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FORMATION OF HIGH-RISE DOMINANTS IN THE STRUCTURE OF THE HISTORICALLY FORMED URBAN LANDSCAPE OF BAGHDAD

The historically formed feature of Baghdad, the capital of Iraq, is the formation of the city in close relationship with its primary landscape principle. Baghdad is located on the Mesopotamian Lowland, on the floodplain banks of the Tigris River.

Currently, a big problem is the invasion of modern high-rise buildings into the historically formed structure of the urban landscape, the transformation of historical panoramas and city skylines, and, in general, changes in the city skyline.

In the article, the author, on the basis of the analysis, revealed the historical stages of the development of the high-rise dominants of Baghdad and determined the change in their parameters and functional purpose. In addition, the proposed classification of high-rise buildings on the basis of their historical, architectural and compositional features. In the final part, the principles of the architectural formation of the high-rise dominants of Baghdad are formulated.

Keywords: architecture of high-rise buildings, high-rise dominants, urban landscape, identity, the image of the city, the silhouette of the city, the architecture of Baghdad.

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ФОРМИРОВАНИЕ ВЫСОТНЫХ ДОМИНАНТ В СТРУКТУРЕ ИСТОРИЧЕСКИ СЛОЖИВШЕГОСЯ ГОРОДСКОГО ЛАНДШАФТА БАГДАДА

Исторически сложившейся особенностью Багдада, столицы Ирака является формирование города в тесной взаимосвязи со своей ландшафтной первоосновой. Багдад расположен на Месопотамской низменности, пойменных берегах реки Тигр. В настоящее время большой проблемой является вторжение современных высотных зданий в исторически сложившуюся структуру городского ландшафта, трансформация исторических панорам и силуэтов городов, в целом изменения городского скайлайна.

В статье автор на основе проведенного анализа выявил исторические этапы развития высотных доминант Багдада и определил изменение их параметров и функционального назначения. Кроме того, предложена классификация высотных зданий на основе их историко-архитектурных и композиционных особенностей. В заключительной части сформулированы принципы архитектурного формирования высотных доминант Багдада.

Ключевые слова: архитектура высотных зданий, высотные доминанты, городской ландшафт, идентичность, образ города, силуэт города, архитектура Багдада.

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I. INTRODUCTION

Currently, there is an increase in high-rise construction in cities in the Middle East, including Baghdad. The influence of high-rise dominants on the historically established buildings is increasing. It became necessary to regulate high-rise buildings from the point of view of the placement of these objects in the urban landscape.

An analysis of the practice of new high-rise construction in historical cities of the Middle East shows that the random placement of high-rise dominants in the structure of cities can adversely affect the transformation of their architectural appearance, the loss of the role of historical high-rise dominants in the formation of urban silhouettes.

Another problem of new high-rise landmarks, which often have a commercial purpose, is their spatial "intolerance" to the already formed architectural objects of culture and religion, which are highly respected and respected by the inhabitants of the cities of the Middle East. The problem of the placement of modern high-rise buildings is very acute, since at present, for example, in Baghdad, where there are no administrative regulations and urban planning norms justifying the parameters of the mutual placement of these objects (skyscraper — mosque) in order to support and respect the local religion and cultural identity.

II. ANALYSIS OF THE INFLUENCE OF HIGH-RISE DOMINANTS ON THE FORMATION OF THE STRUCTURE OF THE URBAN LANDSCAPE OF BAGHDAD

The main historical architectural dominants of Baghdad are concentrated in the central part of the city, located on the eastern bank of the Tigris River. Historically, the development of Baghdad, its urban fabric was a visually monolithic monotonous development of low-rise residential buildings¹. Traditional Baghdad apartment buildings have an open courtyard and narrow narrow streets. The preserved historical buildings are located in the districts of Kharkh,

ИЛЛЮСТРАЦИИ

1. *Baghdad City plan and its surroundings: A — round city of Mansur; B — suburb of Kharkh; C — Baghdad (1095). Source: <https://slide-share.ru/karta-arabskogo-khalifata-vii-xi-vv-118488>*

2. *Panorama of Baghdad. Photo from the book *Bagdad, Babylon, Ninive: Hedin, Sven Anders, 1865–1952. Source: <https://archive.org/details/bagdaababylonnin00hediuoft/page/116/mode/2up>**

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¹ *Iraq [Electronic source]. URL: https://dic.academic.ru/dic.nsf/enc_colier/253/%D0%98%D0%A0%D0%90%D0%9A (in Russ).*

² *Shatha A. Hasan. Effect of Colonial British Architecture in the Iraqi Modern Architecture. University of Baghdad, Baghdad, Iraq, 2018.*

³ *Hedin, Sven Anders. Bagdad, Babylon, Ninive. 1865–1952. Publication date 1918. P. 116.*

⁴ *Hybrid Urbanism: On the Discourse of Identity and the Built Environment, Nezar Al Sayyad. Review: Bulletin of the Association for Near Eastern Studies by James J. Connolly. Vol. 36, no. 1 (summer 2002). P. 78–79.*



Rusafa and Kadimiya (Fig. 1)². The high-rise dominants that formed the image of the city were the buildings of mosques and minarets (Fig. 2)³.

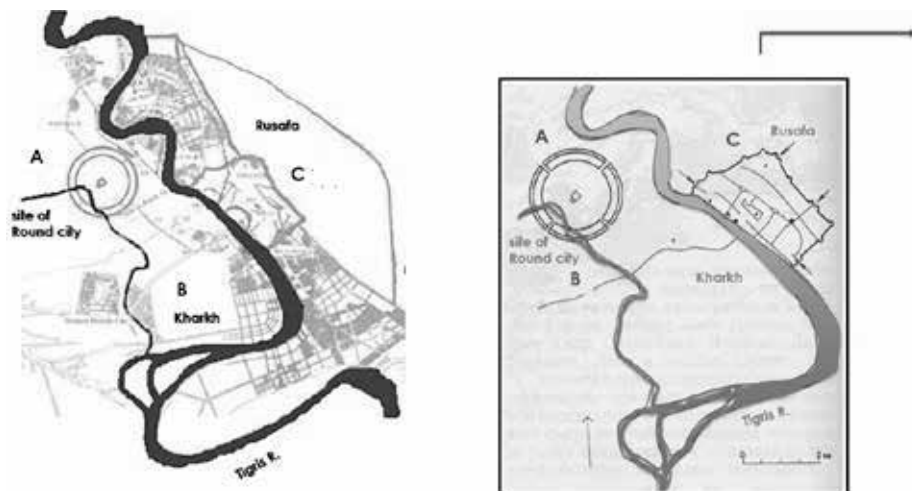
After analyzing the historical structure of the urban landscape of Baghdad, I identified the following periods of the formation of high-rise dominants.

1. Historical period (up to XX century)

The radical transformation of the urban landscape of Baghdad began in the XX century. 1921 marked the beginning of the national era in Iraq, the year of the founding of the Kingdom and, at the same time, the year of the establishment of the so-called British Mandate. The British administration, which remained in Baghdad after the end of the occupation of Iraqi territory after World War I, began major infrastructure work in Iraq⁴.

2. Period of Westernization of the country, British Mandate (1921–1958)

The period 1921–1958 can be described as the beginning of the reformation of the urban landscape of Baghdad. With the emergence of new



public facilities of a secular nature, these are museums, railway stations, administrative buildings that “did not enter into dispute” with the existing spiritual symbols — mosques, madrassas or minarets.

The stage of “westernization” of the city began in the form of British-colonial regulation of its architectural and planning development.

1958 was the starting point for the birth of a new strategy in the development of the city, and the high-rise architectural dominants were to play a major role in the transformation of the urban landscape of Baghdad.

The new national government of Iraq, after the country’s independence, has planned large architectural and urban development projects. Their goal was to present Iraq to the world community as a progressive and ambitious country, and Baghdad as the new capital of the Arab world and as the world’s largest city. World famous international architects were invited to carry out the projects: V. Gropius, F.L. Wright; Le Corbusier, A. Aalto, G. Ponti and others. The architects were actively involved in the work, but due to subsequent political changes, few of the proposed projects were implemented⁵.

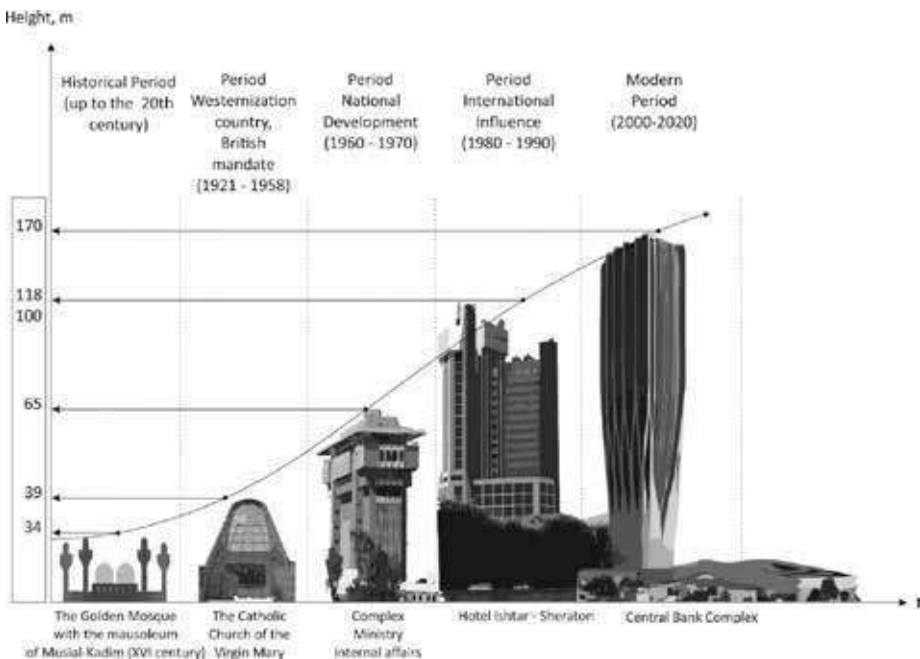
3. Changes in the high-rise dominants of Baghdad during the XX–XXI centuries compared to historical examples. Source: author of this study

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⁵ Hybrid Urbanism: On the Discourse of Identity and the Built Environment, Nezar Al Sayyad.

⁶ Akram J.M. Al-Akkam. Urban Heritage in Baghdad: Towards a Comprehensive Sustainable Framework // Sustainable Development Journal. 2013. Vol. 6, no. 2. P. 39–55.

⁷ Baghdad: city information, sights, description [Electronic source]. URL: <https://autogear.ru/article/158/223/bagdad---stolitsa-kakoy-stranyi-bagdad-informatsiya-o-gorode-dostoprimechatelnosti-opisanie> (in Russ).



3. Period of National Development (1960–1970)

This period was marked by the rapid growth of construction in Baghdad. The city became the main center of architectural culture in the Arab world.

4. Period of International Influence (1980–1990)

Cultural revival 1980–1990 spawned many works of monumental art, which also formed their own layer of high-rise dominants. Expansion of tourism in the 1980s became one of the goals of the government, therefore, among the high-rise buildings of Baghdad, various hotels became a large group⁶.

In the 1990s, high-rise residential complexes appeared in Baghdad for the first time, which radically changed the panorama of the city. These include “The Dutch Residential Buildings”, which are about 50 meters high on the west bank of the Tigris River along Haifa Street. Thus, a linear arrangement of high-rise buildings was added to the centric, traditional for Baghdad focal scheme of compositional organization of high-rise buildings.

5. Modern period (2000–2021)

The modern period is characterized by the emergence of functionally new dominants (banks, multifunctional complexes, residential complexes). Their height has increased (from 100 m and more) (Fig. 3).

Analysis of the historical, architectural and compositional features of high-rise dominants in the structure of Baghdad made it possible to develop and highlight their classification and divide into groups. Five types of high-rise dominants are proposed.

Type 1. Historical Religious Buildings and Structures — objects associated with traditional religion, the spirit and religious beliefs of society. First of all, these are Islamic mosques, minarets and Christian cathedrals and churches. These buildings and structures now represent not only the architectural and historical and cultural attractions of Baghdad, but also are a place to meet the religious needs of representatives of the Islamic and Christian communities. (The Golden Mosque with the mausoleum of Musial-Kadim (XVI century); Catholic Church of the Virgin Mary; Mausoleum and Mosque of Al-Jailani (Mosque and Library), etc.)⁷.

Type 2. Historical and Architectural Monuments and Memorials, which are material symbols of the intellectual and spiritual life of society and the history of the state (Mausoleum of Zubaida-Khatun; Monument of Freedom, Monument to the unknown soldier, Monument to the Martyr, etc.).

Type 3. Social and Cultural Buildings (National Museum of Iraq, Al-Jazeera Tower, Central Station, etc.).

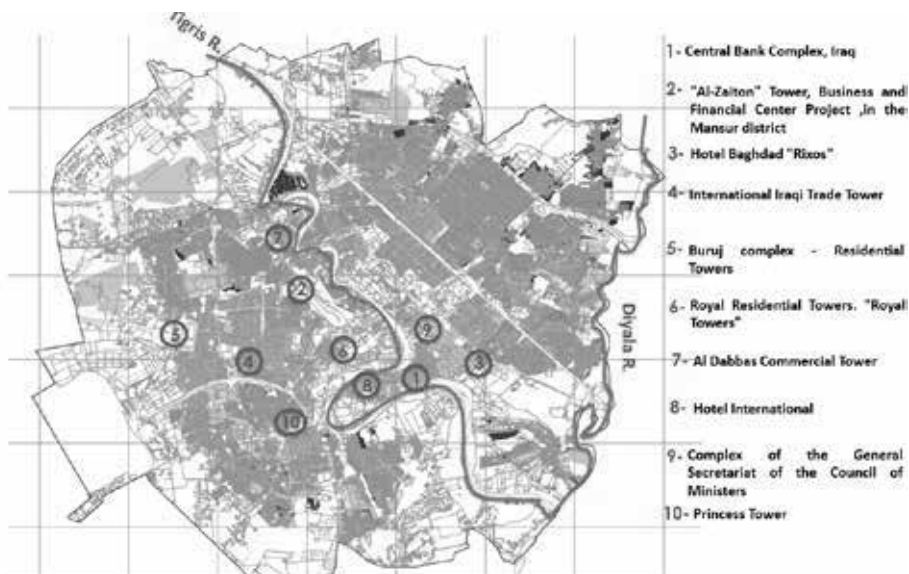
Type 4. Modern Buildings —“icons”. These are high-rise buildings, complexes and centers for multi-functional, commercial, business, cultural and other purposes, which are architectural symbols - models of modern Baghdad (The Babylon hotel, The building of the Iraqi Supreme Court, The International Information Center “Baghdad Tower”, etc.).

Type 5. Modern Residential Complexes (Princess Tower, Iraqi Gate, Zukhur, Yamama City, etc.) (Table, Fig. 4).

On the basis of the classification of high-rise dominants and an analysis of their placement in the structure of the city, the principles of the architectural formation of high-rise dominants of Baghdad are formulated.

1. The principle of the priority of the spiritual and socio-cultural significance of historical high-rise dominants in the system of high-rise buildings. The principle implies the preservation of the main role and special social significance of the historical dominants of the 1st type (public and religious buildings and structures), despite the fact that the main increase in high-rise buildings

4. The location of modern high-rise dominants in the planning structure of Baghdad is shown. The scheme is made by the author




- 1- Central Bank Complex, Iraq
- 2- "Al-Zaiton" Tower, Business and Financial Center Project ,in the Mansur district
- 3- Hotel Baghdad "Rixos"
- 4- International Iraqi Trade Tower
- 5- Buruj complex - Residential Towers
- 6- Royal Residential Towers. "Royal Towers"
- 7- Al Dabbas Commercial Tower
- 8- Hotel International
9. Complex of the General Secretariat of the Council of Ministers
- 10- Princess Tower

Table. Some characteristics of modern high-rise buildings in Baghdad are presented. High-rise dominants, which are officially approved and partially completed in the structure of the urban landscape of Baghdad

Visual appearance	Name, Characteristics	№
	<p>Central Bank Complex, Iraq Work in progress Height 172 m Architect Zaha Hadid Construction Azerbaijan company "Daax Construction"</p>	1
	<p>"Al-Zaiton" Tower, Business and Financial Center Project, in the Mansur district Not implemented Height 195 m On the ground of the Baghdad International Fair The author of the project is an Iraqi company</p>	2
	<p>Hotel Baghdad "Rixos" Work in progress Height 85 m In the Jadiriya district Author of the project – Rixos International Hotels</p>	3

Visual appearance	Name, Characteristics	№
	<p>International Iraqi Trade Tower Not implemented Height 75 m In the district of Al-Haritiya Author of the project – Iraqi company</p>	4
	<p>Buruj complex – Residential Towers 2019 Height 80 m located near Baghdad International Airport Author of the project – Company (Modon Real Estate Development) and Company (Dagli Turkish)</p>	5
	<p>Royal Residential Towers. "Royal Towers" 2019 Height 87 m In the Bezh district Author of the project – Turkish company</p>	6
	<p>Al Dabbas Commercial Tower Not implemented Height 75 m The author of the project is an Iraqi company</p>	7

Visual appearance	Name, Characteristics	N°
	<p>Hotel International 2017 Height 80 m Opposite Bayarat Al Sham restaurant The author of the project is an Iraqi company</p>	8
	<p>Complex of the General Secretariat of the Council of Ministers Not implemented Height 55 m Architect – Manhal al-Habbobi</p>	9
	<p>Princess Tower 2017 Height 80 m Architect – DAMAC Company – Dubai Residential tower in Baghdad</p>	10

Sources: <https://www.youtube.com/channel/UCJx7nfmNqk3luhj9hFwVCA/about>; https://www.facebook.com/CE.BAUC/?ref=page_internal; <https://www.facebook.com/BaghdadProjects/photos/pcb.2926114154295075/2926113964295094>; <http://www.bonah.org>; <https://www.facebook.com/BaghdadProjects/posts/1545447922361712>; <https://www.facebook.com/BaghdadProjects/posts/1545447922361712>

comes from office, commercial and, more recently, residential buildings. Despite their lower height (25–40 m) relative to modern dominants, often exceeding 100 m, the architectural and compositional characteristics of this group of objects are a source of inspiration for creating new silhouettes and panoramas and preserving the uniqueness of the appearance of Baghdad.

2. The principle of the continuity of the formation of high-rise dominants determines the reflection and preservation in the appearance of the high-rise dominants of the projected complexes or individual buildings of the historical compositional patterns of silhouettes, panoramas and the “skyline” of the city. The principle is implemented through maintaining the proportions of the ratio of the height of the dominants and the surrounding buildings. The expressiveness of the urban silhouette in this case is achieved through the construction of verticals that are clearly visible against the prevailing horizontal background of a flat floodplain landscape and horizontal lines of layers of terraced buildings in compliance with the proportions between the dominants and the surrounding buildings from 1 : 2.5 to 1 : 4.

3. The principle of spatial integration of high-rise dominants into the structure of the urban landscape. The implementation of the principle is associated with the provision of a visually perceived sequence in the placement of high-rise dominants and the construction of stable visual connections between them. Due to the fact that the urban landscape of Baghdad is flat, the main structural axis is the Tigris River, along the banks of which it is recommended to create river panoramas with the formation of both high-rise clusters and free-standing high verticals.

Another direction of the principle implementation is the subordination of high-rise dominants. In this case, it is advisable to use a five-step system of dominants, including high-rise dominants of the 1st type, united on the territory of the historical center, forming the basis of the planning structure of the city and forming its main compositional axis, dominants of the 2nd type, forming the memorial and cultural framework of the city; dominants of the 3rd and 4th type, accentuating the main spatial connections and functional planning nodes of the city; dominants of the 5th type are necessary for the formation of rhythmic constructions on the border of the city and along transport routes.

4. The principle of the integrity of the perception of high-rise dominants predetermines the formation of a system of spatial visual connections between high-rise dominants and viewpoints of city panoramas and building silhouettes. The principle implies the creation of conditions for the silhouette perception of high-rise dominants, which includes the elimination or prevention of dissonances between the dominants and the surrounding urban development, as well as the search, consolidation of existing and creation of new viewpoints of city panoramas, silhouettes and skylines (observation deck, “key point”, “gold point”).

Through a field survey, the author selected 30 key points from the entire set of points of visual perception of high-rise dominants in the structure of Baghdad, which influence the formation of the structure of the urban landscape.

The principle also includes the preservation and formation of whist as geometrically defined visual corridors between the vantage point and the strategically important high-rise dominant.

The principle is realized through the preservation of an open spatial perspective, which includes 5 parts: the point of view, framing "Urban Fabric", the middle ground (narrow frontal viewing angle from the "key point" to the compositional emphasis), the completion of the perspective — the object of observation, and a wider back the background against which the general figure or silhouette of the object is perceived. They are formed as linear perspectives (for example, river panoramas) and as wide panoramas (panorama of the city landscape).

5. The principle of architectural and artistic construction of high-rise dominants presupposes the use of shaping techniques characteristic of Baghdad, which largely determine the individuality of the city's silhouettes and panoramas. The identified basic forms of high-rise dominants of Baghdad, such as "dome", "minaret", "rotunda/cylinder", "ziggurat", "pyramid", "cluster", can become the basis for creating new high-rise accents. Completions of high-rise buildings are of particular importance as the most important components of their architectural image. Domes are traditional for Baghdad.

The proposed principles reveal general approaches to the architectural harmonization of high-rise dominant objects when solving the spatial composition of the city. Their use will also allow to streamline the process of urban planning placement of high-rise dominants in master plan projects and territory planning projects.

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