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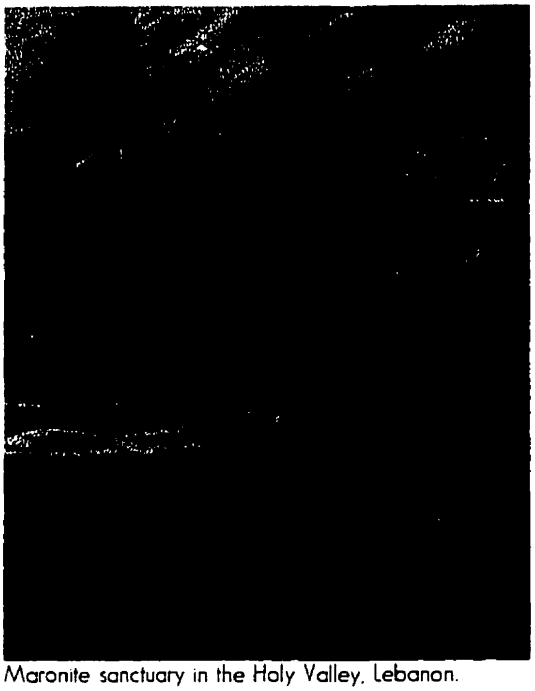
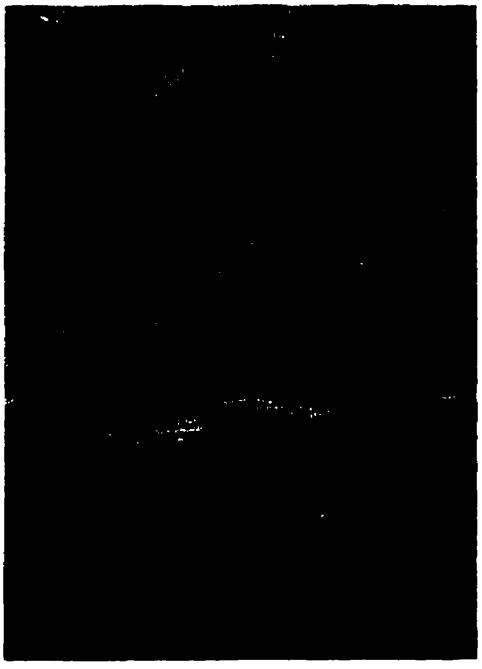
A PATH OF SODALITY
A CATHOLIC MARONITE CHURCH FOR CALGARY





Maronite sanctuary in the Holy Valley, Lebanon.

Prepared in Partial Fulfillment of the requirements of the
Masters of Architecture Degree, in the
Faculty of Environmental Design,
The University of Calgary.

June 1998

Dedicated to my children-
you are my anchor and my joy

and to Tim and Koel your memory makes me strong

ABSTRACT

The Master's Degree Project is a design for a local Lebanese Maronite Catholic Church. The parish is served by a part-time priest and the church operates within the Canadian Catholic Diocese. The design considers the combined influences of: Catholicism, Maronite Lebanese culture, and Canadian regionalism and geography, by considering the unique history of the Catholic Maronite people and the contextual implications of building in Calgary. The architectural program facilitates and meets the needs for Maronite Catholic Mass, religious holiday celebrations, and for parish gatherings.

The project is intended as one possible solution for simple and provident spaces which will contribute to a supportive facility for parish life. The MDP is meant to help the community establish long term goals, to realize some of the general design parameters required, and to consider concomitant roles a church building can embrace. The process entailed:

- Interviewing parish committee members to establish a relevant architectural programme.
- Selecting a potential site with consideration given to the general Catholic community, the Maronite Catholic parishioners, and the City of Calgary.
- Developing a design strategy incorporating the architectural idea of the path as an organizing principle.
- Calculation of a general cost estimate

The architectural response to the design problem is explored and documented. General consideration is given to site and orientation, simplicity of structure and detail, cost and budgeting, accessibility, and material selection.

The project demonstrates that successful provident spaces can be wrought from thoughtful architectural intention. The project embraces the middle ground between overly designed, overly expensive architecture, and thoughtless mediocre building practices, by adopting thoughtful and moderate design strategies. The design scheme responds to the culture and history of the Middle Eastern parishioners and at the same time embraces a Canadian context, consequently the church design is a blend of old traditions in a new context.

ACKNOWLEDGMENTS

I would like to express my appreciation to Professor Tang Lee for his unending guidance and support. In particular, I am indebted to Professor Lee, and to Professor George Jergeas for their valuable comments and advice during this project. I would also like to thank all the members of the church committee whose insights were a contributing force in the MDP.

I would like to thank my family and friends for their continual support and encouragement. Special thanks goes to my parents, especially my father whose belief in education has made a positive impact on my family, to my sister Yvette, and to my brothers, Grant, Lance, and Tony, and to my nephew Liam, and my niece Emme and to my children Kyle and Braden.

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I. Introduction

This Master's Degree Project is intended as one possible design solution and is offered with the intent to help the Maronite Church Community with the following: to recognize some of the general requirements for the design and building process, to consider alternative conventions for their 'church' operations, and to provide a rough cost estimate for long term fund raising goals. The design scheme responds to the culture and history of the Middle Eastern parishioners and at the same time embraces a Canadian context, consequently the church design is a blend of old traditions in a new context.

The Design Problem

The task is to clarify and bring together the requirements for the project by discerning the overall objectives of the church committee members. And to consider the general desires and aspirations of the member's vision for their own building, their thoughts about parish growth and the church's potential uses. The congregation would like to create their own church building which will support their eastern traditions and become an anchor for preserving the traditions and the future gatherings of the Lebanese Maronites in Calgary.

Presently the group does not have a site, nor funds for the project. They are also concerned about their ability to maintain a building once constructed. The MDP is similar to a Environmental Design 702 project in that, cost consideration and designing for real clients places restrictions on the project.

The project demonstrates that successful provident spaces can be wrought from thoughtful architectural intention. By adopting thoughtful and moderate design strategies, the project embraces the middle ground between overly designed, overly expensive architecture, and thoughtless mediocre building practices. Architects have a responsibility to engage the typical in a thoughtful considerate fashion which provides for places which evoke our sensory capacity. Public and private spaces have the capacity to enthrall as evidenced by the success of vernacular architecture all over the world.

The role this MDP plays is to clarify, by speaking with a small sample of the congregation group, what those goals are and to present a hypothetical design solution. An informal first presentation of the design to obtain feedback from the parish membership will proceed the MDP presentation and will inform design changes. When the group eventually purchases a site the elements and principles of the design could be reworked to be site specific. It is important to design the building for its site so that the effectiveness of its orientation, views, and outdoor spaces meets the original intent of the design.

The goal of the MDP is to give a concrete manifestation; one example design solution, which addresses the factors involved and the objectives of the sample group. The committee should identify and consider all the groups, agencies, or individuals who have a vested interest in the project. These are the stakeholders and each stakeholder has an advantage/risk associated with a building project.

It is important to understand all of the players, to acknowledge their concerns and mitigate potential conflicts early in the design phase. Stakeholders could include: the Lebanese community (including individual members), the general Catholic community and the Catholic Diocese, the local community or the neighborhood, the city or other governing bodies, contractors, consultants, financial sources including banks, and potential revenue sources/tenants. Anyone who can influence the success of the project (including the design and the cost) or will have a say in the project, is a player in its success.

What are the Factors?

1) The congregation is predominately a Lebanese Maronite community but also includes members from other Middle Eastern Catholic groups. The parish is served by a part-time priest and the church operates within the Canadian Catholic Diocese. The group requires a space for Sunday worship and for group celebrations primarily centered around religious days. The program should facilitate and meet the needs for Maronite Catholic Mass, religious holiday celebrations, and for parish gatherings. The committee members include, George Jergeas - Parish Finance Council, Antoine Sassine - Parish Pastoral Council, Bernadette Chamoun and Collette Rizkallah - The Women's League, Fadi Nasr- Parish Finance Council.

2) The group is not sure in what area of the city a site should be purchased.

3) The group would like a calculation of a general cost estimate so that fund raising goals can be established. The building should be cost efficient and convenient to maintain.

How does this Influence the General MDP Objectives?
Given the three general factors of the project my general objectives became:

1) To implement and maintain a design process concomitant with the initial desires of the congregation.

2) To create a design which considers the combined influences of Catholicism, Maronite Lebanese culture, and Canadian regionalism and geography, by considering the unique history of the Catholic Maronite people and the contextual implications of building in Canada.

3) To design simple and provident spaces that will contribute to a supportive facility for the parish.

The Process

The process strategy aimed to coalesce the factors and the objectives of the design problem and to eventually inform the design parameters. The preliminary work involved the following:

1) To conduct informal interviews with the parish committee members, and to document these meetings. There was not one clear direction among the members, but the interviews helped to establish a relevant architectural programme and to determine the design parameters that would be pursued within the MDP. The procedure was also useful in recognizing the divergent desires even within a cohesive group. Appendix A includes Minutes of the Meetings.

2) To research Catholic churches, liturgical spaces, the Maronites, and the Lebanese culture, for their potential influence on the building design. The research information was diverse and included the informal interviews, the collection of photographs and books from the committee members, library reference sources, and the internet. The research aided in understanding the unique history of the Maronite people, and also helped to identify the fundamental architectural elements which would generate the design. The document sections; II. Lebanon and the History of the Maronites, and III. Designing for the Maronites in Calgary, present the findings.

3) To select an appropriate site, which would support the design parameters. The site documentation included photos, maps, and city information.

4) To determine the criteria for the project, the design parameters, including the projected size of congregation, the size and characteristics of the building, and the architectural programme. The meetings helped to generate an appropriate architectural programme. The Architectural Programme can be found in Appendix B.

What are the Design Parameters generated from the Process?

The following list summarizes the parameters which influenced the design decisions. The document further discusses the following points in the sections, IV. Design Parameters, and V. The Design.

- The size of the church should service a potential group size of 150-200 families for mass (300-400 people/weekly mass, 50-60 % attend mass regularly) and serve the same number of persons for special functions. There should be consideration for future expansion of the worship space. The project will require a 1-2 acre parcel of land to build the church and to have adequate room on site for parking and for future expansion.

- The required spaces are: entry vestibule, main worship space, sacristy, sanctuary and altar, confessionals, 'crying room' (a distinct but acoustically and visually connected space for parents and small children), a choir area (12 -20 persons), a hall and kitchen, washrooms, and outdoor spaces.

- There is a need to stretch the church group's thinking about the role their building could play in generating income to support its operation. Create lease-able space and design the lease-holds specifically for the tenants. Lease to tenants whose primary use time is Monday to Friday, this frees the parking and common spaces for the church uses.

- The design should include spaces for appropriate long term tenants and should also be designed to rent out for one-time functions. Some tenant possibilities are a permanent day care facility, and permanent office spaces. Office space could be rented to businesses including social or city agencies, community groups, or senior's groups. Office space for appropriate private companies could also be considered. One-time renting of spaces would include, banquets and parties, theater and musical productions, meetings and conferences.

- The church design could also accommodate other worship groups including the larger local Roman Catholic congregation, or other Christian churches. This would enable the parish to generate revenue from renting the worship space and subsidize its maintenance costs.

- Design the worship space for flexibility of use, by using moveable worship furniture including, altars, pulpits, choir seating, and pew seats. Fixed pew seats are preferable (due to the noise and distractions created by moveable seating), but a moveable pew that can be quickly anchored or unlatched could be considered. The church, can also be used by other worship groups and by performance groups.

- Choose an area of the city and a site which will provide proximity to residential, community, and commercial areas. Proximity will enhance the building's use.

- Consider the views from the site. The west views in the city of Calgary, with their hilltop, mountain and valleys, are similar to the views in the hills of Lebanon.

- The site selected should provide good sunlight, a light bright church is desired. The design should consider climate and orientation and provide a primary southern exposure.

- The site should be easily accessible from all areas of the city since the congregation has a city-wide membership. There should be relative separation from noise sources such as roadways, train tracks, and airports.

- Consider the concepts of Value Engineering (optimizing the design to achieve the best value), and the concept of Constructibility (practicality of design and the balance between cost and creativity). The building should be cost efficient and convenient to maintain. The construction should use conventional and standardized building techniques, and economizing materials that provide the desired look and longevity for their cost.

- Consider using steel construction techniques (wood is susceptible to humidity problems and the length of span of truss systems is more limited). Steel also offers unique daylighting, glass wall, and skylight options. There should be an clear expression of materials and a simplicity in structural configuration.

- There should be provision for stained glass windows, where as the parish gains funds they can install stained glassworks. Include the potential for individual expressions of the symbolism and icons in Lebanese and Middle Eastern cultures. This could be done through floor patterns, stained glass windows, mosaics on walls, ceilings, and floors, and mural work by artists.

- Incorporate fund raising opportunities into the design. Include a donor wall for engraved stonework or plaques, have donor paving stones for the many pathways, and also donor Cedar and other trees for the Cedar Grove and park spaces. This would provide for individual contributors to be recognized for their financial involvement.

- The architectural elements which can resonate in a Calgary design are; the ordering and organizational principle of the path and the use of architectural elements to create both path and place. Exterior elements include: roadways, walkways, and stairs, fountains, courtyards and canopies, cedar groves, and gardens. Interior elements include the entries and exits, doorways and windows including the puncture and the arched opening, and also the delineation of the surfaces, walls, floors, ceilings.

In summary two primary issues emerge, 1) that the architectural design be flexible and 2) that it enables the building to provide its own economic support.

Multitudes of conditions have affected both the architecture and the practices of the Maronite Catholics both in Lebanon and in adopted countries. This has produced an open mindedness to accepting diversity in religious beliefs. And since there continues to be a basic simplicity in the architectural requirements for the sacraments, the design has the potential to accommodate other worship groups (those who participate in Christian Sacraments).

The Lebanese have always participated in trade and business and the operation of a building for business is a viable operating strategy. The support for the church by the integration of commercial space can create a sound operating income for the parish committee. It is the argument of this project that by creating the opportunity for the church community to generate income through the building design the church group becomes a viable part of a larger community. It could be argued ethically that this should not be the scope of a church design or a worship group, but it is in the participation in an economic community that our culture including religious practice operates and a spiritual building requires a sound supporting financial commitment by its owners.

II. Lebanon and the History of the Maronites

Sodality is the name of the of the lay society within the Maronite Catholic parishioners group. Sodality, is the promotion of camaraderie and fellowship through an active path of association and good will. Maronite Catholics are a group of Catholic peoples traced back to followers of Saint Maron (5th century) of Lebanon. The Maronite Rite or group is one of the oldest traditions in the Catholic Church and the Maronite Catholics are considered one of the earliest Christian groups. Before Saint Peter and Saint Paul established the Church in Rome, they first established the church in Antioch.

Figure 1. Saint Maron Monastery, a rock cut structure of three levels. This was a temporary refuge of the successors of St. Maron as they traveled from Syria to Lebanon.

St. Maron, a healer and a hermit, was the Abbot of a large monastery of Greater Syria. The monastery Beth-Maron built near Saint Maron's tomb became the nucleus of a community. The liturgy and the organization of the Maronite community even today has monastic characteristics. The Beth Maron monastery was situated in the north of Syria, in Antioch. During the reign of Saint John Maron the Maronite community left the north of Syria to take refuge in the 'Holy Valley", the Vale of Qadisha, of the Lebanese mountains. Figure 1.

In about 749 the Maronites built their first church in Lebanon, Mar-Mama in Ehden. Here the Maronite community enjoyed the peace of the Cedars and the relative security of the Lebanese mountains. Figures 2- 3.

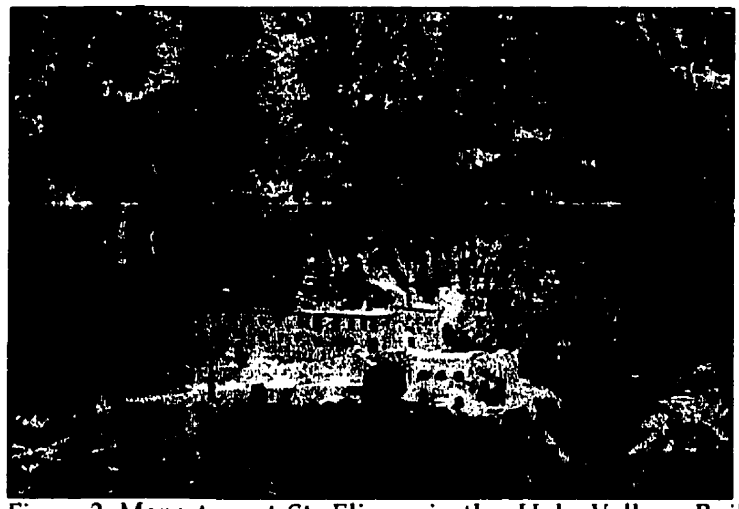


Figure 2. Monastery at St. Eliseus in the Holy Valley. Built into a shallow cave in about the 14th century this monastery was like the original Maronite monastery previously destroyed in Syria.

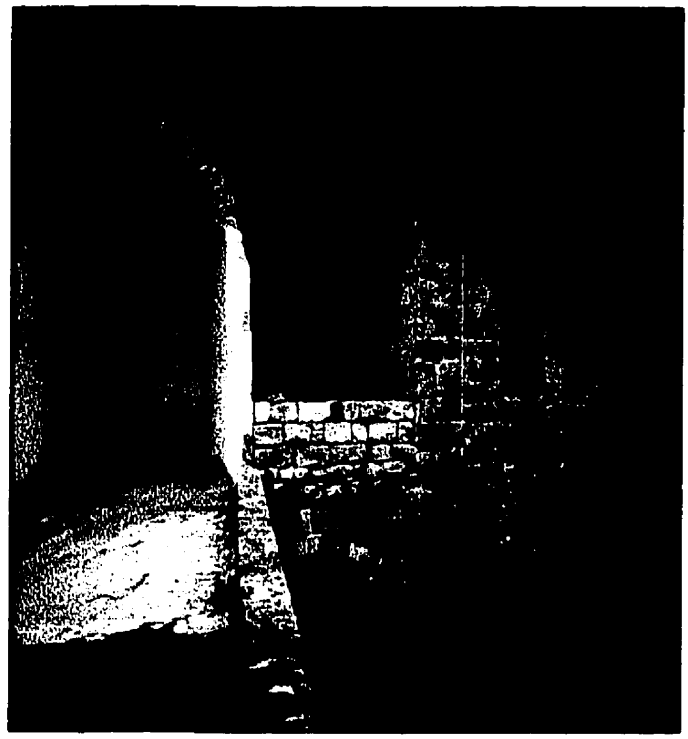


Figure 3. Former Maronite Patriarch Headquarters in the Holy Valley.

From that time, "the history of the Maronites and the history of Lebanon have been intertwined" (Beggiani, Jan. 98). The monks of St. Maron came from among the people of the region, and the Monastery was the place where the lay people received their religious instruction and were educated and trained in various skills. Both the religious and the lay followers of the spirit of St. Maron became known as the Maronites.

Lebanon is a country centrally located in an ancient geographical juncture of history, culture, and trading. The country is bordered to the north and east by Syria and Jordan, to the south by Israel, and to the west lies the Mediterranean Sea, and Cyprus. Figure 4. The entire west coast borders the sea, and the cities of Beirut, Tripoli, Sydon, Tyre, and Bylbos are port cites with rich pasts filled with architectural work from ancient ruins to recent construction. Figure 5. Since wartime (the war lasted from 1975 until 1991), the cities, especially Beriut, have experienced a renewed optimism and are now rebuilding destroyed areas.

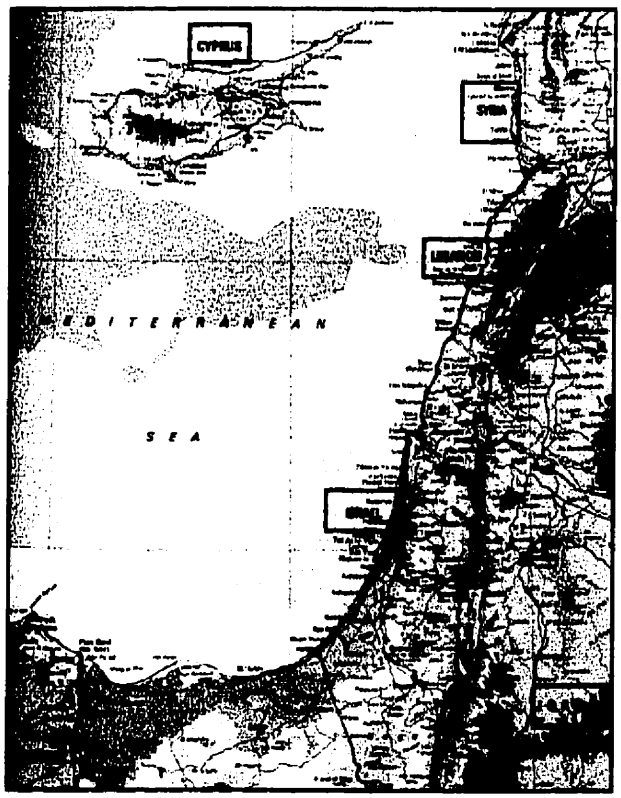


Figure 4. Map of the Lebanon area.

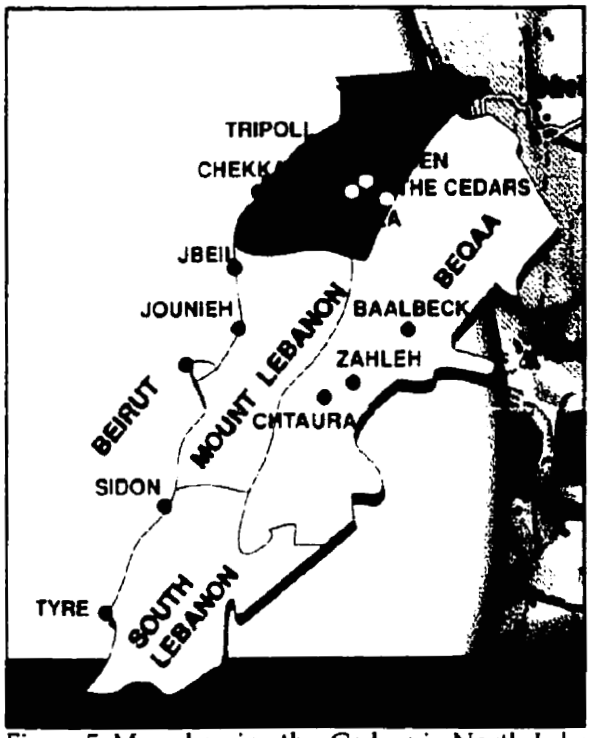


Figure 5. Map showing the Cedars in North Lebanon.

Along with the coastal port cities and the beaches, the natural landscape of the rest of the country is diverse, and includes agricultural valleys similar to the agricultural foothills of Alberta. Figure 6. The Beqaa Valley continues to supply agricultural products as it did thousands of years ago for the Roman Empire. To the north are snow capped mountains and cedar forests. Figures 8-11. The seasonal changes in Lebanon are to tied to the changes in plant life and are attributed to the change in smells throughout the growing seasons of pine trees, cedar trees, citrus fruits, and the smell of flowers and herbs.

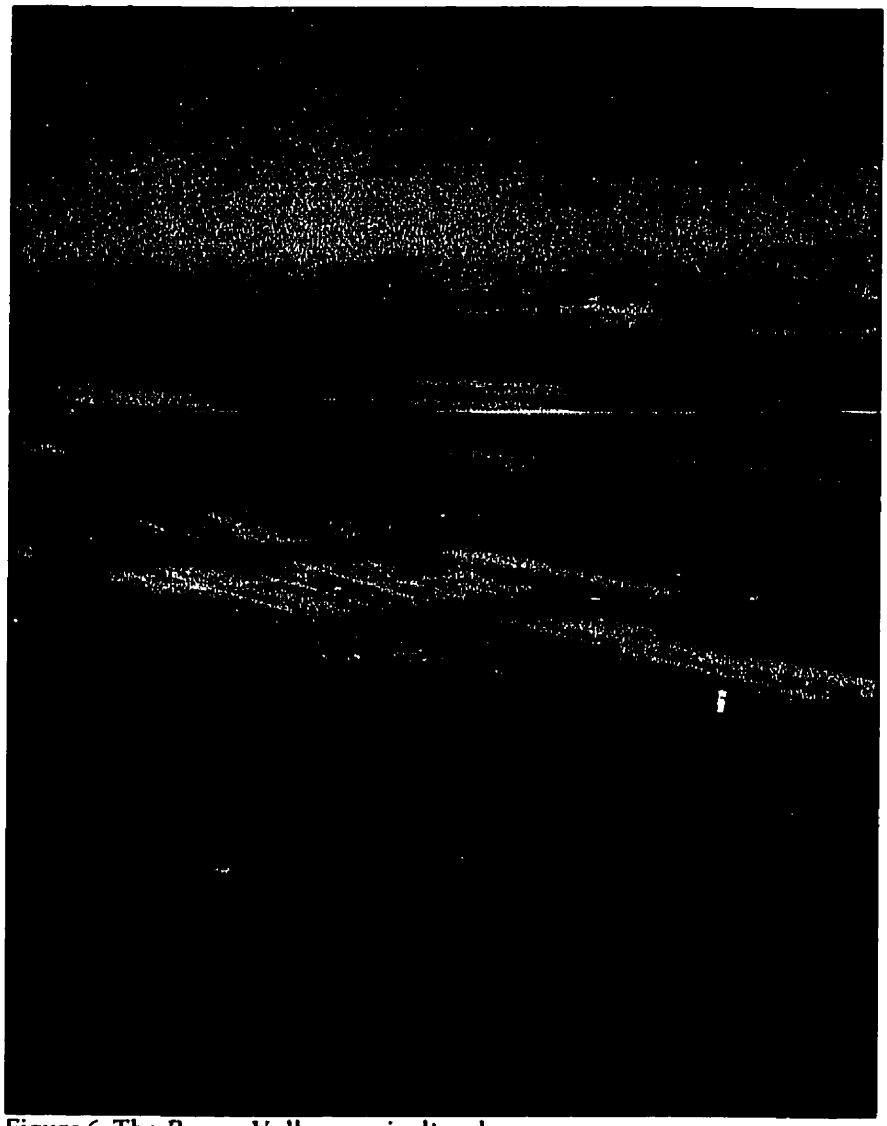


Figure 6. The Beqaa Valley agricultural area.

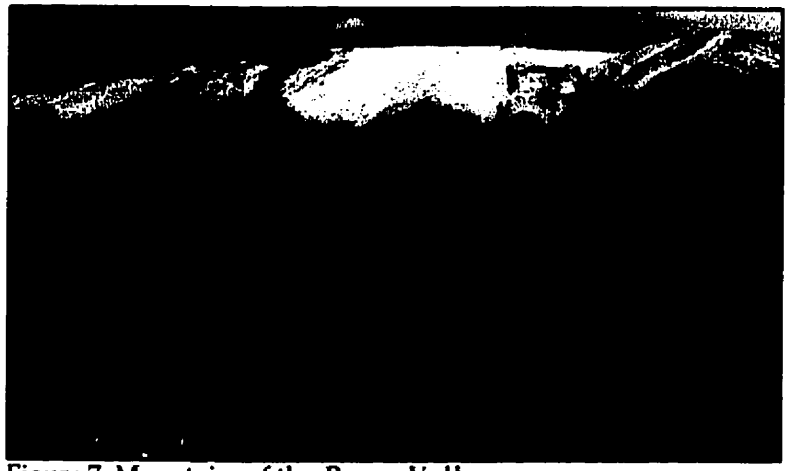


Figure 7. Mountains of the Beqaa Valley.

Figure 8

Figure 9

Figure 10

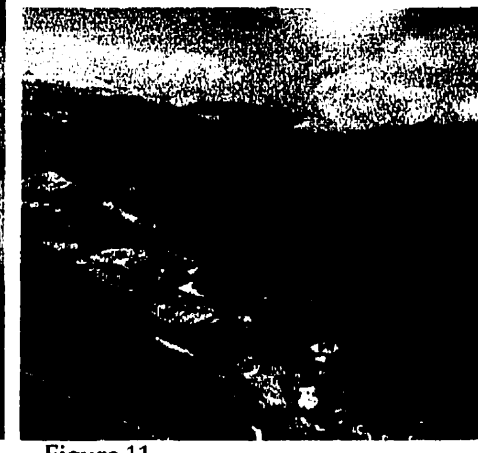


Figure 11

Figures 8-11. The Cedars of Northern Lebanon. Some 2,000 trees, many between 1000 and 200 years old stand on slopes 2000m high. From Lebanon's cedar forests, timber was used in early temple and ship building in the whole Mediterranean area. The cedar is the country's national symbol and is centered on its flag.

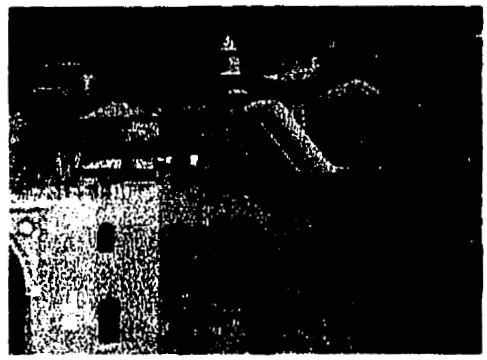
Three quarters of the population live in the port cities which all date back to at least 4000 BC. The nation is 10,452 miles square and a traveler can traverse the country from North to South by car in four hours. The earliest evidence of civilization dates to about 6000 BC and the area was once called Phoenicia. At least seventeen civilizations have left evidence of their existence in Lebanon. Currently seventeen different religions are practiced in Lebanon.

By virtue of Lebanon's geographical position between east and west, the Maronite people have a long history of comradeship. "Today some one million fifty thousand Maronites in Lebanon courageously maintain, under the guidance of their patriarch, this tradition of hospitality and openness in the politically explosive and religiously nearly impossible situation of the Near East. This is the history of the Maronites, a people between two worlds, between East and West, between Latin Church and Oriental churches [Lebanon is a nation of Asia], between Catholicism and Orthodoxy, between Islam and Christianity" (Kolvenbach, Jan. 98).

Today, the Maronite Catholic church is a sister church to the Latin Roman Catholic church. The rites are influenced more by Eastern traditions, but the Sacraments are the same. The Maronites honor the faith and the guidance of the Pope of Rome as do about eighteen other Eastern Catholic church groups along with the Roman Catholics.

III. Designing for the Maronites in Calgary

The region of Lebanon in which the Maronites lived was the crossroads of many cultures and beliefs (Beggiani, Jan. 98). The general architecture reflects a multitude of influences including Early Christian, Muslim, Byzantine, Ottoman, Roman and French. Figures 12-13. Most Maronite churches are monastic and simple. Their architecture reflects early Christian times. Figures 14-16.



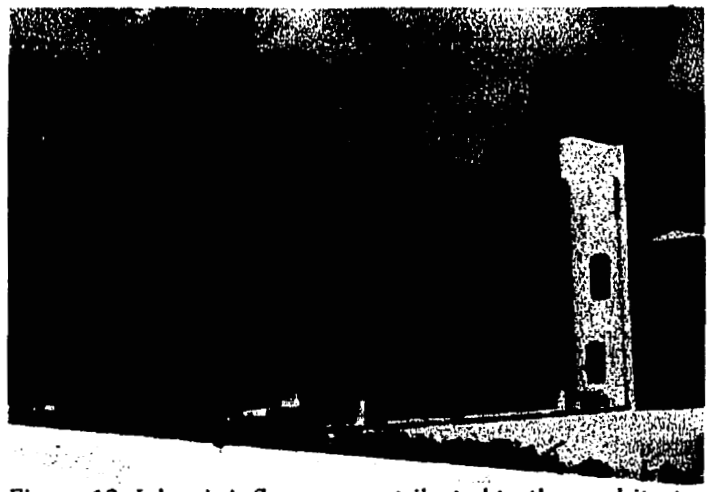


Figure 12. Islamic influences contributed to the architecture of Beitaddine Palace built at the beginning of the 19th century.

"The Maronite church rooted in the ascetic spirit of St. Maron was molded into a community of faith with a monastic stamp. Its origin and early development help to explain why its liturgical life is characterized by simplicity." (Beggiani, Jan. 98)

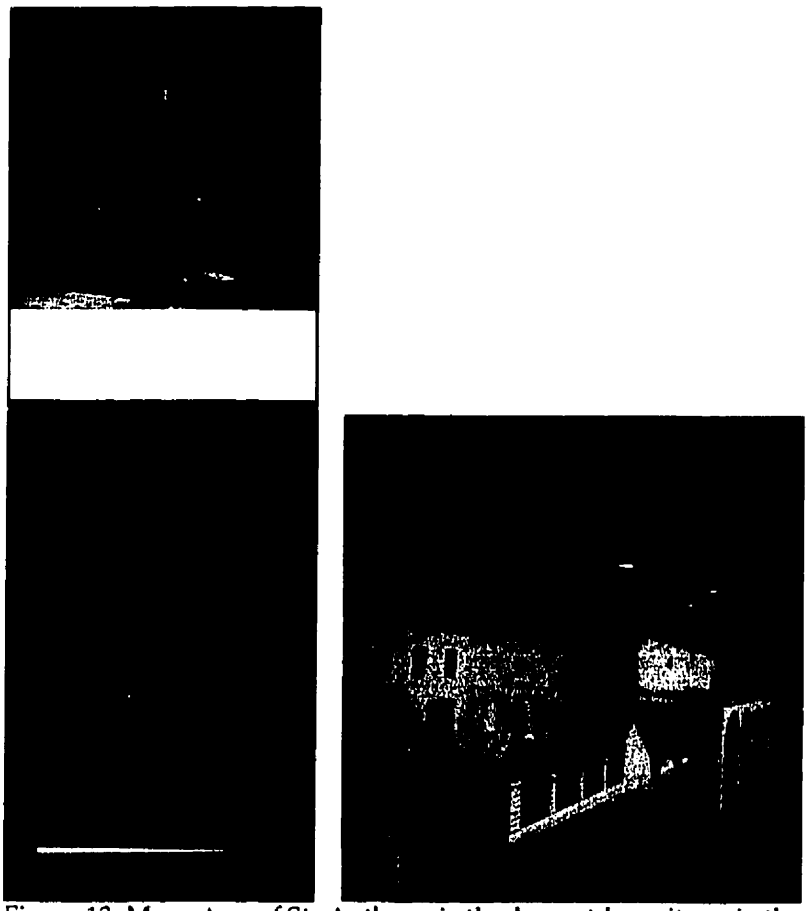


Figure 13. Monastery of St. Anthony is the largest hermitage in the Holy Valley. Figure 14. (right) Old Christian Church.

Figure 15. St. Sharbel Church and Monastery

"The long tradition of living between two worlds prepared more than 470,000 Maronites to live far from their country and holy sites, between the culture of their adopted country and their own tradition." (Kolvenbach, Jan. 98) Emigration by the Lebanese people to all parts of the world creates identification based on common religious traditions rather than on political or national boundaries. The churches become neither national nor territorial churches but churches based on the implantation of venerable and old Christian traditions in a new place. The practice of old traditions by the Maronite people requires a place that can inspirit traditions.

Figure 16. St. Sharbel Church and Monastery

Even today, in the new churches of Lebanon, articulation is simply expressed. Figures 17- 19. "Everything in Lebanon is in stone: wall house, temple, statue or throne is invariably made of stone. A succession of influences is visible in Lebanese architecture: the Phoenicians, then the Greeks, the Romans, Byzance and the Crusaders all brought their own styles. Arabesque patterns and western building techniques have contributed to what is finally a typically Lebanese idiom. The spirit of the people is reflected in its housing, architectural fashions are perpetually influenced by the occupiers' mentality."

"The soul of the Lebanese architecture is Mediterranean, honed by desert and mountain. The outside openings, arcaded galleries, stained glass windows, flower-decorated balconies, inside courtyards, Venetian-style kiosks, are all expressions of the fundamental Lebanese quality of generosity. Lebanese houses have openings on every side, their stone foundations solidly anchored in the soil. Lebanese architecture is the incarnation of a way of life, of a resilience which has adapted itself to the harsh demands of the land. Ramparted Crusader citadels on the coast protect networks of alleyways, give way to Italiante galleries and whitewashed Mediterranean houses." (Soonckindt, page 114)

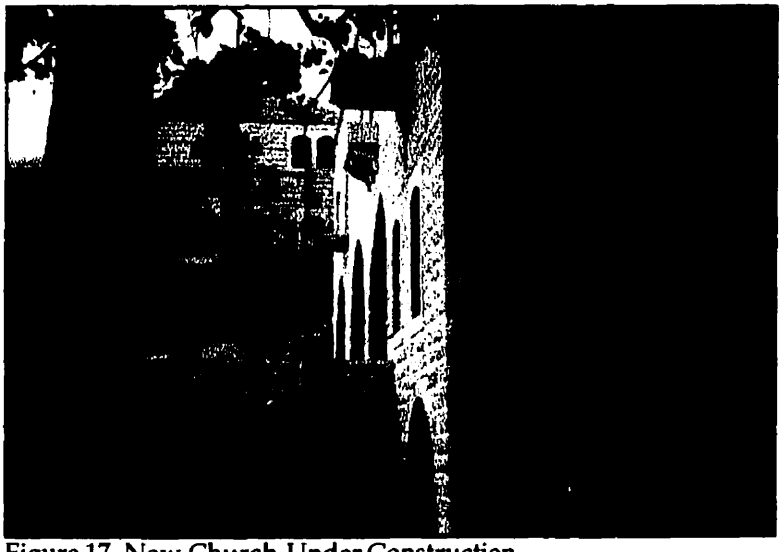


Figure 17. New Church Under Construction.
Stonework and puncture windows are prominent.

Figure 18. New Church Under Construction.

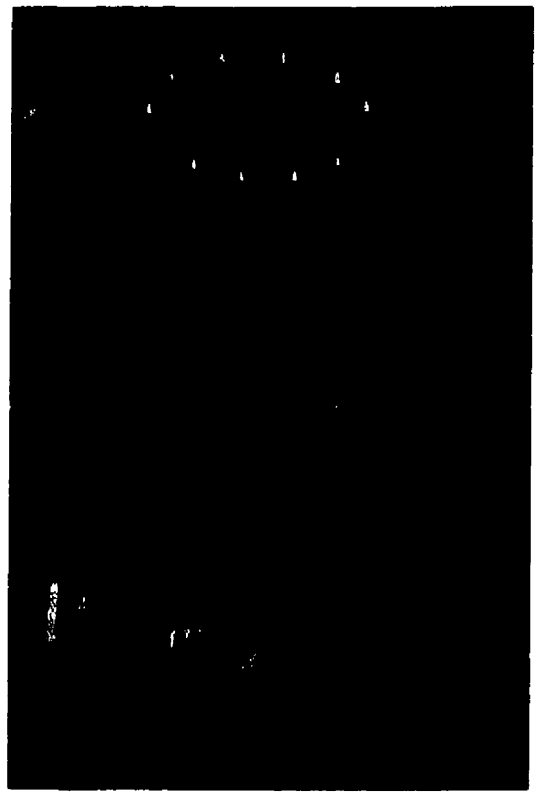


Figure 19. Inside stone vaulting of the new church.

The intention of the MDP design is to reflect and accommodate the Lebanese people who migrated to this country after having escaped turmoil in Lebanon. It does so in two ways. First by recognizing the tangible architectural elements that make-up the buildings of Lebanon and by using similar physical conditions in the proposed church design. And secondly, by focusing on intangible sensory conditions. Smells, sounds, light conditions or the surface textures and the quality of building materials all help to create a sensory realm in architecture.

What is required in place-making is a reconnection to our body's sensory existence, to our thoughts and emotional experiences, and to our memories. Architecture that validates individual experience produces a vibrant sensory place, which supports our well-being. Architecture then becomes an everyday frame for the events, memories, and the individual mindfulness of living.

An architectural space, created to house our senses, is a mindful vessel that, "frames, halts, strengthens, and focuses one's thoughts, preventing them from getting lost." (Pallasmaa, page 30) Materiality at a human scale can bring substance into our everyday lives and an awareness of our position in the structural world by exploring the relationships of the body to substance. "Architecture is essentially an extension of nature into the man-made realm, providing ground for the perception and the horizon to experience and understand the world. It is not an isolated and self-sufficient artifact; it directs our attention and existential experience to wider horizons. Architecture gives a material structure to societal institutions and to daily life, reifying the course of the sun and the cycle of the hours of the day." (Pallasmaa, page 28)

Re-creating the Lebanese experience involves; the consideration for human scale, a connection and understanding of our ties to nature (the elements and weather, site and orientation), and the recognition of sensory experiences including the tactile nature of materiality and light. Awareness of the potential of sensory considerations has a great impact on the shaping of the concrete material world.

> Every touching experience of architecture is multi-sensory; qualities of matter, space, and scale are measured equally by the eye, ear, nose, skin, tongue, skeleton and muscle. Architecture strengthens the existential experience, one's sense of being in the world, essentially giving rise to a strengthened experience of self. Instead of mere vision, or the five classical senses, architecture involves several realms of sensory experience which interact and fuse with each other. Vision reveals what the touch already knows. We could think of the sense of touch as the unconscious of vision. Our eyes stroke the distant surfaces, contours and edges, and the unconscious tactile sensation determines the agreeableness or unpleasantness of the experience. (Pallasmaa, page 29)

The design and site choices set up the conditions for the expression of: common space, worship space, community space, private space and views, by using the directing, as well as the unifying or separating nature of the path.

"Architecture can not only be classified typologically but it is in itself comprised of fundamental elements. These elements are basic constructive and space-forming components such as walls, columns, beams, arches, and domes, as well as types of organization and means of articulation. Functions and use may change with time, as well as aspects of symbolism and meaning, but the architectural form and space, and the elements of which it is formed, remain, they are both timeless, and fundamental." (Barrie, page 6)

The architectural elements which can resonate in a Calgary design are; the ordering and organizational principle of the path and the use of architectural elements to create both path and place. Exterior elements include: roadways, walkways, and stairs, fountains, courtyards and canopies, cedar groves, and gardens. Interior elements include the entries and exits, doorways and windows including the puncture and the arched opening, and also the delineation of the surfaces, walls, floors, ceilings.

IV. Design Parameters

1. The Congregation

The members of the group are predominately Maronite Catholics (from Lebanon) with some members being from Iraq and from Syria. The patrons live in all areas of the City of Calgary. Since a central location for the church site is desired, a site close to the city core or with main trail and road access will be convenient for most patrons.

Although many of the patrons have been in Calgary for some time, the groups' joining together, to celebrate the Maronite Mass, is relatively recent. The Parish Priest, Father Milad lives in Edmonton and

commutes to Calgary from Edmonton to celebrate mass. The arrangement has been in effect since March of 1997. This results in a biweekly mass which is currently held at St. Bernard's Parish in Bowness.

St. Bernard's, is rented by the Maronite congregation and is a small existing Catholic Church, originally designed as a hall. The congregation would like to create their own church building which will support their eastern traditions and become an anchor for preserving the traditions and the future gatherings of the Lebanese Maronites in Calgary.

2. Building Size

Currently there are approximately 100 families that attend the Maronite Mass. A congregation size of approximately 150 - 200 families is a reasonable projection for the building design. Both the priest and the parish members agree that a building, a tangible edifice of the preservation the traditions of Maronite and Eastern Catholicism, will help the growth of membership and the supporting commitment to the church. If, in the future, an increase in seating capacity for church services is required, an addition could be designed for the north side of the worship space. The name of the church has been chosen; the name, Our Lady of Peace, confers a desire for peace in the world.

The general requirements are for a primary worship space, and a secondary separate space for social functions (mainly centered around religious holidays), and for community and family celebrations (weddings, banquets, funerals). It is also lucrative to include lease-able spaces for long term tenants. The building should serve approximately 150- 200 families for mass (300-400 people/weekly mass) and serve the same for special functions. Site size approx. 8325 m2 (2 acres) Building Size approx. 3000 m2. See Appendix B for the architectural programme which lists the area in m2 of the specific spaces.

3. Site Selection

The chosen site is in the Signal Hill area in southwest Calgary. The site presents the following qualities: major road accessibility, views to the mountains and to the residential community, proximity to both

residential and commercial activity, relative separation from noise sources, and prominent southern exposure. Currently there is no Catholic Church in the area. These are characteristics for the parish group to consider in an appropriate site selection.

Figure 20. Aerial photo showing the site (within the blue rectangle). The Elbow River Valley is visible in the south (bottom of the photo).

The site exists as part of a commercial core in the area. The parcel lies west of the Westhills Shopping Center (Richmond Road SW), south of the new Signal Hill Library (Signal Hill Cres. SW), and east of residential housing (Sierra Morena Blvd. SW). Figures 20-21. The City of Calgary annotates the site as Section 2W, T24.R02.W5.

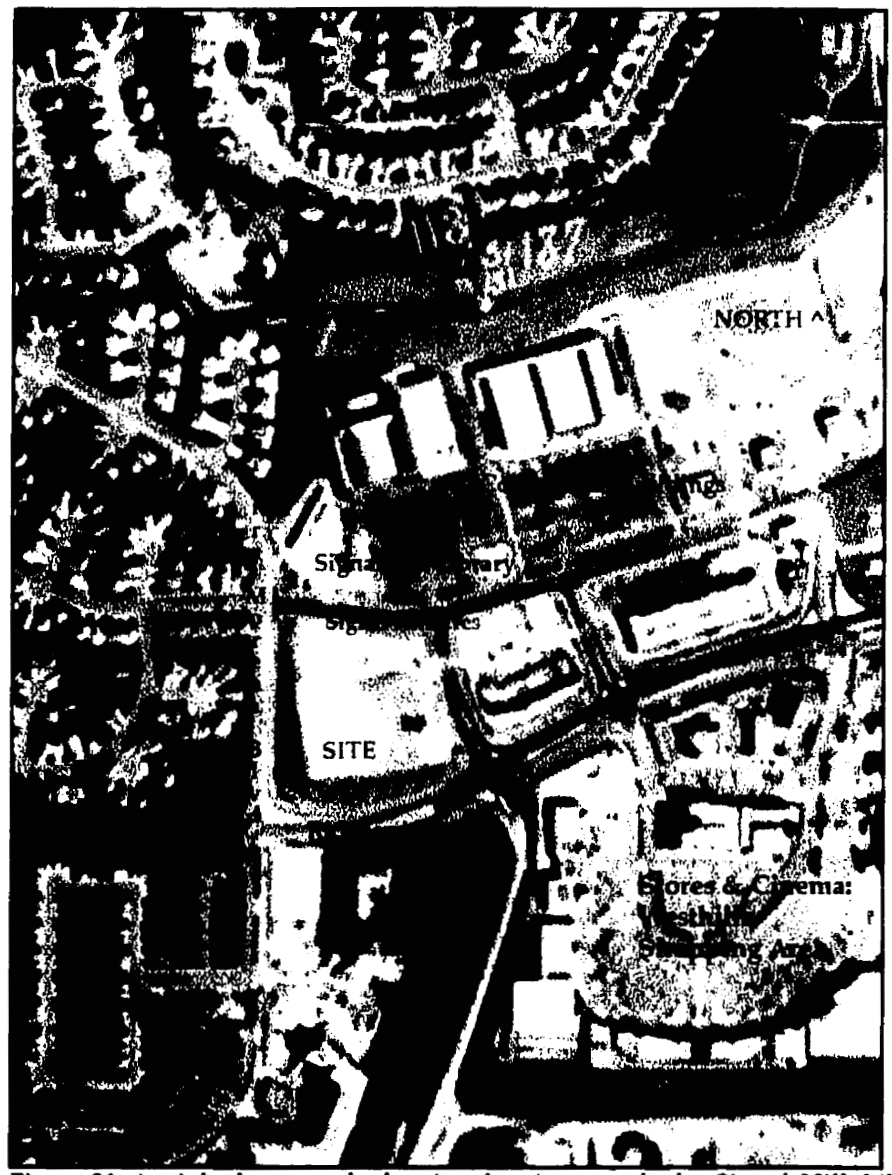


Figure 21. Aerial photograph showing the site parcel, the Signal Hill Library, and the Westhills Cinema and commercial buildings.

The building requires the south half of the parcel of land. In structuring the immediate roads within the parcel, intersections were created with both, the Signal Hill Library parking entrance to the north

on Signal Hill Crescent, and with the commercial parking entrance to the east.

The Signal Hill site is surrounded by residential development of both single detached housing, Figure 22, and higher density developments such as seniors condominiums.

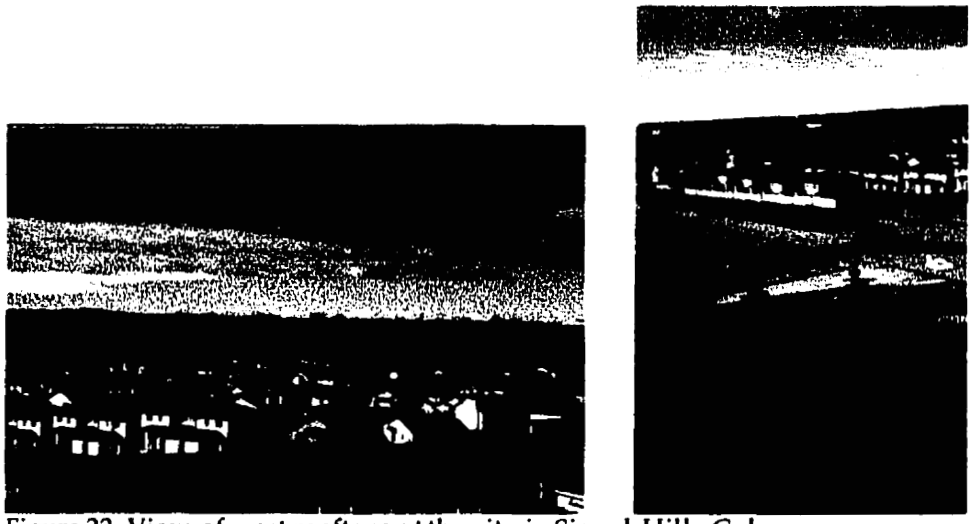


Figure 22. View of west rooftops a t the site in Signal Hill, Calgary.

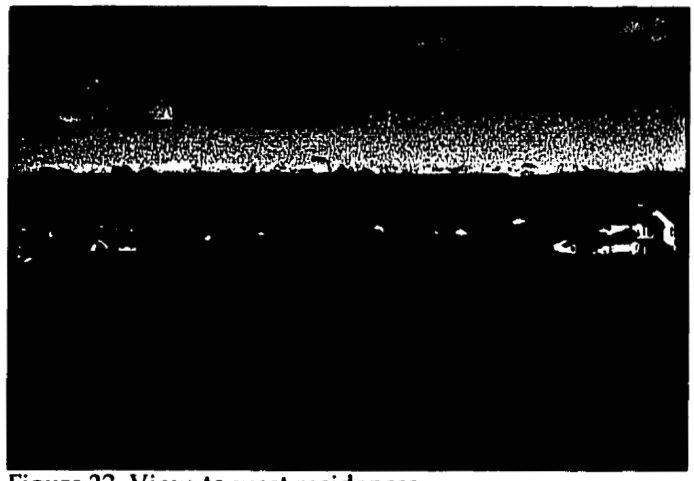


Figure 23. View to west residences.

The site offers an unobstructed southern exposure, and views of the mountains to the west. Figure 23. The parcel is graded as to produce a hill on the southwest edge. The topographical change of approximately 10 meters from the commercial side (north and east) to the residential side (south and west) offered the opportunity to situate both the worship and the commercial functions of the building. Figures 24-27.

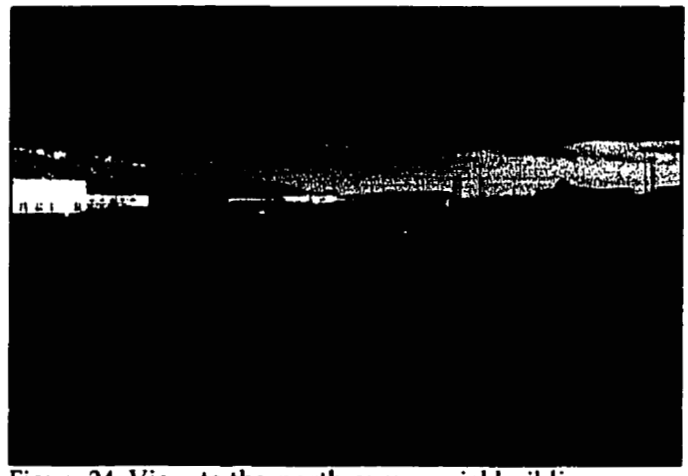


Figure 24. View to the north commercial buildings.

Figure 25. View to the north, Signal Hill Library, and commercial buildings.

The elevation also creates a buffer from the traffic of both Richmond Road and Sierra Morena Blvd. The parcel of the site the church occupies, is at the furthest end away from the library and the commercial area. The positioning of the building, the landscaping, and the placement of paths and roadways, address the progression and contrast from the commercial neighbors on approach to the church, by mitigating the connection. The full Site Plan is in the Section VI. Drawings.

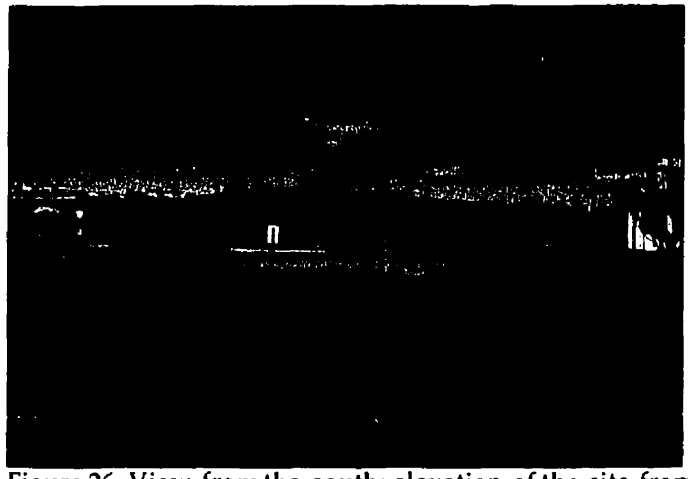


Figure 26. View from the south; elevation of the site from Richmond Road.

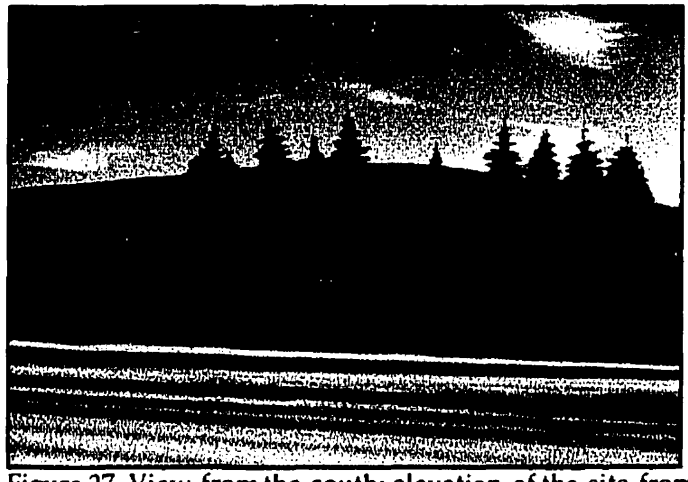


Figure 27. View from the south; elevation of the site from Richmond Road.

The design considers the existing stairways and pathways in the area. Figure 28-29. By integrating with the existing walkways the church becomes a part of the community path system as well as a place or destination along the path. The building is placed to acknowledge the existing City path.

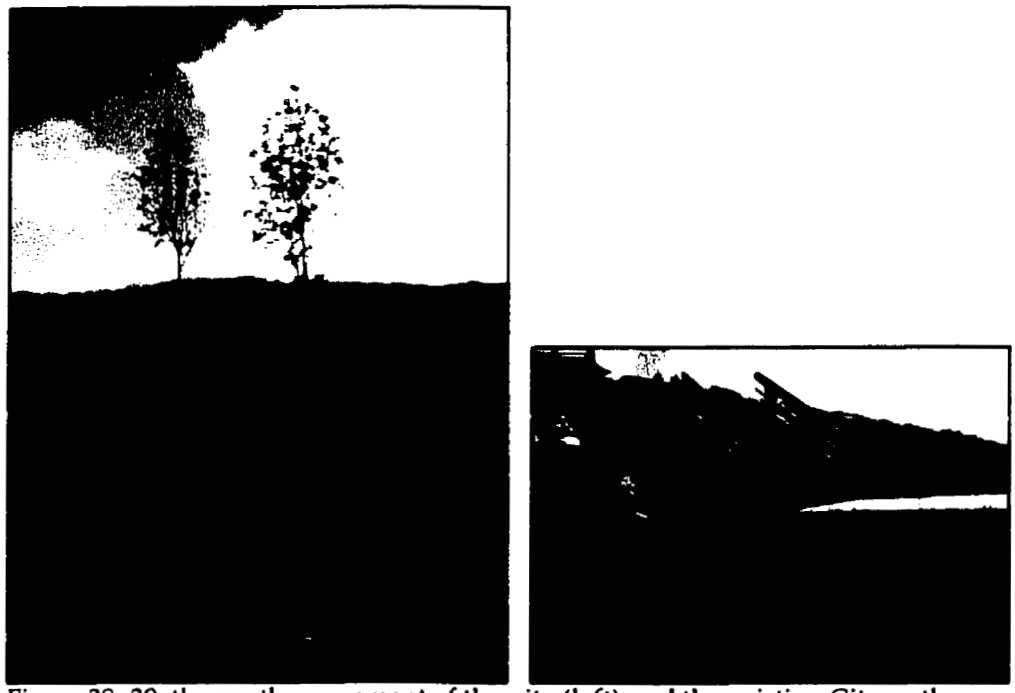


Figure 28- 29. the south escarpment of the site (left) and the existing City pathway and stairways north of the site by the Signal Hill escarpment (right).

There is also an existing footpath at the site. The building placement also acknowledges the footpath. By allowing the direction of the footpath to remain unaltered, its existence is reinforced. Usually persons walking in any area have already determined the most enjoyable or direct route, and foot weary paths should be honored. In the design, the path is articulated in the architecture by its exterior placement over the building.

The building has a strong axial placement along north-south and east-west axes. This is similar to the cruciform or traditional cross form of Early Christian churches. In the design there are three axes, 1) the north-south path which reinforces the direction of entry from the north and the south by the strong placement of the building mass along the edge of the escarpment for views and daylight, 2) the east-west path which reinforces the movement within the building, 3) and the walking path from the north east which crosses the building and reinforces the building's connection to the commercial area. Figure 30.

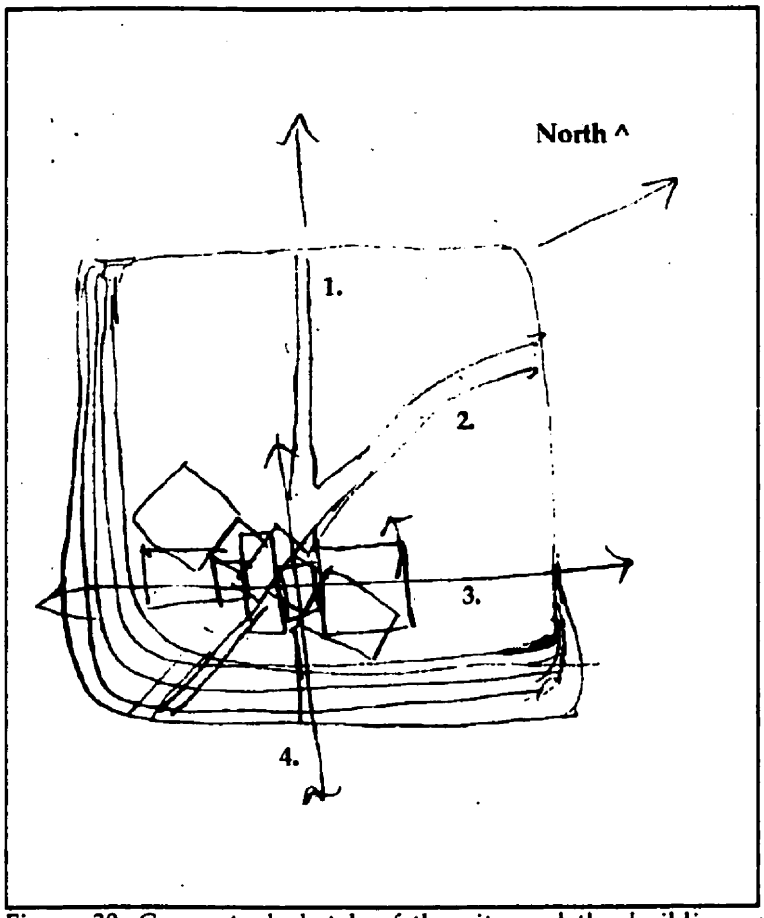


Figure 30. Conceptual sketch of the site and the building massing with beginning gestures for the path. 1. Road/Path to Library, 2. Road/ Path to commercial areas, 3. East-West path, 4. North- South path.

More of the design is presented and discussed in Section, V. Design.

4. Climate and Design

The Calgary climate, is a climate of unpredictability, due to the proximity to the Rocky Mountains. The water-laden air masses from the Pacific coast are driven up into high, cold altitudes by the Rockies, which drains them of moisture. As a result Calgary is in a zone with low levels of precipitation throughout the year. The low moisture content of the air means the air in Calgary is generally clear and the weather sunny. The average number of sunshine hours annually is 2,314 hours (Tivy, Page 18). The northern latitude location of Calgary accounts for differences in the amount and angle of the sun throughout the seasons, with longer days and a higher angle of the sun in the summer months and shorter days and a lower angle of the sun in the winter months.

Even though precipitation averages are low, Calgary can experience years with large snow accumulations. Calgary weather is changeable and temperature variations can occur in any day or season. The mean daily winter temperature is -8.9 degrees Celsius, and the mean daily summer temperature is 22.7 degrees Celsius. The Calgary area can also experience strong winds primarily from the west and the north, with the northern winds being cold, and the west winds being warm or Chinook winds.

The specific architectural implications that climate has on the design are mentioned in section V. Design.
In general, consideration should be given to the following:
1) massing the building as to protect it from the north wind
2) orientating the windows and glazing to the south to increase solar gain with provisions to not overheat the spaces
3) minimize the western windows and glazing to not overheat the spaces
4) provide eastern windows for morning sun
5) consider the exposure of the outdoor spaces, southern exposure is desirable
6) provide for protection of entry areas from precipitation
7) consider snow removal by using building exhaust and/or heating to melt snow on the exterior concrete surfaces

V. The Design

Thomas Barrie in Spiritual Path Sacred Place; Myth, Ritual and Meaning in Architecture, writes that, "Religion, mythology, and ritual are fundamental elements of human consciousness and society and have long served as a means to explain the world and humans' place within it. The creation of belief systems essentially provided answers to questions of existence and thus offered a degree of security in an otherwise insecure world. Architecture is a fundamental act that has served similar purposes. It is essentially shelter but also provides for symbolic needs, architecture can express meanings associated with human existence at its deepest, most fundamental level; this is especially evident in the path and place in sacred architecture." (Barrie, page 4)

The path has been the primary design idea. Kent Bloomer and Charles Moore in Body, Memory, and Architecture, also discuss path and place. They use the terms "place, path, and edge" and call them "architectural building blocks in the existential space that surrounds us" (Bloomer & Moore, pages 77-104). Bloomer and Moore suggest that a place must be distinguishable as a separate entity and that paths can take a variety of configurations. Principally paths fall into two categories: the linear path (Appendix C, discusses the linear path), and segmented paths. Types of linear paths include axial paths, bifurcating paths, radiating paths, grid paths and circular paths. Segmented paths are multi-directional and can take many forms from connected series to labyrinths. In the design the paths are of a linear nature.

J.G. Davies in Temples, Churches and Mosques; A Guide to Religious Architecture, states that "most buildings belong to either the category of path or that of place, the one suggesting, journey and movement, the other a center of stillness ... Between these two main categories there are structures that combine features of both: such are paths that lead to and include places, the latter acting as foci or nodes". The design for the Maronite Catholic Church creates a building which combines features of both place and path.

Davies defines a place as an easily comprehensible shape that possesses a discernible and concentrated form with pronounced borders. The **place** needs to be limited in size and capable of being experienced as an inside in contrast to the surrounding exterior. A place is less directional and can provide a focus for gathering. (Davies pages 240-241). He summarizes that a **path** needs to have a distinct identity, with a clear sense of directionality and continuity that includes both origins and destinations. Often paths comprise a sequence of events along the path and places or spaces or architectural elements can give identity to each section.

The path is a concept evident in architecture of the Maronites in Lebanon and also evident in the rituals and ceremony of the sacraments of Catholic Mass. The sacraments are administered by the ministry of the church and most take place as a processional ceremony to the sanctuary, consequently the church aisles are an important part of church celebrations. In any procession of the ministry, or the patrons, the path the participants take to the sanctuary, is on axis with

the altar. Appendix D explains the main sacraments of the Catholic religion.

Barrie states that, "Architecture, and particularly sacred architecture, often involves a dynamic between both the path and the place. It is possible to examine them separately, but they can only fully be understood in their interplay, as an integrated whole, it is clear that the path and place are not only a fundamental ordering device in the built environment but are imbued with symbolic content as well. A legible path sequence not only orients one physiologically, but psychologically and spiritually as well. Traditionally it has symbolized a going forth from the known to the unknown, the content of which is still present today" (Barrie, pages 39-40). The sequencing of experiences along a path, or the procession along a path, are some of the basic conditions of some sacramental experiences.

The Lebanese Maronite church is often approached by foot along a path that either traverses up a hill or winds through civic streets. Figure 31. The act of traveling the path to the church becomes part of the event of attending mass. It is in these outside spaces of paths, and exterior courtyards that much socializing and sharing of kindred energy takes place. Figure 32. In the design the paths leading to outdoors and to 'outside' the worship space is similar to the way a noisy boisterous congregation (many congregation members indicated that once out of mass, energetic conversation begins) exits directly to outside spaces in Lebanese churches. Here, because of our climate the transition to outside is mitigated by the enclosure.

Figure 31. The path to St. Sharbel in Lebanon. The path to the church is part of the experience of attending mass.

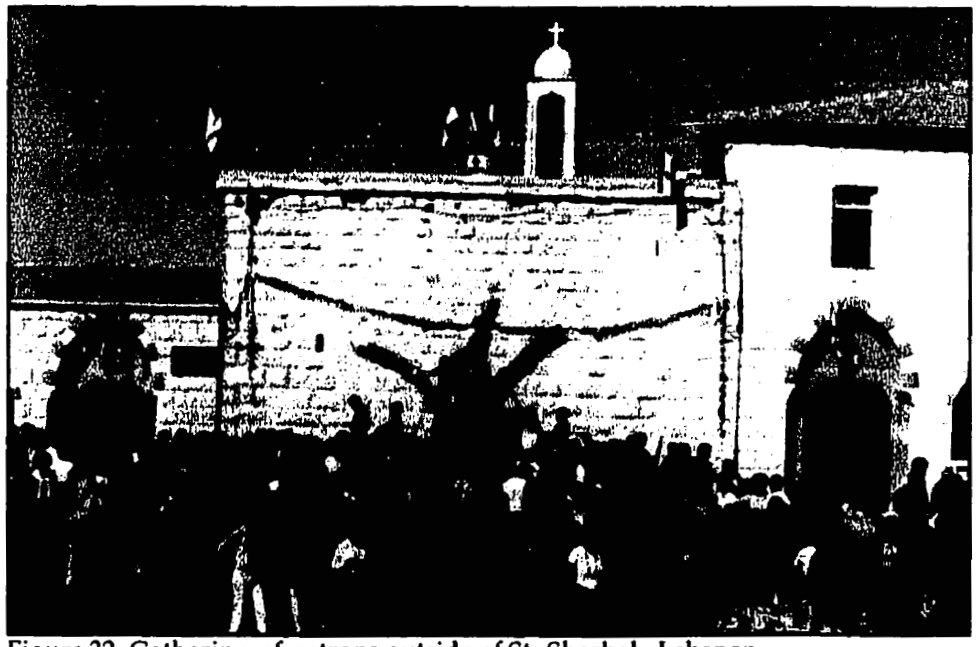


Figure 32. Gathering of patrons outside of St. Sharbel, Lebanon.

The massing of the building design is comprised of three primary masses. The configuration is derived from the monastic tradition of a U shaped plan. The U shape is used in Lebanon (and in Maronite monasteries in other countries) to create a protected courtyard and to provide protection from the sun. Figure 33.

Figure 33. Maronite Monastery in Switzerland. Many Maronite monasteries are built with a U configuration.

In the design, the U configuration, the assimilation of the three connected masses, is loosened to embrace the southern sun. The massing turns its back to the north, and opens up to the south. By doing so, the connection to the commercial sphere of the Westhills site is lessened. The entry or the 'front door' of the church is acting as a back door while the south exit to the south edge of the site is on the 'front' of the building. Here at the 'front', the views are not of any commercial buildings, but of the Elbow River escarpment, and the rooftops of the residential dwellings. Figure 20, on page 24, shows an aerial view of the site. From below the building has visual prominence for the residents since at this edge the site is elevated 10 meters above sidewalks and traffic.

There is a similarity in the landscape between the areas occupied by the Maronites in Lebanon and the landscape in Calgary along the west edge of the city. The Maronites occupied the mountains and valleys of inner Lebanon (the coastal ocean cities were primarily Muslim). The existing hills and valleys can reinforce the monastic tradition of placing a monastery on the hill for both refuge and reverence.

It is in the planting of the Maronites from Lebanon to Calgary, that workable architectural gestures can resonate. To replicate Lebanese churches buildings is not feasible nor necessarily desirable, but by understanding the fundamental elements which create the experiences of place and by transporting into Calgary the qualities of those experiences it is possible to infuse the building with experiential tradition.

The architectural elements which can resonate and create similar sensory experiences in a Calgary design are; the ordering and organizational principle of the path, and the use architectural elements to create both experiences of path and place. The exterior elements include: pedestrian scaled roadways, walkways, and stairs, and outdoor fountains, courtyards and canopies, cedar groves, and gardens. Interior elements include the doorways and windows differentiated by either recessed puncture or arched openings. The texture of the surfaces, of all architectural elements including the walls, floors, ceilings, also interplay with light and create experiential places.

Early design sketches show the initial path gestures, and spatial arrangements. Figure 34-35. The building massing is composed of the entry space which is a space along the north-south path and the two flanking spaces are the worship space and the hall space. Design drawings for the final design are included in the document, Section VI. Drawings.

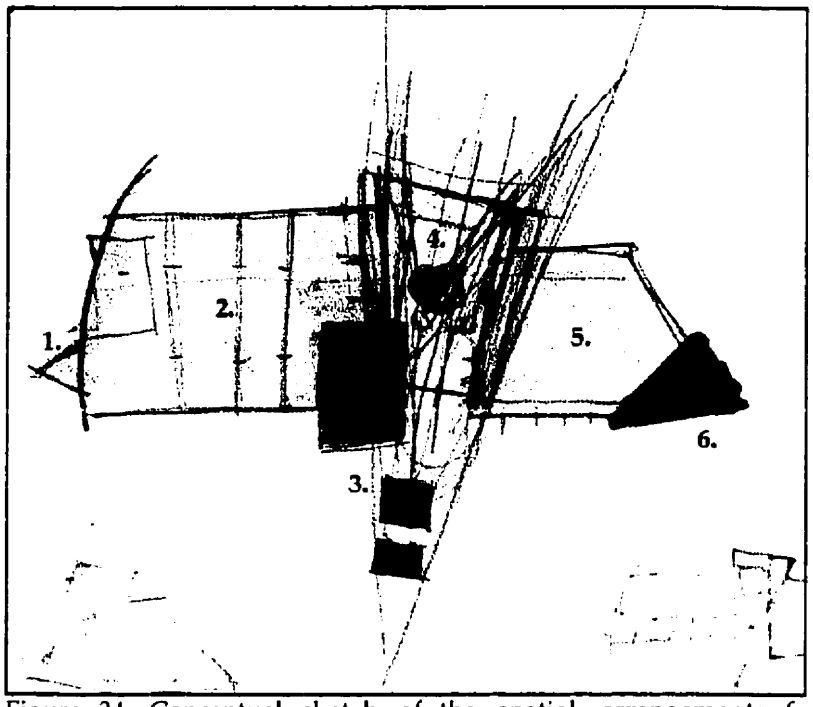


Figure 34. Conceptual sketch of the spatial arrangements for the architectural programme. 1. Sacristy, 2. Worship space, 3. Confessional block (inside) and outside fountains, 4. Entry with Baptismal font, 5. Hall, 6. Stage.

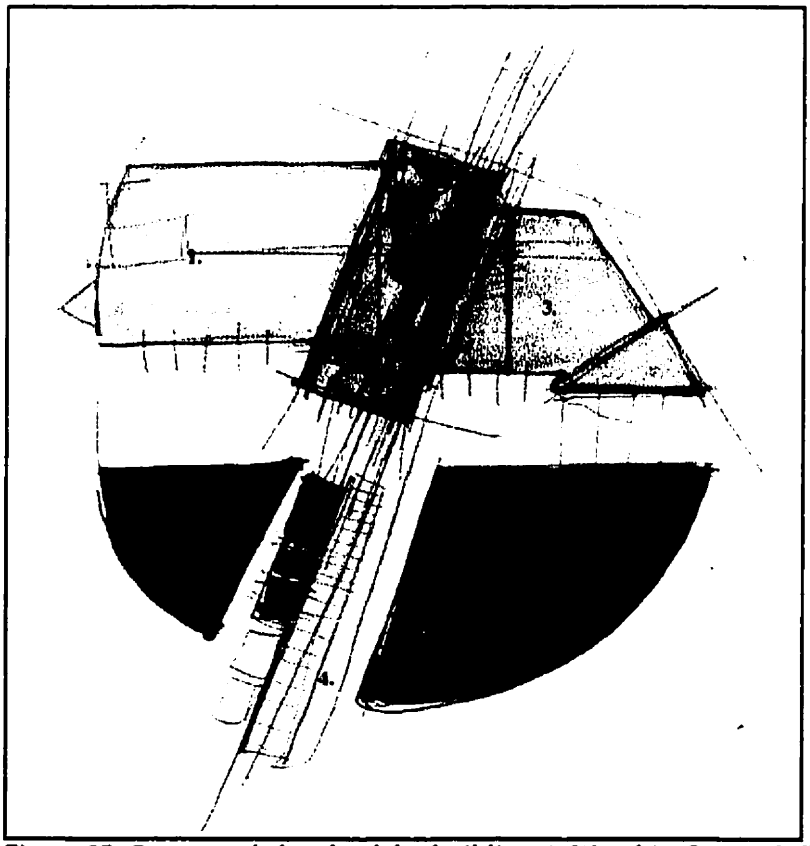


Figure 35. Conceptual sketch of the building. 1. Worship Space, 2. Entry, 3. Hall, 4. Outside Fountain and Stairway.

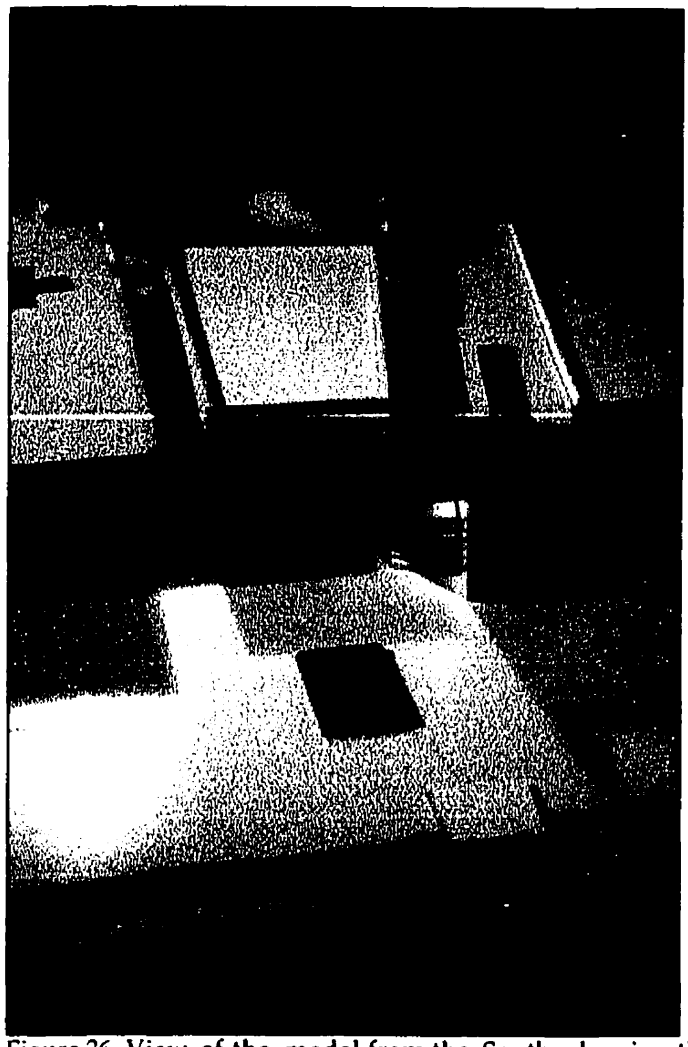


Figure 36. View of the model from the South, showing the walking path crossing the exterior of the building and meeting along the south escarpment with the fountain and waterfalls.

The building is traversed by a walking path from north to south; north from the roadways and walkway, and either through the building or over the building to the south stairs and fountain that lead down the escarpment of the site. Figures 36-37.

The dominant paths of the inside spaces direct the parishioners east and west to the primary places within the enclosure; on the main level either the worship space or the hall. The focus of the path to the west through the worship space is the altar in the sanctuary and views to the mountains. The focus in the hall space is the view to the eastern Cedar Tree Grove.

In all three primary spaces the views and the implicit path to the south are emphasized; ultimately the patrons can leave the building along this edge or enjoy these outside spaces in favorable weather.

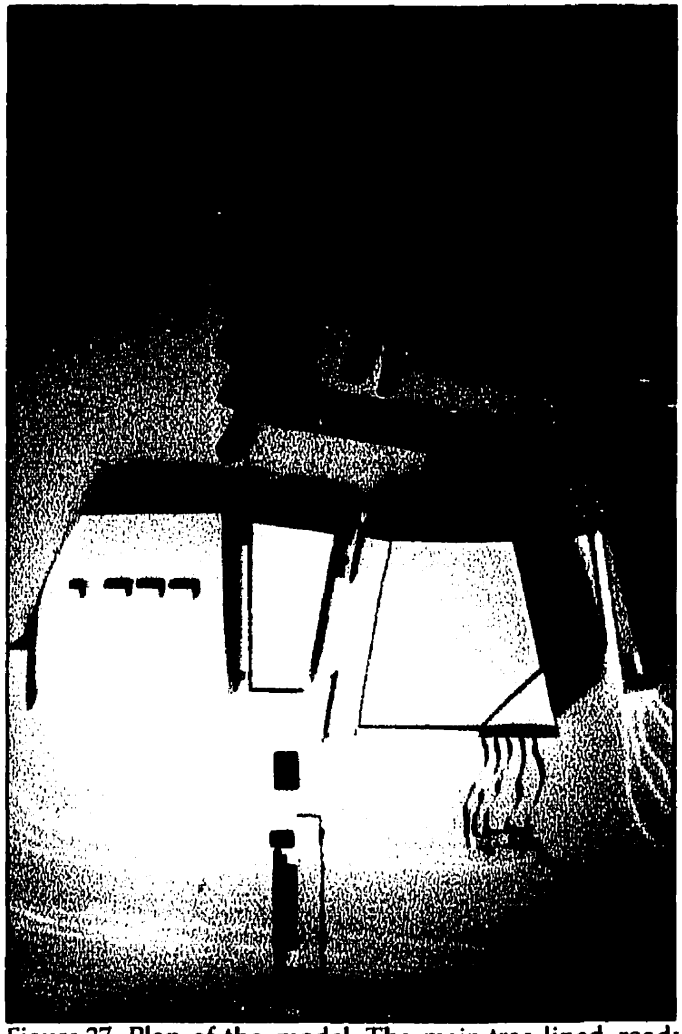


Figure 37. Plan of the model. The main tree-lined roadway and City path runs north-south, while the walking path cuts across the building from the northeast. Both paths meet within the south escarpment of the building and join to become the waterfall and stairways connecting to the residences of the community.

Path expressions can also be more sensory and intangible, such as the passage of the channel of water the fountain creates, from the beginning point of the baptismal font as it extends down the hillside to the community. And, the path of light throughout the day, directed by the doors, windows, and shutters, and by the walls, ceilings, and columns within the spaces. The path of sound is also enveloped within some spaces.

Conditions that exist as transitional devices between places and along paths are **edge** conditions. Edges provide either separation or joining together of the discreet parts of the environment. Edge delineation can be seen in Lebanese architecture, in textured surfaces and patternwork including railings, glass and window mullions, stonework, and mosaics. Figures 38-43.

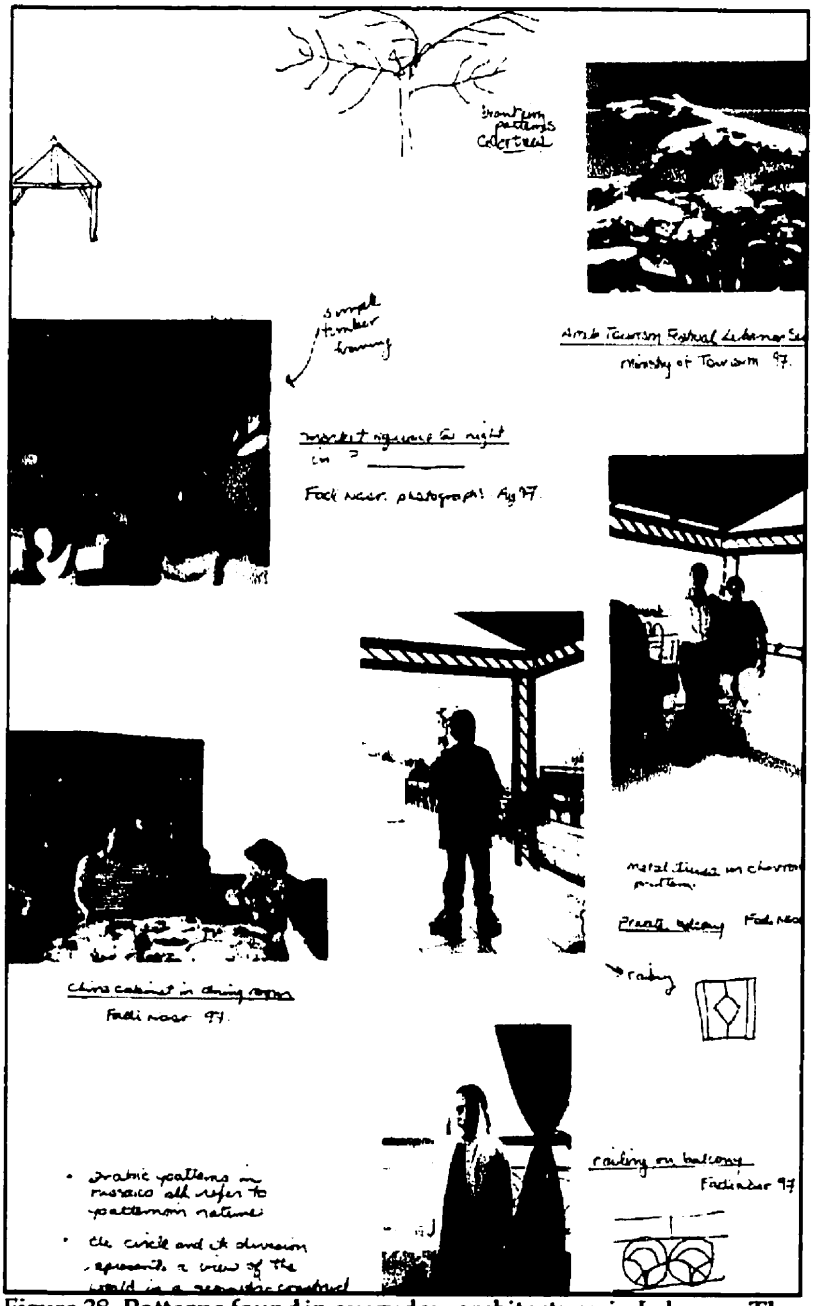


Figure 38. Patterns found in everyday architecture in Lebanon. The patterns have nature as an origin. For example the Cedar trees have influenced the chevron pattern on the cabinetry and the deck canopy.

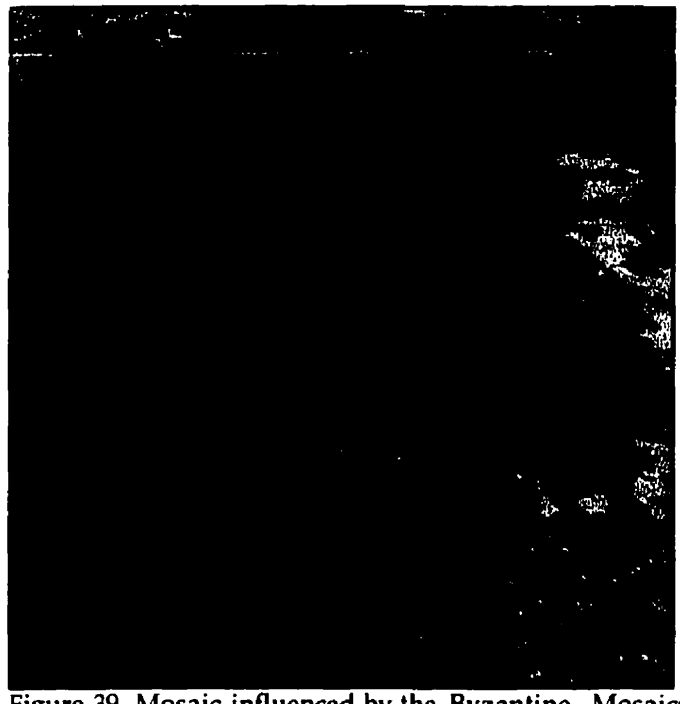


Figure 39. Mosaic influenced by the Byzantine. Mosaics and tile patterns are used for decoration and detailing in many buildings. Whether they depict figures or natural forms often depends on the religious influences. Mosaics provide sensory surfaces within the design interiors.

Figure 40. Glasswork projections create interesting interior spaces. Pattern is evident in the colour and arrangement of the glass. The idea for the sacristy came form the Lebanese window projection.

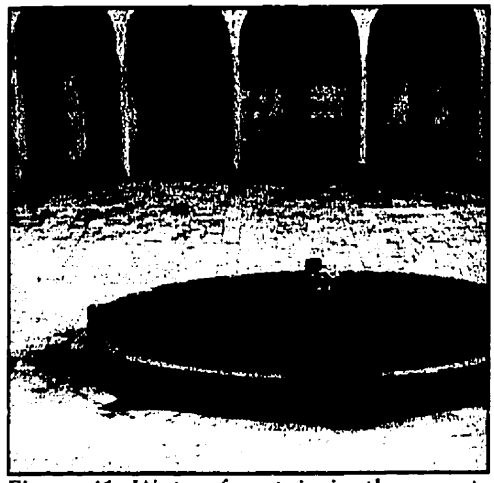


Figure 41. Water fountain in the courtyard of the Jumblatt Palace. Water is used in many religions for renewal sacraments.

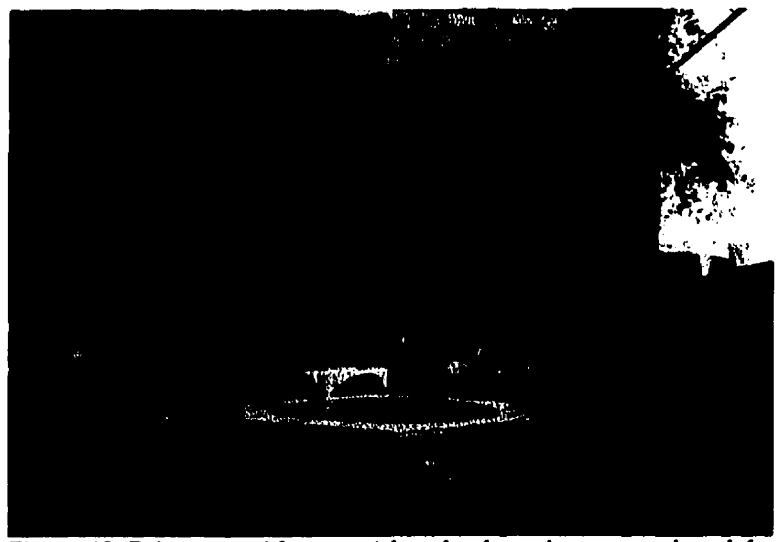


Figure 42. Private residence with a backyard courtyard and fountain. Water fountains delineate path directions on the south escarpment of the site.

Figure 43. Garden trellis at a private residence in Lebanon. The vines scatters the light entering the home. A trellis is used in the design on the north side of the building.

Edges are created through the use of light; sunlight streaming through puncture windows, through cedar trees and gardens, through trellis work and lattices, and across water, creates moving margins that illuminate both place and path.

The design and site choices set up the conditions for the expression of: common space, worship space, community and commercial space, private space and views, by using the directing, as well as the unifying or separating nature of the path.

The following sections discuss the particular spaces of the building design including the entry, the worship space, the hall, the upper level and the parish offices, and the lower level. Outside spaces, constructibility and materials and finishes are also discussed.

1. The Entry

A roadway, defined by a colonnade of trees sets up the entry. A rock edge bench and fountain parallel the entry trees on the north side. The paving continues from the roadway into the inset doorway through to the exterior fountain on the south side. Figure 44.

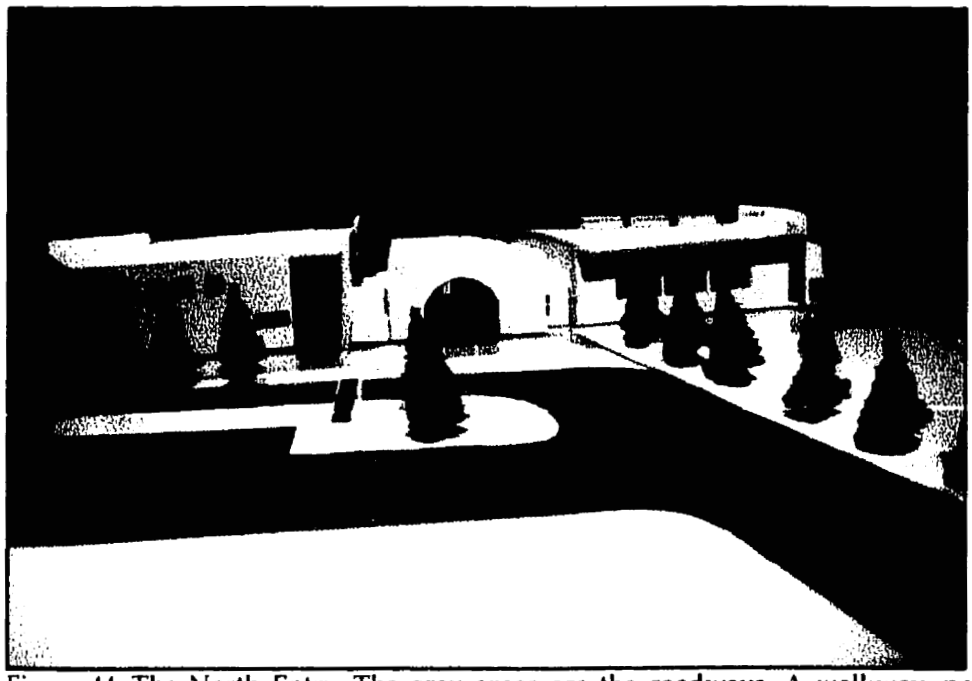


Figure 44. The North Entry. The gray areas are the roadways. A walkway parallels the main roadway and trees. A pathway also exists from the northeast and parallels the exterior water fountain.

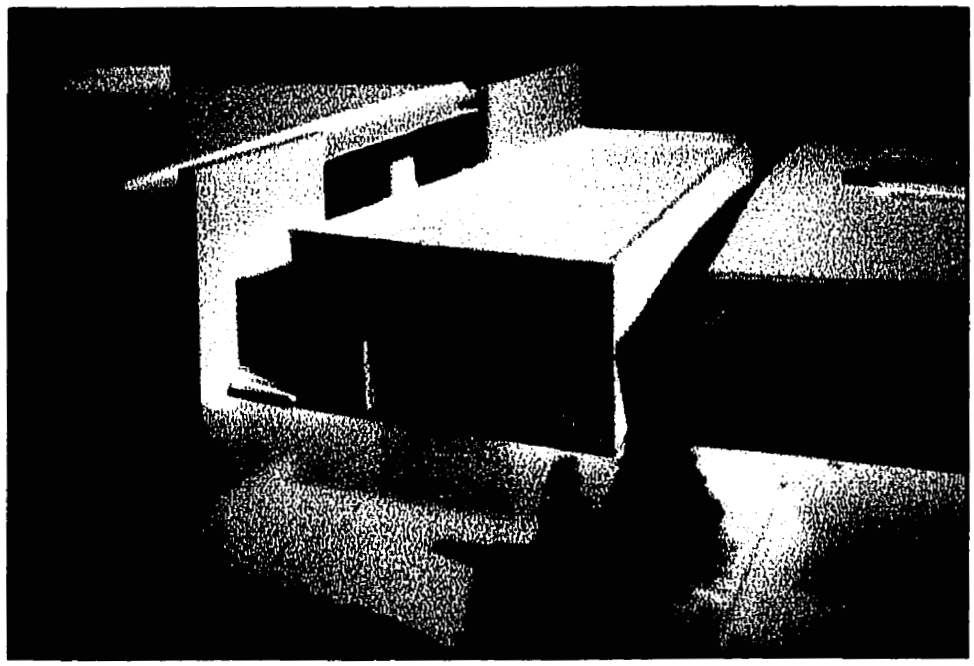


Figure 45. Main entry with the recessed doorway within the arched space.

The doorway is recessed and provides protection from precipitation. The arch contains glass doors and a half circle window over the doors. The light from the window and doors is directed along the ceiling by a triangular bulkhead. Figure 45- 46.

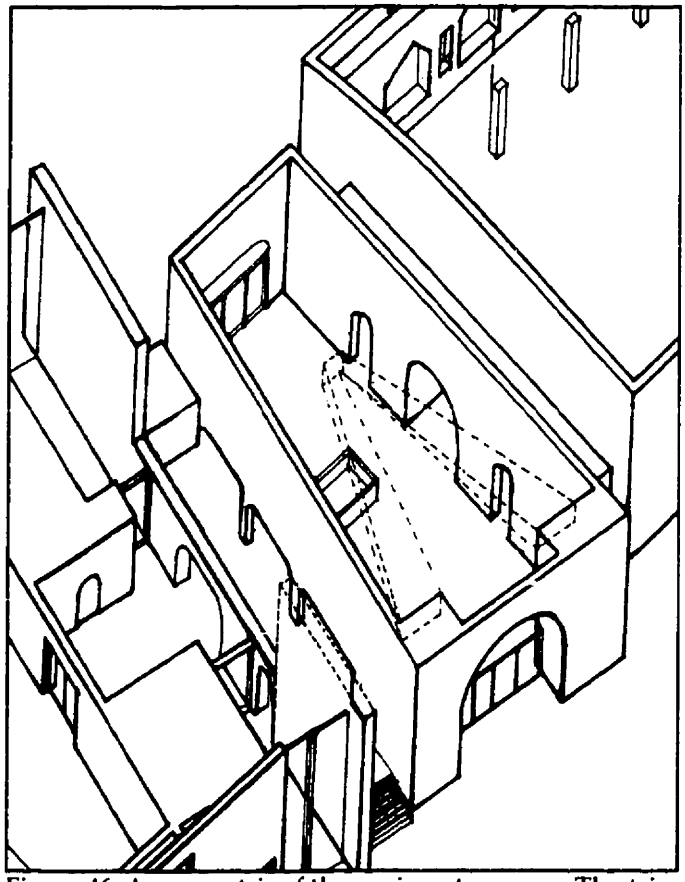


Figure 46. Axonometric of the main entry space. The triangular bulkhead is shown with the slashed lines.

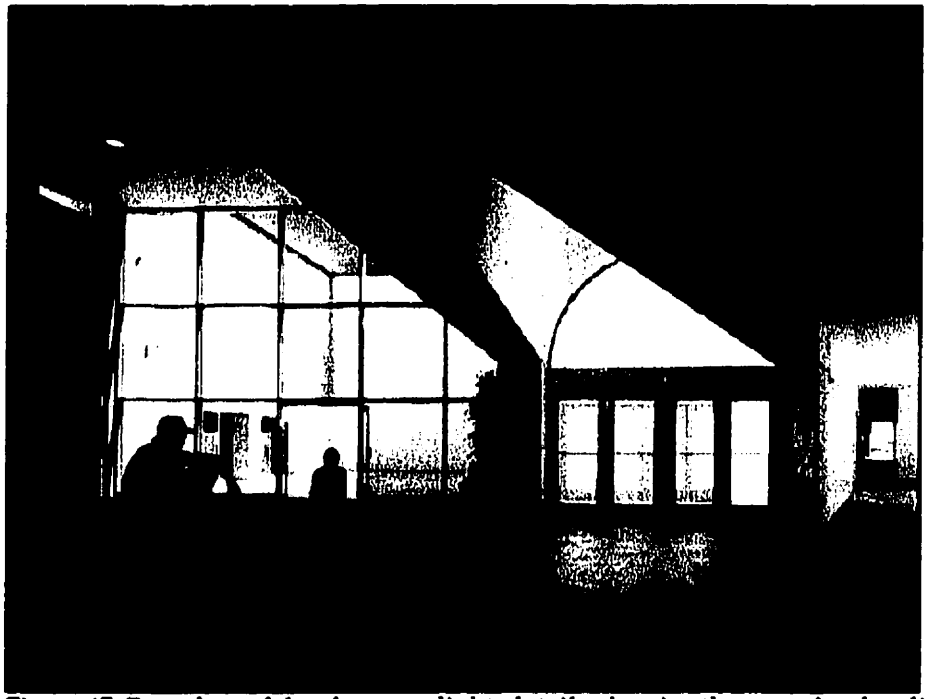


Figure 47. Precedent of the doorway light detail, showing the way the day-light enters the curved window and fills the ceiling bulkhead.

A baptismal font is placed at the intersection of the east west path, the north south path, and the triangular point of light along the ceiling.

Figure 48. Precedent of a similar baptismal font placed at the intersection of daylight within the entry space. The font is constructed of rough heavy material, preferably stone.

The entry contains a wall for donor plaques or inscribed stonework along the west side. In the interior, on the west side, a set of solid doors leading into the worship space is inset into an arched opening and surrounded by glasswork. There are also two pocket doors which are used for both entrances to participate in the sacrament of confession and as exits from the sound controlled family space within the worship space (the space serves dual purposes at different times).

Along the west side, the prominent stone clad wall, which lines the walking path along the exterior of the building, is also visible in the interior, from the font area. This wall braces the path of circulation not

only by anchoring the exterior stairs but also by supporting the interior staircases.

The doors along the south side are glass doors and present to the visitor the view of the exterior fountain and continuation of the path. The immediate exit area is covered by a lattice canopy to create a transition between the outside and inside of the entry. The idea of leaving the church is already presented upon arrival, and the redirection to the west into the worship presents a moment of stillness and contemplation on the inevitable path to the exterior.

2. The Worship Space

The worship spaces primary purpose is to house and give reverence to the sacraments of Catholicism. The worship space is a series of arched trusses which create a modified barrel vault with the columns of the vault creating paths on both sides of the seating pews. The south aisle redirects the visitors once again to the north- south path by providing outside views of the terrace, walkway, fountain, and courtyard. Figures 49-50.

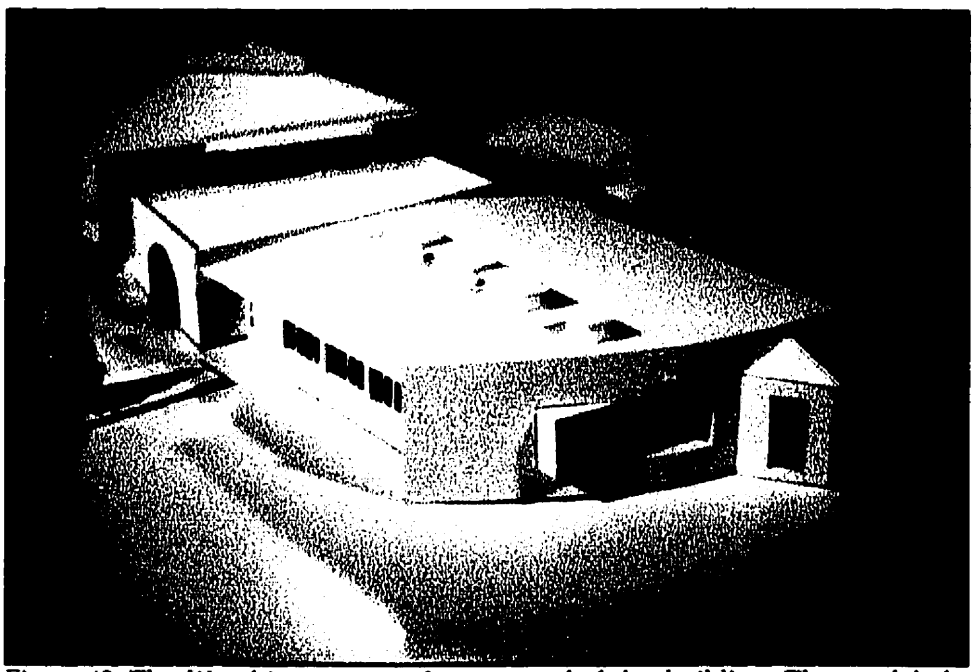


Figure 49. The Worship space at the west end of the building. The model shows the horizontal lineal windows and the sacristy. The sacristy window projection is derived from the window treatments in Lebanese architecture.

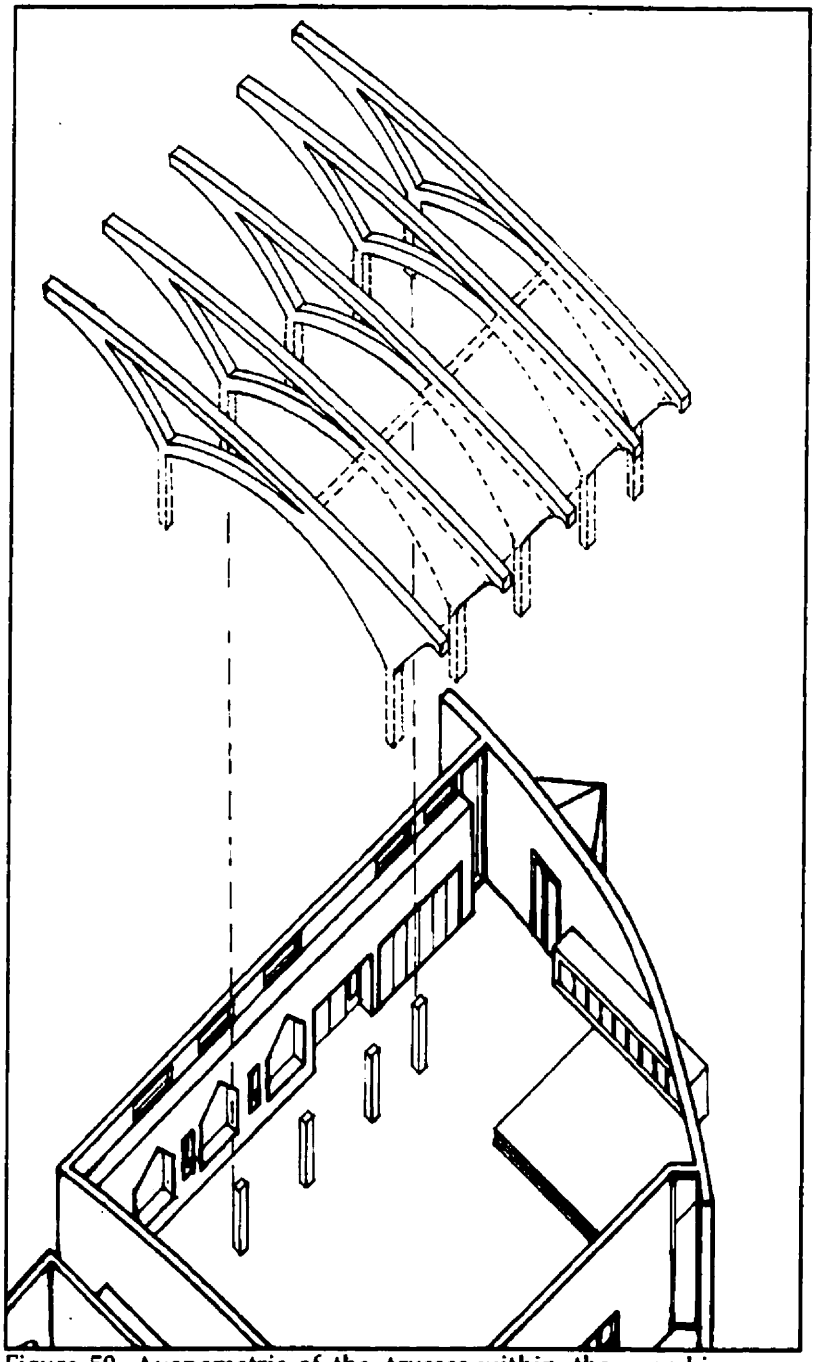


Figure 50. Axonometric of the trusses within the worship space. The truss shape is derived from the cedar trees of Lebanon.

The focus of the main east west path is the altar, and the curved stone wall behind with a horizontal strip of windows. The curved stone wall contains the worship space. The stone cladding is familiar and reminiscent of the stone walls in the buildings of Lebanon.

The stone wall is an anchor and a strong material presence which becomes the backdrop for mass sacraments. The tactile presence of the stone reinforces the groups' ties to the past and to traditions. In contrast the lineal windows create a view to beyond, to the current context of Calgary by extending into the site and a view to the west and the mountains. The view is a visual extension of the east-west path and is an implicit observance of the journey into new horizons. Figure 51.

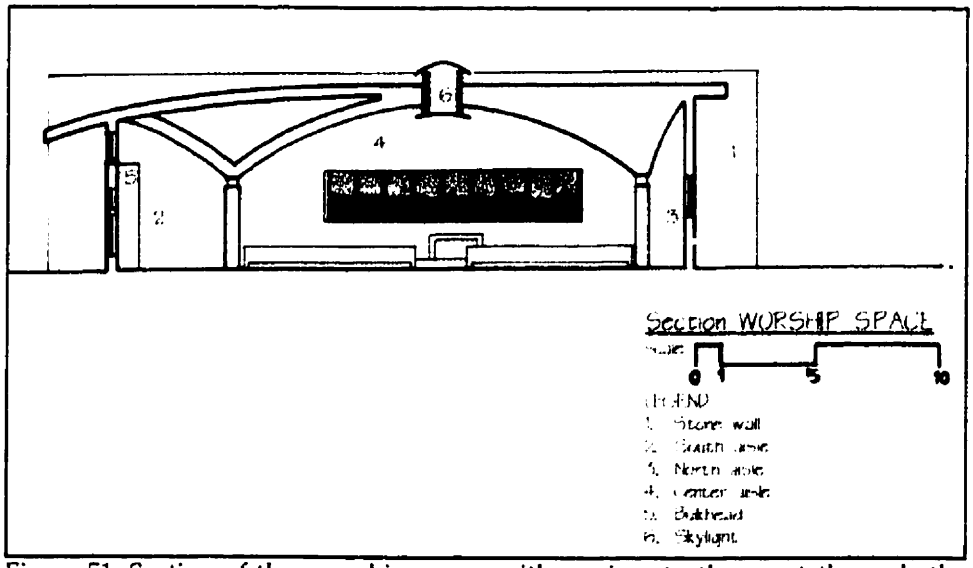


Figure 51. Section of the worship space with a view to the west through the lineal windows.

The view of the mountains is seen as the patron walks down the central path, and the view shifts to the horizon as the patron is seated. To the left of the horizontal window is the sacristy. This triangular space is used for the storage of priests robes and garments and any vessels used in mass. The sacristy is similar to the stained glass window projections in Lebanese architecture. The sacristy space has two tall doors which can swing completely open to offer a view to the west.

The curved stone wall shapes the sanctuary space. The wall receives daylight from the sides by north and south fenestration at its ends. Daylighting of the sanctuary and the central space is also achieved by four central skylights at the top of the barrel vaults. To mitigate glare and heat the daylight is indirect. The skylight acts to diffuse the light along the curved ceiling.

Daylighting is also achieved along the south wall both through deep shuttered windows and above through glazing that directs light along the south curved vault. Figure 52-53.

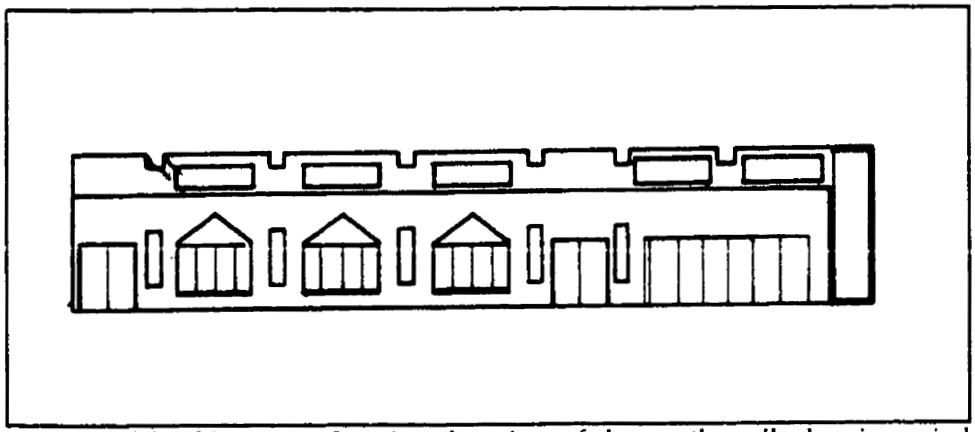


Figure 52. Worship space: Interior elevation of the south wall showing window and door openings, and storage doors.

Figure 53. Precedent of the deep shuttered windows and doors of the church including the south windows of both the worship space and the hall.

Artificial lighting can be placed along the south wall as indirect lighting at the top of the bulkhead. This also enhances and illuminates the ceiling. To illuminate the central space, indirect artificial lighting can be placed within each of the three vaults (south, central, and north) and fixtures can also be placed at each column. The lighting fixtures can be positioned to strategically illuminate the curved ceiling. Along the north wall the fenestration is a ribbon of stained glasswork.

There are fixed pews for about 288 people and each pew holds approximately 12 persons. The pew seating plus the choir seating (12-20 persons) and the family or 'crying' room seating (12- 24 persons) creates seating for 332 persons. For crowded masses such as Christmas and Easter, the south vaulted aisle provides standing room and the back east end of the worship space provides an area for more chairs to be placed. The space along the south side can accommodate 25 more chairs or handicapped seating (1 m2 per chair), or 25 persons standing (1 m2 per person) and the back space, 6 chairs on each side. The placement of seating amongst the columns can be strategically placed for proper site lines to the altar.

The pews are furniture pieces within the space. The pews are moveable bench seating that can be temporarily attached to the floor. The church, since it is designed for flexibility with moveable worship furniture, can also be used by other worship groups and by performance groups. The cross, the altar, pulpit, podium, and small altars for icon placement (display areas for the celebration of masses to honour particular saints), and the priest and processional seating, choir seating, family seating, and confessional seating, are all intended to be moveable pieces. Figure 54. Storage space for these items and for books and banners is located in the west end of the south wall within the bulkhead.

The style of a cross is a very personal and subjective choice and the decision could be left to the parishioners with some guidelines for size and placement. Figure 55. In the design the cross is suspended from the ceiling, and hangs into the area to the right of the sanctuary platform.

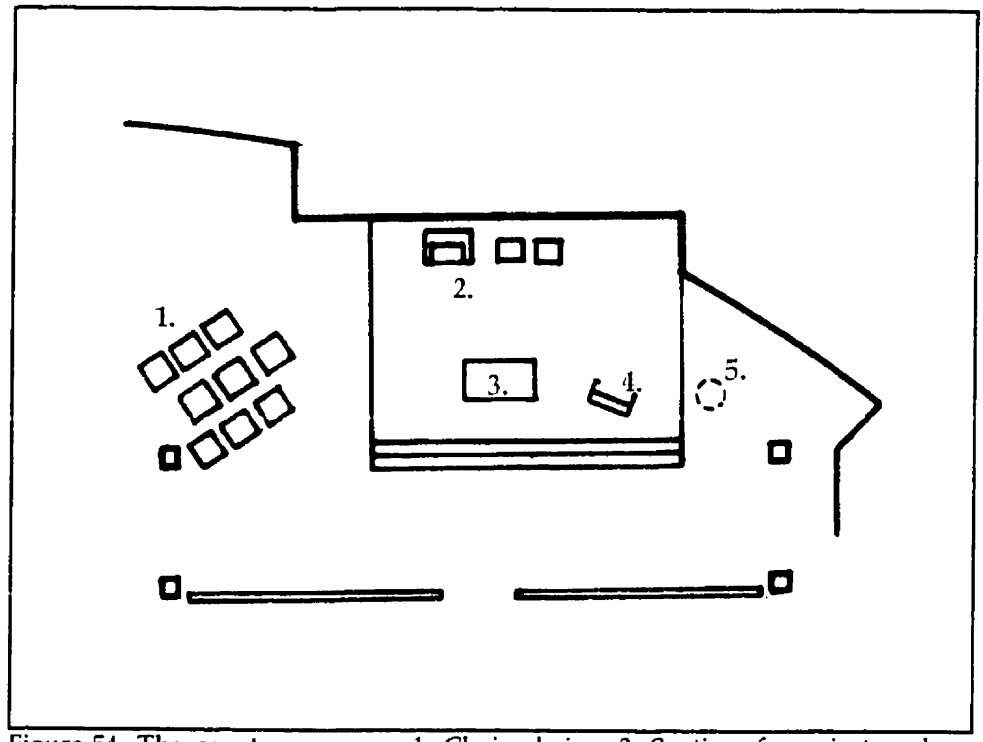


Figure 54. The sanctuary space. 1. Choir chairs, 2. Seating for priest and procession members, 3. Altar, 4. Pulpit or lectern, 5. Suspended cross.

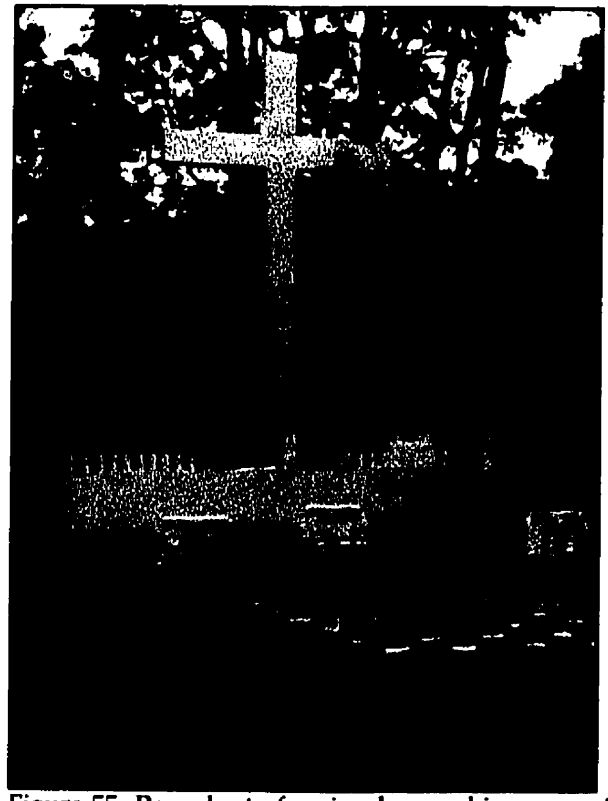


Figure 55. Precedent of a simple worship space. A cross is a Parish's personal choice. The cross design should reflect the simplicity of the spaces created within the design.

The cross placement is architecturally heightened by the light conditions along the curved stone wall. Fenestration at both ends of the wall backlights the sanctuary space and illuminates the cross from behind. The off-center placement of the cross to the right of the altar balances the proportions of the sanctuary's spatial order into thirds. The central altar is offset to the left by the sacristy and the choir, and to the right by the cross.

The choir chairs are placed left of the altar so that the choir members can project voices and music into the congregation space. The curved vaulting of the ceiling, and the curved stone wall both positively affect the acoustical quality within the space. The worship space envelops the group and the volume acts as a vessel to contain the parishioners, and their speech and music.

The family or 'crying' rooms are located at the east end between the main space and the entry. The space is one floor height (3.5 meters) as compared to the main space which is about two floors in height. The back wall of each space is washed with light from small ceiling height windows. The rooms are enclosed by a double glazed wall for both viewing and sound attenuation. A speaker system is placed within the spaces for an audible event. The spaces are also used for the sacrament of confession. Screens to divide the space and shutters on the windows can be used to create privacy for the patrons and the priest. Patrons would enter the sacrament of confession from the main entry space through a pocket door. The priest would enter through the worship area.

3. The Hall

The passage to hall space is through the dominant stone wall which anchors the circulation stairways. The stairs are open rung steel stairs anchored by the stone wall. The wall also serves as a punctuation mark to the 'church' space. It along with the curved stone wall of the worship space bracket the places associated with sacred functions.

The vestibule to the hall houses the public washrooms used by both sides of the building. The space is lower and darker and is illuminated by transom windows and punctures within the stone wall. Small storage spaces for janitorial closets exist under the exterior stairs.

The doors into the hall space are glass and enable the visitor to see the cedars through the glazing on the east side of the building. The hall space contains a kitchen with a private exit. This allows those working in the kitchen to access the outside garbage disposal area at the exterior ramp on the east side. The entry also allows caterers to have direct access to the kitchen. The kitchen is a galley kitchen with two doors to allow for unencumbered circulation and mobility for several people.

The hall space itself can accommodate tables or seating for banquets, and conferences or stage functions. For functions not requiring seating the hall can accommodate approximately 450 persons (based on .7 m2 net area/person). For functions requiring fixed seating such as tables, the hall can accommodate approximately 275 persons at 45 tables (based on 1.5 m2 net area/person). Approximately 350-400 persons could be seated in a chairs only arrangement.

The triangular mass on the southeast corner of the building is a raised stage piece on the main level, a library and lounge on the upper level, and the entry on the lower level. Figure 56. The south doors of the main level hall space are glass and provide views to the exterior. Figure 57. The outside courtyard space to the south can be used for outside events. Figure 58.

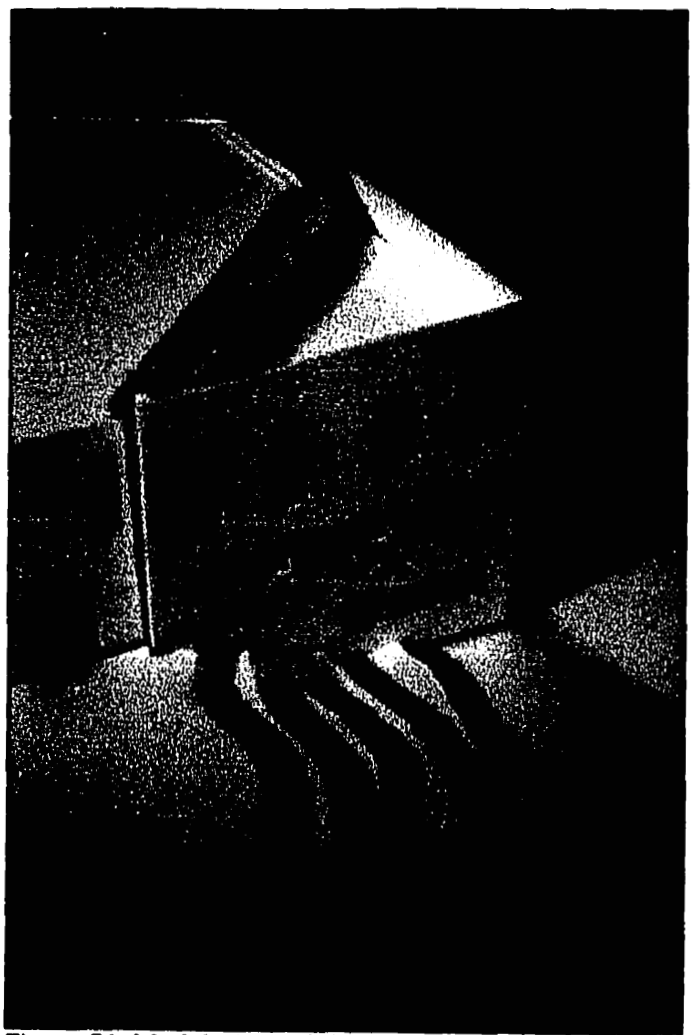


Figure 56. Model view of the triangular mass on the southeast corner of the building. The grade changes about two meters from the triangular hall doors to the lower entry and courtyard. The terrain is soft and grassy.

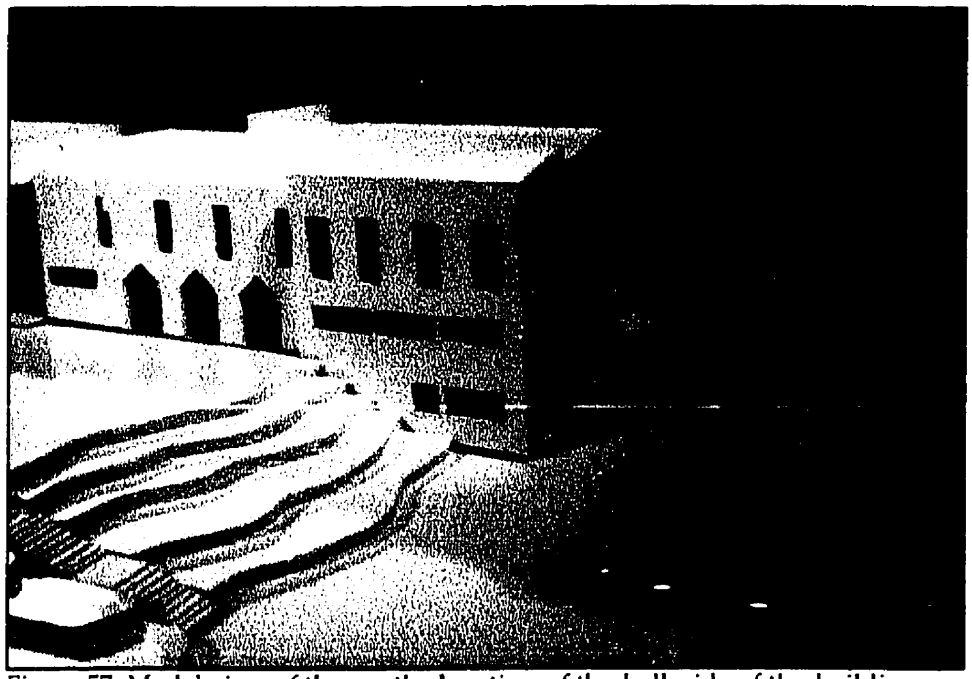


Figure 57. Model view of the south elevation of the hall side of the building.

Figure 58. Precedent of an exterior courtyard treatment. The exterior spaces of the church building would use pattern and texture to create sensual exterior spaces.

4. The Upper Level and the Parish Offices

The stairs and stone wall provide access to the parish side of the upper space. The upper level is subdivided to provide a lease-able office side on the north side and private parish offices on the south.

Currently, (January 1998) new building turn-key office space in Calgary suburbs leases out at an average net rate of $16/ft2. At the upper level there is approximately 270 m2 or 2700 ft2 of office space for lease which could generate approximately $40,000/ year net. The lower level has 600 m2 or 6000 ft2, which could generate approximately $96,000/ year net.

Figure 59. The model shows a view of the glazing of the entry vestibule for the upper office spaces. The stone wall acts as both an anchor for the circulation spaces and as a divider between the worship space and the hall and office space.

The two sides share common non-gender washroom facilities and a common exterior entry and vestibule. Within the parish side, offices could be placed along the interior partition wall. Windows exist on all sides of the space, with the south windows having shutters to control sunlight. The interior partition wall contains transom windows which maintain the north- south light as does the glazed stairway piece and the glazed entry vestibule. The placing of offices (also with interior windows) along the partition wall with a hallway along the south wall of the building creates a colonnade effect and a visual link to the triangular library and lounge. The library and lounge can be used for reading and research and also for small lectures and classes.

On the main level (at the stairways to the upper and lower levels), pockets doors exist within the arched openings. These allow privacy and security for the upper and lower levels when required.

5. The Lower Level

The path to the lower level is part of the exterior sequence of walkways and roadways. The ramp is inclined to allow for handicapped access. Figure 60. All spaces within the building have doors and corridors wide enough for wheelchair access. All washrooms are also sized for wheelchair accessibility. If wheelchair access is required to the upper level, a stair lift could be installed on either the exterior or the interior stairway to the upper level.

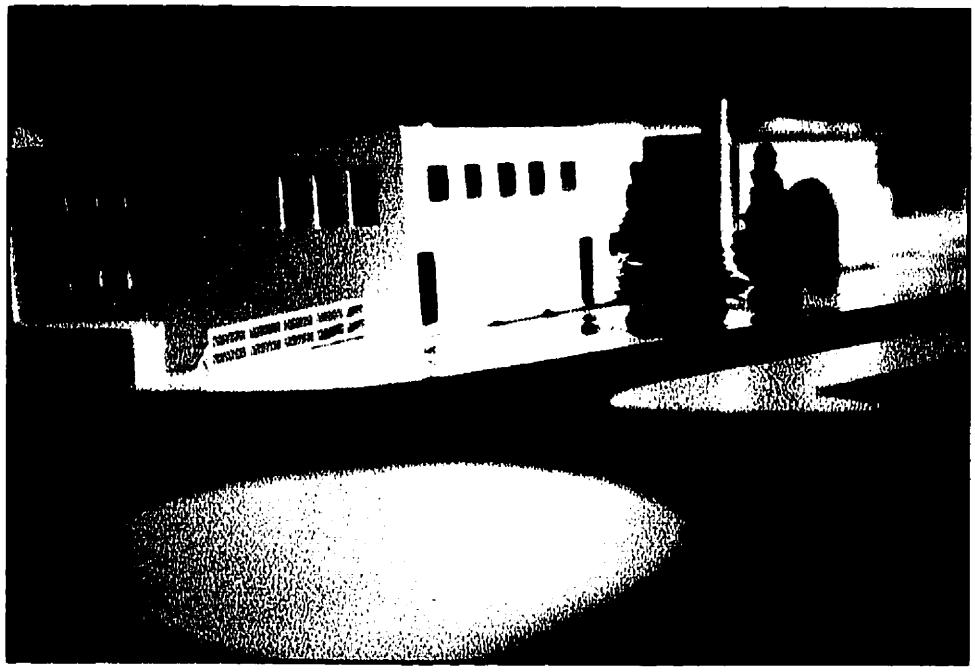


Figure 60. North elevation with the ramp entry to the lower courtyard.

The ramp and retaining wall on the north edge create a south exposure courtyard that can be used by the tenants. Figure 61. An ideal tenant would be a permanent daycare facility which brings in additional revenue. Since there are strict requirements for daycare design the design would be specific for a day-care facility. Both the exterior courtyard spaces and the interior spaces could be designed to facilitate children's educational and play requirements.

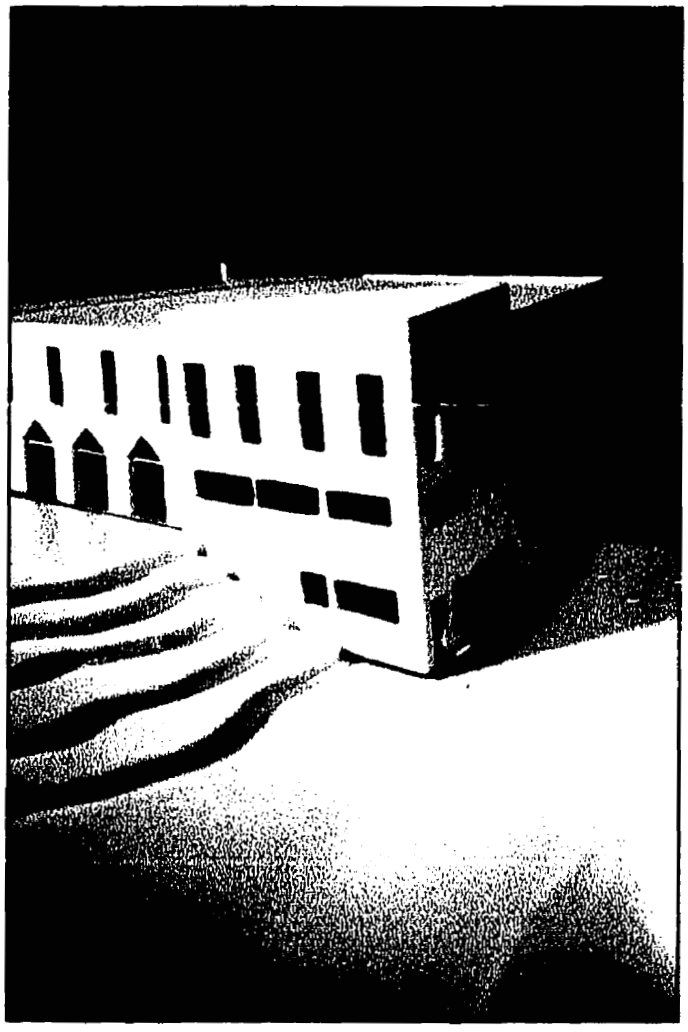


Figure 61. South courtyard created by the ramp and the north railing.

The mechanical room is in the west end of the lower level which is central to the main level and the upper level. Appendix F gives a schematic of the mechanical system. Mechanical systems to the hall side of the building run in shafts adjacent to the public washrooms on the main level and the upper level, and then run through the ceilings. For the worship side the mechanical systems run in the shafts adjacent to the entry doors, over the 'crying rooms', then on to the north side through the overhead truss, and to the south side through the bulkhead over the doorways.

6. The Outside Spaces

The main entry is a paving stone roadway from the north flanked by a colonnade of trees. The road allows car accessibility to a drop off area along the north side of the building. From here patrons can enter the main doors, or use the ramp to access the lower level. The north walkway leads to and from the parking area and is edged by a trellis for vines and a row of trees. Figure 62.

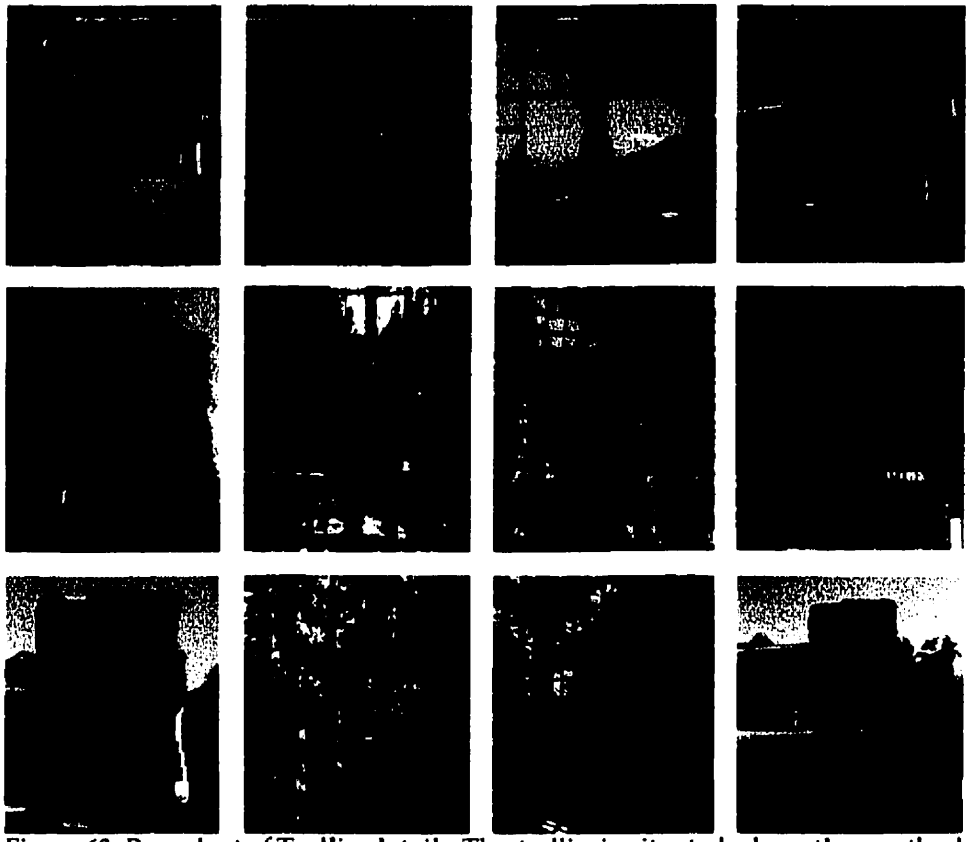


Figure 62. Precedent of Trellis detail. The trellis is situated along the north elevation of the hall.

The parking lot is treed to create the Cedar Grove. Cedar trees along with mixed trees and shrubs which grow well in the Calgary climate are used. On the south edge of the building the exterior path of the courtyard continues and extends into another colonnade of trees. Figure 63-64. This edge sets up the beginning of the Cedar Grove and the north and east edges of the Cedar Grove end at the roadway that leaves the site to the east.

The treed grove surrounds the parking and the north east edge of the site. Thus, the offices and lease-able spaces of the church design, have trees to view from the east and north windows of the building. This mitigates the buildings connection to the less desirable commercial buildings of the shopping areas to the east.

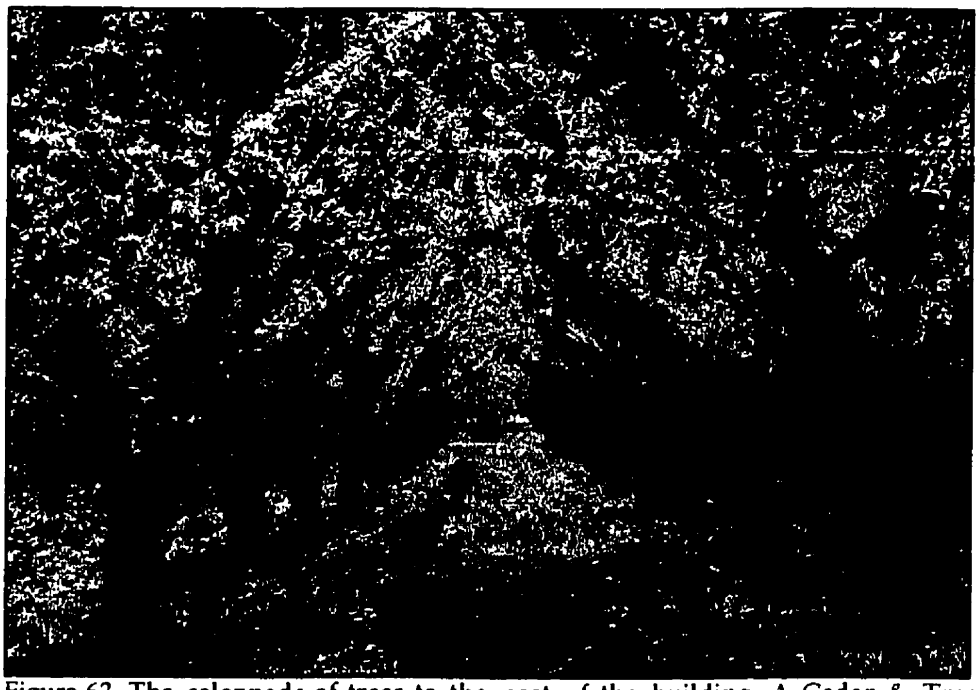


Figure 63. The colonnade of trees to the east of the building. A Cedar & Tree Grove furnishes the parking area with a natural setting which mitigates the views to the commercial areas.

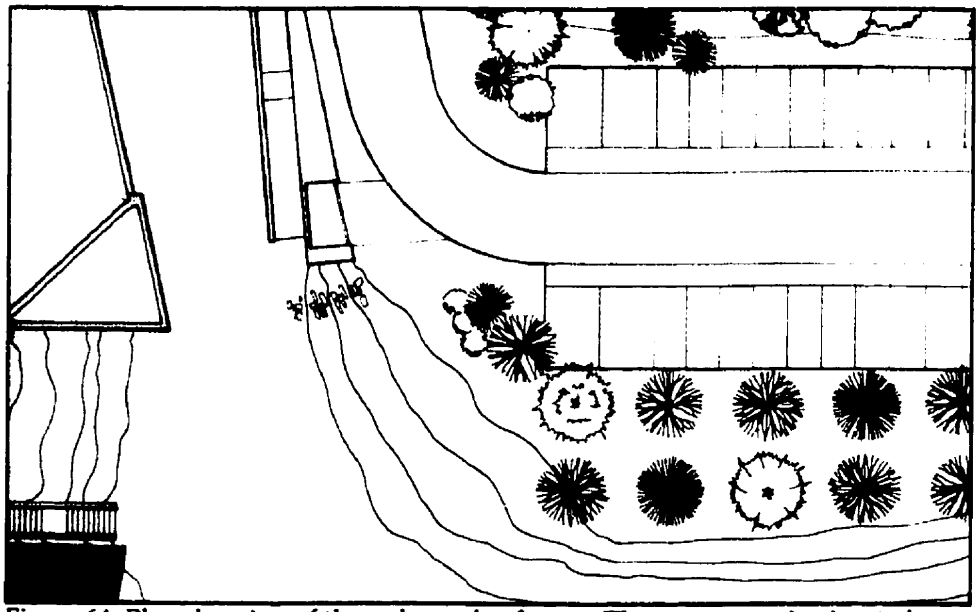


Figure 64. Plan drawing of the colonnade of trees. The tree grove is situated east of the building and south of the parking.

A community walking path connects the library and the commercial areas to the residential areas. The path, from the north and slightly east traverses the building on the exterior and connects on the south side to the hillside fountain and stairway. Figure 65-67.

This walking path creates a link between the residential area and the library and commercial sphere for the local foot traffic. It is important to consider that the building has the potential for both local users and the Maronite parishioners who will arrive from all parts of Calgary. The possible approaches to the building by car or by foot are both considered. The approach to the building by car is along a tree-lined access road with a parallel path for walking.

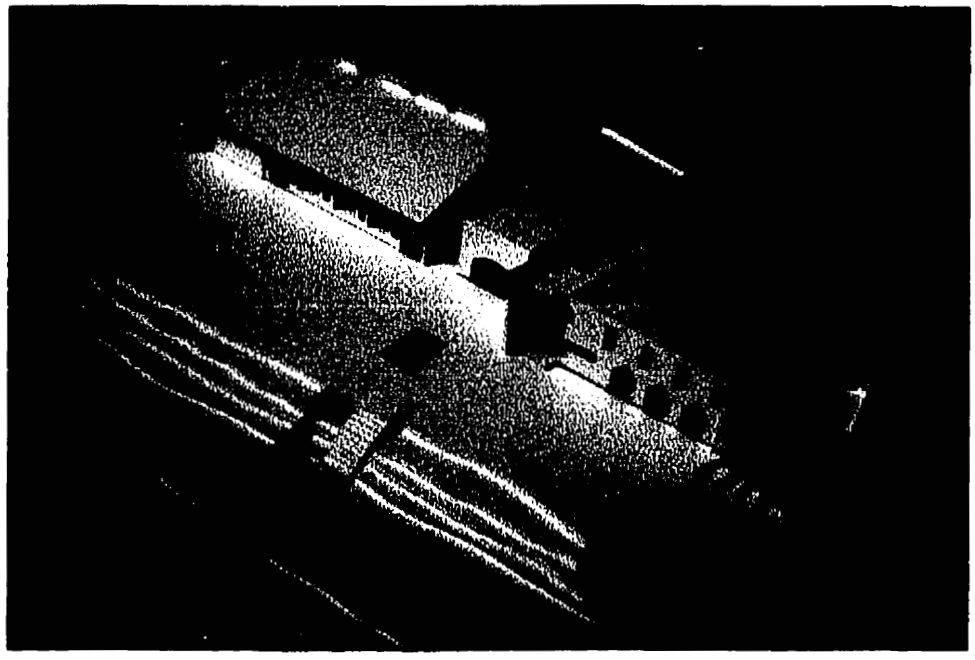


Figure 65. Model view of the path of the walkways and fountains.

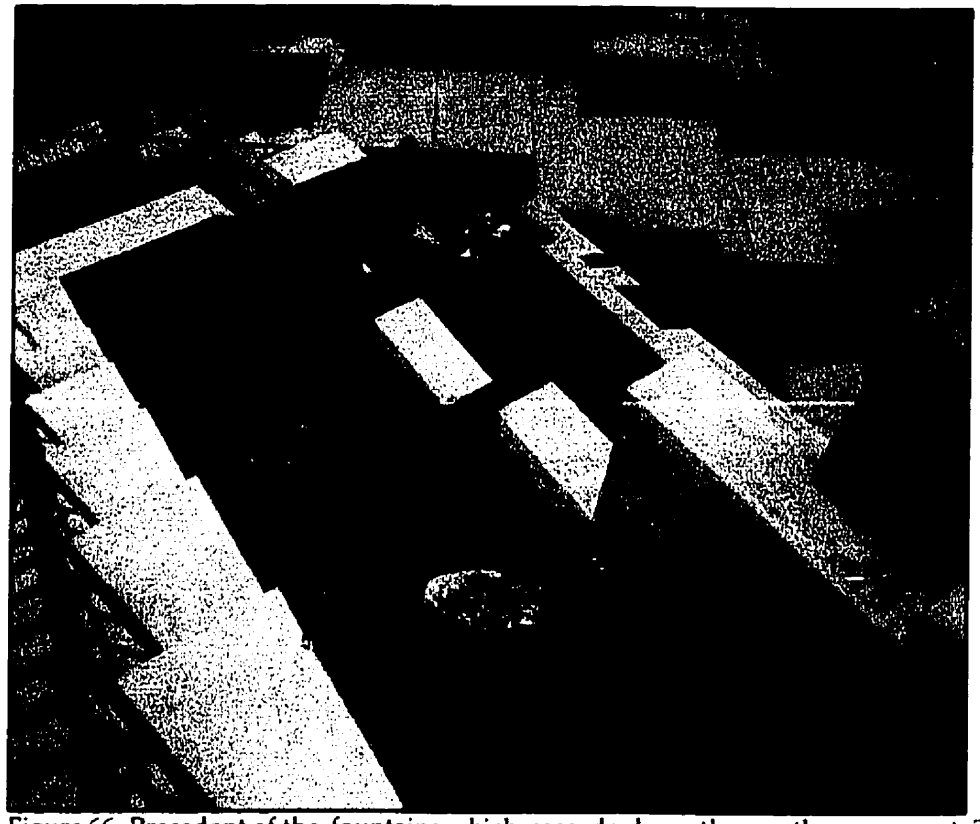


Figure 66. Precedent of the fountains which cascade down the south escarpment. Tiling, colour and pattern can be used to create a tactile effect.

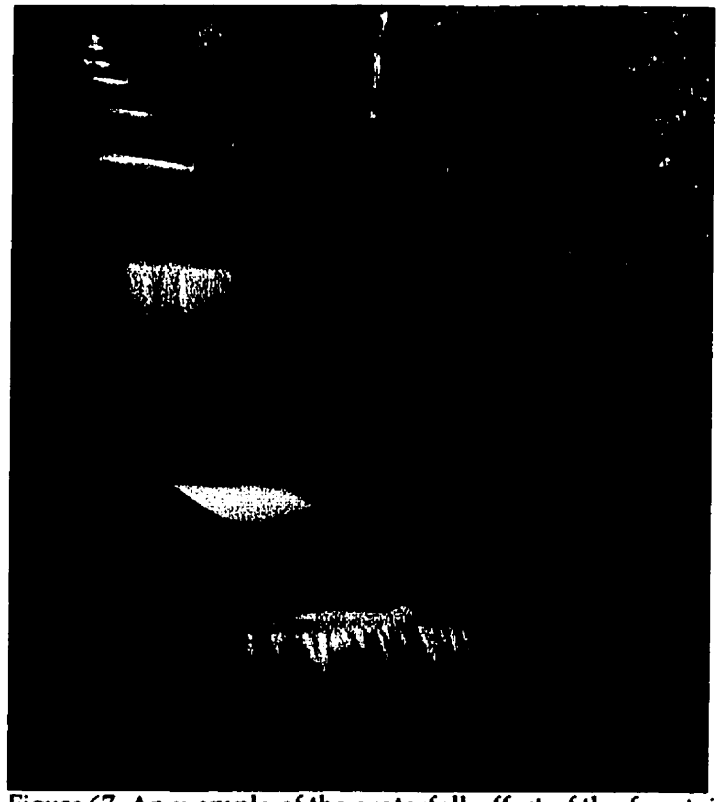


Figure 67. An example of the waterfall effect of the fountains.

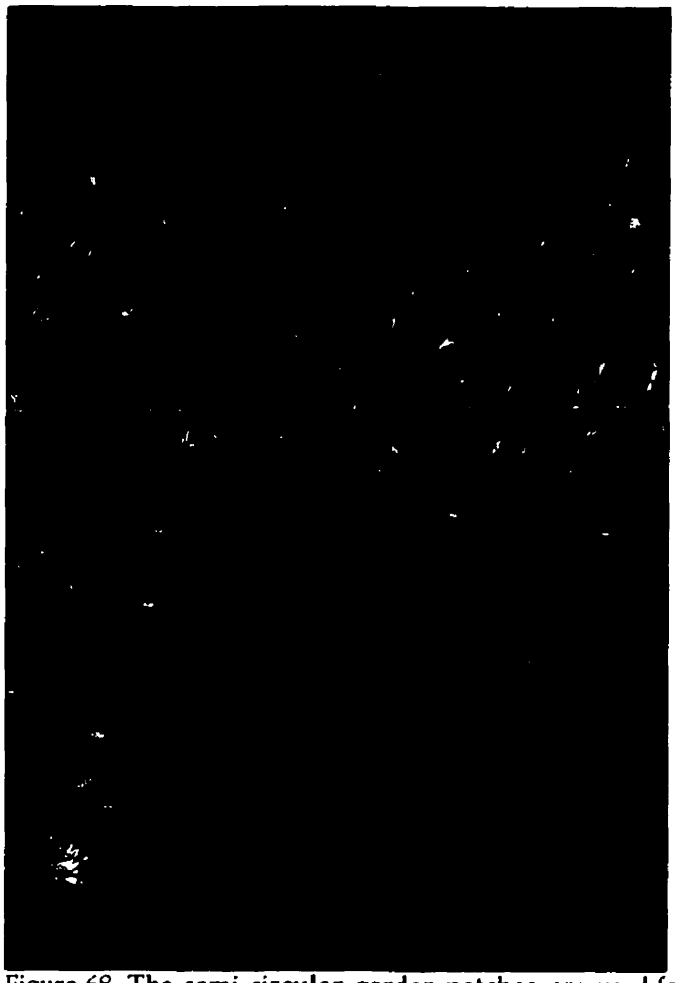


Figure 68. The semi-circular garden patches are used for flowers and plantings. These areas define the park spaces and edge the waterfall and stairway. The site plan in the drawing section gives a plan drawing of the area.

On the south hillside, an edge is used to create a semi-circular garden area for summer flowers and winter plantings. Figure 68. There are also stairs along the garden edge which link the south courtyard of the main level (the hall and worship level) to the lower level of the triangular piece. Figure 69-70.

Pragmatically, the location of the outdoor paths, stairways, ramp, and courtyards on the south side of the building helps snow and ice removal in the winter months by facilitating exposure to the sun. The parking lot roadway on the east of the building is sized for both fire truck and garbage pick-up access. The ramp to the lower level acts as a retaining wall and also holds the garbage bin and a storage section for outside gardening tools.

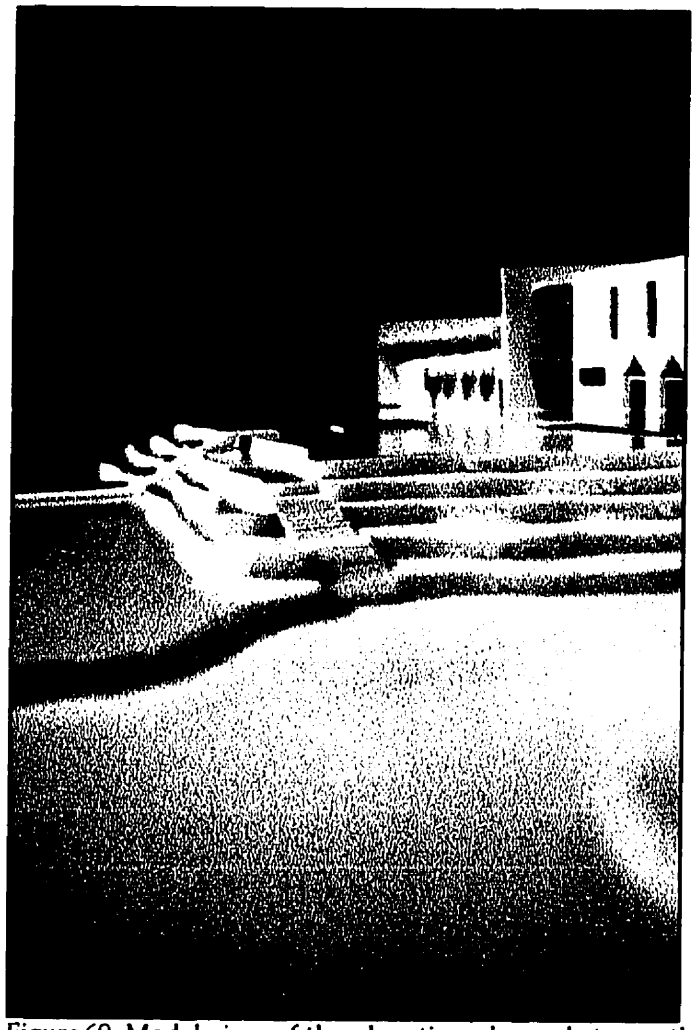


Figure 69. Model view of the elevation change between the exterior courtyards.

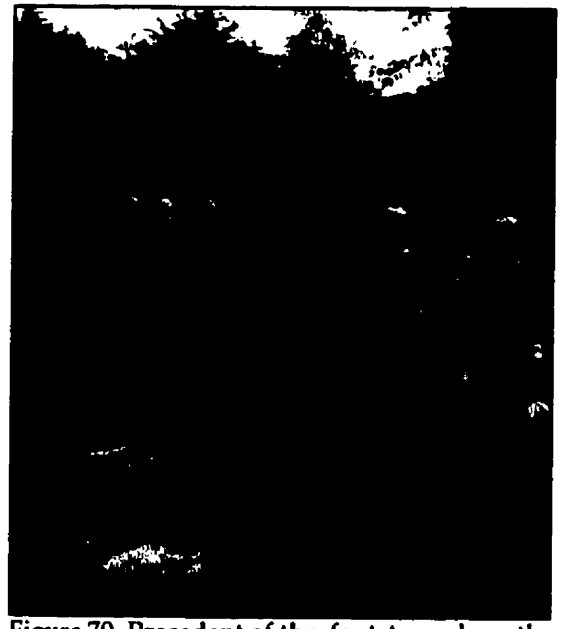


Figure 70. Precedent of the footsteps along the garden edge.

7. Constructibility

The structural system is steel truss and framing. A steel system would be both practical and cost effective. A steel system allows for a large spans thus freeing the plan for more versatile space planning. The design uses common, local, and standard, construction processes and details, thus minimizing extra costs due to more complex construction. Materials are chosen for their affordability, durability and the emotional qualities they add to the church building.

The roofs are primarily parapet roofs. The exception is the worship space which uses a curved truss system which is both structural and aesthetic. Wall construction (except the curved wall in the worship space) is uniform and typical. Exterior windows and doors are mostly standard sizes. The standardization and uniformity allow for more manageable construction.

8. Materials and Finishes

A natural and tactile quality is desired and the choices of materials contributes to the emotive quality of the spaces created. In Lebanon stone is the dominant material for the construction of buildings. Due to the constraints of building for our climate in Calgary, and the prohibitive cost, building in stone would be inappropriate and costly. Using stone selectively as a cladding material is a pragmatic option.

The curved church wall and the prominent wall paralleling the exterior path and stair circulation are clad in stone. Stone and paving treatments are used to create texture and a tactile quality to the finishes. As well stone can be used around windows, doors, or around arches as an edging or trim.

The building exterior (the worship space, the hall, the entry, the southeast triangular mass, and the sacristy projection) is uniformly clad in stucco. The stucco provides a natural texture. A natural effect is also achieved by using rough or rustic wood for all of the woodwork, including the solid doors, and the window shutters.

The curved roof over the worship space is brushed and textured steel material. All the steel materials have an aged look which integrates with the tactile and textural materials such as the wood, stone, and stucco. The four exterior canopies (on the south side) and the trellis (on the north side) are also steel and have a triangular pattern. The pattern of the trellis plays with the light and casts patterned shadows across the stonework and the building. In the winter canvas or sail cloth can be tied to the lattice canopy structures to create sheltered ground cover.

The flooring patterns on the interior resemble the paving patterns of the walkways, roadways, and courtyards on the exterior. Mosaic and tile patterns can be used in combination with stonework and concrete.

The baptismal font, and the exterior fountain are also finished with tile patterns. Patterns are also used in the stained glasswork, the railings, and in the mullions of the stair projection. The walls and ceilings are gypsum finished and are painted in a light colour. The truss system in the main worship space is partially clad with gypsum to allow the trusses to be like Lebanese cedar trees in their articulation.

The use of natural materials, patterns and textures, in combination with the play of light and shadow, creates a tactile and emotive place and contributes to the sensory intention of the church design.

VI. Drawings
Site Plan
Main Floor Plan
Upper Floor Plan
Lower Floor Plan
Section: Worship Space
Axonometric
Typical Wall Section

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SITE PLAN
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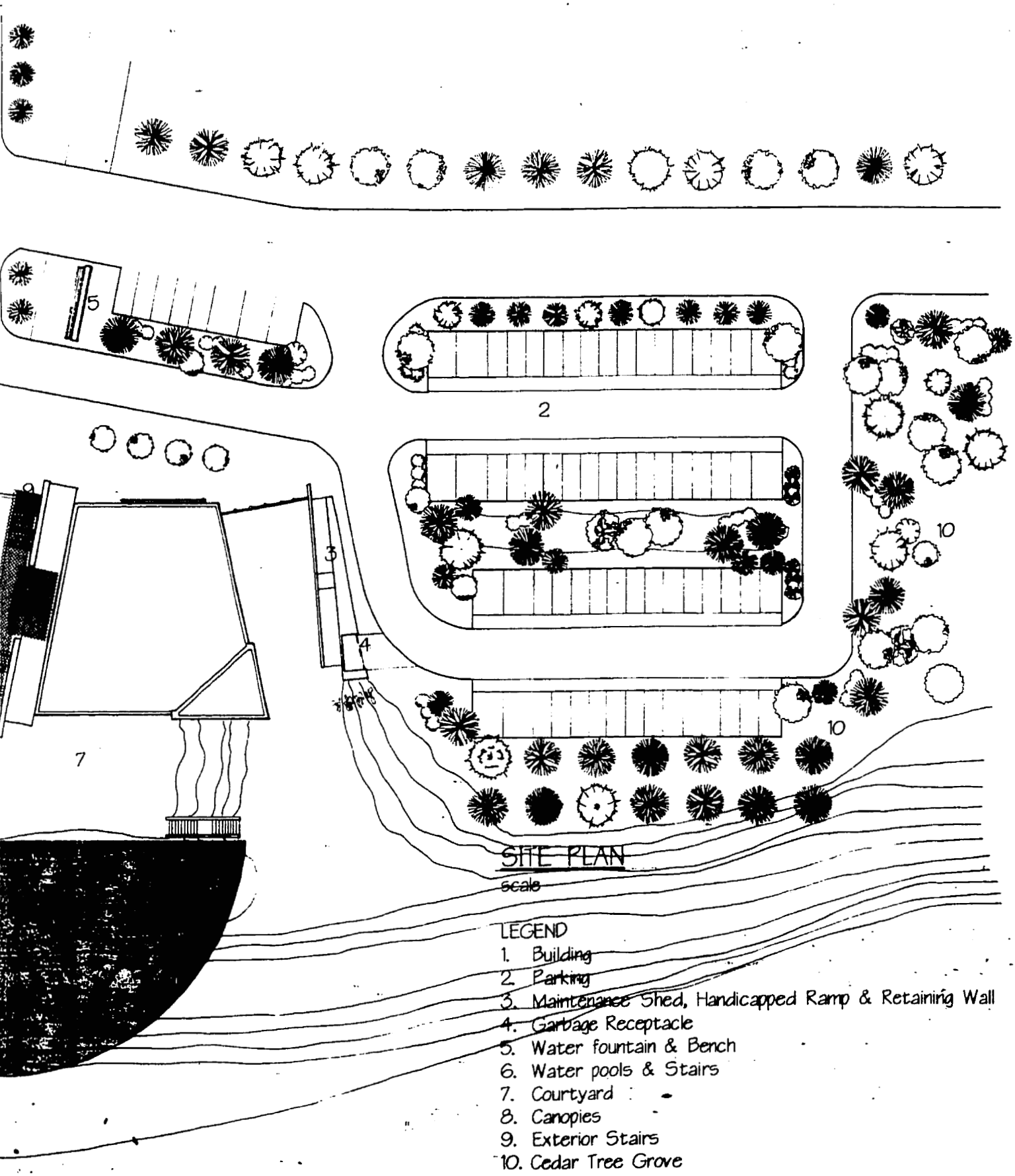
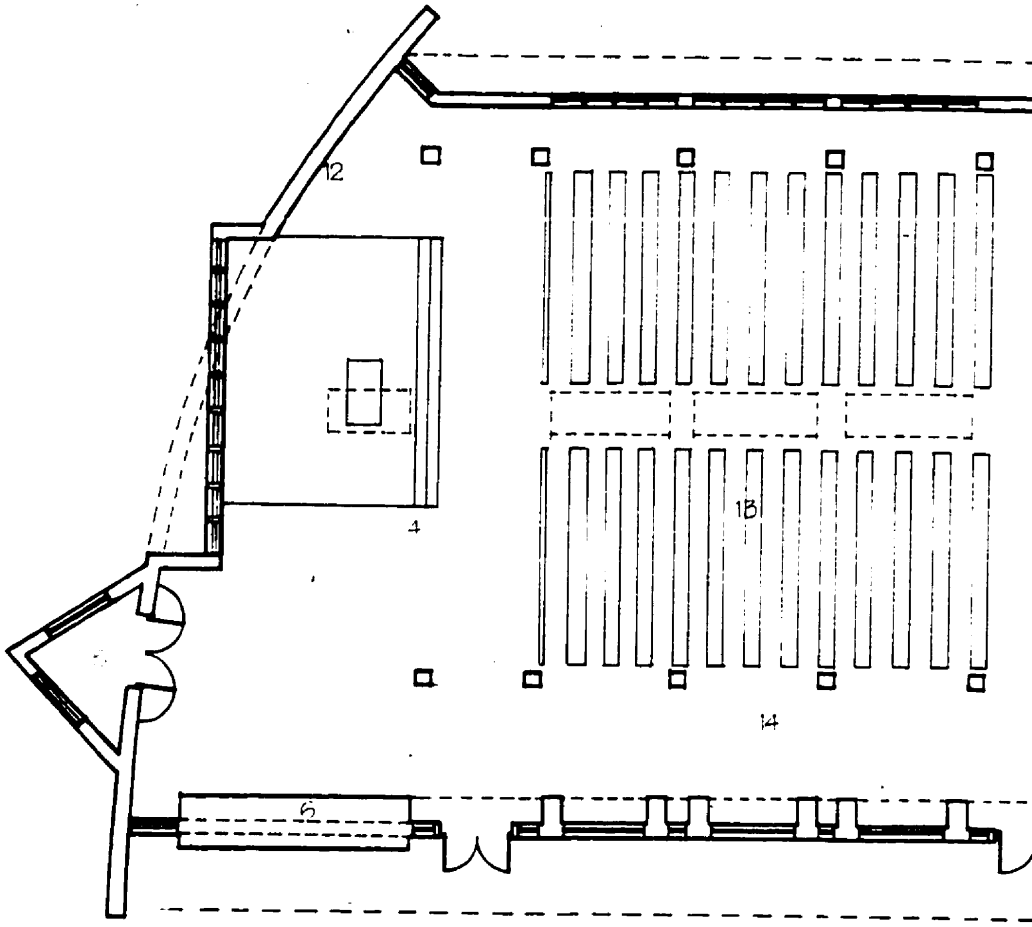


SITE PLAN

scale

LEGEND

1. Building
2. Parking
3. Maintenance Shed, Handicapped Ramp & Retaining Wall
4. Garbage Receptacle
5. Water fountain & Bench
6. Water pools & Stairs
7. Courtyard
8. Canopies
9. Exterior Stairs
10. Cedar Tree Grove
11. Roadway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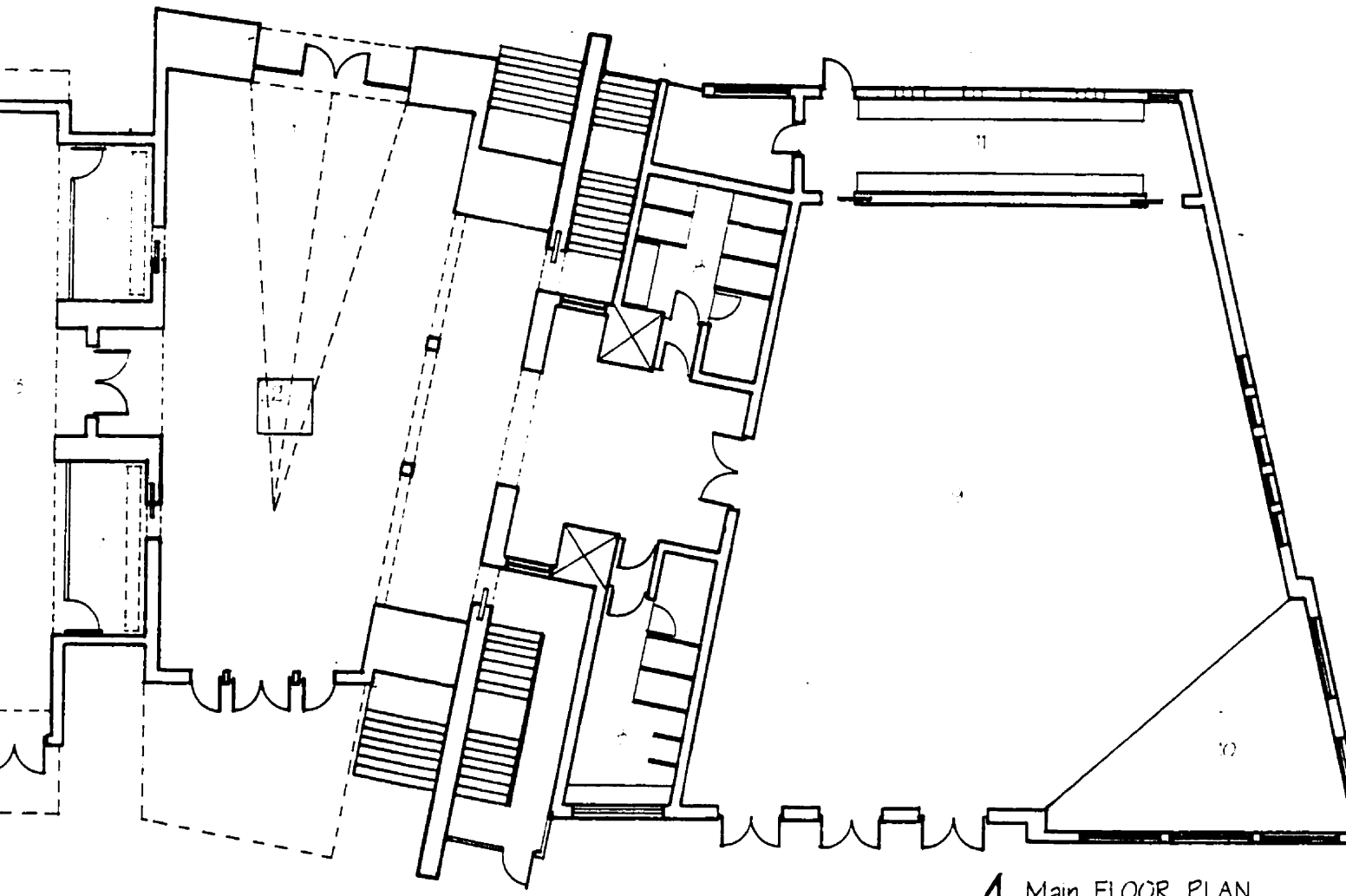
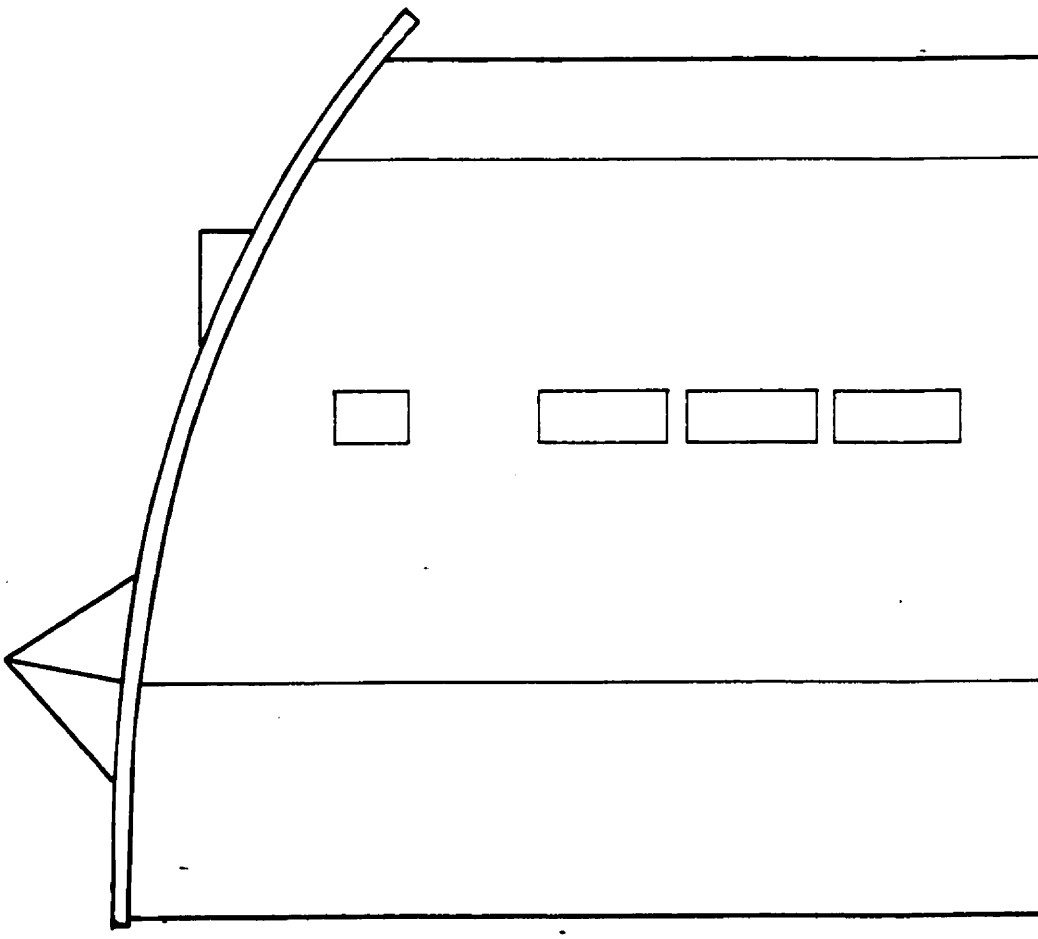


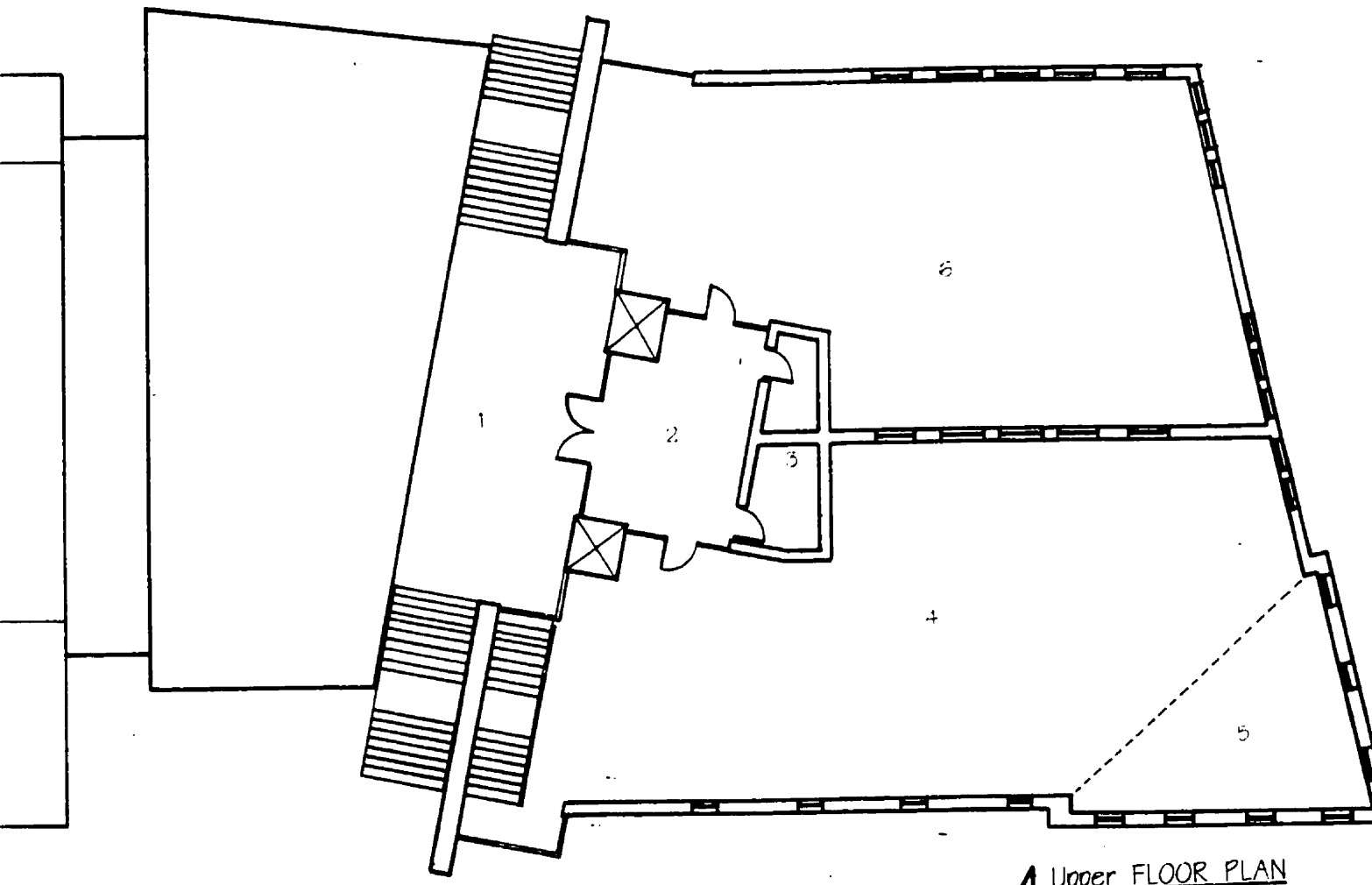
Main FLOOR PLAN

scale 0 1 5 1

LEGEND

1. Entry
2. Baptismal font
3. Worship space
4. Sanctuary & Altar
5. Sacristy
6. Storage
7. Crying room & Confessional.
8. Washrooms
9. Hall
10. Stage
11. Kitchen
12. Stone Wall
13. Pews
14. Overflow & Handicapped Seating



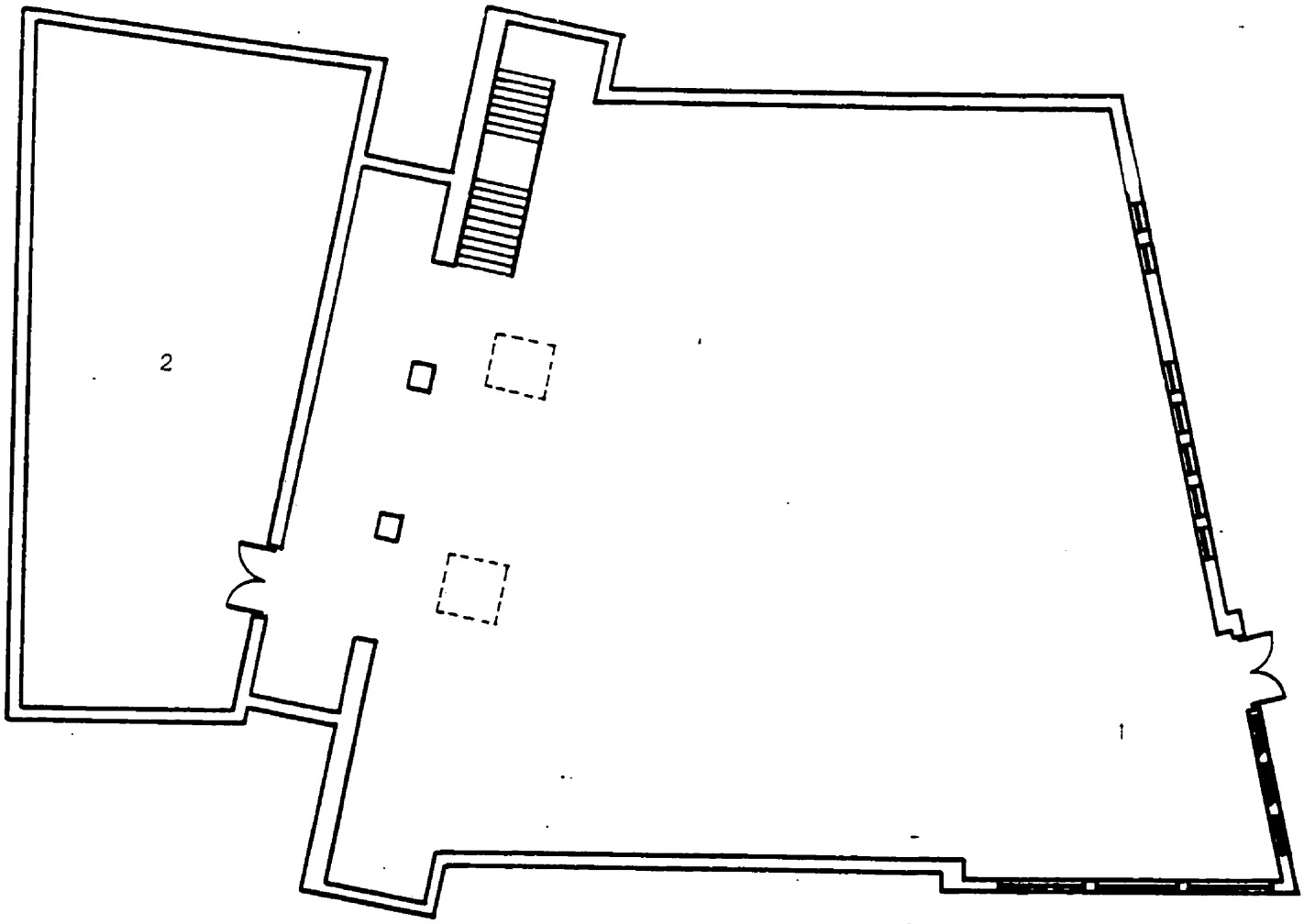


Upper FLOOR PLAN

scale 0 1 5 10

LEGEND

1. Exterior entry
2. Vestibule
3. Washrooms
4. Parish offices
5. Library & lounge
6. Lease able offices

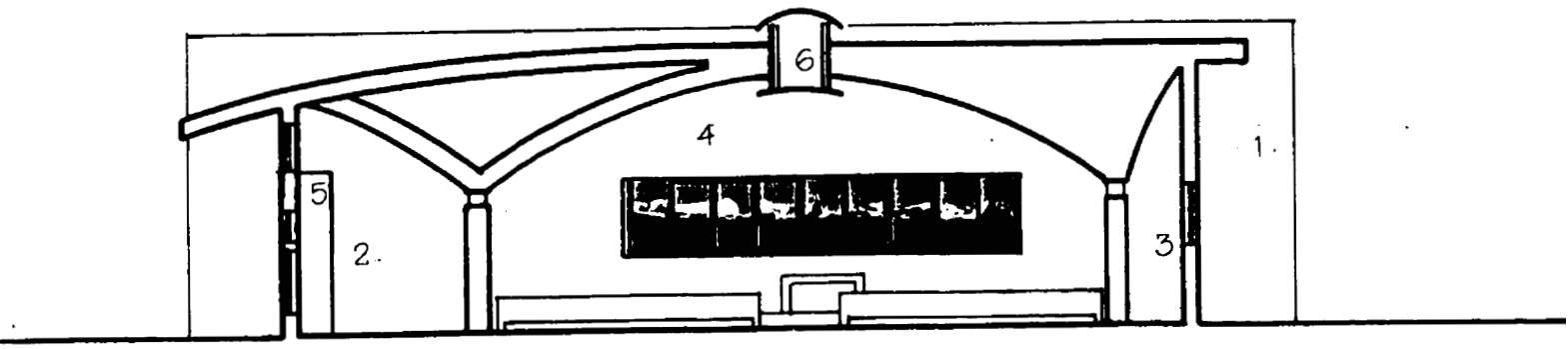


Lower FLOOR PLAN

scale 0 1 5 10 m.

LEGEND

1. Entry
2. Mechanical room

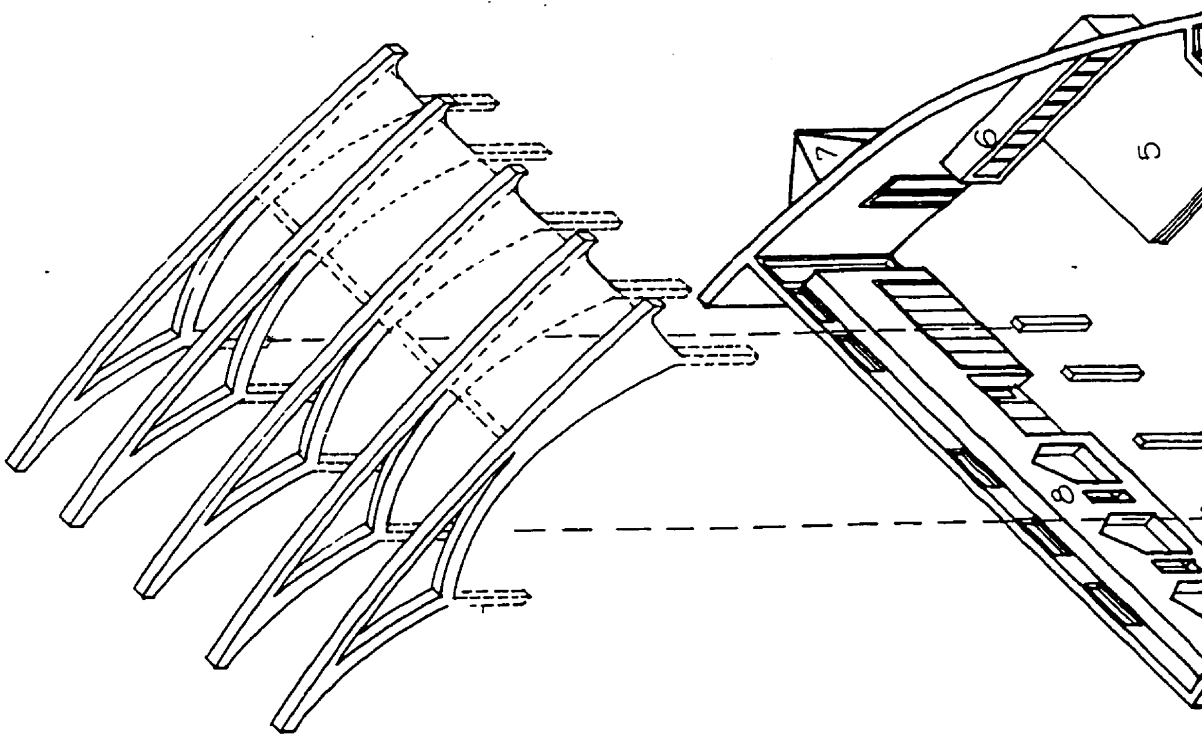


Section WORSHIP SPACE

scale 0 1 5

LEGEND

1. Stone wall
2. South aisle
3. North aisle
4. Center aisle
5. Bulkhead
6. Skylight


7
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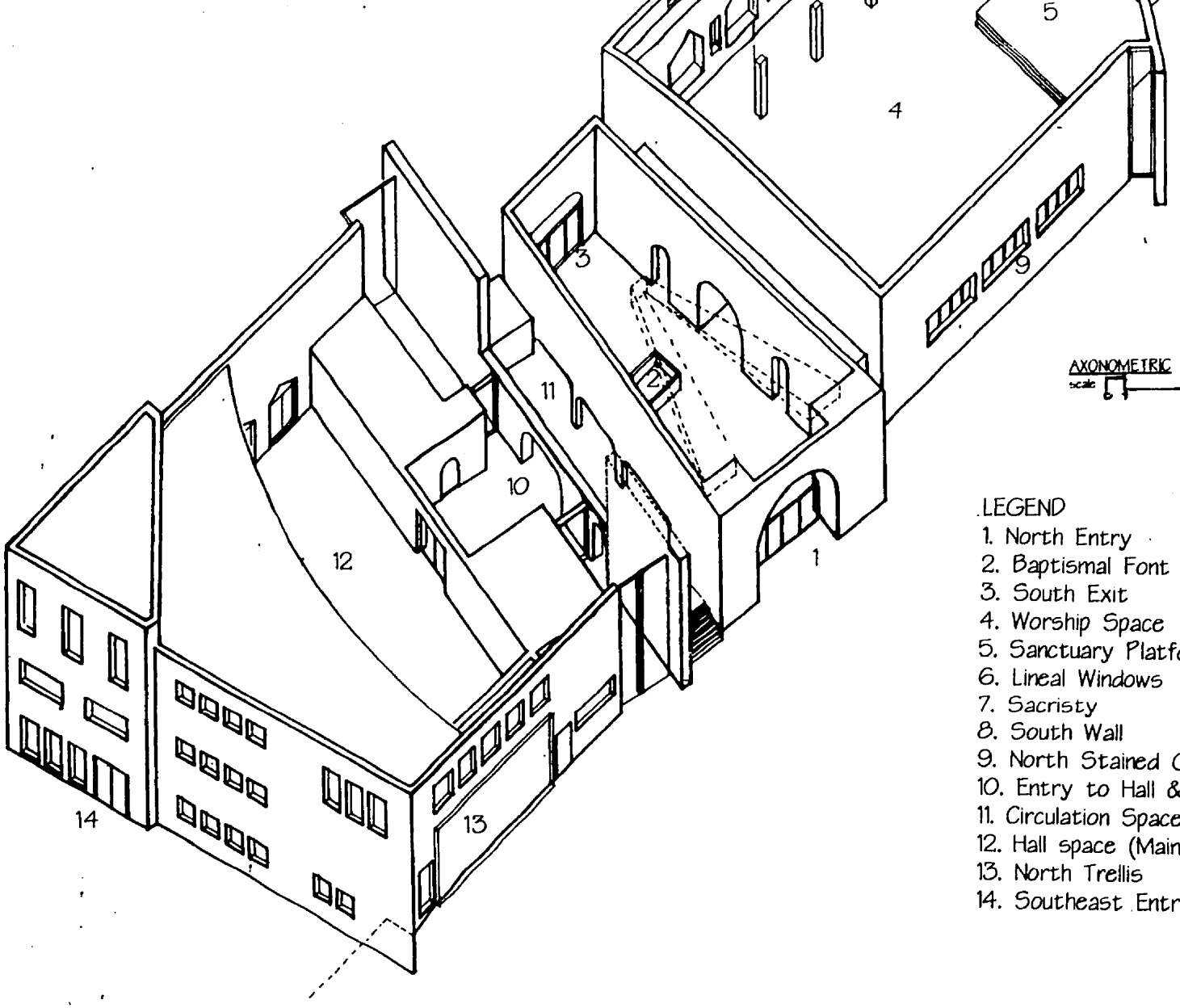
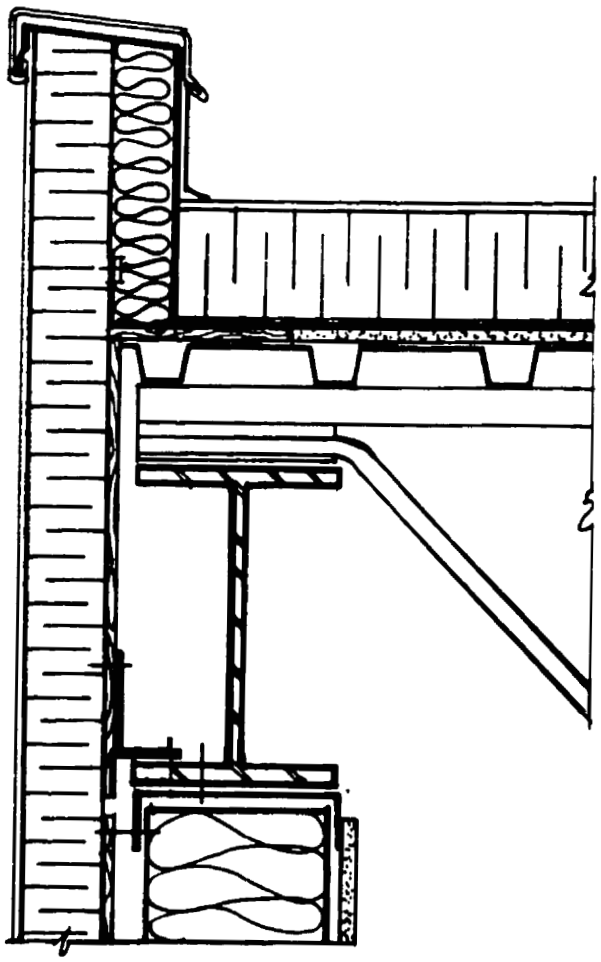


AXONOMETRIC

scale 0 4 8 12m.

LEGEND

1. North Entry
2. Baptismal Font
3. South Exit
4. Worship Space
5. Sanctuary Platform
6. Lineal Windows
7. Sacristy
8. South Wall
9. North Stained Glass Windows
10. Entry to Hall & Washroom
11. Circulation Space
12. Hall space (Main Level)
13. North Trellis
14. Southeast Entry to Lower Level



TYPICAL WALL SECTION

Note : drawing not to scale

Inverted Roof Membrane

gravel
filter fabric
rigid insulation
water membrane
drywall
steel decking

Wall

2-3 coats stucco
wire mesh
building paper
rigid insulation
plywood
steel studs
batt insulation
vapour barrier
gypsum board

VII. Conclusions

Sodality, is the promotion of camaraderie and fellowship through an active path of association and good will. The hope of the design is to foster the continuation of the principles of fellowship and community involvement by creating a building design which provides for an active participation in Maronite Catholicism, and community involvement through shared spaces and commercial activity. The building is a representation of the sodality of spirit, in that the celebration and community space is part of the shared massing of the building.

General consideration is given to site and orientation, simplicity of structure and detail, cost and budgeting, accessibility, and material selection. The spaces are simple and provident and will contribute to a supportive facility for the parish life. The design considers the combined influences of: Catholicism, Maronite Lebanese culture, and Canadian regionalism and geography by considering the unique history of the Catholic Maronite people and the contextual implications of building in Calgary.

The project demonstrates that successful provident spaces can be wrought from thoughtful architectural intention. The project embraces the middle ground between overly designed, overly expensive architecture, and thoughtless mediocre building practices by adopting thoughtful and moderate design strategies.

The project will require a great deal of commitment from the building committee and parishioners to sustain its vision for the actualization of a built structure. Appendix G is intended to provide the congregation with further suggestions for implementation. The committee and church member's involvement in the processes of the building design and fund-raising for a new building is crucial. The congregation's enthusiasm and participation in a design execution will be the determining factor in the success and viability of a built project.

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Appendix A
Minutes from the Meetings

Included within this Appendix are the Meeting Minutes for meetings with the following individuals:
George Jergeas - Parish Finance Council- External Supervisor MDP
Antoine Sassine - Parish Pastoral Council
Bernadette Chamoun- and Sodality; The Women's League
Collette Rizkallah of Parish Pastoral Council Sodality; The Women's League
Fadi Nasr- Parish Finance Council
Bir Dohl- Planner -City of Calgary Planning Dept.
Father Milad- Parish Priest
Tang Lee- MDP Supervisor

The minutes resulted from informal interviews with the committee members and they are presented in chronological order. The structure of the minutes is to divide the information gained from the meetings into three sections: Things discussed, Suggestions for MDP, and Subsequent Tasks. The minutes were for my own benefit since they helped me clarify the scope of the project relevant to the MDP requirements. A summary of the MDP suggestions follows.

The following are summarized from the enclosed minutes. The points are from the Suggestions for MDP section of the Meeting Minutes. Listed are only those which I incorporated into the final design strategy and document.

Programme & Worship Space

- the required 'spaces' are: entry vestibule, main worship space, sacristy, the altars, the confessionals, the 'crying room' - a distinct but acoustically and visually connected space for parents and small children, choir (approx. 12 people), a hall and kitchen, washrooms, possible outdoor spaces
- the vestibule could draw people into worship space immediately (not too large for lingering)
- the altars in Lebanon are sometimes simple large stones
- the cross is part of the space and often the focus of the worship space
- fixed seats are preferable (due to the noise and distractions created by moveable seating)
- there should be provision for stained glass windows (places where the parish as they gain funds could install stained glassworks)
- there is a need to stretch the church group's thinking about the role their building could play in generating income to support its operation (consider the following: day care, gymnasium, private offices for social or city programs, theater or entertainment, community groups, seniors groups)
- look at the symbolism and icons in Lebanese and Middle Eastern cultures; the symbols illustrate some of the distinctions and the diversity of the Christian faith (stained glass, mosaics, paintings)

Site & Costing

- site considerations: the west views in the city are similar to locations of parishes and the views in the hills of Lebanon
- the project will require an acre parcel to build the church (for approximately 200 families) to have adequate room on site for parking and for future expansion
- the building should be cost efficient and convenient to maintain. Estimate a construction (an Order of Magnitude estimate) and outline the time requirements for the project
- include considerations/ suggestions for funding including: purchasing land from the city and subdividing, including lease-able space in the design, and involving other communities (seniors, local community association, social agencies, the larger Catholic church), grants
- in the document, mention the limitations that, cost restrictions and designing for real clients places on the project (similar to a 702 project in that the design exploration is within a framework of the desires of the group, the cost objectives, and the architectural solution is influenced by my direction)

Materials

- consider using steel construction techniques (wood is susceptible to humidity problems and the length of span of truss systems is more limited) Steel also offers daylighting glass wall and skylight options not available in wood construction
- the size of the church should service a potential group size of 150 families with future consideration for expansion (about 50-60 % attend mass regularly)
- should be an honesty in the expression of materials and a simplicity in configuration in the spirit of early Christian churches
- the church design could accommodate other worship groups, this would enable the parish to generate revenue from the building and subsidize its maintenance costs

This is not a complete list of the considerations only a list of those derived from the meetings with parish members and the MDP committee.

Meeting Summary
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Meeting Minutes of: January 2. 1998
Present: George Jergeas (Parish Finance Council- External Supervisor MDP)

Discussed:

- the Catholic parishioners are primarily from the Middle East (including Lebanon, Syria, and Iraq)
- the group is predominately a Lebanese Maronite community
- the general requirements are for a space for social functions (primarily centered around religious holidays), and for community and family celebrations (weddings, funerals)
- would like to socialize as a group
- the investigation of the building becomes a new project; relevant to the culture of the Middle Eastern parishioners but situated within a Canadian context
- task for me is to clarify and bring together the requirements for the project by discerning the overall objectives of the committee members
- consider the general desires and aspirations of the member's vision for the building, their thoughts about parish growth and the church's potential uses, and the scope of cost (budget for construction and maintenance) the congregation is willing to finance
- the group has not purchased a site (site selection for the MDP could represent a realistic possibility)

Suggestions for MDP:

- maintain loosely defined functional spaces in the initial design of the building
- the MDP document can be a focusing device for the project by clarifying the scope of the work through outlining the processes and stages of the project from concept to completion
- there should be consideration in the document to the dollar value of the work intended

Subsequent tasks:

- obtain a list of parishioners and their city addresses
- collect visual information including photographs and view a tape of the Pope's visit to Lebanon
- research a brief history of Lebanon
- meet with the Woman's League Chairperson- Bernadette Chamoun, Parish Council Chairperson- Fadi Nasr, Finance Council Chairperson- Antoinne Sassine, Parish Priest- Father Milad
- document all meetings
- prepare questions to discuss (both structured and informal) which will promote discussions which will help the generation of the design
- attend a mass at St. Bernard's Parish

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Meeting Minutes of: January 9.1998
Present: Antoine Sassine - Parish Pastoral Council

Discussed:

- size of the congregation is approximately 100 families (40 families Maronite)
- ideally the group would like their own church designed from the ground up rather than a renovation project (such as purchasing the existing St. Bernard's Church)
- the site should be convenient for everyone, therefore a central location is ideal
- consider the possibility of building on the St. Bernard site (it is a large site in Bowness)
- the mass celebrates many Eastern saints with feast days not usually observed in Western Catholic mass
- the church is presently reshuffling the committee leaders at the annual general meeting and also choosing a name from the following: Our Lady of Peace, Holy Family, St. Joseph, or St. Elias)
- the Woman's League is called Sodality

Suggestions for MDP:

- look at the symbolism and icons in Lebanese and Middle Eastern cultures, the symbols illustrate some of the distinctions and the diversity of the Christian faith (stained glass, mosaics, paintings)
- the size of the church should service a potential group size of 150 families with future consideration for expansion (about 50-60 % attend mass regularly)
- the building should be cost efficient and convenient to maintain
- the church design could accommodate other worship groups, this would enable the parish to generate revenue from the building and subsidize its maintenance costs

Subsequent Tasks:

- research on the internet Catholic Encyclopedia for Maronite history and for the hierarchy of structure of the Maronite Catholic community down from the Maronite Bishop in Montreal
- understand the difference between the movements in Maronite mass, Roman Catholic mass, and other Eastern catholic masses (ask Father Milad about the movement of the priest and the parishioners)
- determine approximate sizing of the building

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Meeting Minutes of: January 21.1998
Present: Bernadette Chamoun (Parish Pastoral Council and Sodality; The Women's League) Collette Rizkallah (Sodality ; The Women's League)

Discussed:

- a congregation size of approximately 200 families is a reasonable projection for the building design
- there are approximately 25 feasts in the year (for each ceremony the feast saint is adored at the mass) the adoration includes the physical decoration of an altar
- name of the church will be Our Lady of Peace as a wish for peace in the world
- one site consideration is the west hills area of Calgary or a central west area which does not have a Catholic church presently (the church could not only attract Maronite Parishioners but also Catholics from the general public)
- looked at photos and videos of monasteries, and churches (including St. Shabel) and shared her experiences of living in 16 countries and the experience of attending mass

Suggestions for MDP:

- consider a circular or semi-circular spatial design of the main space
- fixed seats are preferable (due to the noise and distractions created by moveable seating)
- the required 'spaces' are: entry vestibule, main worship space, sacristy, the altars, the confessionals, the 'crying room' - a distinct but acoustically and visually connected space for parents and small children, choir (approx. 12 people), a hall and kitchen, washrooms, possible outdoor spaces
- consider making the hall in the basement (allows for a separation of quiet events and noisier events)
- the vestibule could draw people into worship space immediately (not too large for lingering)
- the altars in Lebanon are sometimes simple large stones (there are three altars, one central and two for the blessed sacraments)
- the cross is part of the space and often the focus of the worship space
- there should be provision for stained glass windows (places where the parish as they gain funds could install stained glassworks)
- should be an honesty in the expression of materials (stone, wood- possibly cedar) and a simplicity in configuration similar to early Christian churches

Subsequent Tasks:

- look at St. Gerard's, St. Anthony's, and Holy Trinity in Calgary for the desired feeling (St. Gerard's for the space and St. Anthony's for the spiritual altars and the cross)and find out how stations of the cross are represented in Lebanese churches
- review spaces and movement in Catholic churches and examine the Lebanese churches and how and why the spaces are used to facilitate movement

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Meeting Minutes of: January 22.1998
Present: Fadi Nasr (Parish Finance Council)

Discussed:

- the building of a church is a more long term but worthwhile pursuit as compared to acquiring an existing building (one possibility is an existing church at the Currie Barracks site)
- by designing and fund- raising for a unique building the congregation's enthusiasm and participation in the project's viability, may be more successful and committed
- the building is an exercise in combining the old and the new (looked at the new church in Harisa Lebanon)
- review of the minutes of the Church building and Fund-Raising Committee

Suggestions for MDP:

- site considerations; the west views in the city are similar to locations of parishes and the views in the hills of Lebanon
- check out national, provincial, and city grants for programs which provide financial grants (for example a cultural hall as part of the building may be eligible for funds)
- suggest ideas for fund raising (for example a place to record the names of financial contributors) I suggested stones form Lebanon used in entry arch work or on a wall)

Subsequent Tasks:

- collect a photo album and other information from Fadi next week
- get web site addresses for Lebanese Maronite groups for further research
- Fadi will be away Feb. 8-18 and upon his return he will call a meeting with members of the building committee (which I will attend) for a budget review

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Meeting Minutes of: February 8.1998
Present: George Jergeas
Discussed:

- site should be chosen (I have the go ahead to choose a site)
- the site selected should provide good sunlight, a light bright church is desired
- discussed the concept of stakeholders (consider all the groups, agencies, or individuals who have a vested interest in the project)
- each stakeholder has an advantage/risk associated with a building project (it is important to understand all of the players, to acknowledge their concerns and mitigate potential conflicts early in the design phase)
- stakeholders could include: the Lebanese community (including individual members), the general Catholic community and the Catholic Diocese, the community or the neighborhood, the city or other governing bodies, contractors, consultants, financial sources including banks, and potential revenue sources/tenants. Anyone who can influence the success of the project (including the design and the cost) or will have a say in the project
- discussed the Order of Magnitude Estimate, the Budget Estimate, and the Definitive Estimate

Suggestions for MDP:

- use Microsoft Project to set up scheduling tables for the MDP document
- the scheduling indicates the approximate time required for all the stages of the project (this will allow the group to understand the ordering of events)
- consider 'what can go wrong?' when preparing the scheduling time table (discuss with Tang Lee)
- consider the concepts of Value Engineering (optimizing your design to get the best value includes life-cycle costs) and the concept of Constructibility (practicality of design and the balance between cost and creativity)
- the document should consider financing issues (approximate costs)

Subsequent Tasks:

- go look at Crowfoot YMCA entrance donation wall
- contact the Calgary Catholic Diocese office for church building guidelines
- talk to architects who have built churches in Calgary recently
- contact the City of Calgary Planning department to understand the parameters and the requirements required to build within Calgary
- discuss the design process/scheduling with Tang Lee, and also with a recommended Planning instructor at EVDS
- review course notes Basics of Cost Estimating, and Plan of Work RIBA document
- contact a contractor or construction manager (Kevin Skinner at PCL)

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Meeting Minutes of: February 12.1998
Present: Father Milad, Parish Priest

Discussed:

- the history of the Maronite people; their location and presence within Lebanon
- the format of mass (The Liturgy of the Word, The Eucharist and The Offertory)
- the movement of both the priest and the parishioners during a mass celebration (I also attended a mass February 8.98)
- the Liturgical Calendar Year (the schedule of time the readings and celebrations follow)
- discussed the spatial and physical properties of the following: the altar, the choir, the reading podium, the announcement podium, the location of the alter persons and the Eucharist ministers, the priests main chair, and the orientation of the church building

Suggestions for MDP:

- would like the church to be built with rock or have rock present in the detailing of the church materials
- a functioning bell tower could be considered (recognized the problem of unwanted noise for the adjacent community)
- the altar should face east and the area behind the altar (the west end of the building) will have some form of indirect lighting (stained glass, windows, skylighting)
- there will be a cross at the west end behind or proximate to the altar
- not required to have two secondary altars flanking the main altars
- not required to have the 'stations of the cross' (these are usually placed as a series pictures along the walls) Father Milad would like to see stained glass-work in the windows serving the same purpose
- the feeling and look of the possible materials could be described as: rough,(cleaved stones like mountains rocks), simple, pure, basic, essential

Subsequent Tasks:

- speak with Rt. Rev. Msgr. Kheirallah (902) 443 6484 in Halifax about building guidelines to support Maronite mass and eastern traditions
- speak with Sue (a friend of Father Milad's and an architect from Lebanon) in Edmonton (403) 440 2182
- Father Milad to provide a map of all the existing Catholic churches in Calgary and to contact the previous two persons, and to photocopy the church guidelines manual
- check the internet sites for North American Maronite churches
- watch the video Sharfouna, the Beauty of Lebanon 1997

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Meeting Minutes of: March 2.1998
Present: Bir Dohl, City of Calgary Planning Dept.

Discussed:

- discussed parcel of land by the Signal Hill Library, not owned by the city, but by Norm Green Properties, DC zoning
- process involved in obtaining city approval for building within Calgary
- discussed general bylaws affecting church design
- discussed the southwest area of the city (Section 2W and 23 W) and reviewed which parcels of land are owned by the city and which are owned by private developers

Suggestions for MDP:

- the project will require an acre parcel to build the church (for approximately 200 families) to have adequate room on site for parking and for future expansion
- when the Maronite building committee purchases land either from a private developer or from the city they should present an offer conditional upon Land Use Approval by the city

Subsequent Tasks:

- obtain population statistics for the areas discussed
- obtain updated Calgary Land-Use Bylaw Guide
- if a site west of 69 th St. is selected (the land has been recently annexed for approximately two miles to the west) talk to Ernie Park 268-5334 at the City Planning Dept.
- call Federation of Calgary Communities 244-4111 for community association spokesperson. Discuss the site and obtain a written letter of approval from the community to forward to the city in the building application process
- call Steve Stuart at the Calgary Catholic School Board Planning Office 298-1426 to see if the Catholic School Board owns any land within the area
- call Preston Development about their parcel of land (reserved for a school) in Signal Hill Phase 20 at 245-3515
- contact Norm Green properties or current owner of DC 17Z96
- 1998 aerial photos will be available in one week in blueprint form from the city or as photographs from Foto Flight Photographers

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Meeting Minutes of: March 6, 1998
Present: Tang Lee

Discussed:

- reviewed the scrapbook of visual information
- discussed the process of meeting with the church committee members
- reviewed site selection; of the three Signal Hill sites presented, I am to chose the one I like the best and support my reasons. The MDP committee evaluation will not be too critical of the choice as a real site selection is improbable at this time.
- design processes (drawing and modeling) to begin, and meetings to be scheduled for evaluation of preliminary drawings and massing models
- discussed design conceptualization and its relation to materials and structural systems; "What are some of the ways to consider the cost implications as I design?"
- discussed my role as a facilitator in the initial programme determination

Suggestions for MDP:

- in the document, mention the limitations that, cost restrictions and designing for real clients places on the project (similar to a 702 project in that the design exploration is within a framework of the desires of the group, the cost objectives, and the architectural solution is influenced by my direction)
- consider using steel construction techniques (wood is susceptible to humidity problems and the length of span of truss systems is more limited) Steel also offers daylighting glass wall and skylight options not available in wood construction
- there is a need to stretch the church group's thinking about the role their building could play in generating income to support its operation (consider the following: day care, gymnasium, private offices for social or city programs, theater or entertainment, community groups, seniors groups)

Subsequent Tasks:

- design crits are scheduled for March 12, March 20, and March 27.
- contact George Jergeas for attendance at the second or third crit and book a meeting room
- for the first crit: along with initial massing models and conceptual floor plans address site issues (location of building, roads, parking and access, entry and egress and outdoor space)
- scheduled design crits March 13, March 20, and committee meeting March 27

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Meeting Minutes of: March 27, 1998
Present: George Jergeas, Tang Lee

Discussed:

- design and document strategy for the MDP requirements
- discussed the information the document should discuss to facilitate the client group
- design crit with Tang
- discussed the elements for the graphic presentation
- the client group will have a separate presentation date apart from and after the MDP defense date

Suggestions for MDP:

- within the document discuss the design conceptually (all the factors leading to the design decisions)
- within the document include a general description of the procedure the clients' need to initiate (the what's next)/ could be an ordered list of criterion
- consider and explain the cost (an Order of Magnitude estimate) and the time requirements for the project
- include considerations/ suggestions for funding including: purchasing land from the city and subdividing, including lease-able space in the design, and involving other communities (seniors, local community association, social agencies, the larger catholic church), grants

Subsequent Tasks:

- draft of the document in two weeks to George and Tang (submit, then call for a meeting)
- continue the design see notes on the trace drawings for further exploration and development (in particular the stairs and their articulation)
- create a cardboard massing model to deal with finalizing plans and sections
- for the final defense: present a site plan 1: 2000, plans 1:200, relevant building section 1:200, detailed model 1:200, and either a perspective or a partial model 1:100 of the interior (the altar), no elevations (perhaps partial if effective)

Appendix B
Architectural Programme

Spaces	Size m2
Public/Communal Areas	
Main worship space	730 m2
* see below for specific requirements	
Entry/ vestibule/ lobby/ cloakroom	250 m2
Hall (for celebrations and banquets)	510 m2
Kitchen	75 m2
Public toilets (main level)	
(Female -6, Male - 5)	72 m2
* Main Worship Space	
Fixed seating (300-400 people)	
Sanctuary	
Sacristy	
Altar	
Pulpit	
Podium	
Cross	
Choir area with seating (12 people)	
Confessionals	
Baptistery	
Icon placement areas	
Provision for stained glass windows	
Family area or 'Crying Room'	
Storage (chairs, books, banners)	
Overall Circulation	
Public Stairs (interior)	80 m2
Storage (janitorial)	10 m2
Private Areas: Upper Level	
Lease-able Office Space	270m2
Offices for staff and priest (4 offices)	200m2
Washrooms	24 m2
Private lounge area (library, lounge)	120 m2
Private entry (exterior space)	80 m2
Private Areas: Lower Level	
Lease-able Space (possible daycare)	600 m2
HVAC/ Electrical/ Plumbing	
Mechanical room	220 m2
Storage & Lower level circulation	50 m2
Parking	
Church Patrons (1: 5 seats + 3 handicapped)	60 stalls
Staff + Visitors (1 stall for 3.5 m2 net)	in total
Outdoor Spaces	
Cedar and pine tree grove/ garden / garden shed	
Courtyard area accessible from the hall	
Entry court yard	
Drop-off area for car passenger	
Total Area	**3211 m2**

Appendix C
Configuration & the Path
Path & Space Relationships

Adapted from
Architecture: Form, Space, & Order
By Francis D. K. Ching
Pages 270-271 & pages 282-282.

CONFIGURATION OF THE PATH

All paths of movement are linear in nature. And all paths have a starting point, from which we are taken through a sequence of spaces to our destination. The intersection or crossing of paths is always a point of decision making for the person approaching it. the continuity and scale of each path at an intersection can help us distinguish between major routes leading to major spaces and secondary paths leading to lesser spaces. When the paths at a crossing are equivalent to one another, sufficient space should be provided to allow people to pause and orient themselves.

The nature of a path's configuration influences, or is influenced by, the organizational pattern of the spaces it links. The configuration of a path may reinforce a spatial organization by paralleling its pattern. Or the configuration can contrast with the form of the spatial organization, and serve as a visual counterpoint to it. Once we can map out in our minds the overall configuration of the paths in a building, our orientation within the building and our understanding of its spatial layout will be clear.

1. LINEAR

All paths are linear. A straight path, however, can be the primary organizing element for a series of spaces. In addition, it can be curvilinear or segmented, intersect other paths, have branches, or form a loop.

2. RADIAL

A radial configuration has paths extending from, or terminating at, a central, common point.

3. SPIRAL

A spiral configuration is a single, continuous path that originates from a central point, revolves around it, and becomes increasingly distant from it.

4. GRID

A grid configuration consists of two sets of parallel paths that intersect at regular intervals and create square or rectangular fields of space.

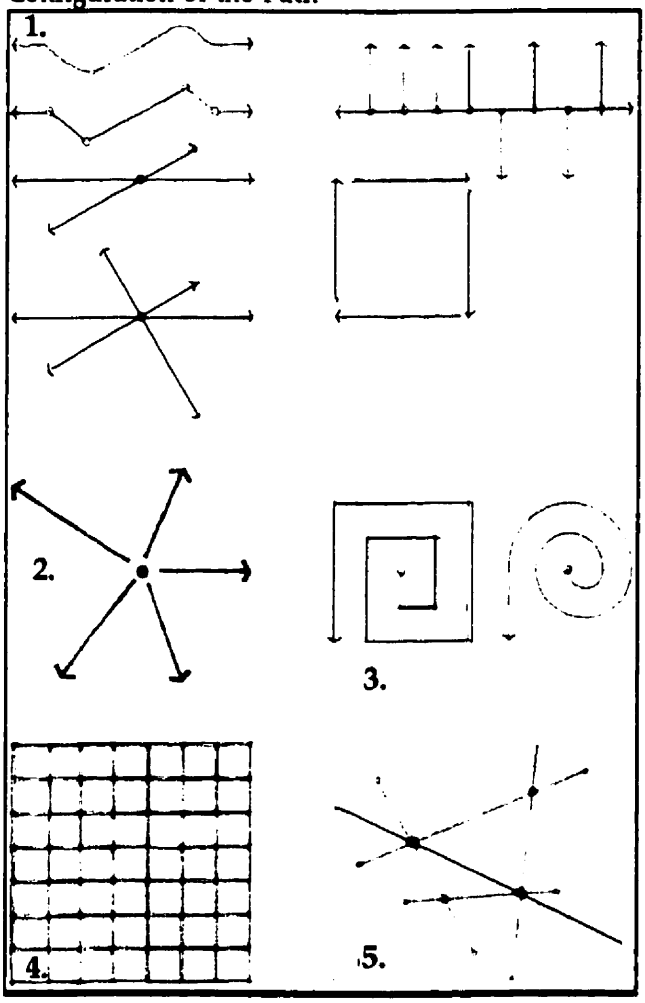
5. NETWORK

A network configuration consists of random paths that connect established points in space.

6. COMPOSITE

A building often employs a configuration of the two preceding patterns. To avoid the creation of a disorienting maze, a hierarchical order among the paths can be achieved by differentiating their scale, form, and length.

Configuration of the Path



PATH & SPACE RELATIONSHIPS

Paths may be related to the spaces they link in the following ways. Paths may:

1. PASS BY SPACES

The integrity of each space is maintained. The configuration of the path is flexible. And mediating spaces can be used to link the path with the spaces.

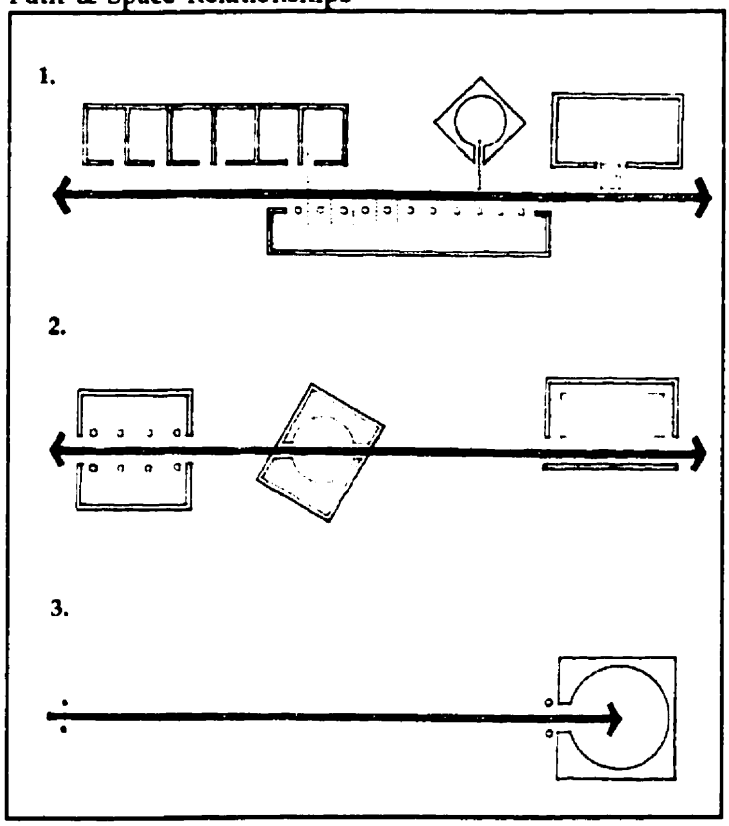
2. PASS THROUGH SPACES

The path may pass through a space axially, obliquely, or along its edge. In cutting through a space, the path creates patterns of rest and movement within it.

3. TERMINATE IN A SPACE

The location of the spaces establishes the path. This path / space relationship is used to approach and enter functionally or symbolically important spaces.

Path & Space Relationships



Appendix D
The Catholic Sacraments
Adapted from The Catholic Faith and Expressions of the Catholic Faith

The Seven Sacraments

The seven sacraments of worship in the Catholic Church are: Baptism, Confirmation, the Eucharist or Communion, Confession or Reconciliation, Matrimony, Holy Orders, and the Anointing of the Sick. It is believed that the spiritual essence of Christ is present in every sacrament. The sacraments are administered by the ministry of the church and most take place as a processional ceremony to the sanctuary, consequently the church aisles are an important part of church celebrations. In any procession of the ministry, or the patrons, the path the participants take to the sanctuary, is on axis with the altar.

Baptism The custom of a purifying rite with water is familiar to various religious traditions. The baptismal ceremony contains various symbols including the principle symbol of water. At one time persons were fully immersed into water for the baptismal sacrament, but now baptismal water is poured over a persons head at a small font.

Confirmation Confirmation is the active completion of Baptism. It is a personal acceptance of the spirit of the faith. The sacrament involved communion and takes place in the sanctuary of the church.

Eucharist or Communion The activity is the sharing or breaking of bread (the host) and the pouring of wine, through which Christ's presence is symbolized. What has been established in baptism and sealed through confirmation is sustained through communion. The Eucharist is the central activity of the Catholic Mass and Catholic Celebrations. The Eucharist is the activity is shared in the sanctuary. A separate room called the sacristy contains the priests' vestments and the host (bread for communion) and any chalices for drink. The sacristy would also contain the incense, candles, and the Holy Bibles for the readings.

Confession or Reconciliation Confession is a private act of confessing personal failings. It is a private sharing between a priest and a person with the aim to forgive and repent. The confessionals are usually small enclosures where, if desired, the persons identity can remain unknown to the priest or there can be a face to face discussion.

Matrimony Marriage expressed as the bonds between two people as well as their bond to the faith of the Catholic community. Matrimony ceremonies take place at the altar of the church, also include celebrate with a mass.

Holy Orders The taking of vows for the ordained ministry. The taking of orders ceremony would occur in a large principal church in the Catholic hierarchy.

Anointing of the Sick This sacrament is an outward sign of the caring for the sick (which usually does not take place in the church but in hospitals or homes) The anointing of the sick is a preparation for death or recovery.

Architecturally, the activities of the sacraments inform the design since they create the need for the following:

- aisles or a path for a procession
- seating for patrons with clear sight lines to the sanctuary
- a sanctuary area (a sacred or holy place, as that part of the church in which the principal altar is placed))
- an altar or communion table (a table or stone slab used for celebration of the Eucharist)
- pulpits or podiums for the priests and patrons to read from at the sanctuary
- chairs for the processional group to sit on and a main chair for the priest also at the sanctuary
- a baptistery; a section of the church containing a font used for baptisms
- a sacristy; a room in the church where the sacred vessels and vestments are kept
- a confession room; a small room of a comfortable size which allows person to person contact
- a choir; the choir is part of the assembly yet distinct and facing both the assembly and the sanctuary so that the choir members can see the sanctuary and so that the assembly can hear the choir

Appendix E
Construction Cost Estimate
Time Frame & Tasks

Construction Cost Estimate

Size of the Church is approximately 2300 square meters (this includes the upper level but not the lower level; the average cost figures are for a structure with a basement, therefore the basement area is already inherent in the average).

Based on an estimated cost of $ 1,100.00 - $1340.00 per square meter or from $102.00 - $124.00 per square foot, the construction costs for the church range from $2,530,000 - $3,082,000, excluding land costs and site work. Approximately 870 square meters can be permanently leased and would generate an income reflecting current market values.

Cost Estimate is derived from **Hanscomb's 1996 Yardsticks for Costing, Cost Data for the Construction Industry**, published by Southam Construction Information Network, Don Mills, Ontario, 1996.

Time Frame & Tasks

Activity	Approximate Time Frame
Partner with appropriate groups for fund raising, design (architectural and engineering work), and the purchase of land and bank financing.	Dependent upon the commitment of the group. Approximately 2-3 years. A design group would need 6 months to a year to develop a design and drawings.
Make a conditional offer to purchase, to the City, for a parcel of land to be zoned (for a church and for residential lots to be resold). The reselling of lots will generate funds for the church.	Dependent on the time for the City of Calgary to approve a zoning change. The design team would submit tentative plans for land subdivision. Approx. 4-6 months for the City to review any redesignation or subdivision. Certificate of Title issued when Offer to Purchase is accepted.
Sale of Residential lots could take place to continue generating earnings for fund raising.	Occurs simultaneously with the development permit process
The development permit process begins, although there is some time overlap with the re-zoning process. The design team, now including a contractor, would submit all detailed building plans, road and landscaping plans, registered survey plan, grade slips, and certificate of title.	Processing depends upon the type of development. The church will require approval from many departments within the City Planning process, and will also require community approval. The application may be circulated and reviewed by several city departments and community associations. Approx. 4-6 months; some of the time is served in the zoning redesignation phase.
The owners, the architectural design team, and the contractor, will execute a building construction programme, and time frame.	The contractor can give an estimate for the time frame of building construction. Approx. 1-2 years. Construction time may proceed on time if there are well executed working drawings, good weather, no changes by the owner, or no delays by suppliers or sub contractors.

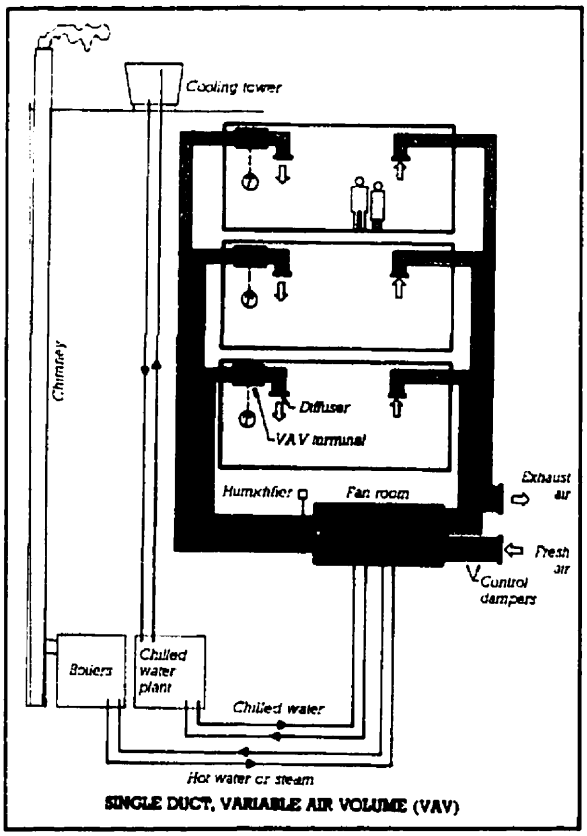
Appendix F
Mechanical System

The Architect's Studio Companion, Technical Guidelines for Preliminary Design, by Edward Allen, and Joseph Lano, pages 146-147.

The HVAC system is a Central All Air System: Single Duct, Variable Air Volume (VAV). Air is conditioned (mixed with a percentage of outdoor air, filtered, heated or cooled, and humidified or dehumidified) at a central source. The mechanical room is in the lower level. Supply and return fans circulate the conditioned air through ducts to the occupied spaces of the building. At each zone, a thermostat controls room temperature by regulating the volume of air that is discharged through the diffusers in the zone. This offers local temperature control. the VAV system should always supply a minimum amount of airflow for proper ventilation and air quality.

The major components are the boilers and chimney, chilled water plant, cooling tower, fan room, outdoor fresh air and exhaust louvers, vertical supply and return ducts, VAV control box for each zone, supply diffusers, return grilles.

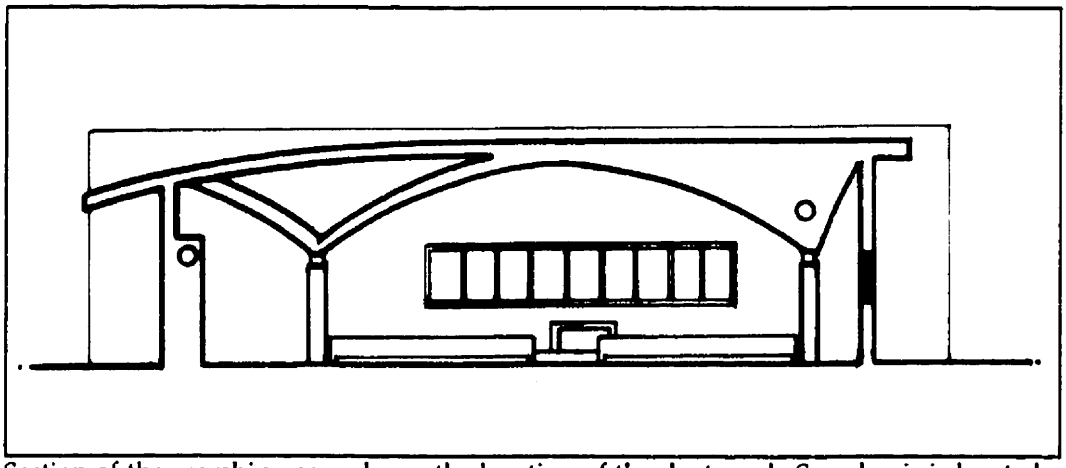
There are four zones within the building; the worship space, the hall space (includes the main entry, circulation and washrooms and kitchen), the upper offices, and the lower level.



A schematic The Architect's Studio Companion, Technical Guidelines for Preliminary Design, by Edward Allen, and Joseph Lano, shows the general configuration principal. The VAV control box for each zone is usually concealed within the ceiling , and the approximate dimensions, to serve each zone of approximately 700 m2, are 460 mm in height and 1.5 m in length for each unit.

The buildings' fresh air intake would be placed away from parking and at suitable distance from the exhaust air and the chimney, which are located on the rooftop of the main entry space.

Mechanical systems to the hall side of the building run in shafts adjacent to the public washrooms on the main level and the upper level, and then run through the ceilings. For the worship side the mechanical systems run in the shafts adjacent to the entry doors, over the 'crying rooms', then on to the north side through the overhead truss, and to the south side through the bulkhead over the doorways. A Section of the worship space shows the location of the duct work.



Section of the worship space shows the location of the duct work. Supply air is located within the overhead truss, and return air within the south bulkhead.

Appendix G
Suggestions for the Parish Congregation Site, Financing, & Design Considerations

Monterey is set to uncork bubbly

Community centre will open this weekend in northeast

[illegible]
Calgary Herald

They've got the champagne on ice in Monterey and they're ready to pop the cork.

Residents of the northeast community will gather this weekend to celebrate the opening of their new $975,000 community centre.

The official ribbon-cutting will take place Sunday.

But on Saturday night, there's a dinner and dance for 180 volunteers who put in more than 600 hours of sweat equity working alongside professional tradespeople.

The actual construction has taken a year but the planning and fund-raising activities have been ongoing for at least six years, says Pat Rosenman, community association vice president and project manager responsible for overseeing construction.

The need for a centre became evident when Monterey kids had to be driven to neighborhood gyms for basketball and field hockey. Nearby community halls were rented for association meetings and community functions.

"We have one of the more ethnically diverse communities," says Rosenman. "We needed a place where all of these people can hold their special functions."

Rosenman's involvement with the project happened by chance. After moving to Monterey with his wife and three children, he went to a community meeting. Building a centre was the topic of discussion that evening and the structural engineer jumped right in.

Since the province is in a cost-cutting mode, before applying for a grant, the community had to prove it was serious about its building plans.

Casinos, bingos, cash and in-kind donations from Qualico homes, developers of Monterey, raised over $[illegible]. Alberta government allocated a matching grant under the Community Facility Enhancement Program (CFEP).

At this point, the city required a needs and assessment survey before giving the nod.

Volunteers phoned residents in Monterey to determine first of all whether they were in favor of having a centre. Then they specified what recreational and sporting opportunities they wanted.

Majority suggested a good meeting space and a main hall for weddings, dances, basketball and floor hockey. A well-functioning kitchen ranked high on their wish list along with a lounge and pub.

In keeping with these requirements an architect formulated the design.

The package of information with a complete break down of expenses was submitted to the city for approval.

"I had contacts at the city I got some guidance from them," Rosenman says.

Construction began in June of 1997 after the city gave them the development and building permits.

Instead of going with a general contractor who'd bring in sub-trades to do their part of the job and everyone would squeeze out a profit, the building committee hired an independent project manager to co-ordinate the entire process. The manager shopped for best prices.

"By project managing it, we gained monetary control and schedule control," Rosenman explains.

The project was finished last month – six months later than previously anticipated.

All along, residents shared the workload.

"Our volunteers came out and worked with us, pouring concrete, back filling, insulating, framing and painting."

Completion of the centre means the nomadic days of Monterey residents are now over. They can take part in activities without having to drive to other locations.

The Maronite Church Project will require a great deal of time and commitment from the building committee and parishioners to sustain its vision for the actualization of a built structure. The committee and church member's involvement in the process of fund-raising for a new building, and the congregation's enthusiasm and participation in the project's viability, will be the key to the success of the project. An article from the Calgary Herald Neighbors newspaper below (July 2, 1998), gives an example of a northeast Calgary community's process in achieving their goal of building a community center. Also included in Appendix G are Site & Financing considerations, and Design considerations.

Site & Financing Considerations

- The congregation could consider a site SW Westhills area recently annexed into the City limits; W of 69 th Street and S of Bow Trail & N of Richmond Road.

- Purchase and sub-divide the land. Provide a conditional offer to purchase based on the approval of the church design as well as the approval for residential or commercial subdivision. Purchase a parcel of land directly from the City of Calgary. The sale of the land could finance the building costs.

- Rent the worship space to the larger Catholic community, or partner with another Eastern Catholic Group of Catholics. The church, since it is designed for flexibility with moveable worship furniture can also be used by other worship groups.

- Partner with the local community. The hall side of the building can be a cooperative project between the church and the larger community.

- An idea for fund-raising is to include a donor wall, donor paving stones for the many pathways, and also donor Cedar and other trees for the Cedar Grove and park spaces. This would provide for individual contributors to be recognized for their financial involvement.

- The fountains, stairways, garden, and Cedar Grove areas of the church will require maintenance. Perhaps a partnership with community groups may result in a shared public park and picnic area. An outside public rest room facility could be added. Provide community space and community parks and fountains areas could be maintained jointly by community groups.

- The building committee should check out national, provincial, and city grants for programs which provide financial grants (for example a cultural hall as part of the building may be eligible for funds).

- More specific costing estimates can be calculated as the design progresses. (The Order of Magnitude Estimate, the Budget Estimate, and the Definitive Estimate would provide more concrete financial information). Experts such as appraisers, and contractors, specification writers would have valuable input into the costing of a final design.

Design Considerations

- Create lease-able space (the proposed design has done this) and design the lease-holds specifically for the tenants. Lease to tenants whose primary use time is Monday to Friday, this frees the parking and common spaces for the church uses and creates an operating income.

- Community approval is required for a project of this scale to be developed. By involving the community groups early in the process and developing a cordial and cooperative relationship with its members, the project with proceed relatively unrestricted.

- The committee should identify and consider all the groups, agencies, or individuals who have a vested interest in the project. These are the stakeholders and each stakeholder has an advantage/risk associated with a building project. It is important to understand all of the players, to acknowledge their concerns and mitigate potential conflicts early in the design phase. Stakeholders could include: the Lebanese community (including individual members), the general Catholic community and the Catholic Diocese, the local community or the neighborhood, the city or other governing bodies, contractors, consultants, financial sources including banks, and potential revenue sources/tenants. Anyone who can influence the success of the project (including the design and the cost) or will have a say in the project, is a player in its success.

- Structure an informal presentation of the design, using the model and the drawings, to obtain feedback from the parish membership.

- When the group eventually purchases a site, the elements and principles of the design should be reworked to be site specific. It is important to design the building for its site so that the effectiveness of its orientation, views, and outdoor spaces meets the original intent of the design.