

**University of Baghdad
College of Engineering
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***Aesthetic and Structural Integrity of Bridge
Architecture*
&
its Urban Importance**

**A thesis Submitted to the Council of Engineering of the
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((*Aesthetic and Structural Integrity of Bridges Architecture
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Abstract :-

Bridges has become characteristics of civilization and urbanization in the recent years. Countries boast the highest technical results it reached in constructing bridges in terms of length and hight and the huge weights it carry , not only that but some bridges have become symbols of their regions some for their distinct technicality and others for their effect on the hearts of the people , or by its relation to historical events . more over it was used in social activities which brought attraction to these facilities and sometimes it affected tourisoum and economy of these countries

Hence the importance of this subject as a result of modernity that would necessitate the need to study facilities and determine it □s nature and it □s impact on the surrounding environment , on urban , social , psychological and environmental levels .

Further more the importance of this research appears because of the important role bridges have in recent times , and it is very important to study levels of aesthetic and methods of applying them and study the extent of integration with the level of construction to enable the designer to design an urban bridge . where this integration plays a big role in giving expressive symbolism and iconography . In addition to the necessity to educate the local architectural fields about the importance of these facilities and ways to deal with it , especially that local studies lacked any architectural studies related to the subject .

The main objective of this research is to provide knowledge about building bridges and to study whether and how to achieve integration of aesthetic and structural level , and the role of this integration in enriching the role of urban bridges on human and urban levels .

The general problem of this research is reflected in the lack of knowledge about the determinants of bridge design while on the particular problem is determined by the lack of knowledge framework coverage on the extent of integration between levels of aesthetic and construction in building bridges in general . Mean while the defined research problem was the lack of framework inclusiveness in Architectural studies from the extent and importance of integration between levels of aesthetic and construction regarding the concept of urban bridges in the cities and how they affect and enrich its urban areas.

The research assumes that bridges play an important role in the history of the city and its urban configurations as bookmark to the significant link with and complement the physical condition and collective memory as it integrated with its social and cultural activities and this integration between its aesthetic and structural unit has the most ampact in making this urban element dynamic and integrated with the functions of city both urbanely and humanly and continuity over time.

The detailed hypothesis of the research included three hypothesis which are :-

1- **The first hypothesis** :- ((The aesthetic of contemporary bridges is derived from it □s structural level , thus achieve the required integration between the two levels , the rules of aesthetic are not fixed but they are subject to revision according to the nature of the project purpose and environment)) .

2- **The second hypothesis** :- ((The overlap of the three applied aesthetic concepts of bridge have the larger role in achieving successful and aesthetic bridges)) .

3- **The third hypothesis is** :- ((The integration and coordination between levels of aesthetic and construction has the larger affect in making this vital urban component integrated with the components of the urban environment and function of the city and its permanence))

This requires the inclusion of research on five chapters beginning with the most important definitions of relevant regulations and construction and their relationship to the concept of beauty and study the mutual influence between the bridge and its surroundings and ending with the testing of hypotheses through a series of bridges global and achieve integration between the .aesthetic and structural level

Then it's studied the patterns of research distinct from the Iraqi experiment in building bridges and reaching the research conclusions .