



THREE COMPETITION ENTRIES

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Bernard Tschumi

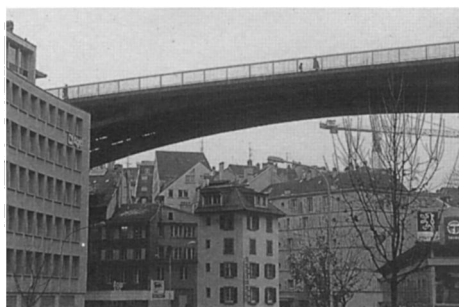
COMPETITION FOR THE REHABILITATION OF THE GARE DU FLON, LAUSANNE

FIRST PRIZE

PONT-VILLES

How to grasp the character of a city at the very point where it contradicts itself? How to reconcile the rugged and picturesque topography of Lausanne with the American-style grid at the bottom of the valley? How to transform an industrial site and its parcelled plots into a quarter that is solid and stable, yet responsive to the soul of the city. How to reinforce the unstudied modernity of this city where, as in the film *Metropolis*, the entrances to the buildings in Place Saint-François are on the sixth floor, while their exits are on the ground floor in the Rue Centrale?

Lausanne's topography has wrought a radical transformation of the relation between streets and buildings, indeed the whole notion of space. Streets are suspended and buildings buried in the ground. Rooftops act as ground floors, while the *piano nobile* can be found on any level. Buildings function as vertical passages, and bridges as multi-storey crossings.



This programmatic and spatial transformation forms the basis of our intervention. Instead of adopting the conservative strategy of concentrating only on the neighbourhood of Gare du Flon, and pretending to preserve its soul, while in reality preserving only the fabric, or of treating it as a delimited sector, in need of a certain amount of rehabilitation, which is part of a larger composition, we chose to superimpose Lausanne's existing networks by extending them according to their own autonomous logic.

Pont-Villes: As functional but inhabited supports, they augment the existing system of bridges (Bessières, Grand-Pont and Chauderon) but also create new spatial relationships and uses. Along the north-south axis of the valley, the bridge-cities use a dynamic programme to link two parts of the city which are entirely in conflict in terms of both scale and character. Each bridge accommodates three categories of use (in the core, public or commercial; at street level, public activities of an urban nature; in the suspended building, hotels and flats) and each can therefore function as an independent fragment. This concept of the fragment allows for very specific spatial links with the existing fabric — thus preserving a sense of scale — but also for adaptation to the unforeseen factors which are inevitable in a process spread over several decades.

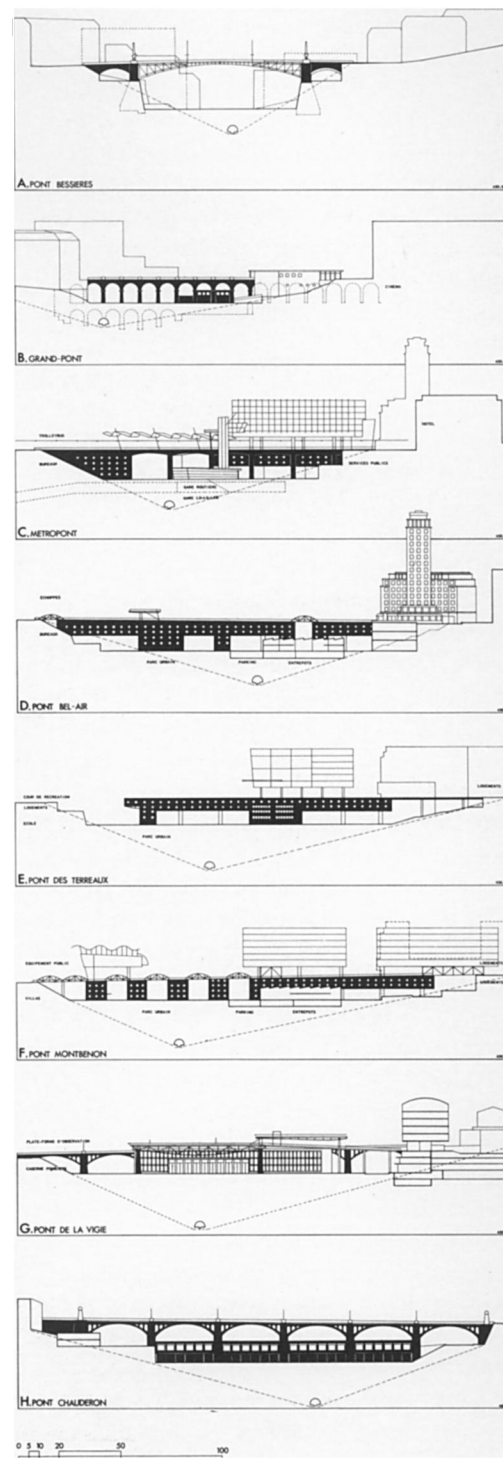
Warehouses: Situated at the bottom of the valley, forming a strip that defines its boundaries, they incorporate disused buildings and contain small industries.

Park: A park which would also act as a support for the bridge cities is planned for the south side of the valley.

Circulation: A planted linear car-park is planned for the space between the warehouses and the park. The combination of the inhabited bridges with their surroundings will create a whole new network of urban relationships. However, the total ground-surface will not be increased. On the contrary, we wanted to avoid the imbalances resulting from over-densification of the environment, in favour of an urban centre capable of integrating various types of programme.

BERNARD TSCHUMI & LUCA MERLINI
ARCHITECTS, 1988

Assistants: Christian Biecher, Phillipe Gavin, Ursula Kurz



Elevations of the existing bridges (Bessières, Grand-Pont and Chauderon) and the new 'pont-villes'.



Two proposals for the phasing of the scheme

KANSAI INTERNATIONAL AIRPORT COMPETITION, OSAKA

Airports are no longer merely a collection of unitary buildings which serve an isolated function; they now extend and redefine the metropolis — as well as being one of the fastest-growing industries. We therefore devised a new concept for Kansai International: to enlarge and transform it into an event, a spectacle, a new city of interchange and exchange, a city of commerce and culture, which would become a counterpoint to the city of Osaka.

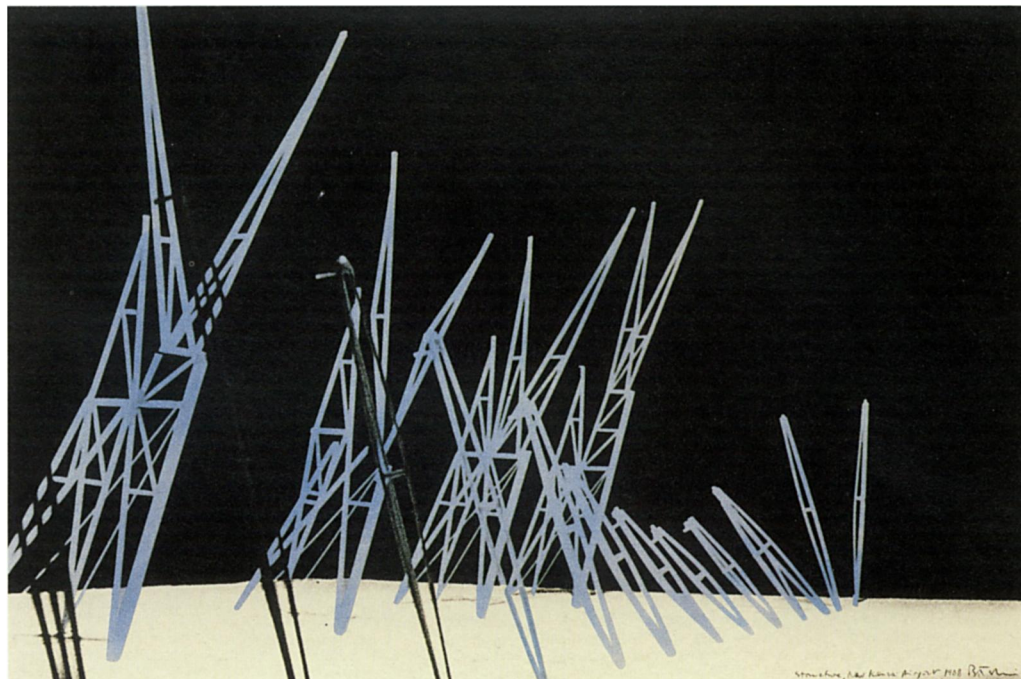
The unusual location — an artificial island five miles offshore in Osaka Bay — was created especially for the airport. This suggested an equally bold move on the part of the architect: to look at the airport as the generator of the ultimate linear city, a twenty-four-hour line which in conceptual terms would extend around the globe. Such a programme also called for a powerful image that would challenge preconceptions about structure and composition. In order to achieve this we divided the new airport into two distinct parts: the Deck and the Linear City.

The Deck, which contains Kansai air terminal and related functions, extends all activities taking place in the linear city: offices, trade and commerce, and cultural activities. It appears as an infinite four-storey functional landscape, with a non-directional structure that allows for the creation of extended tracts of space.

The Linear City is composed of three lines: the Double Strip, the Wave and the Slab. The Double Strip, which consists of the wings of the terminal, contains all the transfer functions of the airport. Between its two layers are the Wave and the Slab, key features of the project. The Slab would contain two hotels and much rent-by-the-hour office space, while the Wave would act as a mile-long entertainment/cultural/sports centre. Both are very narrow — approximately twelve metres and eight metres, respectively. This is intentional, for it not only reinforces the dominant linearity of the city but also forces an unprecedented density of events.

For security and operational reasons, the Double Strip, the Wave and the Slab function independently of one another, with the landside part of the Deck acting as the interchange between the different bands.

The image of the Deck, defined by a glass curtain wall, is intentionally neutral. Should additional space be required, the structure can simply be enlarged, and the curtain wall marking its perimeter moved to the new boundaries. The Double Strip is made of textured glass. All decoration is excluded, since the glass structure itself creates a magical environment. The Slab is made of brushed stainless steel or aluminium.



The Wave is covered with copper plates which, as they oxidize, will turn it into an extended blue-green curve like an ocean wave. The red control tower, the highest point on the site, acts as a vertical counterpoint to the Wave. It would be visible from any vantage-point in Kansai 'city', as well as most of the coastal developments of Osaka.

The bands of the Wave, the Slab, the Double Strip and the Deck are interrelated so as to challenge traditional architecture by introducing spectacular parallel disjunctions. Hence the linear interstices between them are as important as the bands themselves. Perceived as stunning visual rifts, such negative spaces raise questions about architectural composition. Being outside the realm of historical precedents or repetitive typologies, they represent a type of non-classifiable space.

The distortion of the Wave, and its obliquely shifted vertical axis, questions gravity in the same way that airplanes once did. The ground plane ceases to be the datum plane, which is turned into a new conceptual or technological parameter. The supporting masts are therefore all-important. Since the Slab and the Wave already belong to the realm of the sky, they remain the only link between earth and the air.

STRUCTURE

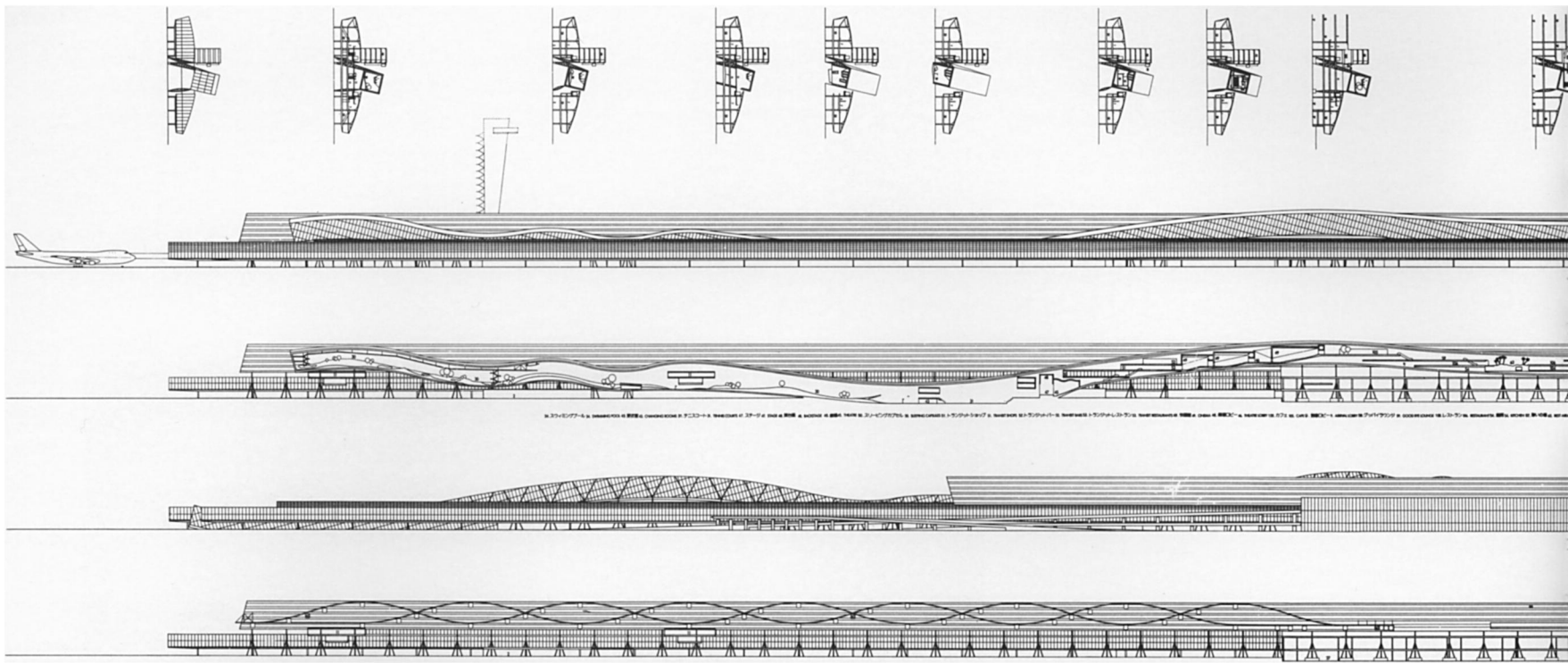
The two bands (copper wave and steel slab) superimposed on the 'given' terminal building

infrastructure are supported by three independent systems, which grow out of the two bands. The central mast is called the Crane, the landside mast the Pencil, and the airside mast the Cigar. Each has an independent longitudinal rhythm. The crane supports both bands by taking some of the vertical load from each, in addition to all of the horizontal load.

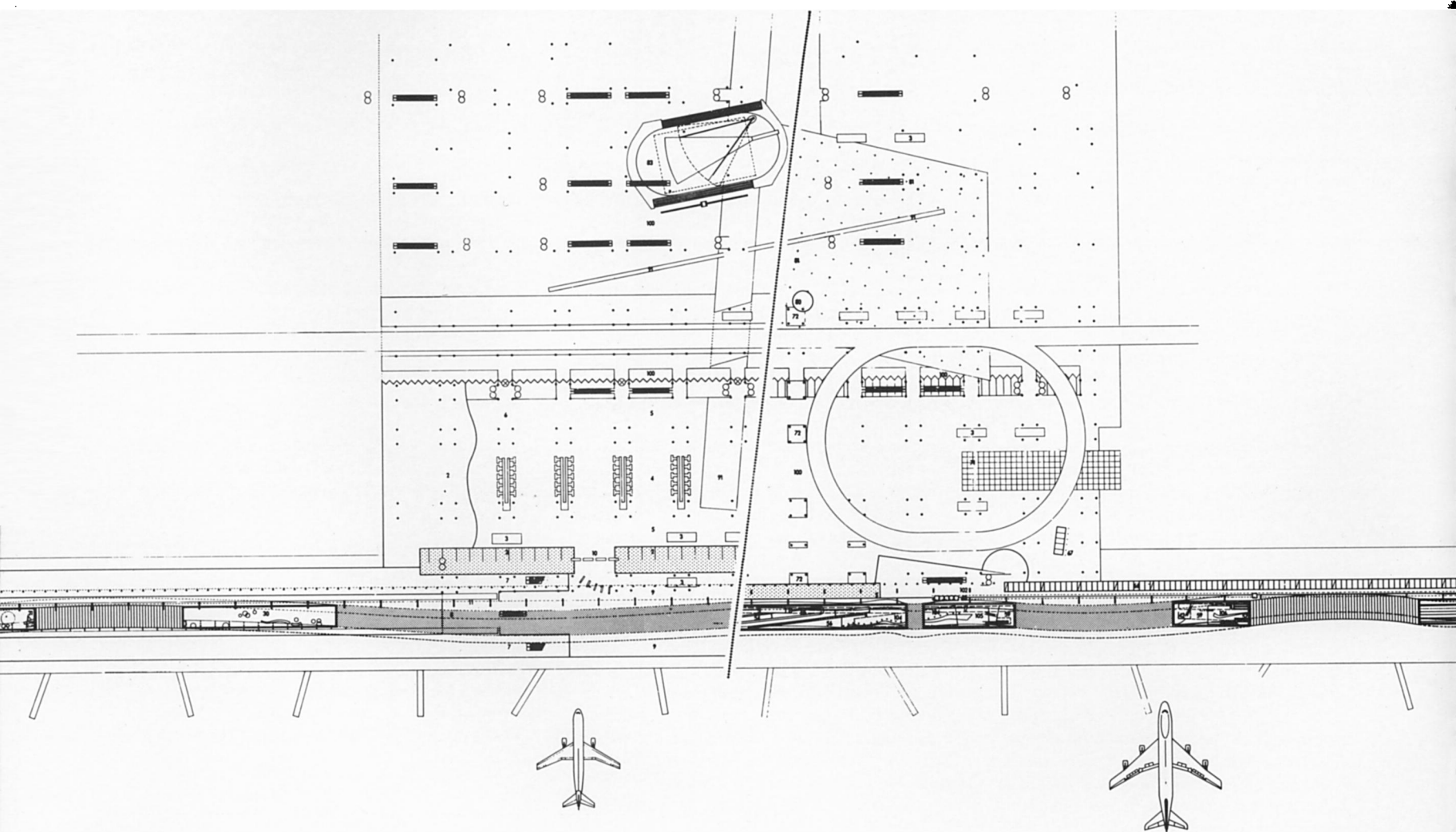
The height of the steel band remains constant, while that of the copper band varies. The geometry of half of the Crane and the Cigar varies in response to the change in height of the upper band, while the half of the crane supporting the steel band and the Pencil remains constant.

Extract from the evaluation report by the jury, which included Kisho Kurokawa, Arata Isozaki, Helmut Jahn and Richard Rogers: 'The proposed hotel and sports facilities are so large that the characteristic appeal of this design would be markedly impaired if these structures were not subsequently approved to be built. Nevertheless, the Panel maintained until the last that this design should be highly regarded for its feasibility in creating a twenty-first-century airport and its architectural merits on a conceptual level.'

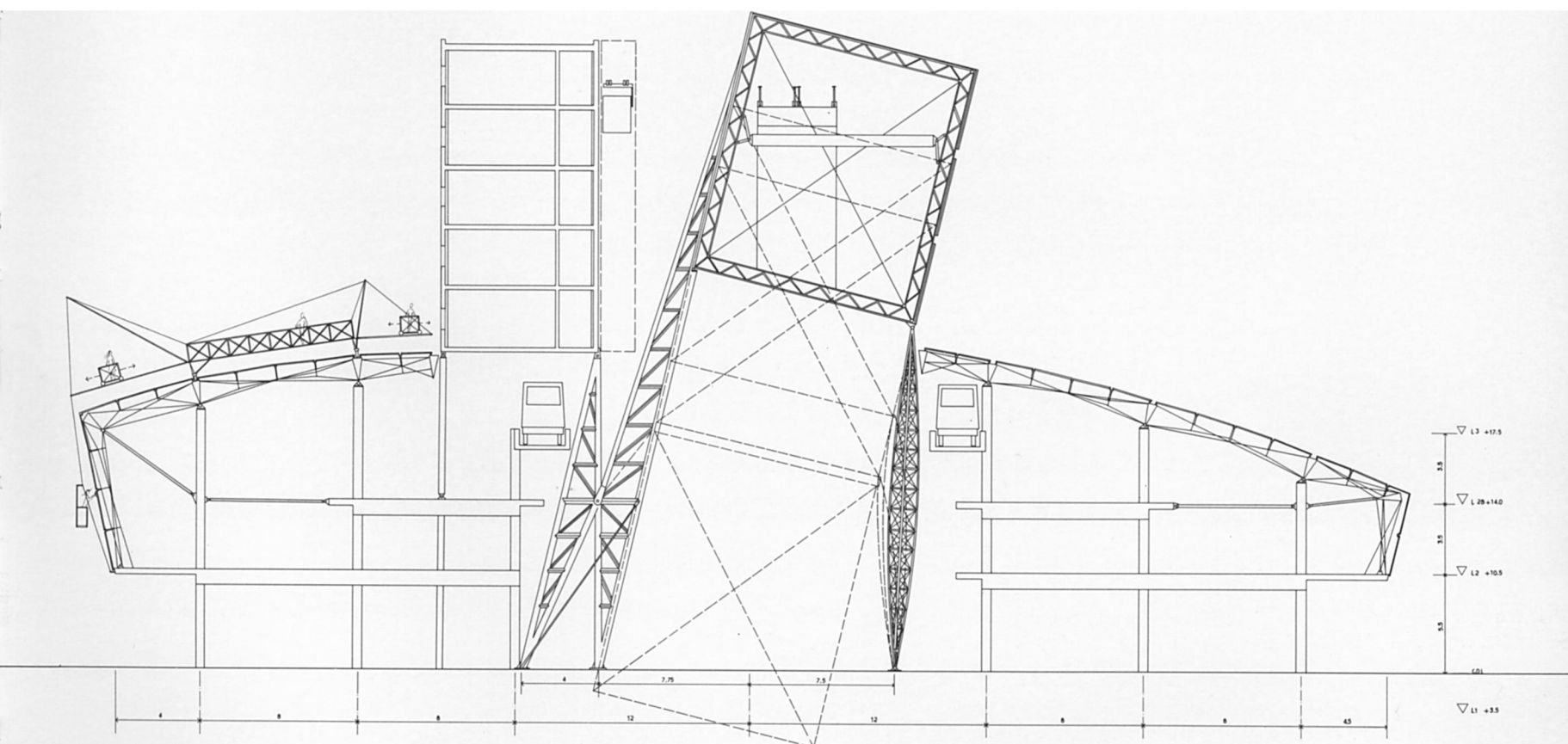
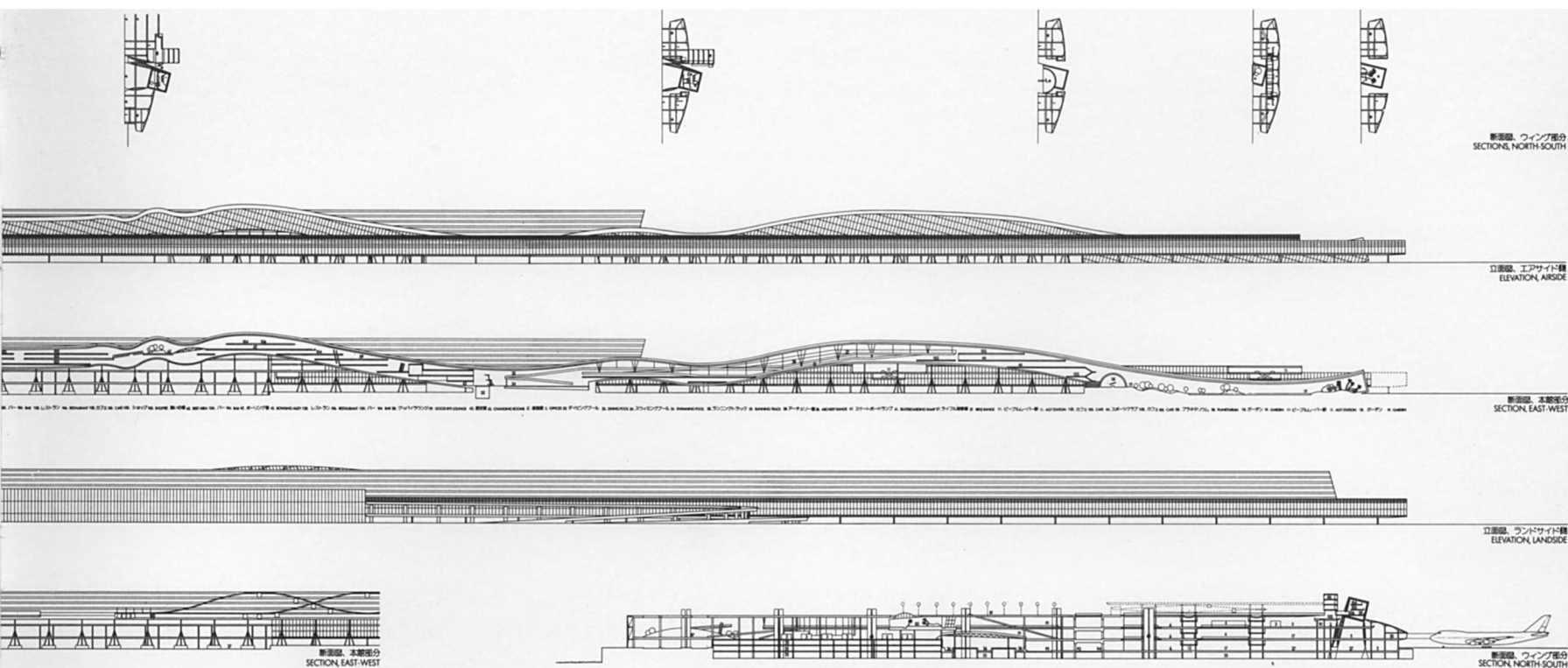
BERNARD TSCHUMI ARCHITECT, 1988
 Assistants: Frazer Gardiner, Mehrdad Hadighi, Gilbert Schafer, Koichi Yasuda, Robert Young
 Structures: Hugh Dutton
 Concept layout: Luca Merlini
 Landscapes: Ursula Kurz
 Photograms: Christian Biecher

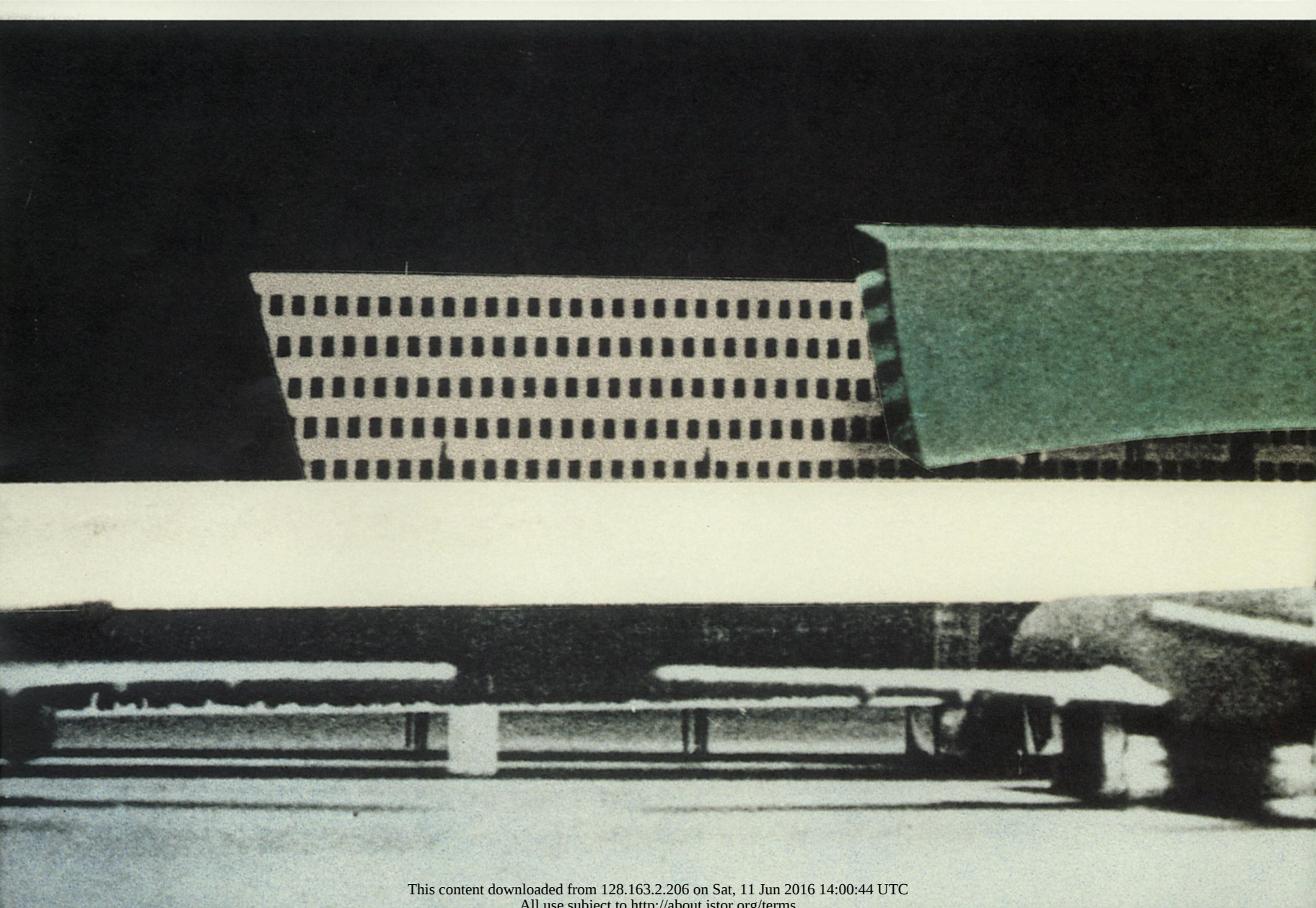
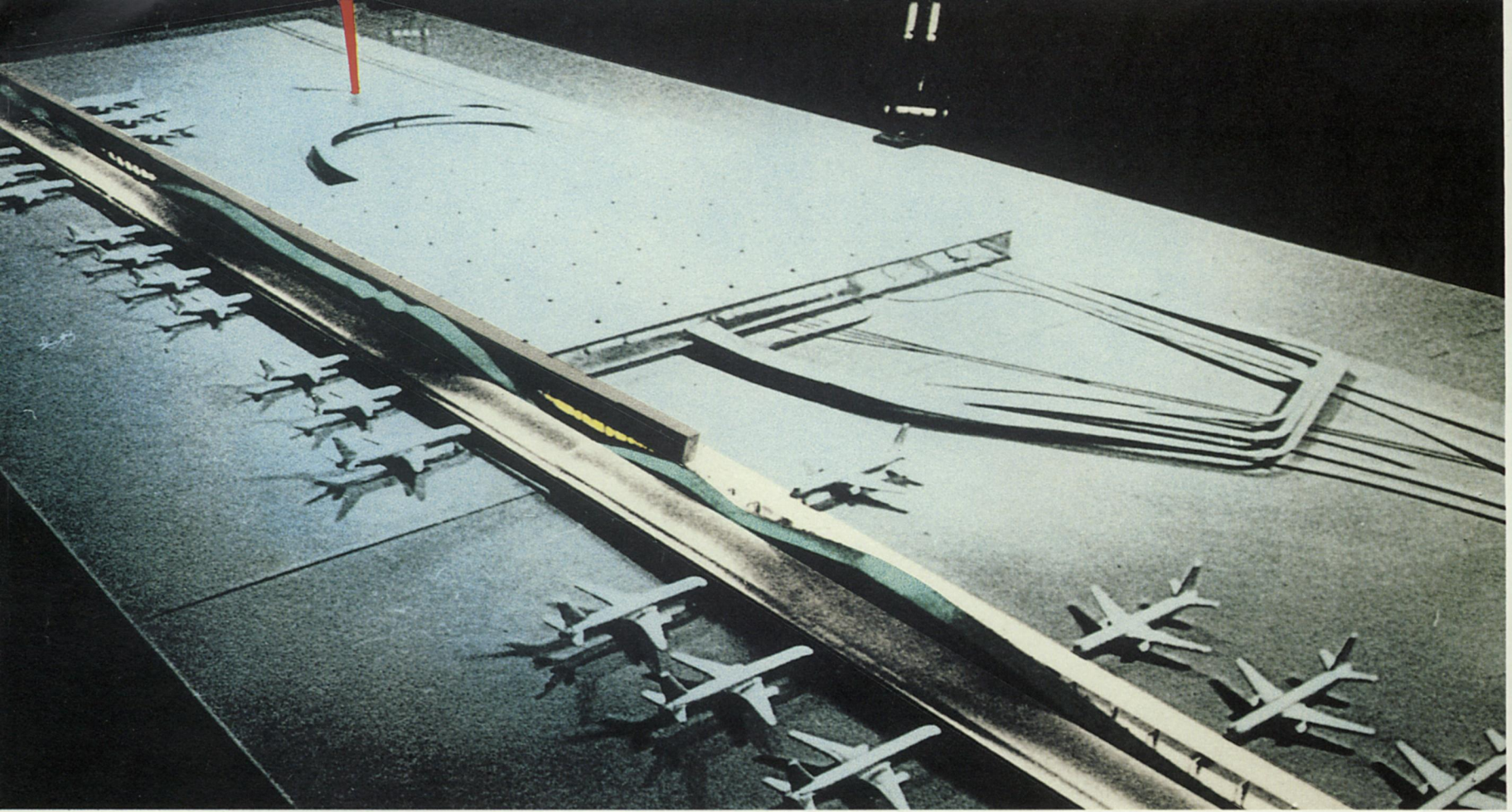


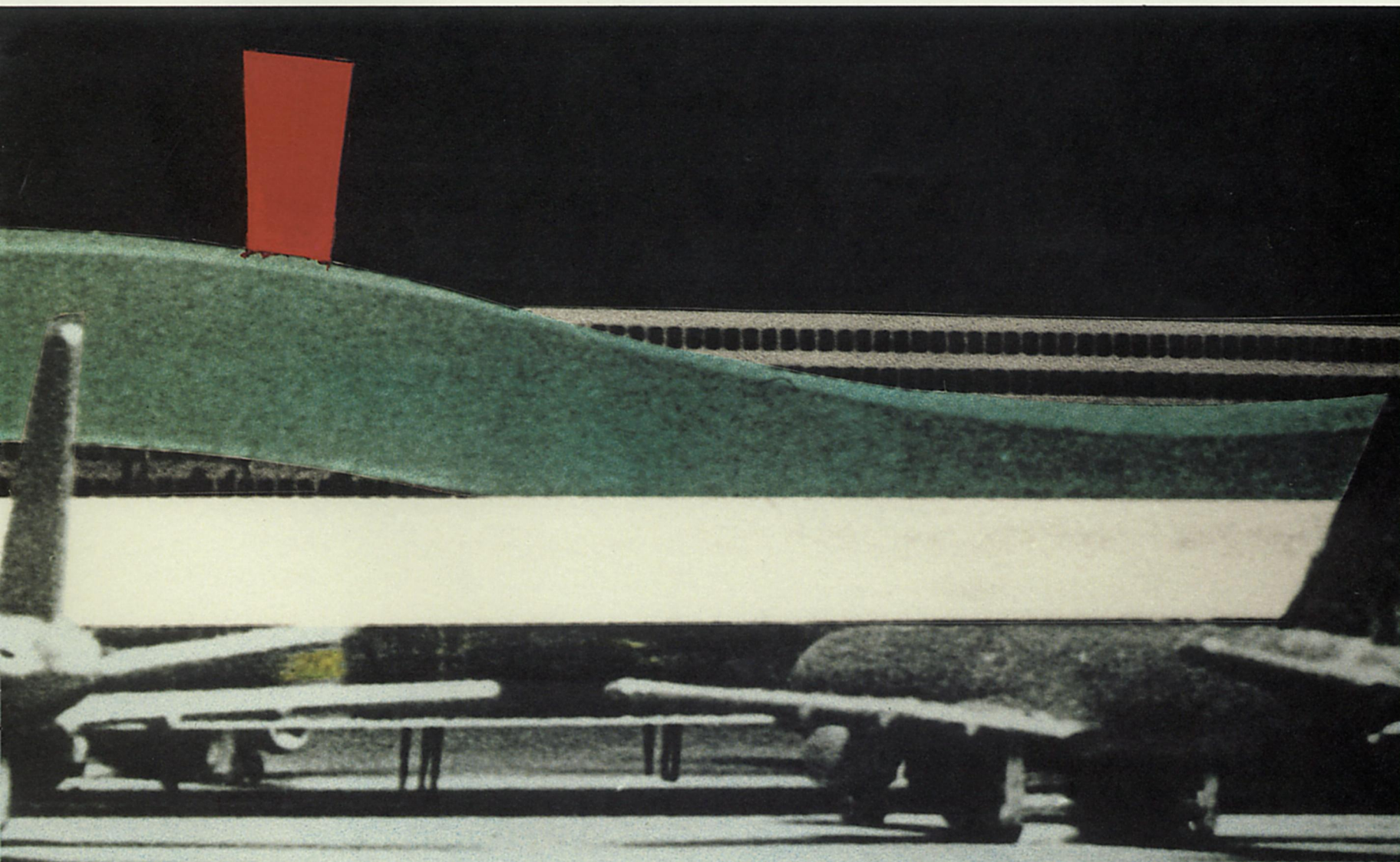
Sections and elevations



Plan of terminal building level 3 (left) and level 4 (right)







BIBLIOTHÈQUE DE FRANCE COMPETITION, PARIS

The competition brief asked for a new type of building, capable of reconciling the conflicting requirements of the traditional library of the past and the computerized library of the future. Its site by the river Seine has a similarly dual character, being located on industrial wasteland to the east of Paris, 2,500 metres from Notre-Dame. Far from being restrictive, such dualities



suggest unusual possibilities, in which disciplines merge and are cross-fertilized, and a new form of architecture and urbanism begins to emerge.

Some of the most significant buildings in the history of architecture have been libraries, including those by Boullée, Labrouste, Carrère and Hastings, and Asplund. The new library should of course be compared to such distinguished precedents, but it is imperative to avoid nostalgia for their outdated spatial forms. Hence, we moved the traditionally centralized reading room towards the exterior. Both great hall and esplanade, this space is the revolving circuit of the project.

Rejecting the static spaces of the past, the concept of the library is based on movement: movement of people and of ideas through a variety of circuits giving access to information and events.

CONCEPTS

- A new library combining the pursuit of modernity with the pursuit of knowledge.
- A new type of library, open to its surroundings but also enjoying internal 'circuits' of culture: a generator of a new district of the city.
- Multimedia circuits for the public, circuits for the books, visible architectural circuits, and invisible circuits of the latest information technology.
- A main circuit offering both excitement and stability, combined with reading 'trays' offering maximum flexibility.
- Transprogramming, that is, combining several types of programme, regardless of their

incompatibilities, together with their respective spatial configurations (the forum and the reading room, 400-metre races and scholarly pursuits).

URBANISTIC AND PROGRAMMATIC CIRCUITS

The library's location outside the historical centre of Paris must be considered an important and positive factor which allows it to break with static ideas of the library. Hence the concept of the open circuit, and the running track located above the library. More than just a dynamic convenience, it embodies the library's complex role as the generator of a new urban strategy. The library opens on to the Seine and articulates a new quarter of the city. Other circuits (electronic) result in a new library transmitter tower, which acts as a visible signal to the centre of Paris.

LIBRARY CIRCUITS

There are five circuits within the library. While each of the circuits has both its own logic and its own rules, they constantly interact at strategic points.

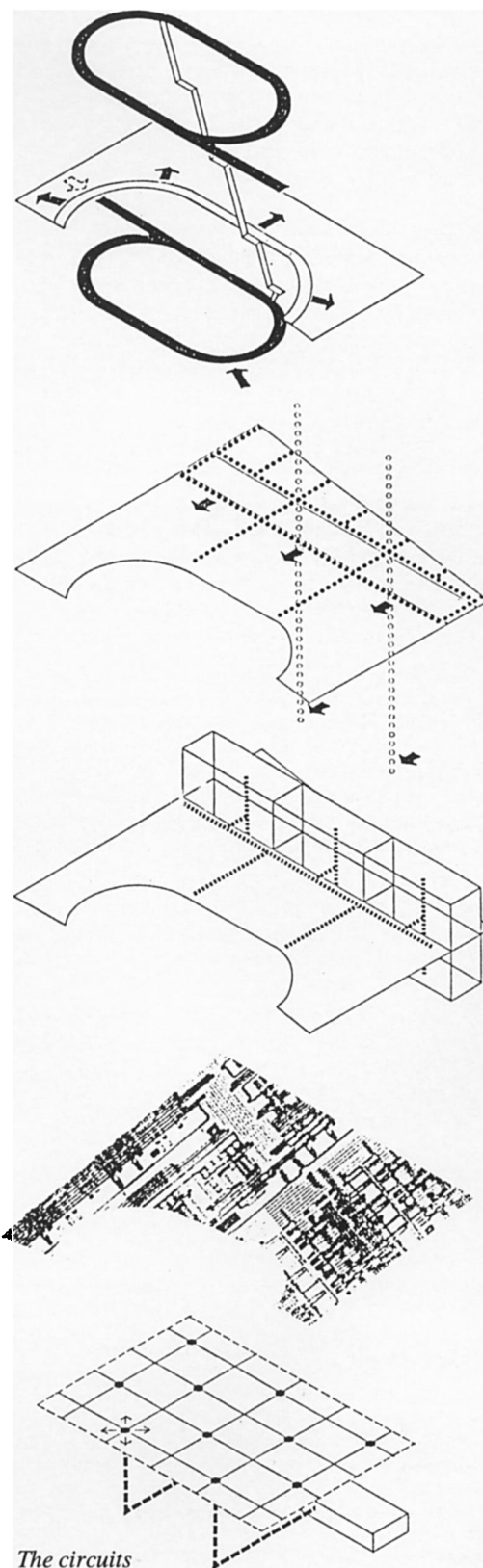
1. The Visitors' Circuits

Arriving from the *quai* along the Seine or from the rue Pierre Charcot, the public will have access to the library in three main areas.

a) The visitors' circuit, consisting on the ground floor (lower circuit) of a spectacular ring-like great hall, offers reception and information facilities, exhibitions, shops, a conference centre, and a children's library, as well as access to the recent-acquisitions library. It also provides access to the upper esplanade and the upper library floors by means of elevator banks and a continuous sequence of escalators. On the top floor is the upper circuit, with video displays, exhibitions, and a small café and lounge area, in an unprecedented setting, above the running-track.

b) The circuit esplanade, located directly above the great hall and forming a 10,000-square-metre sloping plaza, or balcony, overlooking the Seine. Large steps for reading, on a drum above the main auditorium, rotate so as to follow the circuit of the sun.

c) The library departments are in the form of 'trays' which allow free organization of the various departments, according to traditional reading-room arrangements or possibilities fostered by the most sophisticated electronic facilities. The public also has access to the eighty-metre-high transmission tower in front of the library, which contains a café offering spectacular views over the city.



2. The Administrators' Circuit

Arriving from the Nouvelle Avenue, library employees occupy the southern section of the library. Located above the technical services are various administrative offices, their indented configuration allowing each one to have a window.

3. The Book Circuits

Sandwiched between the administration and the reading rooms, the storerooms are designed in such a way that, with a minimum of alterations, they can accommodate any of three different kinds of storage (traditional, compact, automated). Horizontal and vertical transport distances have been kept to a minimum.

4. The Electronic Circuits

A fundamental part of the new library, the electronic circuits govern most of the new cataloguing and information retrieval. The library's role within a network reinforces this priority. Computer and video displays are accessible to the public at all points of the 'architectural' circuits.

5. The Mechanical Circuits

HVAC systems are crucial to the functioning of a library. The chosen spatial configuration by zones allows for separate handling of the stacks, independent of the administration, the reading rooms, or the great hall. Fluids are distributed horizontally in the basement and then vertically on a diagonal point-grid for maximum efficiency.

READING TRAYS

We devised a flexible system of 'trays' capable of adapting to the programme as it inevitably evolves. Four large superimposed trays allow full interchangeability of the location of the various libraries and their departments; the possibility of their expansion or contraction; and the possibility of organizing the library into horizontal areas distributed along the circuit hallway on each floor, vertical departments located around a common elevator bank, or a combination of the two.

BERNARD TSCHUMI ARCHITECT

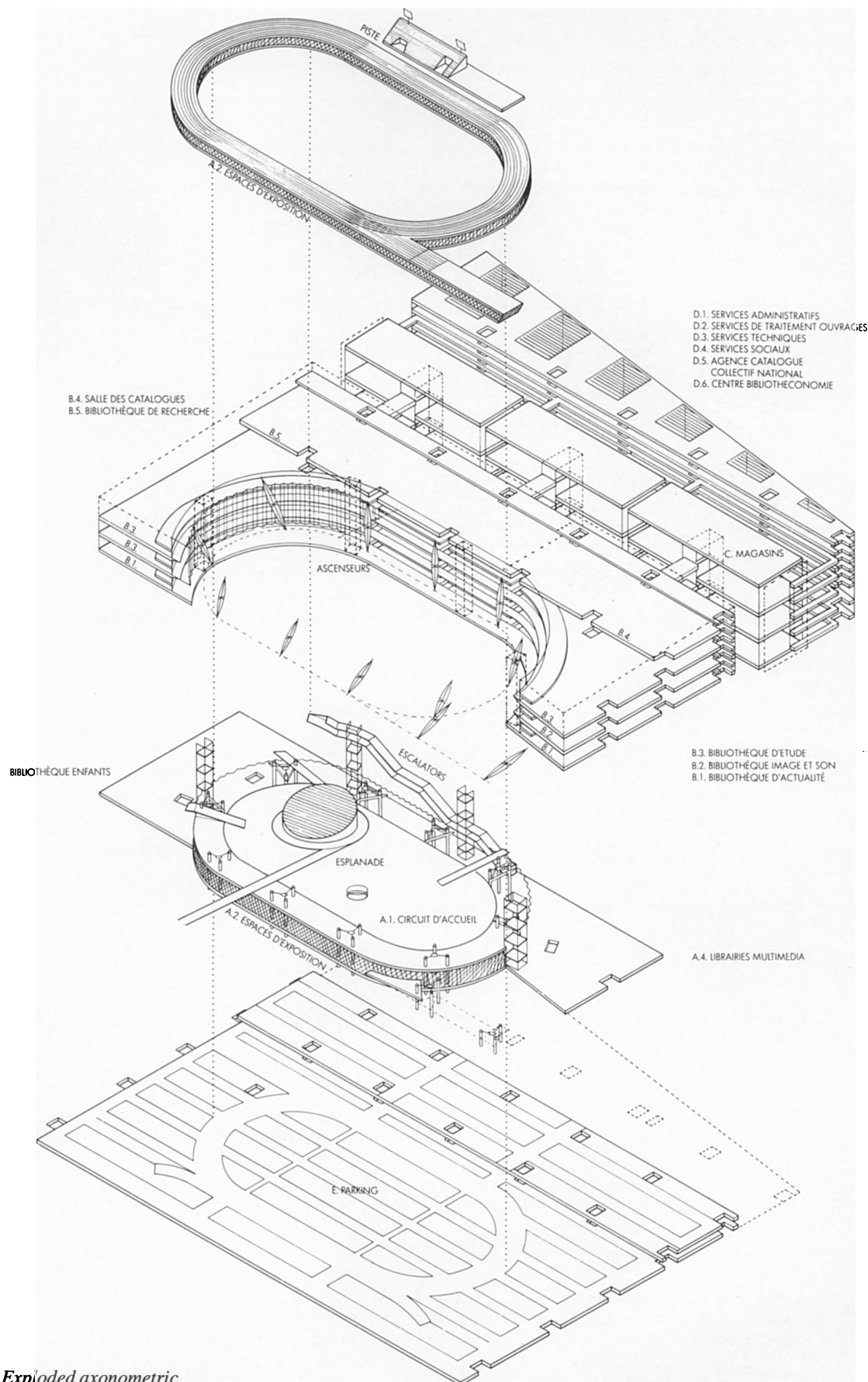
Concept: Bernard Tschumi, Luca Merlini

Structure: Peter Rice, Hugh Dutton

New York team: Robert Young, Ko Yasuda, Mark Haukos, Frazer Gardiner, Jean-Pierre de l'Or, Ann Krsul

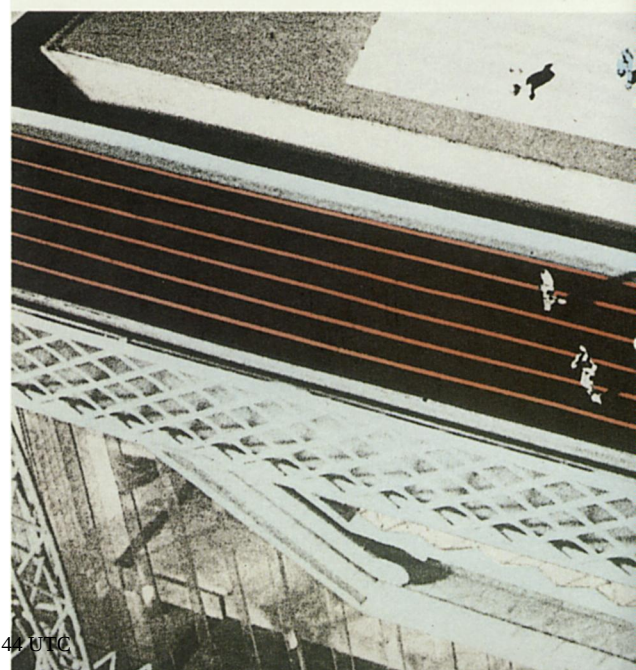
Paris team: Luca Merlini, Philippe Gavin, Marie-Line Luquet

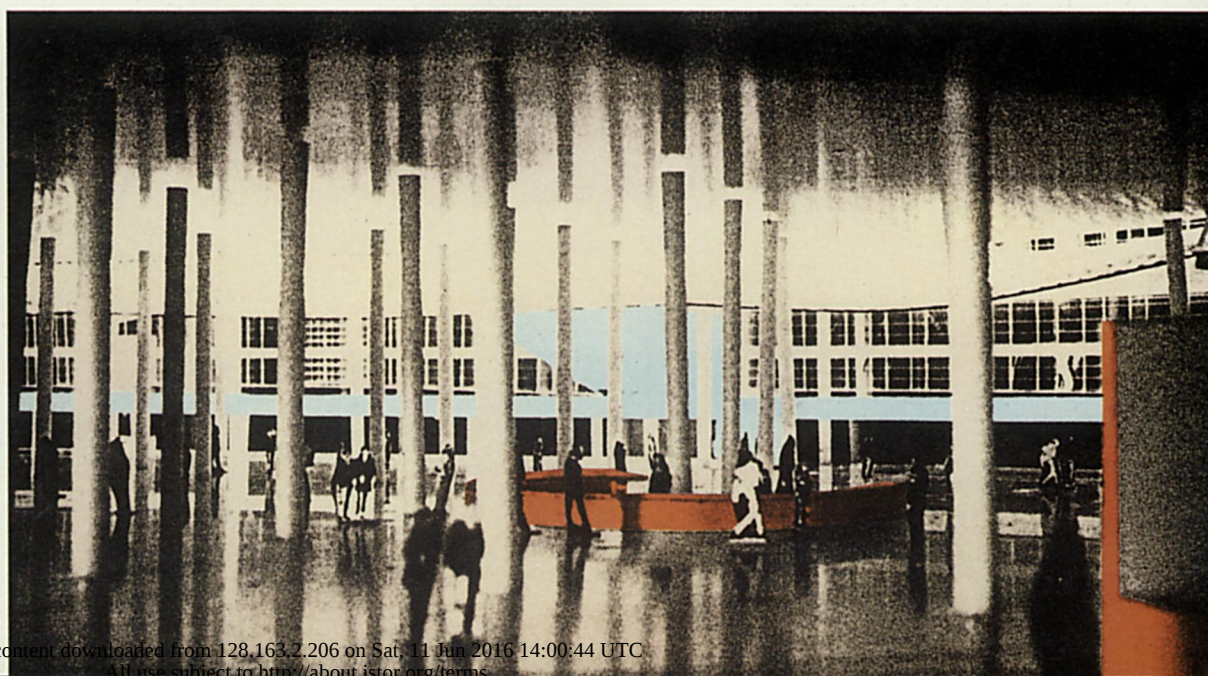
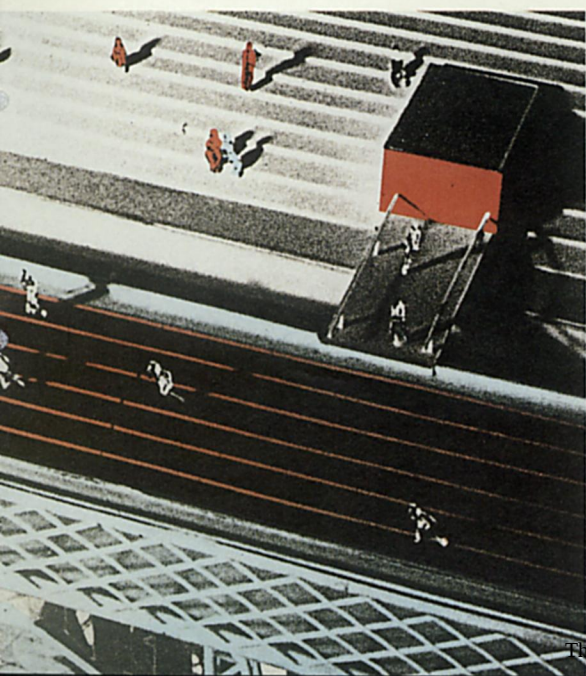
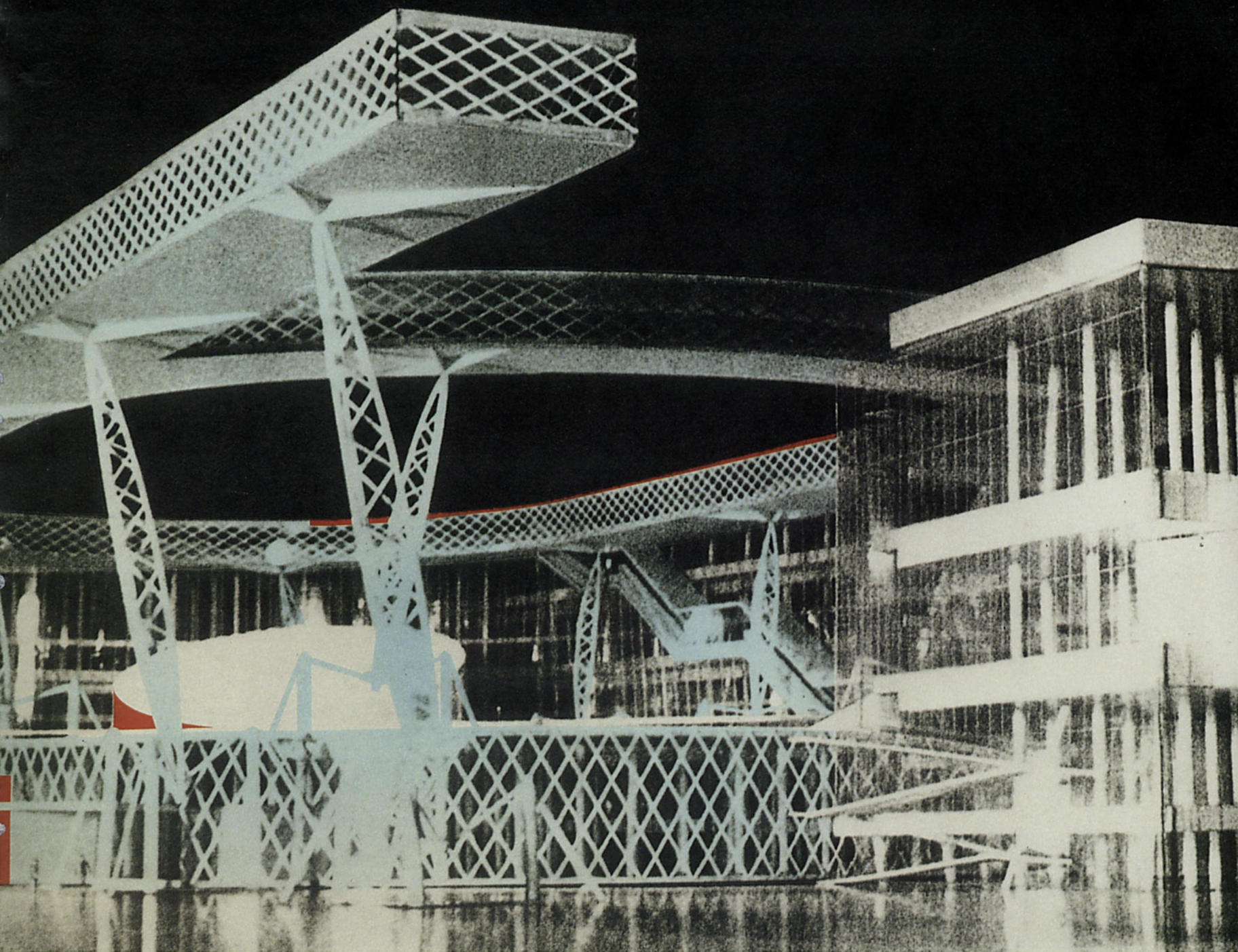
Architect consultant: Jean-François Erhel





Above: Preparatory sketches
Opposite: Exterior view, running track, and reception hall





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