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Mosque Design in the West

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Abstract: The review of Islamic Architecture can take one into many interesting places and times both geographically and intellectually. Many of these places have grown over the centuries to provide an Islamic context for mosques to flourish. Mosque projects in the Western world are seen as a new comer and require specific approach both in design and implementation. Arrival and presence of Muslim communities have created a demand for mosques whose building type is both new and foreign to local people. In addition to serving the community need, these buildings serve a historical purpose as a symbol of Islam and Islamic architecture and many important issues must be dealt with when designing a mosque in the West. In this paper it is argued that mosque projects in the West are:

1. Community driven should meet the needs of the community.
2. The mosques are for Muslims and are seen as a symbol of Islam and therefore should be designed in the spirit of Islam.
3. Because of their location, mosques should be ranked with the best of North American architecture.

Therefore, the issues are organized into three main categories of Muslin Community, Islamic Architecture, and North American Context. At the conclusion of this paper, the role of the Client is discussed.

Introduction

This paper attempts to show an appropriate approach to design and construction of a mosque project in the West based on the architect's project experience in Canada. From the experience of several mosque projects designed in Canada many issues can be identified as important when designing a mosque in the Western world. These issues are articulated in three main categories.

- First: The specific requirements and characteristics of a Muslim Community who would be the users as well as the managers of the building's operation after occupancy. The Mosque building becomes a physical heart of the activities functioning as a Community Centre in addition to being a place of worship;
- Second: The application of principles of Islamic Architecture is essential in keeping with the spirit of Islam and yet accepting a logical transformation and artistic interpretation. This part is decidedly given a cursory attention as it most deservedly should be subject of another paper if not a book in order to do the justice;
- Third: The influence of North American Context through its culture, regulatory requirements, and advancements in the arts and technology.

Methodology

The real project experience is the bases of the findings and discussion in this paper, therefore it is more like a reader than a disciplinary research paper. The realization of all construction projects in Canada is far from simple and is subject to many forces and influences. The issues surrounding the

construction of a Place of Worship for all religions in general and a mosque in particular introduce additional constraints. The factors identified as the primary influences are arrived at empirically based on experience gained in projects designed in Canada.

The Muslim Community

In the absence of a government sponsorship, which is typically available in Muslim countries, the construction of mosques in the West is largely dependent on volunteer contributions. Volunteer participation and contribution are vital factors in completing a mosque project and it is sometimes further complicated by the contentious relationship with the largely non-Muslim neighbourhoods. As we may see in case examples in Toronto, this community emphasis becomes a major impact on all aspects of a project including: planning, programming, design, fund raising, financing, obtaining permits from the local authorities, construction process/phasing and building operation after occupancy.

Community Centre

Mosque projects in the West tend to be closer to the earlier models of mosques by being more than a place for worship and by catering to a broader community needs. From this need analyzing a program for the project may be formulated that includes spaces for prayer, meditation, counseling, learning, social functions, bazaars, recreational and funeral activities. The building is also an important place for making community decisions and general assemblies in a democratic and participatory system. This kind of buildings is often referred to as Community Centres.

Project Organization

A proper project organization will require a minimum of three committees to respond to the needs of a mosque project.

Community Participation Committee

As mentioned earlier community participation is essential in planning and implementation of a mosque project. Promoting community involvement from the outset is the most important strategy during the planning, design and construction and it is in fact necessary for boosting community spirit and participation. Therefore, an outreach program shall be set up at the outset to assist in collecting community input and support. The space planning and design process are inherently fun. Similar to traveling the world on a map, it can encourage participation and therefore sharing the fun. This outreach program can also use the project progress meetings to stimulate and encourage participation and incorporate fund raising activity into these meetings.

The provision of building construction requires large investment of resources on the part of the community, yet this investment could be utilized to offer job training and employment opportunities to participant where possible. This is particularly an important service in helping new immigrant to settle in and assimilate in their new country. The participatory approach further enhances the outreach programs and gives a central focus to other community activities. Recruiting volunteers for various committees, setting up training workshops, update briefings, presentation meetings, feed back questionnaires and organizing social festivities are part of the work of this committee.

Fund Raising Committee

Fund raising activities are usually extended over a long period of time and could be demoralizing at times, therefore a good planning of events can help overcome down times and show progress. Under a well-planned fundraising strategy, this committee will primarily be responsible for fund raising campaign and events such as dinners and other gatherings. The Participation Committee for communication and providing information on the project may use these events.

Development Committee

This committee could also be referred to as executive or planning committee that oversees all project activities. Also it is responsible for selection and procurement of land, developing a project program, selection of architect and other consultants, acting as owner during the construction and finally for building operation and management after occupancy. Some of this committee's responsibilities are discussed below.

Selection of a suitable land is very critical because sometimes a land may be in a desired location but may not be of adequate size or may be located in land with a zoning that may not permit a mosque. The criteria for land selection must require a favourable zoning designation or otherwise risking long delays in obtaining approvals from the municipalities and sometime from courts of law. The size implication and zoning by-laws on a property are often overlooked and chosen without due diligence check resulting in a community to be left with a useless property. Consulting with an architect will help to avoid unnecessary disappointments.

A project program would be needed to guide design of a mosque. This program must be presented to the community at large and all feed backs must be given serious consideration. Many items such as needs of the elderly, teen age groups, children and women must be given careful attention. The need for spiritual activities of course must me given highest priority when designing main prayer hall, ablutions and shoe areas. The issues of separation for male and female spaces and circulation as well as apparent conflict between shoe and non shoe areas as well as wet floors can complicate the design if not identified at the beginning.

Design direction is usually best established if developed by architect working directly with different levels of community. While it is most efficient to work with Development Committee, architect must prepare presentations to various meetings organized by Participation and Fundraising committees. As mentioned before, the space planning and design processes are inherently fun generating activities. It is somewhat similar to traveling the world on a map, it can encourage participation and sharing. Capitalizing on this enjoyable experience coupled with food banquette will encourage people to make donations while receiving information on the progress of the project. It is also very important for the people to have their input collected by the organizers. This will give participants a sense of satisfaction and ownership essential to success of all community projects.

Selection of Professionals

Selection of an architect and other professionals is the most important decision made in every construction project. In accordance with the Canadian law a place of worship is categorized as an assembly building for which an architect with a seal is required. Architects, regardless of their skill level and specialization or strength, are required to maintain certain standard of practice including charging a realistic fee that is necessary to providing proper services, therefore can not work or offer services for free. Similar rules apply to other professionals such as engineering consultants for structural, mechanical and electrical systems. Scope of services required for construction projects are

very serious legal undertakings and are demanding that makes it impossible to offer services without a fee which is also prohibited by law.

The selection of architect is entirely based on the financial consideration alone. Lack of funds, especially in the beginning, forces the project to be deprived of professional services which is a deficiency hard to recover from. Even when an architect is selected, the cost saving desire leads to select an architect with the lowest fee and not the best experience and qualification for the job. Often volunteer draftsman is given the responsibility of designing the project or another volunteer is given the job of constructing the building. These volunteers are in most cases unqualified and inexperienced for the task and fail to deliver the necessary services. The task usually requires a full time commitment and attention for the duration of a project that sometimes lasts over a year. Unfortunately, this approach is preferred because they are either not aware of the real issues at stake or they simply are blinded by what appear to be least expensive method. Of course one of the obvious shortcoming of using unqualified and unlicensed volunteers will become apparent when legal requirement for a licensed architect's seal on the drawings requested by the authorities.

Project Implementation

An implementation strategy must be prepared at the outset, which is responsive to the community's fundraising ability, a strategy that can link construction activity to the flow of funds. This task is highly technical and assistance of a competent professional such as an architect would be required to establish a proper construction budget and phasing plan.

Implementation: Construction Phasing

Due to the greatness of the need and limitation of funds, community projects are likely to be constructed in several phases. Each phase of construction must include spaces that are important to a given community group's needs, however, a general model that has proved successful may include the following groupings of areas in order of priority.

Multi-Purpose Areas

This is a group of spaces that can serve different functions. Most rooms in this group are flexible and multi-purpose in nature, plus the minimum required service spaces. There must be an interim space provided in this phase, which is dedicated to praying, ablution and shoes storage. This space can be converted to other functions later when prayer hall proper could be build in the future phases.

Spiritual Areas

This group includes areas dedicated to religious activities such as prayer hall, ablution and supports that might be needed for a mosque.

Learning Areas

Islamic Centres usually offer classes in Quranic reading, d'awa and organize lectures on broader topics and Islamic teachings to different age groups. Multi-purpose rooms can serve this purpose until dedicated spaces can be provided. Conversion of these multi-purpose rooms to other dedicated support functions such as library and administrative offices may be considered during the project programming.

Social and Recreational Area

This group of spaces includes banquette hall, cafeteria, lounges, auditorium, gymnasium, swimming pools, fitness rooms, showers and lockers, etc. In some cases this group of activities may move to higher priority item considering the growing need of children and younger Muslims for activities in an Islamic environment. These spaces may prove very valuable when compared with the dominant culture that offers facilities for general public.

Other Ancillary Areas

Potential candidates for his group may include day schools, clinics, commercial facilities or offices, and residential areas.

Implementation: Financing

Community Centers are non-profit entities and cater to the needs of the community and not the market. Therefore, conventional funding for the land procurement and construction financing are often unsuitable and an innovative solution may be required. In keeping with the Islamic rule, Muslim communities are reluctant to use borrowed money or mortgage that requires interest payment.

Lack of adequate funds to draw from regularly for construction acts as a major handicap. This forces construction schedule to dependent upon the progress of fund raising, in another words no construction can take place until necessary fund are provided. Since the flow of funds are incremental and unpredictable, proper scheduling of construction may not be possible, and furthermore, engagement of a general contractor may not be possible, as they would require a specific schedule with guaranteed cash flow.

Because of this incremental nature of construction, the design must be flexible enough to allow construction of parts of the building at a time. This constraint is not easy to deal with and requires regular rethinking of construction phasing plan in order to ensure a useful segment of the building to be completed in each attempt. Long winters in Canada only compound this problem.

As a result of incremental construction, full occupancy of building is often delayed and partial occupancy must still provide adequate services, life and fire safety as required by the local building codes.

The Islamic Architecture

The Islamic thinking has produced built forms in many parts of the world representing some innovative designs and technologies adding to the knowledge of mankind. As Muslims living in the West, we have to recognize the significance of this mandate and treat the provision of each building as an opportunity to make a contribution to this tradition of expanding knowledge of architectural forms and construction technologies. An interpretation of traditional forms in terms of meaning and relevance of mihrab, qiblah wall, minaret, dome, iwan, muqarnas, and arches to Muslims and non-Muslims in the context of a Western city are shown in the design of TARIC Islamic Centre in the case study section of this paper.

The most influential factor in shaping the design of a mosque project is the application of the principles of Islamic Architecture. The discussion on the origin of Islamic architectural forms and its evolution in the Western world may be subject of a separate paper, but here we only mention a list of historical examples and mention few of the guiding principles just to highlight the significance rich

Islamic heritage which is very often overlooked by the Muslim communities living in the West because of economical reasons or lack of awareness.

There is a very little disagreement among the scholars on the strength and position of Islamic architecture in the human history. The Islamic architecture is not only a style, but rather a living and growing physical manifestation of the Islamic civilization. As a civilization grows, the architecture strives to advance too. This display of progress in every civilization is most visibly reflected in its architecture and the mosque projects should reflect the beliefs and aspirations of the Muslim communities.

Islamic architecture started with the House of Prophet in Madinah in 622 AD. In less than 100 years it expanded from Chinese frontiers to Atlantic Ocean and covered two giant empires of Byzantine and Persia. It is remarkable that a uniquely Islamic architecture was successfully created in a relatively short time.

Dome of the Rock for example was completed around 690 and the original plan for Kufa Mosque dates back to 638 and was even been rebuilt once by Ziadh ibn Abihi in 670. These and other examples, such as Great Mosque of Damascus in 706, TARIC Khana Mosque of Damghan in 750, Al-Aqsa in 780 and many more all the way to Spain and 786 Great Mosque of Cordoba, show that a uniquely Islamic image and architecture was established in the first Islamic century.

The contribution of Islamic art and architecture to the world has been enormous. The pointed arch was invented in the Damghan Mosque of 750 and paved the way for the development of techniques that made high Gothic architecture and eventually modern skyscraper possible. Islamic Gardens were introduced which emanated from the teachings of the Holy Quran for preservation of nature and also as an image of heavens.

The circling of the square was perfected in the design of domes where this ingenuous solution transferred the roof loads easily down to the four columns in the square base and while fulfilling this utilitarian purpose the dome also became a beautiful symbol of Islamic Architecture as the Vault of Heavens. The Minaret, although an ancient invention, I think was the most extraordinary technical and symbolic developments in the history of architecture. These are all very important contributions deserving a full discussion that goes beyond this writing. However, a quick mention here serves to highlight some of these truly Islamic ideas in architecture.

The North American Context

Islamic architecture in North America is relatively a new arrival. America has been a recent host to Islamic Architecture compare to Europe for example that received this influence in the 8th century Spain. The difference, however, is that Spain was in a receptive mode with little or no industry, while America has a very advanced architecture and a highly sophisticated construction industry. It appears that Islamic Architecture has been less than influential in North America ranking with the mundane building types, nowhere near its original prototypes. From observing some of the existing examples of Islamic architecture in North America we can conclude that there is a lot of work left to do for bringing it to the ranks once enjoyed in Granada (Al-Hamra), Agra, Isfahan, Samarkand and other Islamic cities.

The Western context influences a mosque project in three ways. First, the most obvious influence is local ordinances, by-laws and regulation and is discussed under the heading of Obtaining Permits. The second is the influence of dominant Western cultural, artistic and intellectual forces, which appears to be most foreign to Muslims coming to Canada and perhaps the hardest to understand. This item is discussed under the heading of American Culture. The third influence that is covered under the heading of Project Management deals with the methods of construction delivery, selection of

consultants, choice of construction technology, project financing and fund raising which are highly technical in nature and require assistance of professional consultants. At the end of this section a discussion will follow on the Islamic traditional forms and assimilation into a Western context.

Obtaining Permits

All lands in Canada are subject to municipal zoning restriction that control types of uses and size of buildings permitted. A major restriction in the approval process is the local zoning by-laws that regulate land uses in every property. Without specifying the kind of religion, some properties are zoned to permit construction of a place of worship. Further restrictions are applied by the requirements for parking, storm water management, landscaping, tree preservation, and fire fighting plan and environmental audit reports. Therefore, care must be exercised in procurement of land to ensure a properly zoned property is selected. The usual process involves obtaining a planning approval which includes zoning approval or confirmation.

In the planning approval process there is a requirement for public hearing if zoning variances were deemed necessary. In this case, there will be at least one and perhaps more public hearings that will be set up by the municipality inviting people in the neighborhood to present their concerns and objections. In most cases all mosques projects requiring zoning variance have faced opposition. Although it has been possible to win some cases but it was not without a lengthy and expensive procedures involving architect, lawyers and experts to defend the case.

After satisfying the planning approval, or if already in compliance with the zoning by-laws, the project may be submitted for the building permit. Building permit process usually does not involve any public meetings and is strictly a compliance review procedure that deals with the provision of the provincial Building Codes concerning matters such as materials, construction details, fire and life safety, exits, access, washrooms, lighting, energy, and design standards for all parts of the building. Building codes group all buildings in different categories and impose more stringent restriction for the category of assembly occupancy that places of worship fall into. To ensure public safety licensed architects are required to design and seal the drawings.

Sometimes contentious relationship with a largely non-Muslim neighbourhoods and local governments makes it harder to obtain permits. This is partly due to the fact that places of worship from all religions are expected to bring undesired traffic and cars into a neighborhood creating parking problems. Muslims who know a lot more about Canadians and Americans are perhaps expecting the same level of understanding and familiarity and are somewhat puzzled when they see lack of it. This issue and its social and political dimensions go beyond the scope of this paper.

A common reason for projects to gets caught up in the procedural and regulatory traps can be contributed to the involvement of inexperienced non-professional volunteers who prepare inadequate design and incomplete set of documents. This results in unsuccessful application and the damage of course is too late to recover from after rejection and the community's hopes are sacrificed because of their unfamiliarity with the process and procedures or sometimes lack of language skills for communication.

American Culture

Understanding the North American architectural heritage (started with the arrival of early settlers, 17th century for the Europeans and possibly 9th or 10th century for the Natives) is a necessary first step in starting our task of designing an Islamic Centre. The discussion on American architecture, its archetypal roots and meaning will be beyond this writing but would be helpful in the course of designing a mosque project. Perhaps it is appropriate to mention the observation by Dr. David Handlin, a well known Harvard University professor, scholar and architect, who looked at America in a time when the land was all but uninhabited and summed up the following:

The obligation to fulfill the promise of the empty land has been both a burden and an opportunity. American architects and builders have responded to it in three ways. Some have tried to define an American equivalent of sorely missed traditions; others have produced works of invention and originality; still others have questioned whether architecture as a self-conscious art "and cultural artifact" is necessary or desirable at all. These reactions have most often been divergent, but the best buildings have usually tried to reconcile all three.

The teaching and examples of the early modernist icons such as Le Corbusier, Frank Lloyd Wright, Mies van der Rohe and Louis Kahn and other contemporary masters are well recognized in the world. New generation of prolific architects has taken the modern architecture beyond its norms and introduced yet another significant body of work, which is critical and has been more than a source of inspiration to young architects. While we admire the work of many progressive architects, we have to be aware of the danger in following the popular mainstream mediocrity that dominates commercial architecture of the West. The challenge, however, is to recognize the value of the Western architectural ideas and try to reconcile those relevant with the rich Islamic architectural tradition and forms. The goal should not be to follow mediocre mainstream architecture or copy work of others, but rather to pursue high quality original design with critical and vigorous examination of intellectual ideas. This is of course in contrast with the view that might exist advocating total ignorance of the Western ideas while promoting traditional forms to be transplanted intact.

Current artistic movement and architectural theoretical ideas are usually expected to be part of the discussion between the architect and the Client in most cultural projects. This important and dynamic discourse, however, in the case of a mosque design is often absent and almost entirely left at the discretion of the architect to bring these consideration to the project. The Client rarely notices it if this input was missing.

Project Management

In addition to the artistic and cultural history of Americas, advancement in project management and construction technology must be understood and evaluated. Management of project must be utilize the current know how in addressing important legal and contractual relationship. The contract forms and legal obligations under them are very complicated in construction projects and may pose many hidden liabilities if not handled skillfully. Proper documentation is essential with most projects and must be provided throughout all phases of design and construction.

The choice of construction technology is important and must be analyzed in advance to avoid any long-term difficulties in the building operation and maintenance. Best technologies may be employed in the design of mosques if there is a desire in the part of Muslim communities to revive high standards that was once an integral part of Islamic architecture. Yet the projects that are being build by Muslims in North America is unable to go beyond the basics. It would a poor practice if the community in charge of the building fails to allow budget for project management services by a professional architect. Self-help approach may be used in some projects but must be guided carefully by a professional to avoid undesired legal problems and financial claims.

Islamic Traditional Forms and Assimilation

Only a few specialized university professors and scholars in the West perhaps understand the meaning of Islamic forms. Appreciation of Islamic art and architecture by the general population is limited to post cards and travel magazines. Therefore, architecture in the pure traditional forms will look completely out of place and may be perceived as Hollywood version. Minarets were useful to call the Muslims for five time daily prayers in a city with a predominantly Muslim population, but in a Western city it may be considered as an objectionable noise. There is also a great chance that in a

Western context not many Muslim may live in the near vicinity of a mosque to hear the Mu'azin. Unless a totally Muslim neighbourhood is created there appears to be no need for minarets even in the areas with growing Muslim population because the non-Muslim population is still the majority. A potentially acceptable use for a minaret may be as an observation deck for viewing the surrounding scenery. Domes and arches are still relevant as structural solutions and could be incorporated successfully into the design of a mosque. The need for qiblah wall and mihrab goes beyond local relevance and are mandatory in mosques design. Other architectural forms such as courtyard and entrance portals are well within the acceptable languages common to all architectural traditions. A unique Islamic feature, namely calligraphy is considered highly advance intellectual design elements on buildings and could be encouraged.

Client's Role

In a construction project the Client occupies a central position and plays an important role that could be considered a full time commitment in some projects. The consultants expect the Clients to provide the necessary directions at times when called for and to review and approve the design, drawings and specification which could be very technical and complex in nature.

We have, in the past, worked with the community groups and helped in workshops and discussion meetings where questions were collected to arrive at an understanding and appreciation of the important issues affecting the project. In these meetings, we also provide an interpretation of all the technical information and explain complex design issues so that the community and their respective committees can understand and be informed in making wise decisions. I wish to emphasize here that in every construction project the most important decision a Client makes is the selection of an architect for the project. The strong and harmonious relationship between the Client and Architect is essential for the success of any project and particularly instrumental in quality control during construction.

Two Toronto Mosques

The two example presented here have truly been a community project that came to realization through a combination of self-help, mutual support, volunteerism, cooperation and determination that is so characteristic of the TARIC and Imdad Jamaats. Two Muslim communities who saw these projects far beyond the immediate needs for space and a building but recognized the importance of the rich and powerful tradition of Islamic Architecture. TARIC is the multi-phase large Islamic Centre and Imdad is an existing building retrofit from industrial to a mosque.

TARIC Islamic Centre, Toronto, Canada

The TARIC ISLAMIC CENTRE is a combined community centre and Masjid serving Muslim Canadians living in the Toronto area. TARIC (the Toronto And Region Islamic Congregation) was formed in 1977, and served worshippers from rental halls with 30 to 40 people attending the Friday Prayers (Figs.1-11).

Today, over 1000 worshippers fill the building, which was completed in 1991, and yet the demand for more space is evident since the worshippers are using even the outdoors for the Friday Prayer in the summer. The 18,000 square foot Phase One structure provides a temporary but dedicated Prayer Hall and a multi-purpose gymnasium which is used for D'awa, lectures, weddings, Quranic classes, bazaars and sports activities. It is hoped that with the completion of the Phase Two project, now in the planning and fundraising stage, the Center will provide the originally envisaged mosque proper, library, madrasa, and other facilities.



Fig. 1: TARIC Islamic Community Centre. Toronto. Canada, 1998.



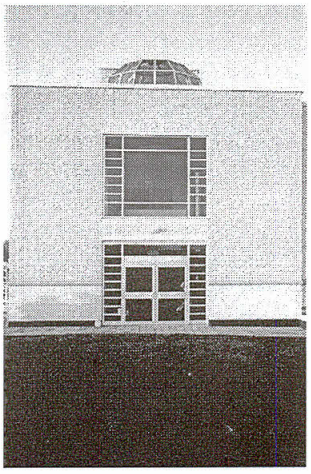


Fig. 2: TARIC Islamic Centre, Toronto, Canada.

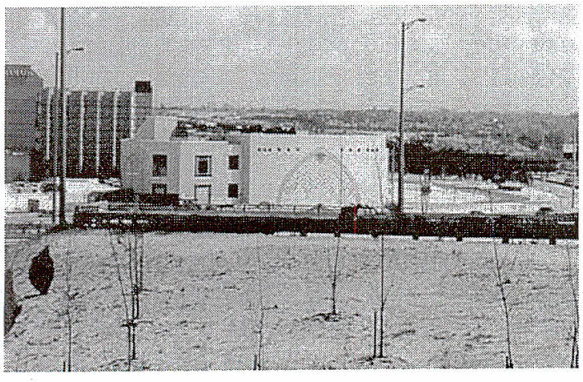


Fig 3: West View, TARIC Islamic Centre.

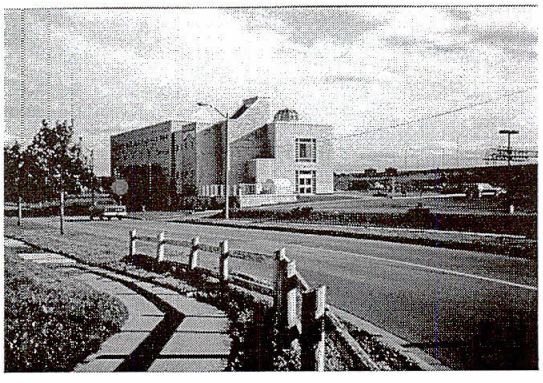


Fig 4: North View, TARIC Islamic centre.

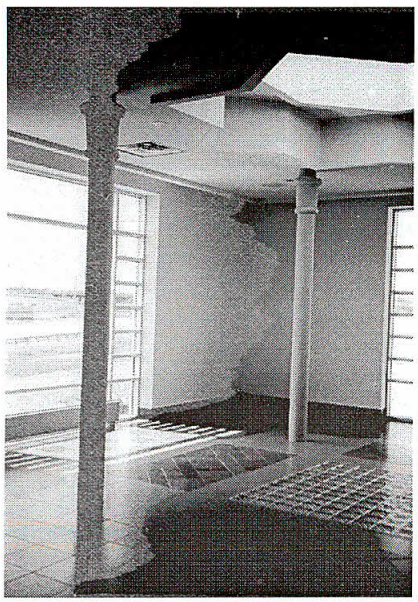


Fig 5: Lounge View, TARIC Islamic Centre, Toronto.

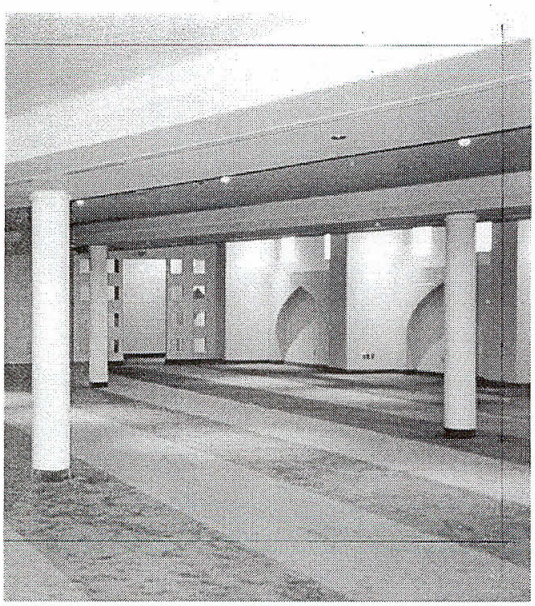


Fig 6: Prayer Hall, TARIC Islamic Centre, Toronto.

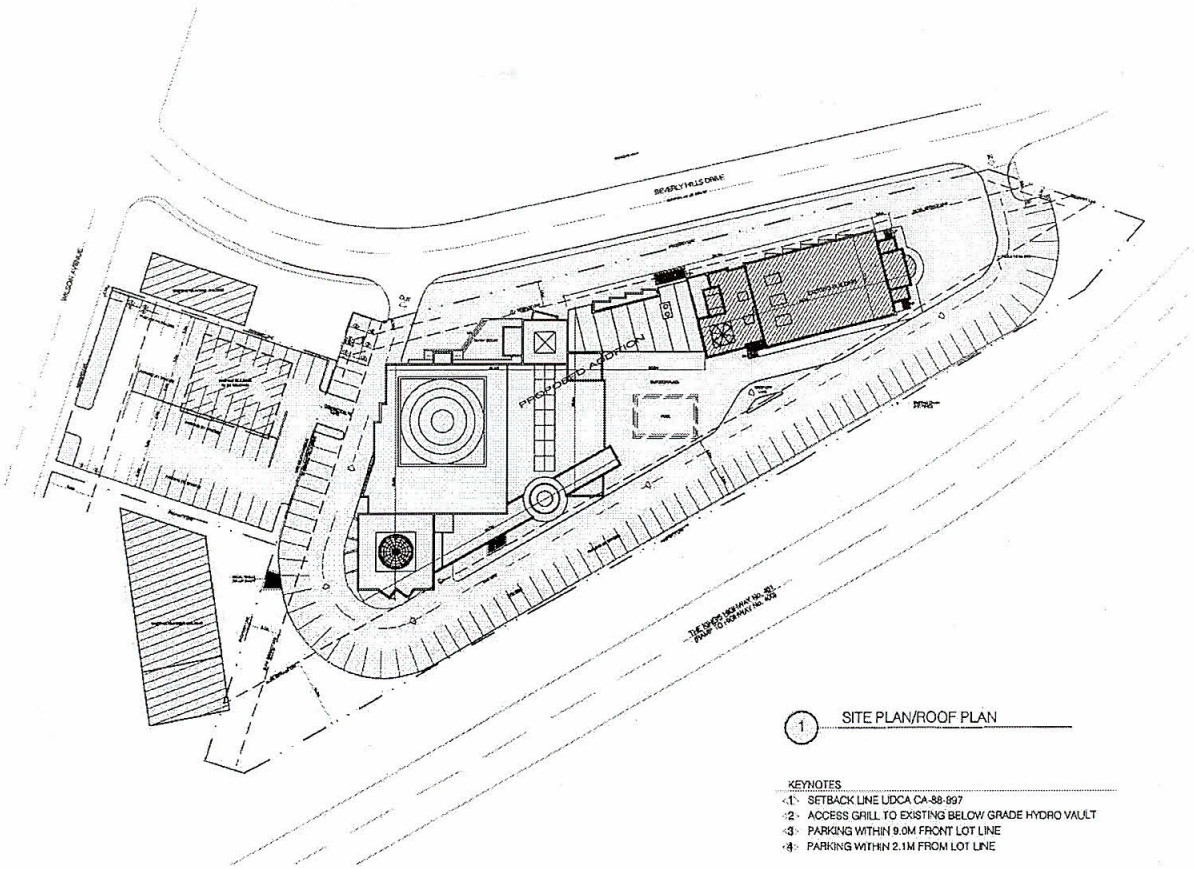


Fig. 7: Site Plan, TARIC Islamic Centre, Toronto.

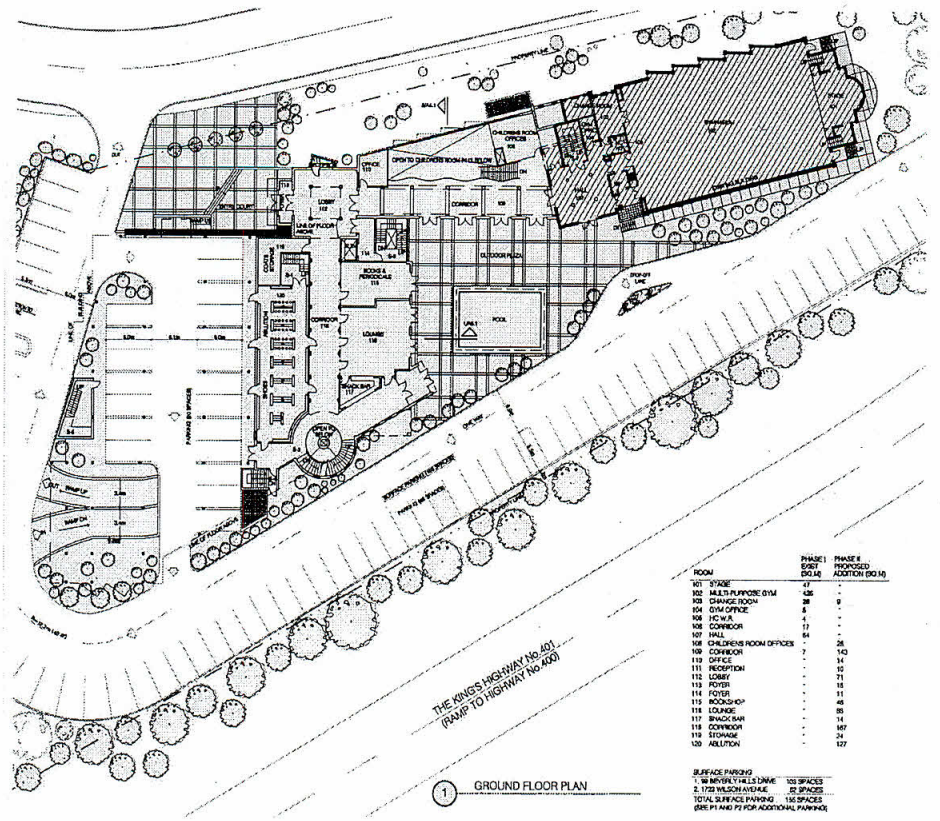


Fig 8: Ground Floor, TARIC Islamic Centre, Toronto.

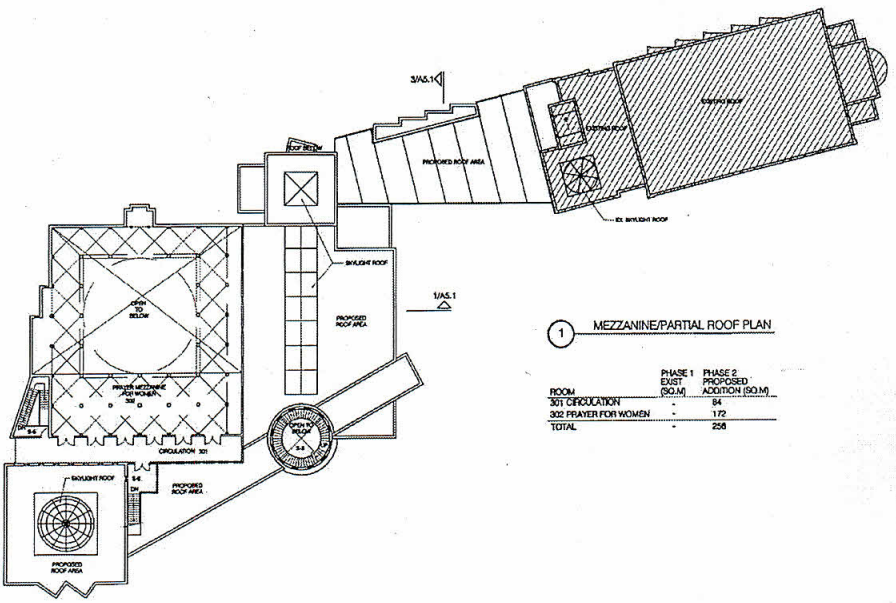
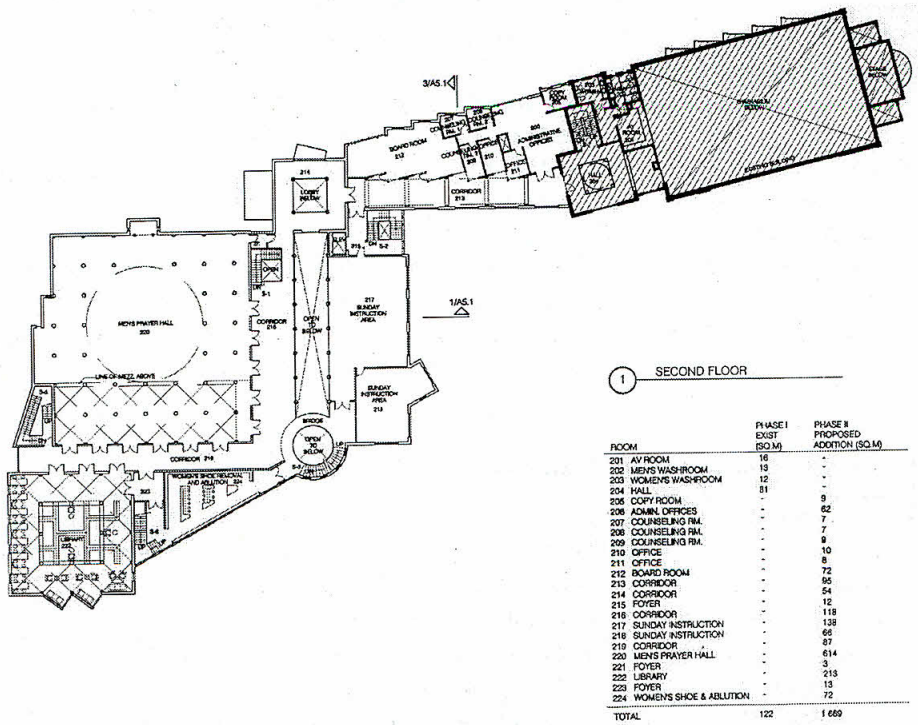


Fig. 9: Mezzanine Floor, TARIC Islamic Centre, Toronto.



ROOM	PHASE I EXIST (SQ.M)	PHASE II PROPOSED ADDITION (SQ.M)
201 AV ROOM	16	-
202 MEN'S WASHROOM	19	-
203 WOMEN'S WASHROOM	12	-
204 HALL	81	-
205 COPY ROOM	-	9
206 ADMIN. OFFICES	-	62
207 COUNSELING RM.	-	7
208 COUNSELING RM.	-	7
209 COUNSELING RM.	-	9
210 OFFICE	-	10
211 OFFICE	-	8
212 BOARD ROOM	-	72
213 CORRIDOR	-	95
214 CORRIDOR	-	54
215 FOYER	-	12
216 CORRIDOR	-	118
217 SUNDAY INSTRUCTION	-	138
218 SUNDAY INSTRUCTION	-	66
219 CORRIDOR	-	87
220 MEN'S PRAYER HALL	-	614
221 FOYER	-	3
222 LIBRARY	-	213
223 FOYER	-	13
224 WOMEN'S SHOE & ABLUTION	-	72
TOTAL	122	1 669

Fig. 10: Second Floor, TARIC Islamic Centre, Toronto.

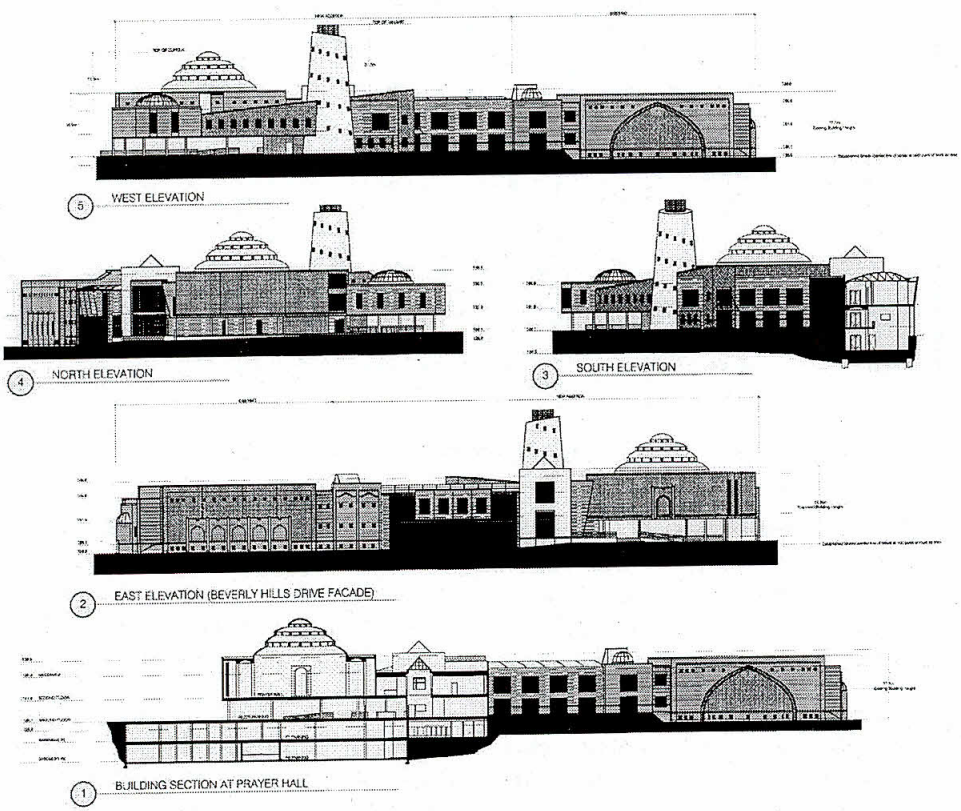


Fig. 11: Section & Elevations, TARIC Islamic Centre, Toronto.

At the intersection of the busiest highways in Canada, a white building occupies a site visible to thousands every day. A quick view of the building, lasting only a few seconds, provides the motorists with an image of a monumental arch relief in the west facade that resembles an Iwan, the archetypal entry portal of a mosque. The colour pattern inside the arch reinforces this image by referring to Muqarnas, the complex of stalactite shaped ornament that frequently adorns the traditional Iwan. The direction of the Qiblah, where the faithful face five times a day for prayers, is given an architectural expression in the form of interior niches projecting towards Mecca. The resulting exterior canted bays in the east facade are given emphasis by a pattern of yellow and blue blocks to suggest an abstract but vivid connection to the elaborate inscription carvings of the traditional designs. These and other design features attempt to produce architecture of innovation within tradition in a contemporary idiom and with a low construction budget. Adequate funds were never at hand for construction and the project had to be built piece by piece gauged to the unpredictable flow of donations.

Imdadul Islamic Centre, Toronto, Canada

Imdadul Islamic Center is a retrofit project converting an existing industrial building into a mosque and a community centre in Toronto. The design of Imdad Mosque reflects the aspirations and beliefs of a Muslim community living in Toronto. (Figs. 12-15). The Qiblah Wall was the guiding force in articulating a form for the Prayer Hall design. Mihrab the focal point of Qiblah Wall is marked by three arches providing three niches for the Imam in the Centre, Minbar to the right and speaker's podium to the left. Leaving behind the shoes, one can enter the Mosque through Ablution rooms for both women and men. Placed behind the Prayer Hall is a large dining hall where the faithful can gather after prayer and be served refreshments from the adjacent kitchen.

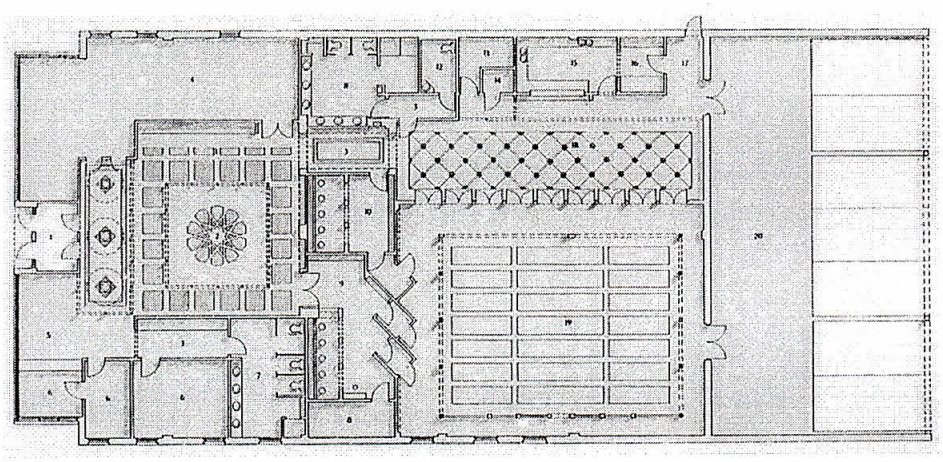


Fig. 12: Floor Plan Imdad Community Centre. Toronto. Canada

Entering the Imdad Centre one is welcomed with the warmed of the Fountain Hall with a symbolic fountain at its centre as a reminder of the unique Islamic rituals of ablution. The library and the administration areas flank the Fountain Hall together forming the public areas where people can enter with shoes on without having to interfere with the privacy of the Prayer Hall.

In designing and implementing Imdad Centre project an innovative method was devised to provide flexible options within an overall strategy that would permit each problem to be resolved within a framework of operational constraint rather than a fixed design. Then, the solution that met the site conditions and the project needs was implemented mostly by volunteers and within the budget available.

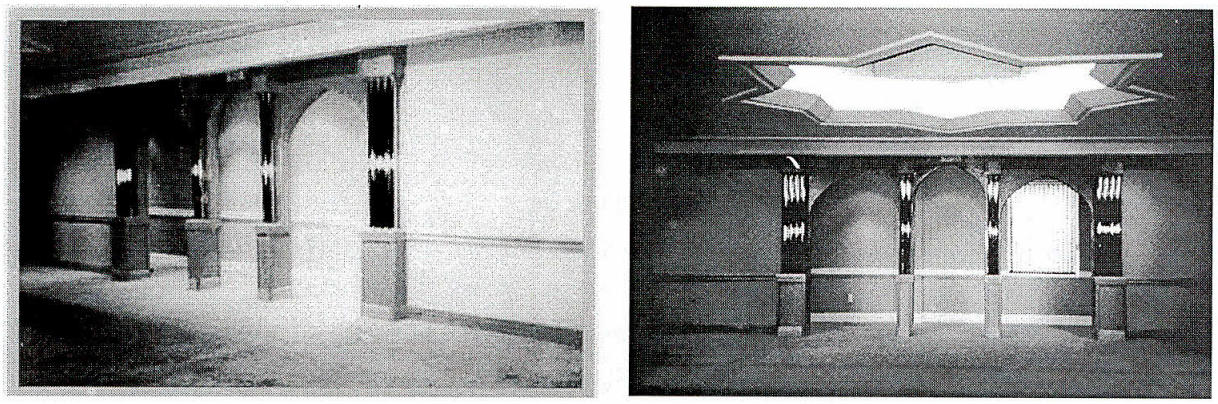


Fig. 13: Mih rab at Imdad Community Centre. Toronto, Canada.



Fig. 14: Lounge at Imdad Community Centre. Toronto, Canada.

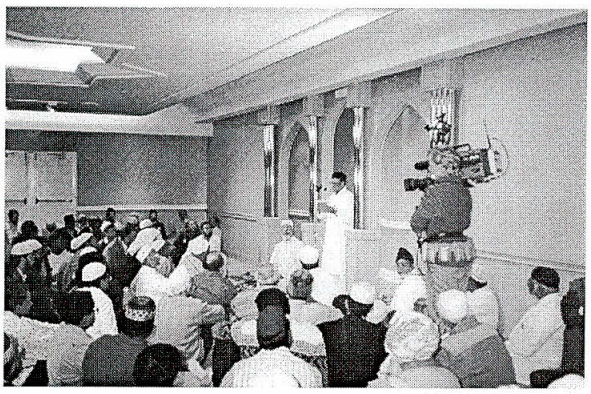


Fig. 15: Prayer Hall at Imdad Community Centre. Toronto, Canada.

Concluding Remarks

As a community project, a mosque project in America comes to realization through self-help, mutual support, community investment, cooperation and determination. To become a symbol of Islamic civilization a building however, requires a greater dedication. The first step is the recognition that the provision of a building is an opportunity for exploring and creating an original design solution. A design that is rooted in the Islamic tradition but goes beyond the functional requirement. Working together, and with the support of the community, design can seek an architecture that incorporates the intrinsic values and the spirit of Islamic Architecture rather than copying few arches, domes and minarets. We can create a design that is advanced in its intelligence and technique, and is one that could serve as an example of Muslims contribution to the world.

References

[1] Ardalan, Nader and Bakhtiar Laleh. *The Sense of Unity.* Chicago: The University of Chicago Press, 1973.

[2] Brett, M. and Forman, W. *The Moors, Islam in the West.* Great Britain: Orbis, 1984.

[3] Danby, Miles. *Moorish Style.* London: Phaidon Press, 1995.

[4] Frishman, M. and Khan, H. *The Contemporary Mosque.* New York: Rizzoli, 1997.

[5] Handlin David P. *American Architecture.* London: Thames and Hudson, 1985.

[6] Holod, R. and Khan, H. *The Mosque.* London: Thames and Hudson, 1994.

[7] Hoag, John D. *Islamic Architecture.* New York: Harry N. Abrams Publishers, 1975.

[8] Rogers, Micheal. *The Making of the Past, The Spread of Islam.* Oxford: Phaidon Press, 1976.

[9] Scerrato, Umberto. *Monuments of Civilization Islam.* New York: Grosset and Dunlap, 1976.

تصميم المساجد في الغرب

لقمان آزر

شركة لاين آركيتكت

تورونتو, كندا

ملخص البحث: تأخذ دراسة العمارة الإسلامية بدارسها إلى كثير من الأماكن والأزمنة المثيرة للاهتمام من الناحيتين الجغرافية والفكرية. وقد نما كثير من هذه الأماكن عبر القرون ليشكل مضمونا" إسلاميا مناسبا لازدهار المساجد. كما أن مشاريع أبنية المساجد في العالم الغربي ينظر لها على أنها شيء قادم جديد يتطلب أسلوبا خاصا في تصميمه وتنفيذه. وقد شكل وصول الجماعات المسلمة وتواجدها في الغرب حاجة ملحة لبناء المساجد التي تعتبر من أنواع المباني الغريبة والجديدة بالنسبة للسكان الأصليين. وبالإضافة إلى كون تلك المباني تخدم حاجات الجماعة فإنها تخدم أيضا" هدفا" تاريخيا" كرموز للإسلام وللعمارة الإسلامية ولذلك فإنه يجب معالجة كثير من القضايا عند تصميم مسجد ما في بلاد الغرب.

في هذه الورقة تناقش مشاريع المساجد في الغرب على أنها: ١- نابعة من حاجات الجماعة المسلمة وعليها أن تسد تلك الحاجات. ٢- وأنها للمسلمين وينظر إليها كرمز للإسلام ويجب أن تعكس روح الإسلام ٣- وأخيرا أنها بسبب موقعها يجب أن تكون من أفضل نوعيات المباني في عمارة أمريكا الشمالية. لقد تم تقسيم عناصر البحث إلى ثلاثة أقسام: ١- المجتمع المسلم ٢- العمارة الإسلامية ٣- البيئة الأمريكية الشمالية.