

Landscape Environment Of Recreational Spaces In Business Centers

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Abstract: The problem of the active participation of modern landscape architecture in the creation of a recreational environment for business centers in Uzbekistan is being studied. Examples of various public and business spaces are analyzed, conclusions are made about the role of landscape architecture in solving the problem under consideration, and the principles of creating the aesthetics and comfort of this recreational environment of business centers are systematized.

Keywords: business center, office buildings, business environment, recreational areas, landscape design, architectural and artistic solutions, reservoirs, facilities.

Introduction

In recent years, the problem of forming social and business centers in Uzbekistan has become extremely serious. The growth of cities and agglomerations, the organization of the largest territorial and industrial complexes, the implementation of huge urban transformations have set urgent tasks for optimizing the processes of functioning, rational use of the territory, protecting and greening the environment and the urban environment, creating a memorable architectural and spatial view of cities and directly their public and business centers (Fig.1).



Figure 1. "Nest One" - a multifunctional skyscraper under construction in Tashkent with a height of 266.5 m on the site of Lot No. 4 in "Tashkent City". Photo by: <https://www.skyscrapercity.com/threads/tashkent-nest-one-267m-874ft-51-fl-u-c.2302694/>

In order to further improve the architectural appearance and beautification of district and city centers, increase their attractiveness for foreign and domestic investors, build modern facilities on the main tourist routes, as well as expand the list and improve the quality of services provided for the population and guests

of the republic, it was decided to create centers "Business city" in districts and cities is adopted by the Council of Ministers of the Republic of Karakalpakstan, khokimiyats of regions and the city of Tashkent [1].

- the problem of forming business centers as the end result of complex urban planning processes should be considered comprehensively, taking into account the main areas, including:
- development of administrative, business, public, cultural, educational and trade functions of the city center;
- separation of pedestrian and vehicle traffic;
- increasing the intensity of the use of buildings and the development of its center-forming functions;
- preservation and reconstruction of the existing urban development in order to increase its historical, cultural and architectural value;
- achievement of socio-economic and technical feasibility of ongoing urban development activities [2].

The ideas of organizing business centers with the allocation of leading functions on their territory have been widely used in the urban planning practice of many countries over the past two decades. It is known that the transformation of public centers and their planning structure is significantly behind the development of cities as a whole. Many cities still do not have a clearly defined system of main specialized functional zones for recreational, administrative, business, cultural, educational, commercial and other purposes. In the public centers of many cities, there is a fragmentation of functional zones, which, as a result, makes it difficult to optimize the functioning of the entire system of the center and its individual facilities. [2].

Currently, the public and business centers of our cities do not have a differentiated system of recreational zones. All this creates serious difficulties with a clear functional zoning of the center and does not meet modern requirements. Nevertheless, as the results of a comprehensive analysis of the town-planning situation in cities have shown, there are reserves and opportunities for improving the architectural, planning and recreational structure of business centers.

The ecological crisis of the last decade of the twentieth century in most industrialized countries influenced the rethinking of the role of landscape components both in the improvement of external territories and in the internal spaces of public buildings.

Reproduction of the natural environment is becoming an increasingly urgent task for large business centers: the use of facade and roof surfaces of buildings, the placement of natural components in a "multi-layered" version with the spread of green surfaces in space [3].

Relevant Literature

A number of studies devoted to business centers have formulated ideas about a new type of public building that has emerged as a result of the evolution of the business function. It should be added to this that modern business centers are also being formed as groups of these public buildings of a new type - that is, they form a new type of urban development complex.

Various aspects of design, construction and operation of business centers were studied by architectural science, including: Pronin E.S., Gelfond A.L., Dubynin N.V., Sokolov L.I. Prokhorov B.B., Filin V.A., Baranov A.V., Lunts L.B. dealt with the problems of psychological health in the conditions of a modern city. The problems of landscape design and landscape architecture were developed by Dan Kiley, Emilio Ambasz, Gelfond A.L. [4], Adilov Z. [5; 6], Matniyazov Z.E. [6; 7], Vetlugina A.V. [eight; 9], Vergunov A.P., Nefedov V.A., Mikulina E.M., Zaleskaya L.S., Armand D.L.

But, despite this, the task of introducing a landscape component into the architecture of business centers remains insufficiently studied. Thus, the landscape component is an independent object of research and design, important for creating and improving the spatial environment for human life in the broadest sense of this problem.

Research results

The development of high-rise construction determined the creation of business centers of our time. They are characterized by vertical zoning and, accordingly, vertical communications. It becomes clear that the predominant building type in a modern business center is a high-rise building.

High-rise construction, which for many decades was considered the main feature of urban planning in the United States, began to develop rapidly throughout the world in the second half of the 20th century. High-rise buildings proved to be particularly suitable for business centers, although they may have had a different function.

After the Second World War in Europe, industrial and financial centers such as Frankfurt am Main and Rotterdam acquired blocks of skyscrapers. Then European capitals, still appreciating their historical integrity, began to erect high-rise buildings as signs of prosperity. Today, interest in such objects in Europe has already passed into the category of an urban planning regulation tool, widely used in cities with an already established image and in situations where skyscrapers are logically justified.

At the first stages, the new business centers were characterized by an exorbitant upward trend, explained by the scarcity and high price of the urban environment, with a rather strict monofunctionality. Later it became clear that business activity often changed during recessions in the economy. High-rise office buildings are being transformed from monofunctional to multifunctional.

Now the problems of the viability of skyscrapers are solved solely through their functionality and their "openness". In addition to business, they include premises of a new functional significance - observatories, viewing platforms, premises for tourists, etc.

Throughout the 20th century the business function developed both as a managerial, and as an entrepreneurial, and as a coordinating business process. Therefore, by the end of the century, business centers represent a seemingly diverse set of options: a ministry, an embassy, a consulate; city (city within a city), conglomerate building (vertical city); the Bureau; conference hotel; trade mission; business club; computer center; terminal, multi-purpose hub at the intersection of transport routes, etc.

A high-rise building rarely has a monofunctional purpose. A huge amount of space allows you to distribute them, taking into account the specific features of the building in such a way as to achieve maximum economic return. Parking lots are arranged on the underground levels, entertainment and shopping complexes are on the first floors. As a rule, the next block of floors are offices. The upper floors are residential apartments, also for rent. The last floors, as the most prestigious, can be both residential penthouses and public entertainment spaces. However, sometimes engineering systems are concentrated in eco-buildings at these levels, allowing the use of eco-factors (rain, sunlight and wind) to provide the building with energy and resources.

Thus, at present, the business center is a new universal type of public complex, in which actual and potential business functions in the totality of their attributes are revealed simultaneously, depending on socio-economic factors - such is the history of the emergence of business centers in the city.

Based on the consideration of the whole variety of modern business centers, two leading types can be distinguished: a large urban development complex, usually built up with high-rise buildings, and a separate high-rise building, or a group of them, representing an important new urban planning element. The first can be conventionally called "a city within a city", the second - a "vertical city". Both of them are the most important elements of the urban structure.

For a long time, when organizing the production process, the personality of the worker was completely ignored: the attractiveness of this work for him, satisfaction with his work, the impact of this work on the health of the worker and the development of his personality.

However, with the scientific and technological revolution of the middle of the 20th century, the requirements for the qualifications of workers increased significantly, and their self-awareness grew. All this has led to the fact that a purely utilitarian approach to improving labor efficiency has ceased to produce its former effect. The need to find fundamentally new ways of organizing labor, taking into account the interest of workers in it, was realized. In the mid-60s, the idea of humanization of labor arose, which by the beginning of the 70s took shape in an independent theory under the same name. The main factors in the humanization of labor are the degree of responsibility of a person for his work, the growth of qualifications and the realization of people's creative abilities, technical equipment that ensures the complexity and diversity of labor, as well as the aestheticization and greening of its conditions.

Back in 1982, a group of foreign scientists published a sensational conclusion that more than 90% of the buildings they examined are "unhealthy", that is, they create a microclimate that adversely affects the health and mood of people. The reason for this is the introduction of new materials and combinations focused

on cheap electricity and fuel. In combination with gas heating and vapor barrier of surrounding structures, such buildings become a source of fatigue and stress [3].

In the air of office buildings, you can find various solvents and organic substances contained in paints, adhesives, plastics, polymeric materials, tobacco smoke and other substances that adversely affect the body.

The concentration of toxins in the air can reach such an extent that people working in this environment develop diseases of the upper respiratory tract, bronchitis, and allergic diseases.

If our environment is more likely to cause stress than to be therapeutic, it contributes to the change taking the form of a disease. Allergic reactions have become a disease that has affected a third of the entire population. Allergies are caused by many reasons. For example, Swedish studies have shown a disproportionate increase in allergies in northern countries, where the air seems to be cleaner, but overheating in living quarters is common. And this makes us pay close attention to the buildings themselves.

The relevance of the "healthy building" task has brought to life a whole area of knowledge called "building ecology". A healthy building is a physical, moral, spiritual and aesthetic environment that is humane in relation to the city and to the participants in the work process.

Ecology of buildings - a field of knowledge designed to systematize methods for creating and maintaining an optimal environment, for this, the climate and landscape of the site, the orientation of the building, finishing materials, air conditioning, sound and color comfort are taken into account.

The formation of the landscape of a new urban complex has always been considered one of the most important tasks, both in terms of rational functioning and the creation of an expressive architectural and artistic appearance.

Based on the experience of landscape architects of previous years in Uzbekistan and other countries, it can be seen that the business center as a design object is closest to production facilities for various purposes. Nowadays, when industrial production of all kinds is withdrawn from the central urban areas, it becomes obvious that business centers take their place not only in a functional, but often in a literal sense (like "Tashkent City"). Researchers of business centers identify the main functions among them - managerial, administrative, recreational, banking, financial activities, trade and related, food and consumer services for visitors, and rehabilitation function. At the same time, the main function of the business center can be one, but the accompanying ones must be present in full - they determine the class of the business center.

Rehabilitation functions in industrial facilities of the past were entirely assigned to landscape architecture. Getting to work, a landscape architect, first of all, analyzes the structure of the design object, whether it is a developed natural landscape, a disturbed area being restored, or an urban area of a certain functional purpose.

The presence of a garden adjacent to the office complex has always been considered prestigious. Such gardens were often distinguished by a high artistic level, suffice it to name the garden at the UN office building in New York or the park with a mirror pond in Tashkent City (Fig.2).

The charm of water lies partly in a deeply rooted desire to return to the roots, partly in its necessity, but, most importantly, in the fact that there is nothing on earth that could compare with the potential of water as an element of creativity. We must not forget about the emotional component of the design of water forms. However, the most important quality of water, without a doubt, is movement, an additional dimension for the modern artist in his constant search.

According to architect J. Jellicoe, water goes through three distinct phases [10].



Figure 2. Pond in Tashkent city park Photo by: https://www.tripadvisor.ru/LocationPhotoDirectLink-g293968-d19875365-i446874401-Tashkent_City_Park-Tashkent_Tashkent_Province.html

First, in their wild form, little streams springing from springs, merging at the right time into rivers. Secondly, tamed water, intended to serve man in irrigation canals, reservoirs and various kinds of buildings. And, thirdly, water forms, created not only in imitation of nature, but also recreating the "captive" water, when the water turned into a work of art. He believed that the Trevi Fountain (Bernini) in Rome was the pinnacle of recreating natural movement, and the Persian garden was the captive water.

Over time, the attitude of man to water as a decorative material has changed. In the hot climate of Central Asia, preference has always been given to the living movement of water in the form of fountains and cascades. However, north of the Alps, where there is an excess of water, the opposite trend prevailed.

Water design originates from the interfluvium of the Tigris and Euphrates, with the construction of irrigation canals. The "Garden of Eden" of the East, the idea of which has been developed over the years, is an oasis in the desert. Water channels became symbols - the surface of the water foamed, low fountains kept it in motion. But it is not until the Renaissance that the fountain appears in all its glory.

Since that time, the main development of water design has been in technology. Engineering solutions of pipes and subsequently electrical energy have led to the fact that a closed circulation of water can become a giant fountain on a flat site or an elegant fountain in the lobby of a business center.

Until the eighteenth century, water design evolved consistently, adapting to social conditions, topography and climate. By this time, a revolution had matured in England that affected water design. Basically, it was a rebellion against the French way of thinking, against monumentalism and all-pervading geometry, it was a return to nature. It was a search for contemplation and tranquility, and therein lay its inevitable success.

If you turn to the architects Humphrey Raptop and André Le Nôtre, you can explore how reflections are used, how water can "lift" a mansion, and many other optical effects of this kind that are truly mesmerizing. And in the gardens of the Alhambra (Spain), water "mirrors" reflect and concentrate light (Fig.3).



Figure 3. Alhambra. <https://tepler.ru/spain/granada/algambra.html>

The beginning of the nineteenth century saw a new attitude towards water - the attitude towards all aspects of life has changed. The French Revolution, the Industrial Revolution, the social revolution of a smaller scale, all together created a society increasingly oriented towards the man of action. In parallel with the need to use various kinds of reservoirs, originally intended for contemplation, for active recreation, there was an unexpected "liberation" of the fountain from the dependence of water supply and gravity - electric pumps were developed.

With all the development of technology, a feature of our time has become that it seems that there was not enough time to truly understand the true aesthetics of water forms.

The landscape architecture theorist Rene Pescher contrasted water in a calm state ("mirror") with water in motion ("stream"), believing that in small landscape compositions one of these hypostases should be chosen, and only in large park ensembles should alternate fountains, cascades and calm pools.

Since the middle of the 20th century, water compositions have also been actively used in roof gardens. The water garden on the roof of a department store in Guildford (England), built by J. Jellicoe, produced a great effect (Fig.4).

A 22 cm layer of water created a distributed load, and the "islands" were covered with a thin layer of soil for small plants or gravel. The free outlines of the plan actually took into account the grid of columns. The idea behind the garden is to create ever-changing reflections, to "unite heaven and earth".

Water in motion was increasingly used in interiors, reaching a high degree of expressiveness. In the 70s, a 4-story water wall depicting an African waterfall was built in the Marriott business and hotel center in Boston (USA).

Water as a landscape component is perhaps the most expressive, and with modern technical capabilities, the most promising for use in a business center [3].

Podiums, stylobates, roofs of underground parking lots. In world practice, the arrangement of gardens above underground parking lots, on podiums and stylobates in business centers, can be considered generally accepted. Such gardens are considered to be the main element connecting the business center with the urban environment. In domestic practice, this space, unfortunately, is given little attention, although with a lack of territory around business centers, its development is very promising.

A modern business center cannot do without elevated parking. Landscape architects do not pay due attention to this area. Often, everything ends with a minimal improvement of the entrance part of the building. The possibilities of this zone are great, but not used properly.

Foreign experience provides convincing examples of how the zones of entry into the territory of a business center can use the landscape component, can be a separate and independent part of the ecological system.

Building roofs, open terraces, roofs of adjoining buildings. The use of greenery on the roofs of buildings and structures in a large city has considerable potential in terms of improving the urban environment and many microclimatic characteristics - in particular, to counteract the formation of the so-called "heat island", with negative consequences in the form of accumulation in the lower atmosphere of harmful industrial emissions, accompanied by an increase in the temperature regime of the surface layer of air. The concept of "green" is associated with one of the pressing problems of our time - the conservation and protection of nature [3].

In this regard, we can note the development of landscape compositions along the vertical, the formation of green facades and roofs. Unfortunately, the climatic conditions of our country are severe and it is almost impossible to use these spaces year-round, but, nevertheless, landscape design has great potential to create, along with traditional elements of the city structure (gardens, parks squares), areas of the natural environment of an alternative technology for developing territories.



Figure 4. Water garden on the roof of a department store in Guildford. Photo by: <https://sadirudi.ru/dzheffri-dzhelliko>

Conclusion

Currently, in the domestic and world practice of urban planning, a new type of complex has developed - the "Business Center", consisting of high-rise office buildings and a number of related elements. Such business centers are being created in the largest cities, displacing production from them, sometimes occupying former industrial territories.

The largest business centers that form entire urban areas (Cannery Wharf, La Defense, Tashkent City) carry out significant landscape and urban transformations and use landscape components to create their own expressive architectural and artistic appearance. The same approach can be traced in smaller business centers.

The problem of humanizing the environment of a business center has two aspects - ecological and aesthetic. The environmental aspect includes the engineering and landscape-architectural direction. And these aspects must be taken into account when designing and organizing the territories of business centers in Uzbekistan.

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