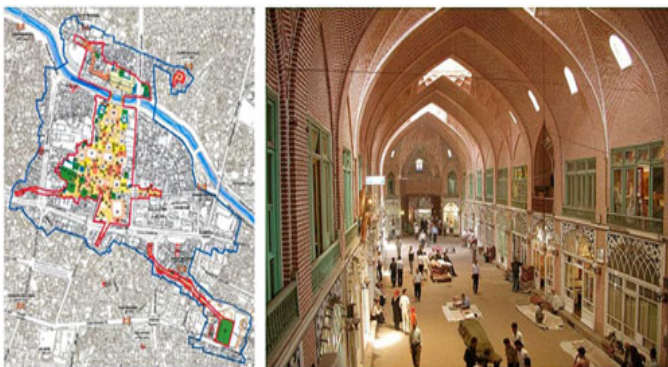


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Volume 5 (6); 25 Nov, 2015



Research Paper

Comparative Study of Sustainability Iranian Bazaar in Traditional Cities; Case Study: Zanzibar and Shiraz.

Sobouti H, and Alavi P.

J. Civil Eng. Urban., 5(6): 242-248, 2015; pii:S225204301500031-5

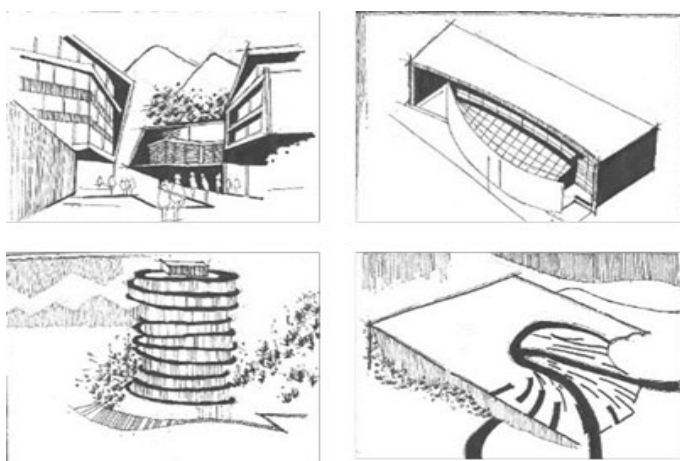
Abstract

Bazaar is a traditional public space in the Iranian cities, and always a great section of commercial activities in urban life. Bazaar is not only the commercial center of traditional cities

in Iran but also the center of social, cultural, political and religious activities. Sustainability of bazaar in Iranian traditional cities seeks to find solutions concerning the effects of city development on cultural heritage and urban element of the city. The main aim of this study is to explain the differences of the social and economic and environmental role of the bazaar in the historical Iranian cities. The case studies are the city of Zanjan and Tabriz in the North West of Iran. The genre of the study is fundamental-theoretical, which has been conducted through basic applied method; the materials required for this research has been gathered through library studies, historical documents, field survey on the historical bazaars of Iran, as well as the historical Bazaar of Tabriz. The main approach of this study is based on qualitative and quantitative data as well as qualitative observations of bodies in charge of urban elements of the Iranian traditional cities in four categories of 1- Mosque (Friday and daily), 2- Citadel, 3-Residential Quarters, 4- Bazaar, and quantitative value for compare bazaar sustainability in Zanjan and Tabriz which including sociology-economic-environment aspect within the framework of the Iranian traditional cities. Surveys show Bazaar can be used as a center for enhancing social interactions and creating a sense of association that leads to sustainable social space. These can act as a model which leads us to sustainable cities in terms of social and economic factors.

Key words: Iranian Bazaar, Morphology, Sustainability, Traditional Cities, Tabriz Bazaar, Zanjan Bazaar

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Research Paper

Transmitting Architectures: Analysis of the Projects of Iranian Architectures in Foreign

Countries.

Mahdavinejad M., Abazari T.

J. Civil Eng. Urban., 5(6): 249-256, 2015; pii:S225204301500032-5

Abstract

Building and Architecting are complex tasks that are affected by many things. Architecting abroad and for people of different cultures requires special patterns. The environment is one of the affecting factors on design. Architecting in the environment puts special orientation in front of the architecture. This article is from a research that discusses the projects of Iranian architectures living abroad. The key questions here are that “What is the common orientation of these architectures in design?”, “Why they tend to design in these manners?”, “What are the effects of the Iranian Nationality and Iranian-Islamic Culture and Patterns on these architectures design?”, “Have these architectures and designers got some attempts on introducing the Iranian Architecture to the world?”, “Where have the Iranian Architecture Patterns manifested in these architectures projects?” To answer the preceding questions, gathering many opuses of Iranian architectures living abroad, we are about to find out the reasons of success of these architectures, their design orientations and inspirations, the effect of the environment on their design and the manner of using archetypes and Iranian-Islamic culture and traditional architecture in their projects. Data gathering has been done through archive studies and by combined methods in data classification and conclusion in various levels. Comparison of these projects in various classes and sub-classes was very helpful in analysis of gathered data and made it easier to reach an accurate way of analysis and architectural criticism. So, using the percentage charts, we could have accurate conclusions of the derived results in this article. All the affecting factors on design procedure have been studied in this article and the most important factors of durability of these projects has mentioned and according to this, the projects of each architect has analyzed and criticized.

Keywords: Globalization, Regionalism, Iranian Architecture, Cultural Diffusion, Iranian Identity

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The screenshot shows the TKUAPAV software window with a menu bar (File, Aircraft Data, Design Structure, Help) and a title bar (TKUAPAV). The main area is titled "Airfield Annual Mean" and contains input fields for Wind Speed (3.2 m/sec), Temperature (11.3 °C), and Precipitation (983.0 mm). Below these are fields for E (27560000 kPa), Sc (4830.5 kPa), and Thickness (51.6 cm). A dropdown menu is set to "PCC". Further down are fields for k (38.38 kPa/mm), Slab Width (7.62 m), and Slab Length (7.62 m), with a dropdown menu set to "Subgrade". At the bottom are two buttons: "Design Thickness" and "Report".

Parameter	Value	Unit
Wind Speed	3.2	m/sec
Temperature	11.3	°C
Precipitation	983.0	mm
E	27560000	kPa
Sc	4830.5	kPa
Thickness	51.6	cm
Material	PCC	
k	38.38	kPa/mm
Slab Width	7.62	m
Slab Length	7.62	m
Subgrade		

Research Paper

Evaluation of Runway Pavement Design Software and Application of Modified Asphalt Overlay on Airfields.

Yavari M.R. and Balali A.

J. Civil Eng. Urban., 5(6): 257-264, 2015; pii:S225204301500033-5

Abstract

Different software has been offered by aviation administrations and investigation institutions to facilitate runway pavement designs. In this paper, four generic runway design software including LEDFAA 1.3, PCASE 2.09, FAARFIELD 1.305 and TKUAPAV were aimed. Hereon, communal layer structures with particular characteristics along with a sample airport containing wide-body commercial and military aircrafts were introduced to each software and the thickness of the pavement was obtained. Afterwards the output from software was compared with each other. Results imply that PCASE 2.09 take account of more precise details and analyses of material and condition behaviour of the pavement design and as a result it leads to an economical design. While, FAARFIELD because of analysing pavements based on three-dimensional finite element method, makes the prediction behavior of the aircrafts loading on the runway pavement

more realistic. Additionally, this article presents an overlay design scheme for runway pavements using FAARFIELD 1.305 combined with a method of thickness reduction previously applied on highways and commercial airports. The application of this methodology lead to 40 millimeters reduction of asphalt overlay.

Keywords: Pavement Design, Runway Overlay Design, Pavement Design Software, Commercial And Military Aircrafts

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Research Paper

Evaluating Daylight Performance of Sharjah Archaeology Museum in UAE with a Reference of Kuwait National Museum.

Mushtaha E.S. and Shadid R.

J. Civil Eng. Urban., 5(6): 265-271, 2015; pii:S225204301500034-5

Abstract

This paper presents the evaluation results of daylight performance at Sharjah Archaeology Museum (SAM) in UAE. The museum was analyzed through inspections and assessments of the actual space and computer simulation programs. Light performance and illuminance levels in different indoor spaces were assessed by using Light Meter (LM-8000A) and computer programs such as ECOTECT and REVIT. The results indicated several lighting problems in the museum due to the absence of daylight penetration. The simulation has reviewed and calculated illuminance levels at different locations in the museum. As the existing case has no windows or openings inserted to its physical body, the readings during day-hour time were taken when artificial lights were on in order to evaluate the existing condition. A proposal with integrated windows has been introduced and simulated taking into consideration of internal electricity network “off” to show the impact of natural daylight on indoor illuminance environment. The results showed the proposed case could achieve the desired interior illuminance levels and save energy by 45%; so the retrofiting is an essential approach to improve lighting performance and reduce energy consumption in museums.

Keywords: Light Meter, Ecotect, Daylight, Sharjah, Kuwait

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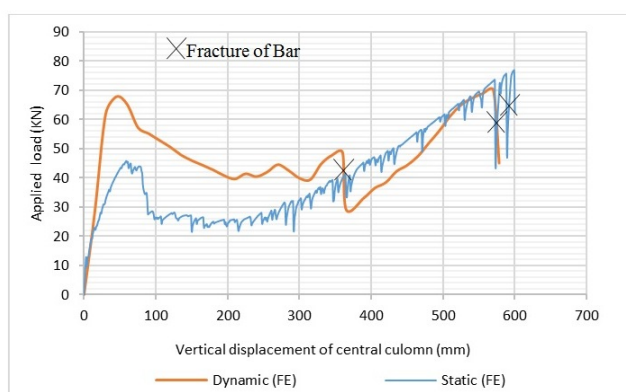


Figure 7. Applied load versus vertical displacement of middle column at high strain rate loading (specimen s1)

Research Paper

Finite Element Analysis of Reinforced Concrete Sub-assembly under High Rate Loading in a Column Removal Scenario.

Usefi N, Abbasnia R and Mohajeri Nav F. 2015.

J. Civil Eng. Urban., 5(6): 272-279, 2015; pii:S225204301500035-5

Abstract

Progressive collapse is a dynamic event with high strain rate in which the failure of a member cause damage to the overall structure. Most research done in the field of progressive collapse are carried out with static analysis. Structural behaviour with regard to the effects of strain rate needs further studies. In this research, to investigate the effects of strain rate in a progressive failure, existing theories are used for Finite Element (FE) modelling of two sub-assemblages, previously tested under static loading. Confirming the model in the static mode, by increasing the rate of loading, the specimens are subjected to high strain rate condition in order to simulate the target scenario of progressive collapse. Results shows that considering the strain rate effects in the FE analysis, the strength of sub-assemblages in the compression zone increases, and the ultimate strength capacity decreases. Increase in maximum tensile and compressive axial force of the beams and the change in beams rotation is also shown in this study.

Keywords: Progressive collapse, Finite Element (FE), High strain rate, Reinforced Concrete (RC), Sub-assemblage

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