

The Architecture of Protoliterate Period

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Abstract. Mesopotamian architecture was characterized by a number of important elements created by ancient builders in line with the nature of the region, the layout and formations of buildings, as well as their association with the types of structural materials used in the construction process. The achievements of the ancient Iraqis in architecture were many, and among their innovations was their high ability to innovate elements from early times based on the results of archaeological excavations. One of the things that draws attention in the architecture of this era is the magnitude of the buildings and the interest in the defensive fortifications represented by the walls, so they were very huge, reaching about two meters approximately, but in terms of aesthetics, this era was famous for a kind of decoration of facades and columns known among researchers for the decoration of beautiful mosaics, which has become a feature of this era.

Highlights:

1. Mesopotamian architecture emphasized massive structures and defensive fortifications.
2. Innovations included decorative mosaics and aesthetic facade designs.
3. Ancient builders adapted designs to regional materials and environment.

Keywords: Mesopotamia; architecture; mosaic decoration; defensive fortifications; fences

Introduction

Mesopotamian architecture was characterized by a number of important elements created by ancient builders in line with the nature of the region, the layout and formations of buildings, as well as their association with the types of structural materials used in the construction process.

The achievements of the ancient Iraqis in architecture were many, and among their innovations was their high ability to innovate elements since early times based on the results of archaeological excavations, and the study of what has been revealed of architectural structures in Iraqi sites, which rise to prehistoric times and analysis confirms the originality of ancient Iraqi architecture through the ages, which became more evident in the late ages, and we will highlight in this study the architecture in the biblical-

like era and its development Since man left the cave after taking it as his dwelling and then moved to live in the open lands and near the rivers and began the first villages and small cities and their development and became famous historical cities had a prominent role in the civilization of Mesopotamia and even in the history of the ancient Near East.

Divide this research into two chapters dealt with in the first chapter, which in turn divided into two sections where the first section dealt with the naming and historical period of the era similar to the book (3500-2800 BC) and dealt with the second section the most important sites of this era inside and outside Mesopotamia where the civilization of this era spread in different regions of Mesopotamia and the Near East and our choice fell on the most prominent of these sites, In the second chapter, which was divided into two sections, we dealt with in the first section religious architecture for this period, which includes temples and ziggurats and in the second section civil architecture, which includes residential houses, fences and public buildings.

1.1. Naming and the most prominent elements of civilization

This name was given to the time period between (3500-2900 BC) and means the period in which the first sham signs used in codification appeared, in the middle of the fourth millennium BC the inhabitants of Mesopotamia achieved the greatest civilized achievement by inventing a way to codify by drawing the sham marks through which they expressed the material things that they wanted to refer to or to their numbers, These simple pictorial signs were the beginning of man's knowledge of writing, which developed in later periods and became regular and complex writing, cuneiform writing.

And the importance of writing in human life I counted by researchers the boundary between prehistory and historical times as long as writing was a means of recording history itself, but writing in its early stages, which took several centuries and was limited in use on a number of people, especially priests, and was used to record some things related to economic life in the first place, meaning that it was not used to record science, knowledge and historical incidents, so the researchers decided to name this stick [17].

In the era similar to the historical because the blogging was in its first beginning and this era included two main roles the role of the last Warka (the fifth and fourth layers) and the role of Jamda Nasr (the third and second layer of Warka) and was recently added to these two roles the era of the dawn of the first dynasties [5].

1.2. The most important sites of this period

1.2.1. Locations in Mesopotamia

One of the most important sites of this era (3500-2800 BC) is the city of Warka, which represented all the roles of this era and all the architectural and cultural elements that gave its name to it, so we see it called the era of Warka.

The Sumerian city of Warka is located in the province of Muthana, 60 km east of the city of Samawa and dates back to the fifth millennium BC was a prestigious religious center has been called several names, including the Sumerian name Uruk and means settler and Onouk and Warka and named Baltorah (Irekh) consists of its remains today of hills have been excavated and others have not excavated, successive on this city several civilized roles inhabited by the Sumerians, Akkadians, Babylonians and Kasians and then ruled by the Assyrians, Chaldeans and then the Persians Achaemenids and then established in it Seleucids and Parthians buildings are still remnants today, and the city of Warka of the largest archaeological cities in southern Iraq has included three civilized roles divided into the old Warka and Warka mediator and Warka late inhabited the city of Warka since the fifth millennium and was then a small city consisting of simple naïve buildings of mud, reeds and mats found its remains in the eighteenth layer deeper layers of this city and then began life progresses and successive eras and civilizations and prospectors were able to distinguish seven major civilized roles divided into secondary layers They totaled about twelve layers, then they were distinguished under these layers by eighteen other layers, all of which are prehistoric and the highest of which is the era of the dawn of dynasties and the last of which is the virgin land [9].

Cuneiform sources state that the city of Warka was located on the Etroncal River.* [14], [15] Or passes near it, there is a text indicating that one of the rulers of Warka built a temple to the gods (Ganisurra) Lady of the Etroncal and then abandoned the temple and turned to Warka, which determines that this river was passing near it and mentions the sources were composed of two lanes east and west and at the end of the fourth millennium merged and became one was fortified with a wall and is the second city ruled after the flood after the royalty was defeated from Kish and moved to it ruled by a dynasty called the first Warka dynasty the most famous king is Gilgamesh and then ruled by several other dynasties [7], [15].

Among the other sites of this era is the city of Eridu, which is the first settlement centers in the southern part, and archaeological excavations have proven to the prosperity of urbanization and construction in it during the period of the protoliterate period, and the temple was built in it from adobe, similar to the temples of Warka, where the city of Eridu witnessed an urban renaissance, as it prevailed in buildings erected on building terraces that live up to them with stairs and the most prominent of the remains of the city are now seen from the remains of the city a few heights covered with sand and the remains of the stepped tower (ziggurat), which dates back in its origin to the era similar to But Balajr was built in its last historical form during the reign of the third dynasty of your in the limits of (2100 BC), as evidenced by the wage stamped with the names of the kings of this dynasty. It seems that public housing in the city of Eridu has been almost cut off after the role of Warka and life in it was limited to a number of public buildings [3].

Among the other sites that have proven excavations to be inhabited since prehistoric times is the city of Kish, which includes the oldest roles in the era of slaves about (5000 BC) and found the effects of this era in another site Hojmada Nasr, which is located in the project hand, but the remains that represent the roles of slaves and Warka old and late be under the rubble of huge remnants of subsequent historical eras and did not reveal the remains of this era only in the site of Uqair, which is on the east of the administrative borders of the province of Babylon For now [3].

The second role of the protoliterate period is that of Jamda Nasr, which got its name mainly from the site of Jamda Nasr, located 25 km northeast of the site of the ancient city of Kish, which was excavated by a British mission headed by Stephen Lunchdon (Steven Langdon (excavation in Jamda Nasr for the first time in 1925 during the excavation at the site of the city of Kish and then returned another British mission in the excavation at the same site in the eighties of the twentieth century headed by Roger Matthews and includes the site Tleen, and conducted most of the excavation in the largest hill, which covers an area of about 7.5 hectares and includes the remains of housing dating from 3400-2800 BC and despite the importance of this civilized role and the site of Jamda Nasr, which found the effects of this era for the first Once the excavations were brief and did not publish detailed studies, so most of our information about this role came from other sites, including Warka (third layer) and Nafr al-Tabaqat

(14-12) in the temple of Anana in southern Iraq and Khafaji in Diyala and Sousse Tabqa (C Iran and Tel Brak al-AsrH) in Syria, and it is likely that the old name of Jamda Nasr is Kadnoun (Kidnun One of the most important discoveries from this role at the site of Jamda Nasr is a large group of clay figures with about 240 numbers found in the large building, which carries very early texts and dates about 3000 BC revolving around lands, yields and people, which indicates the practice of commercial activity under the control of a large institution that may have been the temple [3].

Common makes us sure of this close relationship at this point in time and there is another belief that these civilizational links did not come by population migration, but is a natural extension of the Sumerian civilization between Mesopotamia to the sites of northern Syria, where archaeological excavations proved that northern Syria, Mesopotamia and South Asia Minor share the characteristics and characteristics of the cultural and social transformations taking place in this era, where the pottery Warkai spread within the settlements of those areas. [8].

This era has shown us a clear correspondence between Mesopotamia and Syria to a large degree, and this was represented in architecture, pottery, arts and graphic writing, as the excavations that took place in the central Syrian Euphrates basin, in which important settlements originated back to this era, proved

Recent archaeological excavations in Syria showed us the importance of sites dating back to this period, the most important of which is the great grain, which is located on the right bank of the Middle Euphrates, as this city played a commercial role in the middle of the fourth millennium BC because it was located on the trade road that connects the east with the west, and it has revealed three building layers dating back to the city, which has an area of 18 hectares, and excavations have shown that there are similarities between the cities of Al-Habouba and Al-Warka in terms of architectural styles And arts and handicrafts and this indicates close links between them since the middle of the fourth millennium BC [8].

And to the south of Habouba was excavated in Tell Qanas, which represents the religious and cultural center of the city of Habouba and dates back to the era similar to the biblical also Mount Arouda, which is located to the north of Habouba and successive Syrian sites belonging to this era in giving evidence of the effects of civilization of the role of Warka extension to the far north of Syria has been illustrated in the site (Jarablus

Tahtani) located near Carchemish, which excavated a British mission four seasons (1992-1995) as the pottery discovered in it indicated that they are Warkaia In its style, manufacture and shape, and the latest evidence of the links between Mesopotamia and the Levant is the site of Tell Mashnagha, which was conducted by the French mission headed by Dominique Pierre in 1995, which had inhabited since the role of slaves until the first half of the third millennium BC [8].

The First Topic

2.1. Religious architecture

The religious architecture, which preceded the protoliterate period and founded him were small temples and these temples, which date back to the role of slaves is the temple discovered in the city of Eridu, where Eridu was and within the limits of (3500 BC) of the most famous cities in ancient Iraq and since the beginning of history took this city shrinking and the reason is probably due to the scarcity of water, which is not enough to water its crops, but remained the religious center and became the mother of temples so that it is inhabited only by the priests and priests and those who followed them from Their request in southern Iraq has been built this temple on a bench or platform and the architectural unit in which is the mihrab of the temple from the opposite side and behind it a walkway or corridor.in the north has been found the oldest temples in Tabat Kora near Mosul from the role of alliance, comparable to the temples of Eridu of the same role [5], [17], [18].

The most prominent characteristic of the protoliterate period (3500-2800) is the continuation of temples in their general form in their general form from the periods of slaves and old and medieval warka, but they increased in breadth and beauty, elegance and decoration, so they appeared during this era the first high temples or the so-called (Ziggurat)*, which was specialized in the Mesopotamian civilization [5].

This role was represented by a group of doctrinal buildings that appeared in the city of Warka in the I-Ana area, the holy home. To the goddess We are the Lady of the Sumerian Ishtar sky and it is still one of the largest and most beautiful buildings once it has been well preserved, as these buildings are one of the oldest buildings built by man and its beginnings can be traced back to the fifth millennium BC [5], [11].

The temples in ancient Iraq are on the types and sections of the types of ground temples, which are usually dedicated to the main gods and be in central areas, especially within the city centers where allocated for worship and there are temples high or high above the terraces constructed of milk layer or two has been characterized by this era as we said this type of temples and these two types of temples are the two main types that characterized them temples and layouts in ancient Iraq [1].

In the city of Warka, excavators revealed many temples, which date back to the protoliterate period (3500_2800 BC), and from these temples is the temple dedicated to the goddess that we are Ishtar, as well as two double temples were found, one of which was called a temple ((Baquer, 2009, p. 246)C) and the second temple (D) The nave that brings together the temple rooms and annexes was shaped like a letter (T) This form was also found in the temples of northern Iraq and I joined the small temple (C) A small building unit similar to the white temple and these buildings illustrate the early creativity that appeared in architecture during this era and the designs used in these two temples is the presence of two wings overlooking the courtyard or the sacred and the temple (D) is the best model that distinguishes the urban design letter (T). [5], [11].

2.2. Limestone Temple

The temple called the Limestone Temple of the largest buildings of the last role of Warka (3500_3000 BC) has been built on a longitudinal plan dimensions (70 m × 30 m) and directed corners towards the four sides and the walls were decorated with mosaic decorations, and this feature was characterized by the walls of buildings in this period and subsequent periods and the mosaic consists of cones of roast clay ranging in length between (3_4 Anjat) colored their heads with pigments of black, red and white and were installed in the walls of the screed With clay, the walls were also decorated with a system of sorties and entries, the temple was built with the type of milk known as (Balrimshin) [5], [12], [17] which is considered the main material for the buildings of the Warka era of its fourth layer [10].

The central part of the temple is shaped like a letter (T) where the dimensions of (62 m) length and (11 m) width and on each side of the courtyard there are four rooms opposite completely and on each side of the courtyard there is a room containing a ladder used to climb to the roof of the temple The rest of the rooms are entered through entrances from the outside On the southern side there is the most important room in

the building surrounded by a small room on each side is entered through the courtyard (long room) through a wide door adorned corners curves or Plant branches are in the longitudinal axis of the temple [12].

2.3. Temple of Apu

Recorded for this temple six roles of construction serial dating back to this era eventually evolved into a ziggurat in the form of a bench or terrace rise (50) above feet the ground, and built above the temple, which was known as the White Temple, the temple high this even in its last form sophisticated, which dates back to the era of the dawn of the second dynasties represent the outcome of a tradition passed by several centuries evidence of what was found during the excavations on several roles of construction re-and the repetition of collapse and reconstruction has Making this temple high, that is, this led to the height of its construction and its place [12], [18].

2.4. Uqair Temple

Excavations conducted in Tell al-Uqair, which is located 50 miles south of Baghdad on a temple known as the Uqair Temple, and is one of the first high temples any ziggurat, where his time contemporaneous with the fourth layer of Warka through the milk that the temple was built by, the temple is based on a bench or terrace rises about four meters and is divided into two benches connected by a staircase, the walls of the temple building are wide, where it is about two meters covered with a layer of clay and decorated from the outside with a system of sorties And vertical and alternating inputs and was white painted with plaster and inside each entry there is another entry narrower than them and Tghor in each sortie three vertical lines and slave round from three sides any shape letter [5], [18], decorated the walls of the temple with colorful and beautiful pictures of human forms painted in the form of a procession and the forms of some animals, and the drawings discovered in the wall of the temple of the oldest drawings and wall images discovered so far [5], [18].

2.5. Al Ain Temple

One of the buildings dating back to the era of Jamda Nasr Temple of the eye in Tel Brak on the Syrian border in the Khabur area has been named Temple of the eye because of the many forms and stone images carved in which the eyes without heads, [5] The temple was built on top of two similar structures and its decorations were eyes and amulets in the form of votive images made of alabaster and are located in the temple

platform, 1–1. The temple platform was decorated in the authentic Syrian style with gold and sparkling colored gemstones.

2.6. Oval temple

It was called the oval temple because its external shape is oval occupies a sacred lane with an area of about (8000 m) wall with two huge walls surrounding the temple shrine The temple is located on both sides of the large square and there are at the second end of the temple other temple facilities and priests' residences, the plans show the three stages of construction dating back to the second and third periods of the era of the dawn of dynasties In the beginning there is a harmonious wall and the buildings around it have been arranged in to be a rectangular internal courtyard and a second wall has been added to it as we mentioned in order to Allows him to build an external courtyard, has revealed excavations for the strange way in which the temple was built before the construction of the foundations of the temple dig a deep and large trench received digging nearly (64,000 cubic meters) of dirt and then put in its place clean and clear sand and this phenomenon indicates the interest of the ancient Iraqis in the era of the dawn of dynasties to build temples and interest in their sanctity. [5], [11].

One of the models of temples dating back to this era is the banish, which is located on the height of Tell Qannas in Syria in the area or Tell Habouba Al-Kabir on the west bank of Syria and was one of the temples in this area decorated its walls with nails of clay similar to the nails that appeared in the city of Warka in the columns of buildings or walls to give multiple geometric and decorative shapes in the style of [16].

Civil architecture

3.1. Residential Houses

The housing house is the first architectural unit known to man, and over time, with the increase in his needs and the development of his technologies, the facilities of the residential house increased, its building patterns varied and its area varied, but the goal in its establishment from ancient times until the present time remained in place and was represented by the presence of a suitable place that provides comfort, safety, tranquility and stability.

As for the beginnings of these houses, man has taken the stone ages in Mesopotamia in caves and natural shelters as his shelter, so it is possible that the

elements that make up the cave in whole or some have been reflected in the form of the design of the houses. This is because of his urgent need for a place to shelter him instead of the cave and perhaps the mental image that was imprinted in the imagination of that person in the form of caves has played its role in the form of designing the houses that he built in the early stages of his individual life as those houses contained the elements that make up the cave, namely the roof, walls and entrance, as he built the walls of the house on the ground and left a hole in which he used to enter and exit and the roof of the upper summit confined between the walls with mud, columns, reeds and perhaps animal skins in a way Primitive and naïve [15], [19].

3.2. Basic planning for the old Iraqi house.

The climatic conditions had a great impact in making the design of the houses closed from the outside and open from the inside, in order to be distinguished by climatic conditions that enable its residents to live and work freely, taking into account the distribution of spaces inside the dwelling and ensuring the entry of light and air easily to all sections of the house [6].

3.3. The layout of the building depends mainly on

- 1- The area of land available for construction
- 2- Number of family members
- 3- Material capabilities

In addition, one of the other methods devised by the settlers to reduce the effects of the environment is the construction of an open middle yard around which rooms of different sizes are distributed and an entrance leading to the inside and the house has a wide flat roof to climb to it through a ladder built in one of the corners of the house [13].

Archaeological excavations conducted in the ancient Iraqi sites revealed many residential neighborhoods for the general public, as well as large houses dedicated to the rich class of people, but the remaining monuments of them are very few, due to the nature of the construction materials from which these houses were built, namely clay, raft and wood. The oldest houses were in the form of oval-shaped pits constructed of stones and gravel, and these houses represent a transitional stage from life in the cave, caves and open settlements to a life of settlement in the settlements built for housing. [17].

Then appeared rectangular houses and became more regular construction in the construction of walls and contain the scheme on many facilities as well as the presence of corridors and stores and other requirements of life and then appeared layout houses in the letter T in the era of Samarra of the houses of Tel Al-Sawan and appeared circular houses in the era of the alliance (houses with a rotator layout Tholoi) or oval and then houses with three-part planning close to the dwellings of the era of slaves has been found in some stairs to climb to the house and the most prominent sites that were found It has houses from the protoliterate period.

3.3.1. Qaling Agha

Where many residential lanes were found that are penetrated by main streets and roads, which were paved with plaster, in the middle of this city a large terrace on which the main temple is located.

The houses of residence with a three-part layout represents the middle part of it longitudinal shape and the shape of the letter T Latin is the most important part of the house distributed around the rooms and the house has one entrance has been found on this site under the floors of some residential houses wall used to bury newborns.

3.3.2. Tappe Kora

Models of residential houses belonging to the protoliterate period were found in the layer (12-8) and these houses were of two types

1- Residential houses with (semi-regular) planning I found these houses in the 12-11 layer of this site and were characterized by being flat curved and fit the curvature of the street that overlooks it, that is, they were built according to the space available in the place and not from the human need for that, as most of their walls were irregular [2].

2- Residential houses with regular planning: - This planning has appeared in this site and the house has a three-part layout, which consists of a yard or a long middle room distributed on its longitudinal sides the rest of the house or sometimes this room is surrounded by building units with all sides. [2].

Fences

It is one of the methods and types of permanent defensive fortifications for settlements of different capacity and importance and the wall in its functional meaning is an artificial barrier tightly built around residential centers or any other place intended

to be protected and preserved and its purpose is to stand as an obstacle to those who want to attack or raid the city and prevent storming and controlling walled cities [2].

The wall with towers and surrounded by a defensive trench was found for the first time in that flint, where I found the effects of a ladder built of plaster linking the ground level to the top of the wall, which is the oldest defense system of its kind in Mesopotamia, as well as a wall from the city of Tbeh Kora from the fourth slave era surrounded by a moat and the wall that was found Jamda Nasr has surrounded the city of Warka fence where emerged in this period the urgent need for the construction of walls as it indicates the distinctive characteristic of the Sumerian city state, which Formed in the previous period, as well as the characteristic of the urban architectural building and the strength of the civilized city, as it represents the boundary between the inner city and its suburbs, which is located outside the wall, the date of the wall of the city of Warka can be determined based on the quality of the milk from which it was built is the convex flat milk of the buildings of the ancient Sumerian era (2800-3500) to the era of the dawn of the first dynasties [4].

The wall of the city of Warka passes along the high lands of the plain of the city site, as fractures wrap around the perimeter of the outer city in the form of an irregular circle in shape, its remains appear in the form of a ridge and at varying heights around the ruins of the city, with a length of about 9.5 km to include a land area of about 5 km² Built according to the system of double fences in the form of two adjacent fences The inner wall was built in a larger and more technical size than the outer fence, as the inner wall is based on solid foundations constructed of flat adobe Convex which ranges in thickness between (4-5) m built milk level convex and was measured (20×10×7) cm, (20×22 ×7) cm The second section of the fence consists of the facades of the fence internal and external also constructed of milk level convex according to measurements (25×16×17×8) cm and the construction of the internal façade of the inner fence either the external façade has been covered with a cover of pieces of milk level large and then painted façade layer of clay thickness of approximately 5 cm either fence The outer city of Warka was built 10 km from the inner wall built of flat mud also convex different sizes and the wall thickness is approximately 3 m. The wall of the city of Warka was interspersed with many sorties in number and at certain equal distances similar to the towers of defensive rectangular shape extends in the body of the wall about (2.5) m and

emerges from the façade of the fence distance of (1.8) m approximately and the distance between them ranges (8-9) m approximately and it is believed that their number is about 900 towers, but during the ancient Sumerian era was renovated the construction of the wall and some architectural elements were added, which caused the change in the shape of the towers to look like semi-circles by extending the towers for a longer distance By changing all the forms of towers in the body of the fence until the semi-circles protrude from the façade of the fence a distance of approximately 2.5 m [2], [7].

3.4. Gates and entrances

The gates and entrances represent an outlet for entry and exit, either price gates, they represent the port for exit or entry into the city specified by a range of surrounding walls, so it is theoretically one of the ports out of control or authority of the city and the doors generally consist of several sections linked to each other according to a special design that takes into account accuracy and durability to make it an integrated architectural unit with a good appearance and mechanical kinetic obedience to allow the possibility of moving some of its sections for the purpose of opening and closing them when needed.

One of the most important gates in this period is the gates that penetrate the wall of the city of Warka, which are two gates as confirmed by excavations in the city, including the first gate was on the northern side of the city and called the excavators the northern gate and the second gate that opened on the southern side of the city wall and called the excavators your gate and consists of a simple building extends in the body of the wall with an opening of 3.5 m The depth of the entrance is more than 10 m The gates were built of mud level convex for the Sumerian era The old (2800-2370) BC and must have been linked to the system of the main streets of the city, as excavations indicated the existence of a holy street for the city linked to the main streets, but the excavations did not confirm this [2].

The palaces were not mentioned during the biblical epoch because things were managed by the high priest who held the title of Ain (EN(Where he was occupied and two guests at the same time is the priests and governance and was settled in the temple, but the prospectors found a large building in Jamda Nasr interpreted by the prospectors as a palace or administrative center and if this is true it supports the existence of social classes distinguished by power and wealth and advanced architecture at the same time.

It also refers to the beginning of the stage of the emergence of the state, and this building is constructed of adobe on a terrace with dimensions of 92 × 48 m, consisting of rows of long rooms [4].

We see the great similarity between the civil architecture in the city of Warka and the large grains and we note this in the wall of the city of Habouba, which was built similar to the wall of the city of Warka with note the wall of the city of Habouba is characterized by a right angle while the wall of Warka took a circular shape and the wall of the grain surrounded it from all sides except the east where there was a river, the width of the wall of Haboba 3 meters has been supported by a quarter of the towers of defense and decorated its façade from the outside with sorties and inputs and was built in front of this wall From the outside, another wall has two gates built according to one architectural style and built next to each of them a room dedicated to the guard and has a number of defensive towers, and if we follow the wall of Warka, it consists of two adjacent walls as well. The city of Habouba is characterized by its elaborate planning, which reminds us of the planning of Sumerian cities, where the city penetrates the main streets extending from north to south and secondary streets branching from east to west, as well as the accuracy of sewage drainage in it, as it extends over trenches in the ground and a network of pipes and clay channels connected to each other.

As for the housing houses in the city, they are built of adobe known as Al-Rimchen, which was known in the city of Warka, and most of the houses are characterized by the triple style, i.e. a hall in the middle and two rows of rooms on both sides [8].

Conclusion

In the light of the study of the research material for the protoliterate period from an architectural point of view, it was found that this era is the era of coups in various artistic, urban, political, cultural and literary fields.

The most important achievement that happened in this era is the invention of writing in the city of Warka, which is considered one of the most important cities that represent this era through the buildings in which it was revealed.

One of the things that draws attention in the architecture of this era is the magnitude of the buildings and the interest in the defensive fortifications represented by

the walls, so they were very huge, reaching about two meters approximately, but in aesthetic terms, this era was famous for a type of decoration of facades and columns known among researchers for the decoration of beautiful mosaics, which has become a feature of this era.

Through the research, it was very important to draw our attention to the accuracy of the design and the accuracy of measurements, from which it is concluded that there may be schools to teach the art and science of engineering, although there is very little information about the acceptance of this possibility

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