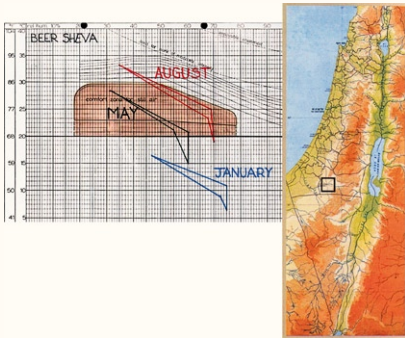


Government Administration Center, Beer Sheva, Israel Energy Conscious Green Building Design

Ruth Lahav, Architect & Town-Planner

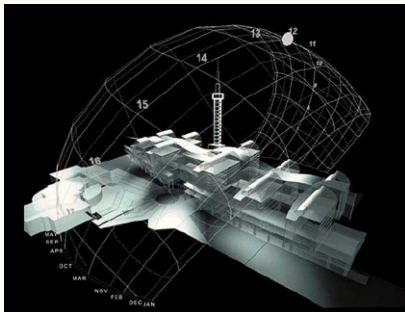
Beer Sheva is the regional capital for southern Israel, located in the northern Negev region, about 100km south of Tel Aviv.



In 1995 a 2-stage, “clients choice” open competition was held by the Israel Ministry of Finance to select a design (and team) for the project. The design of the completed complex

is almost identical to the competition scheme, even though the client changed from the Government to a Developers Consortium (with a long term rent-back contract for the government offices) in the middle of the design process.

The Government Administration Center is a multi-function building complex, aimed at giving the desert city of Beer-Sheva a civic and governmental center.

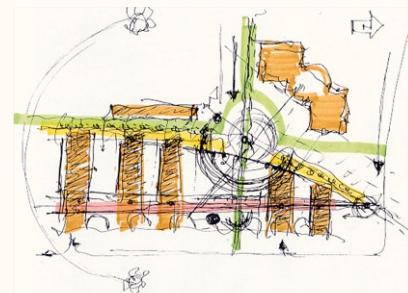


It contributes to the life of the city by creating an accessible ‘concentration of services’ of 30 different government offices, a regional medical health-fund

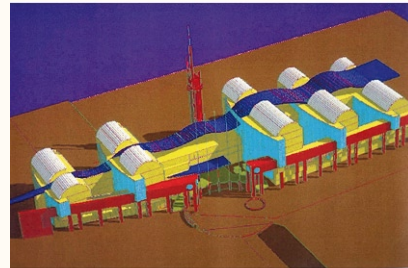
centre, private offices, and a commercial shopping mall.

Urban Planning

In 1948 Beer Sheva was a small Ottoman town, and was expanded from 1950 to 1990 with an agglomeration of neighborhoods added onto the “Old City”, without developing a clear urban or civic centre. Today the city has a population of around 200,000, with another 40,000 in suburban towns, and 80,000 in Bedouin townships, all in the immediate vicinity.



Current planning and development initiatives in Beer Sheva aim to change the urban character of the city, and turn it into a metropolitan centre for the south of Israel.

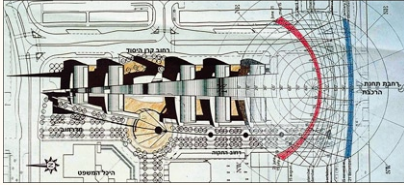


The region needs not only a focus of civic and government services, but also a lively and intensive city

life. The Government Center, in its character, with the movement of people around, through and inside it, and in its relationship to surroundings, creates an urban focus. It aims to give architectural expression to the government services in the daily life of Beer-Sheva and, together with the health centre and shopping mall, the presence of an active civic center.

Buildings on a connecting street

The complex consists of a series of five office buildings, connected through a linear internal street, creating a social and public pathway in the building. Between the office buildings, this internal street faces into a series of atria, day-lit by high level windows. The internal street and atria are covered by a wave-form roof, which cuts through the roofs of the office buildings.



Parallel to the internal street, on the western side of the complex, is an arcade, facing onto

the new pedestrian street of the city.

This pedestrian street starts at the railway and bus stations to the south, continues past the Government Center, the Regional Court-house, shops, offices and a theatre, ending at the City Hall to the north.

At the focus of the entrances of the Government Centre and the Courthouse on the pedestrian street, there is a 'rotunda', creating entrances for commerce and government at different levels, around an amphitheater and waterfall. This rotunda is place for children to play, people to sit, and for public 'happenings'.

Inside the building at ground levels, parallel to the arcade, is a shopping mall, with entrances at the north and south ends, and to the east and west sides in the centre, giving a lively pedestrian level connection to the surroundings in all directions.

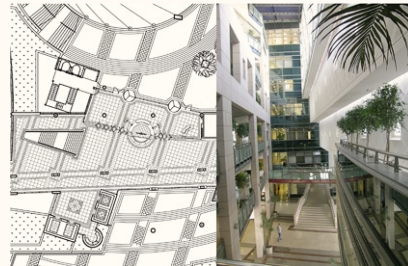
Hierarchy: urban planning, design, and democracy

The urban planning for the area aims to create a civic and

commercial focus, with the Government Center at its heart.

Government is part of the people, and is intended to serve them, and with that aim the building was designed. A democratic hierarchy was created by stretching the government offices along the pedestrian street, integrated with the commercial and social functions, instead of raising them in a tower "above the people".

The concentration of thirty different government offices and departments, spread through four of the buildings, were designed so as not to present a threatening or alienating presence. The offices have two entrances, the main one leading into the large central atrium, while the second one, passing through a shaded court, gives access to three departments with large numbers of public visitors.



The central atrium, 29m high and 45m long, is the internal focus of the government centre, with the main lifts and stairs, public meeting rooms, informal seating corners, and constant "action" of people passing through it at five different levels.

The north facades of the office buildings are transparent, so that the citizens will "see" the government, and the employees will "see" the city.

The building achieves its urban aim with the citizens of the city coming to shop, play, relax in restaurants and coffee shops, as well as for government and health services.

Green Building: environment and relation to climate

Beer-Sheva has a semi-desert climate - hot dry summer

days (28-34 deg C) with cool evenings (17-20 deg C), and cold winters (6-18 deg C). The diurnal temperature swing is between 10 & 15 deg C. Humidity is low (winter 45-75%, summer 29-65%), and rainfall only 200 mm, almost all between november and march. The area is subject to dust storms, and a regular high level of dust in the air.

In spite of a long linear site, stretching 230 m from north to south, by 80 m wide, the government center was planned as a series of 5 office buildings facing north-south, with courtyards between them. This orientation (with minimum east and west elevations) gives controlled access of sun in winter, and blocking it in the summer, preventing overheating of the buildings.



The deep office floor plan (18-20m) is designed to allow planning of open spaces on north side of the building, and

closed offices to south side. In the central strip are service areas, such as stairs, archives, kitchenettes etc.

The north elevation has curtain walls, with large vision areas of low-e double glazing, for maximum daylight transmission, and a high thermal shading coefficient. The south elevation is of stone-clad pre-cast elements, with shaded recessed windows, also low-e double glazed.

The courtyards separating the buildings provide light to the buildings from north and south.

The internal multi-level “street” faces west into the atria, with small view windows in the west atrium wall at each level. On the east side of the “street” is a 5.5 m thick “service wall”, containing the stairs, wc’s, lifts, HVAC and electric services,

security rooms and smoking areas etc.

The offices are designed as closed, air conditioned spaces, since the high levels of atmospheric dust prohibit use of un-filtered natural ventilation in workspaces. Fresh air intake to the AC system is at roof level, avoiding street level pollution. The atria however, have high level through ventilation grills to east and west, since, with hard surfaces and daily cleaning, dust is less of a problem in these “passage” areas.

Building Form

The design concepts of the complex are an expression of present architectural forms, transfused with local design issues and elements, carried out with the most advanced technologies available in Israel.

The architectural form is influenced by local topographic shapes of the desert, and memories of the earlier Turkish city of Beer-Sheva. The Turkish “Governors square” generated the “Rotunda”, and the Roman aquaduct suggested the Arcade. The vaulted office building roofs, the wave-form internal street roof, and the Arcade express “movement”; the



dynamic, interactive elevations express “open government”. Functional logic is shown in the repetition of the buildings, and their recurring

appearance on the streets.

To the east side, where housing blocks are located, the elevations are more articulated, and the offices appearing as separated buildings.

To the west side, where the Courthouse, offices, theater



and Municipality are located, the public arcade of the building accompanies movement of the walking public on the pedestrian street, and provides

the main entrances.

Functional flexibility

The functional layout of five buildings, (rather than one linear building), allows for different size government offices to be allocated in different floors and wings of four buildings, without confusing a clear understanding of location or movement within the building. The fifth commercial office building (inc. the health centre), is entered from the commercial mall.

The layout allows adding or subtracting of office areas between the government and commercial office buildings, and thus for adapting to future changing programme requirements.

Materials

The building is constructed of rein-forced concrete (in -situ and pre-cast), and clad with stone faced pre-cast concrete panels, aluminum curtain walls and windows, and aluminium cladding panels.

The stone is mainly local limestone, with the arcade clad in red Chinese granite to differentiate it from the offices.

The curtain walls and workspace windows are double glazed, using Low-E, high performance transparent glass.

The “street” wall cladding, the vaulted and wave-form roofs are of aluminum panels.

This is a combination of the new materials and traditional local technologies. The juxtaposition of stone, glass and aluminium creates transparency and lightness, bound with a strictly defined hardness.

Conclusions

Green design rules, and the semi-desert climate, determined the building’s form and layout, together with the demand for an urban, civic center.

It is an attempt to create architecture of controversy, of cultural pluralism, a present design but not temporary design, an architecture of local context, radiating a governmental status to the building.

Government Administration Center, Beer Sheva, Israel

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Entrepreneur

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Enosh Ltd.

Client

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Ashtrum Properties Ltd., Israel

Secom Ltd. (Shikum & Binui Ltd.), Israel

Main Contractors

Partnership of:

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Solel Boneh Ltd., Israel

