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DEVELOPMENT OF ORGANIZATION ISLAMIC COOPERATION (OIC) CENTER IN JEDDAH

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Abstract

The Islamic center is one of the most profoundly created types of religious architecture. Thus, to accommodate a place of worship and dialog sharing session among the Islamic community, it is necessary to set aside an enclosed region in urban areas. The organizational and cultural features of Islamic center architecture must complement its nation of origin in terms of culture, environment and traditions. Thus, this work presents a proposal on developing an Organization of Islamic Cooperation (OIC) center in Jeddah, Saudi Arabia.In this work, 4 case studies were analysed in terms of Islamic center design and requirement. Based on the case study analysis, the estimated area for the proposed Islamic center is 25000 m^2. The proposed Islamic center consists of several zones such as the main lobby, meeting and conference area, cultural exhibition and library zone, media and press, offices, amenities, and security. In addition, 4 sites were proposed for the development. Site evaluation was done on all 4 sites based several criteria's using weighting factors (WF). The results of the site evaluation showed that site 1 exhibited the highest score of 72.5 and it was selected as the proposed site. The Islamic center's architecture is contemporary in design. This Islamic center is expected to promote an Islamic culture of dialog among the Saudi community and will be a major attraction in Jeddah.

Keywords--Islamic center, architecture, design, Saudi Arabia. community

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INTRODUCTION

Islam is the rapidly growing culture in the world. Muslim community is increasing as Islam proliferates the globe, prompting growing interest in Islamic structures such as mosques and Islamic centers [1]. The mosque or Islamic center works as a reference point for Muslims in the city in numerous nations, where it serves to express a Muslim kinship as an image of Islam and also as a space for get-togethers, dialogue sharing and community engagements [2]. Furthermore, mosques and Islamic centres undertake a major part in Islam and Muslim lives. This place serves as a focal point for their religious activities. These structures are usually funded by organizations of Muslims of distinct origins and cultures [3].

Generally, the mosque and Islamic center are one of the most realistic symbols of Muslim cultural association. Most of the nations have many distinct architectural types of its Islamic buildings, where every mosque and Islamic center has its own uniqueness in terms of design and structure [4]. The most significant considerations behind this variety in shape and designs can be split into natural effects such as construction materials and environment, accompanied by man-made effects such as culture and traditions [5].In addition, there are many variables that contribute to influencing the philosophy, layout, and component of the mosque and Islamic center in a multicultural atmosphere. Between these variables are foreigners to these nations, government legislation, the accessible financing, and the impact of colonisation [6].

The mosque and Islamic center are important in terms of local religious practices for the people of Saudi Arabia [7]. It is more than a core where it is the most prominent sign of the city and a space for religious ceremonies and dialog sessions [8].Since Jeddah is an important location for local community Islamic activities in Saudi Arabia, it requires the state of the art Islamic center for people to engage them further with the sharing of religious activities and dialog sharing sessions. Therefore, this work proposes the development of Organization of Islamic Cooperation (OIC) Center in Jeddah, Saudi Arabia.

CASE STUDIES

For this work, three case studies were evaluated The details of each case studies are set out as follows:

a. The European parliament
b. The Scottish parliament
c. United Arab Emirates Federal National Council's (FNC)

The European parliament

The European parliament is located at Strasbourg, France (Figure 1). It is a governmental building which was designed by Architecture-Studio (AS). The gross area of this building is 220000 m^2. The building is comprised of the arch, dome and tower. An agora, a city's momentous square positioned within the carved out tower, generates an amphitheater's spatial and symbolic replica. The amphitheater is the location in which the agora has become concrete, polemical and political. The thick glass and sandstone tower appears incomplete, maintaining imbalanced levels between the bases of its metal structural components and assigning the pride of its ellipse-shaped town square. The official headquarters of the European parliament includes the amphitheater, the arch, and the tower. The amphitheater consists of a rounded wooden shell forming a dome from portion of the construction above the sloping ceiling, which represents and shows the contour of the riverbank as a prow. Furthermore, the hemicycle has 750 seats. In addition, the amphitheatre, which houses the conference areas, meeting rooms and auditoriums corresponding to the activity of the session, appears ensconced in the successive transparent arch frames. It has 18 commission chambers, a food and drink area and associated facilities. Moreover, the tower houses 1133 Parliamentary Representatives ' offices. Part of the Strasbourg seat of the Parliament is intended as an incomplete tower, symbolizing the EU's ongoing development. The arch double thermal glazed façade rests on a steel structure, itself broken down by the curved lines of the cat-stepped openwork grating into horizontal planes. It is not a surface but many walls that are more or less invaded by voids or transparencies that make up the arc's layout in a sequence of aircraft. The hornbeam and vegetation, planted in the sky on the stepped terraces,

accompany the tower's volute and assist to erase the accuracy of its geometric lines on its horizon line and endow it with its unfinished appearance by appropriating random contours.

Figure 1. European parliament

The Scottish parliament

The Scottish parliament is located at Edinburgh, Scotland (Figure 2). It was designed by architect Enric Miralles and it is a governmental building. The total area of this building is 31000m^2. The building was designed to symbolize the connection between nature and the Scottish people. As a result, the building has many characteristics related to nature and property, such as the leaf-shaped roof motifs in the building's garden lobby and the big windows of the debating room, the board rooms and the tower buildings facing the wide expanse of Holyrood Park, Arthur's Seat and Salisbury Crags. Inside the structures, the link to the soil is strengthened by the use of Scottish rock such as gneiss and granite in the floors and walls. The zoning of the Scottish parliament includes the garden lobby, debating chamber, towers, members of parliament building (MSP), Queensberry house and Canongate building. The garden lobby is at the middle of the parliamentary complex and connects the Tower Buildings ' debating chamber, committee rooms and administrative offices with Queensberry House and the MSP building. The garden lobby is the location where formal events and television interviews usually take place and is used as an open social space for MSPs and parliamentary employees. Furthermore, debating chamber includes a shallow elliptical seat horseshoe for the MSP. There are 131 desks and chairs on the chamber floor for all elected representatives of the Scottish Parliament and members of the Scottish Government. Galleries above the main floor can accommodate a total of 255 members of the public, 18 guests and 34 members of the media. The roof of the chamber is backed by a framework of laminated oak beams joined with a total of 112 stainless steel connectors, which in turn are suspended from the walls on steel rods. Such a structure allows the chamber to span more than 30 meters (100 ft) without any supporting column. The ceiling lights are produced of stainless steel and the glasswork is covered by a lattice of strong oak struts. Furthermore, Architect Enrico Miralles designed to make complete use of the light and surrounding landscape with a spectacular vaulted entrance ceiling created by the Parliament Chamber floor above. The construction materials will include refurbished stone panels using crushed aggregate of the initial stone from the site's ancient houses and prefabricated concrete.

Figure 2. Scottish parliament

United Arab Emirates Federal National Council's (FNC)

United Arab Emirates Federal National Council's (FNC) is located at Abu Dhabi, the capital of UAE (Figure 3). It was designed by Ehrlich architects. The FNC building symbolizes the UAE's special personality: a cutting-edge society that moves intensely into the future while maintaining a solid association with its history. The venture blends comfortable language of Islamic structure with contemporary structure and practical techniques, making it extremely useful and important. The desert landscape of the Gulf region was a primary source of inspiration. A 100-meter-diameter dome, a contemporary descendant of Istanbul's monumental Hagia Sophia and Blue Mosque domes, anchors the design. The dome is a "desert flowers," its shape derived from the Tribulus Omanense, a desert bloom with five yellow petals that is the U.A.E's national flower. The zone of FNC building is comprised of parliamentary offices, assembly hall, offices prayer room and public amenities. The assembly hall and parliamentary offices is placed under the dome. The dome is modeled with sunscreens and opaque wood boards, the prefabricated concrete design cools and leaves dappled light of ornamental Islamic motifs on the plain black marble assembly hall. Underneath the dome, convection cooling from salt water pools and lakes enhances the microclimate and warm water is produced by hidden heat collectors mounted under the courtyard and placed in ground-level units. The complex covers the Arabian Gulf, the body of water shared by six of the seven emirates, and the origin of the traditional fishing and pearling sectors of the federation.

Figure 3. United Arab Emirates Federal National Council's (FNC)

PROGRAM ASSUMPTION AND SPACE DETAILS

In this work, for the proposed Islamic center, the estimated gross floor area is 25000 m^2. Table 1 shows the space details and division of the estimated area. The Islamic center will comprise of several zone such as main lobby, meeting and conference zone, culture exhibition and library zone, media and press, offices, amenities, safety and security.

Table 1. Space details

Zone	Percentage (%)	Gross area (m^2)	Net area	Floors	Foot print
Main lobby	3	750	525	2	262.5
Meeting and conferences	30	7500	5250	-	-
Culture exhibition and library	20	5000	3500	-	-

Media and press	13	3250	2275	2	11375
Offices	17	4250	2975	3	991.7
Amenities	16	4000	-	-	-
Safety and security	1	250	175	1	-
Total	100	25000	17500	-	12629.2

PROPOSED SITE

Proposed site: Site 1

For Site 1 (Figure 4), this site located on Jeddah's Boundaries, aligned to Jeddah-Makkah's old road beside AL-Hudiybia.

Proposed site: Site 2

For Site 2 (Figure 5), this site located North Jeddah. The site over looks tow main road Al-Madinaroad , and Ring Express road. An advantage of the site is that it's considered as a linking point Makkah to Al- Madina.

Proposed site: Site 3

For Site 3 (Figure 6),This site located on Jeddah's Boundaries aligned to Jeddah-Makkah highway. The site could be continuity to the developed cultural oasis.

Proposed site: Site 4

For Site 4 (Figure 7), this site located on King Abdul Aziz Rd. near Al-Hamra Palace and the seafront area.

Figure 4. Site 1

Figure 5. Site 2

Figure 6. Site 3

Figure 7. Site 4

SITE EVALUATION AND ANALYSIS

For this work, four sites were proposed for development. Thus, to select the most suitable site, site evaluation analysis was done based on few criteria's such as accessibility, land use, urban development, future expansion, security, view, visibility, climate and demographic pattern. All these criteria's were evaluated using weighting factors (WF), where 1 = not very important, 2 = slightly more important, and 3 = important. The site evaluation result for all 4 sites is shown in Table 2. Based on the results in Table 2, site 1 exhibited the highest evaluation score of 72.5, compared to site 2 with score of 71, site 3 with score of 65.5 and site 4 with score of 59.The selected site 1 is located between Makkah and Jeddah, facing the old main road of Makkah Jeddah. Due to the historic event "Sulh Al- Hudiabya" that took place there, the site happens to be a valuable site. This site has a total area of 30050 m^2. The surrounding landmarks and future developments advertise add values to the selected site. This factor must be taken into account while designing to reach a powerful concept and intersect the project with the strategically developed future plan. The selected site settles on the north side of the Makkah main gate, where the new Makkah gate project is planned. The Makkah gate project consists of five main areas: five residential areas, university, medical city, administrative district, cancer research center and museum. The site can be reached directly via Old Jeddah- Makkah road. A non-direct entrance could be through Al-Shamiashah road intersecting with Jeddah-Makkah Highway. The site was considered part of the al-Makkah zone as it is on the boundaries. In terms of climate, Makkah has warm temperature in winter, ranging from 17 ° C (63 ° F) at night to 25 ° C (77 ° F) at daytime. Summer temperatures are considered very hot, often over 40 ° C (104 ° F) during the day falling to 30 ° C (86 ° F) at night. In Makkah, rain usually falls in small amounts between November and January. Furthermore, Shamal winds occur mostly during the summer months in Makkah, where it is very dusty and remain at peak in the morning but decreases at night. These winds also occur in

winter, but not frequently. In addition, western winds bring thunderstorms to many parts of Mecca during winter months, and sometimes hailstorms also occur in the city. The site has a good flat topography. The conceptual zoning of the site is shown in Figure 8.

Table 2. Site evaluation

Criteria	Site 1	Site 2	Site 3	Site 4
Accessibility(WF=3)	13	13.5	10.5	12
Land use(WF=1)	2	2.5	2	3
Urban development(WF=2)	8	8	8	4
Future expansion(WF=2)	10	10	8	6
Security(WF=3)	15	12	12	12
View(WF=1)	2	3	2	3
Visibility(WF=3)	13.5	15	12	12
Climate(WF=2)	6	4	6	4
Demographic pattern(WF=1)	3	3	3	3
Total	72.5	71	65.5	59

Figure 8. Zoning of the site

PROJECT DESIGN

Islam is based on the concept of dialog and consultation where it took place mainly in the mosque, therefore the project was guided by the interaction of three main axes pointing towards the main three mosques which were Al-Haram mosque, Al-Aqsa mosque and Al-Nabawi mosque. In order to enhance the concept of dialogue and increase the social interaction a multilevel (topographic) landscape appearance is given to this project, which allows the project to blend with the natural surrounding acting as an oasis in the middle of the desert. An attraction element (abstracted Manara) is placed to attract and direct people to the project. Figure 9 to Figure 11 shows the various perspectives of the proposed Islamic center. The vision of creating this Islamic center is to pose Saudi Arabia as an important crossroads of civilizations and to spread the culture of dialog as the rule for all purposes at the level of the individual, family and society in order to strengthen the role of Saudi Arabia as a leading country.

This Islamic center is expected to have the right function and facilities to enhance the concept of dialog and attract people to have the right image of Islam. Furthermore, the development of this Islamic center will increase country income as a result of the large number of visitors as it is considered an attraction and makes land for the city. In addition, it will also create a favorable atmosphere for promoting cooperation and understanding between OIC members and other countries.

Figure 9. Isometric view of the Islamic center

Figure 10. Side view of the Islamic center

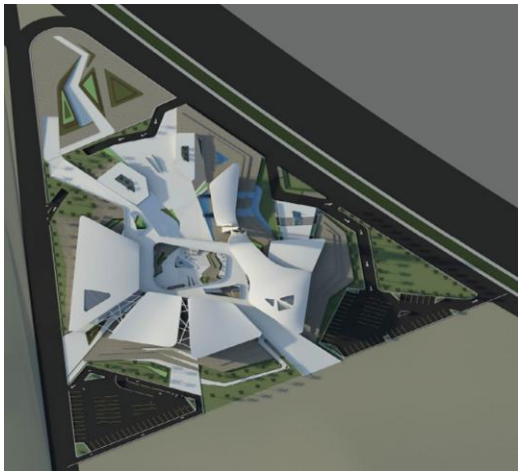

Figure 11. Top view of the Islamic center

CONCLUSION

In this work, a proposal on developing an Islamic center at Jeddah, Saudi Arabia is presented. The estimated gross area for the Islamic center is 20000 m^2 and it comprises of few zones such as meeting and conferences area, cultural area, main lobby, offices and etc. This Islamic center is expected to promote high social interaction at both local and international levels. In addition, it will be a good platform to address and discuss issues related to the Islamic economy generally between OIC members and specifically in Saudi Arabia itself. This Islamic center will be a iconic landmark in Jeddah and it will contribute to the economy of Saudi Arabia.

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