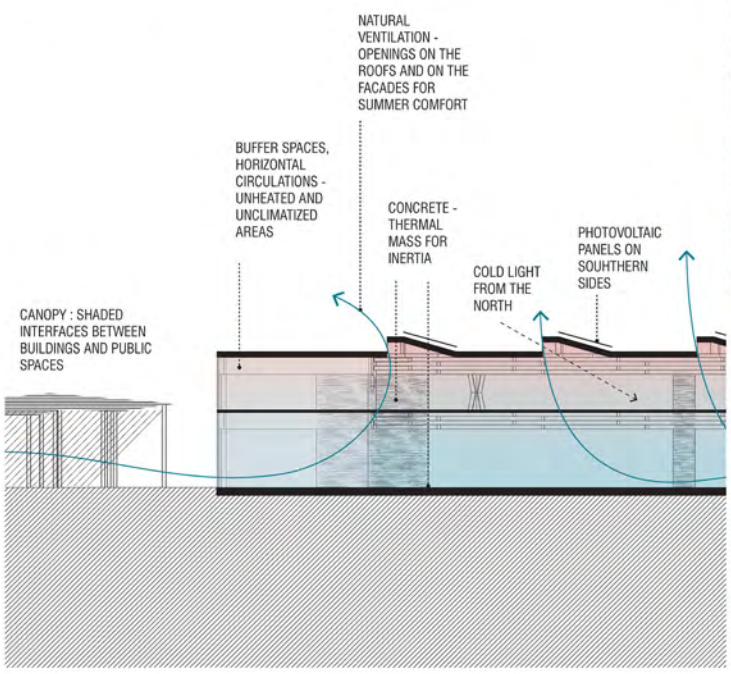
CONGRESS CENTER FIRST FLOOR PLAN
SCALE: 1:500



Congress Center
1. Double height on Luxury exhibition hall
2. VIP Mezzanine
3. Cafe
4. Conference room - 50 person capacity
5. Conference room - 150 person capacity
6. Control room, hall inspector office
7. Control room (interpreter 's cabins/relative equipment)
8. Conference Hall 1 - 1200 person capacity
9. Conference Hall 2 - 1200 person capacity
10. Conference Hall 3 - 1200 person capacity
11. Double height on loading dock

BIOCLIMATIC STRATEGIES FOR EXHIBITION BUILDINGS

The buildings can be ventilated naturally thanks to the openings in the roofs and facades. The roof openings combine both a supply of "cold light" (north orientation), therefore without risk of overheating, and support for photovoltaic panels on the southern sides.



INTEGRATED ROADWAY SYSTEM

BUSINESS CENTER

SECTOR 3

The Business Center is a manifestation of the diverse and dense nature of Thessaloniki's urban fabric. The buildings are designed as a collection of islands acting like an urban village. The landscape is a series of terraces which blur the scale between Egnatia street and the newly designed park. The architecture is porous and open to allow flexible entries and multiple path possibilities. All ground level retail are connected together with outdoor space creating a sense of a village in a park.

The hotel is located facing Sintrivaniou Square, establishing an iconic landmark at the corner. It project's out as the tallest island - this corner piece attracts the public to the vast and diverse public space located within the site.

BUSINESS CENTER STRUCTURAL SYSTEM

There are five buildings in the Business Center complex, with the height of the buildings varying between 10 and 30 meters. These buildings are mostly cylindrical in shape and some of them feature a sloped roof.

The structural gravity system for the buildings in the business center consist of steel columns and beams. One-way concrete slabs on metal deck supported on steel beams form the floor and roof slabs. Perimeter steel columns are located at a regular spacing around each building, in coordination with the window wall panel sizes based on architectural design. Interior columns will be located within the architectural partitions where possible to minimize interference with open spaces.

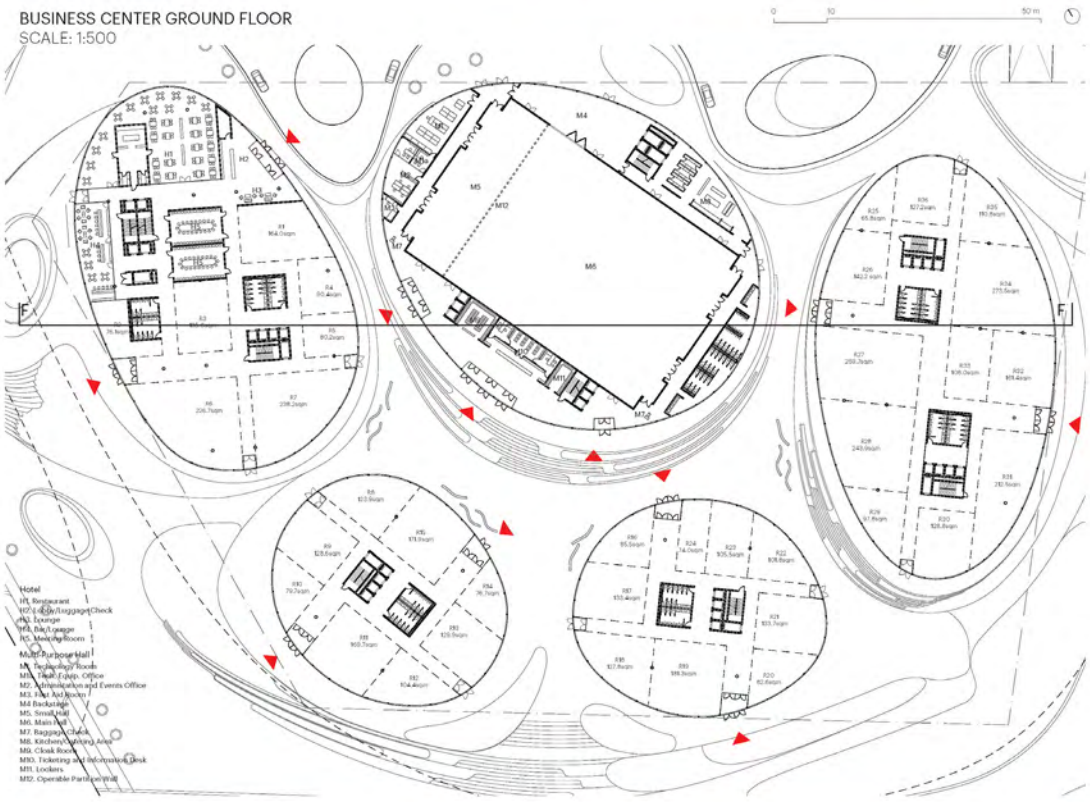
Cast-in-place concrete shear walls located around elevator and stair openings form the structural lateral system of the buildings. These concrete shear walls are balanced across the buildings to provide sufficient lateral stability for the buildings under wind and earthquake loads.

HOTEL FACADE SCREEN

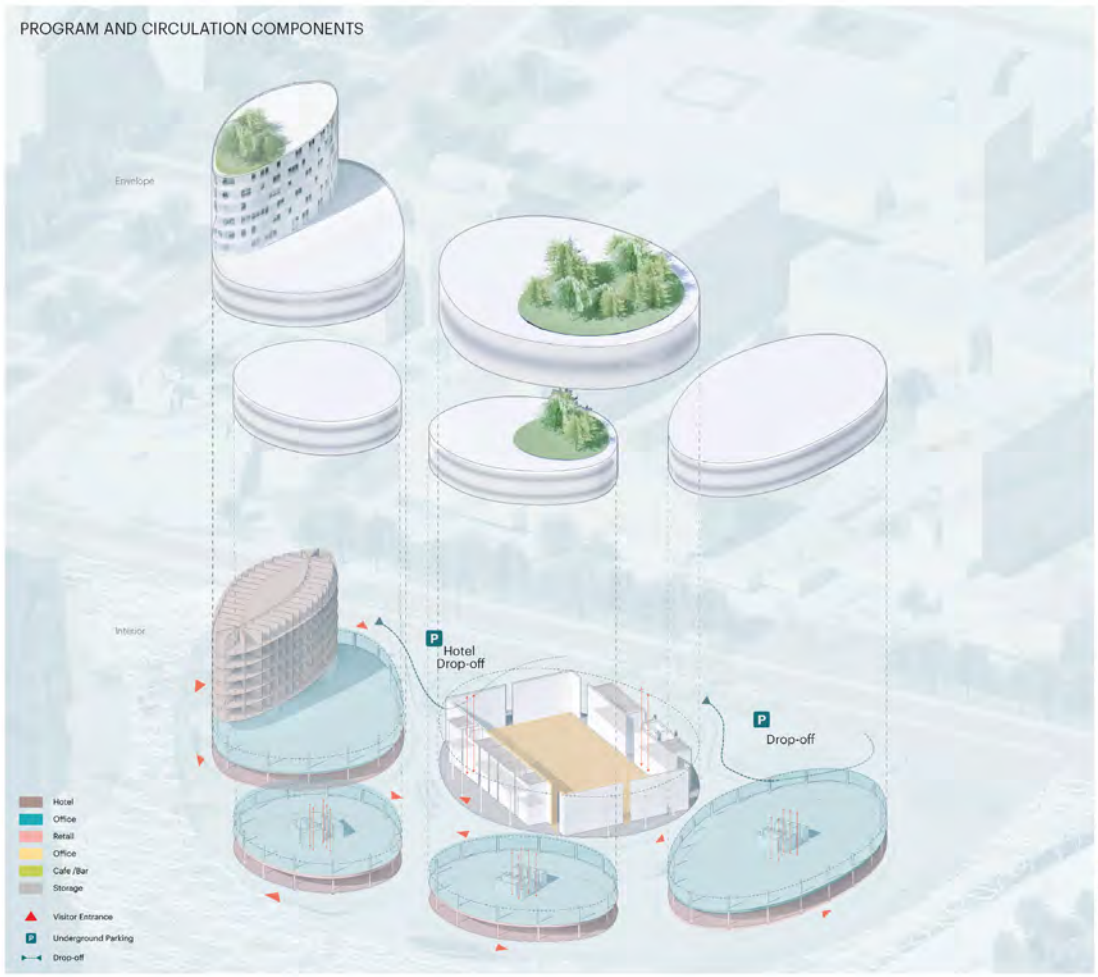
MULTI-PORPOSE HALL

BUSINESS CENTER
URBAN VILLAGE

BUSINESS CENTER GROUND FLOOR
SCALE: 1:500



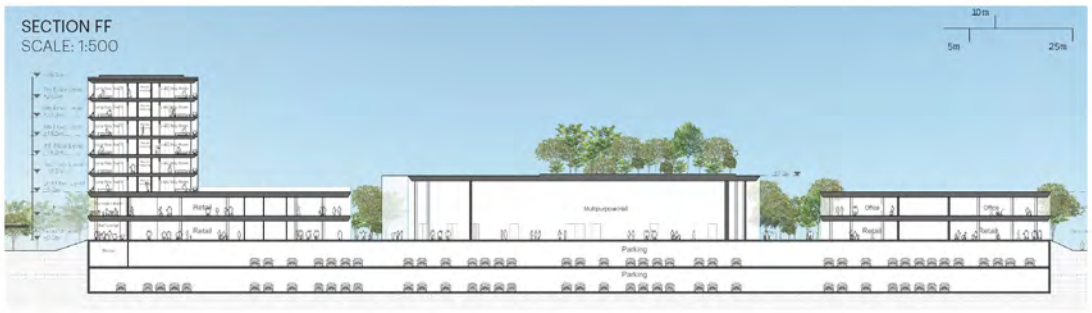
PROGRAM AND CIRCULATION COMPONENTS



SOUTH ELEVATION
SCALE: 1:500

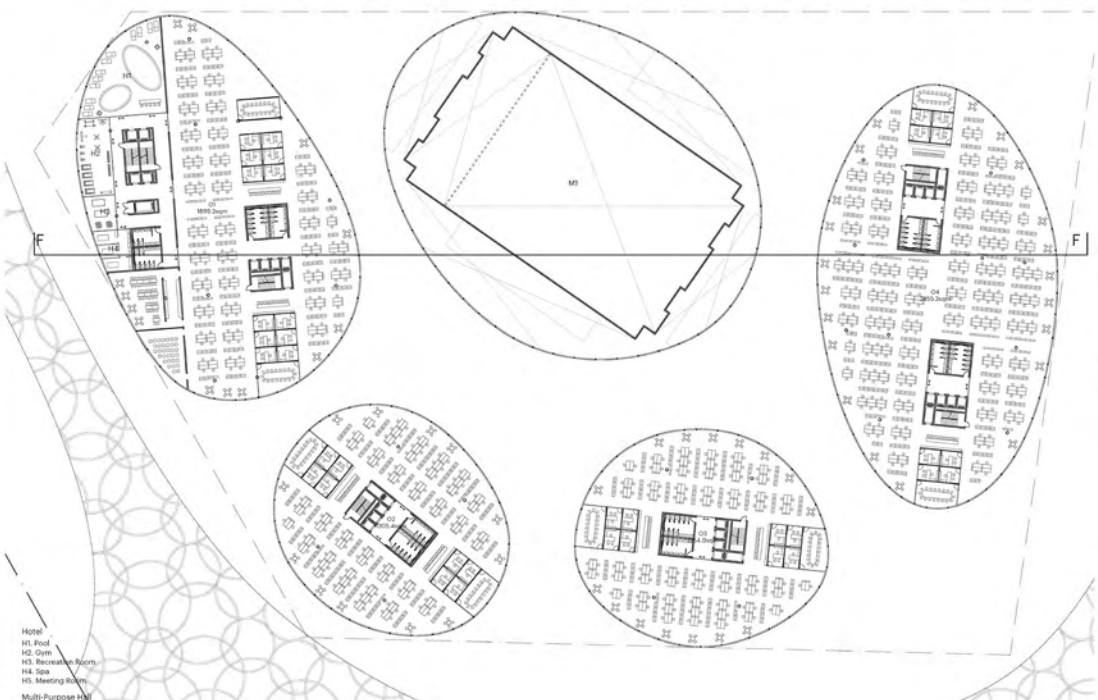
WEST ELEVATION
SCALE: 1:500

SECTION FF
SCALE: 1:500

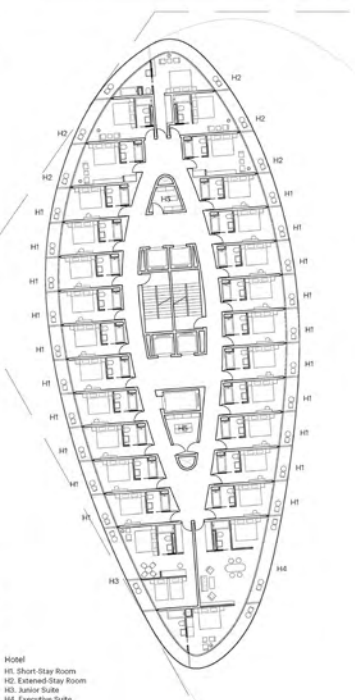


OVERLOOK OF THE CITY ARCHIPELAGO

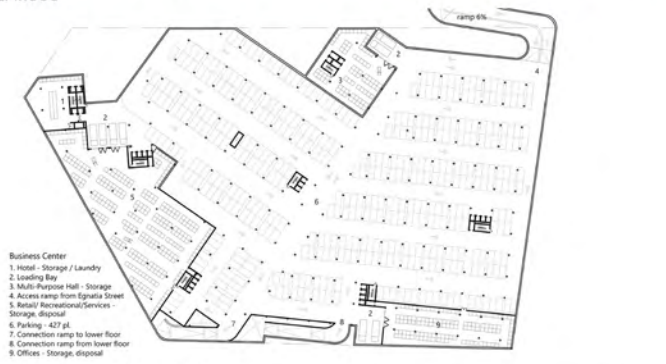
BUSINESS CENTER 1ST FLOOR
SCALE: 1:500



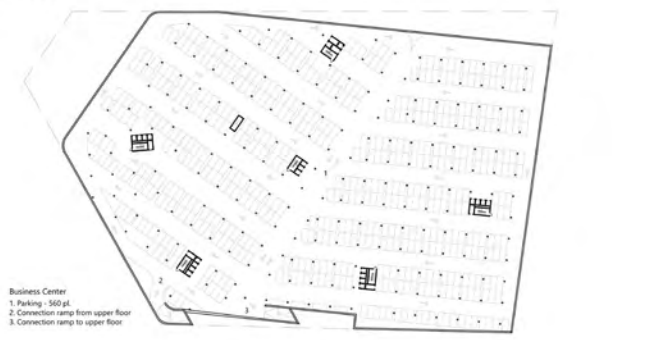
BUSINESS CENTER HOTEL TYP. FLOOR
SCALE: 1:250



BUSINESS CENTER BASEMENT -1
SCALE: 1:1000

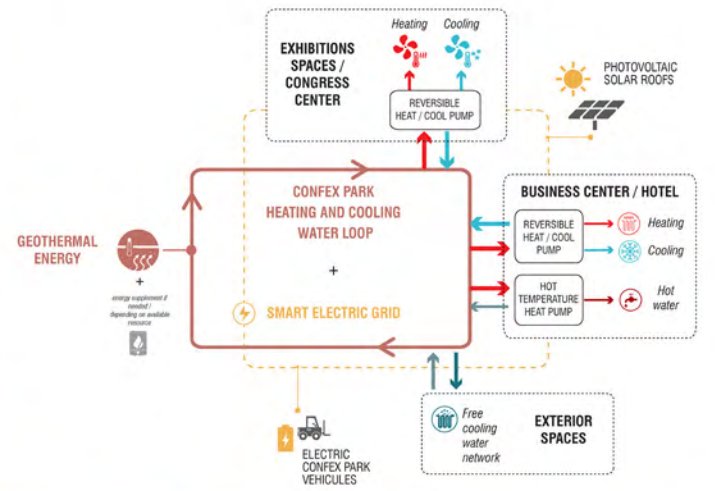


BUSINESS CENTER BASEMENT -2
SCALE: 1:1000



CANOPY AND GROUND FLOOR COMPONENTS

A SMART AND SHARED ENERGY NETWORK, POWERED BY RENEWABLE SOURCES



YMCA MULTI-SEASONAL FUNCTION